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ENVIRONMENTAL ASSESSMENT FOR BASE CLOSURE AND REALIGNMENT OF NAVAL STATION NEW YORK AT BROOKLYN

(Brooklyn Navy Yard;
Ft. Wadsworth, R; Stapleton, R;
Floyd Bennett Field, K; Dayton Field/Manor, K)

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared for the proposed base closure and realignment of Naval Station (NAVSTA) New York at Brooklyn (hereafter referred to as NAVSTA Brooklyn). Activities will relocate to NAVSTA New York at Staten Island (hereafter referred to as NAVSTA Staten Island), with the exception of several tenant activities.

Located on an area of 34.2 acres on the site of the former Brooklyn Naval Shipyard, NAVSTA Brooklyn has approximately 802,834 square feet of enclosed space which supports the command of NAVSTA New York, nine tenant activities, and 12 units of family housing. Approximately 34% of the enclosed space is vacant, and the condition of existing structures, which date from the mid 1880s through the 1940s, has deteriorated to such an extent that to repair the facilities would cost $10.8 million (U.S. Navy, Northern Division 1989e).

The closure and realignment of NAVSTA Brooklyn was recommended by the Commission on Base Closure and Realignment. This Commission was appointed by Secretary of Defense Frank Carlucci in 1988. Its charter was to study military installations and make recommendations on ways base closure and realignment of underutilized and unnecessary installations could lead to a more effective military base structure and cost savings. The recommendations of the Commission were endorsed by Congress and legislated through the Defense Authorization Amendments and Base Closure and Realignment Act (BCRA) (P.L. 100-526). The Commission recommended that NAVSTA Brooklyn be closed and activities located there be moved to NAVSTA Staten Island, recently selected as the homeport for the Northeast Region Surface Action Group (SAG) in support of the Navy's 600-ship Strategic Homeporting Program.

Proposed construction to support the relocation of these activities will cost $75.40 million and will include the construction of the Bachelor Enlisted Quarters, Bachelor Officers Quarters, Storage Facilities, Automotive Hobby Shop, Headquarters and Administration Building, Community Facilities, Physical Fitness Center, Public Works Facilities, Police Station, Outdoor Recreation Facilities, and Navy Exchange Facilities. All of these facilities will be constructed on the Fort Wadsworth site of NAVSTA Staten Island, with the exception of the Navy Exchange Facilities and Physical Fitness Center, both of which will be constructed at the Stapleton site. Additional funds have also been programmed for relocation of certain tenant activities (Administrative Services for Supervisor of Shipbuilding, Conversion, and Repair; Administrative Services for Naval Investigative Services; Navy Motion Picture Service) and 12 units of family housing, although actual construction sites have not been determined. Ten of the housing units will be built on land yet to be acquired, and funds have been programmed for land acquisition.

Any alternative to closure and relocation of NAVSTA Brooklyn is not viable because of the congressional mandate of the project under BCRA. Alternatives for the relocation of the tenant activities located at the station are necessary because space restrictions at NAVSTA Staten Island preclude relocation of all of the tenants. Alternatives considered include the no-action alternative, relocation to other Department of Defense property, relocation to government-owned space, and relocation to commercial space.

Impacts of the proposed action on the environment are minor and primarily socioeconomic. Socioeconomic impacts will be incurred by civilian employees, largely drawn from the Brooklyn/Queens area, who will be required to commute longer distances with increased transportation costs. Tenant activities that will not relocate to NAVSTA Staten Island will have increased operating costs due to new leases on office space. In the current arrangement, tenant activities reimburse the command of NAVSTA New York for utilities, custodial and solid waste services, but are not required to rent or lease office space. After closure of NAVSTA Brooklyn and relocation of activities to NAVSTA Staten Island, the property will be disposed of by the Navy in accordance with

General Services Administration (GSA) procedures to either the government or the civilian sector. As such, reutilization of the property is not addressed by this EA. Plans for reutilization of the property will be reviewed under separate environmental documentation. Impacts to the natural environment will occur as a result of construction of facilities at NAVSTA Staten Island to support the activities of NAVSTA Brooklyn. This EA updates and summarizes these impacts, which have been documented in the Draft and Final Environmental Impact Statements for SAG Homeporting. Construction in support of SAG Homeporting is already occurring at both Stapleton and Fort Wadsworth.

Overall, the long-term impacts of relocation of NAVSTA Brooklyn to NAVSTA Staten Island will be positive. The Navy will save operating expenses of split operations, and consolidation of facilities will allow for a more efficient military operation in support of the mission of NAVSTA New York and the SAG Homeport. In addition, the vacating of property will increase the inventory of space available to federal government agencies or for sale to the civilian sector, municipal or state governments. A total of 34.2 acres of land will be made available for open space or redevelopment into public, commercial, residential, or industrial uses.

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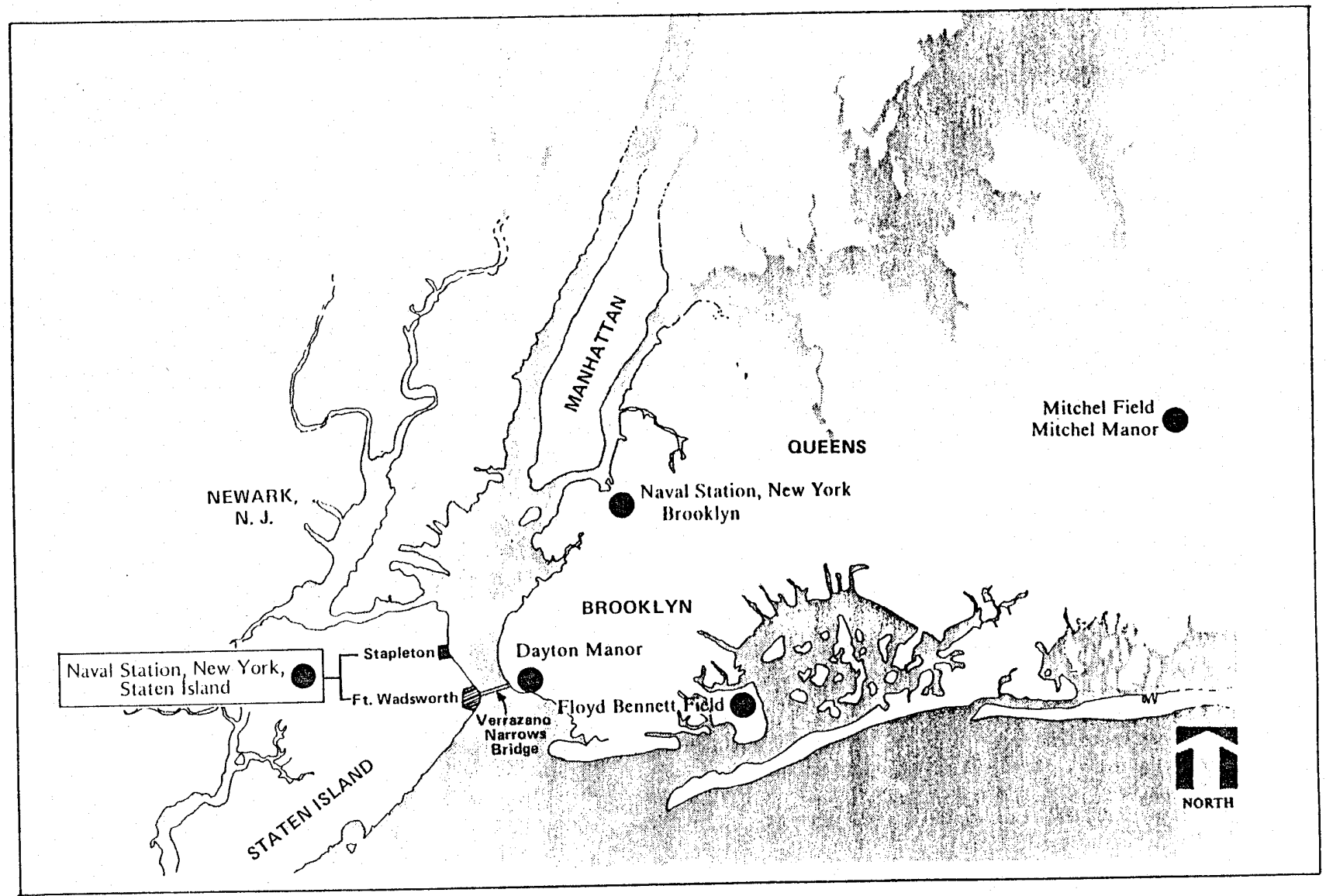
1. INTRODUCTION

This EA addresses the environmental effects of closure and realignment of NAVSTA Brooklyn. It has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality Regulations on Implementing National Environmental Policy Act Procedures (40 CFR 1500-1508), and OPNAVINST 5090.1 (Chapter 4).

Base closure and realignment of NAVSTA Brooklyn was congressionally mandated under the Defense Authorization Amendments and Base Closure and Realignment Act (P.L. 100-526). This legislation was enacted to support the recommendations of the Base Closure and Realignment Commission, which was established in 1988 by the Secretary of Defense to study military installations and make recommendations by which the Department of Defense (DOD) could attain a more effective military structure and realize cost savings through closure and realignment of unnecessary and underutilized facilities.

NAVSTA New York is comprised of five sites on Long Island and Staten Island (see Figure 1-1). The only one of these five sites recommended for closure by the Base Closure and Realignment Commission was NAVSTA Brooklyn--the main complex supporting the administrative headquarters of NAVSTA New York, as well as personnel support activities and 12 units of family housing. The other four land holdings of NAVSTA New York--including Mitchel Field/Mitchel Manor, Dayton Manor, Floyd Bennett Field, and NAVSTA Staten Island--were not identified for closure or reduction by the Commission and, thus, are not addressed under this EA except as possible relocation sites for activities of NAVSTA Brooklyn.



SOURCE: U.S. Navy, Northern Division 1989d.

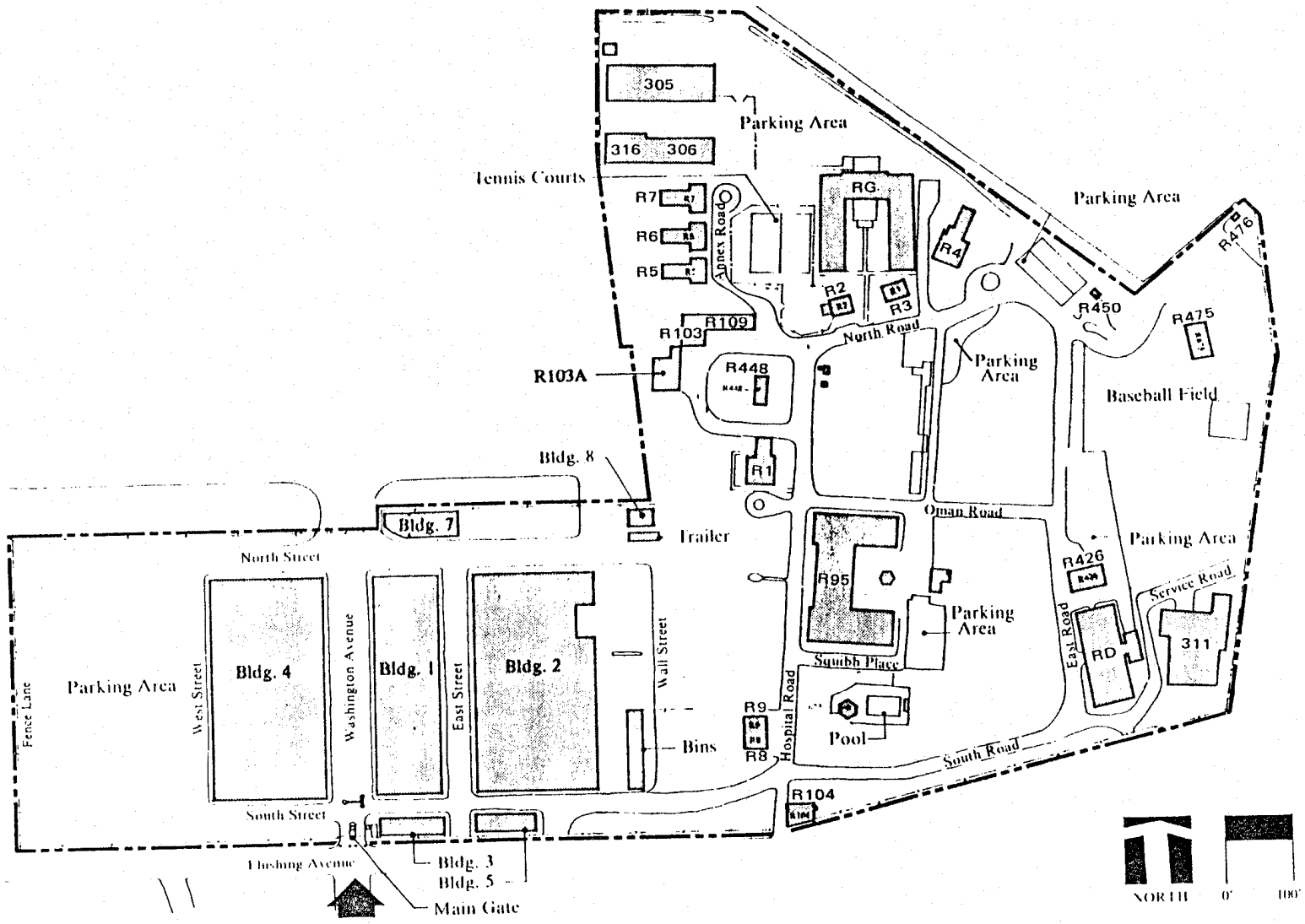
Figure 1–1 LOCATION OF NAVSTA NEW YORK FACILITIES

The Base Closure and Realignment Commission recommended that all activities of NAVSTA Brooklyn be relocated to NAVSTA Staten Island, which was selected by the Navy as the homeport for the Northeast Region Surface Action Group (SAG). The operational activities for NAVSTA Staten Island are located at the Stapleton site. Located at Stapleton will be a pier for berthing seven naval vessels, a large structure for the Shore Intermediate Maintenance Activity (SIMA), a power plant, warehouse, and several smaller waterfront support buildings. The Fort Wadsworth site of NAVSTA Staten Island was acquired from the Army for administrative, personnel support, and residential components.

The proposed action is the relocation of NAVSTA Brooklyn, including nine tenant activities, to NAVSTA Staten Island. The relocation of NAVSTA Brooklyn includes relocation of all administrative, operational, personnel support, recreational, security, and housing components. Space restrictions at NAVSTA Staten Island preclude all the tenant activities from relocating there. The proposed action for relocation of each tenant activity is discussed in Section 1.2.

1.1 BACKGROUND

Of the five sites on Long Island and Staten Island comprising NAVSTA New York (see Figure 1-1), NAVSTA Brooklyn is the main complex, supporting the administrative headquarters of NAVSTA New York as well as personnel support, recreational, security, limited operational, and housing (including 12 family housing units) functions. It consists of 34.2 acres located on the East River, north of the Brooklyn Bridge at the site of the former Brooklyn Naval Shipyard (see Figure 1-2). The main family housing area for NAVSTA New York is Mitchel Field/Mitchel Manor, located in Nassau County, Long Island. Mitchel Field consists of 48.45 acres with 111 family housing units; Mitchel Manor consists of 43 acres with 511 family housing units. The two sites are approximately two miles apart (although referred to as one complex) and are approximately 30 miles east of NAVSTA Brooklyn. Dayton Manor, an apartment complex acquired from the Army, is being renovated into 120 family housing units. It is located in Brooklyn at the foot of the Verrazano Narrows Bridge. Ten acres of Floyd Bennett Field, near a Navy and Marine Corps Reserve Center, is controlled by NAVSTA New York for family



SOURCE: U.S. Navy, Northern Division 1989d.

Figure 1–2 NAVSTA BROOKLYN SITE MAP

housing. It has 10 family housing units and space for 24 mobile home units. The latest additions to the NAVSTA New York land assets are the two sites discussed above on Staten Island that will be the center of operations for SAG when it is homeported in New York. These two sites are the Stapleton waterfront site where the pier is being constructed, and the Fort Wadsworth complex, where administrative and personnel support facilities are being constructed. Located approximately 1.5 miles apart, the Stapleton site consists of approximately 36 acres of land above water and 129 acres below water, while Fort Wadsworth consists of 226 acres of land divided by the western approach of the Verrazano Narrows Bridge.

NAVSTA New York is host command to 11 tenant activities. These include the Consolidated Civilian Personnel Office (CCPO), the Naval Dental Branch Clinic, the Naval Hospital Branch Clinic, the Naval Investigative Service Resident Agent (NISRA), the Naval Motion Picture Service (NMPS), the Personnel Support Activity Detachment (PSD), the Supervisor of Shipbuilding, Conversion, and Repair (SUPSHIPS), the Resident Officer in Charge of Construction (ROICC) at Brooklyn and Staten Island, the Naval Resale and Services Support Office Headquarters (NAVRESSO), the Armed Forces Reserve Center (AFRC) Staten Island, and the Navy Resale Activity, Mitchel Field, Mitchel Manor, Staten Island, and Brooklyn. With the exception of the ROICC at Staten Island, AFRC, NAVRESSO, and contingents of the Navy Resale Activity, these tenant activities are located at NAVSTA Brooklyn.

In 1982, the Department of the Navy initiated its Strategic Homeporting Program to disperse its planned 600-ship fleet to several strategic locations around the country. A site along the northeast coast of Staten Island, New York was selected as the homeport for the Northeast Region SAG. The operational activities for NAVSTA Staten Island are located at the Stapleton site of NAVSTA Staten Island, formerly owned by the City of New York. The Fort Wadsworth site of NAVSTA Staten Island, formerly under the jurisdiction of the Department of the Army, was acquired to support the administrative headquarters and personnel support activities of SAG. Following a study conducted from 1984 through 1986, an Environmental Impact Statement (EIS) was released which addressed environmental issues of homeporting SAG at Staten

During World War I, the Brooklyn Naval Shipyard employed over 18,000 people; however, peak employment occurred during World War II, when over 70,000 were employed and the shipyard repaired more than 5,000 ships, converted 250 others, and constructed three battleships and four aircraft carriers.

The Brooklyn Naval Shipyard was officially closed in June 1966. The piers, drydocks, and waterfront operation area were transferred to private ship-building interests. A small portion of the shipyard remained under Navy ownership as NAVSTA Brooklyn. The mission of the station has gradually changed from an operational to an administrative one. See Appendix A for a more complete history of NAVSTA Brooklyn.

The Stapleton and Fort Wadsworth sites of NAVSTA Staten Island have been acquired by the Navy for development as the homeport of the Northeast Region SAG. Stapleton was formerly owned by the City of New York and has been vacant for some years. Fort Wadsworth had been under the jurisdiction of the Department of the Army since 1794, when 24 acres of the current 226 acres was purchased. At various times through World War I, World War II, and into the 1960s, it has served as a defense site, infantry training site, anti-aircraft defense emplacement, control center for New York City's Nike defense, and site for the Missile Defense Command of the New York Metropolitan Area. In 1963, Headquarters II United States Army was established at Fort Wadsworth. By 1976, Fort Wadsworth was made a sub-installation of Fort Hamilton and served as a housing and personnel area for the Army. In 1987, Fort Wadsworth was acquired by the Navy. See Section 4.2.8 for a more complete history of NAVSTA Staten Island.

1.1.2 Mission

NAVSTA Brooklyn is the main complex of NAVSTA New York. Its primary mission has been to support naval personnel stationed in or visiting New York by coordinating communication and providing administrative; morale, welfare, and recreational; and family housing services. In addition, it is host command to several tenant activities.

Currently, all military active duty and civilian personnel at NAVSTA New York are comprised of 17 officers, 135 enlisted persons, and 326 civilians (U.S. Navy, Northern Division 1989d).

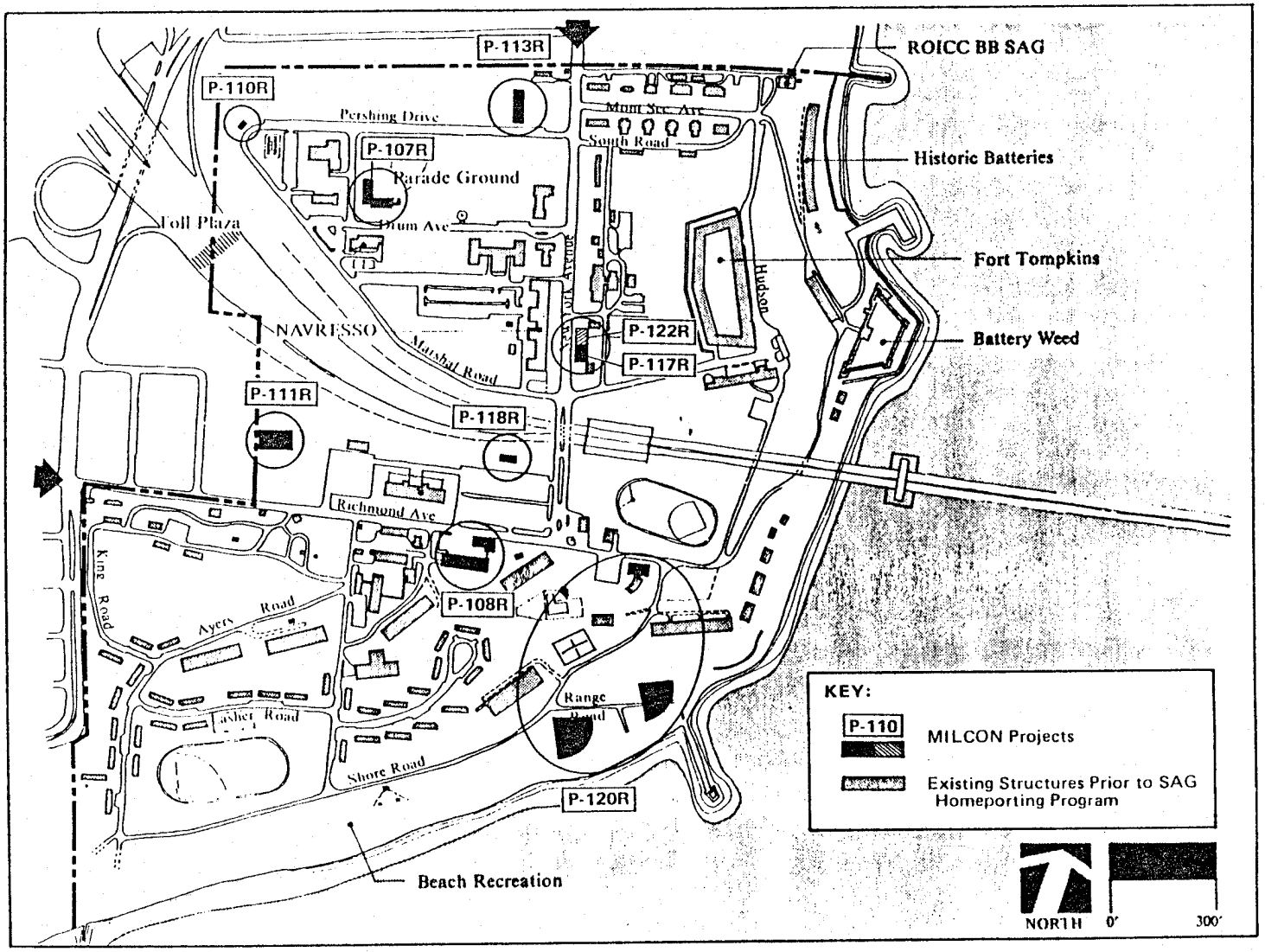
1.2 DESCRIPTION OF THE PROPOSED ACTION

In December 1988, the Commission on Base Closure and Realignment recommended the closure of NAVSTA Brooklyn "primarily because the support functions located there can be more efficiently and effectively performed at Naval Station New York (Staten Island)." The Commission recommended that all units and activities located at NAVSTA Brooklyn be relocated to NAVSTA Staten Island.

The proposed action is the relocation of units and activities at NAVSTA Brooklyn to new locations and the closure of the station. Upon relocation of naval units and activities, land and facilities at NAVSTA Brooklyn will be disposed of by the Navy in accordance with GSA procedures. As such, the proposed action to be assessed will not include the reutilization of land and facilities vacated by naval units and activities.

With the closure of NAVSTA Brooklyn, functions under NAVSTA New York are proposed for relocation to Stapleton and Fort Wadsworth. This is the proposed action as recommended by the Base Closure and Realignment Commission because of the increased activity of the SAG Homeporting Program at NAVSTA Staten Island, and the need to minimize BOS costs which would not be minimized by split operations at NAVSTA Staten Island and a second location. Thus, consolidation is the preferred action. Space restrictions at NAVSTA Staten Island, however, preclude relocation of all tenant activities. Tenant activities will either relocate to Fort Wadsworth or Stapleton, to other government-owned space, or to commercial leased space.

Functions at NAVSTA Brooklyn can be grouped into administrative, operational, personnel support, recreational, security, and housing functions. The main administrative buildings are Buildings 1 and 2, with over 240,000 square feet, or 30% of the enclosed space at NAVSTA Brooklyn. Although there are over 800,000 square feet of enclosed space at NAVSTA Brooklyn, only 6% is administrative. Operational functions, such as supply and public works storage, and maintenance functions occupy approximately 15%. Bachelor Officer Quarters (BOQ) and Bachelor Enlisted Quarters (BEQ) account for 15% of the space. Recreational uses also represent 15% of the space. Approximately 15% is occupied by



SOURCE: U.S. Navy, Northern Division 1989d.

Figure 1–3 NAVSTA STATEN ISLAND: FORT WADSWORTH SITE MAP

Military Ocean Terminal in Bayonne, New Jersey, which will also relocate to the Headquarters and Administration Building.

Naval Dental Branch Clinic. The Naval Dental Branch Clinic provides comprehensive dental service to the Navy and Marine Corps units of the operating forces, shore activities, and other authorized personnel within the geographic region of NAVSTA New York.

Plans for permanent relocation of the Naval Dental Branch Clinic have not been finalized, although the facility will likely be at Stapleton or in the immediate vicinity. An interim location has been proposed for Stapleton. Two trailers would be located near the foot of the pier, including space for four labs and support facilities.

Naval Hospital Branch Clinic. The Naval Hospital Branch Clinic provides general outpatient health-care services for active duty military personnel (including Army, Navy, Marine Corps, Air Force, and Coast Guard) and dependents, retired military personnel, and all civilian employees of any military branch in the New York City area.

The Naval Hospital Branch Clinic will relocate to a temporary facility at Stapleton. Plans for a permanent facility have not been finalized.

Naval Investigative Service Resident Agent, New York. NISRA provides investigative and counterintelligence support to the Navy and Marine Corps in New York and New Jersey. The vast majority of cases are centered in the Manhattan and Brooklyn Boroughs of New York City.

NISRA has moved to GSA-owned offices in Manhattan, which were recently vacated by the NIS Northeast Regional Office when it moved to Newport, Rhode Island. The office had recently been remodeled to conform to NIS law enforcement requirements. In addition, it provides adequate security communications and accessibility to other federal, state, and local law enforcement agencies.

When cost comparisons were made for either government-owned space or commercial leased space, NISRA had a projected annual lease cost of $185,000 for 5,180 square feet (existing square footage) at the

government-owned space (see Table 1-3). At that time, it had a projected renovation cost of $75,000 and a moving cost of $18,000 (U.S. Navy, Commander in Chief Atlantic Fleet 1989).

A small staff of NIS agents remain at NAVSTA Brooklyn. NISRA proposes to have some staff relocate to Mitchel Field and some relocate to NAVSTA Staten Island. Space for a contingent of five persons has been allocated in the Headquarters and Administration Building (MILCON P-117R) at Fort Wadsworth (see Table 1-2). At a later date, the staffs at Mitchel Field and NAVSTA Staten Island will consolidate.

Naval Motion Picture Service. The NMPS is responsible for procurement and distribution of entertainment motion pictures to the Navy, Marine Corps, Coast Guard, ships of the Military Sealift Command, designated ships of the National Oceanic and Atmospheric Administration, and Department of State Foreign Service Posts.

NMPS prefers to remain in the Queens/Brooklyn area because of access to film distribution services such a location provides. Alternatives under consideration include government-owned space in Brooklyn/Queens or commercial leased space in Brooklyn/Queens. These locations are most suitable for frequent trips to midtown Manhattan, LaGuardia and John F. Kennedy airports, and the National Film Service in Rahway, New Jersey.

For 23,500 square feet, NMPS anticipates an annual lease cost of $635,000 for either government-owned or commercial leased space (see Table 1-3). It anticipates a moving cost of $85,000, but no renovation costs (U.S. Navy, Commander in Chief Atlantic Fleet 1989).

Supervisor of Shipbuilding, Conversion, and Repair. SUPSHIPS administers shipbuilding design, conversion, and facility contracts for the Navy and other DOD activities. It also is responsible for procurement and administration of overhauls, repairs, alterations, and inactivations performed on naval ships at private yards.

SUPSHIPS is the major tenant activity at NAVSTA Brooklyn, occupying 8% of the enclosed space. It also employs the largest number of civilian personnel, or 25% of the civilians at NAVSTA Brooklyn.

Table 1-3

COST COMPARISONS FOR RELOCATION ALTERNATIVES

Tenant	Alternative 1					Alternative 2				
	Moving Cost ($)	Annual Lease Cost ($)	Renovation Cost ($)	Location	Square Footage	Moving Cost ($)	Annual Lease Cost ($)	Renovation Cost ($)	Location	Square Footage
NMPS										
FY90	85,000	635,000	0	GSA - Brooklyn/Queens	23,500	85,000	635,000	0	Commercial - Brooklyn/Queens	23,500
FY91	0	635,000	0			0	635,000	0		
NISRA										
FY90	18,000	185,000	75,000	Church St., Manhattan	5,180	18,000	165,000	0	GSA - Greater NY Area	5,000
FY91	0	185,000	0			0	165,000	0		
SUPSHIPS										
FY90	150,000	672,000	0	Pouch Terminal	36,000	150,000	792,000	0	GSA - Greater NY Area	36,000
FY91	0	672,000	0			0	792,000	0		

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Source: U.S. Navy, Commander in Chief Atlantic Fleet 1989.

Plans for relocation have not been finalized. SUPSHIPS prefers to relocate near Fort Wadsworth and Stapleton because of a projected increased work load associated with homeporting. However, adequate space at Fort Wadsworth or Stapleton is not available. SUPSHIPS has identified suitable commercial leased space at One Edgewater Plaza (Pouch Terminal), which is located near Stapleton. Alternatively, government-owned space or other commercial leased space will be considered.

