



Phase IB Archaeological Investigation

**Sweet Brook Drainage Area
Staten Island, New York
BMP SB-5**

**Annandale Road and Grantwood Road
B/L 5056580014, B/L 5056580009, B/L 5056580001**

**New York City
Department of Environmental Protection
South Richmond Drainage
Storm Water and Sanitary Drainage Plan
99/DEP006R**

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Prepared For:

New York City Department of Environmental Protection,
New York City Department of Design and Construction,
and
DeFazio Industries

Prepared by:

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EXECUTIVE SUMMARY

The New York City Department of Environmental Protection (DEP) has developed a drainage plan for the sanitary collection and storm water management of the Sweet Brook Watershed in Staten Island, New York. The storm water management plan includes the construction and installation of Best Management Practices (BMPs). As currently proposed (Staten Island Bluebelt Capital Improvements 002225), a BMP installation between Annandale Road and Grantwood Road, referred to as Sweet Brook BMP No. 5 (SB5), falls in an area designated by an earlier documentary report as *Medium Sensitivity* for Native American resources (Historical Perspectives, Inc., 1999). In addition to the potential Native American sensitivity, the NYC Landmarks Preservation Commission (LPC) has also expressed concern for potential historic-era archaeological resources at SB5 (11/17/10).

In compliance with environmental review requirements, a Phase IB archaeological investigation of the BMP SB5 installation site was conducted by Historical Perspectives, Inc. (HPI). The following technical report of the SB5 archaeological excavation is in accordance with Section 6.21 of the New York City Landmarks Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* (2002). The goal of this initial level of Archaeological Testing is to determine presence/absence of archaeological resource potential by shovel testing the Area of Potential Effect (APE). The shovel testing is conducted prior to proposed impact and according to a protocol approved by LPC.

Phase IB archaeological testing included a series of standard hand-excavated Shovel Tests (STs); a total of 12 STs were completed. No Precontact artifacts were found. No potentially significant historic features or deposits were encountered. No further investigations are recommended.

TABLE OF CONTENTS

I.	INTRODUCTION	1.
II.	CURRENT CONDITIONS.....	1
III.	FIELD RESEARCH METHODS.....	1
A.	<i>TESTING METHODOLOGY</i>	2
B.	<i>FIELD TESTING RESULTS</i>	2
IV.	CONCLUSIONS AND RECOMMENDATIONS.....	3
V.	REFERENCES.....	4

FIGURES

PHOTOGRAPHS

APPENDIX A: Record of Shovel Tests

FIGURES

1. *Project Site Location on Arthur Kill, N.Y. Quadrangle. U.S.G.S., 7.5 Minute Series (USGS 1981).*
2. Results of Archaeological Field Investigation (based on Hazen and Sawyer 2009).

PHOTOGRAPHS

(see **Figure 2** for locations)

- Photograph 1: View looking south at ST1, north end of BMP SB5.
- Photograph 2: View looking south at ST6 in the southern part of BMP SB5.
- Photograph 3: Shovel Test 1, detail.
- Photograph 4: View looking west at ST12 in progress, south end of BMP SB5.

I. INTRODUCTION

The New York City Department of Environmental Protection (DEP) is proposing to improve drainage and environmental conditions in the Sweet Brook Watershed in the Annandale neighborhood of the Borough of Staten Island; it is known as Capital Project SE-002225 (Figure 1). The storm water management plan includes the construction and installation of Best Management Practices (BMPs). As currently proposed (Staten Island Bluebelt Capital Improvements 002225), a BMP installation falls between Annandale Road and Grantwood Road; this BMP is referred to as Sweet Brook BMP No. 5 (SB5).

Historical Perspectives, Inc. (HPI) previously completed a documentary assessment of the Sweet Brook Watershed (1999). That study revealed that there were no known Precontact sites in or near the SB5 project area. However, due to the characteristics of the landform – distance to fresh water source, elevation, and drainage – the general area of SB5 was designated as having *Medium Sensitivity* for Native American resources. In addition to the potential Native American sensitivity, the NYC Landmarks Preservation Commission (LPC) has also expressed concern for potential historic-era archaeological resources at SB5 (11/17/10).

