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DRAFT ENVIRONMENTAL IMPACT STATEMENT

Appendix 1: Visual and Cultural Resources

CROSS HARBOR FREIGHT MOVEMENT PROJECT

a project of New York City Economic Development Corporation

431
581
722
832

MAY 2003

APPENDIX 1

CULTURAL RESOURCES

A. VISUAL RESOURCES

- Figures showing views of the New Jersey and New York study areas.

B. HISTORIC RESOURCES

- A discussion of the regulatory context for historic resources.
- The National Register, New York City Landmark Preservation Commission, the Jersey City Historic Preservation Commission, and the Newark Landmark and Historic Preservation Commission's criteria for listing as a historic resource.
- A discussion of the background history for the New Jersey, Staten Island, Brooklyn, and Queens areas of potential effect.
- Additional discussion of several of the historic resources discussed in Chapter 6, "Historic Resources," including figures depicting several of the resources.
- Correspondence.
- Blue forms.

C. ARCHAEOLOGICAL RESOURCES

- A discussion of the regulatory context for archaeological resources.
- A discussion of the types of archaeological resources.
- A list of sources used for documentary and cartographic research.
- Documentary research was undertaken by professional archaeologists to determine the project's potential to affect archaeological resources. The research was conducted as part of the following reports, which are presented in this appendix:
    - *Cross Harbor Freight Improvement Project, Greenville Yard, Jersey City, Hudson County, New Jersey, Stage 1A Archaeological Assessment*, prepared by The Louis Berger Group, Inc., December 2001;
    - *Cross Harbor Freight Movement Project: Phase 1A Archaeological Assessment, 65th Street Rail Yard, Bay Ridge Tunnel Alignment, First Avenue Tunnel Alignment, Brooklyn, Kings County, New York*, prepared by John Milner Associates, Inc., April 2002;
    - *Cross Harbor Freight Movement Project: Phase 1A Archaeological Assessment, Overhead Rail Clearances, Bay Ridge and Montauk Branches of the Long Island Rail Road, Brooklyn, Kings County, New York and Maspeth, Queens County, New York*, prepared by John Milner Associates, Inc., April 2002;

- *Cross Harbor Freight Movement Project: Phase 1A Archaeological Assessment Proposed Maspeth Rail Yard, Maspeth, Queens Country, New York,* prepared by John Milner Associates, Inc., June 2002; and
- *Phase 1A Literature Review and Archaeological Sensitivity Assessment, Cross Harbor Freight Movement Project, Port Ivory Yard, Arlington Yard, Eleven Railroad Crossings and Proposed Tunnel, Staten Island, Richmond County, New York,* prepared by Hartgen Archaeological Associates, Inc., April 2002.

A. INTRODUCTION AND TABLE OF CONTENTS

This appendix provides supplemental information for Chapter 5, "Visual Resources," Chapter 6, "Historic Resources," and Chapter 7, "Archaeological Resources." Specifically, this appendix contains the following information:

VISUAL RESOURCES

- Figures showing views of the New Jersey and New York study areas.

HISTORIC RESOURCES

- A discussion of the regulatory context for historic resources.
- The National Register, New York City Landmark Preservation Commission, the Jersey City Historic Preservation Commission, and the Newark Landmark and Historic Preservation Commission's criteria for listing as a historic resource.
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B. VISUAL RESOURCES

Figures showing views of the New Jersey and New York study areas are provided here. Figures 1-1 and 1-2 show the Oak Island Yard Study Area. Figure 1-3 shows the Greenville Branch Study Area. Views of Segments 1 and 2 of the National Docks Secondary Study Area are shown in Figures 1-4 through 1-9. Figures 1-10 through 1-13 show views of Segments 1 and 2 of the Chemical Coast Line Study Area. Figure 1-14 shows the Arthur Kill Lift Bridge Study Area. Views of the Northern Staten Island Study Area (Segment 2) are shown in Figures 1-15 through 1-17. Figures 1-18 and 1-19 show Segment 4 of the same study area. Views of the 65th Street Yard Study Area are shown in Figures 1-20 and 1-21. Figures 1-22 through 1-27 show views of the Bay Ridge Branch Study Area (Segment 1). Segment 2 is shown in Figures 1-28 and 1-29; Segment 3 is shown in Figures 1-30 through 1-34; and Segment 4 is shown in Figures 1-35 through 1-40. Figure 1-41 shows views of the Bay Ridge Branch in Queens. Views of the Fresh Pond Study Area are shown in Figures 1-42 and 1-43, and views of the Montauk Branch are shown in Figure 1-44. Figures 1-45 through 1-47 depict views of the Maspeth Yard Study Area. Views of Segment 1 of the Fremont Secondary Line are shown in Figures 1-48 through 1-50 of Segment 2 in Figures 1-51 and 1-52, and of Segment 3 in Figures 1-53 through 1-55. Figures 1-56 and 1-57 show views of the Fremont Secondary Study Area.

C. HISTORIC RESOURCES

REGULATORY CONTEXT

NATIONAL HISTORIC PRESERVATION ACT (SECTION 106)

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as implemented by federal regulations appearing at 36 CFR Part 800, mandates that federal agencies consider the effect of their actions on any properties listed on or determined eligible for listing on the National Register of Historic Places (NR) and afford the federal Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. Federal agency preservation officers, in consultation with the State Historic Preservation Office (SHPO), must determine whether a proposed action would have any effects on the characteristics of a site that qualify it for the State and National Registers (S/NR). Revised Section 106 regulations were

published on May 19, 1999. The basic steps of the Section 106 process, as revised, are as follows:

- All properties that may be affected by the project and that are included in or eligible for the National Register must be identified, in consultation with the SHPO. If properties are found that may be eligible for the National Register, but for which no determination has yet been made, the agency consults with the SHPO to determine eligibility or ineligibility.
- If there are such properties, the potential effect of the proposed project on each property must be evaluated, in conjunction with the SHPO, to determine if the project would have adverse effects on them. To determine potential effects on the historic properties, ACHP's Criteria of Adverse Effect must be applied, in consultation with the SHPO, to determine whether adverse effects would occur. In general, a proposed project is deemed to have an adverse effect if it would cause a change in the quality of the property that qualifies it for inclusion in the National Register. ACHP is notified of any findings of adverse effects.
- If the analysis indicates that the proposed project would have an adverse effect, SHPO is consulted to seek agreement on ways to avoid or reduce the effects. This mitigation is typically implemented through either a Memorandum of Agreement (MOA) or Programmatic Agreement. ACHP may choose to participate in the consultation when there are substantial impacts to historic properties, when a case presents important questions of policy or interpretation, when there is a potential for procedural problems, or when there are issues of concern to Indian tribes or Native Hawaiian organizations. ACHP must be invited to participate when the federal agency sponsoring the project wants ACHP's involvement, when the project would have an adverse effect on a National Historic Landmark, or when a Programmatic Agreement will be prepared.

  Programmatic Agreements are used when effects on historic properties are similar and repetitive or are multi-state or regional in scope; or when effects on historic properties cannot be fully determined prior to approval of an undertaking, among other reasons.
- Execution of the MOA or Programmatic Agreement and implementation of the terms therein satisfies the requirement of Section 106 that ACHP be given a reasonable opportunity to comment on the undertaking as well as demonstrating that the federal agency has taken into account the effects of the action.

Review under Section 106 can be conducted in coordination with analyses conducted under the National Environmental Policy Act (NEPA). In addition, because the views of the public are essential to informed federal decision-making in the Section 106 process, the public should be informed about the project and its effects on historic properties, and given the opportunity to comment. This public comment element can be combined with the public participation component required by NEPA. The public participation efforts being conducted for the Cross Harbor Freight Movement Project are described in the EIS (see Chapter 22, "Public Process").

In addition, Section 110 of NHPA generally requires that federal agencies affirmatively address historic preservation interests. Section 110(f) mandates additional protection to National Historic Landmarks (NHL) by requiring that federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect NHLs. Section 110(g) allows agencies to include costs of preservation as project costs. Further, Section 100(a)(2) specifically requires an agency's procedures for compliance with Section 106 be consistent with ACHP's regulations; provide a process for identification and evaluation of historic properties and development and implementation of agreements about how adverse effects on historic properties

will be considered; and provide for consultation with certain parties during identification, evaluation, development, and implementation of agreements.

SECTION 4(F) OF THE FEDERAL DEPARTMENT OF TRANSPORTATION ACT

In addition, historic properties are also protected from adverse effects, by Section 4(f) of the Department of Transportation Act of 1966.* Section 4(f) prohibits actions by the Secretary of Transportation that require "use" of a historic property that is listed in or eligible for inclusion in the National Register, unless a determination is made that there is no feasible and prudent alternative to the use of such land, and all possible planning has been undertaken to minimize harm to the 4(f) property. For historic properties, "use" constitutes a significant adverse impact. This includes direct physical impacts, such as demolition or removal of part of a historic property. It also includes adverse contextual impacts (these are referred to as "constructive use," which occurs when changes caused by the project that are near the historic structure cause a substantial impairment in the historic resource's important qualities). Constructive use could occur from such changes as noise, visual intrusion, or other such elements that would significantly alter the setting of the historic resource.

NEW YORK STATE HISTORIC PRESERVATION ACT

The New York State Historic Preservation Act of 1980 (SHPA) closely resembles NHPA, and requires that state agencies consider the effect of their actions on properties listed on or determined eligible for listing on the New York State Register of Historic Places.

NEW JERSEY REGISTER OF HISTORIC PLACES ACT

The New Jersey Register of Historic Places Act of 1970 (NJSA) protects historic properties through their nomination and inclusion on the New Jersey Register of Historic Places. Public undertakings that may encroach upon, damage or destroy properties listed on the New Jersey Register of Historic Places, must be reviewed by the New Jersey Historic Preservation Office (NJHPO) with final authorization for the project to proceed granted by the Commissioner of the New Jersey Department of Environmental Protection. Undertakings may consist of actions by local, county, and state-level public agencies.

NATIONAL REGISTER, NYCLPC, JERSEY CITY HISTORIC PRESERVATION COMMISSION, AND NEWARK LANDMARK AND HISTORIC PRESERVATION COMMISSION CRITERIA FOR HISTORIC RESOURCE LISTING

Criteria for NR listing are found in the *Code of Federal Regulations, Title 36, Part 60.* Following these criteria, districts, sites, buildings, structures, and objects are eligible for the Registers if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- Are associated with historic events;
- Are associated with significant people;

* Section 4(f) of the United States Department of Transportation Act (49 USC Section 303 (c)), although the preservation provision is still known as Section 4(f).

- Embody distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic value, or are otherwise distinguished; or
- May yield information important in prehistory or history.

Properties that have achieved significance within the last 50 years are ordinarily not eligible. Determinations of eligibility are made by NYSHPO and NJHPO.

In addition, NYCLPC designates historically significant properties in New York City as New York City Landmarks and/or Historic Districts, following the criteria provided in the *Local Laws of the City of New York, New York City Charter, Administrative Code, Title 25, Chapter 3.* Buildings, properties, or objects are eligible for landmark status when a part is at least 30 years old. Landmarks have a special character or special historical or aesthetic interest or value as part of the development, heritage or cultural characteristics of the city, state or nation. There are four types of landmarks: individual landmark, interior landmark, historic district, and scenic landmark.

The Jersey City and Newark Historic Preservation Commissions obtain their authority to identify, evaluate, designate, and regulate changes to historic properties, including individual sites and districts, from the Municipal Land Use Law (MLUL), the enabling legislation for municipal land use and development planning, zoning, and, since 1986, historic preservation zoning. The MLUL provides for the creation of a historic preservation ordinance with a historic preservation commission. The historic preservation commission may be either advisory, where the Commission only makes recommendations to the planning board, or regulatory, where the Commission itself is empowered to make final decisions on projects subject to its review.

Properties in the project's APEs that appear to meet one or more of the NR criteria were identified as potential historic resources. For each of these properties in New York State, New York State Building-Structure Inventory forms ("Blue forms") will be submitted to NYSHPO for evaluation and determination of whether NYSHPO considers the properties to be eligible for the Registers. For each of these properties in New Jersey, New Jersey Department of Environmental Protection Historic Preservation Office Base Survey Forms and required attachments will be submitted to NJHPO for their evaluation and determination of eligibility for the Registers. Copies of these findings are included in this appendix.

BACKGROUND HISTORY IN THE AREAS OF POTENTIAL EFFECT

NEW JERSEY

Lehigh Valley Railroad and Oak Island Yard

In 1846 the Delaware, Lehigh, Schuylkill & Susquehanna Railroad Company was formed primarily to transport anthracite between the mines being operated near Mauch Chunk, PA and the Delaware River at Easton, PA. As this railroad was being planned, it was renamed the Lehigh Valley Railroad (LVRR) in 1853. The first route was completed in 1855 and extended from Mauch Chunk to Easton. With this route complete, the LVRR could move anthracite from the Lehigh Valley to the Delaware River, where it could then be hauled by boat to Philadelphia. Around 1870 the LVRR leased the Morris Canal, which provided access to the Hudson River and New York markets. When the Morris Canal was conveyed to the State of New Jersey in the 1920s, the LVRR retained the canal's basin at Jersey City on the Hudson River, where the LVRR would later establish its eastern terminus. In the following years the LVRR continued to expand by establishing additional branch lines and acquiring existing railroad companies. The

railroad reached Waverly, New York in 1876, Perth Amboy, NJ in 1875 and Jersey City, NJ in 1899. The LVRR also was successful in providing passenger service, and was known as the "Route of the Black Diamond" for its flagship New York-Buffalo passenger train. By the mid 20th century the LVRR began to decline as competition from automobiles and faster trains affected its passenger business. In 1976 the LVRR became part of the Conrail system.

The LVRR established the Oak Island Yard during the late 19th century to serve as its primary auxiliary classification yard operating in association with the railroad's important New York Harbor terminal facilities. The Pennsylvania Railroad built a smaller yard, known as the Garden Yard, south of the Lehigh Valley Railroad facility to serve as an auxiliary classification yard associated with the large Greenville terminal in Jersey City. These two yards later became known as the Conrail Oak Island Yard.

Greenville Yard and Greenville Branch

The Greenville Yard is located on Upper New York Harbor, Jersey City, Hudson County, NJ. The first industrial development in the area of Greenville Yard and the Greenville Branch was the construction of the Morris Canal. The canal was completed west of the project area in 1838, and this section of the Morris Canal completed the canal's route from Phillipsburg, NJ to Jersey City. The first rail lines were developed in the area in the 1860s, and ran parallel to the canal. In 1900 the Pennsylvania Railroad Company (PRR) began construction on the New York Bay Railroad Yards, which later was called the Greenville Yard. The land on which the Greenville Yard was built was created by filling shallow tidal marsh. Almost all the land the yard was built on was five or six feet under water.

The Greenville Yard Bridge System was first constructed in 1904, in conjunction with the building of the Greenville Yard. That same year three transfer bridges (Nos. 11, 12 and 13) were constructed. The overall plan and design of the Greenville facility was a result of a study made by a committee of PRR line officers, consisting of J.T. Richards, chief engineer maintenance of way; L.H. Barker, assistant chief engineer; and R.M Patterson and Wilson Brown, superintendents. The design and construction of the facility was under the direction of W.C. Bowles, assistant engineer of construction, and F.C. Richardson, principal assistant engineer. F.L. DuBosque, assistant engineer of floating equipment for the PRR at Jersey City, was involved with the development of the machinery in the transfer house. Other contractors involved in the project included Henry Steers, Inc., of New York City, builders of the foundations, steelwork, pile racks, bridges and aprons, and the Cooper-Wigand-Cooke Company and the R.P. & J.H. Staats Company of New York, erectors of the transfer bridge superstructure and the transfer machinery housings.

Transfer Bridge No. 14 was added in 1910 to the south end of the group and Transfer Bridge No 10 was added in 1925 to the north end of the group. These two bridges were almost identical to the previous bridges, except for minor improvements in the strength and capacity of the structure. In 1912 additional fill was added to complete the yard to the north. Since then, no modifications were made to the man-made shoreline of the Greenville Yard.

In 1931 a disastrous fire destroyed the entire facility, including the entire superstructure of the transfer bridge facility and most of the machinery. Several of the wooden Howe truss bridges and the aprons were completely destroyed. After the fire, many bridges, aprons and other components were salvaged and utilized in the reconstruction. The American Bridge Company of Trenton, NJ, was contracted to rebuild the entire bridge facility and supply three new plate-girder main spans and aprons for Transfer Bridges Nos. 10, 13 and 14. The transfer bridges were

rebuilt essentially identical to the old bridges, except that the new construction was built to be fireproof.

In 1939 the railroad authorized the complete rebuilding of Transfer Bridge No. 12, including the replacement of the last remaining original wooden Howe truss bridge dating from 1905. However, with America's entrance to World War II and increased demands to move war materials across the bay, the decision was made to instead build a completely new transfer bridge (No. 9) at the north end of the facility. After Transfer Bridge No. 9 was completed and placed in service in 1943, work on rebuilding Transfer Bridge No. 12 began, and the bridge was rebuilt by 1945.

As the rail industry and freight traffic declined in the years following the war, maintenance of the facility was deferred and bridges in the group were taken out of service. By 1996 only Transfer Bridge No. 11 was in service, and the superstructure of bridges No. 13 and 14 had partially collapsed and was in the process of being demolished.

Chemical Coast Line

The Chemical Coast Line travels along the former Central Railroad of New Jersey. The Central Railroad of New Jersey (CRRNJ) began as the Elizabeth and Somerville Railroad that was charted in 1831. In 1849 the Somerville and Easton (S&E) Railroad Company bought out the Elizabeth and Somerville and changed the name of the company to the Central Railroad of New Jersey. The S&E had extended into Whitehouse in 1848, and under the new name as the CRRNJ it extended into Phillipsburg in 1852. This line became the Main Line of the Central Division of the CRRNJ. The CRRNJ continued to expand by buying smaller railroads. In 1871 it acquired the Lehigh & Susquehanna Railroad and thus was able to access the coal fields in Pennsylvania. A branch from Elizabethport on the main line to Brills Junction was completed in 1872. The Perth Amboy and Elizabeth Railroad began construction in 1871. The CRRNJ took over this line in 1873 and completed its construction. It connected the New York and Long Branch Railroad at Perth Amboy with the CRRNJ main line at Elizabethport.

Other railroads used the CRRNJ mainline to transport coal from their western termini to the Port of New York. Many rail companies used the CRRNJ because it was the only continuous east-west link across New Jersey. In New Jersey, the CRRNJ was the earliest east-west interstate railroad corridor, the most direct physical transportation link between the Pennsylvania anthracite coal fields and the port of New Jersey and New York, and the primary outlets for the anthracite mined in the Lehigh Corridor. The CRRNJ also was important as a passenger railroad that shaped New Jersey's residential growth and development. The CRRNJ was important in transporting passengers to and from New York, Jersey City and Newark as well as dozens of suburban and rural communities.

In 1883 the Reading Railroad leased the entire CRRNJ. Although this agreement was cancelled soon after, the CRRNJ later came under the control of the Reading Railroad in 1933. In 1976 the CRRNJ was consolidated into the Conrail system.

Arthur Kill Lift Bridge/Staten Island Railroad

The Staten Island Railroad was originally constructed in 1860 between Clifton and Tottenville in Staten Island. In 1887, a new branch line was added along the northern shore, and in 1889 the first permanent bridge to New Jersey was constructed over the Arthur Kill. The north shore branch of the railroad continued to Cranford Junction, NJ, where it connected with the Lehigh Valley Railroad (currently known as the Lehigh Mainline) and the New Jersey Central (later

renamed the Central Railroad of New Jersey). In 1889 the Baltimore & Ohio Railroad purchased the Staten Island Railroad. The rail line traveled approximately 5.2 miles in New Jersey, from the vertical lift bridge over the Arthur Kill to Cranford Junction. The rail line was later renamed the Staten Island Rapid Transit Railroad (SIRTRR).

A new vertical lift bridge over the Arthur Kill was constructed in 1959. The bridge was constructed to replace the old swing bridge (ca. 1889) whose center pier had become a navigational hazard. The new concrete and steel bridge was the longest vertical lift span in the world at the time of its construction. The bridge's counterweighted main span was suspended between two shore towers. The span measured 558 feet in length and weighed four million pounds. It could be raised 104-feet in approximately two minutes to leave a 500-foot wide navigation channel for the passage of ships. The bridge was designed by Parsons, Brinckerhoff, Hall and MacDonald for the Staten Island Rapid Transit Railway Company and was built by the American Bridge Division of the United States Steel Corporation. The bridge was reconstructed in the late 1990s.

STATEN ISLAND

The earliest settlement in the area took place on the north side of Old Place Creek around 1680. Historic maps show that there was early settlement near Port Ivory and Old Place in the late 18th through the late 19th centuries. During the 19th and 20th centuries, the north shore of Staten Island developed into several villages or neighborhoods containing residential, industrial and maritime uses. Development in the early 19th century grew as a result of New York City's rise as a commercial center and the inception of steam ferry service. This growing development led to increased population that was concentrated on the northern and eastern shores of Staten Island. By the turn of the century (1900) the island's demographic, economic and political center shifted to the part of the northern shore closest to Manhattan.

Industrial development of the area began around 1887 with the construction of the northern branch of the Staten Island Railroad. The Staten Island Railroad was originally constructed in 1860 between Clifton and Tottenville. In 1884 the Staten Island Railroad was expanded to double tracks and extended to St. George, where a combined rail and ferry terminal was constructed in 1886. The St. George terminal was originally intended to serve passengers traveling from New Jersey who would then proceed by ferry to Manhattan, but this plan was never implemented; passenger trains used the Central New Jersey station at Jersey City instead. In 1887, a new branch line was added along the northern shore, and in 1889 the first permanent bridge to New Jersey was constructed over the Arthur Kill, enabling the north shore branch to continue to Cranford Junction, NJ. The railroad was later renamed the Staten Island Rapid Transit Railroad (SIRTRR), and, in 1889, the railroad was purchased by the Baltimore & Ohio Railroad.

Arlington Yard was likely constructed sometime after the northern branch of the railroad. Historic maps show that the location of Arlington Yards was wooded and/or vacant prior to the late 19th century. Prior to the construction of the railroad, northern Staten Island consisted of lightly developed residential areas. After the construction of the railroad, increased development took place in the area. Industry was primarily located along the north shore and Richmond Terrace, while the roads south of Richmond Terrace were predominantly residential. One of the most prominent industries located in northern Staten Island opened at this time—Procter and Gamble opened their Port Ivory Plant in 1907.

Bridges were constructed across the rail line around 1934. It appears that the rail line was cut into the landscape at this time, when the grade crossings were eliminated. Bridges were constructed at South Avenue, Harbor Road, Union Avenue (north and south tracks), DeHart Avenue, Van Pelt Avenue, Van Name Avenue, Simonson Avenue, Lake Avenue, Granite Avenue, and Morningstar Boulevard. A pedestrian bridge at John Street was constructed between 1937 and 1950. Some bridges were either reconstructed or rehabilitated between 1983 and 1984.

A new vertical lift bridge over the Arthur Kill (the Arthur Kill Lift Bridge) was constructed in 1959. The new bridge was constructed to replace the existing ca. 1889 bridge whose center pier had become a navigational hazard. The new concrete and steel bridge was the longest vertical lift span in the world at the time of its construction. The bridge was reconstructed in the late 1990s.

An aggressive program of road construction in the early 20th century improved internal circulation and led to increased suburban development of Staten Island in general. The opening of the Goethals Bridge (1928), the Outerbridge Crossing (1928), the Bayonne Bridge (1931), as well as a new local span over the Fresh Kills (1931), improved commercial access to the island.

BROOKLYN

Brooklyn Waterfront

In the 17th century, the Brooklyn waterfront in Sunset Park and Bay Ridge was farmland included within the boundaries of the Town of Brooklyn, which was chartered in 1646. One of the earliest colonial farmsteads in the Gowanus area (named for Gowanus Bay and Creek) belonged to William Adrianse Bennet. His house was located south of 28th Street on 3rd Avenue, and his farmland stretched south to 38th Street. The waterfront area between 65th and 42nd Streets remained largely undeveloped through the late 19th century, with the shoreline roughly parallel to 1st Avenue. Although a bulkhead had been established by 1898, the waterfront north of 64th Street was not filled to its present extent until the early 20th century.

In 1872, the New York & Hempstead Railroad Company bought the 110-acre farm of Michael Bergen in Bay Ridge for the purpose of building a rail terminal. The company intended to build a freight line from Bay Ridge to Hempstead Plains in Nassau County. Work began to construct a depot yard (which would become 65th Street Yard), a deepwater dock, and rail cut through Bay Ridge. In 1873 the company went bankrupt, and work resumed on the yard in 1876 under control of the New York, Jamaica, and Manhattan Beach Railroad. In 1876 and 1877, the waterfront was enlarged with fill from the excavation of the Bay Ridge rail cut. In 1878, the rail yard and completed lines were leased to the New York and Manhattan Beach Railroad Company. This company planned to reorganize the lines from an east-west freight system to a north-south passenger rail to Coney Island and Manhattan Beach. In the 1890s, land was purchased to expand the yard to its current boundaries.

Industrial development of the waterfront north of 65th Street Yard also occurred during the late 19th century. The American Projectile Company, later E. W. Bliss, took over an existing pier at 53rd Street and the Bush and Denzlow Manufacturing Company (oil processing) built a new solid fill pier at about 40th Street. After Bush and Denzlow left the oil business, Bush's son Irving T. Bush began, in 1890, to develop—north of 51st Street—what became Bush Terminal. Built between 1890 and 1920, the terminal integrated the commercial and industrial functions of manufacturing and warehousing, with both railroad and water transportation in one terminal

under a unified management. It offered several improvements over the existing facilities in the Port of New York. The terminal's piers, which were wider and longer than those used elsewhere in the city in the late 19th century, were integrated into the industrial complex. The industrial buildings offered clean, well-lit space with modern utilities, large freight elevators, and private rail sidings. In 1900, the complex included six warehouses, an office, a short pier, and some tracks. Bush's ambitious building program began in 1902, and the heart of the terminal operations was to be seven deepwater piers. Development of Bush Terminal included rail lines on 1st and 2nd Avenues that connected to 65th Street Yard.

In the early 1900s, the City of New York, the Long Island Rail Road (LIRR), and the Brooklyn-Manhattan Transit (BMT) Company formed a public/private partnership to reorganize the system of Manhattan Beach lines for the accommodation of freight service and to connect the network of Brooklyn rail lines to lines servicing New England. In 1903, the state legislature created an act that included the establishment of the Brooklyn Grade Elimination Project. Undertaken between 1905 and 1918, this project provided graded rights-of-way for the LIRR Bay Ridge and Manhattan Beach Lines and the Brooklyn Rapid Transit (BRT) Company Brighton Beach Line, the expansion of rail yards, and the improvement of rail lines. It also included upgrading and expanding 65th Street Yard.

Immediately north of the yard, construction of the U.S. Military Ocean Terminal (also known as the Brooklyn Army Terminal) occurred between 1918 and 1919 (see below). The Bush Terminal rail lines ran through the Brooklyn Army Terminal, which also built connections to 65th Street Yard and the Bay Ridge Branch. Until the Depression, the Brooklyn waterfront maintained a dominant role in shipping due to 65th Street Yard, the huge Bush Terminal complex, and the Brooklyn Army Terminal. During the Second World War, the waterfront had a resurgence that lasted until the increased use of containerization during the 1950's.

Bay Ridge Branch

The Bay Ridge Branch is an 11.5-mile, freight line that runs from 65th Street Yard on the Brooklyn waterfront to Fresh Pond Yard in Queens. Begun in 1875 by the New York, Bay Ridge, and Jamaica Railroad Company, the present LIRR Bay Ridge Branch was originally part of the New York, Brooklyn, and Manhattan Beach Rail Road that also included Greenpoint, Manhattan Beach, and Kings County Central Divisions. In 1883, LIRR constructed the Long Island City and Manhattan Beach Rail Road from Fresh Point Junction to Cooper Street, where it connected with the existing Manhattan Beach lines. During this period of construction, the rail lines of the entire Manhattan Beach system were also widened to standard gauge and connected to LIRR's Atlantic Avenue and Montauk Branches. The three Manhattan Beach lines were consolidated in 1885 as the New York, Brooklyn, and Manhattan Beach Rail Road and leased to the LIRR. A grade separation of the Bay Ridge Branch (as well as the LIRR Manhattan Beach line and BRT Brighton Beach line) was completed in 1918. It included the depression and elevation of the railroad tracks and the construction of overhead bridges along various parts of the right-of-way. The Bay Ridge Branch right-of-way was leased by LIRR to the New York & Atlantic Railway Co. in 1997 for a period of 20 years.

QUEENS

Bay Ridge Branch (Queens Portion)

See discussion above under Brooklyn Areas of Potential Effect, Background History, Bay Ridge Branch.

Fresh Pond Yard

Since the late 19th century, the Fresh Pond Yard site has been used for railroad purposes. Prior to that, the site was undeveloped woodland that encompassed the back acreage of large farms that bordered Fresh Pond Road, one of the early transportation routes in this part of Queens.

Montauk Branch

The current Montauk Branch of the Long Island Railroad began as a competitor to the growing late 19th century monopoly of LIRR over passenger traffic from New York to Long Island. The portion of the current Montauk Branch that runs between Long Island City and Jamaica, Queens was constructed in three stages. In 1854, the Flushing Rail Road built a rail line from Hunter's Point along Newtown Creek to the location of the former Haberman station and then on to Winfield. This line was abandoned in 1869, when an alternate route through Woodside was built by the Flushing and North Side Rail Road. In 1868 the South Side Rail Road built a line from Jamaica through Fresh Pond to Bushwick Terminal. In 1870, they extended this line to the East River by constructing a rail line from Bushwick along Newtown Creek to Penny Bridge, where they connected with the former New York and Flushing Railroad line to Hunters Point. The South Side Rail Road was acquired by the Brooklyn & Montauk Rail Road in 1880. The Brooklyn & Montauk Railroad subsequently merged with the LIRR in 1889. At that time, the 1854 Flushing Rail Road route was rebuilt, and a connection was made between Fresh Pond and Haberman to form the current right-of-way. Before the East River tunnels were built, LIRR would take passengers along the Montauk Branch to the Long Island City terminal, where passengers would connect to ferries to Manhattan. The Montauk Branch was once partially electrified. Early 20th century improvements to the western end of the Montauk Branch included the construction of a large freight yard at Hunters Point. The yard was built in the 1990s and extended between Borden Avenue and Newtown Creek from Vernon Avenue to Dutch Kills. On the other side of Dutch Kills was another, smaller freight yard with piers into Newtown Creek.

Potential Maspeth Yard

Maspeth was the site of the first English colony in Queens County, established in 1642. The colony was settled at the head of Newtown Creek, the traditional territory of the Mespat Indians. In 1643 the Mespat Indians attacked the English settlement in retribution for attacks against Mohican and Mattinecock settlements in Connecticut, and the English settlement was abandoned in 1644. English migrants from Brooklyn and Long Island City settled the Maspeth area in the 18th century. Residential and industrial development of Maspeth began in earnest in the middle 19th century. In 1852 Mount Olivet Cemetery was opened, and real estate developers purchased two large farms and subdivided them into streets and lots, laying out a residential community from 59th Place to 69th Street, and from 55th Drive to Grand Avenue. In the 1850s a carbon factory was established on Newtown Creek. After the Civil War, industrial development continued with the construction of fertilizer works, lumber yards, linoleum factories, and rope walks, and the largely English Quaker population began to be replaced by German immigrants. In the 20th century, industrial operations continued to thrive in the area. The neighborhood's isolated character has been maintained by the Long Island Expressway and the belt of cemeteries that form the area's northern border.

Fremont Secondary

The Fremont Secondary was built by the Pennsylvania Railroad and the New York, New Haven and Hartford Railroad as the New York Connecting Railroad (NYCRR). NYCRR was

incorporated in 1892; the New Haven and Pennsylvania Railroads acquired the stock of the NYCRR in 1902, and by 1912 had started construction of the rail line. The 9-mile route opened in 1917 and extended from Fremont Tower at Fresh Pond Junction in Queens, where it connected with the LIRR Bay Ridge line, over the Hell Gate Bridge to the Port Morris crossing in the Bronx. From there it linked the LIRR with the New Haven Line just south of Oak Point Yard, thereby creating direct access between the New Haven line and Bay Ridge. The NYCRR was operated by the New Haven Railroad. In 1967 NYCRR became part of the merged Pennsylvania and New York Central (Penn Central) system. The electrified overhead of the Hell Gate-Bay Ridge freight line was dismantled in 1969. Electrification remained on the Hell Gate Bridge for Penn Station-bound Penn-Central (now Amtrak) passenger trains.

ADDITIONAL INFORMATION ON THE HISTORIC RESOURCES

Additional information is provided here on the historic resources discussed in Chapter 6, "Historic Resources."

NEW JERSEY

Greenville Branch APE

Photographs of the Greenville Yard and potential tunnel alignment are shown in Figure 1-58.

National Docks Secondary APE

Pells Factory-Book Mart Press. The brick factory building was constructed ca. 1915 and is L shaped in plan and is composed of two sections. The main block is located along Dell Avenue at the corner of 42nd Street. It is three stories tall with a gabled roof and parapet end walls. A two-story gabled section extends from the rear of the main block, along 42nd Street.

Pennsylvania Railroad New York Extension Historic District. The structures in this district combined advances in tunneling technology with advances in railroad electrification to form the first major direct railroad connection between New York and New Jersey. The New York Extension represents the continued expansion of the Pennsylvania Railroad, and its construction was planned as part of other improvements in the New York metropolitan corridor. These other improvements include New York's Pennsylvania Station, the East River Tunnels, and Sunnyside Yard. Contributing structures in the linear historic district include bridges, towers, and tunnels.

Roben Company Office Building. The building is rectangular in size, with rounded corners (see Figure 1-59). It has a flat roof with a parapet wall extending above the central wall of the front facade. The façade is banded in six courses of buff colored brick and one course of red brick. The cornice consists of red brick laid in soldier course with a band of dentil bricks below. The entrance bay is enclosed by a corrugated metal garage door and all windows have metal bars. The building is attached to a larger industrial building located behind it.

Erie Railroad Marion Main Line Historic District. The rail line traveled through the Marion section of Jersey City and was developed between 1856 and 1861 by the Long Dock Company, a subsidiary of the New York and Erie Railroad. The railroad right-of-way was originally constructed to serve as the new main line for the New York and Erie Railroad and to link with the new Pavonia Terminal at the waterfront. The Erie Tunnel is a 4,400-foot long railroad tunnel that was the first of several tunnels excavated through the Bergen Ridge to provide access to the Jersey City waterfront and New York Harbor. The Erie Tunnel was later supplemented by the

construction of the Bergen Arches, a large open cut with two short stretches of tunnel (cut through bedrock) and several arched bridges.

St. Peters Cemetery. The cemetery is the earliest Catholic Cemetery in the Archdiocese of Newark, has been in use for interring human remains from the 1860s to the present, and a large percentage of the burial population is Irish Catholic.

Old Main Delaware Lackawanna & Western Railroad Historic District. The Morris & Essex Railroad was incorporated in 1835 and it first offered service in 1837 between Madison and Newark only. It 1854 it extended westward to Hackettstown, reaching the Delaware River at Phillipsburg in 1866. The Warren Railroad opened in 1856 and was leased in perpetuity by the DL&W in 1857. The construction of the Old Main stimulated communities to develop around it and enabled people to live in the country while still having easy access to New York via the ferries at Hoboken.

U.S. Routes 1 and 9 Historic District. The skyway spans the marshlands of the Hackensack Meadowlands and the Hackensack and Passaic Rivers. Most of the skyway is carried on continuous steel deck trusses of short spans and at the river crossings the skyway is carried by cantilever trusses. The U.S. Routes 1 and 9 Historic District is regarded as one of America's pioneer elevated expressways. The U.S. Routes 1 and 9 Historic District was designed in anticipation of increased traffic that would result from the construction of the Holland Tunnel. The U.S. Routes 1 and 9 Historic District was completed in 1932 and at the time was the single largest highway construction project undertaken in the United States to that date. It is important in transportation history as its construction shows that highways were considered as vehicles for the movement of large volumes of through traffic rather than simple access routes for property owners who lived nearby. It was the first highway to be planned and laid out according to any rational economic process or formulae and it also was one of the first roadways to be specifically designed solely for high-speed automobile and heavy commercial truck use.

William Dickerson High School. The William Dickerson High School was designed in the Beaux Arts style and is three stories tall, with a heavily rusticated stone base and first floor (see of Figure 1-59). It has central and corner classical pedimented stone pavilions with pilasters and engaged columns that flank triple-arched raised entrances with second and third floor connecting brick arms.

Lafayette Gardens. Lafayette Gardens was constructed in 1940 as one of the first large-scale Federal low-income public housing projects and the first government financed public housing project built in Jersey City. Lafayette Gardens was designed by Christian Ziegler, a resident architect and partner in the firm of Ziegler, Childs and Paulsen of Jersey City.

Conrail National Docks Railroad Bridge. It was built by the Lehigh Valley Railroad in 1909 as Bridge No. N.D. 2 B to span the Morris Canal and Pacific Avenue, on the New York Division of the National Docks Branch. The bridge was manufactured by the Pennsylvania Steel Company in Steelton, Pennsylvania. It has a span of 162 feet and rests on cut stone abutments.

Conrail Bridge 2.77. The bridge is a two span, riveted through truss bridge constructed of open-hearth steel. The bridge was constructed in 1908 by the Lehigh Valley Railroad and was fabricated by the American Bridge Company. The bridge originally carried one track of the Lehigh Valley Railroad over the multiple tracks of the CNJ.

Chemical Coast Line

Central Railroad of New Jersey Newark and Elizabeth Branch. Passenger traffic included passengers traveling to vacation destinations along the northern New Jersey shore (such as Monmouth Park), excursion riders to the New Jersey shore and numerous points along the CRRNJ Main Line, and workers commuting to Newark. The railroad handled significant volumes of freight traffic moving between the Elizabethport and Newark railroad junctions and to and from the Port of Newark.

Central Railroad of New Jersey Main Line Historic District. It was the first railroad to cross the state to connect with the anthracite coal mines of Pennsylvania and was the primary outlet for the anthracite mined in the Lehigh Corridor. The CRRNJ was significant as a passenger railroad that affected the residential growth and development of northern New Jersey and it increased the spread of suburbanization along its route. The CRRNJ also was the primary means of travel to western cities by immigrants entering the United States at Ellis Island.

