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US Army Corps
of Engineers
New York District

US ACE

CULTURAL RESOURCE SUMMARY
AND PRELIMINARY CASE REPORT
NEW YORK AND NEW JERSEY HARBOR NAVIGATION STUDY

KINGS, QUEENS, AND RICHMOND COUNTIES, NEW YORK
AND
ESSEX, HUDSON, MONMOUTH, AND UNION COUNTIES, NEW JERSEY

vid.
11/24/99

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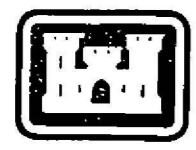
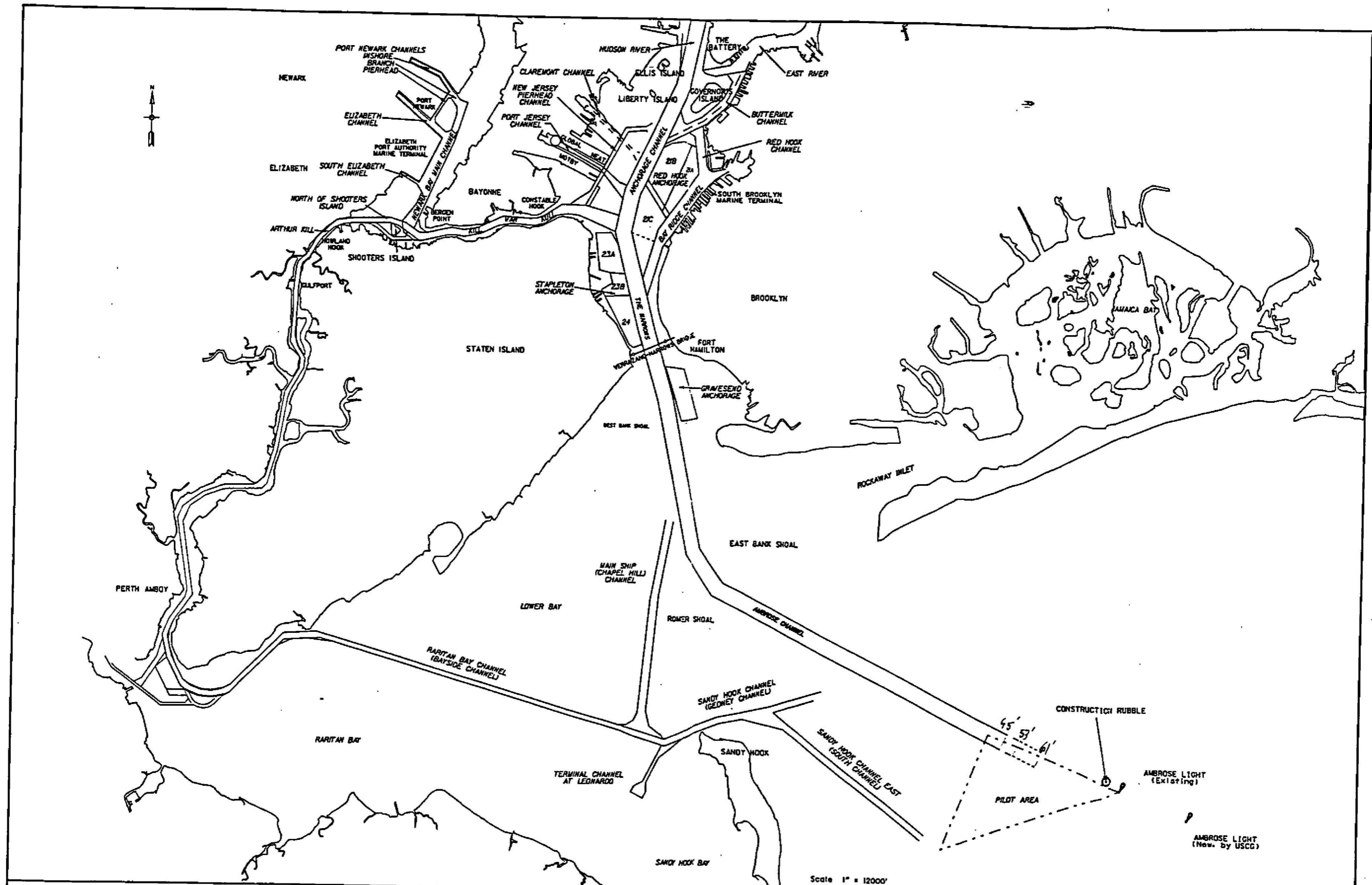
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- B. Dredged Material Management Plan
- C. Draft Programmatic Agreement
- D. New York Anchorages
- E. Port Jersey
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- K. Arthur Kill Navigation
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- M. Shooters Island Drift Removal
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- O. Newark Bay Navigation (Blasting)

The U.S. Army Corps of Engineers, New York District, (Corps), recently completed a feasibility study to evaluate the need for federal participation in navigation improvements in New York and New Jersey Harbor (Harbor). The Harbor Navigation Study examined a number of options to provide economically efficient and environmentally sound navigation to meet current and future needs. The National Economic Development Plan resulting from the feasibility study provides for navigation improvements to nine channels in the Harbor, which will permit access by larger, deeper-draft vessels to four main container terminals. Navigation improvements consist of channel deepening, widening and realignment. Selected for improvement are the Ambrose, Anchorage, Port Jersey, Kill Van Kull, Arthur Kill (to Howland Hook), Newark Bay, Elizabeth, South Elizabeth, and Bay Ridge Channels (Figures 1 and 2).

The Area of Potential Effect (APE) associated with the Harbor Navigation Study is defined as locations within and adjacent to the Ambrose, Anchorage, Port Jersey, Kill Van Kull, Newark Bay, Elizabeth, South Elizabeth, Bay Ridge and Arthur Kill (to Howland Hook) Channels. In locations where blasting will be undertaken the APE will also encompass nearshore and on-shore areas within zones anticipated to experience a certain force from the blast. Previous blasting in the vicinity of historic structures has been limited to 0.5 peak particle velocity. These areas will be determined as project plans develop and blasting locations are defined.

As a federal agency the USACE has certain responsibilities for the identification, protection and preservation of cultural resources that may be located within the area of potential project effect (APE) associated with the proposed Harbor Navigation Project. Present statutes and regulations governing the identification, protection and preservation of these resources include the National Historic Preservation Act of 1966 (NHPA), as amended through 1992; the National Environmental Policy Act of 1969; Executive Order 11593; the regulations implementing Section 106 of the NHPA (36 CFR Part 800, Protection of Historic Properties, May, 1999); the Abandoned Shipwreck Act of 1987 and the Corps of Engineers Identification and Administration of Cultural Resources (33 CFR 305). Significant cultural resources include any material remains of human activity eligible for inclusion on the National Register of Historic Places (NRHP).

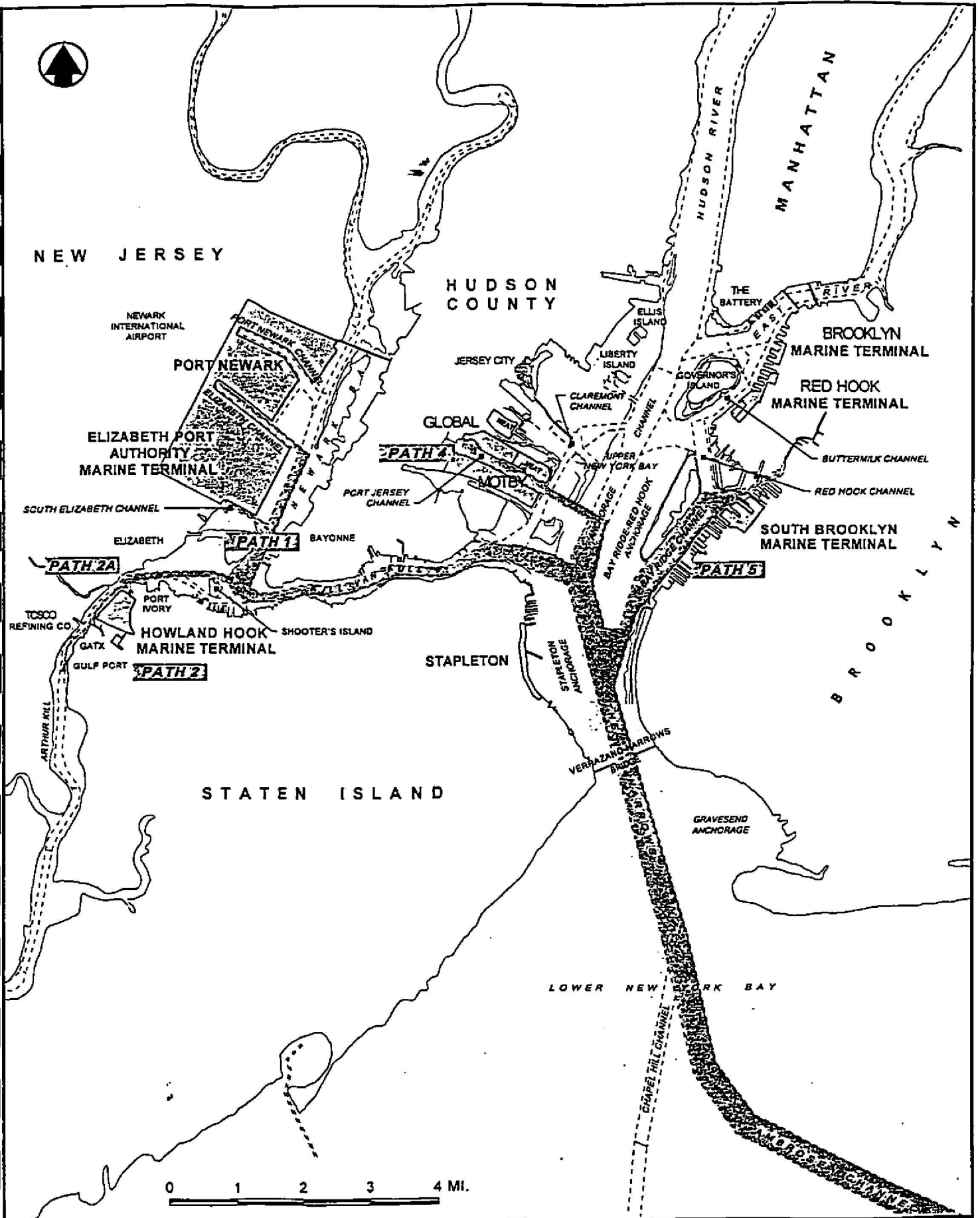
Major portions of the project's APE and the Harbor area as a whole have been subject to numerous cultural resource surveys. These studies were directed at particular project locations within the Harbor. Many of these previous studies were conducted for the USACE as part of the Collection and Removal of Drift Program, individual channel navigation projects, beach erosion control projects and the Dredged Material Management Plan (DMMP). The previous reports and Section 106 coordination undertaken for the USACE's other Harbor projects provide the basis for the Harbor Navigation Study cultural resources evaluation based on the overlap of project areas



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FIGURE 1
EXISTING NAVIGATION CHANNELS
NEW YORK HARBOR



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NAVIGATION STUDY
FEASIBILITY REPORT