The potential sensitivity for cultural resources at SB5 requires action as a function of both the city and state environmental review process. At the request of DEP, Historical Perspectives, Inc. (HPI) completed an archaeological field investigation of the Area of Potential Effect (APE) at SB5. The APE extends from Annandale Road at the intersection with Wolcott Road on the north, southwest to Grantwood Avenue. It then extends across Grantwood Ave. to a small area west of Detroit Avenue (Hazen and Sawyer 2009; Figure 2).

II. CURRENT CONDITIONS

The Sweet Brook Watershed covers an area of approximately 1,870 acres. It contains about thirty-one acres of undeveloped Blue Belt property owned by New York City. The local topography is flat to gently sloping, with little change in elevation. The Sweet Brook Watershed is mostly developed; it contains residential and commercial structures, community facilities, roads and utilities. The Richmond Parkway and Staten Island Rapid Transit Railroad line pass through the watershed.

Annandale Wedge Pond is the principal water source within the Sweet Brook Watershed. The land surrounding the pond is undeveloped, wooded, and contains unpaved roads; this property is part of DEP's Blue Belt system. Water from Annandale Wedge Pond drains southeasterly toward the Richmond Parkway. Another stream originates just north of Grantwood Avenue, to the northeast of the Pond, and flows and meanders southwesterly to Jefferson Boulevard and beyond to the Staten Island Rapid Transit Railroad. Arthur Pond is located northeast of the juncture of Annandale Road and the Staten Island Rapid Transit Railroad. Although it is labeled as a pond on watershed maps, it now functions as a wetland area rather than a true pond.

III. FIELD RESEARCH METHODS

For this study, field investigations based on hand excavated Shovel Tests (ST) were undertaken for the entire APE, which was considered potentially sensitive for both Precontact (Native American) and historical archaeological deposits. Obviously disturbed areas were not tested.

Testing was completed according to the protocol submitted to and approved by LPC (12/22/10). Only two minor changes to the submitted protocol should be noted as the following report is reviewed. Subsequent to the submission of the testing protocol, the DEP reduced the size of the APE. Figure 2 has been annotated with "Area No Longer in Design Plan." Secondly, the actual location of ST8 was shifted in the field away from an area of heavy fill overburden.

There is an older house fronting on Annandale Road that was formerly associated with the project area. The house owner has extensively altered the yard area surrounding the residence, relocating the southern portion of the Sweet Brook channel to the east of its natural location, bringing it closer to the home (Karen Appell and Mike Russo, personal communications, January 5, 2011). A shed and walkway, along with associated retaining walls, were constructed over the relocated brook. This extensive manipulation of the APE and the associated property adjoining

the APE to the southeast, at the intersection of Annandale and Grantwood certainly compromises the APE. Recently, concrete headwalls and a culvert were built where the brook runs under Grantwood Avenue (Figure 2).

The SB5 survey was conducted by Historical Perspectives, Inc. of Westport, Connecticut. Fieldwork, under the direction of William Sandy, RPA, was carried out on January 5, 2011. Archaeologist Rosita Tirabo assisted the field investigation. Mike Russo of DiFazio Industries and Karen Appell of AECOM supplied information about project area conditions.

A. TESTING METHODOLOGY

STs were placed throughout the relatively undisturbed sections of high ground within the project area for the specific purpose of ascertaining the presence or absence of cultural resources in the APE. The hand-excavated STs were approximately 50cm round and were typically dug into culturally sterile subsoil. Standards for excavations, screening, recording, labeling, mapping, and cataloging, as outlined by the NYAC *Standards* (1994) were observed. The investigation followed the New York City Landmark Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* (2002). Field notes recorded all pertinent data including artifact and the levels where they were found. Soil textures were determined with a flow diagram. Soil colors were determined with the *Munsell Soil Color Chart*. Stratigraphic profiles of all STs were recorded (Appendix A). A photographic record was undertaken. All STs were promptly refilled. Soil was sifted through one-quarter inch mesh screen. The retained artifact inventory is included as Table 1.

The construction and environmental teams thoroughly walked and staked the project area when there was no snow cover. No historic foundations or features were observed within the APE.

