CHAPTER 21 ENVIRONMENTAL REVIEW: WEST 135TH STREET CONVERTED MTS

21.1 Introduction

The results of the environmental analyses of the West 135th Street Converted MTS are presented in the following sections:

21.2 Land Use, Zoning, and Public Policy
21.3 Socioeconomic Conditions
21.4 Community Facilities and Services
21.5 Open Space
21.6 Cultural Resources
21.7 Urban Design, Visual Resources, and Shadows
21.8 Neighborhood Character
21.9 Natural Resources
21.10 Hazardous Materials
21.11 Water Quality
21.12 Waterfront Revitalization Program
21.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
21.14 Traffic, Parking, Transit, and Pedestrians
21.15 Air Quality
21.16 Odor
21.17 Noise
21.18 Commercial Waste to the West 135th Street Converted MTS

Section 2.4.3 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

21.2 Land Use, Zoning, and Public Policy

21.2.1 Existing Conditions

21.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 21.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 21.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.3 provides information on existing land uses and operations on the site.

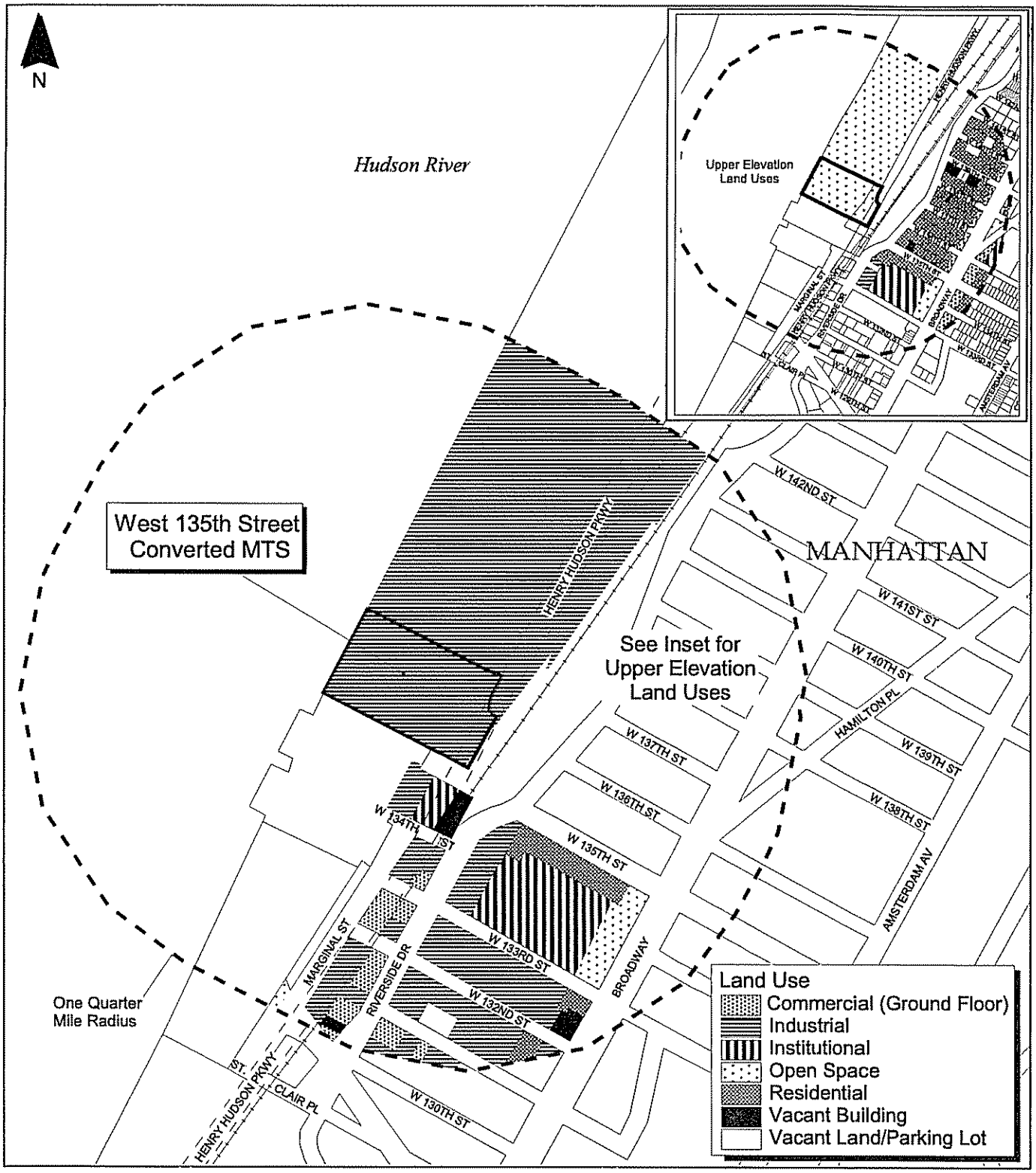
21.2.1.2 Land Use Patterns

21.2.1.2.1 General Context

Set in the larger context of Manhattan's Upper West Side and Hudson River waterfront, the site is surrounded by a variety of land uses in the immediate area, including primarily water-dependent municipal uses, parks and recreational areas and transportation infrastructure.

21.2.1.2.2 Land Uses in the Primary Study Area

Two major roadways, the Henry Hudson Parkway and Riverside Drive, separate the site from upland elevated areas to the east by providing a buffer of about 450 feet between the site and residential uses. In addition, these residential upland areas sit at a higher elevation than the site and do not have direct access to it via the cross streets. Most streets around the site are dead-end or one-way and directed away from the site. Essentially, the only way to access the site is to approach West 135th Street from the south via Twelfth Avenue, which runs between St. Clair Place and 137th Street under Riverside Drive.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

Figure 21.2-1 Land Use in the Primary Study Area
Lower Elevation
West 135th Street Converted MTS

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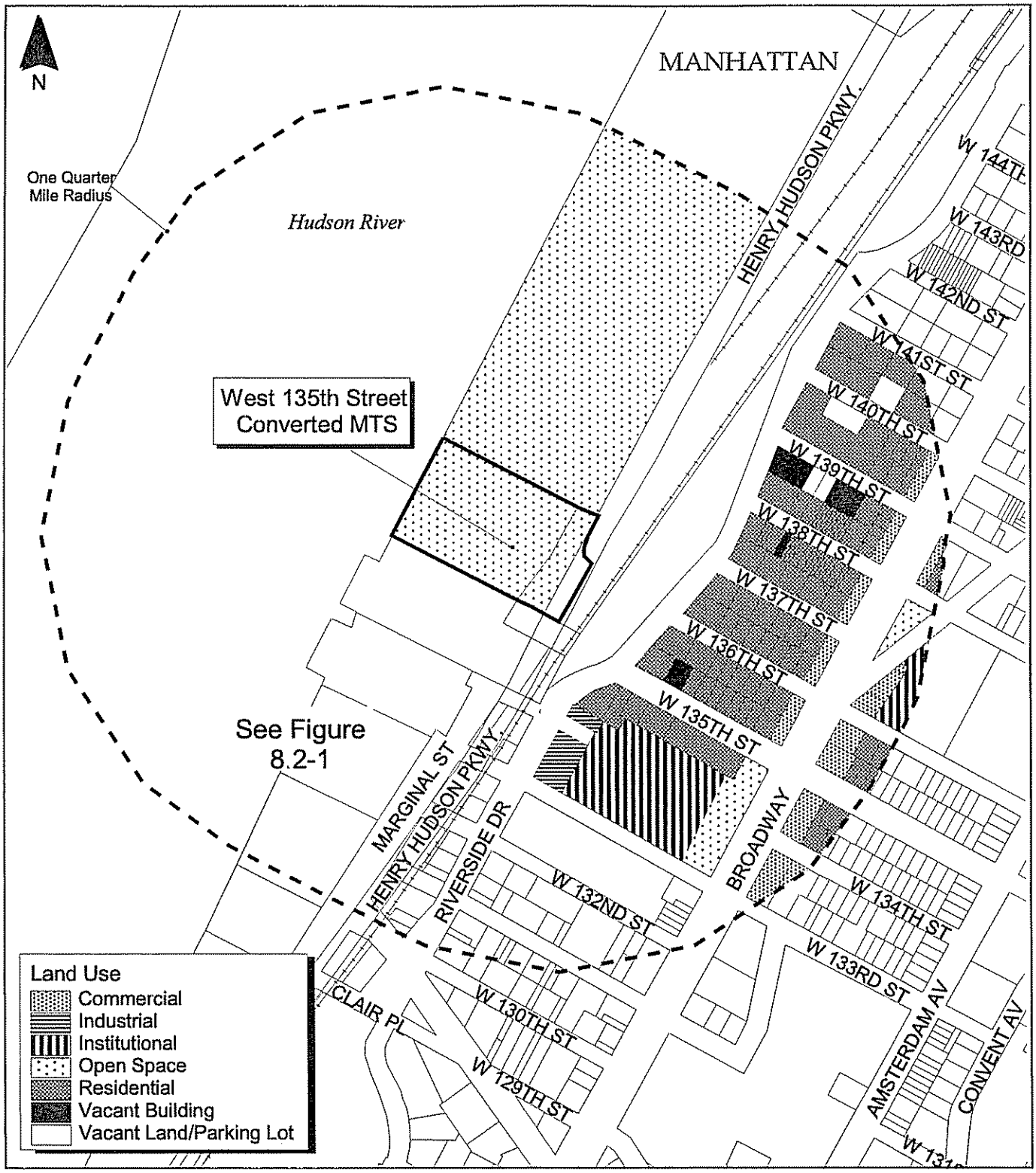

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominate land uses by lot in the primary study area (upper elevation).

300 0 300 Feet

Figure 21.2-2 Land Use in the Primary Study Area
Upper Elevation
West 135th Street Converted MTS

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Immediately north of and adjacent to the site is the City's North River WPCP between West 135th and West 145th Streets, upon which Riverbank State Park is located. The park is an active recreation facility encompassing 28 acres of playing fields and courts, a café, cultural center and amphitheater. (See Section 21.5 for more detail on the park.) Adjacent to the WPCP, at grade level below the Henry Hudson Parkway, is a staging area used by the NYCDEP for ongoing construction at the plant. A variety of other uses are also below the parkway, including the 26th Precinct Police Station at West 135th Street, various warehouses, vacant buildings and commercial establishments. Immediately to the south of the site is a Consolidated Edison natural gas pumping facility.

A narrow portion of Riverside Park runs just to the east of the site, along the western edge of Riverside Drive and at the same elevation as Riverside Drive and the residential area adjacent to it.

The undeveloped piers and shore area south of the site located between West 125th and West 133rd Streets, known as "Harlem Piers," are publicly owned property currently used as informal public waterfront access and the subject of a current NYCEDC redevelopment plan.

East of Riverside Drive, the primary study area is almost entirely residential. These upland areas are comprised of apartment buildings generally six to seven stories tall, except for River View Towers on Riverside Drive north of West 139th Street, which is 24 stories tall. Toward the southern portion of the primary study area, particularly around Broadway, there are ground-level commercial uses and various automotive repair, garage and warehouse storage spaces on the cross streets, including NYCT's Manhattanville Bus Depot (between West 132nd and West 133rd Streets).

21.2.1.2.3 Land Uses in the Secondary Study Area

Land use in the secondary study area is generally characterized as residential, with related uses such as schools, churches and libraries, and commercial uses along Broadway and Amsterdam Avenue, the north-to-south arteries. City College, located east of the site on Amsterdam Avenue,

covers the area along the eastern perimeter of the secondary study area from about West 130th to West 140th Streets. Grant's Tomb, a national landmark and tourist attraction, is located south of the secondary study area at West 122nd Street and Riverside Drive.

21.2.1.3 Zoning On and Near the Site

21.2.1.3.1 Zoning Within the Primary Study Area

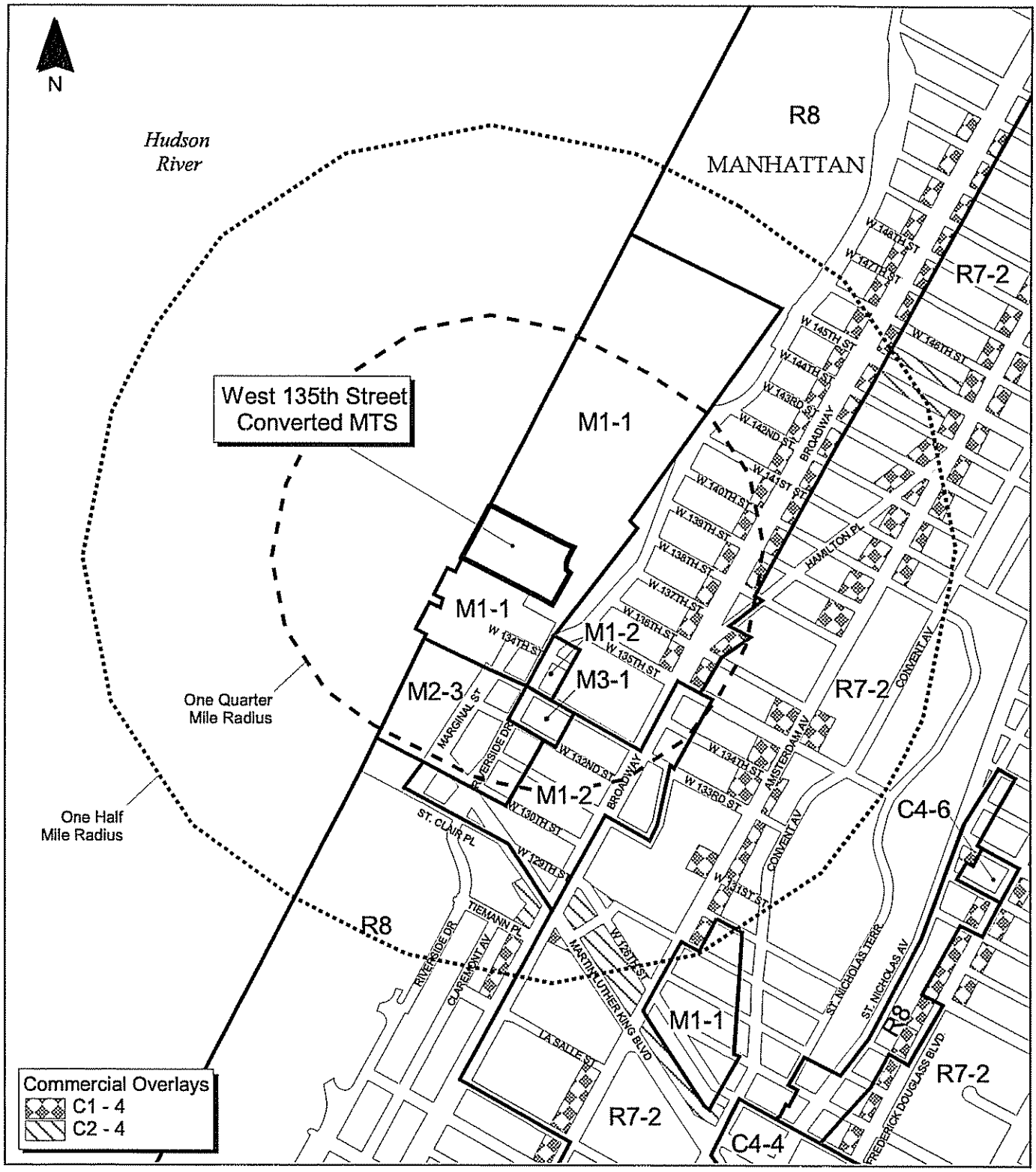
The site is located within an M1-1 zoning district, which extends along the waterfront from West 133rd to West 145th Streets and includes the North River WPCP and Riverbank State Park atop it. The remainder of the primary study area to the east of the Henry Hudson Parkway is zoned for high-density residential development (R8), with a commercial overlay along Broadway. The nearest residentially zoned area is approximately 220 feet from the site. Manufacturing zones cover the waterfront north and south of the site. (See Figure 21.2-3 and Table 3.4-1: Zoning District Characteristics.).

21.2.1.3.2 Zoning Within the Secondary Study Area

The shoreline areas north of the site within the secondary study area are zoned for industrial uses as far north as 145th Street. The manufacturing zoning continues into the secondary study area south of the site to about St. Clair Place and inland to include the area around the intersection of Broadway and West 132nd Street. The remainder of the secondary study area is zoned for residential use with commercial overlay zoning along Broadway and Amsterdam Avenue.

21.2.1.4 Plans and Policies

As described in NYCDPR's Comprehensive Manhattan Waterfront Plan (CMWP) (197-a Plan), Harlem Piers is the site of potential future mixed-use development, where interim improvements to bulkhead and areas along Marginal Street should be coordinated with DSNY to minimize pedestrian-vehicular conflicts. (See Section 21.5 for details on NYCDPR park plans and Section 21.12 for a review of consistency with the WRP.)



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.2-3 Zoning

West 135th Street Converted MTS

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The CMWP recommends that NYCDEP's construction staging area be used "at least in part" to provide access between Riverside Park North and the proposed Harlem Piers. The plan also recommends extending public bus service to Riverbank State Park. Additionally, the CMWP recommends designating the northern portion of the park as a scenic landmark.

The NYCEDC prepared the West Harlem Master Plan, a master plan for the area extending from about St. Clair Place/West 125th Street to West 133rd Street and from the east side of Broadway west to the Hudson River, including the site of the West 135th Street Converted MTS (published in August 2002). The plan suggests three redevelopment components: the transportation system serving the waterfront, transportation, and upland development. Potential transportation improvements include an intermodal center, off-street parking improvements, reconfiguration of the Henry Hudson Parkway ramps and streetscape improvements. The intermodal center would be located between St. Clair Place and West 125th Street, west of Twelfth Avenue, and could include a new Metro-North station (currently being considered by MTA as part of the Penn Station Access Study), as well as provide for bus and ferry connections. The intermodal center is portrayed as the key to making West Harlem a regional attraction.

In the waterfront parcel just west and north of the proposed intermodal center, multi-use recreational activities are envisioned, while upland development largely through infill is expected to occur as a result of proposed infrastructure improvements and potential zoning changes.

Development of the Harlem Piers area is recommended as part of the CMWP and the New WRP. As specified by the Plan for the Manhattan Waterfront, a focus of this development is pedestrian planning and ensuring pedestrian and bikeway connectivity along the Hudson River near the proposed intermodal center; however, while the Harlem Piers development project is planned for completion by 2006, the timeframe for development of the intermodal center and other recreational facilities is not yet known.

CD 9, in its CDNS (FY 2004), is organized to emphasize the primary concerns for promoting an improved quality of life and advancing the economic development of the community. To this end, the CDNS refers to the Harlem Piers area as the last remaining opportunity for community

development and supports the notion of developing the area as a means of providing jobs and open space/waterfront access. Otherwise, the CDNS makes no reference to the site or its immediate environs. The Community Board's goals for the district are to see their prepared 197-a plan through approval and implementation, and to work to improve the quality of housing in the area.

The Frederick Douglass Boulevard Rezoning Study, also conducted by NYCDCP, makes recommendations in four categories: housing stock, quality of urban fabric, Frederick Douglass Boulevard image, and the development of public space. This proposed zoning map amendment would affect 44 blocks in south-central Harlem, and aims to balance growth and preservation in the residential core. The area to be rezoned is generally bounded by Central Park North, West 124th Street, Morningside Avenue and Adam Clayton Powell Boulevard, about one mile from the site.

Of particular interest is the proposed Hudson River Valley Greenway to be developed under the act of the same name. The goal of this act is to provide a continuous waterfront pathway from Albany to Battery Park in lower Manhattan. Currently, there is a "gap" between West 125th Street and West 135th Street. An interim pedestrian and bicycle route connection is currently provided on street until a formal connection can be developed. The driveway to the existing MTS at West 135th Street presents a cross-traffic obstacle to pedestrians and bicyclists traveling on the interim route. According to the Greenway Plan for New York City: Greenway Map, NYCDCP, 1996, this route includes an on-street path following St. Nicholas Avenue along St. Nicholas Park. The more recent New York City Cycling Map (2002) shows proposed on-street routes near the site along Convent Avenue, West 125th Street, West 120th Street and Twelfth Avenue where an off-street path is also proposed (to be part of a Hudson River Greenway route).

21.2.2 Future No-Build Conditions

According to NYCEDC, the Harlem Piers redevelopment (the waterfront component of the West Harlem Master Plan) will be completed by 2006. Current designs show that the Harlem Piers will include a park and wharf along the water's edge, a covered market square and a 10,000-square-foot multi-use structure at the western end of the piers site that could include retail and restaurant uses, as well as cultural and visitor's centers. Certain streetscape improvements are also planned, such as wider sidewalks, new street plantings and street art.

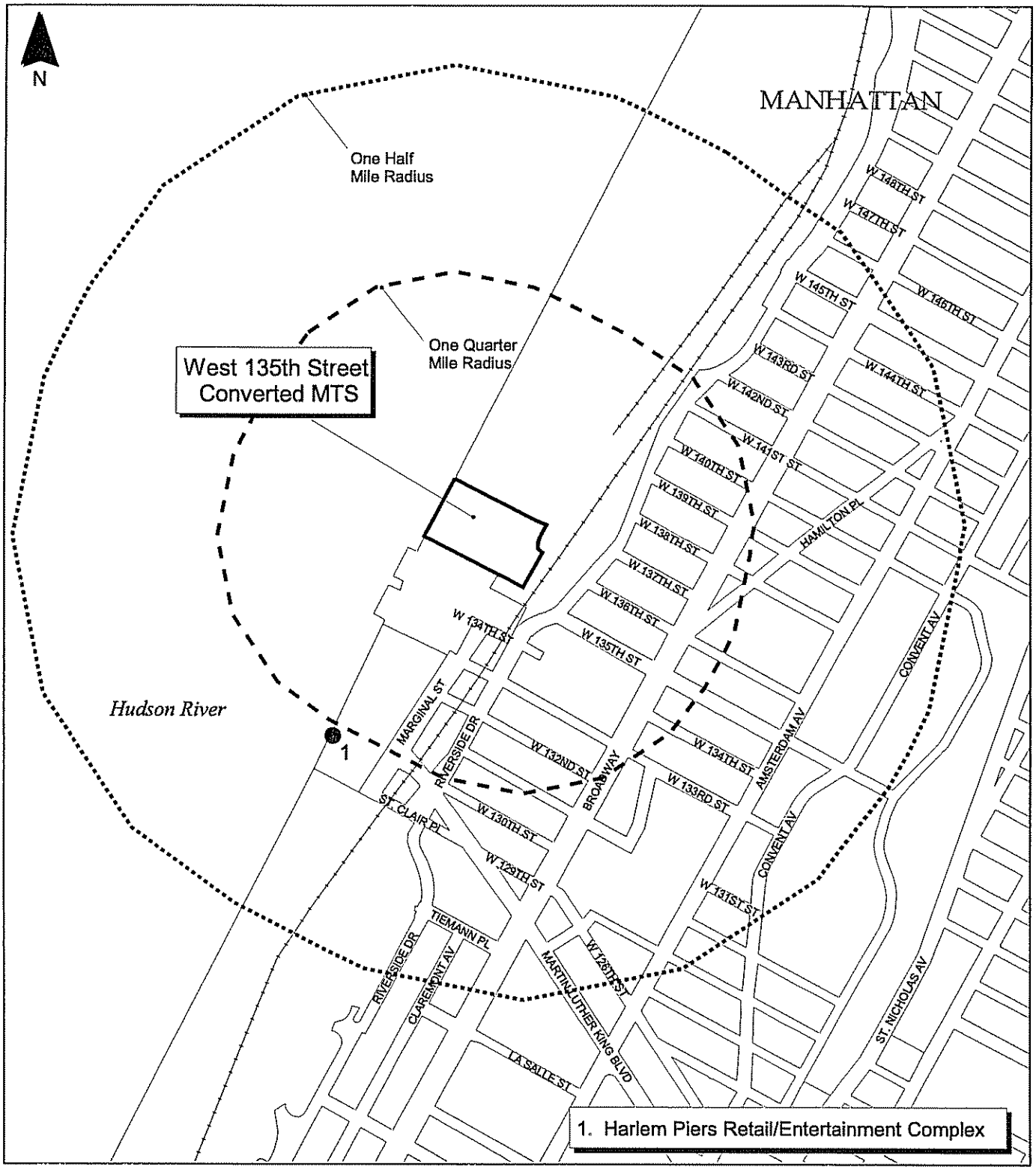
NYCDPR is working with NYCEDC to incorporate elements of its Hudson River Valley Greenway bicycle and pedestrian plan into work implemented as part of the Harlem Piers Redevelopment. Specific solutions to the problematic crossing of West 135th Street — a historically notable disjuncture in the bikeway — are still being discussed. Solutions may include the construction of a cantilever to carry the route from West 133rd Street to the north side of West 135th Street. (See Section 21.5 for a discussion of parks improvement in the area.)

The site will remain DSNY property, and the existing MTS will remain standing.

21.2.3 Potential Impacts with the West 135th Street Converted MTS

21.2.3.1 Land Use and Zoning

Reactivating waste transfer activities on the site and replacing the existing MTS with the West 135th Street Converted MTS would be consistent with zoning on or near the site and existing and proposed land uses, including the planned Harlem Piers development (see Figure 21.2-4). Notably, the location for waterborne waste transfer here is congruent with the North River WPCP immediately north. There are no sensitive uses beneath the viaduct or at the same elevation as the West 135th Street Converted MTS north of West 133rd Street.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.2-4 Planned Development Sites
West 135th Street Converted MTS

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21.2.3.2 Consistency with Public Plans and Policies

There are no recommendations or objectives stated in relevant plans and policies that specifically relate to the site, study area or the West 135th Street Converted MTS, which would be consistent with the applicable 197-a Plan (the CMWP) insofar as it would not preclude the developments recommended in the plan for nearby areas.

21.3 Socioeconomic Conditions

21.3.1 Existing Conditions

21.3.1.1 Definition of the Study Areas

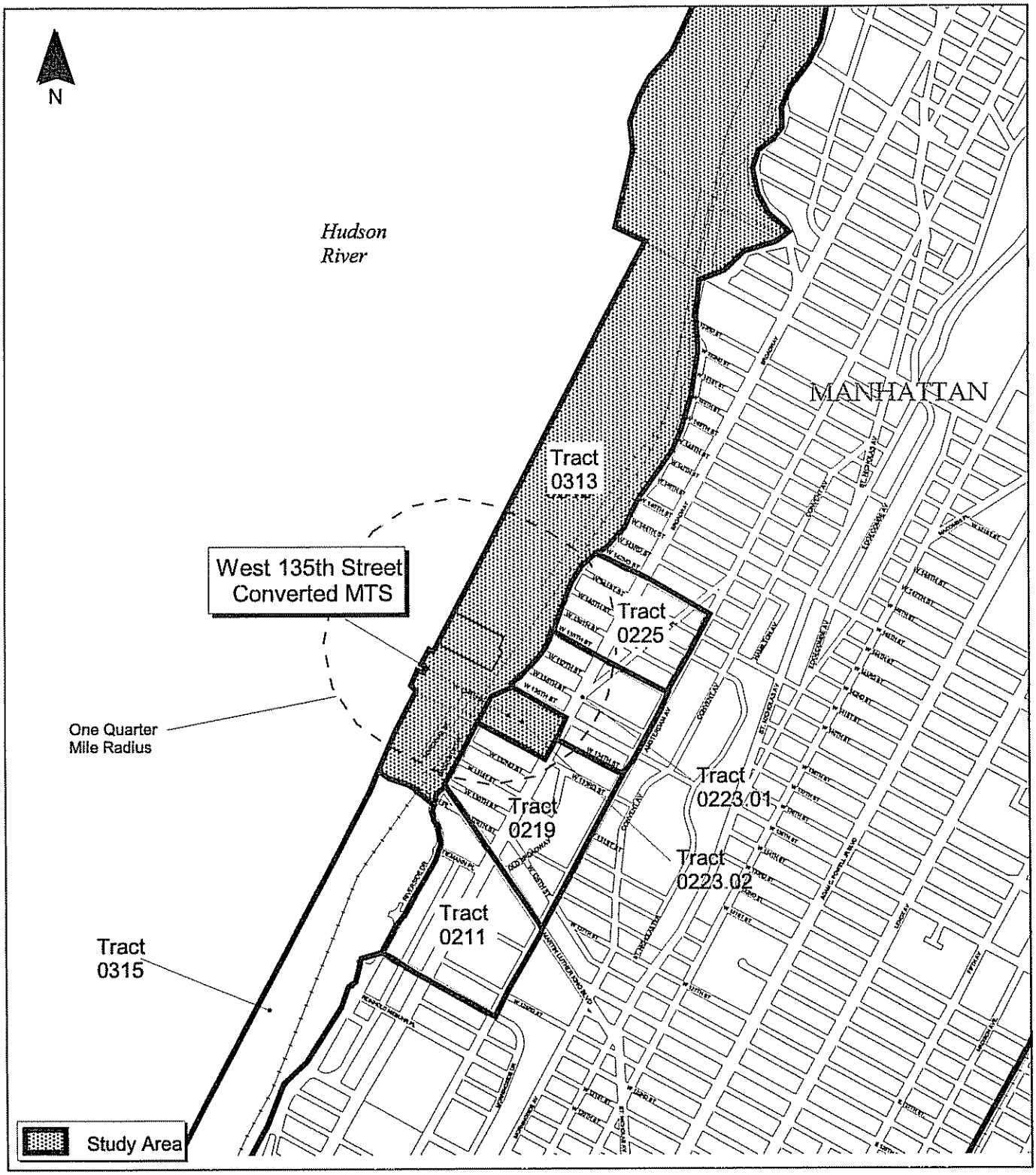
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site, and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) The demographic study area is comprised of Census Tracts 223.02 and 313 (see Figure 21.3-1). Census Tract 223.03 covers an area bounded by Twelfth Avenue to the west, 133rd Street to the south, 135th Street to the north and Broadway to the east. Census Tract 313 covers the Hudson River south until St. Clair Place, east along Henry Hudson Parkway and Riverside Drive and north until I-95. For comparison purposes, census data were also gathered at the borough and City levels. The study area for the assessment of potential impacts on economic conditions extends as far north as West 145th Street, south to Tiemann Place and east to Convent Avenue.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

21.3.1.2 Demographic Characteristics

21.3.1.2.1 Population

The total 2000 study area population was 4,102 persons (see Table 21.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a greater percentage increase (7%) than did the borough during the same period (3%), but its population did not grow as rapidly as the City's as a whole (9%).



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.3-1 Census Tract

West 135th Street Converted MTS

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Table 21.3-1
1990-2000 Population

	Study Area	Manhattan	City
2000	4,102	1,537,195	8,008,278
1990	3,836	1,487,536	7,322,564
Percent Change	+6.9%	+3.3%	+9.4%

Source: U.S. Census 1990, 2000

The age-sex distribution was slightly different from the population distribution of the borough and the City with an even greater proportion of females to males. The study area contained a considerably greater percentage of children and teenagers than did the borough or City; approximately 33% of the study area population was under the age of 20 compared to 19% for the borough and 27% for the City.

21.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a far greater proportion (66%) of people of Hispanic origin (all races) than did Manhattan or the City (27%). Of the 34% not of Hispanic origin, 92% were Black and 3% were White. In Manhattan and the City, Blacks represented approximately 21% and 33% of the non-Hispanic populations, respectively, while Whites represented 63% and 48%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate (45%) than in the borough (10%) and in the City (24%) during the same period. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

21.3.1.2.3 Families and Households

There were 987 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (about 55%) was considerably larger than those families in Manhattan with children under 18 (43%) and in New York City (49%). There was a

considerably smaller percentage of married-couple families in the study area than in the borough or the City, and 49% of these families had children, greater than Manhattan (39%) but about the same as the City (48%).

Fifty-one percent of the families in the study area were headed by a female householder, which is a higher percentage than in the borough or the City (both 30%). Sixty-four percent of the female householder families in the study area had children under the age of 18, slightly greater than the percentages in the borough (53%) and the City (55%).

There were 1,582 households in the study area in 2000, with an average household size of 2.6 persons, greater than Manhattan (2 persons) but equal to the City.

From 1990 to 2000, the number of households in the study area increased by 8%, compared with a 3% increase in the borough and a 7% increase in the City.

21.3.1.2.4 Employment

Within the study area, 45% of persons aged 16 and older participated in the labor force in 2000, compared to 64% in Manhattan and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

Twenty-two percent of employed persons 16 and over were government workers, compared to Manhattan (10%) and the City (16%). Moreover, 10% of the study area's working population was self-employed, about the same proportion as in Manhattan (9%) and somewhat higher than in the City (6%).

From 1990 to 2000, the number of employed persons within the study area decreased by 12%, while the number of employed persons in the borough and the City remained approximately the same. Among employed persons, those engaged in government jobs decreased by 47%, compared to a 15% decrease in the borough and a 10% decrease in the City.

Current forecasts indicate that about 36,397 employees worked in Manhattan CD 9 in 2005, which was about 1.6% of the borough's total employment.[1]

21.3.1.2.5 Housing

Most housing units in the two census tracts in the study area were constructed between 1970 and 1979, while the majority of housing units in both Manhattan and the City were built at least before 1959. As of 2000, there were 1,600 housing units in the study area, with a vacancy rate of about 1.2%, lower than either the borough (8%) or the City (6%). Nearly all the housing units were renter-occupied (94%), considerably greater than the borough (74%) and the City (66%). Median monthly rent ($496) was far lower than in the borough ($796), and in the City ($705).

The turnover in the study area (30%) from 1995 until 2000 was lower than that of the borough (45%) and the City (43%).

From 1990 to 2000, a total of 136 housing units were added in the study area, representing a 9% increase, markedly greater than the borough (2%) and slightly higher than the City (7%).

21.3.1.2.6 Education

Consistent with the higher percentage of children in the study area than in the borough or the City, there was a slightly higher rate of school enrollment (34%) than in either the borough (24%) or the City (29%). Of those enrolled in school within the study area in 2000, 73% were enrolled in elementary school or high school and 18% were enrolled in college or beyond. In Manhattan, 51% were enrolled in elementary school or high school and 39% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

The study area witnessed an 18% increase in the number of persons enrolled in school from 1990 to 2000, with the largest increase in enrollments occurring at the pre-primary school level (190%), comparable to City-wide trends.

The study area had a far lower educational attainment level than either the borough or the City. A markedly smaller proportion (37%) of the study area population aged 25 and over had a college degree or some college education compared to Manhattan (66%) and the City (48%). The study area had a similar percentage of people with only high school diplomas (23%) compared to the City (24%), and a far greater percentage than those in the borough (14%).

