



**City Environmental Quality Review**  
**ENVIRONMENTAL ASSESSMENT STATEMENT**  
**PART I, GENERAL INFORMATION**

**Reference Numbers**

1. 07-DEP-008Y BSA REFERENCE NO. IF APPLICABLE  
CEQR REFERENCE NUMBER (TO BE ASSIGNED BY LEAD AGENCY)

ULURP REFERENCE NO. IF APPLICABLE OTHER REFERENCE NO.(S) IF APPLICABLE  
(e.g. Legislative Intro, CAPA, etc)

**Lead Agency & Applicant Information**  
PROVIDE APPLICABLE INFORMATION

2a. Lead Agency **2b. Applicant Information**  
NYC Department of Environmental Protection NYC Department of Environmental Protection  
NAME OF LEAD AGENCY NAME OF APPLICANT

Angela Licata, Deputy Commissioner James Roberts, Deputy Commissioner  
NAME OF LEAD AGENCY CONTACT PERSON NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON

59-17 Junction Boulevard, 11<sup>th</sup> Floor 59-17 Junction Boulevard, 3<sup>rd</sup> Floor  
ADDRESS ADDRESS

Flushing NY 11373 Flushing NY 11373  
CITY STATE ZIP CITY STATE ZIP

718-595-4479 718-595-4479 718-595-5330  
TELEPHONE FAX TELEPHONE FAX

alicata@dep.nyc.gov jroberts@dep.nyc.gov  
EMAIL ADDRESS EMAIL ADDRESS

**Action Description**  
SEE CEQR MANUAL SECTIONS 2A & 2B

3a. NAME OF PROPOSAL The Replacement of the Existing Water Siphons Between Brooklyn and Staten Island

3b. DESCRIBE THE ACTION(S) AND APPROVAL(S) BEING SOUGHT FROM OR UNDERTAKEN BY CITY (AND IF APPLICABLE, STATE AND FEDERAL AGENCIES) AND, BRIEFLY, DESCRIBE THE DEVELOPMENT OR PROJECT THAT WOULD RESULT FROM THE PROPOSED ACTION(S) AND APPROVAL(S):

See attached description. Also refer to Section 1 of the Supplemental Report to the Environmental Assessment Statement.

3c. DESCRIBE THE PURPOSE OF AND NEED FOR THE ACTION(S) AND APPROVAL(S):  
 See attached description. Also refer to Section 1.3 of the Supplemental Report to the Environmental Assessment Statement.

**Required Action or Approvals**

4. CITY PLANNING COMMISSION  Yes  No  
 Change in City Map  Zoning Certification  Site Selection - Public Facility  
 Zoning Map Amendment  Zoning Authorization  Disposition - Real Property  Franchise  
 Zoning Text Amendment  Housing Plan & Project  UDAAP  Revocable Consent  Concession  
 Charter 197-a Plan  
 Zoning Special Permit, specify type: \_\_\_\_\_  
 Modification of \_\_\_\_\_  
 Renewal of \_\_\_\_\_  
 Other \_\_\_\_\_

5. UNIFORM LAND USE PROCEDURE (ULURP)  Yes  No

PLEASE NOTE THAT MANY ACTIONS ARE NOT SUBJECT TO CEQR. SEE SECTION 110 OF TECHNICAL MANUAL

6. BOARD OF STANDARDS AND APPEALS  Yes  No  
 Special Permit  New  Renewal  Expiration Date  
 Variance  Use  Bulk  
 Specify affected section(s) of Zoning Resolution
7. DEPARTMENT OF ENVIRONMENTAL PROTECTION  Yes  No  
 Title V Facility  Power Generation Facility  Medical Waste Treatment Facility
8. OTHER CITY APPROVALS  Yes  No  
 Legislation  Rulemaking; specify agency:  
 Construction of Public Facilities  Funding of Construction, Specify  Funding of Programs, Specify  
 Policy or plan  Permits, Specify:  
 Other; explain: See attachment and Section 1.7 of the Supplemental Report to the Environmental Assessment Statement.

9. STATE ACTIONS/APPROVALS/FUNDING  Yes  No  
 If "Yes," identify See attachment and Section 1.7 of the Supplemental Report to the Environmental Assessment Statement.

10. FEDERAL ACTIONS/APPROVALS/FUNDING  Yes  No  
 If "Yes," identify U.S. Army Corps of Engineers - Section 10, Nationwide General Permit No. 12.

**Action Type**

- 11a. X Unlisted; or  Type I; specify category (see 6 NYCRR 617.4 and NYC Executive Order 91 OF 1977, as amended):
- 11b.  Localized action, site specific  Localized action, change in regulatory control for small area  Generic action

**Analysis Year**

12. Identify the analysis year (or build year) for the proposed action: 2010  
 Would the proposal be implemented in a single phase?  Yes  No  NA.  
 Anticipated period of construction: May 2010 - June 2013  
 Anticipated completion date: May 2013  
 Would the proposal be implemented in multiple phases?  Yes  No  NA.  
 Number of phases: 1  
 Describe phases and construction schedule: See attached table and Section 1.5 and Table 1-2 of the Supplemental Report to the Environmental Assessment Statement.

**Directly Affected Area**

INDICATE LOCATION OF PROJECT SITE FOR ACTIONS INVOLVING A SINGLE SITE ONLY (PROVIDE ATTACHMENTS AS NECESSARY FOR MULTIPLE SITES)

13a. LOCATION OF PROJECT SITE  
 See attached description.

STREET ADDRESS		
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS		
Parkland - Brooklyn; Manufacturing (M2-1) - Staten Island		22 a and 21c
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION IF ANY		
Block 6140, Lot 8 - Brooklyn; Block 487, Lot 100 - Staten Island	Brooklyn, Staten Island	ZONING SECTIONAL MAP NO. 10,1
TAX BLOCK AND LOT NUMBERS	BOROUGH	COMMUNITY DISTRICT NO.

13b. PHYSICAL DIMENSIONS AND SCALE OF PROJECT

TOTAL CONTIGUOUS SQUARE FEET OWNED OR CONTROLLED BY PROJECT SPONSOR:	48,000	SQ. FT.
PROJECT SQUARE FEET TO BE DEVELOPED:	185,350	SQ. FT.
GROSS FLOOR AREA OF PROJECT:	945	SQ. FT.
IF THE ACTION IS AN EXPANSION, INDICATE PERCENT OF EXPANSION PROPOSED		
NA % OF		
DIMENSIONS (IN FEET) OF LARGEST PROPOSED STRUCTURE:	18.5 Ft	HEIGHT 45 Ft WIDTH 65 Ft LENGTH
LINEAR FEET OF FRONTAGE ALONG A PUBLIC THOROUGHFARE:	3,600	

13c. IF THE ACTION WOULD APPLY TO THE ENTIRE CITY OR TO AREAS THAT ARE SO EXTENSIVE THAT A SITE-SPECIFIC DESCRIPTION IS NOT APPROPRIATE OR PRACTICABLE, DESCRIBE THE AREA LIKELY TO BE AFFECTED BY THE ACTION:  
 N.A.

13d. DOES THE PROPOSED ACTION INVOLVE CHANGES IN REGULATORY CONTROLS THAT WOULD AFFECT ONE OR MORE SITES NOT ASSOCIATED WITH A SPECIFIC DEVELOPMENT?  Yes  No  
 IF 'YES', IDENTIFY THE LOCATION OF THE SITES PROVIDING THE INFORMATION REQUESTED IN 13a & 13b ABOVE.