FIGURE 2
LOCATION MAP
EXISTING CONDITIONS

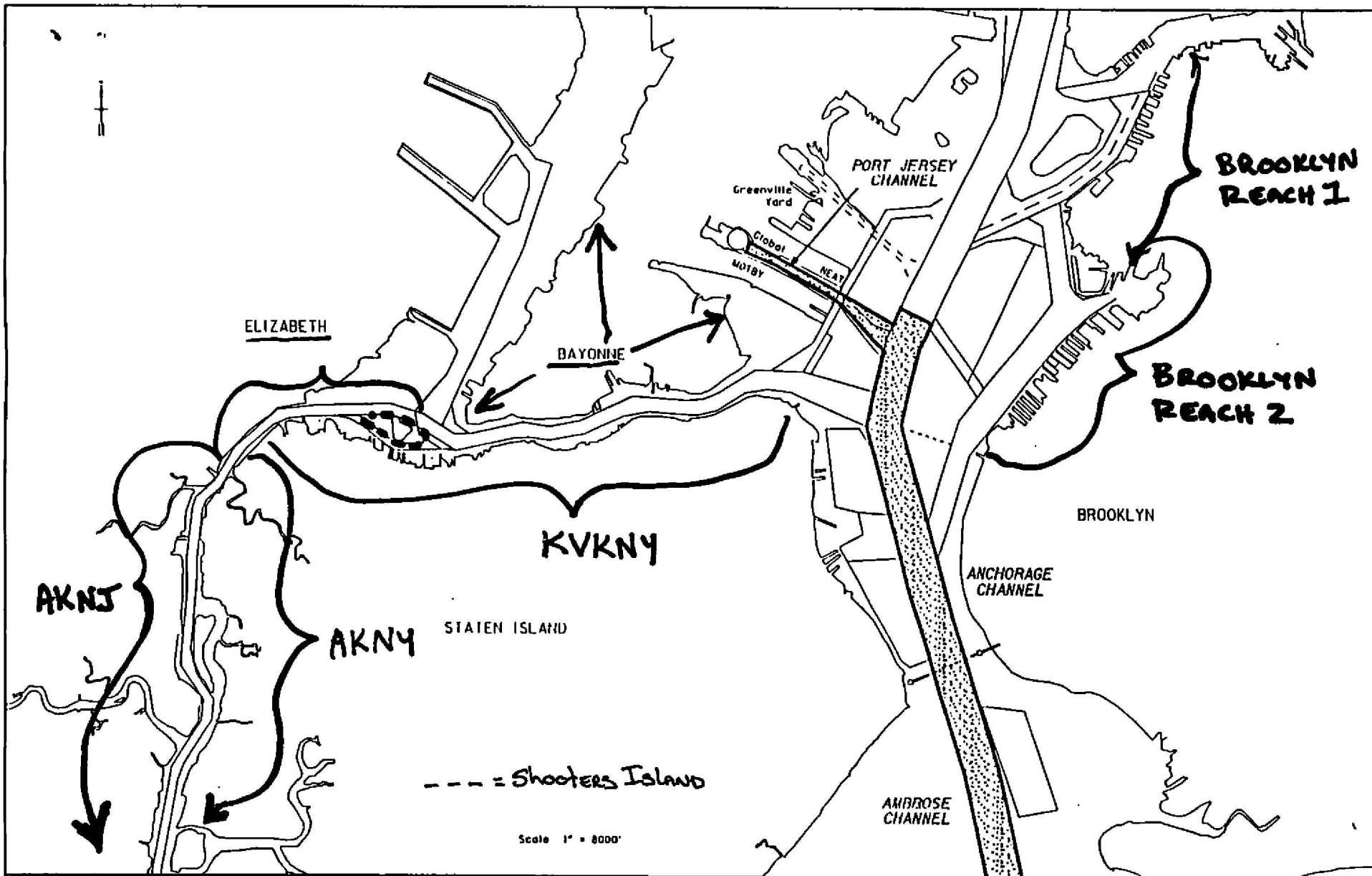
investigated by the earlier work. These previous projects are discussed below on a channel by channel basis. Relevant reaches of the Drift Removal Program are depicted on Figure 3. Correspondence directly related to the Harbor Navigation Study is contained in Appendix A.

To date, a single survey was conducted specifically for the Harbor Navigation Study (Geoarchaeology Research Associates [GRA] 1999). This work, a geomorphological and archaeological investigation, examined borings retrieved from all channels proposed for navigation improvements except for Bay Ridge which was previously examined (LaPorta, Sohl and Brewer 1999). The sediments were subject to a number of tests including foraminifera, pollen analysis and where appropriate, Carbon-14. The results of this work indicate that a number of locations, now submerged, within the APE are sensitive for prehistoric resources. The GRA report was submitted for review by the New Jersey State Historic Preservation Office (NJSHPO), New York State Historic Preservation Office (NYSHPO) and the New York City Landmarks Preservation Commission (NYCLPC).

Overall, a number of locations within the Harbor have a high potential to contain prehistoric sites and will be disturbed by channel improvements. Even though it may not be possible to identify and evaluate specific inundated prehistoric sites, it is not possible to state, with confidence, that such sites will not be adversely affected by aspects of the proposed project, given the potential for identification of intact, inundated prehistoric landforms within the APE. Therefore mitigation measures will be undertaken in the form of a data recovery program. In order to focus data sampling and interpretation, the sensitivity models developed in previous geomorphologic studies for the Harbor Navigation Study, DMMP, and other related projects will be refined and calibrated using a limited number of specifically located borings. Recovered data will be entered into a Geographic Information System to facilitate the correlation to known archaeological sites and resources as well as to aid in efficient project management over the life the Harbor Navigation Study.

Cultural resources issues associated with dredged material disposal sites will be addressed through the Corps' Dredged Material Management Plan (Appendix B). The Port Authority of New York and New Jersey will address cultural resource issues related to upland facility improvements through the Comprehensive Port Improvement Plan.

All tasks discussed below, under "Recommended Actions," are detailed in a Draft Programmatic Agreement for the Harbor Navigation Study (Appendix C).



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Figure 3
Map indicating shorelines examined under the
Collection and Removal of Drift Program

1. AMBROSE CHANNEL

Figure 1.

State and County

New Jersey: Monmouth

New York: Kings, Queens, Richmond

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Geoarchaeology Research Associates, Inc. 1999

Miller and James 1992

Resources

The borings from Ambrose Channel that were examined by GRA had been excavated and archived for geotechnical purposes prior to the award of GRA's cultural resource contract. The data contained in the archived samples was inadequate to make a sound assessment of the channel's sensitivity for prehistoric resources.

A linear remote sensing survey undertaken in the Lower Bay and into the Bight running from Morgan, New Jersey to Edgemere, New York crossed the Ambrose Channel (Miller and James 1992). An anomaly designated a potential shipwreck was identified near Ambrose Channel. No diving was undertaken to evaluate this potential resource.

Previous coordination

None to date.

Recommended Actions

Prehistoric Resources:

Borings will be excavated in Ambrose Channel in locations determined by a qualified geomorphologist. The sediments will be subject to analysis (foraminifera, pollen, Carbon-14) and the results will be incorporated into a sensitivity model. In order to focus data sampling and interpretation, the sensitivity models developed in previous geomorphologic studies for the Harbor Navigation Study, DMMP, and other related projects will be refined and calibrated using a limited number of specifically located borings. Recovered data will be entered into a Geographic Information System to facilitate the correlation to known archaeological sites and resources as well as to aid in efficient project management over the life the Harbor Navigation Study.

Historic Resources:

A remote sensing survey will be undertaken which will run parallel and adjacent to the both sides of the navigation channel to identify anomalies that are potential cultural resources. These anomalies will be further evaluated to determine if they are cultural resources and if they are eligible for the NRHP. If eligible resources are present and

cannot be avoided, mitigation plans will be developed in coordination with the appropriate SHPO(s). Coordination will also be undertaken with the SHPO(s) to develop appropriate monitoring procedures for any eligible resources that will not be directly impacted by dredging operations but are in the immediate vicinity. The existing navigation channel represents a disturbed environment for historic resources and no further in-channel work will be undertaken.

2. ANCHORAGE CHANNEL

Figure 4 (includes area identified as "The Narrows").

State and County

New Jersey: Hudson

New York: Kings, Richmond

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Geoarchaeology Research Associates, Inc. 1999

Louis Berger and Associates 1983, 1985

US Army Corps of Engineers, New York District 1994

Resources

The study by GRA suggests that the Anchorage Channel has a high to moderate sensitivity for prehistoric deposits. The results of the Louis Berger Associates study, however, determined that the deposits beneath modern sediments exhibited in 17 borings taken off of Stapleton were interpreted as dating from the Mid-Wisconsin age or older and therefore unlikely to contain prehistoric deposits.

A cultural resource survey was conducted in connection with deepening the Red Hook Flats Anchorage (Areas 21A, 21B, and 21C). This study concluded that Anchorage Areas 21B and 21C, adjacent to the east side of the Anchorage Channel, were disturbed by previous dredging activities and therefore unlikely to contain remains of historic vessel (US Army Corps of Engineers, New York District 1994). The Stapleton Anchorage, to the west of the navigation channel, is naturally deep and has not been subject to extensive dredging therefore the west side of the channel is considered potentially sensitive for historic resources.

Previous coordination

The NYSHPO concurred with the Corps' determination that no historic resources were present in the Red Hook Flats Anchorage Areas 21B and 21C and that no further work in association with historic resources was required (Appendix D).

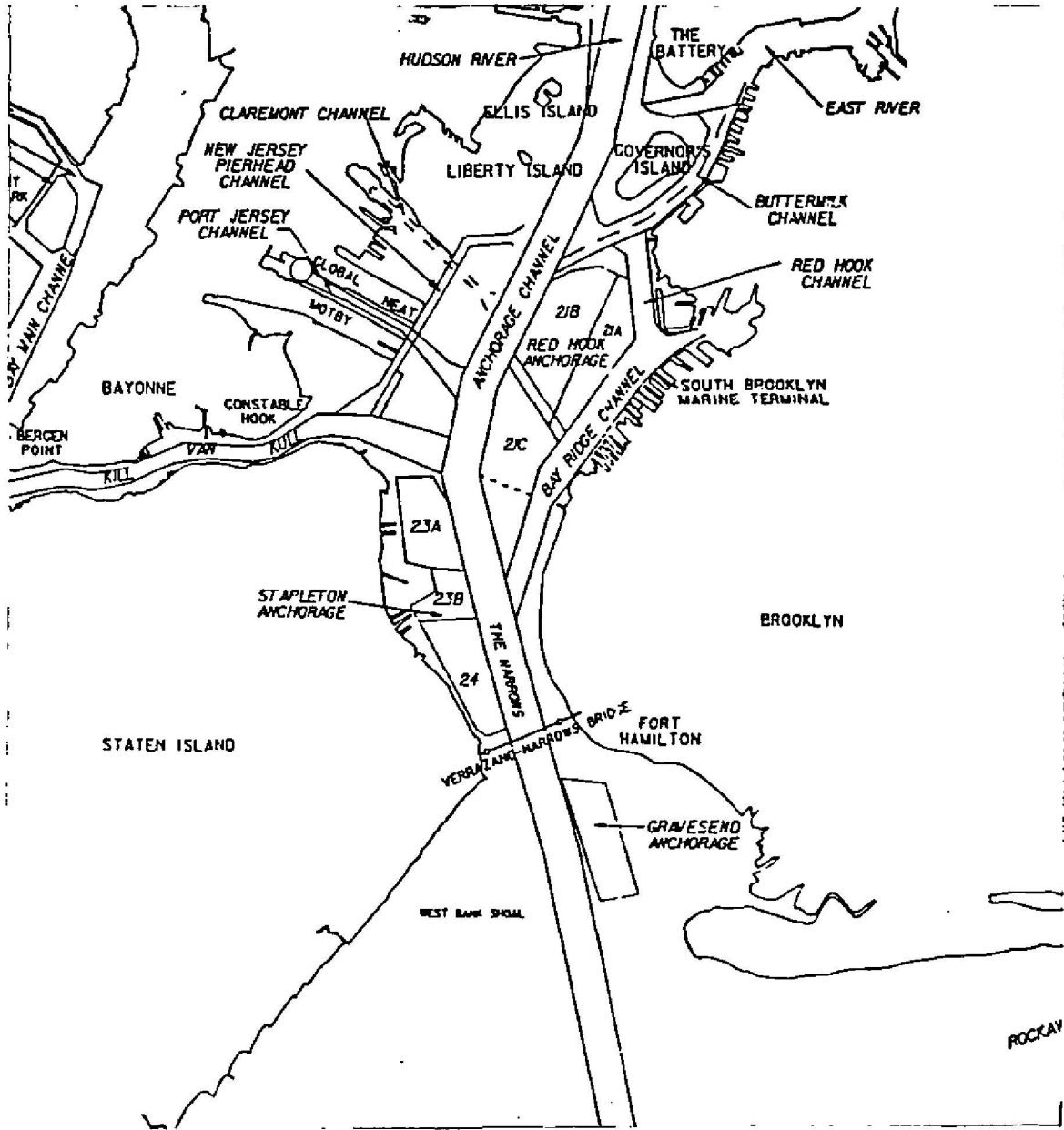


FIGURE 4: Anchorage Channel

Recommended Actions

Prehistoric Resources:

Borings will be excavated in Anchorage Channel in locations determined by a qualified geomorphologist. The sediments will be subject to analysis (foraminifera, pollen, Carbon-14) and the results will be incorporated into the sensitivity model discussed above under Ambrose Channel – Recommended Actions – Prehistoric Resources.

Historic Resources:

A remote sensing survey will be undertaken which will run parallel and adjacent to the both sides of the navigation channel to identify anomalies that are potential cultural resources. Further action, if required, will follow procedures for historic resources outlined above under Ambrose Channel – Recommended Actions. No survey work will be undertaken within the existing navigation channel. No survey work will be undertaken on the east side of the Anchorage Channel in the location of Red Hook Flats Anchorage Areas 21B and 21C.

3. PORT JERSEY CHANNEL

Figure 5.