Despite the lower educational levels, from 1990 to 2000 the study area witnessed rising levels of educational attainment. The number of college graduates increased 34%, and the same trend was evident in the borough and the City, which experienced increases of 20% and 29%, respectively. Correspondingly, the number of people with less than a college education (between 8% and 14%) declined in the study area overall.

21.3.1.2.7 Income and Poverty

In 2000, both median household income ($17,400) and median family income ($25,196) were far lower than in Manhattan ($47,030 and $50,229, respectively) and the City ($38,293 and $41,887, respectively). Compared to the two larger areas, a greater percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes below $25,000. Only 22% of households in the study area had incomes of $50,000 and above, compared with 48% in the borough and 40% in the City.

A greater percentage of persons in the study area under the age of 18 were living below the poverty level in 2000 (47%) than in Manhattan (32%) or the City (30%). The 2000 Census also reported that 38% of the persons 65 and older were living below the poverty level in the study area, compared to 19% in Manhattan and 18% in the City.

Within the study area, the percentage of families living below the poverty level (34%) was nearly twice that of Manhattan (18%) or the City (19%). The percentage of families living below the poverty level with children under the age of 18 (62%) was greater than the percentages in Manhattan (48%) or the City (55%).

From 1990 to 2000, the percentage of people living below the poverty level in the study area increased by 16%, as compared to a minimal change in Manhattan and 20% increase in the City.

21.3.1.3 Economic Conditions

The part of Harlem within approximately ½-mile of the site contains a mix of commercial, automotive repair, distribution and storage-related businesses. This area has experienced a strengthening of its retail sector in the last several years through the establishment of a major food retailer in the area (Fairway). The introduction of this use and the Harlem USA further east on West 125th Street outside of the study area is indicative of the increased momentum of economic activity in Harlem.

21.3.2 Future No-Build Conditions

21.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Manhattan CD 9 will remain about the same as current conditions.[2]

21.3.2.2 Economic Conditions

Ground-level commercial uses and various automotive repair, garage and warehouse storage spaces on and near Broadway will likely continue to comprise the mix of business uses near the site for the near term. Major commercial and public uses are planned south of the project site on

[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

undeveloped piers between West 125th and West 133rd Streets,[3] known as the Harlem Piers. The initial phases of this project involve the creation of waterfront open space as well as yet undetermined retail services. They are expected to be completed by 2006.

The near-term economic health of industrial areas, such as the industrial area in this section of Harlem, may also be supported by established City programs available through the IDA. These programs, such as the Industrial Incentive Program and the Small Industry Incentive Program, provide business tax incentives for capital renovation and expansion projects.

The designation of a portion of the study area as part of the Harlem/South Bronx EZ will likely have a positive economic effect on the larger Harlem community in the long-term. The EZ is expected to expand the range of economic opportunities in the portions of Harlem and Upper Manhattan that it covers.

Regional projections indicate that employment in Manhattan CD 9 will remain about 1.6% of the borough total.[4]

21.3.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS represents the reactivation of solid waste transfer operations at the site with added containerization operations, which is a compatible activity given the site's industrial surroundings.

21.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the West 135th Street Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

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[3] *Comprehensive Manhattan Waterfront Plan: A 197-a Plan as Modified and Adopted by the City Planning Commission and the City Council*; Rudolph W. Giuliani, Mayor; Joseph B. Rose, Director of Department of City Planning; Summer 1997, NYCDCP #98-07.

21.3.3.2 Direct Business and Institutional Impacts

The West 135th Street Converted MTS would not result in the direct displacement of businesses or institutional uses.

21.3.3.3 Indirect Business and Institutional Impacts

The West 135th Street Converted MTS would not result in indirect impacts to study area businesses or institutions.

21.3.3.4 Employment Impacts

The West 135th Street Converted MTS is expected to generate a total of approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

[4] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

21.4 Community Facilities and Services

21.4.1 Existing Conditions

21.4.1.1 Definition of the Study Areas

The primary study area is defined as that area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile of the site.

21.4.1.2 Summary of Community Facilities and Services

There are three community facilities in the primary study area and 30 in the secondary study area. These facilities and others serving the site but located outside of the secondary study area are listed below in Table 21.4-1 and shown on Figure 21.4-1.

21.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. CD 7 has expressed an interest in having a high school within its district, but no plans have been made. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

21.4.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the West 135th Street Converted MTS.

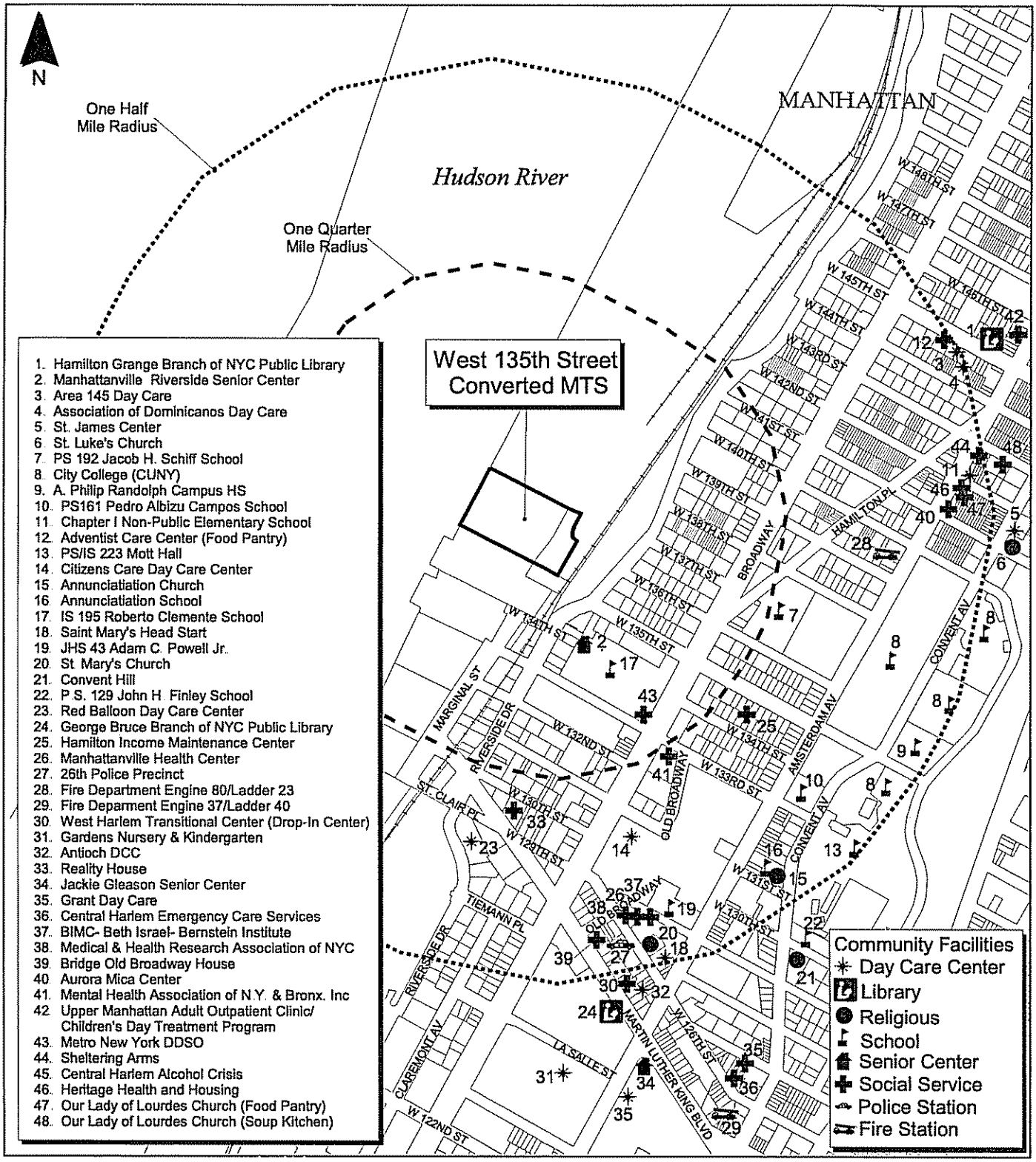
Table 21.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Schools	
I.S. 195 Roberto Clemente School	625 West 133rd Street
Senior Centers	
Manhattanville Riverside Senior Center	3333 Broadway
Health Care Facilities and Social Services	
Metro New York DDSO(1)	3333 Broadway
Within the Secondary Study Area	
Schools	
P.S. 192 Jacob H. Schiff School	500 West 138th Street
City College (CUNY)	138th Street Convent Avenue
P.S. 161 Pedro Albizu Campos School	499 West 133rd Street
P.S./I.S. 223 Mott Hall	West 131st Street and Convent Avenue
J.H.S. 43 Adam C. Powell, Jr. Junior High School	509 West 129th Street
A. Philip Randolph Campus High School	Convent Avenue and West 135th Street
Annunciation School	461 West 131st Street
Chapter I Non-Public Elementary School	474 West 142nd Street
Health Care Facilities and Social Services	
Adventist Care Center (food pantry)	528 West 145th Street
Reality House	637 West 125th Street
BIMC-Beth Israel-Bernstein Institute	21 Old Broadway
Medical and Health Research Association of New York City	21 Old Broadway
Bridge Old Broadway House	551 West 125th Street
Aurora Mica Center	1640 Amsterdam Avenue
Mental Health Association of New York and Bronx, Inc.	3280 Broadway
Sheltering Arms	474 West 143rd Street
Heritage Health and Housing	1649 Amsterdam Avenue
Hamilton Income Maintenance Center	530 West 135th Street
Day Care Centers	
Citizens Care Day Care Center	3240 Broadway
Association of Dominicanos Day Care	510 West 145th Street
Area 145 Day Care Center	510 West 145th Street
Morningside Community Head Start Center IV	2967 Eighth Avenue
Red Balloon Day Care Center	560 Riverside Drive
St. Mary's Head Start	5 West 126th Street
Religious and Cultural Institutions	
Annunciation Church	461 West 131st Street
St. Mary's Church	521 West 126th Street

Table 21.4-1 (continued)
Community Facilities and Services

Name	Address
Health Care Facilities and Social Services	
Hamilton Income Maintenance Center	530 West 135th Street
Manhattanville Health Center	21 Old Broadway
Police	
26th Police Precinct	520 West 126th Street
Fire	
Engine 80/Ladder 23	503 West 139th Street
Outside the Secondary Study Area	
Day Care Centers	
St. James Center	25 St. James Place
Gardens Nursery & Kindergarten	90 LaSalle Street
Antioch Day Care Center	515 West 125th Street
Grant Day Care	1299 Amsterdam Avenue
Senior Centers	
Jackie Gleason Senior Center	1301 Amsterdam Avenue
Schools	
P.S. 129 John H. Finley School	425 West 130th Street
Public Libraries	
Hamilton Grange Branch of the New York Public Library	503 West 145th Street
George Bruce Branch of the New York Public Library	518 West 125th Street
Religious and Cultural Institutions	
Convent Hill (area including several convents: St. Agnes, St. Helen, St. Augusta, St. Cecelia, St. Monica, St. Elizabeth and St. Francis)	Block of West 130th and 129th Streets from Convent to St. Nicholas Avenues
St. Luke's Church	424 West 141st Street
Health Care Facilities and Social Services	
St. Luke's/Roosevelt Hospital Center – St. Luke's Division	114th Street and Amsterdam Avenue
Central Harlem Emergency Care Services	419 West 126th Street
Upper Manhattan Adult Outpatient Clinic/Children's Day Treatment Program	1728 Amsterdam Avenue
West Harlem Transitional Center (drop-in center)	521 West 126th Street
Central Harlem Alcohol Crisis	
Our Lady of Lourdes (food pantry)	472 West 142nd Street
Our Lady of Lourdes (soup kitchen)	468 West 143rd Street
Fire	
Engine 37/Ladder 40	415 West 125th Street

Note:
(1) Developmentally Disabled Service Office



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

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Figure 21.4-1 Community Facilities and Services
West 135th Street Converted MTS

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21.5 Open Space

21.5.1 Existing Conditions

21.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

21.5.1.2 Summary of Open Space in the Study Area

There are 16 public parks and open spaces within the study area and five just beyond. They are listed in Table 21.5-1 and shown on Figure 21.5-1.

Of particular interest is the proposed Hudson River Valley Greenway under development to provide a continuous waterfront pathway from Albany to Battery Park in lower Manhattan. Currently, there is a "gap" between West 125th Street and West 135th Street and an interim pedestrian and bicycle route connection is provided on street until a formal connection can be developed.

21.5.2 Future No-Build Conditions

The NYCDPR has several projects programmed for Riverside Park and assumed to be completed by the 2006 Build year. These include:

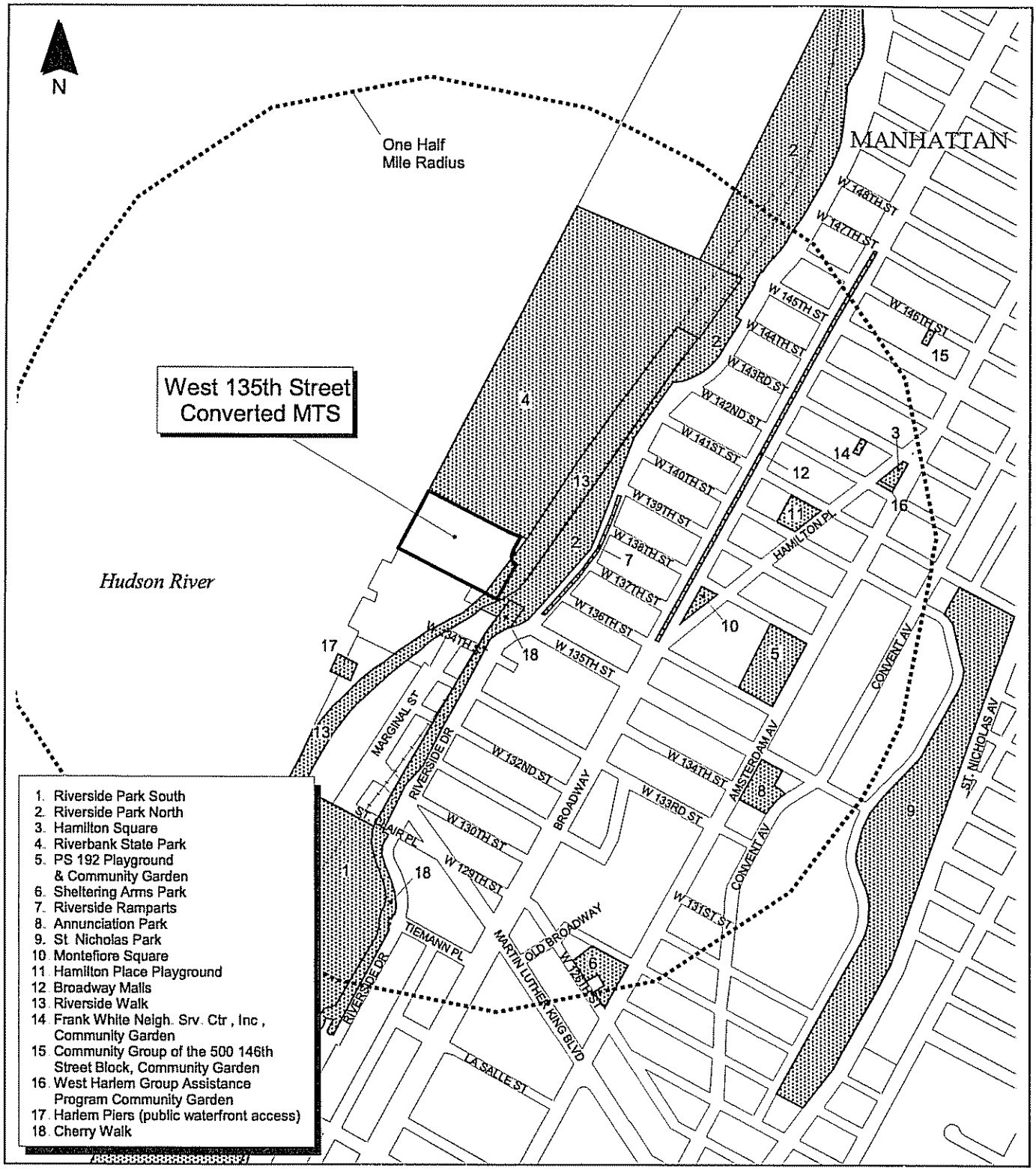
- "Riverside Walk" Bicycle and Pedestrian Path (West 83rd – West 153rd Street) construction;
- West 143rd – West 148th Street path restoration;
- Broadway Malls Reconstruction (West 135th – West 168th Street);
- Application of artificial turf to P.S. 192 Playground (Jacob Schiff Playground); and
- Riverside Park Drive (Ralph Ellison Island West 149th – West 153rd Street).

Table 21.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Frank White Neighborhood Service Center, Inc., Community Garden	506-508 West 143rd Street	0.1
West Harlem Group Assistance Program Community Garden	1656 Amsterdam Avenue	0.1
Community Group of the 500 146th Street Block Community Garden	522 West 146th Street	0.1
Riverbank State Park	West 137th to West 145th Street, on top of the North River WPCP	28.0
Riverside Park North	West 135th Street to West 155th Street	49.6
Riverside Islands	Riverside Drive, West 135th Street to West 158th Street	---
Riverside Park South (only northern tip included in study area)	West 72nd Street to West 129th Street	266.8 (total)
"Riverside Walk" Streets	Western edge of Henry Hudson Parkway, West 83rd Street to West 143rd Street	---
"Cherry Walk"	Riverside Drive to Hudson River, West 92nd Street to West 134th Street	---
Sheltering Arms Park	West 126th Street to West 129th Street, Amsterdam Avenue to Old Broadway	1.4
Montefiore Square	Broadway, Hamilton Plaza, West 138th Street	0.3
Hamilton Square	Amsterdam Avenue, West 143rd Street and Hamilton Plaza	0.1
Saint Nicholas Park	Between St. Nicholas Avenue/Terrace from West 128th Street to West 141st Street	22.7
P.S. 192 Playground and Community Garden	Amsterdam Avenue, West 136th Street	3.9
P.S. 192 School Garden	West 136th Street between Broadway and Amsterdam Avenue	---
Broadway Malls	Broadway from West 135th Street to West 156th Street and West 156th Street to West 158th Street	2.2 and 1.1
Annunciation Park	1491 Amsterdam Avenue and West 135th Street	1.2

Table 21.5-1 (Continued)
Public Parks and Open Spaces

Name	Location	Acreage
Hamilton Place Playground	Hamilton Plaza, West 140th Street to West 141st Street	0.8
Harlem Piers (under development by NYCEDC in cooperation with NYCDPR) includes existing waterfront access at approximately West 132nd Street	Hudson River Waterfront, 125th to 135th Streets	---
Riverside Valley Community Garden	West 139th Street and Riverside Drive	---



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.5-1 Open Space/Parkland
West 135th Street Converted MTS

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NYCEDC has begun the site planning for "Harlem Piers," the waterfront component of the West Harlem Master Plan. A fundamental component of this is the creation of new strip of waterfront parkland extending along the Hudson River between West 129th Street and West 133rd Street.

NYCDPR currently has funding to design and construct a cantilever between 133rd Street and 135th Street, along the western side of the Henry Hudson Parkway and then continuing north of 135th Street along the North River WPCP haul road temporary path.

21.5.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would have no effect on any open space resources within the study area. It would not physically change, diminish or eliminate any open space or reduce its use or aesthetic value, or introduce a substantial new user population that would create or exacerbate over-utilization of open space resources.

21.6 Cultural Resources

21.6.1 Existing Conditions

21.6.1.1 Definition of the Study Area

The cultural resources study area is defined as that area within ½-mile of the site.

21.6.1.2 Development History of the Area

Portions of three distinct Upper Manhattan neighborhoods with their own development histories are part of the study area: Manhattanville, Hamilton Heights and Morningside Heights.

The Manhattanville area on the Upper West Side was a village with a population of about 500 people in the mid-19th century. The village contained churches, a grade school and Manhattan College (1853). It was set in the valley near the present intersection of West 125th Street and Broadway and was surrounded by country residences and open land. There was a ferry terminus on the Hudson River, a mill and a brewery.

The Hamilton Heights area to the northeast includes the neighborhood of Sugar Hill, which is often considered part of Harlem. The area was named for Alexander Hamilton, who spent the last two years of his life in what is now the Hamilton Grange National Monument at 287 Convent Avenue. Elevated subway lines were extended to the neighborhood around the turn of the century, and most of the housing dates to that time. City College of New York (now the north campus) is located on Convent Avenue between West 132nd and West 140th Streets. The Trinity Church cemetery is located at West 155th Street on one of the highest hills of Hamilton Heights.

Morningside Heights is located south of the site and is bounded by West 125th Street to the north, Morningside Park to the east, West 110th Street to the south and the Hudson River to the west. The area was known as Vandewater's Heights in the 17th century, named after a local landowner when farms covered much of the area. Farmland gave way to other uses in the 18th century,

including the Bloomingdale Insane Asylum and an orphan asylum. Since the late 19th century, the area has been home to Riverside Church, Riverside Park, Columbia University, Barnard College and other prominent educational institutions.

21.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

21.6.1.4 Historic Resources Within the Study Area

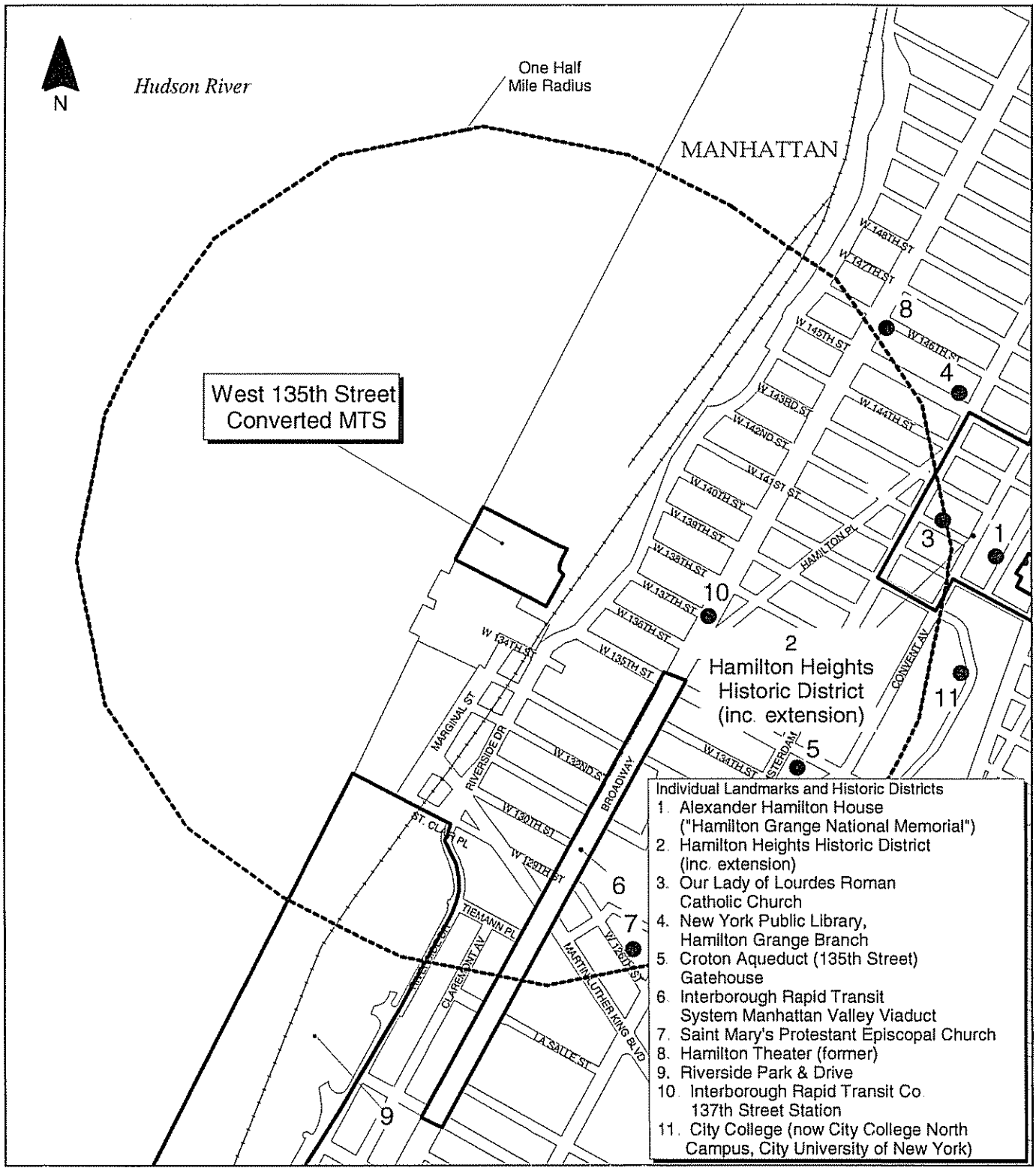
A historic district and ten historic properties are located within or near the study area (see Figure 21.6-1). These properties are listed in Table 21.6-1.

21.6.2 Future No-Build Conditions

There are no additional elements of potential historic significance slated for review. Because of the nature of architectural and archaeological resources and the fact that there is no reason to anticipate the designation of such resources in this area in the near future, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

21.6.3 Potential Impacts with the West 135th Converted MTS

Development of the West 135th Street Converted MTS would have no effect on the cultural resources named above. Based upon its review, SHPO has stated that the West 135th Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, the State and National Registers of Historic Places (see Appendix A). The LPC has stated that the site does not have architectural or archeological significance (see Appendix A).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.6-1 Cultural Resources
West 135th Street Converted MTS

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Table 21.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Hamilton Heights Historic District	Between St. Nicholas Avenue, Amsterdam Avenue, West 140th and 145th Streets (recently extended by LPC north to West 155th Street)	NYCL, SRHP, NR
Hamilton Grange National Memorial	287 Convent Avenue	NYCL, SRHP, NR, also a National Historical landmark
Our Lady of Lourdes Roman Catholic Church	467 West 142nd Street	NYCL, SRHP
New York Public Library, Hamilton Grange Branch	503-505 West 145th Street	NYCL, SRHP, NR
City College, City University of New York	Convent Ave. between West 138th and West 140th Streets.	NYCL, SRHP, NR
Croton Aqueduct Gatehouse	West 135th Street at Convent Avenue	NYCL, SRHP, NR
IRT Manhattan Valley Viaduct	Broadway between West 122nd to West 135th Streets	NYCL, SRHP, NR
IRT 137th Street Station	West 137th Street and Broadway	Interior NYCL, NR-eligible
St. Mary's Protestant Episcopal Church	517-523 West 125th Street	NYCL
(Former) Hamilton Theater	3560-3568 Broadway	NYCL
Riverside Park and Drive	West 72nd to West 129th Streets	NYCL, SRHP, NR

Notes:
SRHP= New York State Register of Historic Places
NR= National Register of Historic Places
NYCL= New York City Landmark

21.7 Urban Design, Visual Resources, and Shadows

21.7.1 Existing Conditions

21.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 21.8-1), although it also includes upland areas east of the Henry Hudson Parkway. The site has been developed in a manner consistent with adjacent properties along the waterfront but not the upland areas. The adjacent Riverbank State Park and upland areas, including warehouses and residential buildings, are visible from the site and have views of the site, so are included as part of the study area.

21.7.1.2 Description of the Site

The site extends over water beyond the existing MTS platform (see Figure 21.7-1). The land portion of the site is paved and has no landscaping or decorative features. The remainder of the built site consists of paved road surfaces, the existing MTS facility (which is built entirely over the water) and the curved ramp that leads to its entrance.

21.7.1.3 Urban Design and Visual Resources of the Study Area

The shoreline surrounding the site has some grass cover and several scrub trees and appears to be managed as necessary to protect the soundness of Marginal Street where it runs along the shore. The 26th Precinct Police Station, located beneath the elevated Henry Hudson Parkway, resembles surrounding warehouses and vacant buildings found beneath the elevated highway (see Figure 21.7-2), which are generally nondescript, with no façade treatment. The design context of the shoreline, however, is defined by the functionalistic style of the existing MTS and the North River WPCP.

Figure 21.7-1 : View of MTS, looking west along 135th Street. (Photo 2000)

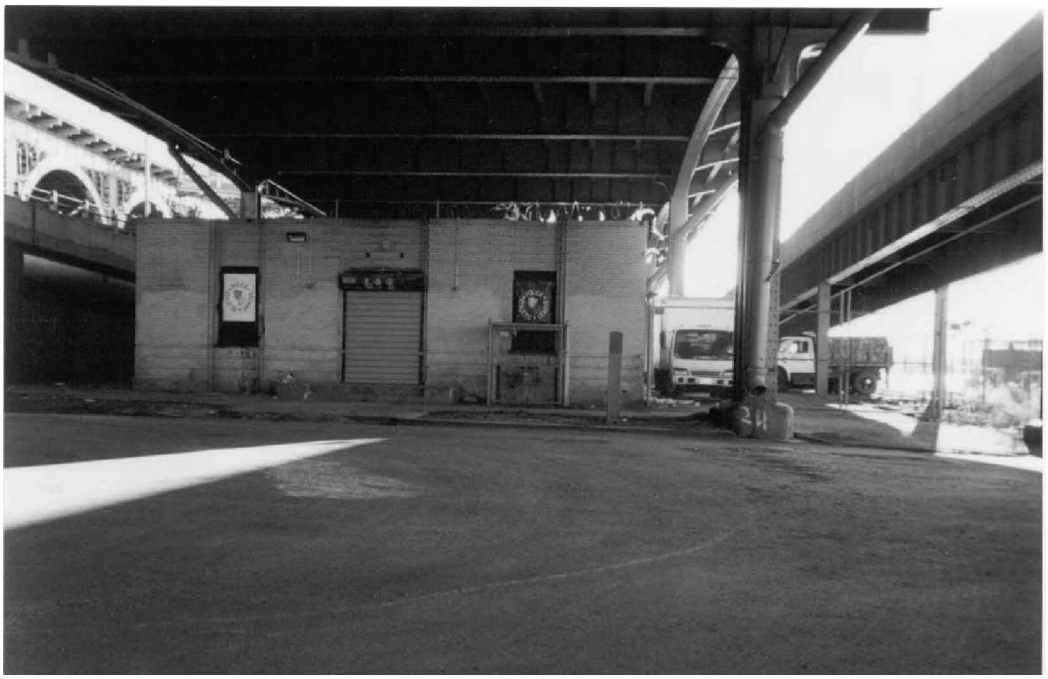

Figure 21.7-2 : Police precinct building located beneath Henry Hudson Parkway, on 135th Street.

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Although not excessively ornamented, the North River WPCP exhibits a designed finish uncharacteristic of many such municipal facilities, with such details as decorative arches, textured concrete and marine blue-glazed brick (see Figure 21.7-3). The low-density appearance of the area south of the North River WPCP is typical of shoreline industrial areas in the City, although the contemporary design of the existing MTS and the adjacent North River WPCP establish a more finished look to the area than may be found on other working waterfront areas.

The railroad tracks, elevated Henry Hudson Parkway and elevated Riverside Drive separate the site from the residential Manhattanville neighborhood visible to the east. This upland area east of Riverside Drive is characterized by massive residential blocks with pre-war apartment buildings stretching from about West 135th Street to West 139th Street. They typically stand approximately six to seven stories tall and feature combinations of brick veneer and stone lintels and sills. The lower floors of the buildings are visually buffered from views of the site and shoreline by distance and a change in elevation as well as mature deciduous trees in Riverside Park, while some upper-floor apartments may have views of the site.

Within the vicinity of P.S. 195, east of Twelfth Avenue and south of West 135th Street (approximately 700 feet east of the site), is a conglomeration of buildings that rises above the Twelfth Avenue viaduct. At the corner of Twelfth Avenue and West 135th Street is a light-brick Italianate building about seven stories high. Adjacent to and south of that building is the Lee Brother's, Inc. building (now used by Manhattan Mini-Storage) that stands about seven stories high, the upper five stories of which contain a vertical portico set into the white west-facing façade (see Figure 21.7-4). This building retains a commanding position over the viaduct and is topped with a large billboard that faces northbound and southbound traffic on Riverside Drive. The shorter building (about three stories tall) just to the south of it is also topped with a billboard. Behind these buildings are tall, red brick apartment buildings 20 to 29 stories tall that may have views of the site

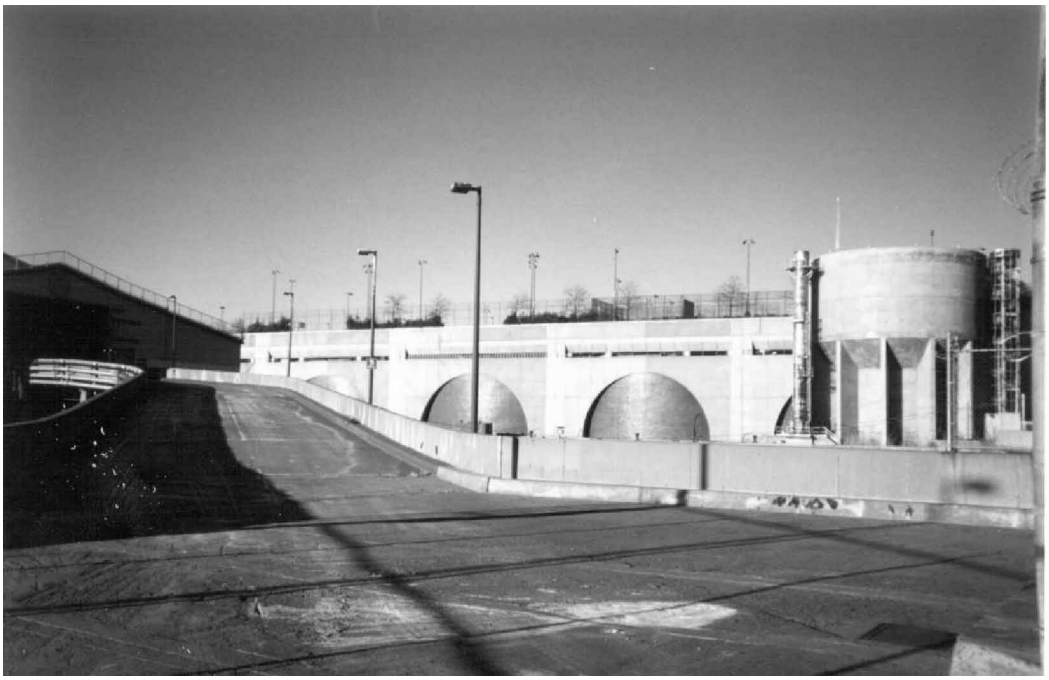

Figure 21.7-3 : View of the North River WPCP and Riverbank State Park, looking north from the site.