The Trumbull Street Sewer. Prior to the construction of sewer systems in the 19th century, deaths attributed to cholera, yellow fever, typhoid fever, small pox, dysentery, and malaria made the mortality rate of Northeastern cities among the highest in the world. Thus, the construction of New Jersey's 19th century sewer systems was essential for reducing mortality, enhancing public health, and making cities viable places to live and work. It is likely that the survival and modern urbanization of Elizabeth would not have been possible without the construction of this sewer system.

Elizabeth River Bridge. The bridge is a rolling-lift span designed by the Scherzer Rolling Lift Bridge Company of Chicago. The bridge was built by the Phoenix Bridge Company of Phoenixville, PA. The company was a major fabricator and erector of bridges since the 19th century. During the early 20th century the Central Railroad of New Jersey embarked upon major improvements to its line. The railroad also commissioned the construction of several bridges at this time, and the Elizabeth River Bridge was one of at least four bascule spans that were built.

Inch Lines Linear Multistate Historic District. The Inch Lines extend from Texas to New Jersey and travel through Arkansas, Missouri, Illinois, Indiana, Ohio, West Virginia, and Pennsylvania. The pipelines were constructed in 1942-1943 for the United States government by War Emergency Pipelines, Inc. Their purpose was to transport crude oil and refined petroleum products from the Gulf Coast region to refining and distribution areas near New York City and Philadelphia. The Inch Lines were significant as the largest, heaviest, and longest pipeline built up to that time. It operated from August 1943 until August 1945 and provided a secure transportation system beyond enemy reach.

The Rahway River Bridge. The bridge is a rolling-lift span designed by the Scherzer Rolling Lift Bridge Company of Chicago. The bridge was built by the Phoenix Bridge Company of Phoenixville, PA. The company was a major fabricator and erector of bridges since the 19th century. During the early 20th century the Central Railroad of New Jersey embarked upon major improvements to its line. The railroad also commissioned the construction of several bridges at this time, and the Rahway River Bridge was one of at least four bascule spans that were built.

Port Reading Railroad Historic District. The Port Reading Railroad provided the Reading Railroad, its parent railroad and a major inter-state carrier of anthracite coal, with access to New York Harbor and an instrument of railroad expansion, acquisition, and consolidation during the late 19th and early 20th centuries. The railroad maintained a substantial railroad yard and coal terminal facility in Port Reading on the Arthur Kill.

Arthur Kill Lift Bridge APE

Photographs showing the Arthur Kill Lift Bridge APE are shown in Figure 1-60.

NORTHERN STATEN ISLAND

Summerfield United Methodist Church

A photograph of the Summerfield United Methodist Church is shown in Figure 1-61.

125 and 137 Lake Avenue

125 Lake Avenue is a two-story, five-bay painted brick building with a flat-roof, arched brick window lintels, and decorative horizontal bands on the front façade (see Figures 1-61 and 1-62). The building appears to have been constructed in the late 19th to early 20th century. The building at 137 Lake Avenue is a two-story brick Art Moderne building with horizontal bands of windows that wrap around the building's curved façade. The building has a flat roof, and horizontal groves are used on the façade for ornamentation. The building appears to have been constructed between 1920 and 1940.

Staten Island Reformed Church

A photograph of the Staten Island Reformed Church is shown in Figure 1-62.

Cornelius Cruser House

The original house was a one-room stone Dutch Colonial, erected in 1722 by Cornelius Van Santvoord, minister of the Dutch Reformed Church in Port Richmond (see Figure 1-63). The steep-roofed central wing was added by Cornelius Cruser in 1770, and the two-story Federal brick end section was built by Daniel Pelton in 1836.

65th STREET YARD APE

Brooklyn Army Terminal

Designed by Cass Gilbert and completed in 1919, the terminal is bounded by 64th and 65th Street on the south, 2nd Avenue on the east, 58th Street on the north, and the Upper New York Harbor on the west. Covering a site of 97 acres, the terminal consists of nineteen structures that include two 9-story, concrete warehouses and three 2-story, enclosed piers. Bridges link the warehouses, piers, and the administration building. The larger of the two warehouses contains an interior sky lit atrium. (See Figure 1-64.)

BAY RIDGE BRANCH APE

Sunset Park Historic District

The district is an architecturally cohesive, largely residential, low-rise neighborhood. The majority of buildings are 2-story, brick rowhouses that display attributes of the neo-Renaissance style, which began to be popular in the 1880s. Institutional, mixed-use residential and commercial, and commercial buildings, none of which are taller than 6 stories, are also found in the district. The buildings on the avenues, especially 5th Avenue, tend to be residential buildings with ground-floor commercial space. There are also apartment buildings and a small number of brownstone rowhouses and frame structures in the district, and other architectural styles include neo-Grec, Queen Anne, and Romanesque. Built around 1905, the buildings on the north side of

64th Street between 4th and 5th Avenues are 2½-story, brick rowhouses with rounded bays (see Figure 1-64). Attributed to Henry Spicer, they have stoops, rough stone window lintels and sills, and sheet metal cornices. On 5th Avenue in the vicinity of 63rd Street, the buildings include 3- to 4-story, brick, neo-Renaissance structures with ground-floor commercial spaces (see Figure 1-65). Several of these buildings have missing cornices and altered storefronts. The buildings on 62nd Street between 5th and 6th Avenues are 2½-story, brick rowhouses with rounded bays that date from around 1910.

New Utrecht Station and Sea Branch Line Right-of-Way

As part of the Dual System, the Sea Branch Line right-of-way was reconstructed between 1913 and 1915, when the New Utrecht Avenue Station was built. The tracks are located in an open cut, and the station consists of two concrete, arcaded platforms and two concrete headhouses—located at each end of the platforms—decorated with cornices and friezes of polychrome inlaid tiles of geometric patterns. Decorative features have been removed from both headhouses. The station is connected by a steel pedestrian bridge to the 62nd Street Station of the elevated BMT West End (B, M) Line, which runs along New Utrecht Avenue. Figure 1-66 shows the New Utrecht Avenue Station.

Ocean Parkway

Running from Prospect Park's southern entrance to Coney Island, Ocean Parkway initially consisted of a central roadway, two landscaped malls, bridle and bicycle paths, and a pedestrian promenade all lined with trees and benches. It ran through several existing neighborhoods, and its construction spurred new development at the turn of the 20th century. In the 1920s, apartment buildings were constructed along the parkway. Within the APE, buildings on Ocean Parkway include two generic, brick, mid-20th-cenutry, 7-story apartment buildings; several early- to mid-20th-century, 2-story, single family houses with enclosed porches and hipped roofs; and a 4-story, mid- to late-20th-century concrete yeshiva (see Figures 1-67 and 1-68). Modern metal fences border the rail cut.

5223-6201 15th Avenue

Alternating bands of buff-colored brick and ribbon windows define the façade (see Figure 1-69). The four ribbon windows consist of large expanses of glass block interspersed with metal windows divided into three vertical, multi-paned strips. Several of these metal windows have been replaced, and modern windows have been punched out of sections of the glass block on the upper floor. The lowest ribbon window is located only a few feet above the ground and is thinner than the upper ribbon windows. A mechanical penthouse is located above the entrance that fronts on 15th Avenue.

221 Elmwood Avenue

Apparently dating from before 1890 according to historic maps, this house has a mansard roof with low eaves, arched dormers, a wrap-around porch supported with Ionic columns, and wood hexagonal shingles. A section of the porch appears to have been enclosed at a later date (see Figure 1-69).

Wilson Avenue Station

Completed in 1928, the station was part of the Dual System, and it linked the new 14th Street Line to the existing Canarsie Line, which opened in 1865 and was rebuilt in 1916. The station is a unique two-level, two-track structure with the Manhattan-bound track on the lower level

(below grade) and the Canarsie-bound track on the upper level, which is at the same grade as the adjacent Bay Ridge Branch. Access to the platforms is through a 1-story, brick control house located at the end of Wilson Avenue (see Figure 1-70).

POTENTIAL MASPETH YARD APE

Walter Reed School

The Walter Reed School is three stories tall above a stone base and is faced with red brick (see Figure 1-71). The building is three bays wide; the side bays project outward to the north. There is brick quoining on the side bays, and stone lintels and keystones above the windows, which appear to be replacements. Stairs lead to the main entrance, above which is a stone balcony at the second floor. The front of the building facing 57th Street is surrounded by grass, trees and shrubs and a black steel fence at the street line.

Star Corrugated Box Company Building

The building is four bays wide (see Figure 1-71). The second and fourth bays are slightly taller than the first and third; they each have four small windows, giving them the look of turrets. The top of the building is crenellated, and the crenellation is finished with stone. On the first and third bays, the window openings are much larger and have more of a factory aesthetic. On the first bay and sides of the building, the original windows have been replaced; however, the original narrow-paned steel casement windows are still apparent on the second story of the third bay. Between the windows and around the main door of the building, which is located on the first bay, there are brick buttresses extending from the building, topped with stone. In front of the third bay, the building has a modern extension of yellow brick with numerous gates for large vehicles. There is a plaque in the upper center of the façade with a crest and the date 1925.

56-70 58th Street

The roughly rectangular, two-story building is faced in white brick and has a protruding bay on 58th Street (see Figure 1-72). The building is mostly unornamented but has some decorative brick detailing, including arches around the second floor window openings, a modest cornice line, and a patternwork of squares and lines above the cornice line. The northern two-thirds of the roof is pitched; the remainder of the roof is flat. The windows and doors are replacement, and there are concrete lattice blocks within some of the window openings on the northern section of the building. There is a larger arched window opening in the protruding bay at the second level, surrounding by a line of brick detail. There is a slight concrete ramp leading to the front entrance from the side, and three shallow steps.

FREMONT SECONDARY APE

Mathews Company Rowhouses

Figure 1-73 shows the Mathews Company Rowhouses.

New York Connecting Railroad Bridge

The railroad bridge is three spans wide, with two central piers that line up with the boulevard's wide traffic medians (see Figure 1-74). It is built of concrete molded to appear like masonry, with large keystones at the center of each arch. The two piers have insets for statuary, and the top of the bridge has a cornice with dentil molding.

Engine Company 263/Hook & Ladder 117

The building has a granite base, limestone first story, and upper two floors in tan brick with limestone moldings and a limestone cornice (see Figure 1-74). There are two entrances for fire trucks with segmentally-arched tops capped with ornamental keystones.

Hell Gate Bridge, Little Hell Gate Bridge, and Bronx Kill Bridge

Figures 1-75 and 1-76 show the Hell Gate Bridge, the Little Hell Gate Bridge, and the Bronx Kill Bridge.

D. ARCHAEOLOGICAL RESOURCES

REGULATORY CONTEXT

As described in more detail above (see "Historic Resources"), Section 106 of the National Preservation Act of 1966 requires federal agencies to consider the effects of their actions on any properties listed on or determined eligible for the National Register of Historic Places and afford ACHP a reasonable opportunity to comment on such undertakings. Properties listed on or determined eligible for the National and State Registers can include historic resources and also archaeological resources.

Federal agency preservation officers, in consultation with SHPO, must determine whether a proposed action would have any effects on the characteristics of a site that qualify it for the National Register. If the analysis indicates that the proposed project will have an adverse effect, SHPO is consulted to seek agreement on ways to avoid or reduce the effects. This mitigation is typically implemented through either a MOA or Programmatic Agreement. ACHP must be invited to participate when the federal agency sponsoring the project requests the Council's involvement, when the project would have an adverse effect on a National Historic Landmark, or when a Programmatic Agreement will be prepared.

The New York State Historic Preservation Act of 1980 similarly requires state agencies to consider the effects of their actions on any properties listed on or determined eligible for the S/NR. The New Jersey Register of Historic Places Act of 1970 necessitates the review by the New Jersey SHPO of the effects of local, county, and state-level public undertakings on properties listed on the New Jersey Register of Historic Places. NEPA also requires such consideration. The review under Section 106 can be conducted in coordination with analyses conducted for NEPA.

In addition, historic properties (including archaeological resources) are also protected from adverse effects by Section 4(f) of the Department of Transportation Act (49 U.S.C. Section 303 (c)) of 1966, as amended. Section 4(f) prohibits actions by the Secretary of Transportation that require "use" of a historic property that is listed in or eligible for inclusion in the National Register, unless a determination is made that there is no feasible and prudent alternative to the use of such land, and all possible planning has been undertaken to minimize harm to the 4(f) property.

TYPES OF ARCHAEOLOGICAL RESOURCES

PREHISTORIC RESOURCES

Before Europeans arrived in New York and continuing into the 18th century, Native Americans (American Indians) lived throughout the region. Upland well-drained land in proximity to fresh water was used by Native Americans for long- and short-term habitation, hunting, and planting. Native American sites that have been identified in the New York City and northern New Jersey region are typically located on high ground near freshwater ponds, streams, and tidal inlets and coves. Throughout the northeast, the limited number of prehistoric archaeological resources that have been found have typically been shallowly buried, usually within 3 or 4 feet of the pre-development surface. As a result, these sites are vulnerable to disturbance by later activities on the site, and few such sites have survived. Because Native American archaeological sites in the New York City and northern New Jersey region are extremely rare, any surviving site would be considered extremely valuable and therefore would most likely be eligible for the State and National Registers of Historic Places.

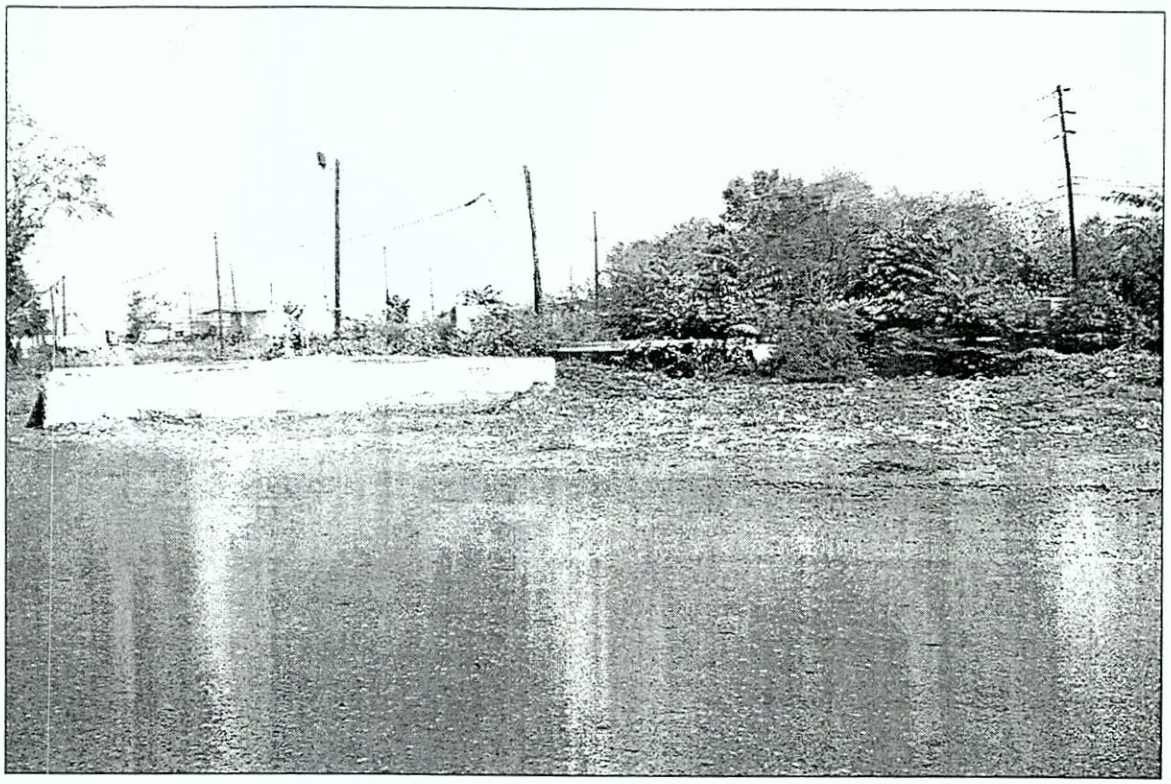
HISTORIC-PERIOD RESOURCES

Buried remains from the historic period can also be important, because of the new, undocumented information they can provide about the daily lives of previous inhabitants or about important historical events. In the New York City and northern New Jersey area, historic-period archaeological resources can range from early Dutch colonial artifacts (17th century), to Revolutionary War-period remains, to 19th century residential remains. Industrial remains can also be important. Types of historic archaeological resources that may be present in the New York City and New Jersey region include artifacts relating to dwellings, workplaces, and schools, which are often preserved in old privies, cisterns, or wells. Privies, cisterns, and wells, in use before municipal sewer and water services were available, were located in backyards. They were typically shafts of up to 8 feet deep, and were sometimes used for refuse disposal. These deep shafts therefore can serve as a time capsule, filled with artifacts from the time of their use. They can remain preserved beneath later construction on a site, often protected by fill levels or later buildings. Other commonly occurring, but more shallowly buried, historic remains include foundations and builder's trenches, as well as more fragile backyard features such as fence lines, paths, and traces of landscaping. Historic-period archaeological resources may be considered significant, and therefore eligible for the State and National Registers, if they have the potential to provide valuable new information about the past. Consequently, historic-period archaeological resources are typically most valuable when they are older and, usually, when they predate installation of municipal sewer and water services.

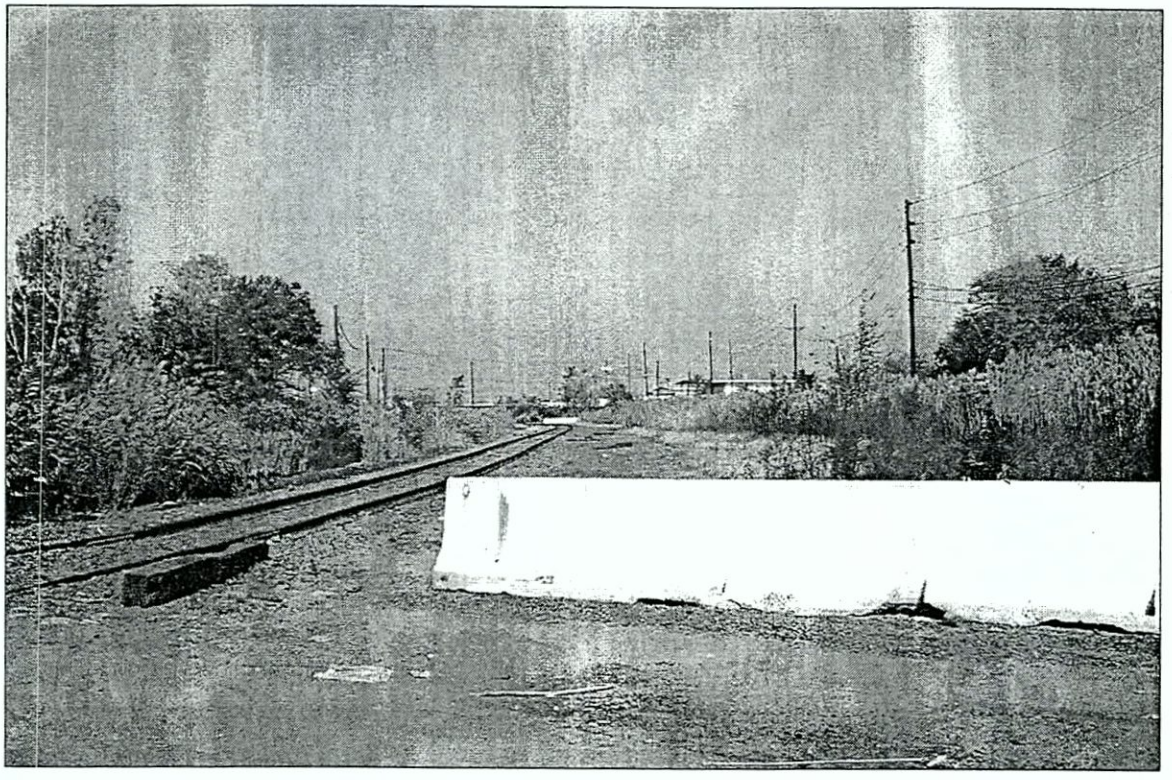
SOURCES USED FOR DOCUMENTARY AND CARTOGRAPHIC RESEARCH

In New York, research was conducted at the Queens Borough Public Library, the St. George Library on Staten Island, the New York State Library, and the New York State Archives. In New Jersey, research was undertaken at the New Jersey Historical Society and the New Jersey State Library. Site file searches were performed at the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), the New York State Museum (NYSM), the New Jersey State Museum (NJSM), and NJSHPO. Pertinent archaeological reports were also reviewed at NYCLPC, which keeps records on archaeological sites in New York City and prepares sensitivity maps based on pre-development topography. Existing, documented archaeological resources were identified, including sites on the State and National Registers and

other known sites. Cartographic information, in the form of historic maps and atlases, was gathered to determine whether land forms within each APE were conducive for prehistoric habitation or use and to ascertain the historical development of each APE. Where available, soil borings were analyzed to determine subsurface conditions.

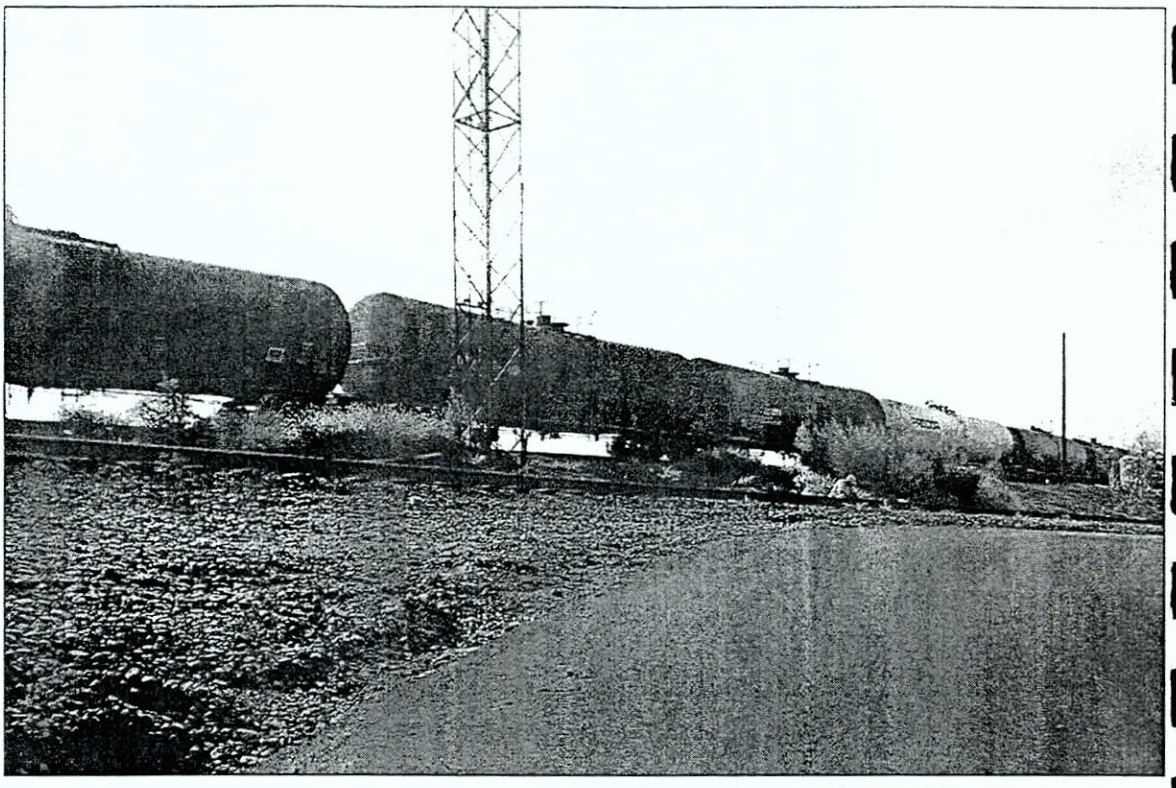


View southwest of the Oak Island Yard study area

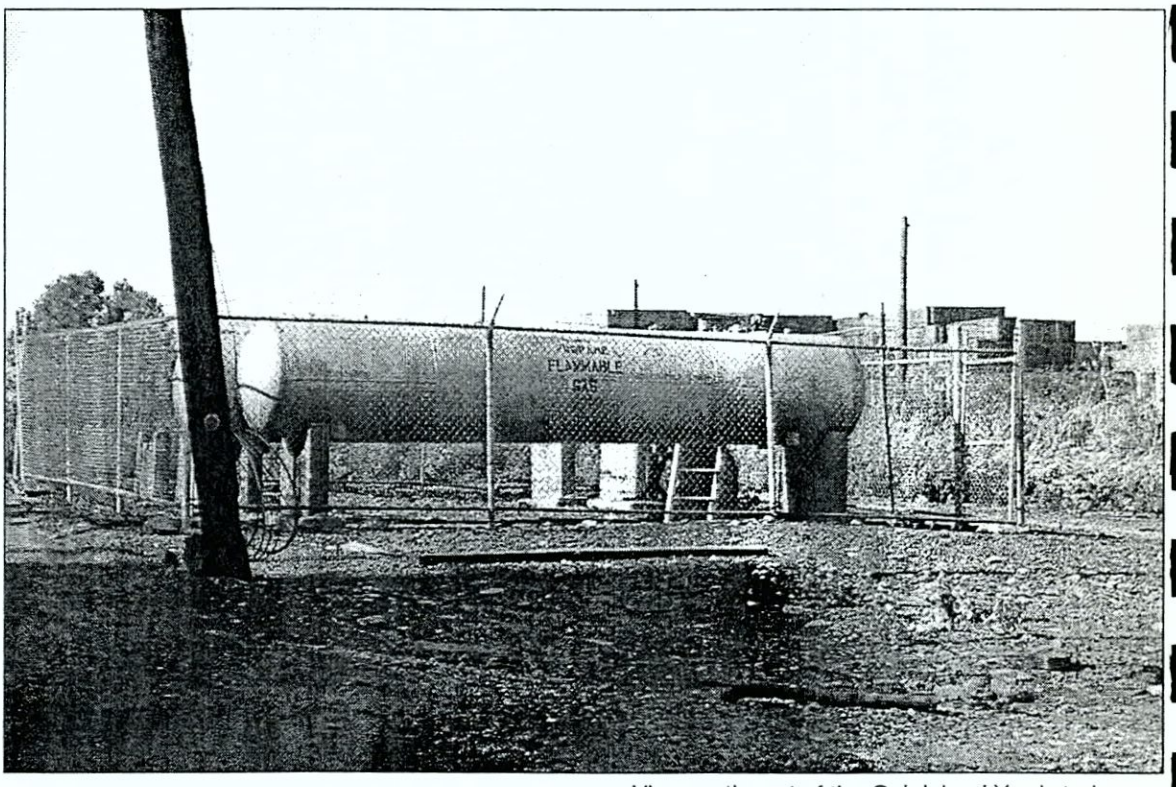


View southeast of the Oak Island Yard study area

Figure 1-1
Oak Island Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT



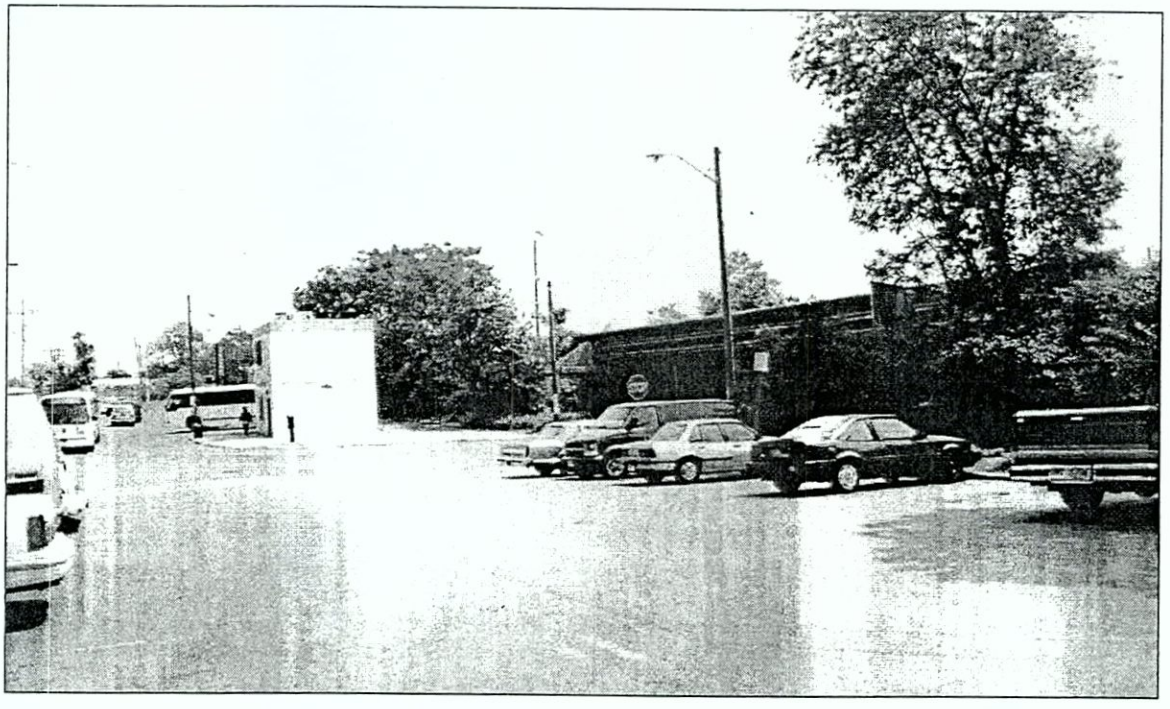
View southwest of the Oak Island Yard study area



View northwest of the Oak Island Yard study area

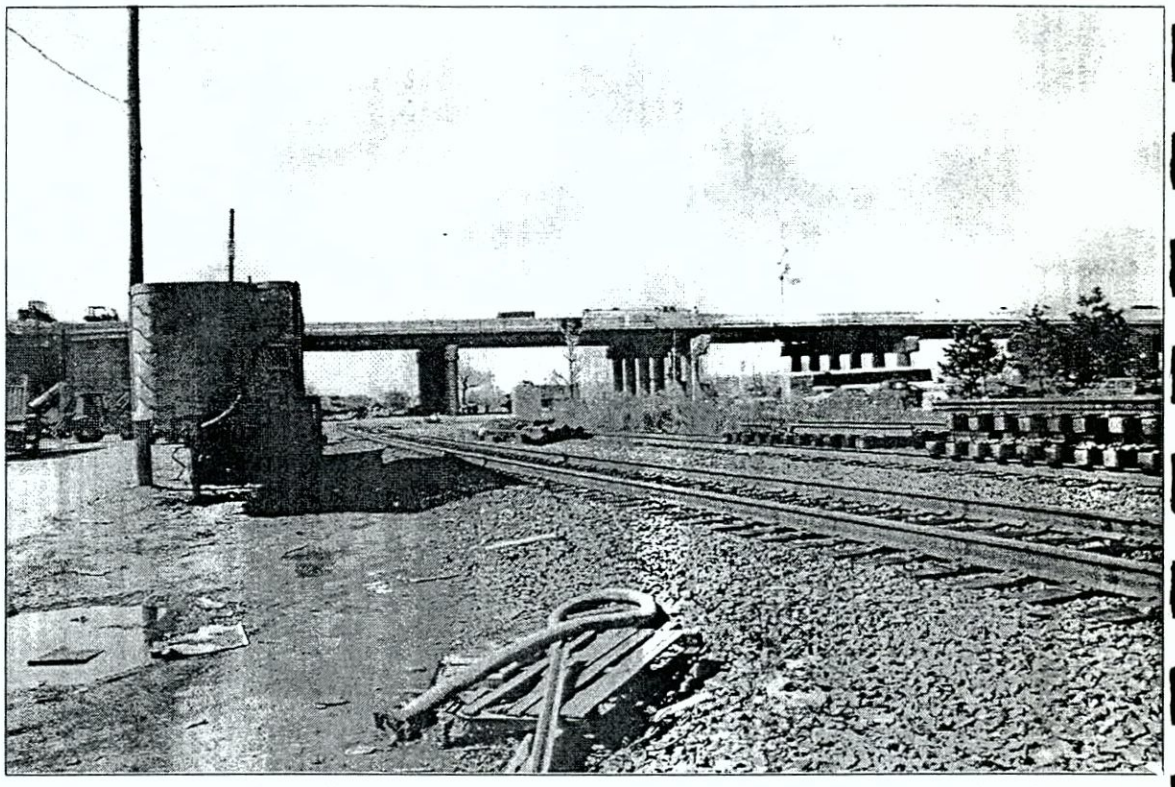
Figure 1-2
Oak Island Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View northwest of the rail line, as seen from Merritt Street

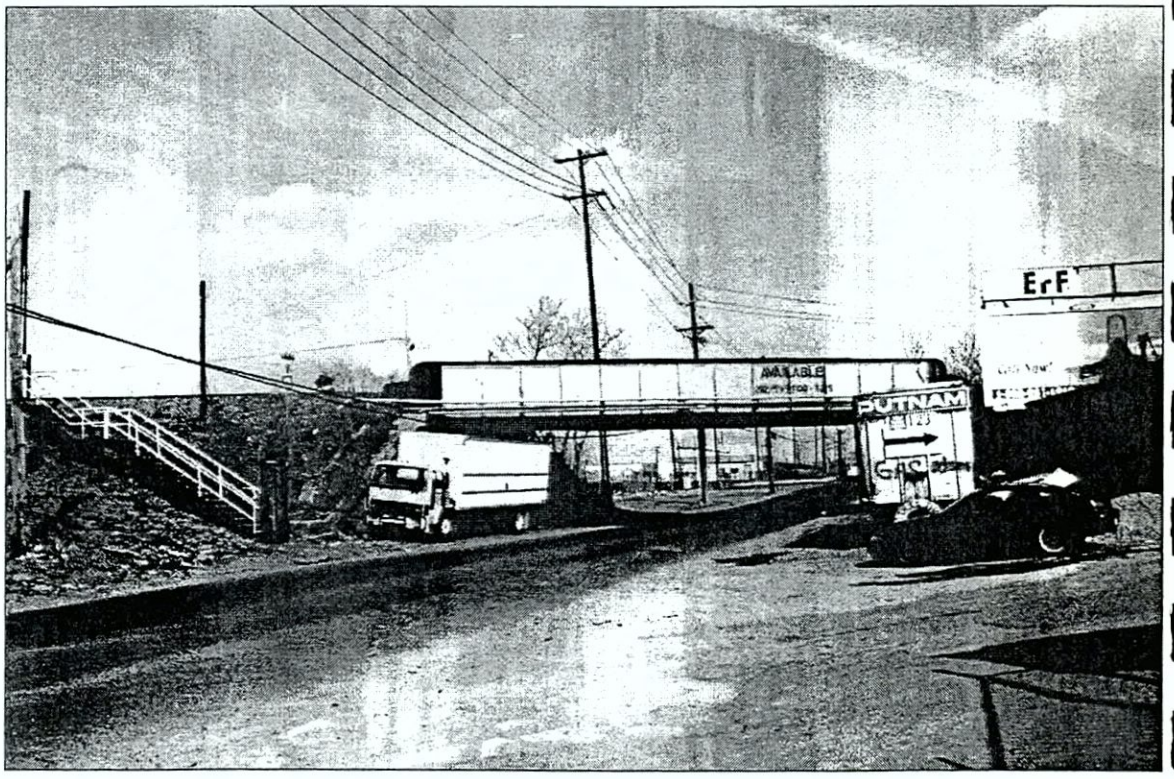


View southeast of the rail line, as seen from Merritt Street

Figure 1-3
Greenville Branch Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View southwest of the rail line as it crosses Secaucus Road, showing an at-grade portion of the rail line

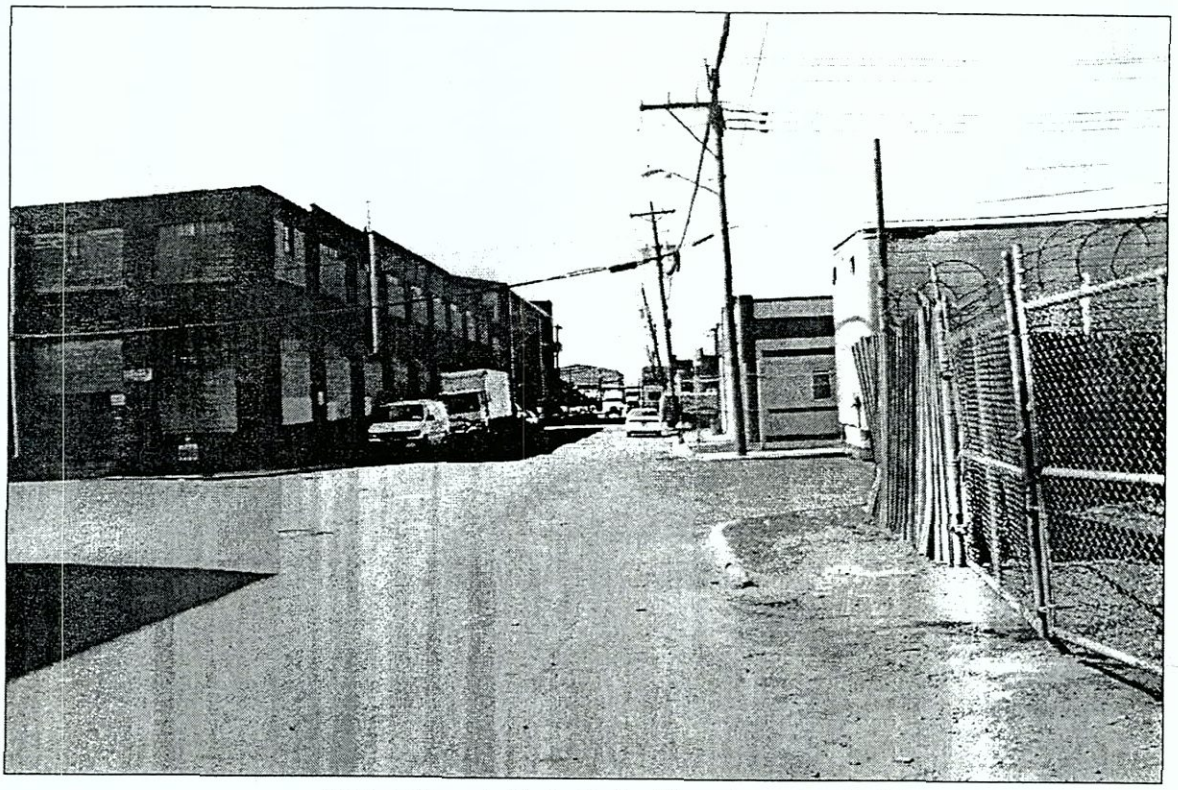


View northwest of the rail line as it crosses County Road, showing an elevated portion of the rail line