State and County

New Jersey: Hudson

Proposed Navigation Improvement Actions

Deepen

Widen

Realignment through the southern end of the Jersey Flats

Relevant Studies

Geoarchaeology Research Associates, Inc. 1999

Henn 1985

LaPorta, Sohl and Brewer 1999

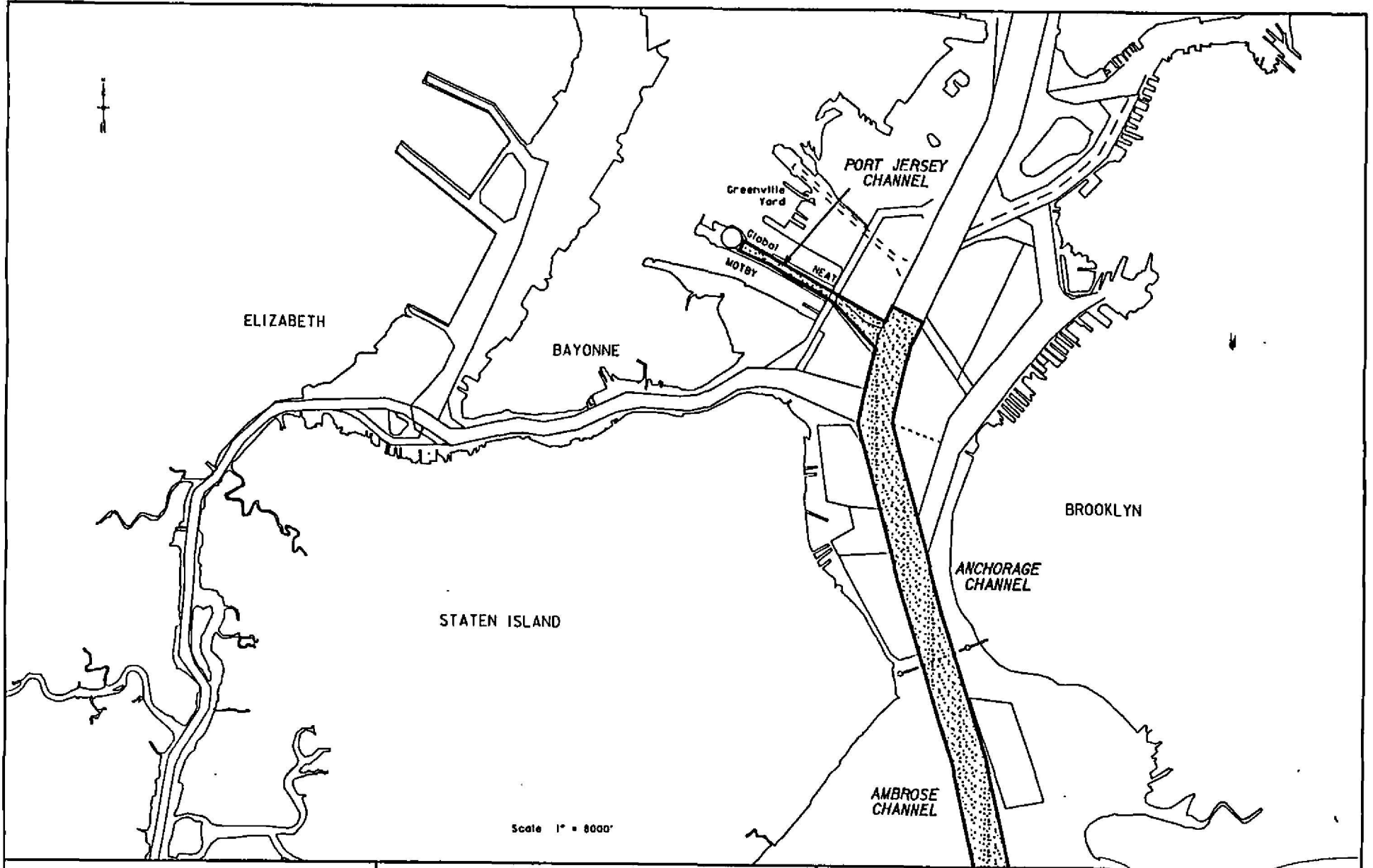
Resources

The studies by Henn, GRA and LaPorta et al. suggest that the Port Jersey Channel area has a moderate to high sensitivity for prehistoric deposits. Particularly sensitive are the undisturbed Jersey Flats and the shallows on the south side of the Global Marine Terminal Pier. The Jersey Flats are located immediately north of the existing channel, east of the pierhead line.

The existing navigation channel is not sensitive for submerged historic resources due to past dredging activities. The Jersey Flats however, since they have not been previously disturbed, are sensitive.

Previous coordination

The NJSHPO concurred with the Corps determination that no cultural resources are present in the Port Jersey Channel. They were also in agreement with the Corps'



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NEW YORK AND NEW JERSEY HARBOR
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FIGURE 5
PATHWAY 4 IMPROVEMENTS
PORT JERSEY CHANNEL

assessment that the Jersey Flats and the shallows at the south side of the Global Marine Terminal Pier have the potential to contain prehistoric materials and the Jersey Flats may also contain submerged historic resources (Attachments B and E).

Recommended Actions

Prehistoric Resources:

Borings will be excavated in the Jersey Flats in the area of the proposed channel realignment and in the shallows adjacent to the Global Marine Terminal. The retrieved sediments will undergo analysis and the results will be incorporated into the sensitivity model discussed above under Ambrose Channel – Recommended Actions – Prehistoric Resources.

Historic Resources:

A remote sensing survey will be undertaken in the area of proposed channel realignment in Jersey Flats to identify anomalies that may be potential cultural resources. Further action, if required, will follow procedures for historic resources outlined above under Ambrose Channel – Recommended Actions. No survey work will be undertaken within the existing navigation channel.

4. BAY RIDGE CHANNEL

Figures 3, 6, 7, 8, 9 and 10.

State and County

New York: Kings

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Flagg, Thomas 1986

LaPorta, Sohl and Brewer 1999

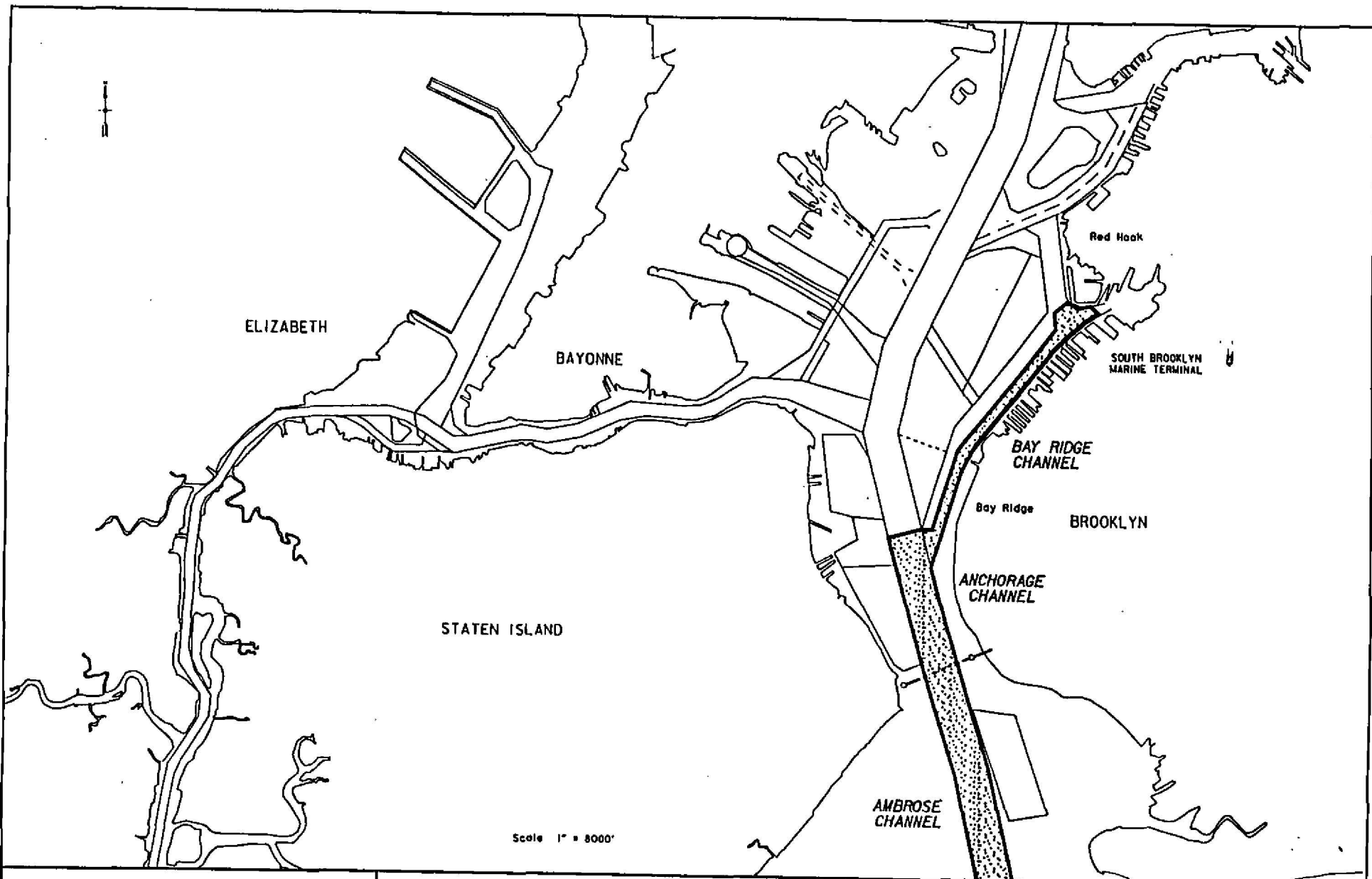
No Author, nd

Raber Associates, Inc. 1984, 1985a, 1985b, 1985c, 1986b, 1998

Resources

The study by LaPorta, Sohl and Brewer suggest that the Bay Ridge Channel has a moderate to low sensitivity for prehistoric resources. Further analysis was recommended to determine the age of the deposits and therefore the likelihood that the sediments contain prehistoric materials.

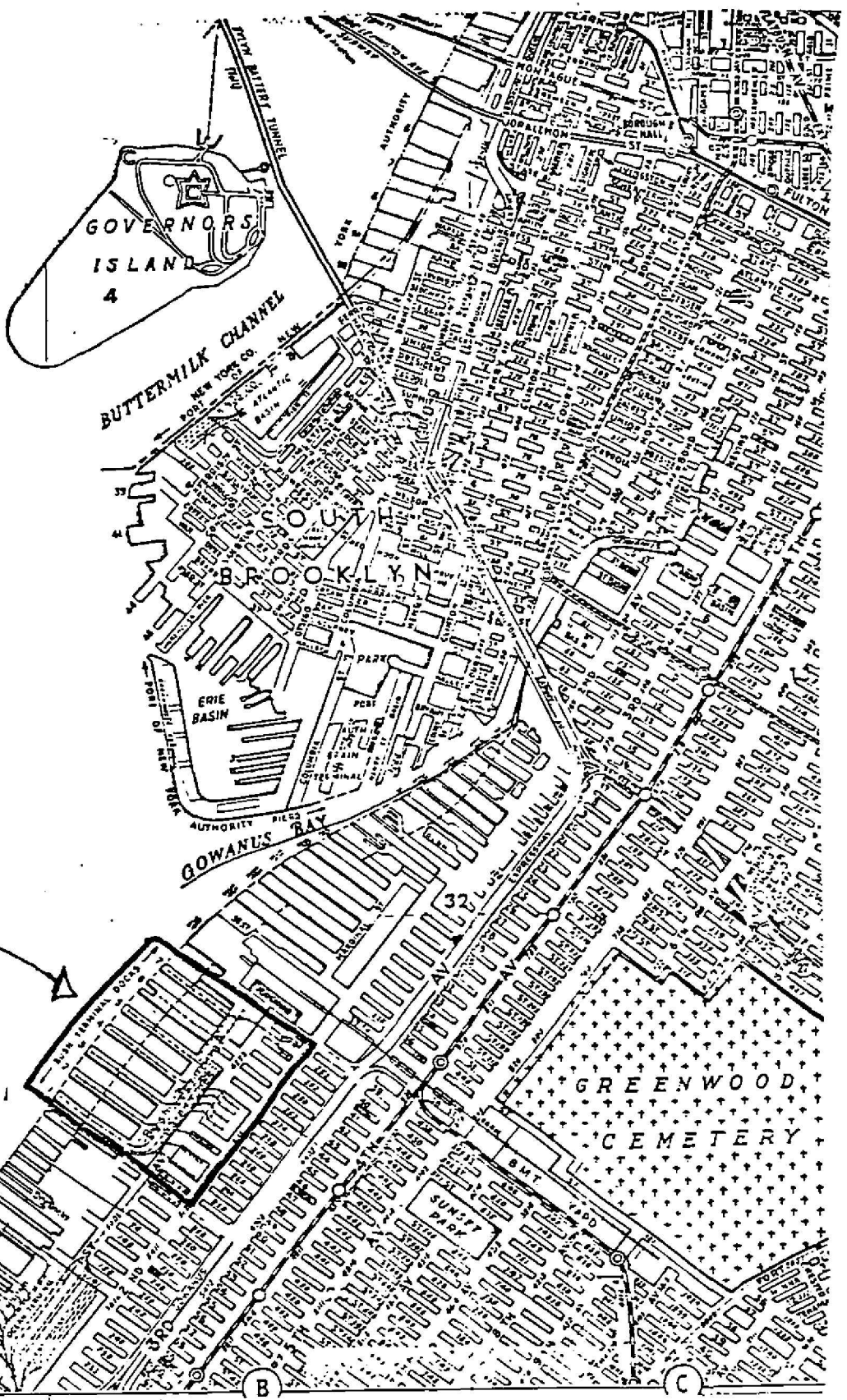
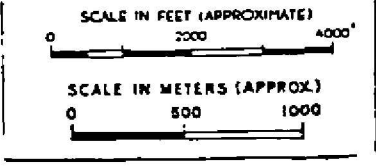
The existing navigation channel is not sensitive for historic resources due to past dredging activities. The nearshore area was surveyed as part of Brooklyn Reach I and Brooklyn Reach II of the Collection and Removal of Drift Project (Raber Associates 1984, 1985a) and significant historic resources were identified (Figures 7, 8 and 9). The