Figure 21.7-4 : View looking east from the site. (Photo 2000)

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The area's landscaping and vegetation are within maintained park areas, Riverbank State Park and portions of Riverside Park, in particular. These park areas are oriented to the land uses east of Twelfth Avenue in terms of access, elevation and location. There is little visual connectivity to the site from the portion of Riverside Park that runs east of the site along Riverside Drive, although the trees in the park are visible from the site.

Just as there are views of the site from some upland residential areas, there are clear views of the site from the ball courts and sitting areas along the entire southern edge of the adjacent Riverbank State Park (seeFigure 21.7-5). The existing MTS does not obstruct views of the river from these locations, however, and it is visually compatible with its adjacent shoreline uses.

The proposed Harlem Piers development site between West 125th and West 135th Streets includes waterfront area by the Fairway parking lot (see Figure 21.7-6). This publicly owned property, which currently is used as a point of public waterfront access, affords views of the site and the North River WPCP to the north (see Figure 21.7-7).

21.7.2 Future No-Build Conditions

Redevelopment of Harlem Piers will be a notable improvement to the urban design of the area by 2006 (see Section 21.2.2). Coupled with the improvements planned by the NYCDPR (see Section 21.5.2), which include enhancement of the bicycle and pedestrian route that follows the water's edge, the Harlem Piers will also provide for a larger visitor population Among the improvements planned by the NYCEDC are the development of a public park area, also featuring retail and passive recreational opportunities. Streetscape improvements, including new streetlights, curbing and sidewalk enhancement, will extend from approximately West 129th Street to West 133rd Street.

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Figure 21.7-5 : View of the MTS and site from the southern edge of Riverbank State Park. (Photo 2000)

Figure 21.7-6 : View of Harlem Piers waterfront area.(Photo 2000)

Figure 21.7-5 and 21.7-6
Urban Design and Visual Quality
West 135th Street Converted MTS

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Figure 21.7-7 : The MTS, North River WPCP and Riverbank State Park as viewed from the parking lot of Fairway.

Figure 21.7-7 Urban Design and Visual Quality

West 135th Street Converted MTS

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The site is expected to remain unchanged, however, under Future No-Build Conditions. Though industrial in nature, the design of the existing MTS and the façade treatment of the North River WPCP will provide suitably designed definition to the northward view from the Harlem Piers rather than merely standing as nondescript neighboring industrial facilities.

21.7.3 Potential Impacts with the West 135th Street Converted MTS

21.7.3.1 Visual Quality and Urban Design

The West 135th Street Converted MTS would entail replacement of the existing MTS with a new facility that would include containerization functions and occupy more water-covered area north of the existing platform. Views of the West 135th Street Converted MTS from the elevated residential neighborhoods, the adjacent park or the Harlem Piers area would be similar to existing views, because the West 135th Street Converted MTS would be similar to the existing facility in industrial type and function, physical size, location and operation. While it would be visible from some upland residential and recreational uses, it would not obstruct views of the river. Furthermore, the West 135th Street Converted MTS would be compatible with the existing urban design context of this portion of the Manhattan waterfront, including the proposed Harlem Piers development, and would not result in significant adverse impacts to the urban design and visual quality of the study area.

21.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

Four park and open space resources are located within shadow impact area:

- Riverbank State Park;
- Cherry Walk;
- Riverside Park North; and
- River Walk Path.

Riverbank State Park is located north of the West 135th Street Converted MTS, on the rooftop level of the North River WPCP, approximately 70 feet above the Hudson River on a ½-mile long platform.

Cherry Walk is a pedestrian path from Riverside Drive to the Hudson River, between West 92nd Street and West 134th Street.

Riverside Park North and River Walk Path are both located at-grade, below and shadowed by the elevated structure of the Henry Hudson Parkway.

There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the Converted West 135th Street MTS development. During most of the year, shadows generated by the 100-foot tall West 135th Street Converted MTS and 80-foot cranes would completely fall across portions of the Hudson River. Analysis of June 21st and May 6th indicates that shadows would fall across any land for 20 to 30 minutes in the evening hours: from 6:30 p.m. to 7:00 p.m. on June 21st and 6:00 p.m. to 6:20 p.m. on May 6th, and would not touch any portion of the nearby sensitive resources. (See Figure 21.7-8.)

On December 21st, shadows would fall across the base of the North River WPCP in the afternoon, but never climb higher than North River WPCP's portion of the wall. Since no shadows are projected to fall across Riverbank State Park by 2:50 p.m. (approximately one hour before sunset per CEQR guidelines), or on any of the area's other relevant resources, no impacts from shadows are anticipated from the West 135th Street Converted MTS.

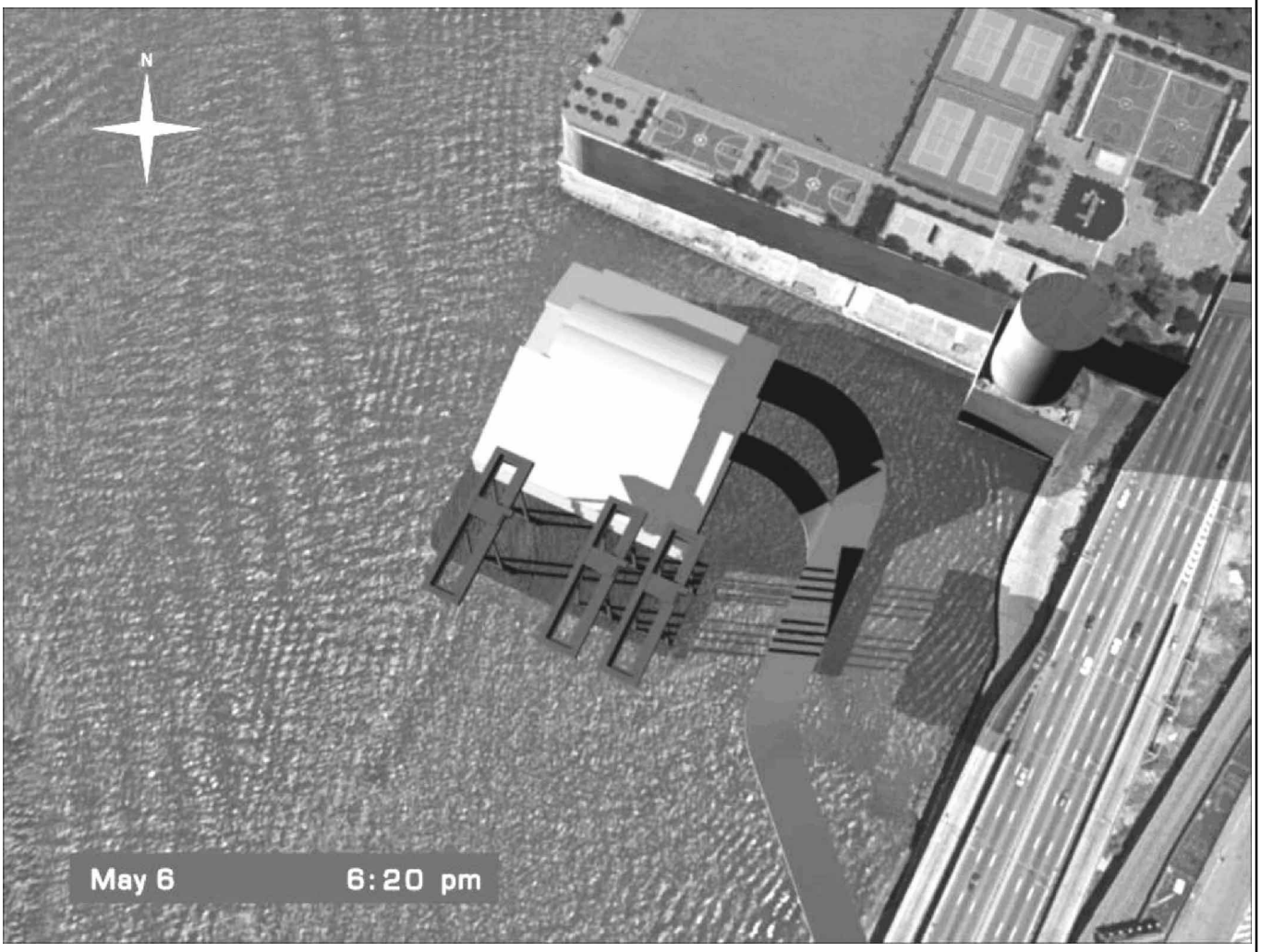

Figure 21.7-8 Shadow Diagram

West 135th Street Converted MTS

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21.8 Neighborhood Character

21.8.1 Existing Conditions

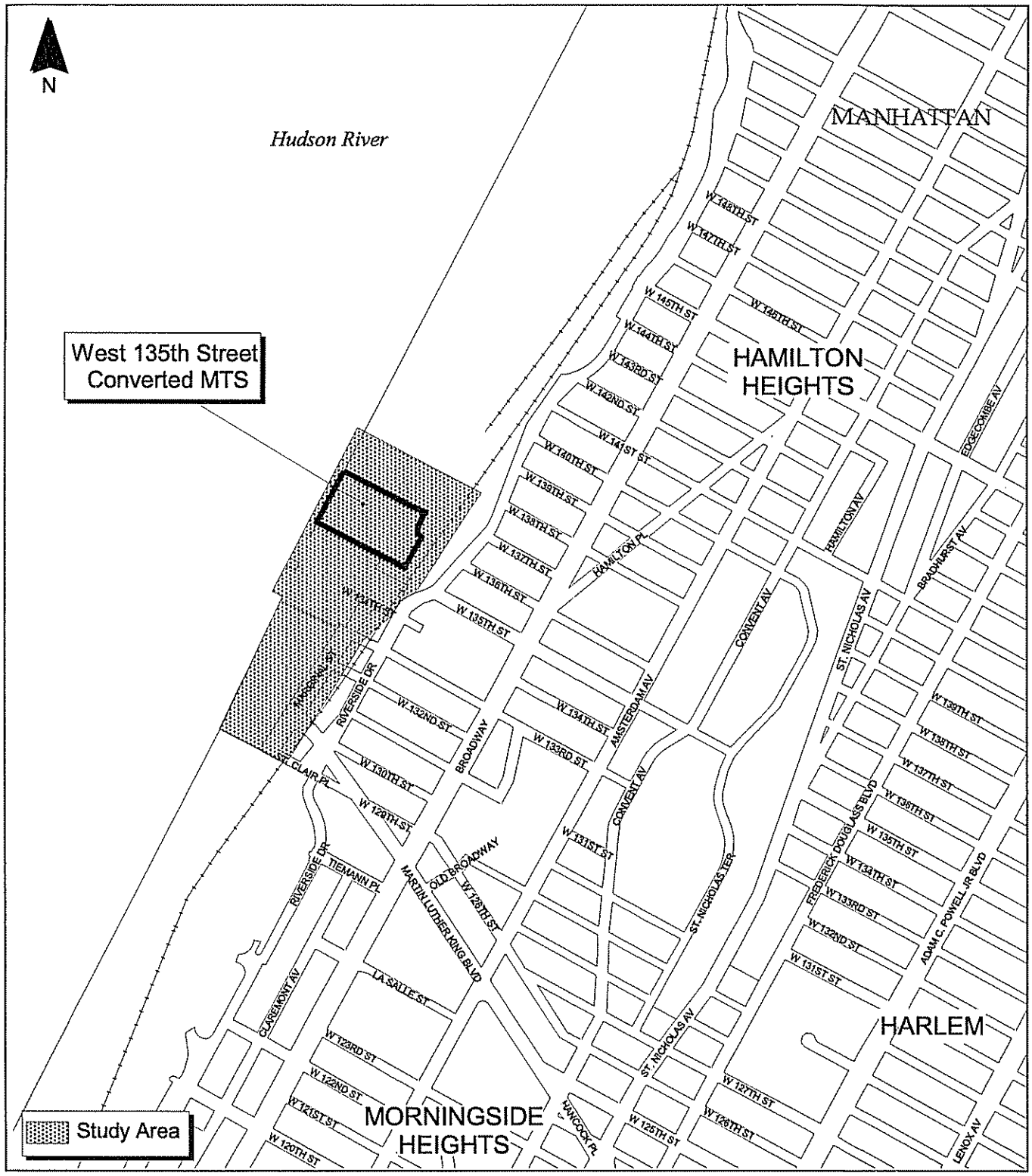
21.8.1.1 Definition of the Study Area

The site is separated from inland residential neighborhoods by the Henry Hudson Parkway, Riverside Drive and the change in elevation that separates the inland properties from the waterfront. The neighborhood character study area is defined by the visual and physical isolation created by the proximity and scale of surrounding transportation infrastructure and municipal uses. The two major factors contributing to the neighborhood character of the site and surrounding shoreline properties are the unique combination of land uses — large-scale municipal uses, regional park use, public waterfront access, shoreline industrial uses, parking areas and commercial land uses — and the resultant, albeit nondescript, visual quality.

The study area is bounded by the Henry Hudson Parkway to the east and includes the portions of blocks facing Marginal Street south of the site (see Figure 21.8-1). View corridors connecting upland residential areas to the site are also included. The southern edge of the study area is defined by St. Clair Place, the southernmost point of egress from the shoreline within the study area. The northern boundary of the study area includes the southern edge of the elevated Riverbank State Park which, in addition to being adjacent to the site, is the only portion of the park that has direct views of the site.

21.8.1.2 Description of Neighborhood Character

The waterfront development consists of the existing MTS and a Consolidated Edison natural gas pumping facility immediately to the south. The remainder of the shoreline south of the existing MTS is City-owned property. A portion of the land west of Marginal Street is used as a parking lot for the Fairway store between West 132nd and West 133rd Streets. The waterfront is publicly accessible at the southern end of this parking lot, approximating the extension of West 131st Street to the shore. The parking lot is not landscaped, and the area of waterfront access is equally utilitarian, lacking landscaping, seating or decorative elements. North of the site and adjacent to it is the Riverbank State Park, which is at approximately the same elevation as the



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 21.8-1 Neighborhood Location

West 135th Street Converted MTS

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upland residential areas, east of the Henry Hudson Parkway. The position of the park atop the North River WPCP affords people along the southern edge of the park (where there are ball courts and sitting areas) views down upon the site and virtually the entire study area.

The visual quality in the study area is not one of a consistent character, nor is it aesthetically pleasing near the site, beneath the elevated roadway. Generally speaking, the upland residential areas are characterized by apartment blocks that include active commercial uses along the avenues. Row houses and smaller apartment buildings are found on cross streets. These upland residential areas have no direct connection to the site, except via usage of Riverbank State Park, but they are visible from the site and have views of it and the adjacent shoreline uses.

21.8.2 Future No-Build Conditions

The redevelopment of Harlem Piers by NYCEDC will figure prominently in redefining the neighborhood character of the study area by 2006. The introduction of a new park area as well as complementary commercial activity as part of the Harlem Piers will create a new destination point and in essence extend inland Harlem development efforts westward to the waterfront.

The Hudson River Valley Greenway is also under development, as discussed in Section 21.5. It is reasonable to anticipate increased use of Riverside Park by residents of the surrounding neighborhoods, as bicycling will be encouraged through the Hudson River Valley Greenway development, which will follow the river. NYCDPR is working in cooperation with NYCEDC to ensure that the necessary bicycle and pedestrian ways are developed by the 2006 Build year. Complementary streetscape and sidewalk improvements proposed as part of the Harlem Piers include improved sidewalks, curbing and street lighting. Taken together, these improvements would ensure that the redeveloped area would not exist in limited-access isolation from street activities even though it is adjacent to industrial uses to the north and generally nondescript warehouses under the Hudson River Parkway to the east.

The site would remain DSNY property, and the existing MTS would remain standing.

21.8.3 Potential Impacts with the West 135th Street Converted MTS

No change to the mixed neighborhood character would be expected to result from the reactivation of waste transfer activities at the site. The West 135th Street Converted MTS would be constructed over the water with a similar point of access as the existing MTS, though it would be situated further north, nearer the North River WPCP and Riverbank State Park. Trucks would follow the same route as they did formerly and the operations would feature containerization operations rather than the transport of loose waste by barge.

Riverbank State Park is the nearest destination point attracting people to the neighborhood and near the site. Traffic, air, odor and noise analyses predict no unmitigatible impact on the park or other receptors in the neighborhood character study area (see Sections 21.14, 21.15, 21.16 and 21.17 for detailed discussions of the traffic, air, odor and noise analyses, respectively). Therefore, it is reasonable to conclude that renewed MTS operations would result in no significant adverse impacts to the character of this specific portion of the neighborhood character study area, including the park. (See Section 21.5 for a discussion of potential impacts to parks and open spaces.)

21.9 Natural Resources

21.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Manhattan. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from implementation of the West 135th Street Converted MTS.

21.9.1.1 Definition of Study Area

The study area includes the existing site, including the waterfront section that is located on the Hudson River to the west (see Figure 2.6-1). The existing facility is a platform structure extending out from the shore into the river with a small employee parking area being the only upland feature. As a result, no terrestrial natural resources exist to be discussed. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of the aquatic communities is included.

21.9.1.2 Geology

Boring data from the City of New York Public Works drawing, entitled Record of Borings, Marine Transfer Station W. 135th Street, Manhattan (January 8, 1954), indicates that bedrock was encountered between elevations -153 and –184, based on the Manhattan Borough Datum. The bedrock was described as hard, badly weathered and seamy, dark gray Schist.

Organic soils were encountered at the mud line and ranged between 20 and 74 feet thick. The organic soils typically consisted of soft, black to gray organic soils with occasional layers of loose gray silty sand. A sand stratum consisting of medium dense to dense, brown to red brown poorly graded sand was encountered underlying the organic soils stratum and ranged from 20 to 41 feet in thickness. Underlying the sand stratum was a silt stratum consisting of stiff, gray to brown silt with sand. This stratum ranged from 4 to 34 feet in thickness. A sand stratum ranging

in thickness from 5 to 55 feet was encountered under the silt stratum and consisted of very dense, red brown silty sand with occasional layers of gravel, silt, and fine sand layers interbedded throughout the unit.

Results of the sediment samples collected for analysis in 2003 show that surficial sediments are composed of 94.3% silt and clay, 5.3% sand and 0.6% gravel.[5] The sediment contains 52,916 mg/kg TOC and was found to be somewhat degraded due to contaminants in the sample material. The three metals with the highest concentrations in the sediment were lead, chromium and barium with concentrations of 76.08 mg/kg, 59.67 mg/kg and 54.83 mg/kg, respectively.

21.9.1.3 Floodplains

The site is constructed within the 100-year coastal floodplain (see Figure 21.9-1). No wetlands, other than the Hudson River, a NYSDEC-designated littoral zone, exist on the site (see Figure 21.9-2).

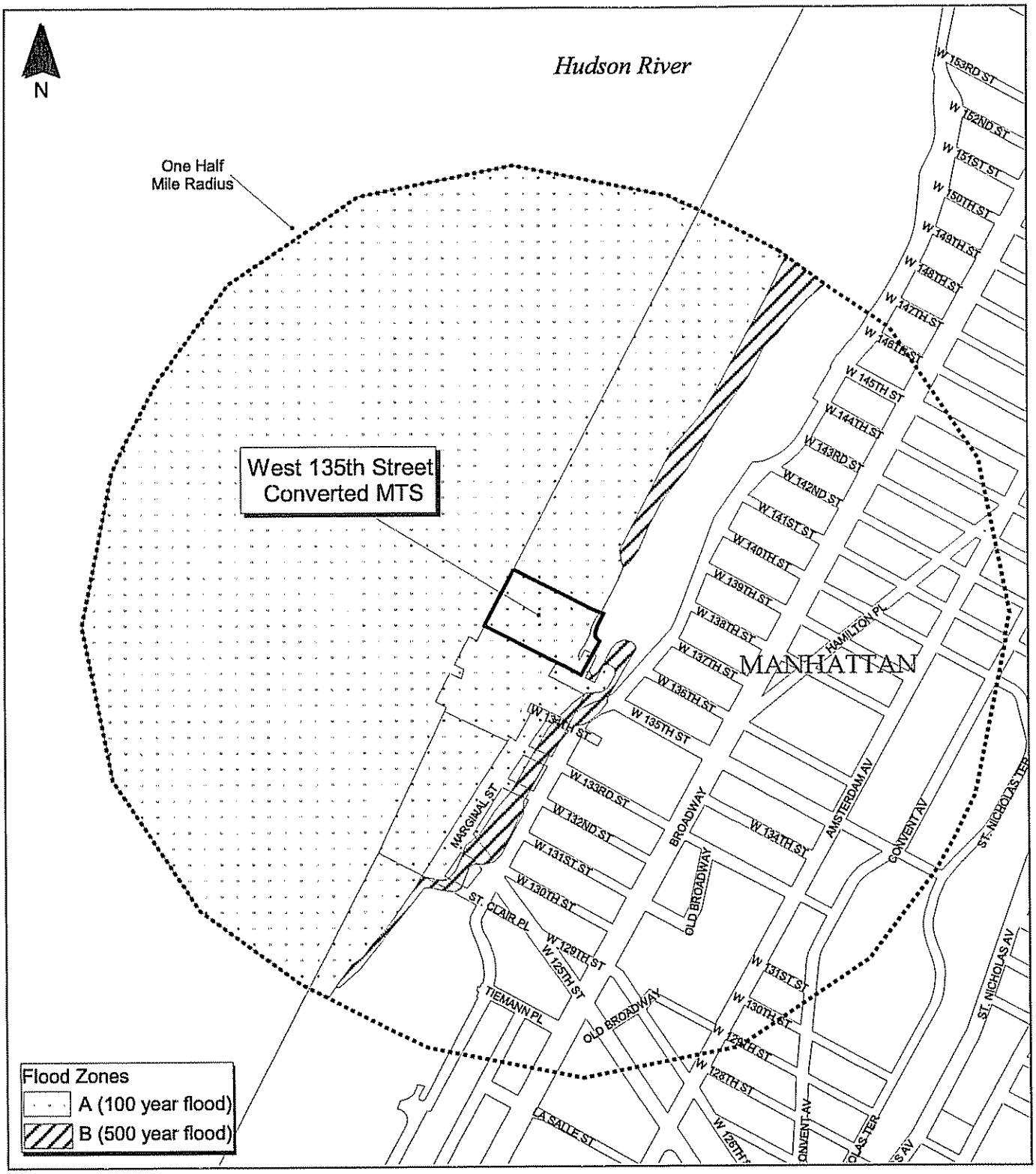
21.9.1.4 Ecosystems

Because the site is located on an offshore platform, there are no upland natural resources to consider, describe or map. The majority of the approaches leading to the facility are hard surface, devoid of vegetation. A 12-space parking area is the only upland feature of the site.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the area. The program included monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for adult finfish, benthic invertebrates and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

The marine communities surrounding the West 135th Street Converted MTS showed signs of ecological stress. Adult finfish and megainvertebrate species richness were amongst the lowest of MTSs sampled. A large number of finfish was collected, but the catch was dominated by a

[5] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.9-1 Floodplains
West 135th Street Converted MTS

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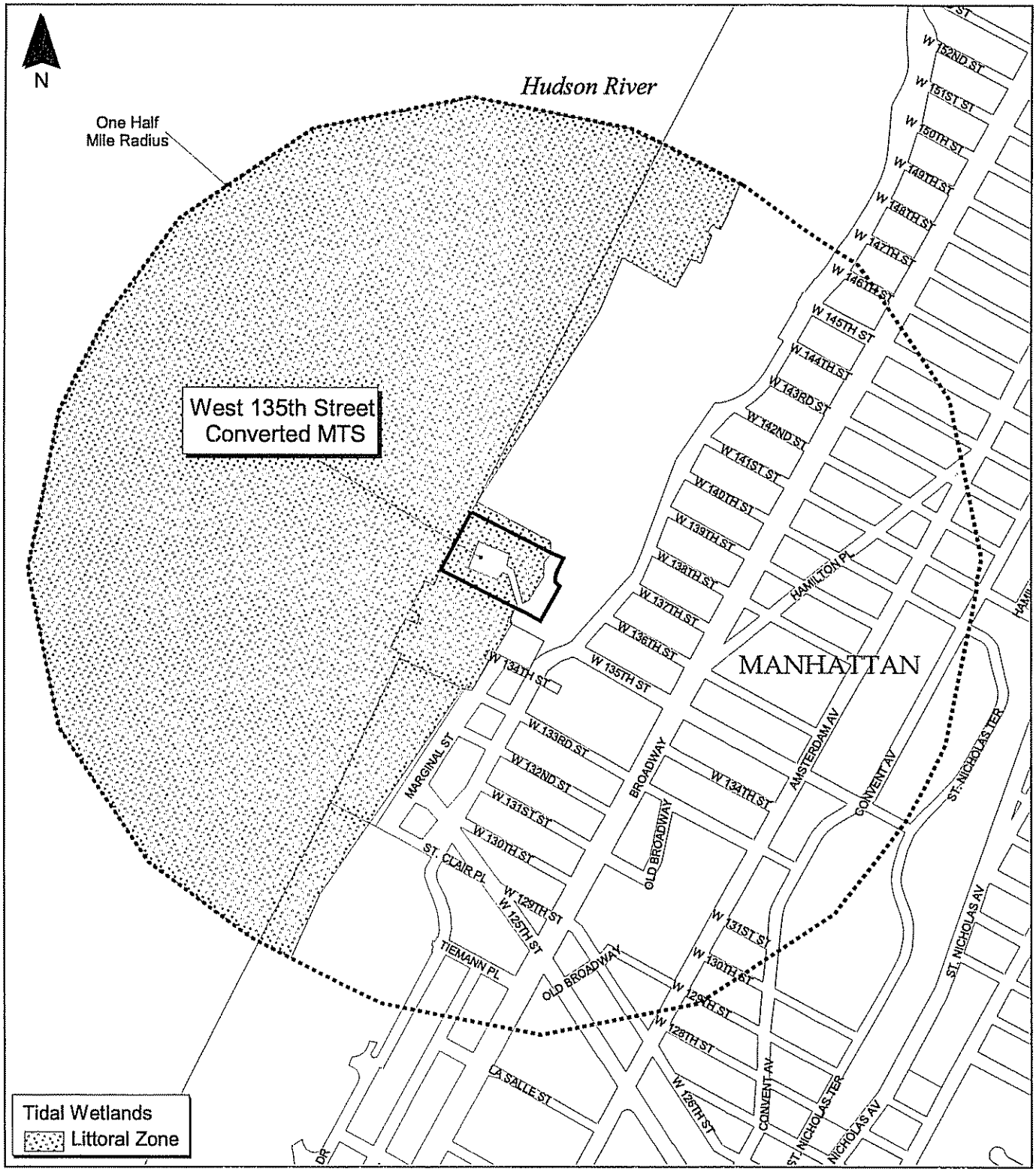

Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.9-2 Wetlands
West 135th Street Converted MTS

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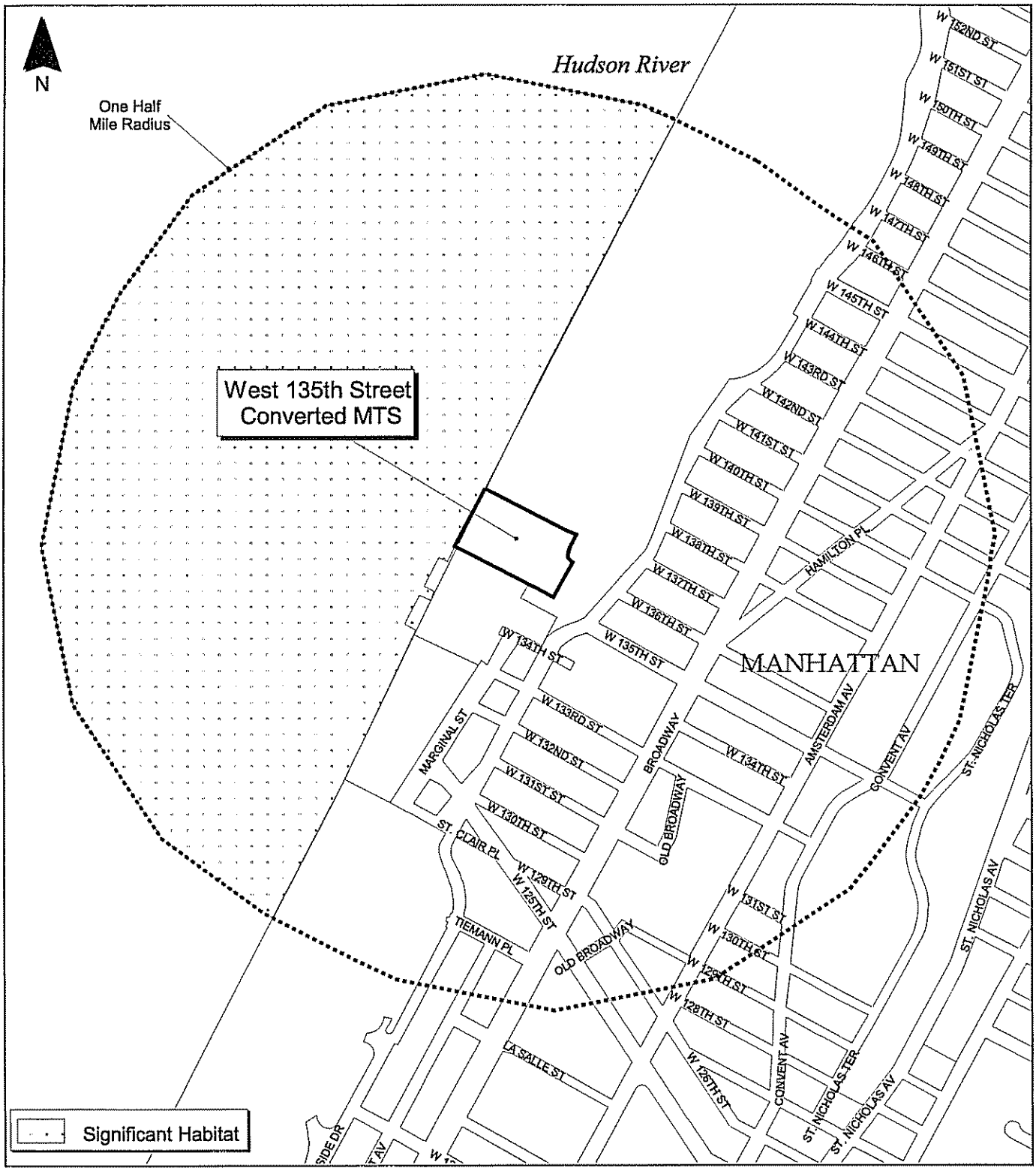
single species, a sign that indicates environmental stress. Finfish larvae also exhibited low densities in the water column around this structure. The benthic community had a high diversity index, but it had low species abundances and was dominated by pollution-tolerant organisms. A reason for the stressed environmental conditions could be the wastewater treatment plant directly north of the MTS.

A total of 948 adult finfish were collected during the year long study at this MTS. Juvenile Atlantic croaker (*Micropogonias undulatus*) was by far the most abundant species collected, comprising 93% of the total catch. The next most abundant species were striped bass (*Morone saxatilis*) and winter flounder (*Pleuronectes americanus*). There were five adult finfish species collected that have EFH listing. These species were: winter flounder, bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), windowpane (*Scophthalmus aquosus*) and summer flounder (*Paralichthys dentatus*). The most abundant finfish eggs collected at the 135th Street Converted MTS were bay anchovy (*Anchoa mitchilli*). Abundant larval species collected were winter flounder, anchovy spp. and goby spp. (*Gobiosoma* spp.). Two larval species having EFH listing were collected at this MTS – winter flounder and windowpane. There were no EFH-listed eggs collected here.

The most abundant megainvertebrate species collected at the West 135th Street Converted MTS was the sevenspine bay shrimp (*Crangon septemspinosa*). Oligochaetes and polychaetes (worms) were the most abundant benthic organisms collected. Of the eight MTSs studied, abundances of benthic organisms per square meter were second lowest at the West 135th Street Converted MTS. Oligochaetes were 11,000 per square meter and *Streblospio benedicti* and polychates were 4,000 and 3,750 per square meter, respectively. The dominant epibenthic colonizers were *Pleusymtes glaber* (amphipod), *Balanus* sp. (barnacle), *Polydora* sp. (polychaete worm), and hydrozoa, mud and algal film.

It should be noted that the Lower Hudson Reach, in which the study area is located, is a New York State Department of State Division of Coastal Resources and Waterfront Revitalization-designated SCFWH (see Figure 21.9-3). New York State's CMP



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.9-3 Significant Habitat
West 135th Street Converted MTS

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includes a specific policy for the protection of fish and wildlife habitats that are determined to be of statewide significance. An inventory of the coastline was conducted to identify the most valuable habitats according to the following criteria: ecosystem rarity, species population levels, support of vulnerable species, human use and replaceability. A numerical rating system using these criteria was applied to more than 300 areas, and approximately 235 have qualified for official designation and mapping as SCFWHs.

NYSDEC's NHP records list the common nighthawk (*Chordeiles minor*) as a species known to be suspected of breeding in the study area. The state legal status of this wild bird is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds.

A pesticide survey was conducted in the nearshore sediments. All organic levels were below detection limits (i.e., very low levels) for the USEPA's Toxicity Extraction Procedure, the test in use at the time of the sampling.[6]

21.9.2 Future No-Build Conditions

If the West 135th Street Converted MTS were not to be built, the study area would remain as is. The absence of terrestrial natural resources would remain and the upland portion of the study area would continue to be an ecologically unproductive and stressed urban area. Aquatic natural resources would continue to be present in the waters in and around the study area.

[6] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

21.9.3 Potential Impacts with the West 135th Street Converted MTS

21.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

21.9.3.2 Floodplains

Implementation of the West 135th Street Converted MTS would have no effect on the elevation of the study area. The facility would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the study area over this level.

21.9.3.3 Ecosystems

Upland impacts to the current natural resources in the study area are expected to be minimal due to the limited size and fully developed condition of the study area.

Removal of the existing facility would presumably be carried out by a barge-mounted crane. During the extraction of the subsurface pilings, the upper organic silts would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low and the impacts, if any, highly localized. Turbidity and short-term, lower, dissolved oxygen are possible, but not measurable, against normal background fluctuations. The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the West 135th Street Converted MTS.

Construction of the new pile-supported facility would involve the driving of new piles through the upper organic silts, through the sand layers and to bedrock or sufficient depth for friction support. Penetration of the upper silts may cause small amounts of re-suspension, and dredging will result in an immediate, short-term destruction of the benthic invertebrates in the area.