## PART II, SITE AND ACTION DESCRIPTION

### Site Description

EXCEPT WHERE OTHERWISE INDICATED, ANSWER THE FOLLOWING QUESTIONS WITH REGARD TO THE DIRECTLY AFFECTED AREA. THE DIRECTLY AFFECTED AREA CONSISTS OF THE PROJECT SITE AND THE AREA SUBJECT TO ANY CHANGE IN REGULATORY CONTROLS.

1. **GRAPHICS** Please attach: (1) a Sanborn or other land use map; (2) a zoning map; and (3) a tax map. On each map, clearly show the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. The maps should not exceed 8½ x 14 inches in size. See attached figures for Brooklyn (Attachments 1a, 2a and 3a, respectively) and Staten Island (Attachments 1b, 2b and 3b, respectively).

2. **PHYSICAL SETTING** (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 213,500 Water surface area (sq. ft.): N.A.  
 Roads, building and other paved surfaces (sq. ft.): 22,100 Other, describe (sq. ft.): 190,800  
 Inclusive of siphon, park disturbance, vacant property and land piping.

3. **PRESENT LAND USE**

Residential

Total no. of dwelling units 0 No. of low-to-moderate income units 0  
 No. of stories 0 Gross floor area (sq. ft.) 0  
 Describe type of residential structures: N.A.

Commercial

Retail: No. of bldgs 0 Gross floor area of each building (sq. ft.): N.A.  
 Office: No. of bldgs 0 Gross floor area of each building (sq. ft.): N.A.  
 Other: No. of bldgs 0 Gross floor area of each building (sq. ft.): N.A.  
 Specify type(s): N.A. No. of stories and height of each building: N.A.

Manufacturing/Industrial

No. of bldgs 0 Gross floor area of each building (sq. ft.): 0  
 No. of stories and height of each building: 0  
 Type of use(s): N.A. Open storage area (sq. ft.) 0  
 If any unenclosed activities, specify:

Community facility

Type of community facility:  
 No. of bldgs 0 Gross floor area of each building (sq. ft.): N.A.  
 No. of stories and height of each building: 0

Vacant land

Is there any vacant land in the directly affected area?  Yes  No  
 If yes, describe briefly: The shaft and chlorination station in Staten Island would be located on City-owned vacant land.

Publicly accessible open space

Is there any existing publicly accessible open space in the directly affected area?  Yes  No  
 If yes, describe briefly: The proposed shaft location in Brooklyn would be situated within Shore Road Park.

Does the directly affected area include any mapped City, State or Federal parkland?  Yes  No

If yes, describe briefly: Construction of the proposed below-grade shaft and land piping would temporarily affect City-owned parkland, specifically Shore Road Park.

Does the directly affected area include any mapped or otherwise known wetland?  Yes  No

If yes, describe briefly: Construction of a new 48-inch outfall within Staten Island would affect NYSDEC-designated littoral zone.

Other land use

No. of stories 0 Gross floor area (sq. ft.) N.A.  
 Type of use: N.A.

4. **EXISTING PARKING**

Garages

No. of public spaces: 0 No. of accessory spaces: 0  
 Operating hours: N.A. Attended or non-attended? N.A.

Lots

No. of public spaces: 0 No. of accessory spaces: 0  
 Operating hours: N.A. Attended or non-attended? N.A.

Other (including street parking) - please specify and provide same data as for lots and garages, as appropriate. NA

5. **EXISTING STORAGE TANKS**

Gas or service stations?  Yes  No Oil storage facility?  Yes  No Other?  Yes  No

If yes, specify: \_\_\_\_\_

Number and size of tanks: NA Last NYFD inspection date: NA Location and depth of tanks: NA

SEE CEQR  
TECHNICAL MANUAL  
CHAPTER III F.,  
HISTORIC RESOURCES

SEE CEQR  
TECHNICAL MANUAL  
CHAPTER III K.,  
WATERFRONT  
REVITALIZATION  
PROGRAM

## Project

### Description

THIS SUBPART SHOULD  
GENERALLY BE  
COMPLETED ONLY IF  
YOUR ACTION  
INCLUDES A SPECIFIC  
OR KNOWN  
DEVELOPMENT  
AT PARTICULAR  
LOCATIONS

## 6. CURRENT USERS

No. of residents: 0 No. and type of businesses: 0  
No. and type of workers by businesses: 0 No. and type of non-residents who are not workers: 0

## 7. HISTORIC RESOURCES (ARCHITECTURAL AND ARCHAEOLOGICAL RESOURCES)

Answer the following two questions with regard to the directly affected area, lots abutting that area, lots along the same blockfront or directly across the street from the same blockfront, and, where the directly affected area includes a corner lot, lots which front on the same street intersection.

Do any of the areas listed above contain any improvement, interior landscape feature, aggregate of landscape features, or archaeological resource that:

- (a) has been designated (or is calendared for consideration as) a New York City Landmark, Interior Landmark or Scenic Landmark;
  - (b) is within a designated New York City Historic District;
  - (c) has been listed on, or determined eligible for, the New York State or National Register of Historic Places;
  - (d) is within a New York State or National Register Historic District; or
  - (e) has been recommended by the New York State Board for listing on the New York State or National Register of Historic Places?
- Identify any resource: N.A.

Do any of the areas listed in the introductory paragraph above contain any historic or archaeological resource, other than those listed in response to the previous question? Identify any resource: No

## 8. WATERFRONT REVITALIZATION PROGRAM

Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?  Yes  No  
(A map of the boundaries can be obtained at the Department of City Planning bookstore.)

If yes, append a map showing the directly affected area as it relates to such boundaries. A map requested in other parts of this form may be used. Refer to Attachment 4.

## 9. CONSTRUCTION

Will the action result in demolition of or significant physical alteration to any improvement?  Yes  No

If yes, describe briefly:

Will the action involve either above-ground construction resulting in any ground disturbance or in-ground construction?

Yes  No If yes, describe briefly:

The proposed action would involve the construction of a new potable water transmission main (siphon) within a bored tunnel beneath the Upper New York Bay between the boroughs of Brooklyn and Staten Island. In addition, the proposed action would also include the construction of shafts, water transmission mains, and other related infrastructure improvements to connect the new system to the existing distribution network in Brooklyn and Staten Island. The action would also include the construction of a new aboveground chlorination station on Staten Island.

## 10. PROPOSED LAND USE

### Residential

Total no. of dwelling units 0 No. of low-to-moderate income units 0 Gross floor area (sq. ft.) N.A.  
No. of stories 0 Describe type of residential structures: N.A.

### Commercial

Retail: No. of bldgs 0 Gross floor area of each building (sq. ft.): 0

Office: No. of bldgs 0 Gross floor area of each building (sq. ft.): 0

Other: No. of bldgs 0 Gross floor area of each building (sq. ft.): 0

Specify type(s): N.A.

No. of stories and height of each building: N.A.

### Manufacturing/Industrial

No. of bldgs 1 Gross floor area of each building (sq. ft.): 945

No. of stories and height of each building: 1 story, 18.5 feet

Type of use(s): Chlorination Station Open storage area (sq. ft.) N.A.

If any unenclosed activities, specify: \_\_\_\_\_

### Community facility

Type of community facility: N.A.

No. of bldgs 0 Gross floor area of each building (sq. ft.): N.A.

No. of stories and height of each building: N.A.

### Vacant land

Is there any vacant land in the directly affected area?  Yes  No

If yes, describe briefly:

Publicly accessible open space

Is there any existing publicly accessible open space to be removed or altered?  Yes  No

If yes, describe briefly:

Is there any existing publicly accessible open space to be added?  Yes  No

If yes, describe briefly:

Other land use

Gross floor area (sq. ft.) N.A. No. of stories 0 Type of use: N.A.