For 36,000 square feet at Pouch Terminal, SUPSHIPS anticipates an annual lease cost of $672,000, compared to an annual lease cost of $792,000 for the same amount of government-owned space (see Table 1-3). For either alternative, a moving cost of $150,000 is anticipated (U.S. Navy, Commander in Chief Atlantic Fleet 1989).

Naval Resale and Services Support Office, Resale Activity. The Navy Resale Activity at NAVSTA Brooklyn consists of a retail and package store, and uniform shop. It provides goods and services at a savings to active duty military personnel and reservists, and their dependents, retired military personnel, and disabled veterans.

Navy Exchange Facilities are proposed for construction at Stapleton (P-115R). These facilities will be designed to serve the increased personnel as a result of SAG Homeporting and the realignment of activities due to closure of NAVSTA Brooklyn. The facilities will include a retail store, cafeteria, service outlets, an exchange, and a warehouse.

1.3 PURPOSE AND NEED FOR THE PROJECT

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations on Implementing National Environmental Policy Act Procedures and with OPNAVINST 5090.1, Navy Environmental and Natural Resources Protection Manual (Chapter 4).

The purpose and need for the project is to comply with the Report of the Defense Secretary's Commission on Base Closure and Realignment. It was endorsed by Congress, with recommendations legislated under BCRA.

The Commission recommended that NAVSTA Brooklyn be closed, primarily because the support functions located there would be more effectively performed at NAVSTA Staten Island, site of the SAG Homeport. The Commission estimated annual savings of $4.2 million would be realized over the cost of split operations.

2. ALTERNATIVES TO THE PROPOSED ACTION

This section presents alternatives to the proposed action. These include the no-action alternative, relocation to other DOD property, relocation to other government-owned space, and relocation to commercial space (see Table 2-1).

2.1 THE NO-ACTION ALTERNATIVE

Under the no-action alternative, administrative functions of NAVSTA New York would remain at NAVSTA Brooklyn. In addition, NAVSTA Brooklyn would continue to support the tenant activities located there. This is not a feasible alternative because BCRA has mandated that NAVSTA Brooklyn be closed and all units and activities be relocated to NAVSTA Staten Island.

An economic analysis was conducted on the cost of split operations, and the total cash flow over 20 years was projected to be $130.5 million. Based on the annual inspection survey of NAVSTA Brooklyn, repairs to maintain Buildings 1 and 2 in a state of usable condition for conducting administrative functions would cost $7.4 million. Other non-recurring maintenance and repair work would cost $3.4 million. Recurring costs would include custodial costs for Buildings 1 and 2, utility costs, trash removal, in-house maintenance work, recurring elevator repair, other recurring repairs, and groundskeeping costs, totaling $635,556 annually. A maintenance staff of 20 persons would be required, at a cost of $1 million annually (U.S. Navy, Northern Division 1989e).

Costs for providing personnel services at NAVSTA Brooklyn would total $3.9 million annually. These services would be duplicate services to those at NAVSTA Staten Island which would be necessary to support homeporting personnel. The $3.9 million figure includes utility,

Table 2-1

ALTERNATIVES FOR NAVSTA BROOKLYN AND TENANT ACTIVITIES

NAVSTA Brooklyn/ Tenant Activity	ALTERNATIVES				
	No Action	Relocation to DOD Property	Relocation to Government-Owned Space	Relocation to Commercial Space	Temporary Relocation
NAVSTA Brooklyn	--	X	--	--	--
CCPO	--	X	--	--	--
Dental Branch Clinic	--	--	--	--	X
Hospital Branch Clinic	--	--	--	--	X
NISRA	--	X*	X	--	--
NMPS	--	--	O	O	--
PSD	--	X	--	--	--
SUPSHIPS	--	X*	O	O	--
ROICC	--	X	--	--	--
Navy Resale Activity	--	X	--	--	--

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*Small detachments

O - Possible alternatives
X - Proposed action

Source: Ecology and Environment, Inc. 1989.

operating, and personnel costs for Bachelor Enlisted Quarters, Bachelor Officer Quarters, dining facilities, security, communications, and morale, welfare, and recreation services. A shuttle bus routed between NAVSTA Staten Island and NAVSTA Brooklyn would cost $131,136 annually (U.S. Navy, Northern Division 1989e).

The Commission on Base Closure and Realignment made the determination that NAVSTA Brooklyn should consolidate with NAVSTA Staten Island. NAVSTA Brooklyn has been selected for closure, and a no-action alternative cannot be considered since the closure has been congressionally legislated.

Relocation of tenant activities is assumed under the closure and relocation action of NAVSTA Brooklyn. Any plans to remain within the facilities of NAVSTA Brooklyn after closure of the station is considered to be in violation of the intent of the Base Closure and Realignment Commission (Hocking 1989).

2.2 RELOCATION TO OTHER DEPARTMENT OF DEFENSE PROPERTY

The principal DOD property proposed for relocation of tenant activities is NAVSTA Staten Island. This alternative is the proposed action, described in detail in Section 1.2. Limited space, however, precludes relocation of all tenant activities to NAVSTA Staten Island, at either Fort Wadsworth or Stapleton.

Under the current proposal for relocation, three tenant activities will be relocated to the Headquarters and Administration Building (P-117R), proposed for construction at Fort Wadsworth to support the administrative functions of NAVSTA New York. These three tenants are the CCPO, the PSD, and the ROICC. In addition, detachments of SUPSHIPS and NISRA will relocate to the Headquarters and Administration Building. Most of the staff for these tenant activities, however, will relocate elsewhere.

Operations of the Navy Resale Activity will relocate to Stapleton, where new construction is proposed (P-115R) and to existing facilities at Fort Wadsworth.

Other property under the command of NAVSTA New York includes Mitchel Field, Mitchel Manor, Dayton Manor, and Floyd Bennett Field. Relocation of NAVSTA New York or tenant activities to these properties

is not viable. The principal usage of these properties is family housing. Since only 14% of military personnel living at Mitchel Field/ Mitchel Manor work at either NAVSTA Brooklyn or NAVSTA Staten Island, the Navy is considering transfer of these properties to the Army or DOD (U.S. Navy, Northern Division 1989d). Dayton Manor is a former Army apartment complex recently acquired from GSA for renovation into 120 family housing units. Space is not available at these facilities for relocation of any of the activities. (NISRA, however, will relocate a small contingent of its staff to Mitchel Field, where a day office is currently maintained.) In addition, the Navy plans to consolidate its activities to one geographical area (U.S. Navy, Northern Division 1989d), and relocation of NAVSTA Brooklyn to any other land holdings would necessitate split operations.

Other DOD installations considered by the remaining tenants are not viable because of the need for new construction or extensive rehabilitation; another problem is the distance to operational areas. The NMPS, for example, makes frequent trips to midtown Manhattan and John F. Kennedy and LaGuardia Airports. SUPSHIPS would prefer to be near Fort Wadsworth and Stapleton due to increased activity associated with the homeported vessels.

The Military Ocean Terminal at Bayonne, New Jersey (MOTBY) has been considered for storage space. It has warehouse space but no office space available (Roundtree 1989). Vacant space is available in four buildings (Buildings 13, 14, 15A, and 34). All of the buildings except Building 15A are considered structurally sound, although all contain asbestos material. Buildings 13 and 14 have 121,355 square feet each of warehouse space available. Building 34 has 80,944 square feet of warehouse space available (Roundtree 1989).

The Navy had considered transferring land to the Coast Guard in exchange for Coast Guard property at Rosebank located approximately 0.5 mile north of Fort Wadsworth on Bay Street. This would provide family housing for officers quarters being vacated at NAVSTA New York at Brooklyn. The Coast Guard, however, has decided to retain Rosebank (Drozd 1989).

2.3 RELOCATION TO GOVERNMENT-OWNED SPACE

The GSA has the authority to assign government-owned space in Standard Metropolitan Statistical Areas. The Navy submits a space request to GSA and, upon provision of space, pays GSA a standard-level user charge out of the DOD Federal Building Fund. The individual command will have to pay the GSA until the Federal Building Fund Administrator requests appropriations from Congress for the additional space (Digiamarino 1989).

Relocation of NAVSTA Brooklyn to government-owned space is not the preferred alternative primarily because of the Navy's intent to consolidate facilities. However, due to the space restrictions at NAVSTA Staten Island, some limited use of government-owned space may be investigated. Currently, however, GSA has limited space available.

The GSA owns 18 buildings in New York City, primarily in Manhattan. Of a total of 6,351,003 square feet, only 20,777 square feet is on Staten Island (SUPSHIPS' preferred location), and a total of 2,734,643 is in Brooklyn and Queens (NMPS's preferred location) (GSA 1989). GSA has a very large demand for space, and, presently, vacant space is not available. Although over 50% of the space in Brooklyn and Queens is located within a vacant two-warehouse complex at 29th Street and 3rd Avenue, it is considered substandard warehouse space (Matthews 1989).

NISRA has relocated to government-owned space in Manhattan. Formerly occupied by the NIS Northeast Regional Office, this space has recently been vacated.

2.4 RELOCATION TO COMMERCIAL SPACE

The GSA has the authority to lease space on the open market for other government agencies within a Standard Metropolitan Statistical Area. After the Navy submits a space request to the GSA for a specific geographic area, the GSA conducts a market survey and selects several properties as candidates. A solicitation for offer is prepared by GSA, to which property owners respond with a price and some negotiable items, such as renovation work. The GSA reviews these offers on the basis of cost, quality, and suitability and makes a final selection. The GSA may also backfill leased space which has been vacated but on which GSA may still hold a contract (Digiamarino 1989).

For this alternative, as well as government-owned space, the naval command must request funds from the Federal Building Fund to reimburse GSA for the leased arrangement.

Currently, GSA manages 26 active leases in Manhattan, three active leases in Staten Island, 16 active leases in Queens, 15 active leases in Brooklyn, and 10 active leases in Bronx (GSA 1989).

SUPSHIPS and NMPS are considering this alternative. Both are in the process of negotiations with GSA. SUPSHIPS has identified suitable leased space on Staten Island, near Stapleton. NMPS prefers space in Brooklyn or Queens, but space has not been identified.

The average asking price for storage/office space on Staten Island is $26.44 per square foot for SUPSHIPS' space requirement of 36,000 square feet, based on lease space listed with the New York City Office of Business Development (see Table 2-2). For a space requirement of 23,500 square feet for NMPS, space in Brooklyn and Queens has an average asking price of $15.25 and $22.98 per square foot, respectively (see Table 2-2).

Eight properties in this listing had space on Staten Island in the 35,000 to 40,000 square-foot range. Nine properties in Brooklyn and nine properties in Queens were listed for the 5,000 to 6,000 square-foot range (New York City Office of Business Development 1989).

2.5 TEMPORARY RELOCATION

Relocation of NAVSTA Brooklyn to temporary facilities was considered in the economic analysis for consolidating Navy facilities. The total cash flow over 20 years was estimated to be $34 million for temporary facilities on Staten Island (U.S. Navy, Northern Division 1989e). This alternative would be more costly than the proposed action since permanent facilities will eventually have to be found.

This alternative would also be costly for tenant activities since permanent facilities will eventually have to be found. However, the Naval Dental Branch Clinic and Naval Hospital Branch Clinic are both being considered for temporary relocation. They will be located at Stapleton.

Table 2-2

AVERAGE ASKING PRICE FOR COMMERCIAL LEASED SPACE
(Dollars per square foot)

Space Requirement	Commercial Space (square feet)	Location							
		Manhattan							
		Midtown West	Midtown East	Downtown	North Manhattan	Brooklyn	Queens	Staten Island	Bronx
NISRA 5,000 S.F.	5,000 - 6,000	14.69	17.16	17.75	15.83	12.61	20.17	19.31	7.00*
NMPS 23,500 S.F.	20,000 - 25,000	14.54	15.39	19.42	NL	15.25	22.98	23.60	12.00*
SUPSHIPS 36,000 S.F.	35,000 - 40,000	14.83	23.93	22.00*	14.00*	12.50	22.00	26.44	14.25*

[MP]NR8900:D2694, #1803, PM=18

*Based on one or two listings.
NL - No listing.

Source: New York City Office of Business Development 1989.

3. RELATIONSHIP OF THE PROPOSED ACTION TO FEDERAL, STATE, AND LOCAL PLANS, POLICIES, AND CONTROLS

The closure and realignment of NAVSTA Brooklyn is guided by the Base Closure and Realignment Act of 1988 (10 USC 2687). Other federal regulations applicable to the proposed action include:

- o National Environmental Policy Act of 1969;
- o Federal Water Pollution Control Act Amendments of 1972, as amended by the 1977 Clean Water Act;
- o Fish and Wildlife Coordination Act;
- o Endangered Species Act of 1973;
- o Clean Air Act Amendments of 1977;
- o National Historic Preservation Act of 1966;
- o Coastal Zone Management Act of 1972;
- o Executive Orders 11988, Floodplains Management, and 11990, Protection of Wetlands of 1977; and
- o Executive Order 12372, Navy guidance provided by OPNAVINST.

The project is consistent with Navy policies, federal, state and local regulations, and local land-use plans. Under BCRA, the Secretary of Defense is responsible for implementing the base closure and realignment decisions. After closure of NAVSTA Brooklyn and relocation of activities, the property will be disposed of by the Navy in accordance with GSA procedures. Appropriate environmental documentation will be prepared prior to disposal of the property.

An EIS was prepared in 1984 and addressed development of Stapleton and Fort Wadsworth for the SAG Homeporting Program. Since these

analyses were conducted for all of the SAG facilities, the EIS can be considered relevant to new construction at Stapleton and Fort Wadsworth funded to support the base closure and realignment. The development of Staten Island at the Stapleton and Fort Wadsworth sites was considered consistent with Navy policies, federal, state, and local regulations, and local land use plans. Any changes to that assessment have been noted in this EA.

As stated in Section 1, this EA has been prepared, and will be reviewed, in accordance with the regulatory requirements set forth by the CEQ on implementing NEPA (1969), and OPNAVINST 5090.1 (Chapter 4).

Base closure and realignment will present no conflict with the provisions of the Clean Air Act, Clean Water Act, Coastal Zone Management Act, Executive Order 11988 (Floodplains Management) and 11990 (Protection of Wetlands), or the Endangered Species Act. In compliance with the Endangered Species Act, appropriate agencies were contacted regarding the potential for rare vegetation and/or wildlife species to exist at NAVSTA Brooklyn as well as NAVSTA Staten Island. Such species do not exist at either station.

In compliance with the National Historic Preservation Act, a cultural resource survey has been conducted to determine whether any structure or cultural resource site is eligible for placement on the National Register of Historic Places (NRHP). Two structures, the former Naval Hospital (Building R-95) and the Admiral's Quarters (Building R-1), are eligible for the NRHP; both are designated New York City Historical Landmarks. Closure will not impact any cultural resources. The Navy will ensure that the structures are maintained and protected against vandalism and deterioration until disposal of the property occurs. At that time, separate environmental documentation will be prepared on the possible impacts to these cultural resources.

NAVSTA Brooklyn is a small quantity generator of hazardous waste, which is disposed of through the Defense Revitalization and Marketing Office and/or vendor contracts. The station has a temporary hazardous waste storage area with no waste held for more than 90 days, per federal and state hazardous waste management regulations.

The Naval Energy and Environmental Support Activity (NEESA) conducted a Preliminary Assessment Report for NAVSTA Brooklyn in December 1987 to determine if hazardous waste disposal sites were present on site. The study concluded that there are no sites present at the station. Therefore no further installation restoration studies are planned.

A hazardous waste and asbestos survey as well as necessary removal and isolation will be conducted prior to transfer or sale of the property as required by Section 120(h) of the Superfund Amendments and Reauthorization Act (SARA) which states that "all remedial action necessary to protect human health and the environment with respect to any substance remaining on the property will be taken before the date of such transfer."

Underground storage tanks (USTs) will be upgraded or removed per the regulations of the Resource Conservation and Recovery Act (40 CFR 280). All but four of the USTs are in the process of being removed. The remaining four are in service, but will be removed upon base closure (Helland 1989). Release detection systems are not required until 1990 for two of the tanks and until 1992 for the other two (42 USC 6991). The tanks in service have been tested for leaks, and a tank test form and tightness form will be submitted to NYSDEC (6 NYCRR 613.5) by the Fall 1990.

Aboveground storage tanks will be taken out of service in accordance with the requirements of the New York State Department of Environmental Conservation regulations 6 NYCRR Part 613 (Handling and Storage of Petroleum), 6 NYCRR Part 612 (Registration of Petroleum Bulk Storage Facilities) and 6 NYCRR Part 614 (Standards for New and Substantially Modified Petroleum Storage Facilities). Tanks temporarily taken out of service are also subject to the requirements of 6 NYCRR Parts 612 and 613. Minimum requirements for the closure of storage tanks include the removal of the petroleum product and vapor, and the capping of all lines to prevent unauthorized use. Tanks may be reused if they meet the standards for new tanks after thorough cleaning and inspection. Tanks to be removed or demolished must be retested for vapors, rendered vapor-free, and punched with holes. Soil and asphalt samples should be taken near each tank to be removed to determine if any contamination from spills

has occurred. Contaminated material will be removed and properly disposed of. Concrete pad stains shall be removed and the wash disposed of as a hazardous waste.

NAVSTA Brooklyn has conducted an inventory of PCBs on site and will continue to inspect PCB equipment until excessing actions are complete. All items (i.e., transformers) containing 50 ppm or more PCBs will be removed and disposed of in accordance with the federal Toxic Substances Control Act. Any in-use (energized) PCB transformers, capacitors, or other electrical equipment may be left in use at the time of transfer to a new owner, provided the equipment use is allowed by federal regulations at the time of transfer. This equipment will be clearly labeled.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

The existing environment is described separately for NAVSTA Brooklyn (Section 4.1) and NAVSTA Staten Island (Section 4.2).

4.1 NAVSTA BROOKLYN

4.1.1 Topography, Geology, and Soils

The Borough of Brooklyn, at the western edge of Long Island, is located in the Atlantic Coastal Plain physiographic province and is separated from the mainland on the north by Long Island Sound and from Manhattan by the East River and New York Harbor. This province is characterized by very flat topography and often swampy conditions. The bedrock units of Long Island consist mainly of the Raritan and Magothy Formations of the Upper Cretaceous Period. These formations are coastal plain deposits made up of gravel, sand, silt, and clay laid down by streams flowing into the marshes, swamps, and estuaries of the coastal area. These sedimentary rocks dip gently to the west and range in thickness from 95 to 1,900 feet (Schuberth 1968).

The natural soils of Long Island consist mostly of freely drained soils with acidic parent materials. These soils formed in moderately or weakly consolidated sedimentary or metamorphic rocks or acid sediment (United States Department of Agriculture 1975). Before construction of the Brooklyn Naval Shipyard, the area consisted of a broad tidal flat and marsh, with sediments consisting of organic-rich silts and clays with stringers of sand or gravel associated with shallow tidal channels. Any natural soils that formed in these deposits have been intensely altered by repeated construction and demolition in the area beginning in the mid- to late 1800s. Since this time, development of the Brooklyn Naval Shipyard has involved substantial filling and dredging within the

tidal bay area and the construction and demolition of numerous structures on the same land (Church and Rutsch 1982).

4.1.2 Climate and Air Quality

The climate of the New York City area and the air quality near NAVSTA Brooklyn are described herein.

4.1.2.1 Regional Climate

The climate of the New York City metropolitan area is classified as humid continental, but is modified appreciably by the Atlantic Ocean and the local urban "heat-island" factor. The "humid" designation refers to the abundant precipitation, while the "continental" term reflects a large distinction between seasons.

Average temperatures in winter fall near the freezing mark in January and February, with about 20 days remaining below freezing in the average winter. Winter precipitation is moderate and results mainly from coastal storms that affect the metropolitan area a few times each month. Winds are fairly brisk in winter, with the prevailing winds from the west or northwest. Average wind speeds are near 12 mph, with gales expected once or twice each month. Coastal storms or "northeasters" can bring exceedingly high winds from the northeast. Air stagnation episodes are very rare in winter due to good ventilation.

Summer is typified by hazy, sultry, warm and humid conditions. Rainfall is infrequent and results primarily from thunderstorms that can be expected more or less weekly. Temperatures exceed the 90-degree mark about 15 days each summer. Air stagnation episodes can occur under these conditions, and ozone, in particular, can become a problem. These spells seldom last longer than a week and are usually broken by thunderstorms and cold fronts from the northwest.

Wind speed is relatively high in this area, especially in winter. The prevailing direction is from the northwest in winter and the southwest in summer, although sea breezes from the south and southeast are common in late spring and early summer. These result in low level inversions and can trap pollutants--primarily during midday and afternoon hours. Soil moisture surpluses can be expected in winter and spring, but deficits are evident in most years from mid-July through

October. Annual runoff averages about 15 inches in the area, with greatest amounts from late winter through mid-spring. Ground frost level is slight, with maximum depths seldom more than 18 inches. Soils often remain unfrozen, even in midwinter. Sunshine in the area is relatively abundant, ranging from about 50% of the possible amount in early winter to about 65% in summer. Table 4-1 consists of relevant climatic parameters for the project area.

4.1.2.2 Existing Air Quality

NAVSTA Brooklyn is within New York's Metropolitan Air Quality Control Region (AQCR). This region includes Rockland, Westchester, Nassau, and Suffolk counties, as well as the five boroughs of New York City. Since 1987, air quality monitoring data have been collected from a total of 22 stations within this region. Seven stations provide data which can be considered representative of air quality at NAVSTA Brooklyn: four air monitoring sites in Brooklyn (Greenpoint, Sheepshead Bay, PS 314, and PS 321); two lower Manhattan sites; and one Bronx site. These stations cover all criteria air quality parameters and reflect data from 1987, the latest year for which complete data is available. The region currently is considered a non-attainment area for carbon monoxide (CO) and ozone (O_3) and considered an attainment area for all other National Ambient Air Quality Standards (NAAQS) compounds (i.e., SO_2, NO_x, TSP, PM_{10} and Pb) (Fram 1989). Table 4-2 summarizes the air quality data for representative stations near NAVSTA Brooklyn and includes a comparison with State and National Ambient Air Quality Standards.

As Table 4-2 shows, carbon monoxide levels exceeded the standards on 26 occasions in 1987. Carbon monoxide levels vary markedly with location because they are highly dependent upon proximity to major highways and congested intersections. Ozone levels also exceeded the standards several times, a fact attributable primarily to hydrocarbon and NO_2 emissions and their subsequent atmospheric reactions. All other data recorded in 1987 from representative stations show NAVSTA Brooklyn to be in continued compliance with all other criteria pollutant standards.

Table 4-1

CLIMATOLOGICAL DATA
BROOKLYN/STATEN ISLAND, NEW YORK

	Temp. °F						Wind	
Month	Avg. Max.	Avg. Min.	Precip.*	Days	Snow*	% Sun	Prevail. Dir.	Avg. Speed**
Jan.	38	26	3.0	11	7.5	50	NW	13.6
Feb.	39	27	3.2	10	8.5	55	NW	13.7
Mar.	48	35	4.1	11	4.4	57	NW	14.0
Apr.	60	44	3.8	11	0.6	59	NW	13.1
May	70	53	3.5	12	--	61	SW	11.6
Jun.	79	62	3.2	10	--	64	S	11.0
Jul.	84	68	3.7	10	--	65	S	10.4
Aug.	83	67	4.2	9	--	64	SW	10.3
Sep.	75	61	3.5	8	--	62	SW	10.6
Oct.	65	51	3.1	8	--	61	SW	11.2
Nov.	53	40	3.7	10	0.4	52	W	12.5
Dec.	42	30	3.6	11	5.0	49	W	13.2
Annual	54.2°		42.6	121	26.4	58%	SW	12.1

[MP]NR8900:D2694, #1771, PM=19

*Inches
**Miles per hour

Source: National Oceanic and Atmospheric Administration, National Climatic Center 1987. Data interpolated for project location.

Table 4-2

AMBIENT AIR QUALITY LEVELS AND STANDARDS

Criteria Pollutant	Site Name & Number		Concentrations				
			Annual	24-hr.	8-hr.	3-hr.	1-hr.
TSP[A]	*Brooklyn - Greenpoint	7095-01	73	138	--	--	--
	*Brooklyn - Sheepshead	7095-03	52	108	--	--	--
	*Brooklyn - PS 321	7095-06	57	129	--	--	--
	**Staten Island - Wagner HS	7097-01	44	119	--	--	--
	**Staten Island - PS 26	7097-02	64	128	--	--	--
	N.Y. STANDARD		65	250	--	--	--
	U.S. STANDARD		75	260	--	--	--
			60[C]	150[C]	--	--	--
PM-10[A]	*Brooklyn - PS 314	7095-07	40	77	--	--	--
	***Manhattan - Lower	7093-08	31	81	--	--	--
	U.S. & N.Y. STANDARD		50	150	--	--	--
SO_2[A]	*Brooklyn	7095-01	41.6	161.2	--	278.2	--
	*Brooklyn	7095-06	39	140.4	--	257.4	--
	**Staten Island	7097-01	28.6	122.2	--	205.4	--
	U.S. & N.Y. STANDARD		80	365	--	1,300[C]	--
CO[B]	***Brooklyn	7095-06	--	--	4.8	--	7.8
	*Brooklyn - Flatbush Ave.	8100-03	--	--	12.4[D]	--	22.3
	U.S. & N.Y. STANDARD				9.0		35.0
NO_x[B]	*Bronx - PS 2	7094-04	.038	--	--	--	--
	***Lower Manhattan	7093-05	.043	--	--	--	--
	U.S. & N.Y. STANDARD		.05	--	--	--	--

[MP]NR8900:D2694, #1772, PM=6

Table 4-2 (Cont.)

Criteria Pollutant	Site Name & Number		Concentrations Annual	24 hr.	8 hr.	3 hr.	1 hr.
O_3 [B]	*Brooklyn	7095-03	--	--	--	--	.216[E]
	**Staten Island	7097-01	--	--	--	--	.294[F]
	U.S. & N.Y. STANDARD		--	--	--	--	.12
Pb[A]	*Brooklyn	7095-01	.11[G]	--	--	--	--
	**Staten Island	7097-04	.07	--	--	--	--
	U.S. & N.Y. STANDARD		1.5	--	--	--	--

[MP]NR8900:D2694, #1772, PM=6

*Representative of NAVSTA Brooklyn
**Representative of NAVSTA Staten Island
***Representative of NAVSTA Brooklyn and NAVSTA Staten Island

A - $\mu g/m^3$
B - ppm
C - Secondary Standards
D - CO standard of 9.0 ppm for an 8-hour period exceeded 26 times in 1987
E - Ozone standard of .12 ppm exceeded on average of 3.5 days/yr
F - Ozone standard of .12 ppm exceeded on average of 6.6 days/yr
G - Quarterly averages

Sources: NYSDEC 1987; Code of Federal Regulations, Title 40, Subchapter C, Parts 50 and 51; Official Codes, Rules, and Regulations of New York: Title 6, Chapter 3, Air Resources, Subchapter B, Parts 256 and 257.

4.1.3 Hydrology and Water Quality

NAVSTA Brooklyn is located in the Atlantic Ocean--Long Island Sound drainage basin, which drains an area of 1,406 square miles. This basin has poor water quality throughout, with especially poor quality in the New York City metropolitan area (NYSDEC 1988). The water is characterized by low dissolved oxygen, high bacterial coliform concentrations, isolated thermal pollution, and high levels of heavy metals, oil, and grease. NAVSTA Brooklyn is located approximately 1,000 feet east of the East River, which is a major river within the Atlantic Ocean--Long Island Sound drainage basin. It has a Class I water quality designation. Bacterial coliform and dissolved oxygen standards are periodically exceeded in the East River during the summer months.

Long Island has the largest principal aquifer system in New York State, consisting of three aquifers of unconsolidated clastic sediments. These aquifers are continuous throughout most of Long Island except on the north shore and parts of the western end of the island, where NAVSTA Brooklyn is located (Rogers 1986).

NAVSTA Brooklyn does not use groundwater as a potable source of water.

4.1.4 Terrestrial Environment

Vegetation and wildlife species in the vicinity of NAVSTA Brooklyn are described herein.

4.1.4.1 Vegetation

NAVSTA Brooklyn is largely developed and is located in a highly urbanized area. As a result, vegetation is characterized by a variety of herbaceous growth and ornamental shrubs and trees. Primary successional species grow along the outer fenceline of NAVSTA Brooklyn along with a few ornamental shrubs. Within the station are maintained grasses, trees, and ornamental shrubs planted to provide a park-like atmosphere.

The maintained lawn areas are planted with a grass mixture of red fescue (Festuca rubberier), Kentucky bluegrass (Poa pratensis), annual ryegrass (Lolium spp.) and perennial ryegrass (Lolium temulentum). Common weed species such as dandelion (Taraxicium officinale), white

clover (Trifolium repens), and plantain (Plantago spp.) have become established in the lawns. The ornamental shrub species at NAVSTA Brooklyn include: flowering dogwood (Cornus florida), hydrangea (Hydrangea arborescens), common privet (Ligustrum vulgare), and American holly (Ilex opaca). The tree species found in the lawn area are primarily deciduous, and include Norway maple (Acer platanoides) American sycamore (Plantanus occidentalis), American beech (Fagus grandifolia), black locust (Robinia pseudocacia), honey locust (Gleditsia triacanthos), basswood (Tilia americana), common cottonwood (Populus deltoides), and American elm (Ulmus americana).

Around the outer fences, as well as the interior fence surrounding the tennis courts, the vegetation has reverted to native early successional species, such as tree-of-heaven (Ailanthus altissima), red mulberry (Morus rubra), and a variety of herbaceous plants including goldenrod (Solidago spp.), quackgrass (Agropyron repens), and plantain (Plantago spp.)

NYSDEC and the U.S. Fish and Wildlife Service (USFWS) were contacted regarding wetlands on NAVSTA Brooklyn, but no designated federal or state wetlands are located on the station (Ketani 1989). In addition, on-site investigations conducted in October 1989 did not reveal any evidence of characteristic (hydrophytic) vegetation or hydrology associated with wetland areas.

No state or federally designated rare, threatened, or endangered plant species are known to exist at the station (Clough 1989; Buffington 1989).

