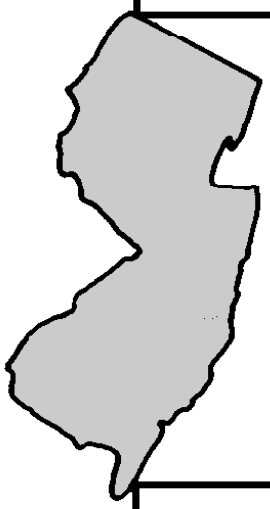
FHWA-NJ-EA/4(f) # 2003-01 Federal Project # MG-RDM-7675(110)

Federal Highway Administration

Route 7, Section 2, Wittpenn Bridge Over the Hackensack River

Town of Kearny and
The City of Jersey City

Hudson County, New Jersey



ENVIRONMENTAL ASSESSMENT/ DRAFT SECTION 4(f) EVALUATION

U.S. Department of Transportation
Federal Highway Administration
and
New Jersey Department of Transportation

Submitted Pursuant to 42 U.S.C. 4332(2)(c),
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May, 2003

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For New Jersey Department of Transportation — Date 5-29-03

For Federal Highway Administration — Date 5-30-03

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ROUTE 7, SECTION 2, WITTPENN BRIDGE
ENVIRONMENTAL ASSESSMENT/SECTION 4(f) EVALUATION

TABLE OF CONTENTS

TABLE OF CONTENTS - continued

LIST OF TABLES

APPENDICES

APPENDIX A – FIGURES

TABLE OF CONTENTS - continued

APPENDICES (Cont.)

1.0 INTRODUCTION AND DESCRIPTION OF PROPOSED ACTION

The New Jersey Department of Transportation (NJDOT) is proposing to replace the Route 7 Wittpenn Bridge over the Hackensack River, and to realign Fish House Road on the west side of the River. The proposed project is located within the City of Jersey City (east side of the River) and the Town of Kearny (west side of the River) in Hudson County, New Jersey (Figure 1). The Wittpenn Bridge carries Route 7 traffic over the Hackensack River, and serves as a major connector between Routes 139 and 1&9 Truck (1&9T) to the east, and the New Jersey Turnpike Interchange 15W and Newark/Jersey City Turnpike to the west.

Route 7 is a key component of the Department's Portway Corridor, allowing traffic from the west to gain access to the Holland Tunnel and New York City, as well as business and industrial areas within the City of Jersey City. Route 7 also serves as a main trucking route that ships people and goods between the New York Metropolitan area and the greater area of Kearny and the Meadowlands. The Portway Project is a series of improvement projects undertaken by the NJDOT in cooperation with New York and Pennsylvania that will strengthen access to and between the Newark-Elizabeth Air/Seaport Complex, intermodal rail facilities, trucking and warehousing/transfer facilities, and the regional surface transportation system. These facilities and their access routes are the front door to global and domestic commerce for New Jersey and the greater metropolitan New York region.

The Wittpenn Bridge has been in constant use by vehicular and pedestrian traffic since it's opening in 1930. It is a vertical lift bridge that is in need of major rehabilitation or replacement. The replacement of the bridge will also require improvements to the associated interchanges, including Fish House Road on the west side of the River and 1&9T St. Paul's Viaduct Project on the east side of the River. The current bridge condition is deficient in terms of traffic capacity and public safety. The existing bridge and its interchanges have an overall condition rating of "poor" (Hardesty & Hanover, LLP 2000) due to the present state of the deck, superstructure, substructure, and approach roadways. Based upon this rating, the bridge is considered to be substandard structurally, geometrically, and in terms of traffic safety. The bridge is also substandard operationally, creating large conflicts between vehicular and marine traffic due to bridge openings. Marine traffic attempts to navigate the channel against the flow of the tide to maintain greater control of maneuverability, but generally this marine traffic cannot pass through the bridges during periods of peak vehicular traffic flow. There are, however, times when tidal factors dictate that marine traffic cannot wait until off-peak or evening hours. Raising the bridge during these peak periods results in massive delays to vehicular traffic. A higher bridge profile will drastically reduce the frequency of bridge openings and will mitigate the current conflicts between marine and vehicular traffic.

This Environmental Assessment (EA)/Section 4(f) Evaluation has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), as implemented by the Council on Environmental Quality (CEQ) Regulations and Federal Highway Administration (FHWA) Procedures, and pursuant to Section 4(f) of the Department of Transportation Act. This EA has been prepared to identify and assess potential social, economic, and environmental impacts that could result from the proposed project.

1.1 Existing Facilities

The following describes the existing conditions for the Wittpenn Bridge and its approach roadways.

1.1.1. Roadways

State Highway Route 7 that extends from 1&9T in the City of Jersey City, westward to the Passaic River in Clifton. Its total length is approximately 10 miles, with the east-west section extending within the Town of Kearny and the City of Jersey City for a total length of 5.3 miles. The Project Area (Figure 1) lies within the eastern portion of the east-west corridor, extending from milepost (MP) 0.00 at Charlotte Avenue, to MP 1.00 (a viaduct crossing of the NJ Transit Morris & Essex Tracks.

The project portion of Route 7 is an urban, limited access land service highway classified as a principal arterial on the National Highway System. The lane configurations within the project area are as follows:

> Near the western terminus of the project, Route 7 has three 12 foot lanes, a 2'-8" left shoulder, and a 12 foot right shoulder in each direction. The eastbound and westbound roadways are separated by a grass median or median barrier.
>
> The bridge section of Route 7, carrying traffic over the Hackensack River via the Wittpenn Bridge, has a curb to curb width of 40 feet and carries two- 10-foot lanes in each direction without a shoulder. The two directions of traffic have no median barrier or other means of physical separation, with only a double-yellow stripe dividing the eastbound and westbound traffic. The roadway is flanked by two 8-foot wide pedestrian walkways. The walkways are separated from traffic by a rigid-post corrugated beam guide rail that is supplemented by a channel section rub rail mounted approximately one foot above the top of curb.
>
> The eastern terminus of the project is a series of ramps and approach roadways that vary in width. The approaches and ramps will be reconstructed under the 1&9T St. Paul's Viaduct Project.

The project area also encompasses the interchange between Route 7 and Fish House Road, and modifications to the signalized intersections constructed as part of the Charlotte Circle elimination project currently under construction. Fish House Road (Hudson County Route 655) provides connections for several industrial sites, including truck and intermodal terminals located south of Kearny. Fish House Road traffic is dominated by large trucks that serve these facilities, including the CSX Transportation/Norfolk Southern (CSX/NS) intermodal facility immediately southwest of the Wittpenn Bridge.

Access to Fish House Road from westbound Route 7 is provided via an exit loop ramp with a horizontal radius of 170 feet (corresponding to a 25 miles per hour design speed). The other loop ramp from Fish House Road to eastbound Route 7 has a horizontal radius of only 75 feet (corresponding to a 15 miles per hour design speed). The Route 7 eastbound exit ramp to Fish

House Road and the entrance ramp from Fish House Road are both movements made from the left travel lanes. Substandard acceleration/deceleration lanes exist, which creates a dangerous condition along the roadway.

The current Level of Service (LOS) for the project section of Route 7 and its associated interchanges is currently between a Level C and a Level F during the AM peak period, and between a Level C and a Level E during the PM peak period. Posted speed limits vary within the project limits. The posted speed at the westerly limit of work is 50 miles per hour (MPH); whereas, eastbound traffic approaching the bridge from Jersey City is limited to 35 MPH. The posted speed in the westbound direction departing the bridge in the vicinity of Fish House Road is 40 MPH.

Crash information for the three-year period from 1999 through 2001 indicates 125 crashes occurred within the project limits, 39 of which involved personal injury. The 125 crashes varied in severity, location and type. Two (1.6%) were fatal, 93 (74%) occurred between intersections (instead of at an intersection), 48 (38%) were side collisions between vehicles traveling in the same direction. A total of 91 crashes (73%) occurred on a dry surface and 73 (63%) occurred during the day. It is important to note that the number of head-on collisions of vehicles heading opposite directions was 17 (14%). The state average for head-on collisions is 1.6%.

According to NJDOT (2003), the actual crash rates within and near the project limits vary, as do the existing cross sections. Rates are 9.66 crashes per million vehicle miles (cr/mvm) between MP 0.10 and .55 (where neither median nor shoulders exist); 4.83 cr/mvm between MP 0.56 and 0.82 (where there is a grass median and no shoulders); 1.02 cr/mvm between MP 0.83 and 1.18 (where there is a barrier in the median and shoulders), and 2.55 cr/mvm between MP 1.19 and 1.70 (where there is a grass median and shoulders).

1.1.2 Bridge

The existing Wittpenn Bridge is a movable vertical lift bridge that was built in 1930, with a major rehabilitation performed in 1953. Other rehabilitation efforts occurred in 1971, 1973, and 1992. The bridge is 2,169 feet long with fourteen deck-girder and three through-truss approach spans, two tower spans, and a 209-foot vertical lift span. The 209-foot vertical lift span provides approximately 35 feet of vertical clearance above Mean High Water (MHW) in the closed position and 135 feet when opened. A continuous fender system exists between Wittpenn, the PATH, and CSX/NS bridges, providing a 158-foot wide navigation channel. The western eight piers, including all river piers and the pier and abutment used to span Fish House Road, are shared by the adjacent CSX/NS freight bridge (Figure 14).

The following is a summary of observed physical deficiencies from the Bridge Re-evaluation Survey Report - Cycle No. 10, February 2000, by Hardesty & Hanover, LLP.

Several structural deficiencies can be observed on the bridge deck. The underside of the deck has moderate to severe scale cracking and isolated areas of small spalls with exposed and rusted reinforcement. The asphalt-wearing surface has few potholes, and areas of medium alligator cracking. The deck joints have a light accumulation of dirt and debris with some areas of depressed joint material. It has also been observed that the fixed approach through truss spans

and above deck portions of the superstructure exhibit peeling paint throughout with areas of light to moderate rusting.

The superstructure displays several deficiencies as well. There are numerous areas of severe rust with small holes in the webs of floor beams throughout the lift span. Some of the lower chord members exhibit several areas of rust on angle legs with up to 50% loss of a section. Areas along the top of the sidewalk stringers have severe rust with holes at the underside of the deck. There are bearings that are surrounded by moderate to heavy accumulation of dirt and debris, sometimes impacting the operation of expansion bearings. This has caused some of the bearings to shift and fall out of alignment. Much of the concrete encasements below the deck exhibit fine to medium longitudinal and random cracks with efflorescence. Discoloration is noticed throughout, and the concrete encasements have spalled or been mechanically removed at several locations, thus leaving several rusty steel members exposed.

The substructure also demonstrates several structural deficiencies. There are wide, full-height horizontal and vertical cracks through the west abutment and several piers. The steel collar straps around the concrete columns at several piers are severely rusted with 25% section loss of the connecting rods and nuts. The granite facing of crash walls at several piers had mortar loss of up to 100% in numerous joints. The structure also fails to meet current seismic design criteria.

In terms of operation, the machinery requires lubrication and adjustments of the live load shoes and uphaul/downhaul ropes. Sheaves, trunnions, and main counterweight ropes are also in poor condition. The sheaves have experienced cracks, and the counterweight ropes have experienced extensive corrosion loss where they contact gatherers and separators.

Aside from structural deficiencies, the existing bridge also has several features that render it substandard and functionally obsolete. The bridge currently carries two – 10 foot lanes in each direction without shoulders or median barriers, creating a dangerous situation for motorists. The open steel grid deck has been noted as being slippery when wet, compounded by a lack of median barriers. A lack of shoulders on the bridge approaches results in ponding widths that encroach upon travel lanes beyond the one-third lane width prescribed in the NJDOT Roadway Design Manual. There is also a substandard horizontal radius at the entrance and exit ramps to and from Fish House Road and the west bridge approach, as well as, inadequate acceleration and deceleration lanes. Finally, the deck geometry and lateral under-clearance at Fish House Road are substandard.

Due to the substandard deck geometry and lateral under clearance, the structure is considered functionally obsolete. Due to the poor condition of the deck, superstructure and substructure, the structure is considered structurally deficient.

1.1.3 Hydraulic/Drainage Problems

There is a flooding condition on Fish House Road beneath the Wittpenn and CSX/NS bridges. At this location, there is an approximate vertical clearance of 13’8” from the roadway to the structures. The roadway low point is approximately 2 feet above the Hackensack River MHW. The existing outfall pipes that drain the low point areas of the roadway lack floodgates and

discharge at or near the low tide elevation. This creates a situation where tidal action has, in the past, washed onto the roadway during high tide periods, especially during storms or windy conditions that may create tidal surges. The runoff stays trapped on the roadway, which exacerbates the flooding condition.

The Owens Corning site (northwest of the Wittpenn) has also been plagued by flooding for many years, especially since the reconstruction of the Route 7 and Fish House Road interchange in the mid-1970's. The site originally drained southward to the drainage system within Newark Turnpike right-of-way. The reconstruction being several feet above the original ground surface changed the existing stormwater runoff patterns. To accommodate the fill slopes, surface flows are carried in a peripheral ditch that is subject to growth of vegetation, accumulation of silt and debris, and the same tidal concerns that affect Fish House Road.

1.1.4 Utilities

The bridge is located in an area that is heavily industrialized, and the project area is crowded with utilities that support this industrial use. Utilities include submarine cables, overhead and underground telephone and fiberoptic lines owned by Verizon, ATT, and Sprint; water lines for the Town of Kearny and the City of Jersey City; electric lines; Transco Pipeline; Public Service Electric & Gas (PSE&G) gas pipelines; PSE&G high tension transmission lines; Amerada Hess pipeline; and Jersey City sewer. The railroad companies, including PATH, CSX/NS, and CONRAIL, also maintain facilities within the project limits.

Terminal Ventures, Inc. maintains an oil pipeline that services its tank farm in Jersey City. Owens Corning maintains an asphalt pipeline that services its distribution center in Kearny. Both of these lines provide means for off-loading raw materials from their docks along the Hackensack River.

1.2 Proposed Action

In order to solve the aforementioned problems and deficiencies, the NJDOT proposes to replace the existing Wittpenn Bridge, as well as the approaches and interchanges. The new bridge and approaches will eliminate structural deficiencies and substandard features, improve traffic operations and safety of the roadway, bridge and interchanges, respond to future growth as part of the Department's Portway project, and minimize vehicular and navigation conflicts.

1.2.1 Bridge Design Specifications

The new Wittpenn Bridge will be designed in accordance with current specifications of NJDOT, American Association of State Highway and Transportation Officials (AASHTO), and FHWA, including requirements for Load and Resistance Factor Design (LRFD). The design life is 100 years and traffic design data will be for the year 2025. Construction of the new bridge will be off line, which will allow the existing bridge to remain in operation during construction of the new bridge (Figure 3). Construction of the approaches will be staged to minimize impacts to existing traffic operations.

The roadway on the bridge section (Route 7) will have two 12-foot lanes with a 12-foot auxiliary lane on the bridge, an 8-foot to 10-foot wide right shoulder, and a 3-foot to 5-foot wide left shoulder in each direction. Opposing lanes of the roadway will be separated by a median barrier. One 6-foot wide sidewalk will be included along the eastbound roadway to accommodate pedestrian traffic. Fish House Road will provide two 12-foot lanes in each direction, with a 12-foot shoulder where feasible. This roadway section is consistent with the improvements proposed in another of the Portway Projects, the Pennsylvania Avenue/Fish House Road widening, at the southerly limit of work along the relocated Fish House Road.

The current navigational channel, as maintained by the United States Army Corps of Engineers (USACOE), is 300 feet wide. The new bridge will not alter the existing channel, and it will maintain a movable bridge clearance of 135 feet above MHW when open, per United States Coast Guard (USCG) requirements. The movable bridge will be 70 feet above MHW in the closed position. This will be a significant improvement over the existing 35-foot clearance in the closed position. The 158-foot face to face fender system, which is shared with the CSX and PATH vertical lift bridges, will be extended through the new structure.

1.2.2 Approach Spans

The approach spans will be 110'-6" wide and 150 to 250 feet long. The variable span lengths will yield the most economical superstructure, and will allow for flexibility in pier placement. The flexibility will ensure the least amount of impact to sensitive lands within the project site. The spans will include four 12-foot traffic lanes, two 12-foot auxiliary lanes, two 8-foot outer shoulders, two 5-foot inner shoulders, one 6-foot sidewalk, and 6'-6" parapets that include the media/side barriers. Retaining walls will be used at numerous locations throughout the project to minimize impacts to the adjacent property owners.

1.2.3 Ramps (On Structure)

The ramps will have varying deck widths between 26 and 30 feet. Generally ramps will have one 2-foot striped shoulder, one 16-foot lane, one 8-foot shoulder (required for stopping distance), and two parapets. Retaining walls will be used where the profile grade line is less than 25 feet above existing grade.

1.2.4 Foundations

Foundations will be constructed to support the large loads from the bridge and approach span superstructure. River piers and land piers will be supported on drilled shafts founded in bedrock. Drilled shafts will also be favored in pier locations that are near several utilities, in order to minimize disturbance to existing lines. Pipe piles and H-piles could also be used to support land piers and retaining walls.

1.2.5 Traffic Requirements

The bridge design will incorporate a design speed of 45 mph beginning west of the Fish House Road interchange along Route 7. Relocated Fish House Road will have a 30 mph design speed. All interchange ramps will be designed for 25 mph. The ramp to Newark Avenue will be

designed for 35 mph. Newark Turnpike and old Fish House Road will be designed for 25 mph. Jughandle Ramp J will be designed for 15 mph. The traffic design will be based on an analysis of the two-way traffic flow, with an assumption of 40,850 average daily trips, and 20% of all vehicles being trucks. The mainline will be constructed for a capacity of LOS D.

1.2.6 Safety Improvements

The bridge will be constructed to improve safety, and to reduce present safety hazards. A concrete/steel median barrier will be provided to separate opposing traffic traveling on the bridge. Access for operation and inspection of the bridge will be incorporated into the design. Safety gates and warning lights included. Improvements to the Fish House Road interchange should reduce the accidents resulting from substandard geometry and left exits and entrances.

Highway and intersection lighting will be provided in accordance with current NJDOT guidelines on the bridge, ramps, and roadways. Navigation lights and a clearance gauge will be provided for safe navigation of marine traffic, per US Coast Guard regulations.

1.2.7 Other Considerations

Right-Of-Way: Right of Way acquisition will be needed for the project in both the Town of Kearny and the City of Jersey City.

Cultural/Historic Resources Requirement: Consideration will be given to the fact that the existing bridge has been recommended as individually eligible for the National Register of Historic Places and as a contributing component of the New Jersey Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District.

Public Access: Consideration has been given to avoiding any restriction to public access to the waterfront. Sidewalks will be maintained throughout the project area.

2.0 PURPOSE AND NEED

The NJDOT is proposing to replace the Wittpenn Bridge and approach roadways in Jersey City and Kearny in Hudson County, New Jersey. This bridge is part of the major transportation network within the region and is essential to the efficient movement of people and goods within the New York metropolitan area. This transportation corridor includes both rail facilities and roadways converging to form a vital link in the transportation network serving the metropolitan area.

This chapter discusses the geographic setting of the Wittpenn Bridge and sets forth the purpose and need for the proposed action.

2.1 Project Setting And Background

The Wittpenn Bridge is located between Kearny and Jersey City, a key location for industrial/commercial warehouse operations because of its access to the regional roadway network. In the immediate vicinity of the bridge are major utility and industrial sites such as the CSX Intermodal Complex, PSEG's high tension transmission towers and Kearny Generating Station, and Owens Corning Asphalt/Roofing Distribution Center. Interstate Route 280 and the New Jersey Turnpike are to the west, the Holland and Lincoln Tunnels provides access to New York City to the east, and Route 3 is located to the north. Important passenger and freight rail facilities in the area include the Northeast Corridor—providing both Amtrak regional service and New Jersey Transit local service. This concentration of freight facilities in the vicinity of the Wittpenn Bridge results in the heavy volume of truck traffic currently using the existing transportation network.

2.1.1 Wittpenn Bridge

The Wittpenn Bridge, a vertical lift bridge, is 2,169 feet long with fourteen deck-girders and three through-truss approach spans, two truss tower spans, and a 209-foot vertical lift span. The vertical lift span provides approximately 35 feet of vertical clearance above MHW in the closed position and 135 feet when opened. The fender system is continuous through the PATH and CONRAIL bridges downriver, providing a 158-foot wide navigation channel. The adjacent CONRAIL freight bridge shares the western eight piers, including all the river piers, and the pier and west abutment used to span Fish House Road.

The roadway on the bridge has a curb-to-curb width of 40 feet and is undivided with two 10-foot travel lanes without shoulders in each direction. It has no median barriers or other physical separation and only a double yellow stripe separates opposing traffic lanes. The roadway is flanked by two eight-foot wide sidewalks, separated from traffic by a guide rail supplemented by a channel section rub rail mounted approximately one foot above the top of curb.

Previous rehabilitations to the Wittpenn Bridge occurred in 1953, 1971, 1973, and 1992. The 1953 repairs included truss reinforcement of the tower and lift spans, redecking of the lift spans, and repairs to both approaches. The 1971 repairs included grading, paving, and structural repairs. The 1973 repairs included repairs to the fender system. The 1992 interim repairs

included column and bearing repairs to one pier, truss repairs to three spans, lift span repairs, and lift span sidewalk replacement repairs. Other emergency repairs and modifications have been performed in subsequent years to the present, most notably to the mechanical systems, the deck system, and the fender system.

2.1.2 Roadway Network and Bridge Approaches

Route 7 is designated as an urban principal arterial. It begins at Route 1&9T Charlotte Circle in the City of Jersey City and extends west across the Hackensack River, through industrial areas in South Kearny and developed sections in the Town of Kearny to the Passaic River and Belleville to Clifton. Its total length is approximately 10 miles, with about 5.3 miles within Kearny and Jersey City.

The Wittpenn Bridge project area lies at the east end of the Route 7 corridor, extending from Charlotte Avenue to a viaduct crossing of the New Jersey Transit Morris & Essex Tracks (Figure 1). In the project area, Route 7 serves as the connection between the Newark Turnpike, County Route 508, and the New Jersey Turnpike to the west, and U.S. Routes 1&9T and State Highway Route 139 to the east. It provides a key connection from the west to the Holland Tunnel and New York City, as well as business and industrial areas within the City of Jersey City. It also serves as a main route for truck traffic serving industries in the greater Kearny/Meadowlands area.

At its east approach to the Wittpenn Bridge, Route 7 connects with Routes 1&9T and Charlotte Avenue. At the west approach, an interchange built in the 1970's provides direct connections between Route 7 and Fish House Road. Fish House Road connects the major industrial sites and intermodal terminals located between Route 7 and Route 1&9T in Kearny. Traffic along Fish House Road is predominately large trucks from these facilities, including the CSX Intermodal facility immediately southwest of the Wittpenn Bridge. The exit from Route 7 eastbound to Fish House Road and the entry from Fish House Road to Route 7 eastbound are from the left travel lanes with substandard acceleration/deceleration lanes, creating an undesirable geometric condition.

West of the Fish House Road Interchange is a viaduct, also constructed in the early to mid 1970's, over the New Jersey Transit Morris and Essex tracks. This viaduct connects to an interchange with the Belleville-Newark Turnpike (State Highway Route 7, County Route 506) and Newark Turnpike (County Route 508). County Route 508 provides connections to the New Jersey Turnpike and Interstate Route 280.

2.1.3 Travel Conditions

The Route 7 corridor is near saturated conditions in the vicinities of the Fish House Road interchange, the Wittpenn Bridge, and the Charlotte Traffic Circle during peak travel periods. Factors fueling increased demand include the commercial and industrial port facilities, nearby major regional employment centers, and businesses in the Jersey City/Kearny area. In addition,

Route 7 is a vital link in the regional roadway network that provides access to these areas and facilities.

Traffic volume is also high on other highways leading to the Wittpenn Bridge. The proposed improvements to the Fish House Road interchange and Wittpenn Bridge will improve mobility, increase capacity, and reduce congestion.

While travel demands have been increasing in the corridor, the operating conditions on the bridge have been deteriorating. With only four 10-foot travel lanes and no shoulders, the Wittpenn Bridge frequently experiences congestion during the morning and evening peak periods. In light of the structural conditions of the bridge, maintenance and repair activities are projected to continue throughout the remaining service life of the bridge. Prevailing conditions are likely to deteriorate during periods when bridge maintenance is occurring.

2.1.4 Other Proposed Actions in the Vicinity of the Proposed Project

As noted, there are several other proposed projects in addition to the Wittpenn Bridge project that are expected to affect the traffic patterns in the study area. Following is a description of these projects that are illustrated in Figure 4.

Portway - NJDOT is currently developing the comprehensive "Portway International Intermodal Corridor" to enhance the mobility of commercial traffic along the New Jersey waterfront. Portway is intended to improve the efficiency of the waterfront/landside interface as a means to maintaining and enhancing economic vitality. The Portway project includes a series of projects, including the Wittpenn Bridge and Fish House Road, that will strengthen access to and between the Newark-Elizabeth Air/Seaport Complex, intermodal rail facilities, trucking and warehousing/transfer facilities, and the regional surface transportation system. It is divided into three phases.

In Phase 1, improvements would extend approximately six miles from Ports Newark and Elizabeth in the south to the vicinity of County Road in the north. Improvements in Phase 2 would extend north from the terminus of Phase 1, extending approximately five miles to the Little Ferry Rail Terminal. Phase 3 would extend east across Newark Bay and serve Port Jersey, the potential new port facilities at the Military Ocean Terminal at Bayonne (MOTBY) and other facilities. There are currently studies underway within the Department to identify ways to mitigate global impacts for all of the Portway Projects.

Route 1&9T St. Paul's Viaduct Improvement - With this project, the existing Truck Route 1&9T viaduct would be reconstructed on a new alignment north of the current structures. Replacing the viaduct on a new alignment would provide improved traffic flow in the project area. The new alignment would incorporate new or modified approach roadways, structures, and ramps necessary to improving traffic movement in the area. These new facilities would improve connections between Route 1&9T, Route 7, Pulaski Skyway, Route 139, Route 1&9 north of Tonnele Circle, and local streets in the City of Jersey City.

Construction of the improvements to Route 1&9T is anticipated to precede the construction of the Wittpenn improvements by one year and then run concurrently. The eastern terminus of the

Route 7/Wittpenn Bridge project will be designed to be compatible with the proposed improvements to Route 1&9T project. Interim connections between the existing bridge and the new interchange on the east approach are to be provided as part of the Route 1&9T improvements.

Route 139 (1) - This project involves reconstruction and rehabilitation of four viaducts in the City of Jersey City, two for roadways and two for railroads. Due to the complexity of the project, it has been broken down into three separate contracts. Contract No. 1 involves concrete encasement removal, cleaning, and painting of structural steel, and substructure repairs and is currently under construction. Contract No. 2 involves deck replacement and superstructure rehabilitation and is scheduled for construction in 2003. Contract No. 3 involves rehabilitation of the Hoboken viaduct, superstructure rehabilitation on the Conrail viaduct and associated local roadway improvements to improve operations. It is scheduled for construction in 2004.

Bergen Arches - The Bergen Arches right-of-way is an abandoned railroad corridor about one mile long that cuts through highly developed Jersey City. The Bergen Arches parallels Route 139 extending from below J.F. Kennedy Boulevard near Tonnele Avenue in the west and Palisades Avenue in the east. This series of arch structures provides a transportation corridor for future development of the Hudson River Waterfront.

The Bergen Arches project is currently in the early planning stages, and no decision has been made as to how the Arches will ultimately be used. Because the Bergen Arches are located in a prime location, several options are being evaluated to determine the best use. Local planners prefer a new roadway/gateway to relieve congestion in the area and to help motorists heading to downtown Jersey City avoid the New York City bound traffic. However, there is also support for non-automotive options such as freight, passenger rail, light-rail, or a bus-way.

Allied Junction/ Secaucus Transfer - A new interchange on the New Jersey Turnpike (Route 95) would be constructed concurrently within this project area to serve a new rail and commercial development being built in Secaucus. The new interchange would be about two miles south of Route 3 (existing Interchange 16E/18E), and would include a toll plaza and a 1.5-mile long connector road. The connector road will probably ultimately link the new interchange with Tonnele Avenue and possibly the Bergen Arches project.

2.2 Project Need

To meet the safety and capacity needs of vehicular, marine, and pedestrian traffic, and NJDOT is proposing the coordinated replacement of the Wittpenn Bridge to:

- *Replace a Structurally Deficient Bridge.* The bridge is structurally deficient and in an advanced state of deterioration. It has required frequent repairs over the last 50 years, and is now beyond feasible and cost-effective repair. Addressing the need to replace this deteriorated bridge and approach roadways is the principal and immediate purpose of the proposed action. While the Wittpenn Bridge does not currently have a posted weight limit, continued deterioration may require this to be re-evaluated.

- *Meet Current Design Criteria and Improve Traffic Operation Safety.* Potentially hazardous conditions in the corridor result from constrained design features and operating conditions on the bridge and approaches. The existing bridge is characterized by low operating speeds, lack of shoulders, and narrow lane widths.

- *Improve Traffic Service for the Region.* The Wittpenn Bridge provides one of the key direct east-west connections between New York City/Lower Manhattan and the developed areas of northern New Jersey. Currently the Wittpenn Bridge operates at or near its capacity during daily peak periods.

- *Increase Vertical Clearance for the Hackensack River*. The 35-foot vertical clearance of the Wittpenn Bridge in the closed position requires frequent opening of the bridge with resulting backups on the approach. Recent further studies have recommended a minimum vertical clearance of 70 feet above MHW for any new vertical lift bridge.

- *Reduce Maintenance Cost and Traffic Disruptions*. Four major rehabilitations have been undertaken on the bridge over the last 50 years. In the most recent in 1992, the Wittpenn Bridge underwent interim repairs including column and bearing repairs, truss repairs, and lift span repairs. The bridge will require continuing inspection and maintenance, in addition to painting and other routine maintenance services. Repair and maintenance activities cause major disruptions in traffic flow because of the substandard lane widths and lack of shoulders on the bridges.

These needs are described in detail below.

2.2.1 Replace a Structurally Deficient Bridge

Based on the recent survey, the Wittpenn Bridge and approach roadway and interchanges are structurally deficient, functionally obsolete, and in an advanced state of deterioration. The 2000 Cycle 10 Bridge Re-evaluation Survey Report prepared by Hardesty & Hanover, LLP states that the overall condition of the Wittpenn Bridge is poor due to the conditions of its deck, superstructure and substructure, as well as safety deficiencies on the bridge and its approach roadways. The Wittpenn Bridge has a Structural Inventory and Appraisal (SI&A) Sufficiency Rating of 30 out of 100.

The re-evaluation report notes that the deck is in poor condition due to previous water leakage in the concrete deck of the approach spans as evidenced by efflorescence and stalactites throughout. The superstructure is in substandard condition due to severe deterioration and section loss of structural members. Also several through truss spans exhibit peeling paint throughout with some areas of light to moderate rust. The condition of the substructure is poor due to wide, full-height vertical and horizontal, full-depth cracks through the west abutment and several piers.

Also because of the poor condition of the structure and the design criteria in use at that time, the bridge has limited earthquake resistance and is in need of major rehabilitation or replacement.

Besides the structural elements of the bridge, the operating machinery requires extensive maintenance and replacement and adjustment of key components. Finally, there is a flooding condition on Fish House Road beneath the Wittpenn and CSX bridges. Tidal action has been noted to wash onto the roadway during high tide periods, especially during storms or windy conditions that may create tidal surges. The Owens Corning site had been plagued by site flooding for many years, especially since the Route 7 and the Fish House Road interchange were reconstructed in the mid 1970's.

2.2.2 Meet Current Design Criteria and Improve Traffic Operation Safety

The Wittpenn Bridge and approaches include a number of geometric and structural features that do not meet current AASHTO and NJDOT minimum design criteria. The substandard features cause numerous high severity accidents.

These substandard features have reduced the safety, level of service (LOS), and operational capacity of the Wittpenn Bridge. The existing bridge is considered functionally substandard and several factors contribute to the inadequacy of the traffic service it provides. These include the following.

- Two 10-foot lanes in each direction,
- The open steel grid deck has been noted to be slippery when wet. Appropriate warning signs have been posted on the bridge approaches,
- The lack of shoulders on the bridge and approaches allows water to pond that encroach upon travel lanes beyond the one-third-lane width prescribed in the NJDOT Roadway Design Manual and limit access to emergency vehicles,
- Median barriers or other physical separation are lacking on the bridge and approaches with only a double yellow stripe provided between opposing traffic lanes,
- The east approach to the bridge has a substandard horizontal radius and super-elevation,
- The entrance and exit ramps for Fish House Road have substandard radii of curvature,
- The ramps have inadequate acceleration and deceleration lanes.

The above features are likely factors contributing to the occurrence of severe accidents on the bridge. The accident rate in the vicinity of the Fish House Road interchange is twice the statewide average. The high accident rate reflects poor geometric features at the interchange and frequent congestion on Route 7 near the Wittpenn Bridge. Replacement of the bridge provides an opportunity to bring it into compliance with current design standards likely leading to a reduction in the frequency of accidents in the area.

2.2.3 Improve Traffic Service for the Region

The Wittpenn Bridge carries Route 7 over the Hackensack River, one of the major east-west routes in the area. Traffic counts collected in April 2002, show that approximately 52,000 vehicles currently cross the bridge on a typical weekday. The bridge does not provide a safe, efficient crossing for traffic. The existing bridge operation impedes the flow of traffic and goods within the project limits and contributes to poor traffic conditions on a regional basis. Eastbound

morning rush hour traffic has been observed at a stopped condition from Charlotte Circle through the Fish House Road Interchange and beyond.

The high volume of truck traffic utilizing the bridge contributes to delays across the bridge. Trucks approaching the bridge from Fish House Road have a left hand merge with eastbound traffic at a 3.5 percent upward grade without benefit of an acceleration or climbing lane. During morning rush hour, these trucks frequently wait two to four minutes to enter the traffic flow, and then cause back-ups as they accelerate up the approach grade.

The replacement of the Wittpenn Bridge is an integral part of the Portway International Intermodal Corridor project to enhance mobility of commercial traffic along the New Jersey waterfront.

2.2.4 Provide Improvements for Navigation

The 35-foot vertical clearance of the Wittpenn Bridge in the closed position requires frequent opening of the bridge with resulting backups on the approaches. The high number of bridge openings—over 300 per year—create extensive traffic delays, frequent congestion, and a poor level of service. The lift bridge opens on demand for ships, with openings lasting from 6 to 20 minutes and a typical opening being ten minutes. During these openings traffic backs up as far as the Tonnele Circle to the east, and to the Belleville-Newark Turnpike (Route 508) Interchange to the west.

Vessel studies and surveys of owners with docks north of the existing bridge, (which confirmed earlier vessel studies), have resulted in a recommended minimum vertical clearance of 70 feet above MHW for any new vertical lift bridge. This increase from the existing 35-foot clearance would reduce annual openings from 300 per year to approximately 63 openings per year.

The existing vertical clearance of 135 feet in the open position is to remain and has been approved by the USCG.

2.2.5 Reduce Maintenance Costs and Traffic Disruption

The Wittpenn Bridge was opened to traffic in 1930. The weight and speed of vehicles have changed substantially since the bridge was constructed. These factors have affected the physical condition of the Wittpenn Bridge and thus increased the cost of maintaining the bridge. Since 1953, $13.5 million has been spent to maintain the Wittpenn Bridge; over $9 million (70 percent of 13.5 million) has been spent since 1984. As the Wittpenn Bridge ages, additional programs will be necessary to rehabilitate major components to extend safely its service life. Additionally, painting and other routine maintenance services will continue to be required.

2.3 Purpose Of Action

The purpose of this project is to provide a safe and efficient transportation link over the Hackensack River in Hudson County between Jersey City and Kearny, while also providing adequate crossing capacity to meet present and future demand levels. The project is also designed to eliminate the functional obsolescence of current design features on the bridge,

thereby improving traffic service, safety conditions, and the ability to manage traffic incidents on the bridge. In particular, the purpose of the proposed action is to:

- Replace the structurally deficient bridge.
- Meet current design standards.
- Improve traffic safety by eliminating substandard safety factors.
  Increase vertical clearances over the river to accommodate the current and future needs of the river/port users while reducing the number of bridge openings.
- Reduce the frequency of major bridge maintenance activities that disrupt traffic flow.

The proposed action, a replacement of the Wittpenn Bridge, is included in the New York Area Transportation Study 1996-2015 Transportation Plan, although the plan does not specify a preferred corridor or whether the existing bridge would be removed.

3.0 ALTERNATIVES CONSIDERED

This chapter presents the process used in selecting the Preferred Alternative, describes the Preferred Alternative, and describes and evaluates other alternatives that were considered during feasibility studies and were found not to be reasonable. "No new crossing" and "new crossing" options, including replacement in the existing corridor, were considered as alternatives to the Preferred Alternative. A comparison table of alternatives is provided with the Section 4(f) Evaluation in Section 5.0 of this EA (Table 5.0-1).

3.1 Selection Of Preferred Alternative

Six different alternatives were assessed for improving the bridge. These included the following:

1. No Build
2. Major Rehabilitation
3. New Vertical Lift Bridge on New Alignment
4. New Vertical Lift Bridge on Existing Alignment
5. New Vertical Lift Bridge for Westbound Traffic, and Existing Bridge for Eastbound Traffic
6. New High Level Fixed Bridge on New Alignment

The evaluation of these alternatives is included in the "Alternatives Analysis Report Route 7 Wittpenn Bridge over the Hackensack River'" prepared by JE/Sverdrup and Parcel Consultants, Inc., dated May 2002. This report concluded the most feasible and prudent alternative is Alternative 3, a New Vertical Lift Bridge on a New Alignment. Evaluation of several key criteria led to the selection of Alternative 3. These are summarized here and discussed in more detail in the following sections.

- The No Build Alternative (Alternative 1) would not address either the structural deterioration or the substandard design features of the existing bridge or the interruptions to traffic flow from bridge openings.
- Rehabilitation or replacement the existing Wittpenn Bridge in the current alignment (Alternatives 2 and 4) would not address the non-standard exit and entrance ramps or the interruptions to traffic flow from bridge openings. Both alternatives would require a temporary bridge since there is no alternative routing for traffic in the project area. Furthermore, only rehabilitating the bridge (Alternative 2) does not address the substandard roadway design features.
- Rehabilitating the existing bridge and adding a new bridge (Alternative 5) would not address the non-standard entrance and exit ramps or the interruptions to traffic flow from bridge openings.
- A High Level Fixed Bridge on a new alignment (Alternative 6) would have significant environmental impacts to socioeconomic, natural and historic resources and seriously delay the Route 1&9T St. Paul's Viaduct Project.

In selecting the proposed action, NJDOT has sought to replace the Wittpenn Bridge and upgrade the approach roadways to current design standards in a cost-effective manner. In addition, the preferred alternative would be developed to minimize effects to community and environmental

concerns. The replacement vertical lift bridge would be of a context sensitive design to complement its historic setting.

3.2 Preferred Alternative – New Bridge On New Alignment

The Preferred Alternative (Alternative 3) for the replacement of the Wittpenn Bridge is shown in Figure 3 and discussed below. It was selected based on the findings of an alternatives analysis, coordination conducted with agencies and organizations in preparation of the EA; and public meetings held in early 2002.

This alternative would replace the existing vertical lift bridge with a new vertical lift (movable) bridge located on a new alignment immediately north of the existing bridge. It would include replacing the existing east and west approaches including the Fish House Road Interchange with new structures and grade-separated roadways.

The new alignment would extend from the western limit of Charlotte Avenue (and the ongoing Route 1&9T operational improvements project) in Jersey City to the east of New Jersey Transit Morris & Essex Line overpass in Kearny for a total length of approximately 4,750 feet. The east approach would be designed to meet the proposed Route 1&9T St. Paul's Viaduct project alignment east of Charlotte Avenue and maintain a ramp exit to Newark Avenue.

The deck width would accommodate four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets. The new bridge would eliminate the existing poor geometry and substandard features. The proposed divided roadway with standard lane widths and shoulders would provide improved traffic operations and safety. It would eliminate the non-standard eastbound entrance and exit ramps of the Fish House Road interchange improving safety. In addition, it would eliminate the westbound exit loop ramp that has a substandard radius of curvature.

The new vertical lift bridge would increase the vertical clearance over MHW from 35 to 70 feet in the closed position and retain the 135-foot clearance in the open position. Replacement of the bridge with a higher level movable bridge would improve traffic flow by reducing interruptions from bridge openings. This would allow vehicular traffic to flow uninterrupted over 75 percent of navigational traffic. The existing clearance has forced the bridge to be raised frequently, stopping all vehicular traffic. This would reduce the bridge openings from 300 per year to approximately 63 per year.

Under this alternative the existing bridge would be demolished resulting in an adverse effect on the Wittpenn and CSX Bridges as well as on the New Jersey Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District. To mitigate the adverse effect, an appropriate program of documentation will be undertaken. In addition, the replacement movable bridge would be of a context sensitive design to recall the elements of the existing bridge and to complement its historic setting.

The approximate cost of the proposed action is estimated to be $317,400,000 (in 2002 dollars) including right-of-way acquisition, utility relocation, and construction costs. This alternative was selected because it best satisfies the need for the project. It provides for a the most cost-

effective alternative in consideration of life-cycle costs for initial construction and the safety and future needs of an already failing structure. Except for the demolition of an historic structure, the bridge and ramp construction under this alternative has minimal environmental impacts. However, several mitigation measures are possible such as an appropriate program of documentation and the design of a replacement bridge sensitive to the historic context.

It was determined, therefore, that the only prudent and reasonable alternative was to replace the bridge with a new structure with a higher vertical clearance on a new alignment north of the current structure. The new bridge would incorporate new or modified approach ramps to improve traffic movement in the area. These new ramps would improve connections between Route 1&9T in Jersey City on the eastern approaches, and Route 7, Fish House Road, and local roads on the western approaches in the Town of Kearny.

An integral part of the proposed bridge replacement project includes the realignment and expansion of Fish House Road. This realignment of Fish House Road, however, imparts a more significant environmental toll in terms of disturbance to wetlands. In order to meet the proposed alignment of the Pennsylvania /Fish House Road portion of the Portways Project, the Fish House Road portion of the preferred alternative would have to be increased to four lanes from its existing condition of two lanes. Mitigation for the impacts caused by the Fish House Road portion of this project is discussed in more detail in Section 4.4.3 of this EA. For additional information on the Alternatives studied see the Feasiblitiy Assessment Report prepared by HNTB Corporation Dated August 2002 (HNTB Corporation. 2002). This report concludes the following:

Currently, Fish House Road is a low speed, two-lane roadway. The roadway does not have shoulders and services a total AM peak hour volume of 558 and 370 vehicles in the westbound (WB) and eastbound (EB) directions, respectively. It services a PM peak period volume of 386 and 739 vehicles in the WB and EB directions, respectively. Analyses for this section of roadway were done using the HCS "Two-Lane Highways" module. The results showed that the level of service for the 2002 AM and PM peak hours were LOS E (35.1 to 50 seconds of delay per vehicle) in both travel directions. The same results were obtained using 2025 projected volumes.

Under the Preferred Alternative, a four-lane section, was analyzed and the results showed LOS B (10.1 to 15.0 seconds of delay per vehicle) or better using 2002 volumes for both the AM and PM peak periods. The results using 2025 volumes showed LOS C (15.1 to 25 seconds of delay per vehicle) or better for both the AM and PM peak periods. With two lanes on each side, faster moving vehicles would be able to maneuver around slower moving vehicles thus reducing travel time through this section of roadway. This improves traffic operations dramatically due to the high percentage of truck traffic along the corridor.

The intersection of Pennsylvania Avenue and Central Avenue just south of the Fish House Road limit of work also benefits from the use of the four-lane section. The intersection LOS for the existing conditions using projected 2025 volumes is C and F for the AM and PM peak period respectively. The LOS for the Preferred Alternative using 2025 volumes is A and B for the AM and PM peak period respectively.

In addition to the making Fish House Road a four-lane road, the alignment of the roadway will be shifted to the west of the PSE&G tower for safety and environmental considerations. Shifting of the roadway to the east of the tower would result in impacts to higher quality low marsh wetlands associated with the river. The westward shift impacts wetlands as well, but the wetlands on the west side of Fish House Road are considered to be of poor habitat quality due a dominance of common reed (*Phragmites australis*) and a substrate containing high concentrations of hazardous materials. Maintaining the current alignment (i.e., splitting the roadway around the PSE&G tower) would result in continued operational and safety concerns. PSE&G employees would be required to park maintenance vehicles in the roadway to access the towers.

In conjunction with the roadway improvements the Preferred Alternative provides improvements to the existing drainage system that will include provisions for water quality treatment. The existing drainage system will be replaced with a new closed pipe system with roadway runoff being conveyed to four (4) Water Quality/Detention Basins. The basins will treat 9.9 acres of pavement which is the total additional pavement area proposed. The basins are located to avoid impacting existing wetlands with locations coordinated with the proposed utility relocations. All of the proposed basins are on the Kearny side of the Hackensack River (See Figure 3). Basin No. 4 discharges directly into the Hackensack River via an outfall controlled by a tide gate. Basins Nos. 1, 2 and 3 discharge into a tidal ditch prior to discharging into the same. A tide gate also controls the tidal ditch. Due to the outfall control and the limitations on discharge resulting from the tidal influence, all of the basins are designed to store the volume of runoff from a 50-year storm event. The portion of the roadway on structure over the river will have scuppers that discharge directly into the Hackensack River.

3.3 Other Alternatives Considered

As noted, five other alternatives were evaluated considering environmental impacts, costs, and operational characteristics. All were eliminated from further evaluation because they would not meet the traffic capacity, traffic safety, structural improvements, and navigation clearance objectives of the project as well as the Preferred Alternative. Following is a discussion of these other alternatives and the reasons for rejecting them. (For a more detailed analysis, see the "Alternatives Analysis, Route 7 Wittpenn Bridge over the Hackensack River" prepared by JE/Sverdrup and Parcel Consultants, Inc, dated May 2002.)

3.3.1 Alternative 1 - No Build

This alternative assumes that no improvements would be made to upgrade the structure; however, maintenance and rehabilitation of the existing bridge would be completed to preserve the structural integrity and extend its useful life. Work to be performed includes replacement of damaged sections of guide rail and rub rail and deteriorated structural members; crack and spall repairs to substructure members, the concrete deck, and easements; and repair of mechanical and electrical systems.

This alternative was eliminated from further consideration for several reasons. First, it does not address the structural deficiencies of the existing bridge. The bridge is in an advanced state of structural deterioration, with a sufficiency rating of 30 out of 100. The viaduct has been deemed

structurally deficient, with low condition ratings for the deck, the substructure, and the superstructure. The viaduct has required frequent repairs for many years to keep the structure in service. It was rehabilitated for a ten-year life in 1986 so that traffic could be maintained until a replacement structure could be constructed. The structure is now past the point where cost-effective repairs can be undertaken without taking the structure out of service with resulting decrease in capacity and increased congestion.

If the No Build Alternative were selected, the existing bridge's substandard design features, including inadequate lane widths, no shoulders, and no median would remain. In addition, the high frequency of bridge openings would continue traffic delays.

Overall, with the No Build Alternative, the substandard roadway conditions and frequent bridge openings would continue to produce significant delays and congestion. In addition, structural deterioration and related safety problems would continue to escalate. Also, this alternative does not address any of the proposed Portway proposals for improved circulation and an overall increase in efficiency of the waterfront. To address these deficiencies, the existing bridge must be replaced.

3.3.2 Alternative 2 - Major Rehabilitation

This alternative consists of an in-depth structural rehabilitation of the existing bridge together with some geometric improvements to the approach spans. The alternative includes widening the existing deck span on the approach spans to provide 12-foot travel lane widths, shoulders, and a median; replacement of major superstructure elements including trusses, piers, and the floor beam system; and crack and spall repairs to substructure members.

These extensive repairs would be necessary to bring the sufficiency rating of the structure to an acceptable level because the structure is severely deteriorated. Making these repairs would require the existing bridge to be closed and construction and use of a temporary movable bridge for the duration of repairs and rehabilitation of the lift spans and approaches.

Many structural deficiencies of the superstructure and substructure would be eliminated under this alternative; however, the deficiencies of the structure in response to earthquakes as well as the drainage problems would remain. There would be some increase in the degree of safety but a traffic barrier would not be provided for the full length of the roadway. Also, the substandard geometric features of the Fish House Road Interchange and the overall substandard conditions of the approaches would remain. This alternative only partially improves the roadway section through the corridor and does not meet the goals of the Portway Corridor Project. Finally, the frequency of bridge openings would not be reduced.

Although the alternative would eliminate some structural deficiencies, traffic congestion, structure deterioration, and related safety problems would continue to escalate. And with an estimated cost of $227,600,000, a bridge replacement is more cost-effective when compared to the rehabilitation option. Thus, similar to the No Build Alternative, the rehabilitation of the existing Wittpenn Bridge is not considered a feasible or prudent alternative. Through a major rehabilitation effort, many of the structural deficiencies or problems of the existing bridge could

be eliminated, but it would still not meet the proposed action's operational, capacity and navigation objectives.

3.3.3 Alternative 4 - New Vertical Lift Bridge On Existing Alignment

Alternative 4 assumes removal of the structurally deficient bridge and the construction of a new vertical lift bridge on the existing alignment (Figure 2) at the same elevation as the existing bridge. The new bridge design would be in accordance with all current standards including roadway design and seismic and scour criteria. It would have the same cross section as Alternative 3— four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets.

A temporary bridge would be constructed to maintain traffic during the construction period. As noted with Alternative 2, the temporary structure is necessary because no suitable detour exists for the heavy volume of traffic that currently uses the existing bridge. The initial construction cost of this alternative is estimated to be $234,000,000 including the temporary bridge.