**11. PROPOSED PARKING – N.A.**

Garages

No. of public spaces: 0 No. of accessory spaces: 0  
Operating hours: N.A. Attended or non-attended? N.A.

Lots

No. of public spaces: 0 No. of accessory spaces: 0  
Operating hours: N.A. Attended or non-attended? N.A.

Other (including street parking) - please specify and provide same data as for lots and garages, as appropriate.

No. and location of proposed curb cuts: The proposed chlorination station would have a total of three accessory parking spaces.

**12. PROPOSED STORAGE TANKS**

Gas or service stations?  Yes  No Oil storage facility?  Yes  No Other?  Yes  No

If yes, specify: Two sodium hypochlorite tanks, a day tank and a diesel fuel tank

Size of tanks: 4,000, 1,000, 100 and 400 Gallons Location and depth of tanks: Two tanks in the Storage Tank Room (approximately five feet below grade) and one tank in the Chemical Feed Room (approximately five feet below grade) of the Chlorination Station. One diesel tank in the Generator Room (ground level).

**13. PROPOSED USERS**

No. of residents: 0 No. and type of businesses: N.A.

No. and type of workers by businesses: N.A. No. and type of non-residents who are not workers: N.A.

**14. HISTORIC RESOURCES (ARCHITECTURAL AND ARCHAEOLOGICAL RESOURCES)**

Will the action affect any architectural or archaeological resource identified in response to either of the two questions at number 7 in the Site Description section of the form?  Yes  No

If yes, describe briefly:

**15. DIRECT DISPLACEMENT**

Will the action directly displace specific business or affordable and/or low income residential units?  Yes  No

If yes, describe briefly:

**16. COMMUNITY FACILITIES**

Will the action directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?  Yes  No

If yes, describe briefly:

SEE CEQR  
TECHNICAL MANUAL  
CHAPTER III B,  
SOCIO-ECONOMIC  
CONDITIONS

SEE CEQR  
TECHNICAL MANUAL  
CHAPTER III C,  
COMMUNITY FACILI-  
TIES & SERVICES

**Zoning  
Information**

17. What is the zoning classification(s) of the directly affected area? Brooklyn: Parkland; Staten Island: Manufacturing (M2-1)

18. What is the maximum amount of floor area that can be developed in the directly affected area under the present zoning? Describe in terms of bulk for each use.

Parkland FAR = NA; M2-1 FAR = 2.0

19. What is the proposed zoning of the directly affected area? N.A.

20. What is the maximum amount of floor area that could be developed in the directly affected area under the proposed zoning? Describe in terms of bulk for each use. N.A.

21. What are the predominant land uses and zoning classifications within a 1/4 mile radius of the proposed action?

Parkland and residential, open space and outdoor recreation and institutional uses in Brooklyn. Primarily industrial, commercial and transportation uses in Staten Island with additional areas of residential and commercial uses located more distant from the proposed action. See Section 2.2 of the Supplemental Report to the Environmental Assessment Statement for additional detail.

**Additional Information**

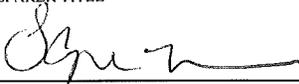
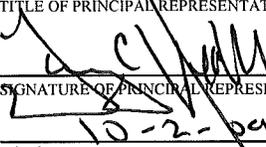
22. Attach any additional information as may be needed to describe the action. If your action involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include here one or more reasonable development scenarios for such sites and, to the extent possible, to provide information about such scenario(s) similar to that requested in the Project Description questions 9 through 16.

**Analyses**

23. Attach analyses for each of the impact categories listed below (or indicate where an impact category is not applicable):
- |  |  |
|--|--|
| a. LAND USE, ZONING, AND PUBLIC POLICY | See CEQR Technical Manual Chapter III.A. |
| b. SOCIOECONOMIC CONDITIONS            | See CEQR Technical Manual Chapter III.B  |
| c. COMMUNITY FACILITIES AND SERVICES   | See CEQR Technical Manual Chapter III.C. |
| d. OPEN SPACE                          | See CEQR Technical Manual Chapter III.D. |
| e. SHADOWS                             | See CEQR Technical Manual Chapter III.E. |
| f. HISTORIC RESOURCES                  | See CEQR Technical Manual Chapter III.F. |
| g. URBAN DESIGN/VISUAL RESOURCES       | See CEQR Technical Manual Chapter III.G. |
| h. NEIGHBORHOOD CHARACTER              | See CEQR Technical Manual Chapter III.H. |
| i. NATURAL RESOURCES                   | See CEQR Technical Manual Chapter III.I. |
| j. HAZARDOUS MATERIALS                 | See CEQR Technical Manual Chapter III.J. |
| k. WATERFRONT REVITALIZATION PROGRAM   | See CEQR Technical Manual Chapter III.K. |
| l. INFRASTRUCTURE                      | See CEQR Technical Manual Chapter III.L. |
| m. SOLID WASTE AND SANITATION SERVICES | See CEQR Technical Manual Chapter III.M. |
| n. ENERGY                              | See CEQR Technical Manual Chapter III.N. |
| o. TRAFFIC AND PARKING                 | See CEQR Technical Manual Chapter III.O. |
| p. TRANSIT AND PEDESTRIANS             | See CEQR Technical Manual Chapter III.P. |
| q. AIR QUALITY                         | See CEQR Technical Manual Chapter III.Q. |
| r. NOISE                               | See CEQR Technical Manual Chapter III.R. |
| s. CONSTRUCTION IMPACTS                | See CEQR Technical Manual Chapter III.S. |
| t. PUBLIC HEALTH                       | See CEQR Technical Manual Chapter III.T. |

The CEQR Technical Manual sets forth methodologies developed by the City to be used in analyses prepared for the above- listed categories. Other methodologies developed or approved by the lead agency may also be utilized. If a different methodology is contemplated, it may be advisable to consult with the Mayor's Office of Environmental Coordination. You should also attach any other necessary analyses or information relevant to the determination whether the action may have a significant impact on the environment, including, where appropriate, information on combined or cumulative impacts, as might occur, for example, where actions are interdependent or occur within a discrete geographical area or time frame.

**Applicant Certification**

24. <u>Sangamithra Iyer, P.E.</u> PREPARER NAME	<u>Steven Lawitts</u> PRINCIPAL
<u>Project Manager, NYCDEP - BEPA</u> PREPARER TITLE	<u>Angela Licata</u> NAME OF PRINCIPAL REPRESENTATIVE
 PREPARER SIGNATURE	<u>Deputy Commissioner</u> TITLE OF PRINCIPAL REPRESENTATIVE
<u>10/2/09</u> DATE	 SIGNATURE OF PRINCIPAL REPRESENTATIVE
	<u>10-2-09</u> DATE

NOTE: Any person who knowingly makes a false statement or who knowingly falsifies any statement on this form or allows any such statement to be falsified shall be guilty of an offense punishable by fine or imprisonment or both, pursuant to Section 10-154 of the New York City Administrative Code, and may be liable under applicable laws.