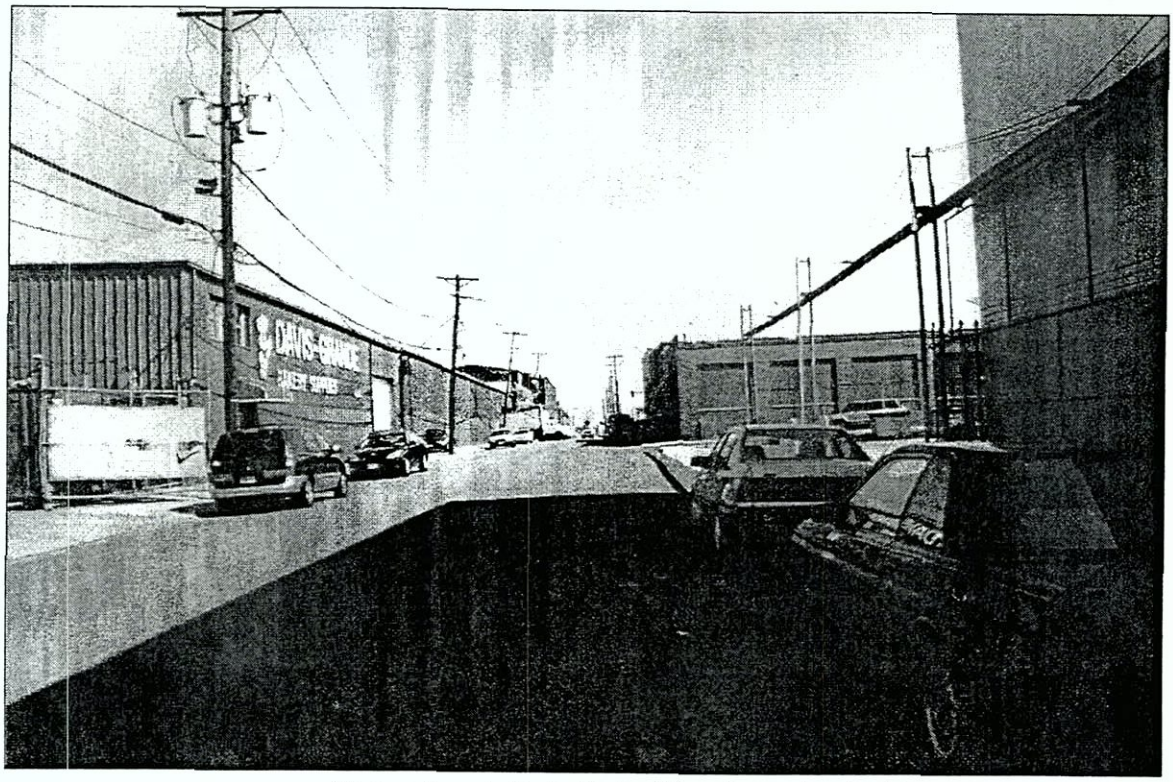
Figure 1-4

National Docks Secondary Study Area - Segment 1

CROSS HARBOR FREIGHT MOVEMENT PROJECT



View southwest of industrial buildings located on Dell Avenue, near 43rd Street

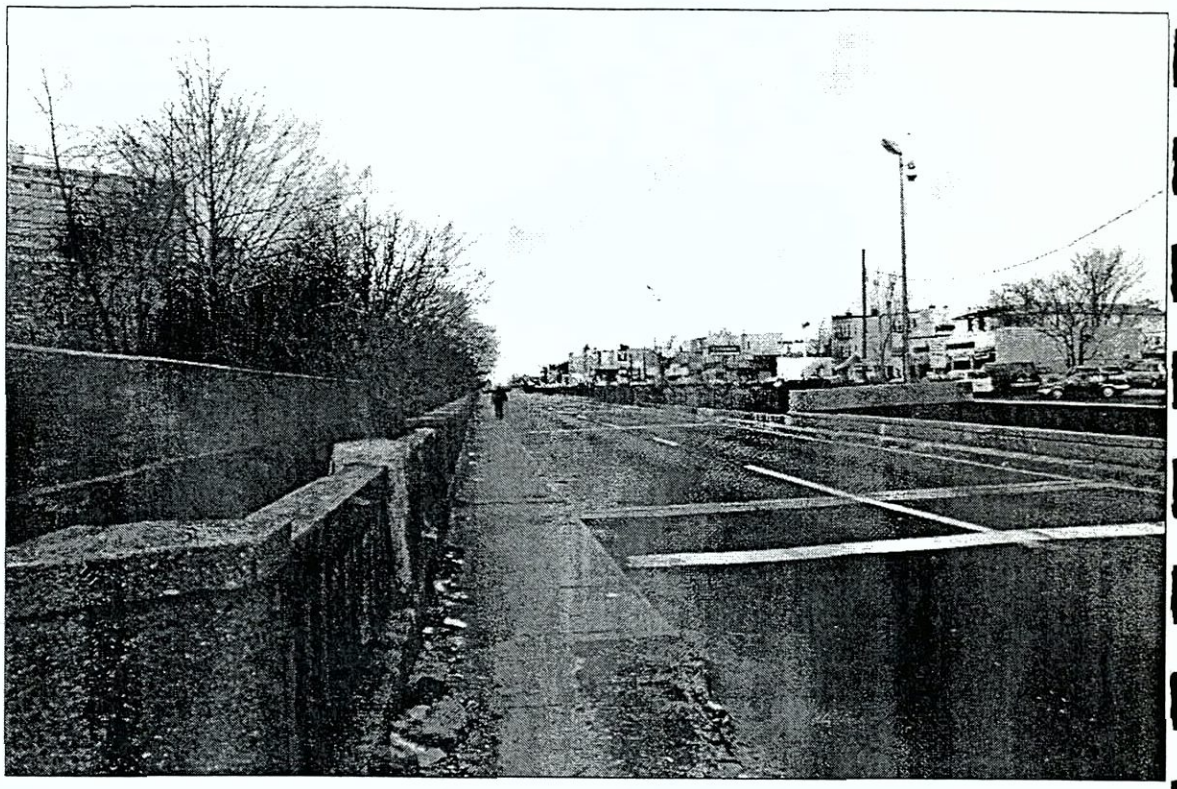


View northeast of industrial buildings located on Dell Avenue, near 43rd Street

Figure 1-5

National Docks Secondary Study Area - Segment 1

CROSS HARBOR FREIGHT MOVEMENT PROJECT



View northwest of Route 139, near Central Avenue. The rail line is west of the road and is depressed

View northwest showing the Bergen Arches and Erie Cut as seen from Baldwin Avenue

Figure 1-6

National Docks Secondary Study Area - Segment 2

View northwest of residential development on Washburn Street

View northwest of an elevated portion of the rail line as seen from 10th Street. The New Jersey Turnpike Extension/I-78 travels overhead, while William Dickinson High School is visible in the background

Figure 1-7

National Docks Secondary Study Area - Segment 2

5-03

View southeast of the rail line as it is carried by a trestle, near Merseles Street

View southeast of the rail line as it travels near Barbara Place. The Conrail National Docks Railroad Bridge is visible, and Lafayette Gardens is partially visible on the right. Modern housing along Pacific Avenue is visible in the background

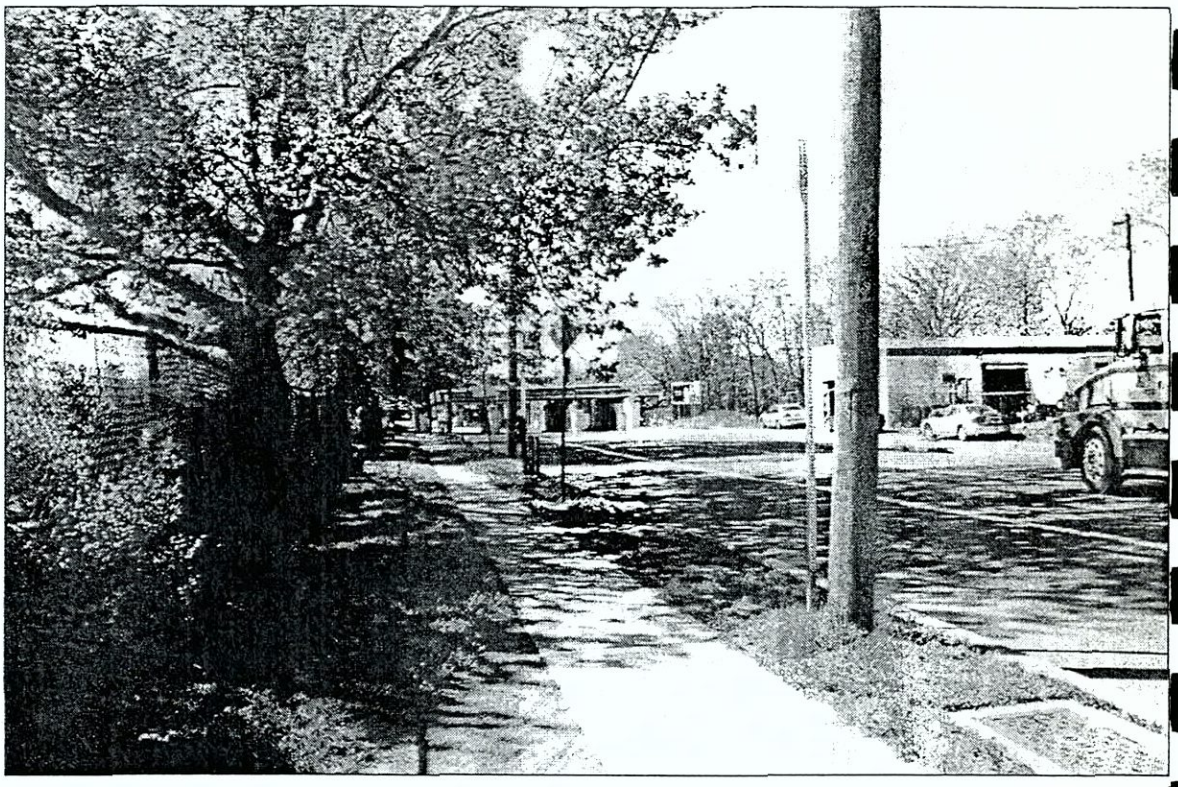
Figure 1-8

National Docks Secondary Study Area - Segment 2

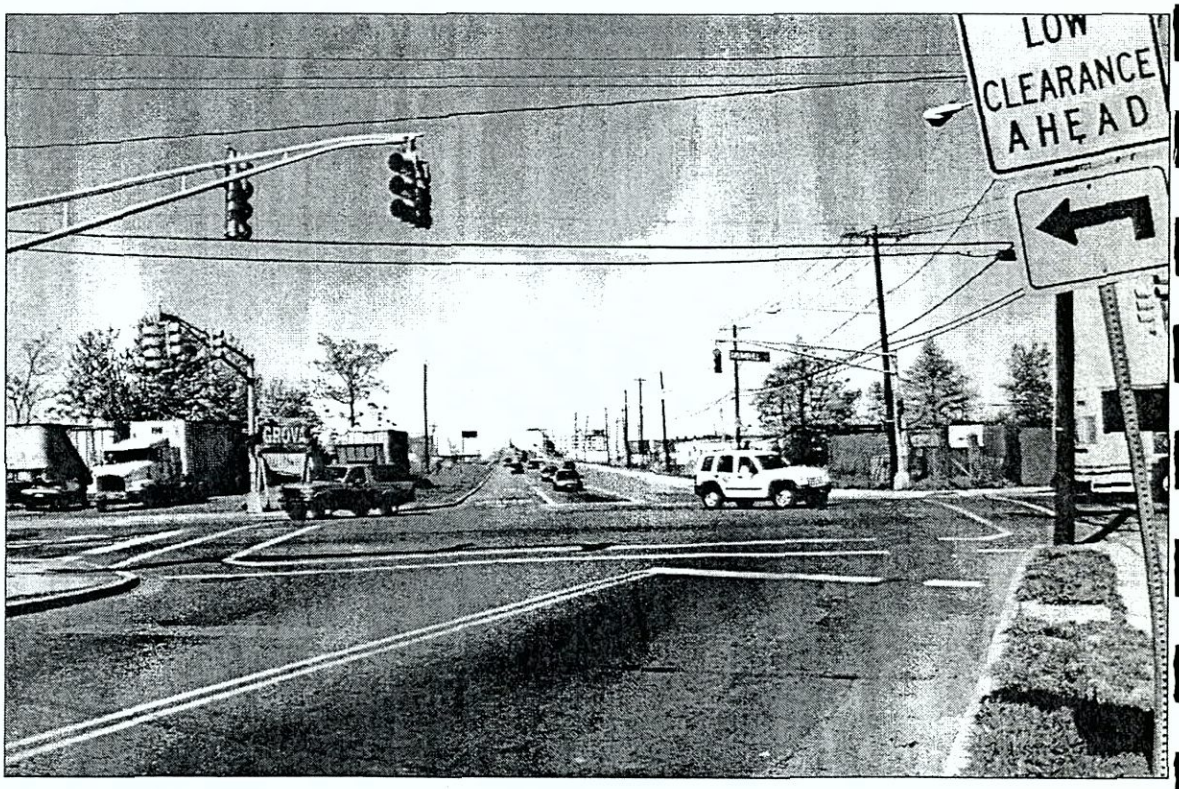
View northeast of the rail line as seen from Ash Street.
The Conrail National Docks Railroad Bridge is visible in the background

View northeast of the rail line, as seen from Chapel Avenue

Figure 1-9
National Docks Secondary Study Area - Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View northwest of the rail line as seen from the corner of Trumbull Street and 3rd Street



View northeast of the northern portion of the study area, as seen from the corner of Trumbull Street and 3rd Street

Figure 1-10

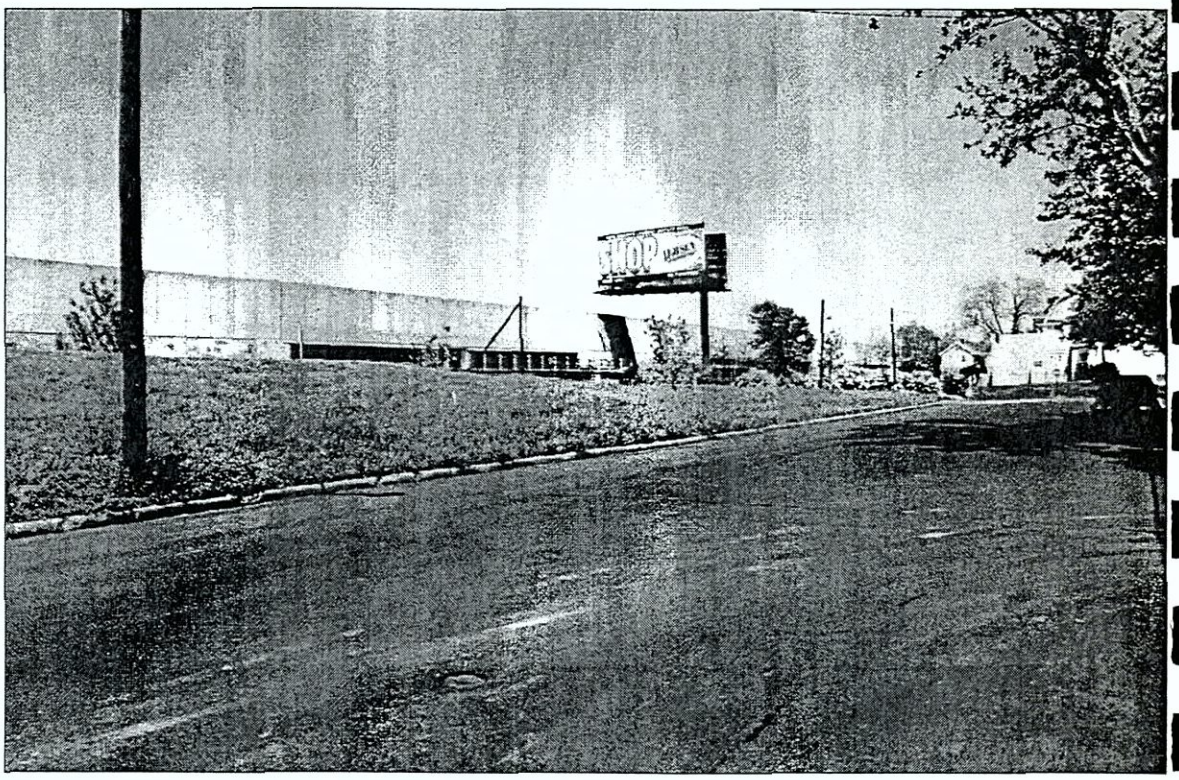
Chemical Coast Line Study Area - Segment 1

View northeast of 3rd Street, showing typical commercial buildings located on the street

View north of Franklin Street, showing typical houses located in the study area. The elevated rail line is visible in the background

Figure 1-11
Chemical Coast Line Study Area - Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View southwest of Lt. Glenn Zamorski Drive



View northeast of Lt. Glenn Zamorski Drive, showing the rail line and the concrete barrier wall for the New Jersey Turnpike

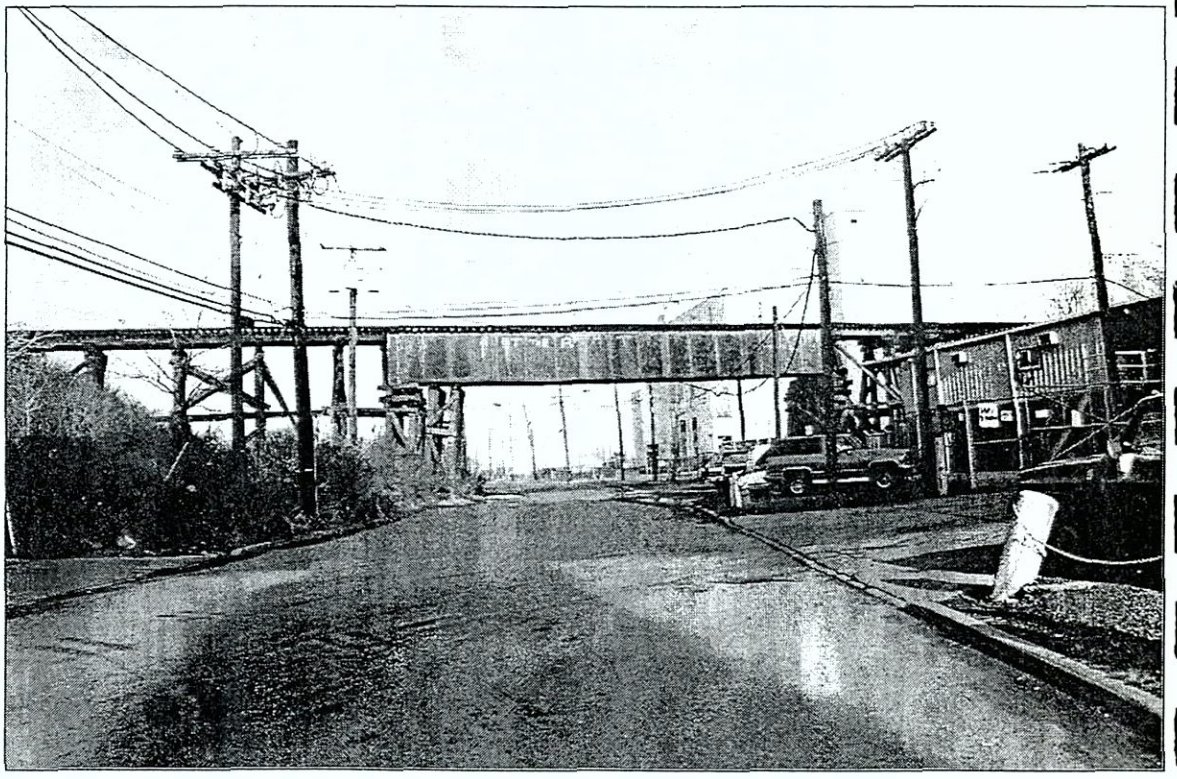
Figure 1-12
Chemical Coast Line Study Area - Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View north of the rail line as it travels behind the rear yards of houses located on Rosewood Lane

View northeast of the rail line as it travels along Carteret Street

Figure 1-13
Chemical Coast Line Study Area - Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View southeast of the elevated railroad near the Arthur Kill Lift Bridge



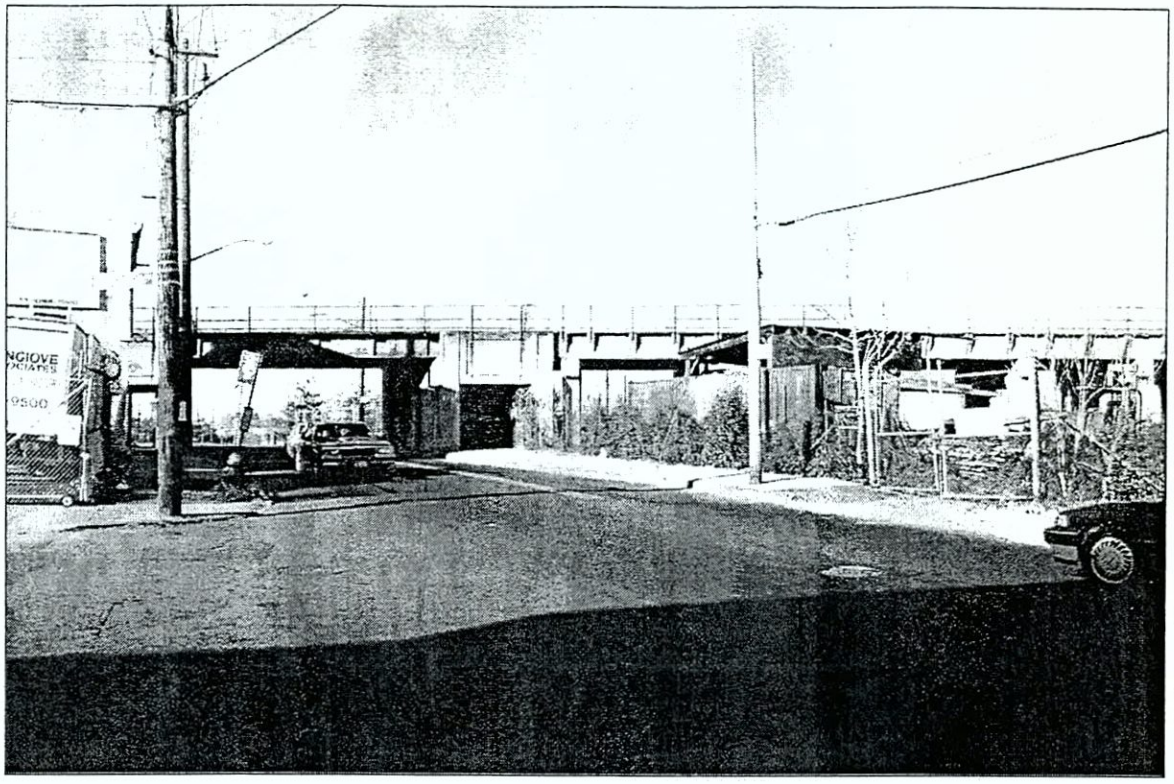
View northeast of a timber trestle bridge that carries the railroad over Amboy Avenue

Figure 1-14
Arthur Kill Lift Bridge Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

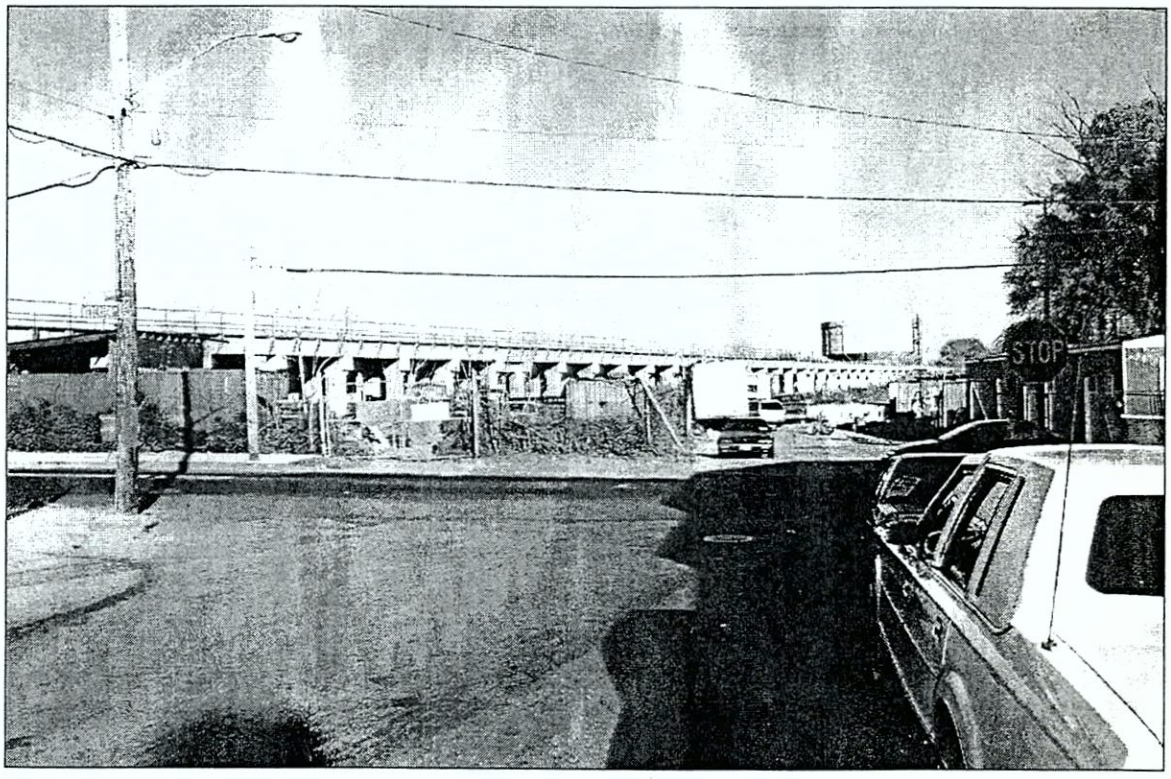
View north of the railroad trestle over Treadwell Avenue

View northwest of the railroad trestle at Sharpe Avenue and Grove Avenue.
The steel arch of the Bayonne Bridge is visible in the background

Figure 1-15
Northern Staten Island Study Area – Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View northwest of the railroad trestle as seen from the corner of Herberton Avenue and Richmond Terrace



View north of the railroad trestle showing it crossing over Richmond Terrace and traveling northeast toward the shoreline

Figure 1-16

Northern Staten Island Study Area – Segment 2

5•03

View northeast of the railroad trestle over Port Richmond Avenue

View northeast of commercial buildings located along Port Richmond Avenue

Figure 1-17
Northern Staten Island Study Area – Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View northwest of commercial buildings on Bay Street

View northeast showing buildings located along the Staten Island waterfront

Figure 1-18

Northern Staten Island Study Area - Segment 4

View southeast of the Staten Island waterfront.
The Verrazano-Narrows Bridge is visible in the background

Figure 1-19
Northern Staten Island Study Area - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

Brooklyn Army Terminal. View northwest from 2nd Avenue and 65th Street

65th Street Yard. View west from 2nd Avenue and 65th Street

Figure 1-20
65th Street Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

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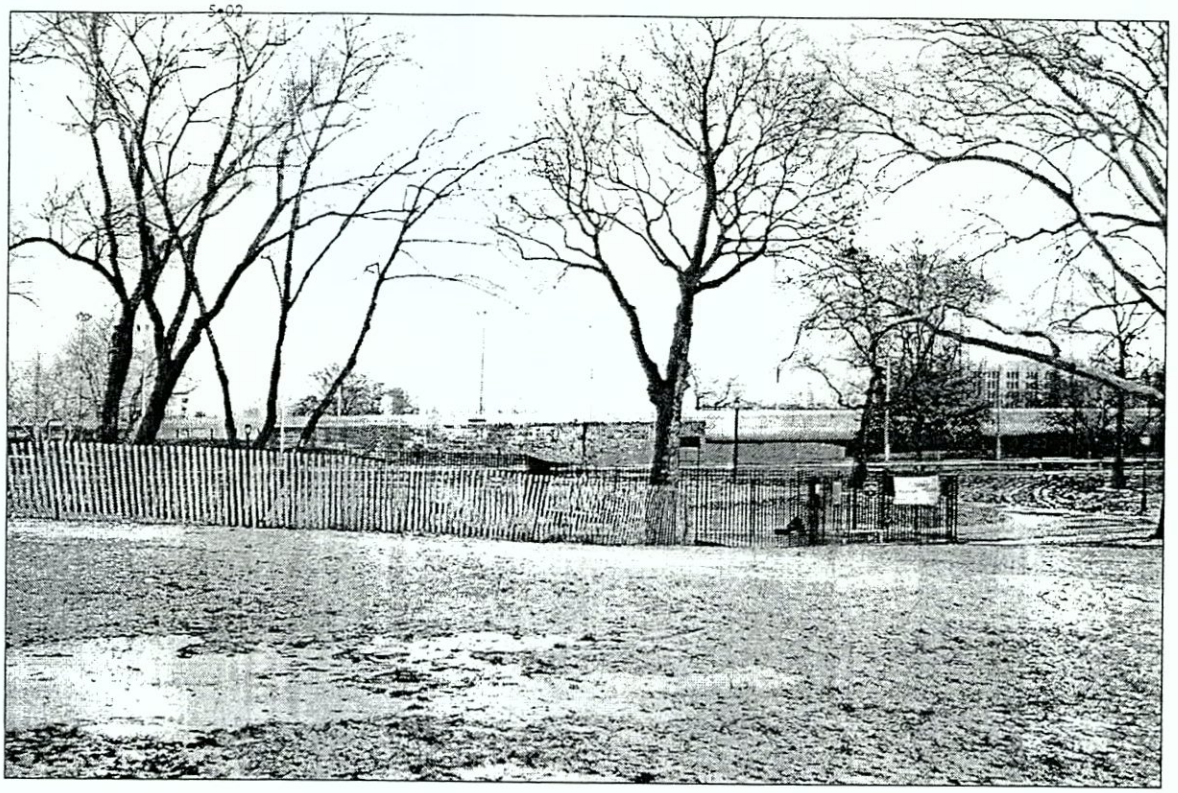
5•02



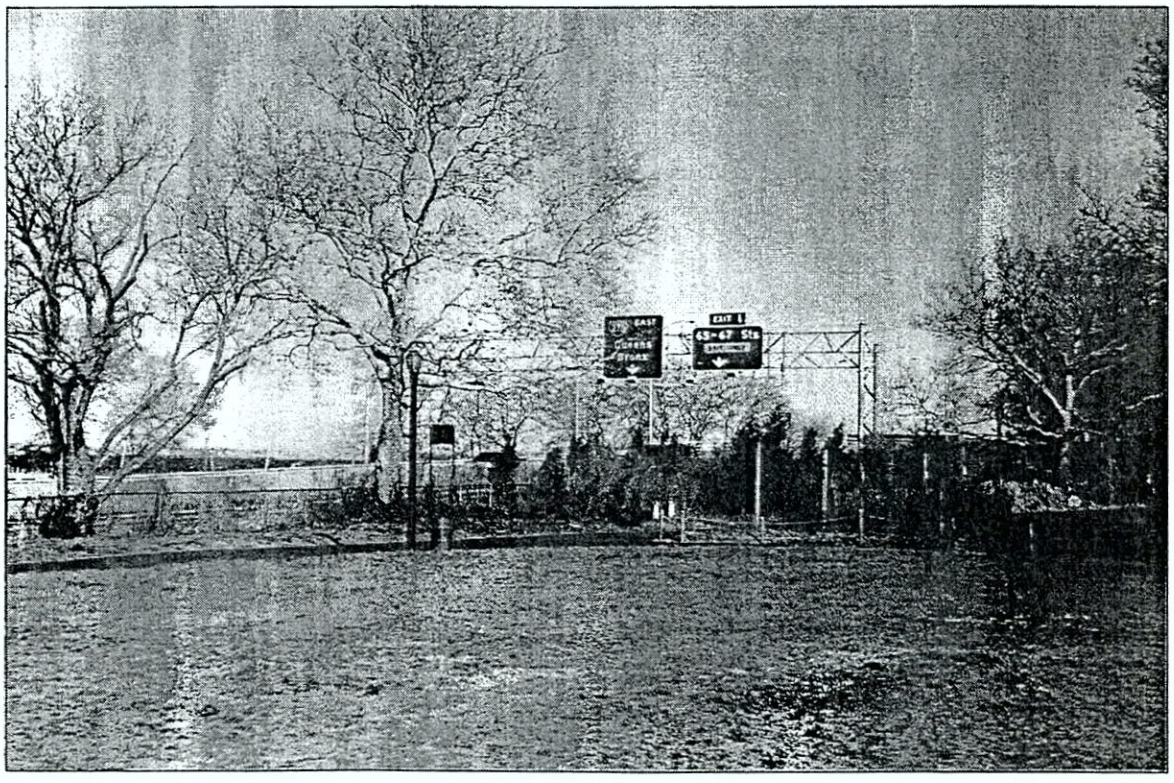
View north from Owl's Head Park showing Shore Parkway

View north from Owl's Head Park. Water Pollution Control Plant visible on left side and Brooklyn Army Terminal on right side

Figure 1-21
Owl's Head Park
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

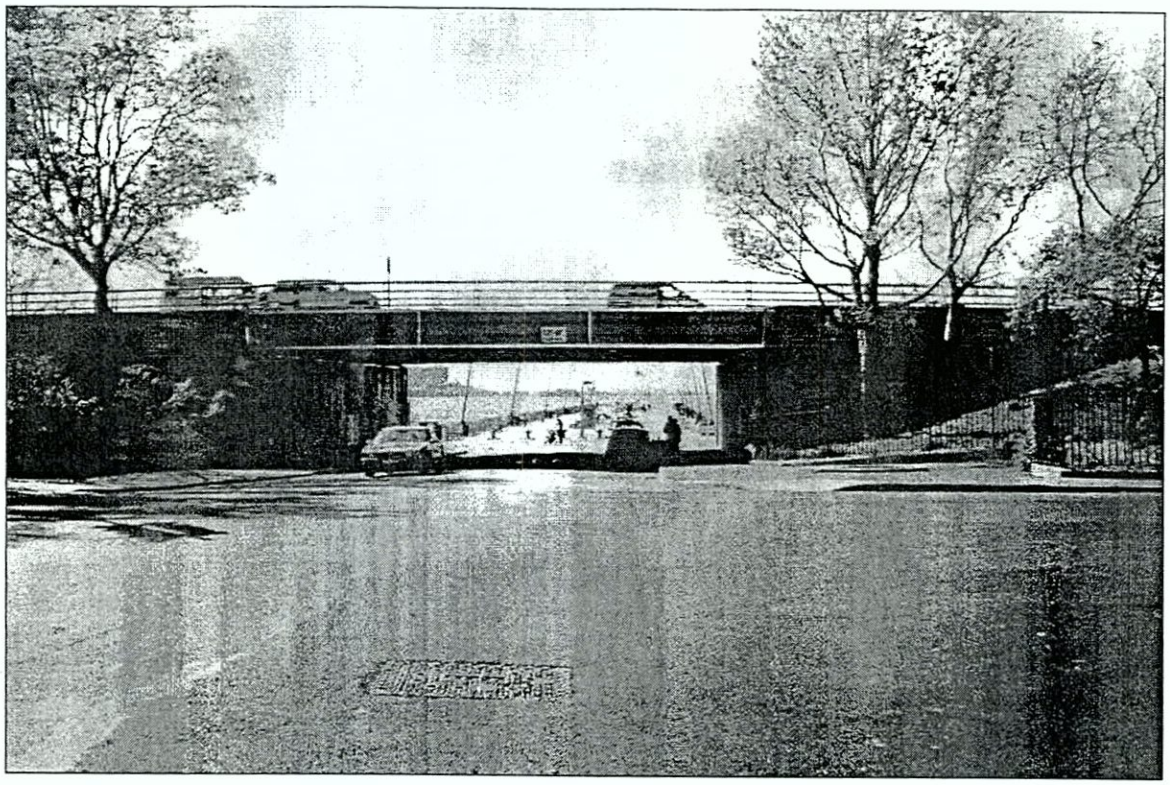
Shore Promenade. View south from approximately Bay Ridge Avenue



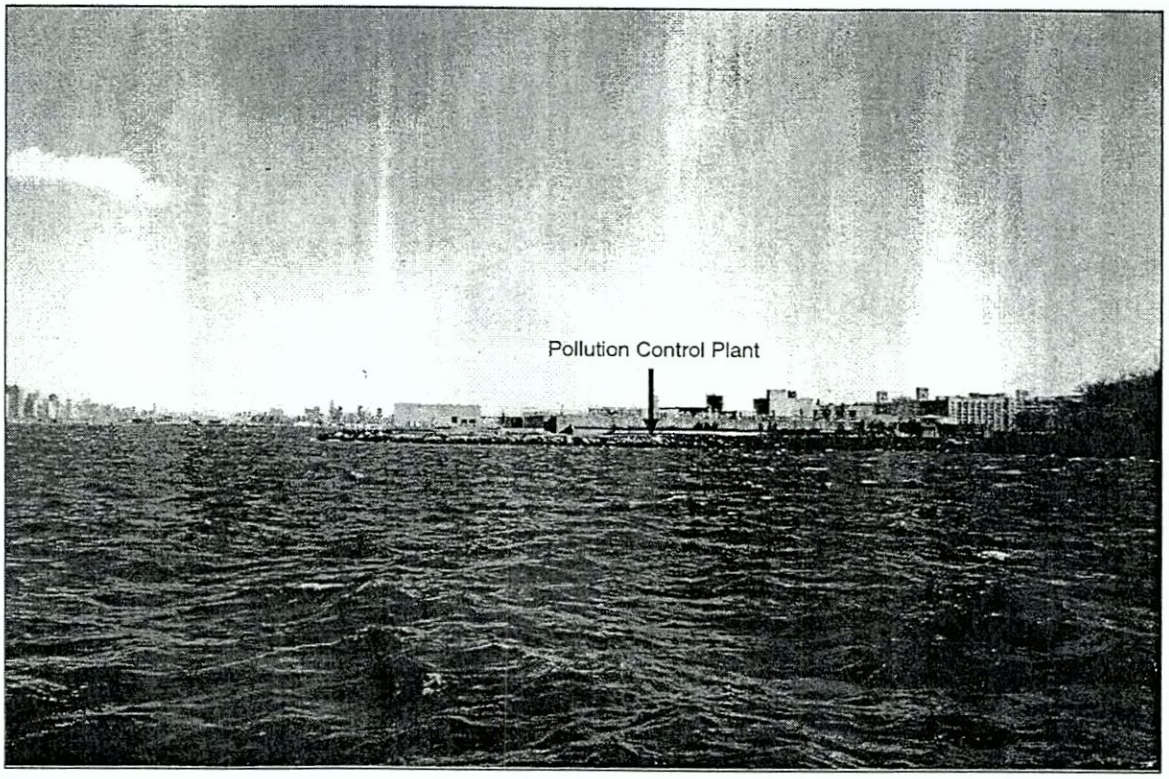
Shore Promenade. View north from Mackay Place