This new bridge would eliminate most of the existing features that contribute to the high accident rates on the bridge and would improve traffic flow, operations and safety. However, only minimal improvements would occur to the Fish House Road Interchange on the west approach. The substandard features at Fish House Road Interchange such as the substandard horizontal radius at the U-turn and the substandard horizontal radii at the entrance and exit ramps would not be improved.

Under this alternative the existing bridge would be demolished resulting in an adverse effect on historic resources. To mitigate the adverse effect, the same mitigation measures as outlined under Alternative 3 would be undertaken including documentation and design of a replacement bridge sensitive to the historic context of the existing bridge. This alternative addresses the proposed improvements as part of the Portway Corridor Project for improved movement across the Hackensack River but does not improve the corridor along Fish House Road.

Thus, this alternative was also not considered a prudent or feasible alternative and was eliminated from further consideration for several reasons. First, although most structural deficiencies and several substandard design elements would be eliminated and traffic operations improved, the substandard approaches would remain. Second, since the vertical clearance in the closed position would not change, the bridge would still require frequent openings. Third, since staged construction on the existing bridge is not an option, a temporary movable bridge would need to be constructed for use for the full duration of the construction.

3.3.4 Alternative 5 - New Vertical Lift Bridge (WB)/Existing Bridge (EB)

This alternative consists of construction of a new vertical lift bridge north of the existing bridge for the westbound traffic and the rehabilitation of the existing bridge for the eastbound traffic. The new bridge would be designed to provide the same vertical clearance over MHW as the existing bridge - 35 feet of vertical clearance with the lift span closed and 135 feet when opened,

The new bridge would provide two 12-foot lanes and two shoulders in the westbound direction. It would be designed in accordance with all current standards including roadway and seismic and scour criteria. The rehabilitated existing bridge would carry two 12-foot lanes and two shoulders in the eastbound direction. The existing two sidewalks would be maintained. For the approach spans, a new concrete deck would be provided on the existing steel stringers.

The proposed separate roadways for eastbound and westbound traffic would eliminate many accidents and provide improved traffic operations and safety. While this alternative would not eliminate the substandard eastbound entrance and exit ramps of the Fish House Road interchange, it would realign the westbound exit loop ramp providing an improved horizontal radius. At the east approach this alternative can be adapted to meet the proposed Route 1&9T St. Paul's Viaduct project.

This alternative would require takings along adjacent properties to the north of the existing bridge. The existing bridge would require substantial alteration to the superstructure similar to those outlined for Alternative 2. The addition of another bridge would impact the lift bridge corridor and the modifications to the existing bridge would modify its historic nature. The initial construction cost of Alternative 5 is estimated to be $125,500,000.

Alternative 5 was not considered a prudent or feasible alternative and was eliminated from further consideration. First, although it would eliminate most structural deficiencies and substandard design conditions, the current bridge would not meet seismic criteria. Also, the substandard approaches would remain. Finally, since the vertical clearance in the closed position would not change for either bridge, both bridges would still require frequent openings and the existing structure would continue to require high maintenance.

3.3.5 Alternative 6 - New High Level Fixed Bridge – New Alignment

This alternative would replace the existing vertical lift bridge with a new high level fixed bridge located just north of the existing bridge. It would include replacement of the existing east and west approaches including the Fish House Road Interchange with new structures and grade-separated roadways.

The new bridge would be a 400-foot parallel through truss structure. The deck width would accommodate four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets in accordance with current design standards. The new fixed bridge would provide 135 feet of vertical clearance over MHW. The new bridge design would be in accordance with all current standards including seismic and scour criteria.

Due to the high vertical clearance of the fixed bridge, this alternative results in the extension of the structure limits by about 3,000 feet beyond those for the vertical lift bridge in Alternative 3. The new limits would extend an additional 950 feet along Route 7 in Jersey City and an additional 900 feet along Route 7 west in Kearny requiring the replacement of a portion of the New Jersey Transit Bridge over the Morris and Essex lines.

In addition, Fish House Road becomes a much longer elevated structure spanning over the existing CSX rail facilities and PATH bridges. To provide for the Fish House Road to Route 7

eastbound movement, a critical component to the Portway Corridor, the entire ramp must also be put on structure spanning PATH and the CSX rail facilities. This alternative would also eliminate the westbound exit loop ramp that has a substandard horizontal radius. The construction cost of Alternative 6 is estimated to be $398,000,000.

The new bridge would eliminate the existing poor geometry and substandard structural features with a resulting reduction in accidents and improvement in traffic operations and safety. It would also eliminate the substandard eastbound entrance and exit ramps of the Fish House Road interchange improving safety and potentially reduce accidents.

Providing a high level fixed bridge with a vertical clearance of 135 feet above MHW would eliminate all bridge openings since all navigational traffic could pass underneath the bridge. However, the current horizontal restrictions in the channel would remain. In addition, under this alternative both eastbound and westbound directions would operate under LOS D or better during peak hours.

This alternative has a negative impact to businesses and environment in the immediate vicinity of the Fish House Road interchange. Several businesses would be displaced. Others would not have direct access to Route 7 east. They would be required to take Route 7 approximately one mile west to the next interchange and make a U-turn. In addition, the Route 7 driveway to the Owens-Corning site would be closed.

This alternative, with its higher elevation, would also have a significant impact on the Route 1&9T St. Paul's Viaduct project. This project would need to be constructed concurrently with the new bridge to avoid costly temporary construction. This requirement would result in a one-year delay in the start of the 1&9T construction contract with corresponding escalation in construction costs.

Under this alternative the existing bridge would be demolished resulting in an adverse effect on the Wittpenn and Conrail Bridges as well as on the New Jersey Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District. To mitigate the adverse effect, an appropriate program of documentation can be undertaken. However, a fixed bridge would be out of character within the historic context of the Hackensack River Lift Bridges Historic District.

Because of these reasons, this alternative was also determined not to be a prudent and feasible alternative. While it would provide for the improvement for the traffic operation and the navigation along the Hackensack River, it would require significant environmental impacts. The natural resources in the area would be affected along with impacts to local industries both through displacement and restricted access to the regional roadway network. In addition, it would have significant impacts on the historic resources in the area including demolition of the historic bridge. It also would have significant impacts on the development of the Route 1&9T project.

4.0 EXISTING CONDITIONS, ENVIRONMENTAL IMPACTS, AND MITIGATION

The following sections describe the existing environmental conditions present within the project limits as well as in the general vicinity of the proposed bridge replacement project. In addition, each section includes a description of potential impacts to environmental receptors as well as proposed methods to mitigate these impacts.

4.1 Topography, Geology, Soils and Groundwater

The following section describes the existing physical environmental conditions within the project area.

4.1.1 Existing Conditions

The Route 7/Wittpenn Bridge project is located in the Piedmont physiographic region (Tiner 1985), which is within the Newark Basin region. Slopes are generally slight in the project vicinity (Figure 1) except for the area to the northwest of the bridge. In this area, the bank of the river rises sharply to an elevation of approximately 25 feet above MHW. Because of many low lying impounded areas and a substandard stormwater management system, flooding of the roadways is frequent.

The project study area is located within the geological province known as the Piedmont Plain. The geologic formation that underlies the project study area is known as the Newark Basin (Drake and Volkert, 1994). Within the project study area the underlying geology is composed chiefly of bedrock. This includes bedrock from the Lockatong Formation that is of Upper Triassic age, and intrusive diabase of Early Jurassic age. Within the study area, the Lockatong Formation consists of cyclically deposited sequences consisting of light- to dark-gray, greenish-gray, and black, dolomitic or analcime-bearing silty argillite, laminated mudstone, silty to calcareous, argillaceous, very fine grained pyritic sandstone, and minor silty limestone. Additionally, cycles in the northern Newark Basin are thinner and have arkosic sandstone in the lower and upper parts. The upper part of the formation in the northern basin are composed mostly of light-gray to light-pinkish-gray or light-brown, coarse- to fine-grained, thick- to massive-bedded arkosic sandstone. Portions of this formation are thermally metamorphosed into hornfels where they have been intruded by diabase.

The Interim Soil Survey of Bergen County (USDA 1990) maps only one soil type over the project area. The Urban Land (UR) soil type is nearly level or gently sloping at 1 to 5 percent. This unit has been cut or filled repeatedly and a capability subclass has not been assigned. This unit is generally used for residential, commercial, industrial, and school sites.

The project is not in a U.S. Environmental Protection Agency (USEPA) Sole Source Aquifer region; however, surficial and bedrock aquifers are present in the vicinity of the project area. According to the Preliminary Geotechnical Report (JE/Sverdrup and Parcel Consultants, Inc., October-2002), groundwater levels encountered during the time of the soil boring investigation varied between 1.5 feet to 9.3 feet below existing grade. However, three of the thirty borings conducted did not encounter any groundwater. In addition, during and after anticipated

construction, these levels may vary due to seasonal variation in rainfall, temperature and variations in soil or rock permeability.

4.1.2 Impacts

Construction of the proposed facility will require only slight topographic modifications for ground leveling prior to construction of the facility. Due to the flat topography of the site and the permeable texture of the majority of the site's soils, the hazard of soil erosion should be slight. Disturbance to soils will result from implementation of the project alternatives. These impacts relate directly to the excavation, removal, and/or grading of soils required for construction activities. However, due to the presence of high concentrations of hazardous materials throughout the project area, Best Management Practices (BMPs) designed to reduce soil disturbance will be employed during construction.

It is anticipated that construction of the proposed project will not result in any adverse impact to the underlying geology of the area. Stormwater runoff will flow either directly into the Hackensack River or into water quality detention basins that discharge into the River. It is expected that overall the water quality associated with project runoff will be better than it currently is due to the presence of the new detention facilities.

4.1.3 Mitigation

To minimize the potential for soil loss during storm events, soil erosion and sediment control measures will be implemented. These measures will conform to the "Standards for Soil Erosion and Sediment Control in New Jersey", (New Jersey State Soil Conservation Committee, revised 4/87). Standard practices such as installation of silt fencing and hay bale barriers, reseeding/mulching disturbed areas within 30 days, installing storm drain inlet protection, utilizing crushed stone tracking pads at the entrance/exit to the construction site, and containing stockpiled topsoil onsite will be required. Soils stockpiled onsite will not be located in any wetlands. In addition, the construction specifications will require that all soil erosion and sediment control structures are installed prior to any construction and that they must be maintained for the duration of the project. With proper implementation of the approved soil erosion and sediment control plan, impacts to soils and to surrounding areas as a result of soil loss from the development activities should be negligible.

Although drilling into bedrock will occur, blasting of bedrock is not anticipated for project implementation. Project activities are not anticipated to impact upon geologic resources; therefore, no mitigating measures for geology are proposed.

4.1.4 No-Build Alternative

There would be no negative impacts to the environment due to exposure and subsequent erosion of soil within the project area. This includes the exposure of contaminated soil and groundwater. Lack of exposure of these hazardous materials reduces the likelihood of migration to environmentally sensitive areas.

4.2 Water Quality and Aquatic Ecology

The proposed project is intricately tied to the Hackensack River and its ecology; therefore, potential impacts to water quality and the aquatic ecology of the River are discussed in the following sections.

4.2.1 Existing Conditions

The Hackensack River is the major water body in the project study area and is contained within the Hackensack River Basin. The portion of the River adjacent to the study area is classified as Saline Estuarine waters (SE2) in the NJ Surface Water Quality Standards (N.J.A.C. 7:9B). This classification reflects the tidal nature of the Hackensack River in this area.

Water quality monitoring of the Hackensack River has been conducted at various positions along the river by the New Jersey Meadowlands Commission (formerly the Hackensack Meadowlands Development Commission) (Kraus and Bragin 1989). In 1988, one of the sampling points was in the immediate vicinity of the Wittpenn Bridge. The analysis, conducted over the four seasons, showed that as summer approaches, water quality declined, as is typical of many other urban water bodies in New Jersey. Salinity was lowest in winter, but gradually increased to a peak by mid-summer. In addition, dissolved oxygen (DO) gradually declined from winter highs to a low in mid-summer. DO normally declines as water temperature rises, but the extreme summertime decline in the Hackensack River shows that it is overloaded with nutrients (sewage, fertilizers, detergents, soaps) that support excessive algal and microbial growth, which in turn causes excessive consumption of oxygen. The low summertime DO levels (2.7 – 3.0 mg/L) are probably stressful to fish and other aquatic biota (Kraus and Bragin 1989). In that study, several species of fish (Atlantic tomcod, blueback herring, and bluefish) were not found during July and August and may have returned to sea, possibly as a response to poor water quality.

As a result of improving water quality, there has been a progressive diversification in the fish community of the Hackensack River since the early 1970's. The salt marshes along the Hackensack River's banks provide critical habitat for the early life history stages of many gamefish species as well as resident fishes. Some diadromous fish species migrate through this river, but their abundance and diversity may be limited by the degraded water quality. According to the National Marine Fisheries Service (NMFS) the presence of resident and anadromous fish forage and benthic species, including alewife, blueback herring, and American shad, in the portion of the Hackensack River associated with the project is possible. In addition, NMFS has designated the area as "essential fish habitat" for one or more species.

4.2.2 Impacts

Short-term impacts to the water quality of runoff draining from project construction areas may result, predominantly from sediment loading related to erosion of exposed soil surfaces. Long-term impacts to the water quality of runoff may result from increased pollutant loading to stormwater due to additional impervious roadway surfaces. Stormwater runoff has the potential to wash pollutants, including hydrocarbons, metals, and sediments, from impervious surfaces. The potential impact would most likely be to the Hackensack River, which could be affected by

sedimentation. It is expected that the construction of the project will not result in any substantial short-term impacts upon surface water quality.

Construction of portions of the proposed project will directly impact aquatic habitat areas including tidal wetlands and tidal open waters. The river and tidal wetlands provide aquatic habitat for plankton, macro-invertebrates, aquatic reptiles, aquatic birds, aquatic mammals, and fish. However, water quality is exceptionally poor during the warm summer months and could act as an ecological trap for organisms that cannot successfully retreat to Newark Bay or the open ocean. Impacts to open water and wetlands from construction of the proposed project are not anticipated to affect aquatic biota. Activities within the river include construction of new piers and fender system for the bridge. In addition, several subsurface utilities may be relocated during project construction.

4.2.3 Mitigation

Mitigating measures for long-term impacts to water quality related to the potential increase in pollutant loading of stormwater will include the construction of water quality basins to receive and treat stormwater runoff from the proposed roadway. Strict adherence to the Soil Erosion and Sediment Control Plan should eliminate negative water quality impacts due to sediment loading.

Best management practices will be utilized in accordance with all local, state and federal regulations. A detailed soil erosion and sediment control plan will be developed after construction design plans are actually in place. The plan will also comply with applicable Storm Water Pollution Prevention regulations, required by the NJDEP. Implementation of this plan will be carefully monitored during construction so as to facilitate utilization of the best sediment management options during construction activities. Work for the bridge abutments and piers will be performed with the use of coffer dams and sealing off of sediments which will then be appropriately disposed of offsite. Measures will be employed during demolition to prevent deposition of debris into the river. Measures will be taken during construction of the piers (i.e., cofferdams, turbidity barriers, etc.) to minimize disturbance of bottom sediments thereby not affecting turbidity. Drilling rather than trenching of utility lines will be employed wherever feasible.

The National Marine Fisheries Service (NMFS) and NJDEP will likely place restrictions on the scheduling of in-river activities to protect fisheries. Coordination between these agencies will take place during the permitting phase of the project. Given the immense size of the river, and the degraded nature of these aquatic environments, it is anticipated that the project will not result in any significant impact to aquatic habitats. DOT anticipates this by stipulating this restriction into environmental and construction documents and plans. Additionally, the project will not create a physical barrier to fish movement and will not adversely affect migrating fish. In order to ensure that migrating fish are not impacted by the project, no construction operations in open water would take place between April 1st and June 30th.

4.2.4 No-Build Alternative

By not disturbing soil and sediment, there will be no additional negative impacts to water quality and aquatic resources beyond what is typical of a highly developed area. However, water quality

in the area will not improve because there is currently no mechanism to improve stormwater runoff from existing road surfaces.

4.3 Floodplains

The Wittpenn Bridge spans the Hackensack River approximately two (2) miles upstream of Newark Bay. The Hackensack River is tidally influenced throughout the project area and is the primary cause of flooding conditions in the project area. The identification of the potential floodplains was performed through a review of available "Flood Insurance Rate Maps" (FIRM) prepared by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (Figure 5). NJDEP regulatory classification for the project per the Floodplain Management regulation lists the floodway north of the Pulaski Skyway as tidally influenced, e.g. subject to fluvial[river] flooding.

4.3.1 Existing Conditions

According to FEMA, the one hundred (100) year flood level of the Hackensack River is approximately 8.8 feet (1988 National Geodetic Vertical Datum (NGVD)). The Hackensack River floods up to and beyond the proposed bridge abutments, which will be above the 100-year floodplain. No streams flow through the project area. However, there are several tidal ditches located within the vicinity of the project area.

The following existing roadways are within the existing floodplain:

- Route 7 west of the Fish House Road interchange,
- All Ramps to and from Fish House Road,
- Fish House Road,
- Newark Turnpike,
- Route 7/Route 1&9T in the vicinity of the Charlotte Circle,

The only existing structures within the floodplain are the piers and abutments supporting the Wittpenn Bridge over the Hackensack River and the fender system protecting the bridge from marine traffic. These structures are shared with the CONRAIL bridge.

4.3.2 Impacts

There are two project elements that will impact the existing floodplain. The first project element will be the construction of four water quality/detention basins to collect the runoff from Route 7 mainline west of the Hackensack River (Station 98+40 to Station 92+00) Ramps A, B and C, and a portion of Fish House Road (Station 234+28 to Station 238+57). Stormwater run-off will be detained in these basins to allow precipitation of suspended solids prior to being discharged to outfalls located within the floodplain along the west bank of the Hackensack River.

The second proposed element to be constructed within the floodplain will be the roadways and their appurtenant structures. The following proposed roadways or portions of roadways will be below the 100-year flood elevation of 8.8 feet (1988 NGVD):

4.3.2.1 Roadways

Route 7 mainline at the westerly limit of work - The westerly limit profile is controlled by the downgrade of the existing NJ Transit Bridge. Raising the roadway profile to bring it above the 100-year flood elevation would require major reconstruction of the NJ Transit Bridge structure, as well as create significant impacts to the adjoining property owners. In addition, alternate access to the Newark Turnpike and the Owens Corning Complex would have to be provided. Approximately 800 feet of this roadway section will be below the 100-year flood elevation with a low point at the centerline of approximately elevation 5.9. This section of Route 7 will flood during an 8 year tidal event.

Relocated Fish House Road - A majority of Relocated Fish House Road follows the existing roadway on a slightly shifted alignment. Existing Fish House Road is below the 100-year flood along its entire length. The portion of the roadway to remain for local access (Old Fish House Road) cannot be raised significantly due to vertical controls of the PATH and CONRAIL bridges. Relocated Fish House Road will be raised slightly with additional protection proposed against the 10 year tidal storm; however, impacts to adjacent wetlands on both sides of the roadway and the need to go under the existing PATH bridge preclude the raising of the roadway at all locations. Ramp D from Route 7 eastbound to Relocated Fish House Road southbound (approximately 300 feet) will also be below the 100-year flood elevation. A wall and/or berm is proposed for this section of Fish House Road to provide protection during a 10 year tidal event.

Newark Turnpike - Existing Newark Turnpike is below the 100-year flood along its entire length. The proposed roadway will be raised slightly on an offset alignment but will remain below the 100-year flood elevation for all but a 1,000-foot portion of the roadway. Raising the entire alignment above the 100-year flood elevation would result in significant impacts to adjacent property owners, and it would require a new connection to Route 7. The proposed portion of Newark Turnpike will flood during a 10 year tidal event.

Ramp to Newark Avenue (Charlotte Circle) - The existing roadway in the vicinity of the Charlotte Circle is below the 100-year flood elevation. The proposed roadway will remain below the 100-year flood elevation for a 300-foot section in the vicinity of the Pulaski Skyway. The roadway will be lowered approximately 1 foot due to the proposed downgrade from the new Wittpenn Bridge and the need to provide minimum under clearances for the existing Skyway. The Ramp J jughandle will also be below the 100 year flood elevation as will be the portion of the interchange constructed under the 1&9T St Pauls Viaduct Project. Newark Avenue and the proposed ramp will flood during a 50-year tidal event.

The remaining roadways (i.e.; the westerly section of Route 7, the Fish House Road Interchange (Ramps A, B, and C), and the eastern limit ramps A, B, G and P (tying into the 1&9T St Pauls Viaduct Project) will be constructed on structure or on embankment above the 100 year flood elevation.

4.3.2.2 Structures

Route 7 – The existing Route 7 structure is above the 100-year flood elevation except for the piers and abutments that are located within the floodway. These piers and abutments are shared

with the CONRAIL bridge. The existing span length of the structure is 2,169 feet. The proposed structure will require the addition of three river piers to support the new bridge structure within the floodway of the Hackensack River. In addition, the existing fender system, also located in the floodway, will need to be extended to the north to provide protection to the new Wittpenn Bridge. The new mainline structure will be approximately 3,450 feet long. The existing piers, which supported the existing Wittpenn Bridge, are to remain in the river.

Ramps A, B, C, D, Fish House Road, and Newark Avenue – The existing ramps are on earth fill however, the new ramps will be raised on pier structures such that they will be elevated above the 100 year flood plain. The only impact to the floodplains will be a result of pier and abutment construction. The preferred alternative will require the construction of 34 piers and four abutments within the 100-year floodplain.

4.3.3 Mitigation

The project will implement various forms of mitigation to maintain the function and quality of the floodplains during construction of the proposed improvements. The project will be designed to minimize floodplain impacts when practicable, and to adequately mitigate unavoidable impacts. Listed below are several measures that have been taken in order to minimize impacts to the floodplain.

The structure piers constructed within the floodplains will optimize the span lengths while reducing the number of piers required in order to achieve a balance of cost and to minimize impacts.

- Retaining walls will be constructed instead of sloping the sides within the floodplain to minimize the required fill as practicable.

- Abutments for the structures will be constructed instead of embankment with side slopes within the floodplain to minimize the required fill where practicable.

- The number of piers and size of the piers constructed in the river will be minimized in order to reduce the impacts to channel flow.

4.3.4 No-Build Alternative

The no-build alternative would have zero increase in fill and impervious surfaces within the floodplain of the Hackensack River. However, flooding would continue along Fish House Road and the approach roadways to the bridge due to the current substandard stormwater drainage system.

4.4 Wetlands, Vegetation, and Wildlife

The following sections describe the habitat characteristics of the project area as well as the potential impacts to these resources from the proposed bridge replacement. Mitigation of these potential impacts is also included.

4.4.1 Existing Conditions

The potential for the presence of wetlands within the project study area was determined from the review of existing published information and a detailed field investigation of the study area conducted by Amy S. Greene Environmental Consultants, Inc. (ASGECI) in October of 2001. Wetlands were identified and delineated within, and immediately adjacent to, the proposed alignment for each of the alternatives (Figure 6A, Figure 6B, Figure 6C, Figure 6D). At the time of the delineation, freshwater and estuarine wetlands, open waters, and intertidal/subtidal shallows were identified on the site. Three types of wetland communities were identified during field investigations. These wetland communities include tidally influenced estuarine emergent wetlands (EEM1N), estuarine emergent-scrub/shrub wetlands (EEM1N/ESS1N), and freshwater palustrine emergent-scrub/shrub (PEM) wetlands. These wetland complexes were primarily associated with man-modified tidal ditches and wetland fringes associated with the Hackensack River.

Estuarine Emergent (EEM1N) wetlands onsite consisted predominantly of common reed in high marsh areas and saltmarsh cordgrass *(Spartina alterniflora)* in low marsh areas. The scrub/shrub portions of the wetland complexes consisted of a mix of common reed, high-tide bush, and groundsel tree. The freshwater (PEM/SS) wetland complexes were dominated by common reed *(Phragmites australis)*, purple loosestrife *(Lythium salicaria)*, goldenrod spp. and great ragweed *(Ambrosia trifida)*.

The area for the proposed bridge is highly degraded and predominantly covered by man-made structures such as buildings, roads, driveways, parking lots, railroads, bridges, and vacant lots. Most vegetated areas are covered by the invasive common reed and other weeds that have limited wildlife value. Habitat for unique wildlife does not exist within the boundaries of the project area. The area of terrestrial habitat that will be affected is too small to support most bird species and the fragmented nature of the project area is predicted to result in a low diversity of wildlife. Therefore, construction of the project is not expected to adversely impact wildlife.

No threatened or endangered species or their habitats were identified within, or immediately adjacent to the project study area by the New Jersey Natural Heritage Program (NJNHP) database search, of United States Fish and Wildlife Service (USFWS) record search, or during the field investigation of the project study area.

4.4.2 Impacts

Wetlands identified within the study area will be disturbed by the implementation of the proposed project, which is characterized by a slight northerly shift in the roadway and bridge alignment and the reconfiguration of Fish House Road and the ramps to Route 7. Impacts to wetlands can be divided into four areas: 1) wetlands disturbed by the bridge, 2) wetlands disturbed by ramp construction, 3) wetlands disturbed by the Route 7 realignment and expansion, and 4) wetlands disturbed by the Fish House Road realignment and expansion.

It is anticipated that a total of 3.15 acres of wetlands will be permanently impacted and 0.14 acres will be temporarily impacted by the proposed project. A breakdown of these impacts reveals that 0.12 acre will be attributed directly to the bridge construction, 0.09 acre is associated

with the Route 7 realignment, 0.6 acre is associated with the new ramp system, and 2.34 acres is associated with the Fish House Road realignment. Of the 2.34 acres of wetlands disturbed by the Fish House Road realignment, 0.14 acre is attributable to the stormwater management system. In addition, there will be impacts to 0.62 acre of open water and subtidal/intertidal shallows due to construction of new piers and fender systems for the bridge. Differentiating between impacts to open water and subtidal/intertidal shallows is not possible at this time due to the lack of information regarding water depths at the proposed pier/fender system locations.

Implementation of the proposed project will result in the minor removal of some upland vegetation in areas adjacent to the proposed alignment. Onsite upland vegetation is limited to invasive species such as common reed (*Phragmites australis*), mugwort, and tree of heaven (*Ailanthus altissima*) that are typical of disturbed areas.

No threatened or endangered species or their habitats were documented, so no impacts are anticipated as a result of implementation of the project (See pertinent correspondence in Appendix B).

4.4.3 Mitigation

The project design has and will have all possible reductions of floodplain, wetland and State open water (SOW) impacts and all required permitting restrictions will be followed. As noted in section 3.2, a number of alignments were studied with varying wetlands impacts. However, the preferred alternative was chosen to meet the greatest project needs. The final alignment eliminates the greatest impact to subtidal/intertidal shallows. Wherever possible, water quality pre-treatment measures, such as retention basins, will be used as well as wetland restoration, preservation, or enhancement of suitable wetlands or upland open habitats.

Mitigation options will be investigated including creation or enhancements of wetlands in the vicinity of the project study area. However, due to significant amounts of contaminated soil and groundwater in the vicinity of project, on or near-site mitigation is unlikely. The most likely means of mitigation will be through acquisition of credits from the Hackensack Meadowlands Wetland Mitigation Project or a private Wetland Mitigation Bank (e.g.; Marsh Resources, Inc.). Future consultation with the New Jersey Meadowlands Commission to discuss mitigation options is expected. Wetlands temporarily disturbed during project construction will be restored to their original grade and planted with indigenous wetland vegetation. There is other anticipated restoration in the area, regarding Portway projects. An investigation has begun with studies to assess locations as candidates for restoration, preservation, or enhancement of suitable wetlands or upland open habitats.

Because of the low habitat suitability of the wetlands associated with the majority of the project area, disturbances to wetlands are not anticipated to result in a significant adverse ecological impact. No threatened or endangered species or their habitats were documented, so no mitigating measures are proposed.

Given the disturbed nature of identified vegetated areas, no significant adverse impacts to upland plant communities are anticipated from project implementation, and no specific mitigating

measures are proposed. There is no evidence of any rare plant species. This is likely due to the disturbed state of the project area.

4.4.4 No-Build Alternative

The No-Build alternative would eliminate additional disturbance to wetlands (3.15 acres), open waters (0.62 acre), and subtidal/intertidal shallows in the project area. Due to the disturbed nature of the project area, it is unlikely that there would be any measurable disturbance to vegetation or wildlife caused by construction of the preferred alternative; therefore, there are no expected differences regarding impacts to vegetation or wildlife for the No-Build Alternative.

4.5 Air Quality

Section 107 of the 1970 Clean Air Act Amendments requires the USEPA and states throughout the country to identify those areas not meeting the National Ambient Air Quality Standards (NAAQS). An area, which does not meet a standard, is referred to as in "non-attainment". For non-attainment areas, states are required to revise their State Implementation Plan (SIP) to detail measures the NAAQS can be met as expeditiously as practical, within certain time limits.

4.5.1 Existing Conditions

The Route 7 Wittpenn Bridge project study area is located in Hudson County, which meets the carbon monoxide (CO) standards. The entire state of New Jersey is in non-attainment for ozone. In recent years documented ozone levels have been decreasing. In 1997, the USEPA created more stringent ozone standards and, therefore, New Jersey will most likely violate these standards for many more years. Hudson County is in the highest ozone category designation (Severe 2) and must meet standards by November 15, 2007.

4.5.2 No-Build Alternative

NJDEP and the New Jersey Department of Transportation (NJDOT) require CO assessments performed at critical intersections within the project study area. For comparative purposes, 2029 "No-Build" CO concentrations were documented at the Route 1&9(T)/Newark Avenue intersection. This intersection is predicted to operate at a Level of Service (LOS) "F" (delay=303.9 seconds/vehicle) under 2029 "No-Build" conditions. The roadway geometry assumed for the 2029 "No-Build" condition included improvements proposed as part of the Route 1&9T (25) – St. Paul's Viaduct Replacement project as well as the existing location of the Wittpenn Bridge structure. CO concentrations were modeled at one (1) critical intersection within the project study area for the AM peak traffic period. However, operational data for the Route 1&9T/Charlotte Avenue intersection were also utilized due to the close proximity to the Route 1&9T/Newark Avenue intersection. Traffic operational data for both intersections utilized for this analysis are included in the "Traffic Data Supporting Environmental Analyses" Technical Memorandum submitted by JE/Sverdrup & Parcel Consultants, Inc. dated October 2002.

Figure 7 details peak one and eight-hour 2029 "No-Build" concentrations predicted at each of the receptors. The highest CO concentration at the Route 1&9T/Newark Avenue intersection was

predicted to be 10.2 ppm for a one-hour period and 7.1 ppm over an eight-hour period along the northbound approach leg; Route 1&9T. The federal/state carbon monoxide primary and secondary standard of 35 ppm (parts per million) for a one hour period, and 9 ppm for a continuous eight hour period, have been set forth. Therefore, no violations of the NAAQS set forth for CO were documented under peak 2029 "No-Build" conditions.

4.5.3 Impacts

CO modeling is required for project-affected signalized intersections that operate at a "Build" LOS D or worse. Under the 2029 "Build" condition, the Route 1&9T at Newark Avenue signalized intersection is predicted to operate at a LOS F (delay=262.5 seconds/vehicle).

To assess air quality impacts, future 2029 "Build" CO concentrations were predicted and compared to 2029 "No-Build" levels. Traffic operational data for the critical intersection (Route 1&9(T) at Newark Avenue) utilized for this analysis are included in the "Traffic Data Supporting Environmental Analyses" Technical Memorandum submitted by JE/Sverdrup & Parcel Consultants, Inc. dated October 2002.

As part of the Route 7 Wittpenn Bridge project, improvements include a new vertical lift bridge along a new alignment. The Fish House Road interchange to the west will be altered to accommodate the new bridge height and deficient roadway/ramp geometry will be improved. The approach to the east will tie directly into the Route 1&9T (25) – St. Paul's Viaduct Replacement project. The Wittpenn Bridge will provide the same number of through lanes over the structure however, standard lane widths (12 feet), shoulders and auxiliary truck lanes are proposed. All project-related improvements have been incorporated in the air quality analysis. Due to the predicted 2029 "Build" LOS, computer modeling was required at the Route 1&9T intersection at Newark Avenue during the peak AM period.

Figure 8 details 2029 "Build" CO concentrations predicted at each receptor. The carbon monoxide modeling analysis for the Route 1&9T intersection at Newark Avenue documented the highest PM concentration of 8.8 ppm (1- hour) and 6.2 ppm (8-hour) along the west approach; Newark Avenue.
A review of total maximum 2029 "No-Build" and "Build" carbon monoxide concentrations, predicted at the Route 1&9T at Newark Avenue intersection for both one and eight-hour periods, are shown in Table 4.5-1.

Table 4.5-1
2029 "NO-BUILD" & "BUILD"
PEAK CONCENTRATION COMPARISON (ppm)

Intersection	Peak 2029 "No-Build" Concentration (1hr/8hr)*	Peak 2029 "Build" Concentration (1hr/8hr)*
Route 1&9T at Newark Avenue	10.2 / 7.1	8.8 / 6.2

* 1-hour standard – 35 ppm, 8-hour standard – 9 ppm

The Clean Air Act Amendments of 1990 requires that transportation plans and programs work toward air emission reductions of several pollutants including carbon monoxide. As stated in the Clean Air Act Amendments of 1990, proposed projects must adhere and insure conformity of the governing SIP. Projects that:

(1) Cause or contribute any new violation of any standard in any area;
(2) Increase the frequency or severity of any existing violation of any standard in any area; or
(3) Delay the timely attainment of any standard or any required interim emission reduction or other milestones in any area, will not gain approval.

The USEPA promulgated the Transportation Conformity Rules (TCR) under the CAA, effective December 27, 1993. The TCR provides criteria and procedures for determining conformity to SIP of transportation plans, programs and project funded or approved under Title 23 U.S.C. or the Federal Transit Act. There are three (3) metropolitan planning organizations (MPO) that govern air emission budgets in the state of New Jersey. This project falls under the jurisdiction of the North Jersey Transportation Planning Authority (NJTPA). Projects that are federally funded or "regionally significant" must be included in the TIP (Transportation Improvement Program). The Route 7 Wittpenn Bridge project will be funded through State and Federal monies. This project is located in a CO attainment area and in an ozone (O_3) non-attainment area and hence conformity determination is required. The conformity requirements are as follows:

(1) The project must originate from a conforming transportation plan and program.
(2) In CO non-attainment areas, the project must eliminate or reduce the severity and number of violations of the NAAQS for CO.

Transportation projects that originate from a conforming STIP (Statewide Transportation Improvement Plan) are considered to conform to the rule. The Route 7 Wittpenn Bridge project is listed on page 5 in Appendix A (NJDOT Study and Development Projects) of the FY 2002-2003 STIP and page 10 of the NJTPA (North Jersey Transportation Planning Authority) Project Status Detail Report (3rd Quarter FY 2002). The results of the air quality analysis have shown that project-related CO levels will be below the one-hour (35 ppm) or the eight-hour (9 ppm) NAAQS. Therefore, this project will comply with the conformity requirements established by the Clean Air Act Amendments of 1990.

4.5.4 Mitigation

Carbon monoxide levels predicted as a result of the Route 7 Wittpenn Bridge project do not exceed the NAAQS. In addition, the project meets conformity requirements set forth within the Clean Air Act Amendments of 1990. Therefore, air quality mitigation is not necessary.

During construction, mitigation measures to minimize particulate emissions include the following:

- Use, where possible, of water or chemicals for dust control in demolition of existing buildings or structures, construction operations, grading of roads, or clearing of land;

- Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials, stockpiles and other surfaces that can give rise to airborne dust;
- Covering, at all times when in motion, open-bodied trucks transporting materials likely to give rise to airborne dust; and

- The prompt removal of earth or other natural materials from paved streets onto which earth or other materials have been deposited.

- Minimizing traffic disruptions from construction activities during peak traffic hours would reduce temporary pollutant emissions as well.

4.6 Noise

The FWHA has established noise level guidelines and noise analysis procedures. The Noise Abatement Criteria (NAC) define noise level guidelines for different land use activities. The land uses within the Route 7 Wittpenn Bridge project study area are mainly commercial and industrial, or Category C.

4.6.1 Existing Conditions

Existing 2002 noise levels were monitored both east and west of the Wittpenn Bridge. Along the west approach, a noise level meter documented peak AM and PM noise levels of 73 and 74 dBA (L_{Aeq}), respectively. The noise level meter was located within the CSX property at 700 Fish House Road. Ambient noise levels in this location were due to an active CSX freight line to the north, a PATH line directly to the south, and vehicular traffic on Fish House Road, Route 7 and the associated ramps. East of the bridge, a noise level meter documented peak AM and PM noise levels of 68 and 69 dBA (L_{Aeq}), respectively. Currently, noise levels within this location did not approach or exceed the Category C NAC. The noise level meter was located within the Terminal Ventures, Inc. (formerly Eastern Oil) property, directly north of the existing Wittpenn Bridge. Peak hour noise levels in this location were a result of the active CONRAIL freight line and vehicular traffic over the Wittpenn Bridge and approaches. Peak hour noise levels and monitoring locations are shown in Figure 9.

4.6.2 No-Build Alternative

Along the west approach of the Wittpenn Bridge, the land use is strictly commercial/industrial. Under 2029 "No-Build" conditions, it is expected that noise levels will exceed the Category C NAC for structures associated with Owens Corning, the Conrail/CSX Intermodal Facility, Alfredo Bellezza Contractors and the Shinn Brothers facility. The east approach of the bridge is directly adjacent to the Eastern Oil tank farm and other commercial/industrial properties. The Category C structures in this area are also expected to approach or exceed the NAC under 2029 "No-Build" conditions.

4.6.3 Impacts

The Route 7 Wittpenn Bridge project proposes construction of a new vertical lift bridge north of the existing structure. To accommodate the new bridge height (70 feet of vertical clearance over

MHW in the closed position), both east and west approaches will be improved. The proposed bridge will be widened from four (4) 10-foot lanes of traffic to four (4) 12-foot lanes. The chosen alternative eliminates the substandard entrance and exit ramps to the current Fish House Road interchange. East of the structure, the approach will tie into the Route 1&9T (25) – St. Paul's Viaduct Replacement project alignment.

As a result of the Route 7 Wittpenn Bridge project, noise levels west of the bridge will increase along the north due to the ramp geometry improvements. The remaining commercial/industrial property, Owens Corning, is expected to experience noise levels above the Category C NAC.

The Route 7 Wittpenn Bridge improvements require a roadway and bridge shift to the north over the Hackensack River. The bridge and approach shift will tie directly into the Route 1&9T (25) – St. Paul's Viaduct Replacement project. Along the east approach, noise levels are expected to approach or exceed the Category C NAC at Eastern Terminal Ventures, Inc. structures under 2029 "Build" condition.

The Noise Technical Environmental Study (TES) required for the Route 1&9T – St. Paul's Viaduct Replacement project addressed noise impacts. Three (3) residences along St. Paul's Avenue will remain after the Route 1&9T (25) – St. Paul's Viaduct project has been completed. As discussed within the Route 1&9T (25) – St. Paul's Viaduct noise TES, mitigation for these three (3) residences was determined not to be feasible.

An improvement proposed as part of the Route 7 Wittpenn Bridge includes Ramp P, which splits from Ramp B. This ramp will be constructed for vehicular access to St. Paul's Avenue during construction staging and will remain once the bridge is open. This ramp is expected to add low volumes to the St. Paul's Avenue area where the remaining three (3) sensitive receptors are located. Ramp P provides access between Route 7 EB and St. Paul's Avenue and is expected to process between 20 and 40 vehicles per hour during each peak traffic hour. It was determined that due to low traffic volumes, the conclusions reached in the Noise Technical Study for Route 1&9T (25) St. Paul's Viaduct Replacement project, noise levels would not change. No mitigation measures were proposed as part of that study because they are cost prohibitive.

The areas adjacent to the widening will experience an increase in noise levels during the construction phase. Specific projects such as erection of the bridge structures, pile driving/drilling, milling and paving are activities known to produce high noise levels. Equipment such as backhoes, cranes, trucks, and drilling apparatus will be used in the construction phase but are subject to construction noise specifications. Construction noise levels within 50 to 100 feet can reach 90 to 95 dBA (L_{Aeq}) during common stages of construction. The most intrusive construction activity proposed is pile driving which can produce noise levels of 100 dBA (L_{Aeq}) at 50 feet.

This project will incorporate standard construction noise specifications that are listed below:

- All construction equipment powered by an internal combustion engine shall be equipped with a properly maintained muffler,
- Air compressors shall meet current EPA noise emission exhaust standards,
- Air powered equipment shall be fitted with pneumatic exhaust silencers,

- Stationary equipment powered by an internal combustion engine shall not be operated within 150 feet of noise sensitive sites without portable noise barriers placed between the equipment and the noise sensitive sites. Portable noise barriers shall be constructed of plywood or tongue and groove boards with a noise absorbent treatment on the interior surface (facing the equipment),
- Powered construction equipment shall not be operated before 8 AM or after 8 PM within 150 feet of a noise sensitive site.

4.6.4 Mitigation

The noise impact receptors associated with the Route 7 Wittpenn Bridge project, east and west of the bridge, are commercial/industrial structures. These uses are classified within the NAC as Category C sites. Long-term noise impacts associated with the project affect Category C structures associated with the Owens-Corning and Eastern Terminal Ventures establishments. Typically, mitigation measures for Category C uses are not warranted and have therefore not been proposed for the project.

4.7 Aesthetics and Visual Character

This section presents a discussion of the aesthetics of the existing Wittpenn Bridge and the visual character of the surrounding area including both natural landscape and manmade developments. It also discusses changes in views of, on, and from the bridge due to the replacement of the bridge, viaducts, and Fish House Road interchange.

4.7.1 Existing Conditions

The Wittpenn Bridge is one of a series of bridges that form a prominent symbol in the area's overall industrial landscape as the Hackensack River Lift Bridges Historic District. A more detailed discussion of the Historic District can be found in Section 4.10 Historic Properties and Archaeological Resources and in Section 5 Programmatic Section 4(f) Evaluation later in this EA. The bridges dominate the long-range views and some of the short-range views from the immediate surrounding areas. These short-range views are from the industrial development on narrow streets on both approaches to the bridges. In general, the bridges are a part of the background from many viewpoints along the shoreline of the Hackensack River as well as from the roadway, bridges, and transit lines that cross the river.

4.7.1.1 Visual Context – Natural and Manmade

The Hackensack River is the focal point of the project area as it divides the City of Jersey City and the Town of Kearny. The river is used by a variety of ocean-going vessels traveling to the various industrial uses and the terminals north of the bridge. Due to the intensity of usage, the shoreline of the River is dominated by various forms of bulkhead. The existing landscape of the project area is characterized topographically by level land adjacent to the Hackensack River and the existing bridges. The project is located in a tidal portion of the Hackensack River, and where there is no bulkhead, the shoreline is dominated by high marsh shrubs, emergent forbs, and mudflats.

Industrial urban development dominates the project area in both the City of Jersey City and the Town of Kearny. Structures in the Town of Kearny portion of the project area consist primarily of one- and two-story buildings serving a variety of land uses. Some residential development is distributed to the east and south of these industrial uses.

4.7.1.2 Views of the Bridge

The Wittpenn Bridge, a vertical lift bridge, is 2,169 feet long with fourteen deck-girder and three through-truss approach spans, two truss tower spans, and a 209-foot vertical lift span. The existing bridge is in an advanced state of deterioration. To a passing observer, the steel exhibits heavy rusting, the deck is spalling and leaking water, and the concrete piers and abutments are cracked with efflorescence and spalling concrete.

At the eastern approach from the Town of Kearny the bridge is elevated approximately 40 feet above ground on a series of piers. To the west, the bridge approach is an interchange with Fish House Road, and is approximately 20 feet above ground.

The visual characteristics of the Wittpenn Bridge and the other existing bridges in the Historic District include the following four key characteristics:

- Transparency – truss members allow sight lines through the structures.
- Massing – truss forms define and surround volumes of space, much as walls define rooms.
- Geometry –paired towers, which face one another across the river.
- Complexity – various ancillary functions of the bridges that contribute to an overall perception of complexity.

The bridge substructures are concrete and the superstructures are painted steel. Black is used for the truss structures and towers, while deck-supporting girders at the approach spans are painted gray. The bridge is similar in appearance to the other existing bridges (Route 7, CONRAIL and PATH) that have skeletal trusses.

Long-range views of the bridge are primarily from adjoining highways and railways that cross the Hackensack River. These include views from the Pulaski Skyway (Routes 1&9), the New Jersey Turnpike, and the Northeast Corridor and PATH trains. The area's best views are from the Lower Hack Bridge about one-half mile to the north and the CONRAIL and PATH bridges just to the south.

From the two communities, there are only limited vantage points to see the existing bridge because of the dense development that generally blocks views of the bridge. Also, the view of the bridge from the south is somewhat obscured by the CONRAIL freight bridge that shares the western eight piers, including all the river piers, and the pier and west abutment used to span Fish House Road.

4.7.1.3 Views from and on the Bridge

Users of the existing bridge are primarily commuters and commercial truck drivers. The views from the bridge depend upon traffic speed and safety. Commuter and truck traffic have little opportunity to take advantage of views from the bridges because of congestion and narrow lanes that require drivers to concentrate on the traffic ahead. Passengers in vehicles can take advantage of views for the minutes or two it takes to cross the bridge.

4.7.2 Impacts to Visual Character and Aesthetics

The proposed project would replace the existing Wittpenn Bridge with a new bridge and interchange with Fish House Road on the western approach. Although the new structure would appear different from the one being replaced, appropriate design considerations are being evaluated to design the bridge to be in character with the remaining Lower Hackensack River Lift Bridges; thereby, mitigating the project's adverse effects to the Historic District. Nevertheless, the proposed project would result in the demolition of one of the bridges that constitute the Lower Hackensack River Lift Bridge Historic District.

4.7.2.1 Proposed Bridge Design Considerations

Several elements are being considered to design a replacement bridge that is in character with the historic properties of the existing bridge in terms of size, scale, materials, and similar visual characteristics associated with the existing structure. Listed below are some of the items that will be addressed in the design.

The replacement bridge is proposed to have a steel superstructure and concrete piers and substructure. The steel superstructure would be painted to match or complement the existing bridges. The concrete substructure can utilize finish treatments for color and texture.

The replacement bridge is proposed to have four-leg towers similar to the existing bridge but simpler in design. The four-leg towers would be designed to complement the geometric and some of the volumetric qualities of the existing bridges in the Historic District. The four-leg towers can be treated to geometrically complement the existing bridges and thus continue the rhythm of paired towers of the existing bridges.

However, unlike the existing bridges, the sheaves and machinery for the new bridge will be enclosed, or partially enclosed due to maintenance concerns. The steel box girder lift span along with the four-leg tower will provide a more transparent bridge. It has a narrow profile and allows the least-obstructed views of the existing remaining bridges.

4.7.2.2 Views of the Bridge

The removal of the Wittpenn Bridge would have visual impacts for both long and short-range views. Long-range views of the bridge would be the most changed. These would include views from drivers approaching the bridge as well as views for drivers on other bridges crossing the Hackensack River, and passengers on the PATH and NJ Transit trains. However, the short-range

visual impact from both the City of Jersey City and the Town of Kearny would be minimal because of the limited locations from which to view the bridge.

4.7.2.3 Views from and on the Bridge

\The Proposed Alternative would offer long-range views for motor vehicle passengers that are currently constricted. The new bridge would allow drivers going over the new bridge an open view of the remaining Lower Hackensack River Lift Bridges since the structure would be open and offset from the CONRAIL Bridge. In addition, the views of the CONRAIL Bridge will be more direct with the elimination of the existing bridge superstructure.

4.7.3 Mitigation

Several mitigation measures are being evaluated for the project. First, as noted above, the new bridge and approaches will be designed to keep in character of the identified historic properties in terms of size, scale, materials and similar visual characteristics associated with the existing structure. These design measures will also address the complexity of the structure, the materials that will be used, and the massing and geometry of the proposed bridge.

In addition, an appropriate program of Historic American Engineering Record (HAER) documentation of the Wittpenn Bridge which will focus on the individual character of the bridge as well as its setting within and relationship to the Hackensack River Lift Bridges Historic District. Copies of the record will be offered to the Historic Preservation Office as well as the appropriate local repositories.

Finally, a popular document, which illustrates the historic and technological significance of the Hackensack River Lift Bridges Historic District, will be distributed to local historical societies, libraries, schools, and preservation organizations. This information will also be posted on NJDOT and HPO websites for wider viewing.

4.7.4 No-Build Alternative

There will be no change in the current aesthetics of the area with the No-Build Alternative.

4.8 Land Use and Socioeconomics

The Wittpenn Bridge is a major linkage between several transportation arterials that service industrial, commercial, and residential properties on both shores of the Hackensack River as well as to more distant economic centers such as New York City and Newark. Because of its strategic location, the proposed Wittpenn Bridge replacement project has the potential to impact the land use and socioeconomic status of businesses and residents in the vicinity of the project area. The following is a discussion of the existing land use and socioeconomic conditions in the vicinity of the project area as well as the potential impacts to these conditions and mitigating measures proposed to reduce any impacts.

4.8.1 Existing Conditions: Land Use, Zoning and Economic Conditions

The Route 7 Wittpenn Bridge Project study area includes portions of two communities that are connected by the Wittpenn Bridge over the Hackensack River - the City of Jersey City and the Town of Kearny both in Hudson County, New Jersey. Existing land use conditions are illustrated in Figure 10A, Figure 10B and, Figure 10C.