B. FIELD TESTING RESULTS

Survey testing covered the entire APE. Because of snow, about 5 percent of the ground surface was visible on the north end of the property (Photo 1); about 20 percent of the surface was exposed in the south (Photo 2).

A total of 12 STs were excavated (Figure2, Appendix A). Much of the project area is disturbed; large areas of fill are present, while other areas have been cut, and exhibit truncated profiles. Some of this disturbance resulted from the relocation of the stream channel, and the filling of the original channel (Karen Appell, personal communication, January 5, 2011). Fill was also used to establish a series of walking trails. There has been dumping of modern debris and fill in several locations, including large pieces of concrete and metal trash.

Appendix A gives a full summary of the ST profiles. STs ranged in total depth from 36cm to 72cm below grade, with most in the 60cm to 70cm range. There are four types of profiles: natural, fill over natural, all fill, and truncated. Six of the tests had profiles that appear natural (STs 1, 2, 4, 5, 9 and 10). ST1 shows an intact, natural profile.

ST1

Depth	Soil type	Color	Artifacts	Interpretations
0-26cm(0-10in)	Loam	Brown	hanger*, battery*	A
-50cm(20in)	Sandy Clay Loam	Dark yellowish brown	NCM	B
-61cm(24in)	Gravelly Sandy Loam	Yellowish brown	NCM	C/sterile subsoil

NCM = No cultural material

*=discarded

Three tests had profiles with fill overlying intact or truncated profiles (ST3, 8 and 12). There was no B horizon in these tests, it may have been removed through erosion or excavated. Like ST3, they had fill over a possible A horizon, which rested atop a C horizon.

ST3

Depth	Soil type	Color	Artifacts	Interpretations
0-20cm(0-8in)	Loam	Very dark grayish brown	NCM	Fill
-29cm(11in)	Sandy Loam	Dark yellowish brown	NCM	Fill
-40cm(16in)	Loam	Brown	NCM	A
-65cm(26in)	Stony Clay Loam	Dark yellowish brown	NCM	C/sterile subsoil

NCM = No cultural material

ST12 was similar, but with only 1 stratum of fill; ST8 had fill directly over a C horizon (Photo 4).

There were two profiles consisting entirely of fill. ST6 was surrounded by a surface deposit of macadam, concrete, and metal debris/trash (Photo 2). ST7 was located in a ramp of fill that extended to Grantwood Avenue, part of the path system.

ST7

Depth	Soil type	Color	Artifacts	Interpretations
0-17cm(0-7in)	Wood Chips w/ Loam	Very dark grayish brown	NCM	Fill
-55cm(22in)	Gravelly Sandy Loam	Yellowish brown mixed w/ brown	NCM	Fill, v. compact

NCM = No cultural material

One test had a truncated profile, ST11. Located in an elevated area, the lone stratum was a compact C horizon.

ST11

Depth	Soil type	Color	Artifacts	Interpretations
0-36cm(0-14in)	Sandy Loam	Strong brown	ceramic,glass, coal*	C

*=discarded

The only artifacts retained came from the very top of ST11 (Table 1). The whiteware was a very tiny sherd, less than one-half inch in size.

Table 1: Artifact Inventory

Location	Artifacts
ST11 Level 1C	1 whiteware, with blue decoration, very small
	1 container glass, clear, small

IV. CONCLUSIONS AND RECOMMENDATIONS

This infield survey was designed to determine the presence or absence of archaeological resources within the APE. A previous pedestrian reconnaissance by the Project Manager and Assistant Registered Engineer/Restoration Specialist did not note any obvious historic features, like cellar holes or shaft features.

There were 12 shovel tests excavated. Much of the project area was disturbed; many tests showed profiles of fill or cut and fill. No Precontact (Native American) artifacts were found. Most of the historic era finds consisted of modern trash (e.g., coat hanger, battery, beer bottle). A tiny fragment of whiteware and a small piece of glass came from the very top of ST11. This test had a truncated profile; the stratum consisted of a C horizon.

No Precontact artifacts were found in the BMP SB-5 APE. No potentially significant historic era materials were found in the APE. No further archaeological investigations of the SB5 site are recommended.

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U.S.G.S.

