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REPORT ON PHASES 1B and 2/3  
ARCHAEOLOGICAL TESTING AND EXCAVATIONS  
OF THE MILL POND SEWER PROJECT  
LOCATED ALONG PARTS OF OLD MILL ROAD,  
ARTHUR KILL ROAD, AND PARTS OF  
HISTORIC RICHMOND TOWN (Blocks 2278, 2290 and 4444),  
BOROUGH OF STATEN ISLAND  
NEW YORK

Contract No. SER 20099



View of Mill Pond project excavations in progress

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May 23, 2003

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## EXECUTIVE SUMMARY

This report on archaeological testing and excavations of a section of Richmondtown, partially within the New York City Landmarked Historic Richmond Town, was conducted as part of the Mill Pond Project, a section of the Richmond Creek Drainage project. Results of the previously completed Mill Pond project archaeological documentary study concluded this DEP project will affect several potentially significant archaeological resources within the many project impacts.

The earlier study concluded archaeological excavations in sections of the new sanitary sewer have the potential to unearth evidence of the Pre-contact Period material, pre-1855 stray human remains from the cemetery of the Church of St. Andrew, a 19<sup>th</sup>-century dwelling, and a late-19<sup>th</sup>-century carriage factory or early 20<sup>th</sup>-century wagon shed. The only of these resources found, documented and excavated were remains of part of a dry-laid stone foundation which was from either the carriage factory or wagon shed. It seemed likely the structure may have been reused since the functions of either type of building would have been similar.

Replacement of a water main in Arthur Kill Road and installation of an elliptical sewer to the west of the road had the potential to affect archaeological remains of an 18<sup>th</sup>-century tannery and the late-19<sup>th</sup> century Hennessy House. A five-foot wide section of the eastern foundation wall of the Hennessy House was found as well as a burnt stratum which may represent the destruction of the house by fire in 1899. No remains of the tannery were found.

Earlier archaeological testing in advance of the elliptical storm sewer excavations determined there were structural remains associated with a number of buildings, including the Hennessy House, within the property of Historic Richmond Town. The other structures whose foundations were found during the course of this work and exposed, documented and excavated include the late-19<sup>th</sup> century Johnson Barn, a late-19<sup>th</sup> century tinsmith shop, an early-20<sup>th</sup> century shed, and a early-20<sup>th</sup> century outbuilding. In addition to these features a circular brick drainage feature was also uncovered and documented.

Archaeological work in advance of elliptical storm sewer excavations within Arthur Kill Road revealed remains of an earlier, pre-1845 (pre-Town Bridge), Arthur Kill Road. It was buried close to five feet below the current road. The storm sewer connectors which are to head down Arthur Kill Road to Richmond Road had the potential to unearth further evidence of this early road as well as remains of the first County Courthouse which was constructed in 1728. Unfortunately, this section of the project had been destroyed earlier in the 20<sup>th</sup> century by the construction of a concrete culvert. Possible destruction rubble from the early-18<sup>th</sup> century was found mixed with 20<sup>th</sup>-century debris in this test trench.

The construction of a pocket wetlands to the east of Historic Richmond Town along Richmond Road had the potential to reveal archaeological information about the Pre-contact Period as well as a 19<sup>th</sup>-century dwelling. Testing did not find any such data. However it was determined the fill in this part of the project impact area was up to ten feet in places.

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## INTRODUCTION

The City of New York Department of Environmental Protection (DEP) is implementing a program of drainage control in the Richmondtown section of Staten Island, partially going through Historic Richmond Town, a New York City Landmark site (Figure 1). Some portions of the project impacts were deemed to have the potential to affect archaeological resources; therefore a program of archaeological testing and data recovery has been conducted in order to comply with environmental review regulations. The results of this fieldwork are presented in this report. The archaeology was done following three scopes of work; one for testing, one for excavations and another for testing the area adjacent to the historic Church of St. Andrew cemetery (see Appendix A).

The project contains four types of impacts; water main replacement, new sanitary sewer, new storm sewer, and wetlands reconstruction in the vicinity of Mill Pond (see Figure 1). The water main will go along the center of Old Mill Road, beginning at a point near the start of the stone wall surrounding the St. Andrew's Church cemetery, to Arthur Kill Road and south down Arthur Kill Road, about five feet from the western curb, to Richmond Road. It will reconnect with existing 12 inch water mains on both Arthur Kill and Richmond Roads. The trench for this impact will be three to four feet wide and up to six feet deep. Its total length will be about 950 feet. The water main replacement trench will be excavated to the depth of the existing water main.

The new sanitary sewer was designed to start at a point on Old Mill Road about 70 feet west of the water main's start and to the south of it. It will cross the path of the water main at the corner of Old Mill and Arthur Kill Roads and proceed south along west of center of Arthur Kill Road to a point north of Richmond Creek. The sanitary sewer will then head east along the north side of Mill Pond first through Block 2278 - Lot 56 then through a paper street (called Mace Street) that extends east. This is now all part of Block 2278. The sanitary sewer extends as far east as the demapped section of St. Patrick's Place and then south along that path to Richmond Road. This trench will be about six feet wide and will be about 1560 feet long. The trench depth will vary from eight feet near Mill Pond to twenty-three feet deep at the top of the hill near the intersection of Old Mill, Arthur Kill and Richmond Hill Roads.

The storm sewer will be an elliptical pipe sixty inches wide by thirty-eight inches high. It will require excavation of a trench about ten feet wide and eight feet deep that will extend from Mill Pond east of the reconstructed Dunn's Mill (through Block 2278, Lots 1, 41, 44, and 47) west across Arthur Kill Road to

Richmond Creek (through Block 4444, Lot 10), a total distance of about 450 feet. The storm sewer will also have a smaller side connection going down the center of Arthur Kill Road to Richmond Road. This will require a trench of up to the same depth but only three feet wide and will extend for about 60 feet to a manhole at the intersection of Richmond Road with Arthur Kill Road. From there connections will be made to two catch basins at opposite corners of Richmond Road. The trenches for the catch basin connectors will be up to five feet deep and three feet wide.

The wetlands work will involve dredging and excavating Mill Pond and creating a pocket wetland at the northeast corner of Richmond Road and St. Patrick's Place (Block 2290, Lots 29, 31 and 37) extending north to Richmond Creek. This wetland will be about 240 feet wide and 160 feet deep. Excavations will disturb up to about ten feet of ground in places.

This report will present the findings of archaeological site investigations conducted for the Mill Pond project. The work has been done in accordance with the guidelines of both the New York City Landmarks Preservation Commission and the New York State Office of Parks Recreation and Historic Preservation. This report was prepared by Linda Stone, RPA for Bedford Construction Corporation. The archaeological fieldwork described in this report was conducted by Ms. Stone with the assistance of Patience Freeman (field supervisor), Doris Del Castillo, and Erik Seadale. Backhoes were operated by Mike Castellano of the union local, and Dennis Maklari, Jr., Danny De Ross and Tommy and John Banks, all of Bedford Construction. Most of the fieldwork was conducted between October 7 and November 22, 2002 and completed on February 4 and March 30 through April 15, 2003. The author would like to acknowledge the assistance of Joseph Lione and the Banks brothers of Bedford Construction Corporation for facilitating the project as well as those working with them and at the associated contracted firms, Historic Richmond Town (John Guild, executive director), and at the various city agencies involved.

## SITE HISTORY AND ARCHAEOLOGICAL POTENTIAL

Two archaeological projects were previously undertaken within the planned impacts of the Mill Pond project in Richmondtown. One was an archaeological documentary study conducted by Linda Stone in 2002. The other was archaeological testing within the planned elliptical storm sewer impacts. This work was conducted by Joan Geismar, PhD, in 1999. Much of the Mill Pond project area south of the pond was rated as containing medium and high archaeological potential by the Landmarks Preservation Commission in the late 1980s while the area generally to the north and west of Mill Pond was rated with low archaeological potential (Baugher et al. 1989: 596-600, 608-610). This was reiterated by Historical Perspectives in 1997 in their cultural resources sensitivity report on the Richmond Creek Drainage area, which includes most of the Mill Pond project area (Historical Perspectives 1997: 35-38). The Phase 1A archaeological documentary study concluded the property was in use since at least the early 1700s and the majority of the project impacts are covered in fill. Potential archaeological resources identified included the first county courthouse, a carriage manufactory, a nineteenth century dwelling, pre-contact resources, and stray human remains from outside an historic cemetery, as well as a number of structures previously identified during archaeological testing throughout most of the elliptical storm sewer impacts within the Historic Richmond Town property.

The following table presents a summary of the findings of the archaeological documentary study:

Table 1 – Potential Archaeological Resources Identified in the Phase 1A Report

IMPACT – LOCATION	FEATURE TYPE	DATES
Sanitary sewer - Old Mill Road	cemetery	c.1742-1855
Sanitary sewer - northeast of Town Bridge	carriage factory	c.1851-c.1891
	wagon shed	c.1891-c.1911
Storm sewer - in Arthur Kill Road, northwest of intersection with Richmond Road	First County Courthouse	c.1728-c.1776
pocket wetland area	19 <sup>th</sup> -century residence	c.1853-1898+
Sanitary sewer - north and east of Mill Pond	Pre-contact resources	pre-European contact

A number of other impacts were identified during the 1999 testing of the planned elliptical storm sewer location. They include twelve structural remains as follows (derived from Geismar 1999):

Table 2 –Archaeological Resources Identified During Previous Testing

AREA	FEATURE TYPE	POSSIBLE STRUCTURE	DATES OF CONSTRUCTION
A	stone wall	Hennessey House	1861-1899
B	stone wall	Johnson Barn	c. 1878-1895
C	stone wall	Johnson Barn	c. 1878-1895
D	stone wall	property wall?	Unknown
E	stone wall or footing	Tinsmith shop?	1878-c.1891
F	brick wall	Tinsmith shop?	1878-c.1891
G	brick wall	Tinsmith shop?	1878-c.1891
H	stone wall	unknown	Unknown
I	stone wall	property wall?	Unknown
J	stone wall	unknown	Unknown
K	stone wall	unknown	Unknown
L	brick foundation	modern patio?	Unknown

Since the documentary study was conducted after the testing, there was an opportunity to research the structural remains shown in Table 2, particularly those listed as “unknown”. The remains attributed as possibly being part of the Hennessey House could also be related to a refreshment stand that was located on this site c.1926-c.1950. This lot also contained an outbuilding from c. 1878 to c. 1891 (Stone 2002: 23). The Johnson barn or stable was the only structure found to have been located on that part of the property. There was no documentary evidence of any property walls historically located within the project impacts, although this was not ruled out. The location of the former Tinsmith Shop was later used as a shed or two sheds from c. 1911 possibly through 1964 (Stone 2002: 22). The eastern part of the planned elliptical sewer impacts contained a privy c. 1911 and a barn or stable from about 1878 to c. 1905 (Stone 2002: 22).

It was also considered possible some archaeological remains from the pre-contact period might be unearthed. Excavations for the sanitary sewer in the sections around Mill Pond as well as the Mill Pond and pocket wetlands excavations contained the potential to reveal the presence of archaeological

resources dating from the time prior to European contact. However it did not seem this should be the main focus of additional archaeological testing, but rather a component of other testing which was recommended.

Archaeological documentation and/or data recovery of the features identified during the 1999 testing was recommended. Archaeological testing was recommended for the planned impacts from the sanitary sewer throughout its length (outside Arthur Kill Road) and within the pocket wetlands construction. Testing was also planned for the segment of the elliptical storm sewer within Arthur Kill Road, as well as the storm sewer connectors toward Richmond Road. One of the archaeological concerns in these sections of Arthur Kill Road is the original County Courthouse dating from c. 1728. The historic documentation on the location of the courthouse is unclear (Stone 2002: 24-5). Another major concern for the Mill Pond project has to do with its proximity to St. Andrew's church cemetery. The oldest section of the cemetery dates from a time prior to the erection of the stone wall that surrounds it today. Although the wall was constructed in 1855, burials in that part of the cemetery took place as early as 1742 and possibly earlier. Archaeological monitoring was recommended in the section of Old Mill Road where the new sanitary sewer will be installed in case pre-1855 human remains from St. Andrews Church cemetery were buried outside its bounds. This recommendation was later changed to pre-construction archaeological testing of the entire segment adjacent to the cemetery. The combined results of this archaeological work, as conducted, are presented in this report.

## METHODOLOGY

Archaeological work done for this phase of the Mill Pond project involved four field techniques to address particular concerns in specific parts of the project impact areas; mechanically assisted trenching, exposure and excavation of structural features, shovel testing, and walk over inspection. Figure 2 depicts which methods have been used in which parts of the project area. The sections of the planned elliptical storm sewer trench that were previously tested were exposed and excavated. Data was recovered and the structural features removed. All other parts of the project impact areas that were deemed to be archaeologically sensitive were tested using one of three testing methods.

### Field Testing

#### **Walk-Over Inspection**

Walk-over inspection was done to identify the possible presence of pre-contact materials within the pocket wetlands and portions of the planned sanitary sewer right-of way after grubbing.

#### **Shovel Tests**

A total of 15 shovel tests were placed at roughly fifty-foot intervals along the path of the planned sanitary sewer trench. Because the entire area was covered with at least a foot of fill, the backhoe was used to remove a swath of fill and shovel tests commenced at the base of each of these pits. Each test was about one and a half feet in diameter and excavated to the depth of non-artifact bearing subsoil, or the limit of the methodology, to evaluate the nature of the soils and the presence or absence of archaeological remains. All soils excavated from the shovel tests were screened through ¼ inch mesh for the recovery of artifacts. Soils, stratigraphy and artifact inclusions were recorded on forms. The shovel test stratigraphy is included as Appendix B. Changes in soil color or texture were recorded as separate levels. Soil color descriptions were made using comparisons to the Munsell Soil Color Charts. Shovel test locations were mapped on the site plan. Photo documentation and drawings were done as appropriate. Measurements were done in feet and tenths of feet.

#### **Mechanically-Assisted Trenching**

Mechanical trenching using a backhoe was the most common testing method in the Mill Pond project. Test trenches were placed along Old Mill Road, across Arthur Kill Road and down to Richmond Road from that point, as well as to the east of Arthur Kill Road, north of Town Bridge and in parts of the planned pocket wetlands. The bucket width of the machine was 30 inches. The backhoe operator was directed to first remove fill, the amount of which varied in different parts of the project impacts. Roughly one bucket of soil was removed at a time. When structural remains were uncovered, the machine would

stop and the archaeologists would enter the trench and manually excavate to uncover and document these features. When no features were found, sample trench profiles were drawn.

### Excavation

Structural features uncovered as previously stated, were manually cleaned to expose their extent within the project impact areas. This allowed the exposure of related features, such as builder's trenches. When these types of features were identified they were excavated and the soils removed from them were screened through ¼ inch mesh for the recovery of artifacts. Sample screening was also done from several cobble surfaces that were uncovered. These will be discussed in detail in the results section of this report. Once features were documented, they were removed, usually by hand. Some of the larger stone features were dismantled with the aid of the backhoe. Each feature will be discussed in detail later in this report.

### Artifact Processing

Unique context numbers were assigned for each field bag of artifacts recovered. Artifacts known in the field to be non-diagnostic modern materials or to be associated with known fill deposits were noted in the field and generally either sampled or not retained. They are noted in the Context Number key (Appendix C). The goal of excavation was not to amass artifacts from the previously documented fill contexts. However there were occasions where specific artifact examples were thought of potential interest to the collection of Historic Richmond Town. In these cases, artifacts were collected and set aside without inventorying for this report.

All recovered glass, ceramic, and metal artifacts and those of man-made materials were washed and rinsed in tap water and left to air dry before labeling and rebagging in clean 4-mil zip-lock bags. Bone artifacts were dry-brushed. Most artifact categories, with the main exception being metal and bone, were individually labeled with the project name abbreviation (MPP), the date recovered and the context number. All zip bags were labeled with the same information. Some smaller pieces were labeled with only the context number.

All ceramic and glass artifacts are considered sherds, unless otherwise noted in the inventory (Appendix D). Ceramic identification and date ranges of manufacture for white-bodied refined earthenwares were based on style of decorations, when available, and are referred to in the inventory as "refined earthenwares". If identifications and/or dates of manufacture were also based on ware type, such as creamware/pearlware/whiteware, then these types are used as identifiers in the inventory. Historic

Richmond Town will be the repository for all artifacts recovered during the conduct of work described in this report.

## RESULTS

### Testing

Archaeological testing was conducted in several locations within the Mill Pond project impacts. Much of the path of the sanitary sewer was tested as it extended east from Arthur Kill Road. Testing in the western end was a backhoe trench and the remainder of the right-of-way was shovel tested. One shovel test was also done in the pocket wetlands, however the main type of testing used in that area was mechanical trenching. Other mechanical trenching was conducted in Old Mill, Arthur Kill and Richmond Roads and at the western end of the planned elliptical sewer. The following discussion of testing results is organized by location, with reference to expected archaeological resources.

### **Sanitary Sewer**

#### *Shovel Tests – Pre-contact evidence*

A total of fourteen shovel tests were excavated along the path of the planned sanitary sewer, primarily to identify the presence or absence of material dating from the Pre-contact Period. The tests were placed at roughly 50-foot intervals and were numbered 1 – 14. The locations of the tests are shown on Figure 3. The shovel tests were distinctly different along the north side of Mill Pond than to its east, adjacent to the Pocket Wetlands area where the fill was more extensive. Therefore those shovel tests (numbers 12 – 14) will be discussed below in the section on the Pocket Wetlands.

All shovel tests were covered with some amount of fill which was removed by backhoe in the area of the tests. A swath of fill about five feet by ten feet was removed in the area where the shovel tests were to be placed. Once removed, the archaeologists were able to enter these pits and excavate shovel tests within them. Fill covered an average of 1.8 feet below the current ground surface in Shovel Tests 1 – 11. The base of the tests averaged 3.7 feet below ground surface. The tests excavated below the fill contained an average of three strata and most encountered ground water. The average depth of ground water was 2.2 feet below ground surface.

An identifiable earlier ground surface was found in seven of these eleven tests. Where it existed, it was at a depth of 2.7 feet below ground surface. This stratum was generally described as a very dark brown loam and often contained organic matter. It generally was devoid of artifacts, as were all the underlying strata. Only two tests contained artifacts at this level and none contained artifacts at levels below this. A sherd of modern glass was found in this stratum in Shovel Test 2. Glass and one coal fragment were found in Shovel Test 9, but not retained. This test also contained a sherd of porcelain that was retained.

It could have been manufactured between 1860 and the early-20<sup>th</sup> century. This provides some minimal information about the time frame the land in that vicinity was filled. None of these shovel tests contained any artifacts dating from the Pre-contact Period.

In addition to shovel testing the area north of Mill Pond to identify archaeological resources from the Pre-contact Period, a walkover was also done after trees were grubbed. This method proved to have less potential than originally anticipated because not all of the right-of-way was grubbed. Tree stumps were grubbed only when their size indicated the need. Therefore the walkover inspections were done only in isolated areas. Once again, this did not yield any artifacts dating from the Pre-contact Period.