4.1.4.2 Wildlife

Wildlife species which have adapted to the urban environment may inhabit NAVSTA Brooklyn. Mammals that have adapted to urban habitats include the house mouse (Mus musculus), Norway rat (Rattus norvegius), gray squirrel (Sciurus carolinensis), opossum (Didelphis marsupialis), and raccoon (Procyon lotor). Avifauna including such species as starling (Sturnus vulgaris), robin (Turdus migratorius), rock dove (Columbia livia), and house sparrow (Passer domesticus) may also inhabit the station.

According to the USFWS and NYSDEC, there are no state or federally designated rare, threatened, or endangered wildlife species known to exist at NAVSTA Brooklyn (Clough 1989; Buffington 1989). However, the peregrine falcon (Falco peregrinus) is known to nest on the Verrazano Narrows Bridge (Clough 1989; Buffington 1989).

4.1.5 Noise Quality

The existing noise quality in the vicinity of NAVSTA Brooklyn and noise quality standards are described herein.

4.1.5.1 Noise Standards

Federal

Federal regulations pertaining to noise include the Noise Emission Standards for construction equipment (40 CFR 204) and for transportation equipment (40 CFR 205). The construction equipment standard limits average noise emissions from portable compressors built after 1977 to 76 dB(A) at 25 feet from the unit. Subpart B of the transportation equipment standard limits the noise emitted from medium and heavy trucks built after 1977 to 80 dB(A) at 50 feet from the centerline of travel. Noise produced by motorcycles and some railroad equipment is also regulated, but the Noise Control Act of 1972 did not set regulations for ambient noise levels.

State

The New York State Conservation Law, Title 6, Department of Environmental Conservation (5 NYCRR 450-454) and the New York State Vehicle and Traffic Law, Chapter 386, list maximum allowable sound levels for motor vehicles. For vehicles or a combination of those with weights $\leq$ 10,000 lbs, the maximum noise level is 76 dB(A) at 50 feet from the source where the speed limits are $\leq$ 35 mph, and 82 dB(A) for all other areas. For vehicles with weights over 10,000 lbs, corresponding values are 82 dB(A) at 50 feet from the source where speed limits are $\leq$ 35 mph, and 90 dB(A) for all other areas. Motorcycles are restricted to 82 dB(A) at 50 feet from the source, where speed limits are $\leq$ 35 mph, and 83 dB(A) for all other areas. Further state regulations pertaining to noise were compiled in the mid-1970s but were not

funded by the state legislature at the time. The state has since decided that noise can best be regulated at a local level and has deferred jurisdiction to appropriate counties and/or municipalities.

Local

New York City has a comprehensive Noise Control Code to combat noise pollution. This code was enacted in 1972 to assure that "every person is entitled to ambient noise levels that are not detrimental to life, health, and enjoyment of property." More specifically, the code prohibits construction activity on weekends and between the hours of 6:00 p.m. and 7:00 a.m. on weekdays unless a variance is obtained from the local police precinct. Additional limits are set by the code regarding music, commercial noise, and buildings and auto alarms.

4.1.5.2 Existing Noise Levels

The existing noise climate at NAVSTA Brooklyn is typical of a heavily congested, urban environment. On-site noise measurements were made at locations throughout NAVSTA Brooklyn on Monday, October 16, 1989, between 1:00 and 3:00 p.m., a time considered representative of the typical noise environment on the average weekday. Table 4-3 outlines actual values measured, and Figure 4-1 shows noise contours and measuring locations.

The primary source of noise in the vicinity of NAVSTA Brooklyn is vehicular and truck traffic on Flushing Avenue, the main arterial bordering the site to the south, and Kent Avenue, an elevated arterial northeast of the site. Sound levels of 60 dB(A) or greater were evident along South Street and South Road, parallel to Flushing Avenue, but did drop to the 50-55 dB(A) range in the residential area near the tennis courts at the north end of the site. Higher values were again evident near the parking areas and baseball fields closer to Kent Avenue in the northeast portion of the site. Noise-sensitive receptors identified are the residential quarters off Annex Road and North Road and the Naval Motion Picture Service Building at the southeast corner of the site.

Table 4-3

EXISTING MEASURED NOISE LEVELS AT NAVSTA BROOKLYN

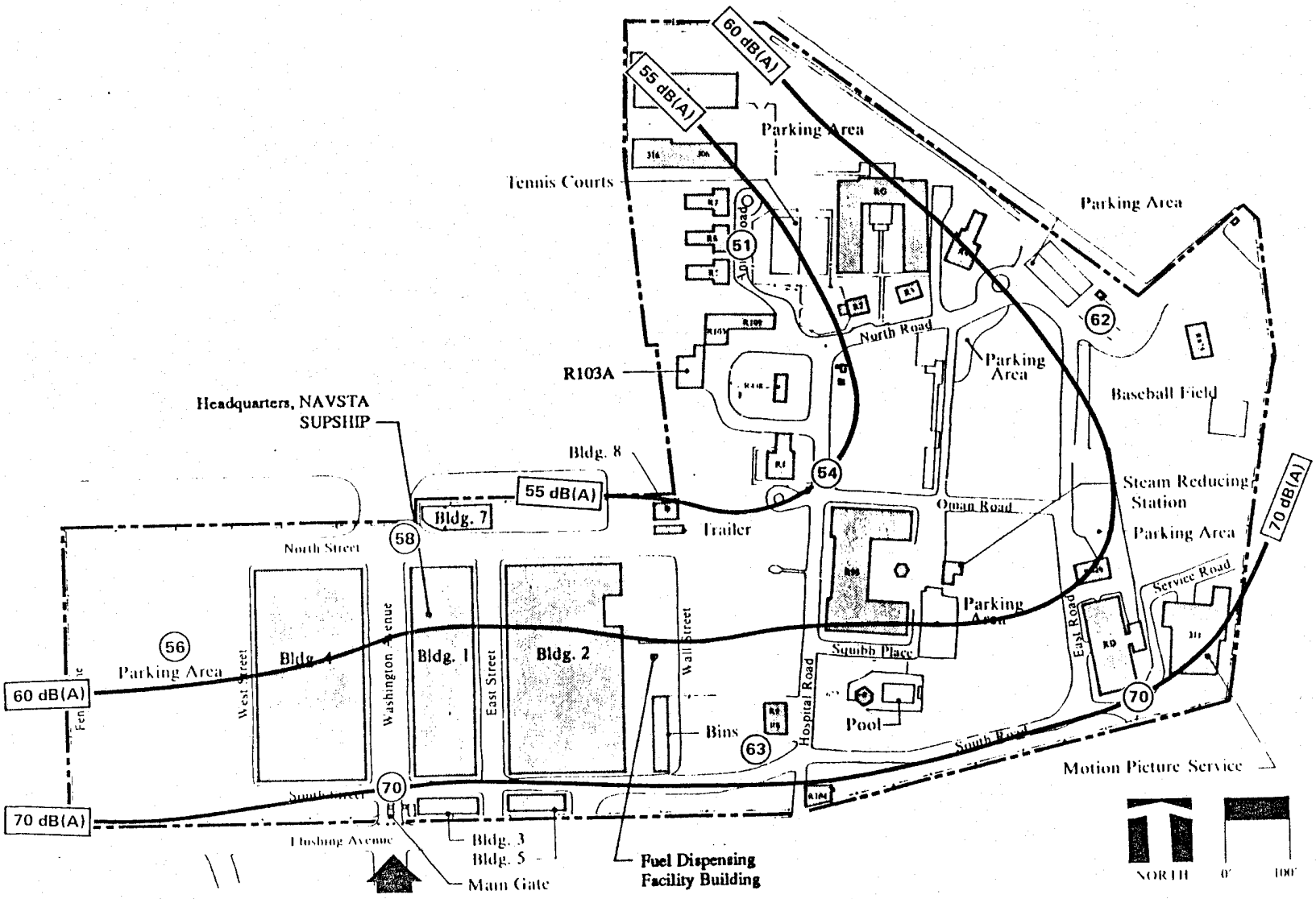
Site Number*	Location	Noise Level L_{EQ}(dBA)	Range**
1	Washington and South Street - Main Entrance	70	65-78
2	South Road and Hospital Road	63	60-75
3	Hospital Road and Oman Road	54	52-62
4	Annex Road - Residential	51	49-61
5	East Road and North Road Parking Area	62	60-72
6	South Road and Service Area	70	67-82
7	Main Parking Lot, West End of Site	56	54-66
8	North Street and Washington Avenue	58	56-63

[MP]NR8900:D2694, #1774, PM=19

Source: Ecology and Environment, Inc. 1989

*See Figure 4-3.
**L_{10} to L_{90}.

Note: Noise survey conducted October 16, 1989, 1-3 pm. L_{EQ} based on 10-minute sampling periods at each site.



SOURCE: U.S. Navy, Northern Division 1989d.

Figure 4–1 EXISTING NOISE LEVELS AND MONITORING LOCATIONS AT NAVSTA BROOKLYN

4.1.6 Land Use and Zoning

A description of the existing land use and zoning in the Borough of Brooklyn, with particular emphasis on the vicinity of NAVSTA Brooklyn, is provided herein. A brief summary of existing relevant land use plans is also provided.

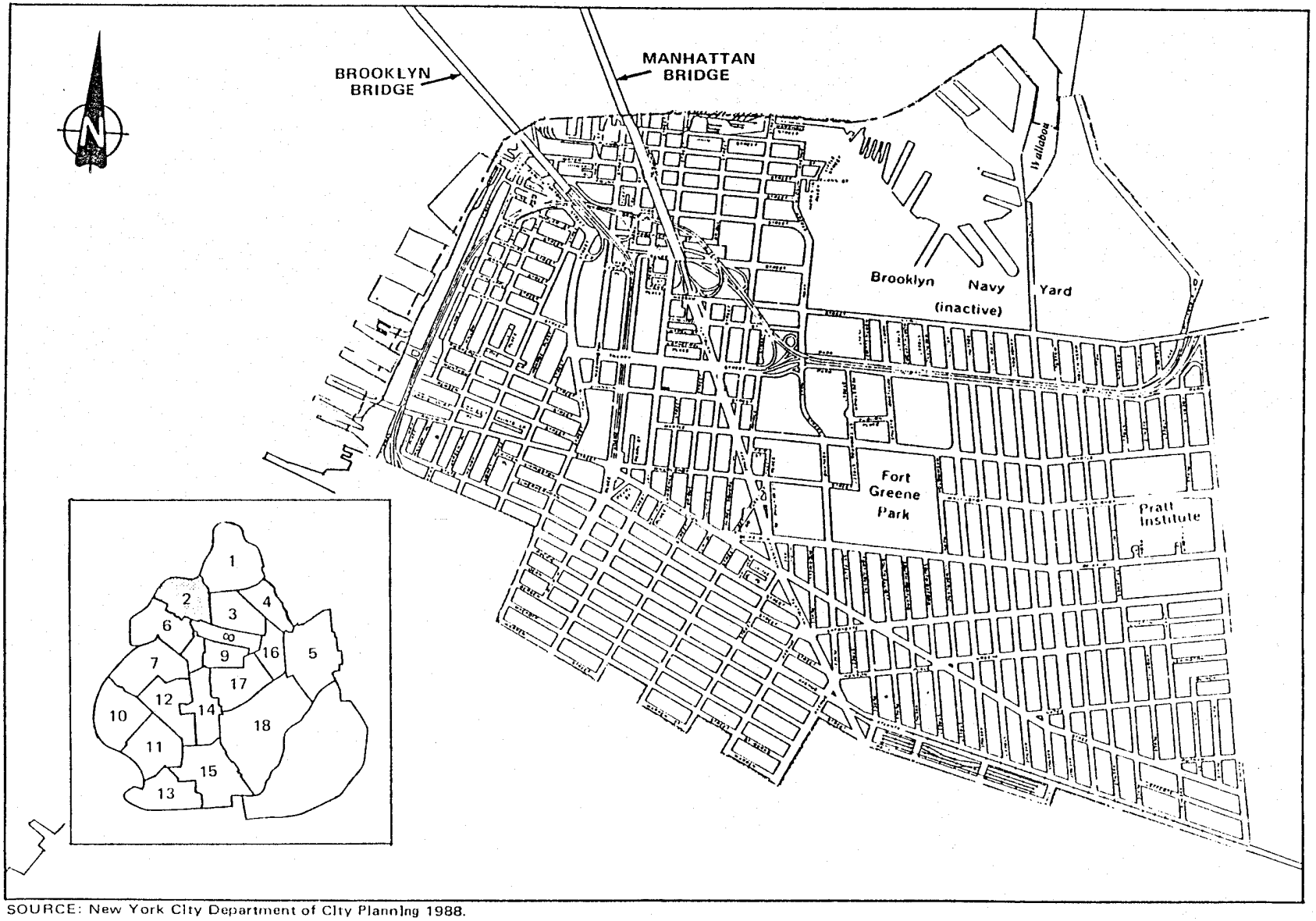
4.1.6.1 Land Use

The total land area of New York City is approximately 322 square miles. The Borough of Brooklyn (Kings County) encompasses 81.8 square miles. NAVSTA Brooklyn is located at the northern end of the Borough of Brooklyn in a highly urbanized area known as Community District 2 (the Borough of Brooklyn is divided into 18 community districts). Community District 2 is a 3-square-mile area bounded by the East River to the north and west, Kent Avenue and Classon Avenue to the east, and Atlantic Avenue, Pacific Street, and Warren Street to the south (see Figure 4-2).

Land use in the Borough of Brooklyn is predominantly residential (80.1%) with significant areas of commercial use (8%) and vacant land use (7.4%). Within the Borough of Brooklyn, approximately 2.2% of all land use is industrial. Although Community District 2 is also predominantly residential (62.8%), this area is characterized by a higher percentage of commercial uses (15.7%), vacant land uses (10.3%), and industrial land uses (5.0%) than the Borough of Brooklyn as a whole. Table 4-4 shows the percentages of land uses for the area in the vicinity of NAVSTA Brooklyn.

In the general vicinity of NAVSTA Brooklyn are several communities, including Green Point and Williamsburg to the north, Bedford to the southeast, Clinton Hill and Fort Greene to the south, Downtown Brooklyn to the southwest, and Brooklyn Heights and Fulton Ferry to the west. To the northwest across the East River is the Borough of Manhattan.

Within the immediate vicinity of NAVSTA Brooklyn, land uses consist of a combination of high-density residential/commercial areas and industrial/manufacturing areas. The mixture of high-density multi-family residential and commercial uses (i.e., high-rise residential structures, restaurants, bars, shops) is typical of many of the streets in the neighborhoods to the south and east of NAVSTA Brooklyn (i.e., Flushing



SOURCE: New York City Department of City Planning 1988.

Figure 4—2 BROOKLYN COMMUNITY DISTRICT 2

Table 4-4

LAND USE FOR AREAS IN VICINITY
OF NAVSTA BROOKLYN BY PERCENT

	New York City	Borough of Brooklyn	Community District 2
Residential*	81.9	80.1	62.8
Industrial	1.9	2.2	5.0
Commercial	6.2	8.0	15.7
Vacant Land	7.5	7.4	10.3
Other	2.5	2.4	6.1

[MP]NR8900:D2694, #1804, PM=32

*Includes 1-2 family dwellings, condominiums, old law tenements, walkups, and elevator apartments.

Source: NYC Department of City Planning 1988.

Avenue, Navy Street, Park Avenue, Washington Avenue). Industrial/manufacturing uses are more prevalent on land adjacent to the station which is owned by the Brooklyn Naval Yard Development Corporation (BNYDC) and to the north and west of the station along the East River waterfront (known as the Fulton Ferry area).

Other land uses within Community District 2 include 17 public schools, 15 private and parochial schools, eight colleges/universities, four public libraries, and 34 parks and recreational facilities (including playgrounds and sitting areas). The closest public park to NAVSTA Brooklyn is Commander John Barry Park, located approximately 0.5 mile west at Navy Street and Flushing Avenue (NYC Department of City Planning 1988).

Land use on NAVSTA Brooklyn consists of a mixture of residential buildings, office space, vacant structures, and recreational facilities. A majority of the office space (i.e., Building 1 and Building 2) is located in the vicinity of the main gate off of Flushing Avenue. Residential structures (i.e., family housing, BOQ) are located at the northernmost area of NAVSTA Brooklyn along Kent Street. Recreational uses (i.e., Building 4, baseball field, pool, tennis courts) are located throughout the station. In relation to the surrounding neighborhoods, a significant amount of open space also exists at the station.

4.1.6.2 Zoning

The entire area surrounding the NAVSTA Brooklyn is zoned for heavy industry (M3-1). M3-1 districts are for heavy industries which generate noise, traffic, and pollutants. The lands immediately adjacent to this M3-1 zone are zoned predominantly M1-2. The M1-2 zone is a light manufacturing zone characterized by "older industrial areas" (NYC Department of City Planning 1988). The M1-2 district is often an industrial buffer to adjacent residential or commercial districts.

R-6 and R-7 zones are also found in the vicinity of NAVSTA Brooklyn. R-6 zones allow medium-density housing typically ranging from 3 to 12 stories. R-7 zones allow medium-density apartment housing (NYC Department of City Planning 1988).

4.1.6.3 Land Use/Development Plans

In addition to the local zoning regulations, many local, regional, and state land use and master plans have been prepared to guide development activities in the vicinity of NAVSTA Brooklyn. Most of these plans have limited relevance to NAVSTA Brooklyn closure and realignment; however, in that they are intended to guide development activities in the communities located near NAVSTA Brooklyn, they are briefly identified and summarized below. Also discussed below is the NAVSTA Brooklyn Master Plan, which was prepared by the Navy to guide development specifically at the station.

Draft Brooklyn--Queens Waterfront Study (NYC Department of City Planning)

The purpose of this study is to examine the existing waterfront resources in the Boroughs of Brooklyn (including the former Brooklyn Naval Shipyard) and Queens and make specific recommendations intended to promote public utilization of these resources (Angotti 1989). Since this study has not been completed and published as of this date, no recommendations of this study are herein identified.

Fulton Ferry (NYC Department of City Planning 1983)

This study examines the changes in employment and the other demographic characteristics (i.e., conversion of industrial space to residential lofts) in the Fulton Ferry area of the Borough of Brooklyn. Fulton Ferry is the industrialized waterfront area located west of and adjacent to the former Brooklyn Naval Shipyard. This study addresses area characteristics, policy objectives, and local land use issues and provides a series of recommendations aimed at protecting existing manufacturing jobs while encouraging the development of a mixed-use waterfront.

Greenpoint--Williamsburg: An Industrial Study (NYC Department of City Planning 1987)

This study examines business activity in the industrial area along the Brooklyn waterfront from the former Brooklyn Naval Shipyard to Neaton Creek. Initially undertaken because of perceived displacement

pressure as vacant manufacturing space was being illegally converted to residential loft space, this study documents a significant manufacturing presence in the area and stresses the need for zoning policies that protect the area's employment base.

New York City Waterfront Revitalization Program (NYC Department of City Planning 1982)

This program, prepared pursuant to the Waterfront Revitalization and Coastal Resources Act of 1981, stresses the protection and best use of the state's coastal waters and promotes waterfront revitalization through the voluntary participation of local government. This Coastal Zone Management Program identifies and establishes the coastal zone within New York City and contains 44 state policies and an additional 12 policies specific to New York City. The New York City policies are part of the local Waterfront Revitalization Program of New York City which is a component of the state program.

In that federal properties are exempt from the provisions of the Coastal Zone Management Program (Barton 1989), the NAVSTA Brooklyn site is not included within the Coastal Zone Management boundary. Therefore, the New York City Waterfront Revitalization Program is not technically applicable to NAVSTA Brooklyn. It should be noted, however, that NAVSTA Brooklyn is entirely surrounded by lands within this boundary.

Plan for New York City (NYC Department of City Planning 1969)

This comprehensive plan addresses a variety of concerns, including land use policy, parks and recreation facilities, neighborhood improvement and community resources. Because of the general nature of this plan and its date of publication, no specific recommendations are listed for NAVSTA Brooklyn.

The Waterfront (Supplement to the Plan for New York City), (NYC Department of City Planning 1971)

This waterfront plan addresses existing and proposed land uses for the city's 220 miles of waterfront, including waterfront in the Borough of Brooklyn.

Master Plan for the NAVSTA, New York at Brooklyn
(Department of the Navy 1983)

This master plan includes an analysis of the facility requirements of NAVSTA Brooklyn and provides for the orderly development of site and associated facility resources. The master plan provides specific recommendations aimed at enhancing the ability of the station to perform its stated mission. However, in that the stated mission of NAVSTA Brooklyn has changed due to base closure and realignment, the recommendations of this plan are outdated. In that this master plan no longer addresses the current situation at NAVSTA Brooklyn, it will be updated following the completion of this EA.

4.1.7 Socioeconomics

This discussion includes the economy, employment, and income; population and housing; infrastructure facilities and utilities; community services; recreational facilities; and transportation.

Descriptions are provided for the New York City area in general, and the Borough of Brooklyn in particular, followed by a discussion of NAVSTA Brooklyn.

4.1.7.1 Economy, Employment, and Income

New York City and the Borough of Brooklyn

In 1988, New York City had 3,529,652 employed, approximately 84% in private industry. Although New York City has a diversified economy, the service industry is particularly strong, employing nearly 31% of the workforce, especially in business, health, and social services. Other significant industries include the wholesale and retail trade (17.5%), government (16.3%), and finance, insurance, and real estate (15.2%). The blue-collar industries, such as manufacturing (10.4%), construction (3.3%), and transportation and public utilities (6.0%), are less significantly represented. Changes over 1987 employment have been slight, with the service, government, construction, and transportation and public utility sectors showing slight increases, and the remaining sectors showing slight decreases in employment (NYC Department of City Planning 1989).

The unemployment rate was 4.7% in 1988, a slight improvement over 1987, when the unemployment rate was 5.7% (NYC Department of City Planning 1989).

The median household income in 1986 for New York City was $20,000. This ranged from highs for homeowners in Manhattan ($50,000), Staten Island ($39,000), and Queens ($30,000), to lows for homeowners in the Bronx ($26,000) and Brooklyn ($25,746). For renters, the average household incomes ranged from $20,000 in both Manhattan and Queens, to $18,300 in Staten Island, to $14,064 in Brooklyn and $11,000 in Bronx (Stegman 1987).

In 1988, 411,217 were employed in the Borough of Brooklyn, 91% in private industry. The largest employers in the Borough of Brooklyn are the service (33.5%), wholesale and retail (23.5%), and manufacturing (17.1%) industries. Other industries employ less than 10% of the workforce and include government (9.1%), transportation and public utilities (5.5%), construction (5.3%), and finance, insurance, and real estate (5.3%). Marked changes over employment in 1987 include an 8.5% increase in construction jobs, 3.1% increase in the service sector, and a 2.4% increase in government. Other industries have declined slightly, with manufacturing showing the greatest decline (3.9%)(NYC Department of City Planning 1989).

The rate of unemployment in Brooklyn has been close to the city average, although it remains slightly higher. In 1988, the rate was 5.5%, down from the 1987 figure of 6.7%. In contrast, New York City's 1988 unemployment rate was 4.7%, down from 5.7% in 1987 (Evans 1989).

NAVSTA New York

NAVSTA New York is responsible for providing logistic, administrative, and management services for activities of the Navy in the New York City metropolitan area. Services are provided to both personnel stationed in the area and visiting naval personnel. NAVSTA New York performs the functions of the Senior Officer Present Afloat (administrative matters of Navy ships in-port in New York City) and the Naval Control of Shipping Office, New York (in the event of a national emergency).

The following departments support the mission of NAVSTA New York and are primarily located at NAVSTA Brooklyn (exceptions are noted).

- **Navy Family Service Center.** Provides assistance to military personnel and families. Located at NAVSTA Staten Island and at Mitchel Field.

- **Chaplain.** Administers and coordinates religious activities; provides worship service, religious instruction, pastoral counseling, and maintains liaison with religious and social agencies. Located at NAVSTA Staten Island as well as NAVSTA Brooklyn.

- **Legal Department.** Provides legal advice to the command; processes military justice cases; receives, investigates and forwards for adjudication claims against the Navy; and provides legal assistance to active duty personnel, dependents, and retirees.

- **Public Affairs.** Provides public affairs support to the Commanding Officer, NAVSTA New York.

- **Equal Employment Opportunity (EEO).** Ensures that equal opportunity is provided to all civilian and military personnel; provides the necessary training and awareness of the EEO program; monitors and evaluates the affirmative action program to ensure its effectiveness.

- **Administrative Office.** Provides administrative support to activities.

- **Security.** Protects life and property. Located at NAVSTA Staten Island as well as NAVSTA Brooklyn.

- **Operations.** Provides port services to the Navy and foreign navy ships visiting the New York area; acts as Senior Officer Present Afloat (administration) for the New York City metropolitan area; maintains disaster preparedness, mobilization, and maritime defense zone plans; supports the Naval Control of Shipping Organizations.

- **Public Works Department.** Responsible for organization, administration, and supervision of public works functions for the command, including maintenance and transportation shops, facilities, and personnel assigned in accordance with technical standards and procedures promulgated by higher authority; responsible for non-contractor planning, design, and construction, maintenance, alteration and repair of all public works and public utilities, including facility support contract administration; responsible for overall coordination of environmental programs, administration of housing at Mitchel Field/Mitchel Manor, Floyd Bennett Field, NAVSTA Brooklyn, and NAVSTA Staten Island, and administration of in-lease housing and the off-base housing referral program within the New York City metropolitan area. Located at Mitchel Field, Mitchel Manor, NAVSTA Brooklyn, and NAVSTA Staten Island.

- **Communications.** Transmits, receives, accepts, processes, and distributes incoming and outgoing messages to all DOD subscribers within the discrete geographical location.

- **Supply/Fiscal.** Provides bachelor enlisted and officer housing; food service; material, purchasing, ADP, management analyst and financial management services (budget preparation, execution, accounting, timekeeping, and plant property).

- **Morale, Welfare, and Recreation.** Provides program of off-duty recreational activities for Navy personnel and their families. Located at Mitchel Field, Mitchel Manor, NAVSTA Brooklyn, and NAVSTA Staten Island.

- **Manpower-Human Resources.** Provides management analysis and management assistance services; develops plans and directs programs and policies for civilian personnel services.

- **Family Housing.** Provides family housing services to military personnel and families.

See Table 4-5 for total base loading at NAVSTA New York and Table 4-6 for base loading of tenant activities at NAVSTA Brooklyn. A total of 17 officers, 135 enlisted personnel, and 326 civilians staff all of NAVSTA New York. Tenant activities at NAVSTA Brooklyn have 18 officers, 41 enlisted personnel, and 249 civilians.

In FY 1988, the Base Operating Support (BOS) costs for NAVSTA New York were $13.6 million. Of this, $6.7 million was incurred by NAVSTA Brooklyn, $2 million by Mitchel Field, $0.93 million by Mitchel Manor, and $3.9 million by NAVSTA Staten Island (U.S. Navy, Northern Division 1989d).

Military personnel receive compensation in the form of a base salary (determined by pay grade level and number of years of experience), basic allowance for quarters (BAQ), basic allowance for subsistence (BAS), and variable housing allowance (VHA) due to the high cost of living in New York City (Drozdowski 1989).

NAVSTA New York has difficulty attracting civilian personnel. The diversity of the economy for New York City and competitive salaries offered make it difficult for government agencies, including NAVSTA New York, to attract qualified applicants and retain experienced managers and executives. Many positions remain unfilled for up to 18 months (U.S. Navy, Northern Division 1989d).

Table 4-5

NAVSTA NEW YORK BASE LOADING

NAVSTA New York Departments	Officer	Current on Board Enlisted	Civilian*	Total
Navy Family Service Center	1	1	2	4
Chaplain	1	1	1	3
Officer-in-Charge (OIC) NAVSTA NY, Staten Island	1	3	3	7
Legal Department	1	1	1	3
Public Affairs Office	1	3	1	5
EEO Office	0	0	2	2
Administrative Office	1	8	3	12
Security	0	8	71	79
Operations	1	13	2	16
Public Works	3	15	141	159
Communications	0	31	3	34
Supply and Fiscal	3	33	28	64
M.W.R.	0	3	53	56
Manpower-Human Resources	0	0	4	4
Family Housing	0	0	4	4
Other Special Assistants	2	13	6	21
Command	2	2	1	5
Totals	17	135	326	478

[MP]NR8900:D2694, #1807, PM=23

*Some civilian billets may be filled by contractor-equivalent personnel.

Source: U.S. Navy Northern Division 1989d.

Table 4-6

NAVSTA BROOKLYN
TENANT ACTIVITIES BASE LOADING

Tenant Activities	Officer	Enlisted	Civilian	Total
CCPO	0	0	7	7
Dental Clinic	2	5	0	7
Hospital Branch Clinic	3	20	4	27
NISRA	0	0	18	18
NMPS	1	0	55	56
PSD	1	16	5	22
SUPSHIPS	10	0	142	152
ROICC	1	0	5	6
Navy Resale Activity	0	0	13	13
TOTAL	18	41	249	308

[MP]NR8900:D2694, #1856, PM=31

Sources: Canady 1989; Ohlberg 1989; Peach 1989; Rogers 1989; Lance 1989; McCabe 1989; Demmerle 1989; Cariello 1989; Strong 1989.

Civilian personnel are paid through either appropriated or non-appropriated funds. Total compensation paid to civilians through appropriated funds at NAVSTA New York is $10,202,500, of which approximately 58% is paid through tenant activities (Gayman 1989).

Non-appropriated civilians are employed in the Department of Morale, Welfare, and Recreation; the Department of Supply/Fiscal; NMPS; and the Navy Resale Activity. Approximately $2,744,184 are paid in civilian salaries through non-appropriated funds (Quinn 1989; Weiner 1989; Tarrani 1989). These funds are generated by services provided by these departments and tenant activities.

4.1.7.2 Population and Housing

New York City and the Borough of Brooklyn

In 1985, the population of New York City was 7,245,000, an increase of 2.4% over the 1980 census population (NYC Department of Planning 1988).

The majority of housing units in New York City were multi-unit dwellings (those with three or more units) or 73% of total units for 1987 (NYC Department of City Planning 1988). Thirty percent of all New York City households were owned by those living in them. The rental vacancy rate in 1987 was 2.5%, and the owner vacancy rate was 2.3%. Median gross rent in New York City was $395 in 1987 (Stegman 1987).