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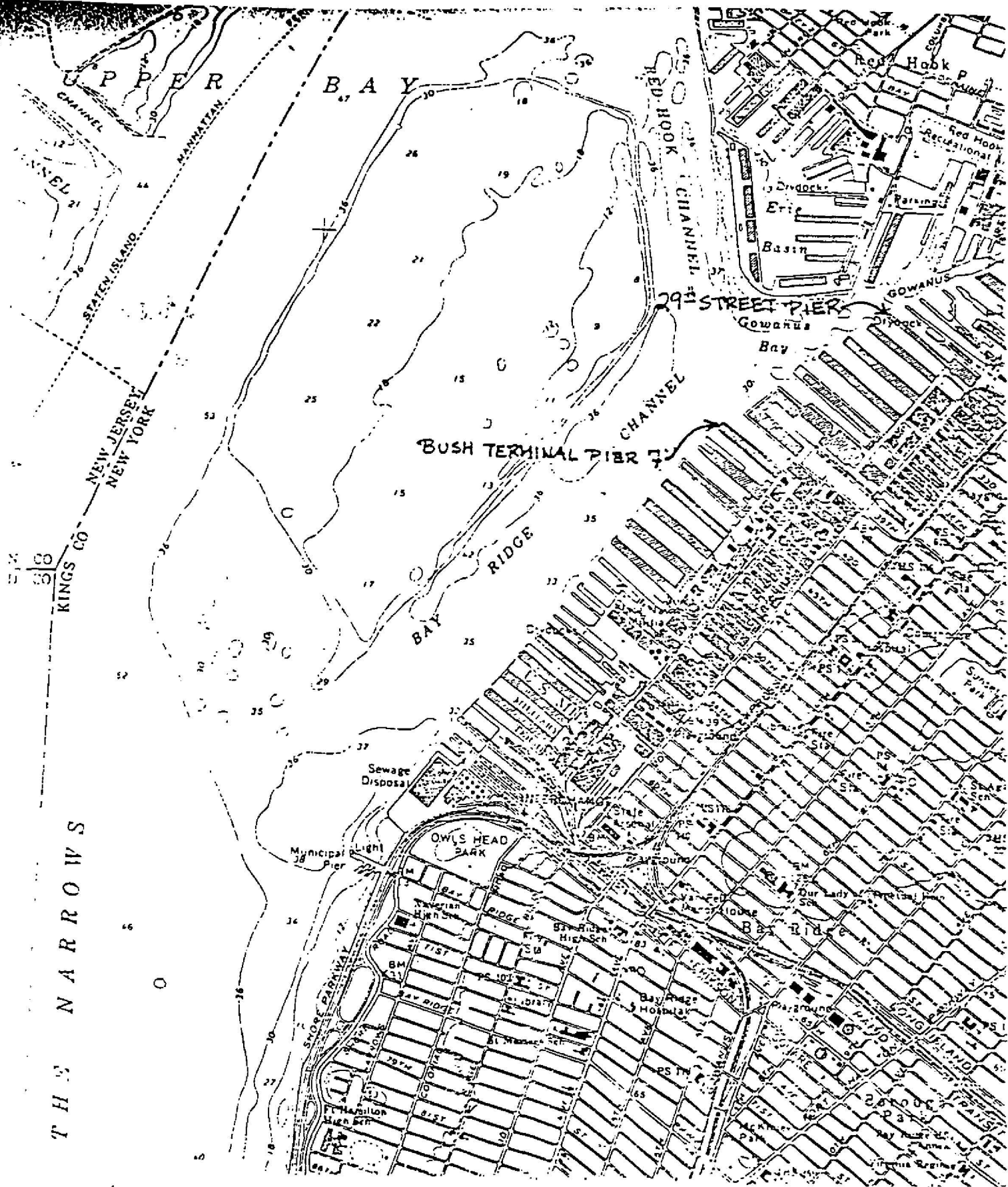
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FIGURE 6
PATHWAY 5 IMPROVEMENTS
BAY RIDGE CHANNEL



BUSH
TERMINAL
BOUNDARIES

Figure 8



THE NARROWS

Figure 9

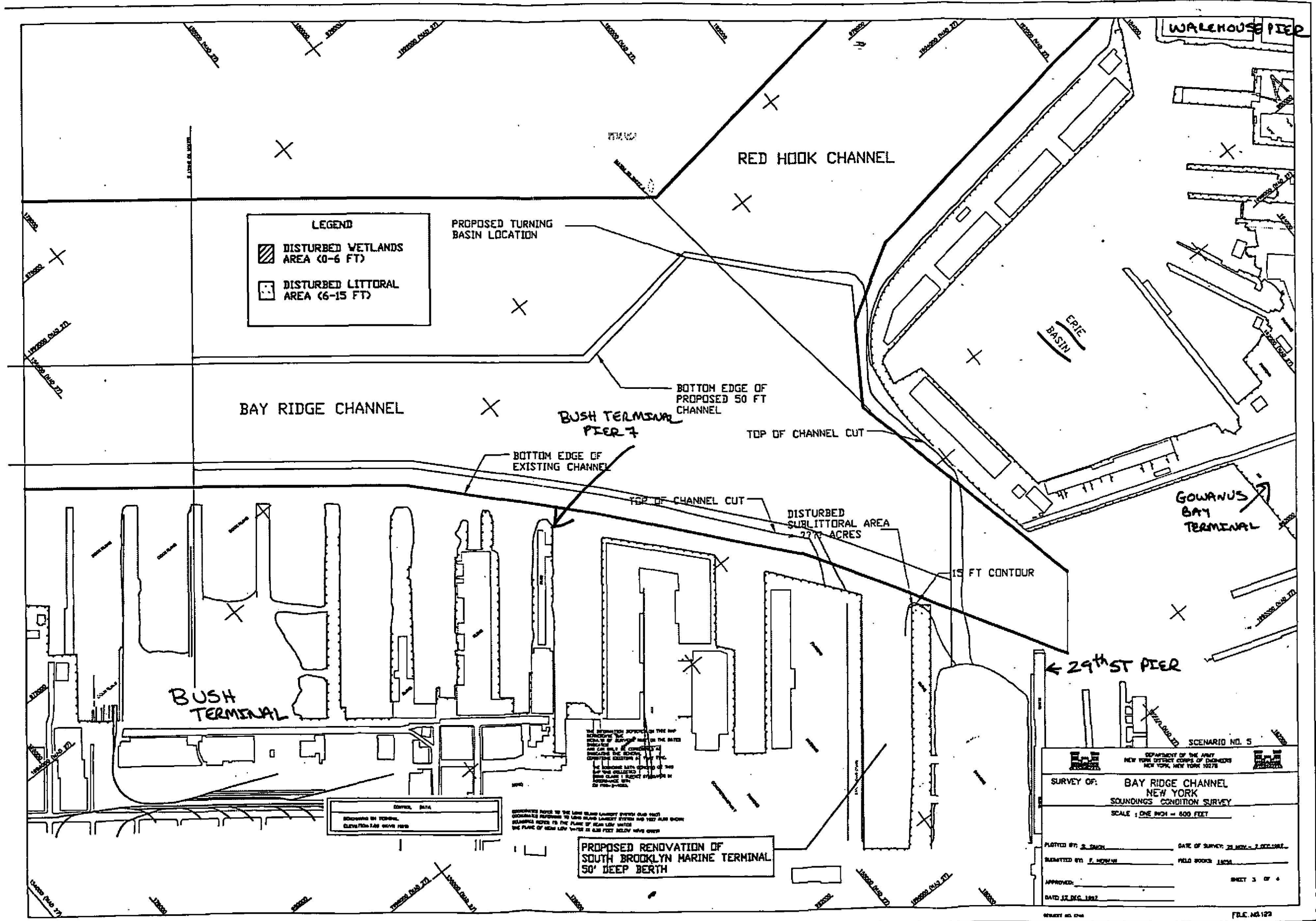


Figure 10

Warehouse Pier, Gowanus Bay Terminal, the 29th Street Pier (Isbrantsen Pier), Bush Terminal and associated Piers 5 and 7, and the Brooklyn Military Ocean Terminal and associated Piers 1 through 4 are eligible for the NRHP as individual properties or contributing elements. The 31st Street Pier and 57th Street Pier and shed were determined to be potentially significant. The 57th Street Pier was examined recently and due to loss of integrity was determined to be not significant (Raber Associates 1998). To date, none of these items have been removed.

Previous coordination

The NYSHPO reviewed the study by LaPorta, Sohl and Brewer and concurred with the Corps' opinion that additional borings will be excavated in the Bay Ridge Channel (Appendix B).

Coordination with regards to Brooklyn Reaches I and II of the Collection and Removal of Drift Project has been extensive and on-going since 1985 (Appendix F). The NYSHPO agreed with the findings of the Raber reports. The Erie Basin was determined significant but its eligibility was not pursued as the project would have no adverse impacts on the complex as a whole. Subsequent documentation determined that the 31st Street Pier was not eligible for the NRHP (Raber 1986b). The SHPO acknowledged that a number of items such as the 57th Street Pier and shed were potentially eligible but were outside of the Section 106 review process for the Collection and Drift Removal Project as these items were slated for repair, not removal.

In the Brooklyn Reach I survey area three resources were determined eligible for the NRHP; Pier 41, Warehouse Pier and the Gowanus Bay Terminal. NYSHPO concurred with the determination of eligibility. The Terminal Pier at the Gowanus Bay Terminal was also determined eligible by the National Park Service. It was determined that only the Terminal Pier would be adversely effected by the project. A Memorandum of Agreement for the Brooklyn Reach I area was signed in 1985 by all participating parties. As stipulated in the MOA the Corps recorded the Terminal Pier to Historic American Engineering Record (HAER) standards. The National Park Service accepted this documentation.

As per a Memorandum of Agreement for Brooklyn Reach II, signed in 1987 by the Corps, New York SHPO and Advisory Council on Historic Preservation, Bush Terminal and associated Piers 5 and 7, the Brooklyn Military Ocean Terminal (BMOT) and the South Brooklyn Freight Terminal (29th Street Pier) were recorded to HAER standards. The National Park Service accepted these documents. An amendment to the MOA was prepared and signed in 1994 because New York City Economic Development Corporation (NYCEDC) requested that BMOT piers 2 and 3 be included in the removal items. The Corps also determined that part of BMOT Pier 1 required removal and BMOT Pier 4 required repair. BMOT Piers 2 and 3 were documented to HAER standards. The National Park Service accepted this work in February 1994. To date, none of these items have been removed or repaired.

Recommended Actions

Prehistoric Resources:

Borings will be excavated in the Bay Ridge Channel in locations determined by a qualified geomorphologist. The retrieved sediments will undergo analysis and the results will be incorporated into the sensitivity model discussed above under Ambrose Channel – Recommended Actions – Prehistoric Resources.

Historic Resources:

No survey work will be undertaken for submerged historic resources as all proposed navigation improvements will occur within the existing navigation channel. An evaluation of impacts to NRHP resources on the Brooklyn shoreline will be assessed as project plans are developed. Preliminary channel designs however indicate that all work will be within the existing navigation channel except in the vicinity of Erie Basin where the cut may fall near the outside wall of the basin (Figure 10). A modern New York City Police Department facility occupies that end of the Erie Basin. Project plans will be developed to ensure that there are no impacts to this NRHP eligible resource. If avoidance is not possible, plans will be modified to minimize impacts and mitigation measures will be developed in consultation with the NYSHPO.

An architectural survey of on shore properties may be required if blasting is determined necessary for the removal of hard material. To ensure that no damage occurs to significant historic structures a blast program will be developed which entails pre- and post-blast condition surveys and details precautions to be undertaken by the blasting contractor in the vicinity of historic structures.

5. KILL VAN KULL

Figures 11, 12, 13, 14 and 18.