Despite the negative findings from the Pre-contact Period, there were some findings of minor note with regard to the modifications of the land during history. Shovel Tests 9 and 10 contained sections of wooden planks crossing the excavations at about 2.5 and 1.9 feet below ground surface, respectively. Shovel Tests 10 and 11 encountered a defunct gas pipe buried about two and a half feet below ground surface.

*Test Trench – Remains of carriage factory/wagon shed*

A test trench was placed at the western end of the sanitary sewer path, just east of Arthur Kill Road to identify possible remains of a carriage factory (c. 1851 – c. 1891) or wagon shed (c. 1891 – c. 1911). It was located from about 50 feet west of Shovel Test 11 and extended west in segments for about 45 feet to the planned location of manhole #5 along the sanitary sewer, just east of Arthur Kill Road. Excavations of this area were conducted over three separate days.

The first day's excavation began at the location of manhole #5 and was a trench about four feet wide. It was excavated in two segments, one about 22 feet long and the other 23 feet. This enabled testing throughout the entire planned length of the trench. The stratigraphy in the upper layers of the trench was fairly uniform. The upper stratum was a brown moist sandy silt. It was about 1.25 feet thick. This was underlain with a thinner lens of black sandy silt about 0.4 feet thick. The next stratum down was a dark brown sandy loam. These upper levels generally represented fill deposits and often contained artifacts which, while of no interest to the archaeological interpretation of the site, were unusual or unique. In such cases, these artifacts were kept on site and retained for Historic Richmond Town. This was done for most fill contexts excavated through the end of October 2002. A list of this material is included in this report at the end of Appendix D – Artifact Inventory.

A potentially *in situ* deposit was encountered in one location near the base of the dark brown sandy loam, at about 3.5 feet below ground surface. In most parts of the trench where no structural remains were found, the deeper soil layers were excavated by backhoe. The soil strata included a reddish brown sandy silt which gave way to a very dark gray brown silty clay at about five feet down. This initial testing of the vicinity of the carriage factory/wagon shed revealed some large stones considered to possibly be related to the historic buildings in that area. The location was noted and the trench filled, to be excavated at a later date. The location of the remains was about 26 feet east of the planned manhole #5 location along the sanitary sewer path.

Excavations resumed at this location in late November, about a month after the possible foundation stones were first uncovered. The trench was opened from 26 feet east of the manhole #5 marker and extended east another eight feet. The soils surrounding the structural feature were very wet, as were most of the soils throughout the project area. Once exposed, the probable foundation stones began to get covered with ground water. Nevertheless, measurements were taken and drawings done. Figure 4 shows the south profile and plan view of the excavations at that time (in bold face), as well as the plan view discussed below. The profile contains the soils described above. The plan shows a number of large stones along a perimeter in a north/south and east/west orientation, creating the rough shape of a corner. To what would be the interior, were some closely packed cobblestones. This was presumed to be a floor within one of the earlier buildings. A probe was used to determine if the cobblestones were more than one deep. They were not. The probe was able to pass without obstruction to about one foot below. Several diagnostic artifacts were recovered while troweling above the muddy floor (see Appendix D – Context # 37). The *tpq* (date of manufacture of the most recently produced artifact) of this surface comes from an embossed bottle base that could have been manufactured any time from about 1890 through the present.

An attempt was made to expand the trench to the east to find where the stones ended. The backhoe inadvertently removed several of the exposed stones during this time. As often happens on archaeological sites, interesting findings happen at the end of the day. It was felt more work was needed to determine the extent and identity of these remains, so the trench was backfilled once again. Excavations resumed about two months later. An area about twelve feet long and 7 feet wide (the planned width of the sewer trench) was opened. Figure 4 depicts the stones exposed during the more recent excavations in fine lines over the earlier stones shown in bold. It is of minor note that the elevations taken at that time represent a difference of about a half a foot from the earlier excavations. This is likely due to a combination of the low-tech string and line level method and a change in the actual elevations of the ground due to heavy

equipment going back and forth for two months. No builder's trench was identified and soils were not screened. Upon excavation of the larger stones, labeled A and B on Figure 4, additional stones were found about one foot down, roughly the diameter of the exposed stones. These were below the water table. As excavations extended eastward to determine the extent of this stone feature, a pipe trench was found, thus truncating the feature. Since test excavations further east did not reveal any remains of this structure, it was presumed it either ended there, at the point shown on Figures 4 and 4A, or was truncated at its eastern limit by the pipe. The backhoe removed the rest of the large stones and they were found in about two layers, to about one to one and a half below the plan view. These were underlain with natural soil deposits.

Diagnostic artifacts recovered from adjacent to the foundation stones include ceramics and glass (see Appendix D – Context # 38). The *tpq* comes from part of a machine made, soda type bottle glass sherd. This could have been made any time from the late-nineteenth century through the present time. A large piece of unidentified corroded hardware was documented *in situ*, retained and is shown on Figure 4.

#### **Pocket Wetlands**

According to the testing plan (see Appendix A), four trenches were to be placed in the pocket wetlands area. Two of these were to test for historic remains of a nineteenth century dwelling. The other two were to have fill removed and shovel tests placed within them, as well as a walkover survey of the entire area as grubbed, to look for material from the Pre-contact Period. This was in addition to the sanitary sewer shovel tests, briefly mentioned above. It was initially thought the grubbing would take place first. However this was not possible, mainly because of the instability this would have caused for the muddy soil. The entire pocket wetlands area was extremely water laden.

#### *Shovel Tests – Pre-contact evidence*

Three shovel tests were excavated along the western edge of the planned pocket wetlands, as mentioned above. One additional shovel test was placed within the southern end of the pocket wetlands. As with the tests along the sanitary sewer right-of-way discussed above, this testing was to identify the presence or absence of Pre-contact Period evidence. Test locations are depicted on Figure 5, their stratigraphy is detailed in Appendix C.

As with Shovel Tests 1 – 11, Shovel Tests 12 – 14 were previously known to be covered with fill, although a larger amount. Excavation methods were similar to the earlier shovel tests, however the pits within which the tests were placed were somewhat larger, closer to six by twelve feet. Almost five feet of fill was removed from the location of Shovel Test 12 before hand excavation began. However it was

clear the fill extended much deeper. Ultimately nine feet of fill were removed, below the depth of planned impact, and the fill continued deeper. A similar situation existed the Shovel Test 13 location. At that location the backhoe removed ten feet of fill, also below the planned depth of impact. This test was also filling with water at about five feet below ground surface. The fill was not as deep in the location of Shovel Test 14. The backhoe removed three feet of fill. It was underlain with gravel and more fill to a depth of about 4.9 feet below ground surface before a possible earlier ground surface was encountered. However no artifacts were recovered dating from the Pre-contact Period. Shovel Test 15 was placed within the southwest part of the pocket wetlands area, about ten feet north of the sidewalk on the north side of Richmond Road. The soils in this test were extremely compacted. The fill in the upper levels of the test was quite modern and included a 1986 nickel. The two strata excavated below this were devoid of any artifacts. Grubbing of tree stumps was done only in a few spots. No Pre-contact Period material was encountered.

*Test Trench –Remains of a 19<sup>th</sup>-century dwelling and Pre-contact Period evidence*

The archaeological documentary study concluded the central area of the pocket wetlands, along the Richmond Road side, contained the potential for preserving the remains of a 19<sup>th</sup>-century dwelling. Two test trenches, at ninety-degree angles to each other, were recommended in this area. These trenches were called Test Trenches B and D in the field. Planned below ground project impacts in these trenches were close to zero near Richmond Road and to ten feet at the northern end of the trenches. Excavations began first in Test Trench D (see Figure 5). It was located about fifteen feet north of the Richmond Road curb. A sample profile of Test Trench D is included as Figure 6. Several soil strata were identified. They were all associated with fill. A defunct pipe was found buried at 2.5 feet below ground surface. A number of large rocks were unearthed during these excavations, some as much as four feet in across. Some of these were noted to have been previously displaced. This was determined by observing the soil adhered to them was different from the matrix in which they were found. As the trench continued north westward, it became deeper. Artifacts were retained from over 3.5 feet down. A possible earlier ground surface was noted buried about 6.3 feet below ground surface. However no remains of the 19<sup>th</sup>-century dwelling were found.

Test Trench B began about seven feet north of the Richmond Road curb. A possible shell cache was found in the trench at about twelve feet north of the curb and buried about 3.5 – 4.0 feet below the ground surface. Some historic artifacts were retained from this deposit, however this was then determined to be part of the mixed fill deposit indicative of the soils throughout the upper levels of the test trenches. This trench began to fill with water at about 4.5 feet below ground surface and was excavated to a depth of up

to five and a half feet at a point near where it met the center of Test Trench D. Excavations were to continue to the northeast at a later time, but were subsequently determined unnecessary (see below).

Two trenches to look for Pre-contact Period evidence were to be placed in the pocket wetlands area, one in the eastern side and one in the western side. In addition, one shovel test was placed near Richmond Road, where very little fill and/or project excavations were to take place. This shovel test was described above. Test Trench A was located in the western part of the pocket wetlands area. Once the backhoe removed 5.3 feet of fill, the archaeologists got in the trench to see if placing a shovel test would be productive. The fill seemed to continue down and getting in the pit any deeper would have been dangerous for the personnel. Therefore the backhoe operator was instructed to continue excavating. At 7.7 feet below ground surface, an oily smell arose. A piece of weather stripping and a bottle marked with the date 1941 were observed. Fill continued to come up at the base of excavation in the north end of Test Trench A, at ten feet below ground surface.

No Pre-contact Period evidence was found. In fact, the historic ground surface was not even encountered in most of the test excavations of the pocket wetlands area. Testing results in the area of the former dwelling showed from about 4.5 to 6 feet of fill covering the former ground surface, with more fill heading north, away from Richmond Road, potentially up to or more than ten feet deep. Therefore, with about ¾ of the testing completed and knowing the depth of fill would likely be greater than six feet in the northeastern end of Test Trench B, further testing in this area was eliminated. A trench planned to the east of Test Trench B to search for archaeological remains from the Pre-contact Period was also eliminated, because the depth of fill in that area was most likely below the depth of planned impact.

#### **Old Mill Road – Potential for Identification of Graves**

The Old Mill Road segment of the sanitary sewer runs parallel to the wall of the cemetery surrounding the Church of St. Andrew. The cemetery dates from as early as 1742 and possibly earlier although the wall around it was not built until 1855. As is the case with most historic cemeteries, original boundary lines were not always adhered to and there was therefore concern the trench necessary for the new sewer may encounter human remains from prior to 1855. Several protocols for testing were considered before settling on mechanically assisted backhoe testing of the entire trench. The scope in Appendix A was modified from testing half of the entire width of the trench to testing the entire width.

Prior to opening the road, the contractor marked out the location of the existing water main within Old Mill Road so that the archaeological testing would not disturb/destroy the water main. The contractor's remote sensing showed the old water main was not located as depicted in the site plans, nor was it a

uniform distance from the south curb. This finding resulted a slight change to the planned sewer excavations, relocating manhole #13 (or the far western end of the sewer) to only about 15 feet west of the gate in the fence to the Church of St. Andrews rectory, thus shortening the planned sewer/test trench. Additionally these findings meant the western portion of the archaeological test trench could not be excavated to the full six foot width because of potential damage to the water main. Therefore the archaeological trench was only about 5.5 feet wide in about the western third of the trench. From that point eastward, it was between 6 and 7.5 feet wide. In the western end of the trench, the remaining six inches were within the old water main trench, previously filled to the depth of the water main, about three feet below the current ground surface.

The southern side of the test trench measured from 10.5 feet to 12.6 feet north of the stone wall which surrounds the St. Andrews Church cemetery and the test trench totaled about 225 feet. The trench was excavated in 15 to 22 foot long segments beginning with the western end of the planned sewer trench, and excavated to a depth of at least seven feet throughout. Figure 7 shows the location of the test trench and contains three sample profiles of the upper strata. Below the depths depicted, soils became redder and clayier and then grayish, indicative of subsoil. The base of excavation was generally about seven feet below ground surface. Some stones were found in the western profile at the interface below the asphalt. This was probably remains of an earlier roadway surface. No evidence of graves was found, nor was any evidence of grave shafts. Additionally, virtually no artifacts were observed within the entire length of the trench.

#### **Arthur Kill and Richmond Roads**

Archaeological testing within the sections of the elliptical storm sewer and storm sewer connectors in Arthur Kill and Richmond Roads had the potential for uncovering some of the earliest historic remains within the Mill Pond project. The original Arthur Kill Road was laid out in 1709 and the first county courthouse was built on its corner with Richmond Road in 1742 (Stone 2002: 14). Archaeological work within these roadways had to take place at nighttime because of Department of Transportation requirements for road closure. The archaeological team was provided with high intensity lighting, however this was not ideal. Soil colors were distorted and photography was not terribly productive.

#### *Elliptical Storm Sewer Test Trench – Remains of an earlier road*

The portion of the elliptical storm sewer as it crosses Arthur Kill Road will require excavation of a trench about ten feet wide and eight feet deep. Testing began in the western lane of Arthur Kill Road just east of the water main that is being replaced as part of the Mill Pond project. The trench was cut to five feet

wide, wider than the one bucket width originally planned for testing. It was felt it would be more difficult to go back and cut additional roadway should archaeological data recovery excavation be needed.

Figure 8 is a sample profile from the upper levels of this test trench. The profile shows several things. Beginning from the right (west), part of the water main trench backfill could be discerned just below the paving. To the east of that was a six inch thick slab of concrete, buried under fill about three feet below the roadway. Under this was additional concrete which crumbled, as did the soil in profile below it, when the backhoe broke through. This concrete did not extend to the north profile of the test trench. At first it was hypothesized this concrete could have been part of an earlier road, perhaps from the 1950s. More detail on this concrete feature will be presented in the following section of this report. The soils to the east of the concrete represent a mix of what was assumed to be fill deposits. Below the depth drawn, the trench began filling with water rendering any more soil distinctions impossible. Excavations continued to seven feet below the roadway.

After backfilling the trench in the western lane of Arthur Kill Road, the eastern lane was opened. The soil profile was similar to the eastern part of Figure 8. This trench was not as wet as the western trench, nor was there any buried concrete. At between 4.6 – 4.8 feet below the roadway, a thin lens of darkened soil was identified, beginning about one foot east of the center line of Arthur Kill Road. This was interpreted as the historic road surface. It was underlain by a reddish brown silty sand, identified as culturally sterile subsoil in other parts of the project impact areas.

The historic road surface was gently cleaned by trowel. A difference in compaction of the surface was noted at about 6.3 feet east of the current center line of Arthur Kill Road. To the east of this point the stratum was not as compact. It was hypothesized this difference in compaction was at the edge of the historic road. Once cleaned, half buckets of soil were removed from the trench for screening. Unfortunately, the trench walls collapsed after only two half buckets were removed. Nevertheless, the excavation continued by backhoe. The deposit in the trench became darker at about 6.7 feet below the roadway, similar to the darker soil seen in the trenches excavated north of Town Bridge and on Old Mill Road. Excavations stopped at eight feet down and no further archaeological material was recovered.

The artifacts recovered during screening of the historic road surface were labeled Context #45. This context contained only one diagnostic artifact. It is a piece of blue transfer print of a type that was manufactured from c. 1780 through the early-20<sup>th</sup> century (Plate 1). The context also contained one brick fragment, seven pieces of coal, 22 small oyster shell fragments and four small pieces of cut wood. None

of these other artifacts are very telling, with the possible exception of the wood (Plate 1). These fragments were either 1/4 inch or 5/16 inches thick. There was speculation they could have been pieces of plank used to pave the road, as was done in the nineteenth century. However there can be no certainty as to their historic use.

*Storm Sewer Connector Test Trenches – Remains 1<sup>st</sup> County Courthouse & earlier road*

Test excavations for the connector between the elliptical storm sewer south to a manhole at the intersection of Richmond and Arthur Kill Roads entailed opening a trench about three feet wide and from five to eight feet below the road. It was thought possible more remains of the historic road surface found in the elliptical sewer test trench could also be found in the connector sewer test trench, particularly in the northern part of the trench. The southern part of this trench held the potential to contain remains of the first county courthouse, dating from 1728.

Upon opening the northern end of the connector trench a substantial amount of concrete was uncovered at about 2.5 feet below the roadway. It was so substantial that it was not possible for the backhoe to break it without jackhammer assistance. At the northern end of the trench there was only about 0.7 feet of space between the concrete and the eastern wall of the trench and it extended at least as far as the western wall. The upper surface of the concrete rose in elevation toward the south, away from Richmond Creek. Assuming this was part of the same concrete structure documented in the elliptical sewer test trench, it was about 3 feet deep in that trench, about 2.5 near the northern end of the connector test trench and about 2.2 feet below the roadway about 30 feet south of there.

The feature was determined to be a defunct culvert which likely once connected the existing manhole at the intersection of Arthur Kill and Richmond Roads to the creek. The concrete was jack hammered and found to contain wire mesh for reinforcing on the top. The sides of the culvert were substantial, about a foot thick. The culvert itself was about three feet wide and its bottom was about 4.6 feet below the roadway near the northern end of the trench, about 4.3 feet halfway to the intersection. The base of the concrete at that point was 5.1 feet below the roadway. Figure 9 depicts the area of the storm sewer connectors and shows a reconstruction of the extent of the culvert.

Subsoil was found at about 5.5 feet below the roadway at a point about five feet north of the planned manhole at the Richmond and Arthur Kill Road intersection. To the south of that point, in the western part of the trench, west of the culvert, a fair amount of demolition debris was found. It contained a mix of eighteenth-century brick and twentieth-century modern brick as well as large stones, possibly from a

dismantled foundation. It seems this mixed debris could have been part of the first county courthouse which had been disturbed in the twentieth century during the construction of the culvert.

Figure 9 also shows the connectors between the manhole at the intersection to the catch basins on the north and south corners of Richmond Roads. The planned test trench to the southern corner was eliminated because of the expected disturbance from the concrete culvert. As can be seen, an electrical line and a gas line cross the path of the connector to the northern catch basin. Therefore the test trench was truncated. It went from the catch basin west about twelve feet. The site plan is not quite accurate in that the actual location of the new catch basin will be within the footprint of the test trench, not to its east as depicted. The trench encountered sterile subsoil at only 2.7 feet below the ground surface. Excavations were continued to six feet down.

#### **West End Elliptical Sewer – Potential for identification of 18<sup>th</sup>-century tannery**

The western fifty feet of the elliptical sewer trench was tested by backhoe trenching to look for possible remains of a tannery dating from the early-18<sup>th</sup> century. This was excavated in two twenty five-foot segments about three feet wide. Figure 10 depicts the upper levels of soil in a section of the trench. Profiles were uniform throughout the two test trenches and the soils were natural deposits, rather than the large amounts of fill found in other parts of the Mill Pond project impacts. The trenches were ultimately dug to about eight feet below ground surface. No evidence of the tannery or other archaeological features was found.