The population has been increasing slightly over the 1980 census count for the Borough of Brooklyn, reversing the trend of population loss experienced in the preceding decade. From 1970 to 1980, the population declined at a rate of 1.4% per year to a 1980 population count of 2,231,000 persons. Between 1980 and 1985, there was a slight increase of 2.1% per year, for an estimated population of 2,280,000 in 1985.

Housing in the Borough of Brooklyn is dominated by multi-unit dwellings (those with three or more units), with 70% of the total units composed of multi-unit dwellings. Two-family housing is the second most common type of housing and makes up around 21% of the total, with single family housing comprising the smallest percentage (9%) of housing types (NYC Department of City Planning 1988). In 1987, there were an estimated 808,688 households in Brooklyn, representing a 0.7% increase over

the previous three years. Distribution of households by occupancy status has remained fairly steady in the last several years, with about 71% of them being renter-occupied. Median gross rents in Brooklyn for 1987 ranged from $299 to $465 across different sub-geographic areas. As would be expected, the type and quality of available units varies considerably between and within the different communities of Brooklyn (Stegman 1987).

NAVSTA New York

Housing for active duty Navy personnel stationed at NAVSTA, New York presently is located at Mitchel Field, Mitchel Manor, Floyd Bennett Field, NAVSTA Staten Island, and NAVSTA Brooklyn. Mitchel Field has 111 family housing units (43 single-family and 68 semi-detached), which are utilized as officer quarters. Mitchel Manor has 511 row/townhouse units for junior officers and enlisted personnel. Floyd Bennett Field has 10 units of family housing and 24 trailer sites. NAVSTA Brooklyn has 12 family housing units, a BEQ on the second floor of Building 1 and BOQ in Building RG. Housing at NAVSTA Staten Island is currently limited to 46 family housing units at Fort Wadsworth (other housing units have been demolished to accommodate construction projects for the SAG Homeporting Program). Occupation of these units is evenly divided at present between families of officers--23 units--and enlisted personnel--23 units (Drozdowski 1989).

The housing construction program in progress to accommodate projected homeporting requirements at NAVSTA Staten Island includes on- and off-station family housing and on-station BOQ and BEQ housing units. On-station family housing presently under construction consists of 400 apartment units, with the first 126 of these ready for occupancy as of December 1989. The remaining units are slated for completion by July 1990, with over 90% to be occupied by families of enlisted personnel. Another 150 family housing units are proposed for construction on-station in FY 1991 (Drozdowski 1989).

Planned off-station units of Section 801 family housing (build to lease) are to be located at two sites on Staten Island. One thousand units are currently being built at the Aspen Knells site in the Arden Heights section of Staten Island, and another 202 units are scheduled to

be started in early 1990 at Hamilton Park. In addition, 120 units are being renovated at Dayton Manor, a former apartment complex of the Army in the Borough of Brooklyn. These housing projects were the subjects of separate environmental assessment documents.

Current on-station construction for BEQ facilities at NAVSTA Staten Island consists of three wings being built as part of the present homeport project schedule. These should be completed by mid-1990. Another three wings are slated for construction during FY 1990 and FY 1991 as part of the facilities to support closure of NAVSTA Brooklyn. When completed, the BEQ facilities will house a total of 429 personnel.

Of the 12 units of family housing existing at NAVSTA Brooklyn, 11 are currently occupied by senior and company grade officers and their wives. These families do not have children living at NAVSTA Brooklyn. Other married personnel assigned to NAVSTA Brooklyn occupy family housing provided at Mitchel Field/Mitchel Manor and Floyd Bennett Field.

The current capacity of the BEQ at NAVSTA Brooklyn is 140 personnel. Approximately 121 of the available units are presently occupied. Twenty "geographic bachelors," who are defined as married personnel who are voluntarily separated from their spouses and/or families, are also housed in the BEQ and included in the total of 121 units. In addition to these, there are 10 enlisted bachelors who are living off-station voluntarily and receiving BAQ/VHA (Keenan 1989).

The BOQ at NAVSTA Brooklyn is currently at capacity, with 50 officers assigned to these living quarters on both a permanent and temporary status. Officers assigned to temporary quarters are typically in the New York area for the relatively short duration of a specific project. The remainder who are housed permanently include officers working at the station and those who have other duties in the New York region, such as the Navy recruiters. A BOQ is programmed for construction at NAVSTA Staten Island to support base closure and will provide accommodations for 40 officers.

4.1.7.3 Infrastructure Facilities and Utilities

Water Supply

Water is provided to the Borough of Brooklyn via the New York City water transmission and distribution system, which obtains its supply

from surface water reservoirs in the Delaware River, Hudson-Mohawk, and Hudson River basins.

The potable water distribution system at NAVSTA Brooklyn is considered in good condition (U.S. Navy, Northern Division 1984). In 1988, a total of 11,019,000 gallons of water was consumed at NAVSTA Brooklyn (Ehrenberg 1989).

Sanitary and Stormwater Sewers

Sanitary sewage from the NAVSTA Brooklyn site is discharged into the New York City collection system at six locations along Flushing, Washington, and Kent Avenues (U.S. Navy, Northern Division 1988). NAVSTA Brooklyn is served by the city's Jamaica Sewage Treatment Plant.

Stormwater is collected through the sanitary sewer system. In addition to the combined mains handling NAVSTA Brooklyn's sanitary sewage, a combined main located along Navy Street collects some stormwater runoff (NYC Department of Sewers 1990).

Electricity

Electricity is provided to the Brooklyn area and NAVSTA Brooklyn by the Consolidated Edison Company (Con Edison). Electricity is provided to the station by two primary feeder lines.

In 1988, a total of 6,916,340 kwh of electricity was consumed at NAVSTA Brooklyn (Ehrenberg 1989).

Natural Gas

Natural Gas is supplied to NAVSTA Brooklyn by the Brooklyn Union Gas Company.

In 1988, a total of 2,266,900 cubic feet of natural gas was purchased by NAVSTA Brooklyn (Ehrenberg 1989).

Heating Oil

Heating oil is purchased by the station through a nationwide Defense Logistics Agency contract. This contract allows for the purchase of heating oil for all military installations at costs lower than are commercially available.

In 1988, NAVSTA Brooklyn utilized approximately 172,219 gallons of heating oil (Ehrenberg 1989).

Steam

Steam for heating purposes is purchased from the BNYDC and also generated in portable boilers at remote sites.

In 1988, 57,525,000 pounds of steam were purchased and utilized by NAVSTA Brooklyn (Ehrenberg 1989).

4.1.7.4 Community Services

Medical Facilities

There are approximately 23,900 certified hospital beds available in New York City, with 5,780 of these beds located in the Borough of Brooklyn (Yorden 1989). Medical services are provided to the borough by three public and 15 private hospitals (Halpin 1989; Yorden 1989). These hospitals have an average occupancy rate of 91.9%, compared to New York City's overall occupancy rate of 85.5%. The Brooklyn Hospital and the Catholic Medical Center, with 444 and 72 beds, respectively, are the only hospitals in Community District 2.

All active duty and retired military personnel and their dependents in the New York City area are eligible to receive medical care from the Hospital Branch Clinic at NAVSTA Brooklyn. Although there are many potential patients (approximately 34,350), the Hospital Branch Clinic currently provides care to approximately 300 people per month, or approximately 3,600 persons per year. Approximately half of the patients served by the clinic are active duty personnel who live on station (Peach 1989).

Currently at NAVSTA Brooklyn, the staff of the Hospital Branch Clinic consists of three officers (one Officer in Charge, one physician, one nurse), 20 enlisted personnel, and three civilian personnel (Peach 1989).

Police Protection

The New York City Police Department, the Transit Police Department, and the Housing Police Department, as well as the Port Authority of New York and New Jersey, all provide New York City with police protection. New York City has approximately 26,000 police officers and 75 precincts. Twenty-seven precincts are located in the Borough of Brooklyn. The 84th and 88th precincts serve Community District 2. The

nearest precinct to NAVSTA Brooklyn is the 88th precinct on Classon Avenue (Powell 1989).

Police protection on station is provided by NAVSTA Brooklyn's security department. Currently, 64 police officers are employed at NAVSTA Brooklyn. This level of staffing is considered adequate to provide police services on station (Wiggins 1989).

Fire Protection

Fire protection for New York City and for NAVSTA Brooklyn is provided by the Fire Department of the City of New York. The fire department is comprised of 210 engine companies, 138 ladder companies, four marine companies, and four special rescue companies. Brooklyn has 70 fire companies within the borough limits. Community District 2 has five fire stations, including five engine companies and two ladder companies (NYC Department of City Planning 1988). The nearest fire station to NAVSTA Brooklyn is Engine 211-Ladder 119 on Kent Avenue (Gallagher 1989).

Educational Facilities

The New York City public school system consists of more than 1,000 elementary, junior high, and senior high schools. Within the Borough of Brooklyn, there are 337 public schools with a total of approximately 282,378 students. Of these public schools, 271 are K-8th grade and 66 are 9-12th grade with a total of 210,514 students and 71,864 students, respectively (NYC Department of City Planning 1988).

In addition to public schools in Brooklyn, approximately 353 private and parochial schools also exist. A total of 79,190 students attend the 266 K-8th grade schools and 19,757 students attend 9-12th grade private and parochial schools. Within Community District 2, in which NAVSTA Brooklyn is located, are located 14 public K-8th grade schools (9,058 students), three public 9-12th grade schools (7,321 students), 13 private and parochial K-8th grade schools (3,014 students), and 6 private and parochial 9-12th grade schools (2,312 students)(NYC Department of City Planning 1988).

Several public schools accommodate students in the NAVSTA Brooklyn area, including P.S. 85 on Claremont Avenue, P.S. 287 on Navy Street,

P.S. 117 on Kent Avenue, and P.S. 307 on York Street. The Intermediate/Junior High School in the area is J.H.S. 265, located on Park Avenue. Brooklyn Technical High School is the nearest high school to NAVSTA Brooklyn.

There are currently no school age children of active duty personnel stationed at NAVSTA Brooklyn.

4.1.7.5 Recreational Facilities

The Borough of Brooklyn has numerous small parks, playgrounds, and other recreational facilities (i.e., sitting areas), but it has limited recreational opportunities for certain uses due to a high demand for quality recreational facilities and competition for existing facilities (Chaney 1989). In particular, a high demand exists for those types of facilities which, by their nature, require more open space (e.g., baseball, football, soccer).

In the general vicinity of NAVSTA Brooklyn (i.e., Community District 2), 34 parks, playgrounds, and sitting areas are located. Of these areas, only three are over 10 acres in size, and 21 are less than 1.5 acres (NYC Department of Planning 1988). This indicates that the majority of recreational facilities in the area are small and not capable of providing the space required for uses such as baseball and football fields.

Within Community District 2, Fort Greene Park, a 19th-century walking park of approximately 30 acres, is the largest recreational facility. Commodore John Barry Park and Playground is the closest municipal park to the station and is located between Park and Flushing Avenues and Navy Street. This park is approximately 10 acres in size and provides outdoor recreational facilities such as soccer and baseball fields, and basketball courts.

A wide variety of recreational facilities are currently available at NAVSTA Brooklyn. Outdoor recreational facilities include a pool, baseball and football fields, tennis courts, and a fitness trail. Indoor recreational facilities are found primarily in Building 4 and include tennis, basketball, and racquetball courts and a weight room. An auto hobby shop is also located at the station.

In relation to all existing military facilities in the New York City area, NAVSTA Brooklyn has the highest patron count utilizing its recreational facilities. This is primarily due to the central location of the station and the limited recreational facilities at other bases (Roberts 1989).

4.1.7.6 Transportation

NAVSTA Brooklyn is located in the northern section of the borough, just southeast of the East River, between the Manhattan and Williamsburg bridges. The Brooklyn-Queens Expressway (BQE), Rte. 278, passes less than 0.5 mile southeast of the site but has no direct access to the area near the station. Heavy traffic volumes on the BQE, therefore, do not affect the project area. The major roads which surround the facility are Flushing Avenue to the south and Kent Avenue to the east. Flushing Avenue, a major east-west arterial, provides the only real access to the site and carries a daily average of about 8,500 vehicles, approximately 30% of which are trucks. Kent Avenue carries a heavier volume of 19,000 average daily traffic (ADT), but does not access the site directly.

The NAVSTA Brooklyn is also served by various forms of public transportation. Regular bus service is available throughout the area including routes along Flushing Avenue and Park Avenue. Three stations of the New York City Rapid Transit System (subway) are located within 0.5 mile of NAVSTA Brooklyn, with the nearest station being approximately 0.3 mile south of NAVSTA Brooklyn along Myrth Avenue between Washington Street and Hall Street. Due to the relatively unsafe character of the area in the vicinity of NAVSTA Brooklyn, nearly all employees who commute to work do so via personal automobiles rather than the subway or other forms of public transportation.

Commuter traffic to and from the station must pass through the main gate on Flushing Avenue. There is no other access to the site from outside roadways except for a small, seldom-used entrance north of the baseball field at the northeast corner of the site.

On-station traffic patterns are essentially the same regardless of weekday or weekend activities. Approximately 300 vehicles enter by way of the main gate each morning and depart late each afternoon. Less than 50 vehicles per day utilize the northeast access. Traffic flow within

the site is minor and restricted mainly to accessing parking areas, which hold spaces for approximately 320 vehicles, 80% in a single area at the west end of the site. The existing roadway system within NAVSTA Brooklyn handles the low traffic volume well.

4.1.8 Cultural Resources

NAVSTA Brooklyn is located on the site of the former Brooklyn Naval Shipyard, originally built in the early 19th century. The site has had a long and varied history associated with naval activity through the years. The historic background and development of the site is discussed in detail in Appendix A.

4.2 NAVSTA STATEN ISLAND

Section 4.2 summarizes information from the Draft and Final Environmental Impact Statements for Surface Action Group Homeporting, Stapleton-Fort Wadsworth Complex, Staten Island, New York. Information has been updated as necessary and, where appropriate, made specific to construction sites for projects supporting base closure. Certain environmental data have been addressed in Section 4.1 for Brooklyn and do not differ for Staten Island. References to Section 4.1 will be noted in the text.

4.2.1 Topography, Geology, and Soils

Staten Island is located in both the Atlantic Coastal Plain province and the Triassic Lowlands of the Piedmont physiographic province. As described earlier, the Atlantic Coastal Plain province is characterized by generally flat topography, often with swampy areas. The Piedmont province, consisting mainly of very complex metamorphic and plutonic igneous rocks, is generally an upland of gently rolling topography and moderate elevations. However, several lowland areas, the Triassic Lowlands, are scattered throughout the province (Schuberth 1968).

Bedrock underlying the southern and eastern edges of Staten Island consists of the Upper Cretaceous Raritan and Mogathy Formations, as described in Section 4.1.1. To the northwest, bedrock is exposed in a 35-square-mile outcrop of serpentenite of Lower Ordovician age (Fisher

1970). This rock formed as an alteration product of older igneous rock in the area. Farther to the northwest is the Triassic Lowlands region. These lowlands consist mainly of gently inclined sedimentary rocks deposited in basins during the Upper Triassic Period. Sedimentation in these basins was accompanied by igneous activity, and the more resistant igneous rocks stand as ridges above the more easily weathered sedimentary rocks (Schuberth 1968). On Staten Island, bedrock consists of the Triassic Newark Group, made up of sandstone, shale, and conglomerate introduced by the Palisades diabase (Fisher 1970).

The soils at Stapleton consist of relatively soft, organic, silty clays which overlie compacted glacial deposits and extend to the present mudline. At Fort Wadsworth, soils formed in terminal moraine and outwash plain deposits.

4.2.2 Climate and Air Quality

Climate and air quality data for NAVSTA Staten Island are described herein.

4.2.2.1 Regional Climate

The climate description under Section 4.1.2.1 is applicable to NAVSTA Staten Island.

4.2.2.2 Existing Air Quality

The Stapleton and Fort Wadsworth complexes are located on the eastern shore of Staten Island, within the limits of New York's Metropolitan AQCR. Six air quality monitoring stations provide data that can be considered representative of the site. Data for TSP, SO_2, O_3, and Pb were collected from Staten Island stations at Wagner High School, PS 26, and Arthurkill Road. Data for PM-10, CO, and NO_x were collected from lower Manhattan and Brooklyn stations. These stations reflect data from 1987, the most recent year for which complete data are available. The region is currently considered a non-attainment area for carbon monoxide and ozone and considered in attainment for all other NAAQS compounds (SO_2, NO_x, TSP, PM-10, and Pb). Table 4-2 summarizes the air quality data for stations representative of Stapleton and Fort Wadsworth and includes a comparison with State and NAAQSs.

As the table shows, carbon monoxide was monitored at only two stations in the area, both in Brooklyn. The Flatbush Avenue station, located in a highly congested area, exceeded the standards on 26 occasions in 1987, while the PS 321 site, in a more residential area, had no exceedences. CO levels vary markedly with location because they are highly dependent upon major highways and congested intersections.

The Stapleton and Fort Wadsworth sites show more similarities to the PS 321 Brooklyn site than the Flatbush Avenue site. Therefore, the number of exceedances of the standard at the project site are substantially less than the 26 at Flatbush, but undoubtedly greater than zero. Ozone, on the other hand, is a regional problem and can be attributed primarily to hydrocarbon and NO_2 emissions and their subsequent atmospheric reactions. The standards have been exceeded an average of almost seven times per year for the 1985-87 period at the Wagner High School station on Staten Island. All other data recorded in 1987 from representative stations show the site to be in continued compliance with all other criteria pollutant standards.

4.2.3 Hydrology and Water Quality

Staten Island is located in the Atlantic Ocean--Long Island Sound drainage basin (see Section 4.1.3). Fort Wadsworth and Stapleton border the upper New York Harbor, which is part of this drainage basin.

NYSDEC and the Interstate Sanitation Commission have classified the upper New York Harbor as Class I. During the summer months, the bacterial coliform concentration and the dissolved oxygen levels have not met Class I water criteria (U.S. Navy, Northern Division 1984).

Staten Island is not situated on a principal aquifer (Rogers 1986). Groundwater is not used as a potable source at either Stapleton or Fort Wadsworth.

4.2.4 Terrestrial Environment

The following describes the vegetation in specific areas where construction projects to support base closure will occur. For a complete description of the existing terrestrial environment at Fort Wadsworth and Stapleton, see the Draft Environmental Impact Statement (DEIS) for SAG Homeporting of 1984.

4.2.4.1 Vegetation

Vegetation at NAVSTA Staten Island consists mainly of mowed lawns and ornamental shrubs in maintained landscapes.

The Navy Exchange Facilities (P-115R) and the Physical Fitness Center (P-116R) are proposed for construction at Stapleton. The site is barren of all natural vegetation except for an occasional clump of weeds. The remainder of construction will occur at Fort Wadsworth.

The Bachelor Enlisted Quarters (P-107R) is in an area that once was covered by mowed lawns. Planted pin oaks (Quercus palustris) line the streets. Construction of Wings B, D, and F, as well as the mess hall, is currently underway under the SAG Homeporting Program, and the area has been cleared of vegetation. The pin oaks will not be removed.

The Storage Area (P-108R) is scheduled to be constructed near a parking lot on Richmond Avenue. The street is lined with birch (Betula spp.) and sycamore (Plantanus occidentalis) trees. Some maintained lawn is also on the site.

The area proposed for construction of the Auto Hobby Shop (P-110R) is presently used for tennis courts. Surrounding the tennis courts are maintained lawns, white oak (Quercus alba), and northern red oak (Quercus rubra). A park-like area, with birch and sycamore trees lining the street, is the proposed location of the Public Works Building (P-111R).

Two buildings were demolished where the Bachelor Officers Quarters (P-113R) is scheduled to be constructed.

The Headquarters and Administration Building (P-117R) and the Community Facilities (P-122R) will be built adjacent to each other in an area along New York Avenue that currently has three existing buildings. Ornamental shrubs, pin oak, and white oak surround these existing buildings, as do maintained lawns.

The construction of the Police Station (P-118R) is proposed for an area that is currently a parking lot adjacent to the Reserve Center.

The Outdoor Recreation area (P-120R) is proposed for an area along the shore that has native vegetation. Tree-of-Heaven (Ailanthus altissima), Black Locust (Robinia pseudocacia), black cherry (Prunus serotina), and red mulberry (Morus rubra) are the common tree species found.

4.2.4.2 Wildlife

The wildlife species found on the proposed construction site are indicative of urbanized areas. These species are similar to those found at NAVSTA Brooklyn (see Section 4.1.4).

4.2.5 Noise Quality

The noise quality for the Stapleton and Fort Wadsworth sites at NAVSTA Staten Island are described herein.

4.2.5.1 Noise Standards

Noise standards listed under Section 4.1.5.1 for NAVSTA Brooklyn are applicable to the NAVSTA Staten Island sites.

4.2.5.2 Existing Noise Levels

Several noise-sensitive receptors at Stapleton were identified in the DEIS for SAG Homeporting (U.S. Navy, Northern Division 1984). Existing noise levels (LEQ) ranged from 50-67 dB(A) (see Table 4-7). The primary source of noise in the vicinity of Stapleton is traffic movement along Bay Street. Such traffic consists of a mix of autos, trucks, and buses moving in a single lane in two directions. To a lesser extent, movement along the Staten Island Rapid Transit (SIRT) is also a contributing source. These values are considered typical of an urban or older suburban environment.

The predominate source of noise in the vicinity of Fort Wadsworth is traffic. Local movements along Lily Pond Road, Bay Street, School Road, and, to a lesser extent, the movements on the Verrazano Narrows Bridge contributed to observed sound levels at the Arthur Von Briesen Park [62 dB(A)] and the McClean Avenue houses [57 dB(A)].

4.2.6 Land Use and Zoning

This section provides a description of the existing land use and zoning in the Borough of Staten Island with particular emphasis on the vicinity of Fort Wadsworth and Stapleton. A brief summary of existing relevant land use/development plans is also provided.

Table 4-7

EXISTING MEASURED NOISE LEVELS, NAVSTA STATEN ISLAND

Site	Location	Noise Level L_{EQ}(dBA)
Stapleton		
S1	Joseph Lyons Playground	60
S2	Tappen Park	62
S3	First Presbyterian Church	54
S4	Houses along Bay Street south of Broad Street	67
S5	Rear of houses along Bay Street overlooking Front Street	60
S6	Bayley Seton Hospital	61
S7	Houses along Bay Street between Townsend and Norwood Avenues	66
S8	Parkland, Edgewater Street, and Hylan Boulevard	53
S9	St. John's Episcopal Church	65
S10	Nixon Avenue houses	50
Fort Wadsworth		
W1	Arthur Von Briesen Park	62
W2	Houses along McClean Avenue	57

[MP]NR8900:D2694, #1778, PM=18

Source: U.S. Navy, Northern Division 1984.

4.2.6.1 Land Use

The total land area of New York City is approximately 322 square miles. The Borough of Staten Island (Richmond County) encompasses 60.2 square miles.

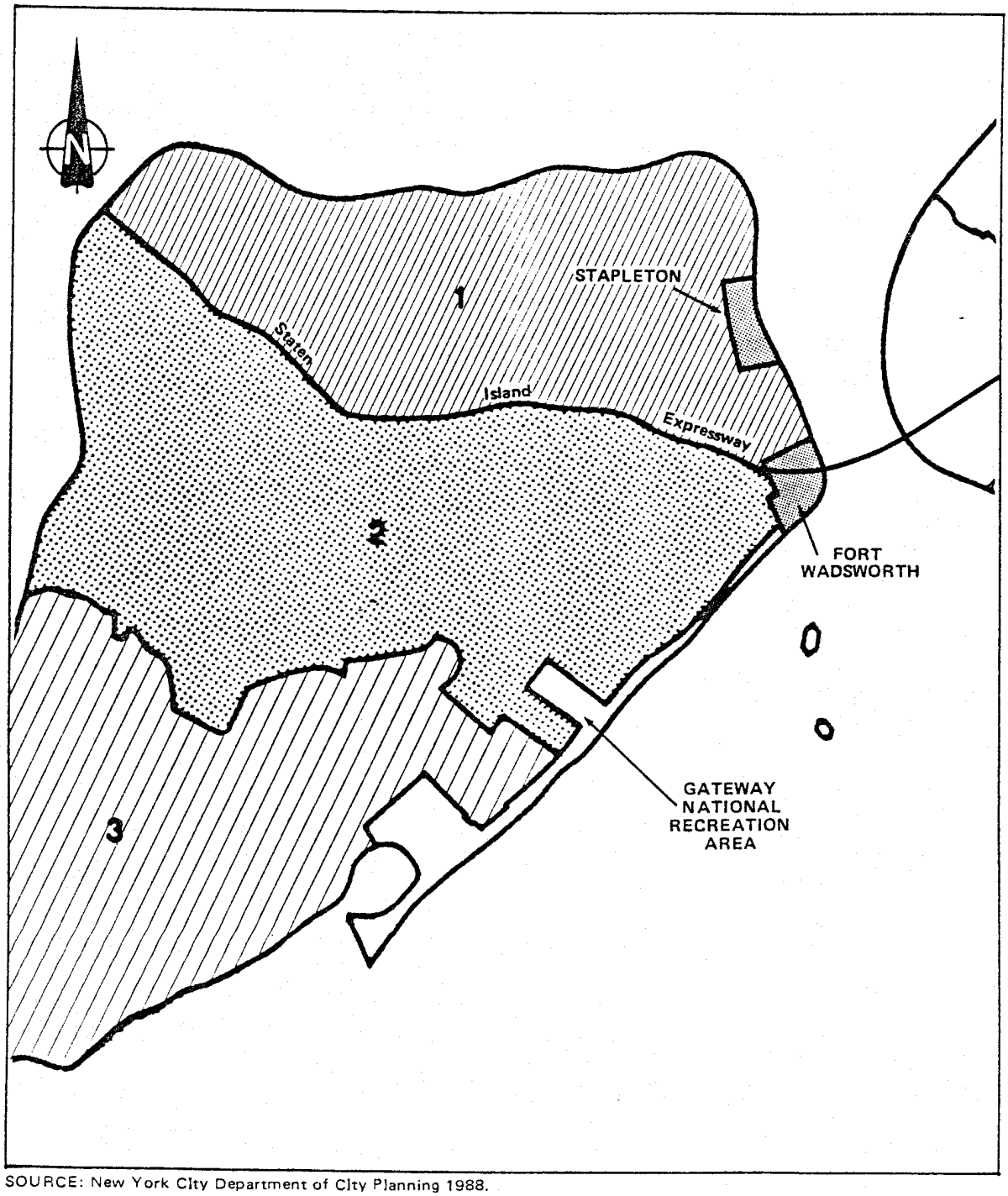
Staten Island is divided into three geographical areas known as community districts. Community District 1 includes that area north of the Staten Island Expressway; Community District 2 includes the central portion of Staten Island; and Community District 3 includes the Southern portion of Staten Island (see Figure 4-3). As shown in Figure 4-3, Stapleton is located in Community District 1, whereas Fort Wadsworth is equally divided between Community Districts 1 and 2.

Land use in the Borough of Staten Island is predominantly residential (78.1%), although significant areas of vacant land (16%) and commercial areas (3%) also exist. Industrial uses account for approximately 0.3% of all land uses on Staten Island (NYC Department of City Planning 1989). As compared to the remainder of New York City, Staten Island has a comparable level of residential development but also a lower percentage of commercial and industrial uses (see Table 4-8). This indicates that more undeveloped and "open space" areas can be found in association with residential uses on Staten Island.

Although Community Districts 1 and 2 are also predominantly residential (79.3% and 79.8%, respectively), Community District 1 has significantly more commercial land uses than does Community District 2 (5.2% versus 2.4%, respectively). Industrial land uses are also more prevalent in Community District 1 (0.6% versus 0.2%, respectively). Much of the commercial and industrial use in Community District 1 is located along the waterfront between Fort Wadsworth and the Staten Island Ferry Terminal.

Within a short distance of Fort Wadsworth are the communities of Dongan Hills and Linden Park to the south, Emerson Hill to the west, and Rosebank and Stapleton to the north. To the east across the Narrows is the Borough of Brooklyn.

In general, the northeast shore of Staten Island is composed of a mixture of residential, industrial, and commercial land uses. Land use in the immediate vicinity of Fort Wadsworth is predominantly residential with some interspersed commercial uses (i.e., restaurants, bars, shops)



SOURCE: New York City Department of City Planning 1988.

Figure 4–3 STATEN ISLAND COMMUNITY DISTRICTS 1, 2, AND 3

Table 4-8

LAND USE FOR AREAS IN VICINITY
OF NAVSTA STATEN ISLAND
(FORT WADSWORTH AND STAPLETON) BY PERCENT

	New York City	Staten Island	Community District 1	Community District 2
Residential*	81.9	78.1	79.3	79.8
Industrial	1.9	0.3	0.6	0.2
Commercial	6.2	3.0	5.2	2.4
Vacant Land	7.5	16.0	12.3	15.0
Other	2.5	2.6	2.7	2.6

[MP]NR8900:D2694, #1805, PM=30

*Includes 1-2 family dwellings, condominiums, old law tenements, walkups, and elevator apartments.

Source: NYC Department of City Planning 1988.

along the larger streets (i.e., Bay Street). One- and two-family residential units comprise approximately 91% of all existing housing units on Staten Island. Industrial uses (i.e., warehouses) are located predominately in the vicinity of the waterfront.

Specific land uses in the vicinity of Fort Wadsworth include the Gateway National Recreation Area, Arthur Von Briesen Park, the Coast Guard Station at Rosebank, and several public and parochial schools.

Pursuant to the Strategic Homeporting Program being located at Staten Island, Stapleton will become the naval operational area, while Fort Wadsworth will be primarily utilized for administrative and personnel support. Land uses at Stapleton will reflect its operational function and will include a pier for berthing seven navy vessels, a large warehouse, the SIMA, and ancillary facilities to provide support directly to shipboard personnel. Land uses at Fort Wadsworth will reflect administrative and personnel support services.

A more complete discussion of the homeporting facilities to be located at Staten Island are included in the Draft Master Plan for NAVSTA, New York Stapleton/Fort Wadsworth (1985) and the DEIS for SAG Homeporting (1984).

4.2.6.2 Zoning

The entire area surrounding Fort Wadsworth is zoned for various levels of residential land use. The predominant zone is the R3-2 zone, which allows for a variety of housing types including garden apartments, row houses, and an occasional apartment house surrounded by extensive open space (NYS Department of City Planning 1988). The R3-2 district is the lowest-density zone in which multiple dwellings are allowed.