State and County

New Jersey: Hudson

New York: Richmond

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Geoarchaeology Research Associates 1999

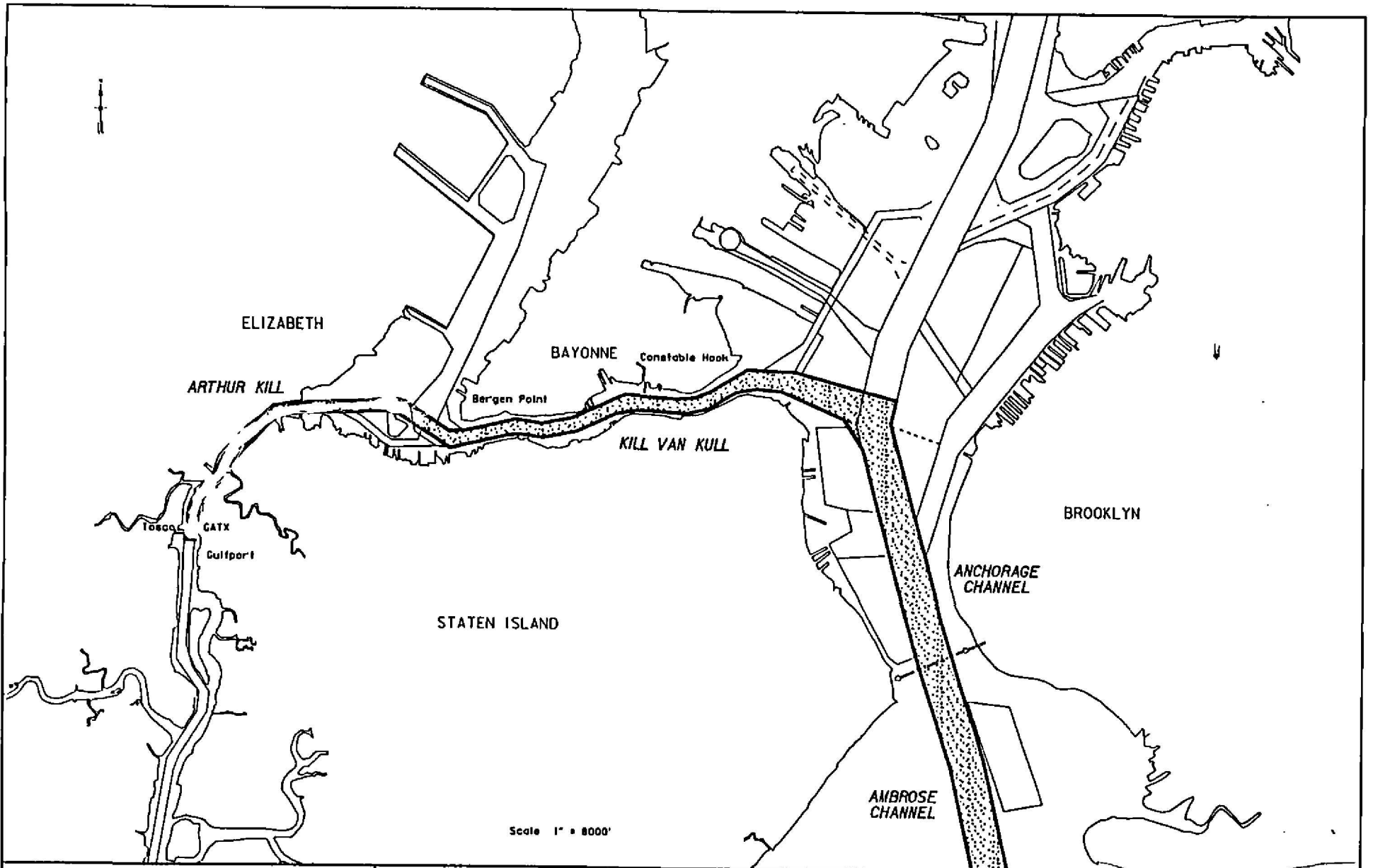
Kardas and Larabee 1976, 1985a

Panamerican 1999

Raber Associates 1996c, 1997

Resources

The Kill Van Kull navigation channel has been dredged to bedrock however the GRA study suggests that the side slopes are sensitive for prehistoric deposits.



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FIGURE 11
PATHWAY 3 IMPROVEMENTS
KULL VAN KULL, ARTHUR KILL TO GULFPORT

The existing navigation channel is not sensitive for historic resources due to past dredging activities however submerged resources may be present adjacent to the channel. The nearshore area was surveyed and significant historic resources were identified.

The Bayonne, New Jersey side of the Kill Van Kull was surveyed as part of the Bayonne Reach of the Collection and Removal of Drift Project. The survey identified the Port Johnson Pier No. 2 (Atlas Yacht Club Pier), Port Johnson Historic Sailing Vessel Cluster and the Van Bushkirk Site as eligible properties. The archeological site was not going to be impacted by the project. The Port Johnson Sailing Vessel cluster initially included seven vessels but subsequent work on the cluster determined that another vessel should be included. At that time it was also determined that nine vessels, not in the cluster, had been incorrectly categorized as not NRHP eligible. These nine vessels underwent further evaluation and it was determined that six of them were eligible. One of those vessels, V36, is located along the KVK. Vessel 80 is located on the northeast side of Constable Hook while the other four vessels lie along the Newark Bay shoreline.

Nearshore structures and vessels along the Staten Island side of the Kill Van Kull were assessed in 1996 as part of the Kill Van Kull New York Reach (KVKNY) of the Collection and Removal of Drift Project. Numerous vessels and structures were identified as potentially significant. These resources underwent additional research to determine which vessels were representative examples of various vessel types with sufficient integrity and significance to be eligible for the NRHP. As a result, 8 vessels and one structure within the KVK as defined by the Harbor Navigation Study, were determined to be NRHP eligible. The eligible vessels along the KVK are depicted on Figures 12, 13, 14 and 18.

Previous coordination

Coordination with regard to the Bayonne Reach of the Collection and Removal of Drift Removal Project has been extensive and on-going (Appendix G). An MOA was signed in 1987 outlining a mitigation plan for the Port Johnson Historic Vessels. An amended MOA is being coordinated to include the additional vessel in the Port Johnson cluster as well as the individual vessels along Bayonne that were re-evaluated and found to be NRHP eligible.

The Kill Van Kull Reach of the Collection and Removal of Drift was initially coordinated alone but due to the similarity of resource types with those along both banks of the Arthur Kill subsequent evaluations and coordination were undertaken in tandem with the Arthur Kill work (Appendix H and I). The NYSHPO concurred with the Corps' opinion on eligibility of the KVKNY vessels and structures and also determined that the Drift Removal Project will have an adverse effect on these NRHP eligible resources. An MOA has been drafted in coordination with both the NYSHPO and NJSHPO which includes mitigation measures for vessels and structures along the AKNY, AKNJ and KVKNY. Recommendations for mitigation include photographic documentation, drawings, additional historic research and analysis, HABS/HAER – level recordation and the removal of certain vessel parts for curation at suitable maritime museums.