4.8.1.1 Town of Kearny

The Town of Kearny is located west of the Hackensack River in Hudson County and connected to the City of Jersey City via the Wittpenn Bridge. The Town of Kearny is a mixed-use community, which consists of single-family and multiple-family residential (comprised of both market-rate and limited-income housing), office, commercial, business, industrial facilities, manufacturing plants, and transportation uses.

The portion of the Town of Kearny located within the study area is highly industrialized. No community facilities are located either within the study area or in the immediate vicinity.

The area of the Town of Kearny located within the Route 7 Wittpenn Bridge Project study area is composed of one of fourteen zoning districts identified by the Town of Kearny Zoning Map and Ordinance, South Kearny Manufacturing (SKM). Additionally, the area of the Town of Kearny in the Route 7 Wittpenn Bridge Project study area also includes one of twenty-four districts designated by the New Jersey Meadowlands Commission (NJMC), Heavy Industrial (HI). See Figure 11A and Figure 11B.

4.8.1.2 City of Jersey City

The City of Jersey City, located east of the Hackensack River in Hudson County, is a mixed-use community composed of varied land uses including single-family residential, multi-family residential, parks, open space, office, commercial, retail, industrial, port industrial, medical districts, institutional (schools and places of worship), historic districts (including the project study area, which is in the New Jersey Railroad Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District (Richard Grubb & Associates, Inc. 2002), government institutions, transportation, and tourist destinations.

The area of the City of Jersey City in the project study area is composed of one of the twenty zoning districts identified by the City of Jersey City Zoning Map and Ordinance, which is the Industrial (I) zone. In addition, the area of the City of Jersey City within the project study area also includes one of the twenty-four zoning districts identified by NJMC, HI (Figure 11C).

Two community facilities were identified within close proximity of the study area - Our Lady of Mount Carmel Church and Our Lady of Mount Carmel School. Both of these facilities are located on Broadway, lying outside of the most southeastern portion of the study area.

4.8.1.3 Hackensack River

The Hackensack River at the project area is tidally influenced and is a navigable waterway that facilitates commercial navigation. Because of the intensity of usage, the shoreline of the River is dominated by various forms of bulkhead, much of which was used for docking commercial vessels for the purposes of loading and unloading merchandise and material. Where there is no bulkhead, the shoreline is dominated by high marsh shrubs, emergent forbs, and mudflats.

4.8.2 Impacts

There are no direct adverse impacts to community facilities, as none are located within the Route 7 Wittpenn Bridge Project study area.

There are no proposed residential or business displacements or relocations that would occur within the Secondary Impact areas (i.e., within 1000 feet of the proposed right-of-way) in the two communities within the study area. Any displacements are located within the Primary Impact area (i.e., within the proposed right-of-way) as defined in the Socioeconomic and Land Use TES (Dewberry-Goodkind, Inc. 2002).

TABLE 4.8-1

Business Acquisitions/Closures

Route 7, Wittpenn Bridge, Structure Number 0909-150 over the Hackensack River

Block	Lot	Business Impacted	Number of Employees	Number of Minority Employees[1]
300	1	Shinn Brothers Properties, Inc.	10 full-time 5 part-time	2 full-time
602	1A	Terminal Ventures, Inc.	11 full-time 4 part-time	2 full-time
603	1A 1B			

Note:

1. Number of Minority Employees as reported as non-white by New Jersey Department of Transportation after discussions with business owners.

Proposed project improvements will result in permanent impacts to two industrial/commercial facilities that are proposed for acquisition; one within the City of Jersey City and the second within the Town of Kearny. These facilities will be closed, which will potentially displace thirty workers (Table 4.8-1). The closure of these facilities will have fiscal impacts on both municipalities in terms of a loss of employment opportunities. The owners of Terminal

Ventures, Inc. have expressed interest in rebuilding in Jersey City, if approval can be obtained from NJDEP. Fiscal impacts would result from the acquisition of properties and their removal from the tax roles in both the Town of Kearny and the City of Jersey City. Because the State of New Jersey does not pay local property taxes, the potential loss would be approximately 0.01% of the Town of Kearny's total tax revenue, and the City of Jersey City would have a loss of approximately 0.09% of the City's total tax revenue (based on 2002 fiscal year data).

Both full and partial land acquisitions of industrial/commercial properties by the NJDOT will change the land use in areas along the study area from industrial/commercial to transportation. Figure 12 and Table 4.8-2 identify the properties proposed for full and partial acquisitions as well as properties that require easements.

The proposed Route 7 Wittpenn Bridge Project will change access to industrial sites along Route 7 and Newark Turnpike within the project study area. In some cases where direct access was previously available to facilities, it may now be necessary to drive further in order to gain access. See the description of the Preferred Alternative presented in Section 3.0 of this document.

Secondary or construction-related impacts would occur throughout the entire Route 7 Wittpenn Bridge Project study area during the various stages of construction (Dewberry-Goodkind, Inc. 2002). Temporary impacts are expected to include increased traffic congestion; increased noise, vibration, and dust; altered traffic patterns (primarily in the form of detours); and potentially degraded air quality and visual environment.

TABLE 4.8-2

Proposed Industrial/Commercial/Tidelands Property Acquisition Summary

Route 7, Wittpenn Bridge, Structure Number 0909-150 over the Hackensack River

Parcel	Block	Lot	Address	Location	Zoning[1]	Type of Acquisition	Size of Acquisition (Acres)	Improvements or Relocation of Structures in Acquisition Area
1	287	67	Route 7 West	Town of Kearny	Industrial	Drainage easement	0.05	Lloyd A. Fry Roofing Company. *Security fencing, macadam paving, lighting fixtures, double stacked pallets containing asphalt shingle roofing materials, security fencing, sprinklers and lights.*
2	287	73	Newark/ Jersey City Turnpike	Town of Kearny	Industrial	Partial take and temporary construction easements	4.75	***Hudson County Improvement Authority.*** **Fencing, macadam paving in poor condition.**
3	287	81, 82, 83	Fish House Road	Town of Kearny	Industrial	Partial take and temporary construction easements	1.14	James M. Salerno Enterprises, Inc. *Three-story, masonry office building.*
4	**300[2]**	**1**	**Fish House Road**	**Town of Kearny**	**Industrial**	**Total take**	**0.81**	**Shinn Brothers Properties, Inc. Office *trailer and 4 metal sheds. Fencing, lighting, wiring.***
5	298	24, 24R, 25A, 25AR	Fish House Road	Town of Kearny	Industrial	Partial take and drainage easement	0.02	Transcontinental Pipelines
6	298	26, 26R	Fish House Road	Town of Kearny	Industrial	Partial take and drainage easement	0.03	Gary Stanecki. *minor fencing.*
7	284	42, 43	*Fish House Road*	Town of Kearny	Industrial	Partial take, drainage, and utility easements	2.36	Public Service Electric & Gas Co.
	298	21, 22						
8	**602[2]**	**1A**	**Newark Avenue**	**City of Jersey City**	**Industrial**	**Total take, utility, and temporary construction easements**	**6.67**	Terminal Ventures, Inc. *Barrel tanks, piping, pumps, foam system, high level alarms, brick office bldg, underground piping, dock, garage, high pressure boilers, security fencing, lighting, security gate, retention basin.*

TABLE 4.8-2, Continued
Proposed Industrial/Commercial/Tidelands Property Acquisition Summary Route 7, Wittpenn Bridge,
Structure Number 0909-150 over the Hackensack River

Parcel	Block	Lot	Address	Location	Zoning[1]	Type of Acquisition	Size of Acquisition (Acres)	Improvements or Relocation of Structures in Acquisition Area
9	-	-	-	Town of Kearny	Industrial	Partial take	0.79	Jersey City Waterworks
10	284	21A, 24C, 38, 40, 41, 52	Newark Turnpike	Town of Kearny	Industrial	Partial take, drainage, bridge, and construction/maintenance, easements	3.58	United NJ RR and Canal Co. *One-story, block repair facility, chain-link fencing, above ground propane tank, wood posts, stone blocks. Relocation of security fencing.*
	298	27A, 27B, 27AR, 27BR, 25B, 25BR						
11	-	-	*Hackensack River*	-	Industrial	Temporary construction, tidelands parcel, and tidelands easement	2.63	NJDEP
12	284	21AC, 21AD, 21BA, 21BB	*Newark Avenue*	Town of Kearny	Industrial	Drainage easement	0.05	Isaac Heller. *Macadam paving.*
13	284	28, 28R	*Meadows*	Town of Kearny	Industrial	Partial take and drainage easements	0.06	Port Authority Trans-Hudson Corp.
14	602	2	*Newark Avenue*	City of Jersey City	Industrial	Partial take, utility, and temporary construction easements	0.74	City of Jersey City

Notes:
1. New Jersey Meadowlands Commission Zoning Designation**.**
2. **Bolded Properties** are properties proposed for acquisition, wh ich involve closure.

Sources: New Jersey Department of Transportation Right of Way, Data Tables and personal communication with New Jersey Department of Transportation Right of Way representatives, October 2002.

Table 4.8-

The NJDOT Division of Right of Way will make every effort to work with the acquired businesses throughout the entire acquisition process to provide assistance in accordance with State and Federal regulations and guidelines. Some components of the process could potentially include:

- Acquisition reimbursements; and
- Provision of related supporting services and assistance from other appropriate agencies, and in cases of potential relocation:
- Assistance in finding replacement business locations;
- Moving expense reimbursement; and
- Business re-establishment expense reimbursement.

Although the change in access may inconvenience business owners, employees, and other motorists, there will be increased safety in roadway conditions, improved access to the facilities within the project study area, and an overall reduction in congested roadway conditions. This reduction in roadway congestion will lead to more consistent traffic flow and the potential for fewer accidents. As a result, safety will be improved throughout the Route 7 Wittpenn Bridge project area upon completion of the project.

4.8.3 Mitigation

Current levels of access and safety via temporary roadway transitions and connections, as well as access to all existing businesses, industrial facilities and residences will be mitigated by maintaining primary access of Route 7 and alternates access of adjacent roadways, both during and after completion of the project. Safety precautions and measures to manage temporary roadway congestion and altered traffic patterns will be implemented through the utilization of a Maintenance and Protection of Traffic Plan throughout all stages of construction.

Construction noise, vibration, dust, and potential air quality degradation will be mitigated through the employment of standard construction practices including the following general procedures:

- Construction equipment with internal combustion engines will be equipped with properly maintained mufflers;
- Air compressors and air-powered equipment will be fitted with appropriate noise silencers and meet applicable United States Environmental Protection Agency (USEPA) noise emission and exhaust standards; and
- Restricted hours of operation will be employed in any noise sensitive locations in order to meet applicable standards.

Additionally, local ordinances regarding construction issues will be observed.

4.8.4 No-Build Alternative

The No Build alternative would result in no structural improvements to the Route 7 Wittpenn Bridge or the adjacent roadway system. No impacts on socioeconomics or land use would result from the No Build alternative until the time when the structure and roadways would need to be

closed for reasons of safety. This would occur unless periodic maintenance were conducted, based on the cost discussion of the No Build alternative in the Alternatives Analysis (JE/Sverdrup & Parcel Consultants, Inc. 2002), noting that "the initial life of the structural repairs is estimated as ten years under this alternative after which periodic rehabilitations will also be needed at years 30, 50, 70, and 90." Such closure would impact the local and regional traveling public, as motorists would be forced to locate both alternative local and through traffic routes. Ultimately, the impacts of these closures on the local and regional roadway network as well as the residents and businesses/industrial establishments in the communities of the Town of Kearny and the City of Jersey City would be significantly adverse.

4.9 Environmental Justice

Executive Order (EO) 12898, Federal Actions to address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994, requires Federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable by law. The goal of EO 12898 is stated as:

[E]ach federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental affects of its programs, policies, and activities on minority and low-income populations in the United States...(emphasis added) (section 1-101, Executive Order 12898, 1994).

The purpose of the environmental justice review is to determine if the Route 7 Wittpenn Bridge Project's socioeconomic impacts are significantly adverse to a disproportionate share of low-income and minority communities. The review consists of two parts:

- The identification of low-income and or minority populations; and
- A determination of whether any low-income and/or minority populations are disproportionately impacted by the proposed project.

4.9.1 Identification of Minority/Low Income Populations in the Affected Area

An Environmental Justice evaluation was performed pursuant to EO 12898. The demographic and economic census data collected and analyzed along with the information obtained as a result of the detailed NJDOT Division of Right of Way Industrial and Commercial Contact Survey indicates that the study area population is diverse with minority populations making up the majority in some locations; see Figure 13A, Figure 13B, Figure 13C, Figure 13D. The study area includes two census tracts: Tract 127 in the Town of Kearny, Hudson County, New Jersey, and Tract 17 in the City of Jersey City, Hudson County, New Jersey.

The project will not have a negative affect on the workforce presently located within the study area. Of the ten business parcels to be affected, only two will be closed. The acquisition and ultimate closure of the Shinn Brothers Properties, Inc. facility will displace fifteen workers. The

acquisition of Terminal Ventures, Inc. and its ultimate closure will also displace fifteen employees. However, the owners of Terminal Ventures, Inc. have expressed interest in rebuilding in the City of Jersey City, if approval can be obtained from NJDEP (Table 4.8-1).

4.9.2 Determination of Disproportionate Impacts on Minority/Low Income Areas

The proposed project will not have a disproportionate adverse effect on minority/low income populations. When conducting an Environmental Justice Analysis, it must be determined whether the adverse affects of a project borne by a minority/low income population are more severe than the potential adverse affects encountered by the non-disadvantaged population. Although it is is true that there are high concentrations of minority and low-income populations throughout the study area, those population percentages remain consistent outside of the project area. Therefore, it can be said that the negative affects borne by minority populations within the study area are not disproportionately adverse. The nature of the proposed improvements incorporated into the project, as currently proposed, have demonstrated the least impact on the project study area overall. The improvements have not specifically targeted any minority or low income populations.

Employees in the study area will be affected by two business closures as a result of right-of-way acquisition. This analysis indicates, however, that minorities will not be disproportionately affected (Table 4.8-1). In both of the businesses that will be taken by the state, thirteen out of fifteen employees are white, only two (or fourteen percent) are non-white. The employees of Terminal Ventures Inc. may be able to retain their jobs because the owners have expressed the desire to relocate the business within the City of Jersey City limits. The proposed improvement project will not adversely impact or hinder access to community facilities or services used by any of the residents or employees within the study area. The proposed project is not expected to directly affect the residential population because no residential properties will be acquired for this project.

4.9.3 Mitigation

The Environmental Justice study concluded that the project will not have a negative affect on the workforce presently located within the study area. The NJDOT will work closely with the municipal officials, particularly those providing police, fire, and emergency services, to ensure that these services are not compromised within the project area during construction. The incorporation of mitigation measures into the MPT Plan will further ensure that these needs are addressed. As a result, no additional mitigation is required.

4.9.4 No-Build Alternative

The No Build alternative would not involve any structural improvements to the Route 7 Bridge or the adjacent roadway system. Therefore, no Environmental Justice concerns would exist as a result of the No Build alternative.

4.10 Cultural Resources

A cultural resources investigation was performed by Richard Grubb & Associates within the Area of Potential Effects (APE) for Alternative 3, the Preferred Alternative for the replacement of the Wittpenn Bridge (Richard Grubb & Associates 2002). The investigation consisted of two components: archaeological and architectural. The purpose of the archaeological component was to determine whether the proposed project would affect any significant prehistoric or historic archaeological resources. The purpose of the architectural survey was to determine the presence of any significant historic architectural resources within the APE-Architecture, to evaluate their eligibility for inclusion in the State and National Registers of Historic Places, and to assess project effects upon any eligible resources. The methods used included a visual inspection of the APE-Archaeology and APE-Architecture, documentary and map research, and a review of pertinent historical and architectural literature.

4.10.1 Existing Conditions: Archaeological Resources

The Archeaology survey consisted of background research followed by a field investigation within the APE-Archaeology, an area that includes all locations where an undertaking may result in disturbance of the ground. The ground disturbing activities from the current project include the proposed replacement of Wittpenn Bridge as well as realignment and improvements to the NJ Route 7 approaches on both western and eastern sides of the Hackensack River. The realignment of Fish House Road interchange is also included in the APE-Archaeology. The total length of the APE measures approximately one mile.

Background research was conducted prior to the field investigation to identify documented cultural resources within the APE. Visual inspection of the APE served to determine the existing conditions and to assess prior disturbances and cultural resource potential. The results of the background research and the visual inspection of the APE determined the potential for significant prehistoric archaeological resources to be located within the APE-Archaeology to be low.

The field investigation portion of the archaeological survey was conducted in September of 2001. It consisted of a visual inspection and surface documentation of the entire APE-Archaeology. Initially, a subsurface testing program was developed involving geotechnical drilling aimed at determining the stratigraphic context of the APE in order to assess the potential for any deeply buried archaeological resources. After repeated visual inspections, intensive background research, historic map review, and consultation with the NJDOT, testing was determined to be impractical and unnecessary given the massive amount of prior disturbances from industrial development and infilling of the meadowlands. The presence of underground utilities also presented an impediment to subsurface testing. The archaeological survey was therefore limited to surficial examination and photographic documentation, focusing on the history of land use of the APE in order to assess the archaeological resources sensitivity.

Based on the results of the intensive background research and surficial survey, the landscape within the APE was found to be largely altered by previous construction within former and existing right-of-ways as well as heavy industrial developments within the Hackensack Meadowlands. The results of the surficial survey did not identify any potential for original

surfaces within the APE. The potential for significant intact historic or prehistoric cultural resources within the APE was considered very low due to the excessive amount of historic and recent disturbances and alterations done over a predominantly marshy area.

One National Register-eligible historic archaeological resource - the Jersey City Water Works Pipeline- may be located within the APE-Archaeology. Sections of the 36-inch pipe west of the Hackensack River that are still in use parallel the north side of NJ Route 7 and bisect the Fish House Road interchange. This still-active cast iron pipe parallels the north side of NJ Route7 and could be located between 3 inches and 3 feet below the surface.

It was the conclusion of the archaeological survey that no significant prehistoric resources would be impacted by the proposed project. The State Historic Preservation Office (SHPO) concurred with this conclusion by letters dated May 3, 2002 and July 29, 2002.

4.10.2 Existing Conditions: Architectural Resources

The objectives of the historic architectural survey were to locate and identify through in-field investigation all buildings, structures, sites and objects more than 50 years of age; to evaluate the eligibility of these resources for listing on the National Register of Historic Places; to identify those resources already listed on the National Register of Historic Places; and to assess the effects of the project on any eligible resources located within the APE-Architecture according to the Criteria of Adverse Effect [36 CFR 800.5(a)(1)]. The investigation included delineation of an APE-Architecture, which encompassed the area in which effects related to the project can be reasonably expected. Research was conducted at the New Jersey Historic Preservation Office to locate known historic resources and to examine previous architectural surveys and planning-related studies.

The architectural survey identified 16 architectural resources more than 50 years of age within the APE-Architecture. Background research determined that six of these resources were previously determined eligible for listing in the National Register: Wittpenn Bridge over Hackensack River; Lower Hack Bridge over Hackensack River; New Jersey Railroad Bergen Cut Historic District; Old Main Line Delaware, Lackawanna and Western (D.L.&W.) Railroad Historic District; Pulaski Skyway; and U.S. Route 1&9 Corridor Historic District.

As a result of the architectural survey the following four additional architectural resources were determined eligible for listing in the National Register of Historic Places: PSE&G Kearny Generating Station; Pennsylvania Railroad Harsimus Branch (Conrail) Bridge over Hackensack River; Pennsylvania Railroad (PATH) Bridge over Hackensack River; and, the Hackensack River Lift Bridges Historic District.

Figure 14 identifies the historic resources in the project area. The following is a description of each historic resource.

4.10.2.1 Hackensack River Lift Bridges Historic District

The Hackensack River Lift Bridges Historic District comprises four consecutive vertical lift bridges that span the Hackensack River between the City of Jersey City and the Town of Kearny,

Hudson County. Beginning at the northern limit of the historic district, the bridges include the following: the Lower Hack Bridge (formerly the D.L.&W Boonton Line and presently NJ Transit's Morristown Line), the Wittpenn Bridge, the Pennsylvania Harsimus Branch Bridge (presently CSX/Conrail) and the Pennsylvania Railroad Bridge (presently PATH). The latter three bridges, collectively known as the Triple Hack Bridges, were completed in 1930, while the Lower Hack Bridge was completed in 1928. The Wittpenn Bridge and the Harsimus Branch Bridge were built concurrently and share common piers. John Alexander Low Waddell, the foremost bridge engineer of the early twentieth century, consulted on the design of the lift spans for the railroad bridges. The firm of Harrington, Howard and Ash, a successor firm to Waddell, designed the Wittpenn Bridge. Detailed descriptions of each bridge are contained in the subsequent sections.

This impressive collection of movable bridges was built as part of a directive issued by the War Department to provide adequate vertical clearance over the navigable waterways within the Port of New York. After World War I, the need became apparent for adequate shipping channels along the Hackensack River, both to allow for the passage of vessels and to ensure a steady and uninterrupted flow of railroad and vehicular traffic into and out of Hudson River terminals. The bridges that comprise the district are integral parts of a regional transportation network built to serve some of the most densely populated areas in the state, and they are a testament to the primary role the City of Jersey City played in the economic and industrial development of the region.

The Hackensack River Lift Bridges Historic District is significant for its association with John Alexander Low Waddell. Dr. Waddell, one of the preeminent bridge engineers of the early twentieth century, designed what is generally acknowledged to be the first vertical lift bridge in the United States - South Halstead Street Bridge in Chicago. The Hackensack River Lift Bridges Historic District represents largely unaltered, operable, and increasingly rare examples of historically and technologically significant bridge types.

The Hackensack River Lift Bridges Historic District retains its integrity of location, setting, design, materials, workmanship, feeling, and association. The period of significance for the district is 1928-1952. Character-defining features of bridges within the historic district include Pratt truss tower spans with inclined rear columns, Parker truss lift spans and sheaves mounted in the towers through which steel cables pass connecting the concrete counterweights to the lift span.

The SHPO determined the Hackensack River Lift Bridges Historic District eligible for listing in the National Register of Historic Places by letter dated May 3, 2002.

4.10.2.2 Wittpenn Bridge

The Wittpenn Bridge, completed in 1930, carries NJ Route 7, a four-lane undivided highway, over the Hackensack River between an industrial section of the City of Jersey City and the Hackensack Meadowlands in the Town of Kearny. The bridge is 2169 feet long and 63 feet wide. At the east approach, the bridge consists of 14 deck girder approach spans on concrete piers, two camelback through truss spans and a modified Pratt through truss. The vertical lift span is a 209-foot long skewed Parker truss with 35-foot vertical clearance over MHW in the

closed position and 135 foot clearance when opened. The westernmost eight piers, including all the river piers and the west abutment, are shared by the adjacent Pennsylvania Railroad Harsimus Branch (Conrail) Bridge. The westernmost 11 piers rest on caissons while the remaining piers are supported on timber piles. Each tower is 160 feet tall and consists of a Pratt truss with front vertical columns and rear inclined columns. Power for lifting the bridge is supplied from electric motors in the operator's house in the middle of the lift span; backup diesel motors in the operator's house are operated manually. Two gatekeepers houses, east and west of the lift span, are located on the north side of the tower spans. At the top of each of the four tower legs are sheaves over which pass steel wire ropes attached at one end to concrete counterweights mounted in the towers and at the other end to the lift span.

A road bridge over the Hackensack River has been at or near the location of the Wittpenn Bridge since 1795, when the first Hackensack River bridge replaced Douw's Ferry to carry the main road from New York to Philadelphia. The existing Wittpenn Bridge replaced the Newark Turnpike Bridge, a swing span, through-truss structure completed circa 1909. Its 15-foot vertical clearance above the river required opening for all but the smallest of sailing vessels, and once opened, the structure was notorious for not closing. Add to that, the sharp S-curve at the eastern approach, and the bridge could no longer handle the volume of truck and passenger traffic, and would not be able to handle the anticipated traffic from the Holland Tunnel, opened in 1927.

Citing the Newark Turnpike Bridge as a hindrance to navigation, the War Department condemned it in 1925 and required that a new bridge with a 35-foot vertical clearance be built within four years. In anticipation of the opening of the Holland Tunnel, the New Jersey Highway Department included the Newark Turnpike as part of Route 10 in the state highway system, thereby relieving Hudson County and the City of Jersey City of the obligation of constructing a new bridge. The new turnpike bridge was also included as one of six bridges the New Jersey Highway Department designated to facilitate traffic between Newark, the City of Jersey City and New York City and one of two bridges over the Hackensack and Passaic Rivers that would complete Route 25 (Route 1) linking Newark and the Holland Tunnel.

Plans for the new highway bridge, to be built south of the existing bridge, were approved by the War Department in June 1928. Original plans for the bridge called for a skew angle, high level fixed bridge with steel trusses supported on masonry piers. One, 500-foot span was to provide a horizontal clearance between piers of 340 feet and a vertical clearance of 135 feet. These plans were revised by May 1929.

The bridge officially opened for traffic on the morning of November 5, 1930. During a heavy downpour, H. Otto Wittpenn, State Highway Commissioner and former mayor of the City of Jersey City, cut the ceremonial ribbon. In all, the bridge was completed in less than two years at a cost of $3 million. The Pennsylvania Railroad Bridge, which had been built concurrently as the Newark Turnpike Bridge, had opened a day earlier. By 1934, the Newark Turnpike Bridge had been renamed Wittpenn Bridge

Those involved in the design and construction of the Wittpenn Bridge included S. Johanneson (Design Engineer), H.W. Hudson (Assistant Construction Engineer), and W.J. Sloan (Chief Engineer) of the State Highway Department. The consulting engineering firm of Harrington,

Howard & Ash was hired by the State Highway Department to design the lift span, with L.R. Ash serving as lead engineer.

On February 7, 2001 the SHPO offered an Opinion of Eligibility for the Wittpenn Bridge, concluding that the bridge is individually eligible for listing in the National Register under Criteria A and C. The SHPO Opinion states further that the "simultaneous construction and structural connections between the Wittpenn Bridge and the Pennsylvania Harsimus Branch Bridge (a part of the New Jersey Railroad Bergen Cut Historic District) justify inclusion of the Wittpenn Bridge as a contributing resource to the New Jersey Railroad (Pennsylvania Railroad) Bergen Cut Historic District." As a result of the architectural survey performed for this project, it has been concluded that the Wittpenn Bridge is a key contributing resource to the Hackensack River Lift Bridges Historic District.

4.10.2.3. Pennsylvania Railroad Harsimus Branch (Conrail) Bridge

The Pennsylvania Railroad Harsimus Branch Bridge is a vertical lift structure completed in 1930 that carries two tracks of Conrail and CSX freight lines over the Hackensack River between the City of Jersey City and the Town of Kearny, Hudson County. The Harsimus Branch Bridge, built for the Pennsylvania Railroad's freight line, replaced an earlier swing span built between 1880-1887. The bridge shares its piers with the adjacent Wittpenn Bridge. South of the Harsimus Branch Bridge lies a second Pennsylvania Railroad bridge built for its passenger line and currently operated by PATH. Due to its skew, the Harsimus Branch Bridge is 140 feet north of the passenger bridge on the east side of the Hackensack River and 500 feet to the north on the west side of the river.

The Harsimus Branch Bridge is comprised of the following spans: one through girder and four deck plate steel girder western approach spans, two Pratt truss tower spans, a Parker truss lift span, one deck plate steel girder, and a six span concrete viaduct at the eastern approach. The bridge measures 1188 feet long and rests on reinforced concrete piers.

The Harsimus Branch Bridge, placed into service on November 4, 1930, was built north of the old bridge and concurrently with the Wittpenn Bridge. Pennsylvania Railroad personnel responsible for its construction included A.C. Watson, chief engineer of the New York District, T.W. Pinard, Engineer of Bridges and Buildings, and J.J. Vail, Construction Engineer. The Phoenix Bridge Co. built the superstructure, and the firm of Waddell and Hardesty acted as consulting engineers on the lift.

The Pennsylvania Railroad Harsimus Branch (Conrail) Bridge was determined eligible for listing the National Register of Historic Places under Criteria A and C and received a SHPO Opinion of Eligibility on May 3, 2002. The Pennsylvania Railroad Harsimus Branch (Conrail) Bridge has also been determined to be a key contributing resource to the Hackensack River Lift Bridges Historic District and to the New Jersey Railroad Bergen Cut Historic District.

4.10.2.4. Pennsylvania Railroad (PATH) Bridge

The Pennsylvania Railroad (PATH) Bridge over Hackensack River is a vertical lift structure completed in 1930. It carries two tracks of PATH over the Hackensack River between the City

of Jersey City and the Town of Kearny, Hudson County. North of the bridge is another vertical lift bridge built in 1930 for the Pennsylvania Railroad Harsimus Branch Bridge to carry its freight division. This skew angle vertical lift bridge is comprised of a three-span concrete viaduct, a through girder span, five deck plate steel girder spans, and a deck truss span at the western approach, two Pratt truss tower spans, a Parker truss lift span, eight deck plate girders, one through girder, and a three span concrete viaduct at the eastern approach.

Pennsylvania Railroad personnel responsible for the bridge's construction include A.C. Watson, Chief Engineer of the New York District, T.W. Pinard, Engineer of Bridges and Buildings, and J.J. Vail, Construction Engineer. The Bethlehem Steel Co. built the superstructure and floated the fixed span into place. The firm of Waddell and Hardesty acted as consulting engineers on the lift span.

The architectural survey prepared for this project concluded that the PATH Bridge is individually eligible for the National Register under Criteria A and C. The PATH Bridge received a SHPO Opinion of Eligibility on May 3, 2002, and it has been determined to be a key contributing resource to the New Jersey Railroad Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District.

4.10.2.5. Lower Hack Bridge

The Lower Hack Bridge spans the Hackensack River between the City of Jersey City and the Town of Kearny and carries three tracks of New Jersey Transit's Morristown Line. Completed in 1928 for the D.L.&W's Morris & Essex Division, the bridge consists of a single-span movable vertical lift with 2 Pratt truss tower spans, 1 deck plate steel girder east approach span, 2 deck plate steel girder west approach spans, and the 11-span reinforced concrete slab Kearny Viaduct that forms the western portion of the west approach span.

The 1926 War Department directive initiated the reconstruction of this bridge to meet the new standards. Construction of the new bridge, built south of the previous swing bridge, required relocating nearly a mile of track; the abutments of the old structure are still visible along Duffield Avenue. The bridge was built at a cost of over $3 million, purportedly paid for in cash, and put into operation in October 1928. The American Bridge Company built the superstructure and John Alexander Low Waddell, then practicing independently, consulted on the design of the vertical lift span.

The Lower Hack Bridge received a SHPO Opinion of Eligibility on February 11, 1997. The bridge is historically significant for its association with a regional effort, led by the War Department, to provide adequate vertical clearance over navigable waterways within the Port of New York (Criterion A) and for its association with John Alexander Low Waddell, one of the preeminent bridge engineers of the early twentieth century (Criterion C). The Lower Hack Bridge is also a key contributing resource to the Old Main Line Delaware Lackawanna &Western (D.L.&W.) Historic District.

4.10.2.6 New Jersey Railroad Bergen Cut Historic District

The New Jersey Railroad (Bergen Cut) Historic District is historically significant (Criterion A) for its association with the New Jersey Railroad, the third railroad incorporated in New Jersey (1832), as the first railroad connection between New York and Philadelphia, and under the auspices of the Pennsylvania Railroad, as the first railroad company to construct a tunnel under the Hudson River. The Bergen Cut Historic District is also technologically significant (Criterion C) for two integral components: the Bergen Cut and the elevated right-of-way, both constructed between1832-1838. The Bergen Cut is noteworthy as a mile-long, 28-foot wide and 40-foot deep cut through a massive ridge of traprock. Until the completion of the Erie Tunnel in 1861, the Bergen Cut provided the only access through the Bergen Ridge to the the City of Jersey City waterfront. The elevated right-of-way is supported on masonry walls enclosing railroad tracks and carried over the city streets via steel bridges. The period of significance for the district is 1832-1937. The New Jersey Railroad Bergen Cut Historic District received a SHPO Opinion of Eligibility on May 21, 1999.

4.10.2.7 Old Main Line Delaware, Lackawanna and Western Railroad Historic District

The Old Main Line Delaware, Lackawanna & Western Railroad (D.L.&W.) Historic District received a SHPO Opinion of Eligibility on September 24, 1996 for its significant association with suburbanization, commuter and passenger traffic, and freight traffic (Criterion A) and for its engineering and architecture (Criterion C). Boundaries of the Old Main Line D.L.&W. Historic District extend along NJ Transit's Morristown Line from its eastern terminus at Hoboken Terminal to Washington, Warren County. The period of significance for the district dates from the mid-1850's to circa 1930.

4.10.2.8 Pulaski Skyway

Hailed as the "outstanding highway engineering achievement in history" when it was completed in 1932, the Pulaski Skyway is a three mile long, high-level viaduct that spans the Hackensack Meadowlands, and the Passaic and Hackensack Rivers to connect Newark with the City of Jersey City. The Skyway consists of continuous steel deck trusses of short spans and cantilever trusses over the rivers. The eastern end of the viaduct, nearest the APE, consists of short girder spans, a deck truss span, and through trusses. Designed by Sigvlad Johanneson of the State Highway Department, the Skyway was the longest high-level viaduct in the world and also the most expensive highway facility ever built, costing $21 million.

In 1983, the Pulaski Skyway received a SHPO Opinion of Eligibility for its significant association with the construction of the Holland Tunnel (Criterion A) and for its innovative traffic engineering features (Criterion C). The Skyway is also an integral part of the U.S. Route 1&9 Corridor Historic District, which is discussed in the following section.

4.10.2.9 US Route 1&9 Corridor Historic District

The best source detailing the history and key features of the U.S. Route 1&9 Corridor Historic District is "Routes U.S. 1&9 Corridor Historic Engineering Survey- Historical Narrative and

Assessment of Significance and Integrity" prepared by TAMS Consultants (TAMS Consultants, Inc. 1991). After a SHPO Opinion was issued in 1996, TAMS Consultants completed a preservation plan for the district (TAMS Consultants, Inc. 1998). Additional historical background on the historic corridor can be found in the RBA Group's Reconnaissance-/Intensive-Level Historic Architectural Survey- U.S. Route 1&9 Truck Improvements project (RBA Group 1999).

The U.S. Route 1&9 Corridor Historic District received a SHPO Opinion of Eligibility on December 12, 1991. This opinion was rescinded on May 22, 1992 but reissued on March 8, 1996. The entirety of the U.S. Route 1&9 Corridor Historic District within the APE is contained within the Pulaski Skyway.

4.10.2.10 PSE&G Kearny Generating Station

The PSE&G property, located along the banks of the Hackensack River to the southwest of the Wittpenn Bridge, consists of four buildings more than 50 years of age, all of which date to the opening of the facility in 1926. The largest and most impressive building is the Power House, a square, two-story brick edifice with monitor roof distinguished by three tall smokestacks in the middle of the building. Other architecturally important structures on the PSE&G property include the Switch House, the Service Building and the North Gate House.

Kearny Generating Station opened in November 1926. In attendance at the opening ceremony with Thomas McCarter were Governor A. Harry Moore and Thomas Edison, who may have been friends with McCarter. The original Kearny complex consisted of approximately 12 buildings located on a 30-acre property. Among these, it appears that only the Power House, Switch House, Service Building and North Gate House, are still extant.

The PSE&G Kearny Generating Station received a SHPO Opinion of Eligibility on May 3, 2002.

4.10.3 Impacts: Architectural Resources

Consultation Comments from the SHPO dated May 3, 2002 and July 29, 2002 for the project have concluded that there will be no adverse effect to the following properties provided that the new bridge structure is "compatible in terms of size, scale, design, and materials" with the following structures:

- Lower Hack Bridge over Hackensack River
- Pennsylvania Railroad (PATH) Bridge over Hackensack River
- Pulaski Skyway
- U.S. Route 1&9 Historic District
- Old Main Line D.L.&W. Railroad Historic District
- PSE&G Kearny Generating Station

Consultation Comments from the SHPO dated May 3, 2002 and July 29, 2002 have concluded that the project will have an adverse effect to the following historic resources:

- Wittpenn Bridge over Hackensack River

- Pennsylvania Railroad Harsimus Branch (Conrail) Bridge over Hackensack River
- Hackensack River Lift Bridges Historic District
- New Jersey Railroad Bergen Cut Historic District

Due to the imprecise nature of locating the Jersey City Water Works Pipeline, effects to this resource could not be assessed. Consultation between the NJDOT and SHPO have determined that mitigation efforts for the current project should be coordinated with similar efforts for the U.S. Route 1&9T (Section 25) St. Paul's Viaduct Replacement project, as discussed below.

4.10.4 Mitigation

An appropriate program of Historic American Engineering Record (HAER) documentation of the Wittpenn Bridge could be carried out prior to initiation of construction of the preferred alternative. This would include photographic and written documentation of the existing structure, as well as reviewing and cataloging the photographs and related historical documents (e.g. As-builts) in the NJDOT files for future reference. This recordation effort should be fully coordinated with any recordation activities associated with the US Route 1&9T (Section 25) St. Paul's Viaduct Replacement project.

A popular document can be prepared that illustrates the historical and technological significance of the Hackensack River Lift Bridges Historic District. Copies of this publication can be distributed to selected local and state historical organizations, libraries, schools, and preservation organizations.

Design alternatives for the new bridge should be considered. The overall goal should be the construction of a new bridge that will address project need while also incorporating a sensitive modern design that is compatible with the character of identified historic properties in terms of size, scale, design, and materials. Creative design of the guide rails, fencing, lighting and balustrade are some aspects that could be considered. These design considerations should be negotiated and agreed upon by the NJDOT and SHPO. The new structure should be designed in such a way as to insure compatibility with other design considerations for the U.S. Route 1&9T(Section 25) St. Paul's Viaduct Replacement project.

Mitigation measures for potential impacts to the Jersey City Water Works Pipeline will be coordinated with the mitigation efforts outlined in the Memorandum of Agreement prepared for the U.S. Route 1&9T (Section 25) St. Paul's Viaduct Replacement project. Specifically, these measures will include background research of primary and secondary sources to locate written and visual materials that will assist in the interpretative public display that will be prepared for the Jersey City Water Works Pipeline.

4.10.5 No-Build Alternative

The only alternative that completely avoids adverse effects to historic resources is the No Build alternative, which would require no changes to the Wittpenn Bridge and current roadway configurations. This alternative, however, is not feasible or prudent, as it does not meet all project purposes and needs.

This alternative assumes that no improvements would be made which upgrade the structure, however maintenance rehabilitation of the existing bridge would be completed to preserve the structural integrity and extend its useful life. Work to be performed includes replacement of damaged sections of guide rail and rub rail and deteriorated structural members; crack and spall repairs to substructure members, the concrete deck, and easements; and repair of mechanical and electrical systems.

This alternative was eliminated from further consideration for several reasons. First, it does not address the structural deficiencies of the existing bridge. The bridge is in an advanced state of structural deterioration, with a sufficiency rating of 30 out of 100. The viaduct has been deemed structurally deficient, with low condition ratings for the deck, the substructure, and the superstructure. The viaduct has required frequent repairs for many years to keep the structure in service. It was rehabilitated for a ten-year life in 1986 so that traffic could be maintained until a replacement structure could be constructed. The structure is now past the point where cost-effective repairs can be undertaken without taking the structure out of service with resulting decrease in capacity and increased congestion.

In addition, the existing bridge's substandard design features, including inadequate lane widths, no shoulders, and, no median would remain. Also, the high frequency of bridge openings would continue traffic delays.

Overall, with the No Build Alternative, the substandard roadway conditions and frequent bridge openings would continue to produce significant delays and congestion. In addition, structural deterioration and related safety problems would continue to escalate. Also, this alternative does not address any of the proposed Portway proposals for improved circulation and an overall increase in efficiency of the waterfront. To address these deficiencies, the existing bridge must be replaced.

4.11 Hazardous Waste Screening

A Hazardous Waste Screening Technical Environmental Study (Dewberry-Goodkind, Inc. 2002A) was performed on properties located in the proximity of the Route 7, Wittpenn Bridge Project, Structure No. 0909-150, over the Hackensack River, the City of Jersey City and Town of Kearny, Hudson County, NJ. The study area consisted of the proposed right-of-way and/or easements plus 250 feet on both sides of Route 7 and Fish House Road within the project limits and four properties north of Howell Street in the City of Jersey City. The study area did not include properties east of Duffield Avenue in the City of Jersey City; these properties were addressed as part of the TES for the 1&9T, Section 25 Roadway Improvements Project (L. Robert Kimball & Associates 1999).

4.11.1 Existing Conditions

As part of the hazardous waste screening, Dewberry-Goodkind, Inc. performed a reconnaissance of the study area, a historical records review, a review of Federal and State records, and made inquiries with several State and municipal offices and bureaus regarding properties, businesses, and NJDEP cases within the study area. Particular attention was paid to the properties proposed for acquisition by the NJDOT.

The screening identified twenty sites within the study corridor that are of environmental concern due to the potential presence of soil or groundwater contamination; see Figure 15.

4.11.2 Impacts

Of the twenty sites identified in the screening, fourteen are impacted by the proposed project. Two sites are proposed for full acquisition; ten sites are proposed for partial acquisition; and one site is proposed as a tidelands parcel. There will be drainage easements on seven sites; utility easements on four sites; a bridge easement on one site; construction maintenance easements on two sites; temporary construction easements on six sites; and a tidelands easement on one site. See the Preferred Alternative presented in Section 3.0 of this document.

These sites are of concern due to the nature of their past and present operations. Contaminants of concern include polycyclic-aromatic hydrocarbons, heavy metals, petroleum hydrocarbons, and polychlorinated biphenyls (PCBs). Further investigation of these properties, including the collection of soil and groundwater samples will be performed in advance of excavation or construction.

The results of the hazardous waste screening provided the following information:

- The site reconnaissance and records review identified four businesses within the study area that are applicable to Industrial Site Recovery Act (ISRA) regulations. Three of these businesses are located within areas proposed for acquisition and may be impacted by proposed construction activities associated with the proposed project.

- There are five sites within the study area that have underground storage tanks (USTs). Proposed construction activities associated with the proposed project will affect four of these sites.

- There are six sites within the study area that are on the NJDEP Known Contaminated Sites List (KCSL). Proposed construction activities associated with the proposed project will affect five of these sites.

- The aerial photographs and Sanborn Fire Insurance maps identified eight areas of concern.

- The site reconnaissance identified several buildings and trailers within the study area. There are also utility lines and an operator house on the Wittpenn Bridge. The buildings, trailers, and bridge may contain Asbestos Containing Material (ACM) and Lead Based Paint (LBP). Further investigation should confirm the presence and content of ACM and LBP prior to construction and demolition activities.

- There are sections of Jersey City and Kearny that contain historic fill contaminants as defined by the NJDEP including hexavalent chromium (CrVI).

Additionally, the Hackensack River is an area of potential environmental concern that warrants further investigation due to the potential presence of polycyclic-aromatic hydrocarbons, heavy metals, and dioxins in sediment.

4.11.3 Mitigation

Table 4.11-1 provides a summary of the properties identified in the hazardous waste screening and recommendations for further study including soil and groundwater sampling. Sampling data will assist in an analysis of right-of-way and easement acquisition and for construction support purposes. As the design progresses, these properties will be further investigated to assess and verify the type and level of contamination present. During design, the extent of the vertical and horizontal disturbance on each of the sites will be determined. Site investigation work plans will be developed to address the impacted areas in accordance with all applicable regulations.

Appropriate mitigation measures will be developed based on the results of the recommended investigation activities including soil and groundwater management options during construction as well as health and safety measures required for the protection of construction personnel. These activities will all be accomplished during the development of the final design in continuing coordination with the NJDEP.

Exact quantities, location, and duration along with mitigation efforts will be determined during the final design development phase. All appropriate contract documents will be prepared and submitted to FHWA for their approval prior to the advertisement of the project.

TABLE 4-11.1

SUMMARY OF FINDINGS AND RECOMMENDATIONS
ROUTE 7, WITTPENN BRIDGE
STRUCTURE NUMBER 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY AND TOWN OF KEARNY, HUDSON COUNTY

AOC	PROPERTY OWNER NAME AND ADDRESS	OPERATIONS	NJDEP CASE MANGER/ CASE NUMBERS	ENVIRONMENTAL CONCERN	IMPACT BY IPA	RECOMMENDATIONS
AOC No. 1	Public Service Electric & Gas Co. Pennsylvania Avenue Kearny, NJ	Power Generation Plant	Jonathan Berg, NJDEP Case Manager NJD 980770176 NJDEP Open Case ISRA, KCSL site	Historical use of this property by PSE&G Power LLC as a fly ash crib and settling pond.	Proposed for partial acquisition. Impacted by construction. Drainage and utility easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, TPH, and PCBs.
AOC No. 2	Transcontinental Pipelines Route 7 Kearny, NJ	Pipeline	NA	Potential environmental concern due to the pipeline contents and the possibility of previous discharges.	Proposed for partial acquisition. Impacted by construction. Drainage easements.	No further investigation is necessary.
AOC No. 3	Isaac Heller 1200 Newark Turnpike Kearny, NJ	Trucking facility Canning Facility	UST 69267	Current use of the properties, the presence of USTs.	Impacted by construction. Drainage easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH.
AOC No. 4	Lloyd A. Fry Roofing Company 1300 Newark Turnpike Kearny, NJ	Asphalt Roofing Manufacturer	NJDEP Case Manager, Tim Nuss UST 239295 NJ Spills 92-06-29-1436 After remedial activities, a NFA closed the NJDEP case on January 31, 1994. ISRA Site	Current use of the property by Owens Corning Fiberglass Corp., the presence of USTs and bulk storage tanks.	Proposed for partial acquisition. Impacted by construction. Drainage, utility, construction and maintenance, and temporary construction easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, TPH.
AOC No. 5	Jersey City Waterworks 700 Fish House Road Kearny, NJ	Narrow strip of land within the center median of Route 7 in Kearny	NA	Consists of a buried water line owned by the Jersey City Municipal Authority.	Proposed for partial acquisition. Impacted by construction.	Collect soil samples and analyze for PP+40, CrVI, TPH.
AOC No. 6	United NJ RR and Canal Co. 700 Fish House Road Kearny, NJ	Equipment/Trailer Storage Facility	NJDEP Open Case NJD 980770028	Contamination associated with railroad operations is typically due to the hazardous materials transported and the construction of the tracks and support bedding. Potential ACM and LBP in existing structures.	Proposed for partial acquisition. Impacted by construction. Drainage, bridge, and construction and maintenance easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, TPH and PCBs. Further investigation is necessary to confirm the presence of ACM and LBP before demolition activities.
AOC No. 7	Port Authority Trans-Hudson Corp.	PATH rail line and vacant land	NA	Contamination associated with railroad operations is typically due to the hazardous materials transported and the construction of the tracks and support bedding. Potential ACM and LBP in existing structures.	Proposed for partial acquisition. Impacted by construction. Drainage easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH.
AOC No. 8	Gary Stanecki Fish House Rd/Route 7 Circle Kearny, NJ	Equipment Storage	NA	Use by Ed Shinn Cranes for the storage of heavy equipment and cranes. Potential ACM and LBP in existing structures.	Proposed for partial acquisition. Impacted by construction. Drainage easements.	No further investigation is necessary.
AOC No. 9	NJDOT Fish House Road Kearny, NJ	Equipment Storage	NA	Ed Shinn Cranes storage of heavy equipment and cranes. Potential ACM and LBP in existing structures.	Impacted by construction.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH. Further investigation is necessary to confirm the presence of ACM and LBP before demolition activities.
AOC No. 10	Hudson County Improvement Authority 2 Fish House Road Kearny, NJ	Vacant	NJDEP Open Case Manager, Trish Conti UST 33848 NJD 002445112 CERCLIS 1000346452 KCSL site	Previous operations at Kopper Coke Company facility.	Proposed for partial acquisition. Impacted by construction. Temporary construction easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH.