Other areas in the vicinity of Fort Wadsworth are zoned R1-2, which allows single-family detached residences with a minimum lot size of 5,700 square feet, and the R-5 zone, which allows medium-density development containing apartment buildings and two- and three-family row houses.

The area around Stapleton is zoned for a variety of manufacturing uses ranging from M1 (light manufacturing) to M2 (medium manufacturing) and M3 (heavy manufacturing). Various commercial zones are also located along Bay Street in the vicinity of Stapleton.

4.2.6.3 Land Use/Development Plans

In addition to local zoning regulations, many local, regional and state land use and master plans have been prepared to guide development activities in areas in the vicinity of Fort Wadsworth/Stapleton. As noted in the Naval Activities New York Regional Study in 1989, these plans have limited relevance to NAVSTA Brooklyn closure and realignment. However, in that they are intended to guide development activities in the communities in which naval activities will be relocated, they are briefly identified and summarized below. Also discussed below is the Draft Master Plan which was prepared by the Navy to identify and guide the necessary development of NAVSTA Staten Island as it relates to the SAG Homeporting Program.

Staten Island: The North Shore Study - A Comprehensive Overview (NYC Department of City Planning 1983)

This plan analyzes in detail the section of Staten Island north of the Staten Island Expressway (Community District 1). It covers residential and commercial land uses, neighborhoods, waterfront development, economic development and provides recommendations for action.

Stapleton: A Community Revitalization Plan (NYC Department of City Planning 1979)

This plan describes the commercial activities in Stapleton's downtown center and includes an inventory of stores and a market analysis. The study concludes that Stapleton is an active commercial center which can support an additional 38,000 to 78,000 square feet of retail space.

Plan for New York City (NYC Department of City Planning 1969).

This comprehensive plan addresses a variety of concerns including land use policy, parks and recreational facilities, neighborhood improvement, and community services. Because of the general nature of this plan and its date of publication, no specific recommendations are made for Fort Wadsworth or Stapleton.

The Waterfront (Supplement to the Plan for New York City) (NYC Department of City Planning 1971)

This waterfront plan addresses existing and proposed uses for New York City's 220 miles of waterfront.

North Shore Esplanade Study - Staten Island, New York (NYC Department of City Planning 1988)

This study provides specific recommendations concerning the creation of a continuous waterfront esplanade linking Sailors Snug Harbor with the Verrazano Narrows Bridge/Fort Wadsworth as initially recommended by Staten Island: The North Shore Study in 1983 (see above). Specific recommendations are provided regarding alignment, access points, overall design, development costs, and implementation priorities.

New York City Waterfront Revitalization Program (NYC Department of City Planning 1982)

This program, prepared pursuant to the Waterfront Revitalization and Coastal Resources Act of 1981, stresses the protection and best use of New York's coastal waters and promotes waterfront revitalization through the voluntary participation of local governments. This Coastal Zone Management Program contains 44 state policies and an additional 12 polices specific to New York City. The New York City policies are part of the Local Waterfront Revitalization Program of New York City which is a component of the state program.

In that federal lands are exempt from the provisions of the Coastal Zone Management Program (Barton 1989), NAVSTA Staten Island is not considered to be located within the Coastal Zone boundary. Although homeport sites are technically exempt from Coastal Zone Management consistency review, the New York State Department of State did review the SAG Homeporting Program for consistency with the Coastal Zone Management Program, due to the potential off-site impacts of the proposed actions (Barton 1989). Since this review has been completed, a review of those actions pertaining to base closure and realignment is not expected to be necessary.

Draft Master Plan, Naval Station, New York, Stapleton/Fort Wadsworth (TAMS 1985)

This Draft Master Plan documents the facility development necessary to support the SAG Homeporting Program as well as the accompanying military and civilian personnel to be stationed at Staten Island. The objectives of this Draft Master Plan are to determine the nature and extent of facilities required for the SAG Homeporting Program, specify the recommended siting of those facilities at Fort Wadsworth and Stapleton, and establish the framework for the development of the base over both the short- and long-term.

4.2.7 Socioeconomics

This discussion includes the economy, employment, and income; population and housing; infrastructure facilities and utilities; community services; recreational facilities; and transportation.

Descriptions are provided for the Borough of Staten Island. Descriptions for the New York City area in general and for NAVSTA New York are addressed in Section 4.1.7.

4.2.7.1 Economy, Employment, and Income

Although the Borough of Staten Island has long been known as a "bedroom" community, all major employment sectors have shown growth in the past year. With a workforce in 1988 of 69,772, the service sector and wholesale and retail industry employ the largest segment of the workforce. The service sector employs over 38% of the workforce, up 7.2% from 1987, and wholesale and retail trade employs 28%, an increase of 1% since 1987.

The remaining employment sectors employ less than 10% of the workforce and include government (8.9%); construction (8.2%); transportation and public utilities (5.8%); finance, insurance, and real estate (5.5%); and manufacturing (4.4%). All these sectors have experienced slight growth since 1987, with the exception of transportation and public utilities (-0.2%). The most significant growth after the service industry was construction, which employed 4.8% more in 1988 than 1987 (NYC Department of City Planning 1989).

The median household income for Staten Island in 1987 was $30,400, (Stegman 1987) higher than that of New York City as a whole at $20,000.

Unemployment is typically low. It stood at 4.0% in 1988, down from 4.4% for 1987. This compares favorably with the city as a whole, which had a slightly higher unemployment rate of 4.7% in 1988 (Evans 1989).

4.2.7.2 Population and Housing

The Borough of Staten Island has been in a steady state of growth since 1970, when the census count was 295,400 persons. From 1970 to 1980, the population increased at a yearly rate of 1.9%. The estimated 1985 population was 370,000, or an increase of 4.9% since 1980. Staten Island's population is 5.1% of New York City's total population and has the lowest percentage of minorities for any of the five boroughs (NYC Department of City Planning 1988). Nearly 85% of the borough's population is white and much of that is fairly recent growth from people who have moved there from elsewhere in the city (Stegman 1987).

Staten Island's relatively young and middle-class population is reflected in the large amount of single family housing that is available there. Just over 44% of the 135,070 housing units fall into this category, while two-family housing makes up almost 31%. In the three year period from 1984 to 1987, the total number of households on Staten Island grew by 7.0%, which was more than twice the growth experienced by any other borough. The homeownership rate for Staten Island also continues to increase, with 65% of households owner-occupied in 1987. This is almost twice the citywide rate. The rental units that do exist generally rent for well above the city average of $395, ranging from $382 in the north shore area of the borough, which has some of the oldest housing, to $455 and $495 in the other two community district areas, where most of the housing growth has occurred (Stegman 1987).

4.2.7.3 Infrastructure Facilities and Utilities

Water Supply

Water is supplied to Staten island via the New York City water transmission and distribution system, which obtains its supply from surface reservoirs in the Delaware River, Hudson-Mohawk, and Hudson River basins. The water supply for both Fort Wadsworth and Stapleton is purchased from the City of New York.

During 1988, approximately 107,700 cf of water were consumed at Fort Wadsworth, based on a quarterly estimate for the period 12/87

through 3/88 (Ehrenberg 1989). To date, the only water consumption at Stapleton involved construction activities and is not representative of projected consumption figures at Stapleton. Water consumption will increase as newly constructed facilities become operational. Local transmission capacities in the Stapleton area more than adequately meet existing needs (U.S. Navy, Northern Division 1984).

Sanitary and Stormwater Sewers

Sanitary sewage from NAVSTA Staten Island is discharged via three separate gravity lines to New York City interceptor sewers along Lily Pond Avenue, School Road, and Bay Street. NAVSTA Staten Island is serviced by the city's Port Richmond Sewage Treatment Plant. The stormwater collection system throughout NAVSTA Staten Island discharges to the Narrows.

Electric Service

Electricity is supplied to both Fort Wadsworth and Stapleton by Consolidated Edison Company (Con Edison).

During 1988, approximately 2,022,010 kwh of electricity were consumed at Fort Wadsworth. To date, the only electricity consumption at Stapleton involved construction activities and hence is not representative of projected consumption figures at Stapleton. Electrical consumptions will increase as newly constructed facilities become operational.

Natural Gas

Natural Gas is provided to both Fort Wadsworth and Stapleton by the Brooklyn Union Gas Company.

During 1988, gas consumption at Fort Wadsworth was 8,908,400 cubic feet (Ehrenberg 1989). Since no facilities located at Stapleton were operational as of mid-1989, no natural gas has been consumed at this site. Gas consumption will increase as newly constructed facilities become operational.

Steam

A steam plant is being constructed at Stapleton to service the homeported ships. None of the other facilities at either Fort Wadsworth or Stapleton will require the purchase of steam for heating purposes.

Heating Oil

Several buildings located at Fort Wadsworth currently utilize heating oil to generate steam heat. Buildings which utilize heating oil include Buildings 203, 356, and 357. These buildings are equipped with a dual fuel boiler so as to have the capability to produce heat from either heating oil or natural gas.

During 1988, 96,622 gallons of heating oil were consumed at Fort Wadsworth (Ehrenberg 1989).

4.2.7.4 Community Services

Medical Facilities

New York City has approximately 23,900 certified hospital beds, with 1,068 of these beds located on Staten Island. Five private hospitals provide medical services to the borough. The average occupancy rate for these hospitals is 78.2%, which is significantly less than the overall rate of 85.5% for New York City (Yorden 1989).

Two hospitals, Bayley Seton Hospital and St. Vincents Memorial Hospital, are located in Community District 1. They have 204 and 440 beds, respectively. Community District 2 also has two hospitals, the Staten Island Hospital, with 470 beds, and the Doctors' Hospital of Staten Island, with 117 beds (NYC Department of City Planning 1989).

Bayley Seton Hospital has been a "uniformed services treatment facility" since 1982. It has been contracted by the DOD to provide medical services to active and retired military and Coast Guard personnel and their dependents.

Police Protection

New York City has approximately 26,000 police officers and 75 precincts which provide police protection for its residents. The New York City Police Department, the Transit Police Department, and the Housing Police Department, as well as the Port Authority of New York and

New Jersey share the responsibility of providing police protection for the city.

Staten Island has three precincts which provide police protection to the borough. The 120th precinct on Richmond Terrace serves Community District 1 on Staten Island. As of July 1984, the precinct had 214 uniformed personnel. Community District 2 is served by the 122nd precinct on Hylan Boulevard, which had 129 uniformed personnel as of July 1984.

Staten Island police are not authorized to patrol at Stapleton or Fort Wadsworth since DOD utilizes its own police forces. There are 29 police officers from the NAVSTA Staten Island security department who are currently stationed at Fort Wadsworth (Wiggins 1989). This level of police service will be increased to support the SAG Homeporting Program.

Fire Protection

Fire protection for New York City is provided by the Fire Department of the City of New York. There are 210 engine companies, 138 ladder companies, four marine companies, and four special rescue companies comprising the city's fire department. Staten Island has 19 fire stations within the borough limits. Community District 1 has nine fire stations, which are comprised of seven engine companies, five ladder companies, one marine company, and one special rescue company. Community District 2 has six fire stations, which include six engine companies, three ladder companies, two brush fire companies, one rescue company, and one satellite company (NYC Department of City Planning 1988). Engine 153 and ladder 77, located on Broad Street, are the first companies to respond to calls at Fort Wadsworth and Stapleton (Gallagher 1989).

Educational Facilities

The New York City public school system consists of more than 1,000 elementary, junior high, and senior high schools. Within the Borough of Staten Island are 55 public schools with approximately 44,265 students. Of these public schools, 48 are K-8th grade and seven are 9-12th grade schools with a total of 29,986 students and 14,279 students, respectively (NYC Department of City Planning 1988).

In addition to public schools on Staten Island, approximately 61 private and parochial schools also exist. There are a total of 12,724 students in the 47 private and parochial K-8th grade schools and 6,079 students in the 14 private and parochial 9-12th grade schools.

Within Community District 1, there are 19 public K-8th grade schools (10,775 students) and four public 9-12th grade schools (5,338 students). In addition there are 22 private and parochial K-8th grade schools (5,299 students) and four private and parochial 9-12th grade schools (1,649 students). In Community District 2, there are 13 public K-8th grade schools (7,523 students) and two public 9-12th grade schools (5,404 students). In addition, there are 13 private and parochial schools (4,164 students) and six private and parochial 9-12th grade schools (1,960 students)(NYC Department of City Planning 1988).

Several public schools accommodate students in the Stapleton/Fort Wadsworth corridor: P.S. 14, at Tomkins Avenue and Hill Street, serves students in the Stapleton vicinity; P.S. 13, on Hylan Boulevard and Bay Street, a new school in Rosebank, serves students near the Bay Street gate of Fort Wadsworth; P.S. 39, at Sand Lane and Major Avenue, serves students near the McClean Avenue gate of Fort Wadsworth. The Intermediate/Junior High Schools in this area are J.H.S. 49 on Hill Street and J.H.S. 2 on Midland Avenue. Two high schools serve the Stapleton/Fort Wadsworth corridor: Curtis High School in St. George draws students from Stapleton, and New Dorp High School draws students living in or near Fort Wadsworth (U.S. Navy, Northern Division 1984).

4.2.7.5 Recreational Facilities

In comparison to the rest of the New York City area, Staten Island has a much larger amount of open space. This is reflected in the type and amount of recreational facilities available in the borough. A wide variety of public and private recreational facilities are readily available throughout Staten Island.

In Community District 1, which includes Stapleton and the northern portion of Fort Wadsworth (all Staten Island north of the Staten Island Expressway), 42 public parks, playgrounds, recreation areas, and sitting areas are available. Of these areas, six are over 10 acres in size, and 14 are under 1.5 acres (NYC Department of Planning 1988). This indicates that a majority of recreational facilities in Community District 1

are of significant size (over 2 acres) and are capable of providing the required space for nearly all recreational facilities. The Clarence T. Barrett Park Zoo is also located in Community District 1.

Within Community District 1, Silver Lake Park is the largest park, consisting of approximately 210 acres. The Authur Von Briesen Park, a 12.7-acre park, is the closest public park to Fort Wadsworth, located directly adjacent to the northern boundary of the station on Bay Street. Arthur Von Briesen Park is considered a 19th-century walking park and provides walking trails but has no other developed recreational facilities.

Community District 2, which includes the central portion of Staten Island south of the Staten Island Expressway, includes the southern portion of Fort Wadsworth. A total of 22 public recreational facilities are located in Community District 2, including parks, playgrounds, a golf course, and a beach. Of these areas, eight are larger than 10 acres (three are larger than 500 acres) and three are smaller than 1.5 acres. This indicates a wide range and diversity of facility size and type.

Within Community District 2, Fresh Kills Park, at approximately 807 acres, is the largest recreational facility. The Franklin Delano Roosevelt Boardwalk and Beach is the closest park to Fort Wadsworth, extending from Fort Wadsworth south to Miller Field. This 638.5-acre public beach is located adjacent to the Gateway National Recreation Area.

The Gateway National Recreation Area was created by Congress in 1972 and includes six coastal units throughout New York Harbor. These units include Jamaica Bay, Breezy Point, Sandy Hook, properties on Staten Island, Hoffman and Swinburne Islands, and all adjacent submerged lands, islands, and waters within one-quarter of mean low water of any of the above waterfront areas. Federal enabling legislation defines the Staten Island unit as: Great Kills Park; Miller Field; Fort Wadsworth; waterfront lands between Cedar Grove Avenue, Seaside Boulevard, and Drury Avenue; and the bay from Great Kills to Fort Wadsworth. As of 1985, all properties with the exception of Fort Wadsworth have been authorized for conveyance to the Department of the Interior, National Park Service (U.S. Navy, Northern Division 1985). Although a portion of

Fort Wadsworth is scheduled to be transferred to the National Park Service, the location of and amount of area to be excessed will not ultimately be determined until construction at Fort Wadsworth relating to the homeport program has been completed (Tinari 1989).

Several recreational facilities are available at Fort Wadsworth. Outdoor recreational facilities include athletic fields, tennis courts, beach-front picnicking and fishing areas, and the parade grounds (also used as the starting point for the New York City Marathon). Indoor recreational facilities include a gymnasium with a weight room. A theater exists at Fort Wadsworth, but is currently non-operational.

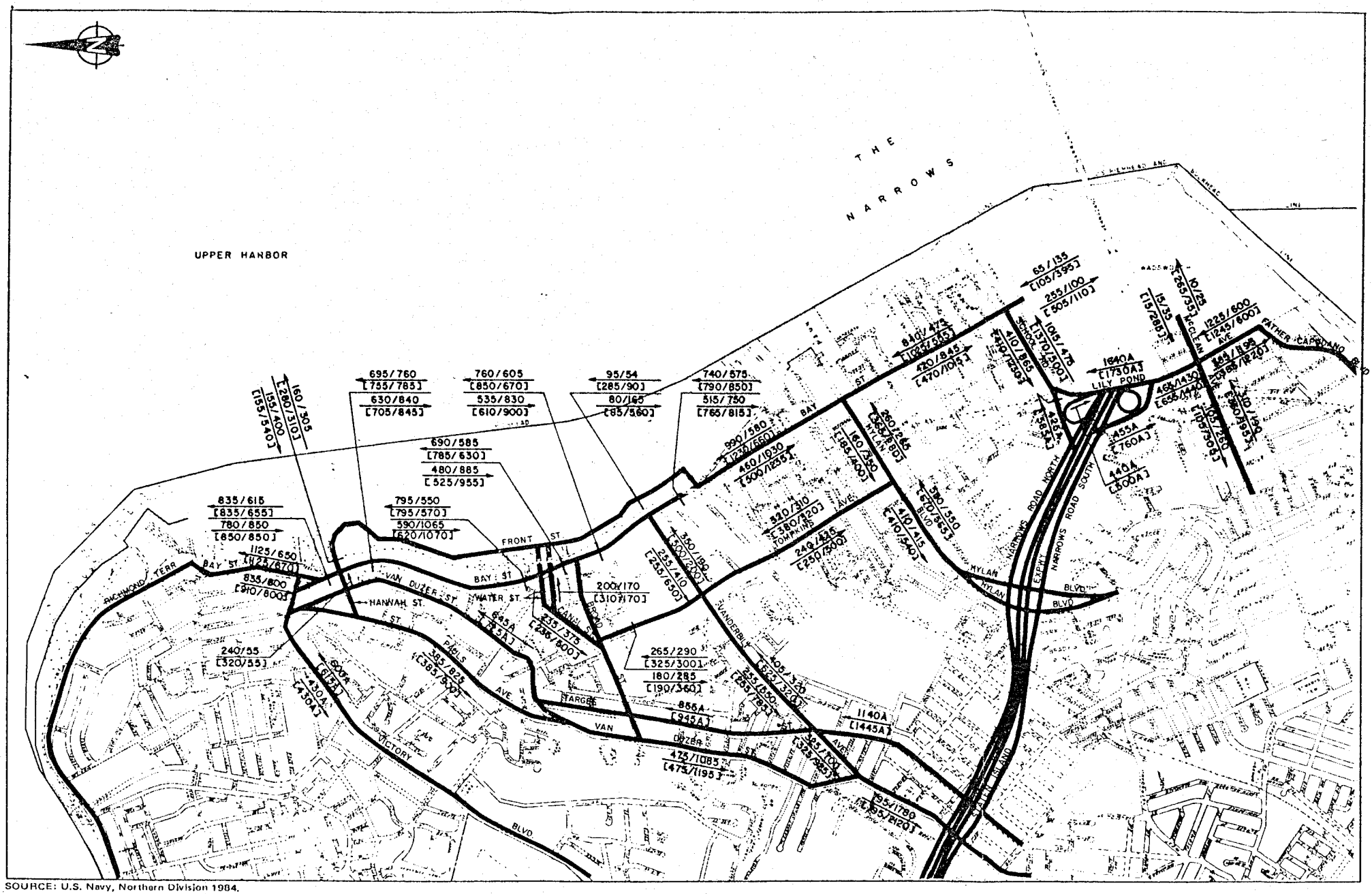
There are no existing recreational facilities on station at Stapleton. Since the site is currently experiencing extensive construction related to the SAG Homeporting Program, all previously existing land uses (vacant industrial/manufacturing) have been demolished. No recreational facilities existed prior to this demolition and new construction.

4.2.7.6 Transportation

The existing roadway network serving the proposed project is bordered on the north by Victory Boulevard; on the south by the Staten Island Expressway (SIE); on the west by the Targee Street/Van Duzer Street one-way couplet; and on the east by Bay Street. This network, illustrated in Figure 4-4, consists of two-way and one-way streets ranging from one to three lanes per direction.

The principal street in the immediate project vicinity is Bay Street, a two-way roadway that parallels the shoreline one block west of the waterfront and extends from the St. George Ferry Terminal on the north to Fort Wadsworth on the south. Bay Street, which varies in width from 35 feet at Tappen Park to 93 feet at Hannah Street, provides the most direct roadway connection between the Stapleton waterfront and Fort Wadsworth. Bay Street is a Federal Aid Urban System roadway with traffic signals at principal intersections.

Several of the streets that intersect Bay Street provide connections to Narrows Road North and Narrows Road South, the one-way service roads of the SIE, and to the other portions of Staten Island. The four major intersecting streets from south to north are:



SOURCE: U.S. Navy, Northern Division 1984.

SCALE
0 400 800 feet

Figure 4–4 EXISTING AND PROPOSED TRAFFIC VOLUMES NEAR NAVSTA STATEN ISLAND

- o School Road, a two-way, 70-foot-wide roadway that connects Bay Street to the SIE and Verrazano Narrows Bridge via the Lily Pond Avenue interchange;

- o Hylan Boulevard, a two-way road with two lanes changing to three lanes half-way between Bay Street and the SIE, that extends the length of the island to Tottenville;

- o Vanderbilt Avenue, a two-way, two-lane road that joins with Richmond Road, which in turn connects with the SIE; and

- o Victory Boulevard, a two-way, two-lane road that joins with Clove Road, which connects with the SIE.

The other major roads that would likely accommodate some homeport-generated traffic as well as relocated NAVSTA Brooklyn personnel are the one-way couplet Targee Street/Vanduzer Street and St. Pauls Avenue/Vanduzer Street. This couplet runs diagonally between Victory Boulevard and Vanderbilt Avenue and provides a direct route between the Staten Island Expressway and the St. George Ferry Terminal. Targee Street is one-way toward St. George (i.e., northbound), while St. Pauls Avenue accommodates southbound traffic. Tompkins Avenue, between Hylan Boulevard and Broad Street, also may serve as an alternative to Bay Street for trips between the SIE corridor and the Stapleton waterfront. In this section, Tompkins Avenue is 40 feet in width and accommodates one travel lane in each direction (U.S. Navy Northern Division 1984).

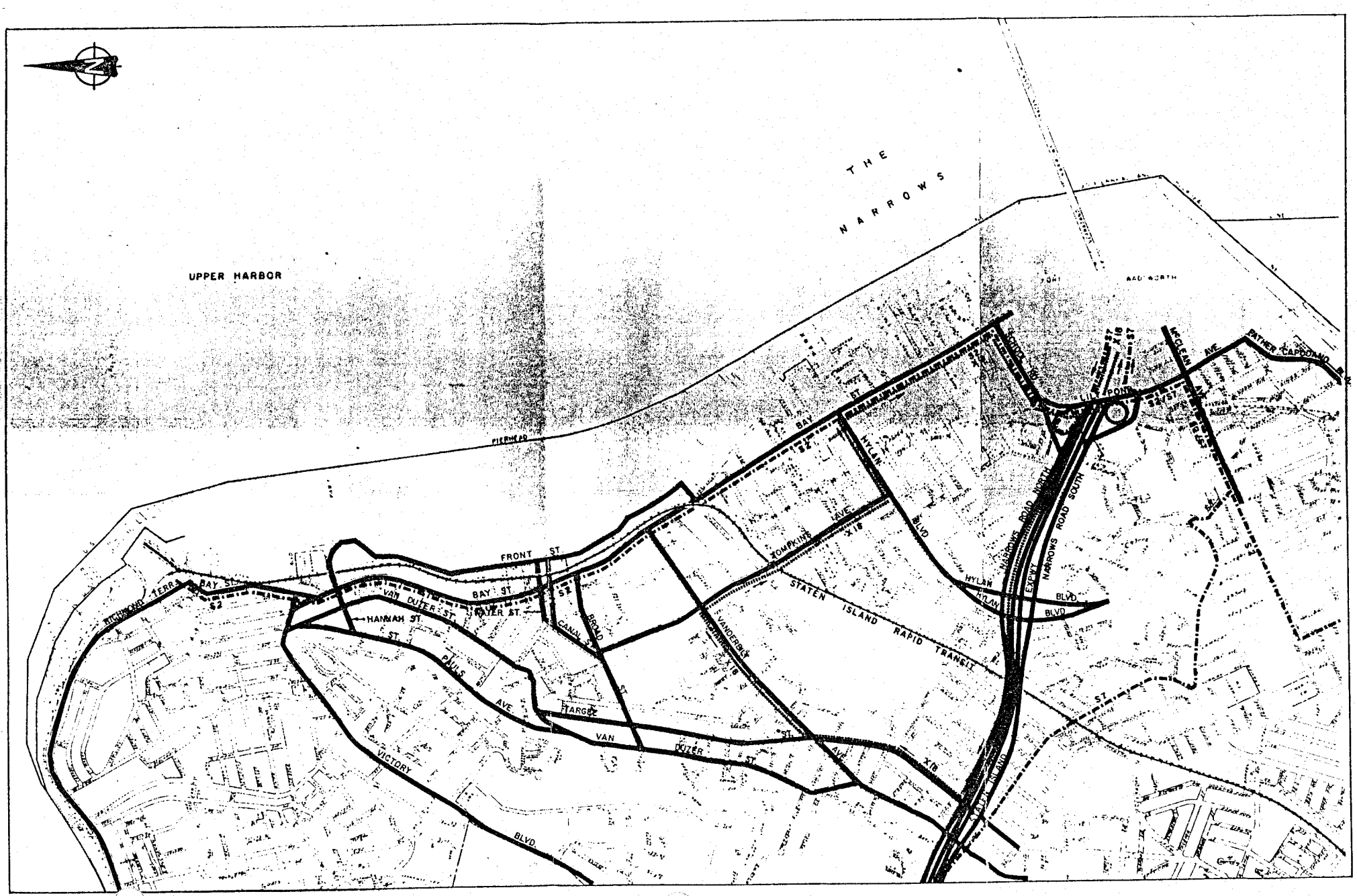
The area south of Fort Wadsworth along the Staten Island shore is connected to Bay Street by Father Capodanno Boulevard, which becomes Lily Pond Avenue in the vicinity of the SIE/Verrazano Narrows Bridge toll plaza. This roadway, which accommodates three travel lanes in each direction, bends frequently in order to traverse the grade differential encountered along its route between the shore and the SIE.

Traffic in the area exhibits distinct morning and late afternoon peaks that are characteristic of a commuter area. The morning peak period occurs from 7:00 to 9:00 a.m., and the afternoon peak period occurs between 4:00 and 6:00 p.m. Heavy volumes are found in the peak periods on School Road and along Bay Street, particularly near the St. George Ferry Terminal (U.S. Navy, Northern Division 1984). Existing traffic volumes for both morning and afternoon peak hours are shown in Figure 4-4.

On-street parking is prevalent throughout the area, with posted regulations indicating the type and time limits of applicable parking prohibitions and restrictions. On-street metered parking is found in the Stapleton area along Canal and Water Streets and in the St. George area. Parking generally is restricted in the vicinity of signalized intersections, although bus stops are located near such locations (U.S. Navy, Northern Division 1984).

There are five off-street parking lots available to the public within walking distance of the proposed project site at Stapleton. Of these, two lots could serve vehicles associated with the proposed project; the other three lots are either reserved for municipal parking or are utilized to capacity. The Bay Street municipal lot (private parking allowed) has a 160-car capacity and a typical occupancy of 30%. The other available lot is a triangular parcel where Edgewater Street converges with Bay Street. The capacity is 35 cars, and the present occupancy is about 50% (U.S. Navy, Northern Division 1984).

The northeast quadrant of Staten Island is served by various forms of public transportation. The Staten Island Rapid Transit line runs from the southeast, at Tottenville, to St. George. This service passes directly west of the Stapleton site with stations at Clifton and Stapleton. In addition, the S2 Bus Route runs along Bay Street between the Ferry Terminal and School Road and along School Road, Lily Pond Avenue, and Father Capodanno Boulevard, with stops every few blocks. At St. George, the Staten Island Ferry provides frequent service (every 20 minutes during peak period, 30 minutes during the workday, and hourly during off-peak times) between St. George and South Ferry in Manhattan. There are also numerous bus lines between different Staten Island neighborhoods and St. George, as well as bus service (X18) between Fort Wadsworth (at the Bay Street/School Road intersection) and downtown Manhattan. Also, the S7 bus route connects Fort Wadsworth (at Lily Pond and McClean Avenues) with the terminal station of the 4th Avenue subway line, at 95th Street in Brooklyn (U.S. Navy, Northern Division 1984). The routes of public transportation services that directly serve the project area are shown in Figure 4-5.



SOURCE: U.S. Navy ...hern Division 1984.

Figure 4–5 PRINCIPAL RO...WAYS NEAR NAVSTA STATEN ISLAND

4.2.8 Cultural Resources

The cultural resources for NAVSTA Staten Island are described herein. A discussion of the Stapleton site (Section 4.2.8.1) is followed by a discussion of the Fort Wadsworth site. The potential for cultural resources is discussed in detail in the DEIS for SAG Homeporting, for which cultural resource surveys were conducted.

4.2.8.1 Stapleton

Until the middle of the 19th century, the area of the proposed construction did not constitute a sub-aerial landform, but corresponded to an inundated near-shore environment of the Lower Hudson River estuary. The inundation of the project area began approximately 10,000 B.P., following the release of large volumes of meltwater at the end of the last (Wisconsin) glaciation. Glacial meltwater trapped behind the terminal moraine formed a number of proglacial lakes in the New York City area, and stratigraphic manifestations of one such lake are extant in Stapleton. Due to the eustatic (global) sea rise, the broad areas of the Continental Shelf were drowned and the levels of surface water in all major estuaries aggraded. Current oceanic and estuarine levels were reached approximately 6,000 B.P., and it is then that the natural shoreline of Staten Island came into existence (Louis Berger and Associates, Inc. 1985; Edwards and Merrill 1977; Sanders 1974). During the early historic period, the natural eastern shoreline of Stapleton was a shallow, low-energy estuarine environment under direct tidal influence.