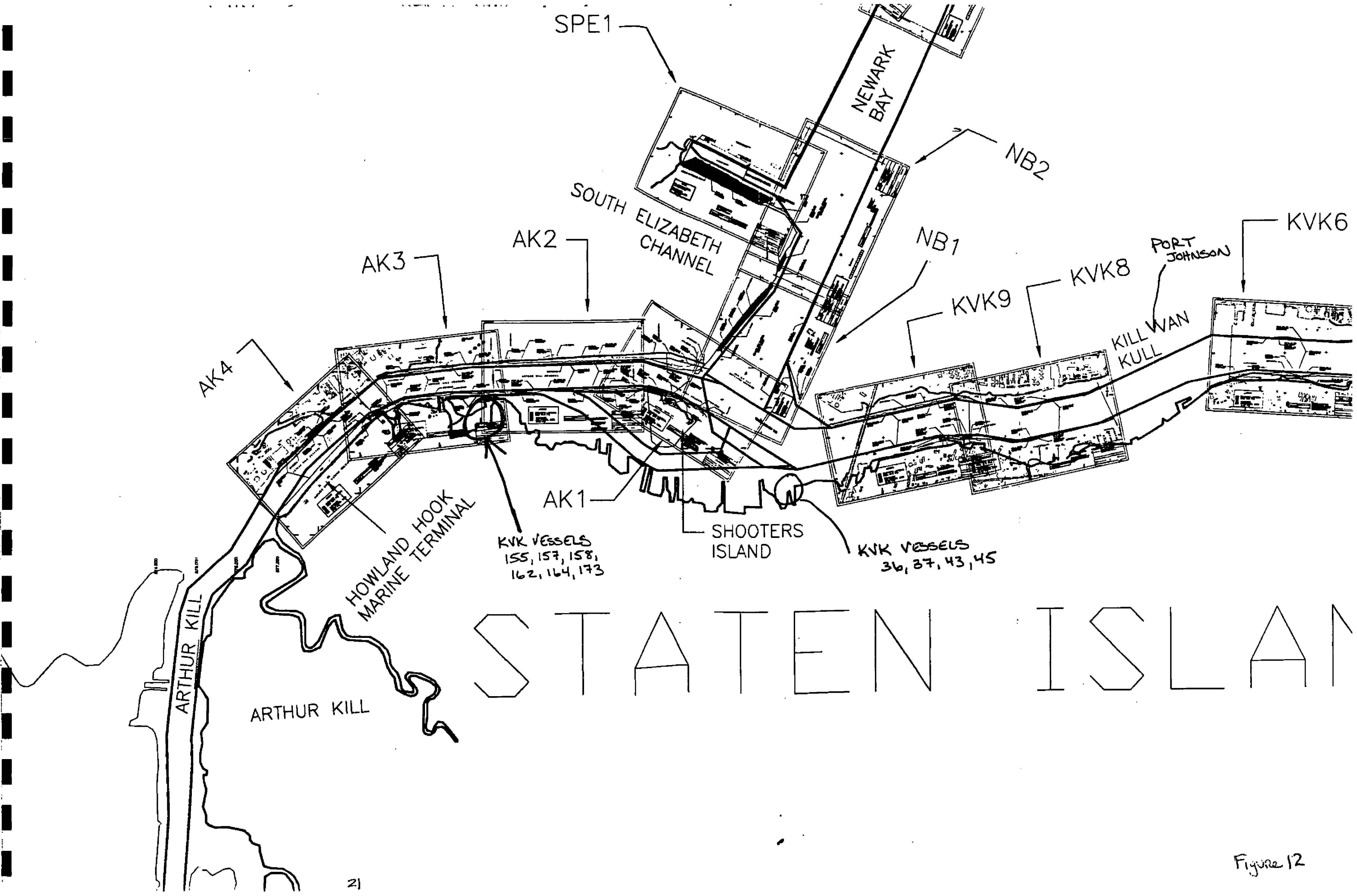


Figure 12

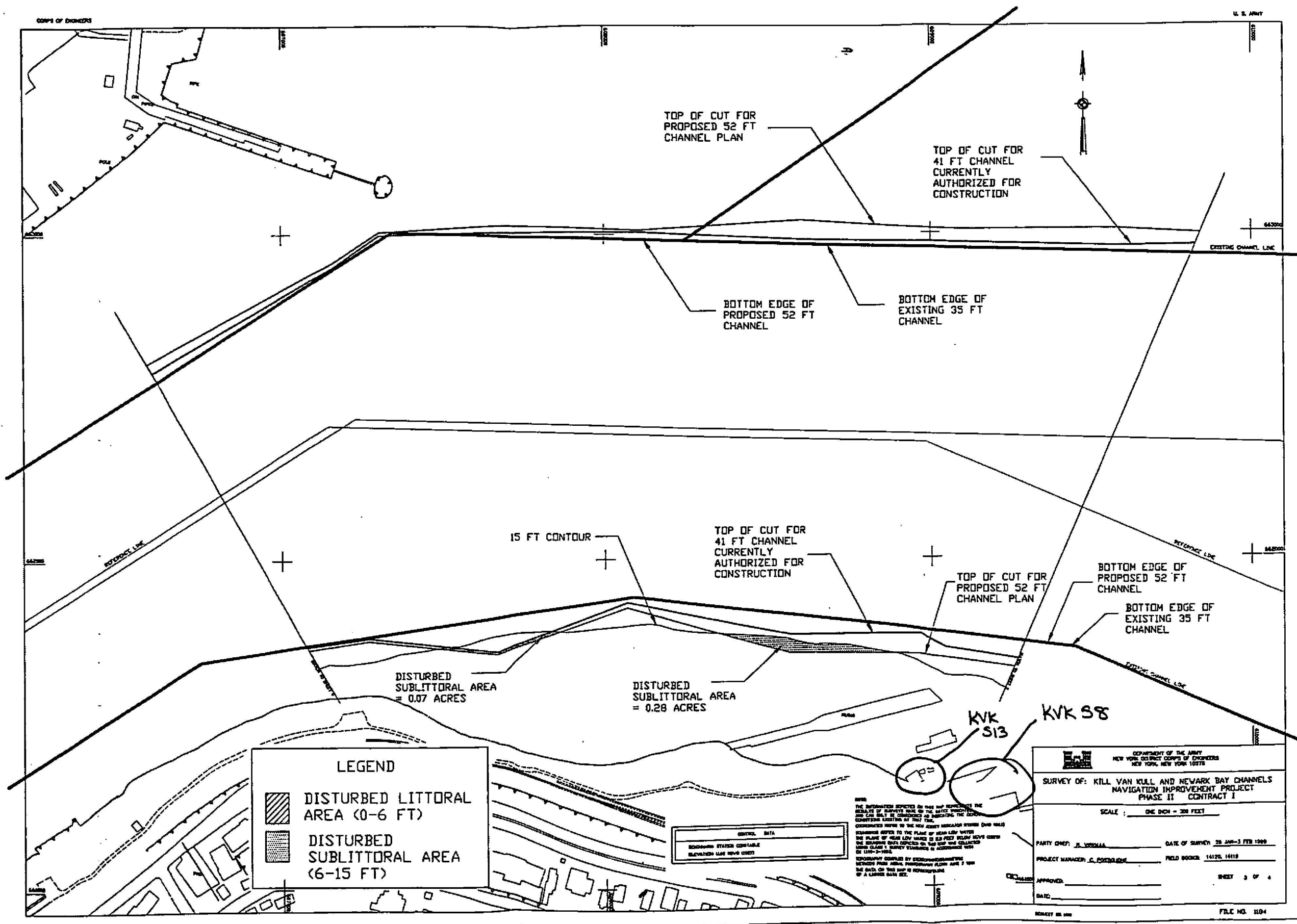


Figure 13

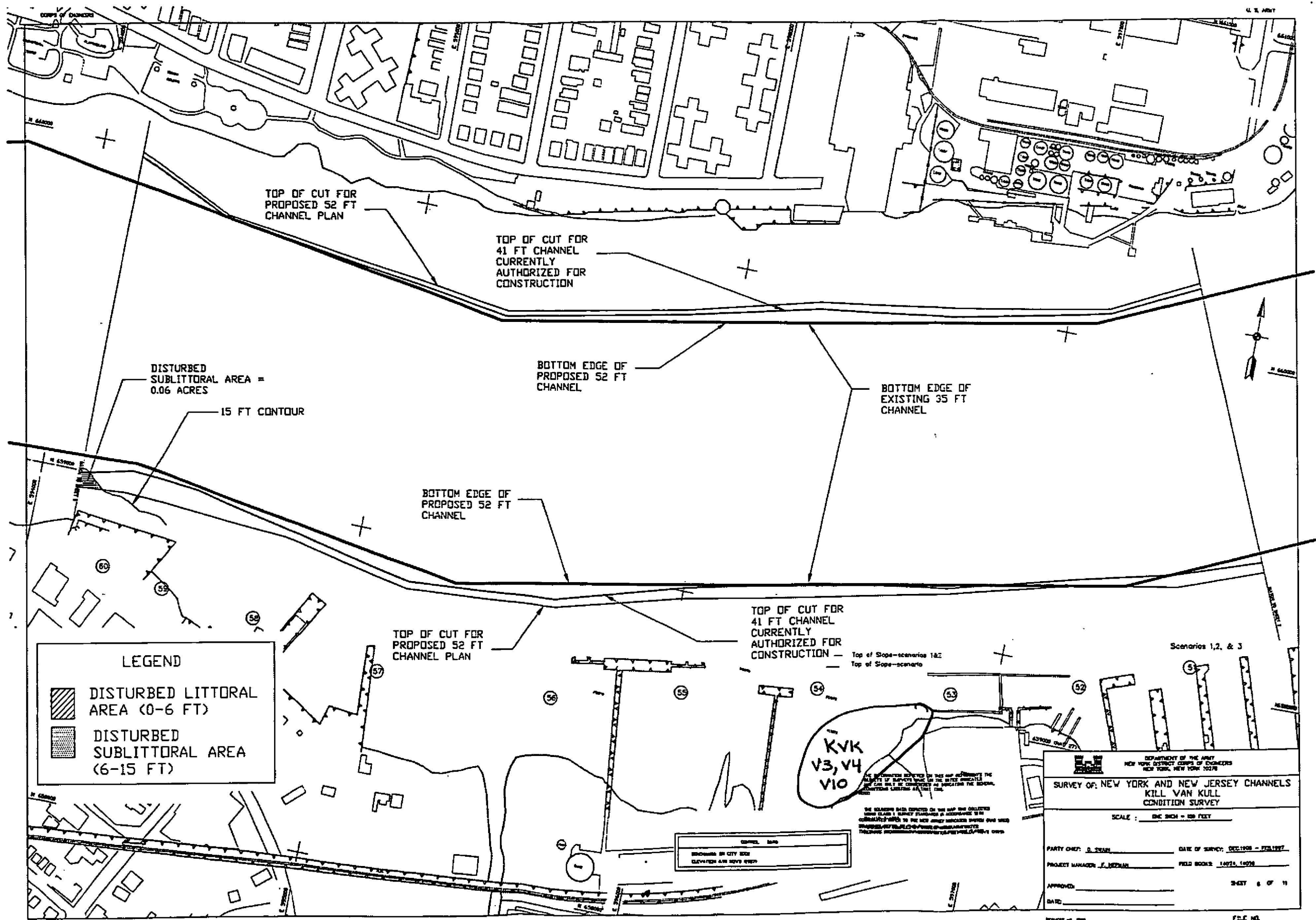


Figure 14

Blasting has been coordinated with NYSHPO and NJSHPO for several locations along the KVK as a number of NRHP eligible resources were determined to lie within the area of impact from the proposed blast (Appendix J). While the impact would be minimal it was agreed that the Corps would monitor significant structures both on shore and nearshore before and after the blast and include precautionary measures within the plans and specifications for work undertaken in the vicinity of historic properties. Both NYSHPO and NJSHPO concurred with a finding of no effect provided that precautionary measures and a monitoring plan were implemented.

Recommended Actions

Prehistoric Resources:

Borings will be excavated in the to examine the side slopes of the Kill Van Kull Channel in locations determined by a qualified geomorphologist. The retrieved sediments will undergo analysis and the results will be incorporated into the sensitivity model discussed above under Ambrose Channel – Recommended Actions – Prehistoric Resources.

Historic Resources:

An evaluation of impacts to NRHP resources on the Bayonne, NJ and Staten Island, NY shoreline will be assessed as project plans are developed. Project plans will be developed to ensure that there are no impacts to NRHP eligible resources. If avoidance is not possible, plans will be developed to minimize impacts and mitigation measures developed under previous projects and documented through an MOA will be employed. If no MOA is in place mitigation measures will be developed.

An architectural survey of on shore properties may be required if blasting is determined necessary for the removal of hard material. To ensure that no damage occurs to significant historic structures a blast program will be developed which entails pre- and post-blast condition surveys and details precautions to be undertaken by the blasting contractor in the vicinity of historic structures.

A remote sensing survey will be undertaken which will run parallel and adjacent to the both sides of the navigation channel to identify anomalies that are potential cultural resources. Further action, if required, will follow procedures for historic resources outlined above under Ambrose Channel – Recommended Actions. No survey work will be undertaken within the existing navigation channel.

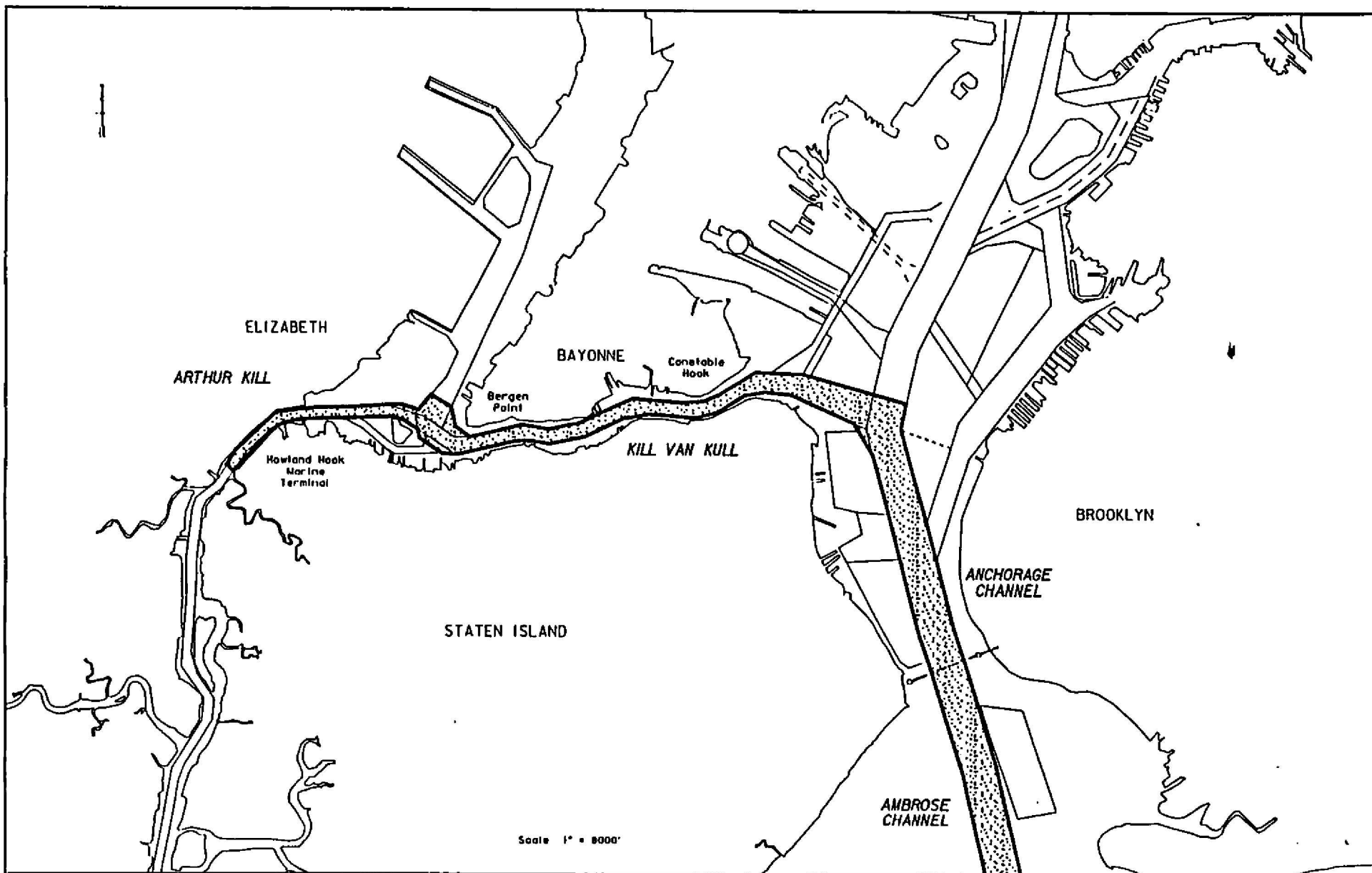
6. ARTHUR KILL

Figure 3, 15, 16.

State and County

New Jersey: Union

New York: Richmond



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FIGURE 16
PATHWAY 2 IMPROVEMENTS
KILL VAN KULL, ARTHUR KILL TO HOWLAND HOOK