Figure 1-22
Tunnel Vent Shaft

CROSS HARBOR FREIGHT MOVEMENT PROJECT

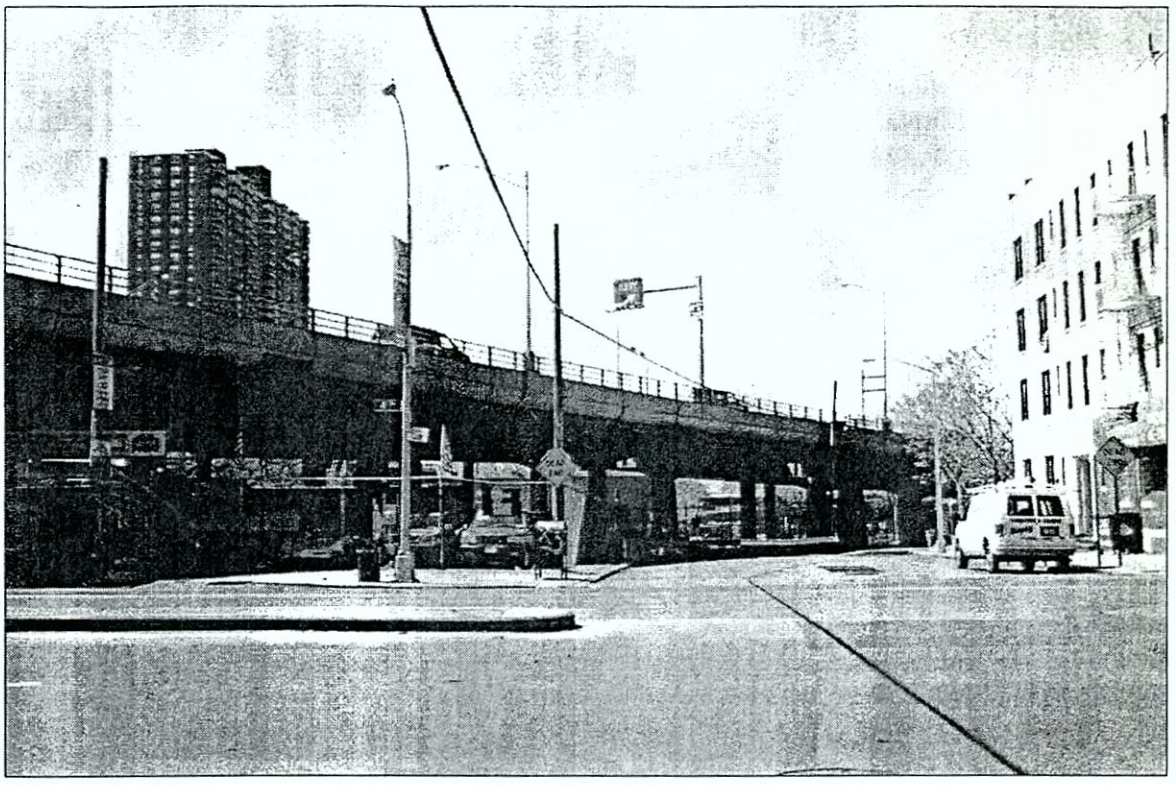


69th Street pier. View west on Bay Ridge Avenue



View north from 69th Street public pier

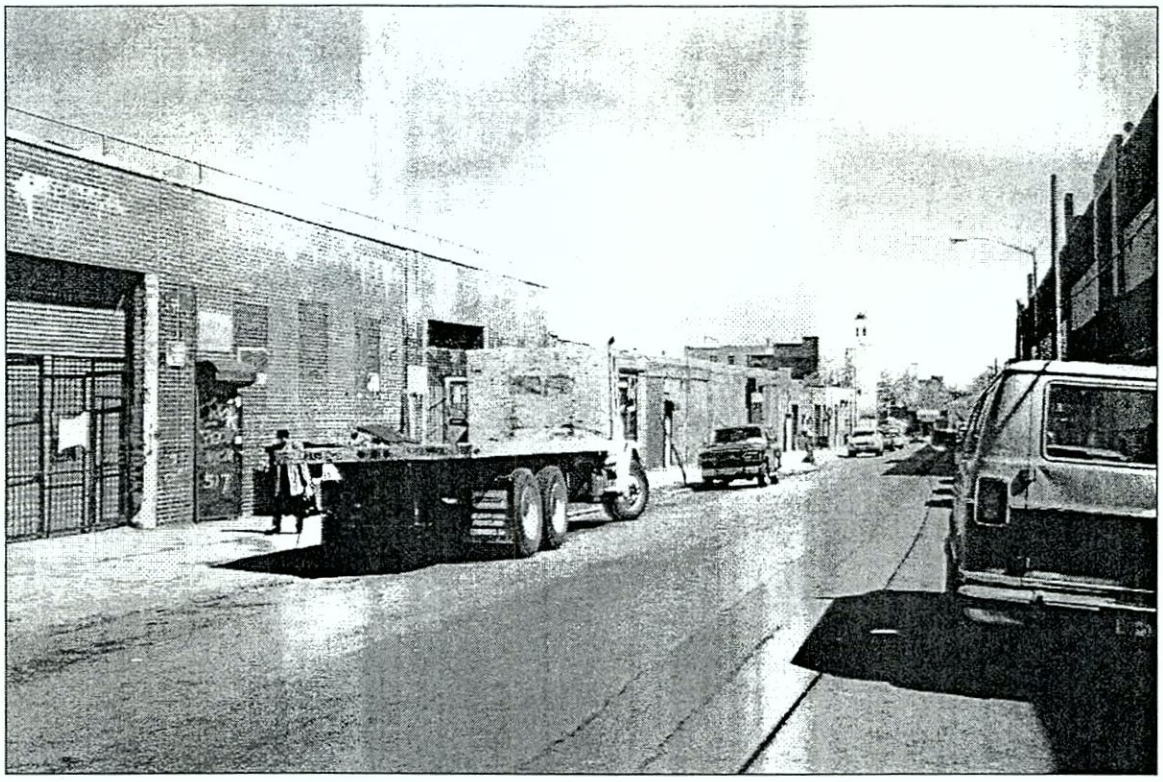
Figure 1-23
Tunnel Vent Shaft



Gowanus Expressway. View west on 64th Street from 4th Avenue

View north on 5th Avenue from 66th Street
The Bay Ridge Branch is underneath and parallel to the Gowanus Expressway

Figure 1-24
Bay Ridge Branch – Segment I
CROSS HARBOR FREIGHT MOVEMENT PROJECT

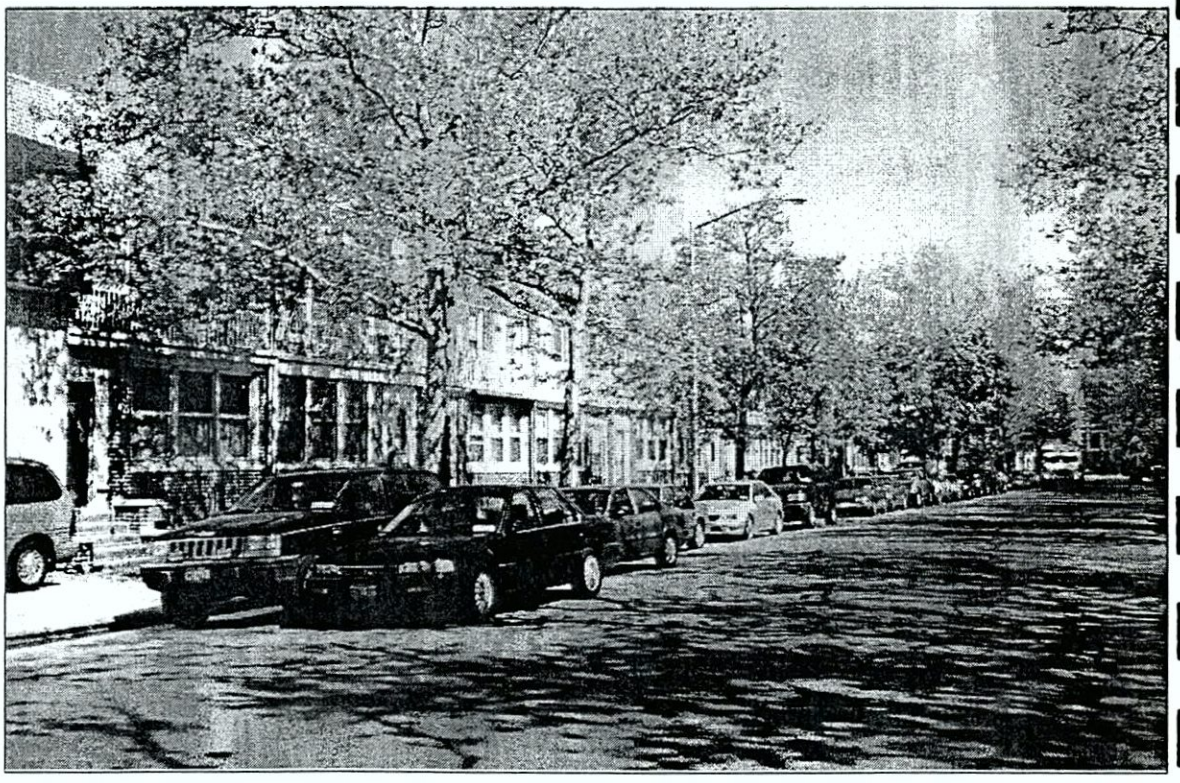


View east on 63rd Street from 5th Avenue

View east on 62nd Street from 6th Avenue

Figure 1-25
Bay Ridge Branch – Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View east on 64th Street from 4th Avenue

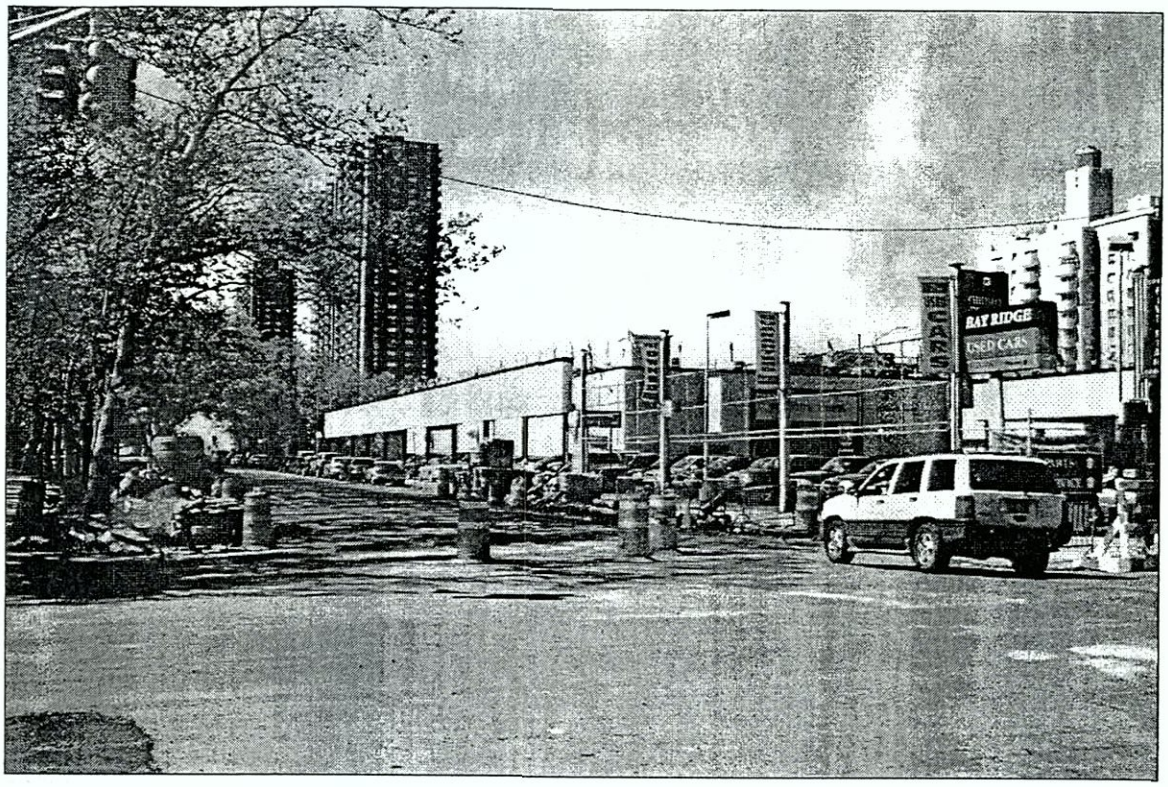


View east on 66th Street from 5th Avenue

Figure 1-26

Bay Ridge Branch – Segment 1

CROSS HARBOR FREIGHT MOVEMENT PROJECT



View west on 66th Street from 5th Avenue

Leif Ericson Park. View southeast from the intersection of 66th Street and 5th Avenue

Figure 1-27
Bay Ridge Branch – Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

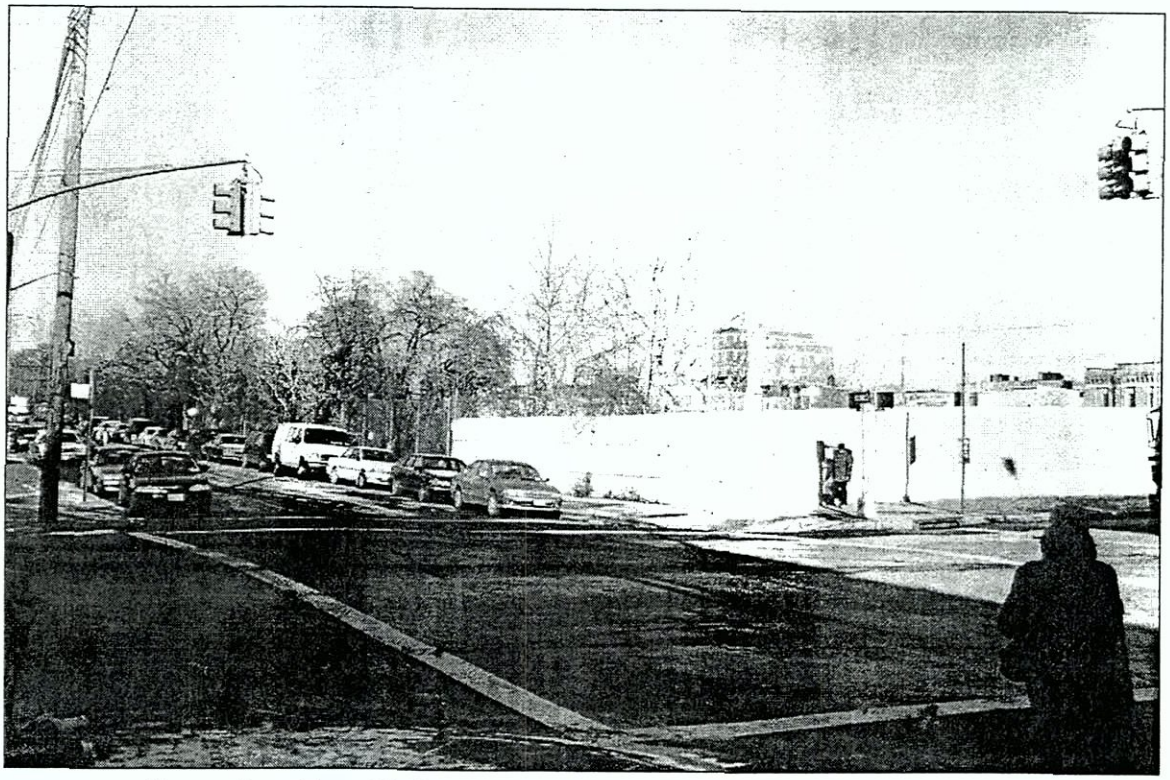
5•03

View west on 61st Street from Fort Hamilton Parkway

View east on 62nd Street from Fort Hamilton Parkway

Figure 1-28
Bay Ridge Branch Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View south on 10th Avenue from 62nd Street



View northwest from 62nd street and Fort Hamilton Parkway showing Bay Bridge Branch railcut

Figure 1-29
Bay Ridge Branch Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT

Bay Ridge Branch rail cut. View west from Ocean Parkway

View east on 62nd Street from 15th Avenue

Figure 1-30

Bay Ridge Branch Segment 3

CROSS HARBOR FREIGHT MOVEMENT PROJECT

View west on 62nd Street from 15th Avenue

View north on 22nd Street from Avenue J

Figure 1-31
Bay Ridge Branch Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

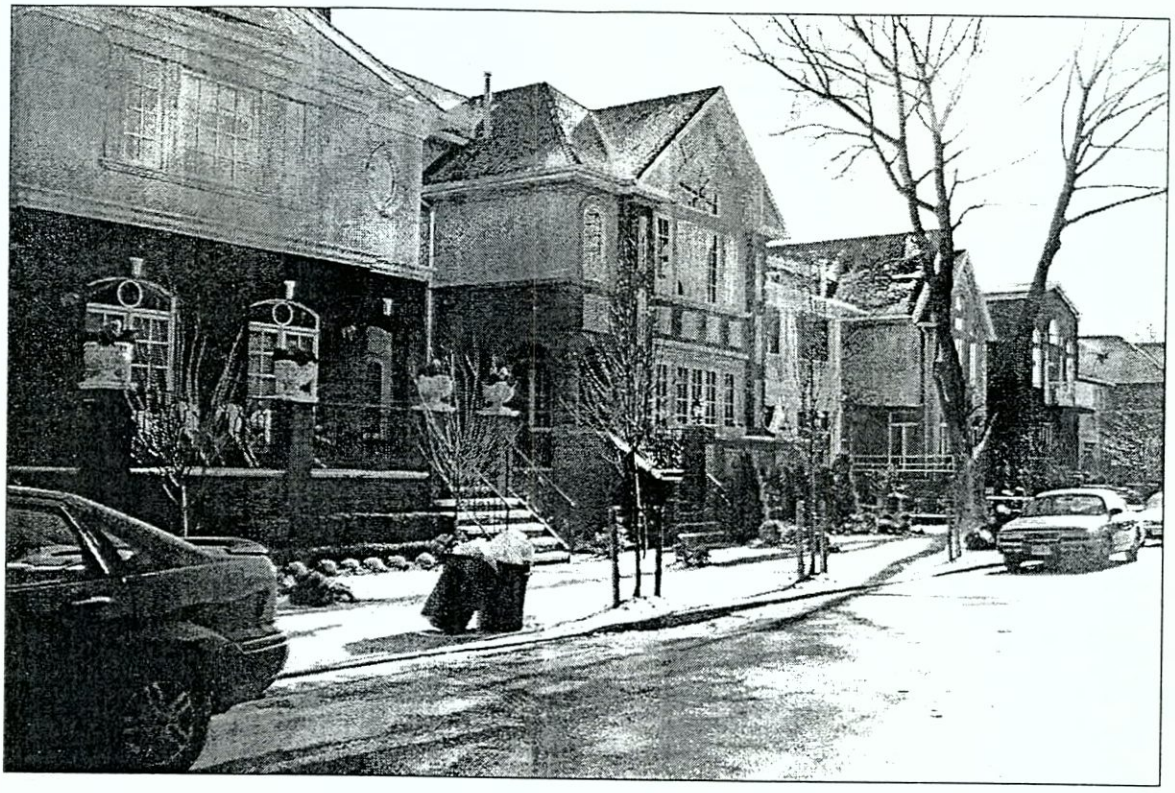
5•03

View west on Elmwood Avenue from East 3rd Street

View east on Elmwood Avenue from East 3rd Street

Figure 1-32
Bay Ridge Branch Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03



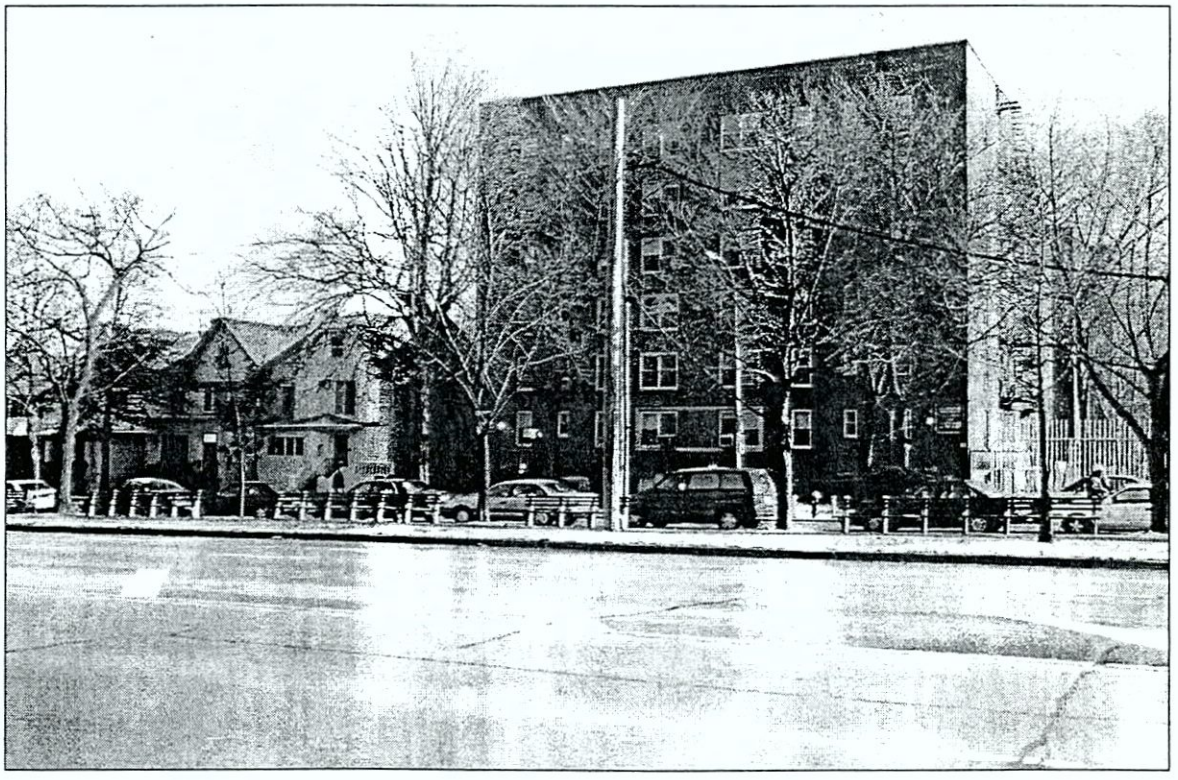
View south on 22nd Street from Bay Ridge Branch rail cut

View north on Flatbush Avenue from East 34th Street

Figure 1-33
Bay Ridge Branch Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

Ocean Parkway. View southwest from proximity of rail cut (visible on right side)



Ocean Parkway. View northeast from proximity of rail cut (visible on right side)

Figure 1-34

Bay Ridge Branch Segment 3

CROSS HARBOR FREIGHT MOVEMENT PROJECT

View east on Foster Avenue from 52nd Street

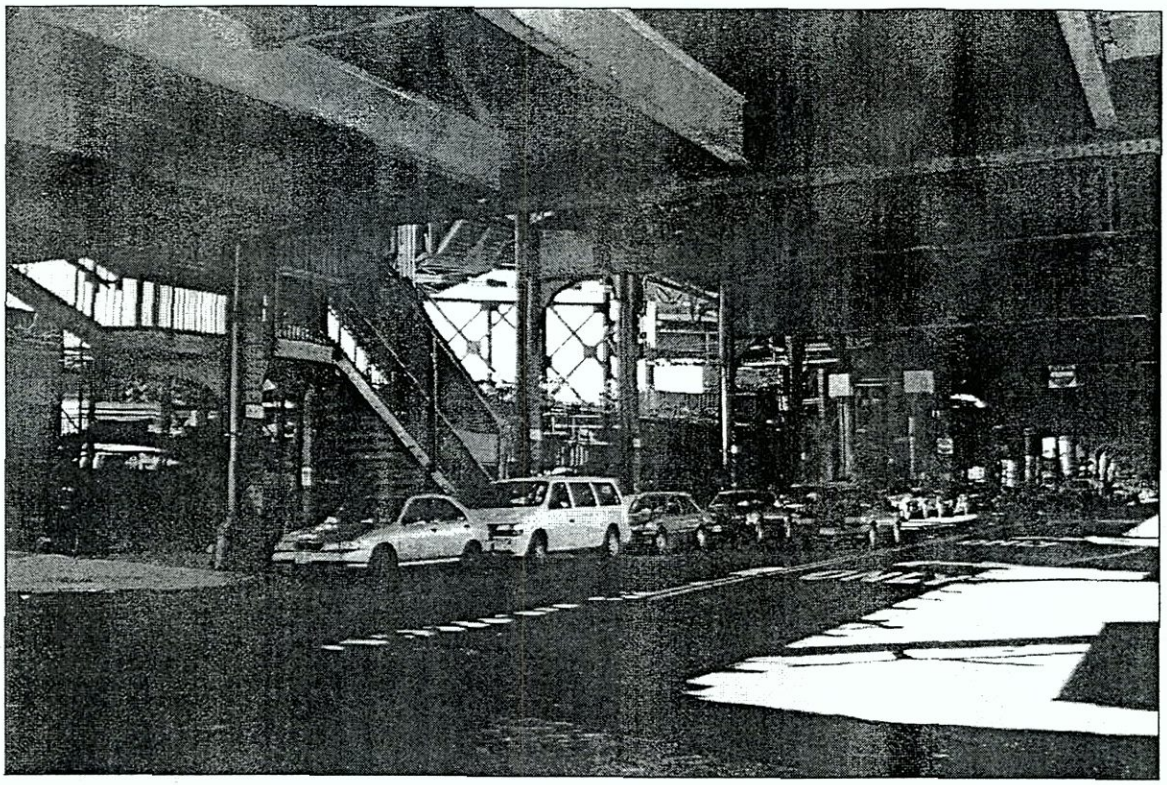
View south on 92nd Street from Ditmas Avenue

Figure 1-35
Bay Ridge Branch - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT

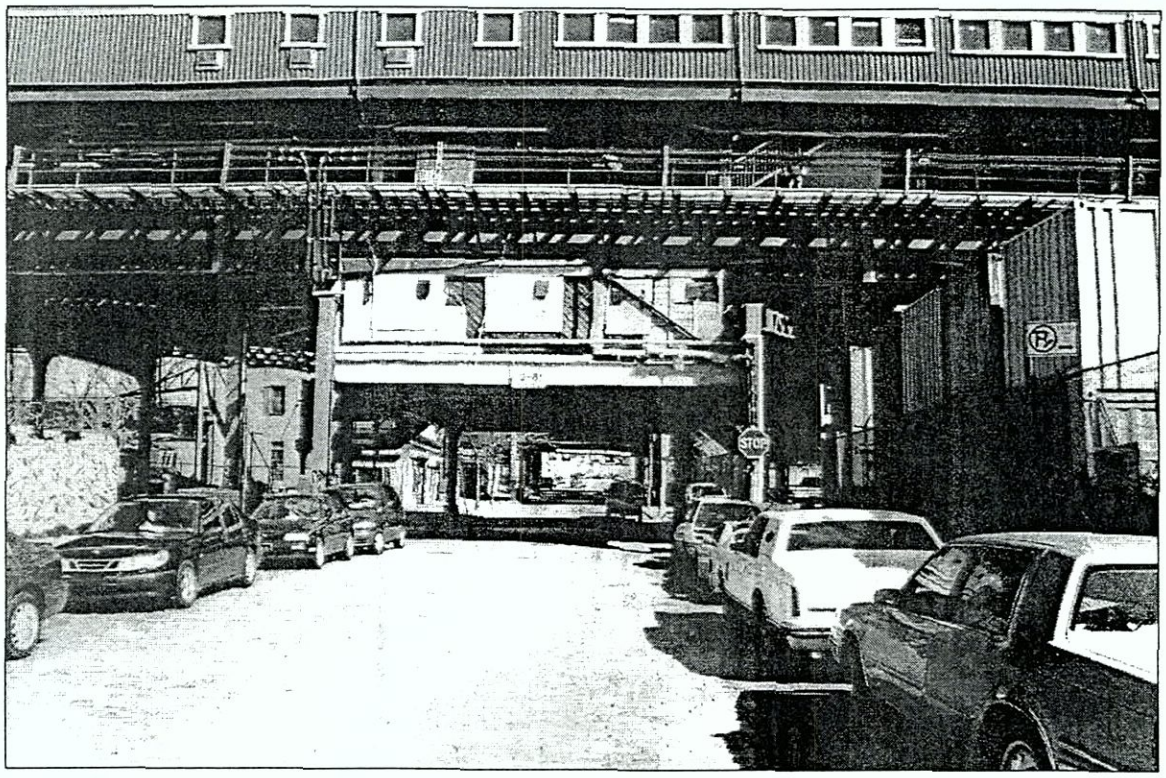
View north on Powell Avenue from Newport Street

View east on Newport Street from Powell Avenue showing elevated L Line

Figure 1-36
Bay Ridge Branch - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT

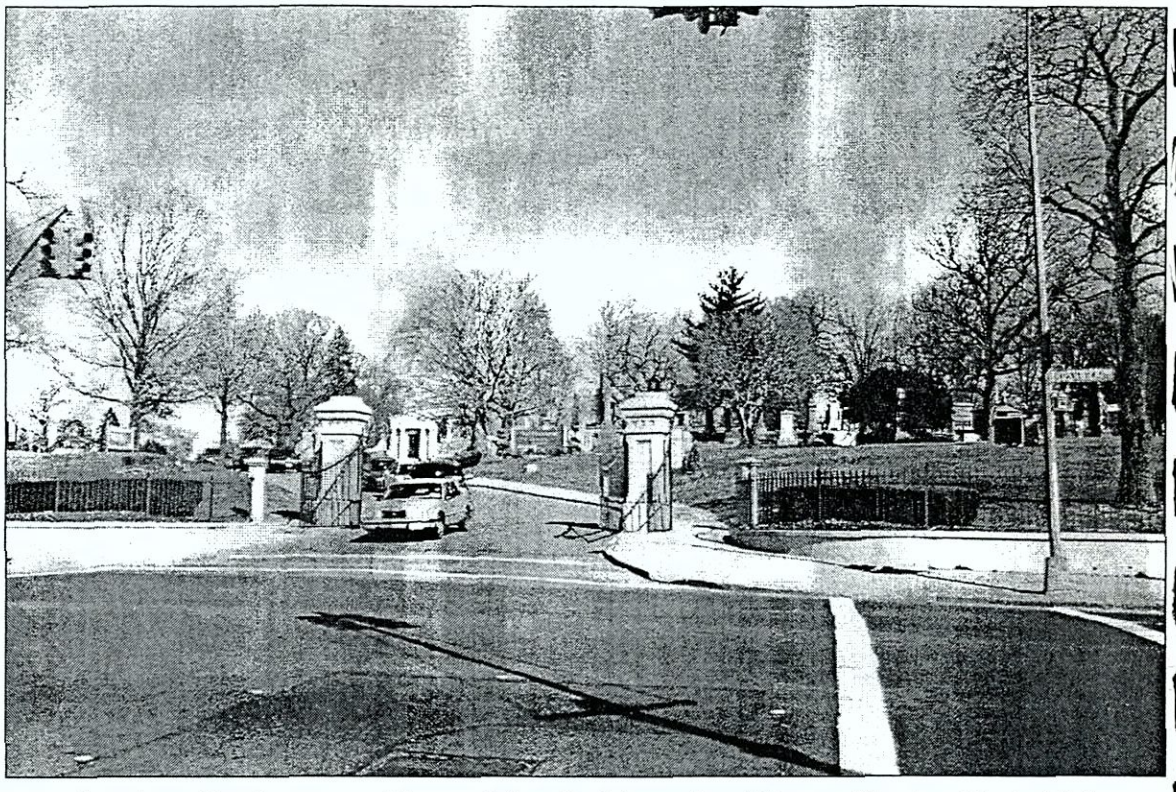


East New York Yard and elevated BMT and IND lines. View southeast on Broadway from Conway Street



View northeast on Conway Street from Truxton Street. Cemetery of the Evergeens is visible in the distance

Figure 1-37
Bay Ridge Branch - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT



Cemetery of the Evergreens. View north from the intersection of Conway Street and Bushwick Avenue

View northwest on Bushwick Avenue from Conway Street

Figure 1-38

Bay Ridge Branch - Segment 4

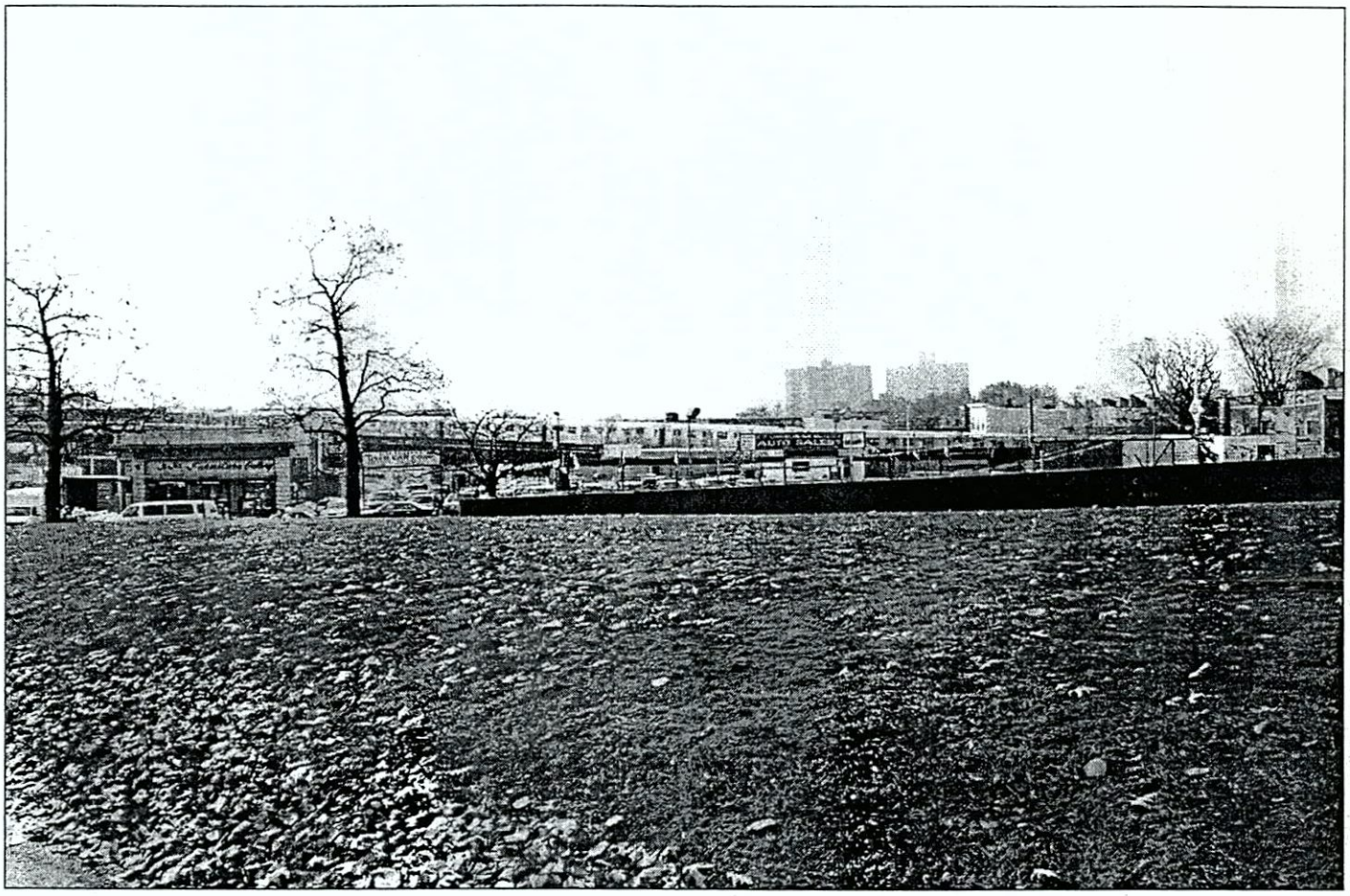
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