**CITY ENVIRONMENTAL QUALITY REVIEW  
ENVIRONMENTAL ASSESSMENT STATEMENT**

**THE REPLACEMENT OF EXISTING SIPHONS BETWEEN BROOKLYN AND  
STATEN ISLAND**

**ATTACHMENT**

**PART I, GENERAL INFORMATION**

**3b. DESCRIBE THE ACTION(S) AND APPROVAL(S) BEING SOUGHT FROM OR  
UNDERTAKEN BY CITY (AND IF APPLICABLE, STATE AND FEDERAL  
AGENCIES) AND, BRIEFLY, DESCRIBE THE DEVELOPMENT OR PROJECT  
THAT WOULD RESULT FROM THE PROPOSED ACTION(S) AND  
APPROVAL(S)**

The proposed action would involve the construction of a new potable water transmission main (siphon) beneath the Upper New York Bay between the boroughs of Brooklyn and Staten Island. The new siphon would replace two existing subaqueous water siphons (Siphon Nos. 1 and 2) located beneath Upper New York Bay. As part of the New York and New Jersey Harbor Deepening Project, the U.S Army Corps of Engineers (USACE) and Port Authority of New York and New Jersey (PANYNJ) will dredge the Anchorage Channel to a depth of 54 feet below mean low water (MLW). This dredging would expose and/or potentially impact the two existing siphons as they are not situated at a sufficient depth that would be protective of their continued use. The existing siphons provide the only secondary/backup water supply from Brooklyn to Staten Island. As part of the proposed action, the existing siphons would be decommissioned and abandoned and replaced with a new, single siphon. Development of the new siphon would provide a backup potable water supply system for Staten Island, thereby maintaining the reliability of the overall water supply system. The new siphon will also be utilized to supplement the existing primary water supply service to the borough.

A new 72-inch water main is being proposed to replace the two existing siphons. This new 72-inch siphon would be placed beneath Upper New York. The 72-inch water main would be contained within a 12-foot 4-inch excavated diameter bored tunnel. In addition to the construction of a new siphon across the Upper New York Bay, the proposed action would also include the construction of shafts on both Brooklyn and Staten Island sides of the harbor, water transmission mains, and other related infrastructure improvements to connect the new system to the existing distribution network in Brooklyn and Staten Island, as well as a new chlorination station within Staten Island. Minor sewer line replacement activities would also occur incidental to the installation of the new required water supply lines.

The Brooklyn shaft site would be situated in Shore Road Park (Block 6140, Lot 8), a 58-acre park owned and maintained by the New York City Department of Parks and Recreation (NYCDPR). The shaft site and staging area would be situated within an area of approximately 28,600 square feet between the Belt Parkway to the west and Shore Road to the east. The Staten Island shaft site would be located within the Stapleton section of Staten Island, specifically in a city-owned vacant lot (Block 487, Lot 100) located between Front Street and the Staten Island Rapid Transit (SIRT). The site and staging area at this location would occupy an area of approximately 48,000 square feet. The shaft on the Brooklyn side would serve as the receiving shaft for the tunnel boring machine (TBM) and the Staten Island shaft would serve as the launching shaft for the TBM. This location would also serve as the primary location for removal of muck associated with the construction of the bored tunnel and the delivery of construction materials for the siphon. Upon completion of the construction activities, the shaft locations would contain the riser pipes, and distribution chambers that would house the valves that control water flow from the risers in the shaft to and from the transmission mains in Brooklyn and Staten Island. The shafts would be unmanned, underground facilities once construction is completed with no major above-ground facilities.

A new chlorination station at the Staten Island shaft site would be constructed to service the new siphon. The station would be predominantly a below ground structure that would contain associated piping, chambers and vaults. The station would have a one-story above ground structure to house the electrical supply and control equipment. A new stormwater outfall would also be developed as part of the chlorination station. This outfall would be a 48-inch diameter pipe and would discharge uncontaminated stormwater to Upper New York Bay. In addition, two new water mains would leave the site and interconnect with existing infrastructure; one connection would be north of the shaft at an existing water main at Victory Boulevard and the other would be located west of the shaft site near an existing distribution chamber in Van Duzer Street Extension. Finally, two micro-tunnel crossings would be required to cross the adjacent railroad tracks owned and operated by the New York City Transit Authority (NYCTA). The total linear length of the water transmission mains in Staten Island would be approximately 1,500 feet.

In Brooklyn, the proposed connection to the existing water mains would be south of the shaft site at an existing water main located at the junction of Shore Road and 86<sup>th</sup> Street. The new transmission main would travel along Shore Road for a total of approximately 1,050 linear feet.

The transmission mains in both areas would be installed via open cut (i.e., “cut and cover”) with the exception of two proposed crossings under the SIRT tracks and maintenance yard (Victory

Boulevard and Minthorne Street and the proposed shaft site to Van Duzer Street Extension), which would be constructed using a tunnel approach.

The new siphon has been designed to replace the existing secondary, or backup potable water supply system for Staten Island, thereby maintaining the reliability of the overall water supply system when the existing siphons are decommissioned and abandoned. The new siphon will also be utilized to supplement the existing primary water supply service to the borough. The current project calls for construction to begin in 2010 with completion in 2013.

**3c. DESCRIBE THE PURPOSE OF AND NEED FOR THE ACTION(S) AND APPROVAL(S)**

The USACE/PANYNJ, as part of their New York and New Jersey Harbor Deepening Project, will dredge the Anchorage Channel within Upper New York Bay to a depth of approximately 54 feet below MLW. The Anchorage Channel generally extends from the middle of Upper New York Bay (east of Port Jersey Channel) south to the Verrazano-Narrows Bridge. The City currently contains two existing siphons that cross this Channel and are situated at a depth that would compromise their continued use after this dredging is completed. These siphons would therefore need to be relocated or replaced to accommodate the proposed dredging activities.

The proposed siphon would be located at a depth of at least 95 feet below MLW. This depth was selected in order to place the new siphon at a depth that would not be affected by the currently proposed dredging of the Anchorage Channel, as well as reasonably anticipated future dredging within the channel. The scheduling of the new siphon construction is also important to allow the Harbor Deepening efforts within the Anchorage Channel, and associated port activity, to continue as planned.

The new siphon along with the new and improved infrastructure (e.g., water mains) would also provide a greater level of reliability in the transmission of potable water between Brooklyn and Staten Island and will also be operated as a supplemental supply of water for a small portion of northern Staten Island. Under normal operations, the supplemental flow from the new siphon would add an average of approximately five (5) million gallons per day (mgd) of potable water to the existing distribution network. In emergency situations, the new siphon would average 50 mgd, with a peak flow of 150 mgd.

## **8. OTHER CITY APPROVALS**

- **Metropolitan Transit Authority / NYC Transit**
  - Staten Island Railroad Crossing Easement Agreement
- **NYC Department of City Planning**
  - Local Waterfront Revitalization Program Consistency Approval
  - Uniform Land Use Review Procedure
- **NYC Department of Environmental Protection – Bureau of Environmental Planning and Assessment**
  - CEQR – Environmental Assessment Statement
- **NYC Department of Environmental Protection - Bureau of Water and Sewer Operations**
  - Site Connection Application
  - Bureau of Customer Service - Water Service Permit Application
- **NYC Department of Transportation**
  - Roadway Construction Permit
- **NYC Department of Buildings**
  - Plan/Work Approval Application
  - Work Permit Application
  - Electrical Permit Application
  - Equipment Use Application
  - Certificate of Occupancy (C/O)
  - Emergency Response Agencies C/O Notification Affidavit
  - Technical Report
- **NYC Department of Small Business Services**
  - Work Notice/Permit Application
- **New York City Fire Department**
  - Application for Plan Examination for Fire Alarm Approval

- **New York Public Design Commission**

- Design Review

**9. STATE ACTIONS/APPROVALS/FUNDING**

- **New York State Department of Health**

- Approval of Plans for Public Water Supply Improvements

- **New York State Department of Environmental Conservation**

- SPDES Construction Dewatering Discharge Permit
- Long Island Well Permit
- General Permit for Stormwater Associated with Construction Activities
- Chemical Bulk Storage Permit
- Tidal Wetlands Permit
- Section 401 Water Quality Certificate