The reclamation of this shore began in the middle of the 19th century by means of vertically driven piles and landfill deposition. Late 19th century structures established on the newly created shorefront consisted of piers, bulkheads, and a yard for storage of lumber, wood, and coal. By the beginning of the 20th century, Stapleton contained a ferry terminal and a number of additional small piers. By 1928, the artificial shoreline of Stapleton contained nine large piers extending from the bulkhead toward the deep channel. These piers were removed prior to construction of the SAG Homeporting Program.

The analysis of historic maps undertaken in the context of the Draft Environmental Impact Statement for the SAG Homeporting has

indicated that during the historic period the project area was under-utilized and lacked substantial industrial development. No known residential structure of historic or architectural significance was constructed on the landfilled shore in the area of Stapleton. It is highly unlikely that any significant cultural resources are buried under the fill (U.S. Navy, Northern Division 1984). The overall cultural resource sensitivity of the project area is low.

4.2.8.2 Fort Wadsworth

Fort Wadsworth is a Navy military installation located on the northeastern shore of Staten Island, atop a steep rise (elevation 150 feet above mean sea level) which dominates the Narrows and New York Harbor. The area presently occupied by Fort Wadsworth has been utilized by human populations since prehistoric times. This is evidenced by archaeological materials originating either directly from the fort or from its immediate vicinity. Archaeological collections at Staten Island Institute of Arts and Sciences include an assemblage of 199 prehistoric artifacts which were found at an undocumented location within Fort Wadsworth. The Walton Stillwell Archaeological Site, which is located approximately 200 feet west of the Fort Wadsworth boundary, yielded more than 200 prehistoric artifacts, including projectile points, net-sinkers, a full-grooved axe, a bone fishhook, and cord-marked ceramic. In 1984, the program of archaeological subsurface testing undertaken in the context of the DEIS for the SAG Homeporting Program resulted in the discovery of a small number of prehistoric stone tools and ceramics in seven testing areas within Fort Wadsworth. Finally, native American artifacts were discovered during the archaeological investigation of the Fountain-Mouquin Site (also known as the Vanderventer-Fountain Site) in the southwest portion of the study area (U.S. Navy, Northern Division 1984; 1985; Louis Berger and Associates, Inc. 1988).

Archaeological testing and documentary background research at Fort Wadsworth did not reveal an extensive colonial presence within the project area, although the Walton Stillwell site did reveal 17th-century deposits. Late 18th-century deposits and features are extant at the Vanderventer-Fountain Site within Fort Wadsworth itself (U.S. Navy, Northern Division 1984; Baugher-Perlin, Shereue and Bluefield 1980).

In 1794, when the State of New York bought 45.45 acres of land for the purpose of establishing a military facility dominating the Narrows, the purchased land had already been cleared and, presumably, used for agricultural purposes. Early military installations, including fortifications and residential quarters, were constructed in the fort in 1808; these structures are not extant. Additional land purchases--i.e., 22 acres in 1809 and 39 acres in 1854-1856--enabled the Army to consolidate its control over the area.

The earliest extant fortifications at Fort Wadsworth are the Battery Weed, designed by Joseph G. Totten and erected between 1847 and 1864, and Fort Tompkins, completed in 1876 (see Table 4-9 and Figure 4-6). Both of these structures were listed on the NRHP in 1972 and 1974, respectively (U.S. Navy, Northern Division 1984; American Association for State and Local History 1989).

In the middle of the 19th century, scenic qualities of the area attracted wealthy residents of Staten Island who built imposing mansions on hillsides overlooking the Narrows. These were confined to the area west of New York Avenue because locations closer to the shore were already occupied by the Army. With time, this neighborhood (known as Arrochar) became a fashionable resort. Between 1892 and 1901, the Army acquired an additional 144 acres of this vacation-land from nine different owners and demolished all standing mansions. Only two gatehouses of the Duncan-King estate (build ca. 1855 and ca. 1860) are still intact. These buildings were determined to not be eligible for NRHP nomination (U.S. Navy, Northern Division 1985). Archaeological testing of the parcel which corresponded to the late 19th-century land acquisition by the Army has indicated that subsurface deposits in the southwestern portion of the reservation are severely disturbed and do not contain a significant archaeological database (U.S. Navy, Northern Division 1984).

Between 1895 and 1904, the Army undertook an ambitious program of upgrading the Fort Wadsworth fortifications. This program was a part of a plan to strengthen American coastal defenses which was proposed and executed by then Secretary of War William C. Endicott. During this time, 12 gun batteries and a command post were erected in the western and southern sectors of Fort Wadsworth (see Table 4-9 and Figure 4-6).

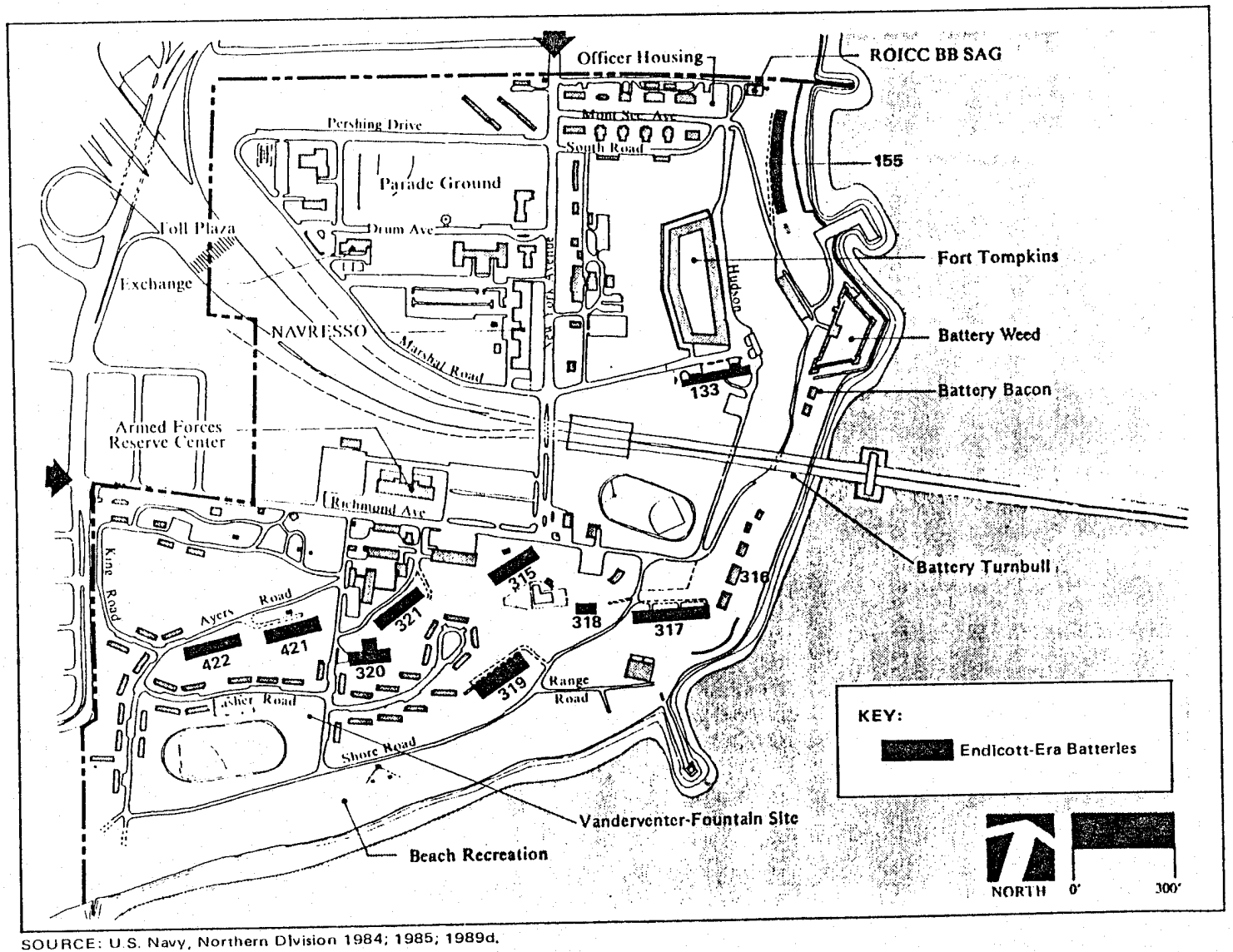
Table 4-9

CULTURAL RESOURCES OF FORT WADSWORTH

Endicott-Era Batteries		
Battery Duane	-	#133 (1895 - 1904)
Battery Catlin	-	#155 (1895 - 1904)
Battery Upton	-	#315 (1895 - 1904)
Battery Barbour	-	#316 (1895 - 1904)
Battery Hudson	-	#317 (1895 - 1904)
Battery Mills	-	#318 (1895 - 1904)
Battery Dix	-	#319 (1895 - 1904)
Command Post	-	#320 (1895 - 1904)
Battery Barry	-	#321 (1895 - 1904)
Battery Richmond	-	#421 (1895 - 1904)
Battery Ayers	-	#422 (1895 - 1904)
Battery Bacon	-	No number (1895 - 1904)
Battery Turnbull	-	No number (1895 - 1904)
19th-Century Fortifications		
Battery Weed (1847 - 1864) NRHP Structure		
Fort Tompkins (1858 - 1872) NRHP Structure		
Vandeventer-Fountain Historic Site (Late 18th - 19th century)		

[MP]NR8900:D2694, #1820, PM=37

Source: U.S. Navy, Northern Division 1984.



SOURCE: U.S. Navy, Northern Division 1984; 1985; 1989d.

Figure 4–6 CULTURAL RESOURCES AT FORT WADSWORTH

Six of the batteries (batteries Duane, Upton, Barry, Ayers, Richmond, and Dix) were new installations, and six others (batteries Catlin, Hudson, Barbour, Bacon, Turnbull, and Mills) replaced previously existing emplacements. Endicott batteries are massive concrete structures with either raised or sunken gun platforms. They were designed to accommodate cannons of various types and calibers and protect gun crews from enemy bombardment (U.S. Navy, Northern Division 1984). These fortifications, however, never fired a shot in battle. Due to the rapid development of military technology, including long range cannons, batteries became obsolete within a few years after the end of construction. All Endicott batteries were abandoned and stripped of their weapons between 1915 and 1944. All 13 structures are in relatively good condition, constitute a unified military complex, and are eligible for NRHP nomination (U.S. Navy, Northern Division 1985).

Following the end of World War I, the importance of Fort Wadsworth drastically declined, and most of its facilities were deactivated. During the 1950s, the fort served as an infantry training site and housed the Missile Defense Command of the New York Metropolitan Area. Between 1963 and 1979, the fort housed the headquarters of the Second United States Army and the U.S. Chaplain Center and school. Later, the facility was used for personnel housing and support activity. It was transferred to the Navy in 1987.

5. ENVIRONMENTAL EFFECTS AND MITIGATIVE MEASURES

The environmental effects of base closure and realignment are negligible and largely confined to socioeconomic effects. For NAVSTA Brooklyn, the proposed project consists of base closure. For NAVSTA Staten Island, the proposed project consists of 11 construction projects to support the activities relocating from NAVSTA Brooklyn.

Environmental effects have not been determined. Environmental effects are described separately for NAVSTA Brooklyn (Section 5.1) and NAVSTA Staten Island (Section 5.2). Environmental effects at NAVSTA Staten Island are summarized since these have been addressed in detail in the Draft and Final Environmental Impact Statements for SAG Homeporting.

Several proposed projects (P-114R Family Housing I, P-YYYR Land Acquisition, P-109R SUPSHIPS Administrative Services, P-121R NIS Administrative Services, P-119R Navy Motion Picture Service, and P-XXXR Family Housing II) have not been sited and, therefore, the environmental effects have not been determined.

5.1 NAVSTA BROOKLYN

5.1.1 Topography, Geology, and Soils

Base closure will have no effect on the topography, geology, or soils at NAVSTA Brooklyn. This is due to the fact that no construction or demolition is associated with base closure at NAVSTA Brooklyn.

5.1.2 Climate and Air Quality

Closure of the station will have a positive, though negligible, impact on the overall air quality at the site due to the minor reduction in air emissions from commuter traffic.

5.1.3 Hydrology and Water Quality

The closure of NAVSTA Brooklyn will not have any significant impacts on the surface and groundwater hydrology or water quality in the area. The station does not use surface water or groundwater near the station, and no surface or groundwater exists on the station. Thus, neither groundwater nor surface water is impacted.

5.1.4 Terrestrial Environment

The closure of NAVSTA Brooklyn will not have any significant impacts on vegetation or wildlife. If landscaped areas are no longer maintained, natural vegetation may return to the station.

5.1.5 Noise Quality

The closure of the station will have a negligible impact on the overall noise levels in the area because primary noise sources will continue to be vehicular and truck traffic from Flushing and Kent Avenues, and any reduction of traffic due to the closing of the station will be negligible.

5.1.6 Land Use and Zoning

5.1.6.1 Land Use

The proposed base closure will have negligible impacts on land use on the Borough of Brooklyn, including the vicinity of NAVSTA Brooklyn. In that the existing station is relatively separate and distinct from the surrounding types of land use (i.e., residential/commercial or industrial/manufacturing), base closure is expected to have little or no impact on neighboring land uses. However, in that base closure will occur regardless of plans for reuse of the property, closure and abandonment of the property may accelerate vandalism if the property is not appropriately secured, and may result in decline in the surrounding neighborhood. However, the Navy plans to ensure that the property will be adequately secured.

The vacating of property will increase the inventory of space or make land available to federal, state, or municipal government agencies or for private development. A total of 34.2 acres of land will be made available.

5.1.6.2 Zoning

Base closure will have negligible impacts on zoning in Brooklyn or in the vicinity of NAVSTA Brooklyn. The proposed action is not expected to have any impacts on land use which, at this time, would warrant a change in the zoning classification on site or on adjacent areas. Such changes in zoning may occur after the property is made available for future use or development.

5.1.7 Socioeconomics

5.1.7.1 Economy, Employment, and Income

The proposed closure and realignment of NAVSTA Brooklyn will result in the loss of employment in the Borough of Brooklyn. However, this loss is minor considering the number of jobs in the Borough of Brooklyn. Re-use of the property is also likely to generate additional jobs in the borough. Any loss in employees will be due primarily to the personal choice of employees not to transfer to NAVSTA Staten Island because of the inconvenience of a longer commuting distance, lack of direct public transportation, and the additional transportation costs, such as the $5.00 toll on the Verrazano Narrows Bridge.

The projected FY 1993 base loading for NAVSTA New York indicates an increase in civilian personnel, as well as enlisted military personnel (see Table 5-1). The number of officers will remain at 17; enlisted military personnel will increase from 135 to 177; and civilian personnel will increase from 326 to 516 (Murray 1989). The projected base loading for the SAG Homeport is 292 officers, 4,356 enlisted personnel, and 1,865 civilians (TAMS 1985). Tenant activities will have approximately the same number of civilian employees, with some increases due to SAG Homeporting.

As seen from these figures, the number of civilian employees is expected to increase, primarily due to homeporting the SAG at NAVSTA Staten Island. Closure of NAVSTA Brooklyn will require a relocation of civilian employees and possibly replacement of civilian employees for those who choose not to relocate, but closure of NAVSTA Brooklyn will not cause a net loss of civilian employees.

Closure and realignment of NAVSTA Brooklyn may impact individual civilian employees. Those who choose to relocate may incur increased

Table 5-1

NAVSTA NEW YORK BASE LOADING - PROJECTED FY 1993

NAVSTA New York Departments	Officer	Enlisted	Civilian*	Total
Command Career Counselor	0	1	0	1
Navy Family Service Center	1	0	3	4
Chaplain	1	5	1	7
Legal Department	1	2	2	5
Public Affairs Office	1	5	1	7
EEO Office	0	0	2	2
Administrative Office	2	17	6	25
Security	0	24	141	165
Operations	3	50	13	66
Public Works	3	12	171	186
Communications	0	0	18	18
Supply and Fiscal	3	60	45	108
M.W.R.	0	0	94	94
Manpower-Human Resources	0	0	6	6
Safety	0	0	9	9
Internal Review	0	0	3	3
Command	2	1	1	4
Totals	17	177	516	710

[MP]REPORTS:NR8900:D2694, #1869, PM=22

*Some civilian billets may be filled by contractor equivalent personnel.

Source: Murray 1989

transportation costs and longer commutes. Certain employees, particularly those in lower salary grades, may be disadvantaged because of a dependency on public transportation, which is not as available in commuting to NAVSTA Staten Island. Those who choose not to relocate may have a loss in individual income until new employment is found.

Estimates of the number of civilian employees who choose not to relocate have not been made (Murray 1989). Although BCRA states that "economic adjustment assistance to any community located near a military installation being closed or realigned" may be provided subject to the availability of funds, no severance or relocation incentive packages have been developed (Murray 1989).

Closure and realignment of NAVSTA Brooklyn may cause a change in the number of civilians employed both directly by the Navy and by Navy subcontractors. Contract work for maintenance services is not considered lucrative at NAVSTA Brooklyn due to its relatively small size, whereas the more extensive operations for homeporting at NAVSTA Staten Island are seen as more profitable. In these instances, civilians may be rehired by these private contractors due to their familiarity with military procedures.

Closure of NAVSTA Brooklyn will cause negligible impacts on the economy of the Borough of Brooklyn. Although civilian employees live primarily in Brooklyn and Queens, income is spent throughout the region. Operating costs spent by NAVSTA Brooklyn are dispersed regionally. Due to the diversity of the economy, closure of NAVSTA Brooklyn will not impact the economy of the borough.

5.1.7.2 Population and Housing

The proposed closure of NAVSTA Brooklyn will result in the loss of 12 family housing units and the BOQ and BEQ that are currently available on the station. As described in Section 4.1.7.2, these units are available to military personnel stationed at NAVSTA Brooklyn and to others who have temporary assignments in the New York City area. The BOQ and BEQ facilities have the capacity to house up to 50 and 140 personnel, respectively, and typically are occupied at near capacity. Since sufficient replacement units are already planned for construction at

Fort Wadsworth, the loss of these bachelor units will have no adverse impacts on the operation of naval activities in the New York City region.

MILCON projects P-114R, P-YYYR, and P-XXXR will provide replacement housing for the loss of the twelve family housing units at NAVSTA Brooklyn. Two family housing units suitable for senior grade officers will be constructed under MILCON project P-114R. MILCON P-YYYR provides funds for land acquisition for these two housing units. The remaining 10 housing units for company grade officers will be replaced under MILCON project P-XXXR. Sites for these projects have not been determined (McCoy 1990).

Senior officer family housing is already projected to have a 35-unit deficit when the homeport becomes operational. Family housing currently scheduled or under construction on the base will be assigned primarily to enlisted personnel and some junior officers. Should senior officers be forced to find housing accommodations off-station, the compensation provided by BAQ/VHA would likely prove inadequate given the high cost of the local and regional housing market (Drozdowski 1989). There is a problem of limited space for more new housing which will be addressed in a revised master plan for NAVSTA New York.

A change in the number of "geographic" bachelors that are part of the current NAVSTA Brooklyn population may be an additional result of the shift of operations to NAVSTA Staten Island. Spouses and families with school-age children are presently dissuaded from moving to Brooklyn. An improvement in living conditions on Staten Island may encourage some personnel to bring their spouses and/or families to the area. However, this increase will be incremental compared to the large increase of families brought into the area as part of the homeport plans.

Since relocation of the current population of military personnel assigned to NAVSTA Brooklyn will not have an effect on the total number of personnel originally projected as a part of the planned homeporting contingent, there should be few or no resulting impacts aside from those identified in other documents as integral to homeporting issues overall. Planned BOQ and BEQ facilities will adequately compensate for the loss of existing facilities at NAVSTA Brooklyn. Family housing on and off

station, under construction or scheduled, should not be impacted by any changes in housing requirements that may occur among current NAVSTA Brooklyn personnel as a result of the closure and subsequent relocation.

Closure of NAVSTA Brooklyn will have no adverse effects on the housing market in the Borough of Brooklyn. A small number of military personnel live off station. If they decide to move on station after relocation to NAVSTA Staten Island, these vacancies will be filled due to the high market demand. Likewise, the number of civilians who may relocate from Brooklyn to Staten Island as a result of closure would have no significant impact because the demand in the housing market is high and vacancies created will be filled.

5.1.7.3 Infrastructure Facilities and Utilities

Base closure is not anticipated to impact the infrastructure facilities and utilities unless the property remains vacant for an extended period, in which case, the infrastructure facilities and utilities could be subject to vandalism and general decline.

5.1.7.4 Community Services

Base closure is not expected to significantly increase the demand for community services in Brooklyn. Existing medical services, police and fire protection, and educational services will not be significantly impacted by the proposed action.

Medical Services

Base closure and realignment will have negligible impact on the provision of medical services and the availability of certified hospital beds in Brooklyn. All active duty military personnel and dependents currently stationed at NAVSTA Brooklyn receive medical care on station at the Naval Hospital Branch Clinic. Following base closure and realignment, these personnel will receive medical care at either the Naval Hospital Branch Clinic (located at Stapleton) or at Bayley Seton Hospital (see Section 5.2.7.4). Since these personnel neither receive their current medical care at either public or private hospitals in Brooklyn nor will they do so following closure, no impacts on these medical facilities are expected.

Military retirees who live in the immediate vicinity of NAVSTA Brooklyn and who currently rely on the Naval Hospital Branch Clinic for medical care may face changes as a result of base closure and realignment. If these individuals are unable to travel to Bayley Seton Hospital on Staten Island, they will be forced to obtain medical care at other facilities.

The Naval Hospital Branch Clinic currently provides care to approximately 30 military retirees per month, with the predominant service provided being prescription refills (Peach 1989). Following base closure and realignment, these individuals will have two primary options to obtain medical care: travel to the Naval Hospital Branch Clinic or Bayley Seton Hospital on Staten Island and receive free care, or utilize the Civilian Health and Medical Program of the Uniform Service (CHAMPUS). CHAMPUS is the medical insurance provided to all active-duty and non-active duty military personnel and their dependents. This program, like all insurance, provides reimbursements for all medical and pharmaceutical costs incurred by the subscriber. Since military retirees are automatically enrolled in the CHAMPUS program, medical care can be obtained via personal physicians or hospitals (Peach 1989).

Police Protection

The demand for local police protection is not expected to be significantly impacted by base closure unless abandonment causes an increase in vandalism. Local police forces are expected to assume responsibility for protecting the NAVSTA Brooklyn property following closure, but due to the limited access to the property and the existing level of service provided to the BNYDC property, this increase in level of service is not expected to be significant.

Fire Protection

The demand for local fire protection is not expected to be significantly impacted by base closure unless abandonment causes an increase in vandalism. No change in existing service levels will result. Those local fire companies which currently provide fire protection services to NAVSTA Brooklyn will continue to do so following base closure.

Educational Services

None of the military personnel stationed at NAVSTA Brooklyn have school-age dependents. Therefore, no impacts will result to the current enrollment of local schools as a result of base closure and realignment.

5.1.7.5 Recreational Facilities

As a direct result of base closure, all indoor recreational facilities (i.e., gymnasium facilities in Building 4) will close at NAVSTA Brooklyn and be relocated to other military facilities throughout the New York City area. Outdoor recreational facilities which can not be removed and relocated will remain after base closure (Roberts 1989).

Most of the indoor recreational facilities currently located in Building 4 will be relocated to either Fort Wadsworth or the Physical Fitness Center at Stapleton at such time as the appropriate facilities are constructed and available.

Other long-term impacts to currently available recreational facilities at NAVSTA Brooklyn resulting from base closure involve the loss of these facilities to current users of the facilities. Adequate recreational facilities will be made available to all active duty military personnel, dependents, or guests at other locations.

5.1.7.6 Transportation Impacts

The closure of NAVSTA Brooklyn will have minimal but positive effects on the overall traffic flow in the surrounding area, most notably the reduction of Flushing Avenue traffic by approximately 600 vehicles per day. A slight decline in ridership of public transportation may occur, but will be insignificant to the overall ridership of the public transportation system in New York City. Some increase in traffic may occur during relocation of office equipment and supplies, but will be of limited duration.

5.1.8 Cultural Resources

Cultural resources of NAVSTA Brooklyn--specifically, the Surgeon's House, built in 1863 (structure R-1), and the U.S. Naval Hospital, built in 1838 (structure R-95)--will not sustain any adverse effects by the process of closure and relocation of NAVSTA Brooklyn. The Navy will

ensure that these structures will not be damaged by vandalism or general deterioration.

5.2 NAVSTA STATEN ISLAND

Impacts of construction, operation, and maintenance of SAG Homeporting facilities were evaluated in the Draft and Final EIS for SAG Homeporting at NAVSTA Staten Island. These impacts are summarized to the extent that impacts are similar for the construction, operation, and maintenance of facilities in support of base closure and relocation for NAVSTA Brooklyn. Impacts also are addressed for updated information on the existing environment and impacts specific to base closure and realignment.

5.2.1 Topography, Geology, and Soils

The overall effects of base closure and realignment on topography, geology, and soils will be minor and limited to the short-term construction activities at NAVSTA Staten Island. The primary effects of base closure and realignment will be the disturbance of soil and increased erosion in areas of construction activities. Demolition of paved areas will expose areas of previously protected soil to surface runoff. Excavation, especially in areas of steep slopes, will temporarily expose unprotected soil areas to rapid runoff. These activities will result in a high, short-term erosion potential. However, these effects can be minimized by implementing proper site drainage and erosion prevention techniques.

5.2.2 Climate and Air Quality

Construction of the proposed projects at Stapleton and Fort Wadsworth will result in emissions of particulate matter, such as dust from demolition, clearing, excavation, etc., and other airborne contaminates from diesel-powered equipment and modified traffic.

Methods available to reduce emissions of dust include wetting, chemical stabilization, and covering of loaded trucks. With the exception of trucking operations to and from the sites, most of the dust-generating activities would occur within either the Stapleton or Fort Wadsworth sites and would be distant from residential land uses.

Methods available to reduce excess emissions attributed to roadway traffic are dependent upon adequate construction preplanning with respect to allowable truck routes, street closings, parking, and schedule. In any case, due to the limited duration of construction activities at any specific location, these short-term impacts are considered insignificant. Long-term impacts will result from a slight increase in residential traffic within the sites, but these impacts will also be insignificant on a regional scale.

5.2.3 Hydrology and Water Quality

The construction necessary for the closure and realignment of NAVSTA Brooklyn will result in short-term minor impacts to surface water hydrology. Fort Wadsworth and Stapleton are areas which are developed or under construction, and surface water is essentially managed by a storm drainage system. Construction and demolition will affect surface water quality by increasing the potential for sediment-loading and erosion during these activities, especially at Fort Wadsworth, where the terrain has steep slopes. Measures will be implemented to minimize disturbed areas and to manage run-off on site. Effective mitigation measures include straw bale and filter fabric barriers, diversion structures, sediment basins, mulching, and temporary seeding. Ongoing maintenance of erosion control measures ensures success over the duration of the project.

There will be no impact to surface water from the operation and maintenance of facilities in support of base closure and realignment at Fort Wadsworth or Stapleton.

The proposed construction at Fort Wadsworth and Stapleton is not expected to have any significant short-term or long-term impacts on the groundwater. The amount of impervious surface will increase with the proposed construction projects. This will cause an increase in surface runoff and decrease in infiltration to the groundwater. The impact on the groundwater, however, will be small and insignificant. Moreover, groundwater at either location is not a source of potable water.

5.2.4 Terrestrial Environment

The construction necessary at Fort Wadsworth and Stapleton for the closure of NAVSTA Brooklyn is expected to have short-term minor impacts

on the terrestrial vegetation and wildlife. The construction of the Police Station (P-118R) and the Automotive Hobby Shop (P-110R) at Fort Wadsworth and the Navy Exchange Facility (P-115R) and the Physical Fitness Center (P-116R) at Stapleton will have a positive long-term effect on the vegetation. The areas slated for construction at Fort Wadsworth are a parking lot and tennis court, while the area at Stapleton is a deteriorating paved area that is now in a construction area for the SAG Homeporting. After construction, all these buildings will be landscaped, thus increasing the net vegetation. The area for construction of the Bachelor Enlisted Quarters (P-107R) is already under construction for SAG Homeporting; therefore, the impact to vegetation from construction has already occurred.

The remainder of the buildings planned for construction (P-108R, P-111R, P-113R, P-117R, and P-122R) are in areas where buildings currently exist. The existing buildings are surrounded mainly by grasses with some scattered ornamental trees and shrubs (see Section 4.2.4). The demolition and construction necessary for these new buildings will result in the loss of the existing vegetation. This loss of vegetation can be offset by the landscaping of the new buildings.

The proposed project is not expected to impact rare, threatened, or endangered species, even though the peregrine falcon, a federally endangered bird, nests on the Verrazano Narrows Bridge (Clough 1989; Buffington 1989). Because the existing wildlife species in the project area are adapted to developed environments, the proposed closure and realignment construction will not impact them.

5.2.5 Noise Quality

Noise-sensitive receptors may be affected by two types of project-related sources: noise generated on-site and noise due to related off-site activities. On-site noise sources occur within project boundaries and may affect receptors near the project. Off-site noise results primarily from vehicle movements and may affect receptors along main corridors of access to Stapleton and Fort Wadsworth.

The major noise impact on the Stapleton site from the proposed project would be short-term construction activities. Pile-driving will generate sound levels of 96-101 dB(A) at 50 feet. During this phase of

construction, the pile-driving activity would be clearly noticeable at noise-sensitive land uses in the vicinity of the Stapleton site. Other phases of construction will have significantly lower associated noise levels, in the range of 75-85 dB(A) at 50 feet. Construction activities will adhere to all construction noise standards outlined in Section 4.1.5.1. Long-term noise levels after completion of construction will have a negligible impact on the existing environment.

As at Stapleton, the major noise impacts at the Fort Wadsworth site from the proposed project will be from short-term construction activities. Pile-driving will not be necessary here, so the extremely high noise levels temporarily experienced at Stapleton will not occur.

Nevertheless, all construction noise standards outlined in Section 4.1.5.1 will be adhered to. It is not anticipated that the proposed long-term on-site activities at Fort Wadsworth will affect adjoining residential land uses. Minor noise impacts may be generated by vehicle movements between Fort Wadsworth and Stapleton and the additional movements of personnel commuting to the site.