TABLE 4-11.1 (Cont.)
SUMMARY OF FINDINGS AND RECOMMENDATIONS
ROUTE 7, WITTPENN BRIDGE
STRUCTURE NUMBER 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY AND TOWN OF KEARNY, HUDSON COUNTY

AOC	PROPERTY OWNER NAME AND ADDRESS	OPERATIONS	NJDEP CASE MANGER/ CASE NUMBERS	ENVIRONMENTAL CONCERN	IMPACT BY IPA	RECOMMENDATIONS
AOC No. 11	James M. Salerno Enterprises Inc. 2 Fish House Road Kearny, NJ	Truck service and repair facility Trucking Facility	Frank Paranta, NJDEP Open Case Manager UST 108010 NJL 000001453 NJDEP issued a site-wide NFA Letter on November 16, 1999 for the chromium remediation. KCSL site	Former use of the property by Bellezza Construction (lot 81), the presence of former and current USTs. This site is Hudson County Chromate Site 145. Potential ACM and LBP in existing structures.	Proposed for partial acquisition. Impacted by construction. Temporary construction easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH. Further investigation is necessary to confirm the presence of ACM and LBP before demolition activities.
AOC No. 12	Shinn Brothers Properties, Inc. 1 Fish House Road Kearny, NJ	Crane and Heavy Equipment Contractor	UST 0108010	Current operations at Ed Shinn Cranes, the former presence of two USTs. Potential ACM and LBP in existing structures.	Proposed for full acquisition. Impacted by construction.	Collect soil and groundwater samples and analyze for PP+40, CrVI, TPH. Further investigation is necessary to confirm the presence of ACM and LBP before demolition activities.
AOC No. 13	Wittpenn Bridge Kearny and Jersey City, NJ	Carries Route 7 traffic over the Hackensack River between the City of Jersey City and the Town of Kearny, Hudson County	NA	An asbestos assessment identified insulation on utility lines traveling across the Wittpenn Bridge. Based on the construction date of the Wittpenn Bridge, the paint may contain lead.	**Impacted by construction.**	**Further investigation is necessary to confirm the presence of ACM before demolition activities. A qualified contractor should perform all work associated with the removal, disturbance, encapsulation, or enclosure of LBP. The contractor should perform all LBP abatement in accordance with applicable Federal, State, and local requirements.**
AOC No. 14	Hackensack River Kearny and Jersey City, NJ	Navigable water	NJ Spills 93-9-17-2211-11	Contaminants may include heavy metals, chlorinated hydrocarbons, fecal coliform bacteria, and mercury from upstream contaminant source such as landfills and industrial and sewerage waste discharges.	Tidelands parcel proposed for acquisition Impacted by construction. Temporary construction and tidelands easements.	Collect sediment samples and analyze for PP+40, CrVI, TPH, PCBs, Dioxins, and DNAPLs.
AOC No. 15	Public Service Electric & Gas Co. Howell Street Jersey City, NJ	Former Gasification Plant	NJDEP Open Case	Former use of this site as a PSE&G generating house with tanks, outdoor coal storage area, accelerator tank, gas tank, tar separator, and pump house.	Not impacted by the IPA.	No further investigation is necessary.
AOC No. 16	Mimi Development Corp. Howell Street Jersey City, NJ	Unknown	NA	Presence of an AST, the lack of information regarding the former use of the property. Potential ACM and LBP in existing structures.	Not impacted by the IPA.	No further investigation is necessary.
AOC No. 17	Howell Associates Property, Inc. Duffield Avenue Jersey City, NJ	Fork Lift Sales and Rental Facility	UST 22501	Current operations at this site as a forklift and construction equipment repair facility. Potential ACM and LBP in existing structures.	Not impacted by the IPA.	No further investigation is necessary.
AOC No. 18	D&R Investment Group, Inc. Howell Street Jersey City, NJ	Trucking facility	NJ Release 95-7-20-1448-58 NJ Spills 90-03-11-1942 NJDEP Open Case UST 022501	Past reported waste oil spills, the presence of a UST. Potential ACM and LBP in existing structures.	Not impacted by the IPA.	No further investigation is necessary.
AOC No. 19	Terminal Ventures, Inc. Howell Street Jersey City, NJ	Bulk Oil Terminal	NJDEP Open Case Manager, Mike Briania NJDEP Open Case Manager, Louis Sanders NJL 800335945 NJL 840002216 ISRA, KCSL site	Current use of this site by Terminal Ventures, Inc., the presence of USTs and bulk storage tanks, historical contamination.	Proposed for full acquisition. Impacted by construction. Utility and temporary construction easements.	Collect soil and groundwater samples and analyze for PP+40, CrVI, and TPH.
AOC No. 20	City of Jersey City	Public ROW easement for the Jersey City Public Sewers	NJDEP Open Case Manager, Frank Paranta NJL 000069112 KCSL site	Hudson County Chromate Site 180 is presently a public ROW easement for the Jersey City Public Sewers and is located between the Terminal Venture facility lagoon area and the main tank farm.	Proposed for partial acquisition. Impacted by construction. Utility and temporary construction easements.	No further investigation is necessary.

Further studies are necessary to verify the presence and quantities of ACM and LBP on the structures affected by the project and to develop an approach to address these issues during construction. The riveted steel girder superstructure was built in the 1930's when LBP was used. NJDOT has approved procedures for removal and disposal of this type of steel, and these will be specified during construction. Specifications will also call for maintaining a clear navigation channel.

Supplemental construction specifications, environmental notes, and a Soil Reuse Plan (SRP) and/or Remedial Action Work Plan (RAWP) will be developed in accordance with NJDOT Standard Procedures and the NJDEP Soil Management Guidelines and NJDEP Technical Requirements for Site Remediation (TRSR), New Jersey Administrative Code (NJAC) 7:26E.

Appropriate soil erosion and sediment control measures will be undertaken to minimize sedimentation and impacts to water quality levels of the Hackensack River. Best management practices will be utilized in accordance with all local, state, and federal regulations. A detailed soil erosion and sediment control plan will be developed after construction design plans are finalized. Implementation of this plan will be carefully monitored during construction so as to facilitate utilization of the best sediment management options during construction activities. Work will be performed sealing off sediments requiring excavation, which will then be appropriately reused onsite and/or disposed offsite. The management of contaminated sediments will meet all applicable Federal, State and/or local regulations in terms of onsite handling, transportation as necessary, and the reuse and/or disposal of these sediments.

4.11.4 No-Build Alternative

The No Build alternative would not involve any structural improvements to the Route 7 Bridge or the adjacent roadway system. There would be no hazardous waste issues as a result of the No Build alternative.

5.0 SECTION 4(F) EVALUATION

5.1. Introduction

FHWA regulations (23 CFR 771), in compliance with Section 4(f) of the 1966 U.S. Department of Transportation Act (U.S. law codified in 49 USC 303 and 23 USC 138), require that a Section 4(f) Evaluation be prepared for any federally funded highway project that uses property from any significant historic property that is listed in or eligible for listing in the National Register of Historic Places and/or a significant publicly owned park, recreation area, wildlife and waterfowl refuge.

This Section 4(f) Evaluation has been prepared for those historic properties that will be influenced by the Route 7, Wittpenn Bridge over the Hackensack River project. The following historic resources, all of which are eligible for the National Register of Historic Places, will be affected by the proposed project: Wittpenn Bridge, Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over Hackensack River, Hackensack River Lift Bridges Historic District, and New Jersey Railroad Bergen Cut Historic District.

Under Section 4(f), the FHWA may not approve the use of land from a publicly owned park, recreation area, or wildlife/waterfowl refuge or any historic site unless a determination has been made that:

1. There is no feasible and prudent alternative to the use of such lands, and
2. The action includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use (23 CFR 771.135)

The word "use," as is stated in this analysis occurs when:

1. Land from a Section 4(f) property is acquired for a transportation project, referred to as a direct taking; or
2. The proximity impacts of the transportation project on the Section 4(f) property, without acquisition of land, are so great that the purposes for which the Section 4(f) property exists are substantially impaired, known as "constructive use."

5.2. Project Setting and Background

5.2.1 Project Setting

The Wittpenn Bridge is located between Kearny and Jersey City, a key location for industrial/commercial warehouse operations because of its access to the regional roadway network. In the immediate vicinity of the bridge are major utility and industrial sites such as CSX, PSEG and Owens Corning. Interstate Route 280 and the New Jersey Turnpike are to the west, the Holland and Lincoln Tunnels provide access to New York City to the east, and Route 3 is located to the north. Important rail passenger and freight facilities in the area include the Northeast Corridor—providing both Amtrak regional service and New Jersey Transit local

service—and several freight yards that serve trucking companies in the area. This concentration of freight facilities in the vicinity of the Wittpenn Bridge results in the heavy volume of truck traffic currently using the existing transportation network. The project location is depicted on Figure 1.

5.2.2 Wittpenn Bridge

The Wittpenn Bridge, a vertical lift bridge, is 2,169 feet long with fourteen deck-girders and three through-truss approach spans, two truss tower spans, and a 209-foot vertical lift span. The vertical lift span provides approximately 35 feet of vertical clearance above MHW in the closed position and 135 feet when opened. The fender system is continuous through the PATH and CSX bridges downriver, providing a 158-foot wide navigation channel. The adjacent CSX freight bridge shares the western eight piers, including all the river piers, and the pier and west abutment used to span Fish House Road.

The roadway on the bridge has a curb-to-curb width of 40 feet and is undivided with two 10-foot travel lanes without shoulders in each direction. It has no median barriers or other physical separation and only a double yellow stripe separates opposing traffic lanes. The roadway is flanked by two eight-foot wide sidewalks, separated from traffic by a guide rail supplemented by a channel section rub rail mounted approximately one foot above the top of curb. An abrupt curve at the east end of the existing bridge constricts existing traffic flow. Traffic flow is further impeded by the high number of large trucks traveling on the bridge's narrow travel lanes.

Previous rehabilitations to the Wittpenn Bridge occurred in 1953, 1971, 1973, and 1992. The 1953 repairs included truss reinforcement of the tower and lift spans, redecking of the lift spans, and repairs to both approaches. The 1971 repairs included grading, paving, and structural repairs. The 1973 repairs included repairs to the fender system. The 1992 interim repairs included column and bearing repairs to one pier, truss repairs to three spans, lift span repairs, and lift span sidewalk replacement repairs. Other emergency repairs and modifications have been performed in subsequent years to the present, most notably to the mechanical systems and the deck system.

5.2.3 Roadway Network and Bridge Approaches

Route 7 is designated as a principle arterial, beginning at Route 1&9 Truck (1&9T) Charlotte Circle in Jersey City. It extends west across the Hackensack River, through industrial areas in South Kearny and developed sections in the Town of Kearny to the Passaic River and Belleville to Clifton. Its total length is approximately 10 miles, with about 5.3 miles within Kearny and Jersey City.

The Wittpenn Bridge project area lies at the east end of the Route 7 corridor, extending from Charlotte Ave to a viaduct crossing of the New Jersey Transit Morris & Essex Tracks. In the project area, Route 7 serves as the connection between the Newark/Jersey City Turnpike (County Route 508) and the New Jersey Turnpike to the west, and U.S. Routes 1&9(T) and State Highway Route 139 to the east. It provides a key connection from the west to the Holland

Tunnel and New York City, as well as business and industrial areas within Jersey City. It also serves as a main route for truck traffic serving industries in the greater Kearny/Meadowlands area.

At its east approach to the Wittpenn Bridge, Route 7 connects with Routes 1&9(T) and Charlotte Ave. At the west approach, a tight, looped interchange built in the 1970's provides direct connections between Route 7 and Fish House Road. Fish House Road serves as the north outlet for the major industrial sites, truck and intermodal terminals located between Route 7 and Route 1&9 (T) in Kearny. Traffic along Fish House Road is predominately large trucks from these facilities, including the CSX Intermodal facility immediately southwest of the Wittpenn Bridge. The exit from Route 7 eastbound to Fish House Road and the entry from Fish House Road to Route 7 eastbound are from the left travel lanes with little or no speed change lane. This represents an undesirable geometric condition.

West of the Fish House Road Interchange is a viaduct, also constructed in the early to mid 1970's, over the New Jersey Transit Morris and Essex tracks. This viaduct connects to an interchange with the Belleville-Newark Turnpike (State Highway Route 7, County Route 506) and Newark-Jersey City Turnpike (County Route 508). County Route 508 is used for access to the New Jersey Turnpike and Interstate Route 280.

5.2.4 Travel Conditions

Travel demands within the Route 7 corridor have resulted in near saturated conditions in the vicinities of the Fish House Road interchange, the Wittpenn Bridge, and the Charlotte Traffic Circle during peak travel periods. Factors fueling increased demand include the commercial and industrial port facilities, nearby major regional employment centers, and businesses in the Jersey City/Kearny area. In addition, Route 7 is a vital link in the regional roadway network that provides access to these areas and facilities.

Travel demand is also high on other highways leading to the Wittpenn Bridge; this demand is expected to remain high as the New York City metropolitan area grows. In response to this projected growth, a number of actions are proposed in the vicinity of the Wittpenn Bridge to improve mobility, increase capacity, and reduce congestion. The proposed improvements include the re-construction of the Fish House Road interchange to Charlotte Circle, and the Wittpenn Bridge.

While travel demands have been increasing in the corridor, the operating conditions on the bridge have been deteriorating. With only four 10-foot travel lanes and no shoulders, the Wittpenn Bridge frequently experiences congestion during the morning and evening peak periods. In light of the structural conditions of the bridge, maintenance and repair activities are projected to continue throughout the remaining service life of the bridge. Prevailing conditions are likely to deteriorate during periods when bridge maintenance is occurring.

5.2.5 Other Proposed Actions in Vicinity of the Project Area

As noted, there are several other proposed projects in addition to the Wittpenn Bridge project that are expected to affect the traffic patterns in the study area. The following is a description of these projects.

Portway
NJDOT is currently developing the comprehensive "Portway International Intermodal Corridor" to enhance the mobility of commercial traffic along the New Jersey waterfront. Portway is intended to improve the efficiency of the waterfront/landside interface as a means to maintaining and enhancing economic vitality. The Portway project includes a series of projects that will strengthen access to and between the Newark-Elizabeth Air/Seaport Complex, intermodal rail facilities, trucking and warehousing/transfer facilities, and the regional surface transportation system. It is divided into three phases.

In Phase 1, improvements would extend approximately six miles from Ports Newark and Elizabeth in the south to the vicinity of County Road in the north. Improvements in Phase 2 would extend north from the terminus of Phase 1, extending approximately five miles to the Little Ferry Rail Terminal. Phase 3 would extend east across Newark Bay and serve Port Jersey, the potential new port facilities at the Military Ocean Terminal at Bayonne (MOTBY) and other facilities.

Truck Route 1&9(T) Ultimate Improvement
With this project, the existing Truck Route 1&9(T) viaduct would be reconstructed on a new alignment north of the current structures. Replacing the viaduct on a new alignment would provide improved traffic flow in the project area. The new alignment would incorporate new or modified approach roadways, structures, and ramps necessary to improving traffic movement in the area. These new facilities would improve connections between Route 1&9(T), Route 7, Pulaski Skyway, Route 139, Route 1&9 north of Tonnele Circle, and local streets in Jersey City.

Construction of the improvements to Route 1&9(T) is anticipated to precede the construction of the Wittpenn improvements. The eastern terminus of a new Wittpenn Bridge would be designed to be compatible with the proposed improvements to Route 1&9(T) viaduct. Interim connections between the existing bridge and the new interchange on the east approach are to be provided as part of the Route 1&9 (T) improvements.

Route 139 (1)
This project involves reconstruction and rehabilitation of four viaducts in Jersey City, two for roadways and two for railroads. Due to the complexity of the project, it has been broken down into three separate contracts. Contract No. 1 involves concrete encasement removal, cleaning and painting of structural steel, and substructure repairs and is currently under construction. Contract No. 2 involves deck replacement and superstructure rehabilitation and is scheduled for construction in 2003. Contract No. 3 involves rehabilitation of the Hoboken viaduct, superstructure rehabilitation on the Conrail viaduct and associated local roadway improvements to improve operations. It is scheduled for construction in 2004.

Bergen Arches

The Bergen Arches right-of-way is an abandoned railroad corridor about one mile long that cuts through highly developed Jersey City. The Bergen Arches parallel Route 139 extending from below J.F. Kennedy Boulevard near Tonnele Avenue in the west and Palisades Avenue in the east. This series of arch structures provides a transportation corridor for future development of the Hudson River Waterfront.

The Bergen Arches project is currently in the early planning stages, and no decision has been made as to how the Arches will ultimately be used. Because the Bergen Arches are located in a prime location, several options are being evaluated to determine the best use. Local planners prefer a new roadway/gateway to relieve congestion in the area and to help motorists heading to downtown Jersey City avoid the New York City bound traffic. However, there is also support for non-automotive options such as freight, passenger rail, light-rail, or a bus-way.

Allied Junction/ Secaucus Transfer

A new interchange on the New Jersey Turnpike (Route 95) would be constructed with this project to serve a new rail and commercial development being built in Secaucus. The new interchange would be about two miles south of Route 3 (existing Interchange 16E/18E), and would include a toll plaza and a 1.5-mile long connector road. The connector road will probably ultimately link the new interchange with Tonnele Avenue and possibly a Bergen Arches project.

5.3. Description of Proposed Action

The Preferred Alternative (Alternative 3) for the replacement of the Wittpenn Bridge is shown in Figure 3 and discussed below. It was selected based on the findings of an alternatives analysis, coordination conducted with agencies and organizations, and public meetings held in early 2002.

This alternative would replace the existing vertical lift bridge with a new vertical lift (movable) bridge located on a new alignment immediately north of the existing bridge. It would include replacing the existing east and west approaches including the Fish House Road Interchange with new structures and grade-separated roadways.

The new alignment would extend from the western limit of Charlotte Avenue (and the ongoing Route 1&9 Truck operational improvements project) in Jersey City to the east of New Jersey Transit Morris & Essex Line overpass in Kearny for a total length of approximately 4,750 feet. The east approach would be designed to meet the proposed Route 1&9 Truck ultimate improvements project alignment east of Charlotte Avenue and maintaining the Newark Avenue Ramp configuration.

The deck width would accommodate four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets. The new bridge would eliminate the existing poor geometry and substandard features. The proposed divided roadway with standard lane widths and shoulders would provide improved traffic operations and safety. It would eliminate the non-standard eastbound entrance and exit ramps of the Fish House Road interchange improving safety. In addition, it would eliminate the westbound exit loop ramp that has a substandard radius of curvature.

The new vertical lift bridge would increase the vertical clearance over MHW from 35 to 70 feet in the closed position and retain the 135-foot clearance in the open position. Replacement of the bridge with a high level movable bridge would improve traffic flow by reducing interruptions from bridge openings. This would allow vehicular traffic to flow uninterrupted over 75 percent of navigational traffic, which in the past has forced the bridge to be raised frequently, stopping all vehicular traffic. This would reduce the bridge openings from 300 per year to approximately 63 per year.

Under this alternative the existing bridge would be demolished resulting in an adverse effect on the Wittpenn and CSX Bridges as well as on the New Jersey Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District. To mitigate the adverse effect, an appropriate program of documentation will be undertaken. In addition, the replacement movable bridge would be of a context sensitive design to recall the elements of the existing bridge and to complement its historic setting.

The approximate cost of the proposed action is estimated to be $317,400,000 (in 2002 dollars) including right-of-way acquisition, utility relocation, and construction costs. This alternative was selected because it best satisfies the need for the project. It provides for a the most cost-effective alternative in consideration of life-cycle costs for initial construction and the safety and future needs of an already failing structure. Except for the demolition of an historic structure, this alternative has minimal environmental impacts. However, several mitigation measures are possible such as an appropriate program of documentation and the design of a replacement bridge sensitive to the historic context.

It was determined, therefore, that the only feasible and prudent alternative was to replace the bridge with a new structure with a higher vertical clearance on a new alignment north of the current structure. The new bridge would incorporate new or modified approach ramps to improve traffic movement in the area. These new ramps would improve connections between Route 1&9(T) in Jersey City on the eastern approaches and Route 7, Fish House Road Interchange and local roads on the west in the Town of Kearney.

5.4 Project Purpose and Need

To meet the safety and capacity needs of pedestrians, and vehicular and marine traffic, NJDOT is proposing the coordinated replacement of the Wittpenn River Bridge to:

- Replace a Structurally Deficient Bridge. The bridge is structurally deficient and in an advanced state of deterioration. It has required frequent repairs over the last 50 years, and is now beyond feasible and cost-effective repair. Addressing the need to replace this deteriorated bridge and approach roadways is the principal and immediate purpose of the proposed action. While the Wittpenn Bridge does not currently have a posted weight limit, continued deterioration may require this to be re-evaluated.

- Meet Current Design Criteria and Improve Traffic Operation Safety. Potentially hazardous conditions in the corridor result from constrained design features and operating conditions on the bridge, on approach ramps, and at at-grade

intersections. The existing bridge is characterized by low operating speeds, lack of shoulders, narrow lane widths, and a lack of guide rails for protection of pedestrians.

- Improve Traffic Service for the Region. The Wittpenn Bridge provides one of the key direct east-west connections between New York City/Lower Manhattan and the developed areas of northern New Jersey. Currently the Wittpenn Bridge operates at or near its capacity, with frequent stop-and-go traffic during daily peak periods.

- Increase Vertical Clearance for the Hackensack River. The 35-foot vertical clearance of the Wittpenn Bridge in the closed position requires frequent opening of the bridge with resulting backups on the approach. Recent studies have recommended a minimum vertical clearance of 70 feet above MHW for any new vertical lift bridge.

- Reduce Maintenance Cost and Traffic Disruptions. Four major rehabilitations have been undertaken on the bridge over the last 50 years. During the most recent rehabilitation in 1992, the Wittpenn Bridge underwent interim repairs including column and bearing repairs, truss repairs, and lift span repairs. The bridge will require continuing inspection and maintenance, in addition to painting and other routine maintenance services. Repair and maintenance activities cause major disruptions in traffic flow because of the substandard lane widths and lack of shoulders on the bridges.

These needs are described in detail below.

5.4.1 Replace a Structurally Deficient Bridge

Based on the recent survey, the Wittpenn Bridge and approach roadway and interchanges are structurally deficient, functionally obsolete, and in an advanced state of deterioration. The 2000 Cycle 10 Bridge Re-evaluation Survey Report prepared by Hardesty & Hanover, LLP states that the overall condition of the Wittpenn Bridge is poor due to the conditions of its deck, superstructure and substructure, as well as safety deficiencies on the bridge and its approach roadways. The Wittpenn Bridge has an SI&A Sufficiency Rating of 30 out of 100.

The re-evaluation report notes that the deck is in poor condition due to previous water leakage in the concrete deck of the approach spans as evidenced by efflorescence and stalactites throughout. The superstructure is in substandard condition due to severe deterioration and section loss of structural members. Also several through truss spans exhibit peeling paint throughout with some areas of light to moderate rust. The condition of the substructure is poor due to wide, full-height vertical and horizontal, full-depth cracks through the west abutment and several piers (Hardesty & Hanover 2000).

Due to the poor condition of the structure and the design criteria in use at that time, the bridge has limited earthquake resistance and is in need of major rehabilitation or replacement.

The operating machinery is also in need of extensive maintenance, replacement, and adjustment of key components. Finally, there is a flooding condition on Fish House Road beneath the Wittpenn and CSX bridges. Tidal action has been noted to wash onto the roadway during high tide periods, especially during storms or windy conditions that may create tidal surges. The Owens Corning site has been plagued by site flooding for many years, especially since the Route 7 and the Fish House Road interchange were reconstructed in the mid 1970's.

5.4.2 Meet Current Design Criteria and Improve Traffic Operation Safety

The geometric features of the bridge and of the approach roadways are such that current safety standards are not met. The bridge deck's substandard features along with the substandard radii of curvature on the approaches and ramp entrances and exits cause numerous high severity accidents.

The Wittpenn Bridge and approaches include a number of geometric and structural features that do not meet current American Association of State Highway and Transportation Officials (AASHTO) and NJDOT minimum design criteria. Narrow lanes substantially increase the potential for sideswipes, and in combination with the lack of shoulders, encumber access by emergency vehicles.

These features have reduced the safety, level of service, and operational capacity of the Wittpenn Bridge. The existing bridge is considered functionally obsolete and several factors contribute to the low level of service it provides (Hardesty & Hanover, 2000). These include the following.

- Two 10-foot lanes in each direction without shoulders or median barriers.
- The open steel grid deck has been noted to be slippery when wet. Appropriate warning signs have been posted on the bridge approaches.
- The lack of shoulders on the bridge approaches allows water to pond on travel lanes beyond the one-third-lane width prescribed in the NJDOT Roadway Design Manual.
- Median barriers or other physical separation are lacking on the bridge with only a double yellow stripe provided between opposing traffic lanes.
- The bridge main line at the east approach has substandard curvature and super-elevation.
- The entrance and exit ramps for Fish House Road have substandard radii of curvature.
- The bridge has inadequate acceleration and deceleration lanes.

The above features are likely factors contributing to the occurrence of severe accidents on the bridge. The accident rate in the vicinity of the Fish House Road interchange is twice the statewide average. The high accident rate reflects poor geometric features at the interchange and frequent congestion on Route 7 near the Wittpenn Bridge. Replacement of the bridge provides an opportunity to bring it into compliance with current design standards with an anticipated reduction in the frequency of accidents in the area.

5.4.3 Improve Traffic Service for the Region

The Wittpenn Bridge carries Route 7 over the Hackensack River, one of the major east-west routes in the area. ATR counts collected in April 2002 show that approximately 50,000 vehicles currently cross the bridge on a typical weekday. The bridge does not provide a safe, efficient crossing for traffic. The existing bridge operation impedes the flow of traffic and goods within the project limits and contributes to poor traffic conditions on a regional basis. Eastbound morning rush hour traffic has been observed at a stopped condition from Charlotte Circle through the Fish House Road Interchange and beyond

The high volume of truck traffic utilizing the bridge contributes to delays across the bridge. Trucks approaching the bridge from Fish House Road have a left hand merge with eastbound traffic at a 3.5 percent upward grade without benefit of an acceleration or climbing lane. During morning rush hour, these trucks frequently wait two to four minutes to enter the traffic flow, and then cause back-ups as they accelerate up the approach grade.

Finally, the replacement/rehabilitation of the Wittpenn Bridge is an integral part of the Portway International Intermodal Corridor project to enhance mobility of commercial traffic along the New Jersey waterfront.

5.4.4 Provide Improvements for Navigation

The 35-foot vertical clearance of the Wittpenn Bridge in the closed position requires frequent opening of the bridge with resulting backups on the approaches. The high number of bridge openings—over 300 per year—create extensive traffic delays, frequent congestion, and a poor level of service. The lift bridge opens on demand for ships, with openings lasting from 6 to 20 minutes and a typical opening being ten minutes. During these openings traffic backs up as far as Tonnele Circle to the east, and to Belleville-Newark Turnpike (Route 508) Interchange to the west.

Recent vessel studies and surveys of owners with docks north of the existing bridge, (which confirmed earlier vessel studies), have resulted in a recommended minimum vertical clearance of 70 feet above MHW for any new vertical lift bridge. This increase from the existing 35-foot clearance would reduce annual openings from 300 per year to approximately 63 openings per year.

The existing vertical clearance of 135 feet in the open position was recommended to remain and has been approved by the USCG.

5.4.5 Reduce Maintenance Costs and Traffic Disruption

The Wittpenn Bridge was opened to traffic in 1930. The weight and speed of vehicles have changed substantially since the bridge was constructed. These factors have affected the physical condition of the Wittpenn Bridge and thus increased the cost of maintaining the bridge. Since 1953, $13.5 million has been spent to maintain the Wittpenn Bridge; over $9 million (70 percent of 13.5 million) has been spent since 1984. As the Wittpenn Bridge ages, additional programs

will be necessary to rehabilitate major components to extend its service life. Additionally, painting and other routine maintenance services will continue to be required.

5.4.6 Purpose of Action

The purpose of this project is to provide a safe and efficient transportation link over the Hackensack River in Hudson County between Jersey City and Kearny, while also providing adequate crossing capacity to meet present and future demand levels. The project is also designed to eliminate the functional obsolescence of current design features on the bridge, thereby improving traffic service, safety conditions, and the ability to manage traffic incidents on the bridge. In particular, the purpose of the proposed action is to:

- Replace the structurally deficient bridge.
- Meet current design standards.
- Improve traffic safety by eliminating substandard safety factors.
- Increase vertical clearances over the river to accommodate the current and future needs of the river/port users while reducing the number of bridge openings.
- Reduce the frequency of major bridge maintenance activities that disrupt traffic flow.

The proposed action, a replacement of the Wittpenn Bridge, is included in the New York Area Transportation Study 1996-2015 Transportation Plan, although the plan does not specify a preferred corridor or whether the existing bridge would be removed.

5.5 Description of Section 4(f) Properties

The proposed project will have an adverse effect on four Section 4(f) resources: Wittpenn Bridge (SHPO Opinion 2/7/01), Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River (SHPO Opinion 5/3/02), Hackensack River Lift Bridges Historic District River (SHPO Opinion 5/3/02), and New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5/21/99). This finding of Section 4(f) resources is based on the intensive-level historic architectural survey and Phase 1A archaeological survey titled Cultural Resources Survey/Route 7 Section 2, (Wittpenn Bridge) over Hackensack River/City of Jersey City and Kearny Town/Hudson County, New Jersey/February 2002 prepared by Richard Grubb & Associates, Inc. No significant prehistoric or historic archaeological sites were discovered during the field surveys performed for this project. The analyses were reviewed with the SHPO, and SHPO concurred with these findings by letters dated May 3, 2002 and July 29, 2002 (see Appendix B).

Figure 14 identifies Section 4(f) resources located within the project area.

Wittpenn Bridge

The Wittpenn Bridge, completed in 1930, carries NJ Route 7, a four-lane undivided highway, over the Hackensack River between an industrial section of Jersey City and the Hackensack Meadowlands in Kearny Town. At the east approach, the bridge consists of 14 deck girder approach spans on concrete piers, two camelback through truss spans and a modified Pratt through truss. The westernmost eight piers, including all the river piers and the west abutment,

are shared by the adjacent Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge. The westernmost 11 piers rest on caissons while the remaining piers are supported on timber piles. Each tower is 160 feet tall and consists of a Pratt truss with front vertical columns and rear inclined columns. Power for lifting the bridge is supplied from electric motors in the operator's house in the middle of the lift span; backup diesel motors in the operator's house are operated manually. Two gatekeepers houses, east and west of the lift span, are located on the north side of the tower spans. At the top of each of the four tower legs are sheaves over which pass steel wire ropes attached at one end to concrete counterweights mounted in the towers and at the other end to the lift span.

A road bridge over the Hackensack River has been at or near the location of the Wittpenn Bridge since 1795, when the first Hackensack River bridge replaced Douw's Ferry to carry the main road from New York to Philadelphia. The existing Wittpenn Bridge replaced the Newark Turnpike Bridge, a swing span, through-truss structure completed circa 1909. Its 15-foot vertical clearance above the river required opening for all but the smallest of sailing vessels, and once opened, the structure was notorious for not closing. In addition, the sharp S-curve at the eastern approach prevented the bridge from handling the volume of truck and passenger traffic, and assured that it could not handle the anticipated traffic from the Holland Tunnel, opened in 1927.

Citing the Newark Turnpike Bridge as a hindrance to navigation, the War Department condemned it in 1925 and required that a new bridge with a 35-foot vertical clearance be built within four years. In anticipation of the opening of the Holland Tunnel, the New Jersey Highway Department included the Newark Turnpike as part of Route 10 in the state highway system, thereby relieving Hudson County and Jersey City of the obligation of constructing a new bridge. The new turnpike bridge was also included as one of six bridges the State Highway Department designated to facilitate traffic between Newark, Jersey City and New York City and one of two bridges over the Hackensack and Passaic Rivers that would complete Route 25 (Route 1) linking Newark and the Holland Tunnel.

Plans for the new highway bridge, to be built south of the existing bridge, were approved by the War Department in June 1928. Original plans for the bridge called for a skew angle, high level fixed bridge with steel trusses supported on masonry piers. One, 500-foot span was to provide a horizontal clearance between piers of 340 feet and a vertical clearance of 135 feet. These plans were revised by May 1929.

The bridge officially opened for traffic on the morning of November 5, 1930. During a heavy downpour, H. Otto Wittpenn, State Highway Commissioner and former mayor of Jersey City, cut the ceremonial ribbon. The bridge was completed in less than two years at a cost of $3 million. The Pennsylvania Railroad Bridge, which had been built concurrently as the Newark Turnpike Bridge, had opened a day earlier. By 1934, the Newark Turnpike Bridge had been renamed Wittpenn Bridge

Those involved in the design and construction of the Wittpenn Bridge included S. Johanneson (Design Engineer), H.W. Hudson (Assistant Construction Engineer), and W.J. Sloan (Chief Engineer) of the State Highway Department. The consulting engineering firm of Harrington, Howard & Ash was hired by the State Highway Department to design the lift span, with L.R. Ash serving as lead engineer.

On February 7, 2001 the SHPO offered an Opinion of Eligibility for the Wittpenn Bridge, concluding that the bridge is individually eligible for listing in the National Register under Criteria A and C. The SHPO Opinion states further that the "simultaneous construction and structural connections between the Wittpenn Bridge and the Pennsylvania Harsimus Branch Bridge (a part of the New Jersey Railroad Bergen Cut Historic District) justify inclusion of the Wittpenn Bridge as a contributing resource to the New Jersey Railroad (Pennsylvania Railroad) Bergen Cut Historic District." As a result of the architectural survey performed for this project, it has been concluded that the Wittpenn Bridge is a key contributing resource to the Hackensack River Lift Bridges Historic District. The SHPO consultation comments concurred with this assessment (Appendix B).

Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River

The Pennsylvania Railroad Harsimus Branch Bridge is a vertical lift structure completed in 1930 that carries two tracks of Conrail and CSX freight lines over the Hackensack River between Jersey City and the Town of Kearny, Hudson County. The Harsimus Branch Bridge, built for the Pennsylvania Railroad's freight line, replaced an earlier swing span built between 1880-1887. The bridge shares its eastern piers with the adjacent Wittpenn Bridge, a vertical lift bridge also completed in 1930. South of the Harsimus Branch Bridge lies a second Pennsylvania Railroad bridge built for its passenger line and currently operated by PATH. Due to its skew, the Harsimus Branch Bridge is 140 feet north of the passenger bridge on the east side of the Hackensack River and 500 feet to the north on the west side of the river.

The Harsimus Branch Bridge is comprised of the following spans: one through girder and four deck plate steel girder western approach spans, two Pratt truss tower spans, a Parker truss lift span, and one deck plate steel girder and a six span concrete viaduct at the eastern approach. The bridge measures 1188 feet long and rests on reinforced concrete piers. The lift span is 206 feet long with a 13-foot vertical clearance over high water in the closed position and 135 feet when opened. The relatively low 13 foot vertical clearance is due to the fact that Pennsylvania Railroad's Meadow Yards (now part of the Kearny Intermodal Facility) are close to the western end of the structure. As a result of the low vertical clearance, the bridge opens more than 1000 times a year.

The towers consist of front vertical columns and rear inclined columns. Mounted atop the towers are sheaves over which pass steel wire ropes that are attached to counterweights and the lift span. The wire ropes are retracted by gears that move the span upward while simultaneously allowing the counterweights to move downward. Since its opening, the lift span has been controlled by a bridge operator in the Pennsylvania Railroad (PATH) Bridge to the south. The operator in the PATH bridge is a Conrail employee, and to open the PATH bridge, the operator requires a release of the machinery from PATH headquarters.

In 1926, the War Department issued a directive requiring vertical clearance above the Hackensack and Passaic Rivers be a uniform 35 feet over high water with a maximum vertical clearance of 135 feet. Plans were subsequently drawn up by the Pennsylvania Railroad to replace its old swing bridge over the Hackensack River. The new Harsimus Branch Bridge was built north of the old bridge and concurrently with the Wittpenn Bridge, which shares adjacent piers at its eastern approach.

The Harsimus Branch Bridge went into service on November 4, 1930. Pennsylvania Railroad personnel responsible for its construction included A.C. Watson, chief engineer of the New York District, T.W. Pinard, Engineer of Bridges and Buildings, and J.J. Vail, Construction Engineer. The Phoenix Bridge Co. built the superstructure, and the firm of Waddell and Hardesty acted as consulting engineers on the lift span.

The architectural study prepared for this project concluded that the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge is eligible for listing the National Register of Historic Places under Criteria A and C. The bridge received a SHPO Opinion of Eligibility on May 3, 2002 The Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge has also been determined to be a key contributing resource to the Hackensack River Lift Bridges Historic District and to the New Jersey Railroad Bergen Cut Historic District (Appendix B).

Pennsylvania Railroad (PATH) Bridge over the Hackensack River

The Pennsylvania Railroad (PATH) Bridge over Hackensack River is a vertical lift structure completed in 1930. It carries two tracks of PATH over the Hackensack River between Jersey City and Kearny Town, Hudson County. North of the bridge is another vertical lift bridge built in 1930 for the Pennsylvania Railroad Harsimus Branch Bridge to carry its freight division. This skew angle vertical lift bridge is comprised of a three-span concrete viaduct, a through girder span, five deck plate steel girder spans and a deck truss span at the western approach, two Pratt truss tower spans, a Parker truss lift span and eight deck plate girder, one through girder and a three span concrete viaduct at the eastern approach. The bridge rests on a concrete substructure and measures 2950 feet long. The lift span is 331 feet long with a 40-foot vertical clearance over high water in the closed position and 135 feet when opened. Horizontal clearance between the fenders is 158 feet.

Power for lifting the bridge is supplied from electric motors, and at the top of each of the four tower legs are sheaves over which pass steel wire ropes that are attached to counterweights mounted at the towers. The wire ropes are retracted by gears that move the span upward while simultaneously allowing the counterweights to move downward. The operating machinery is located at the center of the lift span, and the operator's house is at the top of the east tower span. The bridge operator, a Conrail employee, operates the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge to the north. To open the PATH bridge, the operating machinery is released from remote PATH headquarters.

In 1926, the War Department issued a directive requiring vertical clearance above the Hackensack and Passaic rivers be a uniform 35 feet over high water with a maximum vertical clearance of 135 feet. All bridges along the Hackensack River would have to meet these requirements, and plans were subsequently drawn up by the Pennsylvania Railroad for the construction of two new bridges to span the Hackensack River. The new Pennsylvania Railroad passenger lift bridge was built south of the older swing bridge. The 245-foot lift span was erected on timber falsework and floated by barges into position. Pile trestles from the old bridge were removed and the river dredged to provide a wider navigation channel. At high tide on the morning of November 2, 1930, two barges maneuvered by four tugs floated the lift span, weighing 813 tons, into its final position. The first east bound train passed over the new bridge later that morning.

Pennsylvania Railroad personnel responsible for the bridge's construction include A.C. Watson, Chief Engineer of the New York District, T.W. Pinard, Engineer of Bridges and Buildings, and J.J. Vail, Construction Engineer. The Bethlehem Steel Co. built the superstructure and floated the fixed span into place. The firm of Waddell and Hardesty acted as consulting engineers on the lift span.

The architectural survey prepared for this project concluded that the Pennsylvania Railroad (PATH) Bridge is individually eligible for the National Register under Criteria A and C. The Pennsylvania Railroad (PATH) Bridge received a SHPO Opinion of Eligibility on May 3, 2002. The Pennsylvania Railroad (PATH) Bridge has also been determined to be a key contributing resource to the New Jersey Railroad Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District (see Appendix B).

Lower Hack Bridge over Hackensack River

The Lower Hack Bridge spans the Hackensack River between Jersey City and Kearny Town and carries three tracks of New Jersey Transit's Morristown Line. Completed in 1928 for the D.L.&W's Morris & Essex Division, the bridge consists of a single-span movable vertical lift with 2 Pratt truss tower spans, 1 deck plate steel girder east approach span, 2 deck plate steel girder west approach spans, and the 11-span reinforced concrete slab Kearny Viaduct that forms the western portion of the west approach span. The bridge rests on concrete piers with timber piles and has an overall length of 1309 feet and a width of 45 feet. The vertical lift span is 200 feet long and weighs 1,100 tons. Each tower is 153 feet tall and consists of an upper vertical Pratt truss with front vertical columns and rear inclined columns. At the top of each of the four tower legs are sheaves over which pass steel wire ropes that are attached at one end to concrete counterweights mounted in the towers. The span has a vertical clearance of 35 feet above water in the closed position and can be lifted to a height of 135 feet in about 90 seconds. Power for lifting the bridge is supplied from electric motors in the two-story operator's house on the east tower span, which also contains an auxiliary gas motor. Horizontal clearance between the fenders is 158 feet.

In 1926, when the War Department directed that all bridges over the Hackensack and Passaic Rivers had to meet a minimum height of 35 feet, the D.L.&W. drew up plans for a new vertical lift bridge with three tracks instead of two and a channel opening of 150 feet instead of the previous 69 and 73 feet between the piers. Construction of the new bridge, built south of the previous swing bridge, required relocating nearly a mile of track; the ashlar abutments of the old structure are still visible along Duffield Avenue. The bridge was built at a cost of over $3 million, purportedly paid for in cash, and put into operation in October 1928. The American Bridge Company built the superstructure and John Alexander Low Waddell, then practicing independently, consulted on the design of the vertical lift span.

The Lower Hack Bridge received a SHPO Opinion of Eligibility on February 11, 1997. The bridge is historically significant for its association with a regional effort, led by the War Department, to provide adequate vertical clearance over navigable waterways within the Port of New York (Criterion A) and for its association with John Alexander Low Waddell, one of the preeminent bridge engineers of the early twentieth century (Criterion C). The Lower Hack

Bridge is also a key contributing resource to the Old Main Line Delaware Lackawanna &Western (D.L.&W.) Historic District (Appendix B).

Hackensack River Lift Bridges Historic District

The Hackensack River Lift Bridges Historic District comprises four consecutive vertical lift bridges that span the Hackensack River between the City of Jersey City and Kearny Town, Hudson County. Beginning at the northern limit of the historic district, the bridges include the following: the Lower Hack Bridge (formerly the D.L.&W Boonton Line and presently NJ Transit's Morristown Line), the Wittpenn Bridge, the Pennsylvania Harsimus Branch Bridge (presently CSX/Conrail) and the Pennsylvania Railroad Bridge (presently PATH). The latter three bridges, collectively known as the Triple Hack Bridges, were completed in 1930, while the Lower Hack Bridge was completed in 1928. The Wittpenn Bridge and the Harsimus Branch Bridge were built concurrently and share common piers at the eastern approach. John Alexander Low Waddell, the foremost bridge engineer of the early twentieth century, consulted on the design of the lift spans for the railroad bridges. The firm of Harrington, Howard and Ash, a successor firm to Waddell, designed the Wittpenn Bridge. Detailed descriptions of each bridge are contained in the foregoing sections.

This impressive collection of movable bridges was built as part of a directive issued by the War Department to provide adequate vertical clearance over the navigable waterways within the Port of New York. After World War I, the need became apparent for adequate shipping channels along the Hackensack River, both to allow for the passage of vessels and to ensure a steady and uninterrupted flow of railroad and vehicular traffic into and out of Hudson River terminals. The bridges that comprise the district are integral parts of a regional transportation network built to serve some of the most densely populated areas in the state, and they are a testament to the primary role Jersey City played in the economic and industrial development of the region.

The Hackensack River Lift Bridges Historic District is significant for its association with John Alexander Low Waddell. Dr. Waddell, one of the preeminent bridge engineers of the early twentieth century, designed what is generally acknowledged to be the first vertical lift bridge in the United States- South Halstead Street Bridge in Chicago. The Hackensack River Lift Bridges Historic District represents largely unaltered, operable, and increasingly rare examples of historically and technologically significant bridge types.

The Hackensack River Lift Bridges Historic District retains its integrity of location, setting, design, materials, workmanship, feeling and association. The period of significance for the district is 1928-1952. Character-defining features of bridges within the historic district include Pratt truss tower spans with inclined rear columns, Parker truss lift spans and sheaves mounted in the towers through which steel cables pass connecting the concrete counterweights to the lift span. The SHPO determined the Hackensack River Lift Bridges Historic District eligible for listing in the National Register of Historic Places by letter dated May 3, 2002 and July 29, 2002 (see Appendix B).

New Jersey Railroad Bergen Cut Historic District

The New Jersey Railroad (Bergen Cut) Historic District was determined eligible for listing on the National Register of Historic Places by a May 21, 1999 SHPO Opinion. The district is eligible under Criterion A for its association with the New Jersey Railroad, the third railroad

incorporated in New Jersey (1832), as the first railroad connection between New York and Philadelphia, and under the auspices of the Pennsylvania Railroad, as the first railroad company to construct a tunnel under the Hudson River. The Bergen Cut Historic District is also eligible under Criterion C for the technological significance of two integral components: the Bergen Cut and the elevated right-of-way, both constructed between 1832-1838. The Bergen Cut is noteworthy as a mile-long, 28-foot wide and 40-foot deep cut through a massive ridge of traprock. The elevated right-of-way is supported on masonry walls enclosing railroad tracks and carried over the city streets via steel bridges.

Key contributing resources to the New Jersey Railroad Bergen Cut Historic District include the Wittpenn Bridge and Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge. The SHPO has concluded that the structural connections between the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge and the Wittpenn Bridge, "justify inclusion of the Wittpenn Bridge as a contributing resource to the New Jersey Railroad (Pennsylvania Railroad) Bergen Cut Historic District" (Appendix B).

Other Resources

The location of the Jersey City Water Works Pipeline (SHPO Opinion 5/7/1999) with respect to the proposed project could not be identified with precision. Mitigation measures for potential effects to this resource are contained in Section 9.1 of this report.

In addition, it was determined that the proposed project would have no adverse effect on six resources if appropriate design considerations are implemented. These six resources include the following:

- Pulaski Skyway (SHPO Opinion 8/4/1983)
- US Route 1&9 Historic District (SHPO Opinion 3/8/1996)
- Lower Hack Bridge (SHPO Opinion 9/18/1990)
- Pennsylvania (now PATH) Bridge over Hackensack River (SHPO Opinion 5/3/2002)
- Old Main Delaware Lackawanna and Western Railroad Historic District (SHPO Opinion 9/24/1996)
- PSE&G Kearny Generating Station (SHPO Opinion 5/3/2002)

The SHPO has indicated (in letters dated May 3, 2002 and July 29, 2002) that the proposed project will have no adverse effect on the above resources "provided that new construction is compatible in terms of size, scale, design, and materials." Additional information about these resources is contained in Cultural Resources Survey, Route 7 Section 2, (Wittpenn Bridge) over Hackensack River, City of Jersey City and Kearny Town, Hudson County, New Jersey completed by Richard Grubb & Associates, Inc in May 2002.

5.6 Impacts to Section 4(f) Properties

Effects of Project on Wittpenn Bridge

The Wittpenn Bridge would be replaced by the proposed project. The SHPO has determined (by letters dated May 3, 2002 and July 29, 2002) that "there will be an adverse effect to the Wittpenn Bridge because it will be demolished."

Effects of Project on Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River

The Wittpenn Bridge shares common piers with the adjacent Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River. The proposed replacement of the Wittpenn Bridge will have a direct physical impact on the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge and adversely affect this 4(f) property. The SHPO has determined (by letters dated May 3, 2002 and July 29, 2002) that "the demolition of the Wittpenn Bridge will irreversibly alter the integrity of setting, design, workmanship, materials, feeling, and association for this resource."

Effects of Project on Hackensack River Lift Bridges Historic District

The Wittpenn Bridge is a key contributing resource to the Hackensack River Lift Bridges Historic District. The proposed replacement of the Wittpenn Bridge will have a direct physical impact on this 4(f) property. The SHPO has determined (by letters dated May 3, 2002 and July 29, 2002) that "there will be an adverse effect to the Hackensack River Lift Bridges Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished."

The SHPO has further determined (by letters dated May 3, 2002 and July 29, 2002) that "adverse effects to the [Hackensack River Lift Bridges Historic District] could be compounded if the replacement bridge is not compatible with [its] character in terms of size, scale, design, and materials."

Effects of Project on New Jersey Railroad Bergen Cut Historic District

The Wittpenn Bridge is a key contributing resource to the New Jersey Railroad Bergen Cut Historic District. The proposed replacement of the Wittpenn Bridge will have a direct physical impact on this 4(f) property. The SHPO has determined (by letters dated May 3, 2002 and July 29, 2002) that "there will be an adverse effect to the New Jersey Railroad Bergen Cut Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished."

Another key contributing resource to the New Jersey Railroad Bergen Cut Historic District is the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River. As stated in Section 6.2, the proposed project will have an adverse effect on the Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge. As stated by the SHPO (by letters dated May 3, 2002 and July 29, 2002), "there will be an adverse effect on the New Jersey Railroad Bergen Cut Historic District because the project will have an adverse effect on a key-contributing resources within the district- the Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River.

The SHPO has further determined (by letters dated May 3, 2002 and July 29, 2002) that "adverse effects to the [New Jersey Railroad Bergen Cut Historic District] could be compounded if the replacement bridge is not compatible with [its] character in terms of size, scale, design, and materials."

5.7 Alternatives Considered

This section discusses each of the six alternatives examined during the development of the project. The criteria used to examine the feasibility of each of these alternatives included the

extent to which an alternative meets the project purpose and need. Table 5.0-1 presents a summary of the findings of this analysis.

5.7.1 Alternative 1- No-Build

The only alternative that completely avoids the 4(f) resources is the No Build alternative, which would require no changes to the Wittpenn Bridge and current roadway configurations. This alternative, however, is not feasible or prudent, as it would fail to meet all of the project's purposes and needs.

This alternative assumes that no improvements would be made which upgrade the structure, however maintenance rehabilitation of the existing bridge would be completed to preserve the structural integrity and extend its useful life. Work to be performed includes replacement of damaged sections of guide rail and rub rail and deteriorated structural members; crack and spall repairs to substructure members, the concrete deck, and easements; and repair of mechanical and electrical systems.

This alternative was eliminated from further consideration for several reasons. First, it does not address the structural deficiencies of the existing bridge. The bridge is in an advanced state of deterioration, with a sufficiency rating of 30 out of 100. The viaduct has been deemed structurally deficient, with low condition ratings for the deck, the substructure, and the superstructure. The viaduct has required frequent repairs for many years to keep the structure in service. It was rehabilitated for a ten-year life in 1986 so that traffic could be maintained until a replacement structure could be constructed. The structure is now past the point where cost-effective repairs can be undertaken without taking the structure out of service, resulting in decreased capacity and increased congestion.

In addition, the existing bridge's substandard design features, including inadequate lane widths, no shoulders, and, no median would remain. Also, the high frequency of bridge openings would continue traffic delays.