- **New York State Office of General Services**

- Public Lands Law, Article Section 75 - Riverbed Utility Easement

- **New York State Department of State, Coastal Management Program**

- Coastal Zone Management Consistency Assessment Approval

**10. FEDERAL ACTIONS/APPROVALS/FUNDING**

- **U. S. Army Corps of Engineers**

- Nationwide Permit No. 12 – Utility Line Activities
- Section 10 Permit (Individual)

**12. DESCRIBE PHASES AND CONSTRUCTION SCHEDULE**

<b>Construction Activity</b>	<b>Estimated Duration (months)</b>	<b>Dates</b>
<b>Subaqueous Crossing</b>	34	May 2010 – February 2013
Launching Shaft – Staten Island	4	July – November 2010
Reception Shaft – Brooklyn	6	November 2010 – May 2011
Tunnel Drive	13	June 2011 – July 2012
TBM Removal, Pipe Installation, Shaft Completion	7	July 2012 – February 2013

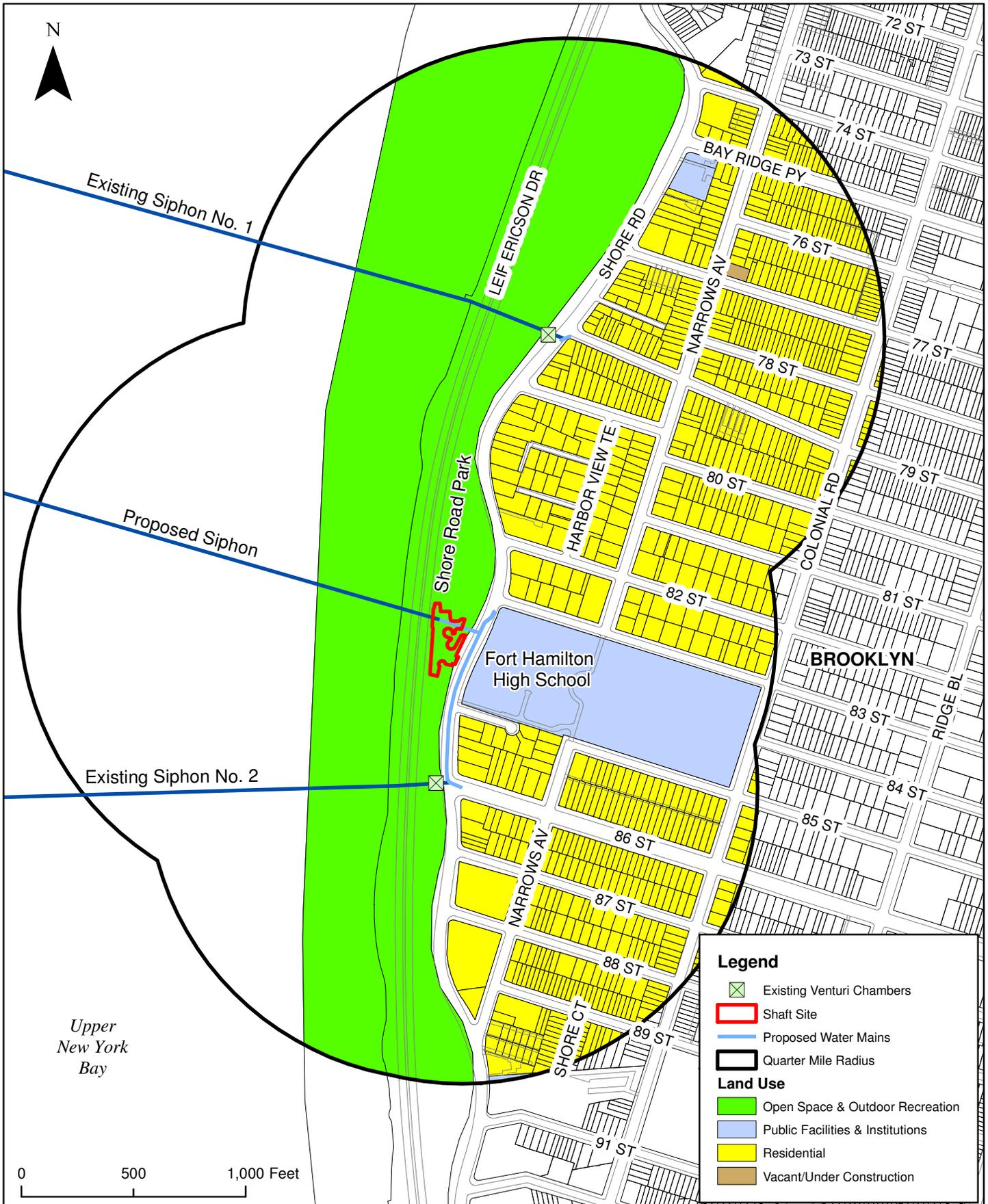
<b>Construction Activity</b>	<b>Estimated Duration (months)</b>	<b>Dates</b>
<b>Land Piping – Brooklyn</b>		
Install 72-inch Water Main - Shore Rd. to 86 <sup>th</sup> St.	2	June – July 2011
Tie-in at Shore Road Park	1	January 2013
Abandon Siphon No.1 at 78 <sup>th</sup> Street	1	February 2013 – March 2013
Abandon Siphon No 2 at 86 <sup>th</sup> Street	1	February 2013 – March 2013
<b>Land Piping – Staten Island</b>		
Tunnel – Launching Shaft to Van Duzer Street	4	March – August 2011
Tunnel – Victory Boulevard & Minthorne Street	4	November 2010 – March 2011
Other Land Piping	3	April – July 2011
<b>Chlorination Facility</b>	10	August 2012 – June 2013
<b>Testing, Cleanup and Closeout</b>	5	January – June 2013
<b>Total Anticipated Construction Duration</b>	<b>37</b>	<b>May 2010 – June 2013</b>

### **13a. LOCATION OF PROJECT SITE**

The proposed action involves the installation of a new 72-inch diameter siphon within a 12-foot 4-inch excavated diameter bored tunnel. The proposed action would be located beneath Upper New York Bay between Bay Ridge, Brooklyn and Stapleton, Staten Island, New York. As part of the proposed action, land-based sites would also be required. One site would be located in Brooklyn within Shore Road Park (Block 6140, Lot 8) in Community District (CD) 10. The site would be located adjacent to Shore Road between Shore Road Lane and 83<sup>rd</sup> Street and directly across from Fort Hamilton High School. This location would serve as the receiving shaft for the proposed tunnel crossing. In addition, a site would also be located in the Stapleton neighborhood of Staten Island within CD 1 in a portion of an existing City-owned vacant lot (Block 487, Lot 100), which is located on Front Street. This location would serve as the launching shaft for the tunnel crossing and would also be the location of a proposed chlorination station that would service the new siphon. All land-based sites and facilities would be located above the mean high water (MHW) line.