5.2.6 Land Use and Zoning

5.2.6.1 Land Use

As a result of the SAG Homeporting Program, many changes to the existing land use at both Fort Wadsworth and Stapleton have occurred. The projected influx of naval operations, personnel, and resulting construction will have both short-term and long-term impacts to existing land uses. Many changes to existing land use at Fort Wadsworth and Stapleton are the result of the SAG Homeporting Program, and most of these impacts are addressed in the Draft Master Plan for Fort Wadsworth/ Stapleton and the EIS.

Additional impacts to existing land use at Fort Wadsworth and Stapleton, however, are attributable to NAVSTA Brooklyn base closure and realignment. In order to support NAVSTA Brooklyn closure, the following facilities will be constructed at Fort Wadsworth: BEQ; BOQ; Public Works Facility; Headquarters and Administration Building; Community Facilities Building; Storage Facilities; Police Station; Automotive Hobby Shop; and Outdoor Recreation Facilities. The following facilities will be constructed at Stapleton: Navy Exchange Facility, Physical

Fitness Center; the temporary Naval Dental Branch Clinic; and the temporary Naval Hospital Branch Clinic.

As currently proposed, the following facilities will be located at various locations at Fort Wadsworth. The BEQ (P-107R) will be located at a currently vacant site at Liggett Road and Drum Avenue. The Public Works Facility (P-111R) will be located at a vacant site southwest of the entrance to the Verrazano Narrows Bridge. The BOQ will be located at a site on Pershing Avenue near New York Avenue. The structures previously occupying the site have been demolished. The Headquarters and Administration Building (P-117R) will be located at a site on New York Avenue near Tompkins Street. Prior to construction, former Army buildings no. 121, 122, and 123 will be demolished. The Community Facilities Building (P-112R) will be located directly adjacent to the Headquarters and Administration Building on New York Avenue. Prior to construction, Army buildings no. 127 and 129 will be demolished. The Storage Facilities (P-108R) will be located adjacent to the Public Works Commissary (Building 306) on a site along Richmond Avenue. The Automotive Hobby Shop (P-110R) will be located in the northwest corner of Fort Wadsworth at a vacant site on the corner of Marshal Road and Pershing Drive. The Police Station (P-118R) will be located on a vacant site west of New York Avenue and on the south side of the entrance to the Verrazano Narrows Bridge. The Outdoor Recreation Facilities (P-120R) will be constructed along the southeastern shore of the station. The pool will be built on higher ground along Richmond Avenue, west of the intersection with Shore Road.

As currently proposed, the followings facilities will be located at Stapleton: the Navy Exchange Facility (P-115R) will be located directly south of the SIMA Building, which is being constructed as part of the SAG Homeporting Program. This site is vacant. The Physical Fitness Center (P-116R) will be located directly adjacent to the proposed Navy Exchange Facility (also on a vacant site).

Also proposed for relocation from NAVSTA Brooklyn to Stapleton are the tenant activities of the Naval Dental Branch Clinic and Naval Hospital Branch Clinic. Although the exact location of both of these facilities has not been confirmed at this time, indications are that they will be located at Stapleton so as to provide support services directly to shipboard personnel.

Since the entire Stapleton site is currently undergoing considerable construction to support the SAG Homeporting Program (i.e., new pier, SIMA facility, infrastructure, etc.), the impacts to the Stapleton site directly attributable to base closure and realignment will be negligible.

Short-term land-use-related impacts resulting from base closure and realignment at Fort Wadsworth and Stapleton will result primarily from construction activities. Temporary impacts of construction will result from the removal of existing land uses and vegetation, site preparation (grading, excavation, etc.), and construction of new facilities. All construction-related impacts are considered temporary and capable of being mitigated using construction techniques designed to reduce or eliminate such impacts (i.e., erosion control).

Long-term land-use-related impacts of base closure and realignment at Fort Wadsworth and Stapleton include the permanent loss of existing land uses and vegetation at proposed construction sites and permanent changes to the existing land uses at each site. Long-term impacts attributable to NAVSTA Brooklyn base closure and realignment are expected to be minor.

5.2.6.2 Zoning

The proposed projects will not impact zoning in the Borough of Staten Island.

5.2.7 Socioeconomics

5.2.7.1 Economy, Employment, and Income

Closure of NAVSTA Brooklyn will have a positive economic impact on NAVSTA Staten Island in that general funds currently made available for Base Operating Support (BOS) expenditures at NAVSTA Brooklyn may be reallocated to NAVSTA Staten Island. The majority of NAVSTA Brooklyn's BOS expenditures for FY 1988 went for operating costs of the three major buildings at the site, amounting to $5.3 million (U.S. Navy, Northern Division 1989d). There should be no adverse impacts to NAVSTA Staten Island itself as a result of the base closure and realignment of NAVSTA Brooklyn.

Impacts of the proposed NAVSTA Brooklyn base closure and realignment on the Borough of Staten Island will consist mainly of increased employment opportunities and additional local taxes that will accrue from the wages paid. In addition there will be both direct and indirect economic impacts resulting from expenditure of wages and purchases of materials for construction. Much of this impact will occur within the sphere of the regional economy, although the wider national economy will also be affected.

The total of construction costs for the facilities planned to support NAVSTA Brooklyn closure is approximately $75.4 million. This figure represents almost 27% of the estimated $282 million construction budget as presented in the 1984 EIS for SAG Homeporting. Since the original homeporting plans for NAVSTA Staten Island necessarily duplicated existing facilities and services at NAVSTA Brooklyn, the construction presently scheduled for support of base closure does not represent any additional construction costs to the original estimate. Rather, it represents that portion of the original homeporting requirements that would have been duplicated at NAVSTA Brooklyn and for which funding appropriations have now been, or are expected to be, designated from closure funds.

As a result, there will be no new net increase of construction jobs apart from those estimated in the EIS. This figure for probable labor requirements was stated in terms of an estimated 28,000 person-months for the entire construction phase and is a function of the total estimated construction cost. Since approximately 27% of the original construction cost estimate will be attributed to base closure projects, approximately 20% of the original estimate of 28,000 person-months may also be considered impacts of base closure projects. This amounts to 7,840 person-months of labor required for the duration of the construction period, or approximately 327 person-years of employment for each of the two years for construction.

Wages for construction labor will likewise constitute about 27% of the original wage estimate and should amount to approximately $23 million. Also, indirect or secondary impacts should create temporary jobs in the region as a result of purchases of supporting goods and services.

Permanent civilian jobs that will be created as a result of the transfer of activities to NAVSTA Staten Island from NAVSTA Brooklyn will also result in increased regional income and local tax revenues. However, the exact number of permanent civilian jobs that may be attributed to closure of NAVSTA Brooklyn cannot be readily disaggregated from the original homeporting estimate of 995 civilian personnel in both appropriated and non-appropriated categories. This original estimate assumed a nominal transfer of 86 civilian workers from NAVSTA Brooklyn and should not be affected by the transfer of the remaining NAVSTA Brooklyn civilian employees since they will simply be filling positions that were already defined under homeporting requirements at NAVSTA Staten Island. However, the number of new jobs created by base loading for NAVSTA Staten Island will be affected since some positions will be filled by an unknown number of transfers rather than new employees.

5.2.7.2 Population and Housing

Closure of NAVSTA Brooklyn and subsequent relocation of personnel to NAVSTA Staten Island will not have any significant impacts on the local community. All potential impacts have been identified in the EIS. The relocation of NAVSTA Brooklyn personnel will not result in an increase in the number of projected personnel for homeporting purposes. The number of civilian employees who may relocate their residence as a result of closure and relocation to Staten Island will be insignificant.

5.2.7.3 Infrastructure Facilities and Utilities

Pursuant to the SAG Homeporting Program, extensive construction of new facilities and associated utility infrastructure was proposed at Fort Wadsworth and Stapleton. All requirements of the SAG Homeporting Program have been identified and addressed by the Department of Navy via the preparation of the EIS and Draft Master Plan. Much of the required construction identified in these documents, including the extension of existing utilities, has been initiated at both Fort Wadsworth and Stapleton.

Both the EIS and the Draft Master Plan provide relatively detailed discussions of infrastructure requirements of the SAG Homeporting Program and address the need for new utility distribution systems at both

Fort Wadsworth and Stapleton. According to these reports, the new utility distribution systems will provide the necessary level of services to support all construction activities and operations requirements of new and existing facilities as required by the SAG Homeporting Program.

Pursuant to the NAVSTA Brooklyn closure and realignment, 11 projects will be constructed at Fort Wadsworth and Stapleton: BEQ (P-107R); Storage Facilities (P-108R); Automotive Hobby Shop (P-110R); Public Works Facility (P-111R); BOQ (P-113R); Navy Exchange Facilities (P-115R); Physical Fitness Center (P-116R); Headquarters and Administration Building (P-117R); Police Station (P-118R); Outdoor Recreation Facilities (P-120R); and Community Facilities Building (P-122R).

Although these projects are technically relocating to Fort Wadsworth and Stapleton due to NAVSTA Brooklyn base closure and realignment, each project has been considered as part of the general SAG Homeporting Program. As such, preliminary homeporting planning documents (EIS; Draft Master Plan) have identified and addressed the potential impacts resulting from the location of the facilities at Fort Wadsworth and Stapleton, including potential impacts to infrastructure and utilities. In that these planning documents address the need for the new utility distribution system to provide utility services to all homeporting facilities, it is assumed that the provision of all necessary infrastructure facilities and utilities to the above-mentioned facilities has been ensured.

5.2.7.4 Community Services

Base closure and realignment is not expected to significantly increase the demand for community services on Staten Island. The relocation of facilities from NAVSTA Brooklyn to Fort Wadsworth and Stapleton may cause an increase in the demand for medical care at Bayley Seton Hospital; however, it is not expected to result in an increase in the demand for police and fire protection or educational services.

Medical Services

The Naval Hospital Branch Clinic currently stationed at NAVSTA Brooklyn will be relocated to Stapleton and will continue to provide

medical care to active duty military personnel. As a result of the SAG Homeporting Program and the base closure and realignment, the Naval Hospital Branch Clinic is expecting to increase its current level of service of 150 persons/ month to approximately 500 persons/month (Peach 1989). It should be noted, however, that a majority of this increased demand for medical service is attributable to the SAG Homeporting Program and not to NAVSTA Brooklyn base closure and realignment.

In order to accommodate this increase in demand for medical care via the Naval Hospital Branch Clinic, an agreement has been reached whereby all non-active duty personnel, retirees, and dependents will be referred to Bayley Seton Hospital for medical care. The Naval Hospital Branch Clinic, to be relocated to a temporary facility at Stapleton, will continue to provide medical care to active-duty military personnel and perform military-specific functions (i.e., physicals).

Although base closure and realignment may result in an increased demand for medical services at Bayley Seton Hospital, a majority of this demand is attributable to the influx of military personnel and their dependents under the SAG Homeporting Program. No other public or private hospitals on Staten Island are expected to be impacted by base closure and realignment.

As a result of base closure and realignment, no person currently eligible to receive medical care via the Naval Hospital Branch Clinic at NAVSTA Brooklyn will lose that eligibility. All active duty military personnel currently eligible to receive care from the Naval Hospital Branch Clinic will continue to be eligible to receive care. Non-active duty personnel, retirees, and dependents will, however, receive medical care from Bayley Seton Hospital rather than from the clinic following base closure and realignment. These individuals will not experience a loss of medical care, only a shift in the provider of that care (Peach 1989).

Police Protection

There will be no measurable impact on the demand for police protection on Staten Island as a result of base closure and realignment. In order to provide support for base closure and realignment, DOD will increase its existing police force at Fort Wadsworth and Stapleton from

29 to 71. This is considered adequate to accommodate closure of NAVSTA Brooklyn.

Given the adequate level of police staffing to accommodate base closure and realignment and the use of DOD forces, the New York City Police Department will not be required to increase its staffing on Staten Island. Thus, no impacts to the New York City Police Department are expected to result from the proposed action.

Fire Protection

Base closure and realignment will not significantly increase the demand for fire protection. The expansion of the local fire departments resulting from the SAG Homeporting Program will be able to accommodate additional services required by base closure and realignment.

Educational Services

Currently, due to the lack of school-age dependents of active duty personnel stationed at NAVSTA Brooklyn, no school age children will be relocated to Staten Island. Future staffing of NAVSTA Staten Island is not expected to significantly affect school enrollment.

5.2.7.5 Recreational Facilities

As a result of base closure and realignment, recreational facilities will be constructed at both Fort Wadsworth and Stapleton. The construction of these facilities will have positive impacts on the existing environment.

Pursuant to base closure and realignment, the following facilities are planned: a Physical Fitness Center (P-116R) (gymnasium, amusement center, indoor playing courts, chapel, and telephone exchange), an Automotive Hobby Shop (P-110R), and Outdoor Recreation Facilities (P-120R) (pool, bathhouse, two lighted tennis courts, and two lighted ballfields.)

The new facilities will increase the recreational opportunities available at NAVSTA Staten Island for active duty military personnel, dependents, and guests. Existing facilities are not satisfactory to accommodate increased personnel for SAG Homeporting as well as personnel relocating from NAVSTA Brooklyn. Thus, the impact will be positive for a larger population than those relocating from NAVSTA Brooklyn.

5.2.7.6 Transportation

Traffic impacts at the Staten Island sites will be both short-term and long-term. Short-term impacts will result from construction activities.

Stapleton and Fort Wadsworth contain adequate areas for construction worker parking. The roadway system leading to the SAG Homeporting sites is expected to experience peak worker loading prior to its normal peak. Construction is usually initiated an hour earlier in the workday than office-based or other jobs. Given the number of jobs involved and the arrival of workers prior to normal peak traffic conditions, the street network leading to each site is expected to handle the construction load without serious degradation in level of service.

Long-term impacts will consist of the increase in trip-making activities in the post-development stage. Based on detailed analysis outlined in the EIS, post-development traffic flow will be as indicated on Figure 4-7. Impacts on public transportation are expected to be insignificant in terms of increased ridership. Personnel living in New Jersey will not have access to any reasonably direct public transportation services, and less than 50% of potential public transit users actually will use available services.

5.2.8 Cultural Resources

5.2.8.1 Stapleton

Review of the available documentary sources indicate that the project area corresponds to a landfill section of the Stapleton's shore which lacked significant historic, industrial, and architectural development. During the late 19th and early 20th century, the reclaimed shore was used for ship loading, docking, and storage. No known significant cultural resources exist in the immediate vicinity of the proposed projects. Thus, the construction of the Navy Exchange Facility (P-115R) and the Physical Fitness Center (P-116R) will not have adverse effects on important historic properties.

It should be noted that a number of historic properties listed on the NRHP, eligible for NRHP nomination, or designated as New York City Landmarks exist within the Bay Street corridor, 700 to 900 feet west of

the proposed construction. These cultural resources have been identified in the course of documentary research and cultural resources surveys undertaken in conjunction with the EIS (U.S. Navy, Northern Division 1984). The construction of P-115R and P-116R will not have any adverse effect on these properties.

5.2.8.2 Fort Wadsworth

Under the proposed base closure and realignment, the Navy proposes to erect nine housing, storage, administrative, and recreational facilities on the Fort Wadsworth site (see Table 1-3; Figure 1-3). This action will have no direct physical impact on any existing historic structure. Two NRHP structures--Battery Weed and Fort Tompkins--are located 1,200 feet and 500 feet, respectively, from the nearest construction site. With only one exception, all remaining historic buildings are between 1,700 and 2,000 feet from the nearest proposed facilities. The proposed Building P-108R, Storage Facilities, will be located within 100 feet of Battery Upton. However, the construction of this unit will not result in an alteration of the battery or any damage to it.

Evaluation of the archaeological sensitivity of various areas of Fort Wadsworth was carried out through documentary background research undertaken in the context of the EIS.

The study has concluded that:

> ". . . Any subsurface remains associated with the majority of the nineteenth century structures had been badly disturbed, if not totally obliterated, by major twentieth century construction activities. This conclusion was verified through on-site inspection of the indicated localities." (U.S. Navy, Northern Division 1984)

Subsurface investigation of nine testing areas within Fort Wadsworth's boundaries demonstrated general absence of intact archaeological deposits (U.S. Navy, Northern Division 1984).

5.3 OTHER SITES

This section describes environmental effects on relocation sites outside of NAVSTA Staten Island. Three tenant activities may not be

relocated from NAVSTA Brooklyn to NAVSTA Staten Island. These three tenant activities are NMPS, NISRA, and SUPSHIPS. NMPS plans to relocate to government-owned or commercial leased space in Brooklyn or Queens. NISRA has relocated to government-owned office space in Manhattan. SUPSHIPS plans to relocate to commercial leased space on Staten Island, although new construction may also be programmed for SUPSHIPS.

Impacts of these relocation plans are negligible. All of the proposed relocation sites are located in highly urbanized areas, and no new construction is anticipated. The most significant impact is the increase in operating expenses of these tenant activities to include leasing costs. Services provided by an on-station location will no longer be available. Such services include parking, security, and cafeterias. Communication between naval activities will be more difficult because of disparate locations.

Positive impacts may be provided by new locations in areas of greater economic strength. NAVSTA Brooklyn is located in an area in which few services (i.e., restaurants and shops) are located. Relocation to other areas of New York City may provide amenities which are attractive to employees. Other socioeconomic impacts addressed in Sections 5.1.7 and 5.2.7 are applicable to these tenant activity relocation plans.

Impacts on the boroughs of Manhattan, Queens, Brooklyn, and Staten Island are negligible. The demand for office space is high, and any impact the tenant activity will provide to the economy is incremental to the borough, where employment is diversified and very strong.

6. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS AND CONSIDERATIONS WHICH OFFSET ADVERSE EFFECTS

The primary environmental effect of the closure and realignment of NAVSTA Brooklyn is socioeconomic. Several tenant activities will have increased operating costs primarily due to the added cost of leasing commercial or government-owned space outside of NAVSTA Staten Island or other NAVSTA New York property. Depending on location, annual lease costs for commercial space will be $341,690 to $554,600 for NMPS and $504,000 to $951,840 for SUPSHIPS. NISRA has relocated to government-owned space in Manhattan with an expected annual lease cost of $672,000. Vacant government-owned space is scarce. Services provided to the on-station community will also be lost to tenant activities relocating elsewhere. Services such as a security system, on-station parking, and cafeterias will need to be provided by the individual tenants or found through alternative arrangements. In addition, disparate locations of tenant facilities may affect ease of communication for receiving and sending messages between naval commands and activities.

Civilian employees will be impacted by the relocation plans. Relocation plans for NAVSTA Brooklyn and the tenant activities will necessitate alternative commuting routes for civilian employees. Since most civilian employees live in Brooklyn or Queens, relocation of NAVSTA Brooklyn to NAVSTA Staten Island will involve increased commuting distance, time, and cost. Increased costs are due to increased travel distances and tolls to cross the Verrazano Narrows Bridge (a $5.00 toll each round-trip crossing). Public transportation to Staten Island is not readily accessible.

Other environmental effects will occur due to construction activities at NAVSTA Staten Island. Effects of construction are documented in the Environmental Impact Statement for the Surface Action

Group Homeporting at Staten Island. These include construction-related air emissions, noise, traffic, and some loss of vegetation and open space.

The primary consideration which offsets these adverse effects is the Base Closure and Realignment Commission's recommendation, endorsed by Congress in the Base Closure and Realignment Act, that NAVSTA Brooklyn be closed and activities relocated to NAVSTA Staten Island. The projected cost savings is $4.2 million annually. With an increase in responsibility for NAVSTA New York, services will be more efficiently and effectively provided at NAVSTA Staten Island. The facilities and housing areas at NAVSTA Brooklyn have deteriorated such that an extensive repair and rehabilitation program would be required to upgrade them. Much of the facility has been underutilized. In 1988, 34% of the space was considered vacant. Rehabilitation of the facility would not service the needs for increased personnel at NAVSTA Staten Island due to homeporting.

7. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term uses of the environment, as well as the enhancement of long-term productivity, will largely be socioeconomic. Additional expenses beyond base operating costs will be incurred by NAVSTA New York and tenant activities to relocate facilities and personnel. Approximately $75.4 million will be required for new construction at NAVSTA Staten Island. Additional moving expenses will include temporary work stoppage, moving vehicles and equipment, and some renovation costs for certain tenant activities moving into leased space outside of NAVSTA Staten Island.

Per the recommendation of the Base Closure and Realignment Commission, these expenses will be offset by closure and relocation of NAVSTA Brooklyn to Staten Island. The Commission estimates annual savings of $4.2 million. Closure and relocation will eliminate the need for duplicate services at both NAVSTA Brooklyn and NAVSTA Staten Island and eliminate the need to maintain or upgrade the deteriorating, underutilized structures at NAVSTA Brooklyn.

Other short-term uses of the environment will be positive. Construction jobs will be required by proposed construction projects at NAVSTA Staten Island. Although short-term, these jobs will strengthen the construction economy.

8. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed project will require construction to support the activities and facilities relocating from NAVSTA Brooklyn. This construction will utilize open space and increase the amount of impervious surface on NAVSTA Staten Island. Material used in the building and facility construction, as well as energy resources for construction equipment, will be irreversible and irretrievable uses of resources.

9. PREPARERS

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APPENDIX A

CULTURAL RESOURCES AT NAVSTA BROOKLYN

Prior to 1966, the facilities and structures of the NAVSTA Brooklyn were part of the Brooklyn Naval Shipyard. Their histories were closely connected. The following provides general background information on the history of the Shipyard (Section 1), elucidates historical developments more specific to the NAVSTA Brooklyn, and documents existing cultural resources that are potentially eligible for nomination to the National Register of Historic Places (NRHP) (Section 2). The information was obtained in the course of documentary research, which consisted of an examination of primary sources (i.e., historic and contemporary maps, real estate inventories, evaluation reports, historic manuscripts) and selected secondary sources (published histories, cultural resource surveys reports, regional studies). These documents were made available by the Department of Public Works, NAVSTA Brooklyn, the Municipal Library of the City of New York, and the New York City Landmarks Preservation Commission. The documentary research was supplemented by a field inspection of the NAVSTA Brooklyn, during which it was determined that two historic structures (the U.S. Naval Hospital, Building R-95, and the Surgeon's Quarters, Building R-1) are potentially eligible for the NRHP nomination. The results of this inspection are presented in Appendix A-1.

1. HISTORIC BACKGROUND

European penetration into the area began in 1609, when Henry Hudson explored the New York seaboard and the river which bears his name. By 1614, the agents of the Dutch East India Company had established claims on Manhattan Island in order to strengthen the Dutch claim to the newly discovered territories and facilitate the fur trade. The earliest known grants of land in the County of Kings took place in 1636 at New Armsfort and Gowanus (Church and Rutsch 1982).

The recorded history of the project area began in 1637 when Joris Jansen Rapalje, a French Walloon, bought 336 acres of land from the Indians. This land lay adjacent to a bay on the south shore of the East River. There, Rapalje established a farm called "Waal-Bought." The name was from the Dutch "Ein Waal" and "Ein Bought," signifying "the bend of the inner harbor" or "the Walloon's Bay," from which the modern name of Wallabout Bay is derived. Rapalje's tract comprised a portion

of the present shipyard, and his house probably was situated on the elevated ground at the present location of the U.S. Naval Hospital (Barton nd).

In 1697, Hans Hensen Bergen, Rapalje's son-in-law, obtained a patent on 400 adjoining acres of land east of the original purchase. These lands were retained by descendants of the Rapalje family and used predominantly for agriculture until the beginning of the 19th century.

The original development in the study area was carried out by John Jackson, a local entrepreneur and director of the Wallabout and Brooklyn Toll Bridge Company. In 1781, Jackson bought the western portion of the Wallabout Bay shore and adjacent meadows and built a small shipyard there. It consisted of a few buildings which were used for housing boats under construction, a pond for seasoning oak timbers, a mill, and a pier. The first warship constructed there was the frigate John Adams, built in 1798 (Geismar 1988; Church and Rutsch 1982).

Jackson's shipyard and adjacent lands on the western shore of Wallabout Bay were purchased by the U.S. government, through an intermediary, in 1801. Under the official name of New York Shipyard and more common name of Brooklyn Naval Yard, this facility became one of six naval yards established by the new Department of the Navy.

The development of the shipyard in the first decade of the 19th century was hampered by a lack of funds and a number of land disputes involving the surrounding properties. The first warship commissioned by the government, the 74-gun ship-of-the-line, Ohio, was not completed until 1817.

Early structures erected within the shipyard included two ship houses, six brick buildings housing offices and storehouses, and the Commander's House (completed 1806). Other notable early buildings on the shipyard were the Lyceum (completed 1833) and Dry Dock No. 1 (completed 1851). Dry Dock No. 1, a granite and timber structure, is the only one of six dry docks to have survived later demolitions and alternations. Both the Commandant's House and Dry Dock No. 1 are designated New York City Landmark sites (Landmark Preservation Commission 1975; Church and Rutch 1982).

United States involvement in armed conflicts required ever larger and more powerful ships which, in turn, required stronger piers and

docks, larger shipbuilding, repair, maintenance facilities, and deeper channels and berthing stations. Consequently, construction and demolition were frequent events in the Brooklyn Naval Shipyard. During the course of the 19th and 20th centuries, the Navy undertook extensive reclamation of swamplands adjacent to the bay. This involved canal filling, dredging, and construction of shore stabilizing piers, bulkheads, and wharfs (Church and Rutsch 1982; Geismar 1980).

United States naval requirements during the Civil War and the Spanish American War resulted in increased shipbuilding activities. During the second half of the 19th century, numerous ships were built in the Brooklyn Naval Shipyard, including the sail-powered Vergennes and Savannah; the sail- and steam-powered Trenton; and steam-powered ships of the Civil War era, including the Monticello, Oneida, Lexington, and Octorora. In 1888, the Brooklyn Naval Shipyard completed the construction of a 7,000-ton battleship, the U.S.S. Maine. The explosion of this ship and loss of 260 men in the harbor of Havana in 1898 was used by the United States as a pretext for war against Spain (Church and Rutsch 1982).

In the beginning of the 20th century, the Brooklyn Naval Shipyard produced four battleships: the Connecticut, Florida, New York, and Arizona. During the course of World War I, the shipyard employed some 18,000 people.

The Japanese attack on Pearl Harbor in 1941 destroyed or damaged a number of American battleships. Following the appropriation of funds for naval rearmament by Congress, a massive shipbuilding program involving over 70,000 personnel commenced at the Brooklyn Naval Shipyard. The shipyard repaired more than 5,000 vessels, converted 250 warships, and produced numerous destroyers, cruisers, and Coast Guard cutters. World War II-vintage ships built in Brooklyn included the 43,200-ton battleships South Dakota, Indiana, North Carolina, Iowa, and Missouri, as well as the aircraft carriers Bennington, Bon Homme Richard, Franklin D. Roosevelt, and Saratoga (Church and Rutsch 1982; U.S. Navy, Northern Division 1989d, 1983).

The Brooklyn Naval Shipyard with the exception of its eastern portion was closed in 1966. The eastern portion of the shipyard, now called NAVSTA Brooklyn, was retained by the Navy as NAVSTA New York,

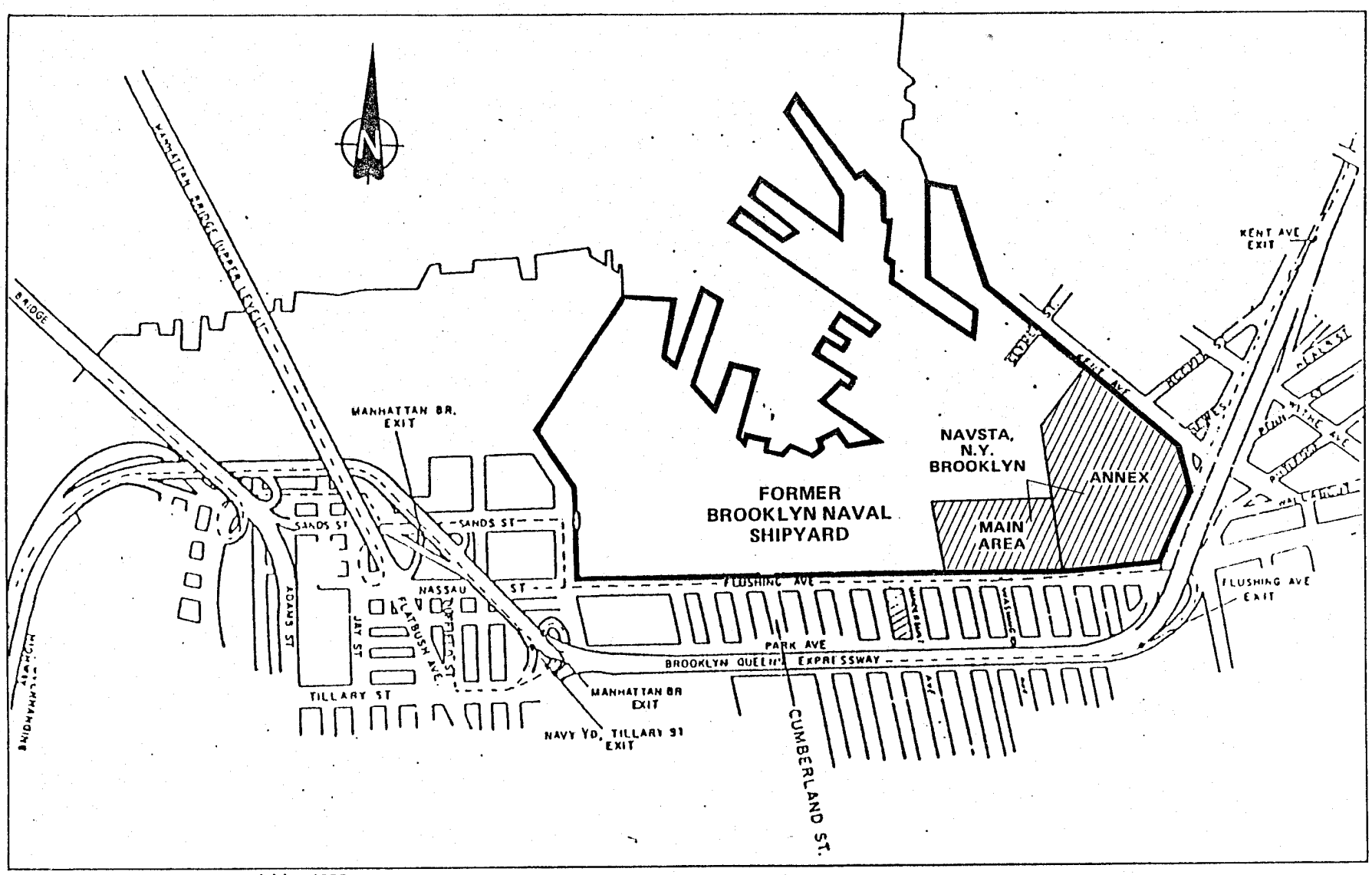
which provides administrative support and services to various shore commands in the New York metropolitan area (U.S. Navy, Northern Division 1983). The remainder was transferred to a quasi-governmental development corporation, the Brooklyn Naval Yard Development Corporation. The following section describes the history and the cultural resources of NAVSTA Brooklyn.