TABLE 5.0-1
COMPARISON OF ALTERNATIVES FOR REPLACEMENT OF WITTPENN BRIDGE

	Does this alternative meet project needs and goals?					**Other impacts of this alternative**				
Alternative	**Replace, repair or rehabilitate bridge because of structural deficiencies**	**Meet current design criteria and improve traffic operation safety**	**Improve traffic service for the region**	**Increase vertical clearance for the Hackensack River**	**Reduce Maintenance Cost and Traffic Disruptions**	**Impacts to Section 4(f) properties**	**Initial Cost (Million)**	**Life Cycle Cost (100 Years) (Million)**	**Estimated Construction Period**	**Rationale for selection/rejection**
1. No Build	Partial	No	No	No	Yes	None directly	$4.5	$79.2	No Time required	Does not address structural deficiencies and deterioration. Even after minimum maintenance, bridge would still be functionally obsolete. Does not meet other project needs.
2. Major Rehab	Partial	Partial	No	No	Partial	Multiple adverse effects	$227.6	$278.9	Two Years	Rehabilitation would be so extensive that complete replacement is more cost-effective. Does not meet other project needs.
3. New Vertical lift bridge on New Alignment	Yes	Yes	Yes	Partial	Partial	Multiple adverse effects	$317	$362.0	Four Years	Meets all project purposes and needs. Designed to minimize impacts.
4. New Vertical lift bridge on Existing Alignment	Partial	Partial	No	No	Partial	Multiple adverse effects	$234	$288.3	Four Years	Does not meet other project needs
5. New Bridge (WB) Existing Bridge (EB)	Partial	Partial	Partial	No	Partial	Multiple adverse effects	$125.5	$235.5	Three Years	Does not meet other project needs
6. New High Level Fixed Bridge on New Alignment	Yes	Yes	Partial	Partial	Partial	Multiple adverse effects	$398	$423.4	Six Years	Requires substantial property takings and has significant environmental impacts. This would fail to meet all of the project's purposes and needs.

Overall, with the No Build Alternative, the substandard roadway conditions and frequent bridge openings would continue to produce significant delays and congestion. In addition, structural deterioration and related safety problems would continue to escalate. Also, this alternative does not address any of the proposed Portway proposals for improved circulation and an overall increase in efficiency of the waterfront. To address these deficiencies, the existing bridge must be replaced.

5.7.2 Alternative 2- Major Rehabilitation

Alternative 2 consists of an in-depth rehabilitation of the existing bridge that would replace the following character-defining features of the bridge: east approach trusses, lift and through truss spans, towers and sheaves. This alternative would have a direct adverse effect on three Section 4(f) properties: Wittpenn Bridge, Hackensack River Lift Bridges Historic District, and New Jersey Railroad Bergen Cut Historic District.

This alternative consists of an in-depth structural rehabilitation of the existing bridge together with some geometric improvements to the approach spans. The alternative includes widening the existing deck span on the approach spans to provide 12-foot travel lane widths, shoulders, and a median; replacement of major superstructure elements including trusses, piers, and the floor beam system; and crack and spall repairs to substructure members.

These extensive repairs would be necessary to bring the sufficiency rating of the structure to an acceptable level because the structure is severely deteriorated. Making these repairs would require the existing bridge to be closed with construction and use of a temporary movable bridge for the duration of repairs and rehabilitation of the lift spans and approaches.

Many structural deficiencies of the superstructure and substructure would be eliminated under this alternative, however the deficiencies of the structure in response to earthquakes as well as the drainage problems would remain. There would be some increase in the degree of safety but a traffic barrier would not be provided for the full length of the roadway. Also, the substandard geometric features of the Fish House Road Interchange and the overall substandard conditions of the approaches would remain. This alternative only partially improves the roadway section through the corridor and is not consistent with the Portway Corridor Proposals. Finally, the frequency of bridge openings would not be reduced.

Although the alternative would eliminate some structural deficiencies, traffic congestion, structure deterioration, and related safety problems would continue to escalate. And with an estimated cost of $227,600,000, a bridge replacement is a more cost-effective measure than a rehabilitation option. Thus, similar to the No Build Alternative, the rehabilitation of the existing Wittpenn Bridge is not considered a feasible and prudent alternative. Through a major rehabilitation effort, many of the structural deficiencies or problems of the existing bridge could be eliminated, but it would fail to meet the proposed action's operational, capacity and navigation objectives.

5.7.3 Alternative 3- New Vertical Lift Bridge on New Alignment

Alternative 3 (Preferred Alternative) consists of replacing the existing Wittpenn Bridge with a new vertical lift bridge located on a new alignment immediately north of the existing bridge. Alternative 3 is shown on Figure 3 and described in detail in Section 3.0 of this report.

5.7.4 Alternative 4- New Vertical Lift Bridge on Existing Alignment

Alternative 4 assumes removal of the existing bridge and construction of a new vertical lift bridge on the existing alignment and same elevation as the existing bridge. This alternative would have a direct adverse physical impact on four Section 4(f) properties: Wittpenn Bridge, Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River, Hackensack River Lift Bridges Historic District, and New Jersey Railroad Bergen Cut Historic District. Unavoidable impacts to the above named resources would result from the removal of the Wittpenn Bridge.

Alternative 4 assumes removal of the structurally deficient bridge and the construction of a new safer vertical lift bridge on the existing alignment at the same elevation as the existing bridge. The new bridge design would be in accordance with all current standards including roadway design and seismic and scour criteria. It would have the same cross section as Alternative 3—four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets.

A temporary bridge would be constructed to maintain traffic during the construction period. As noted with Alternative 2, the temporary structure is necessary because no suitable detour exists for the heavy volume of traffic that currently uses the existing bridge. The initial construction cost of this alternative estimated to be $234,000,000 including the temporary bridge.

This new bridge would eliminate most of the existing features that contribute to the high accident rates on the bridge and would improve traffic flow, operations and safety. However, only minimal improvements would occur to the Fish House Road Interchange on the west approach or to the eastern approaches. The substandard features at Fish House Road Interchange such as the substandard horizontal curvature at the U-turn and the substandard radii of curvature at the entrance and exit ramps would not be improved.

Under this alternative the existing bridge would be demolished resulting in an adverse effect. To mitigate the adverse effect, the same mitigation measures as outlined under Alternative 3 would be undertaken including documentation and design of a replacement bridge sensitive to the historic context of the existing bridge. This alternative addresses the proposed improvements as part of the Portway Corridor Project for improved movement across the Hackensack River but does not improve the corridor along Fish House Road.

Thus, this alternative was also not considered a feasible and prudent alternative and was eliminated from further consideration for several reasons. First, although most structural deficiencies and substandard design conditions would be eliminated and traffic conditions would improve, the substandard approaches would remain. Second, since the vertical clearance in the closed position would not chance, the bridge would still require frequent openings. Third, since

staged construction on the existing bridge is not an option, a temporary movable bridge would need to be constructed for use for the full duration of the construction.

5.7.5 Alternative 5- New Vertical Lift Bridge (WB) and Existing Bridge (EB)

This alternative would consist of constructing a new movable lift bridge located immediately north of the existing bridge for westbound traffic and the rehabilitation of the existing bridge for eastbound traffic. The major rehabilitation required to improve existing structural and traffic deficiencies would have a direct adverse physical effect on three Section 4(f) resources- Wittpenn Bridge, Hackensack River Lift Bridges Historic District, and New Jersey Railroad Bergen Cut Historic District.

This alternative consists of construction of a new vertical lift bridge north of the existing bridge for the westbound traffic and the rehabilitation of the existing bridge for the eastbound traffic. The new bridge would be designed to provide the same vertical clearance over MHW as the existing bridge—35 feet of vertical clearance with the lift span closed and 135 feet when opened,

The new bridge would provide two 12-foot lanes and two shoulders in the westbound direction. It would be designed in accordance with all current standards including roadway and seismic and scour criteria. The rehabilitated existing bridge would carry two 12-foot lanes and two shoulders in the eastbound direction. The existing two sidewalks would be maintained. For the approach spans, a new concrete deck would be provided on the existing steel stringers.

The proposed separate roadways for eastbound and westbound traffic would eliminate many accidents and provide improved traffic operations and safety. While this alternative would not eliminate the non-standard eastbound entrance and exit ramps of the Fish House Road interchange, it would realign the westbound exit loop ramp to have a standard radius of curvature. At the east approach this alternative can be adapted to meet the proposed Route 1&9 (T) projects thus providing access to and from Charlotte Avenue.

This alternative would require Right of Way (ROW) takings along adjacent properties to the north of the existing bridge. The existing bridge would require substantial alteration to the superstructure similar to those outlined for Alternative 2. The addition of another bridge would impact the lift bridge corridor and the modifications to the existing bridge would modify its historic nature. The initial construction cost of Alternative 5 is estimated to be $125,500,000.

Alternative 5 was not considered a feasible and prudent alternative and was eliminated from further consideration. First, although it would eliminate most structural deficiencies and substandard design conditions, the current bridge would not meet seismic criteria. Also, the substandard approaches would remain. Finally, since the vertical clearance in the closed position would not change, the bridge would still require frequent openings and the existing structure would continue to require high maintenance.

5.7.6 Alternative 6- New High Level Fixed Bridge on New Alignment

This alternative assumes removal of the existing bridge and construction of a new fixed bridge immediately north of the existing bridge. As a result of implementing this alternative, the project would have a direct adverse physical effect on four Section 4(f) properties: Wittpenn Bridge,

Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge over the Hackensack River, Hackensack River Lift Bridges Historic District, and New Jersey Railroad Bergen Cut Historic District. Unavoidable impacts to the above-named resources would result from the removal of the Wittpenn Bridge.

This alternative would replace the existing vertical lift bridge with a new high level fixed bridge located just north of the existing bridge. It would include replacement of the existing east and west approaches including the Fish House Road Interchange with new structures and grade-separated roadways.

The new bridge would be a 400-foot parallel through truss structure. The deck width would accommodate four 12-foot lanes, two 12-foot auxiliary lanes, two outer and two inner shoulders, one sidewalk, and median barrier and parapets in accordance with current design standards. The new fixed bridge would provide 135 feet of vertical clearance over MHW. The new bridge design would be in accordance with all current standards including seismic and scour criteria.

Due to the high vertical clearance of the fixed bridge, this alternative results in the extension of the project limits by about 3,000 feet beyond those for the vertical lift bridge in Alternative 3. The new limits would extend from Station 6+188 (in metric) on Route 7 east side in Jersey City to Station 4+215 (in metric) on Route 7 west side in Kearny.

In addition, Fish House Road becomes a much longer elevated structure spanning over the existing CSX rail facilities and PATH bridges. To provide for the Fish House Road to Route 7 eastbound movement, a critical component to the Portway Corridor, the entire ramp must also be put on structure spanning PATH and the CSX rail facilities. This alternative would also eliminate the westbound exit loop ramp that has a substandard radius of curvature. The construction cost of Alternative 6 estimated to be $398,000,000.

The new bridge would eliminate the existing poor geometry and substandard structural features with a resulting reduction in accidents and improvement in traffic operations and safety. It would also eliminate the non-standard eastbound entrance and exit ramps of the Fish House Road interchange improving safety and potentially reducing accidents.

Providing a high level fixed bridge with a vertical clearance of 135 feet above MHW would eliminate all bridge openings since all navigational traffic would pass underneath the bridge. However, the current horizontal restrictions in the channel would remain. In addition, under this alternative both eastbound and westbound directions would operate under LOS D or better during peak hours.

This alternative has a negative impact to businesses and environment in the immediate vicinity of the Fish House Road interchange. Several businesses would be displaced. Others would not have direct access to Route 7 east. They would be required to take Route 7 about one mile west to the next interchange and make a U-turn. In addition, the Route 7 driveway to the Owens-Corning site would be closed.

This alternative, with its higher elevation, would also have a significant impact on the Route 1&9(T) project. This project would need to be constructed concurrently with the new bridge to

avoid costly temporary construction. This requirement would result in a one-year delay in the start of the 1&9(T) construction contract with corresponding escalation in construction costs.

Under this alternative the existing bridge would be demolished resulting in an adverse effect on the Wittpenn and Pennsylvania Railroad Harsimus Branch (Conrail/CSX) bridges as well as on the New Jersey Bergen Cut Historic District and the Hackensack River Lift Bridges Historic District. To mitigate the adverse effect, an appropriate program of documentation could be undertaken. However, a fixed bridge would be out of character within the historic context of the Hackensack River Lift Bridges Historic District.

Because of these reasons, this alternative was also determined not to be a feasible and prudent alternative. While it would provide for the improvement for the traffic operation and the navigation along the Hackensack River, it would require significant environmental impacts. The natural resources in the area would be affected along with impacts to local industries both through displacement and restricted access to the regional roadway network. In addition, it would have significant impacts on the historic resources in the area including demolition of the historic bridge and affect on the historic district. It also would have significant impacts on the development of the Route 1&9(T) project.

5.8. Alternatives To The Use Of 4(f) Properties

5.8.1 No-Build Alternative

The only alternative that completely avoids the Section 4(f) resources is the No-Build alternative, as detailed in Section 7.1 of this report. The No-Build Alternative does not allow for improvement of the structure other than routine maintenance, which would be carried out to extend the useful life of the bridge; however, there would be no improvement in the overall condition of the bridge or the substandard roadway configuration by selecting this alternative.

As a historic resource, future preservation options would narrow, as deterioration to the features of historic importance would continue unabated. This alternative was not selected, since the combination of several undesirable conditions (structural deficiency, safety inadequacy, hindrance to navigation) would remain, presenting an unsafe and undesirable condition. Consequently, the No-Build alternative was determined to be not feasible and prudent and was rejected from further consideration.

5.9 Measures To Minimize Harm

5.9.1 Documentation

An appropriate program of Historic American Engineering Record (HAER) documentation of the Wittpenn Bridge could be carried out prior to initiation of the Initially Proposed Alternative. This would include photographic and written documentation of the existing structure, as well as reviewing and cataloging the photographs and related historical documents (e.g. As-builts) in the NJDOT files for future reference. This recordation effort should be fully coordinated with any recordation activities associated with the US Route 1&9T(25) St. Paul's Viaduct Replacement project.

A popular document can be prepared that illustrates the historical and technological significance of the Hackensack River Lift Bridges Historic District. Copies of this publication can be distributed to selected local and state historical organizations, libraries, schools and preservation organizations.

Mitigation measures for potential impacts to the Jersey City Water Works Pipeline will be coordinated with the mitigation efforts outlined in the Memorandum of Agreement prepared for the U.S. Route 1&9T(25) St. Paul's Viaduct Replacement project. Specifically, these measures will include background research of primary and secondary sources to located written and visual materials that will assist in the interpretative public display that will be prepared for the Jersey City Water Works Pipeline.

5.9.2 Context Sensitive Design

Design alternatives for the new bridge should be considered. The overall goal should be the construction of a new bridge that will address project need while also incorporating a sensitive modern design that is compatible with the character of identified historic properties in terms of size, scale, design, and materials. Creative design of the guardrails, fencing, lighting and balustrade are some aspects that could be considered. These design considerations should be negotiated and agreed upon by the NJDOT and SHPO. The new structure should be designed in such a way as to insure compatibility with other design considerations for the U.S. Route 1&9T(25) St. Paul's Viaduct Replacement project.

5.10. Summary Of Project Coordination

Coordination and on-going discussions between the NJDOT and SHPO have occurred during the course of the project. That coordination will continue as the proposed project is advanced through the environmental review process. This coordination will ensure that all practical measures to accommodate the proposed project with the minimum impact to the Section 4(f) historic resources will be considered and factored into the final design.

Coordination between the above agencies has served to ensure that all reasonable planning has been accomplished to minimize any significant or adverse impacts to Section 4(f) resources. Appendix B includes correspondence that summarizes the NJDOT's coordination efforts with public officials, relevant agencies, and the public with regard to this project.

5.11 Conclusion

The foregoing Draft Section 4(f) Evaluation identified the impacts to historic properties consequent to each alternative considered for the project. Only the No-Build alternative would have no Section 4(f) historic property impacts. The Initially Preferred Alternative (Alternative 3) would fulfill the project purpose and need as well as each of the project objectives.

Direct consultation and coordination among the FHWA, the NJDOT and the SHPO will identify appropriate mitigation measures to address the adverse effects resulting from the proposed project. Mitigation measures to be agreed upon by the FHWA, the NJDOT, the SHPO, and the

Advisory Council on Historic Preservation will be set forth in a Memorandum of Agreement developed as part of the Section 106 process and may consist of documentation to HAER standards, production and distribution of a popular document, and the incorporation of compatible design elements.

6.0 PERMITS AND APPROVALS

This section discusses potential environmental and land use permits and approvals that may be required for project implementation

6.1 Permits

New Jersey Department of Environmental Protection

- **Waterfront Development Permit (N.J.A.C. 7:7E):** This permit applies to any development waterward of MHW in the NJMC jurisdiction and up to 500 feet landward of MHW elsewhere.

- **Coastal Zone Consistency Determination (N.J.A.C. 7:7E):** This will be provided with the Waterfront Development Permit.

- **Stream Encroachment Permit (N.J.A.C. 7:13):** This permit applies to any development in the Flood Hazard Area or within 25 feet of the top of bank of a waterbody. Because the project contains an element that is being constructed in the floodway of the river (i.e., the bridge), the engineering and environmental standards apply.

- **Freshwater Wetlands Individual Permit (N.J.A.C. 7:7A):** Because wetland disturbances for the Fish House Road realignment are expected to exceed ¼ acre, an Individual Permit will be required. This permit will require mitigation at a minimum of a 2:1 ratio (creation:disturbance).

- **Water Quality Certification (WQC) Section 401 of the CWA:** The WQC is granted with any of the Land Use Regulation Permits.

United States Army Corps of Engineers

- **Individual Section 10/404 Permit –** This permit will apply to wetland/open water impacts caused by the Route 7 approaches to the bridge as well as to the Fish House Road realignment regardless of the proximity to the New Jersey Meadowlands District.

United States Coast Guard

- **Bridge Permit –** This permit applies to the bridge work that will be conducted within navigable waters.

New Jersey Meadowlands Commission

- **Final Site Plan Review –** Review of all aspects of the project will be conducted by the Transportation Planner to insure consistency with the mandate of the Commission.

- **Coastal Zone Consistency Determination –** This determination will be made by the Chief Engineer for the Commission after evaluating whether the project is consistent with the New Jersey Meadowlands District Management Plan. This determination is required prior to any approvals by NJDEP or USACOE.

6.2 Grants And Approvals

New Jersey Department of Environmental Protection

- **Tidelands/riparian rights:** This grant requirement applies to any ROW parcel or easement within the area "now or formerly flowed" by the tide zone which will need to have a license granted for construction by the DEP Tidelands Bureau. The NJDEP "Now or Formerly Flowed by the Tides" maps must be referenced to ascertain whether there are any outstanding riparian claims by the state or riparian grants already transferred. These grants are made through NJDEP Bureau of Tidelands.

- **Conceptual Wetland Mitigation Plan:** Wetland mitigation whether it is to be conducted on or near-site or through a mitigation bank requires NJDEP Land Use Regulation Program approval.

- **Hazardous Site Remediation Work Plan:** Any work plan for the sampling and remediation of a hazardous materials requires approval from NJDEP Site Remediation Program.

7.0 COMMENT AND COORDINATION

The following sections detail the efforts taken on the part of the Project Management Team to maintain a dialogue with public and private stakeholders in the project.

7.1 Public Involvement

A comprehensive and pro-active public involvement program has been implemented for this project. The public involvement effort has been designed to help provide complete information and to be, early and continuing, timely in public notice, broad in public outreach, and responsive. Implementation of this program has been a crucial ingredient in gaining support from key stakeholders.

There has been continuing coordination with federal and state agencies, statewide elected officials, and the affected municipalities to help achieve project acceptance. It is the project team's belief that, a well-informed and involved public that understands the need for the project is more likely to endorse recommendations made. This is a dynamic public involvement effort that has remained flexible, as input has been received.

The public involvement program has coordinated its efforts, where possible, with an adjacent NJDOT projects, the U.S. Route 1&9T St. Paul's Viaduct Replacement project, and the Pennsylvania/Fish House Road Project. This coordinated approach hopes to maximize public understanding of each of the projects and how they are interrelated—and to create linkages among the separate project teams that will enhance and lend consistency to the improvements which are developed.

The public involvement effort has informed key stakeholders in the Jersey City and Kearny administrations as well as the business, civic, educational, cultural and transportation communities. A significant public involvement goal is to create an atmosphere of interest and cooperation, a spirit of partnership, and an attitude that says "let's work together and share information to best address community needs during planning, design, and construction."

The public involvement program includes the following actions:

- Met with the City of Jersey City's Engineer, Gerald Nissen (May 2, 2002)
- Met with and presented information to the Mayor of the City of Jersey City, Glenn Cunningham (May 20, 2002)
- Met with and presented information to the City of Jersey City Municipal Council and received a resolution of support (May 20, 2002)
- Met with and presented information to the officials of Kearny and received a resolution of support (May 28, 2002)
- Held a Public Information Center in the City of Jersey City (June 2, 2002)
- Held an All-Agency Meeting at NJDOT, Trenton (June 19, 2002)
- Held a Public Information Center in Kearny (June 26, 2002)
- Held a Partnering Meeting at NJDOT, Trenton (December 11, 2002)
- Circulate the EA and Individual Section 4(f) to agencies and appropriate public locations

- Conduct a Public Hearing and a concurrent Information Center after the EA is released

7.2 Agency Input

Early coordination with appropriate agencies was initiated to solicit their views and assure adequate environmental analysis/documentation and related environmental requirements. Agency coordination was accomplished through a widely distributed Notice of Planned Action (NOPA) mailed to potentially affected public agencies and organizations.

The NJDOT sent the NOPA letter to relevant agencies and jurisdictions on January 9, 2002.

Coordination continued with an All-Agency Meeting, convened on June 19, 2002. NJDOT gathered input from key agency representatives on project goals and initial concepts, and identified certain environmental issues requiring further discussion and coordination.

The NJDOT followed-up the All-Agency Meeting with the project's first Partnering Meeting on December 11, 2002. At the meeting further input was solicited from various agencies, utilities and other organizations on some of the decisions made since the All-Agency meeting in June. The group then worked through other environmental and engineering concerns that remain, and began to discuss bridge-design issues in more detail. It is expected that this is the first in a series of partnering sessions to be held at key points in the development of this project.

The NJDOT and the project team have held separate meetings with various agency departments, on an as need basis, throughout the duration of this project in order to maintain and continue to develop a productive working relationship.

The proposed project is excluded from the need for a project level Congestion Management System (CMS) analysis because it is considered by the North Jersey Transportation Planning Authority (the Metropolitan Planning Organization) with jurisdiction over the CMS regulations to have no feasible alternative except to replace the bridge (see Appendix B). As a result, the North Jersey Transportration Planning Authority determined on October 30, 2000 that the project is not subject to CMS requirements.

Nevertheless, an important goal of this project is to reduce congestion by providing an "efficient and safe network of ramps and roadways that improves the movement of people and goods on Routes 7, 1&9T, and 139 in the vicinity of the project site.

7.3 Municipal Input

The NJDOT has solicited municipal input from officials in both Jersey City and Kearny throughout the course of this project. As mentioned previously, representatives of Jersey City and Kearny were involved in the NOPA process. The public involvement effort involved and will continue to involve Jersey City and Kearny representatives in the following outreach activities:

- Met with the City of Jersey City's Engineer, Gerald Nissen (May 2, 2002)

- Met with and presented information to the Mayor of the City of Jersey City, Glenn Cunningham (May 20, 2002)
- Met with and presented information to the City of Jersey City Municipal Council and received a resolution of support (May 20, 2002)
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- Held a Public Information Center in the City of Jersey City (June 2, 2002)
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- Circulate the EA and Individual Section 4(f) to agencies and appropriate public locations
- Conduct a Public Hearing and a concurrent Information Center after the EA is released

8.0 REFERENCES

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9.0 LIST OF PREPARERS

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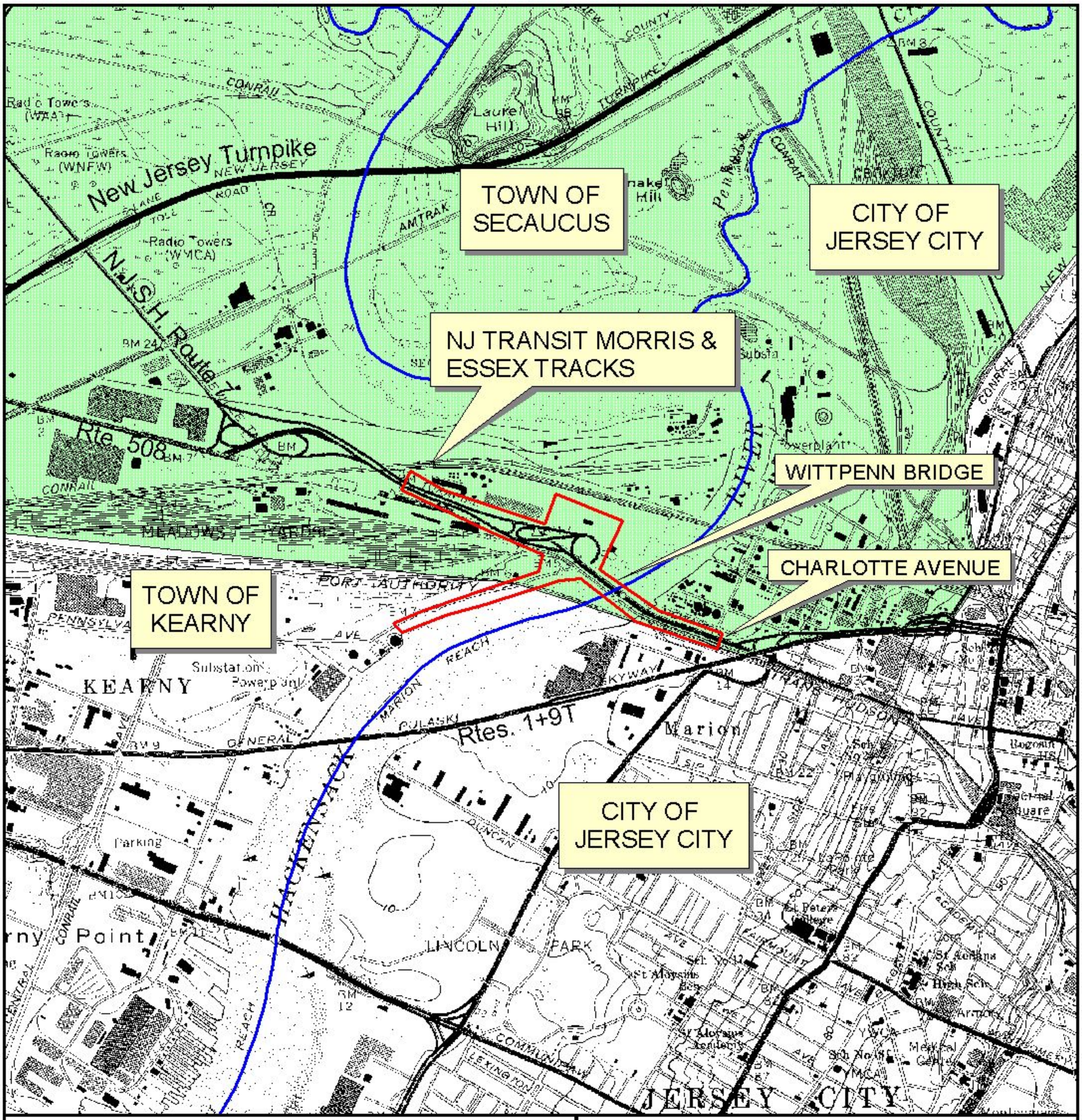
- Glenn Modica, Architectural Historian
- Vincent Bourgeois, Archaeologist

Paul Carpenter Associates, Inc.

- Sharon Paul Carpenter, Project Director

APPENDIX A

FIGURES



LEGEND:

- NEW JERSEY MEADOWLANDS COMMISSION JURISDICTIONAL AREA
- PROJECT LIMITS
- MUNICIPAL BOUNDARIES

SITE LOCATION

N

SOURCE:
MONOCHROMATIC BIT-MAPPED 7.5 MINUTE TOPOGRAPHIC IMAGES OF NEW JERSEY, GREGORY C. HERMAN AND MARYANN C. SCOLL, NJ GEOLOGICAL SURVEY DIGITAL GEODATA SERIES, DGS99-1, MAY 27 1999, JERSEY CITY N.J. QUADRANGLE.

0 2000'

NEW JERSEY DEPARTMENT OF TRANSPORTATION

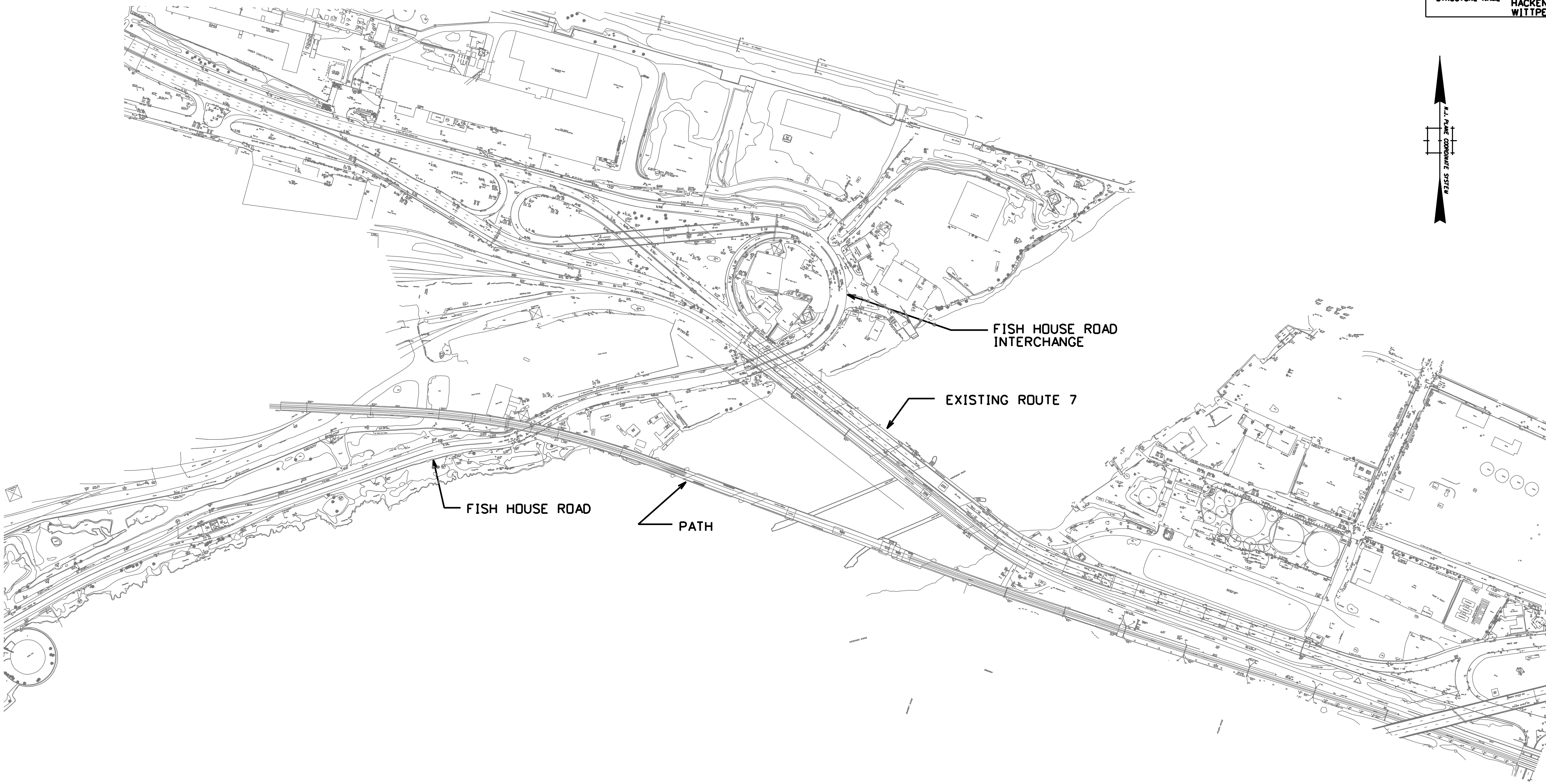
ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

PROJECT AREA

DATE: JANUARY, 2003

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

FIGURE 1



STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.			

STRUCTURE NO. 0909-150

STRUCTURE NAME ROUTE 7 OVER THE HACKENSACK RIVER WITTPENN BRIDGE

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7 OVER THE HACKENSACK RIVER
WITTPENN BRIDGE

EXISTING ALIGNMENT

ROUTE 7 SECTION 2

JACOBS CIVIL

LYNNE BAUMANN, P.E. DATE
P.E. NJ LICENSE NO. 39864

ENVIRONMENTAL ASSESSMENT REPORT

2

REVISION	BY	CKD.	DATE

CONTROL SECTION		JOB NO.	
DESIGN BY		CHECK BY	
DRAWN BY			
ESTIMATE BY		CHECK BY	
SPEC'S BY			

IN CHARGE OF

USERNAME
01/09/03

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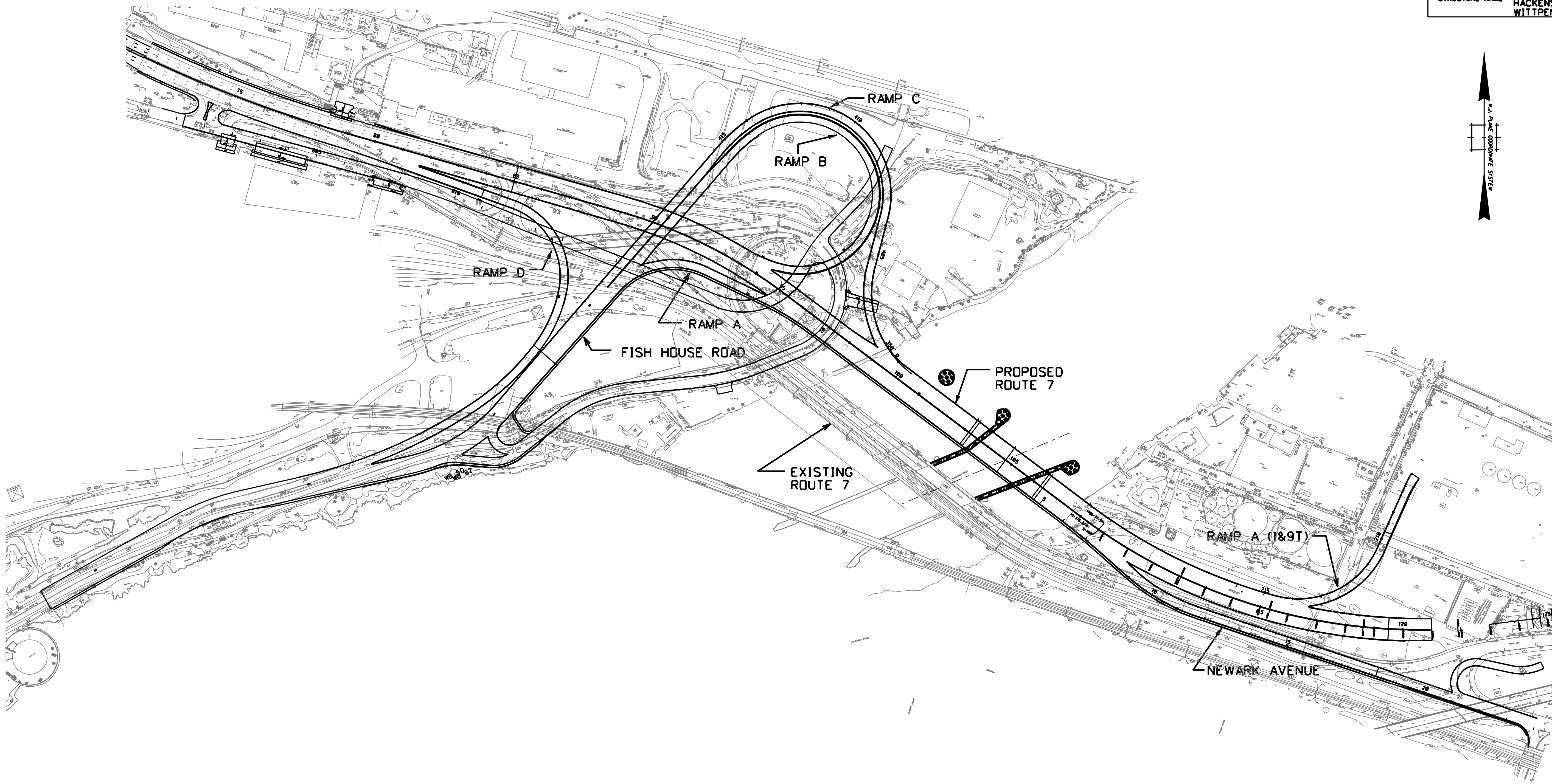
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.			

STRUCTURE NO. 0909-150

STRUCTURE NAME ROUTE 7 OVER THE HACKENSACK RIVER WITTPENN BRIDGE



NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7 OVER THE HACKENSACK RIVER
WITTPENN BRIDGE

PROPOSED ALIGNMENT

ROUTE 7 SECTION 2

JACOBS CIVIL

LYNNE BAUMANN, P.E. DATE
P.E. NJ LICENSE NO. 39864

ENVIRONMENTAL ASSESSMENT REPORT

3

REVISION	BY	CKD.	DATE

CONTROL SECTION		JOB NO.	
DESIGN BY		CHECK BY	
DRAWN BY			
ESTIMATE BY		CHECK BY	
SPEC'S BY			
IN CHARGE OF			

USERNAME
01/09/03

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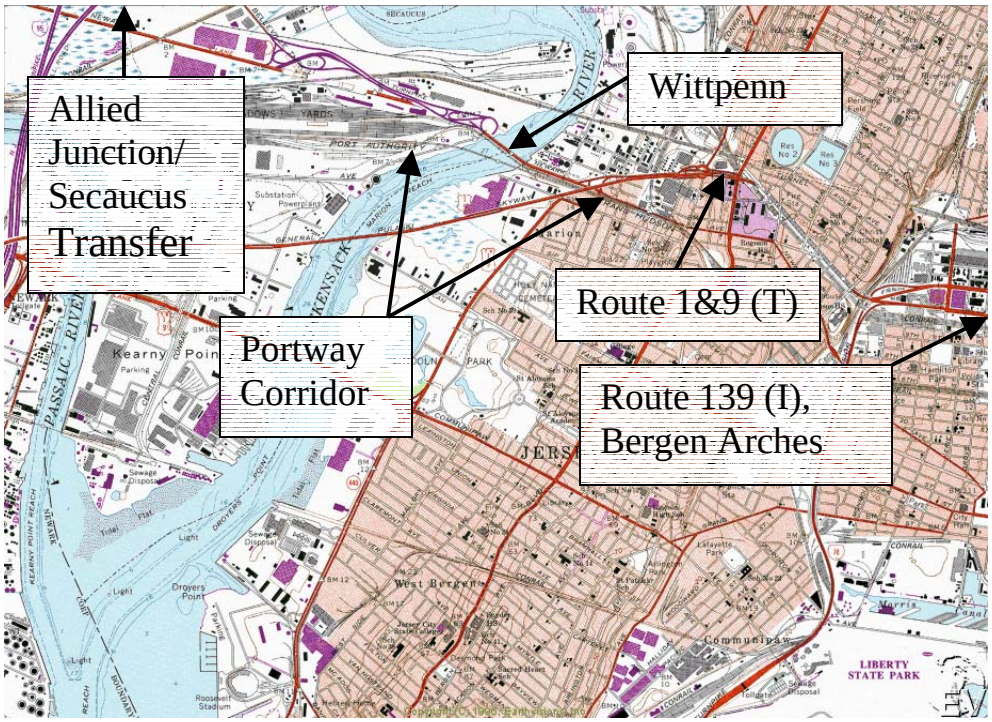

NEW JERSEY DEPARTMENT OF TRANSPORTATION

FIGURE 4: ADJACENT AREA PROJECTS
Route 7, Wittpenn Bridge
Over the Hackensack river
City of Jersey City and Town of Kearny,
Hudson County, NJ

LEGEND:

FLOODPLAINS

PROJECT LIMITS

SITE LOCATION

N

0 2000'

SOURCE:
MONOCHROMATIC BIT-MAPPED 7.5 MINUTE TOPOGRAPHIC IMAGES OF NEW JERSEY, GREGORY C. HERMAN AND MARYANN C. SCOLL, NJ GEOLOGICAL SURVEY DIGITAL GEODATA SERIES, DGS99-1, MAY 27 1999, JERSEY CITY N.J. QUADRANGLE.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150

OVER THE HACKENSACK RIVER

CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

FLOODPLAINS

DATE: JANUARY, 2003

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

FIGURE 5

STATE	FEDERAL PROJECT NO.
N.J.	

TOWN OF KEARNY

1"=100' 100 0 100 200

COUNTY OF HUDSON

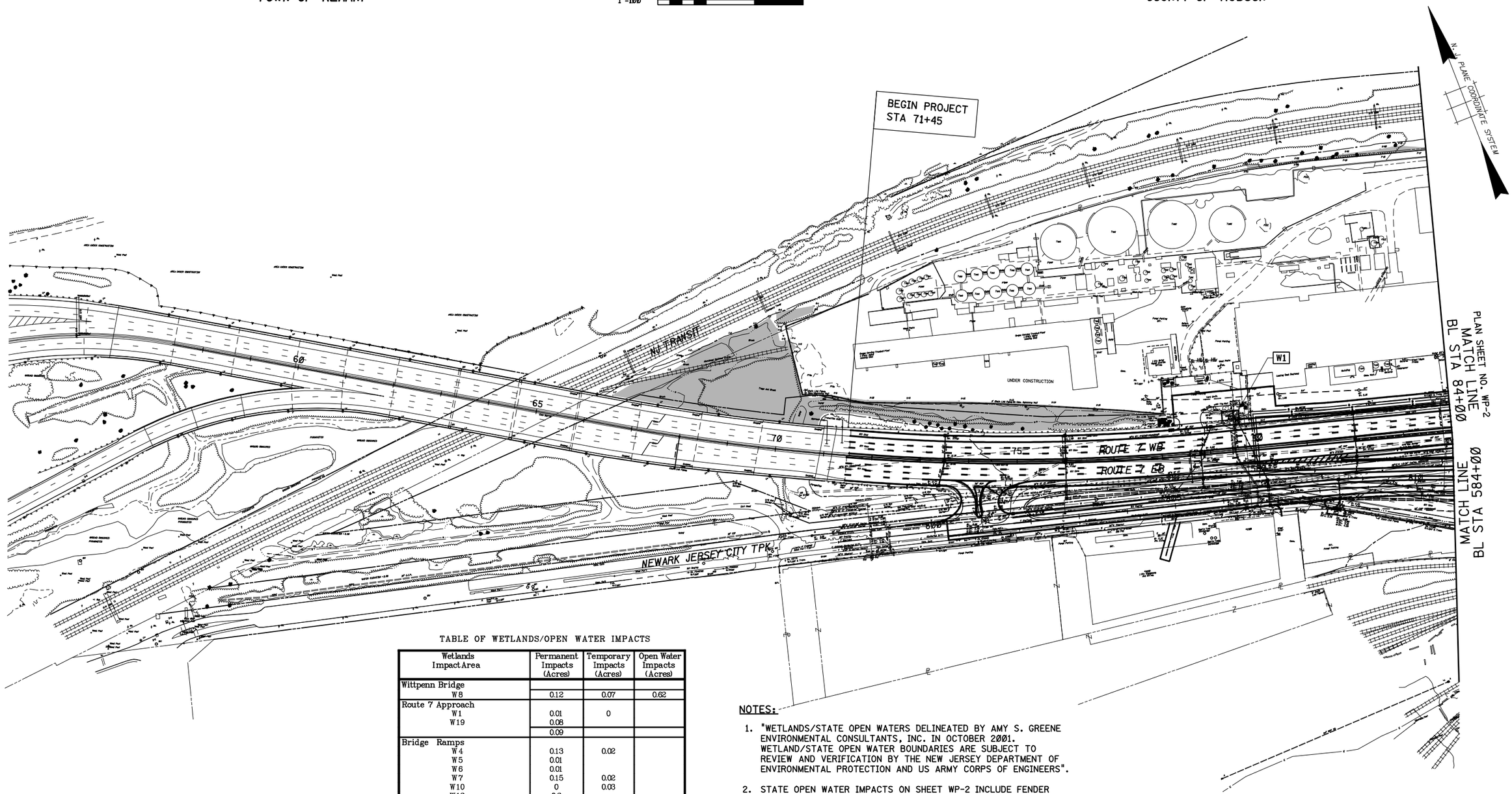

TABLE OF WETLANDS/OPEN WATER IMPACTS

Wetlands Impact Area	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Open Water Impacts (Acres)
Wittpenn Bridge			
W8	0.12	0.07	0.62
Route 7 Approach			
W1	0.01	0	
W19	0.08		
	0.09		
Bridge Ramps			
W4	0.13	0.02	
W5	0.01		
W6	0.01		
W7	0.15	0.02	
W10	0	0.03	
W12	0.3		
Sub-Total	0.6	0.07	
Fish House Road Realignment			
W2	1.53		
W3	0.51		
W11	0.03		
W20	0.03		
W22	0.10		
Sub-Total	2.2	0	
Stormwater Management System			
W13	0.03		
W14	0.02		
W15	0.01		
W16	0.03		
W17	0.02		
W18	0.02		
W21	0.01		
Sub-Total	0.14	0	
Totals	3.15	0.14	0.62

NOTES:

1. "WETLANDS/STATE OPEN WATERS DELINEATED BY AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC. IN OCTOBER 2001. WETLAND/STATE OPEN WATER BOUNDARIES ARE SUBJECT TO REVIEW AND VERIFICATION BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND US ARMY CORPS OF ENGINEERS".
2. STATE OPEN WATER IMPACTS ON SHEET WP-2 INCLUDE FENDER SYSTEM AND THREE PIERS.

5 SAMPLE STATIONS

J PHOTO LOCATIONS

S1 STATE OPEN WATER IMPACT AREA

W1 WETLAND IMPACT AREA

PROPOSED ROW

PROPOSED EASEMENTS

IMPACTED WETLANDS

NONIMPACTED WETLANDS

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

WETLANDS AND WETLAND IMPACT PLANS

DATE: DECEMBER, 2002

DEWBERRY-GOODKIND, INC.

FIGURE 6A

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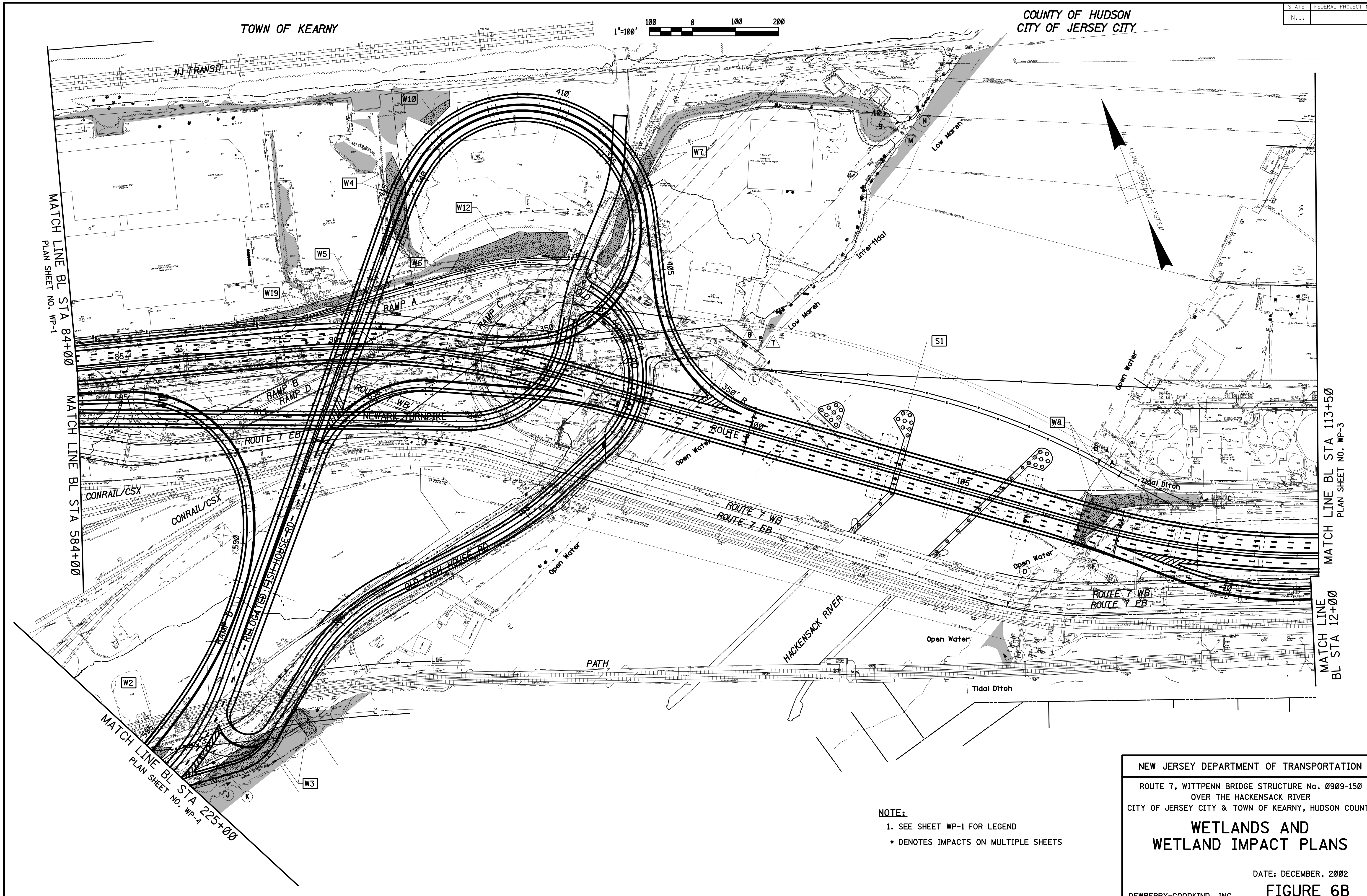

TOWN OF KEARNY
COUNTY OF HUDSON
CITY OF JERSEY CITY
1"=100'
100 0 100 200
NJ TRANSIT
MATCH LINE BL STA 84+00
PLAN SHEET NO. WP-1
MATCH LINE BL STA 584+00
MATCH LINE BL STA 225+00
PLAN SHEET NO. WP-4
MATCH LINE BL STA 113+50
PLAN SHEET NO. WP-3
MATCH LINE BL STA 12+00
RAMP A
RAMP B
RAMP C
RAMP D
NEWARK TURNPIKE
ROUTE 7 EB
ROUTE 7 WB
ROUTE 7
CONRAIL/CSX
RELOCATED FISH HOUSE RD
OLD FISH HOUSE RD
HACKENSACK RIVER
PATH
Open Water
Low Marsh
Intertidal
Tidal Ditch
N.J. PLANE COORDINATE SYSTEM
W2
W3
W4
W5
W6
W7
W8
W10
W12
W19
S1

STATE	FEDERAL PROJECT NO.
N.J.	