Because the benthic diversity is high and marine construction causes turbidity and siltation that could smother the benthic organisms, the short-term degree of impact is expected to be high. However, recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[7] Given the relatively small size of the project, minimal overall impact to the benthic community is expected at the West 135th Street Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Flounder catch was much higher at the West 135th Street Converted MTS than herring catch, so it can be assumed that this site is not an important herring habitat that will be temporarily impacted. Finfish eggs and larvae are more sensitive to suspended sediment, and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the West 135th Street Converted MTS is for an increase in 36,089 square feet of pier. This will result in increased shading that will block sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[8] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

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[7] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

[8] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[9] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the increase in shading over water is very small, there are not expected to be significant deleterious results. There is a possibility of a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

According to the Atlas of Breeding Birds in New York State, the common nighthawk (*Chordeiles minor*) regularly nests on flat-roofed structures in cities and towns and feeds upon insects during flight. The West 135th Street Converted MTS is not likely to directly impact any potential nesting habitat or prey species that the nighthawk depends upon.[10]

[9] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

[10] Andrle, R.F. & Carroll, J.R., eds, 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

21.10 Hazardous Materials

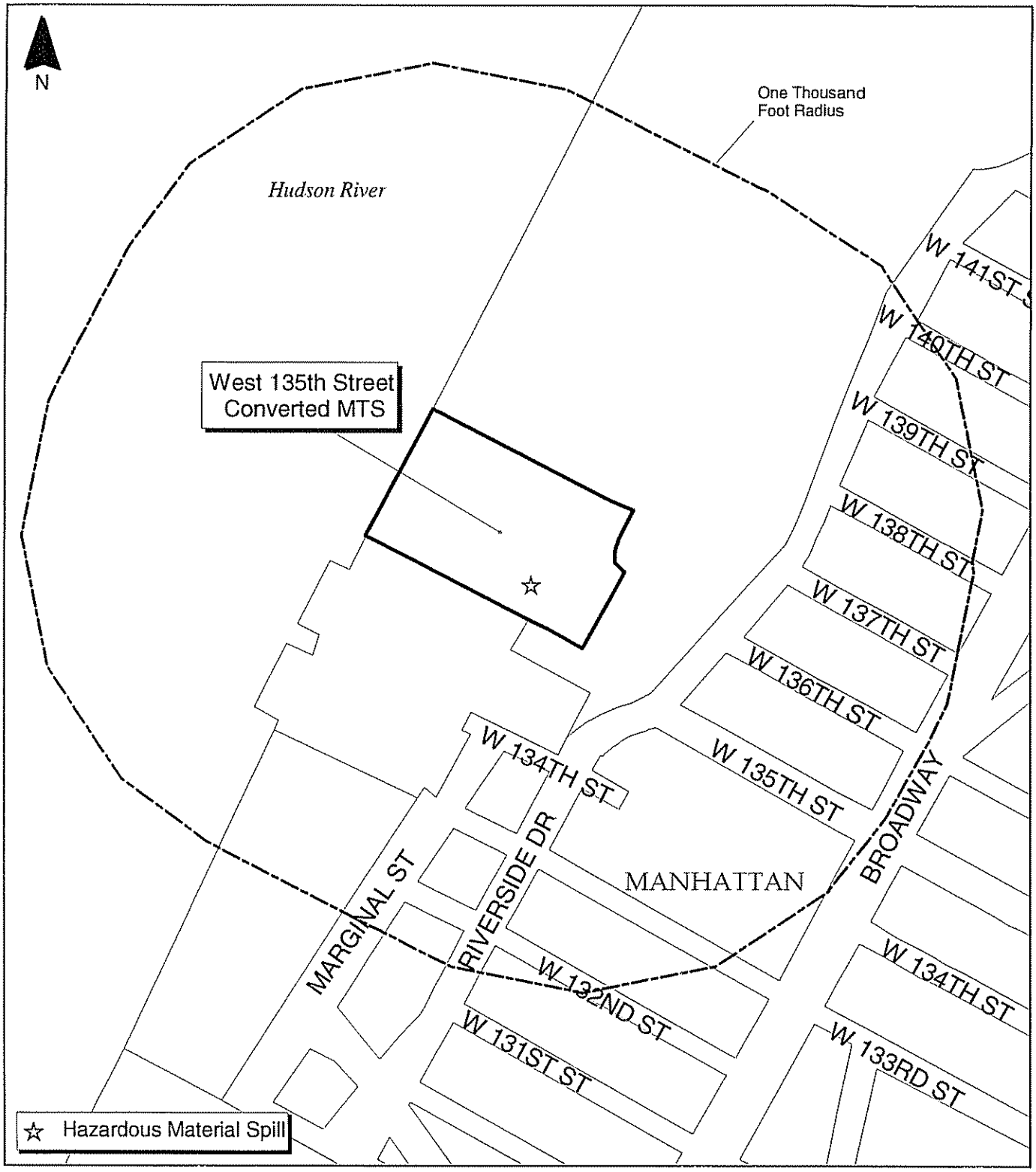
21.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

21.10.1.1 Definition of Study Area

The study area includes the existing MTS site and neighboring properties within a 1,000-foot radius (see Figure 21.10-1).



Site delineations and study area boundaries are approximate
Base Mp Source: New York City Department of City Planning

200 0 200 Feet

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Figure 21.10-1 Hazardous Material Sites

West 135th Street Converted MTS

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21.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the ground, groundwater, surface water or structures within the study area where the presence or likely presence of hazardous materials exists and implementation of the West 135th Street Converted MTS could lead to an increased exposure of people or the environment to those materials. No specific areas of concern were identified at this site during the assessment.

21.10.2 Future No-Build Conditions

The site would remain as is. There would be no areas of significant concern with regard to hazardous materials.

21.10.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would not result in adverse impacts. Some benefits may be realized because a new facility would replace the existing MTS. No additional testing would be required other than an asbestos inspection prior to demolition of the existing MTS. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.

21.11 Water Quality

21.11.1 Existing Conditions

21.11.1.1 Definition of the Study Area

The water quality study area encompasses the Hudson River and includes discharges from CSOs located within ½-mile of the site.

21.11.1.2 Water Quality

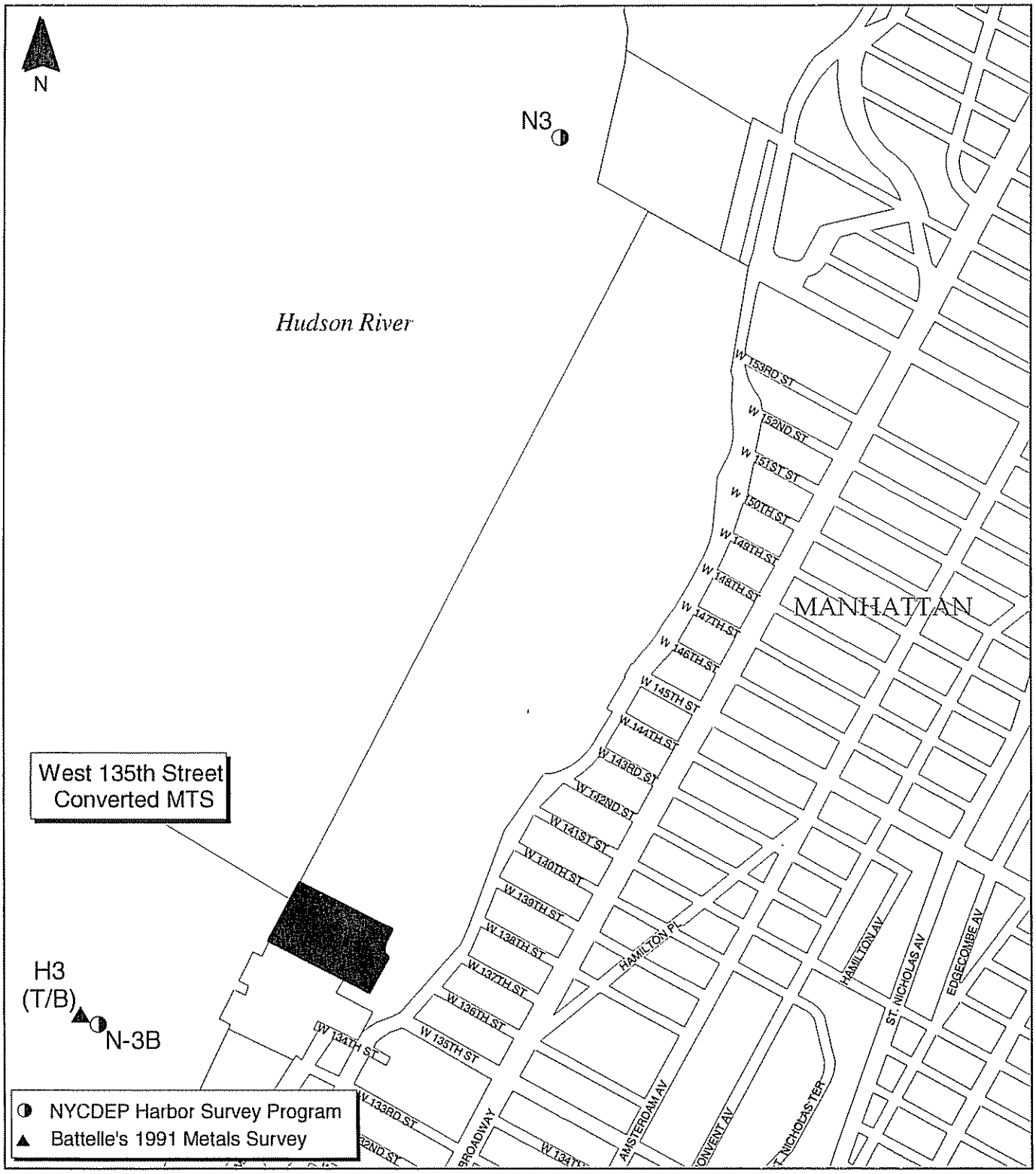
The water quality data for the following monitoring stations, shown in Figure 21.11-1, are generally representative of water quality in the study area:

- NYCDEP Harbor Survey Program –Stations N-3 and N-3B in the Hudson River off of Manhattan; and
- Battelle's 1991 Metals Survey –Stations H-3T and H-3B[11] in the Hudson River at mid-Manhattan.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 21.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates water suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 21.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Stations H-3T and H-3B did not conform to the water quality standard for mercury.

[11] Stations H-3T and H-3B are located at the same longitude and latitude. Station H-3T is located at the surface of the Hudson River. Station H-3B is located at the bottom of the Hudson River.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.11-1 Ambient Water Quality Stations
West 135th Street Converted MTS

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Table 21.11-1
Existing Water Quality Conditions and Standards
West 135th Street Converted MTS Study Area

Average Concentration						
Parameter	**Units**	**Station N-3[1]**	**Station N-3B[2]**	**Station H-3T[3]**	**Station H-3B[4]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	8.7[5]/5.2[6]	8.69[7]/5.51[8]	-------	-------	4
Dissolved Oxygen (bottom/minimum)	mg/L	7.1[5]/4.5[6]	6.95[9]/4.69[8]	-------	-------	4
BOD (surface)	mg/L	2.0[10]	2.0[10]	-------	-------	-------
BOD (bottom)	mg/L	3.0.[10]	2.7[10]	-------	-------	-------
Total Coliform (surface)	MPN/100 ml	718[11]	838[11]	-------	-------	10,000
Total Coliform (bottom)	MPN/100 ml	1,893[11]	1,411[11]	-------	-------	10,000
Fecal Coliform (top)	MF	37	94	-------	-------	2,000
Fecal Coliform (bottom)	MF	43	35	-------	-------	2,000
Total Suspended Solids (surface)	mg/L	19	13.1	-------	-------	-------
Total Suspended Solids (bottom)	mg/L	66	71.2	-------	-------	-------
NH_3-N	mg/L	0.244	0.21	-------	-------	-------
(NO_3 + NO_2)	mg/L	0.453	0.52	-------	-------	-------
Total Phosphorous	mg/L	0.433[12]	0.12	-------	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------	-------
Chlorophyll-a	µg/L	10.3	6.6	-------	-------	-------
Arsenic	µg/L	-------	-------	-------	-------	36[12,13]
Cadmium	µg/L	-------	-------	0.06[12]	0.07[12]	7.7[12,13]
Chromium	µg/L	-------	-------	-------	-------	------
Copper	µg/L	-------	-------	2.00[14]	1.91[14]	5.6[13,14]
Lead	µg/L	-------	-------	0.13[12]	0.16[12]	8[12,13]
Mercury	µg/L	-------	-------	0.0027[12]	0.0033[12]	0.0026[12,13]
Nickel	µg/L	-------	-------	0.98[12]	1.03[12]	8.2[12,13]
Silver	µg/L	-------	-------	0.0106[12]	0.0135[12,15]	-------
Zinc	µg/L	-------	-------	3.76[12]	5.23[12]	66[12,13]
Cyanide	µg/L	-------	-------	-------	-------	1.0[12]

Notes:

(1) Average concentrations for 1999 NYCDEP Harbor Survey site N-3, located at mid-Manhattan in the Hudson River.

(2) Average concentrations for 2003 NYCDEP Harbor Survey site N-3B, located at mid-Manhattan in the Hudson River.

(3) Average concentrations for 1991 Battelle Ambient Survey site H-3T, located at mid-Manhattan on the surface of the Hudson River.

(4) Average concentrations for 1991 Battelle Ambient Survey site H-3B, located at mid-Manhattan at the bottom of the Hudson River.

(5) Represents average between March and December 1999.

(6) Minimum between June 1, 1999 and September 30, 1999.

(7) Represents average between January and December 2003.

(8) Minimum between June 1, 2003 and September 30, 2003.

(9) Represents average between January and December 2003.

(10) Latest available data 1997.

(11) Latest available data 1996.

(12) Latest available data 1998.

(13) Guidance values and data are for dissolved metals.

(14) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata January 1999 and addendum April 2000).

Notes for Table 21.11-1 (Continued)
(15) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

21.11.1.3 Permitted Discharges

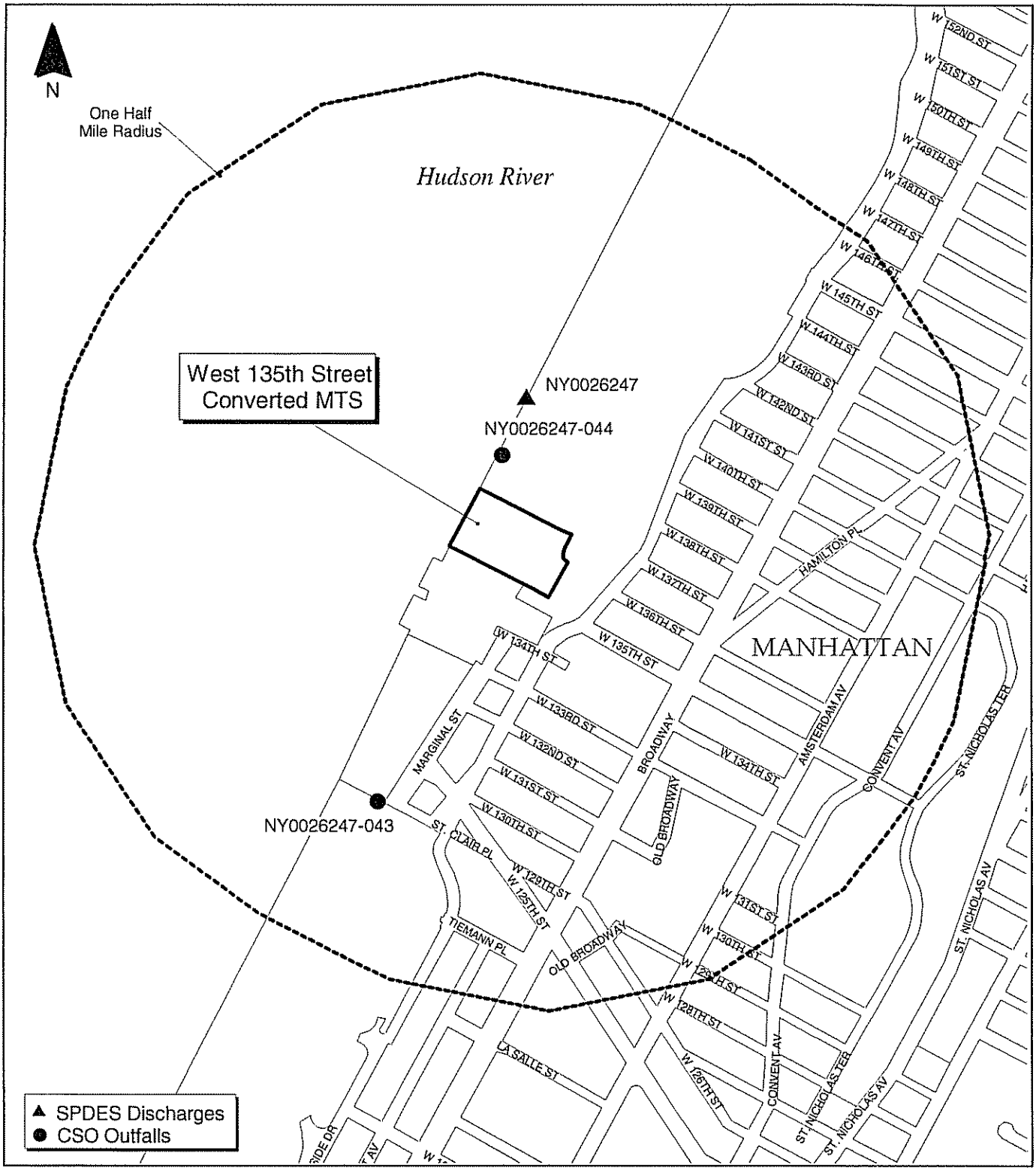
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the West 135th Street Converted MTS site are shown in Figure 21.11-2 and listed in Table 21.11-2. These discharges consist of two CSOs and one point source, all of which are permitted by the NYSDEC. One CSO outfall and the point source are located to the north of the site. The other CSO outfall is located to the south of the site.

21.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and infiltration. A runoff flow of 0.078 cfs was calculated using the impervious site area (1.30 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 21.11-3, represent the existing loads at the existing site.

21.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to ongoing water quality improvement programs such as the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from the City WPCPs; and other water improvement programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 21.11-2 Permitted Outfalls and CSO Locations West 135th Street Converted MTS

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Table 21.11-2
Existing Permitted Discharges
West 135th Street Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
St. Clair Place/North River	NY0026247-043	New York	Hudson River
West 138th Street/North River	NY0026247-044	New York	Hudson River
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
North River WPCP	NY0026247	New York	Hudson River

Table 21.11-3
Estimated Existing Pollutant Loads and Runoff Flows
West 135th Street Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	14,273[(1)]
BOD mg/L	11	5
Heavy Metals		
Copper µg/L	35	0.015
Lead µg/L	28	0.012
Zinc µg/L	154	0.065
Total Impervious Area (acre) = 1.30		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[(2)]		Runoff Volume (cfs) = 0.078

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

21.11.3 Potential Impacts with the West 135th Street Converted MTS

All solid waste processing at the West 135th Street Converted MTS would occur within the proposed structures. All process wastewater from waste handling operations at the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After pretreatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the North River WPCP, where it would be treated prior to discharge to the Hudson River and, therefore, would not adversely affect water quality.

With the development and operation of the West 135th Street Converted MTS, there would be an increase in the impervious area and, therefore, an increase in stormwater loadings. Table 21.11-4 shows the existing impervious area, the change in impervious area and the pollutant loads for the West 135th Street Converted MTS. According to the 208 Model, however, these increased loads would have no significant impact on water quality in the adjacent surface waters.

Table 21.11-4
Impervious Area and Estimated Pollutant Loads
West 135th Street Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Conditions	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	1.30	0 0	14,273/NA	5/NA	0.015/NA	0 012/NA	0.065/NA
Future Build Conditions	2.08	0.78	23,081/8,808	8/3	0 024/0 009	0 019/0 007	0.105/0.040

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

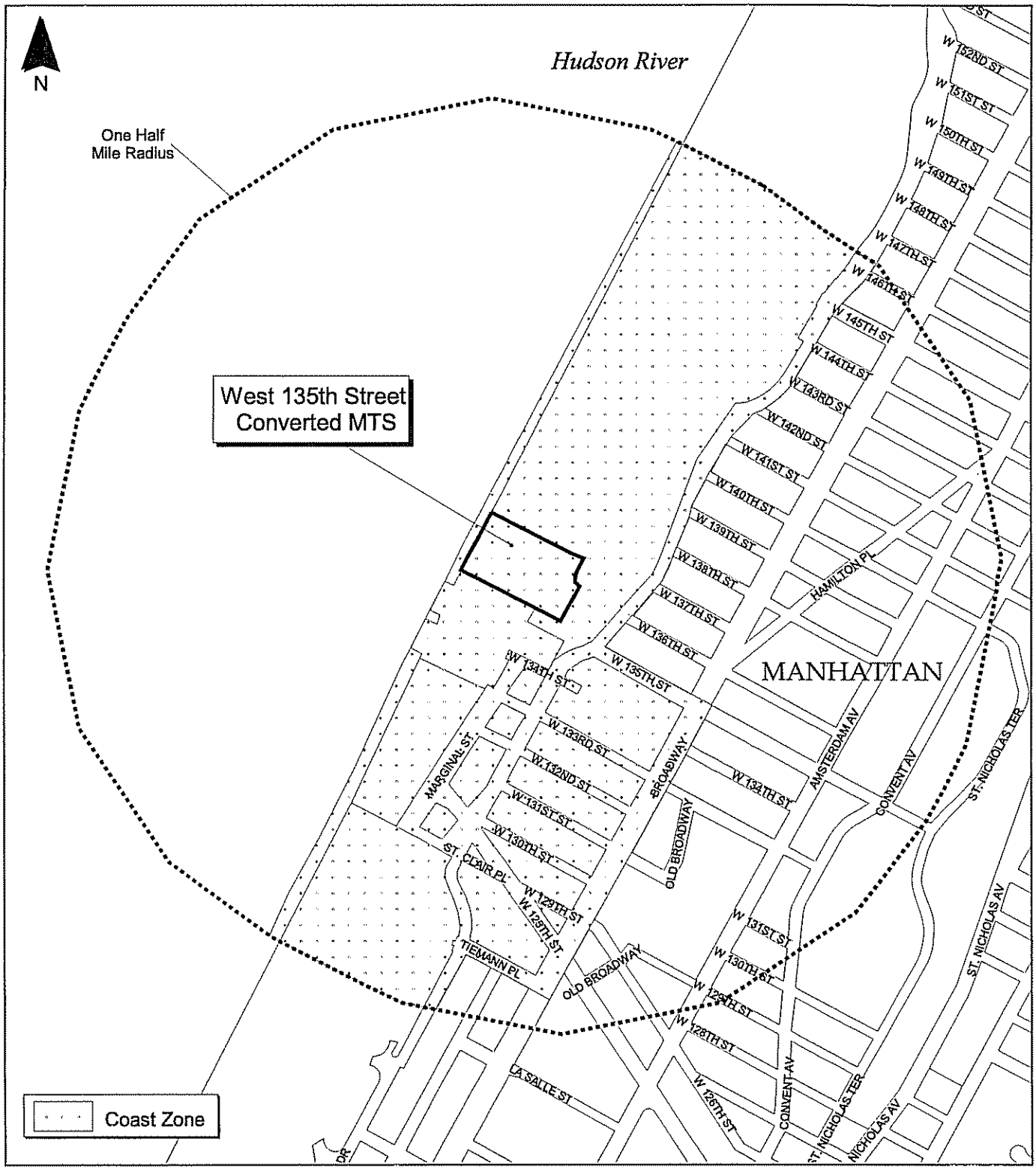
The West 135th Street Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

21.12 Waterfront Revitalization Program

21.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the Hudson River, the West 135th Street Converted MTS would be within the City's coastal zone boundary (see Figure 21.12-1). According to "The New Waterfront Revitalization Program," the West 135th Street Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 5/Northern Manhattan as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Manhattan Waterfront." It is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The West 135th Street Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3 and 21.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the West 135th Street Converted MTS. A description of waste handling operations that would occur at the South Bronx Converted MTS is provided in Section 2.4.3.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 21.12-1 Coastal Zone Boundary

West 135th Street Converted MTS

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21.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the West 135th Street Converted MTS. As part of the West 135th Street Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The West 135th Street Converted MTS would not be located within an SMIA. It would involve the conversion of the existing facility from a truck-to-barge waste transfer station into a TCB transfer station that would transport DSNY-managed Waste to remote out-of-City disposal facilities. The West 135th Street Converted MTS would be largely located at the site of the existing MTS and would extend further north.

The West 135th Street Converted MTS, as described in Section 2.4.3, would involve the complete demolition of the existing MTS to accommodate its expanded function, size and configuration. Waterfront development would involve over-water construction of four primary components: (1) an elevated

access ramp; (2) an enclosed processing building, which would include the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a barge fendering system and bulkheads. The West 135th Street Converted MTS would largely involve the continuation of an existing industrial and water-dependent use. It would serve to maintain this use while restoring and revitalizing an existing industrial waterfront property, and it would be compatible with existing neighboring industrial uses. Although the West 135th Street Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an expansion and revitalization of an existing water-dependent use and would be compatible with surrounding uses.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The West 135th Street Converted MTS structure would require the complete demolition of the existing MTS to accommodate the expanded function, size and configuration of the new facility. The majority of the construction would occur over the Hudson River. The West 135th Street Converted MTS would be located at the site of the existing MTS and extend further north. Waterfront development would involve four primary components: (1) an elevated access ramp; (2) an enclosed processing building, which includes the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a barge fendering system and bulkheads. The West 135th Street Converted MTS would be consistent with existing waterfront uses in the vicinity of the site.

The West 135th Street Converted MTS would require dredging to remove accumulated sediments and to provide adequate draft for barges and tugboats once it became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The West 135th Street Converted MTS would be located within the Hudson River at the location of the existing MTS. The use of tugboats or its day-to-day operations would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within the Hudson River resulting from the West 135th Street Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four of five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The West 135th Street Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The existing MTS managed solid waste through a truck-to-barge system under which loose waste was placed in open barges. The West 135th Street Converted MTS would be a TCB MTS where waste would be transferred into containers that would be sealed and placed into flat deck barges that would transport DSNY-managed Waste to remote out-of-City disposal facilities. All solid waste handling would be done within an enclosed processing building and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All waste would be placed in sealed containers before leaving the building for loading on barges. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environments. Litter control methods, such as routine sweeping and

washing of the tipping floor, would be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, any on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with applicable federal, state and local regulations.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes and SCFWH information, the site is located within a New York State Department of State Division of Coastal Resources and Waterfront Revitalization-designated SCFWH, specifically the Lower Hudson Reach. The West 135th Street Converted MTS would represent an expansion of a previous use and would not be anticipated to result in any long-term impacts to the natural resources in the vicinity of the site. As described in Section 21.9.2, disturbances to surficial sediments would have short-term and minimal effects on the benthic community found in the immediate vicinity of the site. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and NWI maps was conducted to determine the presence of wetlands. As noted in Section 21.9.1, the site contains no freshwater wetlands. The West 135th Street Converted MTS would be within the Hudson River, which is identified as a littoral zone, a state-

designated wetland. The demolition of the existing MTS and subsequent development of the West 135th Street Converted MTS would not be anticipated to result in any significant long-term impacts to tidal wetlands. Dredging would be required to remove accumulated sediments in order to provide adequate draft for staged barges and tugboats. Potential impacts due to dredging, however, would be minimal and all dredging would be conducted in compliance with applicable federal, state and local regulations. Mitigation for potential impacts, as appropriate and applicable, would be proposed during the environmental review and permitting of the West 135th Street Converted MTS.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

There are no known vulnerable fish or plant species found to be inhabiting areas within the vicinity of the West 135th Street Converted MTS. A review of NYSDEC NHP records list the Common Nighthawk (*Chordeiles minor*) as a known species potentially breeding in the area; it is classified by the state as a Protected-Special Concern species. As noted in Section 21.9.3, the West 135th Street Converted MTS would not impact these species and their habitats.

The West 135th Street Converted MTS would involve the demolition of the existing MTS facility and replacement with a larger, expanded MTS facility. Development of the West 135th Street Converted MTS would involve removal of the existing MTS and its adjoining vehicle ramp and over-water construction of a new, expanded facility. Dredging activities would be required to remove existing piers and structures, install a new pile-supported platform and footings and accommodate barges and tugboats. Potential impacts to plant, fish and wildlife species would be minimal and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be obtained prior to any dredging activities. In addition, all handling and

containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the West 135th Street Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The West 135th Street Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, all sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system that would include an oil-water separator, and then be discharged to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the West 135th Street Converted MTS would be managed in accordance with applicable regulations. All handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of pollutants into the environment.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the West 135th Street Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The West 135th Street Converted MTS would comply with federal, state and local

requirements concerning the management of stormwater runoff and erosion. During construction, non-structural (such as silt curtains) and, if necessary, structural, measures would be used to manage stormwater runoff and erosion. The West 135th Street Converted MTS would also comply with applicable federal, state and local requirements and would be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The majority of the demolition and construction would occur over the Hudson River. The existing MTS would be demolished and replaced with a new and expanded TCB MTS. Dredging would be necessary during the demolition and construction of pier structures and footings, and would also be necessary to accommodate future barge and tugboat activity. All dredging would be conducted in accordance with applicable federal, state and local permit requirements and would be conducted in a manner that minimizes any impacts to the water quality. Potential impacts to water quality would be short-term and localized. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The West 135th Street Converted MTS would have no adverse impact on the quality or quantity of surface or ground waters at or in the vicinity of its site. No surface or ground waters in the vicinity of the site constitute a primary source of water supply. Applicable and appropriate measures would be implemented at the facility in accordance with federal, state and local regulations. The West 135th Street Converted MTS would be consistent with this subpolicy.

Policy 6. Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to review of the FEMA National Flood Insurance Program maps, the entire West 135th Street Converted MTS site would be located within the 100-year floodplain boundary (Zone A). Redevelopment of the site, however, would not affect the potential for flooding or erosion. All demolition of the existing MTS and construction of new pier structure, platforms and bulkheads would comply with applicable building code requirements and, to the extent practicable and necessary, non-structural (such as silt curtains) or structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7. Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The West 135th Street Converted MTS would involve the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Waste would be transported in airtight, waterproof, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding water body. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. Waste processing would be done in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the West 135th Street Converted MTS. Radiation detection equipment would be located at the facility, and

contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. The West 135th Street Converted MTS would not result in adverse impacts and would operate in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

On-site storage of petroleum or hazardous materials related to the operation of the West 135th Street Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. Spill prevention and control plans would be used to prevent any hazardous materials from entering the environment.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Public access would generally not be compatible with the principal use of the site due to the existing industrial uses at and in the immediate vicinity of the West 135th Street Converted MTS, such as the North River WPCP. Riverbank State

Park is located above the North River WPCP and currently offers visual and recreational access to the waterfront. Several additional parks located in the area of the West 135th Street Converted MTS providing public access and recreation facilities are discussed in Section 21.5.1.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The West 135th Street Converted MTS would be a stand-alone, water-dependent facility on the Hudson River. Public access would not be compatible with the West 135th Street Converted MTS; however, its development would not preclude any future development of public access along the Hudson River.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Expansion of the West 135th Street Converted MTS would be compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. As discussed in Section 21.7.3, visual access to the coastal lands would not be obstructed or impaired. See also response to Subpolicy 9.1

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

There are numerous park and open space areas identified in the vicinity of the West 135th Street Converted MTS. Major mapped parklands in the vicinity of the site include Riverbank State Park, Riverside Park (North) and Riverside Park (South), which are north, east and south of the site, respectively. Riverbank State Park is located atop the North River WPCP and would be elevated above the West 135th Street Converted MTS; therefore impacts, if any, would be minimal. Riverside Park (North) is northeast and east of the site and is physically separated

and shielded from the site by the Henry Hudson Parkway. Riverside Park (South) is located south of St. Clair Place and would not be significantly impacted by the West 135th Street Converted MTS. Expansion of the West 135th Street Converted MTS would cause no new significant impacts to these areas and, therefore, is consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The West 135th Street Converted MTS would not result in a significant impact on views, as noted in Section 21.7.3. Based on the information discussed in that section, the West 135th Street Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The West 135th Street Converted MTS would be an expansion and rehabilitation of an existing facility and would pose no new impacts to scenic values associated with natural resources. The West 135th Street Converted MTS would also be compatible with surrounding buildings and, therefore, would be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

Designated historic resources are found within the study area, as noted in Section 21.6.1. However, the West 135th Street Converted MTS would have no impacts on these resources. Based upon information discussed in Section 21.6.2, the West 135th Street Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

As noted in Section 21.6.3, the site does not have any architectural or archaeological significance, nor are any resources located in its vicinity. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

21.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

21.13.1 Existing Conditions

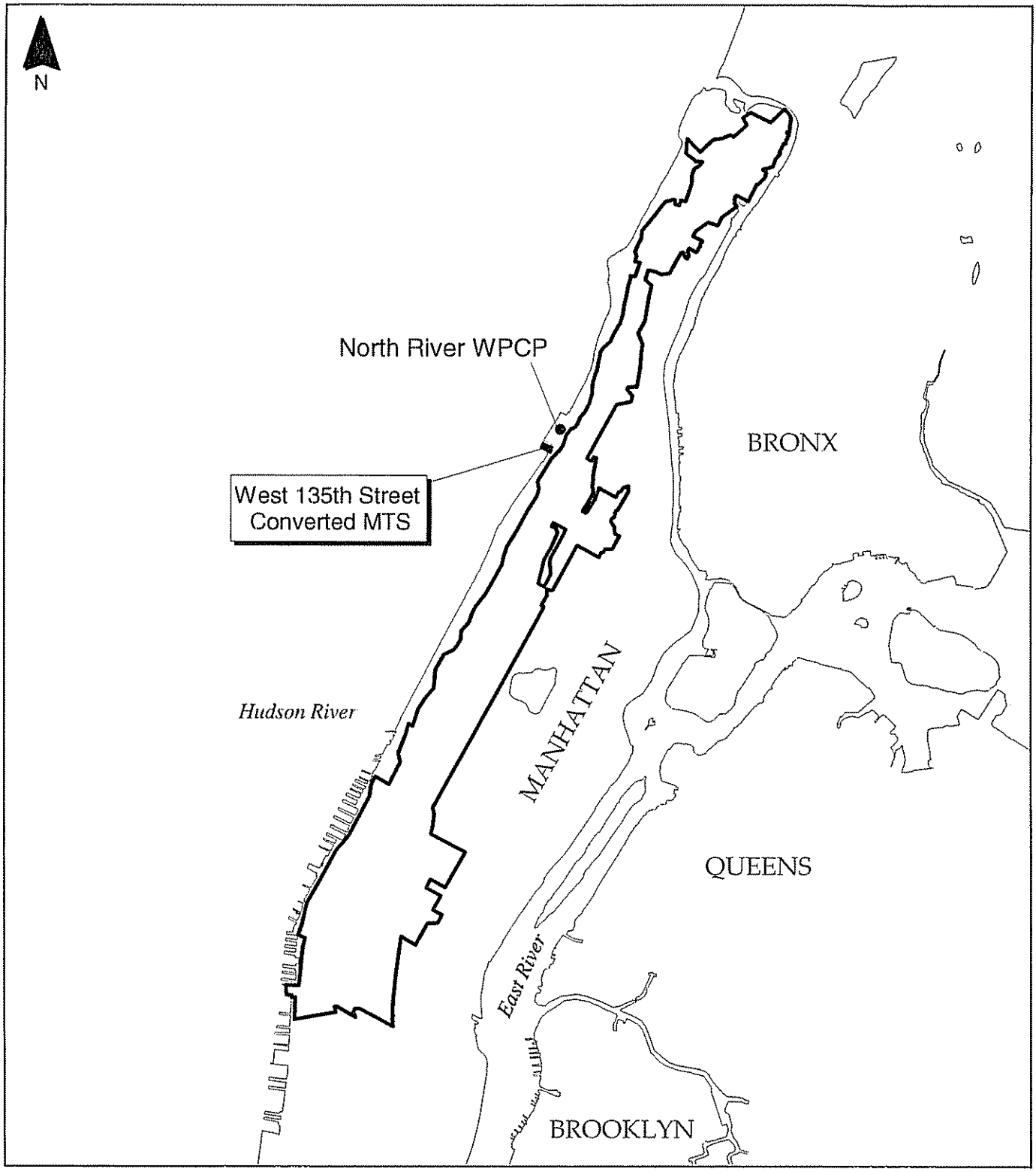
21.13.1.1 Water Supply

Water is supplied to the existing West 135th Street MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter pipe in the immediate area of the site at the intersection of West 135th Street and 12th Avenue provides water to the existing potable and fire water systems.