2. Historic Development in the Project Area and Existing Cultural Resources

The station can be subdivided into two distinct areas: the Main Area and the Annex (U.S. Navy, Northern Division 1983) (see Figure A-1). The main area previously housed the former Naval Materials Laboratory and the Naval Strategic System Navigational Facility. It contains 10 utilitarian or industrial-type buildings and structures constructed between 1942 and 1944 (Table A-1 and Figure 1-2). Presently, the Main Area is the center of the administrative and support activities of NAVSTA New York. The Annex had its origin in the United States Naval Hospital (Building R-95) constructed between 1830 and 1838. The hospital ceased operation in the late 1940s. Presently, the Annex contains 25 buildings and structures constructed between 1838 and 1978 (Table A-2 and Figure 1-2).

Among the events leading to the creation of the U.S. Naval Hospital and the Annex was the Act of Congress of March 2, 1799, which authorized and directed the Secretary of the Navy to deduct 20 cents per month from the pay of officers and seamen for the purpose of providing medical aid to sick and disabled servicemen. The conditions in early naval hospitals were often dismal, and it was said that sailors stayed in them only until they were strong enough to desert.

In 1824, the Commissioners of the Navy, with the expressed purpose of creating a naval hospital, acquired 33 acres of land from the Schenk family. The purchased land was situated to the east of the shipyard, on a prominent ridge some 56 feet above the tide. The parcel contained various standing structures, including the old Schenk farm, a mill, and a number of outbuildings. Between the land purchase in 1824 and the completion of the new hospital in 1838, sick sailors were housed in the old Schenk farmhouse, which is no longer extant.



SOURCE: U.S. Navy, Northern Division 1983.

Figure A–1 NAVSTA NEW YORK, BROOKLYN IN RELATION TO FORMER BROOKLYN NAVAL SHIPYARD SITE

Table A-1

NAVSTA BROOKLYN MAIN AREA
CURRENTLY STANDING STRUCTURES

Building No.	Area (Sq. Ft.)	Built	Construction & Use
1	245,146	1942	Seven-story, brick building used as administrative center of NAVSTA NY, containing offices, tenant activities, exchange, Bachelor Enlisted Quarters, and Enlisted Dining Facility.
2	118,455	1942	Two-story, brick building containing Public Works Department and Supply and Fiscal Office/Warehouse.
3	4,313	1942	Two-story, brick building containing Security Dept. and NISRA office.
4	62,286	1944	Single-story, brick, wood, and corrugated asbestos-sided building containing recreation center, and SUPSHIP warehouse.
5	6,700	1944	Two-story, brick building. Vacant.
7	6,300	1942	Single-story, brick building. Electrical substation.
8	1,419	1942	Brick, unroofed enclosure. Electrical substation.
10	3,125	1942	Single-story, concrete and corrugated plastic sided building. Public Works Department storage.

[MP]NR8900:D2694, #1817, PM=18

Sources: U.S. Navy, Northern Division 1983; U.S. Navy, NAVSTA Brooklyn 1968.

Table A-2

NAVSTA BROOKLYN, ANNEX
CURRENTLY STANDING STRUCTURES

Building No.	Area (Sq. Ft.)	Built	Construction and Use
305	19,712	1896(?)	Two-story, brick building. Storage.
306	8,364	1936	Single-story, brick building. Storage and Operations (Boat Repair).
311	21,583	1944	Single-story, brick building. NMPS and Exchange.
316	3,952	1942	Single-story, brick building. Storage.
353	300	1938	Single-story, brick building. Vacant.
670	49	1975	Single-story building. Fuel-dispensing hut.
671			Pool.
672	400	1978	Single-story, wood building. Pool bathhouse.
R95	48,396	1830	Two-story, stone building. Vacant. Former Naval Hospital (N.Y.C. Historical Landmark).
R103	3,332	Prior to 1890	Two-story, brick building. Four-car garage and storage.
R103A	2,620	1943	Single-story, concrete block building. Eight-car garage.
R104	1,482	1850	Two-story, brick guesthouse, renovated.
R109	1,716	1883	Two-story, brick building. Garage and storage.
R426	2,409	1909	Single-story, brick building. Storage.
R448	969	1923	Single-story, concrete-and-glass greenhouse.
R450	315	1920	Subsurface concrete building. Electrical substation.
R475	1,798	1967	Single-story, concrete block building. Auto Hobby Shop.
R476	36	1966	Single-story, metal building. Hewes St. Gatehouse.
RD	28,536	1910	Two-story, brick and stone building. Vacant.
R1	10,984	1864	Two-story, brick veneer on wood building. Family housing (N.Y.C. Historical Landmark).
R2	4,812	1905	Two-story, cement asbestos on wood building. Family housing.
R3	4,812	1905	Two-story, cement asbestos on wood building. Family housing.

[MP]NR8900:D2694, #1818, PM=13

Table A-2 (Cont.)

Building No.	Area (Sq. Ft.)	Built	Construction & Use
R4	7,852	1909	Three-story, brick and asbestos tile building. Family housing.
R5	2,160	1915	Single-story, brick building. Family housing.
R6	2,160	1915	Single-story, brick building. Family housing.
R7	2,160	1915	Single-story, brick building. Family housing.
R8/9	5,800	1926	Two-story, brick building. Family housing.
RG	48,736	1919	Three-story, brick and stucco building. BOQ and Officer's Club.

[MP]NR8900:D2694, #1818, PM=13

Sources: U.S. Navy, Northern Division 1983; U.S. Navy, NAVSTA Brooklyn 1968.

The U.S. Naval Hospital (Building R-95), which was designed by Architect Martin E. Thomson, was constructed between 1830 and 1838. It is a two-story, E-shaped Greek Revival structure of dressed granite, with a basement and an attic. The building facade is on the long west wall and consists of a recessed portico with eight square piers of stone two stories high. A well-proportioned, simple, and refined building of exquisite stonework set an example for a number of subsequent structures (Landmark Preservation Commission 1975). This building is a New York City Landmark (nominated in 1965) and is potentially eligible for nomination to the NRHP. At the time of its construction, the hospital was expected to accommodate 125 patients, although in subsequent years this number was often exceeded.

By approximately 1850, the hospital grounds were a self-contained entity surrounded by a brick wall. Buildings and features existing at that time included the U.S. Naval Cemetery located approximately 350 feet east of the hospital, the two-story stone Laboratory approximately 65 feet east of the hospital's north wing (variously designated as Building 98, R-253, or "A" Annex), and the Gatehouse (Building R-104) located at the junction of Hospital Road and Flushing Avenue.

Apart from the hospital, the Gatehouse is the oldest surviving building in the Annex (built 1850). This two-story, asymmetrical brick structure with crowned windows shows the influence of the Italianate style. Recently, the building was converted to a guesthouse, and its interior underwent extensive remodeling. A brief inspection of Building R-104 revealed that the brick frame and, possibly, a portion of a stairway with a banister are the only original features of the house. The building's frame was breached in a number of places during the installation of modern utility and sewage lines. This structure does not appear to be eligible for NRHP nomination.

During the Civil War, the Laboratory (R-98) was converted to a medical annex accommodating more than 500 patients.

Another Civil War structure, Building R-1 (variously known as the Surgeon's House or the House of Medical Director), was built approximately 120 feet northwest of the hospital in 1864. It is attributed to True W. Rollins, a builder, and Charles Hastings, an engineer. The house is a two-story brick structure with a concave mansard roof and

shows the influence of the Second Empire style. Presently, it is well maintained and is used by the Navy as Flag Quarters. The structure was designated a New York City Landmark by the Landmark Preservation Commission in 1976. Due to its historic and aesthetic value, it is potentially eligible for nomination to the NRHP (Appendices A-1 and A-2).

Comparison of available historic maps indicates that, starting from the end of the 19th century, the Annex constituted an extremely dynamic architectural landscape, undergoing repeated events of construction and demolition. The map of the Annex commissioned by the Navy and dated April 16, 1890 (Asserson and Braine 1890), indicates that, apart from the Gatehouse, U.S. Naval Hospital, Surgeon's House (R-1, also designated on early maps as Building 97), and Medical Annex Building (Building 98), a number of other structures have stood on the hospital grounds. These were the Boiler House (99), Coal House (108), Boiler and Engine House (107), and the Box Shop (110), positioned immediately east of the hospital. Structures to the north included a Mortuary (102), a Chapel (100), a Smallpox Hospital (101; also known as the Contagious Diseases Hospital), a Conservatory (105), and the North Gatehouse (106). Furthermore, two stables (109 and 103) and an unnumbered cart shed are depicted northeast of the Surgeon's House. Judging from available real estate inventories (U.S. Navy, NAVSTA Brooklyn 1968), the latter buildings were connected between 1883 and 1890. However, a map of the facility dated September 14, 1891 (Asserson 1891), shows a number of changes which occurred within a span of one and a half years. On this map, Buildings 110 and 99 are joined together; a laundry is added to the Boiler House 107; a large addition is appended to Building 108; and, finally, unnumbered sheds, including a cow stable, two hen houses, and a new horse stable, stood in various portions of the hospital grounds. Primary sources also indicate that a Courthouse (R-251) and a Kitchen (R-250) were constructed in the eastern courtyard of the hospital in 1895. The following year, Building 305, a two-story rectangular utilitarian brick structure, was constructed. This building, however, is located north of the brick wall delineating the hospital grounds and does not appear to be connected with the early history of the Annex. Together with Buildings 316 and 306, it appears to represent real estate acquired by the Navy during World War II.

In spite of the ongoing change, the Annex retained the character of a semi-rural, cloistered retreat until the end of the 19th century. Due to a reduced number of patients during the peace time following the Civil War, the Medical Annex was reconverted into a laboratory. Patients were accommodated either in the main building (R-95) or in a small contagious disease unit.

In the beginning of the 20th century, the Annex underwent a gradual renovation which included the demolition of a number of structures (i.e., buildings 99, 107, 100, 101, 102, and 105), the alteration and remodeling of others (R-103 and 109), and the construction of additional structures such as the Enlisted Personnel Quarters (R-2 and R-3, built 1905), the Residence of the Laboratory Director (R-4, built 1909), the Medical Supply Depot (RD, built 1910), and the Mortuary (R-426, built 1909).

World War I brought a drastic change to the Annex. With the exception of the Hospital, the Gatehouse, the Surgeon's House, and the aforementioned structures erected in the beginning of the 20th century, virtually every building within the Annex was either demolished or altered, and an ambitious construction program commenced on the premises. Following the end of the war, the entire surface of the Annex was occupied by large, multiple-wing, 2- and 3-story brick buildings erected between 1915 and 1919 (U.S. Navy, NAVSTA Brooklyn 1968; The Map of U.S. Naval Hospital 1920). These included the Administrative Building (RF; constructed 1919, demolished 1981), Nurses Quarters (RG 1919-1981), South Annex to the Hospital (RB 1915-1979), Powerhouse (R440; 1917-1979), and the Barracks (RE; 1919-1981). A number of smaller, single-story brick structures were also built during the war, including three family housing units (R5, R6, R7; 1915-present). Other alterations included the construction of a tennis court in the northwest corner of the Annex, rearrangement of roadways and traffic circles, installation of additional sewer and utility lines, and construction of a subsurface electric substation (R450; 1920-present).

Construction that took place between World War I and World War II contributed to incremental overcrowding of the hospital grounds. During this period, two two-story brick residences (R8/9; 1926-present), a single-story glass-and-concrete greenhouse (R448; 1923-present), and two general warehouses (R454, R453; 1939-1979) were built.

By the beginning of World War II, the hospital grounds were a somewhat haphazardly organized medical campus, with structures of various size, shape, age, construction material, and function all connected with overhead bridges, covered sun corridors, paved walks, and underground tunnels. As a rule, the distance between different buildings and different wings of the same building did not exceed 40 feet.

During World War II, the hospital grounds served as a "Receiving Annex" where thousands of Navy personnel were processed prior to deployment. Because of the lack of space, only two small buildings were erected during the war within the Annex property, in spite of the drastically increased demand for additional facilities. These two buildings were the general warehouse (R451; 1945-1979) and the garage (R103A; 1943-present). The dearth of space resulted in the annex spilling over the historic brick wall and into surrounding areas. Buildings 311 (the Navy Motion Picture Service) and 316 (storage) were erected beyond the original boundaries of the Annex. Sometime between 1937 and 1947 (Steam Lines 1937, Map of U.S. Naval Hospital 1947), and in all probability during World War II, the U.S. Naval Cemetery, situated on a slope east of the Hospital, ceased being used. The cemetery was excavated, the slope leveled, paved with asphalt and concrete, and subdivided into a handball court, tennis court, and recreational area. Presently, the area of the former cemetery contains a baseball field.

The formation of the Main Area of NAVSTA Brooklyn is also dated to World War II. All of the structures of the Main Area are utilitarian/industrial-type buildings constructed between 1942 and 1944.

Following the end of World War II, the use of the hospital grounds as the "Receiving Annex" was discontinued. The hospital itself was moved to a new facility, a now-defunct naval hospital at St. Albans, New York (U.S. Navy, Northern Division 1983). Between 1966 and 1978, four small structures were constructed: the Gatehouse (R-476), Gas Station Exchange (R-475), Bathhouse (R-672), and Fuel Hut (R-670). Between 1975 and 1985, the Annex underwent two major demolition episodes when not less than 17 structures were destroyed. The Annex presently is used for personnel housing and support activity.

At present, NAVSTA Brooklyn (both the Main Area and the Annex) contains 35 standing structures constructed between 1838 and 1978. Two

of these buildings, the U.S. Naval Hospital (R-95) and the Surgeon's House (R-1), are potentially eligible for NRHP nomination because of their historic and aesthetic value. The remaining structures are utilitarian in type and/or extensively remodeled. They do not appear to meet the NRHP nomination criteria.

NAVSTA Brooklyn as a whole appears to be ineligible for the status of NRHP Historic District. The existing architectural landscape is a mixture of structures of widely varying age and style which are not connected by discernible functional or processual continuity. Historical authenticity of this landscape has been seriously impaired by numerous demolition and construction episodes, and the NRHP-eligible structures R-95 and R-1 presently exist out of their historic, stylistic, or architectural context.

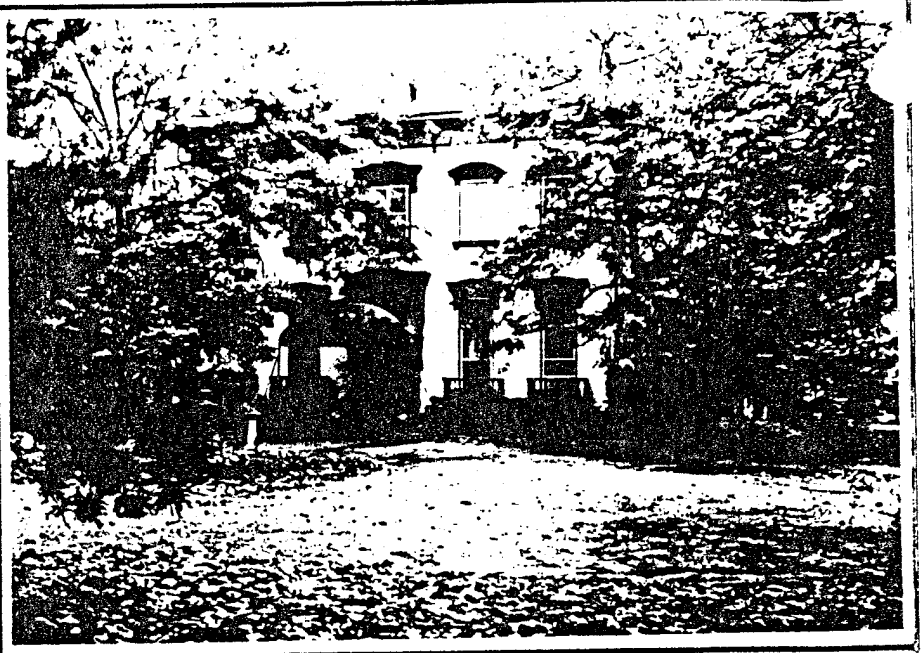
APPENDIX A-1

NAVSTA NEW YORK HISTORIC STRUCTURES POTENTIALLY ELIGIBLE FOR NOMINATION TO THE NATIONAL REGISTER OF HISTORIC PLACES

CULTURAL RESOURCE SURVEY FORM-K

Bldg#/Name

R-1



Original/Present Use

Surgeon's House (Medical Director's House)/U.S. Navy Flag Quarters

Date Constr.

1864

Condition:

- ☒ Excellent
- ☐ Good
- ☐ Fair
- ☐ Deteriorated
- ☐ Ruins
- ☐ Altered
- ☒ Unaltered
- ☒ Original Site
- ☐ Moved

Classification:

- ☒ Building
- ☐ Structure
- ☐ Object
- ☐ District
- ☐ Site

Photo Notation/View/Date

View due north
October 19, 1989

Site Sketch

Primary Bldg Material:

- ☒ Masonry
- ☐ Stone
- ☐ Wood/Frame
- ☐ Other _____

Location/Boundary Description

Intersection of Hospital and Oman Road. Naval Station New York in Brooklyn (Annex).

Area(s) of Significance:

- ☒ Architecture
- ☒ History
- ☐ Culture
- ☐ Archeology
- ☐ Engineering
- ☐ Other _____

Architect/Builder

True W. Rollins
Charles Hastings

Statement of Significance/Comments:

Surgeon's House is a two-story brick structure with basement, attic, and a low mansard roof with a concave profile. Its style shows influence of French Second Empire design. The house is 76 feet long, 46 feet wide, and 33 feet high. The house contains 21 rooms, 2 large center halls, and a large circular stairway between the first and second floors. It is a Designated New York City Landmark.

Sources of Information:

1. Landmarks Preservation Commission, LD-0940, No. 2, November 9, 1976
2. Detailed Inventory of Naval Shore Facilities, 1968

Prepared By:

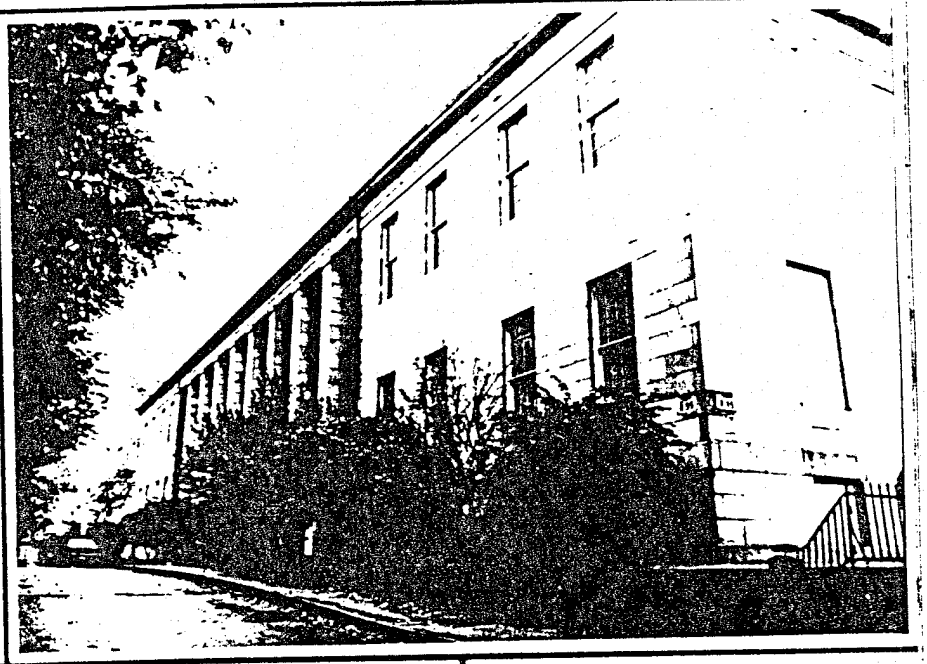
Ecology & Environment, Inc.

Date: November 8, 1989

CULTURAL RESOURCE SURVEY FORM-K

Bldg#/Name

R-95



Original/Present Use

U.S. Naval Hospital/Abandoned

Date Constr.

1830-1838

Condition:

- ☐ Excellent
- ☒ Good
- ☐ Fair
- ☐ Deteriorated
- ☐ Ruins
- ☐ Altered
- ☒ Unaltered
- ☒ Original Site
- ☐ Moved

Classification:

- ☒ Building
- ☐ Structure
- ☐ Object
- ☐ District
- ☐ Site

Photo Notation/View/Date

View due N.E. October 19, 1989

Site Sketch

Primary Bldg Material:

- ☐ Masonry
- ☒ Stone
- ☐ Wood/Frame
- ☐ Other _____

Location/Boundary Description

Hospital Road, between Oman Road and Squibb Place. Naval Station New York in Brooklyn (Annex)

Area(s) of Significance:

- ☒ Architecture
- ☒ History
- ☐ Culture
- ☐ Archeology
- ☐ Engineering
- ☐ Other _____

Architect/Builder

Martin E. Thompson

Statement of Significance/Comments:

U.S. Naval Hospital is a two-story Greek Revival structure of dressed granite. The building has an E-shaped plan. Its facade is a recessed portico with eight square piers, each two-stories high. It is a highly refined building which set an example for many subsequent structures and is a designated New York City landmark.

Sources of Information:

Landmarks Preservation Commission, LP-0003, No. 3, October 14, 1965.

Prepared By:

Ecology & Environment, Inc.

Date: November 8, 1989

NORTHNAVFAC

(Continue on Reverse Side if Necessary)

APPENDIX A-2

LANDMARKS PRESERVATION COMMISSION DESIGNATIONS FOR THE SURGEON'S HOUSE AND THE OLD UNITED STATES NAVAL HOSPITAL

Landmarks Preservation Commission
November 9, 1976, Number 2
LP-0940

SURGEON'S HOUSE (Quarters "R-1"), Third Naval District, United States Naval Station, Flushing Avenue opposite Ryerson Street (on the grounds of the Old United States Naval Hospital), Borough of Brooklyn. Built 1863; builders True W. Rollins and Charles Hastings.

Landmark Site: Borough of Brooklyn Tax Map Block 2023. Lot 150 in part consisting of the land on which the described building is situated.

On September 14, 1976, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Surgeon's House and the proposed designation of the related Landmark Site (Item No. 4). The hearing had been duly advertised in accordance with the provisions of law. There were no speakers for or against designation. The Commandant of the Third Naval District has expressed approval of the designation.

DESCRIPTION AND ANALYSIS

This charming house now serves as the Commandant's residence (Quarters "R-1") in the New York Naval Yard in Brooklyn. It dates from the Civil War years and was built as the quarters of the head surgeon of the U.S. Marine Hospital. The handsome Old United States Naval Hospital building, a designated New York City Landmark, stands across from the house, and the two buildings form an architecturally interesting enclave within the historic Brooklyn Navy Yard.

The property on which the Surgeon's House and the hospital building are located was originally farmland; it was sold to the U.S. Navy in 1824 by the heirs of Martin Schenck, a member of one of Brooklyn's oldest families. The hospital site, consisting of some thirty-three acres, was then hilly land surrounded by swamps and mud-flats which were later filled in and incorporated in the Navy Yard. In the 1820s an old house, the Livingston mansion, served as the hospital. The new building of the U.S. Marine Hospital, a fine marble-faced Greek Revival structure, was completed in 1838, and two years later, wings were added. It was planned to accommodate about one hundred and twenty-five patients and was devoted to the care of injured and ill seamen. A laboratory building and a small cemetery were located nearby.

With the outbreak of the Civil War, the Brooklyn Navy Yard immediately began to expand its activities. Under the command of the distinguished Admiral Hiram Paulding (1797-1878), the Yard, with a work force of over five thousand, fitted out some four hundred merchant marine vessels as cruisers. When wounded and ill Navy men began

arriving in New York, the Hospital was also enlarged to meet war-time demands. A temporary wooden annex was erected and as many as five hundred patients were treated at one time. The head surgeon from 1862 until 1866 was Dr. Thomas L. Smith. The Surgeon's House was planned during his administration.

A handsome set of framed drawings and plans, dated January 1, 1863, are still preserved at the Surgeon's House. They depict the building very much as it appears today. The construction of the house was carried out by two local Brooklyn residents, True W. Rollins, a builder, and Charles Hastings, a civil engineer.

The Surgeon's House is constructed of brick, with a concave mansard roof, which shows the influence of the French Second Empire style in this country. The mansard roof, hallmark of the style, made its first appearance in America in the late 1850s. The roof of the Surgeon's House is a low mansard with concave profile, typical of early Second Empire design. The style reached its height of popularity in this country in the late 1860s. Numerous residential quarters built by the U.S. Navy reveal its influence; among them is a series of seven identical houses erected in 1867 at Newport, Rhode Island.

The Surgeon's House, now painted white with brown trim, is two stories in height with a full attic in the mansard roof. A spacious house of sixteen rooms, it is divided into two main sections, the house proper and a servant's wing. The entrance facade is symmetrically designed, with a central doorway approached by stairs flanked by low balustrades. Pairs of tall, elegant segmental-arched windows with small balconies are placed at each side of the entrance, and segmental-arched windows appear at the second story. The cornices and sills of these windows rest on small corbel blocks. The cornice of the building has brackets which support the overhang of the concave mansard roof. The dormer windows, with roofs which echo the profile of the main roof, are typical of the French Second Empire style. Segmental-arched and square-headed windows appear on the side elevations of the house, and at the north, a handsome projecting three-sided bay is located at the first story. The house is pleasantly landscaped and approached by a curved driveway.

This residence, like the other designated New York City Landmarks in the Brooklyn Navy Yard--the U.S. Marine Hospital, the Commandant's House and the Dry Dock No. 1--is an important reminder of the long and interesting history of this military complex. Beautifully maintained and officially regarded by the U.S. Navy as "prestige quarters," the house is a very handsome example of mid-19th-century American residential architecture.

FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history, the architecture, and other features of this building, the Landmarks Preservation Commission finds that the Surgeon's House has a special character, special historical and aesthetic interest, and value as part of the development, heritage, and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Surgeon's House is a handsome example of Second Empire design, that along with the old U.S. Marine Hospital building, it is part of an attractive enclave within the Brooklyn Navy Yard, that it is an important reminder of the history of the Navy Yard during the Civil War, and that, as the residence of the Commandant, it is regarded as "prestige quarters" and is beautifully maintained.

Accordingly, pursuant to the provision of Chapter 63 of the Charter of the City of New York and Chapter 8-A of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Surgeon's House (Quarters "R-1"), Third Naval District, United States Naval Station, Flushing Avenue opposite Ryerson Street (on the grounds of the Old United States Naval Hospital), and designates as its related Landmark Site that part of Borough of Brooklyn Tax Map Block 2023, Lot 150 on which the described building is situated.

Landmarks Preservation Commission
October 14, 1965, Calendar No. 3
(LP-0003)

OLD UNITED STATES NAVAL HOSPITAL, Hospital Road between Squibb Place and Oman Road, New York Naval Shipyard, Borough of Brooklyn. Begun 1830, completed 1838, architect Martin E. Thompson.

Landmark Site: Borough of Brooklyn Tax Map Block 2023 in part, consisting of the land on which the described building is situated.

On September 21, 1965, the Landmarks Preservation Commission held a public hearing on the proposed designation of the Old United States Naval Hospital as a Landmark and the proposed designation of the related Landmark Site (Calendar No. 3). The hearing had been duly advertised in accordance with the provisions of law. Four witnesses spoke in favor of designation of the building, including the Deputy Borough President of Brooklyn representing the Borough President of Brooklyn. In the letter to the Commission, a local representative of the Department of the Navy asked that his building be deleted from the Calendar. In another letter, the Deputy Assistant Secretary of Defense for Properties and Installations took the position that the Commission cannot exercise any authority over buildings owned by the United States.

DESCRIPTION AND ANALYSIS

The Old Naval Hospital is a distinguished two-story Greek Revival structure by an outstanding architect of the period. This building of dressed granite is marked by extreme simplicity and refinement. The relationships between window and wall and the jointing of the masonry show a care and study which are truly Greek in their subtlety. The woodwork of the building maintains the high standard set by the stonework. The building has an "E" plan, and on the long side is a recessed portico with eight square classical piers of stone, two stories in height. These are an important architectural feature which set an example for many subsequent structures.

The question has been raised by the Federal Government as to whether this building should be designated by New York City as a Landmark. The Commission wishes to honor a building of which New Yorkers are proud. The Commission is cognizant of the jurisdictional question. Nevertheless, it is very important for the Government of New York City to state officially its deep concern that this building be preserved. There should be no uncertainty about this in anyone's mind.

The Commission would be negligent if it failed to act in this situation. At some time in the future this building may be in jeopardy. Our designation will be especially helpful in alerting New York City's elected representatives in Washington of the importance of saving this building. At present the Commission's specialists can be of service in providing advice so that the architectural integrity of this building is maintained. Indeed, a fine relationship already exists with many local representatives of the Federal Government.

FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history, the architecture, and other features of this building, the Landmarks Preservation Commission finds that the Old United States Naval Hospital has a special character, special historical and aesthetic interest, and value as part of the development, heritage, and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Old United States Naval Hospital is a Greek Revival building of the highest quality in design and construction and is the work of a celebrated New York architect and that the building is of national interest as a rare surviving example of early institutional design.

Accordingly, pursuant to the provision of Chapter 8-A of the Charter of the City of New York and Chapter 8-A of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Old United States Naval Hospital, Hospital Road between Squibb Place and Oman Road, New York Naval Shipyard, Borough of Brooklyn and designates as its related Landmark Site that part of the Brooklyn Tax Map Block 2023 which contains the land on which the described building is situated.