NOTE:

1. SEE SHEET WP-1 FOR LEGEND
• DENOTES IMPACTS ON MULTIPLE SHEETS

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

WETLANDS AND WETLAND IMPACT PLANS

DATE: DECEMBER, 2002

DEWBERRY-GOODKIND, INC.

FIGURE 6B

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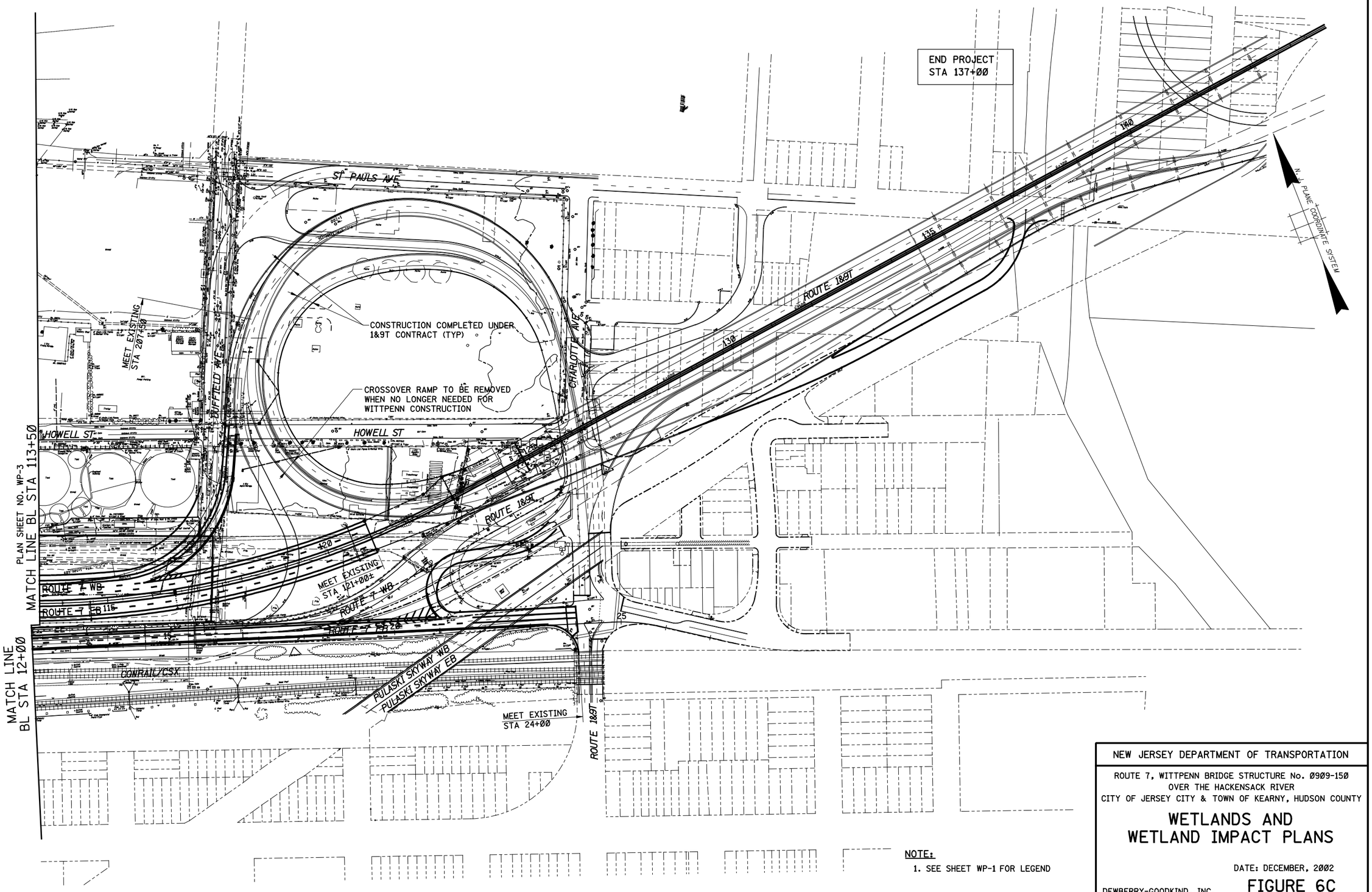
STATE	FEDERAL PROJECT NO.
N.J.	

CITY OF JERSEY CITY

1"=100' 100 0 100 200

COUNTY OF HUDSON



NOTE:

1. SEE SHEET WP-1 FOR LEGEND

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

WETLANDS AND WETLAND IMPACT PLANS

DATE: DECEMBER, 2002

DEWBERRY-GOODKIND, INC.

FIGURE 6C

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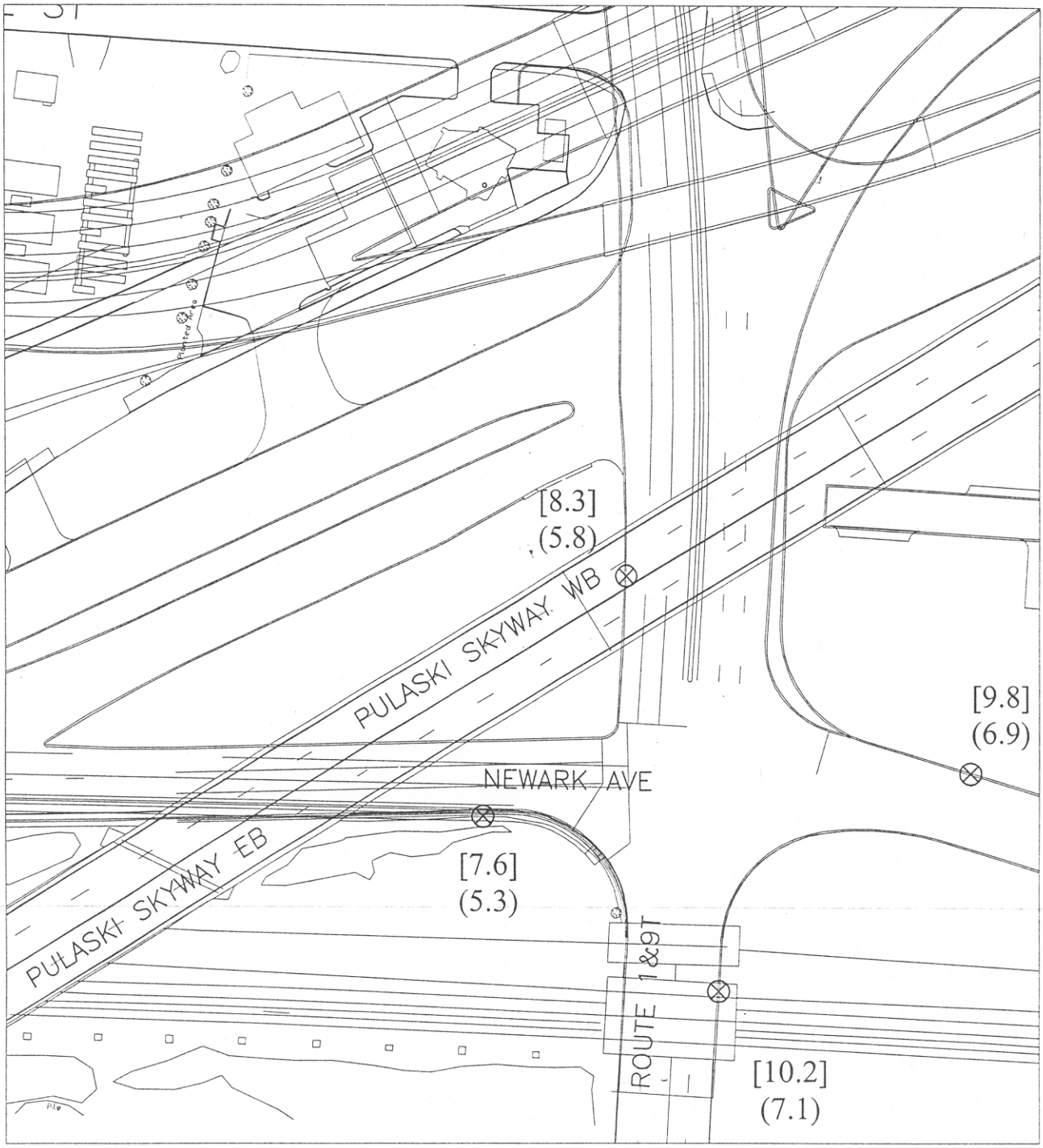


PROJECT NORTH

LEGEND

⊗ CARBON MONOXIDE RECEPTOR LOCATION

[ ] PEAK 1-HR. CO CONCENTRATIONS

( ) PEAK 8-HR. CO CONCENTRATIONS

All concentrations in units of ppm (parts per million)

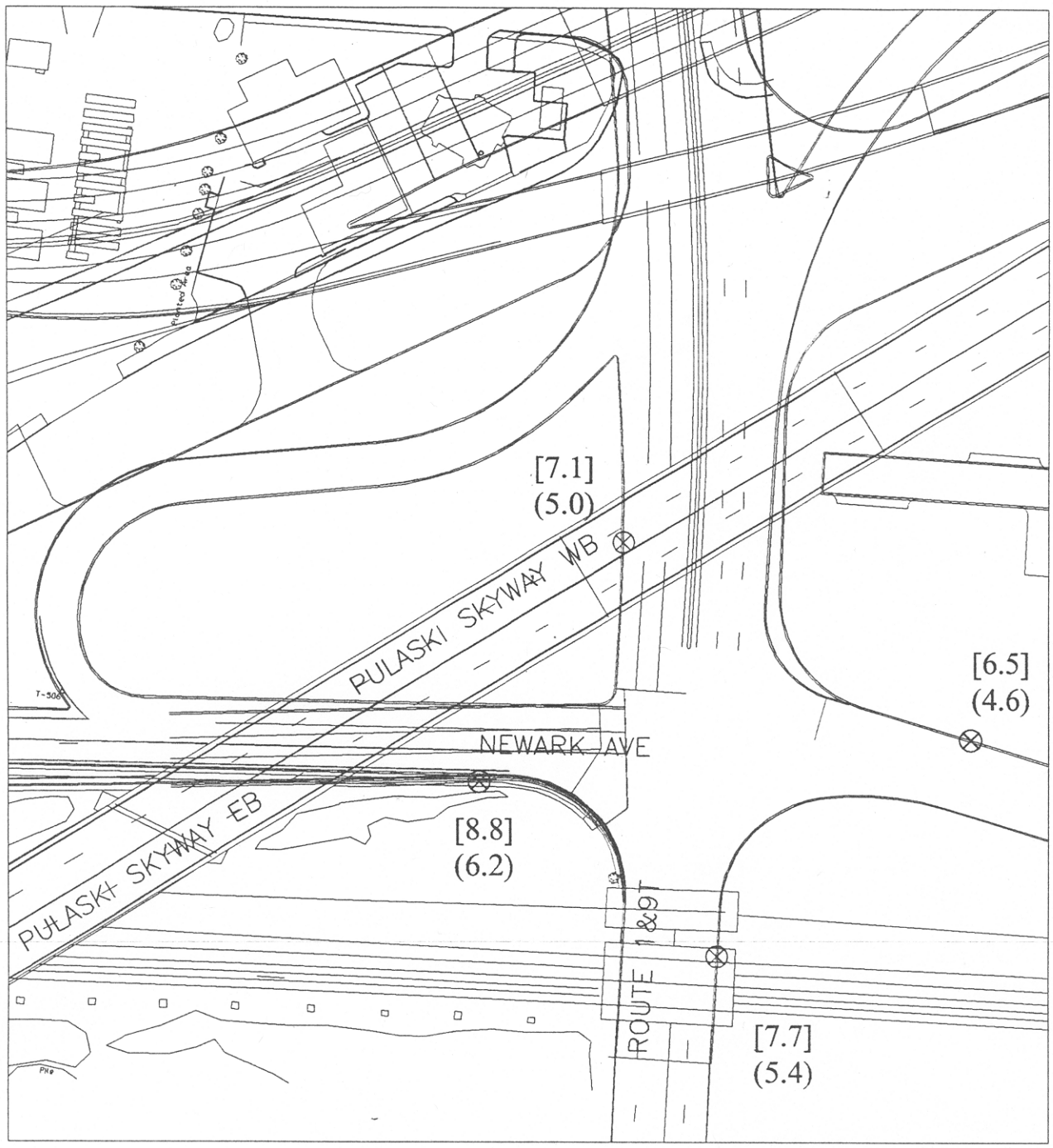
New Jersey Department of Transportation

Route 7, Wittpenn Bridge
Structure No. 0909-150
Over the Hackensack River
City of Jersey City and Township of Kearny
Hudson County

No-Build 2029 CO Concentrations

Date: January 10, 2003

Paul Carpenter Associates, Inc. **Figure 7**



PROJECT NORTH

LEGEND

⊗ CARBON MONOXIDE RECEPTOR LOCATION

[ ] PEAK 1-HR. CO CONCENTRATIONS

( ) PEAK 8-HR. CO CONCENTRATIONS

All concentrations in units of ppm (parts per million)

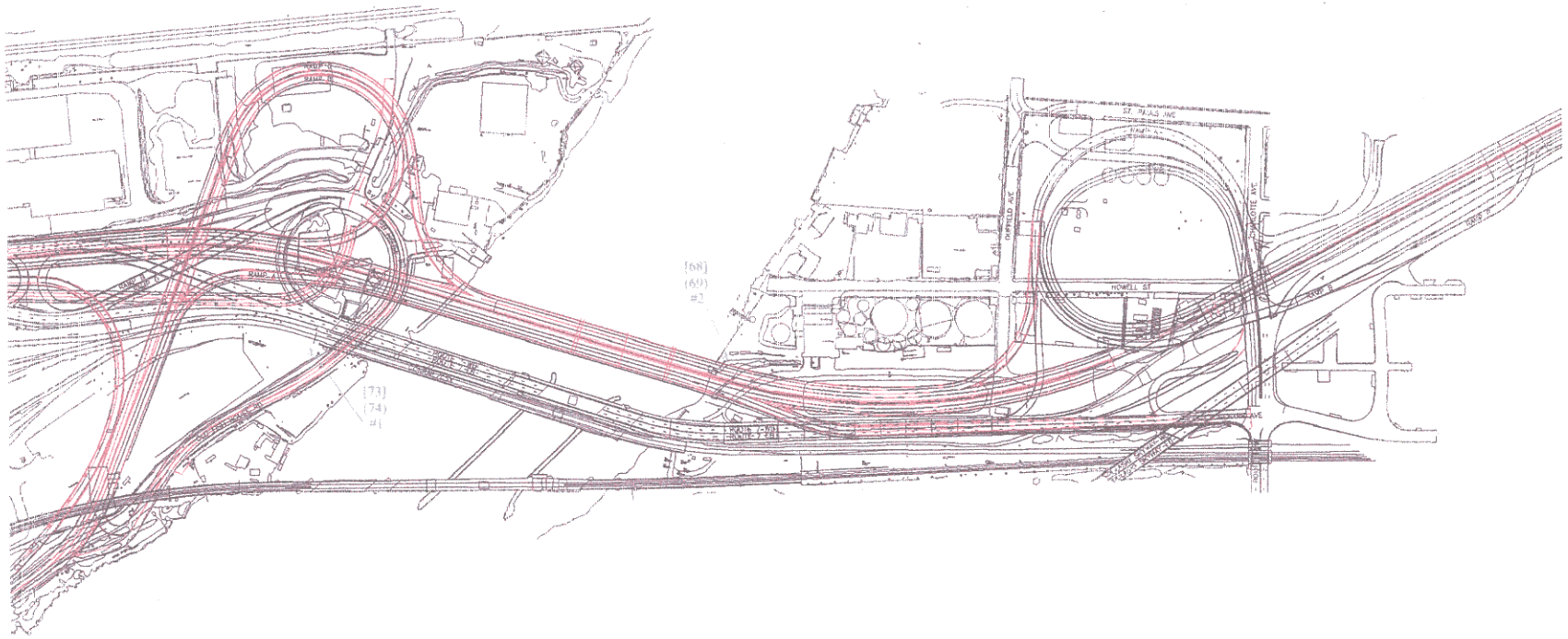
New Jersey Department of Transportation

Route 7, Wittpenn Bridge
Structure No. 0909-150
Over the Hackensack River
City of Jersey City and Township of Kearny
Hudson County

Build 2029 CO Concentrations

Date: January 10, 2003

Paul Carpenter Associates, Inc. Figure 8



PROJECT NORTH

LEGEND
Noise Figure Generated by Peak AM & PM Conditions

- Initially Preferred Alternative
- X Location of Noise Monitor
- # Noise Monitoring Location Number
- [ ] PEAK AM Noise Levels - dBA LAeq
- ( ) PEAK PM Noise Levels - dBA LAeq

New Jersey Department of Transportation

Route 7, Wittpenn Bridge
Structure No. 0909-150
Over the Hackensack River
City of Jersey City and Township of Kearny
Hudson County

Noise Monitoring Locations

Date: January 10, 2003

Paul Carpenter Associates, Inc.

Figure 9

TOWN OF KEARNY

LEGEND

PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS

PROPOSED ROADWAYS

EXISTING LAND USE

INDUSTRIAL/WAREHOUSE

GOVERNMENT/QUASI-PUBLIC/UTILITIES

RAILROAD

COMMERCIAL

TOWN OF KEARNY — KEY MAP — CITY OF JERSEY CITY

Fig. 3A

STUDY AREA

HACKENSACK RIVER

WITTPENN BRIDGE

150 0 150 300

Scale: 1" = 300 feet

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

EXISTING LAND USE
(TOWN OF KEARNY)

DATE: APRIL, 2003

DEWBERRY-GOODKIND, INC.

FIGURE 10A

Dewberry-Goodkind, Inc.
A Dewberry Company
Consulting Engineers and Planners
Parsippany, N.J.

In Charge of Design Checked by Drawn Checked by

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TOWN OF KEARNY

WITTPENN BRIDGE

HACKENSACK RIVER

STUDY AREA

LEGEND

PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS

PROPOSED ROADWAYS

EXISTING LAND USE

GOVERNMENT/QUASI-PUBLIC/UTILITIES

INDUSTRIAL/WAREHOUSE

RAILROAD

COMMERCIAL

150 0 150 300

SCALE: 1" = 300 FEET

KEY MAP

TOWN OF KEARNY

CITY OF JERSEY CITY

FIG. 3C

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE NO. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

EXISTING LAND USE
(TOWN OF KEARNY)

DATE: APRIL, 2003

DEWBERRY-GOODKIND, INC. FIGURE 10B

DEWBERRY-GOODKIND, INC.
A Dewberry Company
CONSULTING ENGINEERS AND PLANNERS
PARSIPPANY, N.J.

IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

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TOWN OF KEARNY

CITY OF JERSEY CITY

LEGEND

PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS

PROPOSED ROADWAYS

I & 9I ST. PAULS VIADUCT PROJECT

EXISTING LAND USE

INDUSTRIAL/WAREHOUSE

COMMERCIAL

RESIDENTIAL

RAILROAD

VACANT

GOVERNMENT/QUASI-PUBLIC/UTILITIES

KEY MAP

TOWN OF KEARNY

CITY OF JERSEY CITY

FIG. 3B

STUDY AREA

HACKENSACK RIVER

WITTPENN BRIDGE

ROUTE 7

ROUTE 1&9

PULASKI SKYWAY

MONROE STREET

GRAND STREET

MARIN BOULEVARD

JERSEY AVENUE

GILLES AVENUE

STUDY AREA

SCALE: 1" = 300 FEET

150 0 150 300

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE NO. 0909-151

OVER THE HACKENSACK RIVER

CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

EXISTING LAND USE
(CITY OF JERSEY CITY)

DATE: APRIL, 2003

DEWBERRY-GOODKIND, INC.

FIGURE 10C

DEWBERRY-GOODKIND, INC.
A Dewberry Company
CONSULTING ENGINEERS AND PLANNERS
PARSIPPANY, N.J.

FILES
PLANS
WORKSPACES

IN CHARGE OF
DESIGNED BY
DESIGN CHECKED BY
DETAILED BY
DETAIL CHECKED BY

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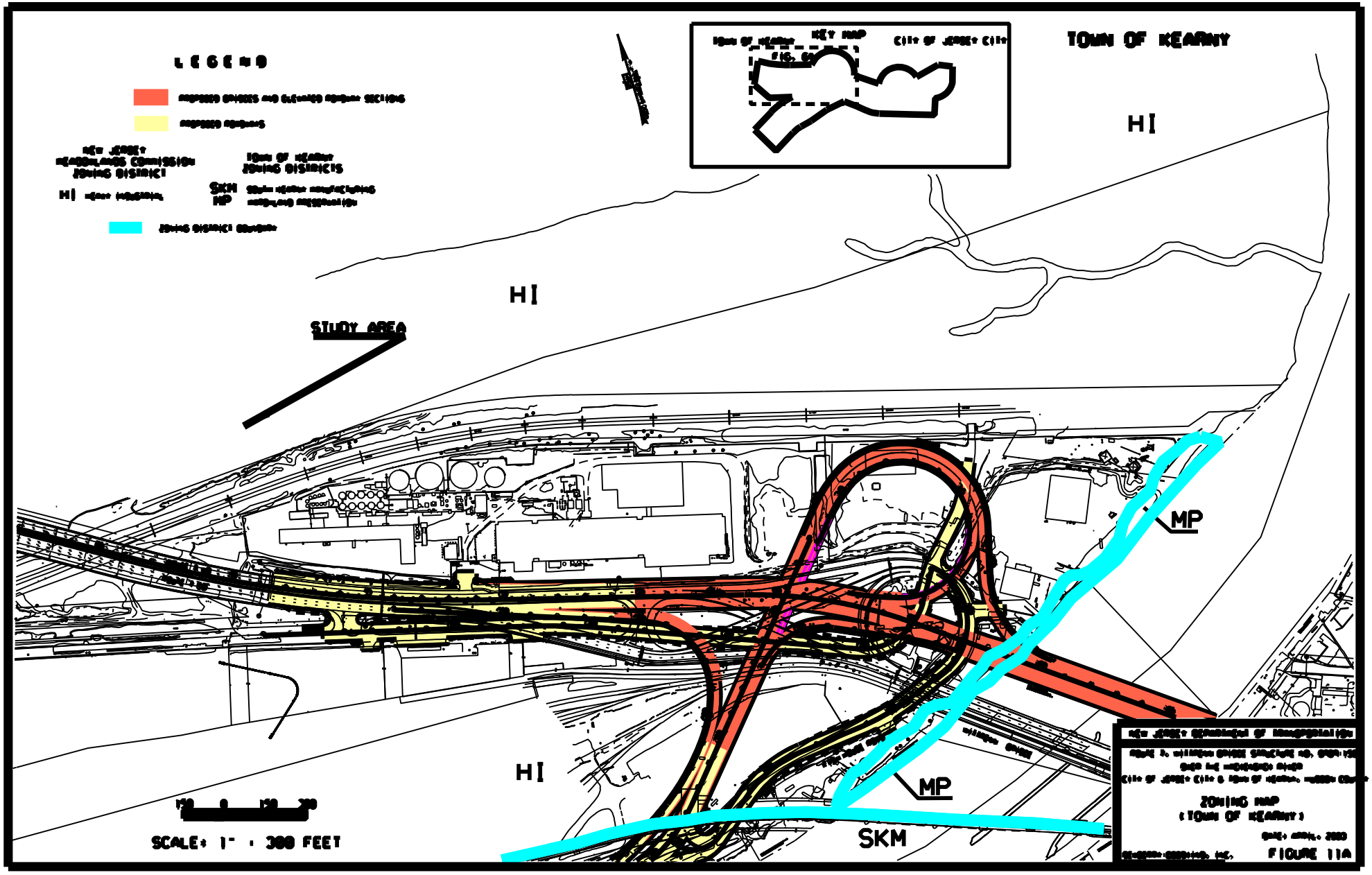
LEGEND
HI
SKM
MP
KEY MAP
TOWN OF KEARNY
HI
HI
HI
STUDY AREA
MP
MP
SKM
SCALE: 1" = 300 FEET
ZONING MAP
(TOWN OF KEARNY)
FIGURE 11A
DEWBERRY - GOODKIND, INC.

TOWN OF KEARNY

HI

HI

SKM

SKM

SKM

MP

HI

FISH HOUSE RD

FISH HOUSE RD

WITTPENN BRIDGE

HACKENSACK RIVER

STUDY AREA

LEGEND

PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS

PROPOSED ROADWAYS

NEW JERSEY MEADOWLANDS COMMISSION ZONING DISTRICT

HI HEAVY INDUSTRIAL

TOWN OF KEARNY ZONING DISTRICTS

SKM SOUTH KEARNY MANUFACTURING

MP MARSHLAND PRESERVATION

ZONING DISTRICT BOUNDARY

150 0 150 300

Scale: 1" = 300 feet

KEY MAP

TOWN OF KEARNY

CITY OF JERSEY CITY

Fig. 6C

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE STRUCTURE No. 0909-150

OVER THE HACKENSACK RIVER

CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY

ZONING MAP
(TOWN OF KEARNY)

DATE: APRIL, 2003

DEWBERRY-GOODKIND, INC.

FIGURE 11B

Dewberry-Goodkind, Inc.
A Dewberry Company
Consulting Engineers and Planners
Parsippany, N.J.

In Charge of
Designed by
Designed Checked by
Detailed by
Detail Checked by

$FILE$
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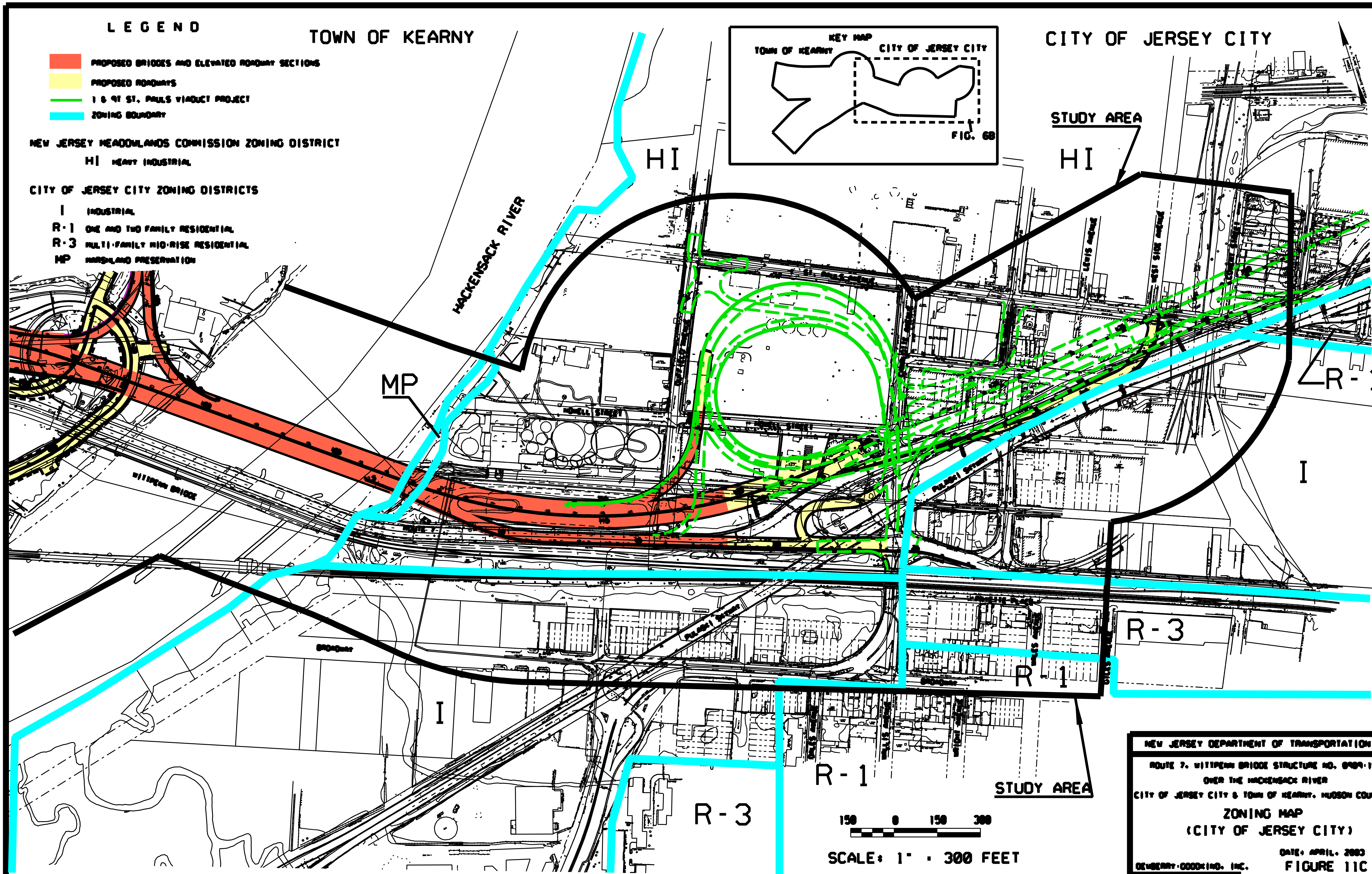

LEGEND
PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS
PROPOSED ROADWAYS
1 & 9T ST. PAULS VIADUCT PROJECT
ZONING BOUNDARY
NEW JERSEY MEADOWLANDS COMMISSION ZONING DISTRICT
HI HEAVY INDUSTRIAL
CITY OF JERSEY CITY ZONING DISTRICTS
I INDUSTRIAL
R-1 ONE AND TWO FAMILY RESIDENTIAL
R-3 MULTI-FAMILY MID-RISE RESIDENTIAL
MP MARSHLAND PRESERVATION
TOWN OF KEARNY
CITY OF JERSEY CITY
KEY MAP
TOWN OF KEARNY
CITY OF JERSEY CITY
FIG. 6B
STUDY AREA
HACKENSACK RIVER
HI
HI
MP
I
I
R-1
R-1
R-1
R-3
R-3
STUDY AREA
150 0 150 300
SCALE: 1" = 300 FEET
NEW JERSEY DEPARTMENT OF TRANSPORTATION
ROUTE 7, WITTPENN BRIDGE STRUCTURE NO.
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY
ZONING MAP
(CITY OF JERSEY CITY)
DATE: APRIL, 2003
DEWBERRY-GOODKIND, INC.
FIGURE 11C

DEWBERRY-GOODKIND, INC.
A Dewberry Company
CONSULTING ENGINEERS AND PLANNERS
PARSIPPANY, N.J.

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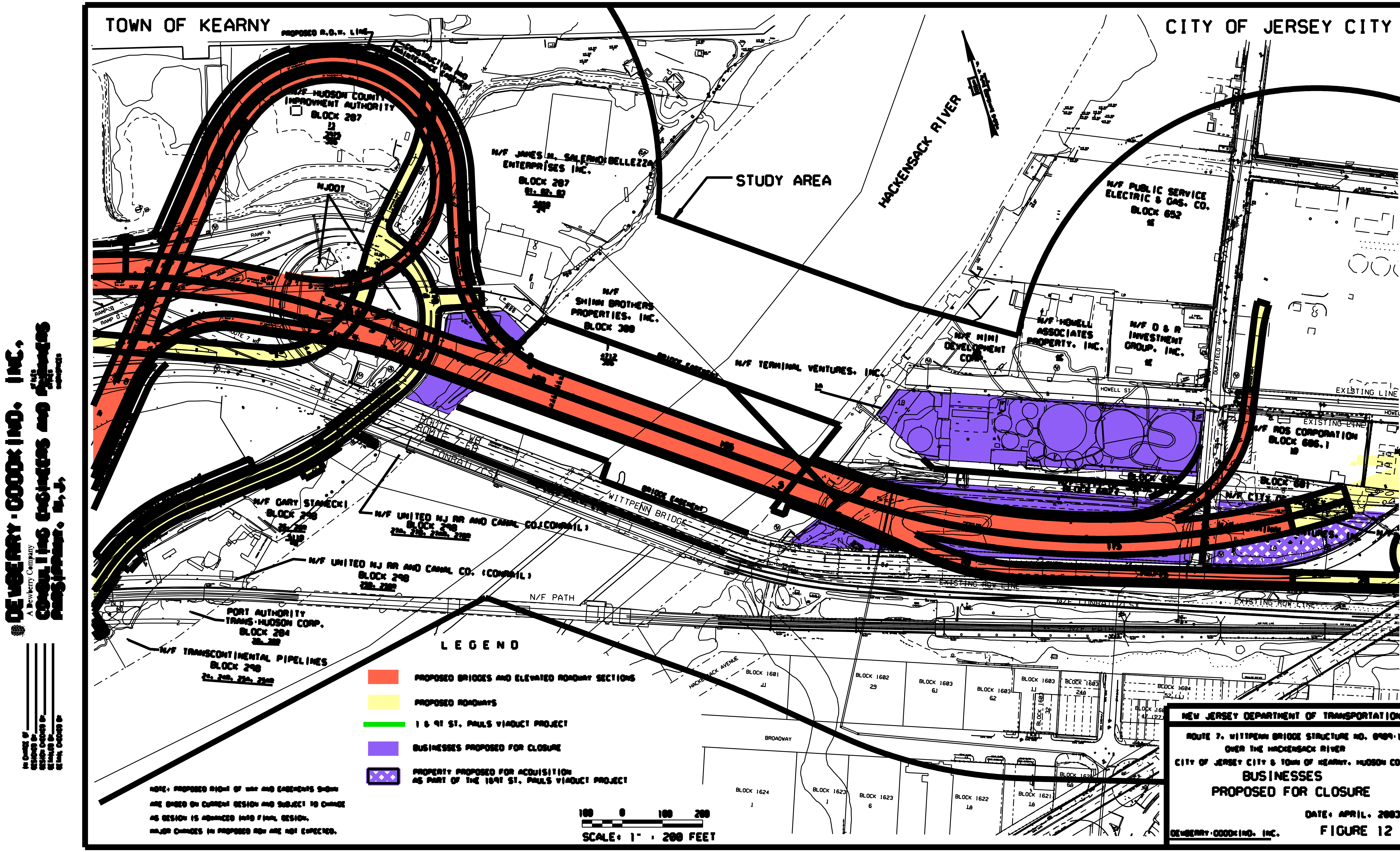
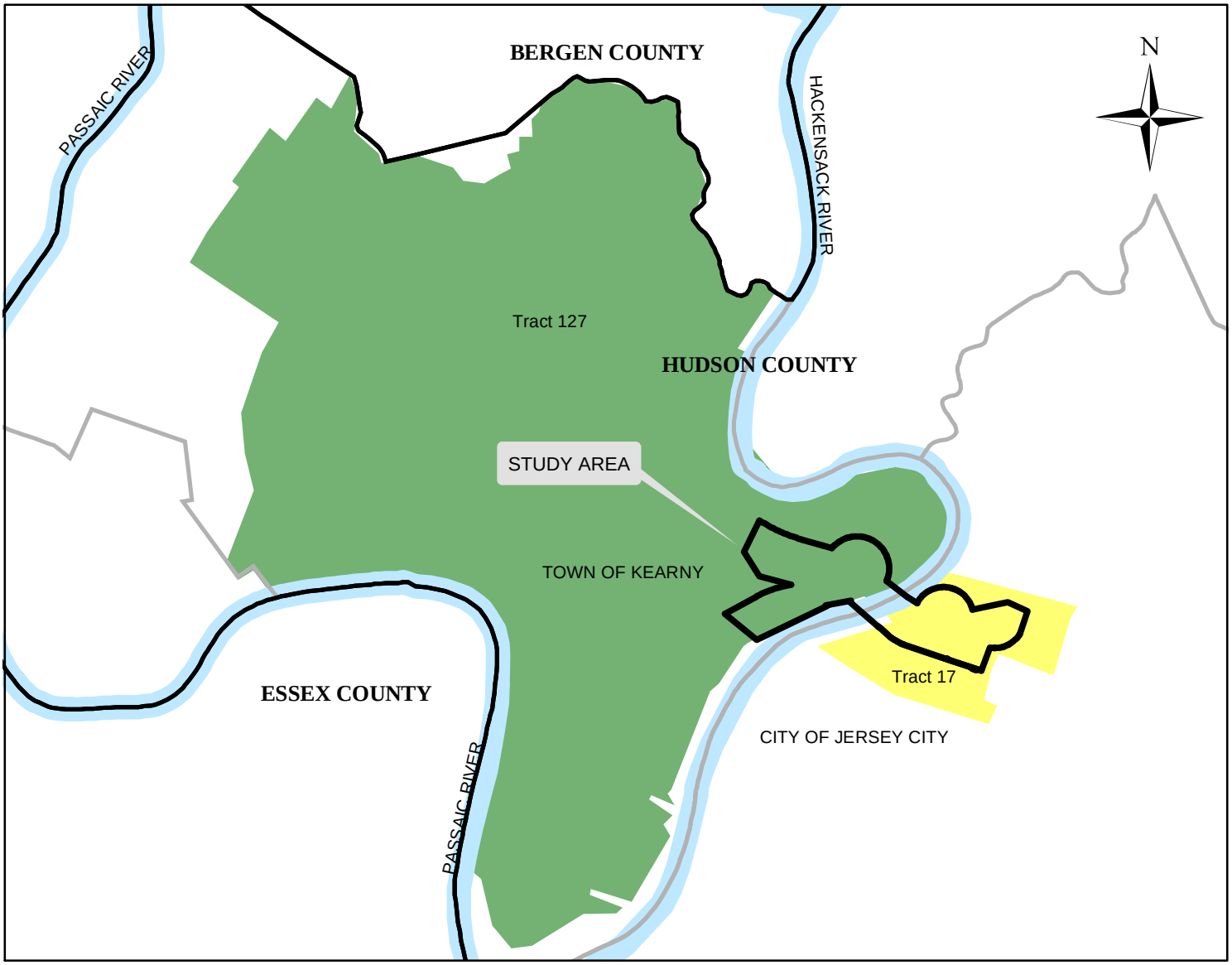
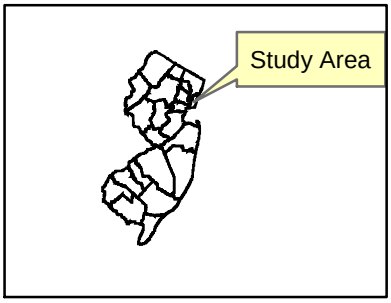


TOWN OF KEARNY
CITY OF JERSEY CITY
STUDY AREA
HACKENSACK RIVER
N/F HUDSON COUNTY IMPROVEMENT AUTHORITY BLOCK 287
N/F JAMES N. SALERNO/BELLEZZA ENTERPRISES INC. BLOCK 287
NJDOT
N/F SHINN BROTHERS PROPERTIES, INC. BLOCK 300
N/F TERMINAL VENTURES, INC.
N/F PUBLIC SERVICE ELECTRIC & GAS. CO. BLOCK 652
N/F MIMI DEVELOPMENT CORP.
N/F HOWELL ASSOCIATES PROPERTY, INC.
N/F D & R INVESTMENT GROUP, INC.
N/F RDS CORPORATION BLOCK 686.1
DUFFIELD AVE
HOWELL ST
EXISTING LINE
ROUTE 7 WB
ROUTE 7 EB
CONRAIL
WITTPENN BRIDGE
BRIDGE EASEMENT
N/F GARY STANECKI BLOCK 298
N/F UNITED NJ RR AND CANAL CO.(CONRAIL) BLOCK 298
N/F PATH
PORT AUTHORITY TRANS-HUDSON CORP. BLOCK 284
N/F TRANSCONTINENTAL PIPELINES BLOCK 298
EXISTING ROW LINE
HACKENSACK AVENUE
BROADWAY
LEGEND
PROPOSED BRIDGES AND ELEVATED ROADWAY SECTIONS
PROPOSED ROADWAYS
1 & 9T ST. PAULS VIADUCT PROJECT
BUSINESSES PROPOSED FOR CLOSURE
PROPERTY PROPOSED FOR ACQUISITION AS PART OF THE 1&9T ST. PAULS VIADUCT PROJECT
NOTE: PROPOSED RIGHT OF WAY AND EASEMENTS SHOWN ARE BASED ON CURRENT DESIGN AND SUBJECT TO CHANGE AS DESIGN IS ADVANCED INTO FINAL DESIGN. MAJOR CHANGES IN PROPOSED ROW ARE NOT EXPECTED.
SCALE: 1" = 200 FEET
NEW JERSEY DEPARTMENT OF TRANSPORTATION
ROUTE 7, WITTPENN BRIDGE STRUCTURE NO. 0909-150 OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY, HUDSON COUNTY
BUSINESSES PROPOSED FOR CLOSURE
DATE: APRIL, 2003
DEWBERRY-GOODKIND, INC.
FIGURE 12
DEWBERRY-GOODKIND, INC.
A Dewberry Company
CONSULTING ENGINEERS AND PLANNERS
PARSIPPANY, N.J.





0 0.5 1 1.5 2 Miles

Legend

- Study Area
- State River

Study Corridor Census Tracts

BLACK POPULATION PERCENTAGE 2000

- 16%
- 26.9%

NEW JERSEY DEPARTMENT OF TRANSPORTATION

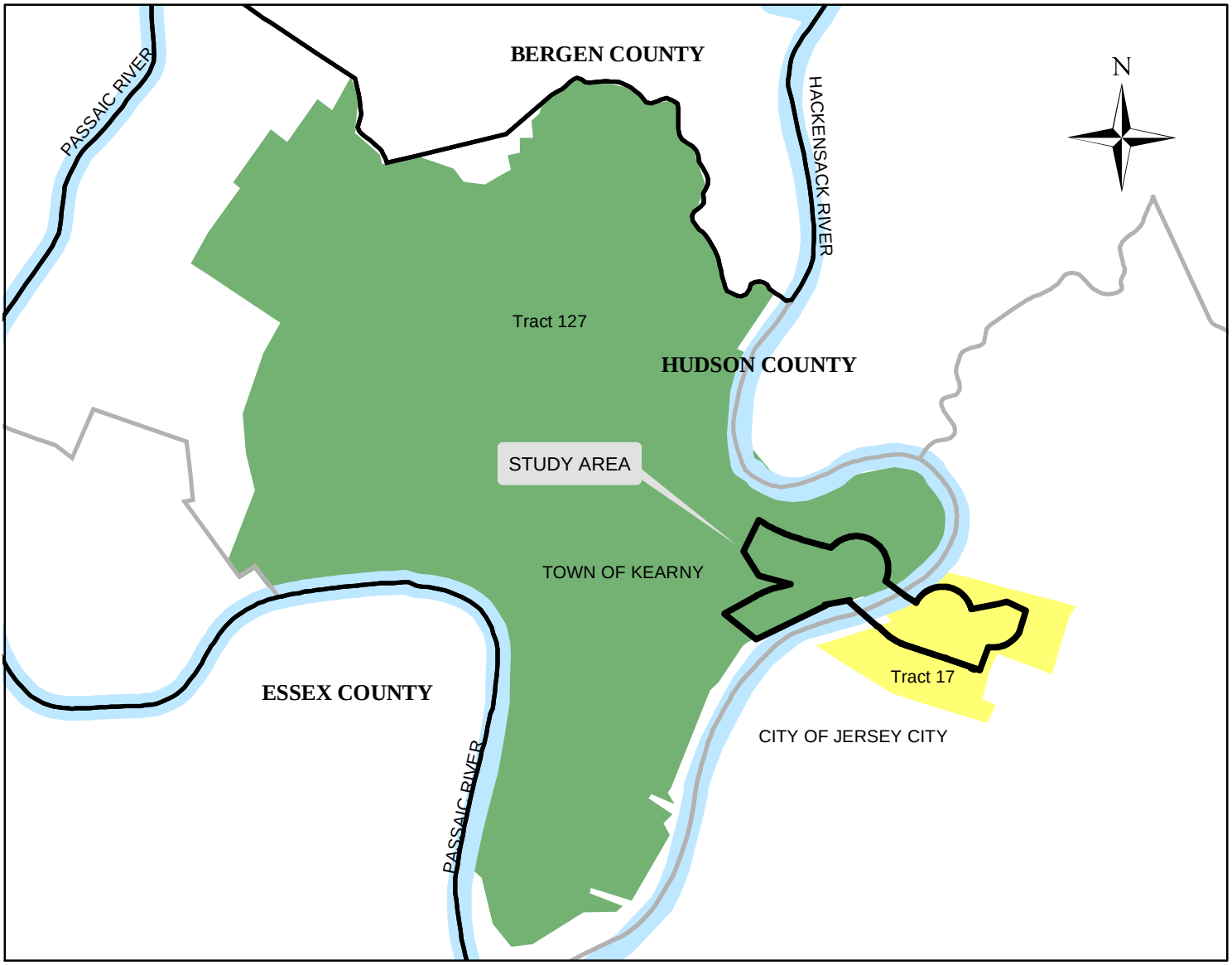
ROUTE 7, WITTPENN BRIDGE, STRUCTURE NO. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY
HUDSON COUNTY

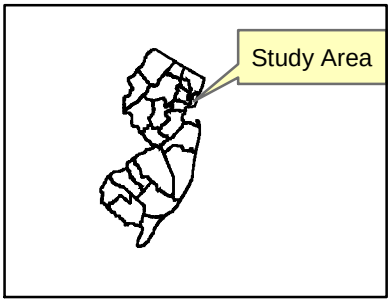
CENSUS TRACT MAP
BLACK POPULATION PERCENTAGE

SCALE: AS INDICATED DATE: APRIL, 2003

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE 13A





0 0.5 1 1.5 2 Miles

Legend

Study Area

State River

Study Corridor Census Tracts

HISPANIC POPULATION PERCENTAGE 2000

24.6%

29.1%

NEW JERSEY DEPARTMENT OF TRANSPORTATION

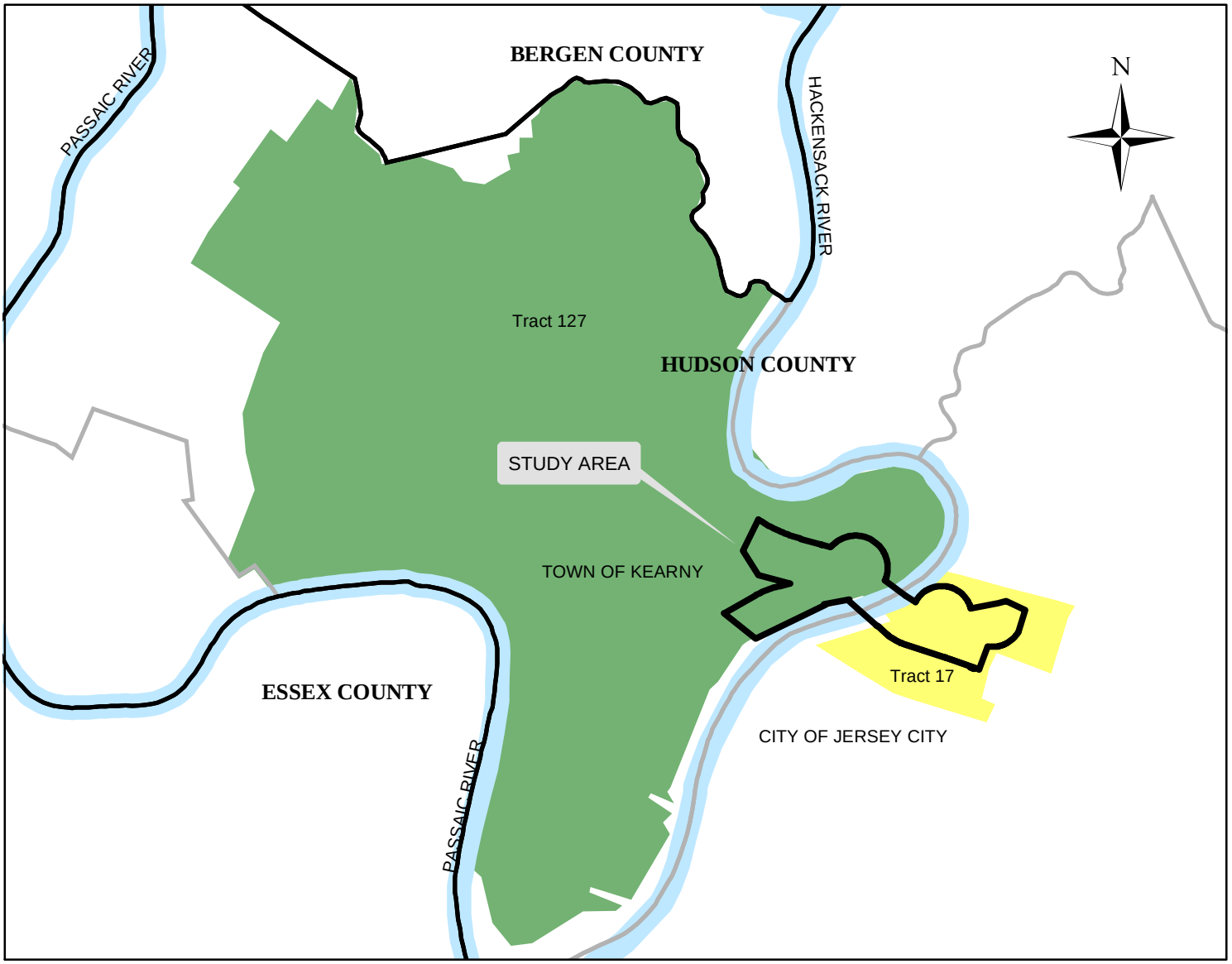
ROUTE 7, WITTPENN BRIDGE, STRUCTURE NO. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY
HUDSON COUNTY