An off-site 6-inch-diameter line along West 135th Street provides potable water for both consumption and sanitary requirements. A second 6-inch-diameter fire water service line located on site provides potable water to charge the fresh water sprinkler system at the existing MTS. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual). To ensure that adequate pressure is provided on site, each water system is currently supplemented with a pump.

21.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the North River WPCP, which serves the western section of Manhattan from Chelsea to Inwood and is located immediately north of the existing West 135th Street MTS. The WPCP drainage area is illustrated in Figure 21.13-1. From July 2002 through June 2003, the North River WPCP treated an average of 124 mgd of wastewater underdry weather flow conditions and an average flow of 133 mgd, which includes the sanitary and stormwater flows by the WPCP during wet weather. (Ssee Table 21.13-1.). The maximum dry weather flow during this period was 130 mgd during August 2002 and June 2003 and the maximum average flow was 149 mdg during June 2003. Effluent from the plant is discharged into the Hudson River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the North River WPCP is 170 mgd. It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on the current



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

4000 0 4000 Feet

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Figure 21.13-1 Existing WPCP Drainage Area
West 135th Street Converted MTS

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Table 21.13-1
Average Monthly Dry Weather and Average Flows
North River Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	127	129
August	130	137
September	124	135
October	121	140
November	118	130
December	120	128
January 2003	119	125
February	125	129
March	122	130
April	128	134
May	122	129
June	130	149
Average Effluent	**124**	**133**

Notes:
(1) Average flows include the sanitary and stormwater flows received by the plant in wet weather.

staff of three security employees (one employee per shift, three shifts per day) using 25 gallons per person, per day (2001 CEQR Technical Manual). As the facility is currently not accepting waste, no other potable water is used and no operational staff is assigned to the site.

A 12-inch-diameter sewer at West 135th Street and 12th Avenue serves the site. The sewer is connected to a 16-foot, square interceptor line (combined sanitary and storm water system) that runs north along Riverside Drive where waste is directed north to the North River WPCP. Stormwater runoff from the MTS parking area and ramp are routed to catch basins that discharge to the combined sewer system.

21.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately four pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriate licensed solid waste management facility.

21.13.1.4 Energy

Electricity to the facilty is provided by Consolidated Edison of New York. A review of applicable utility plans shows electric lines along 12th Avenue and 135th Street. The MTS service is connected to the Consolidated Edison system on West 135th Street to the west of 12th Avenue. The existing West 135th Street MTS currently utilizes a negligible amount of energy due to low staffing levels providing only security. Currently, no gas is supplied to the facility.

21.13.2 Future No-Build Conditions

The existing West 135th Street MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near Existing Condtions levels for security employees. Wastewater flows to the North River WPCP would continue to increase and would be projected to be 135.1 mgd by 2006.

21.13.3 Potential Impacts with the West 135th Street Converted MTS

21.13.3.1 Water Supply

The West 135th Street Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The West 135th Street Converted MTS would have no impact on the existing system's ability to supply water reliably. According to Division 6 of the FDNY, the water pressure in the area is about 90 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

21.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the West 135th Street Converted MTS, the small quantities of wastewater sent to the North River WPCP would not significantly impact the sewage flow rate or the ability of the North River WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 135.1 mgd in 2006, which would be well below the permitted capacity of 170 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

21.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the West 135th Street Converted MTS and would not significantly impact the system.

21.13.3.4 Energy

The West 135th Street Converted MTS would require an additional 5.51E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the West 135th Street Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the West 135th Street Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts.

21.14 Traffic, Parking, Transit, and Pedestrians

21.14.1 Introduction

The West 135th Street Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

21.14.2 Existing Conditions

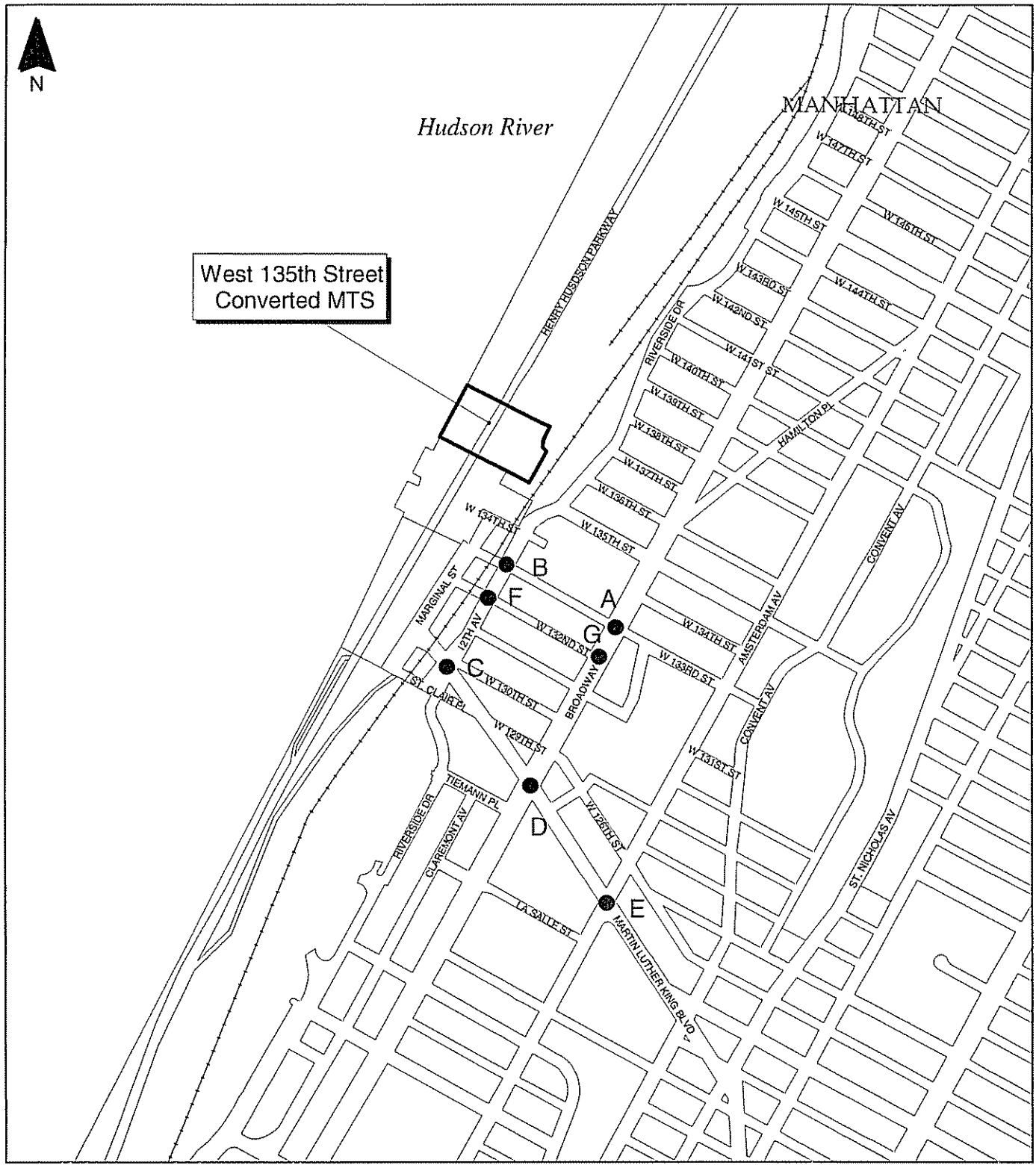
21.14.2.1 Definition of Study Area

The West 135th Street Converted MTS is located on the Hudson River at West 135th Street. The study area, which is bounded on the east by Amsterdam Avenue, on the south by West 125th Street and on the north by West 135th Street, was defined based upon a determination of the expected concentration of vehicle trips to and from the West 135th Street Converted MTS and also by the configuration of the arterial street network in the site area. The study area is characterized primarily by mixed commercial and residential land uses with some light industrial.

The major roadways in the study area include 12th Avenue, Broadway, West 125th Street and Amsterdam Avenue. Figure 21.14-1 shows the locations of the intersections selected for analysis (locations A through G). (Intersections analyzed were selected using the procedures defined in Section 3.16). Section 21.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the West 135th Street Converted MTS.

21.14.2.2 Surface Network

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the site or the intersection nearest the site if adjacent streets are not designated truck routes. A map showing all major truck routes and local truck routes in Manhattan is provided in Section 3.16 (see Figure 3.16-4).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-1 Traffic Analysis Study Area
West 135th Street Converted MTS

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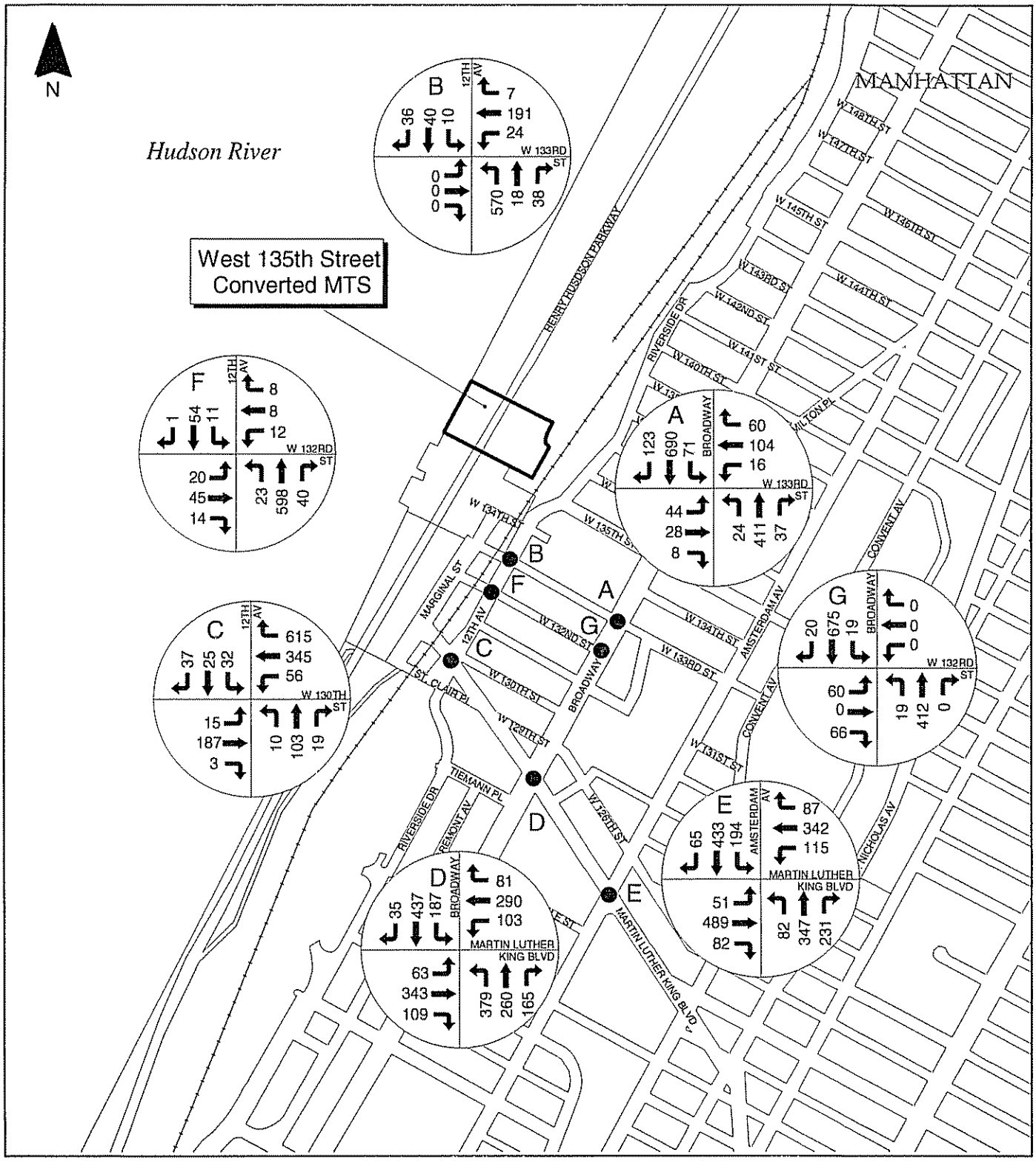
The primary truck access routes between the West 135th Street Converted MTS and CDs M9, M10 and M12 and their associated garages are Broadway, Amsterdam Avenue and West 125th Street. Broadway and Amsterdam Avenue are major north/south Manhattan arterials. Broadway extends throughout the length of Manhattan and is a two-way arterial in the study area. The NYCT Broadway/7th Avenue Local No. 1/9 line runs on an elevated structure over Broadway in the study area. Amsterdam Avenue is also a two-way arterial in the study area. West 125th Street is a two-way major east-west commercial corridor extending from the east to the west shorelines of Manhattan. Direct access to the site is provided by 12th Avenue and a short segment of West 135th Street. 12th Avenue is a short street segment in the study area extending generally between West 125th Street and West 135th Street. Riverside Drive is on an elevated structure over 12th Avenue. Ramps to northbound Route 9A and to and from southbound Route 9A are located in the study area.

DSNY and other agency collection vehicles traveling to the West 135th Street Converted MTS from the north on Broadway can turn west on West 133rd Street to gain access to 12th Avenue and then proceed to the site. Vehicles coming from the north along Amsterdam Avenue would proceed to West 125th Street and then to 12th Avenue. Vehicles approaching from the south on Broadway or Amsterdam Avenue would use West 125th Street to gain access to 12th Avenue and then West 135th Street by the Converted MTS. DSNY and other agency collection vehicles exiting the West 135th Street Converted MTS and returning north along Broadway must use West 132nd Street in order to turn north onto Broadway. A height restriction due to an NYCT bridge located above Broadway at West 133rd Street prevents DSNY and other agency collection vehicles from making a left onto Broadway from West 133rd Street. Other exiting vehicles travel south along 12th Avenue to West 125th Street and then proceed to a designated truck route to return to their respective CDs. Figure 21.14-2 depicts NYCDOT designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

Figure 21.14-2 Existing Traffic Volumes
AM Peak
West 135th Street Converted MTS

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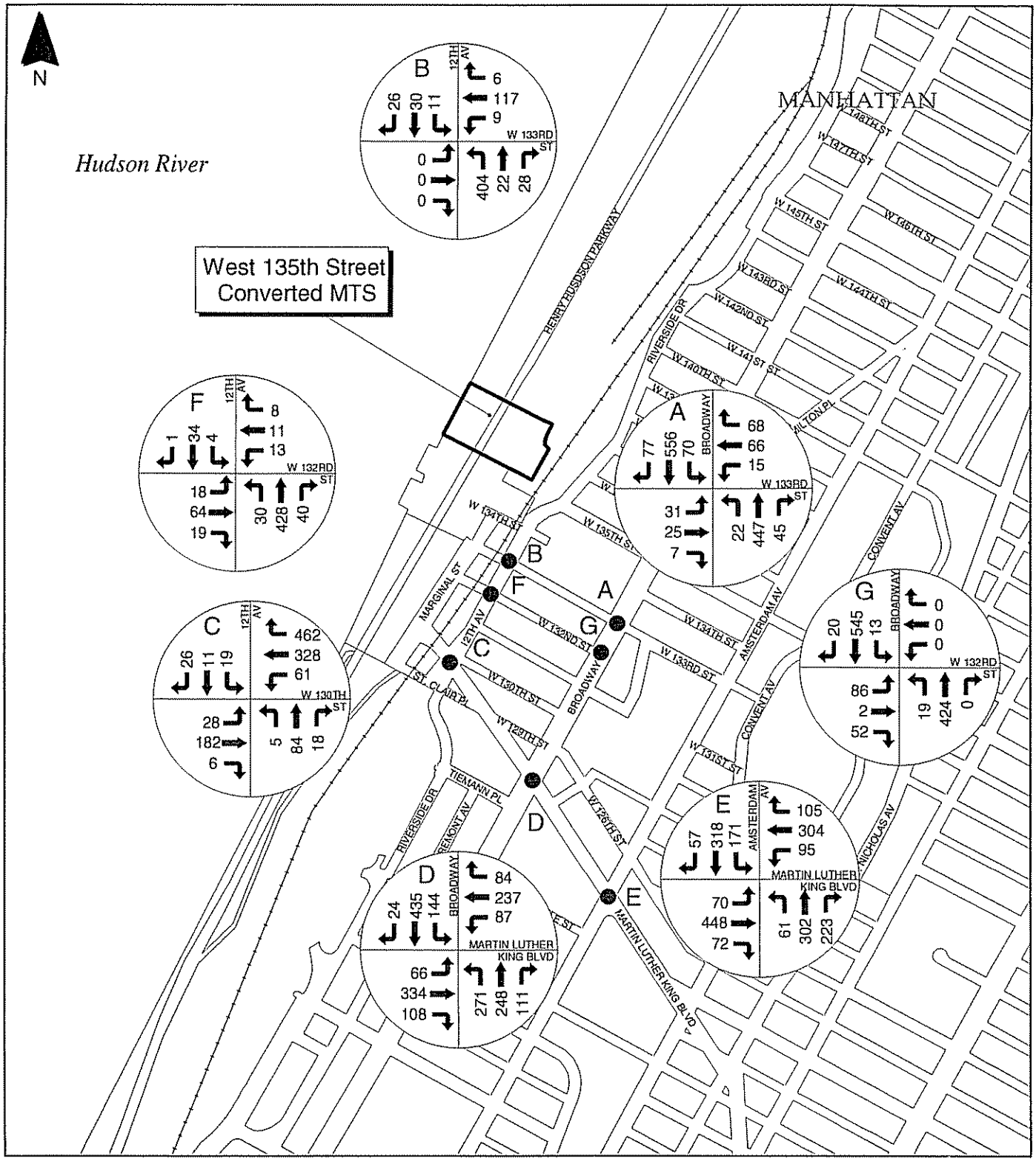
21.14.2.3 Existing Traffic Operations

The seven intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the West 135th Street Converted MTS. All are on major arterials and/or collection vehicle routes. Diagrams of the following intersections are included in technical backup submitted to NYCDOT.

- Broadway and West 133rd Street – Signalized Intersection (see Figure 21.14-1, Location A)
- 12th Avenue and West 133rd Street – Signalized Intersection (see Figure 21.14-1, Location B)
- 12th Avenue and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location C)
- Broadway and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location D)
- Amsterdam Avenue and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location E)
- 12th Avenue and West 132nd Street – Signalized Intersection (see Figure 21.14-1, Location F)
- Broadway and West 132nd Street – Signalized Intersection (see Figure 21.14-1, Location G)

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement and ATR counts were conducted primarily in November 2002 with some additional counts conducted in March 2003. Figures 21.14-3, 21.14-4 and 21.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 8:00 a.m. and 9:00 a.m., the Facility peak between 9:00 a.m. and 10:00 a.m., and the PM peak between 5:00 p.m. and 6:00 p.m. Table 21.14-1 presents the v/c ratio, delay and LOS for the seven study intersections during the AM, Facility, and PM peaks.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-3 Existing Traffic Volumes Facility Peak West 135th Street Converted MTS

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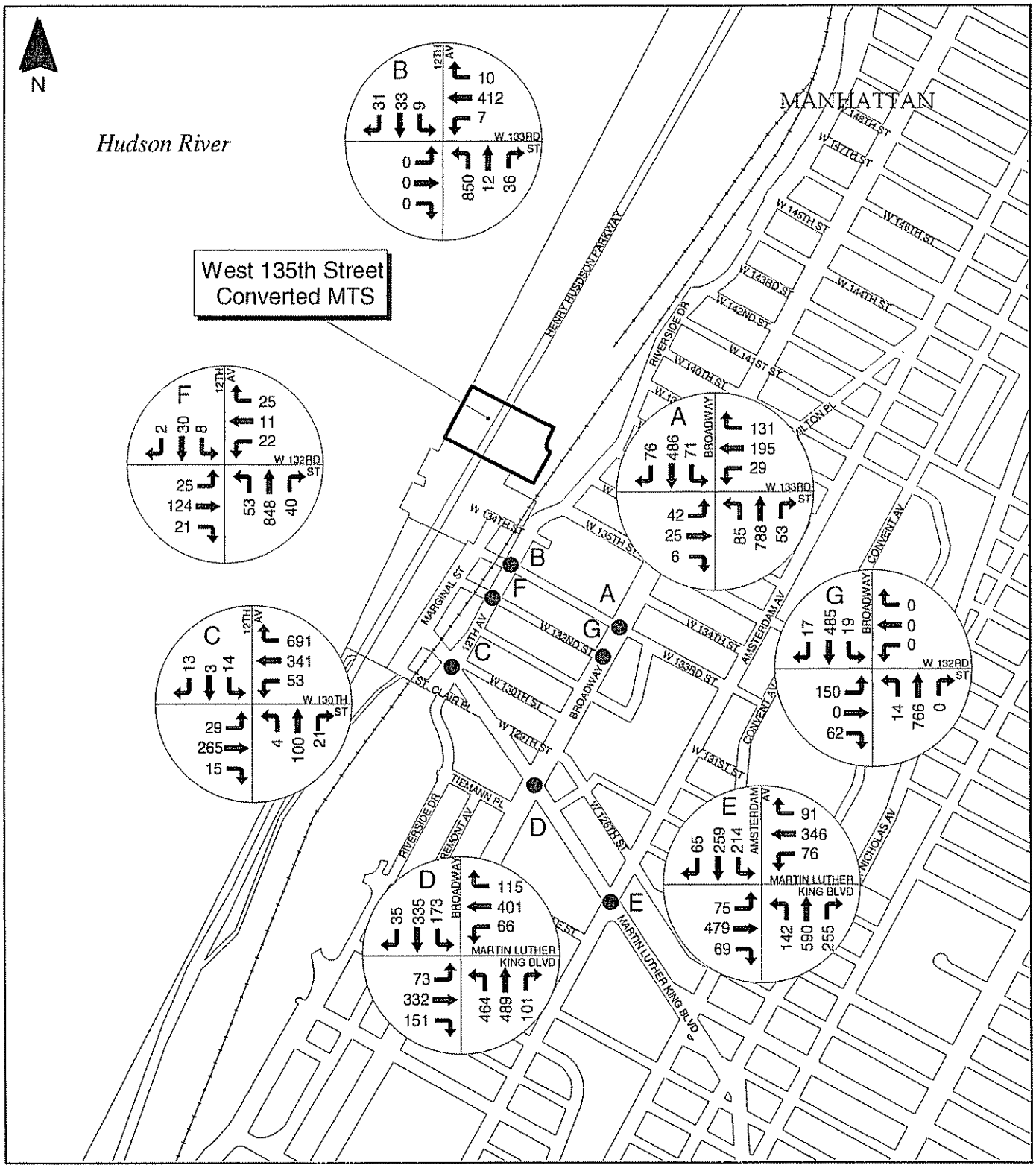

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-4 Existing Traffic Volumes PM Peak West 135th Street Converted MTS

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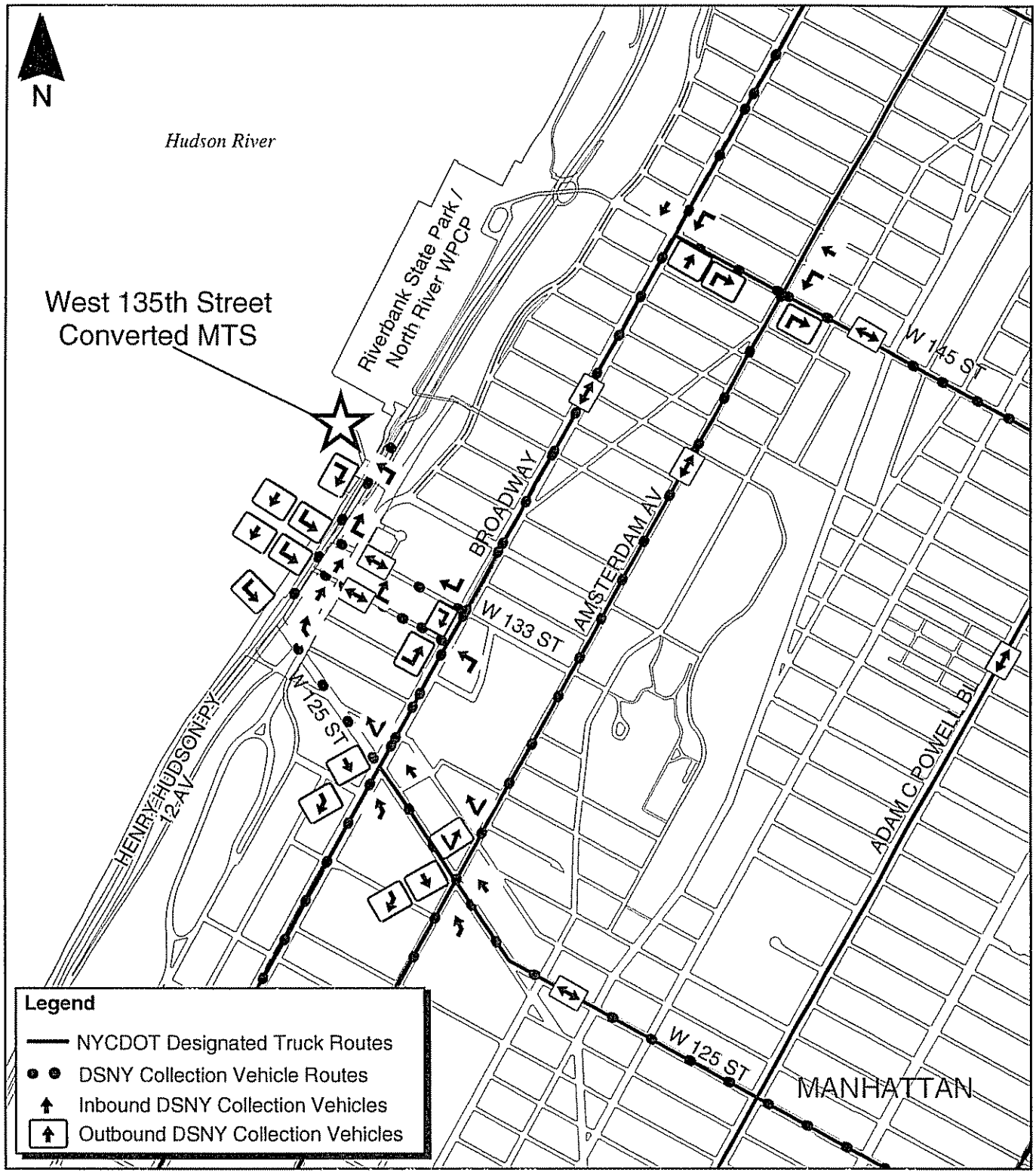

Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 21.14-5 DSNY Collection Vehicle Routes West 135th Street Converted MTS

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Table 21.14-1
HCM Analysis[1] - Existing Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0.25	28.2	C	0.20	27.7	C	0.21	27.8	C
SB LTR	0.32	30.4	C	0.27	29.6	C	0.18	28.0	C
EB LTR	0.18	6.7	A	0.16	6.6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.4	A
WB TR	0.67	12.3	B	0.55	10.2	B	0.62	11.1	B
OVERALL		13.9	B		12.3	B		12.2	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0.41	10.7	B	0.35	10.2	B	0.61	13.5	B
SB LTR	0.11	8.4	A	0.07	8.1	A	0.09	8.3	A
EB LTR	0.29	27.4	C	0.32	27.9	C	0.53	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.2	B		14.0	B		16.9	B
133rd Street & 12th Avenue (signalized)									
NB L	0.73	20.0+	C	0.55	14.4	B	0.99	50.7	D
NB LTR	0.26	9.8	A	0.21	9.2	A	0.35	11.0	B
SB LTR	0.07	8.0	A	0.06	7.9	A	0.06	7.9	A
WB LTR	0.61	33.1	C	0.33	27.0	C	1.06	88.0	F
OVERALL		20.7	C		15.3	B		54.4	D
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0.79	31.1	C	0.74	29.0	C	1.03	64.1	E
SB DFL	0.45	18.2	B	0.43	16.9	B	0.58	28.2	C
SB TR	0.91	47.0	D	0.76	32.6	C	0.60	26.5	C
EB L	0.33	27.5	C	0.39	28.6	C	0.43	30.3	C
EB TR	0.76	33.5	C	0.67	30.1	C	0.63	28.6	C
WB L	0.99	108.0	F	0.71	52.9	D	0.53	36.5	D
WB TR	0.62	29.0	C	0.58	28.0	C	0.55	27.0	C
OVERALL		36.9	D		29.7	C		41.2	D
133rd Street & Broadway (signalized)									
NB LTR	0.48	16.3	B	0.43	15.5	B	0.99	46.1	D
SB LTR	0.80	24.7	C	0.72	21.6	C	0.70	21.6	C
EB LTR	0.21	19.3	B	0.17	18.8	B	0.20	19.3	B
WB LTR	0.38	21.6	C	0.32	20.6	C	0.67	28.6	C
OVERALL		21.4	C		19.3	B		34.8	C
132nd Street & Broadway (signalized)									
NB LTR	0.46	15.9	B	0.40	15.1	B	0.62	18.5	B
SB LTR	0.61	18.4	B	0.47	15.9	B	0.46	15.9	B
EB LTR	0.34	21.2	C	0.34	21.0	C	0.48	23.5	C
OVERALL		17.8	B		16.4	B		18.4	B
125th Street & Broadway (signalized)									
NB L	0.97	75.9	E	0.68	41.1	D	1.08	103.9	F
NB LTR	0.97	65.0	E	0.75	39.8	D	1.08	93.0	F
SB L	0.46	32.5	C	0.37	30.9	C	0.40	31.3	C
SB LTR	0.74	38.1	D	0.73	38.1	D	0.56	33.0	C
EB L	0.31	25.3	C	0.26	23.7	C	0.42	29.4	C
EB TR	0.55	26.3	C	0.50	25.3	C	0.55	26.0	C
WB L	0.62	39.0	D	0.47	30.9	C	0.36	27.1	C
WB TR	0.48	25.0	C	0.39	23.7	C	0.55	26.1	C
OVERALL		43.5	D		33.0	C		54.5	D

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound WB = westbound

LT = left through movement L = left movement

TR = through right movement

Existing truck traffic on the major streets in the study area is substantial in the AM and mid-day periods, but less during the PM peak. Heavy vehicles generally consist of 10% to 15% of the total traffic on Broadway, Amsterdam Avenue and West 125th Street during the AM and mid-day periods; and range from 5% to 10% on Amsterdam Avenue and Broadway, and less than 3% on West 125th Street during the PM peak period.

The intersection of Amsterdam Avenue with West 125th Street has been identified as a high pedestrian accident location. Thirteen accidents involving pedestrians were reported at this intersection in the year 2000. Overall, 51 accidents occurred at the intersection in 2000, of which 26 were reportable and 17 involved personal injury. There were no fatalities reported over the last three-year period, but the total number of accidents and the number of injury accidents have increased over the period.

21.14.2.3.1 LOS at Signalized Intersections

Table 21.14-1 shows that the study signalized intersections generally operated at an overall LOS of B or C with the following exceptions. During the AM peak period both West 125th Street at Amsterdam Avenue and West 125th Street at Broadway operated at LOS D. These two intersections also operated at LOS D during the PM peak hour, as did the intersection of West 133rd Street at 12th Avenue.

Overall, most of the individual lane groups at each intersection generally operate at LOS D or better during each analysis period, with some exceptions. At the intersection of West 133rd Street at 12th Avenue, the westbound left, through and right lane group operates at LOS F during the PM peak hour. The westbound left turn lane group operates at LOS F during the AM peak hour at the intersection of 125th Street and Amsterdam Avenue and during the PM peak hour, the northbound left, through and right turn lane group operates at LOS E. Lastly, the northbound left turn lane group and the northbound left, through and right turn lane group at the intersection of 125th Street and Broadway operates at LOS E during the AM peak hour and LOS F during the PM peak hour.

21.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

21.14.2.4 Existing DSNY-Related Traffic

MSW generated by Manhattan CDs M9 and M10 is currently transported under the Manhattan interim export program to American Ref-Fuel, a commercial vendor located at 183 Raymond Boulevard in Newark, New Jersey. MSW generated by Manhattan CD M12 is currently transported to ACS PEN PAC-Eastern located at 30-35 Fulton Street in Paterson, New Jersey. In all instances, MSW is transported from Manhattan to New Jersey in collection vehicles.