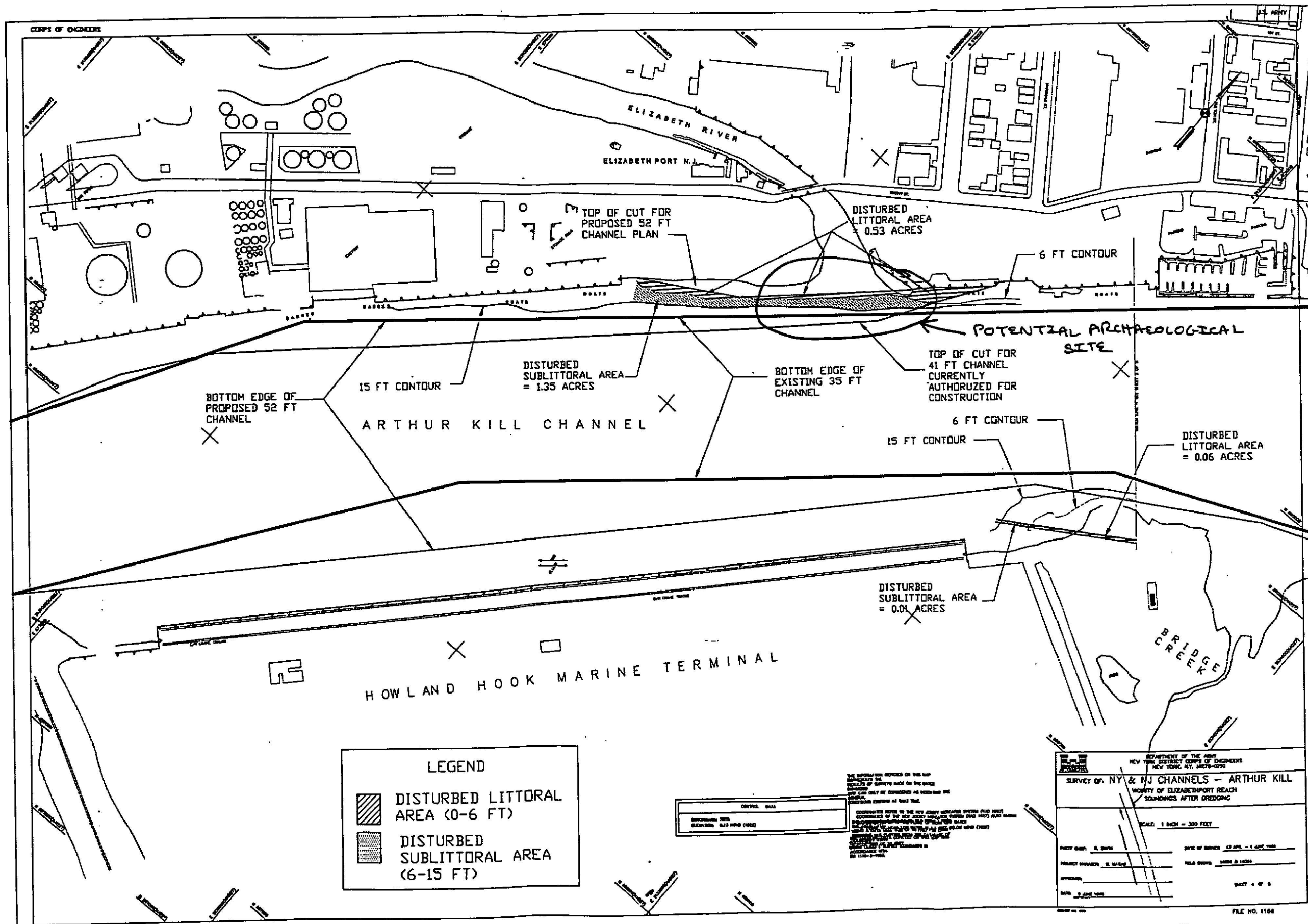


Figure 1b

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Eisenberg 1987

Brouwer 1981, 1983

James 1987a, 1987b

Kardas and Larabee 1980, 1985b,

MAAR Associates 1986

Mueser Rutledge Consulting Engineers 1985

Panamerican Consultants 1999

Raber Associates 1996a, 1996b

Rockman and Rothschild 1979

Wagner and Siegel 1996

Please note that the study area for the Arthur Kill New York (AKNY) and Arthur Kill New Jersey (AKNJ) Reaches of the Collection and Removal of Drift Project (Raber 1996a, 1996b; Panamerican Consultants 1999) do not correspond with those of the Harbor Navigation Study (see Figure 3). The Arthur Kill Channel as defined by the Harbor Navigation Study begins at the Goethals Bridge and runs north. The AKNJ Drift begins at the bridge and runs south so there is no overlap. Just one map of the AKNY Drift project overlaps with the Harbor Navigation Study. This map depicts the shoreline at Howland Hook. There are no NRHP eligible resources along the shoreline in this area. The Kill Van Kull New York, Elizabeth and Shooters Island Reaches of the Collection and Removal of Drift Project overlap with the Arthur Kill Channel as defined in the Harbor Navigation Study. The Elizabeth Reach ran from the Goethals Bridge north along the Elizabeth, NJ shoreline then followed the navigation channels that run North of Shooters Island and South of Shooters Island. The Shooters Island Reach was later separated from the Elizabeth Reach and subsequent cultural resource studies and coordination for Shooters Island has been conducted under the Shooters Island Reach.

Resources

The Goethals Bridge and Staten Island Railroad Vertical Lift Bridge are NRHP eligible and are listed on the New Jersey State Register of Historic Places. The Singer Plant on the Elizabeth shoreline was determined eligible for the NRHP.

The survey for the Elizabeth Reach of the Collection and Removal of Drift Project indicated that there is the potential for two archeological sites, a 17th to early 18th century ferry to Staten Island and possible evidence of a Revolutionary War Pontoon Bridge near the mouth of the Elizabeth River. No archaeological investigations were undertaken as the Drift Removal Project would not impact buried resources. These potential sites are now buried under fill or are under water. No vessels or shoreline structures were determined significant on the Elizabeth shoreline.

Nearshore structures and vessels along the Staten Island side of the Arthur Kill, as defined by the Harbor Navigation Study, were assessed in 1996 as part of the Kill Van Kull New York Reach (KVKNY) of the Collection and Removal of Drift Project. Numerous vessels and structures were identified as potentially significant. These resources underwent additional research to determine which vessels were representative examples of various vessel types with sufficient integrity and significance to be eligible for the NRHP. As a result, 20 vessels and one structure within the KVK as defined by the Harbor Navigation Study, were determined to be NRHP eligible. Most of these vessels are located along the channel South of Shooters Island. The US Dike, north of Shooters Island, was determined not eligible for the NRHP as were the five wrecks located just north of the dike (James 1987a, 1987b).

Previous coordination

Coordination has been undertaken in relation to the Elizabeth, Shooters Island and KVKNY reaches of the Collection and Removal of Drift Project as well as the Arthur Kill 40/41 Navigation Study (AK 40/41) which assessed the feasibility of deepening the Arthur Kill Channel to 41 feet. The AK 40/41 study determined that no historic properties would be effected by channel deepening however the area northeast of Shooters Island contained sediments sensitive for prehistoric resources. The NY and NJSHPO concurred with the Corps' opinion (Appendix K).

The 1980 study for the Elizabeth Reach of the Collection and Removal of Drift Project identified three locations as sensitive. Two of these locations at Shooters Island were addressed through the Arthur Kill 40/41 Navigation Study and through the Collection and Removal of Drift Project. The third sensitive area is at the mouth of the Elizabeth River where there is the potential for archaeological sites. At that time the NJSHPO concurred with the Corps decision not to conduct further investigations of the potential archaeological sites because of the expense of testing in such an environment coupled with the dubious value of monitoring such resources. It was noted in the cultural resource report that the effect of removing drift was unlikely to disturbed archaeological sites provided that pilings were removed with care (Appendix L).

This reach of the Arthur Kill as defined by the Harbor Navigation Study falls within the KVKNY Reach of the Collection and Removal of Drift Project except for a small area at Howland Hook which is within the AKNY Reach (Appendix H and I). Following the initial cultural resources evaluation the AKNY, AKNJ and KVKNY were combined as one study for subsequent evaluation and coordination due to the similarity of resource types. The NYSHPO concurred with the Corps' opinion on eligibility of vessels and structures and also determined that the Drift Removal Project will have an adverse effect on the NRHP eligible resources. An MOA has been drafted in coordination with both the NYSHPO and NJSHPO which includes mitigation measures for vessels and structures along the AKNY, AKNJ and KVKNY. Recommendations for mitigation include photographic documentation, drawings, additional historic research and analysis, HABS/HAER – level recordation and the removal of certain vessel parts for curation at suitable maritime museums.

Two cultural resources surveys of the derelict vessels surrounding Shooters Island were undertaken in 1981 and 1983 (Brouwer 1981, 1983). Although most of the vessels were wooden and badly deteriorated, the surveys indicated that the vessel complex as a whole was potentially significant in that it represented late nineteenth and early twentieth century maritime technology. In 1983, both the NYSHPO and NJSHPO concluded that this ship graveyard was eligible for listing on the NRHP. The NYSHPO and NJSHPO further concluded that the proposed removal of these derelict vessels constituted an adverse effect and recommended that a program of recording be undertaken as a mitigative measure (Appendix M).

Corps staff coordinated with the NJSHPO and the NYSHPO to develop an appropriate mitigation plan for the Shooters Island Graveyard. A Memorandum of Agreement (MOA) was signed in 1985 by all participating parties. As per the MOA, the Corps undertook archival recording of selected vessels in the ship graveyard. This recording was completed and formally accepted by the National Park Service in 1985.

One additional item in the Memorandum of Agreement was that the Corps would try to find a suitable curating institution willing to acquire the A-frame from the walking beam engine of the Jane Moseley, one of the vessels in the ship graveyard. The South Street Seaport Museum indicated interest in 1985 in acquiring the A- frame however since then the A-frame deteriorated and was no longer in a condition to be conserved. The MOA was amended in 1996 and stipulates that Corps will develop a publication for public distribution on sidewheel steamboats or walking beam engines. The Corps will also construct a scale model of the Jane Moseley if sufficient data is available and if a curating institute is interested in the acquiring such a model.

The NJSHPO concurred with the Corps' opinion that the US Dike and the five vessels north of the dike are not eligible for the NRHP (Appendix N).

Recommended Actions

Prehistoric Resources:

The Arthur Kill was evaluated in connection with an on-going study to deepen the channel to 41 feet. The area just northeast of Shooters Island was determined sensitive for prehistoric deposits. Additional borings and analyses will be undertaken in the autumn of 1999 and should preclude the need for any further identification work in the Arthur Kill with regard to prehistoric resources. The results will be incorporated into the sensitivity model discussed above under Ambrose Channel – Recommended Actions – Prehistoric Resources.

Historic Resources:

A remote sensing survey will be undertaken which will run parallel and adjacent to the both sides of the navigation channel to identify anomalies that are potential cultural resources. Further action, if required, will follow procedures for historic resources outlined above under Ambrose Channel – Recommended Actions. No survey work will be undertaken within the existing navigation channel.

An evaluation of impacts to NRHP resources on the Arthur Kill shoreline will be assessed as project plans are developed. Project plans will be developed to ensure that there are no impacts to NRHP eligible resources. If avoidance is not possible, plans will be developed to minimize impacts and mitigation measures developed under previous projects and documented through an MOA will be employed. If no MOA is in place mitigation measures will be developed.

An architectural survey of on shore properties may be required if blasting is determined necessary for the removal of hard material. To ensure that no damage occurs to significant historic structures a blast program will be developed which entails pre- and post-blast condition surveys and details precautions to be undertaken by the blasting contractor in the vicinity of historic structures.

7. NEWARK BAY CHANNEL

Figure 17, 18 and 19.

State and County

New Jersey: Hudson, Essex

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Geoarchaeology Associates 1999

Hartgen Archaeological Associates 1996

Kardas and Larabee 1985a

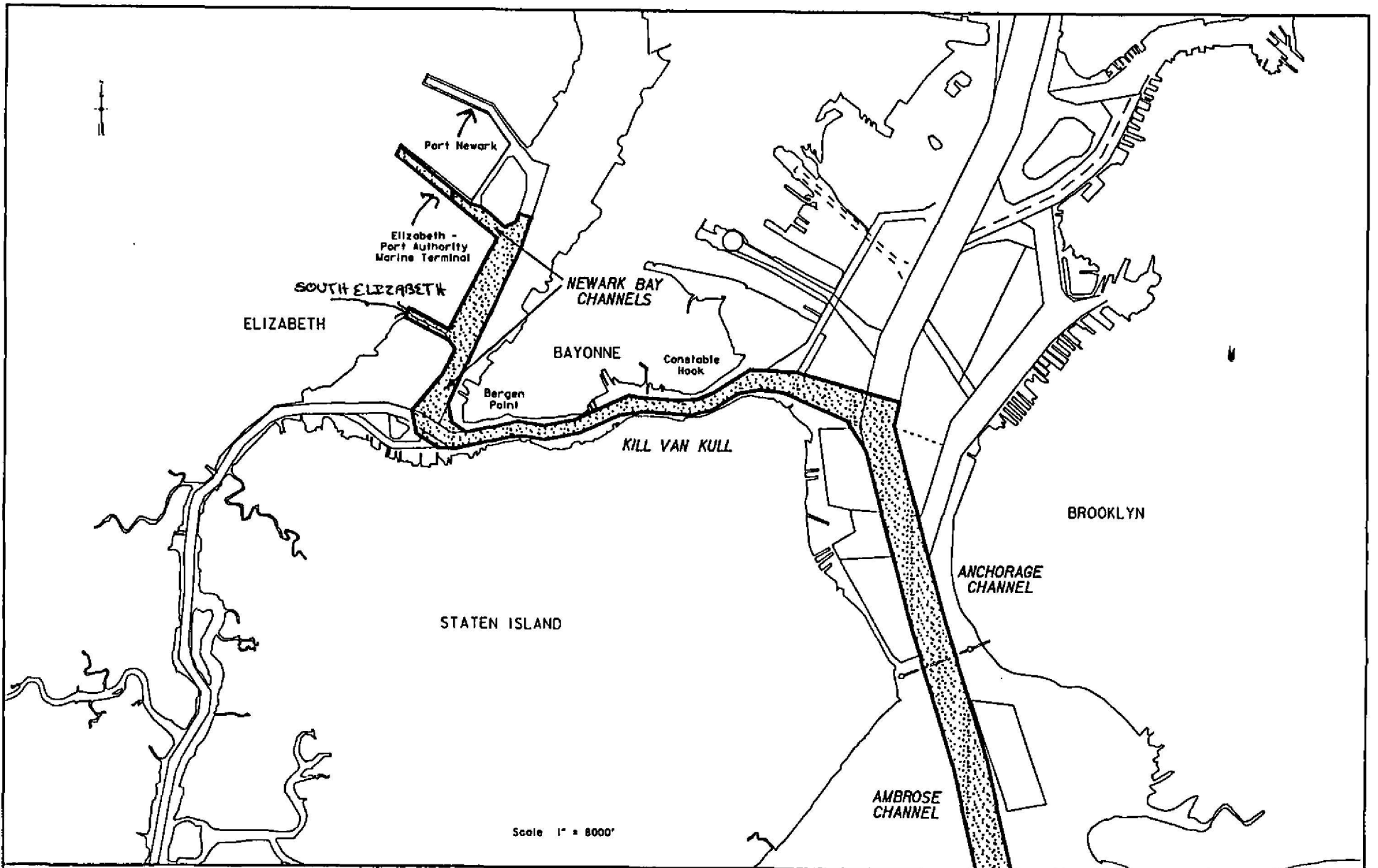
LaPorta, Sohl and Brewer 1999

Raber Associates 1997

Resources

The study by LaPorta, Sohl and Brewer indicated that areas outside of the navigation channel have a moderate potential for prehistoric resources. GRA's study agreed with the earlier findings. The Hartgen Archaeological Associates study, conducted in connection with the Newark Bay Confined Disposal Facility on the west side of Newark Bay, did not identify any resources.