In addition to the chlorination station, improvements to the existing water main infrastructure would be required. Within Brooklyn, improvements to the existing mains would occur near the corner of 79<sup>th</sup> Street and Shore Road and along Shore Road between 83<sup>rd</sup> Street and 86<sup>th</sup> Street. Portions of the proposed project includes two underground venturi chambers, one located west of the intersection of 79<sup>th</sup> Street and Shore Road, and the other west of the intersection of 86<sup>th</sup> Street and Shore Road. In Staten Island, new water transmission mains would occur along Victory Boulevard, Front Street and Murray Hulbert Avenue north of the proposed shaft site. Additional

water main construction is proposed west of the shaft site, under the Staten Island Railroad, and along Swan Street to the intersection of Swan and Van Duzer Streets. A new 48-inch stormwater outfall would be constructed in Staten Island that would drain uncontaminated stormwater from the proposed chlorination station to the Upper New York Bay. The proposed project also includes site preparation for two staging areas, with the primary one located southeast of the shaft location, opposite of Front Street and a proposed alternative site located south-southwest of the shaft location at the corner of Front and Wave Streets.



**Legend**

- Existing Venturi Chambers
- Shaft Site
- Proposed Water Mains
- Quarter Mile Radius

**Land Use**

- Open Space & Outdoor Recreation
- Public Facilities & Institutions
- Residential
- Vacant/Under Construction



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**Attachment 1a - Brooklyn Land Use**

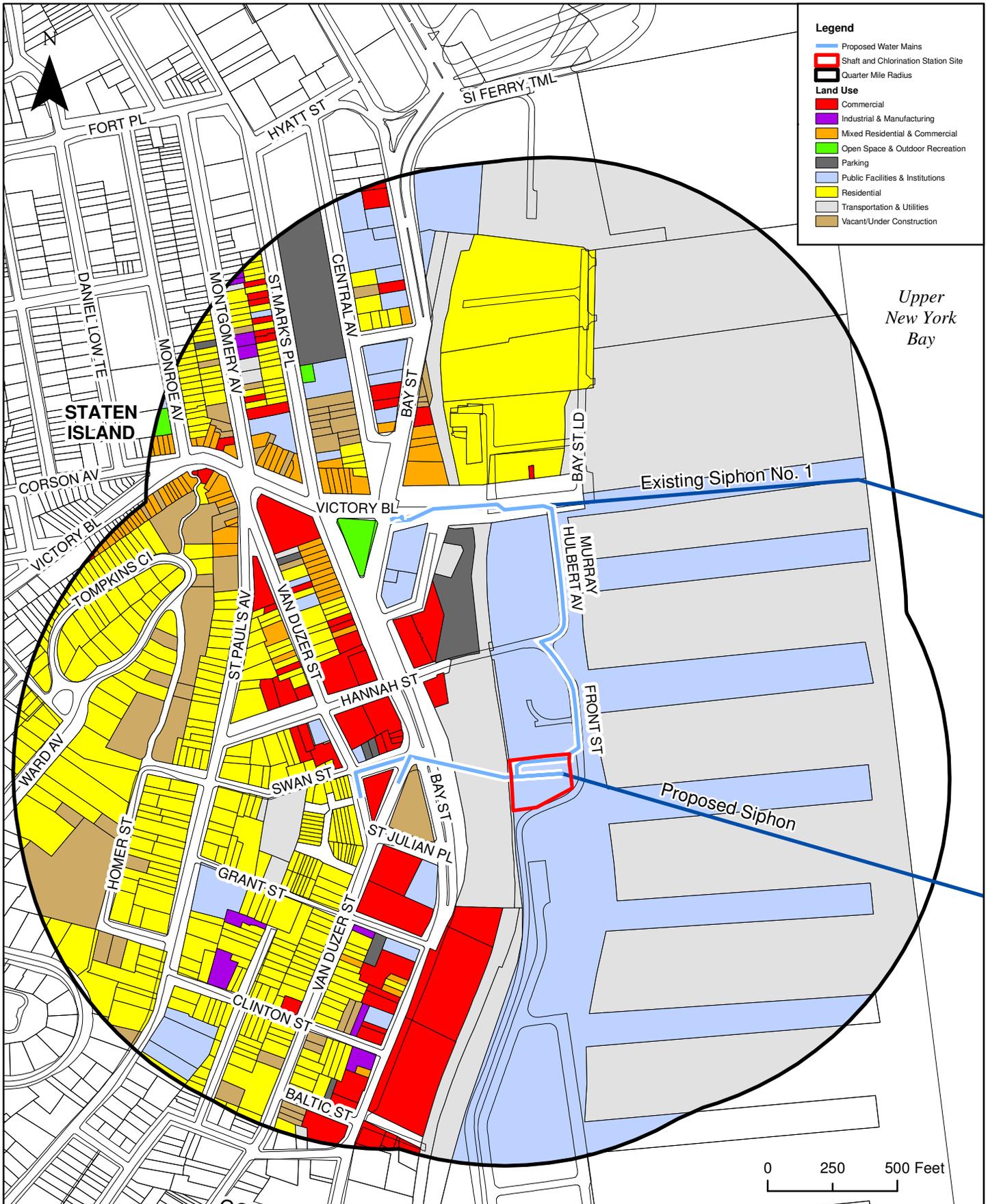
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 BETWEEN BROOKLYN AND STATEN ISLAND**



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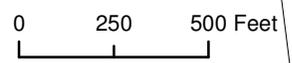


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 Land Use modified based on field verification, January, 2009



- Legend**
- Proposed Water Mains
  - Shaft and Chlorination Station Site
  - Quarter Mile Radius
- Land Use**
- Commercial
  - Industrial & Manufacturing
  - Mixed Residential & Commercial
  - Open Space & Outdoor Recreation
  - Parking
  - Public Facilities & Institutions
  - Residential
  - Transportation & Utilities
  - Vacant/Under Construction

Upper  
New York  
Bay



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**Attachment 1b - Staten Island Land Use**

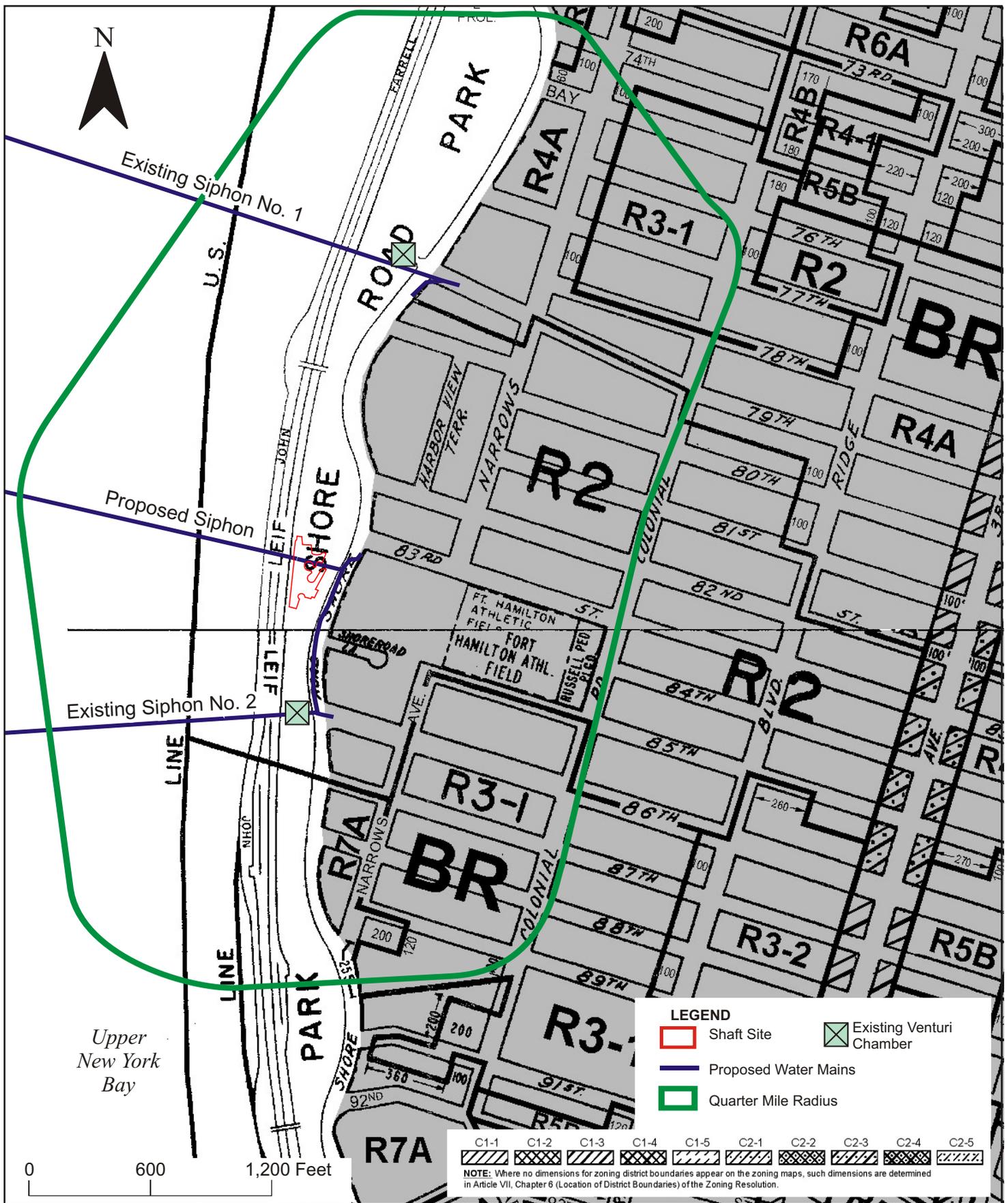
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**LEGEND**