21.14.2.5 Public Transportation

Within the study area, NYCT bus and subway systems provide public transportation service. The Broadway-7th Avenue Local No. 1/9 subway line runs north/south on Broadway through the study area with station stops at West 125th Street and West 137th Street. There are also a number of NYCT bus routes that traverse the study area as follows:

- Bx15: Harlem to Fordham in the Bronx serving West 125th Street within the study area.
- M4: Midtown to Washington Heights through the Upper East Side and Harlem. Service is provided along Broadway within the study area.
- M5: Greenwich Village to Washington Heights. Service is provided along Broadway, Riverside Drive and 5th Avenue.
- M11: Greenwich Village to Riverbank State Park making stops in the study area along Amsterdam Avenue.
- M100: East Harlem crosstown and into Inwood. Within the study area, service is provided along West 125th Street and Amsterdam Avenue.
- M101: East Village to Washington Heights through both East Harlem and Harlem, servicing West 125th Street and Amsterdam Avenue within the study area.
- M104: Murray Hill crosstown and into Harlem. Within the study area, stops are made along West 125th Street and Amsterdam Avenue.

21.14.2.6 Pedestrian Activity

Pedestrian activity is substantial along Broadway, West 125th Street and Amsterdam Avenue, but is significantly less in the western part of the study area, such as along 12th Avenue. The highest pedestrian volumes were identified at the intersection of Amsterdam Avenue and West 125th Street, where counts exceeded 300 pedestrians per hour crossing a crosswalk. Slightly lower pedestrian volumes were counted at the intersection of Broadway and West 125th Street. In contrast, fewer than 20 pedestrians per hour on each crosswalk were identified along 12th Avenue.

21.14.3 Future No-Build Conditions

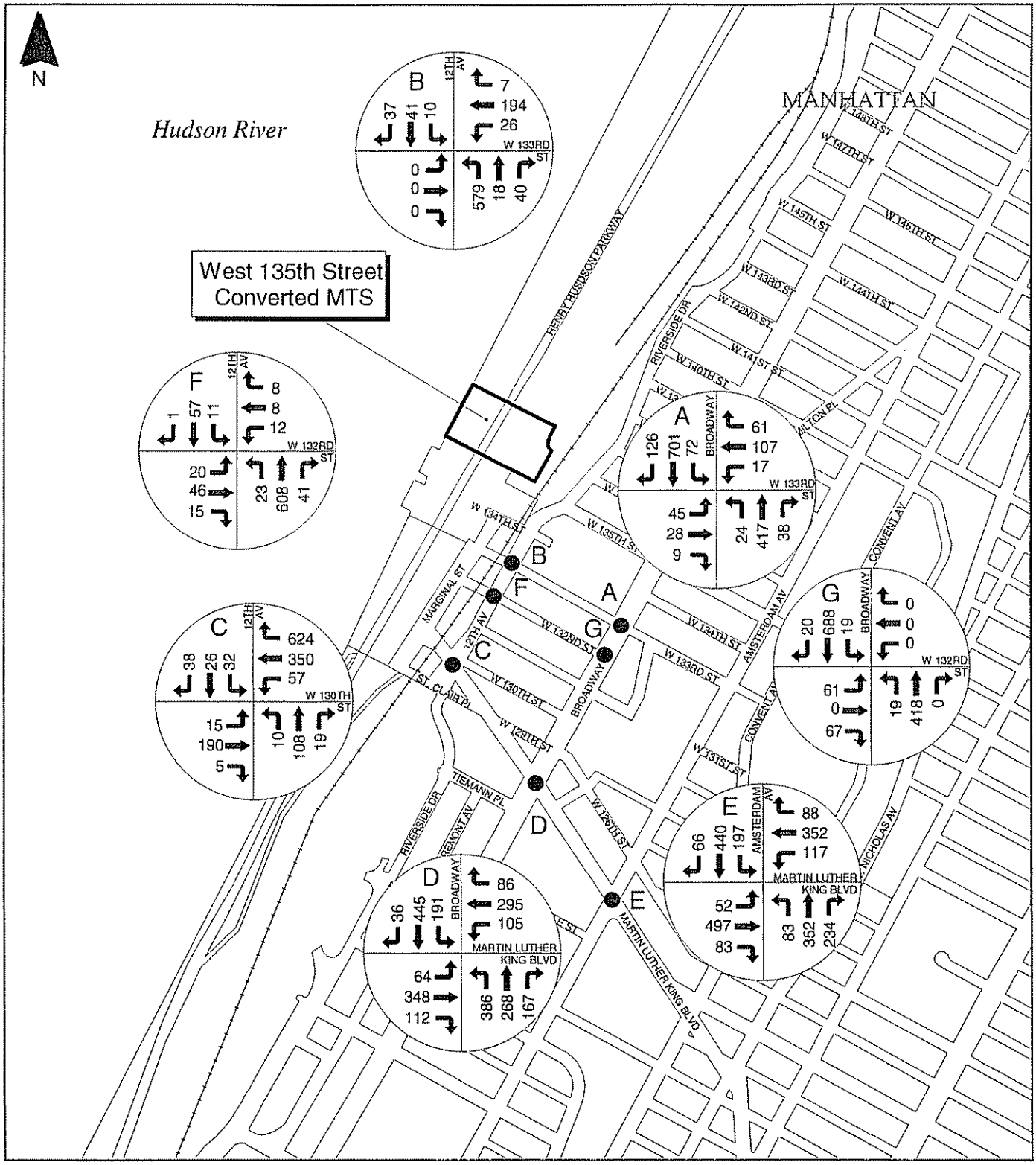
21.14.3.1 Traffic Conditions

The following assumptions and traffic assignments were applied in the development of Future No-Build traffic volumes:

- Continued operation of the Manhattan interim export program with MSW delivered to the vendors noted above.
- Discrete assignment of auto and truck trips expected to be generated by the West Harlem Master Plan Waterfront Development Complex, which is expected to be completed by 2006, and the redevelopment of the Studebaker Building at 615 West 131st Street as a 35,000-square-foot office building.
- Background traffic growth of 0.5% per year in accordance with the 2001 CEQR Technical Manual.

Figures 21.14-6, 21.14-7 and 21.14-8 provide the AM, Facility, and PM peak hour Future No-Build traffic volumes for the intersections analyzed in conjunction with this site.

Table 21.14-2 provides the Future No-Build v/c ratio, delay and LOS for each study intersection. As shown, the study intersections will operate at a LOS B or C during most time periods. During the AM peak hour, however, the intersections of both West 125th Street and Amsterdam Avenue, as well as West 125th Street and Broadway, will operate at LOS D. During the PM peak hour,



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-6 Future No-Build Traffic Volumes AM Peak West 135th Street Converted MTS

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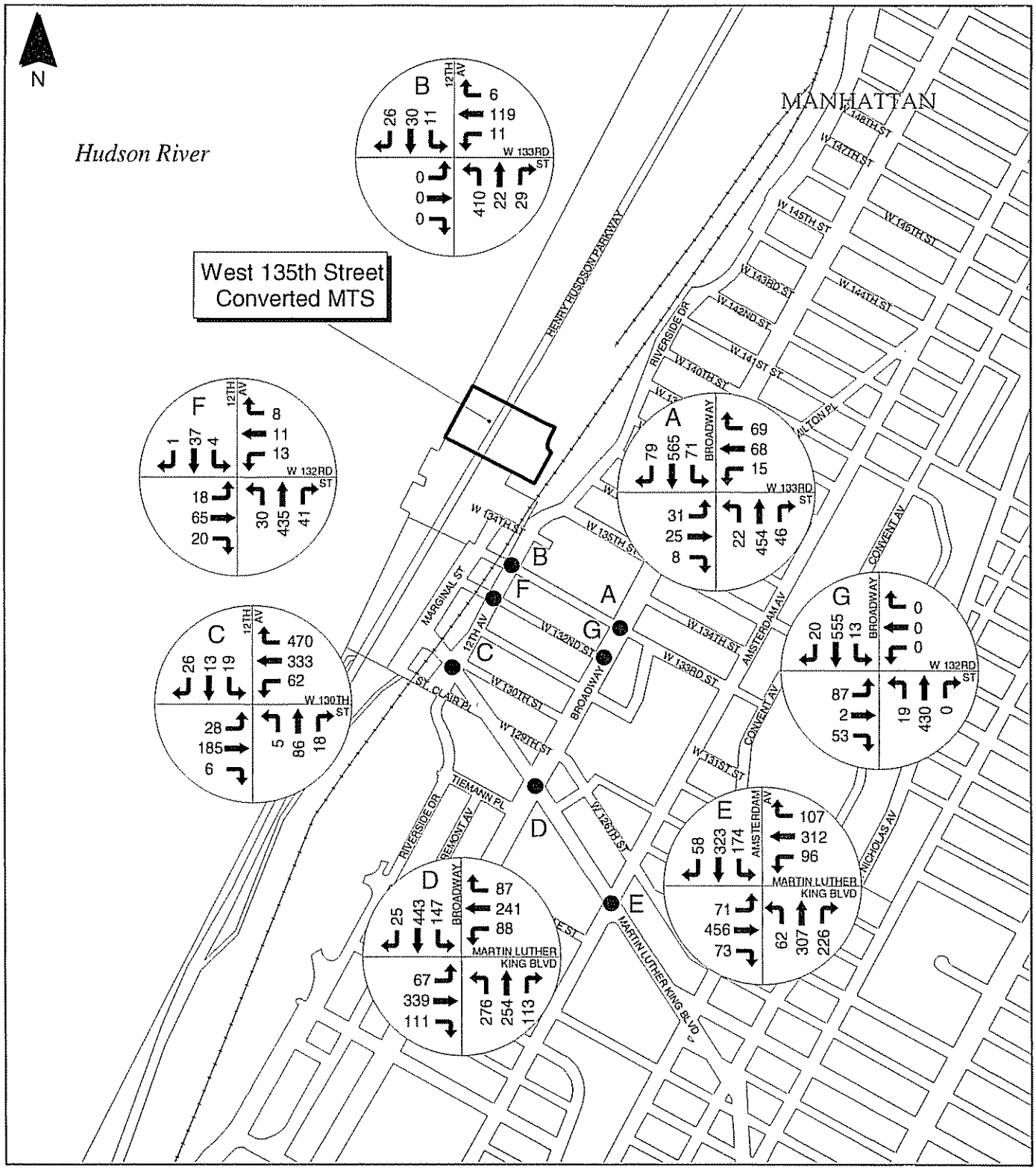

Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-7 Future No-Build Traffic Volumes
Facility Peak
West 135th Street Converted MTS

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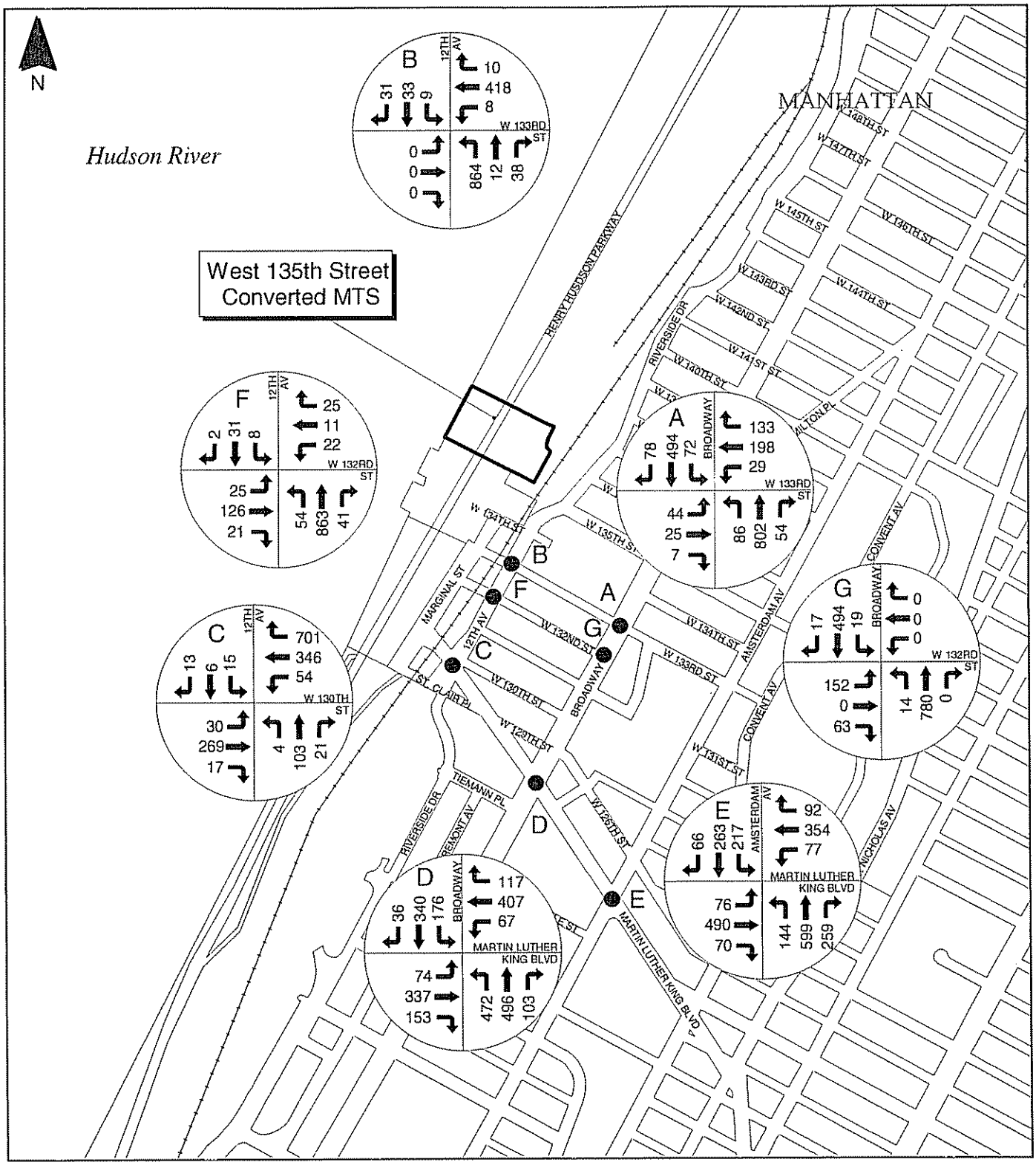

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-8 Future No-Build Traffic Volumes PM Peak West 135th Street Converted MTS

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Table 21.14-2
HCM Analysis[1] - Future No-Build Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0.26	28.4	C	0.20	27.7	C	0.22	27.9	C
SB LTR	0.33	30.5	C	0.28	29.7	C	0.20	28.3	C
EB LTR	0.19	6.7	A	0.17	6.6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.5	A
WB TR	0.68	12.5	B	0.56	10.4	B	0.63	11.3	B
OVERALL		14.1	B		12.4	B		12.4	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0.41	10.8	B	0.36	10.2	B	0.62	13.7	B
SB LTR	0.11	8.4	A	0.08	8.2	A	0.09	8.3	A
EB LTR	0.30	27.4	C	0.33	28.0	C	0.54	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.3	B		14.0	B		17.1	B
133rd Street & 12th Avenue (signalized)									
NB L	0.74	20.8	C	0.56	14.6	B	1.01	54.9	D
NB LTR	0.26	9.9	A	0.21	9.3	A	0.36	11.1	B
SB LTR	0.07	8.0	A	0.06	7.9	A	0.06	7.9	A
WB LTR	0.62	33.5	C	0.34	27.2	C	1.08	94.5	F
OVERALL		21.2	C		15.5	B		58.5	E
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0.80	31.7	C	0.75	29.5	C	1.05	69.1	E
SB DFL	0.46	18.6	B	0.43	17.3	B	0.59	29.1	C
SB TR	0.93	49.4	D	0.77	33.3	C	0.61	26.9	C
EB L	0.34	28.1	C	0.40	29.0	C	0.44	30.9	C
EB TR	0.78	34.1	C	0.69	30.4	C	0.65	29.0	C
WB L	1.03	120.1	F	0.74	56.0	E	0.55	38.0	D
WB TR	0.63	29.4	C	0.59	28.4	C	0.56	27.3	C
OVERALL		38.3	D		30.2	C		43.2	D
133rd Street & Broadway (signalized)									
NB LTR	0.49	16.4	B	0.44	15.6	B	1.01	52.2	D
SB LTR	0.82	25.5	C	0.74	22.1	C	0.72	22.4	C
EB LTR	0.22	19.4	B	0.18	18.9	B	0.21	19.4	B
WB LTR	0.39	21.8	C	0.32	20.7	C	0.68	28.9	C
OVERALL		21.9	C		19.6	B		38.0	D
132nd Street & Broadway (signalized)									
NB LTR	0.46	16.0	B	0.41	15.1	B	0.63	18.7	B
SB LTR	0.62	18.7	B	0.48	16.0	B	0.47	16.0	B
EB LTR	0.34	21.2	C	0.35	21.2	C	0.48	23.6	C
OVERALL		18.0	B		16.5	B		18.6	B
125th Street & Broadway (signalized)									
NB L	0.99	80.9	F	0.69	41.7	D	1.10	110.2	F
NB LTR	0.99	69.8	E	0.77	40.7	D	1.10	99.3	F
SB L	0.47	32.7	C	0.38	31.0	C	0.41	31.4	C
SB LTR	0.75	38.6	D	0.75	38.8	D	0.57	33.2	C
EB L	0.32	25.7	C	0.27	23.9	C	0.44	30.0	C
EB TR	0.56	26.5	C	0.51	25.5	C	0.56	26.2	C
WB L	0.64	41.0	D	0.48	31.3	C	0.37	27.6	C
WB TR	0.49	25.3	C	0.40	23.8	C	0.56	26.3	C
OVERALL		45.4	D		33.5	C		57.1	E

Notes for Table 21.14-2:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L = left movement
TR = through right movement

the intersection of West 133rd Street and 12th Avenue will operate at LOS E, as would the intersection of West 125th Street and Broadway. Also, the intersections of West 125th Street and Amsterdam Avenue as well as West 133rd Street and Broadway would operate at LOS D.

The individual movements generally would operate at LOS D or better with a few exceptions. At the intersection of West 125th Street and Amsterdam Avenue, the westbound left turn lane group would operate at LOS F during the AM peak hour, LOS E during the Facility peak hour and LOS D during the PM peak hour, and the northbound approach would operate at LOS E during the PM peak hour. The westbound left, through and right turn lane group would operate at LOS F during the PM peak hour at the intersection of West 133rd Street and 12th Avenue. At the intersection of West 125th and Broadway, the northbound approach would operate at LOS E or worse during the AM and PM peak hours.

21.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

21.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

21.14.4 Potential Impacts with the West 135th Street Converted MTS

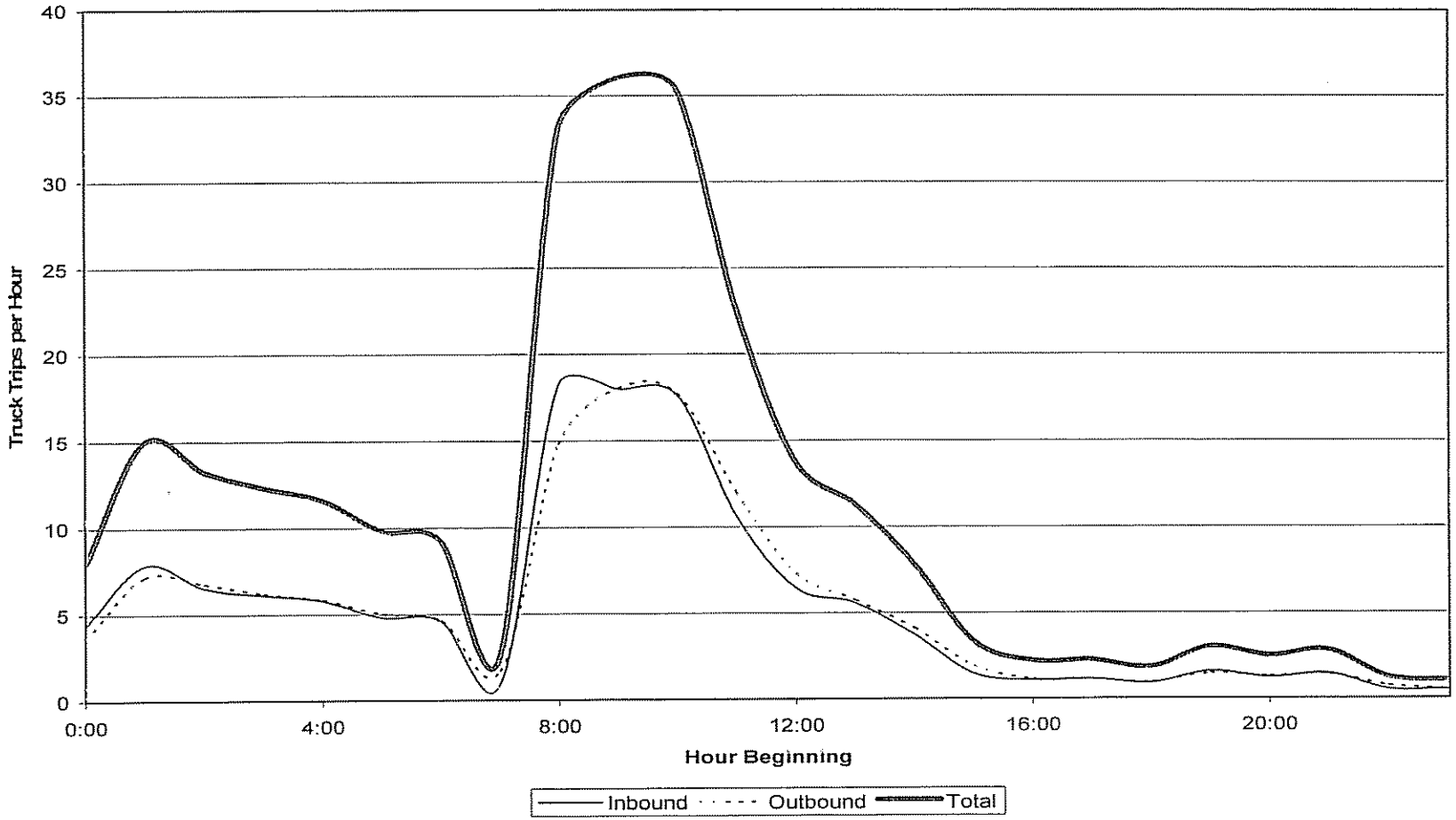
The West 135th Street Converted MTS would receive municipal waste from CDs M9, M10 and M12 in Manhattan. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

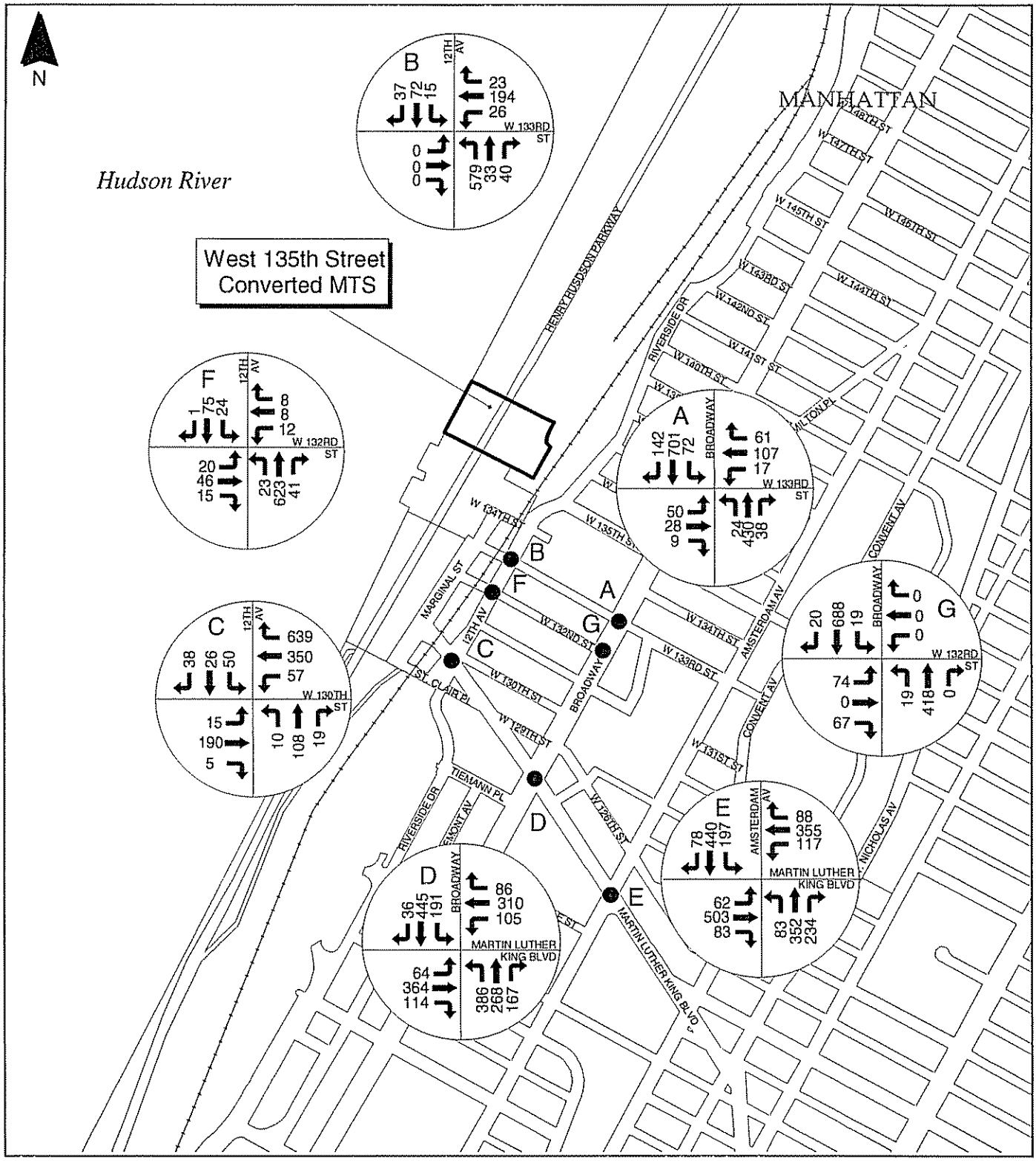
21.14.4.1 2006 Future Build Traffic Conditions

2006 Future Build Traffic Conditions assume that the West 135th Street Converted MTS would generate 222 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site to the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the West 135th Street Converted MTS are shown in Figure 21.14-2.

Figure 21.14-9 presents the average peak day temporal distribution of collection vehicles for the West 135th Street Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicle trips generated by the West 135th Street Converted MTS is expected to vary between 2 to 25 truck trips per hour in the late evening/early morning; approximately 15 to nearly 60 truck trips per hour in the mid-morning/early afternoon; and 5 to 15 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle trips (60) occurs during both 9:00 a.m. and 10:00 a.m. and 10:00 a.m. to 11:00 a.m. Figures 21.14-10, 21.14-11 and 21.14-12 depict the Future Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Figures 21.14-13, 21.14-14 and 21.14-15 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM, Facility, and PM peaks at the intersections analyzed.

Figure 21.14-9
Truck Trips per Hour
West 135th Street Converted MTS





Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-10 2006 Future Build Traffic Volumes AM Peak West 135th Street Converted MTS

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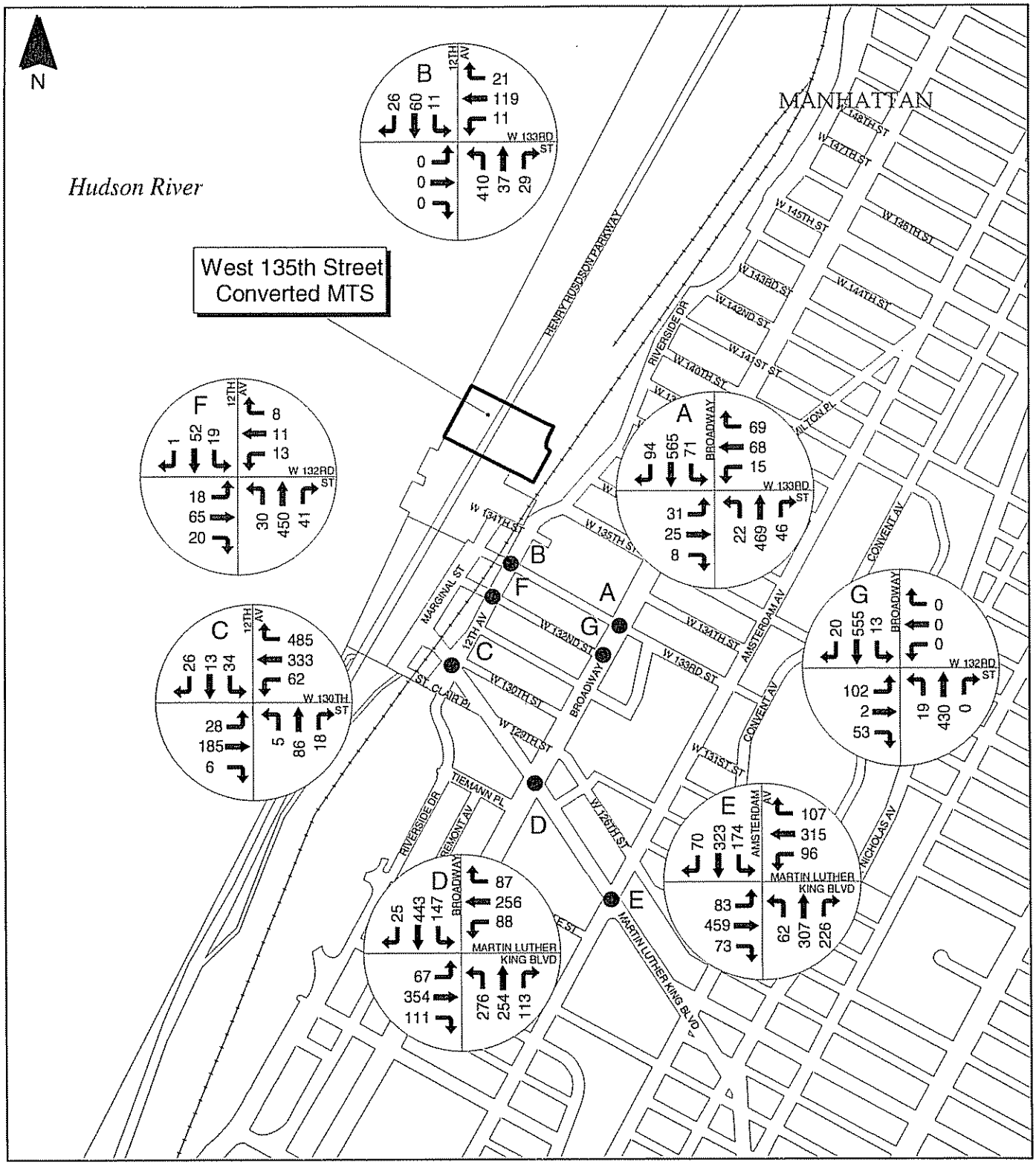

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-11 2006 Future Build Traffic Volumes
Facility Peak
West 135th Street Converted MTS

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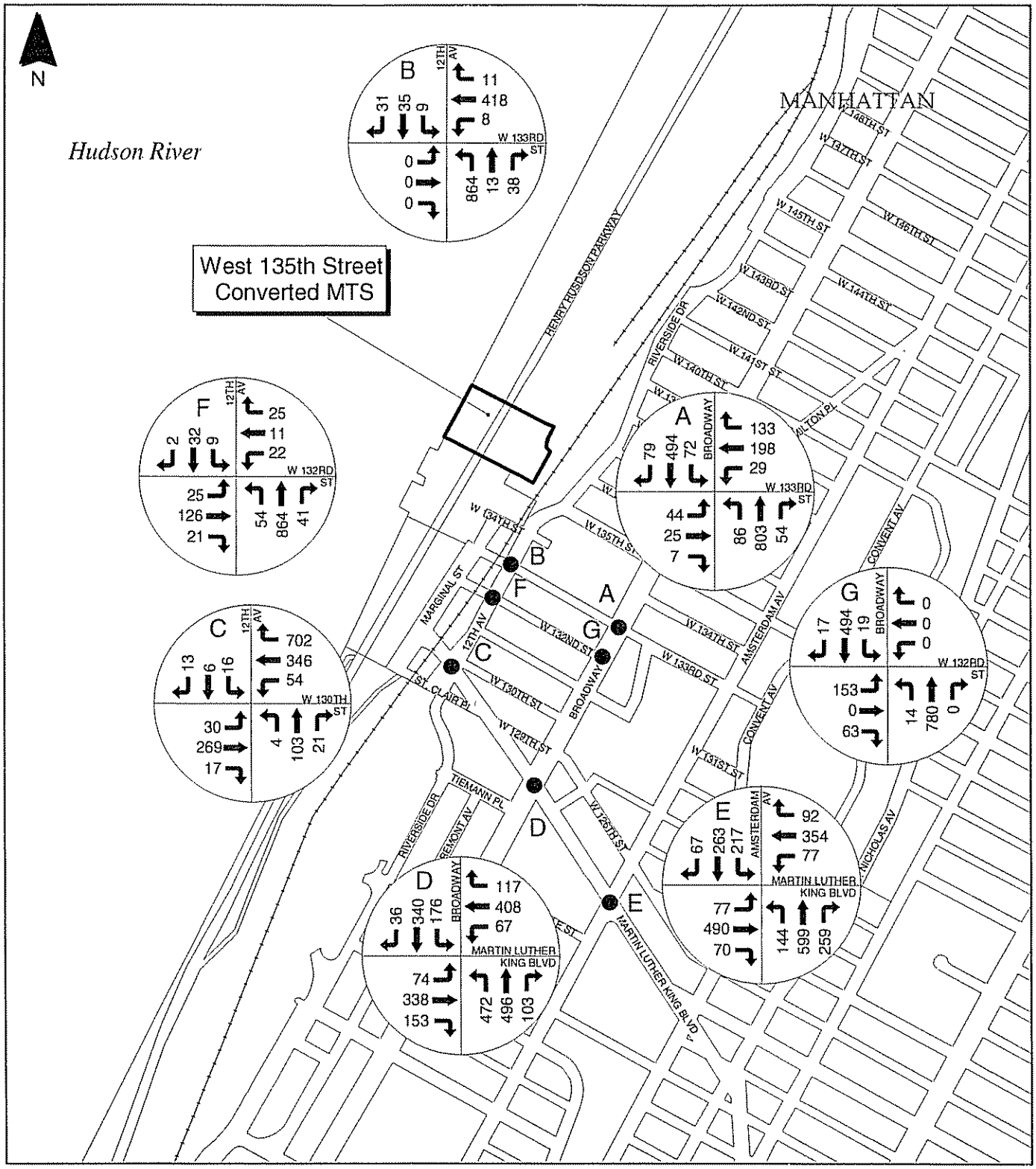

Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-12 2006 Future Build Traffic Volumes PM Peak West 135th Street Converted MTS

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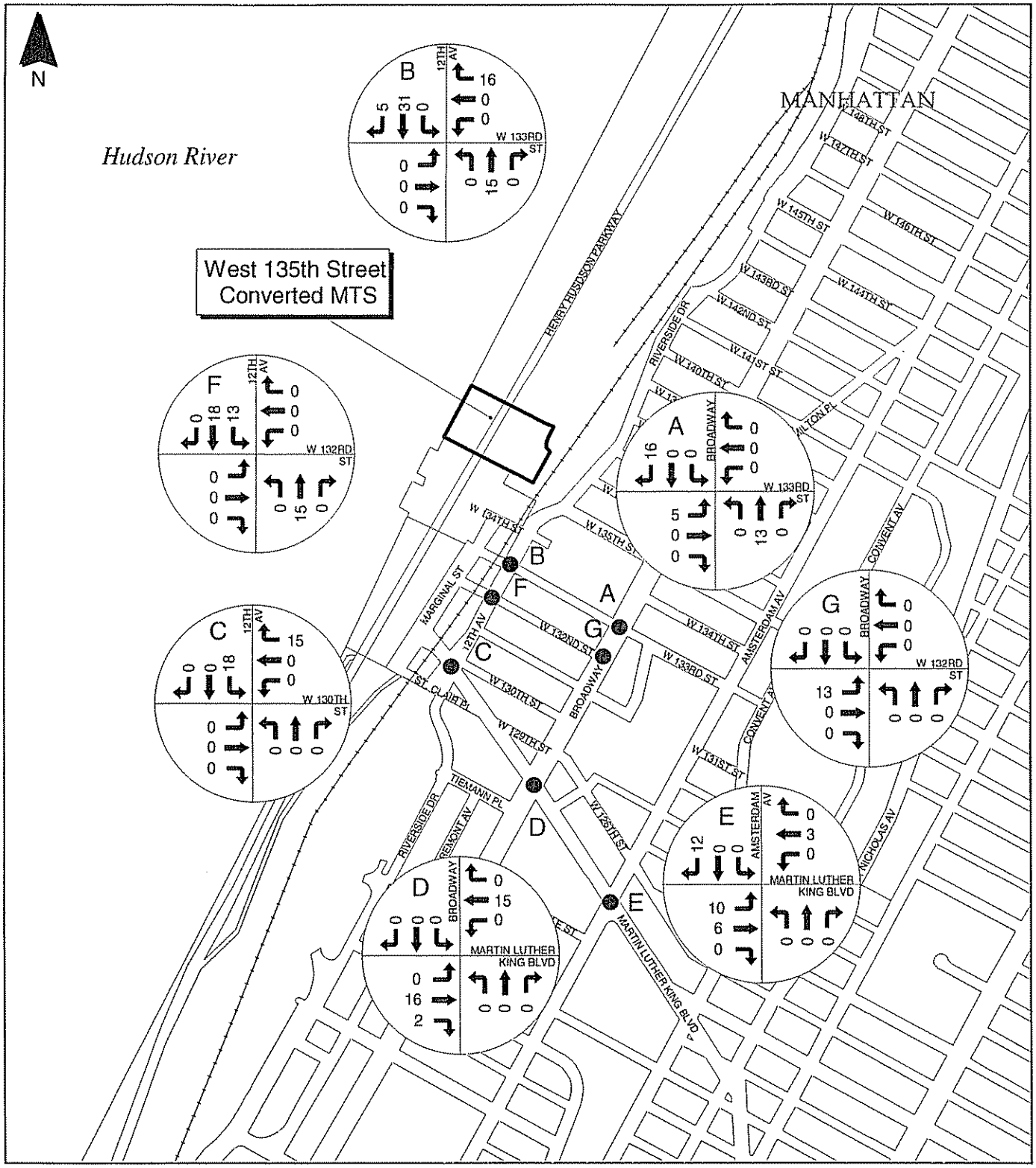

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-13 2006 Net Traffic Volumes AM Peak West 135th Street Converted MTS

CITY OF NEW YORK
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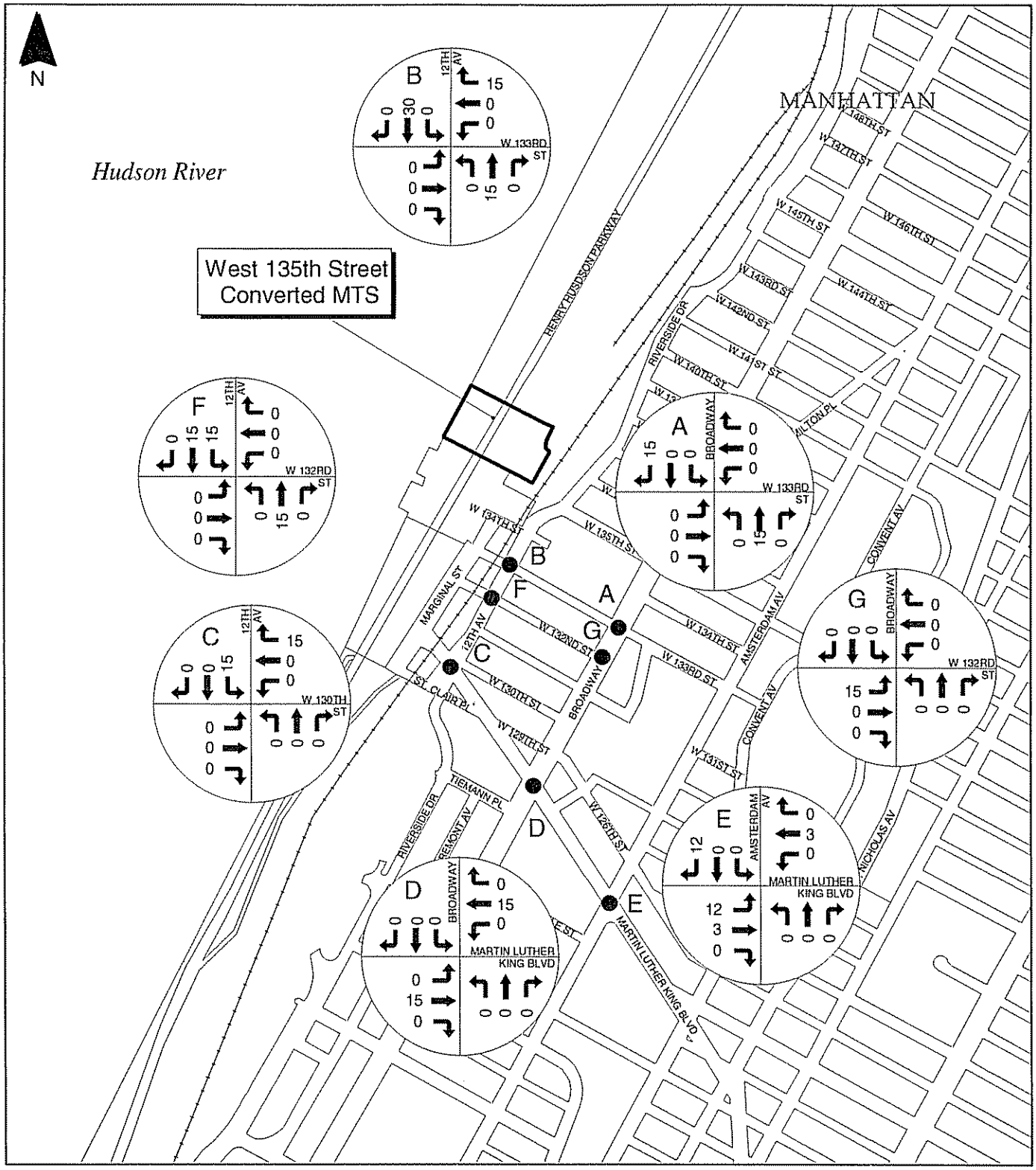

Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-14 2006 Net Traffic Volumes Facility Peak West 135th Street Converted MTS

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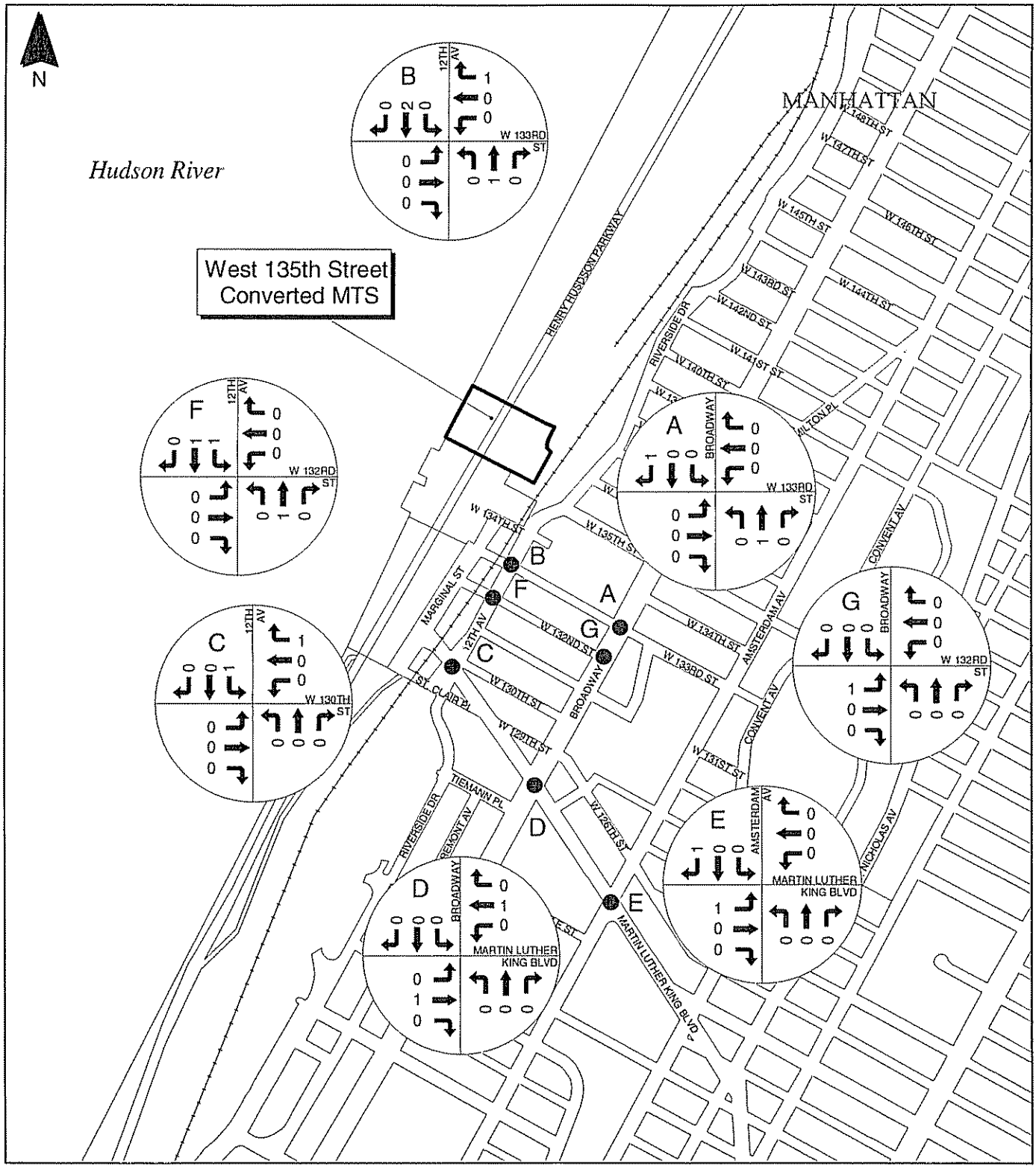

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-15 2006 Net Traffic Volumes PM Peak West 135th Street Converted MTS

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Employee person trips generated as a result of the West 135th Street Converted MTS are expected to be about 44 per shift (22 coming in and 22 leaving). There are three employee shifts per day: 8:00 a.m. to 4:00 p.m.; 4:00 p.m. to 12:00 a.m.; and 12:00 a.m. to 8:00 a.m. It is assumed that employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected to occur between 7:30 a.m. and 8:30 a.m.; 3:30 p.m. and 4:30 p.m.; and 11:30 p.m. and 12:30 a.m. Because only the AM peak (8:00 to 9:00 a.m.) coincided with a projected employee shift change (7:30 to 8:30 a.m.), employee trips both to and from the West 135th Street Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic.

Figures 21.14-10, 21.14-11 and 21.14-12 illustrate the 2006 Build Condition traffic volumes, which are a combination of Future No-Build and 135th Street MTS traffic volumes at the study intersections. A two-stage process was used to derive these traffic volumes. First, the truck trips generated by the existing interim export program were subtracted from the truck trips expected to be generated by the West 135th Street Converted MTS. These net trips were added to the Future No-Build traffic volumes along the paths specified in Figure 21.14-2. In the case of the West 135th Street Converted MTS, there was no overlap of truck trips generated by the interim export program with that expected to be generated by the West 135th Street Converted MTS.

Figures 21.14-13, 21.14-14 and 21.14-15 illustrate the resulting net change in traffic at each study intersection. The highest net increase in truck trips occurred at the intersection of 133rd Street and 12th Avenue. All of the trucks proceeding to and from the West 135th Street Converted MTS would pass through this intersection.

As noted in Section 21.14.2.3, the intersection of West 125th Street and Amsterdam Avenue was identified as a high pedestrian accident location and the overall number of accidents at this intersection has been increasing over the last three-year period. As also noted in Section 21.14.2.6, the highest pedestrian crossing volumes were identified in the study area at this intersection. High pedestrian volumes, coupled with turning movement volumes ranging from 50 to nearly 260 vehicles per hour and only a short lag-protected green phase for the southbound Amsterdam Avenue approach, likely result in a level of pedestrian/vehicle conflict that is contributory to the high number of pedestrian accidents. The maximum volume of collection vehicles that would pass through this intersection proceeding to and from the West 135th Street Converted MTS during one hour is estimated at 30. This represents less than 2% of the total

traffic flow that would enter the intersection under Future Build Conditions and should not represent a measurable change in safety. The provision of additional split phases to separate pedestrian and turning traffic should be investigated at this intersection.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 70% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 94% of weekday traffic volumes. Table 21.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the West 135th Street Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 21.14-3
Weekday and Weekend Traffic
West 135th Street Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic NB and SB on Broadway (1)**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
222	153	26,501	25,043

Note:
(1) NB and SB traffic data collected from ATR counts taken on Broadway between 133rd Street and 134th Street from September 11 to 17, 2003.

Table 21.14-4 provides the v/c ratio, delay and LOS for each analyzed signalized intersection under the Future Build with the West 135th Street Converted MTS. Overall, 2006 Build intersection traffic operations, expressed in terms of delay, would deteriorate very minimally and except during the facility peak hour at the intersection of 133rd Street and Broadway, the LOS does not change at any intersection. While there are no changes in the LOS at most signalized intersections, a significant traffic impact, as defined by the 2001 CEQR Technical Manual and listed in Section 3.16, was identified for the westbound left turn lane group at the intersection of 125th Street and Amsterdam Avenue during the AM peak hour. Suggested mitigation for this impact is discussed below.

Table 21.14-4
HCM Analysis[(1)]- 2006 Future Build Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0 26	28.4	C	0.20	27.7	C	0 22	27.9	C
SB LTR	0 45	33.7	C	0.43	33.7	C	0.21	28.5	C
EB LTR	0.19	6.8	A	0.17	6 6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.5	A
WB TR	0.70	13.0	B	0.58	10.7	B	0.63	11.3	B
OVERALL		14.8	B		13.2	B		12.4	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0 43	11 0	B	0.38	10 4	B	0.62	13.7	B
SB LTR	0 21	9 5	A	0.22	9 8	A	0 10	8 4	A
EB LTR	0 30	27.4	C	0.33	28 0	C	0 54	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.4	B		13.9	B		17.1	B
133rd Street & 12th Avenue (signalized)									
NB L	0 77	22 8	C	0.58	15.2	B	1.01	55 3	E
NB LTR	0 31	10 5	B	0.25	9 8	A	0.36	11.1	B
SB LTR	0 11	8 3	A	0.10	8 2	A	0 07	8.0	A
WB LTR	0.71	37.8	D	0.42	28.9	C	1.08	95.9	F
OVERALL		22.9	C		16.0	B		59.1	E
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0 80	31 9	C	0.75	29.6	C	1.05	69 1	E
SB DFL	0 46	18 6	B	0 43	17 3	B	0.59	29 1	C
SB TR	0 98	59.5	E	0 82	37.1	D	0 62	27.1	C
EB L	0 46	33 5	C	0 52	35.0+	D	0 45	31 3	C
EB TR	0 78	34 5	C	0 69	30.7	C	0 65	29 0	C
WB L	1 05	125 7	F	0 74	56 9	E	0 55	38 0	D
WB TR	0.64	29.5	C	0.60	28.6	C	0.56	27.3	C
OVERALL		40.9	D		31.3	C		43.2	D
133rd Street & Broadway (signalized)									
NB LTR	0 53	17.0	B	0 46	15.9	B	1.01	52.4	D
SB LTR	0 85	27 5	C	0 77	23.4	C	0 72	22.5	C
EB LTR	0 23	19 7	B	0 18	18 9	B	0 21	19 4	B
WB LTR	0.39	21.8	C	0.32	20.7	C	0.68	28.9	C
OVERALL		23.1	C		20.4	C		38.2	D
132nd Street & Broadway (signalized)									
NB LTR	0 46	16.0	B	0 41	15.1	B	0 63	18 7	B
SB LTR	0 62	18 7	B	0 48	16 0	B	0 47	16.0	B
EB LTR	0.40	22.4	C	0.42	22.6	C	0.49	23.7	C
OVERALL		18.2	B		16.8	B		18.6	B
125th Street & Broadway (signalized)									
NB L	0 99	80 9	F	0 69	41 7	D	1.10	110 2	F
NB LTR	0 99	69 8	E	0 77	40.7	D	1.10	99.3	F
SB L	0 47	32 7	C	0 38	31 0	C	0 41	31 4	C
SB LTR	0 75	38 6	D	0 75	38 8	D	0 57	33 2	C
EB L	0 33	26 0	C	0 28	24 1	C	0 44	30 0	C
EB TR	0 59	27 2	C	0 54	26 1	C	0 56	26 2	C
WB L	0 66	43 2	D	0 49	32 1	C	0 37	27 6	C
WB TR	0.52	25.9	C	0.43	24.3	C	0.56	26.3	C
OVERALL		45 5	D		33 6	C		57 1	E

Notes for Table 21.14-4:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
DFL = defacto left
NB = northbound
WB = westbound
EB = eastbound
SB = southbound
L = left movement
TR = through right movement

During the AM peak hour, an impact was identified on the westbound left turn lane group at the intersection of West 125th Street and Amsterdam Avenue. As shown, the westbound left turn lane group remains at LOS F, but the delay increases from 120.1 seconds to 125.7 seconds. Currently, the existing signal operates as a three-phase signal. The mitigation proposed is as follows:

- Increase eastbound/westbound green time to 31 seconds; and
- Reduce northbound/southbound exclusive left turn green time to 9 seconds.

This would reduce the westbound left turn lane group, with LOS F, from a delay of 125.7 seconds to 104.5 seconds. This would not generate any impacts for the southbound exclusive left turn lane group and it would provide adequate clearance time for pedestrian crossings.

21.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

21.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

Table 21.14-5
HCM Analysis[1] - 2006 Future Build Conditions with Mitigation
West 135th Street Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & Amsterdam Avenue (signalized) – AM Peak									
NB LTR	0.80	31.7	C	0.80	31.9	C	0.80	31.9	C
SB DFL	0.46	18.6	B	0.46	18.6	B	0.47	19.5	B
SB TR	0.93	49.4	D	0.98	59.5	D	0.98	59.5	E
EB L	0.34	28.1	C	0.46	33.5	C	0.44	31.4	C
EB TR	0.78	34.1	C	0.78	34.5	C	0.76	32.5	C
WB L	1.03	120.1	F	1.05	125.7	F	0.98	104.5	F
WB TR	0.63	29.4	C	0.64	29.5	C	0.62	28.2	C
OVERALL		38.3	D		40.9	D		39.2	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L = left movement
TR = through right movement

21.15 Air Quality

21.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the West 135th Street Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 21.15.4.2.

21.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 21.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 21.15-1
Representative Ambient Air Quality Data
West 135th Street Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	P.S. 59	8-Hour	2,978 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	5,268 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	P.S. 59	Annual	71 $\mu g/m^3$ (1)	100 $\mu g/m^3$
PM_{10}	P.S. 59	Annual	34 $\mu g/m^3$ (2)	50 $\mu g/m^3$
		24-Hour	88 $\mu g/m^3$ (2)	150 $\mu g/m^3$
SO_2	P.S. 59	3-Hour	186 $\mu g/m^3$ (1)	1,300 $\mu g/m^3$
		24-Hour	123 $\mu g/m^3$ (1)	365 $\mu g/m^3$
		Annual	37 $\mu g/m^3$ (1)	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.

21.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

21.15.4 Potential Impacts with the West 135th Street Converted MTS

21.15.4.1 On-Site Analysis

21.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that is anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 21.15-2. Figure 21.15-1 shows the locations of these sources within the site.

21.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 21.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from West 135th Street Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 21.15-3, are below the STVs. The West 135th Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 21.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
West 135th Street Converted MTS

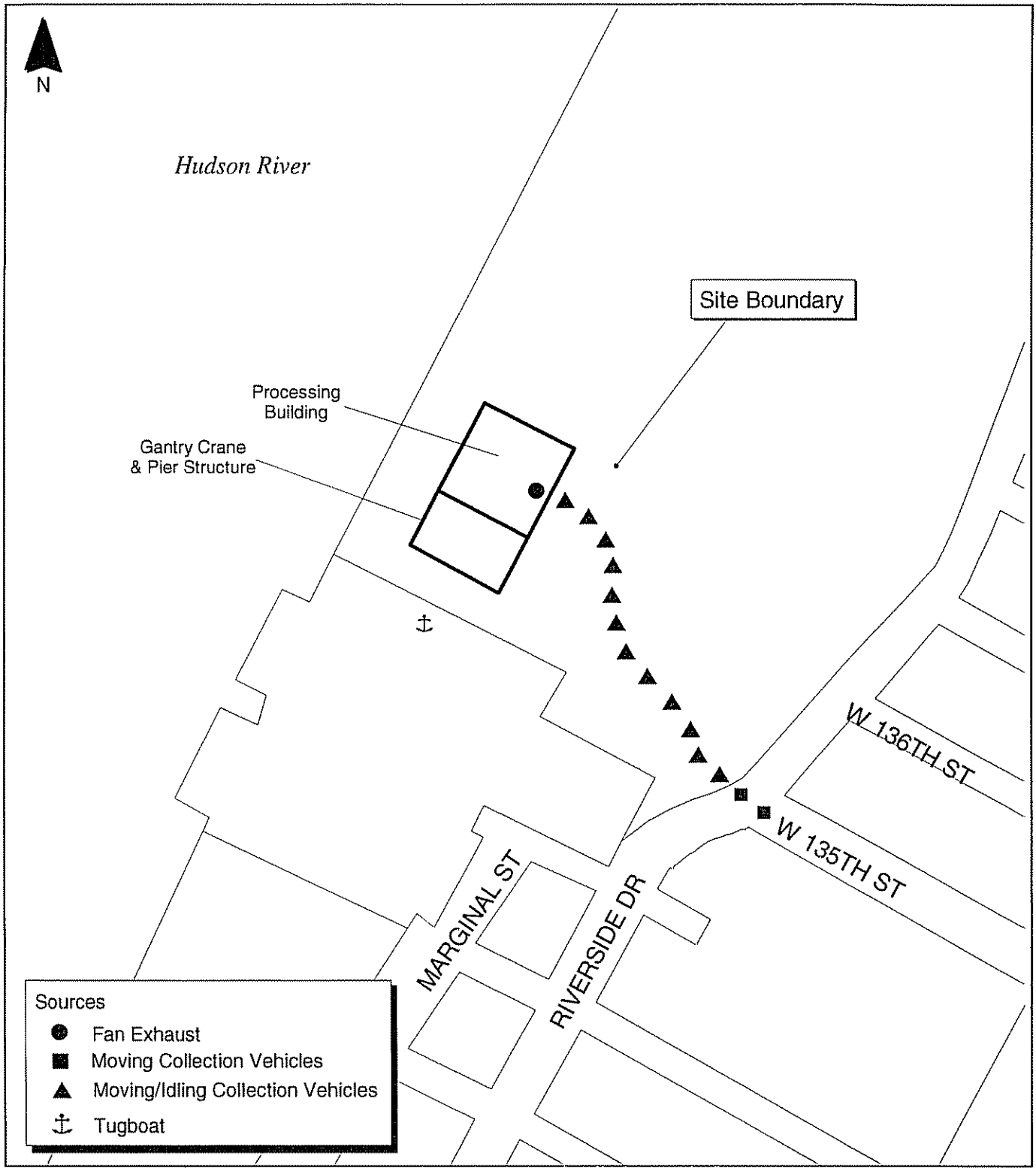
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	10
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	17 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) The peak 8-hour and 3-hour average number of queuing collection vehicles outside of the processing building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (17), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 21.15-1 On-Site Air Quality Analysis
West 135th Street Converted MTS

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Table 21.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
West 135th Street Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~2,091~~ 2,100	~~4,352~~ 4,400	~~443~~ 6,500	40,000	NA
	8-hour[6]	1,000 ~~019~~	~~3,321~~ 3,300	~~340~~ 4,300	10,000	NA
Nitrogen Dioxide (NO_2) [6]; $\mu g/m^3$	Annual	~~56~~	77	~~82~~ 83	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~26~~ 27	~~46~~ 61	~~72~~ 88	150	NA
	Annual	5	21	26	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2	~~NA~~	~~NA~~	NA	5
	Annual Neighborhood Average	0.~~036~~ 0.023[5]	~~NA~~	~~NA~~	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	264	265	529	1,300	NA
	24-hour[6]	7	139	146	365	NA
	Annual	1	~~34~~ 37	~~35~~ 38	80	NA

Notes:
(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.
(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~on February 18, 2005.
(3) NAAQS = National Ambient Air Quality Standard.
(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.
(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.
(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.
NA = Not Applicable

21.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 21.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the West 135th Street Converted MTS are not considered to be significant.

21.15.4.2 Off-Site Analysis

21.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of 12th Avenue and West 133rd Street, and Broadway and West 133rd Street to determine whether West 135th Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the same two intersections, to determine whether West 135th Street Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 21.15-2.

Table 21.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
West 135th Street Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] (µg/m³)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] (µg/m³)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] (µg/m³)	Long-Term (Annual) Guideline Conc. (AGCs)[5] (µg/m³)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] (µg/m³)	Unit Risk Factors[7] (µg/m³)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	1.41E-01	1.30E+03	1.08E-04	1.99E-03	1.30E-01	1.53E-02	1.99E-03	8.30E-06	1.55E-08
2	Formaldehyde	1.78E-01	3.00E+01	5.95E-03	2.52E-03	6.00E-02	4.20E-02	2.52E-03	1.30E-05	3.28E-08
3	1,3 Butadiene	5.91E-03	-	-	8.35E-05	3.60E-03	2.32E-02	8.35E-05	2.80E-04	2.51E-09
4	Acetaldehyde	1.16E-01	4.50E+03	2.58E-05	1.64E-03	4.50E-01	3.64E-03	1.64E-03	2.20E-06	3.60E-09
5	Benzo(a)pyrene	2.84E-05	-	-	4.02E-07	2.00E-03	-	4.02E-07	1.70E-03	6.83E-10
Non-Carcinogenic Pollutants[10]										
6	Propylene	3.90E-01	-	-	5.51E-03	3.00E+03	1.84E-06	5.51E-03	NA	NA
7	Acrolein	1.40E-02	1.90E-01	7.36E-02	1.98E-04	2.00E-02	9.88E-03	NA	NA	NA
8	Toluene	6.18E-02	3.70E+04	1.67E-06	8.74E-04	4.00E+02	2.18E-06	NA	NA	NA
9	Xylenes	4.31E-02	4.30E+03	1.00E-05	6.09E-04	7.00E+02	8.70E-07	NA	NA	NA
10	Anthracene	2.83E-04	-	-	4.00E-06	2.00E-02	2.00E-04	NA	NA	NA
11	Benzo(a)anthracene	2.54E-04	-	-	3.59E-06	2.00E-02	1.79E-04	NA	NA	NA
12	Chrysene	5.34E-05	-	-	7.54E-07	2.00E-02	3.77E-05	NA	NA	NA
13	Naphthalene	1.28E-02	7.90E+03	1.62E-06	1.81E-04	3.00E+00	6.04E-05	NA	NA	NA
14	Pyrene	7.23E-04	-	-	1.02E-05	2.00E-02	5.11E-04	NA	NA	NA
15	Phenanthrene	4.44E-03	-	-	6.28E-05	2.00E-02	3.14E-03	NA	NA	NA
16	Dibenz(a,h)anthracene	8.82E-05	-	-	1.25E-06	2.00E-02	6.23E-05	NA	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		7.97E-02	**Total Estimated Chronic Non-Cancer Hazard Index**		9.83E-02	**Total Estimated Combined Cancer Risk**		5.51E-08
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold**[11]		**1.0E+00**	**Cancer Risk Threshold**[11]		**1.0E-06**

Notes to Table 21.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

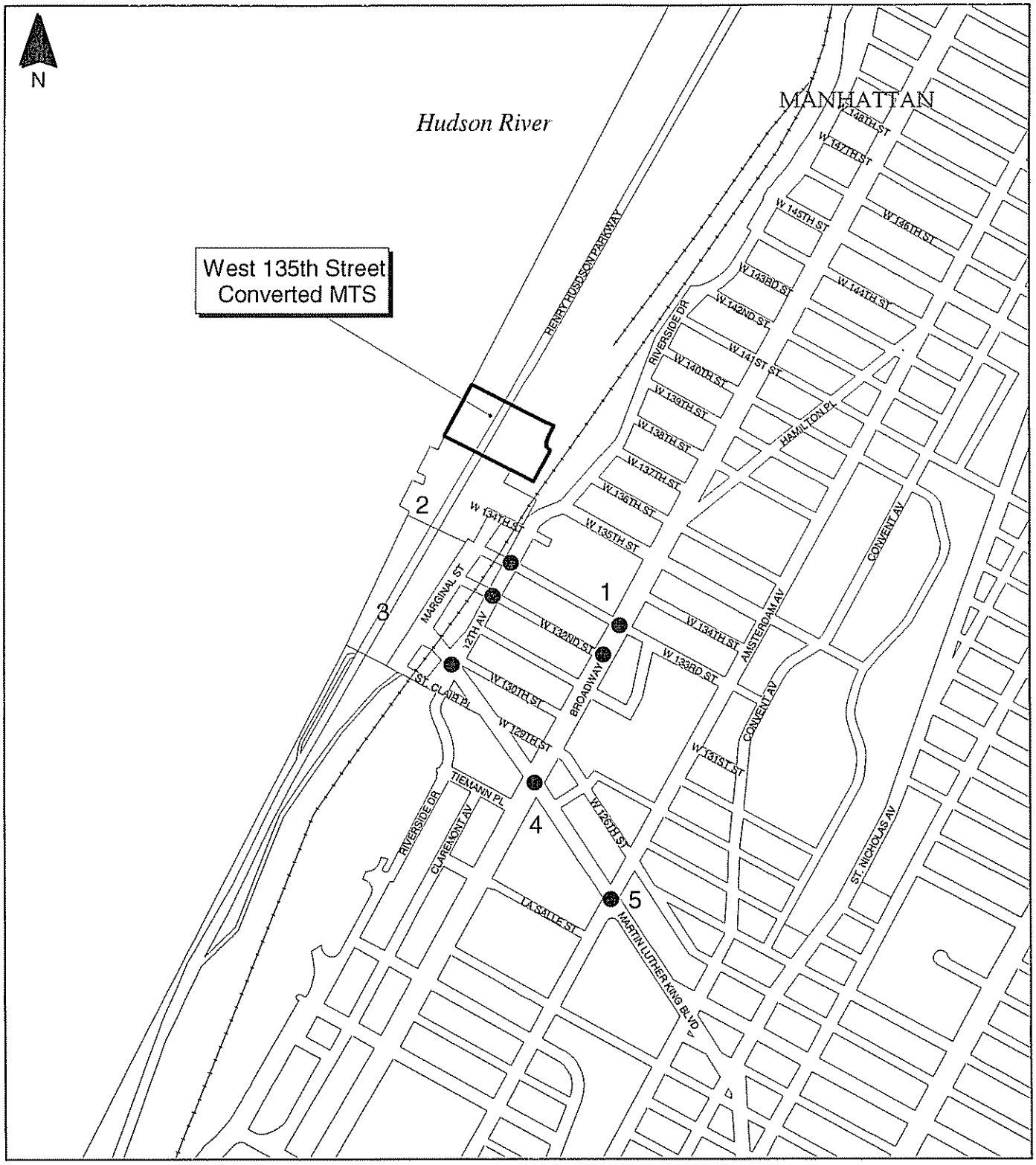
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 21.15-2 Off-Site Air Quality Intersections Studied West 135th Street Converted MTS

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21.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 21.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). The West 135th Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 21.15-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
West 135th Street Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources [3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources [2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
12th Avenue & West 133rd Street									
Existing Conditions		~~77~~92	34						
Future No-Build Conditions		~~77~~92	34						
Future Build Conditions	NA[5]	~~77~~92	34						
Future Build Incremental				0.4	0.2~~1~~	0.6~~6~~4	0.0402	0.0~~4~~4050	0.0~~8~~8070
Broadway & West 133rd Street									
Existing Conditions		~~77~~92	33						
Future No-Build Conditions		~~77~~92	33						
Future Build Conditions	NA[5]	~~78~~93	34						
Future Build Incremental				0.4	0.1~~6~~62	0.5~~6~~66	0.0402	0.020	0.0~~6~~6040

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration (24-hr PM_{10} = ~~46~~61 $\mu g/m^3$; Annual PM_{10} = 21 $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions near the intersection considered.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for the~~under ~~Future~~ Future No-Build and ~~Future~~ Future Build ~~scenarios~~ conditions at ~~any~~ sidewalk receptors ~~three meters from the edge of the roadways using~~ under AM, Facility, or PM peak traffic conditions.