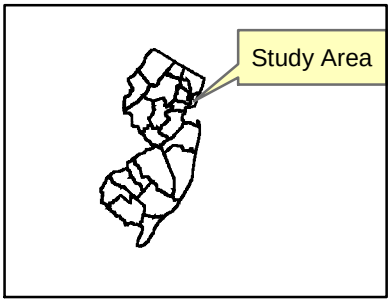
CENSUS TRACT MAP
HISPANIC POPULATION PERCENTAGE

SCALE: AS INDICATED DATE: APRIL, 2003

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE 13B





0 0.5 1 1.5 2 Miles

Legend

- Study Area
- State River

Study Corridor Census Tracts

ASIAN POPULATION PERCENTAGE 2000

- 3.6%
- 15.5%

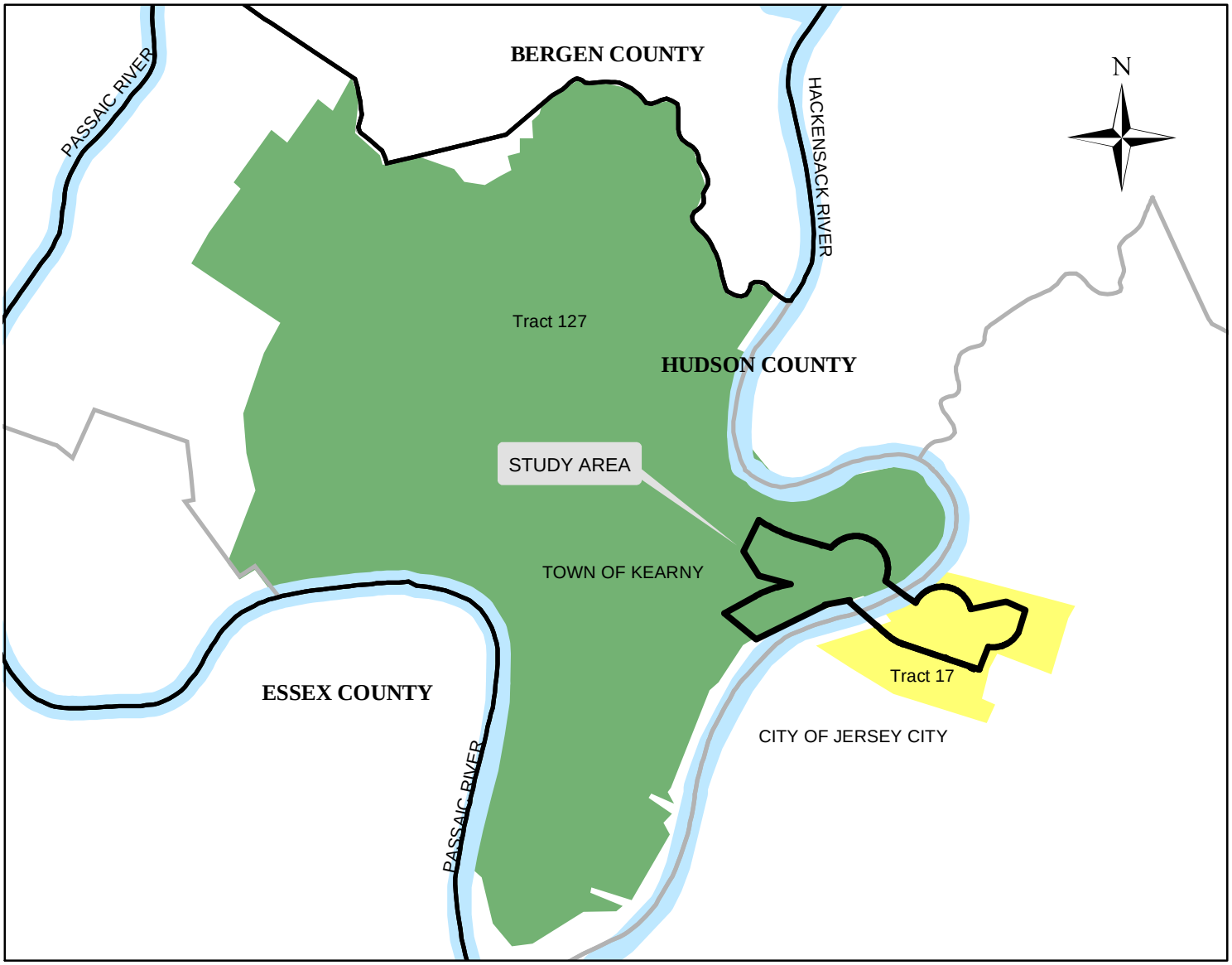
NEW JERSEY DEPARTMENT OF TRANSPORTATION

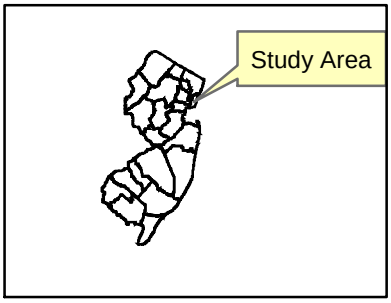
ROUTE 7, WITTPENN BRIDGE, STRUCTURE NO. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY
HUDSON COUNTY
CENSUS TRACT MAP
ASIAN POPULATION PERCENTAGE

SCALE: AS INDICATED DATE: APRIL, 2003

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE 13C





0 0.5 1 1.5 2 Miles

Legend

- Study Area
- State River

Study Corridor Census Tracts

LOW INCOME POPULATION PERCENTAGE

- 5.6%
- 25.5%

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE, STRUCTURE NO. 0909-150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY & TOWN OF KEARNY
HUDSON COUNTY
CENSUS TRACT MAP
LOW INCOME POPULATION PERCENTAGE

SCALE: AS INDICATED DATE: APRIL, 2003

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE 13D

Area of Potential Effect

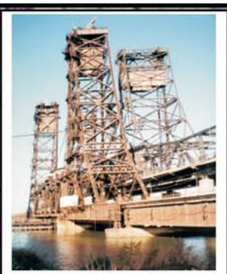
Individually Eligible Resource - No Adverse Effect

Eligible Historic District - No Adverse Effect

Individually Eligible Resource - Adverse Effect

Eligible Historic District - Adverse Effect

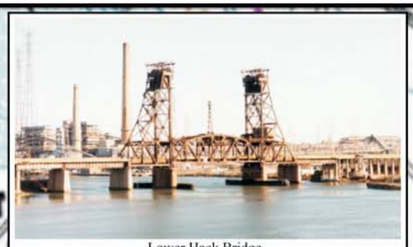
Note: US Route 1 & 9 Corridor Historic District
Includes Pulaski Skyway



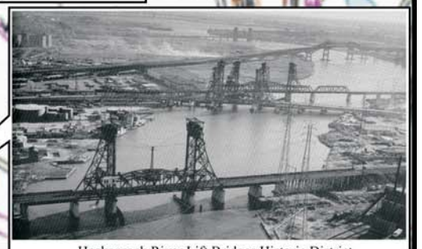
Pennsylvania Railroad Harsimus Branch (Conrail/CSX) Bridge.

Wittpenn Bridge

Old D. L. & W. Main Line Historic District.



Lower Hack Bridge.

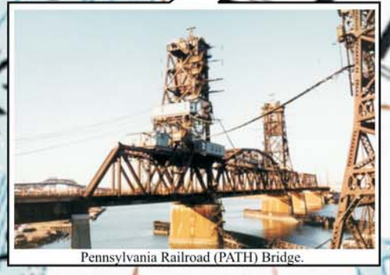


Hackensack River Lift Bridges Historic District.

PSE&G Kearny Generating Station.

New Jersey Railroad Bergen Cut Historic District.

Pulaski Skyway.



Pennsylvania Railroad (PATH) Bridge.

US Route 1 and 9 Corridor Historic District.

N W E S

FEET
0 1000

New Jersey Department of Transportation

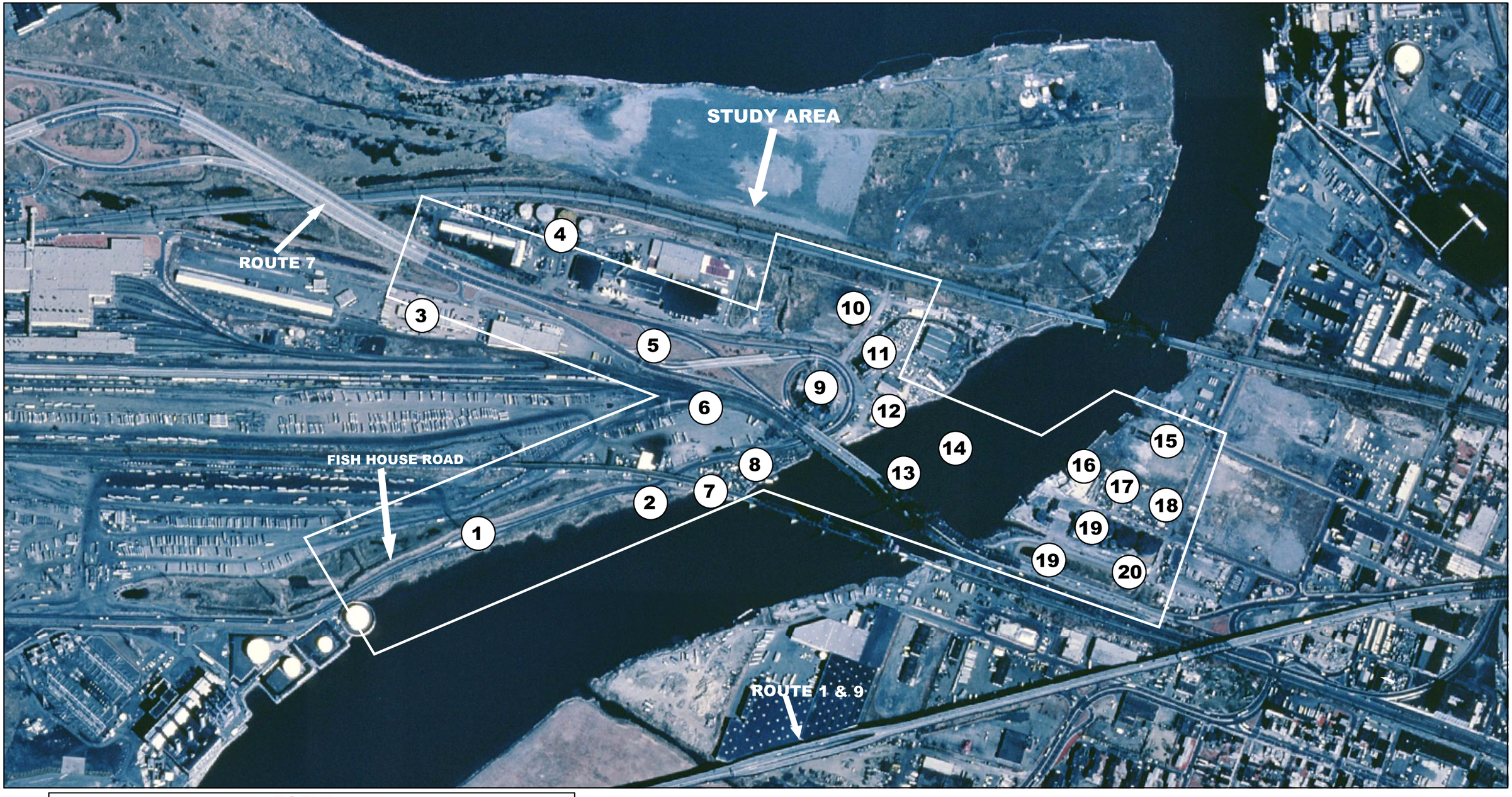
Route 7, Wittpenn Bridge Structure No. 0909-150
Over the Hackensack River
City of Jersey City & Town of Kearney, Hudson County

Map of Historic Architectural Resources

Date: January 2003

RICHARD GRUBB & ASSOCIATES

Figure 14



LEGEND

1. Public Service Electric & Gas, Co.
2. Transcontinental Pipelines
3. Isaac Heller
4. Lloyd A. Fry Roofing Company
5. Jersey City Waterworks
6. United NJ RR Co. and Canal
7. Port Authority Trans-Hudson Corp.
8. Gary Stanecki
9. NJDOT
10. Hudson County Improvement Authority
11. James M. Salerno Enterprises Inc.
12. Shinn Brothers Properties, Inc.
13. Wittpenn Bridge
14. Hackensack River
15. Public Service Electric & Gas, Co.
16. Mimi Development Corp.
17. Howell Associates Property, Inc.
18. D & R investment Group, Inc.
19. Terminal Ventures, Inc.
20. City of Jersey City

N

0 500 1,000 2,000 Feet

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ROUTE 7, WITTPENN BRIDGE, STRUCTURE NO. 0909–150
OVER THE HACKENSACK RIVER
CITY OF JERSEY CITY AND TOWN OF KEARNY, HUDSON COUNTY
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
AERIAL PHOTOGRAPH 1995

SCALE: AS INDICATED DATE: JANUARY, 2003

Dewberry-Goodkind, Inc.
A Dewberry Company

FIGURE 15

APPENDIX B

CORRESPONDENCE

Notice of Planned Action (Dated January 9, 2002)
Public Information Center Letter (Dated May 17, 2002)
Public Information Center Letter (Dated June 14, 2002)
Resolution of Support – The City of Jersey City (Dated June 26, 2002)
Resolution of Support – The Town of Kearny (Dated June 27, 2002)
Miscellaneous Correspondence (Dated July 9, 2002)
SHPO Consultation Letter (Dated May 3, 2002)
SHPO Consultation Letter (Dated July 29, 2002)
FHWA Response to the Draft Memorandum of Agreement (Dated 12/20/02)
Memorandum of Agreement
New Jersey Natural Heritage Data Base response (Dated 8/29/01)
United States Fish and Wildlife Service response (Dated 8/27/01)
National Marine Fisheries Service response (Dated 8/28/01)
New Jersey Breeding Bird Atlas response (Dated 9/17/02)
Congestion Management System Letter (Dated 10/30/00)

State of New Jersey

DEPARTMENT OF TRANSPORTATION
1035 Parkway Avenue
PO Box 600
Trenton, New Jersey 08625-0600

DONALD T. DIFRANCESCO
Acting Governor

JAMES WEINSTEIN
Commissioner

January 9, 2002

New Jersey Historical Society
52 Park Place
Newark, NJ 07102

Re: Notice of Planned Action (NOPA)
Route 7 Wittpenn Bridge over the Hackensack River, Section 2
Township of Kearny and City of Jersey City, Hudson County
Federal Project No. MG-RDM-7675 (110)

To Whom It May Concern:

The New Jersey Department of Transportation and the Federal Highway Administration have determined that technical environmental studies leading to an Environmental Assessment are required for the referenced project.

In accordance with the provisions of the National Environmental Policy Act, NJDOT hereby initiates an early coordination process to assist in the identification of reasonable alternatives and the evaluation of the social, economic, and environmental impacts of the impacts of the proposed action and measures to mitigate adverse impacts which may result from this project.

You are requested to review this Notice of Planned Action and the attached information and address any questions or comments to the person named below within 30 days. Your response will help assure early and continuous consideration of your agency's concerns during the development of the environmental studies for this project.

You are invited to participate in this process to determine the scope and the significant issues to be analyzed in depth in the environmental studies. If sufficient interest is shown we will conduct a formal scoping meeting as defined by the Council of Environmental Quality Regulations issued on 11/29/78.

All responses or requests for further information may be directed to Brian Mulcahy, Environmental Team Leader at 609-530-2983 or Irene Matos, Principal Environmental Specialist at 609-530-5264.

Sincerely yours,

Andras Fekete, Manager
Bureau of Environmental Services

Cc: F. Kashani
I. Matos
B. Mulcahy

NOTICE OF PLANNED ACTION

Project Name: State Highway Route 7 – Wittpenn Bridge over the Hackensack River
Jersey City and Kearny Township, Hudson County
Federal Project No. MG-RDM-7675 (110)

Project Location: State Highway Route 7 is a major arterial which extends from US Route 1&9 Truck at Charlotte Circle in Jersey City westward across the Hackensack River via the Wittpenn Bridge, then through industrial, undeveloped Meadowlands areas and developed sections in the Town of Kearny to the Passaic River and Belleville. The project area lies within the most easterly portion of this east-west corridor, extending approximately from MP 0.00 at Charlotte Circle in Jersey City to MP 1.00 at the viaduct crossing of the NJ Transit Morris & Essex railroad tracks. The project includes the Fish House Road interchange at MP 0.51 in Kearny Township; see the attached map. The Wittpenn Bridge is a 209-foot vertical lift span bridge that carries Route 7 traffic over the Hackensack River between Jersey City and Kearny Township, Hudson County, providing the important connection between the municipalities and industrial areas to the west and destinations including Jersey City and the Holland Tunnel to the east.

Existing Conditions and Project Need: The original Wittpenn Bridge was built in 1930. A major rehabilitation was performed in 1957. Other emergency repairs and modifications have been performed in subsequent years, most notably to the mechanical systems and the deck system. The bridge roadway has a curb-to-curb width of 40 feet and carries two 10-foot lanes without shoulders in each direction. There is no median barrier or other physical separation; only a double-yellow stripe was provided. There are two 8-foot-wide sidewalks, separated from traffic by a rigid-post corrugated beam guiderail and a channel section rub rail mounted approximately one foot above the top of the curb. There are no signalized intersections within the project limits. The Department identified a need for this project based on the existing condition of the Wittpenn Bridge, and operational and safety problems being experienced on the bridge and its approaches due to substandard features. The existing problems are summarized below:

Bridge Structural Deficiencies:

- Poor condition of bridge deck, substructure and superstructure
- Substandard deck geometry and lateral underclearance
- Does not meet current seismic design criteria

Substandard Features:

- Substandard lane widths
- Lack of shoulders
- Lack of median barrier
- Substandard curvature and superelevation for the bridge mainline at the east approach
- Substandard radii of curvature at the entrance and exit ramps for Fish House Road
- Sharp radii for U-turn at the west bridge approach
- Inadequate acceleration/deceleration

Accidents:

- Accident rate of the segment immediate west of Wittpenn Bridge (Fish House Road Interchange area) is twice the statewide average.
- Wittpenn Bridge has high severity accidents

Recommended Improvements: The NJDOT proposes to eliminate structural deficiencies on the Wittpenn Bridge, correct its substandard features, and improve safety and traffic operations at the bridge and its approaches including existing and future modified interchanges at Charlotte Circle and Fish House Road. The eastern terminus of any new bridge will have to be compatible with proposed improvements to Route 1&9 Truck/Charlotte Circle/St. Paul's Viaduct, planned by the Department. The western terminus of the proposed project will also provide for improvements to the existing Fish House Road interchange and increased underclearance for the Wittpenn Bridge in its closed position. In summary, this project would seek to maintain and, where practical, enhance connectivity between the Wittpenn Bridge and the Fish House Road corridor.

Areas of Environmental Concern:

Air and Noise: An air and noise assessment that will evaluate the change in air pollution and noise levels in locations where traffic is predicted to change will be presented in a Technical Environmental Study (TES). This information will be included in the Environmental Assessment.

Cultural Resources: A cultural resources investigation will be provided to determine if any sites within the Area of Potential Effect (APE) are eligible for inclusion in the National Register of Historic Places. The Department has already consulted with the State Historic Preservation Office (SHPO) on the project's APE. If any eligible sites are identified, the project's effects on those resources will be determined.

Ecology: As a result of a preliminary assessment of wetland impacts, areas of wetlands have been identified. The quality of wetlands at these sites is generally poor. They are generally small pockets of wetlands-type vegetation in disturbed former industrial sites and man-made ditches. A formal program of investigation, identification, mapping, and, if appropriate, identification of permits and remediation will be included within the Final Scope Development phase of this project.

Hazardous Waste: A preliminary investigation has been made of properties adjacent to the project site that could potentially have hazardous waste issues. Approximately 20 properties, including several underground storage tank sites, Industrial Site Recovery Act (ISRA) sites, chromium sites, and other railroad and trucking properties, have been identified. Further investigation is currently underway and hazardous waste concerns will be presented in a TES and included in the Environmental Assessment.

Socioeconomics: An investigation has been made of properties abutting the project site that would likely be affected by the proposed bridge or interchange modifications. Further investigation and potential costs and impacts to these sites and others should be undertaken within the Final Scope Development phase of this project.

Environmental Justice: A study will be done to determine if a disproportionate share of the proposed project's impacts are borne by low income or minority populations. The Environmental Justice analysis will consist of the identification of disadvantaged populations in the project area and a determination of whether any

disadvantaged populations are disproportionately impacted by the project. Environmental Justice issues will be addressed in the Environmental Assessment.

Context Sensitive Design: An assesament of the proposed project design will consider the view of the existing visual environment, as well as the socioeconomic and land context of the study area. This assessment will be performed to ensure that the project is compatible with the context of the surrounding area, i.e. existing physical landscape, signage, building façade-types, highway aesthetics, and the existing land use pattern. The Route 7 Wittpenn Bridge study area is zoned for heavy industry. There is a large rail yard adjacent to the west approach and a fuel oil company adjacent to the east approach. Three 1930s era vertical lift bridges and numerous transmission towers and gas tanks dominate the skyline. In light of these conditions, historic properties of the new structure will be given equal weight with economy of design. To the extent practical, the proposed structures should be designed with simple, clean lines to help reduce the clutter of structural form in the area.

CMS (Congestion Management System): A CMS analysis was completed for this project in January 1998. According to NJDOT Bureau of Mobility Strategies, the New Jersey Transportation Planning Authority will not require a revised CMS.

State of New Jersey

DEPARTMENT OF TRANSPORTATION
1035 Parkway Avenue
PO Box 600
Trenton, New Jersey 08625-0600

JAMES E. McGREEVEY
Governor

JAMES P. FOX
Commissioner

May 17, 2002

Re: **Route 1&9T(25) St. Pauls Viaduct Replacement Project, Jersey City**
Route 7 Wittpenn Bridge over Hackensack River Project, Jersey City and Kearny
Public Information Center- June 4, 2002

Dear Sir or Madam:

The New Jersey Department of Transportation (NJDOT) cordially invites you to attend an informal public information center for the above referenced projects.

The information center will provide the interested public with the opportunity to review the changes to the proposed Rt. 1&9T(25) project that have occurred since circulation of the Environmental Assessment/Section 4(f) Evaluation and public hearing held on December 3, 2001. The project was modified at the western end to make it more compatible with the Rt. 7 Wittpenn Bridge project.

Additionally information will be available on the proposed replacement of the Rt. 7 Wittpenn Bridge. The NJDOT recently competed the first phase of this comprehensive project with a recommendation that the Wittpenn Bridge should be replaced with a new vertical lift bridge to the north of the existing bridge. Environmental studies evaluating the potential social, economic and environmental impacts of the project have been initiated.

The information center is scheduled for Tuesday, June 4, 2002 from 3:00 PM to 7:00 PM at the Jersey City, City Hall, 280 Grove Street in the Council Chambers. We encourage you to attend.

You are receiving this letter because your property may be affected by these projects. The information center will provide you with the opportunity to examine exhibits, and discuss the projects with Department personnel.

Your comments are very important to the ongoing design and environmental process. Please plan to attend at a time that is convenient for you. If you have any questions or if you are physically challenged and require assistance, please contact me at (609) 530-2110.

Sincerely,

Thomas P. Johnson
Community Relations Manager
Office of Community Relations

LET US KNOW WHAT YOU THINK:

Route 7 Wittpenn Bridge Over the Hackensack River
Public Information Center
Tuesday, June 4, 2002
Jersey City, NJ

NJDOT is interested in learning more about what you think.
Please use this comment form to let us know your thoughts.

Comments:

Please fax your comments to Feraidoon Kashani, P.E., PMP
NJDOT Division of Project Management

ROUTE 7 WITTPENN BRIDGE OVER THE HACKENSACK RIVER PUBLIC INFORMATION CENTER

TUESDAY, JUNE 4, JERSEY CITY, NJ 3:00 PM – 7:00 PM

SIGN-IN-SHEET

(PLEASE PRINT CAREFULLY)

LAST NAME	FIRST NAME	ORGANIZATION	ADDRESS & ZIP CODE	PHONE	FAX	EMAIL
KING	ROBERT	PANY & NJ	JSTC, ONE PATH PLAZA JERSEY CITY, NY 07306	AREA CODE: 201 963 7495	AREA CODE: 201 216 6800	rKing@panynj.gov
Davey	Barbara	Christ Hospital	176 Palisade Ave. Jersey City 07306	AREA CODE: 201- 795- 8364	AREA CODE: 201 795-8634	bdavey@christhospit u Org
KING	NANCY		2164 KENNEDY BLVD Jersey City, NJ 07306	AREA CODE: 201 435-3769	AREA CODE:	NIKNAK@WEBTV NET.
Wisneski	Rich	NJTRANSIT	ONE PENN PLAZA NEWARK NJ 07105	AREA CODE: 973 491 7808	AREA CODE:	
VanDervoort	Tim	Owens Corning	1249 Newark Tnpk Kearny, NJ 07032	AREA CODE: 201 955-3626	AREA CODE: x 0530	tim.vandervoort@ owenscorning.com
PETER TROPIANO	TROPIANO	35 LOUISE AVE	21 MINA DR. 07305 JERSEY CITY, NJ	AREA CODE: 201-434-7892	AREA CODE:	
LEVITT	HAROLD	PATH	ONE PATH PLAZA J.C.N.J. 07306	AREA CODE: 201 216.6313	AREA CODE: 201 216-6493	HLevitt@panynj.gov.
STRANIERO	ANTHONY	AMERADA HESS CORP.	1 HESS PLAZA US-HWY-9 WOODBRIDGE NJ 07095	AREA CODE: (732) 750-6000	AREA CODE: (732) 750-4020	
CARLISLE	CLAYTON	" " "	"	AREA CODE: (732) 750-6339	AREA CODE: "	
MAZZA	STAN	SAMSON STONE	1000 Newark Ave 5E NJ	AREA CODE: 201 653 0417	AREA CODE:	
WAND	William J.	CARL M. HARD	25A Vreeland Florham PARK NJ 07932	AREA CODE:	AREA CODE:	
NAZARIO	WILBERT		1239 WESTSIDE AVE	AREA CODE: 201 653-8340	AREA CODE:	WILL7@AOL.COM
Dabrowski	Tom	Knights of Columbus	342 St. Paul's Ave	AREA CODE: 201 798-2842	AREA CODE:	

ROUTE 7 WITTPENN BRIDGE OVER THE HACKENSACK RIVER PUBLIC INFORMATION CENTER

TUESDAY, JUNE 4, JERSEY CITY, NJ 3:00 PM – 7:00 PM

SIGN-IN-SHEET

(PLEASE PRINT CAREFULLY)

LAST NAME	FIRST NAME	ORGANIZATION	ADDRESS & ZIP CODE	PHONE	FAX	EMAIL
NICHOLS	OLGA		31 CLIVERT ST	AREA CODE: 201-653-2477	AREA CODE:	
ROSS	HENRY		161 LIBERTY AVE	AREA CODE: 201 963-7976	AREA CODE:	
BROWN	STAVAN	PANYNT		AREA CODE:	AREA CODE:	
FROHWIRTH	DANIEL	JERSEY CITY ECONOMIC DEVELOPMENT CORP.	30 MONTGOMERY ST. Suite 820, J.C. 07302	AREA CODE: 333-7797	AREA CODE: 201 333-9323	dan@jcedc.org
Hill	William	Viacom	185 Rt 46 Fairfield, NJ 07004	AREA CODE: 973.575-6900	AREA CODE:	
				AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	
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				AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	

State of New Jersey

DEPARTMENT OF TRANSPORTATION
1035 Parkway Avenue
PO Box 600
Trenton, New Jersey 08625-0600

JAMES E. McGREEVEY
Governor

JAMES P. FO
Commissioner

June 14, 2002

Dear Sir or Madam·

The New Jersey Department of Transportation cordially invites you to attend an informal public information center for the proposed replacement of the Route 7/Wittpenn Bridge over Hackensack River Project in Jersey City and Kearny Town in Hudson County.

The Information Center is scheduled for Wednesday, June 26, 2002 from 3:00 p.m. to 7:00 p.m. at Kearny Town Hall in the Council Chambers, 402 Kearny Avenue, Kearny, New Jersey. It is a repeat of the PIC held in Jersey City on June 3 and offers you another opportunity to get involved. We encourage you to attend.

The Information Center will proved the interested public with the opportunity to review the proposed replacement of the Route 7/Wittpenn Bridge. The Department recently completed the first stage of this comprehensive project with a recommendation that the Wittpenn Bridge should be replaced with a new vertical lift bridge to the north of the existing bridge. Environmental studies evaluating the potential social, economic and environmental impacts of the project has been initiated.

You are receiving this letter because your property may be effected by this project. The Information Center will provide you with the opportunity to examine exhibits and discuss the project with Department personnel.

Your comments are very important to the ongoing design and environmental process. Please plan to attend at a time that is convenient for you., If you have any questions or if you are physically challenged and require assistance, please contact me at (609) 530-2110.

Sincerely,

Thomas P. Johnson
Community Relations Manger
Office of Community Relations

LET US KNOW WHAT YOU THINK:

Route 7 Wittpenn Bridge Over the Hackensack River
Public Information Center
Wednesday, June 26, 2002
Kearny, NJ

Name: _____

Organization: _____

Address: _____

City: _____ State: _____ Zip: _____

Daytime Phone: ( ) _____ Fax: ( ) _____

Comments:

_____

_____

_____

_____

_____

_____

_____

_____

Please return your written comments to the sign-in desk or send to:
Feraidoon Kashani, P.E., PMP
NJDOT Department of Project Management
1035 Parkway Avenue, P.O. Box 600, West Trenton, NJ 08625-0600
or by Fax: 609-530-5787

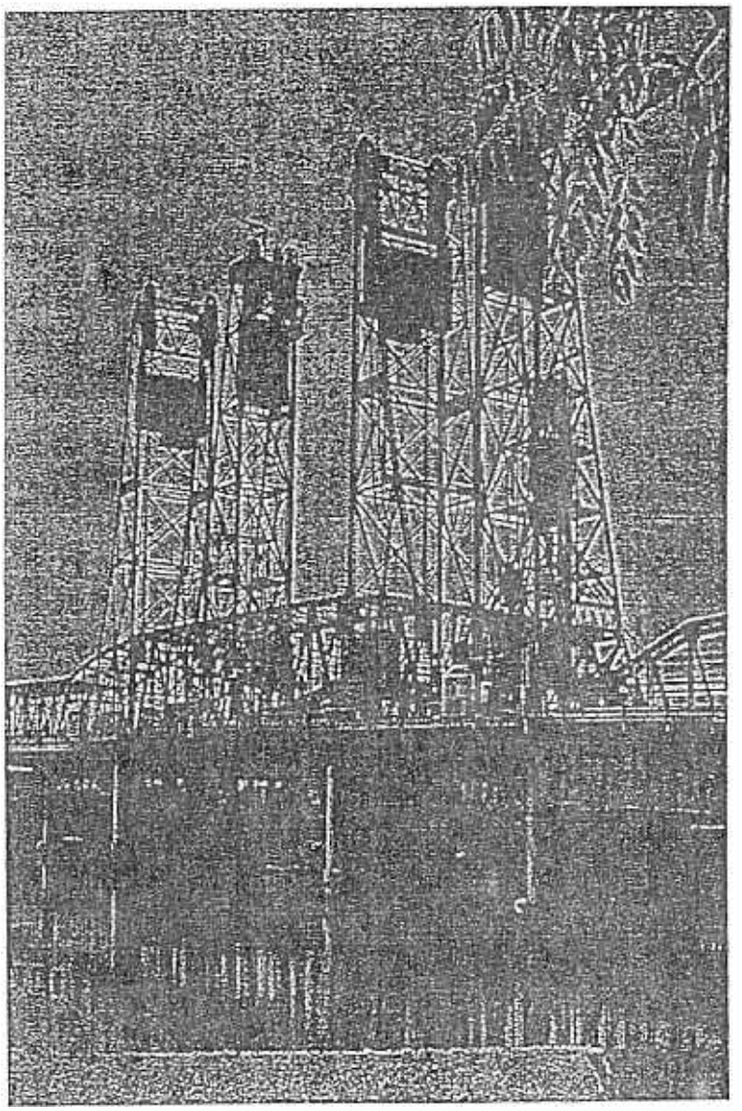
Your Ideas Count!

Please join
New Jersey Department of Transportation
for a

Public Information Center

on the

Route 7 - Wittpenn Bridge Project



New Jersey
Department of Transportation

Wednesday, June 26, 2002
3:00 to 7:00 p.m.

Project Team Members will be on hand for informal discussions at the public information center (PIC). It is a repeat of the PIC held in Jersey City on June 3 and offers you another opportunity to get involved.

Kearny Town Hall
402 Kearny Avenue
Kearny, NJ 07032

- ✓ Examine exhibits and discuss the project with Department personnel.
- ✓ Find out how you or your group can become and stay involved

For handicapped access contact
Thomas P. Johnson - NJDOT Community Relations Manager at (609) 530-2110

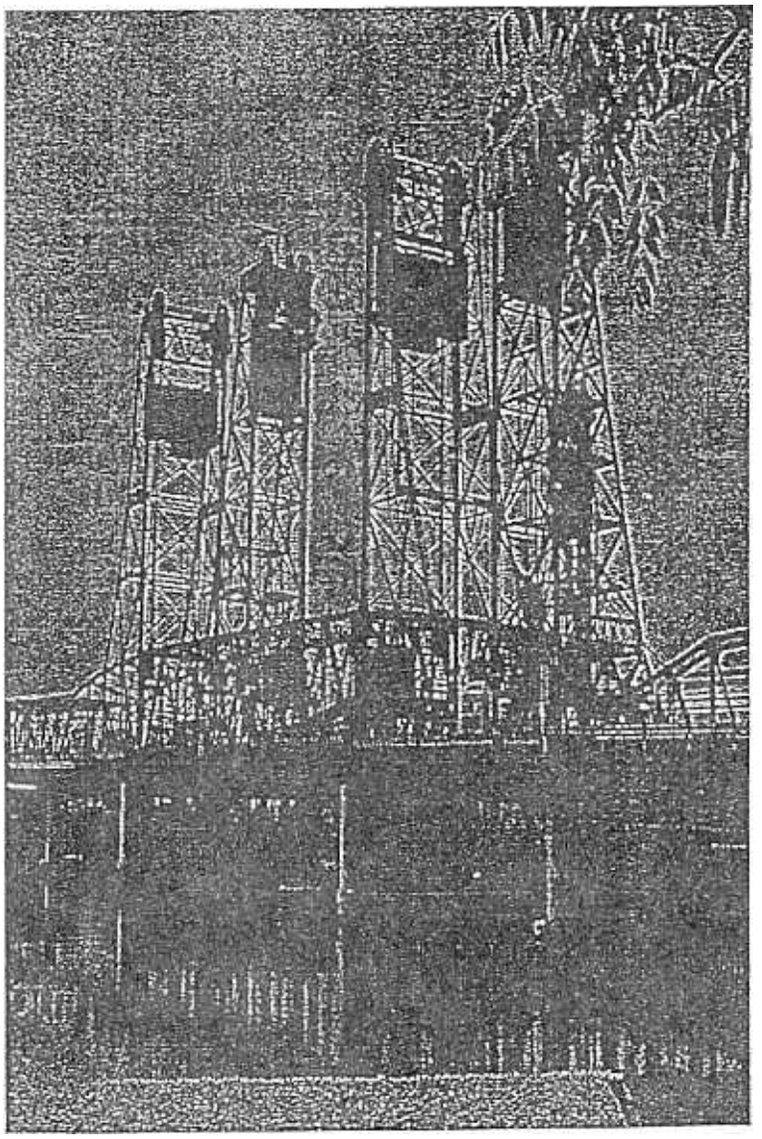
! Sus Ideas Cuentan ¡

Unase al
Departamento de Transporte de New Jersey
para un

Centro Público de Información

acerca del

Proyecto del Puente Wittpenn – Ruta 7



New Jersey
Department of Transportation

Miercoles, 26 de Junio del 2002
3:00 to 7:00 p.m.

Representantes del proyecto estaran presentes para una discusion informal sobre el proyecto. Este centro público de información (CPI) es una repeticion del ofrecido en Jersey City el 3 de Junio del 2002. Este (CPI) le ofrese otra oportunidad de participar en este poyecto.

Kearny Town Hall
402 Kearny Avenue
Kearny, NJ 07032

✓ Examine carteleras del proyecto y discuta el proyecto con personal del Departamento de Transporte.

✓ Averigüe cómo usted o su grupo pueden involucrarseny mantenrsen involucrados en este proyecto.

Para información sobre acceso
para descapacitados contacte a :
Thomas P. Johnson - Director de Relaciones
Publicas NJDOT al (609) 530-2110

ROUTE 7 WITTPENN BRIDGE OVER THE HACKENSACK RIVER PUBLIC INFORMATION CENTER

WEDNESDAY, JUNE 26, KEARNY, NJ 3:00 PM – 7:00 PM

SIGN-IN-SHEET

(PLEASE PRINT CAREFULLY)

LAST NAME	FIRST NAME	ORGANIZATION	ADDRESS & ZIP CODE	PHONE	FAX	EMAIL
Adamski	John	The Observer	531 Kearny Ave, 07032	AREA CODE: 201-991-1600	AREA CODE: 201-991-8941	John@theobserver
MARTINEZ	Augustine	Aide to ASSEMBLY Joan Quigley	57 AFTON ST, KEARNY NJ	AREA CODE: 201-991-3825	AREA CODE:	
CURLEY	JOSH	New Jersey Institute of Tech.	University Heights Newark NJ 07102	AREA CODE: 973 596 6087	AREA CODE: 973 596 6454	curley@njit.edu
HFox	HENRY	NEGLIA ENG	34 PARK AVE LYNDHURST	AREA CODE: 201 939 8805	AREA CODE: 201 939-0846	HFox@NegliaEngineering
Acquavella	JOE	Galaxy	517 RT 1 Iselin NJ	AREA CODE: 732-855-8600	AREA CODE:	-
LOTFI	AL	HNTB		AREA CODE: (973)237-1650	AREA CODE:	alotfi@hntb.com
McHugh	PAT	RBA GROUP	1 Evergreen Pl Morristown	AREA CODE: 973-898-0300	AREA CODE: 973-898-9472	pmchugh@rbagroup.com
BEKHIET	YOSRY	NJDOT-BPSD	1035 Parkway AVE Trenton, NJ 08505	AREA CODE: 609-530-5545	AREA CODE: 609-530-3595	Yosry.Bekhiet@dot.state.nj.us
Bennett	LAWRENCE	Ottem. Wandering Bay		AREA CODE:	AREA CODE:	
Stanecki	Gary	P.S. contracting	P.O. Box 457 Kearny NJ. 07032	AREA CODE: 201-997-3696	AREA CODE:	
Stanecki	Kim	PS Contracting	11 Delaware Ave Hainesport, NJ 08036	AREA CODE: 609 702-9804	AREA CODE:	
LAMBIASE	ALAN	RTD	100 CENTRAL AVE. KEARNY	AREA CODE: 973-587-0063	AREA CODE: 973-587-7966	ALAMBIASE@ENERTERMINAL
Greenthal	Peter	NJ DOT / ROW	MT. Arlington	AREA CODE: 973 770-5164	AREA CODE:	

ROUTE 7 WITTPENN BRIDGE OVER THE HACKENSACK RIVER PUBLIC INFORMATION CENTER

WEDNESDAY, JUNE 26, KEARNY, NJ 3:00 PM – 7:00 PM

SIGN-IN-SHEET

(PLEASE PRINT CAREFULLY)

LAST NAME	FIRST NAME	ORGANIZATION	ADDRESS & ZIP CODE	PHONE	FAX	EMAIL
HANSE	JOHN	Hudson Co. Engineering	595 County Ave Secaucus NJ	Area Code: 20 538-7020		
MACE	RICHARD	KHM, INC		Area Code: 201 955 9265	Area Code:	
Giraldo	Leonardo	Jacobs / Sverdrup		Area Code: 732		452-9200
Carpenter	Eric	PMK			Area Code: (908) 497-8934	
Schulz	Stephan	EAI, Inc (Environmental Management Services)			Area Code: 201-714-9895	StephanS@eaiservices.com
VAN Orden	Carole				Area Code:	
Junkelman	Martin		374 Belleville Tpk. No. Arlington N.J.	Area Code: 201-998-8120	Area Code:	
JACKSON	ARTHUR	CITIZEN	125 Devon St Kearny N.J	Area Code: 201-997-6479	Area Code:	
	OLGA	CITIZEN	36 Colfax St	Area Code: 201-653-2421	Area Code:	
	WALTER	CITIZEN	76 Linden Ave J.C. N.J 07306	Area Code: 201-963-1417	Area Code:	WALTEROONNELL @COMCAST.NET
MILANNK	JEFF	HELLER PARK	205 NULL RD EDISON, NJ 08837	Area Code: 732	Area Code: 287-4880	
Codd	John	Heller Park	↓	Area Code: 732	Area Code: 2874080	johnmcodd@hellerpark
CARPENTER	ELLEN	HELLER PARK	↓	Area Code: 732	Area Code: 287-4880	

ROUTE 7 WITTPENN BRIDGE OVER THE HACKENSACK RIVER PUBLIC INFORMATION CENTER

WEDNESDAY, JUNE 26, KEARNY, NJ 3:00 PM – 7:00 PM

SIGN-IN-SHEET

(PLEASE PRINT CAREFULLY)

LAST NAME	FIRST NAME	ORGANIZATION	ADDRESS & ZIP CODE	PHONE	FAX	EMAIL
Volk	Len	Heller	205 Mill Elen	AREA CODE: 732		
Brennan	Lynne	Jacobs/ Sverdrup	70 Wood Ave	AREA CODE: 732		
Tornay	Jerry			AREA CODE:		
Unger	Rose	The Jersey Journal		AREA CODE:	AREA CODE:	
Stevenson	Chris	Waters Mcpherson	300 Lighting Way Secaucus NJ	AREA CODE: 201-319-5758	AREA CODE:	
Walker	James	KEARNY DPW	357 BERGEN AVE KEARNY NJ	AREA CODE: 201-991-3705	AREA CODE: 201-998-2893	
DeRascale	Peter	Larosca IN	J.C. NJ 50 LEWIS AVE	AREA CODE: 201-659-6960	AREA CODE: 201-659-0886	
Johnson	Thomas	NJ DOT OCR	1035 Parkway Ave Trenton NJ	AREA CODE: 609 530-2110	AREA CODE:	
Farrell	Ann	K Council	Kearny Ave Kearny	AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	
				AREA CODE:	AREA CODE:	
				CODE:	AREA CODE:	

Resolution of the City of Jersey City, N.J.

City Clerk File No. Res. 02-467

Agenda No. 10.2.15

Approved: JUN 2 6 2002

TITLE: **RESOLUTION SUPPORTING THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S PROJECT FOR ROUTE 1 & 9 (25) ST. PAUL'S VIADUCT REPLACEMENT PROJECT**

COUNCIL OFFERED AND MOVED ADOPTION OF THE FOLLOWING RESOLUTION:

WHEREAS, on May 20, 2002, staff from the New Jersey Department of Transportation and their consultants made a presentation to the City Council on Route 1 & 9 (25) St. Paul's Viaduct Replacement Project; and

WHEREAS, New Jersey Department of Transportation represents that this project has been designed to address four major needs and goals:

1. Correct structural deficiencies and functional obsolescence of the 1 & 9 viaduct.
2. Provide an efficient and safe network of ramps and roadways that improve the movement of people and goods on Route 1 & 9, 1 & 9T, 7, 139 in the vicinity of the project site.
3. Provide a more continuous flow of traffic from Route 1 & 9 southbound onto Route 7 and the Pulaski Skyway.
4. Minimize social and environmental impacts, and meet the project needs in a cost-effective manner.

WHEREAS, the New jersey Department of Transportation has requested a Resolution of general support for the aforementioned project; and

NOW, THEREFORE, BE IT RESOLVED BY THE MUNICIPAL COUNCIL OF THE CITY OF JERSEY CITY that:

1. it does hereby give its general support for the Route 1 & 9 (25) St. Paul's Viaduct Replacement Project; and
2. that a certified copy of this Resolution be forwarded to the New Jersey Department of Transportation.

Gerald J. Nissen, Director Engineering

Ronald Buonocore, Director DPW

0200302

APPROVED: _____

APPROVED: _____
Business Administrator

APPROVED AS TO LEGAL FORM

_____
Corporation Counsel

Certification Required ☐

Not Required ☒

APPROVED 9-0

RECORD OF COUNCIL VOTE ON FINAL PASSAGE 6/26/02

COUNCILPERSON	AYE	NAY	N.V.		COUNCILPERSON	AYE	NAY	N.V.		COUNCILPERSON	AYE	NAY	N.V.	
BRENNAN	✓				GAUGHAN	✓				HEALY	✓			
	✓				MALDONADO	✓				VEGA	✓			
	✓				RICHARDSON	✓				SMITH, PRES.	✓			

N.V.–Not Voting (Abstain)

Adopted at a meeting of the Municipal Council of the City of Jersey City, N.J.

L. Harvey Smith, President of Council

Robert Byrne, City Clerk

Resolution of the City of Jersey City, N.J.

City Clerk File No. Res. 02-468

Agenda No. 10.2.16

Approved:

TITLE:

RESOLUTION SUPPORTING THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S PROJECT FOR ROUTE 7-WHITTPEN BRIDGE REPLACEMENT

COUNCIL OFFERED AND MOVED ADOPTION OF THE FOLLOWING RESOLUTION:

WHEREAS, on May 20, 2002, staff from the New Jersey Department of Transportation and their consultants made a presentation to the City Council on the Wittpen Bridge replacement project; and

WHEREAS, New Jersey Department of Transportation represents that this project:

a) will be at no cost to the City
b) will reduce the number of bridge openings by more than 70%
c) will be fully coordinated with other New Jersey Department of Transportation projects in the area, i.e. St. Pauls Avenue Viaduct, Charlotte Circle, Tonnele Circle
d) will allow for the maintenance of four lanes of traffic during construction; and

WHEREAS, the New Jersey Department of Transportation has requested a Resolution of general support for the aforementioned project; and

NOW, THEREFORE, BE IT RESOLVED BY THE MUNICIPAL COUNCIL OF THE CITY OF JERSEY CITY that:

1. it does hereby give its general support for the Route 7-Whittpen Bridge Project; and
that a certified copy of this Resolution be forwarded to the New Jersey Department of Transportation.

Gerald J. Nissen, Director Engineering

Ronald Buonocore, Director DPW

APPROVED:

APPROVED: Business Administrator

APPROVED AS TO LEGAL FORM Corporation Counsel

Certification Required ☐

Not Required ☑

0200301

APPROVED 9-0

RECORD OF COUNCIL VOTE ON FINAL PASSAGE 6/26/02

COUNCILPERSON	AYE	NAY	N.V.	COUNCILPERSON	AYE	NAY	N.V.	COUNCILPERSON	AYE	NAY	N.V.
BRENNAN	✓			GAUGHAN	✓			HEALY	✓		
DONNELLY	✓			MALDONADO	✓			VEGA	✓		
LIPSKI	✓			RICHARDSON	✓			SMITH, PRES.	✓		

N.V.--Not Voting (Abstain)

Adopted at a meeting of the Municipal Council of the City of Jersey City, N.J.

Harvey Smith, President of Council

Robert Byrne, City Clerk

TOWN OF KEARNY
HUDSON COUNTY, NEW JERSEY
402 Kearny Avenue
Kearny, New Jersey 07032
(201) 955-7400 FAX (201) 991-0608

ALBERTO G. SANTOS
MAYOR
(201) 991-2462

FIRST WARD
PETER A. CICCHINO
JOSE TORRES

SECOND WARD
LAURA CIFELLI PETTIGREW
BARBARA CIFELLI SHERRY

DOREEN CALI, RMC
TOWN CLERK

THIRD WARD
CAROL JEAN DOYLE
JAMES A. MANGIN

FOURTH WARD
ANN FARRELL
ANTHONY PAGLIA

June 27, 2002

Mr. Howard Stein
Hudson Associates
516 West 36th Street
New York, New York 10018

Dear Sir:

Please find enclosed a certified copy of Resolution #2002-(R)-309 adopted by the Mayor and Council of the Town of Kearny at a Regular Meeting held June 25, 2002.