#### **Excavation of Previously Identified Structural Features**

Twelve structural features (A-L) were previously identified along the path of the planned storm sewer west and east of Arthur Kill Road (see Appendix A). All of these locations were investigated as described in the approved September 17, 2002 scope of work. A ten-foot wide trench was opened for the appropriate length to expose and document structural remains. The following describes the findings of the archeological work done to document these features.

#### **Area A – Hennessy House – 1861-1899**

Initial testing uncovered a possible stone wall related to the Hennessy House which was at that location from 1861 through 1899. Excavation of this area for the Mill Pond project was done at two separate times because of the proximity to Arthur Kill Road. The first trench began at a point about 11.5 feet west of Arthur Kill Road, considered a safe distance from traffic, and extended to about 40 feet west of the road. The second trench was excavated from roughly the 11.5 foot mark east to Arthur Kill Road when the street was closed to through traffic. Both trenches were ten feet wide, the planned impact width from sewer excavations.

For the first trench, the backhoe operator was instructed to begin excavating a trench to remove the fill covering the location of the stone wall. The machine was stopped several times to afford the archaeologists an opportunity to enter the trench. This was done until the trench was about 4.5 feet deep, the depth of the stone wall found during testing. At that point, no remains of the Hennessey House were found and sample trench profiles were drawn. Figure 11 depicts segments of the north and south profiles of this trench. The area was covered with about two to two and half feet of fill which contained demolition debris. This was underlain by dark or very dark gray mottled silty sand. A burned layer or lens was beneath this level. At the base of the profiles was a dark brown silty clay. Once the trench exceeded a safe depth for entry, the backhoe operator was directed to excavate to the depth of planned impact to be sure the structural remains of the Hennessey House were not more deeply buried. A five-foot wide path the length of the trench was excavated to a depth of about 7.5 to eight feet. No structural remains were encountered at these depths.

Testing resumed to the east. A defunct pipe was found buried about a foot below ground surface just east of the test trench described above. It was in a north/south direction. The pipe trench was discernable to about three feet down. This was underlain with some large rocks, thought to be part of the Hennessey House foundation. Figure 12 depicts the stratigraphy above the stone foundation remains. The differences in the soils in profile on Figures 11 and 12 are of some interest. These upper levels obviously represent different depositional episodes, one after the destruction of the refreshment stand which stood at that location during the early 20<sup>th</sup> century, and the other after the demolition of the late-19<sup>th</sup> century Hennessey House. Although not depicted on Figure 12, there was a burnt lens in parts of the trench at about 2.5 feet below ground surface, comparing favorably to the earlier testing and trench excavation.

The *in situ* Hennessey House foundation stones were identified at a point about five feet west of Arthur Kill Road. Since the water main being replaced as component of the Mill Pond project is about one foot east of the western curb of the road, the maximum width of the Hennessey House remains could be no more than six feet. The ten foot wide trench tapered down toward the bottom as unstable fill does and like most of the other trench, this began filling with water during excavation. Figure 13 is a plan view of the foundation stones. It shows what appears to be a number of large stones in a rough north/south direction parallel to the road, with additional stones to the east and some smaller stones to the west. The eastern stones could either be from the destruction of the foundation or from the eastern part of the foundation, should it have been more substantial. The western stones were not in any clear pattern to interpret.

While working in this area, water main replacement was underway. Engineering concerns dictated a change in plans for a section of the water main and it was now possible excavations for it could disturb remains of the Hennessey House south of the elliptical storm sewer. Therefore additional archaeological excavations were done to document potential findings.

The test trench was excavated and later used to install the water main. It was about twenty feet long, three feet wide and five feet deep. A series of possible foundation stones began to emerge about two feet down. There was a relatively large cache of shell amongst these stones. Directly underlying this deposit were intact foundation remains. The soils above the foundation stones were similar to the profile shown in Figure 12. The soils around the stones were also waterlogged. Figure 14 is a plan view of this section of the Hennessey House foundation. The southern end of this drawing represents what appears to be the cornerstone of the house. The stones were generally too large to remove by hand, averaging about two feet in diameter. The foundation stones were only one or two deep. The base of the remaining foundation was about 4.5 feet below the ground surface. This represents an elevation of about 3.2 feet above sea level. The foundation was underlain with reddish sandy soil, similar to that found at this level in the elliptical sewer trench. Excavation continued another half a foot, to the depth needed to lay the water main.

#### *Artifacts*

No artifacts were retained from the first day of excavations of Area A. However a large number of beverage bottles (about 25) were recovered from the demolition rubble and set aside for the collection of Historic Richmond Town. These bottles were clearly associated with the refreshment stand which stood on that location from about 1926 through 1950.

Very few artifacts were found in and among the foundation stones of the Hennessey House. Some shell, a small amount of coal and a small amount of burned wood were noted but not retained. A piece of redware was retained from the elliptical storm sewer archaeological excavations. The burned stratum (Context #41) contained several diagnostic artifacts. The *tpq* comes from a piece of molded glass which could have been manufactured any time after 1867. This context also contained a smoking pipe bowl and stem, redware and whiteware. The most surprising find from this archaeological work was a pre-contact period worked stone piece, possibly a scraper (Plate 2).

When the archaeological work was expanded to the south, a number of diagnostic artifacts were retained from above the foundation stones (Contexts #s 42 & 43). These include another possible pre-contact

period artifact (Plate 2), although more dubious than the one recovered from Context # 40, as well as ceramic and glass sherds. The *tpq* comes from a piece of glass which could have been made any time after 1890. Context # 44 represents the soil between the foundation stones and contained two artifacts; a small piece of aluminum, possibly from a specialized type of cap, and a sherd of white granite.

#### *Discussion*

The previously identified stone wall was found truncated by demolition debris and a defunct pipe on the west, leaving a swath of about five feet wide of intact deposit. Demolition debris was from the refreshment stand which stood at the site in the early to mid-twentieth century. It is likely the construction of this refreshment stand obliterated the remains of the Hennessy House in this location. The excavation for the now defunct pipe would have had less of an impact since it was found only to a depth of three feet below ground surface and only in part of the project impact area.

The Hennessy House stood on the site from 1861 through 1899 when it burned down. Remains of a dry-laid stone foundation were documented as was a burned stratum which could represent the fire. Figure 15 shows the plan views of the Hennessy House foundations superimposed over the site survey. Once again, note the survey is off slightly. The existing water main cuts west at a point further south within the elliptical storm sewer trench than depicted and the angle at which it turns is 45 degrees, sharper than drawn on the survey. The entire water main replacement north of the elliptical storm sewer trench is an in-kind replacement, not causing any disturbance to potential archaeological resources. Additionally, the archaeological remains of the foundation of the Hennessy House were actually found slightly south of where the foundation footprint is drawn on the survey, although the eastern wall does align.

#### **Area B/C – Johnson Barn – c.1878-1895**

Initial testing found remains of two possible stone walls which were thought to be part of the Johnson Barn which stood at that location in the late-nineteenth century. Like the excavations of the Hennessy House foundation remains, excavations of the Johnson Barn were done at two separate times because of the proximity to the road.

The first part of the work was done in a seven foot square excavation pit, three feet short of impact width because of the previously excavated three foot wide test trench dug in 1999. It revealed remains of a dry-laid stone foundation buried only about 1.5 feet below the ground surface, just below the topsoil. Most of the foundation stones were about a foot in diameter on the longest dimension. Some smaller chinking stones as well as pieces of brick were also observed. The foundation stones as they were revealed are depicted on Figure 16. The northern section of the excavations in Figure 16 were not headed at quite

ninety degrees in that direction and did not seem as clear as the line of foundation stones in the east/west direction. It was hypothesized this could represent part of the demolition of the foundation. Excavations were expanded toward the west and south to see if the east/west line of foundation stones continued. Since it did, this added credence to the theory the stones to the north were tumbled in that direction.

Once the east/west foundation wall was exposed, a small builder's trench was defined on part of the eastern end of the exposed foundation wall. The soil from this trench was excavated separately and screened for the recovery of artifacts. It contained 7.5 YR 2.5/2 very dark brown loamy soil and was less than one foot deep. Excavations removed two to three levels of stones within this east/west wall of the Johnson Barn foundation. Two levels of foundation stones were removed by hand along the southern edge of the excavation pit. The base of these stones was the base of the foundation. It was about 2.5 feet below the ground surface or about 4.1 feet ASL. Figure 17 is a cross section showing the south profile of the excavations after the stones were removed. The jumble of rocks is the portion of the excavation hypothesized to be evidence of the dismantling of the foundation. The profile was actually drawn at an angle to the archaeological remains, thus creating a foundation cross-section rather than a profile of the length of the northern foundation wall. Excavations continued to seven feet below the ground surface. The western extent of the trench was about twenty feet west of Arthur Kill Road, to the east of the property fence and a large tree.

Excavations resumed about six months later, beginning at Arthur Kill Road and extending east to about twenty-five feet. In the eastern end of the ten-foot wide trench, stones began appearing at about a foot and a half below the ground surface. Unlike the foundation remains previously described, these were oriented in a north/south direction. Many of these stones were more cobble size than foundation stone size (see Figure 18). The plan view shows the previously excavated trench in the southeast and the location of the removed tree in the northwest of the excavation. As work proceeded westward, a series of larger stones were uncovered at a depth of just over two feet below ground surface, in the east/west line of those exposed during the earlier excavations. There were also some tightly packed cobbles and pieces of brick to what would have been the barn interior (see Figure 19). Water began seeping in almost immediately after these stones were exposed and it was not possible to draw the individual cobbles, some of which were measured at three or four inches in diameter. Not only was the prior disturbance from the earlier excavations described in this report detected within this part of the trench, evidence of the test trench done by Geismar in 1999 was found in and along the northern part of the trench.

The cobble surface was removed by backhoe since screening the wet mud was not possible in the given conditions of nighttime work. The cobbles were underlain by gravelly clayey sand at about two and a half feet below ground surface. The surface was shovel scraped and troweled at about three feet below ground surface. There were no more features found.

Excavations moved westward. The western end of the 1999 test trench was observed to be in a line with the fence surrounding Historic Richmond Town, a section of which was temporarily removed for this work. To the west of the fence line about four feet east of the curb of Arthur Kill Road, another series of foundation stones was found, this time oriented in a north/south direction. They were about a foot and a half below the road surface and were presumed to be the western wall of the Johnson Barn. The stones were about a foot or so in diameter, like those further to the east within the trench. The dry-laid stone foundation wall was about one and a half feet wide, roughly the size of two stones. Only a three and a half foot section was uncovered. The top of the stones was at elevation 6.4 above sea level and the bottom was 3.4 feet above sea level, indicating the foundation remains were about three feet deep. As with the excavations to the east, the trench began filling with water at this level.

Once the western wall was exposed and documented, the backhoe removed the underlying deposits to the depth of planned elliptical sewer impact to ensure there were no additional features to be uncovered. During this process, some large stones were pulled up. At first, it was thought these were natural since similar stones had been observed elsewhere in the project impact areas. However, the stones seemed to be quite large and concentrated in this area. No specific feature was discerned, although the heavy concentration of stones made them seem intentionally placed.

#### *Artifacts*

As with the exposure and documentation of the Hennessy House foundation remains, the Johnson Barn remains contained very few artifacts. However many more artifacts were retained. Some modern garbage-like material was found in the eastern part of the excavations in what initially looked like it could be the western end of the barn. However it was then concluded the stones among which the material was found could have been a tumble created upon the demolition of the barn. Artifacts retained from within these stones include 18<sup>th</sup>-century brick, butchered bone and a large number (n=22) of ceramic sherds (Context #1). The ceramics included a variety of types, many blue transfer printed pieces and some redware and stoneware, as well as other refined earthenwares. The *tpq* of the context is the early-nineteenth century. The small builder's trench also contained a variety of similar material with an early-nineteenth century *tpq* (Context #2).

Underneath the second level of foundation stones at the eastern end of the excavation, was a carved fish made of bone or ivory/tooth/tusk (Context #8) (Plate 3). It was initially thought it may be a lure, however there was no hole for a hook or line. The piece is intricately carved with eyes and gills on each side. The only other artifact retained from this context was a diagnostic piece of glass which could have been manufactured any time from the eighteenth century until the present time.

Excavations of the western twenty-five foot section of the Johnson Barn foundation remains also unearthed a number of diagnostic artifacts (Context #s 46-50). The excavations of the exposed cobbles unearthed a few shells, glass and coal. One sherd of ceramic was retained (Context # 47). The deposit underlying these stones contained a cow rib, shell, pipe stem, slate, melted glass, and milk glass (Context # 48). It had a *tpq* of the 1890s, based on the sherd of milk glass. The *tpq* for Context #49, slightly deeper in the excavations, was only a decade earlier.

#### *Discussion*

Two parts of a previously identified stone foundation wall were exposed and documented to be the remains of the Johnson Barn which had been destroyed by fire in 1895 (Stone 2002: 19). The reason, it is now known, is two sections of stone wall were identified in a trench oriented in the same direction the barn is oriented on the site survey, but not spaced as far apart as would be expected, is because the survey is incorrect. The historic maps as well as actual archaeological remains show the barn was parallel to Arthur Kill Road (Stone 2002: Fig.12). It was about four feet west of the current curb. The excavations did not reveal the entire dimension of the barn in either direction because it was askew to the orientation of the planned elliptical sewer. Figure 20 depicts the archaeological findings on the site survey. The outline of the previously presumed location of the barn is a gray dashed line with an arrow and the word "buried" pointed at it. The actual footprint is extrapolated and shown within the elliptical storm sewer in black.

Below the depth of the western barn wall foundation was a concentration of very large stones. It is not clear if these stones were part of a historic feature dating from before the barn or a natural deposit. Since there is no historic documentation of any other structure having been at this location, one hypothesis is the stones were part of rip-rap along Richmond Creek before the course of Arthur Kill Road was straightened and Town Bridge was built in 1845. Another theory is the stones were part the of fill material used under the deck during the construction of the stone masonry arch bridge over Richmond Creek (personal communication: Lynn Rakos, Army Corps of Engineers). These theories may be bolstered by the fact archaeological testing nearby within Arthur Kill Road revealed remains of the earlier road buried almost five feet below the current road surface, a depth consistent with the stone concentration.

#### **Area D-H – Tinsmith Shop – 1878-c.1891; Shed(s) c. 1911-1964**

Initial testing revealed both brick and stone remains which were thought to relate to either the late-nineteenth century tinsmith shop or an early-twentieth century shed, as well as two stone walls thought to be possible property boundary walls. A complex of interrelated structural remains was documented in the vicinity during this archaeological work.

Excavations began in Area D, as defined in the scope of work (Appendix A). This was the western part of the feature complex previously thought to be either a property wall or a foundation wall of the Tinsmith Shop. About a foot below ground surface, an ash deposit was encountered. The ash was over a foot thick in places and was deposited on top of and around an *in situ* cinderblock wall (see Figure 21 and Plate 4). Some mortared marked bricks were found in proximity. Some of the bricks, marked "Richmond" had been previously displaced, likely from the demolition of a structure. Other bricks appeared to be unmarked. Figure 21 depicts the stratigraphy above the level of this feature. The ash is shown as a deposit within the a dark yellowish brown silty loam.

After documenting the brick and cinderblock feature, the excavation trench was widened toward the south, to the full ten foot planned impact width, and expanded toward the east. The northern extent of the trench was previously excavated during the 1999 testing. Beneath the ash deposit described above, the trench expansion exposed a previously knocked-down section of mortared brick wall and a jumble of brick debris and fill to its west (see Plate 4). A large stone was also exposed to the north of this and can be seen in Plate 4 just to the right of the scale in the upper part of the photograph.

Once documented, the layer of bricks and cinderblocks was removed by hand. The bricks were about three deep, about the height of one cinderblock. Those where a mark was observed were marked "Richmond". The brick wall was also about a cinderblock wide, about a foot. This was underlain by a number of large stones and a cobble surface, buried only three or four inches down, or about 2.3 feet below ground surface (see Figure 22). The cobbles were about two to seven inches in diameter and the surface was about four by three feet wide.

Another part of this cobble surface was found further to the east, about seven and a half feet away (see Figure 23 and Plate 5). It measured about six by eight feet and was intruded upon by a brick footing. The footing was removed by hand. These bricks were underlain by some flat stones which were in turn underlain by mortar-covered cobbles. It was supposed these cobbles came from a section of the cobble surface being dismantled and to create stability for the brick footing. A piece of decaying wood was

documented in the south profile in the area near the footing. It was interpreted in the field as either a root or a possible post, although it was so decayed its actual identity was never determined. The cobbles under the footing were removed by hand to a depth of about four feet below ground surface.

The remainder of the cobble surface was excavated by hand and a sample of the soils surrounding the stones was screened for the recovery of artifacts. The base of the cobble surface was about 2.5 feet below ground surface. The larger stones found around the perimeter of what was presumed to be a cobble floor were also removed. These were presumed to be part of the foundation of the tinsmith shop. The foundation remains contained at least three levels of very large rocks, about a foot and a half to two feet in diameter. The foundation was more substantial in the western wall of the remains. This part of the foundation continued down to a depth of over seven feet below the ground surface. It was underlain with the ubiquitous reddish subsoil and then grayish muck.

A circular brick drainage feature was found to the east of the cobble surfaces (see Figure 23). Although depicted as circular, it was not quite so. It seemed to have had a beehive shape top that was removed prior to having been covered with fill. This opening measured three feet, although the interior was over five feet at its widest. The feature was made of a mortared unmarked brick and contained an intake and outtake opening for a five-inch diameter ceramic drain pipe that had remained *in situ*. The exterior was surrounded by clay, presumably to keep moisture in. The top of the pipe was just under two feet below ground surface in the south and about 3.3 feet in the north. It would have flowed in a rough southeast to northwesterly direction toward Richmond Creek. Not very much mortar was used to construct the feature. The bricks were laid with the longest side of the bricks adjacent to each other, making the feature about one brick wide. Water began filling the excavations in this area almost immediately. The bricks continued down to about 6.5 feet below ground surface. They were underlain by a series of large boulders, up to three feet in diameter.

#### *Artifacts*

The ash deposit contained virtually no artifacts, although it did contain some building debris including an early form of dry wall, tar paper, brick fragments, concrete pipe fragments and plaster. It also contained some burned bone and melted glass. Underneath the ash (Context # 3), west of the cinderblock wall, a fragment of bisque doll head was found buried about 2.2 feet below ground surface among burned building debris and window glass (Plate 3). Context #s 4 and 5 were also associated with the ash deposit. They contained a number of diagnostic pieces with the *tpq* of the 1890s.

Sections of the cobble floor were screened for the recovery of artifacts. Other artifacts were recovered while troweling. Artifacts found while troweling the surface include some coal, food remains (faunal bone), window glass and nails corroded beyond identification. None of these were retained. Context #s 9 and 12 also were located within the feature, above the cobbles. They contained a number of diagnostic sherds with a *tpq* of 1871. Artifacts retained from screening (Context #s 11, 15 and 16) include non-diagnostic glass and several pieces of blue transfer print with a *tpq* of c. 1780. Corroded nails, coal, shell and wood were noted in the field, but not retained. A whole stoneware jug was found in the fill around the very deep foundation wall in the western part of the former tinsmith shop, buried about 6.3 feet below ground surface.