View west on McDougal Street

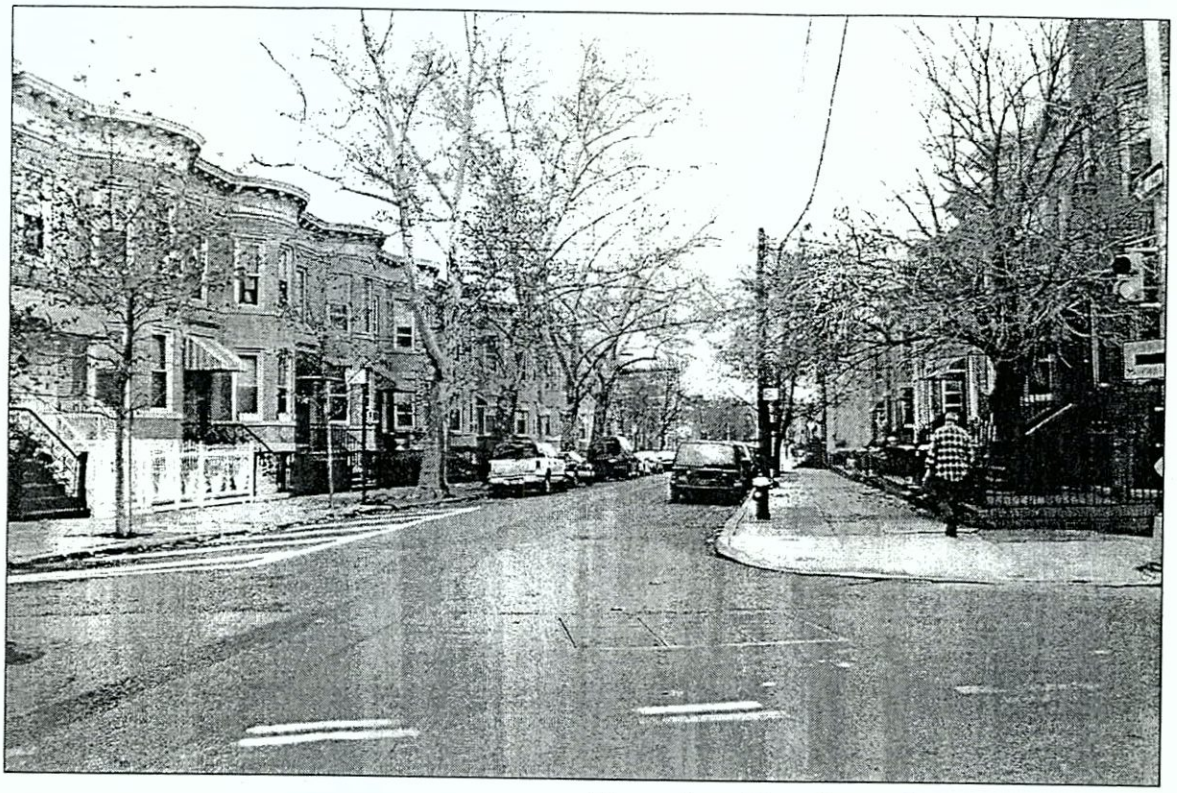
View east on Wilson Avenue from Decatur Street

Figure 1-39
Bay Ridge Branch - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View west from the Cemetary of the Evergreens

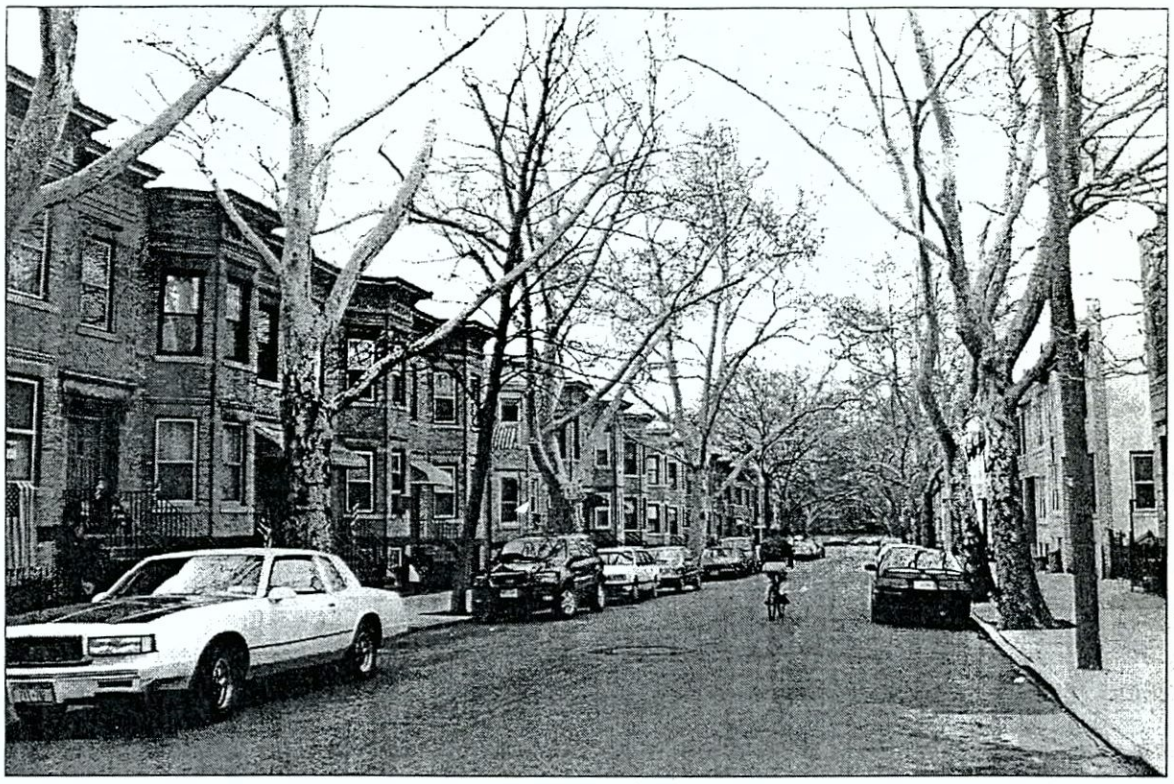
Figure 1-40
Bay Ridge Branch - Segment 4
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View northwest from Cooper Avenue and 62nd Street

View west from Trinity Cemetery

Figure 1-41
Bay Ridge Branch – Queens Portion
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View southeast on 64th Street from Catalpa Avenue

View south from Lutheran Cemetery

Figure 1-42
Fresh Pond Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

View northwest from intersection of Traffic and Palmetto Avenues

View northeast from intersection of Traffic and Palmetto Avenues

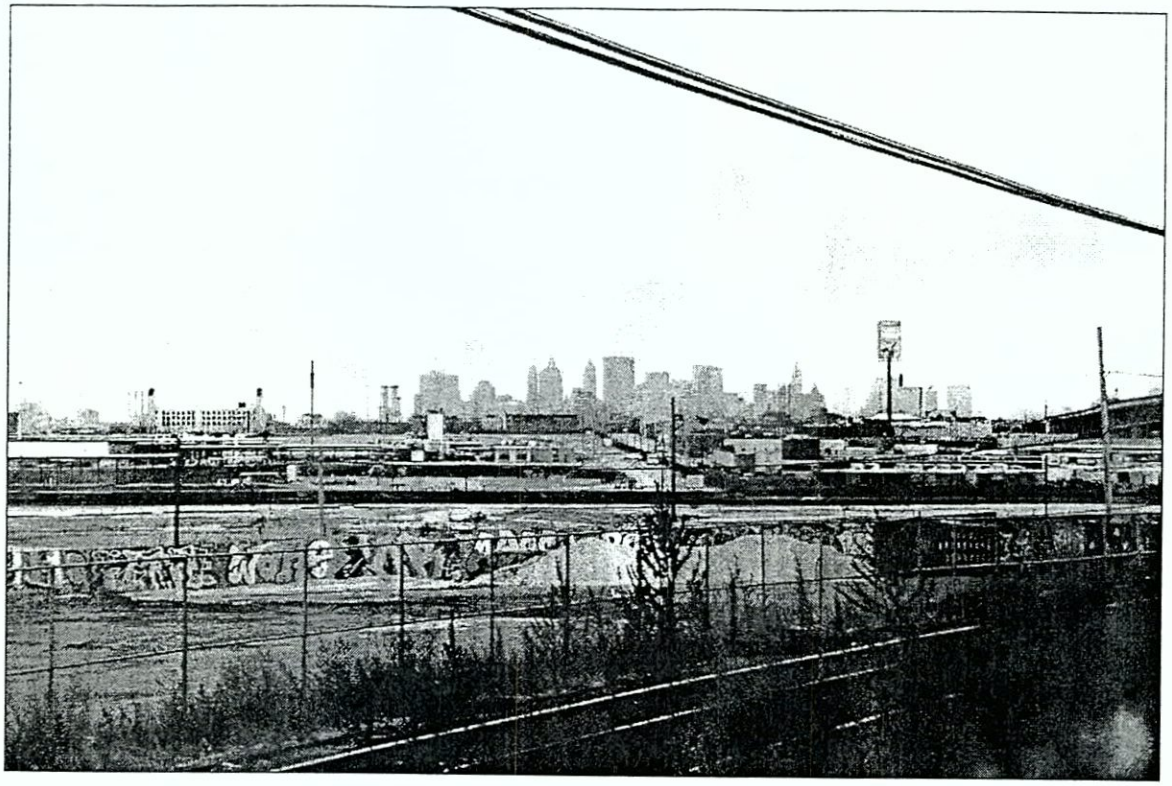
Figure 1-43
Fresh Pond Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

View west from 60th Road at 60th Street

View west from 59th Drive at 59th Street

Figure 1-44
Montauk Branch

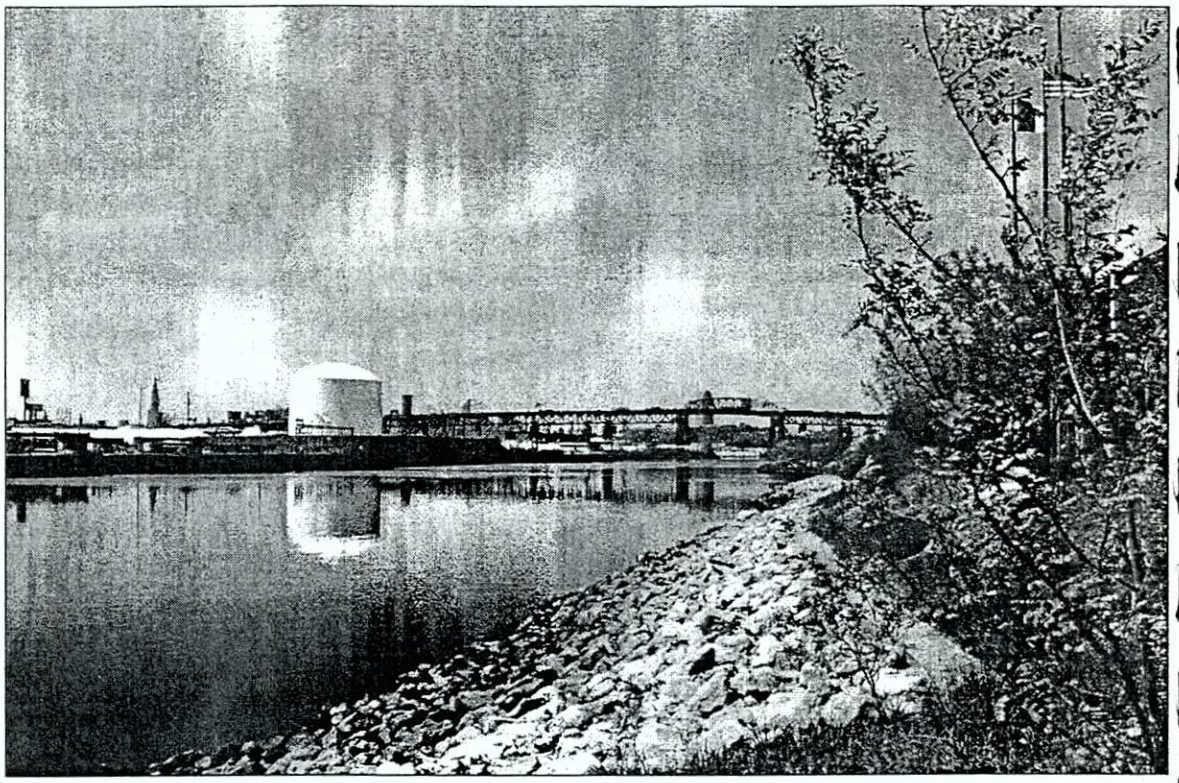


View toward project site from 56th Road

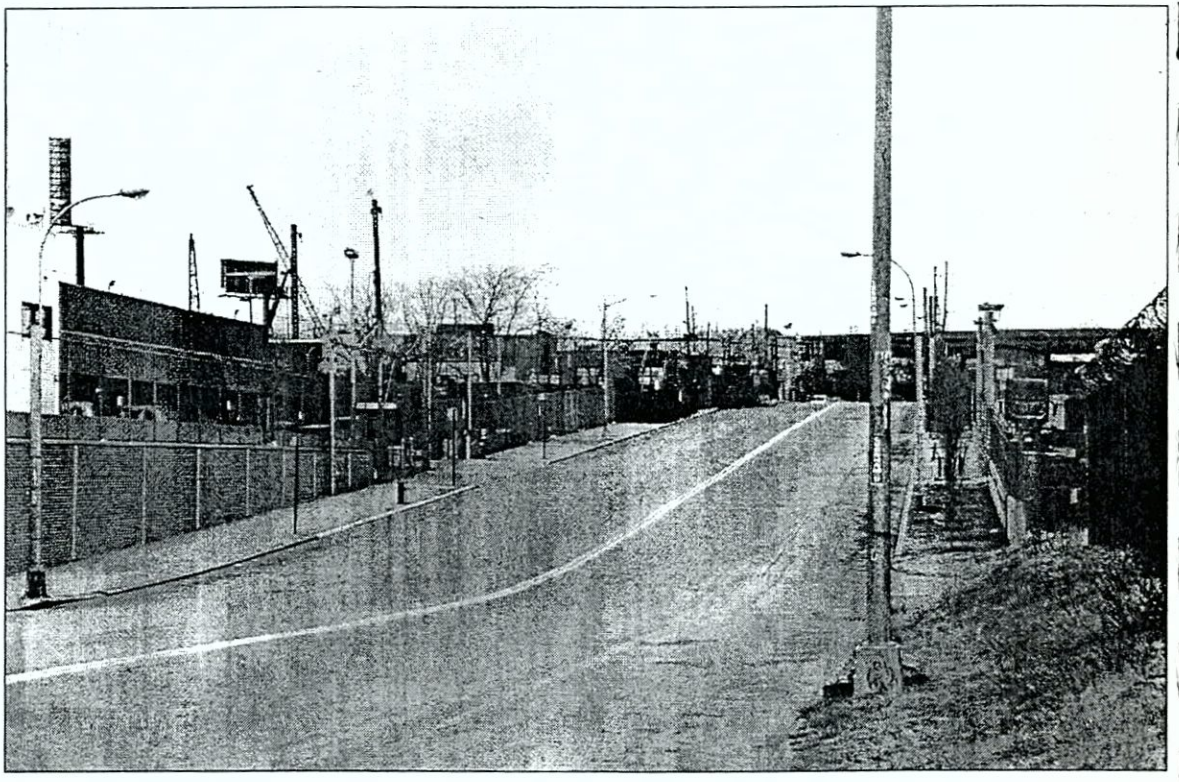
View north toward project site from south side of Maspeth Creek

Figure 1-45
Potential Maspeth Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03



View northwest of Newtown Creek and Kosciuszko Bridge from 58th Road



View north from intersection of 48th Street and 56th Road

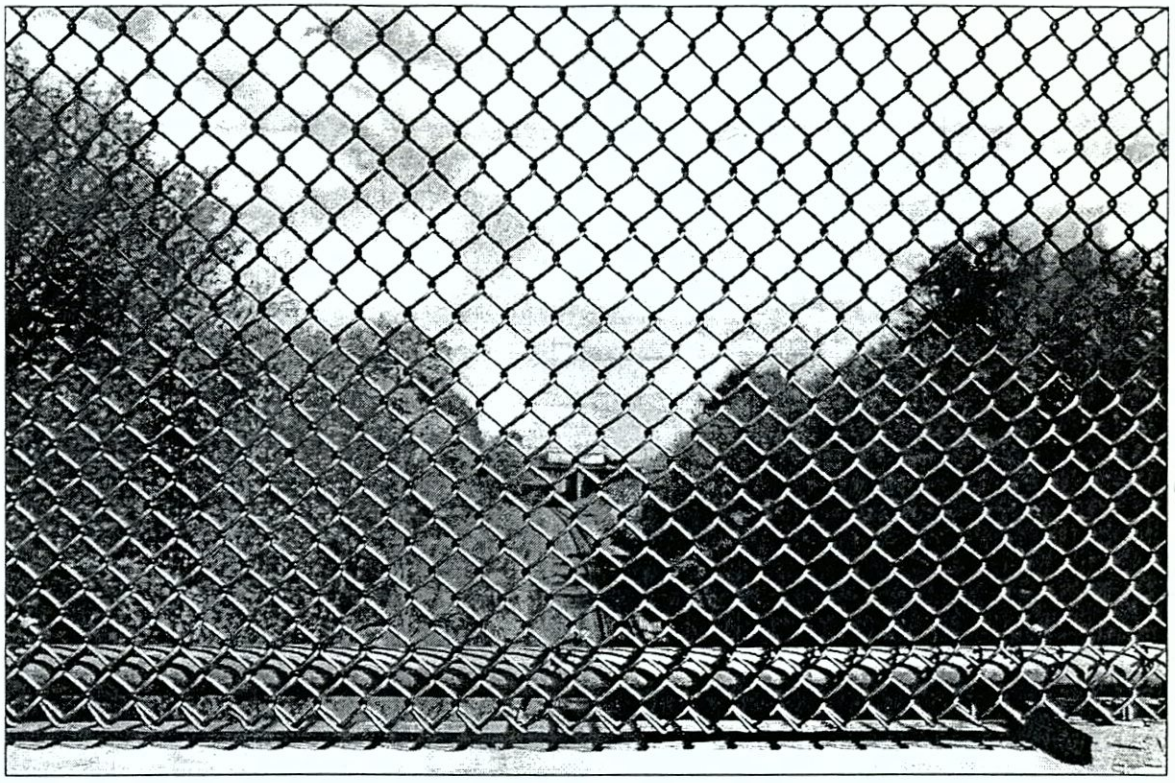
Figure 1-46

Potential Maspeth Yard Study Area

CROSS HARBOR FREIGHT MOVEMENT PROJECT

East side of 58th Street from 58th Avenue

Figure 1-47
Potential Maspeth Yard Study Area
CROSS HARBOR FREIGHT MOVEMENT PROJECT



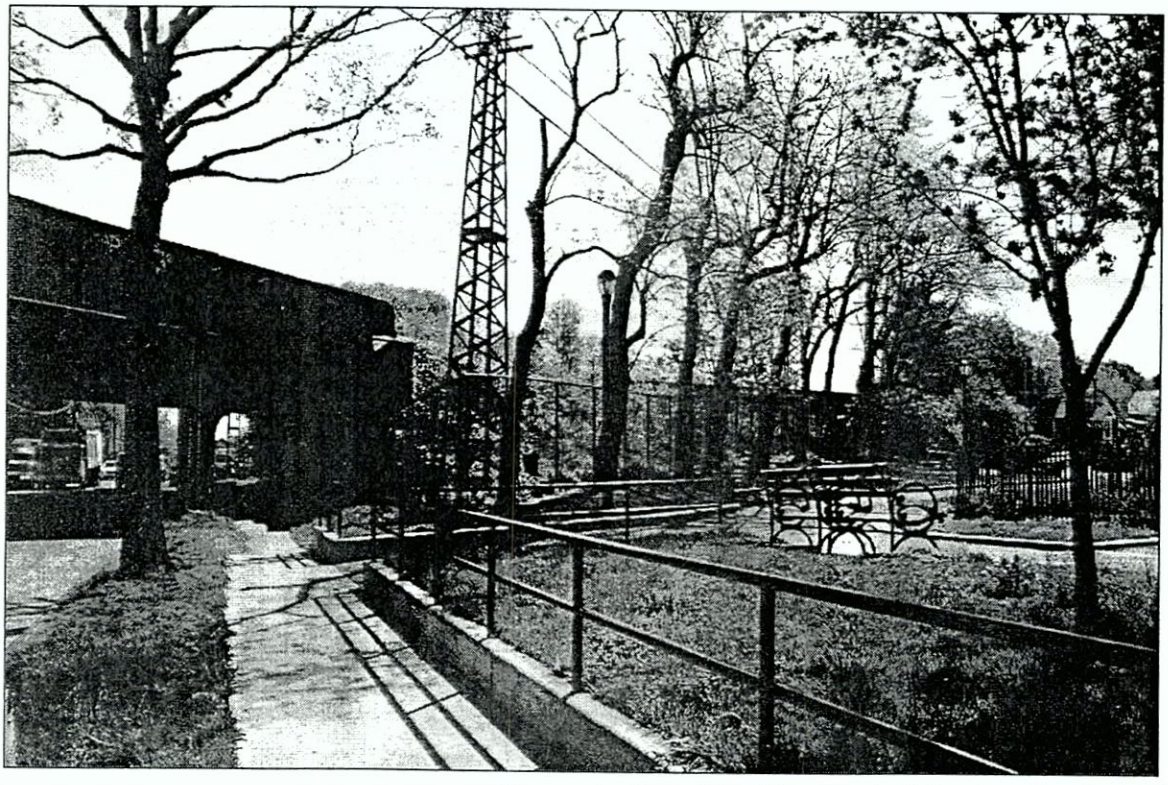
View north of rail line from Caldwell Avenue

View of corner of 70th Street and 62nd Drive

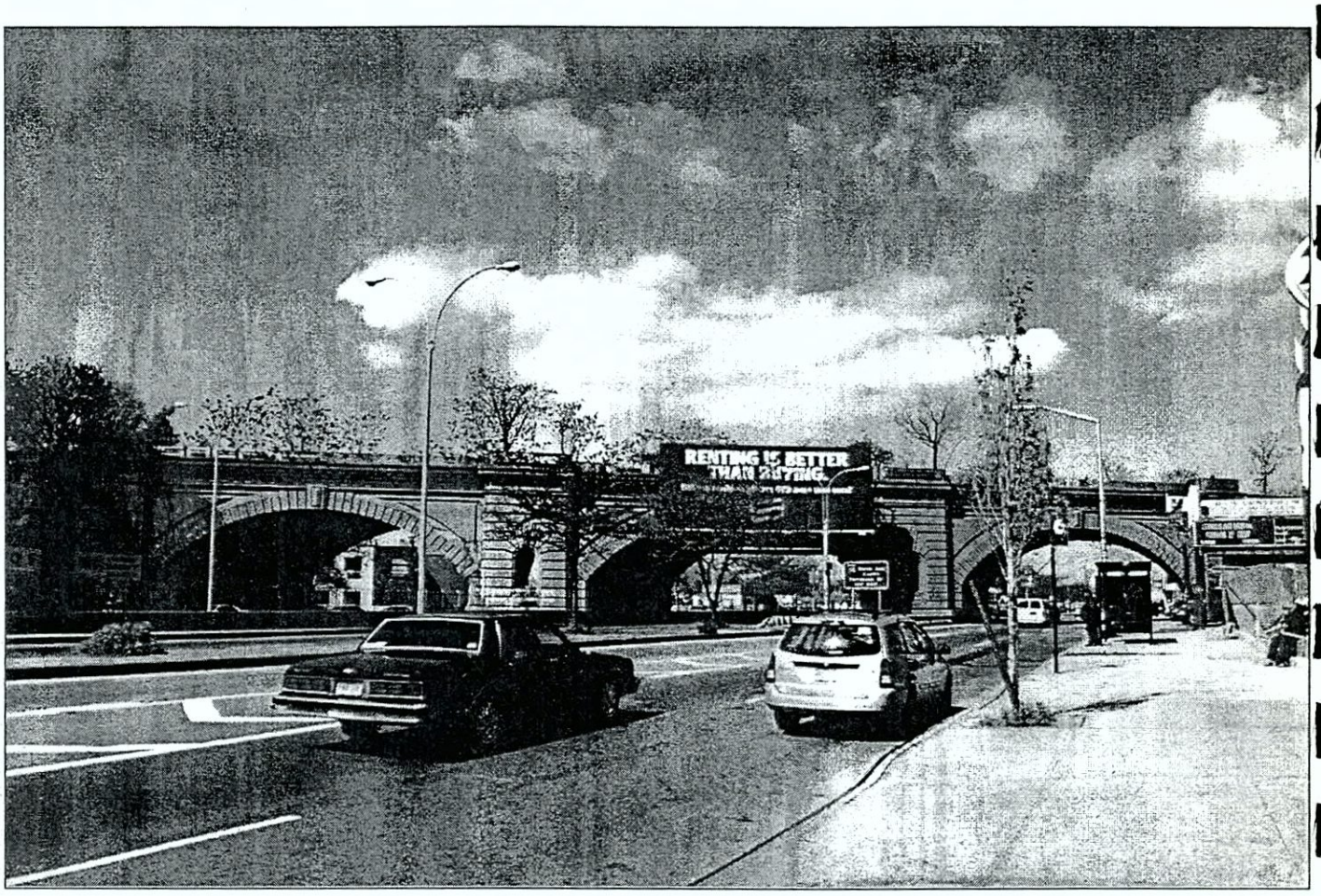
Figure 1-48
Fremont Secondary Study Area – Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

View south of west side of 79th Street from Calamus Avenue



View east of Long Island Mews and rail line from 51st Avenue

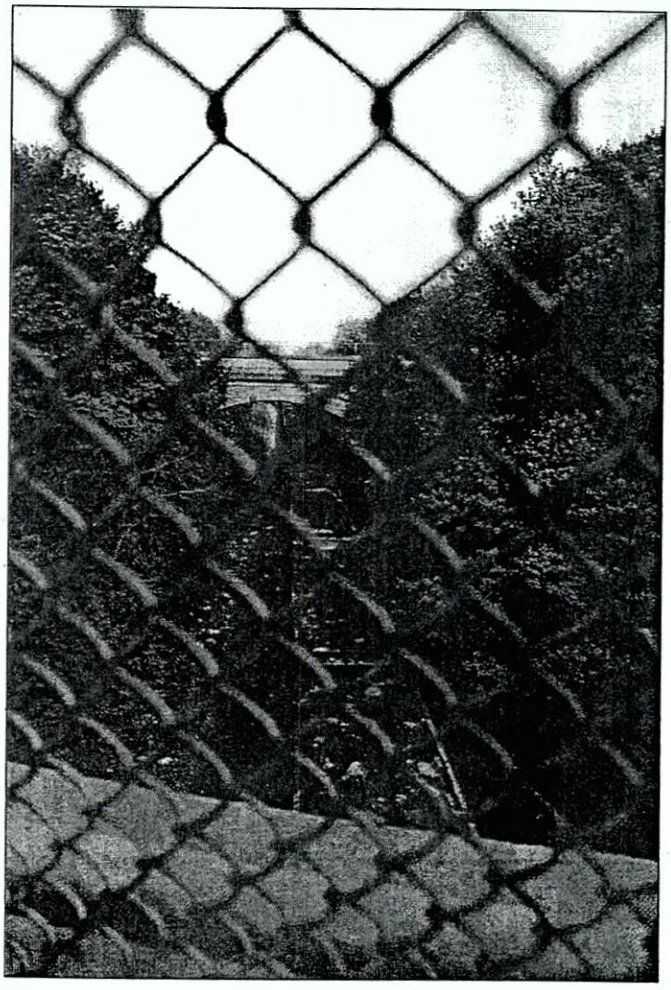


View west of rail line above Queens Boulevard

Figure 1-50
Fremont Secondary Study Area – Segment 1

5•03

View west to elevated rail line and BQE from Northern Boulevard

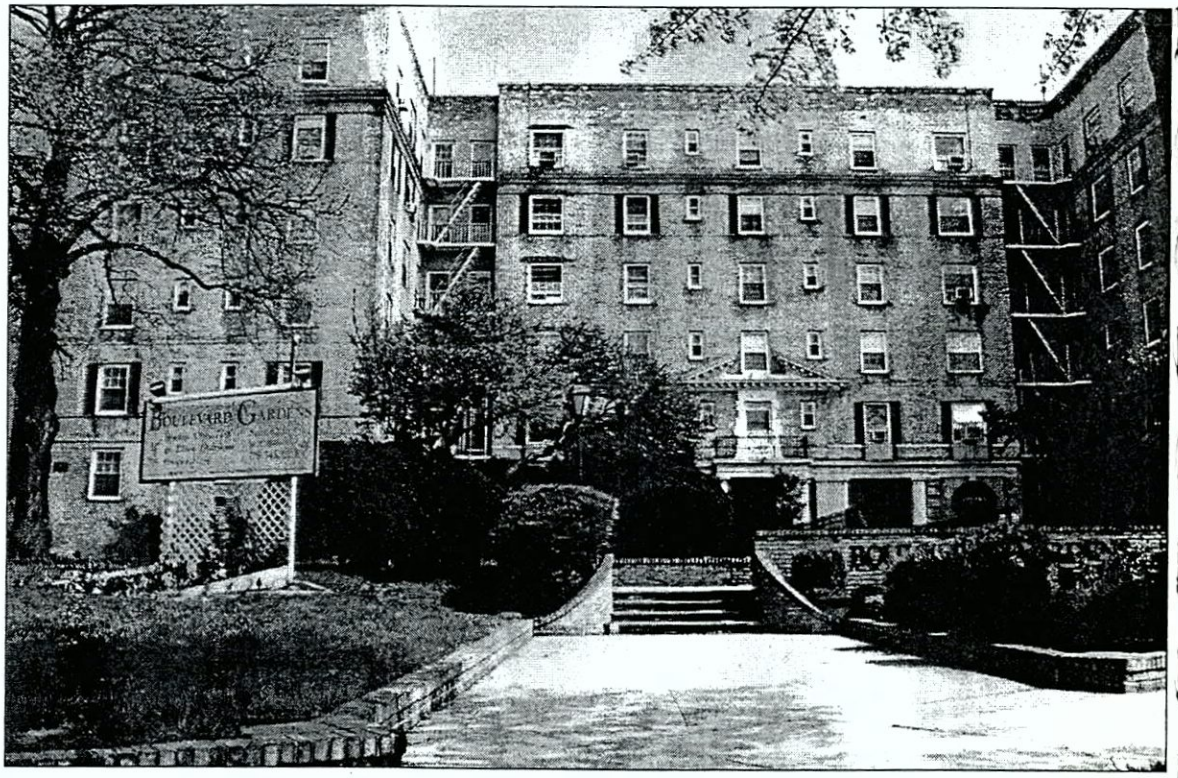


View north of rail line from 43rd Avenue

Figure 1-51
Fremont Secondary Study Area – Segment 2
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

View south on 70th Street from Northern Boulevard

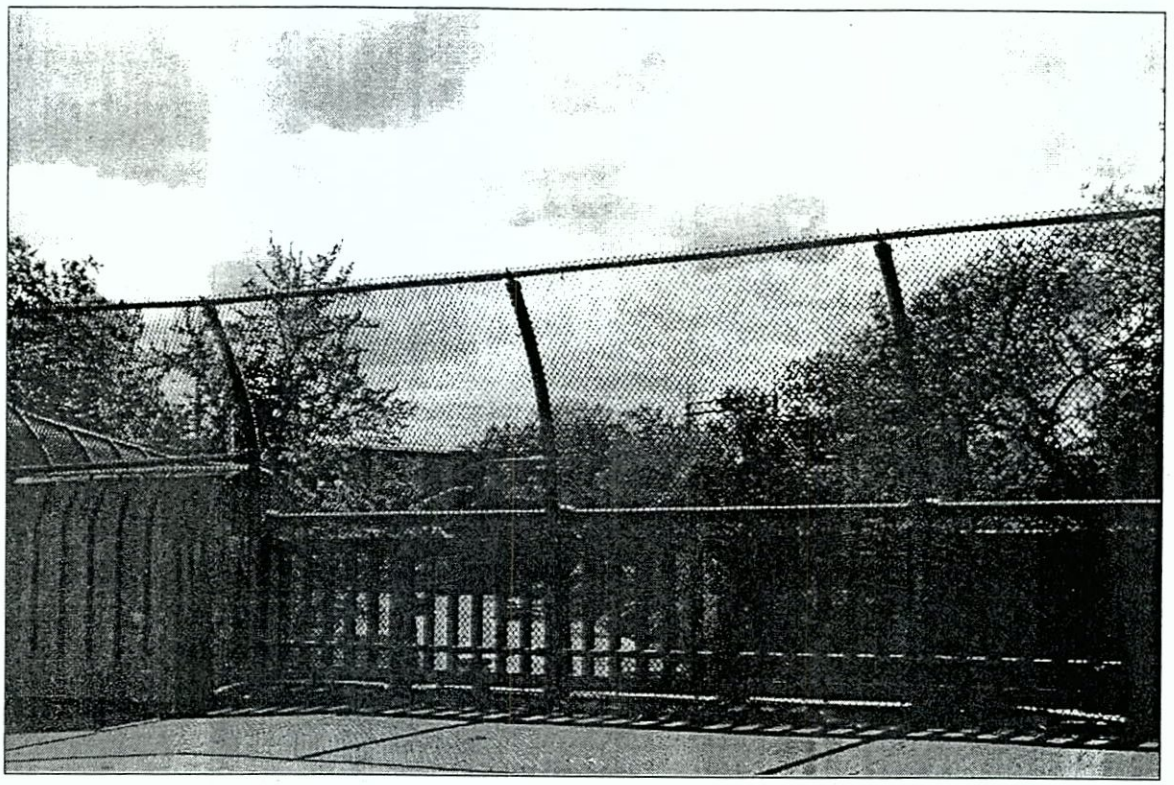


Boulevard Gardens, view from 31st Avenue and 57th Street

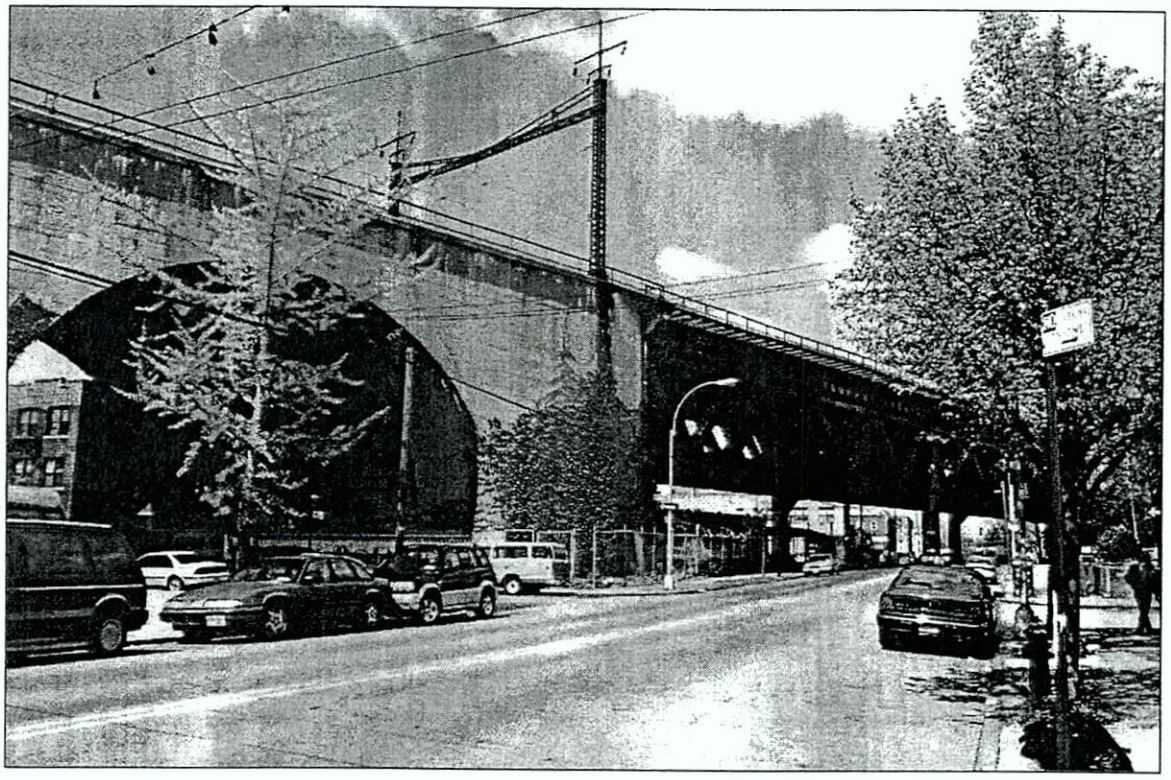
Figure 1-52

Fremont Secondary Study Area – Segment 2

CROSS HARBOR FREIGHT MOVEMENT PROJECT



View east of rail line above Grand Central Parkway from Steinway Street

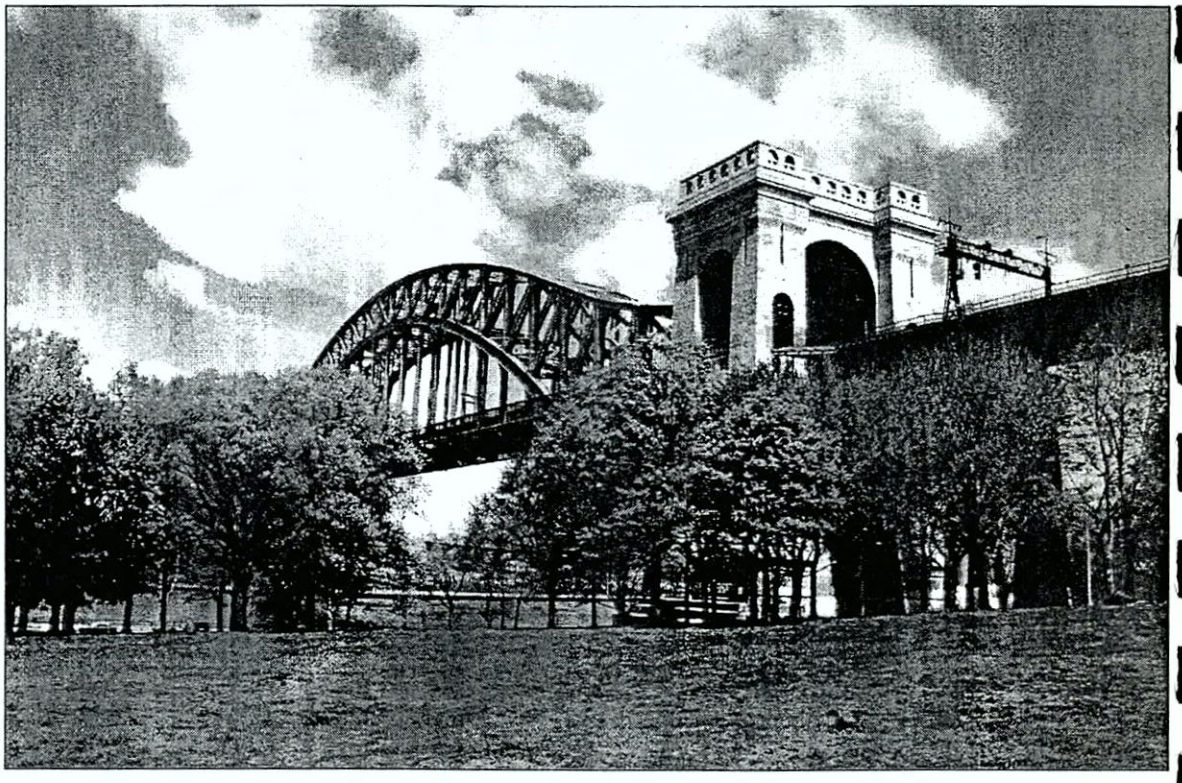


View west on 23rd Avenue to elevated rail line

Figure 1-53
Fremont Secondary Study Area – Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