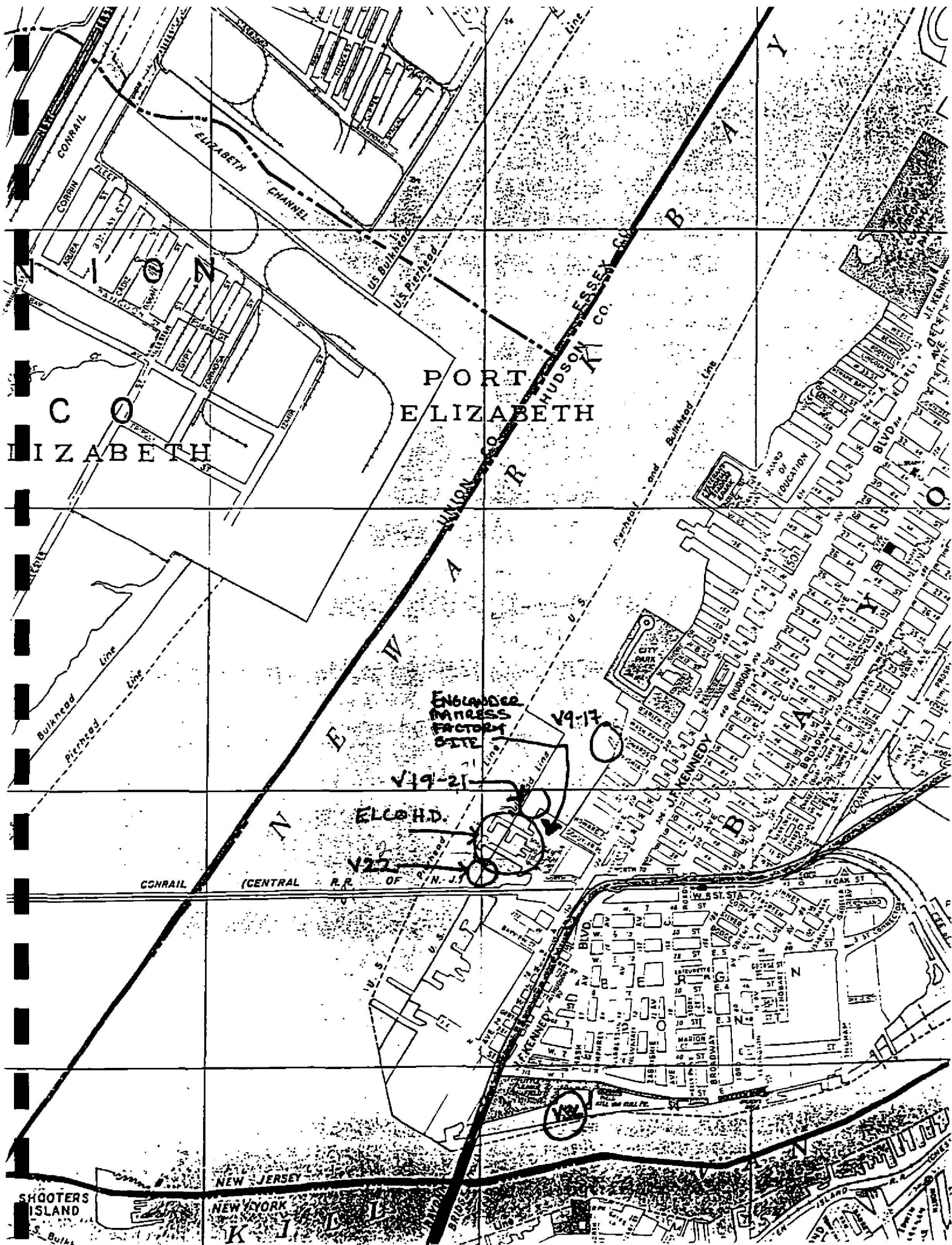
The Bayonne side of the Newark Bay was surveyed as part of the Bayonne Reach of the Collection and Removal of Drift Project. The ELCO Historic District is a NRHP listed property. The survey identified the Englander Mattress Prehistoric Site as an eligible property. A subsequent study determined that nine vessels along the Bayonne Peninsula had been incorrectly categorized as not eligible. These nine vessels underwent further evaluation and it was determined that six of them were eligible. Four of those vessels, V9, V10, V21 and V22, are located along the Bayonne shoreline of Newark Bay (Figures 17 and 18).



U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK

NEW YORK AND NEW JERSEY HARBOR
NAVIGATION STUDY
CHANNEL DESIGN APPENDIX

FIGURE 17
PATHWAY 1 IMPROVEMENTS
KILL VAN KULL, NEWARK BAY



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ENGLANDER
PRESS
FACTORY
SITE

ELCO H.D.

SHOOTERS
ISLAND

NEW JERSEY
NEW YORK

Figure 18

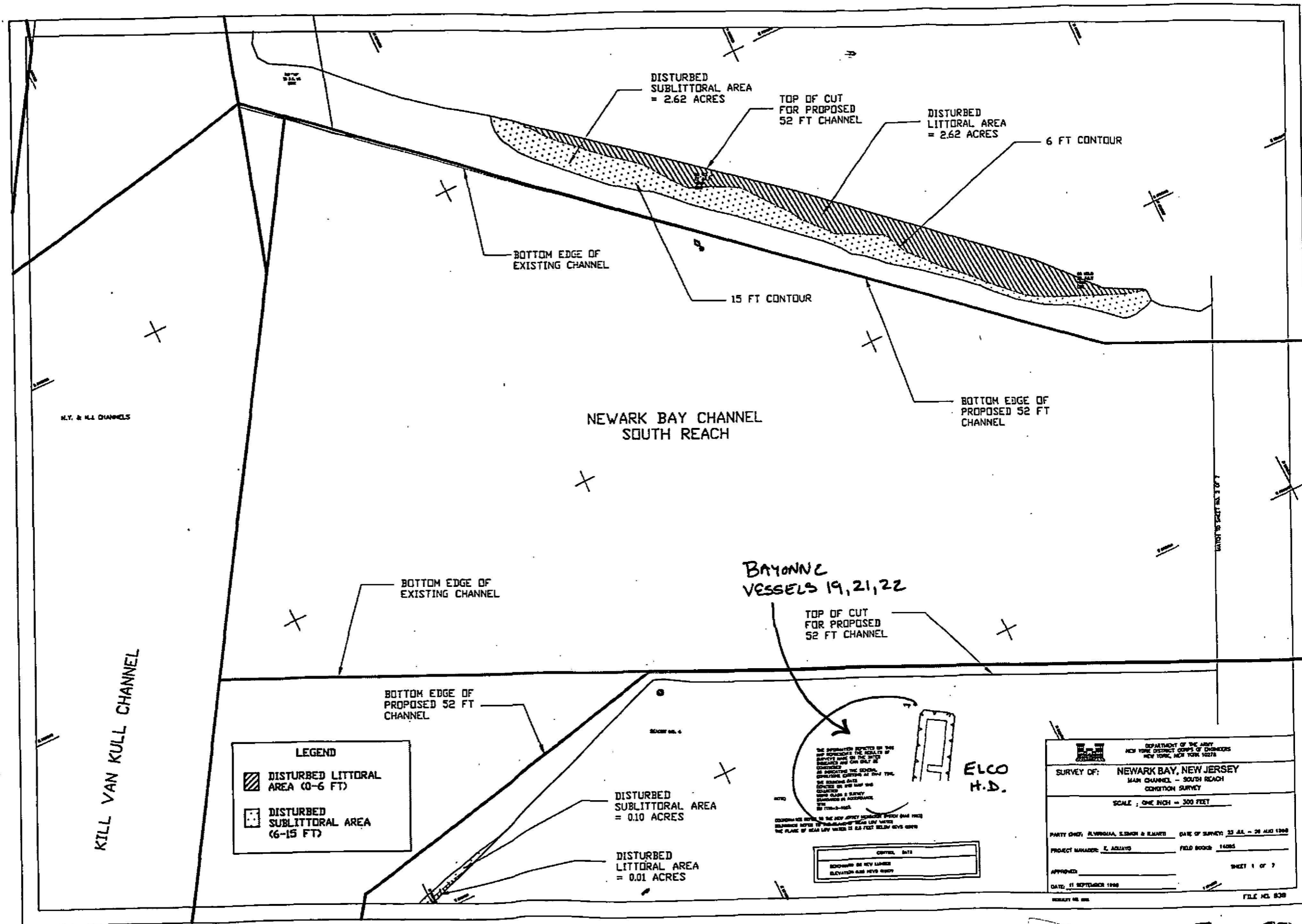


Figure 79

The existing navigation channel is not sensitive for historic resources due to past dredging activities. Submerged resources may be present adjacent to the channel.

Previous coordination

As part of coordination for the DMMP the NJHPO concurred with the Corps opinion that the undisturbed areas of Newark Bay possess moderate potential for prehistoric resources and agreed with the consultant's recommendations that additional borings be analyzed (Appendix B).

Coordination with regard to the Bayonne Reach of the Collection and Removal of Drift Removal Project has been extensive and on-going (Appendix G). A MOA was signed in 1987 outlining a mitigation plan for the Port Johnson Historic Vessels. The MOA will be amended soon to include the additional vessel in the cluster as well as the individual vessel along Bayonne that were re-evaluated and found to be eligible, including those on the Newark Bay shoreline. Coordination is on-going for the ELCO Historic District where several piers and bulkheads, which are contributing elements, are proposed to be removed. The Corps is attempting to have these items taken off of the list of removal items. If that is not possible, they will be documented prior to their removal.

Coordination was undertaken in 1996 for blasting two rock areas within Newark Bay. It was determined that no resources were present within the blast impact area (Appendix O).

Recommended Actions

Prehistoric Resources:

Borings will be excavated in the Newark Bay Channel in locations determined by a qualified geomorphologist. The retrieved sediments will undergo analysis and the results will be incorporated into the sensitivity model discussed above under Ambrose Channel -- Recommended Actions -- Prehistoric Resources.

Historic Resources:

A remote sensing survey will be undertaken which will run parallel and adjacent to the both sides of the navigation channel to identify anomalies that are potential cultural resources. Further action, if required, will follow procedures for historic resources outlined above under Ambrose Channel -- Recommended Actions. No survey work will be undertaken within the existing navigation channel.

An evaluation of impacts to NRHP resources on the Bayonne shoreline will be assessed as project plans are developed. Project plans will be developed to ensure that there are no impacts to NRHP eligible resources. If avoidance is not possible, plans will be developed to minimize impacts and mitigation measures developed under previous projects and documented through an MOA will be employed. If no MOA is in place mitigation measures will be developed.

An architectural survey of on shore structures along the Bayonne side of Newark Bay may be required if blasting is determined necessary for the removal of hard material. To

ensure that no damage occurs to significant historic structures a blast program will be developed which entails pre- and post-blast condition surveys and details precautions to be undertaken by the blasting contractor in the vicinity of historic structures. This type of activity has been previously coordinated by the USACE with both the New York and New Jersey State Historic Preservation Offices. The on shore areas on the Newark side of Newark Bay is a modern port facility and no cultural resource work will be undertaken.

8. SOUTH ELIZABETH CHANNEL

Figure 17.

State and County

New Jersey: Essex

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

none

Resources

The South Elizabeth Channel was not under consideration as part of the Harbor Navigation Study when the cultural resources work was contracted so no data was recovered from this channel.

Previous coordination

None to date.

Recommended Actions

Prehistoric Resources:

A cultural resource assessment of this channel will be undertaken which will include an examination of borings previously excavated for the Harbor Navigation Study. This work will also include an assessment on the potential for prehistoric resources and will provide recommendations for further work, if necessary.

Historic Resources:

A cultural resources assessment of this channel will be undertaken which will include an assessment on the potential for historic resources and will provide recommendations for further work, if necessary.

9. ELIZABETH CHANNEL

Figure 17.

State and County

New Jersey: Essex

Proposed Navigation Improvement Actions

Deepen

Widen

Relevant Studies

Geoarchaeology Research Associates 1999

Resources

The GRA study determined that the Elizabeth Channel has been deepened below any pre-existing Holocene deposits and has a low potential for prehistoric materials. No further work is recommended. The existing navigation channel represents a disturbed environment for historic resources and no further in-channel work will be undertaken. The surrounding environment is a modern marine and warehousing facility.

Previous coordination

None to date.

Recommended Actions

Prehistoric Resources:

No further work is recommended.

Historic Resources:

No further work is recommended.