#### *Discussion*

Initial testing revealed a number of brick and stone structural remains (n=5) in the area of a former tinsmith shop and later a shed. Four of these were found in front of the reconstructed Dunn's Mill, between its western end and the eastern end of its entrance ramp. The fifth was uncovered slightly to the east. During the current archaeological work, the entire area was exposed to document these remains which were buried about two to two and a half feet below ground surface. In addition to documenting remains of the tinsmith shop and shed, a circular brick drainage feature was also documented.

The tinsmith shop had a dry-laid stone foundation and an interior cobble floor. The cobble surface was only about eighteen feet wide and six feet deep. This may also have been the extent of the original tinsmith shop structure. The western foundation wall was quite substantial and may have doubled as a retaining wall. These very deep foundation stones were surrounded by fill, further emphasizing their possibly doubling as a retaining wall. This wall may have also been reused when the shed was constructed in c. 1911 since a possible brick pier was found in line with the foundation/retaining wall. The shed had brick walls and at least one brick pier, as well as some early concrete block. The distance between the two exposed brick piers was about twelve feet. The remains of the shed were overlain with an ash deposit. Knowing the shed was demolished in 1964, and that an ash deposit was found overlying the shed remains, it may be assumed the ash was deposited no earlier than 1964, although many earlier artifacts were documented and recovered from it.

The tinsmith shop went into disuse sometime after 1881 and its use after that time, as well as its cause of demise, is not known (Stone 2002: 19). No information on these questions was uncovered during these excavations. The circular brick drainage feature documented to the east of the tinsmith shop/shed remains had not been filled prior to its being covered with fill. Therefore there was no information retained as there may have been with a privy or cistern.

### Area I

Initial testing revealed what was tentatively identified as a possible property wall made of stone. It was located in front of the reconstructed Dunn's Mill. No such feature was found during this work in the trench excavated to a depth of about seven feet below ground surface. Since many large stones are found naturally in the area, it has been hypothesized the possible property wall may have been one of these and not a structural feature at all. However, the historic documentation indicates the area was once the location of one of the sheds in this vicinity (Baugher et al. 1989:371-2).

Although the property wall was not found, the exact location of the one-inch electrical line connecting service between Dunn's Mill and the Kruzer-Finley House was identified. It was buried less than a foot below ground surface and was located about seven feet west of the southeastern corner of the reconstructed Dunn's Mill and 18.5 feet east of the northwestern corner of the Kruzer-Finley House, crossing the planned elliptical sewer trench close to where the possible property wall was originally thought to have been. Again, the location in ground of this electrical service is not depicted correctly on the site survey.

### Area J/K

Initial testing revealed parts of two stone walls in this area. The current work exposed a wider area. However the entire planned impact width could not be excavated because of the previously identified gas line to the north and the proximity to the walkway behind the Kruzer-Finley House to the south. The trench was only about four to five feet wide, following the angle of the walkway. The gas line was found, as expected, about two feet below ground surface. The remains of a dry-laid stone foundation were found about two and a half feet below ground surface (Plate 6). The south side and the part of the east and west foundation walls were documented (see Figure 24).

The south foundation wall remains were about two feet deep and one and a half feet wide, as can be seen in profile on Figure 24. The base had to be extrapolated because the trench was filling with water. The water level was about 3.25 feet below the gas pipe. In addition to the large foundation stones, the feature also contained some smaller stones and pieces of brick that were used for chinking. This structure was about seven feet wide in the east/west direction. Two possibly *in situ* nails were found in the south trench profile at about the same depth as the foundation stones. It was never determined if these were related to the former building or if they were part of the fill.

### *Artifacts*

Some of the soil amongst the stone was screened for artifacts (Context #29). A number of diagnostic sherds were recovered. The *tpq* comes from a piece of milk glass dating from c. 1890. Other artifacts were recovered while troweling in and among the stones (Context #s 25 and 26). These include stoneware, redware, slate and coal.

### *Discussion*

The foundation remains documented in this part of the project impact area include the southern part of a seven foot wide building. Parts of the east and west walls of this structure are likely the two stone walls identified during testing. No builder's trench was found. The structure was truncated to the north by a now defunct gas pipe which was also documented in the 1999 testing. Reexamination of the archaeological documentary study reveals this was the location of a former privy which had been built by 1911 (Baugher et al. 1989: 371-2). Based on the milk glass found within the foundation, the structure could have been built anytime after 1890. Figure 25 depicts the location of this structure, as well as the correctly mapped electrical line and the tinsmith shop/shed, on the site survey.

Although the 1989 Archaeological Planning Model described this structure as a privy, it did not seem like any privy we had previously worked on. In addition to being much larger than most backyard privies, this structure did not contain the type of fill deposit typically found inside privy remains. Field notes indicated there was less cultural material found as the excavations got deeper, rather than a wealth of information sometimes found in these potential time capsules.

### **Area L**

Initial testing identified a possible modern patio at a shallow depth below ground surface. No additional archaeological excavations were conducted in this area. However several similar brick constructions were observed as paths leading from the adjacent Historic Richmond Town buildings toward Mill Pond. These paths lead from the buildings and end at the concrete walkway that goes along Mill Pond. Therefore it was assumed the brick feature identified during the 1999 testing is related to the house which formerly occupied this area until the mid-twentieth century.

## SUMMARY DISCUSSION

### **Testing**

Archaeological testing was done in various places throughout the Mill Pond project impacts to assess the presence or absence of archaeological resources. Such potential resources include evidence from the Pre-contact period, an eighteenth-century tannery, an eighteenth-century road, the first county courthouse (built in 1728), eighteenth- and early-nineteenth century graves, a nineteenth-century dwelling, and late-nineteenth- early-twentieth century carriage factory or wagon shed.

### **Pre-contact Period**

Archaeological testing within the planned pocket wetlands and the sanitary sewer north of Mill Pond did not reveal any evidence from the Pre-contact Period.

### **Historic Period**

Testing of the elliptical storm sewer trench revealed remains of the historic road surface buried just under five feet below ground in the eastern lane of Arthur Kill Road, relatively close to Richmond Creek. It may be assumed the historic grade naturally sloped down toward the creek. This would mean the historic road would be closer to the current road surface heading south toward the intersection of Arthur Kill and Richmond Roads. The storm sewer connector going down the center of Arthur Kill Road uncovered a defunct concrete culvert extending from a base of over five feet below the current road surface. The construction of this culvert would have destroyed any previously existing remains of the historic courthouse and adjacent road. Disturbed remains of the courthouse may have been encountered mixed with more modern debris. Sterile subsoil was encountered in the catch basin test trench at a depth of about 3 feet below the ground surface.

Testing in the western end of the planned elliptical sewer near its outlet at Richmond Creek was done to identify possible remains of an 18<sup>th</sup>-century tannery. No such evidence was found.

Archaeological testing of the sanitary sewer trench in Old Mill Road was conducted to determine whether pre-1855 graves were buried outside the current cemetery boundaries. No evidence of graves was found.

The area of the foundation and cobble floor remaining in the vicinity of where once stood a carriage factory from c. 1851 – c. 1891 and then a wagon shed from c. 1891– c. 1911 yielded some clues as to which of these structures these remains were associated with. The diagnostic artifacts recovered from the

surface and surrounding the foundation stones had a *tpq* of c. 1890, roughly the time when the property was used as a wagon shed, although some of the material dates earlier. It is not known with certainty whether any of the buildings of the carriage factory were reused as a wagon shed or if the wagon shed was newly constructed for that purpose. A comparison of the location of the archaeological findings was made with the historic maps to try to determine if there is any correlation. Almost all of the maps included in the documentary study (Stone 2002: Figs. 10-15) scale to show the excavated remains fall within the footprint of the eastern end of the depicted historic structures. This fits with the evidence. However, nothing was unearthed to indicate which of the two structures was found buried. It seems most likely there was some reuse involved since historic building uses were similar, although this is only conjecture.

Archaeological testing was also done in the pocket wetlands to look for evidence of a 19<sup>th</sup>-century dwelling. The area proved to be covered with substantially more fill than the previous analysis concluded. Testing results in the area of the former dwelling show from about 4.5 to 6 feet of fill covering the former ground surface, with more fill heading north, away from Richmond Road. No remains of this structure were found.

#### **Excavations and Documentation**

Excavations to document previously tested structural remains was done within sections of the planned elliptical storm sewer trench. It is of some interest that most of the excavations of historic features were either within mud or water. This begs questions as to what the ground water conditions were in history. It is suspected the drainage problems that exist today are more severe than they were over a hundred years ago when buildings were going up in close proximity to Richmond Creek. The large amounts of fill documented during these excavations and during the 1999 testing most certainly had an affect on water drainage within the project impact areas.

#### **Area A – Hennessy House – 1861-1899**

Excavations for the elliptical storm sewer and the new water main to the west of Arthur Kill Road were done to identify remains of the Hennessy House. Parts of a dry-laid stone foundation were documented, as was a burned stratum which could represent the fire which consumed the Hennessy House in 1899. These archaeological remains were truncated by demolition debris and a defunct pipe on the west, leaving a swath about five feet wide of intact deposit. Demolition debris was from the refreshment stand which stood at the site in the early- to mid-twentieth century. It is likely the construction of this refreshment stand obliterated the remains of the Hennessy House in that location.

#### **Area B/C – Johnson Barn – c. 1878-1895**

Remains of parts of the northern and western foundation walls of the Johnson Barn were documented during excavations in advance of the elliptical storm sewer excavations. The barn was located about four feet east of and parallel to Arthur Kill Road and extended east from there. It crossed the southern side of the planned elliptical storm sewer trench about twenty-six feet from the curb. The foundation wall was dry-laid stone and about two to three courses of stone deep as well as wide, having a width of about a foot and a half or so. Unlike the remains of the Hennessy House, there was not evidence of the fire found during these excavations. There were, however, some remains of a possible cobble floor found at the water table.

#### **Area D-H – Tinsmith Shop – 1878-c.1891; Shed c.1911-1964**

Remains of both the tinsmith shop and shed were documented during excavations in advance of elliptical sewer excavations, as were remains of a circular brick drainage feature. Remains of the tinsmith shop included a stone foundation and two parts of a cobble floor totaling about eighteen by six feet. The western foundation wall of the shop was quite deep and it may also have served as a retaining wall. The tinsmith shop was intruded upon and partially destroyed by the construction of the shed. The shed may have reused the foundation/retaining wall from the tinsmith shop. Its width would have been about twelve feet. Neither the north nor the south ends of the shed were identified. The brick drainage feature may have been contemporaneous with the shed, however there were no artifacts recovered which would have confirmed or negated this assertion.

#### **Area I**

No evidence of a possible property wall, originally identified during testing, was found.

#### **Area J/K**

Part of the foundation of a possible privy or small outbuilding was documented during excavations. The stones were dry laid and the structure was about six feet wide from east to west. It was found at about three feet below the ground surface. The remains were truncated to the north by a now defunct gas pipe. Artifacts reveal the building would have been constructed sometime after 1890. However the feature did not contain fill typically found in backyard privies.

## CONCLUSIONS AND RECOMMENDATIONS

The archaeological investigations of the Mill Pond project impacts have provided answers to a number of questions raised in the scopes of work. Both archaeological testing and investigation were conducted to address concerns ranging from Pre-contact Period site use, to eighteenth-century public and commercial buildings, roads and graves, to nineteenth-century buildings and outbuildings. Testing was done in various parts of the project impacts. Archaeological excavation and documentation of structural remains was done in the location of eleven previously identified features.

The findings of this archaeological work confirm the earth has been markedly altered during history. Fill was found throughout almost all of the project impacts, with the greatest depths in the eastern part of the project area, the planned pocket wetlands location. Here there were over ten feet of fill in parts. Some of this fill may be the result of excavation and backfill in places. The results also indicate the project impact areas were lightly used during the Pre-contact Period, or evidence of this use was destroyed through history. Although a couple of worked stone pieces were recovered, they were from historic contexts and not *in situ* deposits.

Testing was also done to identify the presence or absence of pre-1855 graves in Old Mill Road. None were found. Neither were archaeological remains related to an 18<sup>th</sup>-century tannery found within the project impacts, in the western end of the planned elliptical sewer. Archaeological testing for a nineteenth-century dwelling formerly located within the planned pocket wetlands revealed no remains of this either.

Testing within Arthur Kill Road was done to look for remains of an earlier incarnation of the road, from prior to 1845 when Town Bridge was built over Richmond Creek, as well as for the first County Courthouse, built in 1728 and destroyed during the Revolutionary War. A small section of the historic roadway was found buried almost five feet below the current ground surface. Fortunately this was at what was the eastern side of the road so a definition of the location of this side of historic road was documented. However, what was thought to be remains of the first County Courthouse had been destroyed by a twentieth-century concrete culvert. Modern demolition rubble was found among older debris containing, among other things, colonial bricks.

Finally testing to locate archaeological remains of a carriage factory or wagon shed dating from the late-nineteenth through early-twentieth century was done in the planned sanitary sewer impact just to the east

of Arthur Kill Road. Remains of part of a dry-laid stone foundation were documented, however it was not possible to tell which of the two historic structures these were remains of. It seemed likely some of the earlier building, the carriage factory, may have been reused as a wagon shed and the archaeological remains represented this.

Previous archaeological testing revealed stone and/or brick remains of twelve possible structures. Eleven of these were determined in need of further excavation. The close proximity of some of these brick and stone remains was good indication some were parts of the same historic structures rather than eleven individual buildings. From west to east, the remains documented were determined to be from the Hennessy House, Johnson Barn, a tinsmith shop and later a shed, and a previously unknown building. Additionally, a brick drainage feature was found while documenting the remains of the tinsmith shop. All features were documented and dismantled.

The remains of the Hennessy House were found to the west of Arthur Kill Road and were truncated by a defunct pipe and more recent demolition rubble to the west, leaving about a five foot swath of intact archaeological deposit. In addition to the dry-laid stone foundation remains, a burned stratum thought to represent the destruction of the house by fire in 1899, was found.

The Johnson Barn remains were found just to the east of Arthur Kill Road in two sections. A portion of the western foundation wall was found about four feet east of and parallel to Arthur Kill Road. This was in a different orientation from the site survey, although oriented is as depicted on historic maps. The barn was destroyed by fire in 1895, however no evidence of this was found. Very few artifacts were recovered from either the barn or Hennessy House remains.

Excavations of the tinsmith shop/shed area revealed a complex of stone, cobble, brick and cinderblock remains. The earliest building located on this spot was the tinsmith shop, standing from c.1878 through 1885/91. It had a dry-laid stone foundation and a cobble floor. The western foundation wall was quite substantial and may have doubled as a retaining wall. The structure was likely about eighteen by six feet in size. No information on the date or cause of disuse of the tinsmith shop was recovered during these excavations. Around 1911 a shed was built on that location. It likely reused the western foundation wall from the tinsmith shop. The shed used brick and cinderblock in its construction and had two brick piers. The piers were spaced about twelve feet apart. Construction of parts of the shed destroyed sections of the tinsmith shop. Just to the east of this feature complex, a circular brick drainage feature was identified and

documented. It had not been backfilled at the time of its disuse so there was no information as is often found in other features such as cisterns and privies.

A small outbuilding, possibly a privy, was uncovered during this work, located behind the Kruzer-Finley House in Historic Richmond Town, in the area of the planned chamber 1 of the elliptical sewer. The southern section of the building foundation was found *in situ*. It had been truncated to the north by a pipe trench. An artifact found within the soils surrounding the foundation stones indicates the building was constructed sometime after 1890. Documentary evidence found it was built by 1911, thereby bracketing the date of construction between 1890 and 1911, however no data was recovered on the possible historic use of this building.

In conclusion, the Mill Pond project in the areas discussed can proceed as planned without concern for further archaeological work. Although much was documented during this work, it is recommended any future archaeology in the area be done during the dry season (fall) because of the poor drainage and ground water.

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Plate 1 Artifacts recovered from the surface of the early Arthur Kill Road (Context 45), cut wood and blue transfer print sherd.



Plate 2 Possible Pre-contact Period artifacts recovered from around the foundation of the former Hennessy House (Contexts 40 & 42)



Plate 3 Sample of small finds from various contexts (clockwise from fish Contexts 8, 13, 1, 3, & 3)



Plate 4 Brick and cinderblock foundation remains of Area D shed.



Plate 5 Cobble surface and brick footing from Areas D-F, the Tinsmith Shop and shed(s), facing south.



Plate 6 Foundation remains of previously unknown structure in Area J/K, facing east.

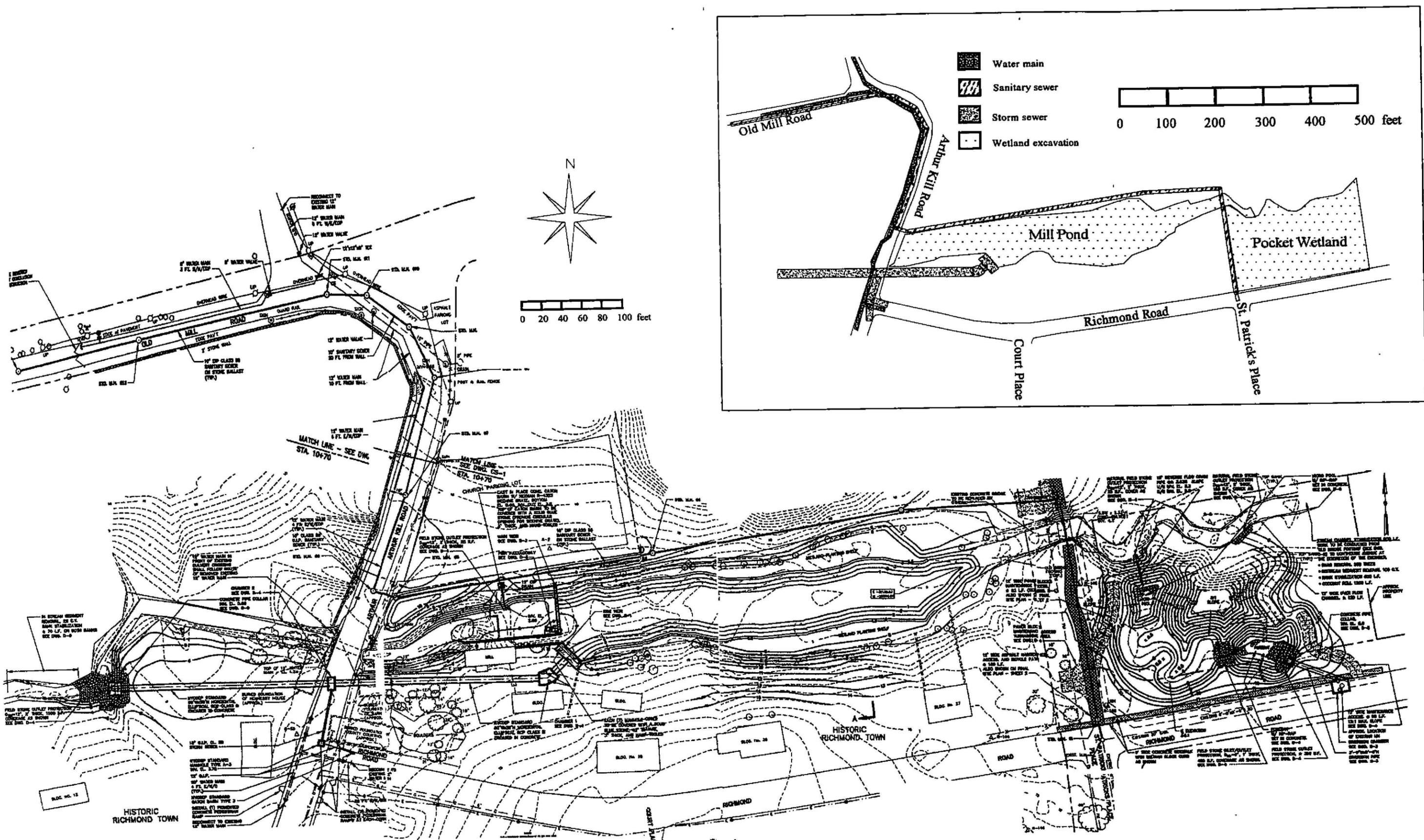


Figure 1 Hazen & Sawyer site plan showing the footprint on planned impacts from the Mill Pond project.