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Phase IB Testing, BMP-SB5

Annadale Road and Grantwood Road, Block 5658, Lots 1, 9, and 14
Sweet Brook Watershed, Staten Island, Richmond County



Figure 1: Project site on *Arthur Kill*, N.Y. 7.5 Minute Topographic Quadrangle (U.S.G.S. 1981)

0 1000 2000 3000 4000 5000 FEET

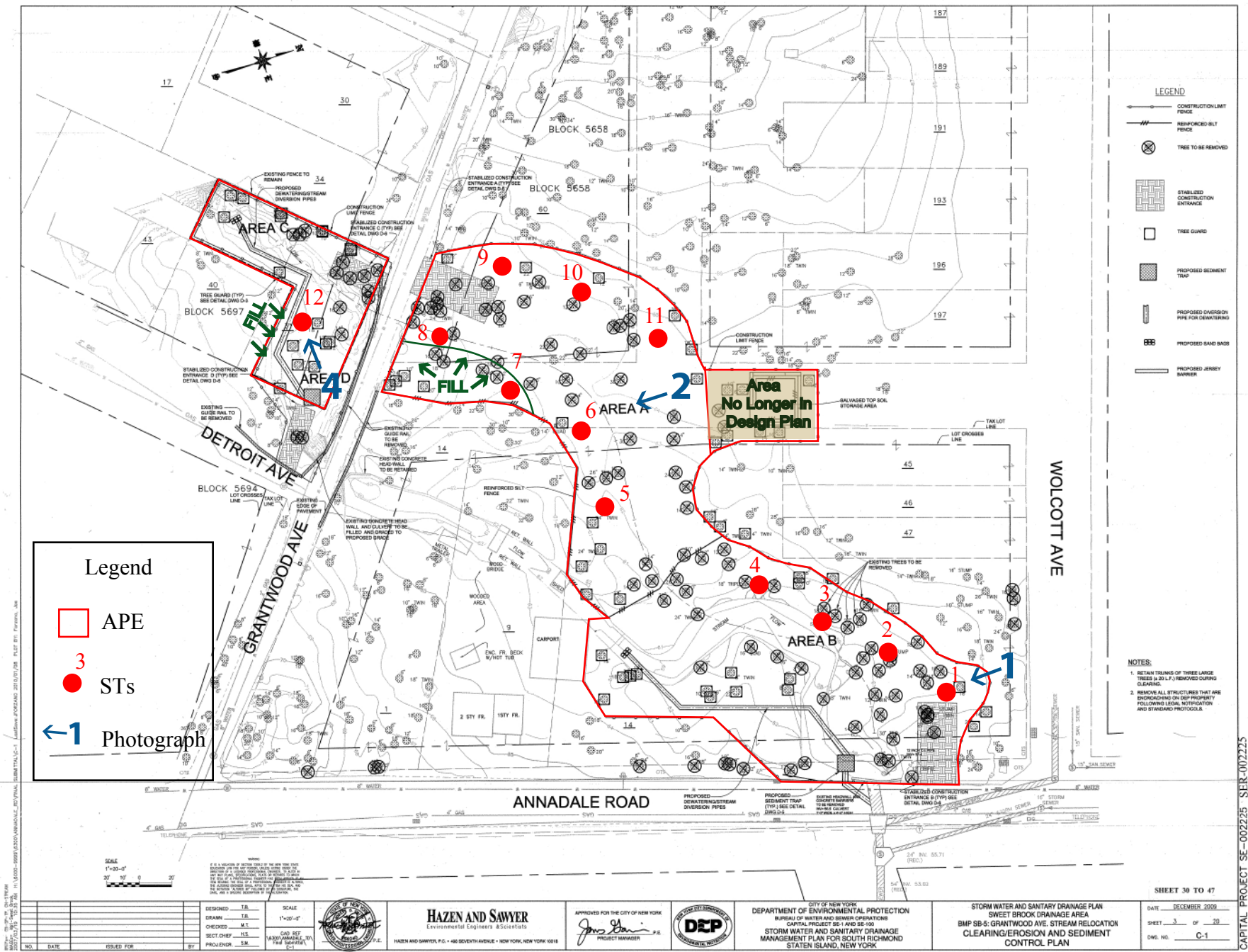


Figure 2: Phase IB testing locations.