- Shaft Site
- Proposed Water Mains
- Quarter Mile Radius
- Existing Venturi Chamber

C1-1	C1-2	C1-3	C1-4	C1-5	C2-1	C2-2	C2-3	C2-4	C2-5

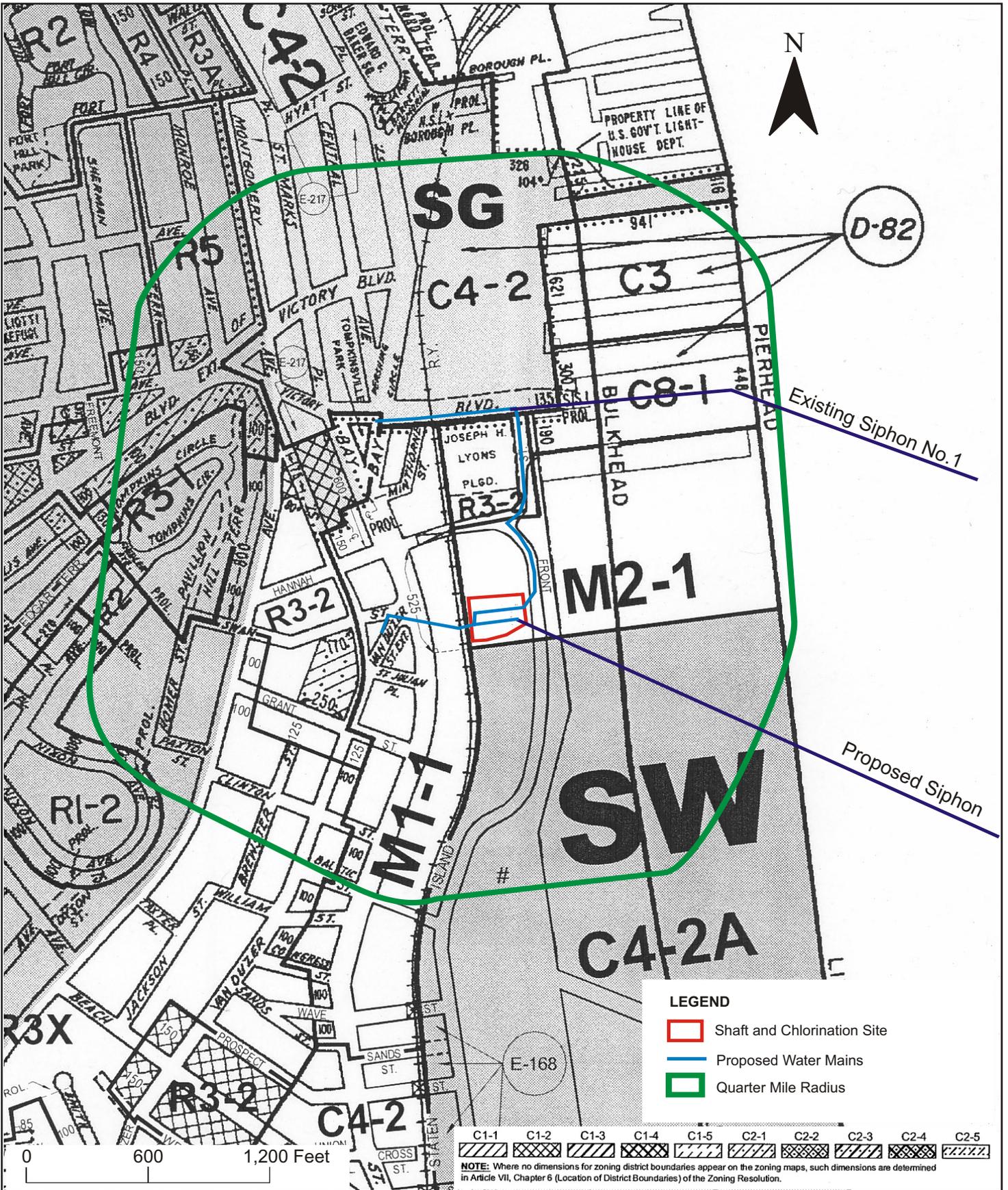
NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

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**Attachment 2a - Zoning - Brooklyn**

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**LEGEND**

- Shaft and Chlorination Site
- Proposed Water Mains
- Quarter Mile Radius

C1-1	C1-2	C1-3	C1-4	C1-5	C2-1	C2-2	C2-3	C2-4	C2-5

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

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**Attachment 2b - Zoning - Staten Island**