Sincerely

Doreen Cali, R.M.C
Town Clerk

Encl (1) reso

2002-(R)- 309
RESOLUTION

BY: COUNCILMEMBER Mayor Santos

RESOLUTION SUPPORTING THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S PROJECT FOR ROUTE 7/WITTPEN BRIDGE REPLACEMENT

WHEREAS, the New Jersey Department of Transportation made a presentation to the Town Council on the Wittpen Bridge replacement project, and

WHEREAS, New Jersey Department of Transportation represents that this project:

a) will be a no cost to the City
b) reduce the number of bridge openings by 75%
c) will be fully coordinated with other New Jersey Department of Transportation projects in the area i.e. St. Paul's Avenue Viaduct, Charlotte Circle, Tonnele Circle
d) will allow for the maintenance of four lanes of traffic during construction and

WHEREAS, the New Jersey Department of Transportation has requested a Resolution of general support for the aforementioned project, and

NOW THEREFORE BE IT RESOLVED by the Mayor and Council of the Town of Kearny that it does hereby give its general support for the Route 7/Wittpen Bridge Project provided that the New Jersey Department of Transportation addresses the serious flooding and drainage problems in the area in a mutually agreeable manner.

BE IT FUTHER RESOLVED, that certified copy of this Resolution be forwarded to the New Jersey Department of Transportation.

ADOPTED: June 25, 2002

I hereby certify that the foregoing resolution was adopted by the Council on June 25, 2002.

DOREEN CALI
N CLERK

HOWARD/STEIN-HUDSON. ASSOCIATES

July 9, 2002

Andrew Wilner
NY-NJ Baykeeper
Building 18
Sandy Hook
Highlands, NJ 07732

Dear Mr. Wilner:

Thank you for agreeing to receive information regarding the Route 7 Wittpenn Bridge Project. Enclosed is a flyer of information that was recently distributed at Public Information Center's in Jersey City and Kearny, NJ.

If you require any further information, please feel free to contact Feraidoon Kashani at 609-530-3758 or myself at 917-339-0488, for assistance.

Sincerely,

Chris Ryan
Senior Transportation Planner

516 West 36th Street, 4th Floor ■ New York, New York 10018 ■ (917) 339-0488 ■ Fax (917) 339-1068
E-mail newyork@hshassoc.com ■ Web Page www.hshassoc.com

HOWARD/STEIN-HUDSON ASSOCIATES

July 9, 2002

Bill Sheehan
Captain
Hackensack Riverkeeper, Inc.
1000 River Road - T090C
Teaneck, NJ 07666

Dear Mr. Sheehan

Thank you for agreeing to receive information regarding the Route 7 Wittpenn Bridge Project. Enclosed is a flyer of information that was recently distributed at Public Information Center's in Jersey City and Kearny, NJ.

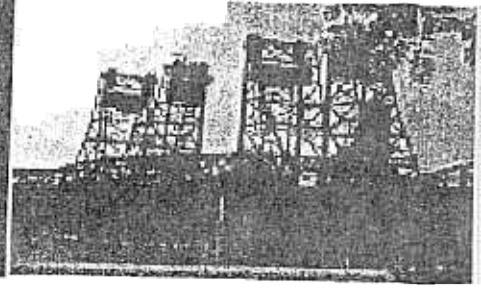
If you require any further information, please feel free to contact Feraidoon Kashani at 609-530-3758 or myself at 917-339-0488, for assistance.

Sincerely,

Chris Ryan
Senior Transportation Planner

516 West 36th Street, 4th Floor ■ New York, New York 10018 ■ (917) 339-0488 ■ Fax (917) 339-1068
E-mail newyork@hshassoc.com ■ Web Page www.hshassoc.com

Route 7 - Puente sobre el Río Hackensack Wittpenn



Dónde Andamos Ahora...

Empezando en Junio 2001, el Departamento del Transporte de Nueva Jersey (NJDOT) comenzó con el desarrollo final de investigación para preparar la documentación ambiental para reemplazar el puente existente Wittpenn que lleva el tráfico de la ruta 7 de Nueva Jersey sobre el Río Hacensack desde Jersey City hasta Kearny, en Nueva Jersey. Los estudios ambientales evaluarán los impactos potenciales social, económico y ambiental del proyecto.

Dónde vamos....

- El Departamento del Transporte de Nueva Jersey (NJDOT) ha finalizado una recomendación que sugiere el reemplazo del puente existente con un nuevo puente levadizo justo al Norte del puente existente.
- El puente nuevo proveerá una altura de 70 pies en la posición cerrada, y 135 pies en la posición abierta.
- Actualmente, el Departamento (NJDOT) está desarrollando diseños conceptuales y preliminares conjuntamente con la participación de planeación y coordinación pública para asegurar que el proyecto cumpla con con los objetivos visual, funcional y de ingeniería.
- Después de seleccionar el diseño deseado, el Departamento (NJDOT) procederá con la preparación de documentos para la construcción del nuevo puente.
- El costo de la construcción es estimado en $350 millones.
- El puente existente permanecerá en uso hasta que el nuevo puente entre en operación una vez que los arreglos para transferir el tráfico sean hechos.
- El puente propuesto acomodará tres líneas de tráfico y un respaldo en cada dirección con una barrera de concreto (tipo New Jersey) para separar el tráfico de sentido opuesto. Esto mejorará la seguridad de este cruce el cual ha sido muy notorio en el pasado por accidentes de tránsito.
- Habrá una acera protegida en el lado norte del puente, la cual permitirá a los peatones usar el cruce con seguridad.
- El puente existente permanecerá en servicio durante la construcción, por lo tanto no será necesario desvíos del tráfico. Después de que el nuevo puente sea puesto en operación el puente viejo será removido.
- El puente propuesto será 35 pies más alto que el puente existente lo cual reducirá el número de abiertas del puente por más del 70 por ciento. Como resultado el flujo del tráfico en el área será interrumpido con menor frecuencia, beneficiando a los usarios de este cruce.

Calendario del Proyecto

- La construcción se espera que comience en la primavera del año 2006.
- Construction is estimated to take three years with a La construcción es estimada que durará tres años con una fecha de terminacion en el año 2009.

Cómo puede Ud. ayudar....

Envúelvase! Dénos su opinión!
Este centro de información comunal es nuestra primera oportunidad para para alcanzar al público y obtener su opinión. Esperamos que Ud. continúe siendo parte del proceso:

- Por favor mantegase alerta sobre futuras reuniones públicas sobre elproyecto. Nosotros queremos su opinión acerca de como estos asuntos pueden afectarle a Ud. y a su comunidad. Venga y únase a nosotros!

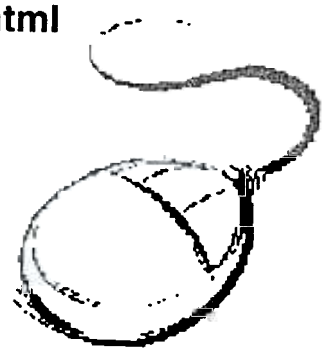
- El Departamento (NJDOT) mantendrá la página del proyecto en el internet al día continuamente para mantenerle informado acerca de los asuntos relacionados con el puente Wittpenn.

Si Ud. tiene algunas preguntas u otros intereses relacionados con el proyecto Wittpenn, Ud puede contactar al equipo Wittpen directaemente:

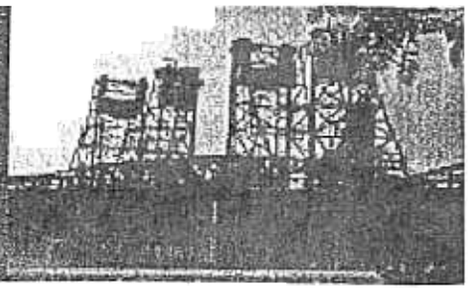
Feraidoon Kashani, P.E., PMP
Jefe del Proyecto, Divison de Jefatura de Proyectos
NJDOT
Telefono: 609-530-3758/Fax: 609-530-5787

Manténgase en línea!

http://www.state.nj.us/dot/roads/rt7/wittpenn/index.html



Route 7 Wittpenn Bridge Over the Hackensack River



Where we're at...

Beginning in June 2001, the New Jersey Department of Transportation (NJDOT) began Final Scope Development to prepare the Environmental documentation to replace the existing Wittpenn Bridge that carries NJ Route 7 over the Hackensack River from Jersey City to Kearny, NJ. The Environmental studies will evaluate the potential social, economic and environmental impacts of the project.

Where we're going...

- The NJDOT has finalized a recommendation that suggests replacement of the existing bridge with a new vertical lift bridge just North of the existing bridge.
- The new bridge would provide a clearance of 70 feet in the closed position and 135 feet in the opened position.
- Currently, the NJDOT is developing conceptual and preliminary designs concurrent with public involvement, planning and coordination to ensure the project meets visual, functional and engineering objectives.
- After selecting the desired design, the NJDOT will proceed with document preparation for construction of the new bridge.
- The current estimated cost of construction is $350 million.
- The existing bridge will be maintained until the new bridge is in place and arrangement can be made to transfer traffic.
- The proposed bridge will carry three lanes and a shoulder in each direction, with a New Jersey concrete barrier to separate the opposing lanes of traffic. This will improve the safety of this crossing which has in the past been notorious for traffic accidents.
- There will be a protected sidewalk on the north side of the bridge, allowing pedestrians to use the crossing safely.
- The existing bridge will remain in service during construction, therefore no detour will be required. After the new bridge is opened to traffic, it is expected the old bridge will be removed.
- The proposed bridge is 35 feet higher than the existing bridge which will reduce the number of openings required by more than 70%. As a result traffic flow in the area will be interrupted less frequently, benefiting all users of this crossing.

Project Schedule

- Construction is expected to start in the spring of 2006.
- Construction is estimated to take three years with a completion date of 2009.

How you can help.

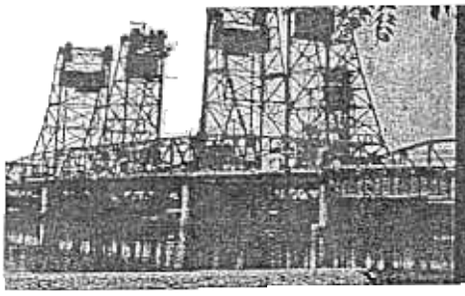
Get Involved! Give us your input!
This Public Information Center is our first opportunity to reach out to the public and get the community involved. We hope you continue to be a part of the process:

- Please be on the lookout for upcoming opportunities to participate in public meetings. We want your input about how these issues affect you and your community. Come join us!
- The NJDOT will be continuously updating their project website to keep you informed about current issues relating to the Wittpenn Bridge.

If you have any questions or concerns relating to the Wittpenn project, you can contact the Wittpenn team directly:

Feraidoon Kashani, P.E., PMP
NJDOT Division of Project Management
Telephone: 609-530-3758/Fax: 609-530-5787

Stay online! **Visit http://www.state.nj.us/dot/roads/rt7/**



Route 7 Wittpenn Bridge Over the Hackensack River

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Feraidoon Kashani, P.E., PMP
NJDOT Division of Project Management
Telephone: 609-530-3758/Fax: 609-530-5787

Stay online! **Visit http://www.state.nj.us/dot/roads/rt7/wittpenn/index.html**

HPO-E2002-67 PROD
Log #02-1526

James E. McGreevey
Governor

State of New Jersey
Department of Environmental Protection
Division of Parks & Forestry, Historic Preservation Office
PO Box 404, Trenton, NJ 08625
TEL: (609) 292-2023 FAX: (609) 984-0578
www.state.nj.us/dep/hpo

Bradley M. Campbell
Commissioner

May 3, 2002

Mr. Brian Mulcahy, E-Team Leader
Division of Project Management
New Jersey Department of Transportation
1035 Parkway Avenue
P.O. Box 600
Trenton, NJ 08625-0600

Dear Mr. Mulcahy:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on December 12, 2000 (65 FR 77725-77739), I am providing Consultation Comments for the following project:

Hudson County, Jersey City and Kearny Town
Replacement of Route 7 (2) Wittpenn Bridge over Hackensack River
Str. # 0909150.

These comments were prepared in response to your request for Historic Preservation Office (HPO) review and comment on the following report:

"Cultural Resources Survey, Route 7 Section 2, (Wittpenn Bridge) over Hackensack River, City of Jersey City and Kearny Town, Hudson County, New Jersey" by Richard Grubb and Associates, Inc. (February 2002).

SUMMARY: **Four (4) new historic properties have been identified. There are seven (7) previously identified historic properties in the project area. The project as proposed will have an Adverse Effect on historic properties.**

800.4 Identifying Historic Properties

The following properties have previously been identified as National Register eligible:

- Lower Hack Bridge (SHPO Opinion 9-18-90), it is also a key-contributing resource in the Old Main Delaware, Lackawanna & Western Railroad Historic District
- Wittpenn Bridge (SHPO Opinion 2-7-01), it is also a key-contributing resource in the New Jersey Railroad Bergen Cut Historic District.
- New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5-21-99)
- Old Main Delaware, Lackawanna and Western Railroad Historic District (SHPO Opinion 9-24-96)
- Pulaski Skyway (SHPO Opinion 8-4-83)
- US Route 1 & 9 Corridor Historic District (SHPO Opinion 3-8-96)
- Jersey City Water Works Pipeline (SHPO Opinion 5-7-99)

It is my opinion as Deputy State Historic Preservation Officer for New Jersey that the following properties are eligible to be listed in the National Register of Historic Places:

- **The Hackensack River Lift Bridges Historic District** has a state level of significance and is eligible under Criteria A and C. The four bridges included (Lower Hack Bridge, Wittpenn Bridge, Pennsylvania Harsimus Branch Bridge, and Pennsylvania Railroad Bridge) were all built as part of a post WWI regional effort, led by the War Department, to provide a steady and uninterrupted flow of railroad, vehicular, and marine traffic through and over the navigable waterways within the Port of New York. All four bridges are individually distinguished examples of vertical lift bridge design. Three of the bridges are associated with master designer John Alexander Low Waddell. The Hackensack River Lift Bridges Historic District is a unique collection of largely unaltered, operable, and increasingly rare examples of historically and technologically significant bridges. The period of significance for the district is 1928-1930. It is located in both Jersey City and Kearny Town.
- **The Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River has a state level** of significance and is individually eligible to be listed in the National Register of Historic Places under Criteria A and C. It was built as part of a post WWI regional effort, led by the War Department, to provide a steady and uninterrupted flow of railroad, vehicular, and marine traffic through and over the navigable waterways within the Port of New York. It is an individually distinguished example of vertical lift bridge design. It is associated with master designer John Alexander Low Waddell. The period of significance for the bridge is 1930. In addition to being individually eligible, this structure is also a key-contributing resource within both the Hackensack River Lift Bridges Historic District and the New Jersey Railroad Bergen Cut Historic District.
  The Pennsylvania Railroad (now PATH) Bridge over the Hackensack River has state level significance and is individually eligible to be listed in the

National Register of Historic Places under Criteria A and C. It was built as part of a post WWI regional effort, led by the War Department, to provide a steady and uninterrupted flow of railroad, vehicular, and marine traffic through and over the navigable waterways within the Port of New York. It is an individually distinguished example of vertical lift bridge design. It is associated with master designer John Alexander Low Waddell. The period of significance for the bridge is 1930. It is located in both Jersey City and Kearny Town. In addition to being individually eligible, this structure is also a key-contributing resource within both the Hackensack River Lift Bridges Historic District and the New Jersey Railroad Bergen Cut Historic District.

- **The PSE&G Kearny Generating Station (located at Block 298, Lot 19A in Kearny Town)** has state level significance and is individually eligible to be listed in the National Register of Historic Places under Criteria A and C. The eligible resource includes the Powerhouse, Switch House, Services Building, and North Gate House – the only survivors of the 12 buildings associated with the original construction in 1926. PSE&G, throughout its corporate history, has been at the vanguard of developing new power sources and technologies. At the time of its construction, company engineers saw the new Kearny Station as an opportunity "to develop an installation outstanding at the time in its use of new and modern design practices." The turbo generators embodied all the latest improvements. By the 1920s over 90% of New Jersey's energy came from its four most efficient stations at Essex, Marion, Kearny and Burlington. In 1933, a 20,000 kilowatt mercury boiler-turbine (the largest such unit in the world) was installed in Kearny Station. However, it was abandoned 20 years later because the mercury began dissolving the steel in the tubes of the boiler. In the 1960s, PSE&G pioneered the use of airplane-type jet engines to drive electric generators, which were installed in Kearny.

It is my opinion as Deputy State Historic Preservation Officer for New Jersey, in concurrence with the reviewed report, that the following properties are not eligible to be listed in the National Register of Historic Places:

- Eastern Oil Terminal, 205 Howell Street, Jersey City
- 35 Duffield Avenue, Jersey City
- 228 Broadway, a.k.a. Nabisco Warehouse, Jersey City
- 275 Broadway, Jersey City
- 301 Broadway, Jersey City
- Charlotte Circle, Jersey City

800.5 Assessing Adverse Effects

The project as proposed, demolition and replacement of the Wittpenn Bridge, will have an **Adverse Effect** on historic properties.

- There will be an adverse effect to the Wittpenn Bridge because it will be demolished.

- There will be an adverse effect to the Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River because it shares common piers with the adjacent Wittpenn Bridge. The demolition of the Wittpenn Bridge will irreversibly alter the integrity of setting, design, workmanship, materials, feeling, and association for this resource.
- There will be an adverse effect on the New Jersey Railroad Bergen Cut Historic District because the project will have an adverse effect on a key-contributing resource within the district – the Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River.
- There will be an adverse effect to the Hackensack River Lift Bridges Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished.
- There will be an adverse effect to the New Jersey Railroad Bergen Cut Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished.
- Adverse effects to the two historic districts could be compounded if the replacement bridge is not compatible with their character in terms of size, scale, design, and materials.

The project as proposed will have (conditionally) no adverse effect on the following resources, provided that the new construction is compatible in terms of size, scale, design, and materials:

- Pulaski Skyway
- US Route 1 & 9 Historic District
- Lower Hack Bridge
- Pennsylvania Railroad (now PATH) Bridge over Hackensack River
- Old Main Delaware, Lackawanna and Western Railroad Historic District
- The PSE&G Kearny Generating Station

Effects on the Jersey City Water Works Pipeline have not yet been assessed.

800.6 Resolution of Adverse Effects

I look forward to proceeding with the effects assessment for the Jersey City Water Works Pipeline and continuing consultation in accordance with 36 CFR Part 800.6, Resolution of Adverse Effects, on ways to avoid or minimize harm to identified historic properties.

If the avoidance of adverse effects is found not feasible after the appropriate level of study and analysis of alternatives, then I concur that the following mitigation measures outlined in the reviewed report should be part of the mitigation strategy and among the final inventory of mitigation measures:

- Recordation of the Wittpenn Bridge to standards similar to the Historic American Engineering Record (HAER). Recordation should focus on both the individual character of the bridge as well as its setting within and relationship to the Hackensack River Lift Bridges Historic District. Copies of the recordation

should be offered to the Historic Preservation Office as well as appropriate state and local repositories.

- A popular document that illustrates the historical and technological significance of the Hackensack River Lift Bridges Historic District which should be distributed to local and selected state historical societies, libraries, schools, preservation organizations, and railroad organizations. Copies of the publication may also be posted on the NJDOT and HPO web sites for wider distribution at a reasonable cost.
- New construction should be designed to be compatible with the character of identified historic properties in terms of size, scale, design, and materials. HPO staff should be integrally involved in the design process.
- If mitigation considerations become necessary for the Jersey City Water Works Pipeline, the consultation should include Ms. Jean Howson, the foremost authority on the history and archaeology of this 19th century urban utility.

If you have any questions regarding this letter, please contact Charles Scott or Andrea Tingey regarding architecture at (609-633-3496 or 609-984-0539, respectively) or Mike Gregg regarding archaeology at (609-633-2395).

Sincerely,

Dorothy P. Guzzo
Deputy State Historic
Preservation Officer

cc Andras Fekete, NJDOT-BES
Lauralee Rappleye-Marsett, NJDOT-BES
Amy Fox, FHWA
Yamina Eyfa, FHWA
Harold Carstens, Friends of the NJ Railroad and Transportation Museum
William La Rosa, Hudson County Division of Cultural and Heritage Affairs
Claire Davis, Jersey City Historic Preservation Commission
Doreen Cali, Clerk, Kearny Historic Preservation Commission
Alan Mounier, Archaeological Society of New Jersey
Chair, Jersey City Landmarks Conservancy
Rick James

PROJECT MANAGER
R.

AT/CS C:/E2002-67Wittpenn

MA:

State of New Jersey
Department of Environmental Protection
Division of Parks & Forestry, Historic Preservation Office
PO Box 404, Trenton, NJ 08625
TEL: (609) 292-2023 FAX: (609) 984-0578
www.state.nj.us/dep/hpo

ames E. McGreevey
Governor

Bradley M. Campbel
Commissioner

July 29, 2002

David Mudge, E-Team Leader
Bureau of Environmental Services
New Jersey Department of Transportation
1035 Parkway Avenue
P.O. Box 600
Trenton, NJ 08625-0600

Dear Mr. Mudge:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on 18 May 1999 (64 FR 27071-27084), I am providing Additional Consultation Comments for the following project:

Hudson County, Jersey City and Kearny Town
Replacement Route 7 (2) Wittpenn Bridge over Hackensack River
Str. # 0909150

These comments were prepared in response to your request for HPO review and comment on the following report:

"Route 7, Wittpenn Bridge over the Hackensack River, Structure No. 0909-150, City of Jersey City and Town of Kearny, Alternatives Analysis" by JE/Sverdrup & Parcel Consultants, Inc. (May 2002).

SUMMARY: **The project as proposed will have an Adverse Effect on historic properties.**

800.4 Identifying Historic Properties

The following properties have previously been identified as National Register eligible:

- Lower Hack Bridge (SHPO Opinion 9-18-1990)
- Wittpenn Bridge (SHPO Opinion 2-7-2001)
  New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5-21-1999)
- Old Main Delaware Lackawanna and Western Railroad Historic District (SHPO Opinion 9-24-1996)
- Pulaski Skyway (SHPO Opinion 8-4-1983)
- US 1 & 9 Corridor Historic District (SHPO Opinion 3-8-1996)
- Jersey City Water Works Pipeline (SHPO Opinion 5-7-199)
- The Hackensack River Lift Bridges Historic District (SHPO Opinion 5-3-2002)
- The Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River (SHPO Opinion 5-3-2002)
  The Pennsylvania Railroad (now PATH) Bridge over the Hackensack River (SHPO Opinion 5-3-2002)
- The PSE&G Kearny Generating Station (located at Block 298, Lot 19A in Kearny Town) (SHPO Opinion 5-3-2002)

800.5 Assessing Effects

The project as proposed, demolition and replacement of the Wittpenn Bridge, will have an **Adverse Effect** on historic properties.

- There will be an adverse effect to the Wittpenn Bridge because it will be demolished.
- There will be an adverse effect to the Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River because it shares common piers with the adjacent Wittpenn Bridge. The demolition of the Wittpenn Bridge will irreversibly alter the integrity of setting, design, workmanship, materials, feeling, and association for this resource.
  There will be an adverse effect on the New Jersey Railroad Bergen Cut Historic District because the project will have an adverse effect on a key-contributing resource within the district – the Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River.
- There will be an adverse effect to the Hackensack River Lift Bridges Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished.
- There will be an adverse effect to the New Jersey Railroad Bergen Cut Historic District because a key contributing resource, the Wittpenn Bridge, will be demolished.
- Adverse effects to the two historic districts could be compounded if the replacement bridge is not compatible with their character in terms of size, scale, design, and materials.

The project as proposed will have no adverse effect on the following resources, provided that the new construction is compatible in terms of size, scale, design, and materials:

- Pulaski Skyway
- US Route 1 & 9 Historic District
- Lower Hack Bridge
- Pennsylvania Railroad (now PATH) Bridge over Hackensack River
- Old Main Delaware Lackawanna and Western Railroad Historic District
- The PSE&G Kearny Generating Station

I look forward to additional consultation on ways to avoid or reduce harm to identified historic properties. Specifically, consultation on the design of the new vertical lift bridge.

Sufficient information to assess project effects on the Jersey City Water Works Pipeline has not yet been submitted to the HPO.

Mitigation Measures

If avoidance of adverse effects is found not feasible after an appropriate level of study and analysis, then I concur with the following mitigation measures outlined in the reviewed report:

- Recordation of the Wittpenn Bridge to standards similar to the Historic American Engineering Record (HAER). Recordation should focus on both the individual character of the bridge as well as its setting within and relationship to the Hackensack River Lift Bridges Historic District. Copies of the recordation should be offered to the Historic Preservation Office as well as appropriate local repositories.
- A popular document that illustrates the historical and technological significance of the Hackensack River Lift Bridges Historic District which should be distributed to local historical societies, libraries, schools, preservation organizations, and railroad organizations. Copies of the publication may also be posted on the NJDOT and HPO web sites for wider distribution at a reasonable cost.
- Preparation of National Register nominations for the remaining eligible properties in the APE for the project.
- New construction should be designed to be compatible with the character of identified historic properties in terms of size, scale, design, and materials. HPO staff should be integrally involved in the design process.

Consulting parties should be included in the development and finalization of mitigation measures.

If you have any questions regarding this letter, please contact Charles Scott or Andrea Tingey regarding architecture at (609-633-3496 or 609-984-0539, respectively) or Mike Gregg regarding archaeology at (609-633-2395). Thank you.

Sincerely,

Dorothy P. Guzzo
Deputy State Historic
Preservation Officer

cc Jack McQuillan, NJDOT-BES
Yanina Eyfa, FHWA
Harold Carstens, Friends of the NJ Railroad and Transportation Museum
William La Rosa, Hudson County Division of Cultural and Heritage Affairs
Claire Davis, Jersey City Historic Preservation Commission
Doreen Cali, Clerk, Kearny Historic Preservation Commission
Alan Mounier, Archaeological Society of New Jersey
Rick James
Chair, Jersey City Landmarks Conservancy
Bierce Riley, Roebling Chapter SIA

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

New Jersey Division Office
840 Bear Tavern Road, Suite 310
West Trenton, New Jersey 08628-1019

December 20, 2002

IN REPLY REFER TO:
HPO-NJ

Route 7 Sect. 2 - Wittpenn Bridge
Revised Draft MOA
Jersey City, Hudson County
Federal Project # RDM-7675(110)

David C. Mudge
Division of Project Management
New Jersey Department of Transportation
1035 Parkway Avenue, P.O. Box 600
Trenton, New Jersey 08625-0600

Dear Mr. Mudge:

We have completed our review of the Revised Draft Memorandum of Agreement (MOA) for Route 7 Sect. 2 - Wittpenn Bridge over the Hackensack River project in Jersey City, Hudson County. Our previous comments have been addressed and we have no additional comments. If you have any questions, please call Jeanette Mar at (609) 637-4203 or myself at (609) 637-4234.

Sincerely yours,
George W. Hoops

George W. Hoops, P.E.
Area Engineer

cc: Ihor Sypko
Feraidoon Kashani

PROJECT ...
RECEIVED
DEC 24 2002

** TOTAL PAGE.02 **

DRAFT
MEMORANDUM OF AGREEMENT
BETWEEN THE
NEW JERSEY DIVISION, FEDERAL HIGHWAY ADMINISTRATION
AND THE
NEW JERSEY HISTORIC PRESERVATION OFFICE
REGARDING THE
ROUTE 7(2) – WITTPENN BRIDGE OVER THE HACKENSACK RIVER
JERSEY CITY AND KEARNEY, HUDSON COUNTY, NEW JERSEY

WHEREAS, the New Jersey Department of Transportation (NJDOT) proposes to replace the Route 7(2) – Wittpenn Bridge in Jersey City and Kearney, Hudson County, New Jersey using funds provided by the Federal Highway Administration (FHWA); and

WHEREAS, the FHWA, the New Jersey Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (Council) and the NJDOT executed a Programmatic Agreement in November of 1996 which stipulates how FHWA's Section 106 responsibilities for NJDOT-administered federal aid projects will be satisfied; and

WHEREAS, in accordance with that agreement, the NJDOT has consulted with the SHPO in order to determine the area of potential effect (APE), to identify significant, National Register eligible properties, and to assess the effects of the project on those properties; and.

WHEREAS, the FHWA pursuant to 36CFR800.4 has determined that seven resources in the Area of Potential Effect (APE) have previous opinions of eligibility:

Lower Hack Bridge (SHPO) Opinion 9-18-1990)
Wittpenn Bridge (SHPO Opinion 2-7-2001)
New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5-21-1999)
Old Main Delaware Lackawanna and Western Railroad Historic District (SHPO Opinion 9-24-1996)
Pulaski Skyway (SHPO Opinion 8-4-1983)
US 1 & 9 Corridor Historic District (SHPO Opinion 3-8-1996)
Jersey City Water Works Pipeline (SHPO Opinion 5-7-1999); and

WHEREAS, consultation has determined that the following four properties are eligible to be listed in the National Register of Historic Places:

The Hackensack River Lift Bridges Historic District (SHPO Opinion 5-3-2002)
The Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River (SHPO Opinion 5-3-2002)
The Pennsylvania Railroad (now PATH) Bridge over the Hackensack River (SHPO Opinion 5-3-2002)

The PSE&G Kearny Generating Station (located at Block 298, Lot 19A in Kearny Town) (SHPO Opinion 5-3-2002); and

WHEREAS, the FHWA has determined that construction of this project as proposed will adversely affect the:

Wittpenn Bridge (demolition)
Pennsylvania Railroad Harsimus Branch (now Conrail/CSX) Bridge over the Hackensack River (demolition of Wittpenn Bridge)
New Jersey Railroad Bergen Cut Historic District (due to adverse effects to the Pennsylvania Railroad Harsimus Branch Bridge and demolition of key contributing resource, Wittpenn Bridge)
Hackensack River Lift Bridges Historic District (demolition of key contributing resource, Wittpenn Bridge)

and, will have a conditional no adverse effect (dependent on a compatible new construction in terms of size, scale, design, and materials) on these resources:

Pulaski Skyway
US Route 1&9 Historic District
Lower Hack Bridge
Pennsylvania Railroad (now PATH) Bridge over Hackensack River
Old Main Delaware, Lackawanna, and Western Railroad Historic District
PSE&G Kearny Generating Station
Jersey City Water Works Pipeline; and,

WHEREAS, the NJDOT and FHWA have considered alternatives to void or minimize the adverse effects and found that they are not feasible; and

WHEREAS, the FHWA has consulted with all other consulting parties and members of the public to develop a plan to mitigate the adverse effects; and

WHEREAS, the NJDOT participated in the consultation and has been invited to concur in the Memorandum of Agreement (MOA); and,

WHEREAS, the Advisory Council on Historic Preservation was notified on August 9, 2000 of the adverse effect finding and, on October 25, 2000 declined to participate in the consultation process; and,

WHEREAS, the NJDOT has invited the public and local historic organizations to a public information center on June 4, 2002 to comment upon the undertaking and received no public comments; and,

NOW, THEREFORE, the FHWA and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The FHWA will ensure that the following measures are carried out.

1) **Recordation**

The NJDOT shall record the Wittpenn Bridge to the standards of Historic American Engineering Record (HAER). Recordation shall focus on both the individual character of the bridge as well as its setting within and relationship to the Hackensack River Lift Bridges Historic District. As part of this recordation, NJDOT, in consultation with the SHPO, shall solicit from the public and obtain from other accessible sources printed, graphic, and photographic information regarding the Wittpenn Bridge, previous bridges at this general location, and navigation the Hackensack River. The compiled information will be evaluated and (as appropriate) archivally duplicated as part of the recorded document. NJDOT will also, in accordance with archival standards and in consultation with the SHPO, photo-duplicate selected contract plans for the Wittpenn Bridge, as well as review, catalog, and archivally duplicate historic photographs and other documents in the NJDOT files related to the Wittpenn Bridge and the segment of Route 7 within the project area. The SHPO shall receive a draft copy of the recordation document for review and comment. Completion of the recordation will occur within two (2) months of letting the construction contract and prior to the initiation of any demolition or construction activity. The format, quality, and specific content of the written and photographic documentation shall be determined through consultation among FHWA, NDOT, and the SHPO. An archival copy of the complete recordation document will be provided to the SHPO, Rutgers University Special Collections Library, and the Jersey City and Kearny Libraries.

2) **Design Considerations**

NJDOT in consultation with consulting parties and consistent with Context Sensitive Design principles, shall develop a historically appropriate and compatible design for the Wittpenn Bridge replacement structure. Consultation shall include consideration of:

a. the design of the historic structure, (as described by the recordation documentation) and the physical setting of the bridge.

b. the contemporary design parameters for the replacement structure.

c. the current range of structural designs and materials that could be used at this location and an understanding of the historical relevance, as well as the desirability and feasibility, of each

d. how original character defining features of the historic bridge could be visually replicated or evoked using modern structures, materials, and technologies.

To implement this mitigation objective, NJDOT, in cooperation with consulting parties, will include the following activities in the design process for the replacement bridge:

A. Background Research – Research will focus on the accumulation of information about the design of the historic structure, within the contexts of the physical setting of the bridge, navigation on the Hackensack River, and Vertical Lift Bridge engineering and construction. The goal of this effort is to understand why the historic structure was built using the chosen structural and architectural elements, how the bridge compares to other contemporary Vertical Lift Bridges over New Jersey inland waterways in the historic engineering and architectural literature (for example Engineering News-Record, Civil Engineering [American Society of Civil Engineers], and United States Army Corps of Engineers Reports).

B. Evaluation of Appropriate Design – As the results of the background research described above, an explanation of the engineering and architectural design and character of the historic structure will be presented at either a design meeting or in a written report.

C. Engineering Summary – In order to arrive at a recommended design for the replacement structure, an engineering design summary will be prepared which will include the following information:

1. an assessment of the integrity of the extant structure (original design of the structure as compared to the features which remain)

2. an inventory and brief discussion of the design parameters for the replacement structure (including the relationship of roadway design, navigational requirements and maritime operations, and environmental protection requirements (if any) to bridge design parameters

3. a discussion of the range of structural designs and materials which could be used at this location and an assessment of the historic relevance, as well as the functional desirability and feasibility, of each.

4. a discussion of how original character defining features of the historic structure, and it's technologies, can be incorporated in the new bridge's design.

D. Design Recommendation – considering all of the information compiled for the engineering summary, prepare a design scheme or concept (verbal description and conceptual sketches), for a replacement structure for the Wittpenn Bridge

which visually conveys the character of the historic bridge. This will include, but not be limited to, consideration of sub-and superstructure materials, configuration, tint, texture, and/or color, parapet, railing, and lighting; and landscaping (as appropriate).

NJDOT shall submit the concept or initial design to the FHWA and SHPO for their information and review prior to convening one or more meetings, as needed, to reach a consensus on the final design and design details. Consulting parties shall also have an opportunity to review and comment on final plans (and specifications as relevant) prior to the initiation of bidding.

3. **National Register Nominations**

Barring any objections from the controlling entities/owners of the below listed properties, the NJDOT will ensure that National Register nomination forms are completed for the following National Register eligible resources: The Hackensack River Lift Bridge Historic District, the New Jersey Railroad Bergen Cut Historic District, PSE&G Kearny Generating Station and the Jersey City Water Works Pipeline.

4. **Popular Document**

The NJDOT will direct the authorship of a popular document that illustrates the historical and technological significance of the Hackensack River Lift Bridges Historic District which should be distributed to local historical societies, libraries, schools, preservation organizations, and railroad organizations. Copies of the publication may also be posted on the NJDOT and HPO web sites for wider distribution at a reasonable cost.

ADMINISTRATIVE CONDITIONS

1. **Professional Qualifications**

   NDOT, on behalf of FHWA, will ensure that all work is carried out by/under the direct supervision of a person or persons meeting, at a minimum, the appropriate Secretary of the Interior's Professional Qualifications standards (48 FR 44738-44739).

2. **Dispute Resolutions**

   A. At any time during the implementation of the measures stipulated in this MOA, should an objection to any such measure or its manner of implementation be raised, FHWA will notify all signatories to the agreement, take the objection into account, and consult as needed to resolve the objection.

   B. Disputes regarding the completion of the terms of this agreement as necessary shall be resolved by the signatories. If the signatories cannot agree regarding a dispute, the FHWA shall then initiate appropriate actions in accordance with the provisions of 36 CFR §800.6(b) and §800.7 as appropriate.

   C. Modification, amendment, or termination of this agreement as necessary shall be accomplished by the signatories in the same manner as the original agreement.

3. **Design Changes**

   If any major changes to the proposed Route 7(2) – Wittpenn Bridge project design occur, the FHWA shall consult with the New Jersey Historic Preservation Office in accordance with the provisions of 36 CFR Part 800.

4. **Project Completion**

   A. Project Completion – Design work required by Stipulation 2 will be completed prior to seeking federal authorization to advertise the project. All construction items which result from the work in Stipulation 2 will be completed prior to final acceptance by the contractor. Work required by Stipulation 1 will be completed within 90 days of receipt of a National Park Service Schedule of Documentation.

   B. Documentation of Satisfaction of Stipulations – NJDOT shall submit a short narrative report with appropriate illustrations demonstrating satisfaction of all the requirements of this agreement to all signatories within 60 days of completion of construction.

5. Review of Implementation

This agreement shall become null and void if construction is not initiated within five years from the date of execution unless the signatories agree in writing to an extension. If, after five years without action the FHWA chooses to continue with the undertaking, it shall reinitiate its review in accordance with the provisions of 36 CFR Part 800.

Execution of this Memorandum of Agreement by the FHWA, the NJSHPO, the NJDOT, and Jersey City, and the implementation of its terms, evidence that the FHWA has afforded the Council an opportunity to comment on the Route 7(2) – Wittpenn Bridge project and that the FHWA has taken into account the effects of the undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

BY:_____ **DATE:**

Dennis L. Merida
Division Administrator
New Jersey Division Office

NEW JERSEY STATE HISTORIC PRESERVATION OFFICE

BY:_____ **DATE:**

Dorothy P. Guzzo
Deputy State Historic Preservation Officer

CONCUR:

NEW JERSEY DEPARTMENT OF TRANSPORTATION

BY:_____ **DATE:**

Director
Division of Project Management

State of New Jersey

DONALD T. DIFRANCESCO
Acting Governor

Department of Environmental Protection

Division of Parks and Forestry
Office of Natural Lands Management
Natural Heritage Program
P.O. Box 404
Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

Robert C. Shinn, Jr.
Commissioner

August 29, 2001

Bill Romaine
Amy S. Greene Environmental Consultants, Inc.
18 Commerce Street Plaza
Flemington, NJ 08822

Re: Route 7, Section 2, Wittpenn Bridge Replacement

Dear Mr. Romaine:

Thank you for your data request regarding rare species information for the above referenced project site in Kearny Town and Jersey City, Hudson County.

The Natural Heritage Data Base does not have any records for rare plants, animals, or natural communities on or within one half mile of the site.

The Natural Heritage Data Base has three records for occurrences of rare species and natural communities that may be present on the Jersey City USGS quadrangle. The attached list provides additional information about these occurrences. Also attached is a list of rare species and natural communities that have been documented from Hudson County. This county list can be used as a master species list for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

In order to red flag the general locations of documented occurrences of rare and endangered species and natural communities, we have prepared computer generated Natural Heritage Index Maps. Enclosed please find these maps for the Jersey City USGS quadrangle. If individual projects are to be located in the shaded areas of these maps, the Natural Heritage Program can be contacted for additional information.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'

Thank you for consulting the Natural Heritage Program. The attached invoice details the

payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Thomas F. Breden
Administrator

cc: Lawrence Niles
NHP File No. 01-4007461

CAUTIONS AND RESTRICTIONS ON NATURAL HERITAGE DATA

The quantity and quality of data collected by the Natural Heritage Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in New Jersey have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously added to the data base. Since data acquisition is a dynamic, ongoing process, the Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of New Jersey. Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The attached data is provided as one source of information to assist others in the preservation of natural diversity.

This office cannot provide a letter of interpretation or a statement addressing the classification of wetlands as defined by the Freshwater Wetlands Act. Requests for such determination should be sent to the DEP Land Use Regulation Program, P.O. Box 401, Trenton, NJ 08625-0401.

This cautions and restrictions notice must be included whenever information provided by the Natural Heritage Database is published.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
927 N. Main Street (Bldg. D1)
Pleasantville, New Jersey 08232
Tel: 609-646-9310
Fax: 609-646-0352

IN REPLY REFER TO:

ES-01/572

August 27, 2001

Bill Romaine, Project Manager
Amy S. Greene Environmental Consultants, Inc.
18 Commerce Street Plaza
Flemington, New Jersey 08822-1743
Fax Number: (908) 788-6788

Reference: Threatened and endangered species review in the vicinity of the proposed Route 7, Section 2, Wittpenn Bridge Replacement (2000), Kearny Township and Jersey City, Hudson County, New Jersey.

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced proposed project pursuant to Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of federally listed endangered and threatened species. The following comments do not address all Service concerns for fish and wildlife resources and do not preclude separate review and comment by the Service as afforded by other applicable environmental legislation.

Except for an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the Endangered Species Act is required by the Service. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

The Service is providing this determination with respect to federally listed or proposed threatened or endangered flora and fauna under Service jurisdiction only. The proposed project will involve the repair of pier bases located at elevations beneath the recorded mean high water line of Newark Bay, an estuarine environment. Principal responsibility for threatened and endangered marine species is vested with the National Marine Fisheries Services (NMFS). Therefore, the NMFS must be contacted to fulfill consultation requirements pursuant to Section 7(a)(2) of the Endangered Species Act:

National Marine Fisheries Service
Habitat and Protected Resources Division
Sandy Hook Laboratory
Highlands, New Jersey 07732
(908) 872-3023

Enclosed is current information regarding federally listed and candidate species occurring in New Jersey. The Service encourages federal agencies and other planners to consider candidate species in project planning. The addresses of State agencies that may be contacted for current site-specific information regarding federal candidate and State-listed species are also enclosed.

Reviewing Biologist: Lisa Solhus

Authorizing Supervisor: J.C. Staples

Enclosures: Current summaries of federally listed and candidate species in New Jersey
Addresses for additional information on candidate and State-listed species
Permit Requirements for activities in wetlands

Sect 7 (es-eot7.fax) rev. 6/24/99

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Habitat Conservation Division
James J. Howard Marine
Sciences Laboratory
74 Magruder Road
Highlands, New Jersey 07732

August 28, 2001

TO: Bill Romaine
Amy S. Greene Environmental Consultants, Inc
18 Commerce Street Plaza
Flemington, NJ 08822-1743

SUBJECT: Route 7. Section 2 Wittpenn Bridge
Kearny and Jersey City, Hudson Co, NJ

Karen Greene
(Reviewing Biologist)

We have reviewed the information provided to us regarding the above subject project. We offer the following preliminary comments pursuant to the Endangered Species Act, the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act:

Endangered and Threatened Species

There are no endangered or threatened species in the project area.

The following endangered or threatened species may be present in the project area:

	shortnose sturgeon (*Acipenser brevirostrum*)	
sea turtles	loggerhead (*Caretta caretta*)	Kemp's ridley (*Lepidochelys kempii*)
	green (*Chelonia mydas*)	leatherback (*Dermochelys coriacea*)

DEPENDING UPON PROJECT DETAILS, POSSIBLE RECOMMENDATIONS MAY INCLUDE

Insufficient project information available.

Fish and Wildlife Coordination Act

X The following may be present in the project area: Anadromous and resident fish, forage and benthic species including alewife, blueback herring and American shad

DEPENDING UPON THE PROJECT DETAILS POSSIBLE RECOMMENDATIONS INCLUDE:

No in-water work from April 1 to June 30 to protect migrating anadromous fish

Essential Fish Habitat

No EFH presently designated in the project area.

__X___ The project area has been designated as Essential Fish Habitat (EFH) for one or more species. When details of the project are made available and permit applications have been made, conservation recommendations may be given. For a listing of EFH and further information, please go to our website at:

http://www.nero.nmfs.gov/ro/doc/newefh.html.
-If you wish to discuss this further, please call 732-872-3023.

September 17, 2001

Bill Romaine
Amy S. Greene Environmental Consultants
18 Commerce Street Plaza
Flemington, N. J., 08822-1743

Thank you for your interest in the New Jersey Breeding Bird Atlas data. Enclosed are the printouts for the area requested. Please be advised this information is given to you, and only to you, for use on the stated projects. If you or anyone else needs any other information on this or other blocks, please call me and I will be happy to provide it. A note of caution when using this data; this data is a survey of the species found in the block. If a species was not found, it does not mean the species is not there. This is especially important to consider when evaluating the distribution of rare, Threatened, or Endangered Species, or those species that are difficult to detect. Highlighted species indicate Threatened & Endangered species.

The data collected represent five years of field work where observers evaluate the likely hood of breeding species by behaviors seen. The evidence is blocked into Possible, Probable and Confirmed breeding. For most species, even the lowest codes indicate a strong likely hood of breeding.

The fee for this information is $75 per block, so the fee is $75. Please remit to Cape May Bird Observatory at the address below.

If you have questions, please call me. Good luck with this project.

Cheers,

Vince Elia
Research Associate

Block 053NW / Jersey City Quad
Wittpenn Bridge Replacement

Species	Status	Year
Green Heron	X	95
Canada Goose	FL	97
Green-winged Teal	P	95
American Black Duck	X	94
Mallard	FL	94
Blue-winged Teal	ON	94
Gadwall	X	94
American Kestrel	FL	96
Ring-necked Pheasant	FL	97
American Woodcock	C	96
Rock Dove	ON	94
Mourning Dove	ON	97
	X	
	X	
	FL	
		93
		95
Northern Mockir		
Brown Thrasher		
European Starling		
Common Yellowthroat	FY	97
Northern Cardinal	ON	96
Field Sparrow	X	94
	ON	
	X	
	X	
		95
American Goldfinch	NB	97
House Sparrow	ON	94
Total Species	41	

NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY, INC.

One Newark Center, 17th floor, Newark, NJ 07102
(973) 639-8400; fax (973) 639-1953

Robert C. Janiszewski, Chairman
Joel S. Weiner, Executive Director

October 30, 2000

Mr. William S. Beetle
Director, Transportation Systems Planning
NJDOT
1035 Parkway Avenue
Trenton, NJ 08625

Dear Mr. Beetle:

I am replying to your October 12, 2000 request for a review of the redesigned Whittpenn Bridge (Route 7 over the Hackensack River- DB No. 075). You correctly note that NJTPA made a determination in 1998 that this project had no feasible alternatives except to replace the bridge. This finding exempted the project from our CMS procedures which otherwise would have required NJDOT to study alternative strategies in arriving at the project concept.

Our planners have completed a review of the re-design and the new project concept. We are convinced that the project continues to address a serious safety issue and although you are proposing additional lanes, we do not believe there are any other feasible alternatives except to replace the bridge. This is an important project to the region and we look forward to its expeditious completion. Therefore, you should proceed with the project as it is redesigned.

Sincerely,

Joel S. Weiner
Executive Director

PROJECT MANAGEMENT
RECEIVED
MAY [illegible] 2001

APPENDIX C

GLOSSARY

Laws and Regulations

CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CFR	Code of Federal Regulations
FTA	Federal Transit Act
ISRA	Industrial Site Recovery Act
NEPA	National Environmental Policy Act (1969)
SECTION 4(f)	Title 49, United States Code, Section 303 (Originally Section 4(f) of the DOT Act of 1966 which specifies that special effort be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites – Binding to programs administered by Federal DOT agencies)
N.J.A.C.	New Jersey Administrative Code
TCR	Transportation Conformity Rules
USC	United States Code

Government and Other Agencies

AASHTO	American Association of State Highway and Transportation Officials
ASGECI	Amy S. Greene Environmental Consultants, Inc.
CEQ	Council on Environmental Quality
CONRAIL	Consolidated Rail Corporation
CSX	CSX Transportation
CSX/NS	CSX Transportation/Norfolk Southern Railroad
D.L.&W.	Delaware, Lackawanna and Western Railroad
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NJNHP	New Jersey Natural Heritage Program
NJMC	New Jersey Meadowlands Commission
NJTPA	New Jersey Transportation Planning Authority
NMFS	National Marine Fisheries Service
NS	Norfolk Southern Railroad

PATH	Pennsylvania Railroad
PSE&G	Public Service Electric & Gas
USACOE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Terminology

1&9T	Routes 1&9 Truck
ACM	Asbestos Containing Material
APE	Area of Potential Effects
ATR	Automatic Traffic Recorders
BMPs	Best Management Practices
CO	Carbon Monoxide
CR	County Route
cr/mvm	crashes per million vehicle miles
CrVI	Hexavalent chromium
dBA	A-weighted decibel
DO	Dissolved Oxygen
EA	Environmental Assessment
EEM1N	Estuarine Emergent Wetlands
EEM1N/ESS1N	Estuarine Emergent-scrub/shrub wetlands
EO	Executive Order
FHR	Fish House Road
FIRM	Flood Insurance Rate Maps
FY	Fiscal Year
HAER	Historic American Engineering Record
HI	Heavy Industrial (Zoning Designation)
I	Industrial (Zoning Designation)
KCSL	Known Contaminated Sites List
LAeq	A-weighted noise level equipment
LBP	Lead Based Paint
LOS	Level of Service
LRFD	Load and Resistance Factor Design
MHW	Mean High Water
MOTBY	Military Ocean Terminal at Bayonne
MP	Mile Post
MPH	Miles Per Hour
MPT	Maintenance and Protection of Traffic Plan
MVM	Million Vehicle Miles
NAC	Noise Abatement Criteria
NGVD	National Geodetic Vertical Datum

NOPA	Notice of Planned Action
PCBs	Polychlorinated biphenyls
PEM	Freshwater Palustrine Emergent-scrub/shrub
ppm	parts per million
RAWP	Remedial Action Work Plan
ROW	Right of Way
SE2	Saline Estuarine waters
SHPO	State Historic Preservation Office
SKM	South Kearny Manufacturing District (Zoning Designation)
SI&A	Structural Inventory & Appraisal
SIP	State Implementation Plan
SRP	Soil Reuse Plan
STIP	Statewide Transportation Improvement Plan
TES	Technical Environmental Study
TIP	Transportation Improvement Plan
TRSR	Technical Requirements for Site Remediation
UR	Urban Land
USTs	Underground Storage Tanks