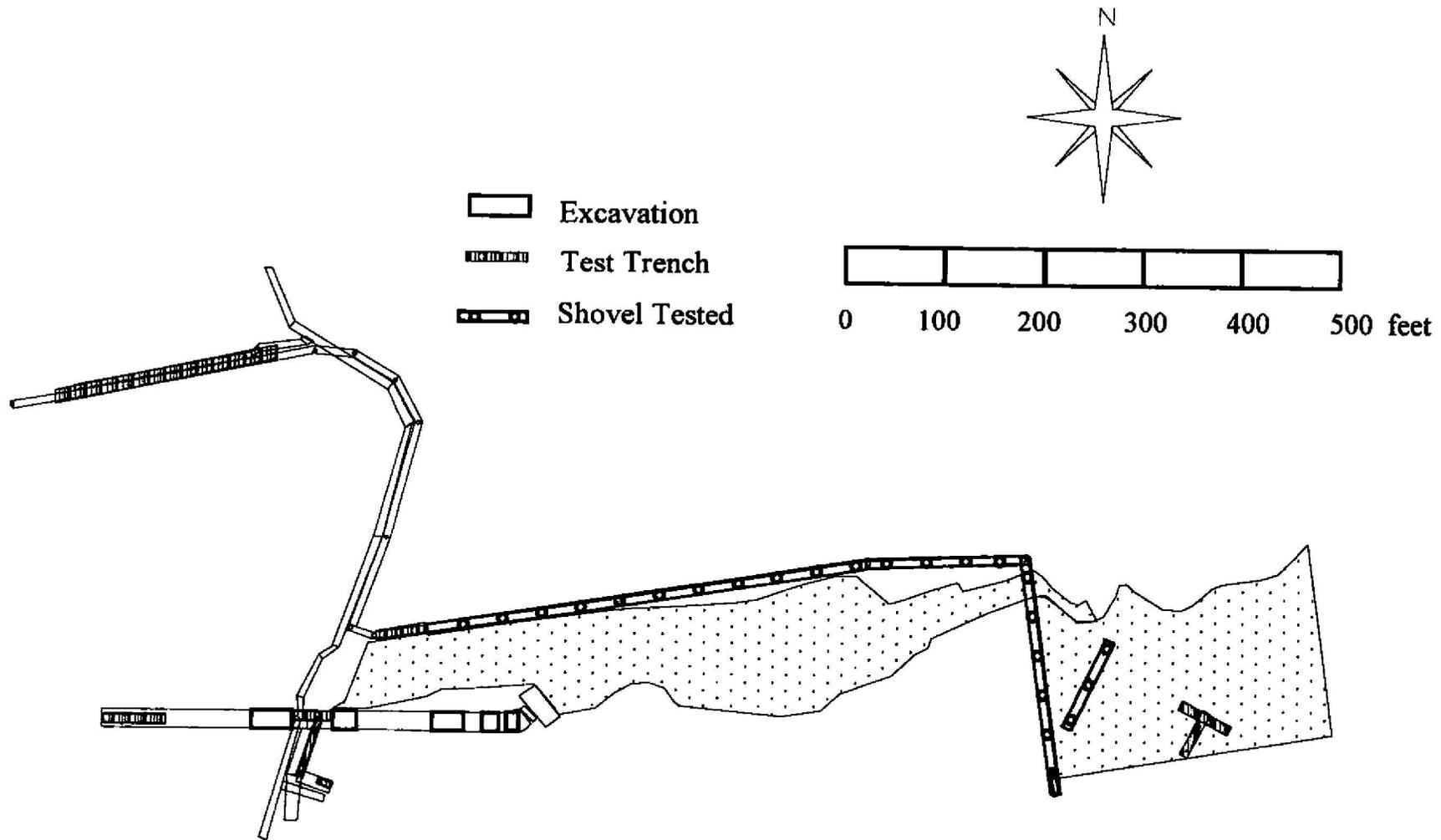
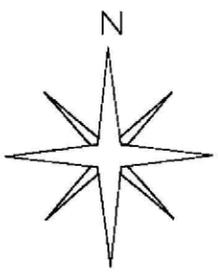


Figure 2 Field methods used during this phase of the Mill Pond project.

Shovel Test # and location = ● ST #



CATCH LINE  
SEE DWG. CS-1  
A. 10+70

CHURCH PARKING LOT  
CAST IN PLACE CONC. CATCH  
BASIN W/ NEEZAH R-4303  
BEEHIVE GRATE. BOTTOM  
EL. 0.00, INV. OUT EL. 3.0  
TOP OF CATCH BASIN TO BE  
COVERED WITH A SOLID BLUE  
STONE (PROVIDE CIRCULAR  
OPENING FOR BEEHIVE GRATE),  
3" THICK, AND HAND-TOOLED

PROTECTION  
S.F.  
MAIN WEIR  
SEE DWG. S-2  
R-2  
10" DIP CLASS 60  
SANITARY SEWER  
ON STONE BALLAST  
(TYP.)

FISH PASSAGEWAY  
SEE DWG. D-6

12" DIP  
CHAMBER  
INV. EL.  
2.65

MILL

BLDG.

RYCREP STANDARD  
80"X30" HORIZONTAL  
ELLIPICAL RCP CLASS II  
ENCASED IN CONCRETE

CHAMBER 1  
SEE DWG. S-4

EACH (3) MANHOLE COVER  
TO BE COVERED WITH A SOLID  
BLUE STONE, 42" SQUARE,  
3" THICK, AND HAND-TOOLED

BLDG. No. 25

BLDG. No. 28

HISTORIC  
RICHMOND TOWN

RICHMOND

COURT PLAZA

TURNAROUND AREA  
SEE DWG. D-4

STD. M.H. 83

EXISTING CONCRETE BRIDGE  
TO BE REPLACED BY 2  
37' SPANS

STD. M.H. 82

STD. M.H. 84

STD. M.H. 85

OLD BRIDGE  
FOOTING  
(TYP.)

12' WIDE PAVER BLOCKS  
MAINTENANCE ACCESS  
± 82 LF. (SEE DWG. S-4)  
ALSO SHOWN ON FINAL  
SITE PLAN - SHEET 2

PAVER BLOCKS  
MAINTENANCE ACCESS  
TURNAROUND AREA  
SEE DWG. D-4

12' WIDE ASPHALT MAINTENANCE  
ACCESS AND BICYCLE PATH,  
± 180 LF.  
ALSO SHOWN ON FINAL  
SITE PLAN - SHEET 2

BLDG. No. 27

STD. M.H. 81

EXIST. M.H.

20 10 0 20'

EXISTING 36" DIA.  
ST. PATRICKS PLACE

Figure 3 Shovel test locations along the sanitary sewer path.

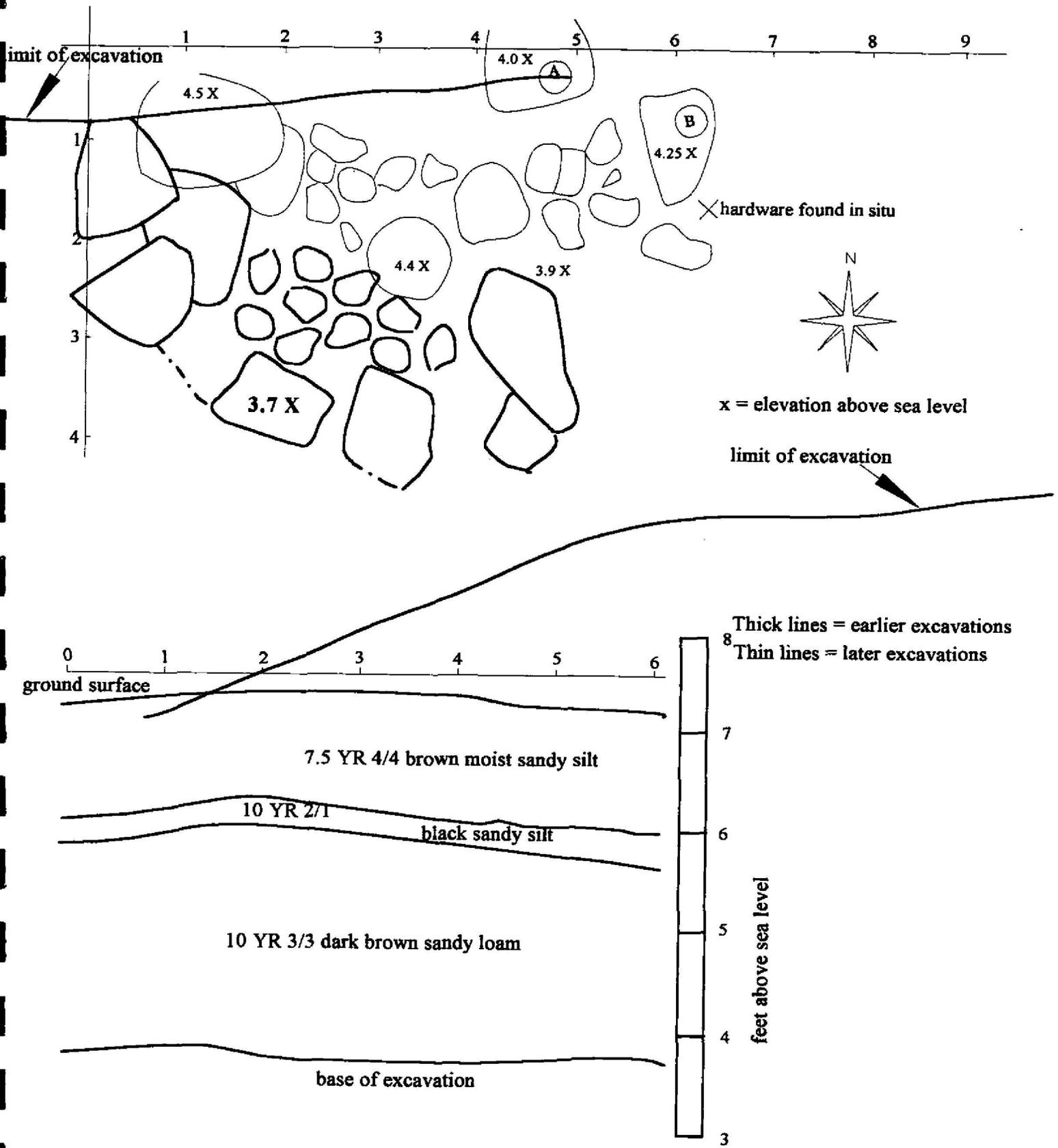


Figure 4 Plan views and south profile of excavations at the location of the former Carriage Factory/Wagon shed.

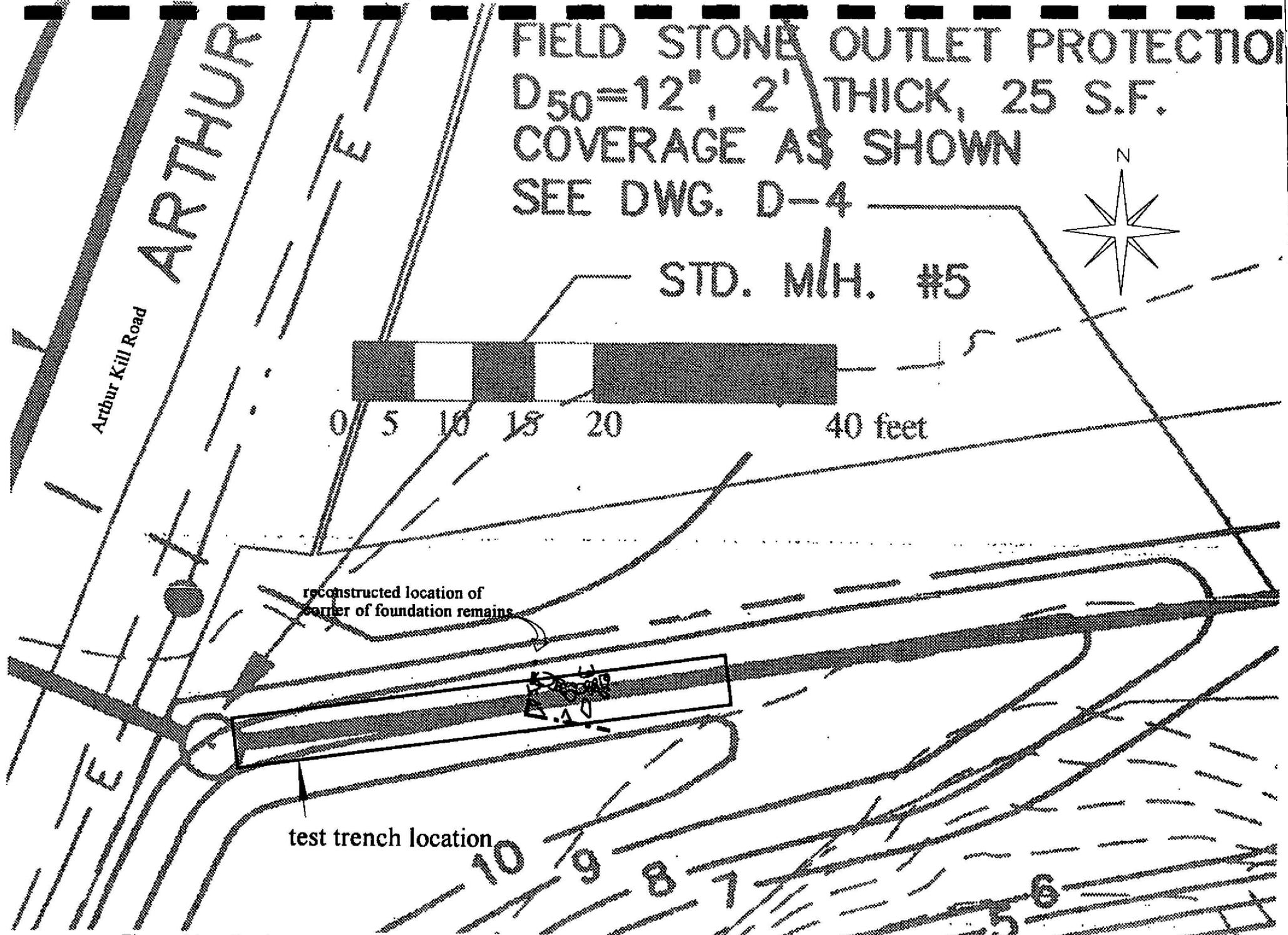


Figure 4A Carriage Factory/Wagon Shed plan views superimposed on the site survey.



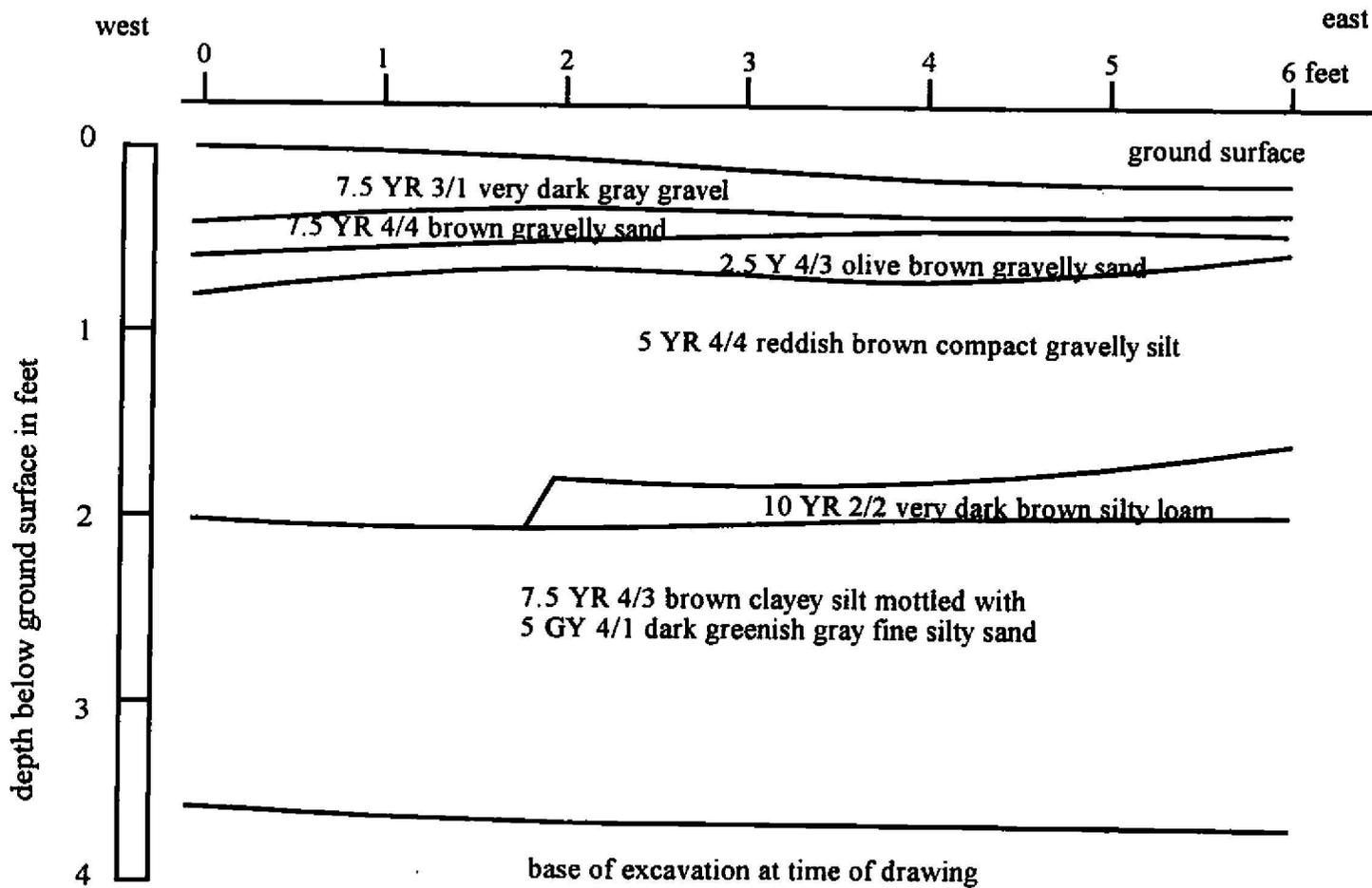


Figure 6 North profile of Test Trench D, pocket wetlands.