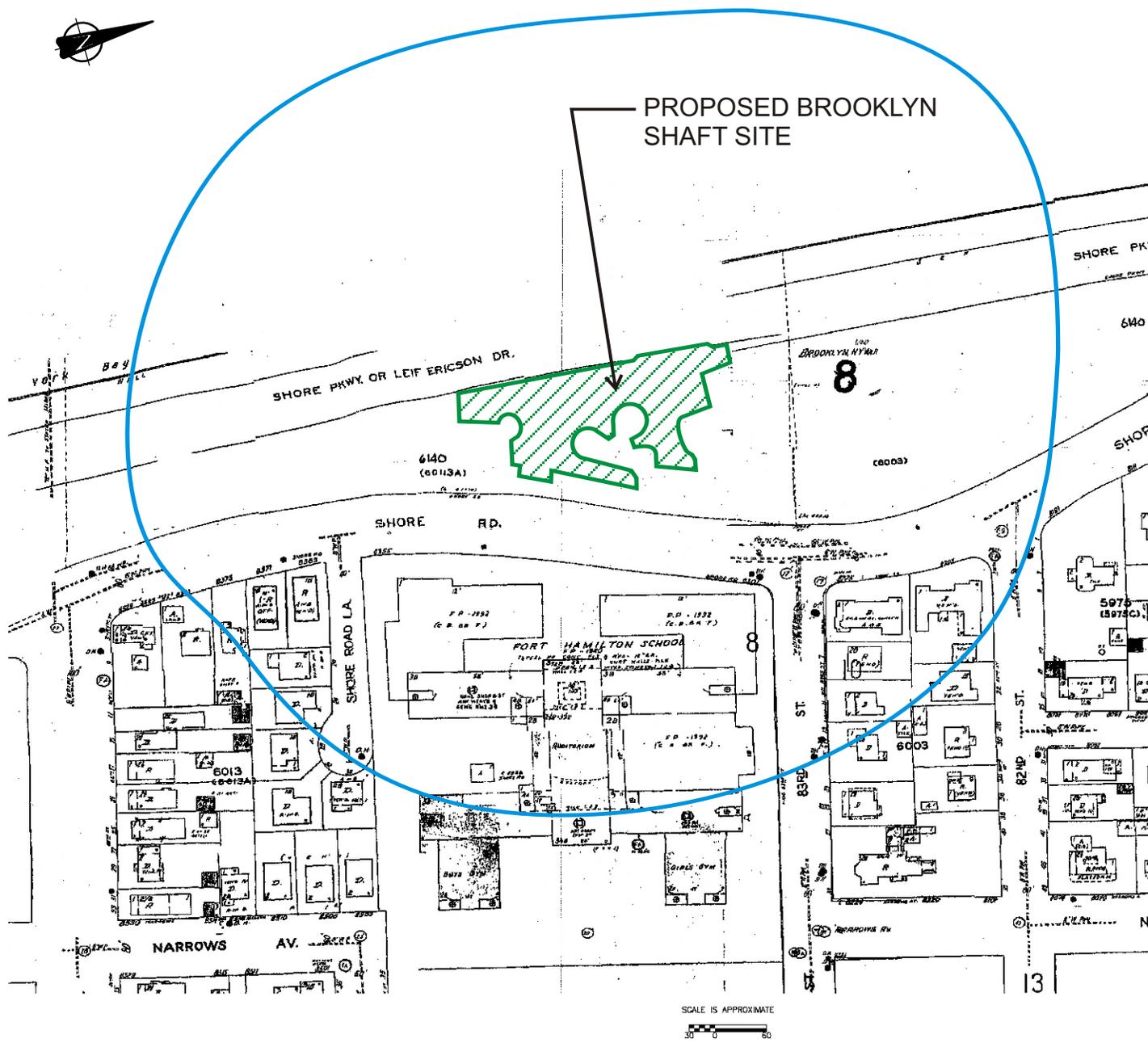
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NEW YORK CITY DEPARTMENT OF  
 ENVIRONMENTAL PROTECTION  
**DEP**



PROPOSED BROOKLYN  
SHAFT SITE



Siphon Shaft Location



400' Radius

NOTE: SITE BOUNDARIES ARE APPROXIMATE



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### Attachment 3a - Brooklyn Tax Map

THE REPLACEMENT OF THE EXISTING WATER SIPHONS  
BETWEEN BROOKLYN AND STATEN ISLAND



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FIRST USED FOR TAX OF 1994 - 95

R 3/1

UPPER NEW YORK BAY

Dec 29, 1977.  
Block: 487.  
Lot Aff: 110  
New Lot: 1 DEPT  
10: E 320-11

PROPOSED STATEN ISLAND  
SHAFT AND CHLORINATION  
STATION

487  
110.



Siphon Shaft and Chlorination Location



400' Radius

NOTE: SITE BOUNDARIES ARE APPROXIMATE



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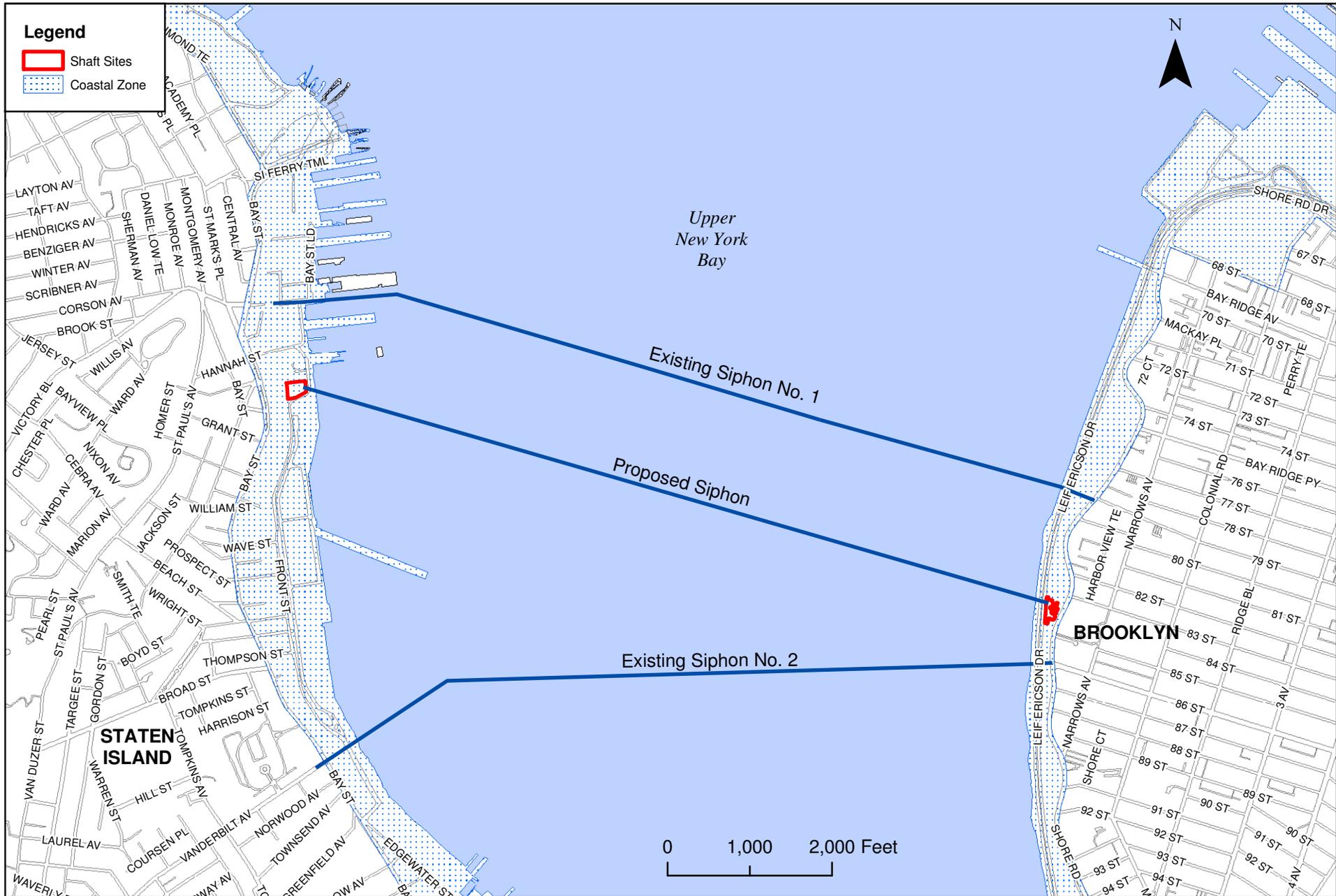
Attachment 3b - Staten Island Tax Map

THE REPLACEMENT OF THE EXISTING WATER SIPHONS  
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**Attachment 4 - Coastal Zone Boundary**

**THE REPLACEMENT OF THE EXISTING WATER SIPHONS  
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