Photograph 1: View looking south at ST1, north end of BMP SB5.



Photograph 2: View looking south at ST6 in the southern part of BMP SB5.



Photograph 3: Shovel Test 1, detail



Photograph 4: View looking west at ST12 in progress, south end of BMP SB5.

Appendix A: Summary of Field Testing – BMP SB-5 Staten Island, NY

Shovel Test #	Level	Horizon	Depth (cm below grade)	Soil Color	Soil Texture	Artifacts/ Comments/ Reason for Termination
1	1	A	0-26	10YR4/3 Brown	Loam	wire hanger*, battery*
	2	B	26-50	10YR4/6 Dark yellowish brown	Sandy Clay Loam	NCM
	3	C	50-61	10YR5/8 Yellowish brown	Gravelly Sandy Loam	NCM/sterile subsoil/photos
2	1	A	0-25	10YR4/3 Brown	Loam	NCM
	2	B	25-36	10YR4/6 Dark yellowish brown	Sandy Clay Loam	NCM
	3	C	36-72	10YR5/8 Yellowish brown	Gravelly Sandy Clay Loam	NCM/sterile subsoil
3	1	Fill	0-20	10YR3/2 Very dark grayish brown	Loam	NCM
	2	Fill	20-29	10YR4/4 Dark yellowish brown	Sandy Loam	NCM
	3	A	29-40	10YR4/3 Brown	Loam	NCM
	4	C	40-65	10YR4/6	Stony Clay Loam	NCM/sterile subsoil
4	1	A	0-38	10YR3/4 Dark yellowish brown	Stony Silty Loam	NCM
	2	B	38-59	10YR4/6 Dark yellowish brown	Stony Loam	NCM
	3	C	59-65	10YR5/6 Yellowish brown	Sandy Loam	NCM/sterile subsoil/boulders/5m from brook
5	1	A	0-22	10YR3/3 Dark brown	Stony Loam	NCM
	2	B	22 - 66	10YR5/8 Yellowish brown	Stony Sandy Loam	NCM/boulders
6	1	Fill	0-19	10YR3/2 Very dark grayish brown	Sandy Loam	macadam*, modern bottle glass*
	2	Fill	19-66	10YR5/8 Yellowish brown mixed w/ 10YR3/3 Dark brown	Clay Loam	NCM/cobbles
7	1	Fill	0-17	10YR3/2 Very dark grayish brown	Wood chips w/ loam	NCM/in path
	2	Fill	17-55	10YR5/8 Yellowish brown mixed w/ 10YR4/3 Brown	Gravelly Sandy Loam	NCM/very compact
8	1	Fill	0-45	10YR4/3 Brown	Stony Loam	Modern beer bottle glass*

NCM = No Cultural Material

* = Discarded

Appendix A: Summary of Field Testing – BMP SB-5 Staten Island, NY

Shovel Test #	Level	Horizon	Depth (cm below grade)	Soil Color	Soil Texture	Artifacts/ Comments/ Reason for Termination
	3	C	45-60	7.5YR4/4 Brown	Sandy Clay Loam	NCM/sterile subsoil/cobbles
9	1	A	0-19	10YR3/2 Very dark grayish brown	Clay Loam	plastic*
	2	B	19-40	10YR5/6 Yellowish brown	Stony Clay Loam	NCM/water @ 32
	3	C	40+		Boulders	NCM/water/boulders
10	1	A	0-8	10YR3/2 Very dark grayish brown	Loam	NCM
	2	B	8-33	10YR4/4 Dark yellowish brown	Sandy Loam	NCM
	3	C	33-49	7.5YR5/8 Strong brown	Sandy Clay Loam	NCM/sterile subsoil
11	1	C	0-36	7.5YR4/6 Strong brown	Sandy Loam	ceramic, glass, coal*/artifacts from top/sterile subsoil
12	1	Fill	0-18	10YR5/4 Yellowish brown mixed w/ 10YR4/3 Brown	Clay Loam	NCM
	2	A	18-36	10YR4/3 Brown	Loam	NCM
	3	C	36-72	7.5YR4/3 Brown	Clay Loam	NCM/sterile subsoil/water @ 70