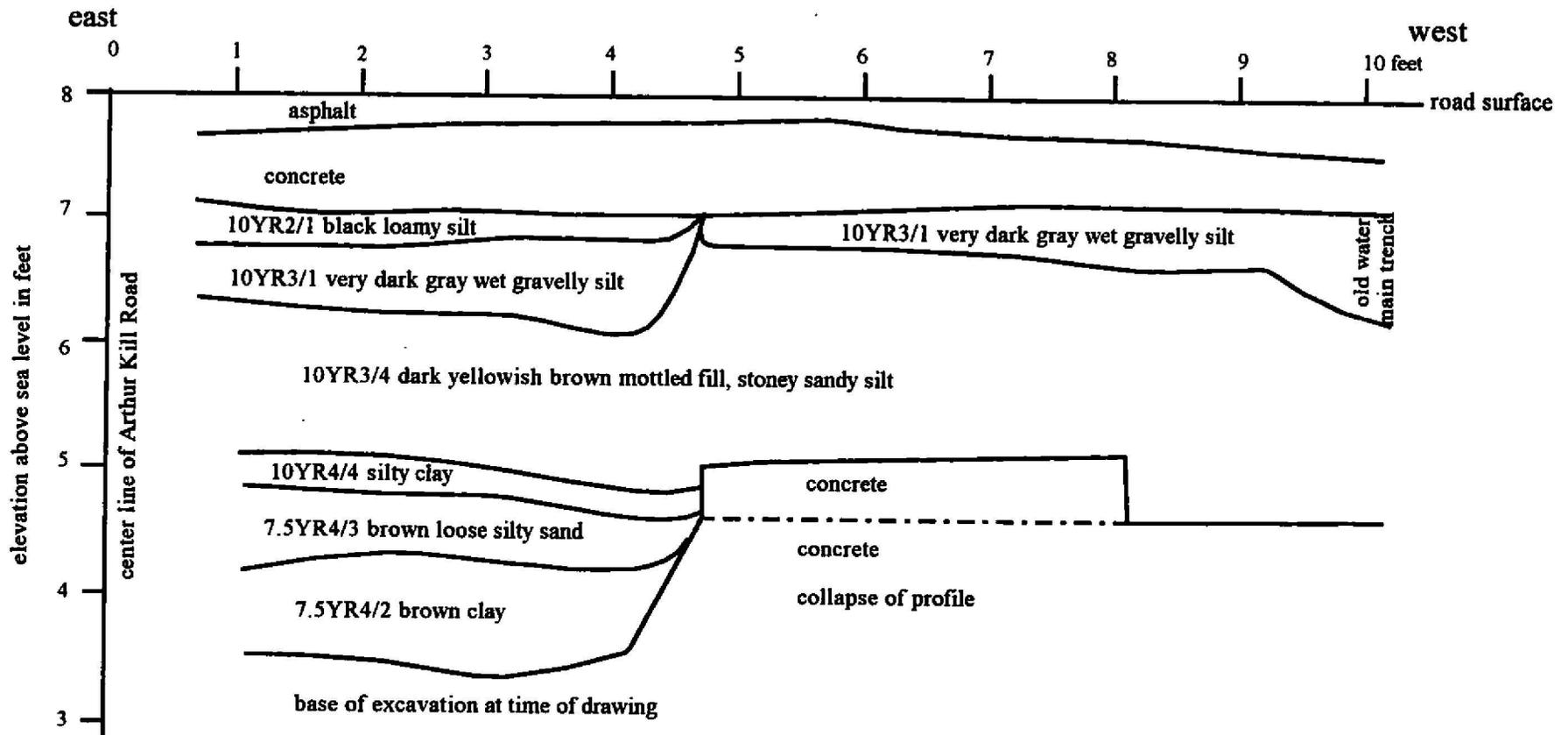


Figure 8 South profile of the upper levels of the test trench within the west lane of Arthur Kill Road.

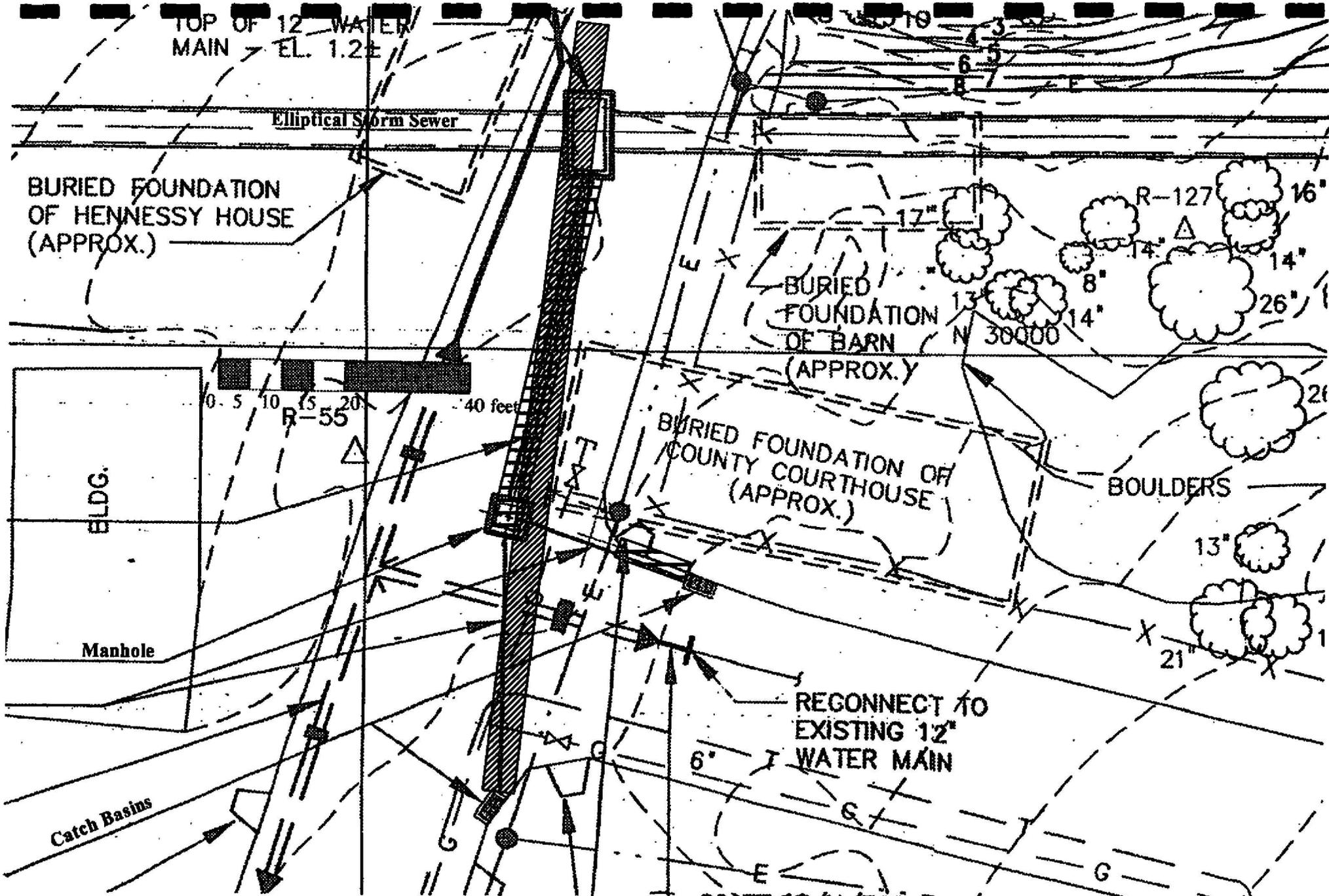
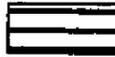


Figure 9 Storm sewer connector trenches with reconstruction of culvert location shown on section of the site plan.

-  = archaeological excavations
-  = reconstructed limits of culvert

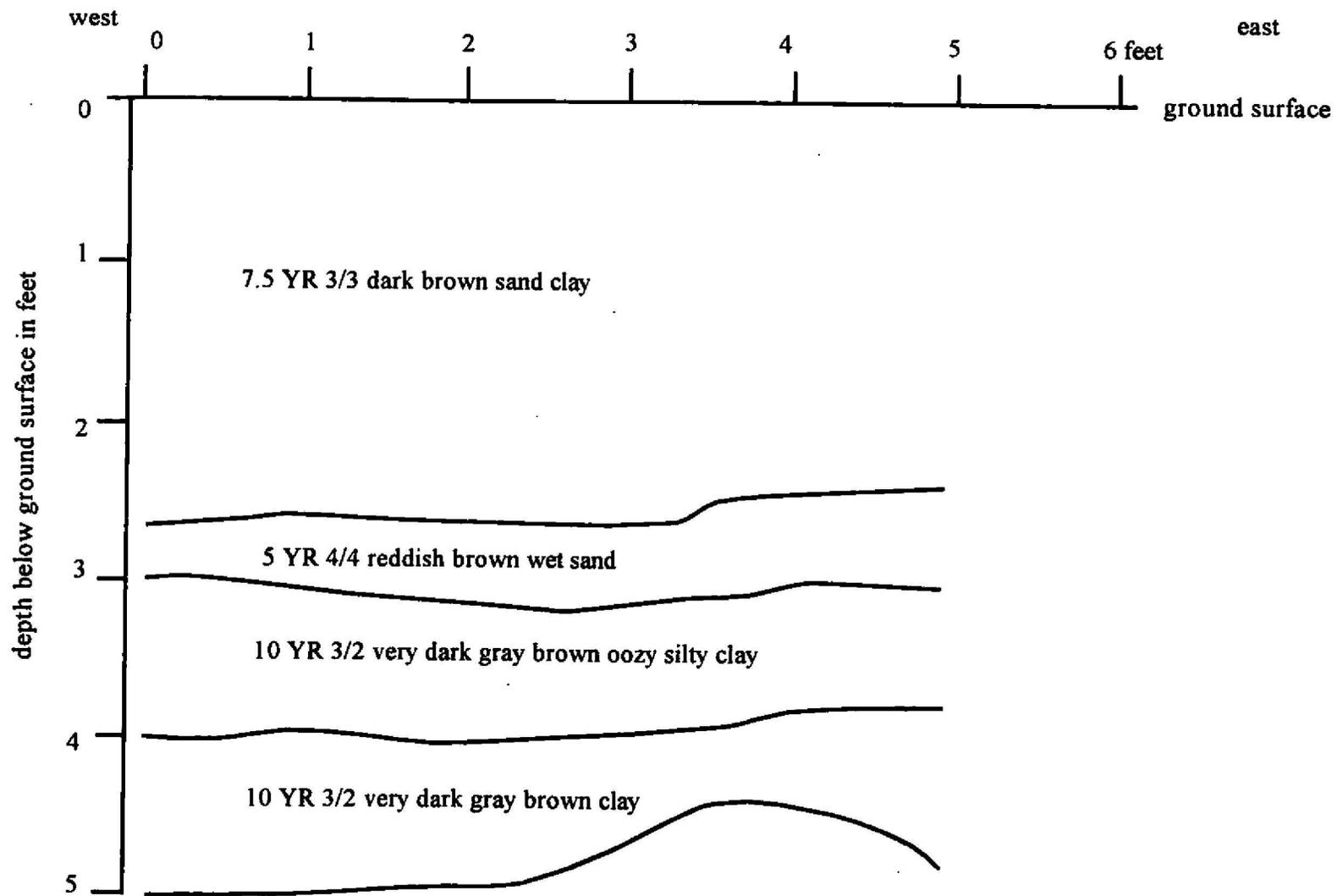
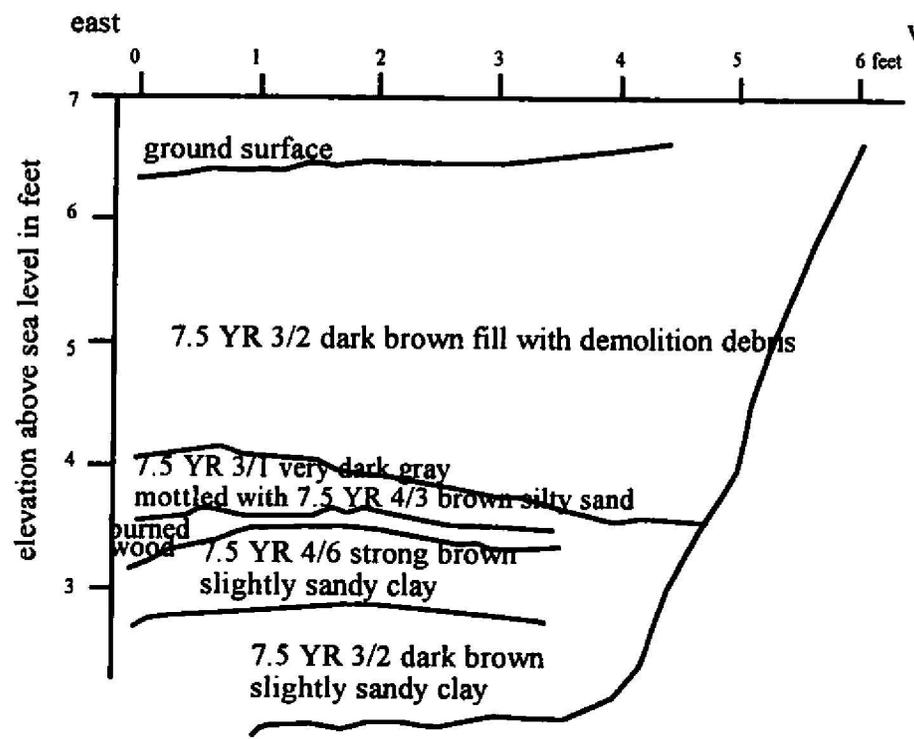
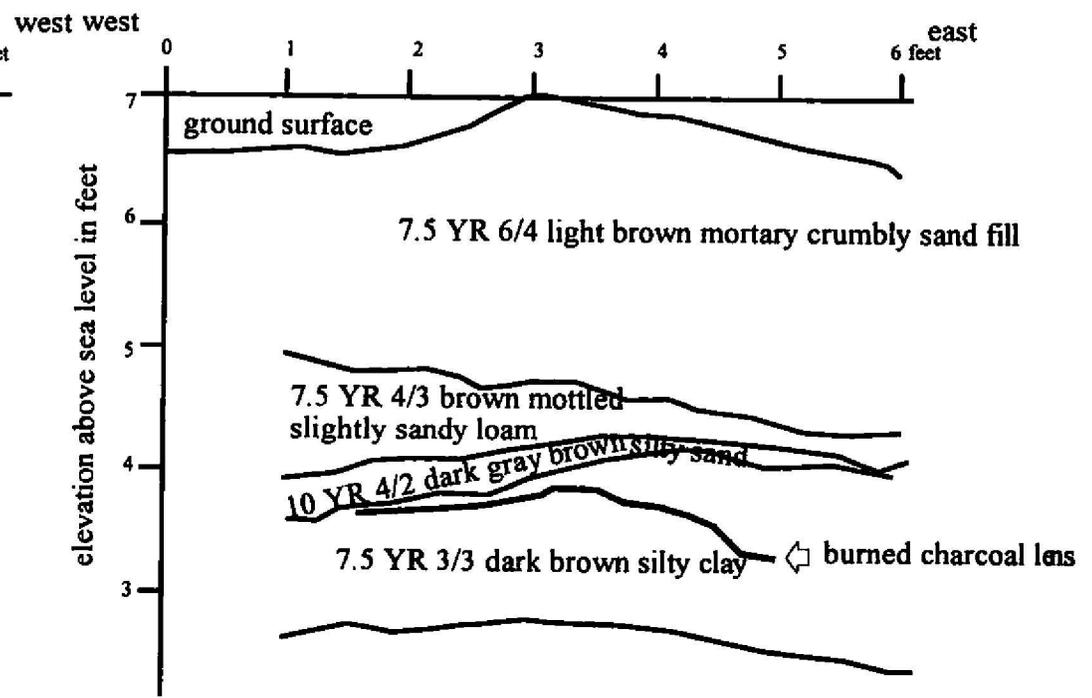


Figure 10 North profile of upper levels of elliptical storm sewer test trench near Richmond Creek.



South Profile



North Profile

Figure 11 North and south profiles of the upper levels of Area A excavations west of Arthur Kill Road.

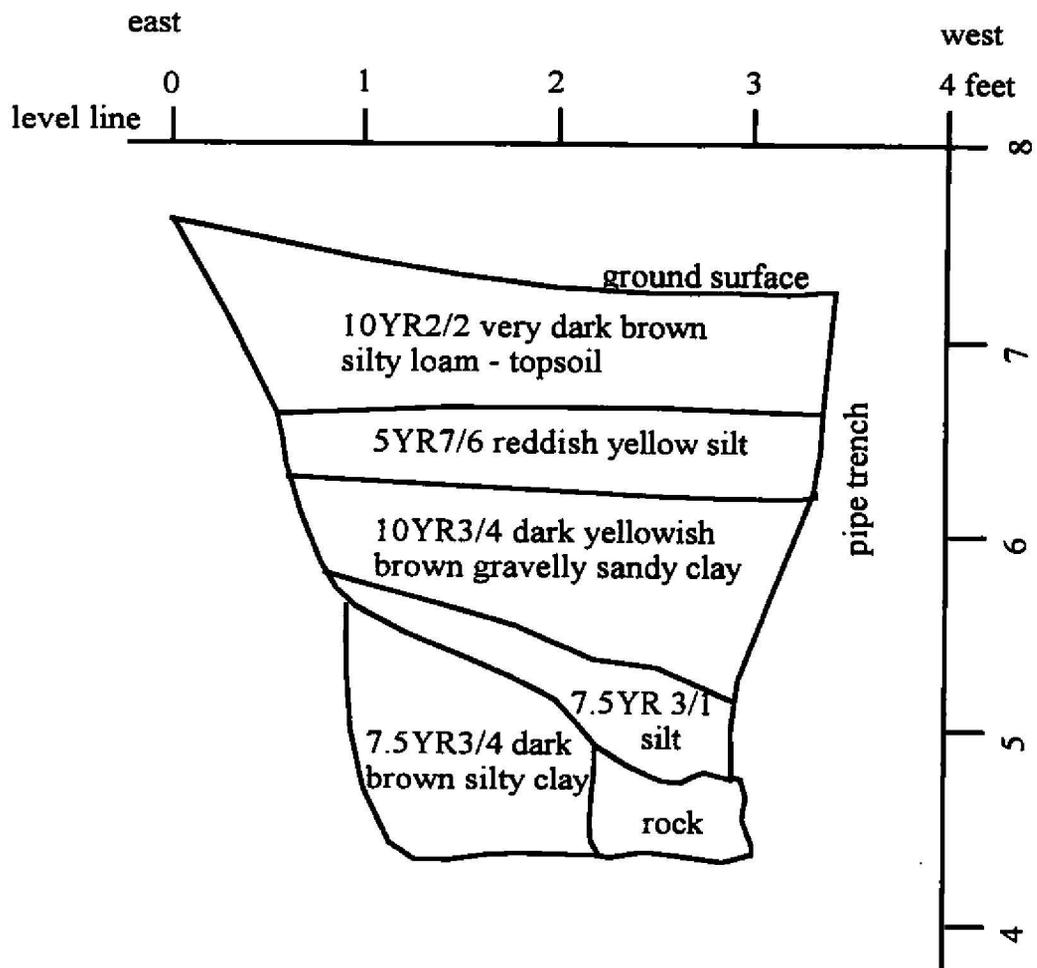


Figure 12 South Profile of soils above the remains of the Hennessy House.