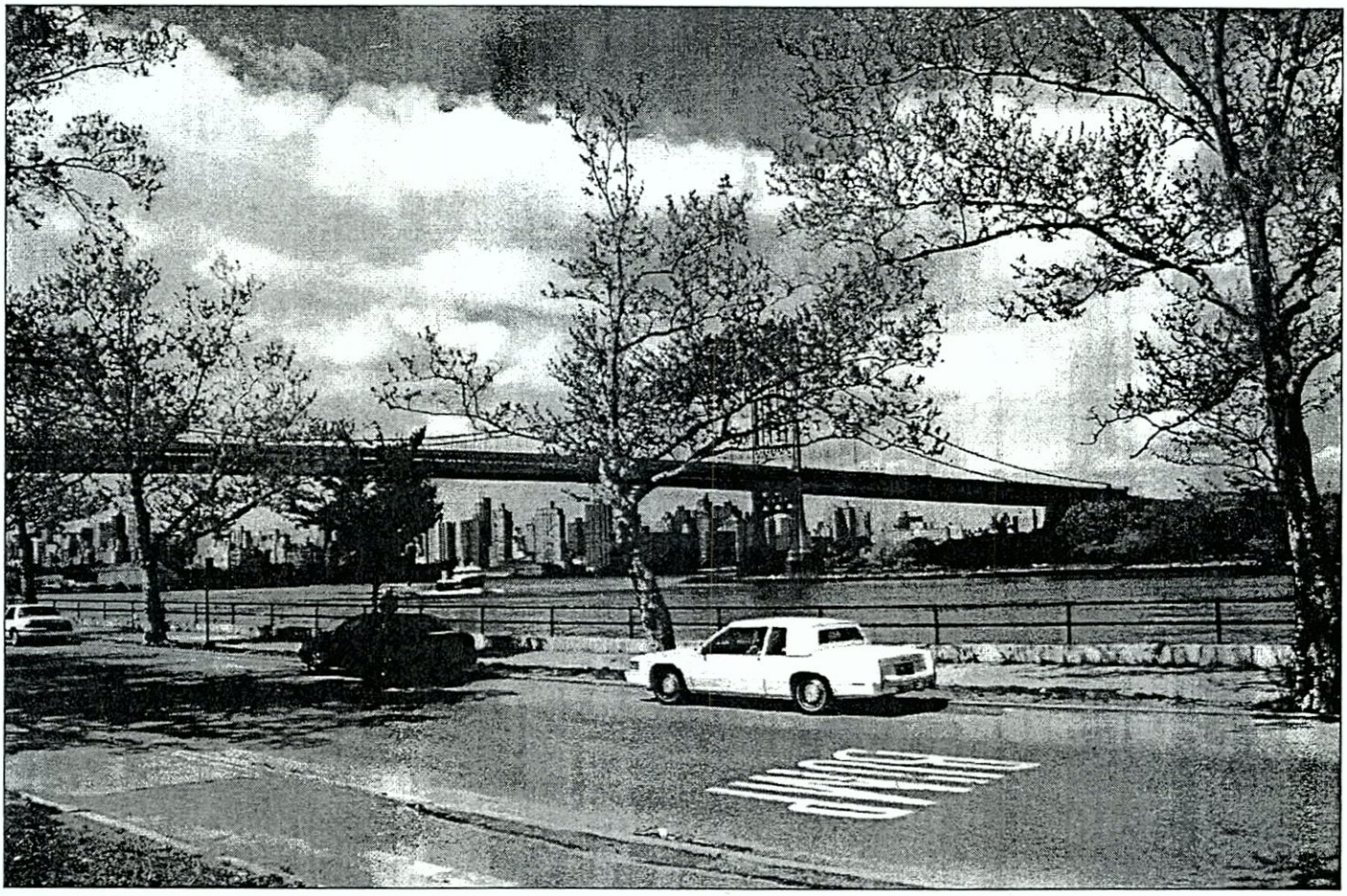
5•03

View east of 22nd Drive from 19th Street, with rail line above



View of Hell Gate Bridge from Astoria Park

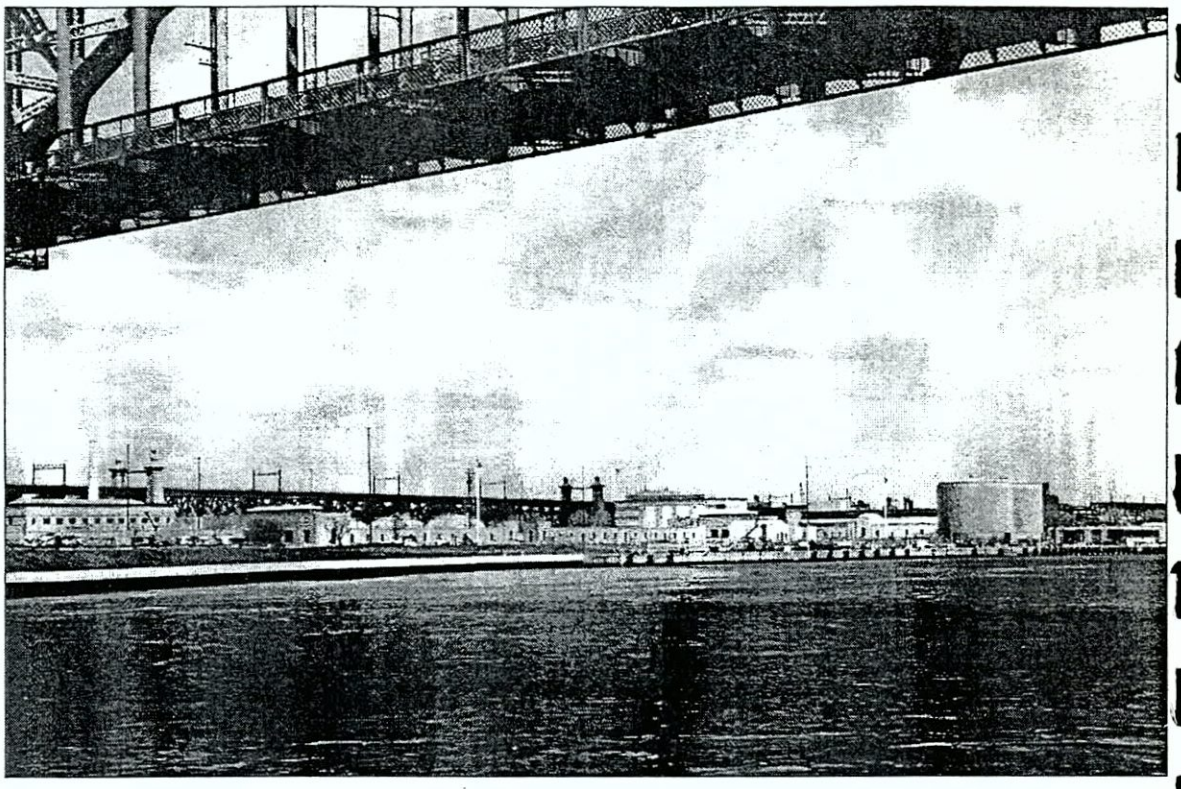
Figure 1-54
Fremont Secondary Study Area – Segment 3



View of Triborough Bridge from Shore Boulevard

Figure 1-55
Fremont Secondary Study Area – Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03



View of Wards Island Water Pollution Control Plant and rail line from Astoria, Queens

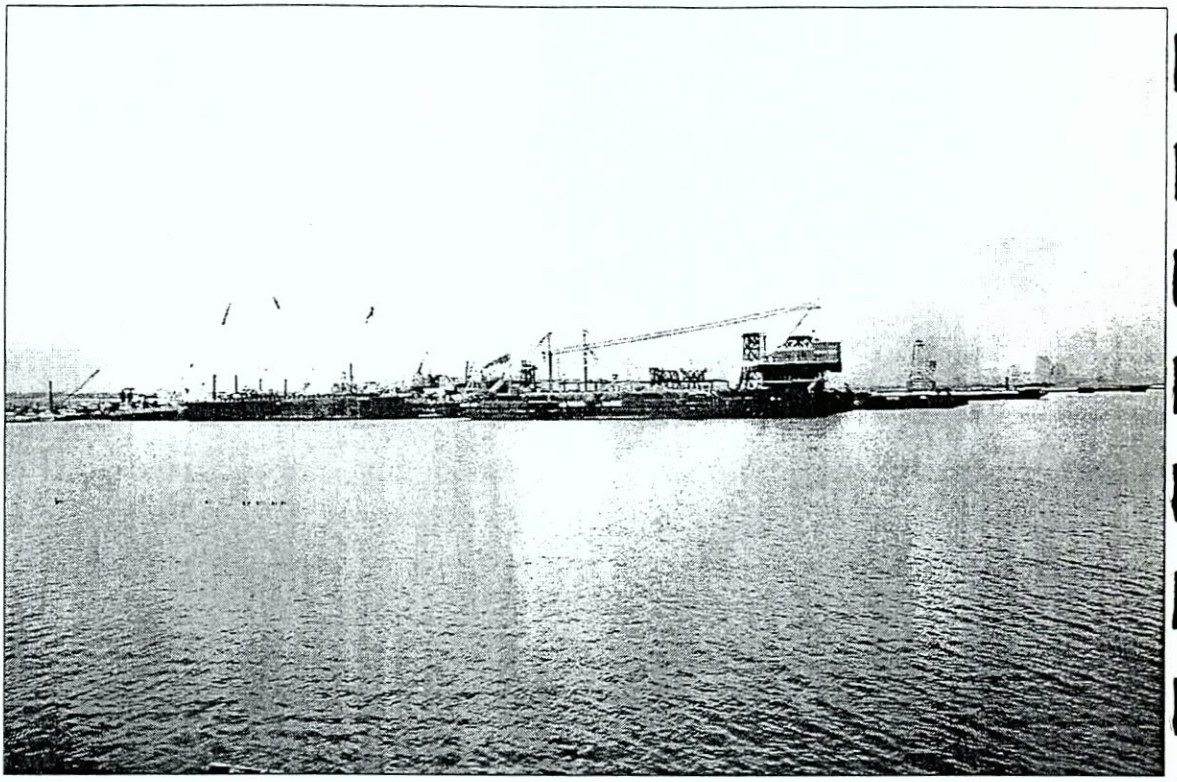
View west of Manhattan Psychiatric Center from beneath Triborough Bridge highway

Figure 1-56

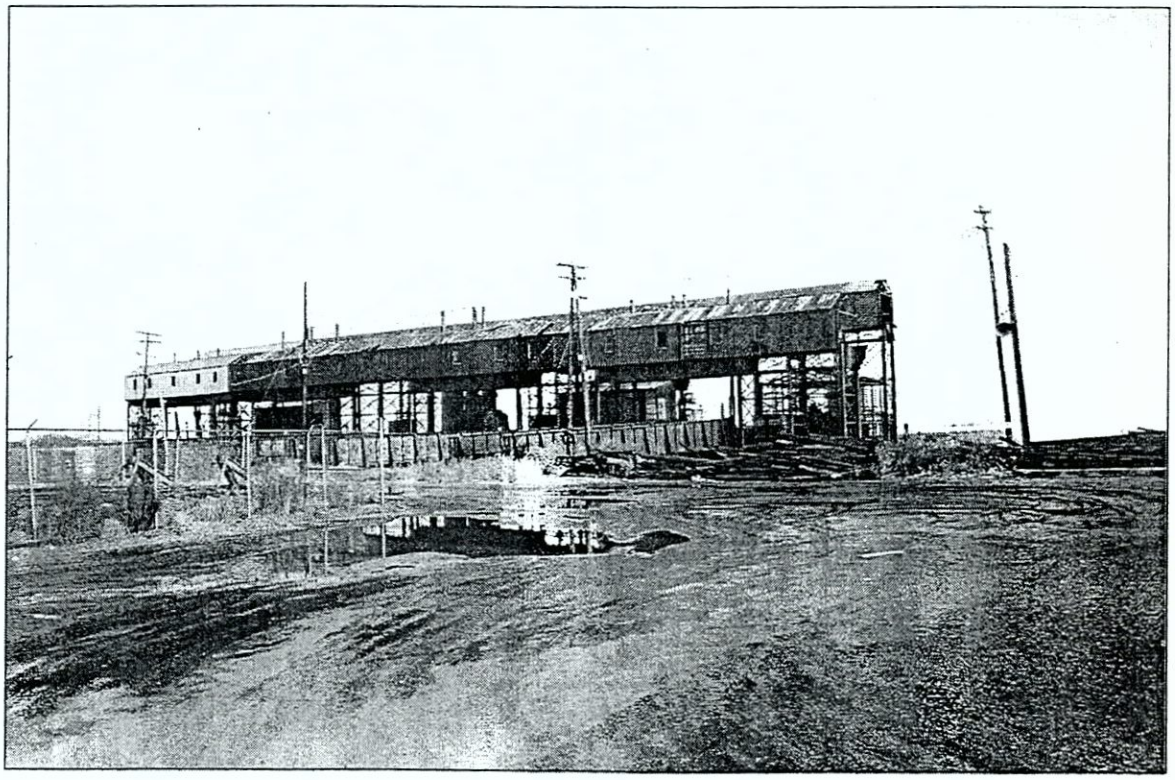
Fremont Secondary Study Area (Randalls/Wards Island Portion)

View east of Bronx Kill Bridge and Randalls Island playing fields

Figure 1-57
Fremont Secondary Study Area (Randalls/Wards Island Portion)
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View northwest of the Greenville Yard Piers, as seen from the observation deck



View northeast of the carfloat transfer bridges

Figure 1-58

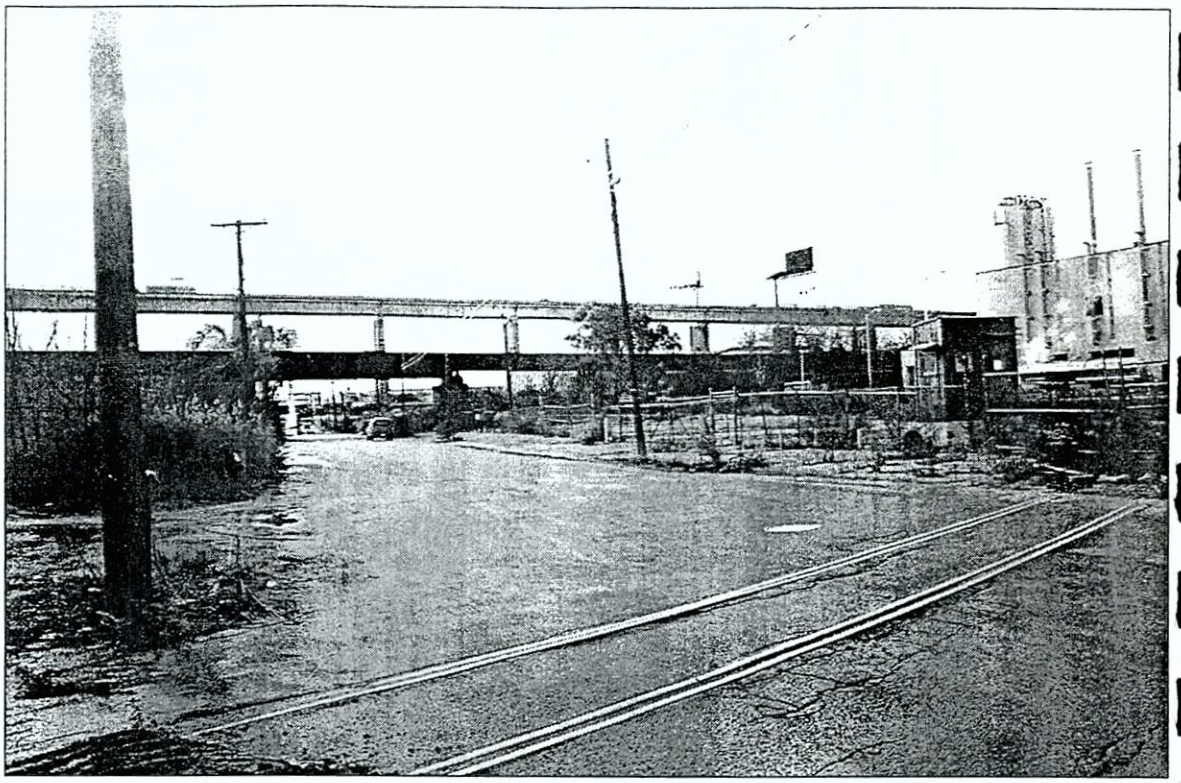
Greenville Yard/Potential Tunnel Alignment APE

CROSS HARBOR FREIGHT MOVEMENT PROJECT

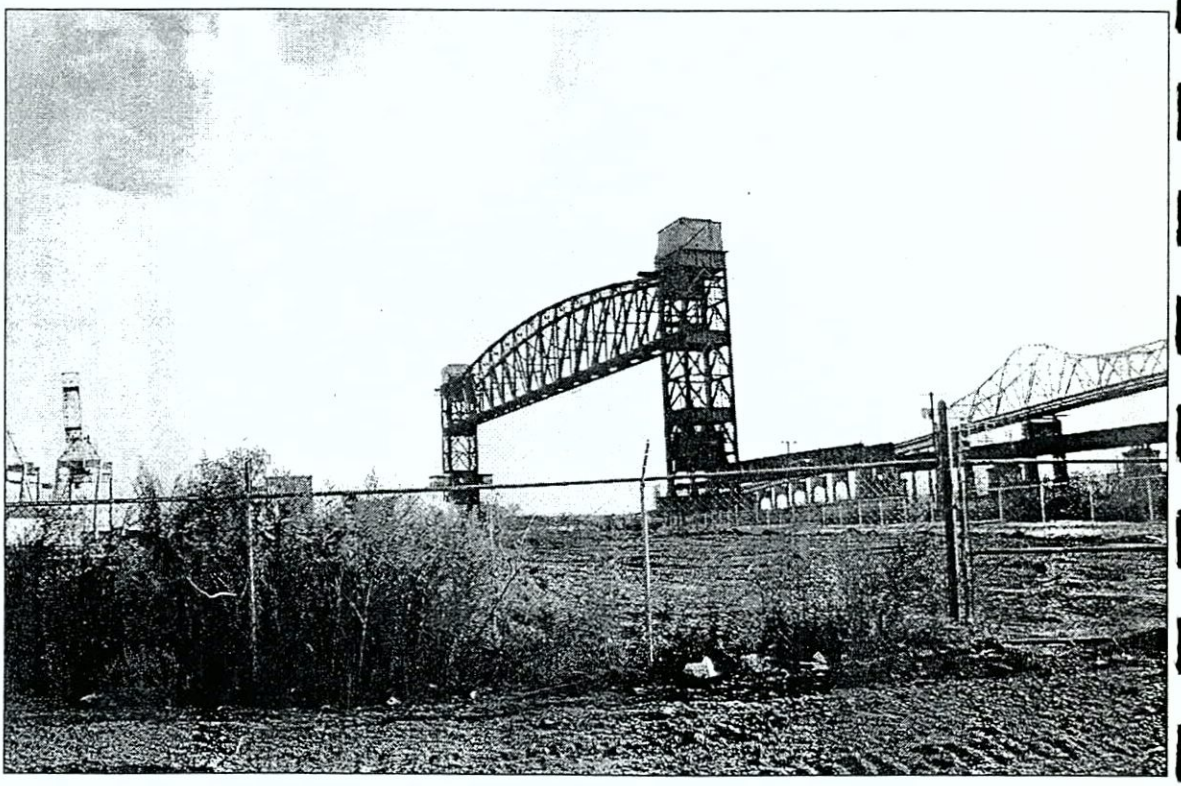
View southwest of the Kennedy Tile, Inc. building (a.k.a. the Roben Company Office Building), as seen from Tonnelle Avenue

View south of William Dickerson High School, as seen from Palisade Avenue

Figure 1-59
National Docks Secondary APE
CROSS HARBOR FREIGHT MOVEMENT PROJECT



View southwest of the Goethals Bridge approach and an elevated section of the railroad as seen from South Front Street



View south of the Arthur Kill Lift Bridge

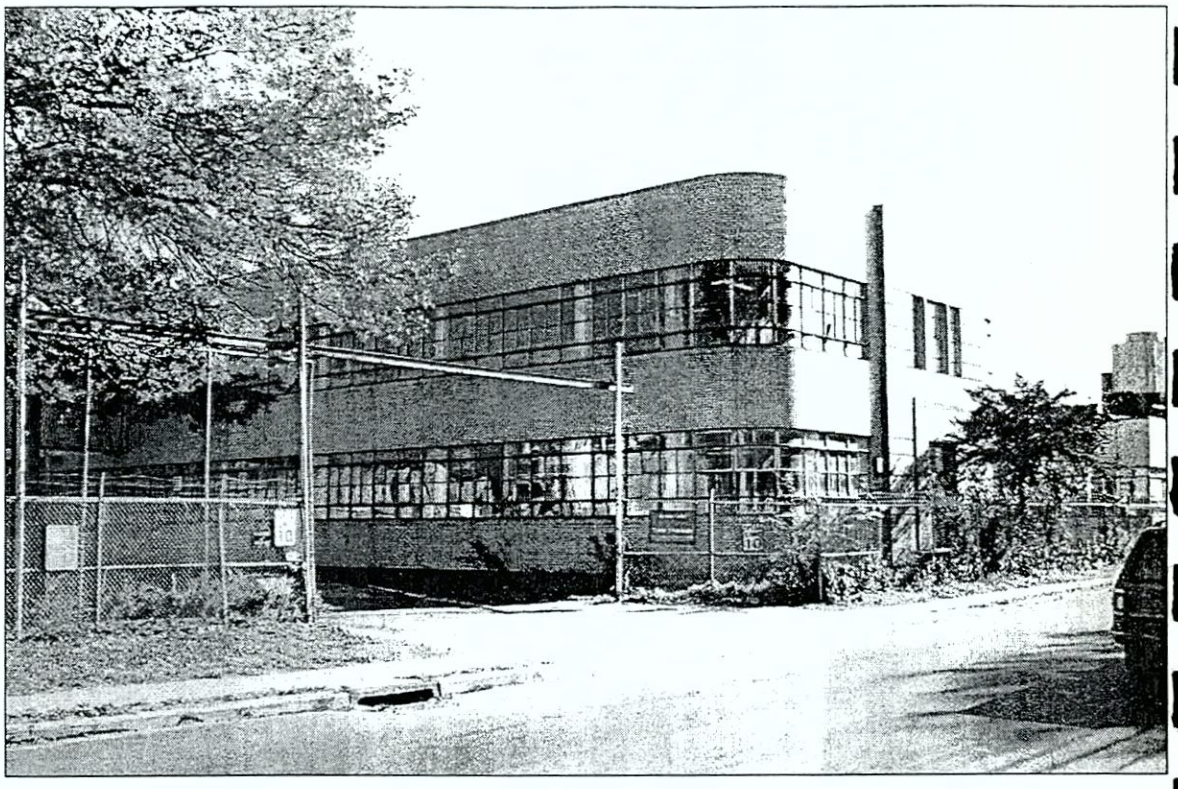
Figure 1-60
Arthur Kill Lift Bridge APE
CROSS HARBOR FREIGHT MOVEMENT PROJECT

View northwest of the
Summerfield United Methodist Church

View southeast of the factory at 125 Lake Avenue

Figure 1-61
Northern Staten Island APE – Segment 1
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03



View southeast of the factory at 125 Lake Avenue

View north of the Staten Island Reformed Church

Figure 1-62

Northern Staten Island APE – Segments 1 and 2

CROSS HARBOR FREIGHT MOVEMENT PROJECT

View northwest of the Cornelius Cruser House

Figure 1-63
Northern Staten Island APE – Segment 3
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

Brooklyn Army Terminal View northwest from Second Avenue and 63rd Street

Sunset Park Historic District. North side of 64th Street between Fourth and Fifth Avenues. View east

Figure 1-64

Bush Army Terminal and Sunset Park

CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03

Sunset Park Histroic District. View northwest on Fifth Avenue from 63rd Street

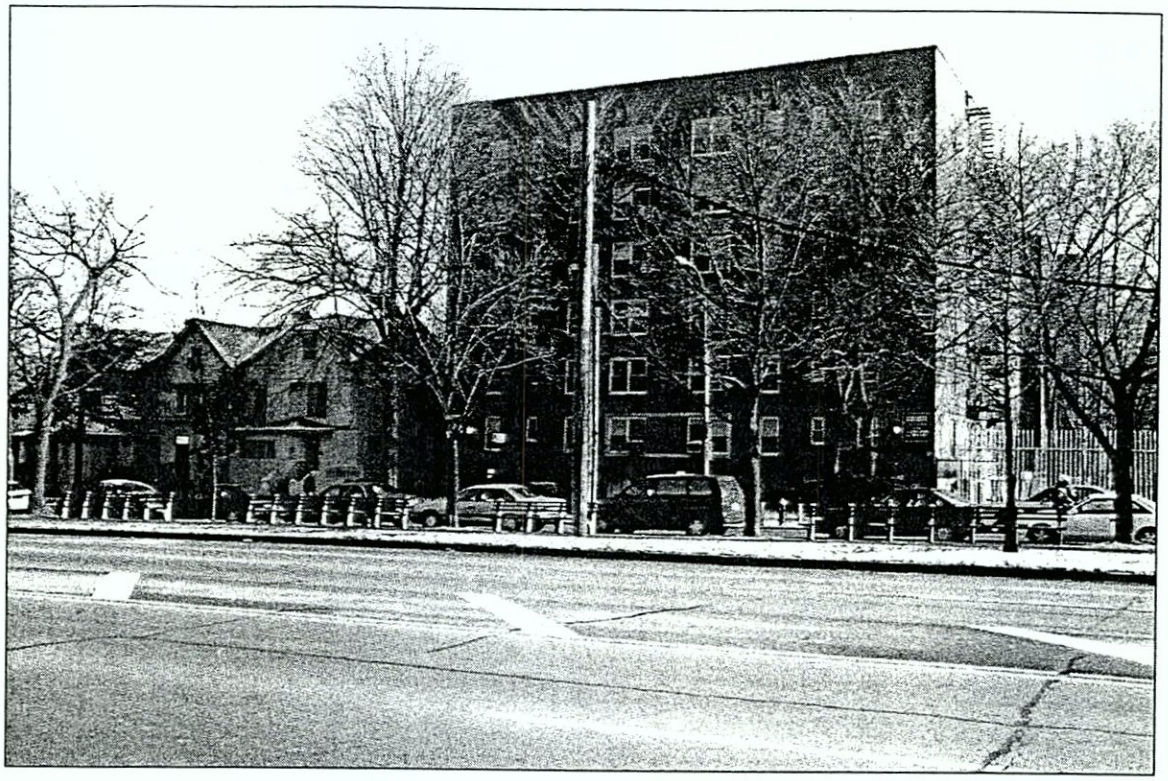
Sunset Park Historic District. View northeast on Fifth Avenue from 63rd Street

Figure 1-65
Sunset Park Historic District
CROSS HARBOR FREIGHT MOVEMENT PROJECT

New Utrecht Avenue Station. View northeast

Figure 1-66
New Utrecht Avenue Station
CROSS HARBOR FREIGHT MOVEMENT PROJECT

5•03



Eastside of Ocean Parkway. View northeast between Avenues H and I. Bay Ridge Branch rail cut visible in lower right corner

Eastside of Ocean Parkway. View soustheast between Avenues H and I. Bay Ridge Branch rail cut visible on left side

Figure 1-67
Ocean Parkway
CROSS HARBOR FREIGHT MOVEMENT PROJECT

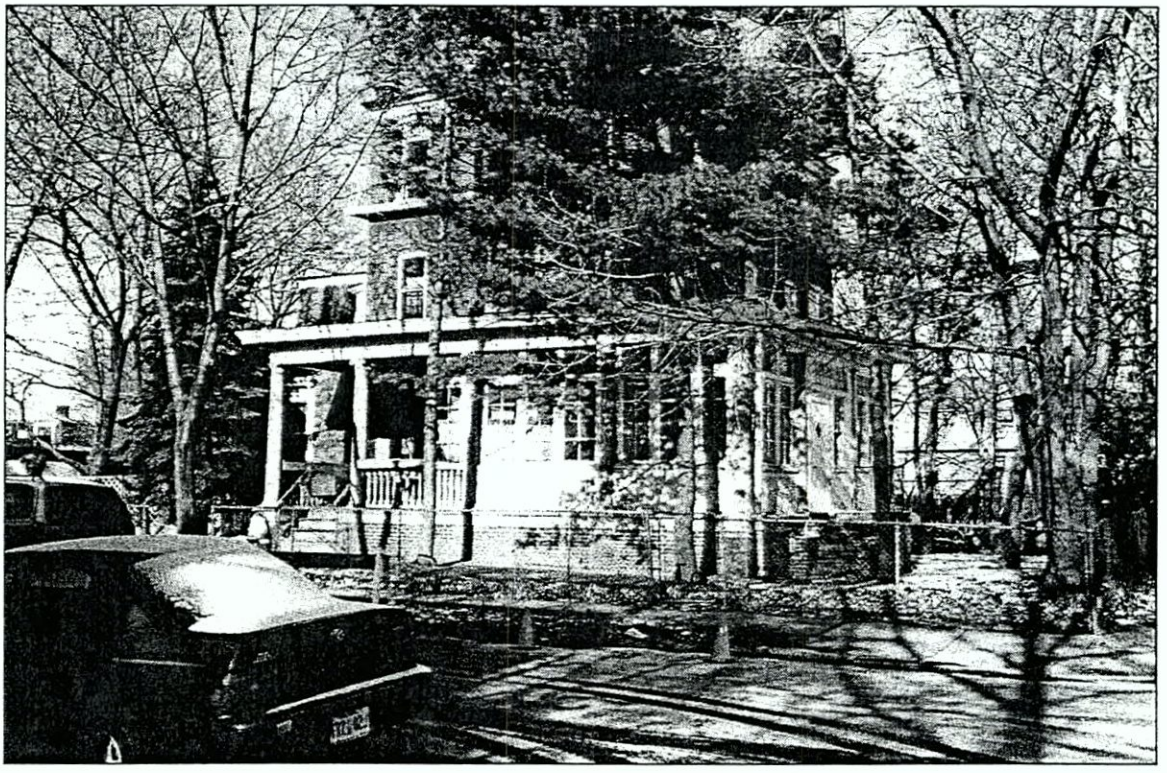
5•03

West side of Ocean Parkway. View northwest between Avenues H and I showing Bay Ridge Branch rail cut

West side of Ocean Parkway. View southwest between Avenues H and I showing Bay Ridge Branch rail cut

Figure 1-68
Ocean Parkway

International Style factory. View southeast from 62nd Street



Second Empire-style house. View north from Elmwood Avenue

Figure 1-69
Bay Ridge Branch – Segment 3
Potential Resources

Wilson Avenue Station control house. View southeast on Wilson Street

Figure 1-70
Wilson Avenue Station
CROSS HARBOR FREIGHT MOVEMENT PROJECT

P.S. 9 (Walter Reed School), 58-74 57th Street

Star Corrugated Box Company building, 55-15 Grand Avenue

Figure 1-71
Potential Maspeth Yard Area of Potential Effect
CROSS HARBOR FREIGHT MOVEMENT PROJECT

56-70 58th Street

Figure 1-72
Potential Maspeth Yard Area of Potential Effect
CROSS HARBOR FREIGHT MOVEMENT PROJECT

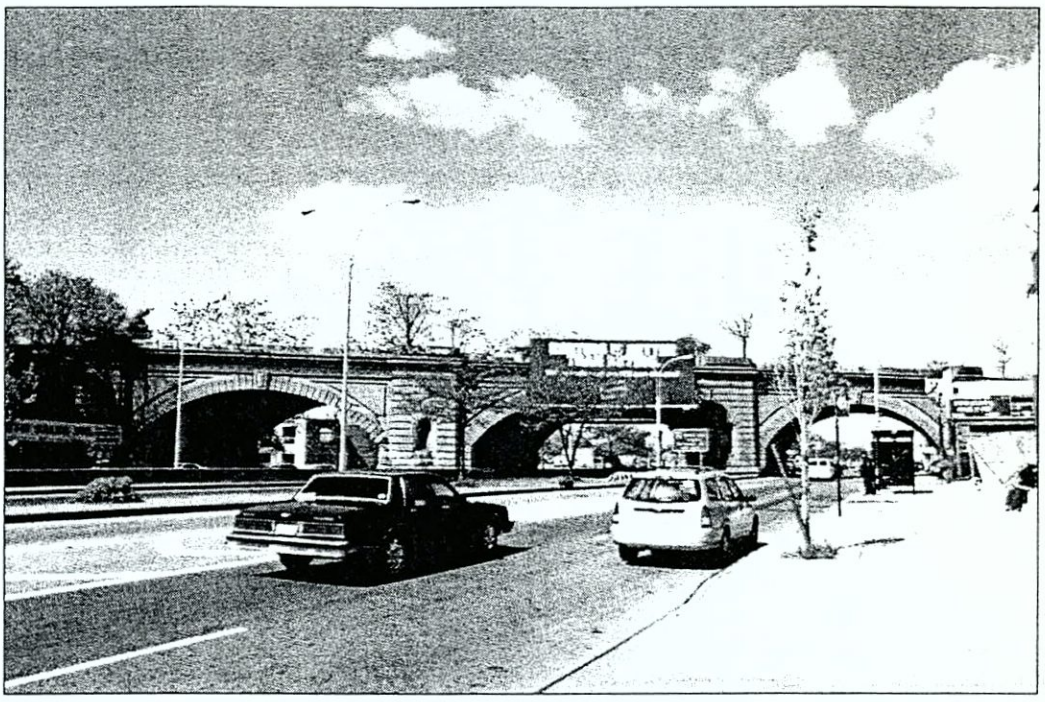
West side of 79th Street, between Grand and Calamus Avenues