(4) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking T~~the maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for the~~under ~~Future~~ Future No-Build and ~~Future~~ Future Build ~~scenarios~~ conditions at ~~any~~ receptors 15 meters from the edge of the roadways ~~using~~ under AM, Facility, or PM peak traffic conditions.

(5) NA = Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter ~~NA = Not Applicable~~

21.16 Odor

21.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the Riverbank State Park located approximately 60 feet from the site boundary.

21.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the West 135th Street Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

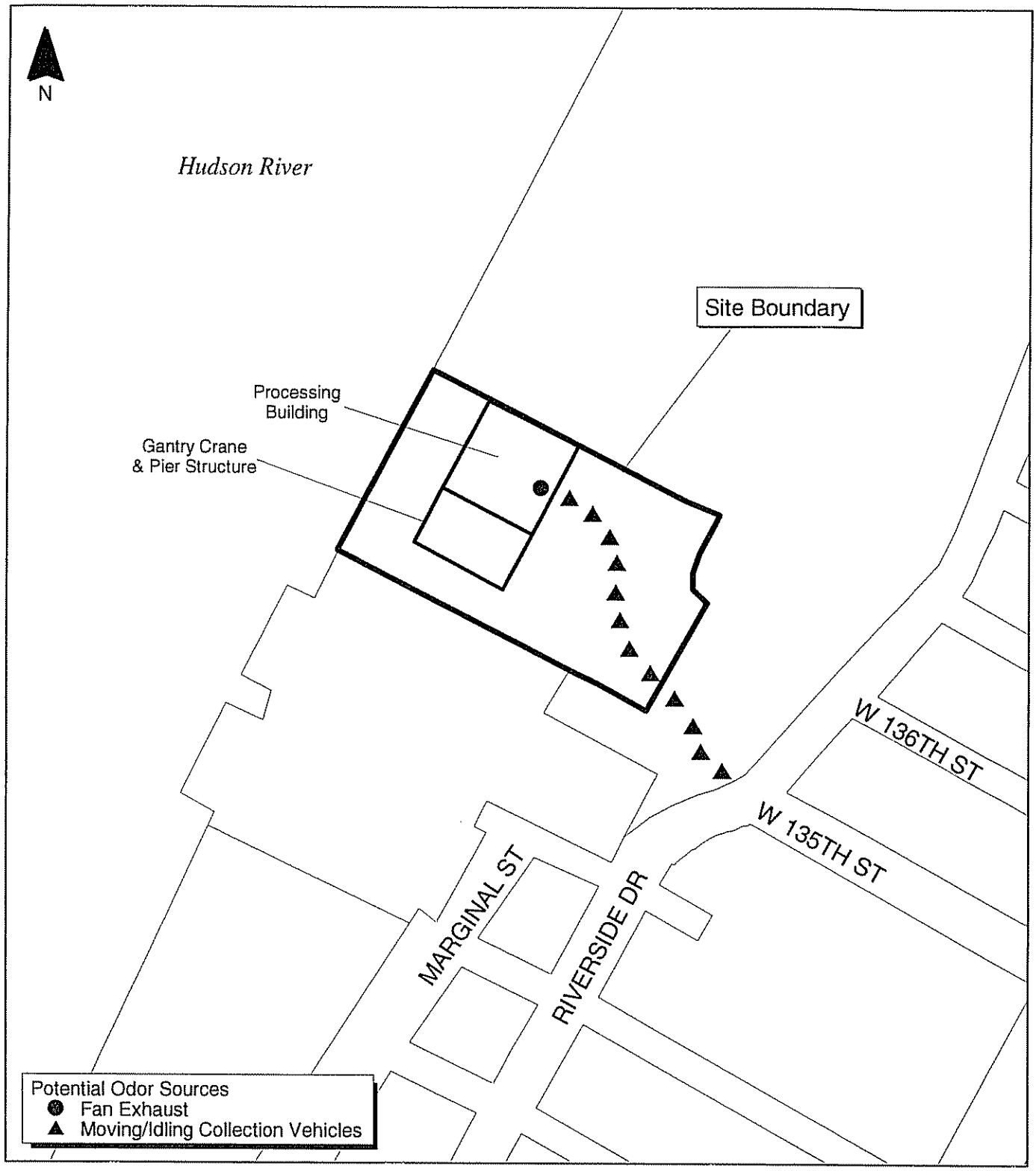
21.16.3 Potential Impacts with the West 135th Street Converted MTS

21.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the West 135th Street Converted MTS are provided in Table 21.16-1. Figure 21.16-1 shows the locations of these sources within the site.

Table 21.16-1
Odor Sources Included in Odor Analysis
West 135th Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection	18



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 21.16-1 Potential Odor Sources

West 135th Street Converted MTS

CITY OF NEW YORK
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THE CITY OF NEW YORK DEPARTMENT OF SANITATION

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the West 135th Street Converted MTS.

21.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 21.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the West 135th Street Converted MTS at any nearby sensitive receptor is less than 1, so odors from the West 135th Street Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 21.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
West 135th Street Converted MTS

Parameter	Resulting Odor Unit (1)
Estimated Detectable Concentration	5.0
Highest Result	0.31
Type of Receptor	Discrete Receptor
Receptor(2)	On Land
Closest Sensitive Receptor Result (2)	0.09
Type of Receptor	Riverbank State Park
Distance to Receptor	~~60~~ 90 Feet

Notes:

(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.

(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

~~(1) D/T ratio is dimensionless.~~

~~(2) Measured from the site boundary.~~

~~(3) Measured from the site property line.~~

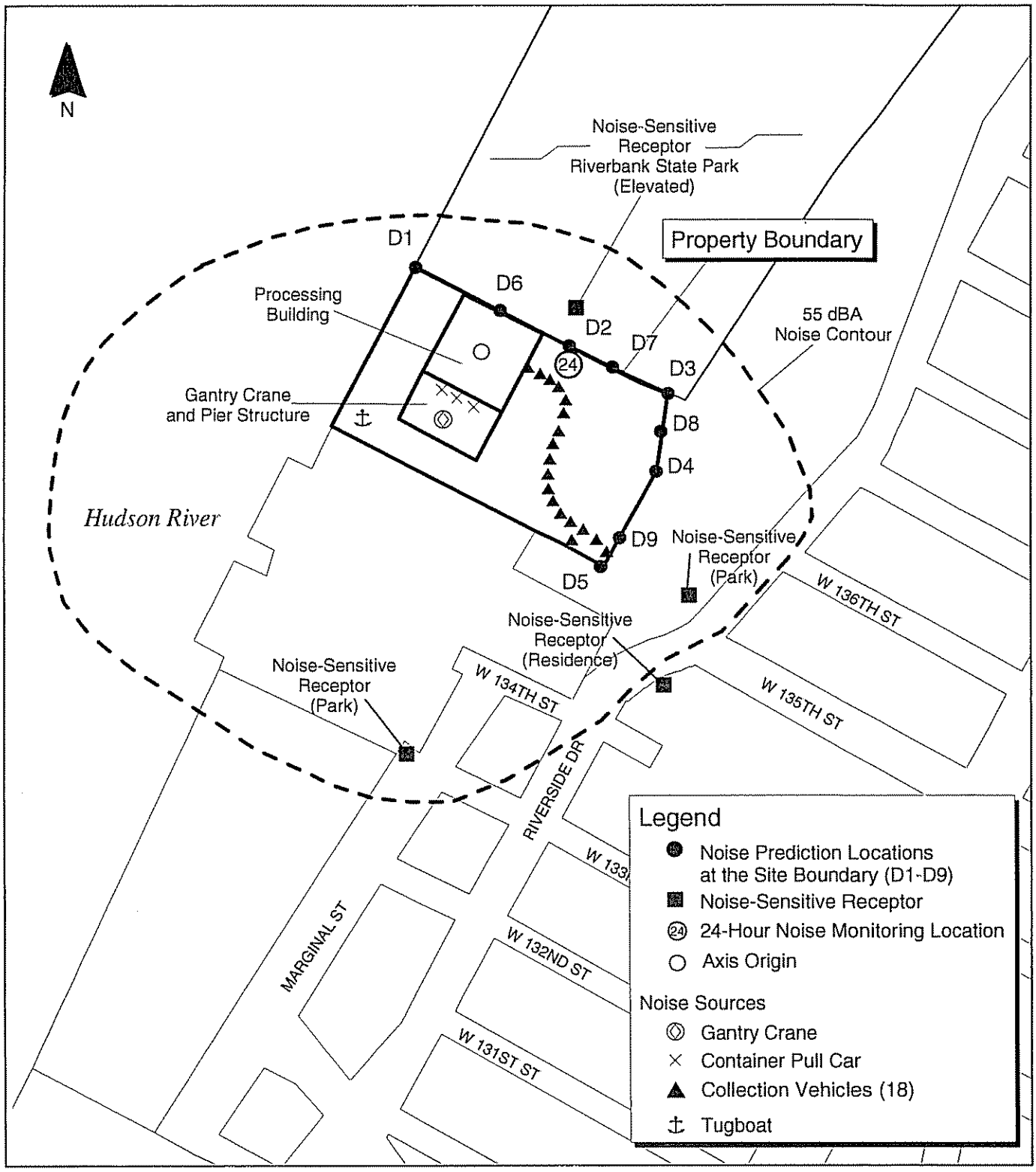
21.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from West 135th Street Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

21.17.1 Existing Conditions

21.17.1.1 Introduction

Figure 21.17-1 shows the location of the West 135th Street MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptors are Riverbank State Park, located adjacent to the elevated West Side Highway approximately 27 meters (90 feet) north of the property boundary; Riverside Ramparts, located on Riverside Drive approximately 67 meters (220 feet) southeast of the property boundary; an apartment building located on the corner of Riverside Drive and West 135th Street, approximately 99 meters (325 feet) southeast of the property boundary; and Harlem Piers Park, located approximately 183 meters (600 feet) from the property boundary. The other noise-sensitive land uses within the study area are residential areas on top of the bluff across the West Side Highway, where traffic noise from the elevated highway dominates the ambient acoustic environment and obscures noise from the site. No other noise-sensitive land uses are found nearby.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

Figure 21.17-1 Noise Sources and Receptors
West 135th Street Converted MTS
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21.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptors. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}[13] Table 21.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 61.6 dBA on March 18, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic noise from the elevated West Side Highway; and
- Occasional watercraft on the Hudson River.

21.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the West 135th Street Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required and, therefore, off-site noise monitoring was conducted. Table 21.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.

Table 21.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
West 135th Street Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 a.m.	62.7	61.1	62.3	63.8	59.1	72.9
1:00-2:00 a.m.	62.0	60.2	61.8	63.2	58.1	74.8
2:00-3:00 a.m.	61.6	59.9	61.3	62.7	57.3	77.2
3:00-4:00 a.m.	62.2	59.8	61.6	63.1	57.5	77.9
4:00-5:00 a.m.	62.7	61.3	62.5	63.7	59.7	76.1
5:00-6:00 a.m.	64.7	63.1	64.3	65.9	61.2	69.8
6:00-7:00 a.m.	66.3	64.6	65.9	67.5	61.9	76.6
7:00-8:00 a.m.	65.9	64.1	65.3	67.0	61.6	78.9
8:00-9:00 a.m.	65.6	63.7	65.0	66.6	61.1	82.7
9:00-10:00 a.m.	64.6	62.6	64.0	65.7	60.4	78.4
10:00-11:00 a.m.	66.3	63.8	65.0	66.6	61.6	85.7
11:00 a.m.-12:00 p.m.	65.5	63.4	64.6	66.7	60.8	81.6
12:00-1:00 p.m.	65.5	63.5	64.8	66.4	61.3	80.6
1:00-2:00 p.m.	65.6	63.5	64.9	66.7	61.0	83.8
2:00-3:00 p.m.	66.2	64.5	65.6	67.2	62.4	80.8
3:00-4:00 p.m.	65.1	63.2	64.3	66.1	61.0	78.2
4:00-5:00 p.m.	65.0	63.2	64.5	66.0	61.3	77.1
5:00-6:00 p.m.	65.6	63.7	64.7	66.1	62.0	84.2
6:00-7:00 p.m.	67.7	65.6	67.3	68.7	63.6	88.6
7:00-8:00 p.m.	66.8	65.0	66.3	67.8	62.9	80.8
8:00-9:00 p.m.	65.2	63.6	64.8	66.2	61.1	77.7
9:00-10:00 p.m.	64.4	62.6	63.8	65.4	60.1	77.7
10:00-11:00 p.m.	64.1	61.7	63.1	65.0	59.8	80.6
11:00 p.m.-12:00 a.m.	63.7	62.2	63.4	64.7	60.3	75.1

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

Table 21.17-2
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-Site Analysis
West 135th Street Converted MTS

Location	Existing Noise Levels During Quietest Hour (dBA)[1][2]
West 132nd Street between 12th Avenue and Broadway	71.3
West 133rd Street between 12th Avenue and Broadway	66.1

Notes:
(1) The noise level reading was measured at the closest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The existing noise levels were measured on June 16, 2004 at 3:00 a.m. for West 132nd Street and July 31, 2003 at 1:00 a.m. for West 133rd Street.

21.17.2 Future No-Build Conditions

21.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

21.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 21.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 21.17-3
Off-Site Noise Traffic Volume
West 135th Street Converted MTS

Location	Hour	Existing Traffic Volume[1] (Vehicles / Hour)	Future No-Build Traffic Volume[2] (Vehicles / Hour)
West 132nd Street between 12th Avenue and Broadway	2:00 a.m.	16	16
West 132nd Street between 12th Avenue and Broadway	8:00 a.m.	100	104
West 133rd Street between 12th Avenue and Broadway	2:00 a.m.	41	42
West 133rd Street between 12th Avenue and Broadway	10:00 a.m.	237	247
West 125th Street between Broadway and Amsterdam	2:00 a.m.	225	228
West 125th Street between Broadway and Amsterdam	10:00 a.m.	1,001	1,016
~~West 125th Street between Broadway and 12th Avenue~~	~~1:00 a.m.~~	~~251~~	~~255~~
West 125th Street between Broadway and 12th Avenue	3:00 a.m.	152	154
West 125th Street between Broadway and 12th Avenue	9:00 a.m.	1,070	1,086
Broadway between West 132nd Street and West 133rd Street	2:00 a.m.	225	228
Broadway between West 132nd Street and West 133rd Street	10:00 a.m.	1,001	1,016

Notes:
[1] Existing Traffic Volumes are based on ATR data
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates

21.17.3 Potential Impacts with the West 135th Street MTS

21.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the West 135th Street Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 21.17-4. Spectral noise levels used in the Performance Standards analysis are shown in Table 21.17-5. The number and types of equipment assumed for this analysis were based on the West 135th Street Converted MTS's peak design capacity. Shown earlier, Figure 21.17-1 indicates the West 135th Street layout, the locations of the points along its property boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

21.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the West 135th Street Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 79 meters (260 feet) from the property boundary in the direction of Riverbank State Park, which is approximately 27 meters (90 feet) away from the property boundary. Similarly, the 55 dBA contour line is approximately 84 meters (275 feet) from the property boundary in the direction of the apartment building on Riverside Drive, which is 99 meters (325 feet) away from the property boundary; approximately 98 meters (320 feet) from the property boundary in the direction of Riverside Ramparts, which is approximately 67 meters (220 feet) away from the property boundary; and approximately 229 meters (750 feet) from the property boundary in the direction of Harlem Piers Park, which is approximately 183 meters (600 feet) away from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that ~~three of the four~~ there are noise-sensitive receptors ~~are~~ located within the 55 dBA contour line (see Figure 21.17-1). Therefore, an on-site noise analysis, including noise monitoring at Riverbank State Park, Riverside Ramparts, Riverside Drive Apartment Building and Harlem Piers Park, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Table 21.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
West 135th Street Converted MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Crane (1)[3]	67
Harbor Tug Bboat (1)[4])	69
Moving/Queuing DSNY Collection Vehicles (18)[5]	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.
(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the converted MTS's.
(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the converted MTS's.
(5) Quantity includes one truck queuing on the outbound scale.

Table 21.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
West 135th Street Converted MTS

Equipment Name (quantity)[1], [2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
~~Wheel~~ Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT325 (1)	95	90	85	85	81	78	73	64
~~Bridge/~~ Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
~~Mini-Sweeper~~Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars ~~Puller~~ (3)	31	30	47	44	36	35	42	46
Gantry Crane (1) [~~24~~]	79	81	78	71	66	60	55	55

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.
(3) Noise level representative of each piece of equipment.
(4) ~~N~~noise level ~~that~~ will be specified for the gantry crane in DSNY's plans and specification for construction of the ~~C~~converted MTS's.
Hz = Hertz
K = Thousand

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on monitoring data provided in Table 21.17-1 above. Table 21.17-6 below identifies the existing monitored background noise levels. The table shows the distance from the West 135th Street Converted MTS to the noise-sensitive receptors, the monitored existing background noise level at the noise-sensitive receptors, West 135th Street Converted MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptors. This difference represents the predicted incremental change in noise level from the West 135th Street Converted MTS. Because this incremental change is ~~less~~ greater than the CEQR threshold of 3 dBA, at one of the

noise-sensitive receptors, since the existing background noise level is 62 dBA or greater at all of the noise-sensitive receptors analyzed, there is ~~no~~ a predicted impact that would be caused by the West 135th Street Converted MTS on-site operations.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

21.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the West 135th Street Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 21.17-7). Based on this analysis, ~~no~~ exceedances to the Performance Standards are predicted.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-6
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ~~ID~~	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1]~~[2]~~	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]~~[4]~~	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise ~~Levels~~ Level (dBA)	Impact[4]~~[5]~~ (yes or no)
Riverbank State Park	27 / 90	64.2	67.0	~~67.1~~ 69.0	~~2.9~~ 4.8	~~No~~ Yes
~~Harlem Piers Park~~Riverside Ramparts Park	67/200	62 ~~24~~	59.0	~~64.6~~ 64.0	1.6	No
Riverside Drive ~~Ramparts~~Apartment	~~67 / 200~~ 119/389	58.0	~~58.5~~ 58.0	~~63.9~~ 61.8	~~1.5~~ 2.5	No
Harlem Piers Park	183/600	62.2	~~60.1~~ 61.0	~~64.3~~ 64.5	~~2.1~~ 2.3	No

Notes:

(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels at the proposed Harlem Piers Park were measured July 16, 2004 at 10:15 a.m. Existing noise levels at Riverside Ramparts were measured at August 18, 2004 at 10:40 a.m. Existing noise levels at Riverbank State Park were measured on April 16, 2003 at 2:45 p.m. Existing noise levels at Riverside Drive Apartment were measured on May 9, 2003 at 2:30 a.m.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase of 3 dBA during the daytime if the existing noise level is greater than 62 dBA is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the West 135th Street Converted MTS with the quietest background noise levels that occur during its operation. Only an analysis during the quietest daytime noise level was performed since the parks are not expected to be open during nighttime hours.

Table 21.17-7
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
West 135th Street Converted MTS

Manufacturing District Regulation (M1)								
Frequency Range (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Threshold	**78**	**73**	**64**	**57**	**52**	**46**	**40**	**38**
Total Lp dB: D1	74.5	69.1	59.1	52.7	44.9	36.1	25.7	17.8
Total Lp dB: D2	77.0	71.7	61.9	55.4	47.8	39.3	30.3	27.1
Total Lp dB: D3	70.1	70.0	**66.4**	**59.4**	**54.1**	**47.9**	**42.6**	**42.3**
Total Lp dB: D4	70.9	71.0	**67.4**	**60.4**	**55.2**	**49.0**	**43.7**	**43.4**
Total Lp dB: D5	66.5	64.3	59.6	52.6	47.1	40.5	34.4	33.0
Total Lp dB D6	**85.8**	**80.4**	**70.3**	**63.9**	**56.1**	**47.1**	36.2	25.3
Total Lp dB D7	73.2	70.7	**65.8**	**58.8**	**53.4**	**47.0**	**41.5**	**41.2**
Total Lp dB D8	73.7	**75.2**	**71.9**	**64.9**	**59.8**	**53.7**	**48.5**	**48.2**
Total Lp dB D9	68.0	66.3	61.9	54.9	49.5	43.0	37.2	36.3

Notes:
Hz = Hertz
Lp = sound pressure level
dB = decibel
D1 through D9 are the points representative of the West 135th Street Converted MTS boundary that were used in all noise analyses
K = Thousand
Bold = Exceedance

21.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the West 135th Street Converted MTS boundary (D1, etc.) to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 21.17-8. Based on this conservative analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-8
Current Noise Code Analysis
West 135th Street Converted MTS

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	58.5
D2	**71.4**
D3	69.0
D4	**71.5**
D5	**78.4**
D6	65.0
D7	**72.4**
D8	**71.0**
D9	**73.4**

Notes:
(1) D1 through D9 are the points representative of the West 135th Street Converted MTS boundary that were used in all noise analyses
Bold = Exceedance

21.17.3.6 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the West 135th Street Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 21.17-9.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles coming to or going from the West 135th Street Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between

Table 21.17-9
Off-Site Noise Screening Results
West 135th Street Converted MTS

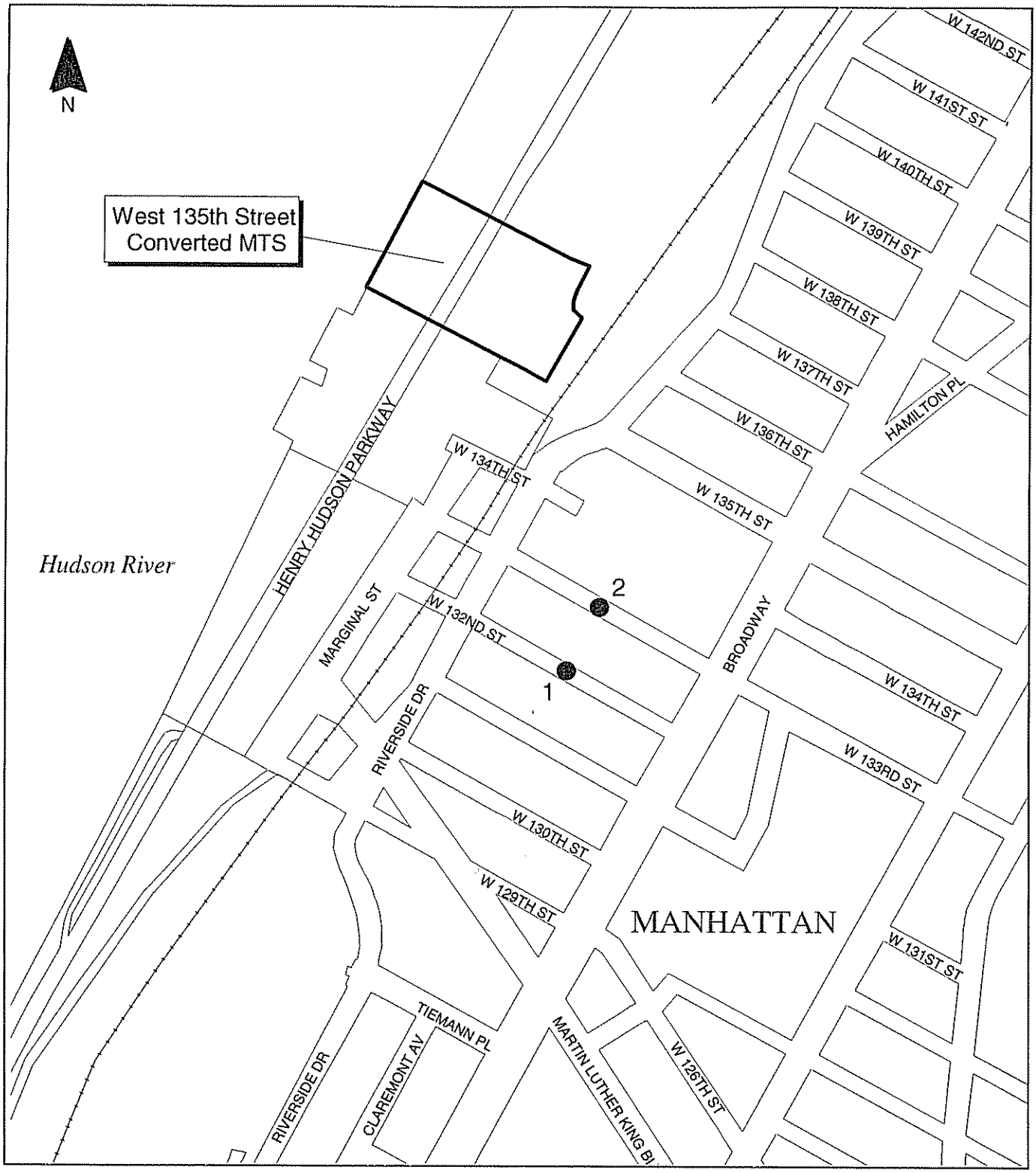
Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net Collection Vehicle PCEs[1][2]	Future Build PCEs[1][2]	Possible Impact[3]
West 132nd Street between 12th Avenue and Broadway	2:00 a.m.	16	6	0	282	298	Yes
West 132nd Street between 12th Avenue and Broadway	8:00 a.m.	248	13	0	611	859	Yes
West 133rd Street between 12th Avenue and Broadway	2:00 a.m.	42	5	0	235	277	Yes
West 133rd Street between 12th Avenue and Broadway	10:00 a.m.	344	15	0	705	1,049	Yes
West 125th Street between Broadway and Amsterdam	2:00 a.m.	616	12	0	564	1,180	No
West 125th Street between Broadway and Amsterdam	10:00 a.m.	3,935	30	0	~~5,345~~ 1410	5,345	No
West 125th Street between Broadway and 12th Avenue	1:00 a.m.	626	13	0	611	1,237	No
West 125th Street between Broadway and 12th Avenue	3:00 a.m.	577	12	0	564	1,141	No
West 125th Street between Broadway and 12th Avenue	9:00 a.m.	2,226	30	0	1,410	3,636	No
Broadway between West 132nd Street and West 133rd Street	2:00 a.m.	616	11	0	517	1,133	No
Broadway between West 132nd Street and West 133rd Street	10:00 a.m.	3,935	30	0	1,410	5,345	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include West 135th Street Converted MTS-related DSNY and other agency collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 21.17-2 Mobile Noise Analysis
Intersections Analyzed
West 135th Street Converted MTS

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traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. Figure 21.17-2 depicts the location of the roadways when a detailed off-site noise analysis was performed.

TNM results for locations/hours that indicated an impact based on a second-level screening are presented in Appendix E of this FDEIS. Because the incremental noise-level change, which is calculated by obtaining the difference between the TNM-predicted Future Build noise level and the TNM-predicted Future No-Build noise level, is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, an impact is predicted by TNM from the West 135th Street Converted MTS-related collection and employee vehicles.

To determine if these TNM-predicted impacts were accurate, site-specific truck simulations were conducted at the noise-sensitive receptor site. The truck simulation analysis provides a more realistic determination of DSNY and other agency collection vehicle noise impacts based on the proposed number of DSNY and other agency collection vehicles expected to travel through the roadways analyzed during the nighttime hours. Truck simulations were conducted with DSNY collection vehicles, as described in Section 3.19.7.2, for each roadway and hour that the first-level screening analysis resulted in potential impacts. For this procedure, two sets of noise measurements were taken, one with and one without DSNY trucks, by routing a set number of DSNY trucks during the affected nighttime hours past the noise-sensitive receptor. Tables 21.17-10 and 21.17-11 below contain the results of the site-specific DSNY collection vehicle simulations.

A comparison of the simulation results for the hour resulting in an impact and the TNM results for this hour for the same traffic conditions and background noise levels estimated from recordings during the simulations is provided in Appendix E of this FDEIS. Based on this comparison, it is determined that TNM over-predicted the incremental change. The over-prediction can be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the West 135th Street Converted MTS-related collection vehicles.

The results of the site-specific truck simulations show that an impact would not be caused at a noise-sensitive receptor by the West 135th Street Converted MTS-related collection vehicles.

Table 21.17-10
Off-Site Noise Analysis Truck Simulation
West 133rd Street between Broadway and 12th Avenue
West 135th Street Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	66.1	14	68.7	No (2.6)
2:00 a.m.	66.7	12	69.2	No (2.5)
3:00 a.m.	66.9	11	69.1	No (2.2)
4:00 a.m.	66.7	12	69.2	No (2.5)
5:00 a.m.	68.7	12	70.5	No (1.8)
9:00 a.m.	71.5	15	72.2	No (0.7)
10:00 a.m.	72.1	15	72.7	No (0.6)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations for hours 1:00 a.m. to 6:00 a.m. were performed on July 31, 2003. Simulations for hours 9:00 a.m. to 11:00 a.m. were performed on June 16, 2004.

Table 21.17-11
Off-Site Noise Analysis Truck Simulation
West 132nd Street between Broadway and 12th Avenue
West 135th Street Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Measured) (dBA)	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	71.9	6	72.5	No (0.6)
2:00 a.m.	71.4	6	71.9	No (0.5)
3:00 a.m.	71.3	5	71.9	No (0.6)
4:00 a.m.	72.0	5	72.4	No (0.4)
8:00 a.m.	72.0	13	72.5	No (0.5)
9:00 a.m.	71.8	15	72.7	No (0.9)
10:00 a.m.	72.4	15	73.3	No (0.9)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations for hours 1:00 a.m. to 5:00 a.m. were performed on June 16, 2004. Simulations for hours 8:00 a.m. to 11:00 a.m. were performed on May 25, 2004.

21.17.3.6 Combined On-Site and Off-Site Noise Levels

An on-site and off-site noise analysis was performed for the West 135th Street Converted MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis was conducted to determine if a combined noise analysis would be required for the operations at the West 135th Street Converted MTS. The combined analysis study area was defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway entrance to the site. The other limits for the combined analysis study area were defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the site. The results of the screening analysis show that the West 132nd Street apartment building and West 133rd Street apartment building noise-sensitive receptors are located within the study area that can be impacted by both on-site and off-site West 135th Street Converted MTS operations; therefore, a combined noise analysis, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on the off-site analysis discussed in Section 21.17.3.5 above. Tables 21.17-12 and 21.17-13 show the distance from the West 135th Street Converted MTS to the noise-sensitive receptors, the monitored existing background noise level at the noise-sensitive receptors, West 135th Street Converted MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted off-site noise levels at the noise-sensitive receptors. The table also provides the combined on-site and off-site noise levels and the difference between these combined noise levels. This difference represents the predicted incremental change in noise level from the West 135th Street Converted MTS on-site and off-site operations at the noise-sensitive receptor. Because this incremental change is not greater than the CEQR threshold of 3 dBA during nighttime hours for the West 132nd Street apartment building and West 133rd Street apartment building noise-sensitive receptors analyzed, there is ~~no~~ a predicted impact that would be caused by the West 135th Street Converted MTS combined on-site operations and off-site operations.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-12
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (L_{eq}) at the
West 132nd Street Apartment Building Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
West 132nd ~~Street between Broadway and 12th Avenue~~Apt. Building	350 / 1147	1:00 a.m.	71.9	~~52.3~~ 57.3	6	72.5	~~72.5~~ 72.6	~~0.6~~ 0.7	No
		2:00 a.m.	71.4	~~52.3~~ 57.3	6	71.9	72.0	0.6	No
		3:00 a.m.	71.3	~~52.3~~ 57.3	5	71.9	72.0	0.7	No
		4:00 a.m.	72.0	~~52.3~~ 57.3	5	72.4	~~72.4~~ 72.5	~~0.4~~ 0.5	No
		8:00 a.m.	72.0	~~52.3~~ 57.3	13	72.5	~~72.5~~ 72.6	~~0.5~~ 0.6	No
		9:00 a.m.	71.8	~~52.3~~ 57.3	15	72.7	~~72.7~~ 72.8	~~0.9~~ 1.0	No
		10:00 a.m.	72.4	~~52.3~~ 57.3	15	73.3	~~73.3~~ 73.4	~~0.9~~ 1.0	No

Notes:

(1) Existing background noise levels were estimated from noise monitoring performed during truck simulations.
(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(3) According to CEQR, an increase over 3 dBA at nighttime is considered an impact.

Table 21.17-13
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (L_{eq}) at the
West 133rd Street Apartment Building Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
West 133rd ~~Street between Broadway and 12th~~ Avenue Apt. Building	418 / 1373	1:00 a.m.	66.1	~~49.1~~ 53.3	14	~~68.7~~ 72.5	~~68.8~~ 72.6	~~2.7~~ 6.5	~~No~~ Yes
		2:00 a.m.	66.7	53.3 ~~49.1~~	12	~~69.2~~ 71.9	~~69.2~~ 72.0	~~2.5~~ 5.3	~~No~~ Yes
		3:00 a.m.	66.9	53.3 ~~49.1~~	11	~~69.1~~ 71.9	~~69.1~~ 72.0	~~2.2~~ 5.1	~~No~~ Yes
		4:00 a.m.	66.7	53.3 ~~49.1~~	12	~~69.2~~ 72.4	~~69.2~~ 72.5	~~2.5~~ 5.8	~~No~~ Yes
		5:00 a.m.	68.7	53.3 ~~49.1~~	12	~~70.5~~ 72.5	~~70.5~~ 72.6	~~1.8~~ 3.9	~~No~~ Yes
		9:00 a.m.	71.5	53.3 ~~49.1~~	15	~~72.2~~ 72.7	~~72.2~~ 72.8	~~0.7~~ 1.3	No
		10:00 a.m.	72.1	53.3 ~~49.1~~	15	~~72.7~~ 73.3	~~72.7~~ 73.3	~~0.6~~ 1.2	No

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during truck simulations.
(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(3) According to CEQR, an increase over 3 dBA at nighttime is considered an impact.

21.18 Commercial Waste to the West 135th Street Converted MTS

21.18.1 Existing Conditions

No commercial waste is delivered to the West 135th Street MTS site under Existing Conditions. Commercial waste generated in Manhattan is taken directly out of the City to remote disposal locations.

21.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the West 135th Street Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

21.18.3 Potential Impacts of Sending Commercial Waste to the West 135th Street Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

21.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the West 135th Street Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 21.15, 21.16 and 21.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

21.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the West 135th Street Converted MTS were evaluated in Sections 21.14, 21.15 and 21.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 21.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 30 (inbound trip ends) per hour, which occurred during the AM peak. These 30 DSNY and other agency collection vehicles are also more than the 22 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the West 135th Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 30 DSNY and other collection agency vehicles at the West 135th Street Converted MTS. Therefore, the addition of the 22 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the West 135th Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 30 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 30 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts. Consequently, because the 22 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can be processed at the West 135th Street Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the West 135th Street Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,029 tons (or 95 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.