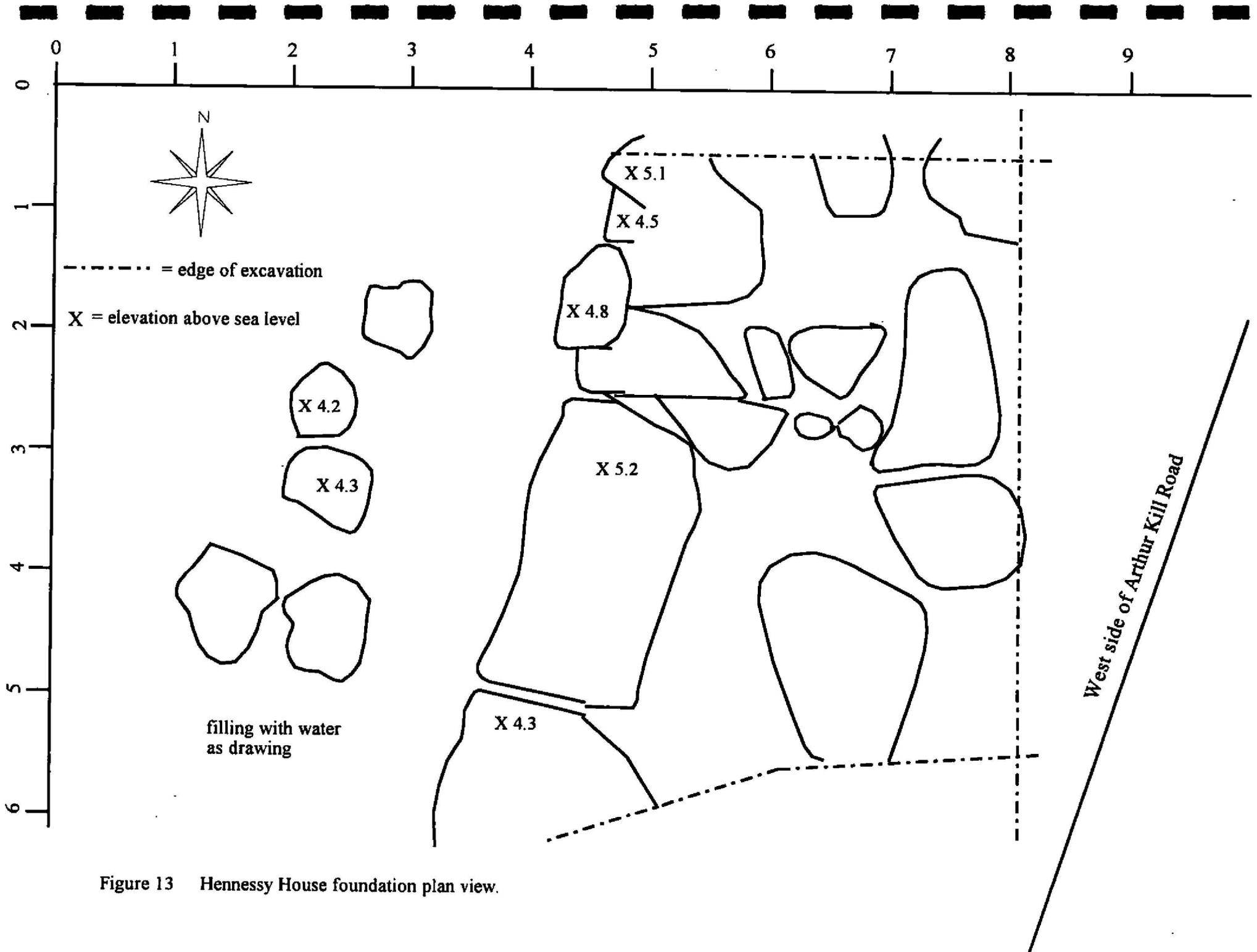


Figure 13 Hennessy House foundation plan view.

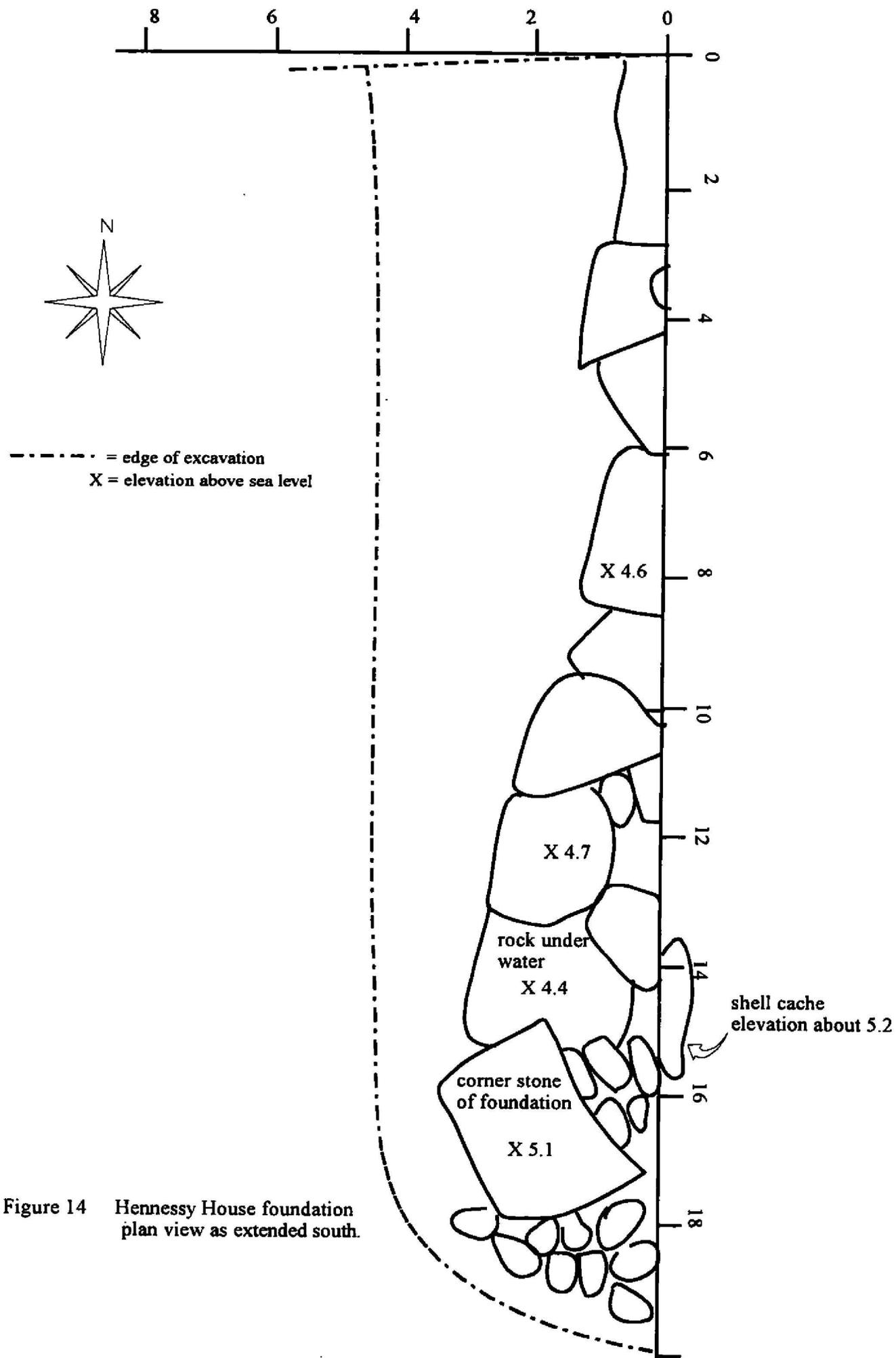


Figure 14 Hennessy House foundation plan view as extended south.

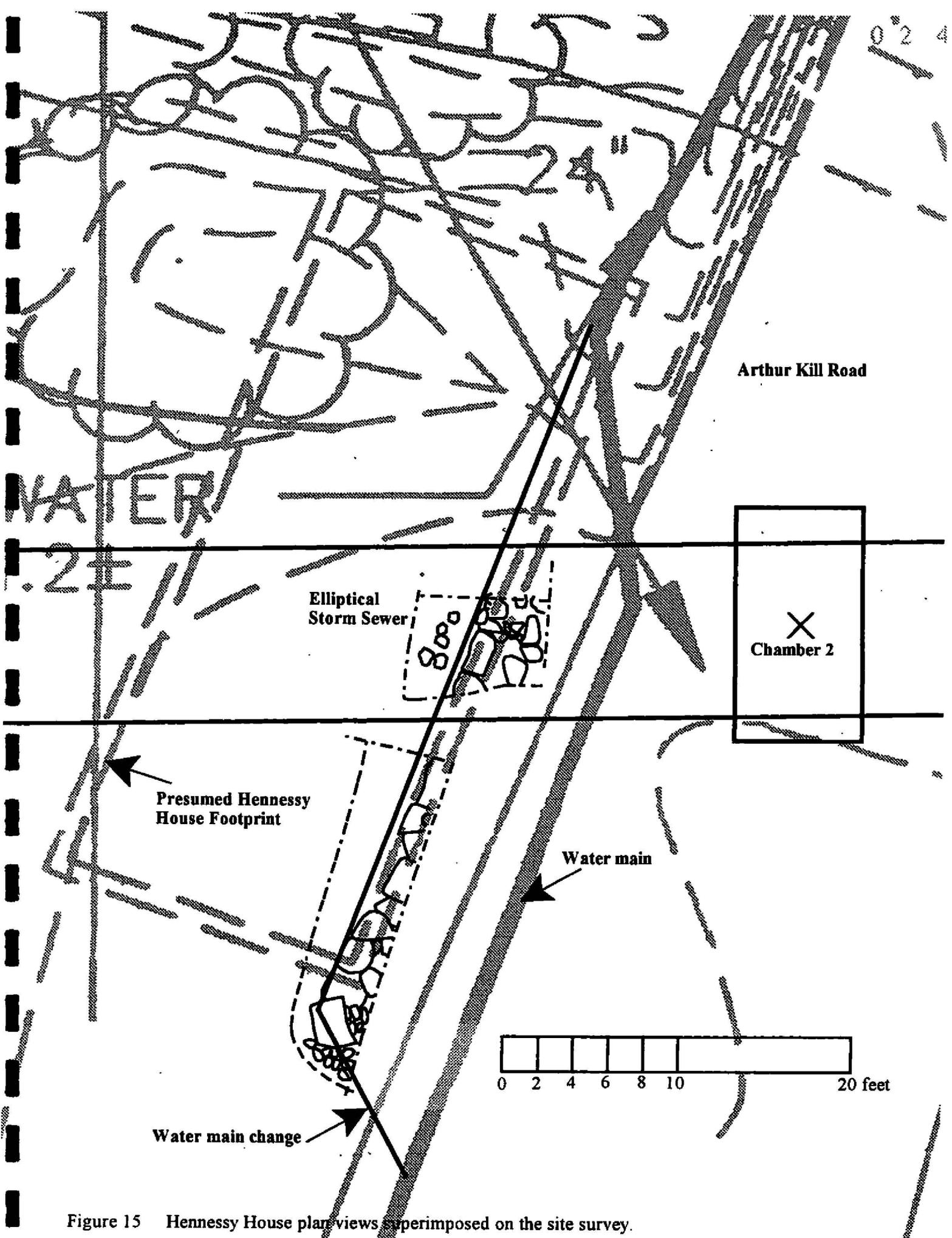


Figure 15 Hennessy House plan views superimposed on the site survey.

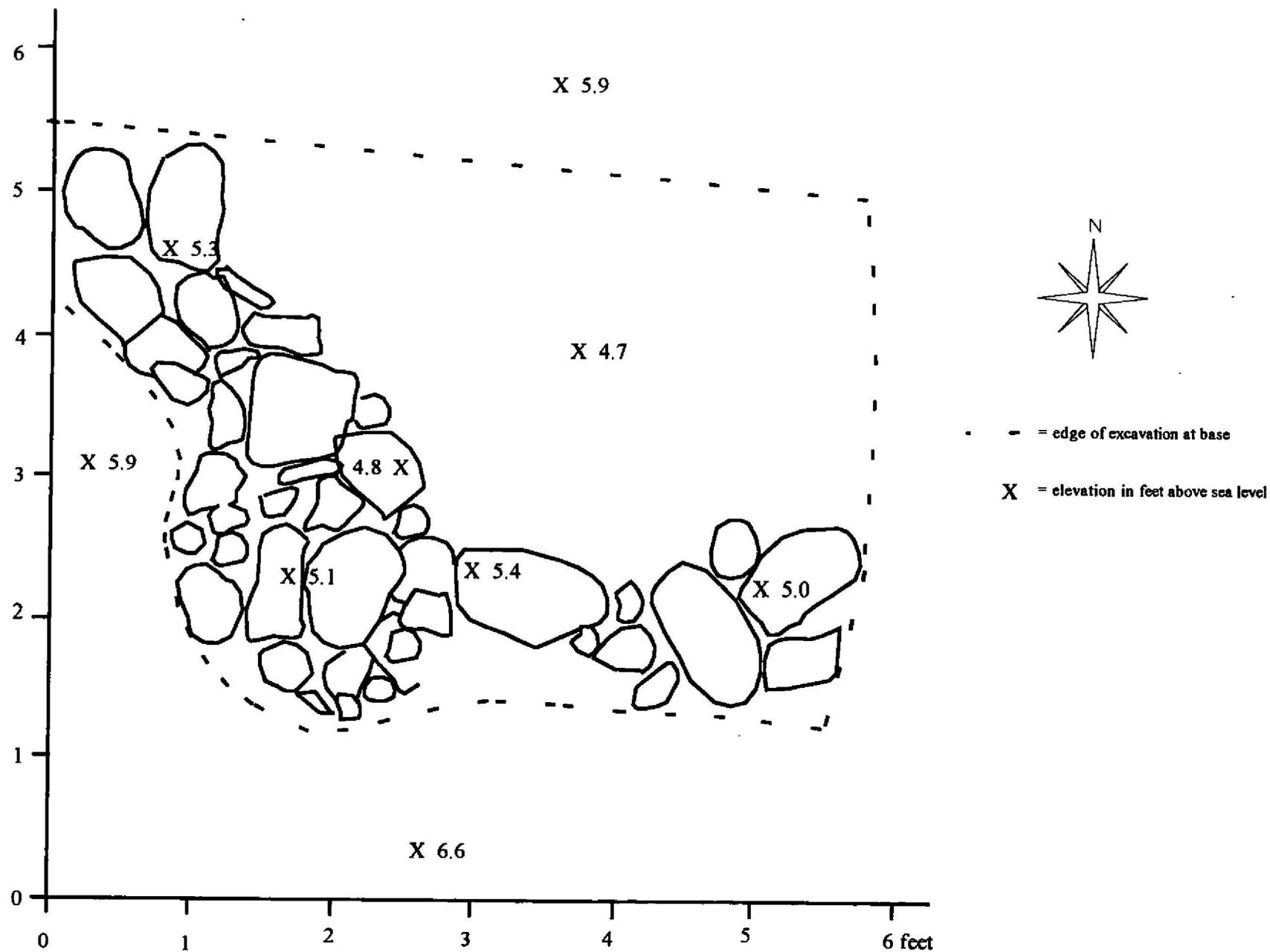


Figure 16 Plan view of Area B/C, remains of the stone foundation of the Johnson Barn.

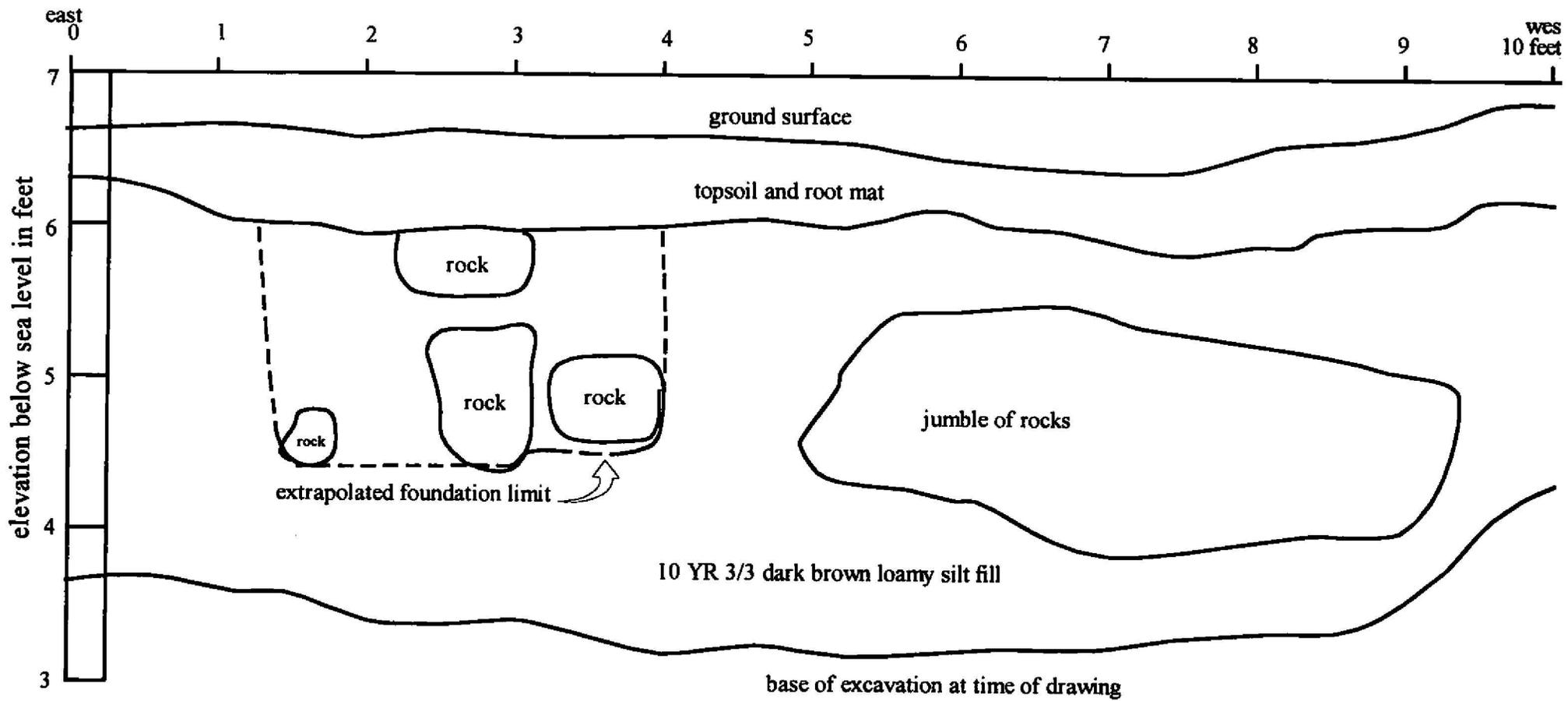


Figure 17 South profile of Area B/C, the Johnson Barn.