North side of Calamus Avenue, view west toward rail line

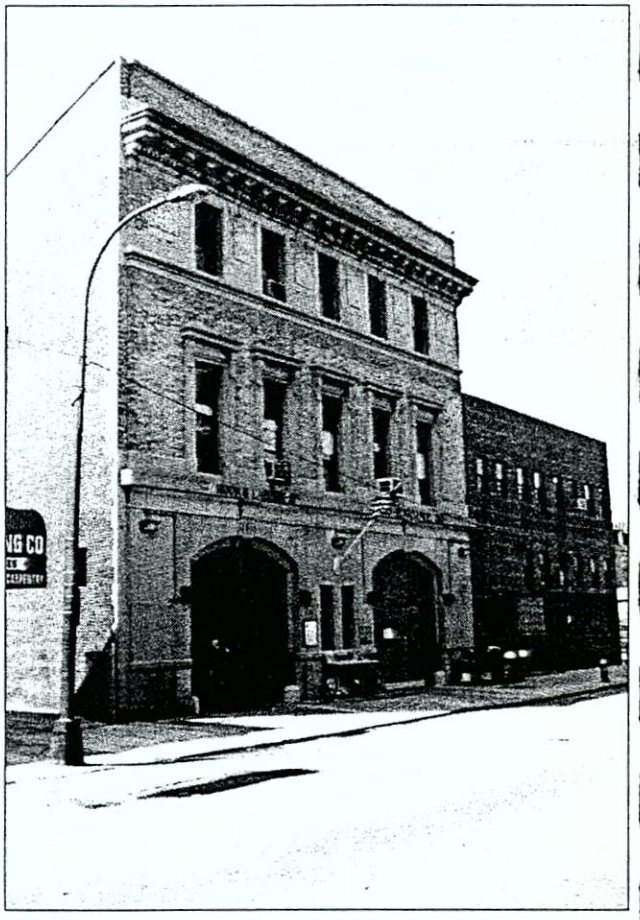
Figure 1-73

Fremont Secondary Area of Potential Effect – Segment 1

CROSS HARBOR FREIGHT MOVEMENT PROJECT



New York Connecting Railroad bridge over Queens Boulevard, view west

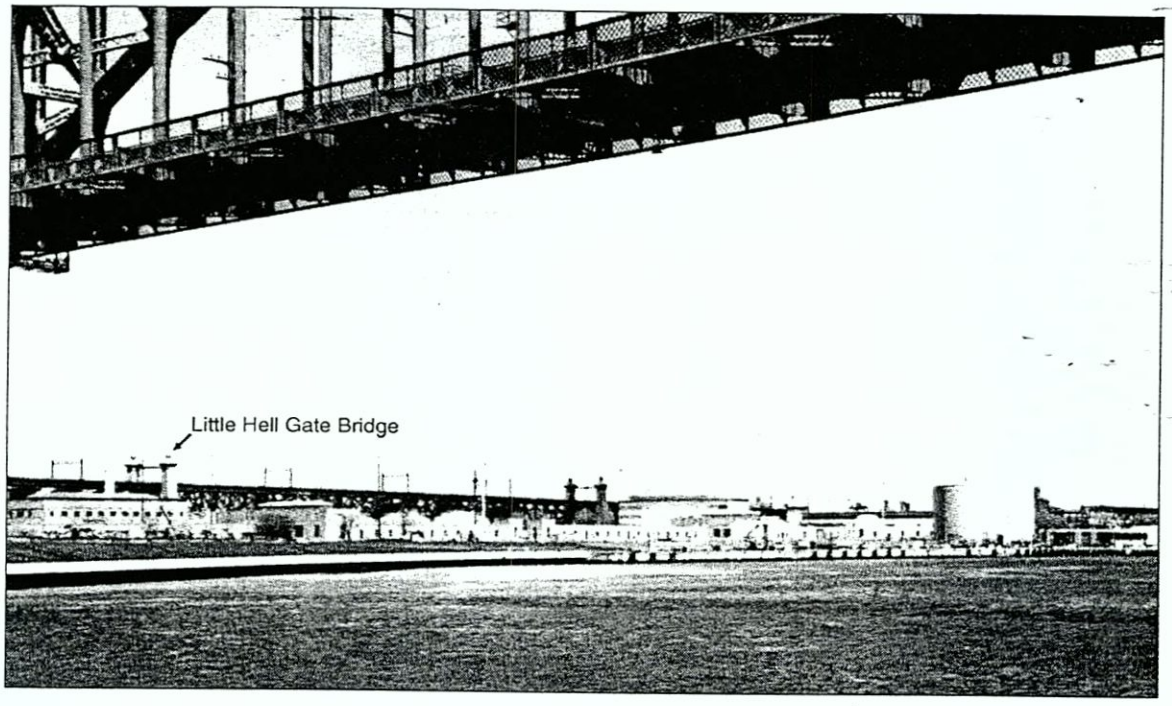


Engine Company 263/ Hook & Ladder 117, 42-06 Astoria Boulevard

Figure 1-74

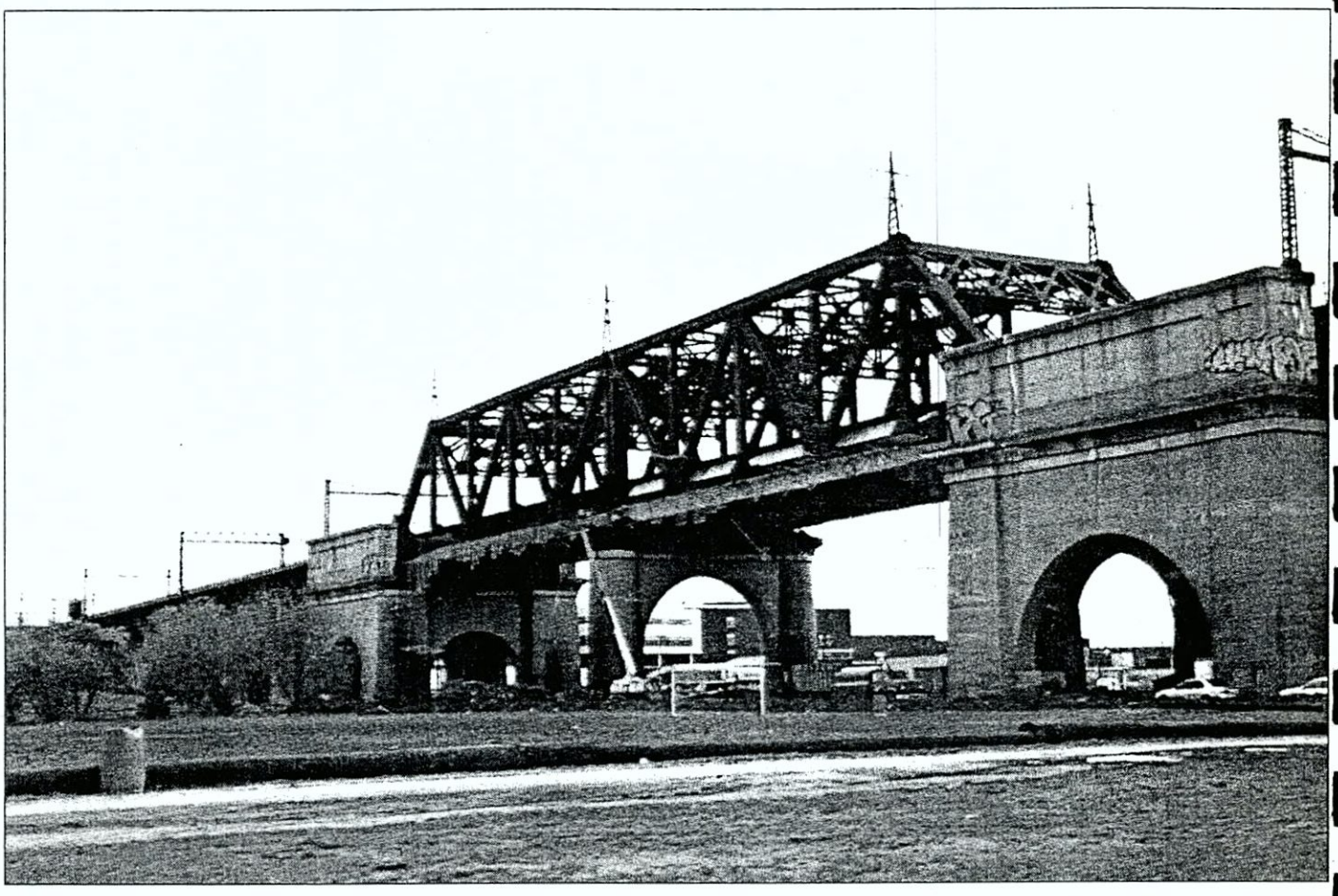
Fremont Secondary Area of Potential Effect – Segment 2

Hell Gate Bridge, view west from Astoria Park



Little Hell Gate Bridge, view west from Astoria Park

Figure 1-75
Fremont Secondary
(Randalls/ Wards Island Portion) Area of Potential Effect



Bronx Kill Bridge, view east from Randalls Island

Figure 1-76
Fremont Secondary (Randalls/ Wards Island Portion)
Area of Potential Effect

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
NEW YORK DIVISION
LEO W. O'BRIEN FEDERAL BUILDING, SEVENTH FLOOR
ALBANY, NEW YORK 12207

IN REPLY REFER TO:

HPD-NY

March 1, 2002

Mr. Don Klima, Director
Office of Planning and Review
Advisory Council on Historic Preservation
Old Post Office Building, Room 809
1100 Pennsylvania Avenue, NW
Washington, DC 20004

Re: **Cross Harbor Freight Movement Project EIS**
New York and New Jersey Study Areas

Dear Mr. Klima:

I would like to invite you to participate in the Section 106 consultation process for the Cross Harbor Freight Movement Project. The Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA), in cooperation with the New York City Economic Development Corporation (NYCDEC), propose to improve regional rail freight operations across upper New York Harbor between the states of New Jersey and New York. NYCEDC is the project's sponsor and FHWA and FRA are serving as co-lead agencies for the preparation of an Environmental Impact Statement (EIS) to evaluate the project. Michael Saunders is my counterpart at FRA for this project.

As part of the EIS, analyses of archaeological and historic resources will be undertaken, as per Section 106 of the National Historic Preservation Act of 1966. These analyses will identify designated and potential resources that may be affected by the proposed undertaking of the federal agencies (FHWA and FRA) and assess the action's effects on those resources. As mandated by the regulations governing such work, the archaeological and historic resources analyses will be prepared in consultation with the State Historic Preservation Offices (SHPO). This letter is also being sent to the SHPO offices in the States of New Jersey and New York.

The purpose of this letter is to initiate the Section 106 process and to begin to define the areas of potential effects (APEs) for architectural and archaeological resources for the Cross Harbor Freight Movement Project EIS as provided in §800.4 of the Advisory Council on Historic Preservation's regulations. At this stage in the scoping process, there are four project alternatives —the Transportation Systems Management Alternative, the Expanded Float Operations Alternative, the Rail Freight Tunnel Alternative, and the No Action Alternative. A short description of each of the project alternatives is included. Also enclosed is a newsletter that provides additional information for the project. Engineering and environmental studies are still being conducted, and as the project plans evolve, refinements will be made to the alternatives. APEs will be adjusted as necessary to reflect changes in the proposed project in accordance with the methodology outlined in this memorandum.

DESCRIPTION OF THE THREE PROJECT ALTERNATIVES

TRANSPORTATION SYSTEMS MANAGEMENT (TSM) ALTERNATIVE

The TSM Alternative is designed to maximize the use of the existing transportation system without major capital expenditures. The TSM Alternative would include measures to more effectively manage the existing transportation infrastructure to accommodate freight demand. The alternative would emphasize operating improvements and strategic upgrades to critical bottlenecks along the existing freight rail system. The TSM Alternative would include the following elements:

- Increased efficiency in float operations between Greenville Yard, Jersey City, NJ and 65th Street Yard, Brooklyn, NY including improved scheduling coordination between the float operator, rail operators, and customers.
- Rehabilitated or new float bridges at Greenville Yard;
- A new rail yard in Maspeth, Queens at the site of the former Phelps Dodge Refinery Company;
- Minor adjustments (less than 1 foot excavation) to clearance heights (17 feet, 6 inches) to accommodate Trailer-on-Flatcar (TOFC) service along the Bay Ridge Branch and Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth; and
- Upgrading of tracks along the Bay Ridge Branch of the Long Island Rail Road (LIRR), including replacement of tracks, railroad ties, and ballast in certain locations.

EXPANDED FLOAT OPERATIONS ALTERNATIVE

The Expanded Float Operations Alternative would include enhanced and expanded capacity for the railcar float system across New York Harbor between Greenville Yard, Jersey City, NJ and 65th Street Yard, Brooklyn, NY and/or between 65th Street Yard and Port Ivory, Staten Island, NY. The Expanded Float Operations Alternative would include the following elements:

- Two additional float bridges at 65th Street Yard;
- A new float facility at Port Ivory including a new float bridge and a rail connection to the Staten Island Railroad;
- Rehabilitated or new float bridges at Greenville Yard;
- A new rail yard in Maspeth, Queens at the site of the former Phelps Dodge Refinery Company;
- Minor adjustments (less than 1 foot excavation) to clearance heights (17 feet, 6 inches) to accommodate TOFC service along the Bay Ridge Branch and Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth;
- Upgrading of tracks along the Bay Ridge Branch of the LIRR including replacement of tracks, railroad ties, and ballast in certain locations; and
- Regularly scheduled float operations. The railcar floats would leave on a regular schedule regardless of whether they were fully loaded. Scheduled service would make the railcar floats more attractive because it would ensure greater reliability and shorter travel time. At the same time, such service is costlier.

RAIL FREIGHT TUNNEL ALTERNATIVE

The Rail Freight Tunnel Alternative would establish a direct rail freight connection between East and West of Hudson through the construction of a rail freight tunnel under New York Harbor. The scoping process has identified two tunnel alignments to be evaluated in the EIS: (1) between the Staten Island Railroad, Staten Island, NY and the Bay Ridge Branch, Brooklyn, NY and (2) between Greenville Yard, Jersey City, NJ and the Bay Ridge Branch, Brooklyn, NY.

Under the Staten Island tunnel alignment, freight would travel via the Union County Central Railroad from Cranford Junction, Cranford, NJ or via the Chemical Coast Line in NJ across the Arthur Kill Lift Bridge and continue along the Staten Island Railroad in northern Staten Island to the tunnel.

Under the New Jersey tunnel alignment, freight would travel via the Lehigh Mainline or Chemical Coast Line in NJ through Oak Island Yard, along the Greenville Branch, and across the Lehigh Valley Drawbridge to the Greenville Yard where it would enter the tunnel.

The eastern end of either tunnel route would connect with the Bay Ridge Branch, a dedicated rail freight line that runs from the Brooklyn waterfront to Fresh Pond Yard in Queens. At Fresh Pond Yard, the Bay Ridge Branch connects to the Fremont Secondary Line for points north and to the LIRR Montauk Branch for points east and west. To serve the south Brooklyn waterfront, including 65th Street Yard and the South Brooklyn Marine Terminal, two alternatives are being considered: a rail track connection from the Bay Ridge Branch to the waterfront or a possible second tunnel alignment along 1st Avenue.

East of the Hudson River, freight would be transferred from rail to trucks for delivery to customers at several rail yard locations: 65th Street Yard in Brooklyn; a potential new rail yard in Maspeth, Queens; Oak Point Yard and Harlem River Yard in the Bronx; and the new Pilgrim Yard in Deer Park, Long Island.

Tunnel Construction

The cross harbor tunnel would be constructed using either, or a combination, of two construction methods: bored tunnel technology and/or an immersed tube tunnel technology. Bored tunnel technology would use a tunnel boring machine to drill through rock in Staten Island and/or through compacted soil underneath the harbor and in Brooklyn. An immersed tube tunnel would be constructed by laying pre-fabricated tunnel sections in a deep trench excavated along the bottom of the harbor. Both options have been evaluated for the tunnel alignments. For the New Jersey alignment, the in-harbor portion of the tunnel would most likely be constructed of an immersed tube from the shoreline of Greenville Yard to the tip of the Global Marine Terminal pier. From this point to the Brooklyn shoreline, the tunnel would be bored. The selection of the preferred construction method would be made before the Final EIS is issued and would be based on geological conditions, water quality and aquatic impacts, construction requirements, and cost.

The tunnel would consist of dual tubes that would be connected at regular intervals. It would be constructed at a depth that would provide adequate clearance for potential future navigational traffic. Based on trends in the ship industry and discussions with the Port Authority of New York and New Jersey (PANYNJ) and United States Army Corps of Engineers (USACOE), future generations of ships may require navigational channels of up to 60 feet. The top of the tunnel would be at least 30 feet below this potential harbor bottom for a bored tunnel and 10 feet below for an immersed tube tunnel. The 30 feet of sediment and soil would serve to protect and anchor the tunnel in place.

The landside portion of the tunnel in Staten Island and Brooklyn would be bored beginning at the shoreline. With immersed tube construction, a connection would be required between the tube and bored sections at the shoreline. A coffer dam would be built at this location to create a dry environment to allow construction of the transition structure. From the shoreline at a depth of 90 feet, the tunnel would be bored to a depth of 65 feet. From this point, the tunnel would be built of cut and cover construction to the portal located at a depth of 35 feet, and then open cut construction, to the point at which it meets grade. The landside portion of the New Jersey tunnel alignment does not contain a bored section, and would be built of open cut and cut and cover construction.

In Staten Island, the bored portion of the tunnel would begin south of the Staten Island Ferry and waterfront esplanade and would travel in a northwesterly direction until meeting the Staten Island Railroad along the north shore near Snug Harbor. From the eastern end of Snug Harbor along the Staten Island Railroad right of way to Elm Street where it meets grade, the tunnel would be built using cut and

cover and open cut construction. In NJ, the cut and cover and open cut portions of the tunnel are located in Greenville Yard and under Greenville Branch. In Brooklyn, there are two alternative tunnel alignments. One begins at the shoreline adjacent to Owls Head Park, the second at the shoreline adjacent to 65th Street Yard. For both of these alignments, the bored section ends at 6th Avenue. From 6th Avenue along the Bay Ridge Branch right of way to approximately 11th Avenue where it meets grade, the tunnel would be built of cut and cover and open cut construction.

The exterior of the tunnel would be approximately 33 feet high, and the interior would provide 23 feet of clearance above the tracks, with adequate clearance to accommodate doublestack service and overhead electric catenaries. Ventilation shafts for each tunnel tube would be built on either side of the in-harbor portion of the tunnel, a short distance off-shore.

Associated Rail Infrastructure Improvements .

The antiquated East of Hudson rail freight infrastructure would need to be significantly upgraded to service modern equipment that would utilize the tunnel. Rail infrastructure improvements common to both tunnel alignments include:

- A new intermodal rail yard in Maspeth, Queens;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Bay Ridge Branch of the LIRR involving the excavation of a trench 20,400 feet long and up to 4 feet deep within the existing right of way, modification at the East New York Tunnel, and possible reconstruction of some overpasses;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth involving the excavation of a trench 6,100 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the length of the Bay Ridge Branch;
- One or two new mainline tracks along the length of the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth;
- Two additional sidings of up to 10,000 feet in length to parallel the two main line tracks along the Bay Ridge Branch to be used for freight operations and to provide access to the 65th Street Yard and the South Brooklyn waterfront;
- Improvements to 65th Street Yard; and
- Improvements to Fresh Pond Yard.

The Staten Island tunnel alignment would require the following additional rail infrastructure improvements:

- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Staten Island Railroad involving the excavation of a trench 6,000 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the Staten Island Railroad from Arlington Yard to the tunnel;
- Possible improvements to Arlington Yard to facilitate pass-through of trains en route to the tunnel;
- Possible construction of a second rail bridge adjacent to the existing one-track Arthur Kill Lift Bridge;
- Possible enhancements to the Union County Central Railroad from Cranford Junction to the Arthur Kill Lift Bridge in NJ; and

- Possible new passing track along the Chemical Coast Line in NJ.

The New Jersey tunnel alignment would require the following additional rail infrastructure improvements:

- Improvements to Greenville Yard;
- Possible improvements to the Lehigh Valley Drawbridge; and
- Possible improvements to Oak Island Yard, Kearny Yard, and Croxton Yard.

DEFINITION OF AREAS OF POTENTIAL EFFECT FOR PROJECT ALTERNATIVES

ARCHITECTURAL RESOURCES

The APE for architectural resources was defined to incorporate areas wide enough to include potential impacts that might be expected to occur either during the project's construction (e.g., physical impacts resulting from demolition, vibration, noise, underpinning, alteration, etc.) or operation (e.g., physical impacts resulting vibration or noise or contextual impacts related to visual changes). The APEs defined below will be reevaluated after the noise impact assessment is completed to determine whether additional areas should be incorporated. Thus, different APEs were defined depending on the expected construction and operational activities and the expected visibility of project components. The APE for project sites ranges from no potential impact (no APE) to 400 feet from the project site. The 400-foot APE is expected to be large enough to encompass the extent of potential significant physical impacts and the most visible components of the proposed project. Since most project components are not anticipated to be visible for long distances or at all, the APE is typically the area within 50 feet of major construction elements, with a few exceptions. APEs are described below.

No APE

There would be no APE for areas where tunnel sections would be constructed through boring techniques. It is assumed that the bored tunnel portions would not affect architectural resources. Two potential construction-period concerns for deep tunnels—ground-borne vibrations and settlement along the route—are not expected to require an APE due to the depth (over 65 feet below ground) and geotechnical factors. Experience on similar projects indicates that settlement is typically limited to a maximum of one centimeter, which is not enough to cause damage to any structure. Since there would be no impact from settlement, there would be no APE to define for historic resources in proximity to the proposed bored portions of the tunnels.

However, an analysis of vibration during the project's construction, as well as operation, is currently being conducted to confirm this.

Once the project is operational, no impacts to standing structures are expected near the bored tunnel section. The project's design specifications would be sufficiently stringent to avoid vibrations that could affect the structures above. There would also be no visual or contextual effect from the deep tunnels. Overall, therefore, there would be no APE for the bored portions of the tunnel. Depending on the alternative, these portions would be located in the following areas:

- Staten Island: From Tysen Street east to New York Harbor
- Brooklyn: From New York Harbor shoreline to 6th Avenue; and for potential waterfront alignment, from the shoreline to 53rd Street.

APE of 50 Feet

For several construction elements, the APE would be 50 feet, an area large enough to encompass expected physical or contextual impacts that might result. These include the following project elements:

- For depressed portions of the rail lines, the APE for construction and operational impacts is the area within 50 feet.
- An APE of 50 feet was also defined for operational impacts in the cut and cover portions of the tunnel to account for potential vibration impacts.
- For rail yards industrial areas, the APE was defined as the area within 50 feet of the rail yard. For rail yards with adjacent residential uses or public open spaces, the APE was expanded to consider potential viewsheds from those uses.

APE of 150 Feet

For several project elements, the APE would be 150 feet. These elements are:

- For cut and cover and open cut tunnel excavation, the APE would be 150 feet, an area large enough to encompass expected vibration impacts that might result from construction activities. The APE would be 150 feet along the New Jersey, Staten Island, and Brooklyn cut and cover and open cut tunnel sections.
- Along at grade and elevated sections of the rail lines where rail traffic would be substantially increased.

APE of 400 Feet

An APE of 400 feet has been identified for two project elements. These are the potential new rail bridge across the Arthur Kill and the ventilation structures that would be located in New York Harbor off the shorelines of Brooklyn, Staten Island, and New Jersey. This takes into consideration the larger areas potentially affected by these larger and more visually prominent structures.

ARCHAEOLOGICAL RESOURCES

Project elements involving in-ground disturbance have the potential to affect archaeological resources through construction activities such as excavation and grading. Therefore, Stage 1A Archaeological Assessments—prepared for discrete geographic areas where project in-ground construction would occur—will be completed. Definitions of APEs are described below and range from no potential impact (no APE) to areas where in-ground disturbance in the form of new excavation or other subsurface disturbance may impact potential archaeological resources.

No APE

Some components of the proposed project would not cause impacts to any archaeological resources since they are either 1) within new tunnels to be dug through bedrock via tunnel boring machines; or 2) involve shallow construction within existing railroad trackbeds in right-of-ways that have already been previously disturbed. Areas of no impact include the following:

- The bored portions of the tunnels that would be built through bedrock. The entire proposed tunnel alignments have been assessed for archaeological sensitivity. Portions of the tunnels to be bored through bedrock will be assumed to possess no archaeological sensitivity, since there is no potential for archaeological resources within bedrock.
- Areas which have been previously disturbed by railroad right-of-way construction and where new construction would be shallow. This includes the reconfiguration or replacement of existing tracks and laying of new tracks within trackbeds in existing railroad right-of-ways along the Bay Ridge Branch in Brooklyn, Staten Island Railroad in Staten Island, and Montauk Branch in Queens. It also includes minor adjustments to rail line clearance heights with excavation depths of less than 1 foot. This work would involve shallow excavation that would not extend beneath existing trackbeds.

APEs

Impacts to archaeological resources could occur where construction would cause disturbance from the ground surface down into potentially sensitive strata, including improvements to existing rail yards, increasing track clearances more than 3 feet, reconstructing clearances, and constructing the cut and cover and open cut portions of the tunnels. Impacts to archaeological resources could also occur where boring machines would go through potentially sensitive strata to construct new tunnels. APEs are described below:

Tunnel Construction

Construction in the Harbor. The APE for the construction of the tunnel in the Harbor is the tunnel alignment where the tunnel would be bored or immersed. Of concern is the potential for any submerged ships in the harbor. The potential for submerged prehistoric and/or historic-period resources are addressed in the APEs for the landside construction, described below.

Landside Construction. The APEs for the construction of the tunnel in Brooklyn, Staten Island, and New Jersey are as follows:

- New Jersey: The New Jersey tunnel alignment would be built within Greenville Yard and along the Greenville Branch. There would also be improvements made to Greenville Yard in the Rail Freight Tunnel Alternative, described below under "Rail Yard Improvements." Therefore, the APE has been defined as the entire Greenville Yard and the Greenville Branch to the point at which the tunnel would meet existing grade just east of the New Jersey Turnpike Extension. The APE extends in the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- Staten Island: The APE for the tunnel alignment includes the anticipated area of impact for the tunnel alignment as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. The APE for the tunnel alignment extends into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- As described above, several tunnel options are under consideration for Brooklyn. The harbor tunnel may enter Brooklyn at the shoreline at 65th Street Yard (northern tunnel alignment) or it may enter at the shoreline near Owls Head Park (southern tunnel alignment). A possible tunnel alignment link ("waterfront tunnel alignment") to the Brooklyn waterfront is also being considered along First Avenue. The APEs for the bored portion of the tunnel alignments includes the anticipated area of impact for the tunnel alignments as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. For the northern and southern tunnel alignments, the APE for the open cut and cut and cover sections (from 6th Avenue to 11th Avenue), is the anticipated area of impact along the Bay Ridge Branch right of way. For the waterfront tunnel alignment, the APE for the cut and cover and open cut sections is the area from 53rd to 45th Streets along First Avenue. As engineering proceeds and geotechnical boring results become available, the APEs may become more narrowly defined. The APEs for the northern and southern tunnel alignments also extend into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.

Rail Yard Improvements

The APE for excavation associated with rail yard improvements at the Greenville Yard in New Jersey, 65th Street Yard in Brooklyn, Arlington Yard and Port Ivory Yard in Staten Island, and the new Maspeth Yard in Queens is the entirety of each yard. This APE may be reduced as definitive construction impact areas at each rail yard are identified.

Rail Clearances

The APE for excavation associated with increasing clearance heights encompasses the anticipated area of impact, which is not expected to exceed 4 feet vertically. All clearance work would occur within the existing right-of-ways of the Bay Ridge Branch (20,400 feet horizontally), Staten Island Railroad (6,000 feet horizontally), and Montauk Branch of the LIRR (6,100 feet horizontally). If the reconstruction of overpasses is required, the APE is defined as the area of potential construction impacts.

We look forward to discussing with you the project and the proposed definitions of the APEs for historic and archaeological resources. Jennifer Wong from AKRF, Inc. will be contacting you to set up a meeting at a time convenient for you and your staff. In the meantime, please contact Nathan Riddle at AKRF, Inc. if you have any questions or need further clarification.

Sincerely,

Richard E. Backlund

Richard E. Backlund
Intermodal Transportation Coordinator
Federal Highway Administration - New York Division

cc: Michael Saunders, FRA
Alice Cheng, NYCEDC
Dan Baer, STV, Inc.
Esther Siskind, AKRF, Inc.

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
NEW YORK DIVISION
LEO W. O'BRIEN FEDERAL BUILDING, SEVENTH FLOOR
ALBANY, NEW YORK 12207

IN REPLY REFER TO:

HPD-NY

March 1, 2002

Ms. Ruth L. Pierpont, Director
New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, P.O. Box 189
Waterford, NY 12188-0189

Re: **Cross Harbor Freight Movement Project EIS**
Kings, Queens, and Richmond Counties

Dear Ms. Pierpont:

The Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA), in cooperation with the New York City Economic Development Corporation (NYCDEC), propose to improve regional rail freight operations across upper New York Harbor between the states of New Jersey and New York. NYCEDC is the project's sponsor and FHWA and FRA are serving as co-lead agencies for the preparation of an Environmental Impact Statement (EIS) to evaluate the project. Michael Saunders is my counterpart at FRA for this project.

As part of the EIS, analyses of archaeological and historic resources will be undertaken, as per Section 106 of the National Historic Preservation Act of 1966. These analyses will identify designated and potential resources that may be affected by the proposed undertaking of the federal agencies (FHWA and FRA) and assess the action's effects on those resources. As mandated by the regulations governing such work, the archaeological and historic resources analyses will be prepared in consultation with the State Historic Preservation Office (SHPO).

The purpose of this letter is to initiate the Section 106 process and to begin to define the areas of potential effects (APEs) for architectural and archaeological resources for the Cross Harbor Freight Movement Project EIS as provided in §800.4 of the Advisory Council on Historic Preservation's regulations. At this stage in the scoping process, there are four project alternatives —the Transportation Systems Management Alternative, the Expanded Float Operations Alternative, the Rail Freight Tunnel Alternative, and the No Action Alternative. A short description of each of the project alternatives is included. Also enclosed is a newsletter that provides additional information for the project. Engineering and environmental studies are still being conducted, and as the project plans evolve, refinements will be made to the alternatives. APEs will be adjusted as necessary to reflect changes in the proposed project in accordance with the methodology outlined in this memorandum.

DESCRIPTION OF THE THREE PROJECT ALTERNATIVES

TRANSPORTATION SYSTEMS MANAGEMENT (TSM) ALTERNATIVE

The TSM Alternative is designed to maximize the use of the existing transportation system without major capital expenditures. The TSM Alternative would include measures to more effectively manage the existing transportation infrastructure to accommodate freight demand. The alternative would emphasize operating improvements and strategic upgrades to critical bottlenecks along the existing freight rail system. The TSM Alternative would include the following elements:

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- Rehabilitated or new float bridges at Greenville Yard;
- A new rail yard in Maspeth, Queens at the site of the former Phelps Dodge Refinery Company;
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EXPANDED FLOAT OPERATIONS ALTERNATIVE

The Expanded Float Operations Alternative would include enhanced and expanded capacity for the railcar float system across New York Harbor between Greenville Yard, Jersey City, NJ and 65th Street Yard, Brooklyn, NY and/or between 65th Street Yard and Port Ivory, Staten Island, NY. The Expanded Float Operations Alternative would include the following elements:

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- Regularly scheduled float operations. The railcar floats would leave on a regular schedule regardless of whether they were fully loaded. Scheduled service would make the railcar floats more attractive because it would ensure greater reliability and shorter travel time. At the same time, such service is costlier.

RAIL FREIGHT TUNNEL ALTERNATIVE

The Rail Freight Tunnel Alternative would establish a direct rail freight connection between East and West of Hudson through the construction of a rail freight tunnel under New York Harbor. The scoping process has identified two tunnel alignments to be evaluated in the EIS: (1) between the Staten Island Railroad, Staten Island, NY and the Bay Ridge Branch, Brooklyn, NY and (2) between Greenville Yard, Jersey City, NJ and the Bay Ridge Branch, Brooklyn, NY.

Under the Staten Island tunnel alignment, freight would travel via the Union County Central Railroad from Cranford Junction, Cranford, NJ or via the Chemical Coast Line in NJ across the Arthur Kill Lift Bridge and continue along the Staten Island Railroad in northern Staten Island to the tunnel.

Under the New Jersey tunnel alignment, freight would travel via the Lehigh Mainline or Chemical Coast Line in NJ through Oak Island Yard, along the Greenville Branch, and across the Lehigh Valley Drawbridge to the Greenville Yard where it would enter the tunnel.

The eastern end of either tunnel route would connect with the Bay Ridge Branch, a dedicated rail freight line that runs from the Brooklyn waterfront to Fresh Pond Yard in Queens. At Fresh Pond Yard, the Bay Ridge Branch connects to the Fremont Secondary Line for points north and to the LIRR Montauk Branch for points east and west. To serve the south Brooklyn waterfront, including 65th Street Yard and the South Brooklyn Marine Terminal, two alternatives are being considered: a rail track connection from the Bay Ridge Branch to the waterfront or a possible second tunnel alignment along 1st Avenue.

East of the Hudson River, freight would be transferred from rail to trucks for delivery to customers at several rail yard locations: 65th Street Yard in Brooklyn; a potential new rail yard in Maspeth, Queens; Oak Point Yard and Harlem River Yard in the Bronx; and the new Pilgrim Yard in Deer Park, Long Island.

Tunnel Construction

The cross harbor tunnel would be constructed using either, or a combination, of two construction methods: bored tunnel technology and/or an immersed tube tunnel technology. Bored tunnel technology would use a tunnel boring machine to drill through rock in Staten Island and/or through compacted soil underneath the harbor and in Brooklyn. An immersed tube tunnel would be constructed by laying pre-fabricated tunnel sections in a deep trench excavated along the bottom of the harbor. Both options have been evaluated for the tunnel alignments. For the New Jersey alignment, the in-harbor portion of the tunnel would most likely be constructed of an immersed tube from the shoreline of Greenville Yard to the tip of the Global Marine Terminal pier. From this point to the Brooklyn shoreline, the tunnel would be bored. The selection of the preferred construction method would be made before the Final EIS is issued and would be based on geological conditions, water quality and aquatic impacts, construction requirements, and cost.

The tunnel would consist of dual tubes that would be connected at regular intervals. It would be constructed at a depth that would provide adequate clearance for potential future navigational traffic. Based on trends in the ship industry and discussions with the Port Authority of New York and New Jersey (PANYNJ) and United States Army Corps of Engineers (USACOE), future generations of ships may require navigational channels of up to 60 feet. The top of the tunnel would be at least 30 feet below this potential harbor bottom for a bored tunnel and 10 feet below for an immersed tube tunnel. The 30 feet of sediment and soil would serve to protect and anchor the tunnel in place.

The landside portion of the tunnel in Staten Island and Brooklyn would be bored beginning at the shoreline. With immersed tube construction, a connection would be required between the tube and bored sections at the shoreline. A coffer dam would be built at this location to create a dry environment to allow construction of the transition structure. From the shoreline at a depth of 90 feet, the tunnel would be bored to a depth of 65 feet. From this point, the tunnel would be built of cut and cover construction to the portal located at a depth of 35 feet, and then open cut construction, to the point at which it meets grade. The landside portion of the New Jersey tunnel alignment does not contain a bored section, and would be built of open cut and cut and cover construction.

In Staten Island, the bored portion of the tunnel would begin south of the Staten Island Ferry and waterfront esplanade and would travel in a northwesterly direction until meeting the Staten Island Railroad along the north shore near Snug Harbor. From the eastern end of Snug Harbor along the Staten Island Railroad right of way to Elm Street where it meets grade, the tunnel would be built using cut and

cover and open cut construction. In NJ, the cut and cover and open cut portions of the tunnel are located in Greenville Yard and under Greenville Branch. In Brooklyn, there are two alternative tunnel alignments. One begins at the shoreline adjacent to Owls Head Park, the second at the shoreline adjacent to 65th Street Yard. For both of these alignments, the bored section ends at 6th Avenue. From 6th Avenue along the Bay Ridge Branch right of way to approximately 11th Avenue where it meets grade, the tunnel would be built of cut and cover and open cut construction.

The exterior of the tunnel would be approximately 33 feet high, and the interior would provide 23 feet of clearance above the tracks, with adequate clearance to accommodate doublestack service and overhead electric catenaries. Ventilation shafts for each tunnel tube would be built on either side of the in-harbor portion of the tunnel, a short distance off-shore.

Associated Rail Infrastructure Improvements

The antiquated East of Hudson rail freight infrastructure would need to be significantly upgraded to service modern equipment that would utilize the tunnel. Rail infrastructure improvements common to both tunnel alignments include:

- A new intermodal rail yard in Maspeth, Queens;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Bay Ridge Branch of the LIRR involving the excavation of a trench 20,400 feet long and up to 4 feet deep within the existing right of way, modification at the East New York Tunnel, and possible reconstruction of some overpasses;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth involving the excavation of a trench 6,100 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the length of the Bay Ridge Branch;
- One or two new mainline tracks along the length of the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth;
- Two additional sidings of up to 10,000 feet in length to parallel the two main line tracks along the Bay Ridge Branch to be used for freight operations and to provide access to the 65th Street Yard and the South Brooklyn waterfront;
- Improvements to 65th Street Yard; and
- Improvements to Fresh Pond Yard.

The Staten Island tunnel alignment would require the following additional rail infrastructure improvements:

- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Staten Island Railroad involving the excavation of a trench 6,000 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the Staten Island Railroad from Arlington Yard to the tunnel;
- Possible improvements to Arlington Yard to facilitate pass-through of trains en route to the tunnel;
- Possible construction of a second rail bridge adjacent to the existing one-track Arthur Kill Lift Bridge;
- Possible enhancements to the Union County Central Railroad from Cranford Junction to the Arthur Kill Lift Bridge in NJ; and

- Possible new passing track along the Chemical Coast Line in NJ.

The New Jersey tunnel alignment would require the following additional rail infrastructure improvements:

- Improvements to Greenville Yard;
- Possible improvements to the Lehigh Valley Drawbridge; and
- Possible improvements to Oak Island Yard, Kearny Yard, and Croxton Yard.

DEFINITION OF AREAS OF POTENTIAL EFFECT FOR PROJECT ALTERNATIVES

ARCHITECTURAL RESOURCES

The APE for architectural resources was defined to incorporate areas wide enough to include potential impacts that might be expected to occur either during the project's construction (e.g., physical impacts resulting from demolition, vibration, noise, underpinning, alteration, etc.) or operation (e.g., physical impacts resulting vibration or noise or contextual impacts related to visual changes). The APEs defined below will be reevaluated after the noise impact assessment is completed to determine whether additional areas should be incorporated. Thus, different APEs were defined depending on the expected construction and operational activities and the expected visibility of project components. The APE for project sites ranges from no potential impact (no APE) to 400 feet from the project site. The 400-foot APE is expected to be large enough to encompass the extent of potential significant physical impacts and the most visible components of the proposed project. Since most project components are not anticipated to be visible for long distances or at all, the APE is typically the area within 50 feet of major construction elements, with a few exceptions. APEs are described below.

No APE

There would be no APE for areas where tunnel sections would be constructed through boring techniques. It is assumed that the bored tunnel portions would not affect architectural resources. Two potential construction-period concerns for deep tunnels—ground-borne vibrations and settlement along the route—are not expected to require an APE due to the depth (over 65 feet below ground) and geotechnical factors. Experience on similar projects indicates that settlement is typically limited to a maximum of one centimeter, which is not enough to cause damage to any structure. Since there would be no impact from settlement, there would be no APE to define for historic resources in proximity to the proposed bored portions of the tunnels.

However, an analysis of vibration during the project's construction, as well as operation, is currently being conducted to confirm this.

Once the project is operational, no impacts to standing structures are expected near the bored tunnel section. The project's design specifications would be sufficiently stringent to avoid vibrations that could affect the structures above. There would also be no visual or contextual effect from the deep tunnels. Overall, therefore, there would be no APE for the bored portions of the tunnel. Depending on the alternative, these portions would be located in the following areas:

- Staten Island: From Tysen Street east to New York Harbor
- Brooklyn: From New York Harbor shoreline to 6th Avenue; and for potential waterfront alignment, from the shoreline to 53rd Street.

APE of 50 Feet

For several construction elements, the APE would be 50 feet, an area large enough to encompass expected physical or contextual impacts that might result. These include the following project elements:

- For depressed portions of the rail lines, the APE for construction and operational impacts is the area within 50 feet.
- An APE of 50 feet was also defined for operational impacts in the cut and cover portions of the tunnel to account for potential vibration impacts.
- For rail yards industrial areas, the APE was defined as the area within 50 feet of the rail yard. For rail yards with adjacent residential uses or public open spaces, the APE was expanded to consider potential viewsheds from those uses.

APE of 150 Feet

For several project elements, the APE would be 150 feet. These elements are:

- For cut and cover and open cut tunnel excavation, the APE would be 150 feet, an area large enough to encompass expected vibration impacts that might result from construction activities. The APE would be 150 feet along the New Jersey, Staten Island, and Brooklyn cut and cover and open cut tunnel sections.
- Along at grade and elevated sections of the rail lines where rail traffic would be substantially increased.

APE of 400 Feet

An APE of 400 feet has been identified for two project elements. These are the potential new rail bridge across the Arthur Kill and the ventilation structures that would be located in New York Harbor off the shorelines of Brooklyn, Staten Island, and New Jersey. This takes into consideration the larger areas potentially affected by these larger and more visually prominent structures.

ARCHAEOLOGICAL RESOURCES

Project elements involving in-ground disturbance have the potential to affect archaeological resources through construction activities such as excavation and grading. Therefore, Stage 1A Archaeological Assessments—prepared for discrete geographic areas where project in-ground construction would occur—will be completed. Definitions of APEs are described below and range from no potential impact (no APE) to areas where in-ground disturbance in the form of new excavation or other subsurface disturbance may impact potential archaeological resources.

No APE

Some components of the proposed project would not cause impacts to any archaeological resources since they are either 1) within new tunnels to be dug through bedrock via tunnel boring machines; or 2) involve shallow construction within existing railroad trackbeds in right-of-ways that have already been previously disturbed. Areas of no impact include the following:

- The bored portions of the tunnels that would be built through bedrock. The entire proposed tunnel alignments have been assessed for archaeological sensitivity. Portions of the tunnels to be bored through bedrock will be assumed to possess no archaeological sensitivity, since there is no potential for archaeological resources within bedrock.
- Areas which have been previously disturbed by railroad right-of-way construction and where new construction would be shallow. This includes the reconfiguration or replacement of existing tracks and laying of new tracks within trackbeds in existing railroad right-of-ways along the Bay Ridge Branch in Brooklyn, Staten Island Railroad in Staten Island, and Montauk Branch in Queens. It also includes minor adjustments to rail line clearance heights with excavation depths of less than 1 foot. This work would involve shallow excavation that would not extend beneath existing trackbeds.

APEs

Impacts to archaeological resources could occur where construction would cause disturbance from the ground surface down into potentially sensitive strata, including improvements to existing rail yards, increasing track clearances more than 3 feet, reconstructing clearances, and constructing the cut and cover and open cut portions of the tunnels. Impacts to archaeological resources could also occur where boring machines would go through potentially sensitive strata to construct new tunnels. APEs are described below:

Tunnel Construction

Construction in the Harbor. The APE for the construction of the tunnel in the Harbor is the tunnel alignment where the tunnel would be bored or immersed. Of concern is the potential for any submerged ships in the harbor. The potential for submerged prehistoric and/or historic-period resources are addressed in the APEs for the landside construction, described below.

Landside Construction. The APEs for the construction of the tunnel in Brooklyn, Staten Island, and New Jersey are as follows:

- New Jersey: The New Jersey tunnel alignment would be built within Greenville Yard and along the Greenville Branch. There would also be improvements made to Greenville Yard in the Rail Freight Tunnel Alternative, described below under "Rail Yard Improvements." Therefore, the APE has been defined as the entire Greenville Yard and the Greenville Branch to the point at which the tunnel would meet existing grade just east of the New Jersey Turnpike Extension. The APE extends in the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- Staten Island: The APE for the tunnel alignment includes the anticipated area of impact for the tunnel alignment as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. The APE for the tunnel alignment extends into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- As described above, several tunnel options are under consideration for Brooklyn. The harbor tunnel may enter Brooklyn at the shoreline at 65th Street Yard (northern tunnel alignment) or it may enter at the shoreline near Owls Head Park (southern tunnel alignment). A possible tunnel alignment link ("waterfront tunnel alignment") to the Brooklyn waterfront is also being considered along First Avenue. The APEs for the bored portion of the tunnel alignments includes the anticipated area of impact for the tunnel alignments as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. For the northern and southern tunnel alignments, the APE for the open cut and cut and cover sections (from 6th Avenue to 11th Avenue), is the anticipated area of impact along the Bay Ridge Branch right of way. For the waterfront tunnel alignment, the APE for the cut and cover and open cut sections is the area from 53rd to 45th Streets along First Avenue. As engineering proceeds and geotechnical boring results become available, the APEs may become more narrowly defined. The APEs for the northern and southern tunnel alignments also extend into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.

Rail Yard Improvements

The APE for excavation associated with rail yard improvements at the Greenville Yard in New Jersey, 65th Street Yard in Brooklyn, Arlington Yard and Port Ivory Yard in Staten Island, and the new Maspeth Yard in Queens is the entirety of each yard. This APE may be reduced as definitive construction impact areas at each rail yard are identified.

Rail Clearances

The APE for excavation associated with increasing clearance heights encompasses the anticipated area of impact, which is not expected to exceed 4 feet vertically. All clearance work would occur within the existing right-of-ways of the Bay Ridge Branch (20,400 feet horizontally), Staten Island Railroad (6,000 feet horizontally), and Montauk Branch of the LIRR (6,100 feet horizontally). If the reconstruction of overpasses is required, the APE is defined as the area of potential construction impacts.

We look forward to discussing with you the project and the proposed definitions of the APEs for historic and archaeological resources. Jennifer Wong from AKRF, Inc. will be contacting you to set up a meeting at a time convenient for you and your staff. In the meantime, please contact Nathan Riddle at AKRF, Inc. if you have any questions or need further clarification.

Sincerely,

Richard E. Backlund
Intermodal Transportation Coordinator
Federal Highway Administration - New York Division

cc: Michael Saunders, FRA
Alice Cheng, NYCEDC
Dan Baer, STV, Inc.
Esther Siskind, AKRF, Inc

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
NEW YORK DIVISION
LEO W. O'BRIEN FEDERAL BUILDING, SEVENTH FLOOR
ALBANY, NEW YORK 12207

IN REPLY REFER TO:

HPD-NY

March 1, 2002

Ms. Gina Santucci
Director of Environmental Review
The New York City Landmarks Preservation Commission
Municipal Building
1 Centre Street, 9th floor
New York, NY 10007

Re: **Cross Harbor Freight Movement Project EIS**
Kings, Queens, and Richmond Counties

Dear Ms. Santucci:

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As part of the EIS, analyses of archaeological and historic resources will be undertaken, as per Section 106 of the National Historic Preservation Act of 1966. These analyses will identify designated and potential resources that may be affected by the proposed undertaking of the federal agencies (FHWA and FRA) and assess the action's effects on those resources. As mandated by the regulations governing such work, the archaeological and historic resources analyses will be prepared in consultation with the State Historic Preservation Office (SHPO).

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The Staten Island tunnel alignment would require the following additional rail infrastructure improvements:

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DEFINITION OF AREAS OF POTENTIAL EFFECT FOR PROJECT ALTERNATIVES

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The APE for architectural resources was defined to incorporate areas wide enough to include potential impacts that might be expected to occur either during the project's construction (e.g., physical impacts resulting from demolition, vibration, noise, underpinning, alteration, etc.) or operation (e.g., physical impacts resulting vibration or noise or contextual impacts related to visual changes). The APEs defined below will be reevaluated after the noise impact assessment is completed to determine whether additional areas should be incorporated. Thus, different APEs were defined depending on the expected construction and operational activities and the expected visibility of project components. The APE for project sites ranges from no potential impact (no APE) to 400 feet from the project site. The 400-foot APE is expected to be large enough to encompass the extent of potential significant physical impacts and the most visible components of the proposed project. Since most project components are not anticipated to be visible for long distances or at all, the APE is typically the area within 50 feet of major construction elements, with a few exceptions. APEs are described below.

No APE

There would be no APE for areas where tunnel sections would be constructed through boring techniques. It is assumed that the bored tunnel portions would not affect architectural resources. Two potential construction-period concerns for deep tunnels—ground-borne vibrations and settlement along the route—are not expected to require an APE due to the depth (over 65 feet below ground) and geotechnical factors. Experience on similar projects indicates that settlement is typically limited to a maximum of one centimeter, which is not enough to cause damage to any structure. Since there would be no impact from settlement, there would be no APE to define for historic resources in proximity to the proposed bored portions of the tunnels.

However, an analysis of vibration during the project's construction, as well as operation, is currently being conducted to confirm this.

Once the project is operational, no impacts to standing structures are expected near the bored tunnel section. The project's design specifications would be sufficiently stringent to avoid vibrations that could affect the structures above. There would also be no visual or contextual effect from the deep tunnels. Overall, therefore, there would be no APE for the bored portions of the tunnel. Depending on the alternative, these portions would be located in the following areas:

- Staten Island: From Tysen Street east to New York Harbor
- Brooklyn: From New York Harbor shoreline to 6th Avenue; and for potential waterfront alignment, from the shoreline to 53rd Street.

APE of 50 Feet

For several construction elements, the APE would be 50 feet, an area large enough to encompass expected physical or contextual impacts that might result. These include the following project elements:

- For depressed portions of the rail lines, the APE for construction and operational impacts is the area within 50 feet.
- An APE of 50 feet was also defined for operational impacts in the cut and cover portions of the tunnel to account for potential vibration impacts.
- For rail yards industrial areas, the APE was defined as the area within 50 feet of the rail yard. For rail yards with adjacent residential uses or public open spaces, the APE was expanded to consider potential viewsheds from those uses.

APE of 150 Feet

For several project elements, the APE would be 150 feet. These elements are:

- For cut and cover and open cut tunnel excavation, the APE would be 150 feet, an area large enough to encompass expected vibration impacts that might result from construction activities. The APE would be 150 feet along the New Jersey, Staten Island, and Brooklyn cut and cover and open cut tunnel sections.
- Along at grade and elevated sections of the rail lines where rail traffic would be substantially increased.

APE of 400 Feet

An APE of 400 feet has been identified for two project elements. These are the potential new rail bridge across the Arthur Kill and the ventilation structures that would be located in New York Harbor off the shorelines of Brooklyn, Staten Island, and New Jersey. This takes into consideration the larger areas potentially affected by these larger and more visually prominent structures.

ARCHAEOLOGICAL RESOURCES

Project elements involving in-ground disturbance have the potential to affect archaeological resources through construction activities such as excavation and grading. Therefore, Stage 1A Archaeological Assessments—prepared for discrete geographic areas where project in-ground construction would occur—will be completed. Definitions of APEs are described below and range from no potential impact (no APE) to areas where in-ground disturbance in the form of new excavation or other subsurface disturbance may impact potential archaeological resources.

No APE

Some components of the proposed project would not cause impacts to any archaeological resources since they are either 1) within new tunnels to be dug through bedrock via tunnel boring machines; or 2) involve shallow construction within existing railroad trackbeds in right-of-ways that have already been previously disturbed. Areas of no impact include the following:

- The bored portions of the tunnels that would be built through bedrock. The entire proposed tunnel alignments have been assessed for archaeological sensitivity. Portions of the tunnels to be bored through bedrock will be assumed to possess no archaeological sensitivity, since there is no potential for archaeological resources within bedrock.
- Areas which have been previously disturbed by railroad right-of-way construction and where new construction would be shallow. This includes the reconfiguration or replacement of existing tracks and laying of new tracks within trackbeds in existing railroad right-of-ways along the Bay Ridge Branch in Brooklyn, Staten Island Railroad in Staten Island, and Montauk Branch in Queens. It also includes minor adjustments to rail line clearance heights with excavation depths of less than 1 foot. This work would involve shallow excavation that would not extend beneath existing trackbeds.

APEs

Impacts to archaeological resources could occur where construction would cause disturbance from the ground surface down into potentially sensitive strata, including improvements to existing rail yards, increasing track clearances more than 3 feet, reconstructing clearances, and constructing the cut and cover and open cut portions of the tunnels. Impacts to archaeological resources could also occur where boring machines would go through potentially sensitive strata to construct new tunnels. APEs are described below:

Tunnel Construction

Construction in the Harbor. The APE for the construction of the tunnel in the Harbor is the tunnel alignment where the tunnel would be bored or immersed. Of concern is the potential for any submerged ships in the harbor. The potential for submerged prehistoric and/or historic-period resources are addressed in the APEs for the landside construction, described below.

Landside Construction. The APEs for the construction of the tunnel in Brooklyn, Staten Island, and New Jersey are as follows:

- New Jersey: The New Jersey tunnel alignment would be built within Greenville Yard and along the Greenville Branch. There would also be improvements made to Greenville Yard in the Rail Freight Tunnel Alternative, described below under "Rail Yard Improvements." Therefore, the APE has been defined as the entire Greenville Yard and the Greenville Branch to the point at which the tunnel would meet existing grade just east of the New Jersey Turnpike Extension. The APE extends in the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- Staten Island: The APE for the tunnel alignment includes the anticipated area of impact for the tunnel alignment as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. The APE for the tunnel alignment extends into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- As described above, several tunnel options are under consideration for Brooklyn. The harbor tunnel may enter Brooklyn at the shoreline at 65th Street Yard (northern tunnel alignment) or it may enter at the shoreline near Owls Head Park (southern tunnel alignment). A possible tunnel alignment link ("waterfront tunnel alignment") to the Brooklyn waterfront is also being considered along First Avenue. The APEs for the bored portion of the tunnel alignments includes the anticipated area of impact for the tunnel alignments as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. For the northern and southern tunnel alignments, the APE for the open cut and cut and cover sections (from 6th Avenue to 11th Avenue), is the anticipated area of impact along the Bay Ridge Branch right of way. For the waterfront tunnel alignment, the APE for the cut and cover and open cut sections is the area from 53rd to 45th Streets along First Avenue. As engineering proceeds and geotechnical boring results become available, the APEs may become more narrowly defined. The APEs for the northern and southern tunnel alignments also extend into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.

Rail Yard Improvements

The APE for excavation associated with rail yard improvements at the Greenville Yard in New Jersey, 65th Street Yard in Brooklyn, Arlington Yard and Port Ivory Yard in Staten Island, and the new Maspeth Yard in Queens is the entirety of each yard. This APE may be reduced as definitive construction impact areas at each rail yard are identified.

Rail Clearances

The APE for excavation associated with increasing clearance heights encompasses the anticipated area of impact, which is not expected to exceed 4 feet vertically. All clearance work would occur within the existing right-of-ways of the Bay Ridge Branch (20,400 feet horizontally), Staten Island Railroad (6,000 feet horizontally), and Montauk Branch of the LIRR (6,100 feet horizontally). If the reconstruction of overpasses is required, the APE is defined as the area of potential construction impacts.

We look forward to discussing with you the project and the proposed definitions of the APEs for historic and archaeological resources. Jennifer Wong from AKRF, Inc. will be contacting you to set up a meeting at a time convenient for you and your staff. In the meantime, please contact Nathan Riddle at AKRF, Inc. if you have any questions or need further clarification.

Sincerely,

Richard E. Backlund

Richard E. Backlund
Intermodal Transportation Coordinator
Federal Highway Administration - New York Division

cc: Michael Saunders, FRA
Alice Cheng, NYCEDC
Dan Baer, STV, Inc.
Esther Siskind, AKRF, Inc.

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
NEW YORK DIVISION
LEO W. O'BRIEN FEDERAL BUILDING, SEVENTH FLOOR
ALBANY, NEW YORK 12207

IN REPLY REFER TO:

HPD-NY

March 1, 2002

Ms. Dorothy P. Guzzo
Deputy State Historic Preservation Officer
Historic Preservation Office
P.O. Box 404
Trenton, NJ 08625-0404

Re: **Cross Harbor Freight Movement Project EIS**
New Jersey Study Areas

Dear Ms. Guzzo:

The Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA), in cooperation with the New York City Economic Development Corporation (NYCDEC), propose to improve regional rail freight operations across upper New York Harbor between the states of New Jersey and New York. NYCEDC is the project's sponsor and FHWA and FRA are serving as co-lead agencies for the preparation of an Environmental Impact Statement (EIS) to evaluate the project. Michael Saunders is my counterpart at FRA for this project.

As part of the EIS, analyses of archaeological and historic resources will be undertaken, as per Section 106 of the National Historic Preservation Act of 1966. These analyses will identify designated and potential resources that may be affected by the proposed undertaking of the federal agencies (FHWA and FRA) and assess the action's effects on those resources. As mandated by the regulations governing such work, the archaeological and historic resources analyses will be prepared in consultation with the State Historic Preservation Office (SHPO).

The purpose of this letter is to initiate the Section 106 process and to begin to define the areas of potential effects (APEs) for architectural and archaeological resources for the Cross Harbor Freight Movement Project EIS as provided in §800.4 of the Advisory Council on Historic Preservation's regulations. At this stage in the scoping process, there are four project alternatives —the Transportation Systems Management Alternative, the Expanded Float Operations Alternative, the Rail Freight Tunnel Alternative, and the No Action Alternative. A short description of each of the project alternatives is included. Also enclosed is a newsletter that provides additional information for the project. Engineering and environmental studies are still being conducted, and as the project plans evolve, refinements will be made to the alternatives. APEs will be adjusted as necessary to reflect changes in the proposed project in accordance with the methodology outlined in this memorandum.

DESCRIPTION OF THE THREE PROJECT ALTERNATIVES

TRANSPORTATION SYSTEMS MANAGEMENT (TSM) ALTERNATIVE

The TSM Alternative is designed to maximize the use of the existing transportation system without major capital expenditures. The TSM Alternative would include measures to more effectively manage the existing transportation infrastructure to accommodate freight demand. The alternative would emphasize operating improvements and strategic upgrades to critical bottlenecks along the existing freight rail system. The TSM Alternative would include the following elements:

- Increased efficiency in float operations between Greenville Yard, Jersey City, NJ and 65th Street Yard, Brooklyn, NY including improved scheduling coordination between the float operator, rail operators, and customers.
- Rehabilitated or new float bridges at Greenville Yard;
- A new rail yard in Maspeth, Queens at the site of the former Phelps Dodge Refinery Company;
- Minor adjustments (less than 1 foot excavation) to clearance heights (17 feet, 6 inches) to accommodate Trailer-on-Flatcar (TOFC) service along the Bay Ridge Branch and Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth; and
- Upgrading of tracks along the Bay Ridge Branch of the Long Island Rail Road (LIRR), including replacement of tracks, railroad ties, and ballast in certain locations.

EXPANDED FLOAT OPERATIONS ALTERNATIVE

The Expanded Float Operations Alternative would include enhanced and expanded capacity for the railcar float system across New York Harbor between Greenville Yard, Jersey City, NJ and 65th Street Yard, Brooklyn, NY and/or between 65th Street Yard and Port Ivory, Staten Island, NY. The Expanded Float Operations Alternative would include the following elements:

- Two additional float bridges at 65th Street Yard;
- A new float facility at Port Ivory including a new float bridge and a rail connection to the Staten Island Railroad;
- Rehabilitated or new float bridges at Greenville Yard;
- A new rail yard in Maspeth, Queens at the site of the former Phelps Dodge Refinery Company;
- Minor adjustments (less than 1 foot excavation) to clearance heights (17 feet, 6 inches) to accommodate TOFC service along the Bay Ridge Branch and Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth;
- Upgrading of tracks along the Bay Ridge Branch of the LIRR including replacement of tracks, railroad ties, and ballast in certain locations; and
- Regularly scheduled float operations. The railcar floats would leave on a regular schedule regardless of whether they were fully loaded. Scheduled service would make the railcar floats more attractive because it would ensure greater reliability and shorter travel time. At the same time, such service is costlier.

RAIL FREIGHT TUNNEL ALTERNATIVE

The Rail Freight Tunnel Alternative would establish a direct rail freight connection between East and West of Hudson through the construction of a rail freight tunnel under New York Harbor. The scoping process has identified two tunnel alignments to be evaluated in the EIS: (1) between the Staten Island Railroad, Staten Island, NY and the Bay Ridge Branch, Brooklyn, NY and (2) between Greenville Yard, Jersey City, NJ and the Bay Ridge Branch, Brooklyn, NY.

Under the Staten Island tunnel alignment, freight would travel via the Union County Central Railroad from Cranford Junction, Cranford, NJ or via the Chemical Coast Line in NJ across the Arthur Kill Lift Bridge and continue along the Staten Island Railroad in northern Staten Island to the tunnel.

Under the New Jersey tunnel alignment, freight would travel via the Lehigh Mainline or Chemical Coast Line in NJ through Oak Island Yard, along the Greenville Branch, and across the Lehigh Valley Drawbridge to the Greenville Yard where it would enter the tunnel.

The eastern end of either tunnel route would connect with the Bay Ridge Branch, a dedicated rail freight line that runs from the Brooklyn waterfront to Fresh Pond Yard in Queens. At Fresh Pond Yard, the Bay Ridge Branch connects to the Fremont Secondary Line for points north and to the LIRR Montauk Branch for points east and west. To serve the south Brooklyn waterfront, including 65th Street Yard and the South Brooklyn Marine Terminal, two alternatives are being considered: a rail track connection from the Bay Ridge Branch to the waterfront or a possible second tunnel alignment along 1st Avenue.

East of the Hudson River, freight would be transferred from rail to trucks for delivery to customers at several rail yard locations: 65th Street Yard in Brooklyn; a potential new rail yard in Maspeth, Queens; Oak Point Yard and Harlem River Yard in the Bronx; and the new Pilgrim Yard in Deer Park, Long Island.

Tunnel Construction

The cross harbor tunnel would be constructed using either, or a combination, of two construction methods: bored tunnel technology and/or an immersed tube tunnel technology. Bored tunnel technology would use a tunnel boring machine to drill through rock in Staten Island and/or through compacted soil underneath the harbor and in Brooklyn. An immersed tube tunnel would be constructed by laying pre-fabricated tunnel sections in a deep trench excavated along the bottom of the harbor. Both options have been evaluated for the tunnel alignments. For the New Jersey alignment, the in-harbor portion of the tunnel would most likely be constructed of an immersed tube from the shoreline of Greenville Yard to the tip of the Global Marine Terminal pier. From this point to the Brooklyn shoreline, the tunnel would be bored. The selection of the preferred construction method would be made before the Final EIS is issued and would be based on geological conditions, water quality and aquatic impacts, construction requirements, and cost.

The tunnel would consist of dual tubes that would be connected at regular intervals. It would be constructed at a depth that would provide adequate clearance for potential future navigational traffic. Based on trends in the ship industry and discussions with the Port Authority of New York and New Jersey (PANYNJ) and United States Army Corps of Engineers (USACOE), future generations of ships may require navigational channels of up to 60 feet. The top of the tunnel would be at least 30 feet below this potential harbor bottom for a bored tunnel and 10 feet below for an immersed tube tunnel. The 30 feet of sediment and soil would serve to protect and anchor the tunnel in place.

The landside portion of the tunnel in Staten Island and Brooklyn would be bored beginning at the shoreline. With immersed tube construction, a connection would be required between the tube and bored sections at the shoreline. A coffer dam would be built at this location to create a dry environment to allow construction of the transition structure. From the shoreline at a depth of 90 feet, the tunnel would be bored to a depth of 65 feet. From this point, the tunnel would be built of cut and cover construction to the portal located at a depth of 35 feet, and then open cut construction, to the point at which it meets grade. The landside portion of the New Jersey tunnel alignment does not contain a bored section, and would be built of open cut and cut and cover construction.

In Staten Island, the bored portion of the tunnel would begin south of the Staten Island Ferry and waterfront esplanade and would travel in a northwesterly direction until meeting the Staten Island Railroad along the north shore near Snug Harbor. From the eastern end of Snug Harbor along the Staten Island Railroad right of way to Elm Street where it meets grade, the tunnel would be built using cut and

cover and open cut construction. In NJ, the cut and cover and open cut portions of the tunnel are located in Greenville Yard and under Greenville Branch. In Brooklyn, there are two alternative tunnel alignments. One begins at the shoreline adjacent to Owls Head Park, the second at the shoreline adjacent to 65th Street Yard. For both of these alignments, the bored section ends at 6th Avenue. From 6th Avenue along the Bay Ridge Branch right of way to approximately 11th Avenue where it meets grade, the tunnel would be built of cut and cover and open cut construction.

The exterior of the tunnel would be approximately 33 feet high, and the interior would provide 23 feet of clearance above the tracks, with adequate clearance to accommodate doublestack service and overhead electric catenaries. Ventilation shafts for each tunnel tube would be built on either side of the in-harbor portion of the tunnel, a short distance off-shore.

Associated Rail Infrastructure Improvements.

The antiquated East of Hudson rail freight infrastructure would need to be significantly upgraded to service modern equipment that would utilize the tunnel. Rail infrastructure improvements common to both tunnel alignments include:

- A new intermodal rail yard in Maspeth, Queens;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Bay Ridge Branch of the LIRR involving the excavation of a trench 20,400 feet long and up to 4 feet deep within the existing right of way, modification at the East New York Tunnel, and possible reconstruction of some overpasses;
- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth involving the excavation of a trench 6,100 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the length of the Bay Ridge Branch;
- One or two new mainline tracks along the length of the Montauk Branch of the LIRR between Fresh Pond Yard and the new rail yard in Maspeth;
- Two additional sidings of up to 10,000 feet in length to parallel the two main line tracks along the Bay Ridge Branch to be used for freight operations and to provide access to the 65th Street Yard and the South Brooklyn waterfront;
- Improvements to 65th Street Yard; and
- Improvements to Fresh Pond Yard.

The Staten Island tunnel alignment would require the following additional rail infrastructure improvements:

- Increased clearance heights (22 feet, 6 inches) to accommodate doublestack service along the Staten Island Railroad involving the excavation of a trench 6,000 feet long and up to 4 feet deep within the existing right of way and possible reconstruction of some overpasses;
- Two new mainline tracks along the Staten Island Railroad from Arlington Yard to the tunnel;
- Possible improvements to Arlington Yard to facilitate pass-through of trains en route to the tunnel;
- Possible construction of a second rail bridge adjacent to the existing one-track Arthur Kill Lift Bridge;
- Possible enhancements to the Union County Central Railroad from Cranford Junction to the Arthur Kill Lift Bridge in NJ; and

- Possible new passing track along the Chemical Coast Line in NJ.

The New Jersey tunnel alignment would require the following additional rail infrastructure improvements:

- Improvements to Greenville Yard;
- Possible improvements to the Lehigh Valley Drawbridge; and
- Possible improvements to Oak Island Yard, Kearny Yard, and Croxton Yard.

DEFINITION OF AREAS OF POTENTIAL EFFECT FOR PROJECT ALTERNATIVES

ARCHITECTURAL RESOURCES

The APE for architectural resources was defined to incorporate areas wide enough to include potential impacts that might be expected to occur either during the project's construction (e.g., physical impacts resulting from demolition, vibration, noise, underpinning, alteration, etc.) or operation (e.g., physical impacts resulting vibration or noise or contextual impacts related to visual changes). The APEs defined below will be reevaluated after the noise impact assessment is completed to determine whether additional areas should be incorporated. Thus, different APEs were defined depending on the expected construction and operational activities and the expected visibility of project components. The APE for project sites ranges from no potential impact (no APE) to 400 feet from the project site. The 400-foot APE is expected to be large enough to encompass the extent of potential significant physical impacts and the most visible components of the proposed project. Since most project components are not anticipated to be visible for long distances or at all, the APE is typically the area within 50 feet of major construction elements, with a few exceptions. APEs are described below.

No APE

There would be no APE for areas where tunnel sections would be constructed through boring techniques. It is assumed that the bored tunnel portions would not affect architectural resources. Two potential construction-period concerns for deep tunnels—ground-borne vibrations and settlement along the route—are not expected to require an APE due to the depth (over 65 feet below ground) and geotechnical factors. Experience on similar projects indicates that settlement is typically limited to a maximum of one centimeter, which is not enough to cause damage to any structure. Since there would be no impact from settlement, there would be no APE to define for historic resources in proximity to the proposed bored portions of the tunnels.

However, an analysis of vibration during the project's construction, as well as operation, is currently being conducted to confirm this.

Once the project is operational, no impacts to standing structures are expected near the bored tunnel section. The project's design specifications would be sufficiently stringent to avoid vibrations that could affect the structures above. There would also be no visual or contextual effect from the deep tunnels. Overall, therefore, there would be no APE for the bored portions of the tunnel. Depending on the alternative, these portions would be located in the following areas:

- Staten Island: From Tysen Street east to New York Harbor
- Brooklyn: From New York Harbor shoreline to 6th Avenue; and for potential waterfront alignment, from the shoreline to 53rd Street.

APE of 50 Feet

For several construction elements, the APE would be 50 feet, an area large enough to encompass expected physical or contextual impacts that might result. These include the following project elements:

- For depressed portions of the rail lines, the APE for construction and operational impacts is the area within 50 feet.
- An APE of 50 feet was also defined for operational impacts in the cut and cover portions of the tunnel to account for potential vibration impacts.
- For rail yards industrial areas, the APE was defined as the area within 50 feet of the rail yard. For rail yards with adjacent residential uses or public open spaces, the APE was expanded to consider potential viewsheds from those uses.

APE of 150 Feet

For several project elements, the APE would be 150 feet. These elements are:

- For cut and cover and open cut tunnel excavation, the APE would be 150 feet, an area large enough to encompass expected vibration impacts that might result from construction activities. The APE would be 150 feet along the New Jersey, Staten Island, and Brooklyn cut and cover and open cut tunnel sections.
- Along at grade and elevated sections of the rail lines where rail traffic would be substantially increased.

APE of 400 Feet

An APE of 400 feet has been identified for two project elements. These are the potential new rail bridge across the Arthur Kill and the ventilation structures that would be located in New York Harbor off the shorelines of Brooklyn, Staten Island, and New Jersey. This takes into consideration the larger areas potentially affected by these larger and more visually prominent structures.

ARCHAEOLOGICAL RESOURCES

Project elements involving in-ground disturbance have the potential to affect archaeological resources through construction activities such as excavation and grading. Therefore, Stage 1A Archaeological Assessments—prepared for discrete geographic areas where project in-ground construction would occur—will be completed. Definitions of APEs are described below and range from no potential impact (no APE) to areas where in-ground disturbance in the form of new excavation or other subsurface disturbance may impact potential archaeological resources.

No APE

Some components of the proposed project would not cause impacts to any archaeological resources since they are either 1) within new tunnels to be dug through bedrock via tunnel boring machines; or 2) involve shallow construction within existing railroad trackbeds in right-of-ways that have already been previously disturbed. Areas of no impact include the following:

- The bored portions of the tunnels that would be built through bedrock. The entire proposed tunnel alignments have been assessed for archaeological sensitivity. Portions of the tunnels to be bored through bedrock will be assumed to possess no archaeological sensitivity, since there is no potential for archaeological resources within bedrock.
- Areas which have been previously disturbed by railroad right-of-way construction and where new construction would be shallow. This includes the reconfiguration or replacement of existing tracks and laying of new tracks within trackbeds in existing railroad right-of-ways along the Bay Ridge Branch in Brooklyn, Staten Island Railroad in Staten Island, and Montauk Branch in Queens. It also includes minor adjustments to rail line clearance heights with excavation depths of less than 1 foot. This work would involve shallow excavation that would not extend beneath existing trackbeds.

APEs

Impacts to archaeological resources could occur where construction would cause disturbance from the ground surface down into potentially sensitive strata, including improvements to existing rail yards, increasing track clearances more than 3 feet, reconstructing clearances, and constructing the cut and cover and open cut portions of the tunnels. Impacts to archaeological resources could also occur where boring machines would go through potentially sensitive strata to construct new tunnels. APEs are described below:

Tunnel Construction

Construction in the Harbor. The APE for the construction of the tunnel in the Harbor is the tunnel alignment where the tunnel would be bored or immersed. Of concern is the potential for any submerged ships in the harbor. The potential for submerged prehistoric and/or historic-period resources are addressed in the APEs for the landside construction, described below.

Landside Construction. The APEs for the construction of the tunnel in Brooklyn, Staten Island, and New Jersey are as follows:

- New Jersey: The New Jersey tunnel alignment would be built within Greenville Yard and along the Greenville Branch. There would also be improvements made to Greenville Yard in the Rail Freight Tunnel Alternative, described below under "Rail Yard Improvements." Therefore, the APE has been defined as the entire Greenville Yard and the Greenville Branch to the point at which the tunnel would meet existing grade just east of the New Jersey Turnpike Extension. The APE extends in the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- Staten Island: The APE for the tunnel alignment includes the anticipated area of impact for the tunnel alignment as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. The APE for the tunnel alignment extends into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.
- As described above, several tunnel options are under consideration for Brooklyn. The harbor tunnel may enter Brooklyn at the shoreline at 65th Street Yard (northern tunnel alignment) or it may enter at the shoreline near Owls Head Park (southern tunnel alignment). A possible tunnel alignment link ("waterfront tunnel alignment") to the Brooklyn waterfront is also being considered along First Avenue. The APEs for the bored portion of the tunnel alignments includes the anticipated area of impact for the tunnel alignments as well as the area located within one block on either side of the tunnel alignment. This APE accounts for potential variations in the tunnel alignment as project engineering proceeds. For the northern and southern tunnel alignments, the APE for the open cut and cut and cover sections (from 6th Avenue to 11th Avenue), is the anticipated area of impact along the Bay Ridge Branch right of way. For the waterfront tunnel alignment, the APE for the cut and cover and open cut sections is the area from 53rd to 45th Streets along First Avenue. As engineering proceeds and geotechnical boring results become available, the APEs may become more narrowly defined. The APEs for the northern and southern tunnel alignments also extend into the water beyond the existing shoreline to encompass areas that may have been previously inhabited or utilized prehistorically or historically but are presently submerged.

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The APE for excavation associated with rail yard improvements at the Greenville Yard in New Jersey, 65th Street Yard in Brooklyn, Arlington Yard and Port Ivory Yard in Staten Island, and the new Maspeth Yard in Queens is the entirety of each yard. This APE may be reduced as definitive construction impact areas at each rail yard are identified.

Rail Clearances

The APE for excavation associated with increasing clearance heights encompasses the anticipated area of impact, which is not expected to exceed 4 feet vertically. All clearance work would occur within the existing right-of-ways of the Bay Ridge Branch (20,400 feet horizontally), Staten Island Railroad (6,000 feet horizontally), and Montauk Branch of the LIRR (6,100 feet horizontally). If the reconstruction of overpasses is required, the APE is defined as the area of potential construction impacts.

We look forward to discussing with you the project and the proposed definitions of the APEs for historic and archaeological resources. Jennifer Wong from AKRF, Inc. will be contacting you to set up a meeting at a time convenient for you and your staff. In the meantime, please contact Nathan Riddle at AKRF, Inc. if you have any questions or need further clarification.

Sincerely,

Richard E. Backlund

Richard E. Backlund
Intermodal Transportation Coordinator
Federal Highway Administration - New York Division

Cc: Michael Saunders, FRA
Charles Scott, NJSHPO
Alice Cheng, NYCEDC
Dan Baer, STV, Inc.
Esther Siskind, AKRF, Inc.

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cc: Anne Lake
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Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

MAR 14 2002

Mr. Richard Backlund
Intermodal Transportation Engineer
Federal Highway Administration
New York Division
Leo O'Brien Federal Building, Seventh Floor
Albany, NY 12207

Ref: Cross Harbor Freight Movement Project EIS
New York and New Jersey Study Areas

Dear Mr. Backlund:

On March 6, 2002, we received your request for the Council to participate in Section 10 consultation for the referenced undertaking, which was submitted in accordance with 36 CFR Part 800 "Protection of Historic Properties." Specifically, Section 800.6(a)(1) of our regulations specifies that the federal agency shall notify the Council of an adverse effect determination after the finding has been made. The background documentation included with your submission does not meet the specifications in Section 800.11(e) of the Council's regulations. We, therefore, are unable to determine whether Appendix A of the regulations, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, applies to this undertaking at this time. While we appreciate the early notification of this project, we need additional information in order to determine the level of our involvement. Accordingly, we request that you submit the following information so that we can determine whether our participation in the consultation to resolve adverse effects is warranted.

- A description of the steps taken to identify historic properties;
- A description of the affected historic properties, including information on the characteristics that qualify them for the National Register;
- A description of the undertaking's effects on historic properties;
- An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and
- Copies or summaries of any views provided by consulting parties and the public, including correspondence from the State Historic Preservation Office.

Upon receipt of the additional information, we will notify you within 15-days of our decision. Should you have any questions, please contact Karen Theimer Brown at 202-606-8534 or via eMail at ktheimer@achp.gov.

Sincerely,

Don L. Klima
Director
Office of Federal Agency Programs

CC: -Anne Locca
-Claudia Coney
-Ryan
FYI-

New York City
Economic Development
Corporation
Andrew M. Alper, President

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FACSIMILE COVER SHEET

Date 3/27/02

To Esther Siskend cc: Dan Baer, Buzzson

Fax Number 447-5548, 777-8463, 214-0392

Subject SHPO

From Aric Chen

Number of Pages (including cover sheet) 2

Comments

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

518 237-8643

March 18, 2002

Richard E. Backlund
Intermodal Transportation Coordinator
Federal Highway Administration-New York Division
Leo W. O'Brien Federal Building, Seventh Floor
Albany, New York 12207

Dear Mr. Backlund:

Re: FHWA/FRA
Cross Harbor Freight Movement Project
Staten Island, Richmond County
01PR3336

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). The SHPO has reviewed your March 1, 2002 letter concerning the Cross Harbor Freight Movement Project in accordance with Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations.

Based upon this review, the SHPO concurs with your definition of the Area of Potential Effect (APE) for each of the project alternatives.

When responding please be sure to refer to the SHPO project review (PR) number noted above. If you have any questions, please feel free to call me at (518) 237-8643 ext. 3268.

Sincerely,

Robert D. Kuhn
Assistant Director

RDK:hsd

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

June 21, 2002

Nathan J. Riddle
Historian
AKRF, Inc.
117 East 29th St.
New York, NY 10016-8022

Re: Cross Harbor Freight Movement Project
Richmond and Kings counties
FHWA, FRA
01PR03336

Dear Mr. Riddle:

Thank you for your letter and enclosures of June 10. As you have correctly noted, the rail tunnel project has the potential to impact historic shipwrecks in Upper New York Harbor. This is a particularly important issue in the shoreline areas, where the immersed tube method of construction may be employed requiring excavation of the harbor bottom from the surface, and where the construction of ventilation structures will involve similar excavation. Over the years, we have collected some data on shipwreck sites in the state, often as a result of dredging or utility projects. We do not have comprehensive data on the areas around the proposed tunnel alignments, but recent acoustical surveys for the Corps of Engineers in adjacent shoreline areas along Staten Island show extensive deposits of wooden shipwrecks (New York and New Jersey Navigation Study, Pan American Consultants, Inc., March 2002, 99PR03466). There is a strong possibility of similar conditions near the proposed tunnel termini. The same survey conducted for the Corps along the edges of the main navigation channel between Staten Island and Brooklyn suggests that there are six or seven potential wrecks several thousand feet east of the Staten Island Ferry Terminal. This information confirms the likelihood of numerous historic shipwrecks in the project area and the need for a thorough underwater survey of all areas involving open excavation.

I would also like to point out that the path of the proposed Staten Island alignment passes directly beneath the National Register listed Office Building and United States Light-House Depot Complex and it's historic buildings, wharf and subterranean vaults. Construction in this area will require extreme caution and close consultation with our office as plans are developed.

We look forward to continuing consultation with your office as plans develop and significant historic and cultural resources are identified. Please feel free to call with any questions at 518-237-8643 ext. 3258.

Sincerely,

Mark L. Peckham
Historic Preservation
Program Coordinator