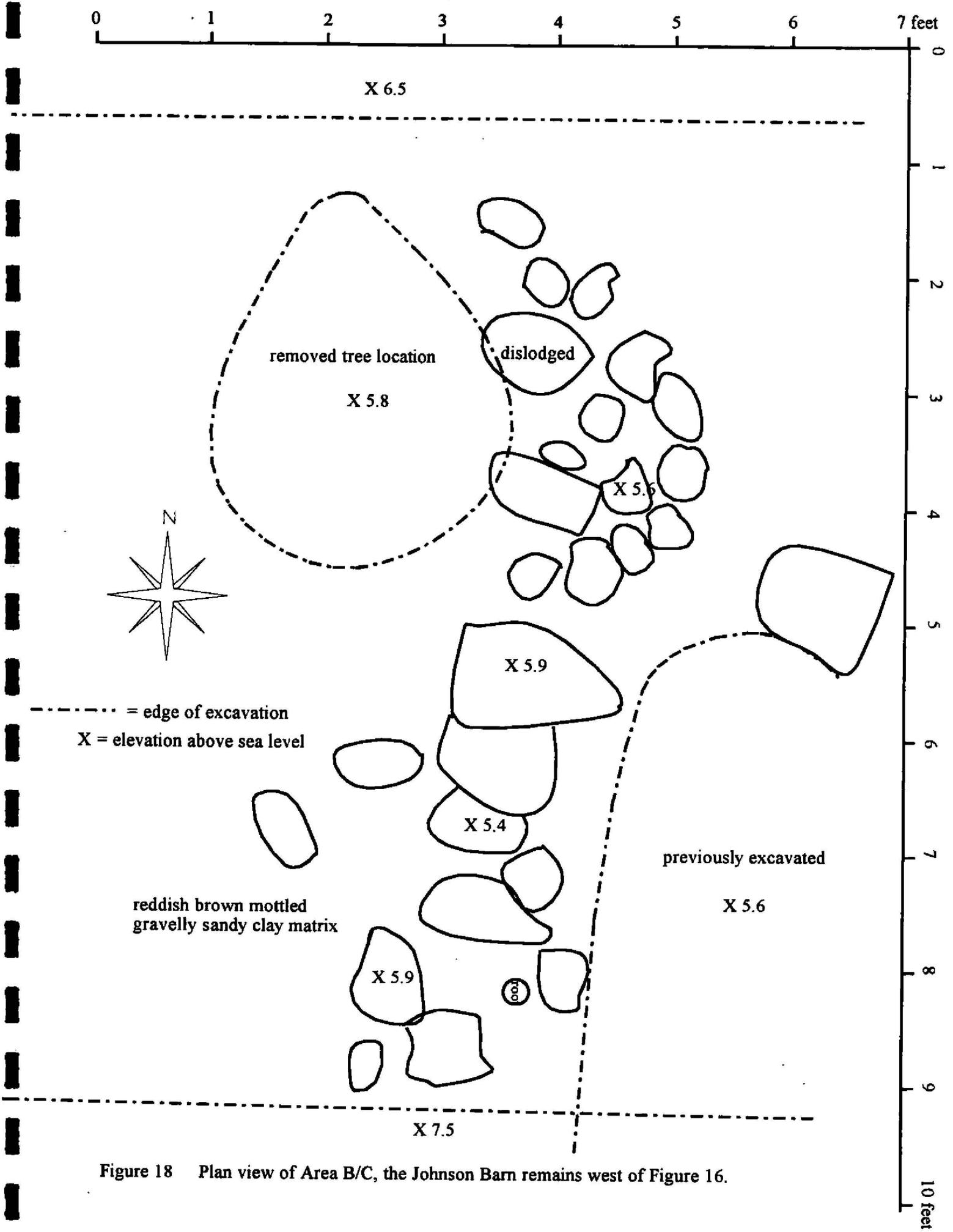


Figure 18 Plan view of Area B/C, the Johnson Barn remains west of Figure 16.

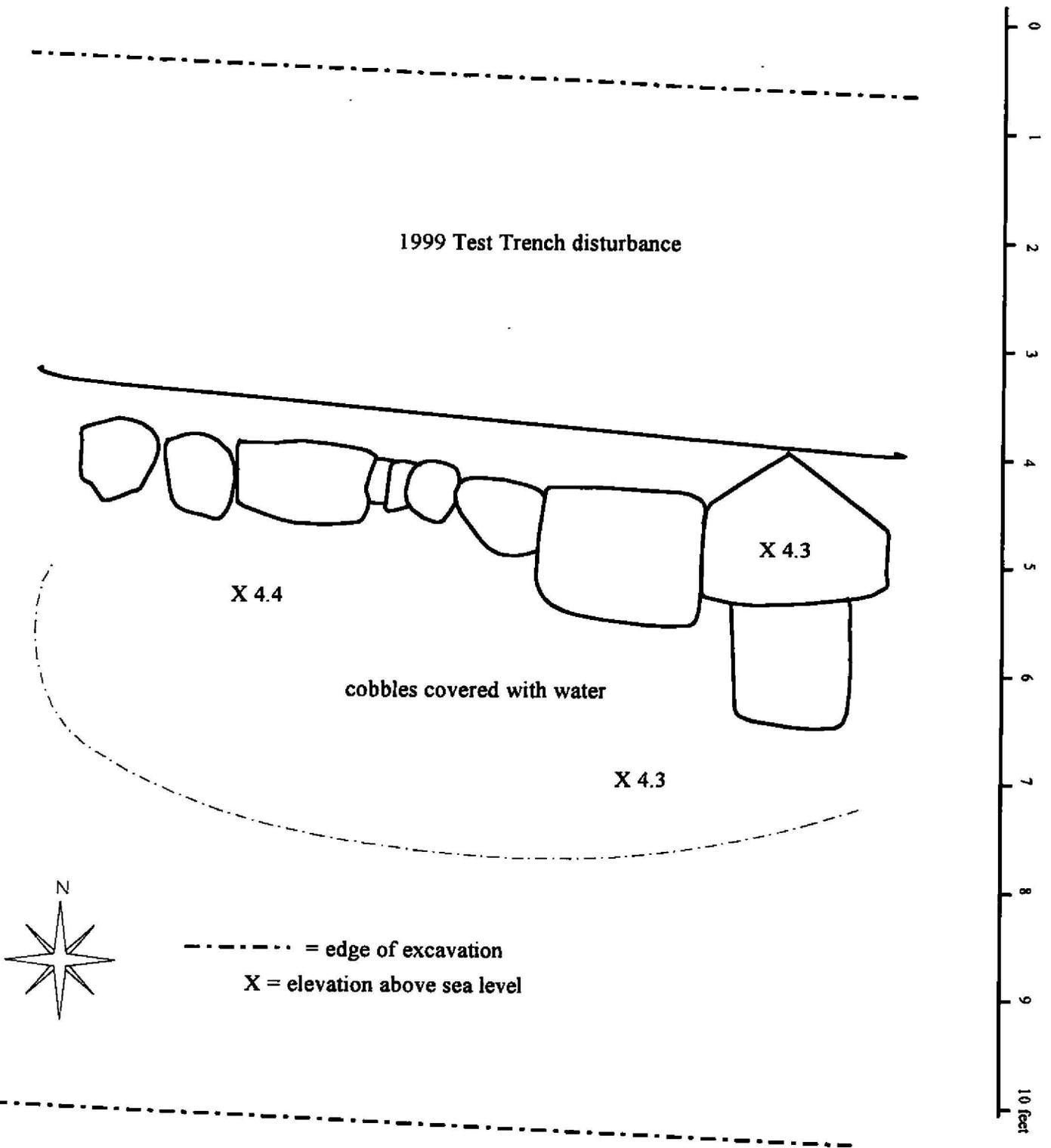


Figure 19 Plan view of Area B/C, Johnson Barn under Figure 18

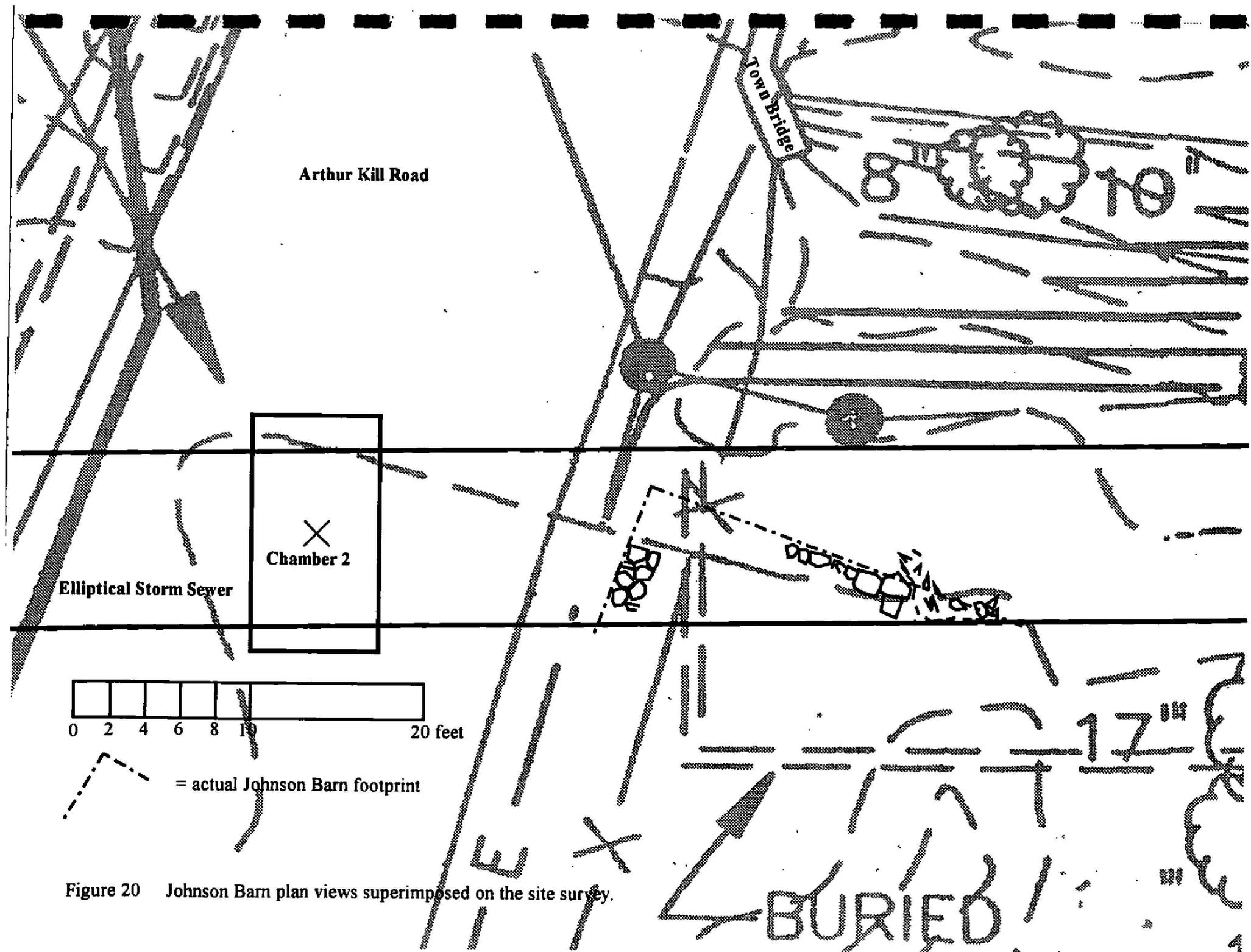


Figure 20 Johnson Barn plan views superimposed on the site survey.

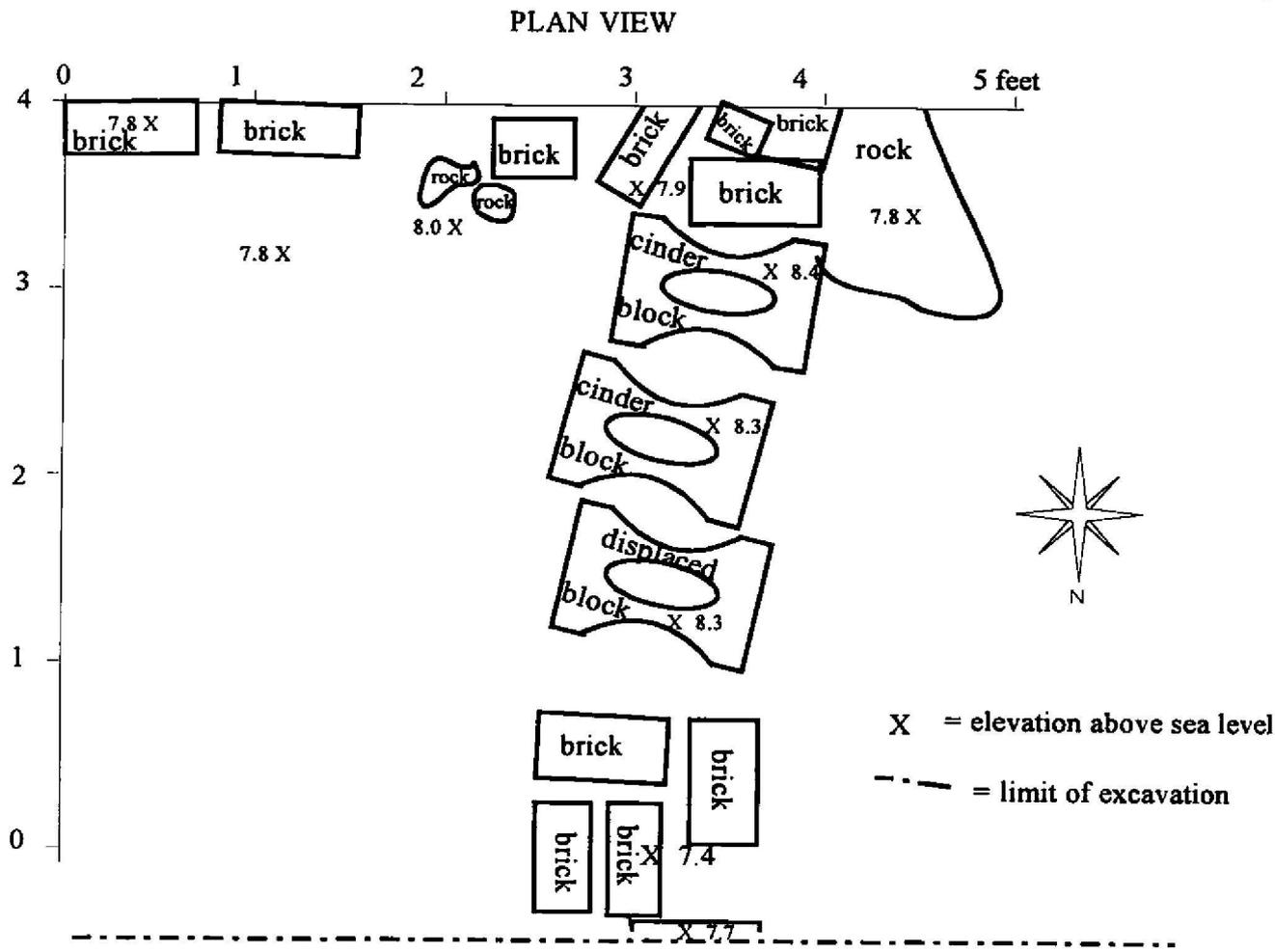
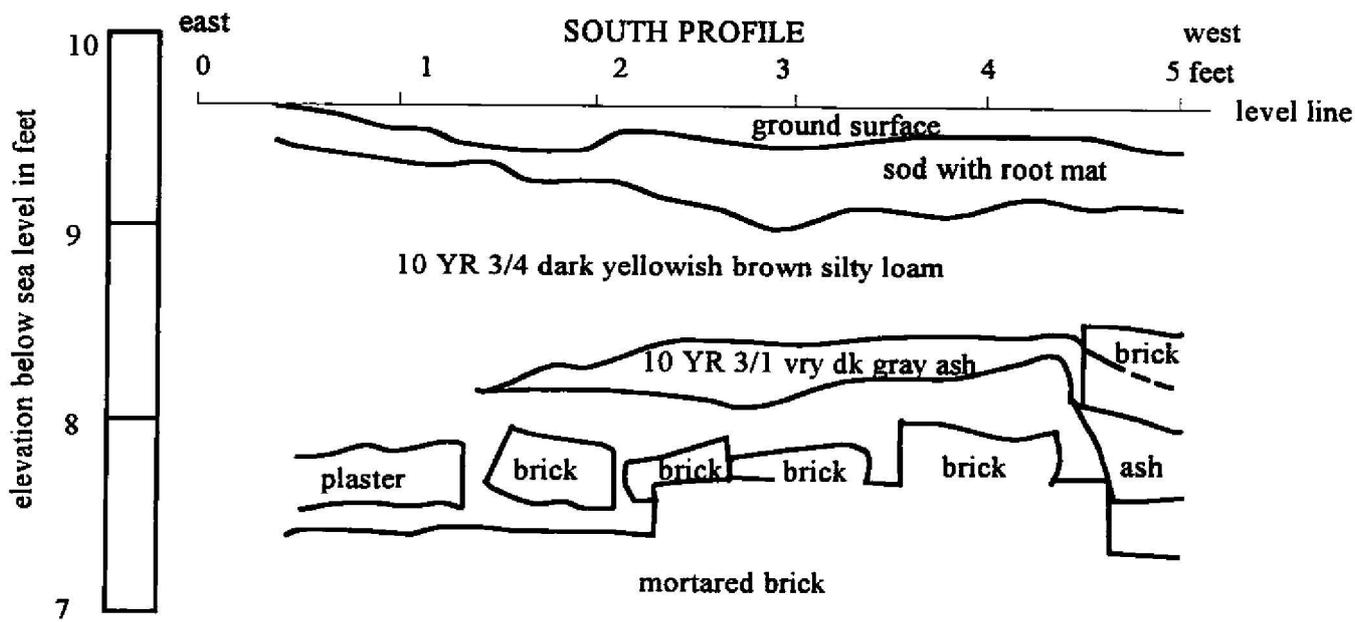


Figure 21 South profile and plan view of Area D, tinsmith shop/shed prior to expanding southward.

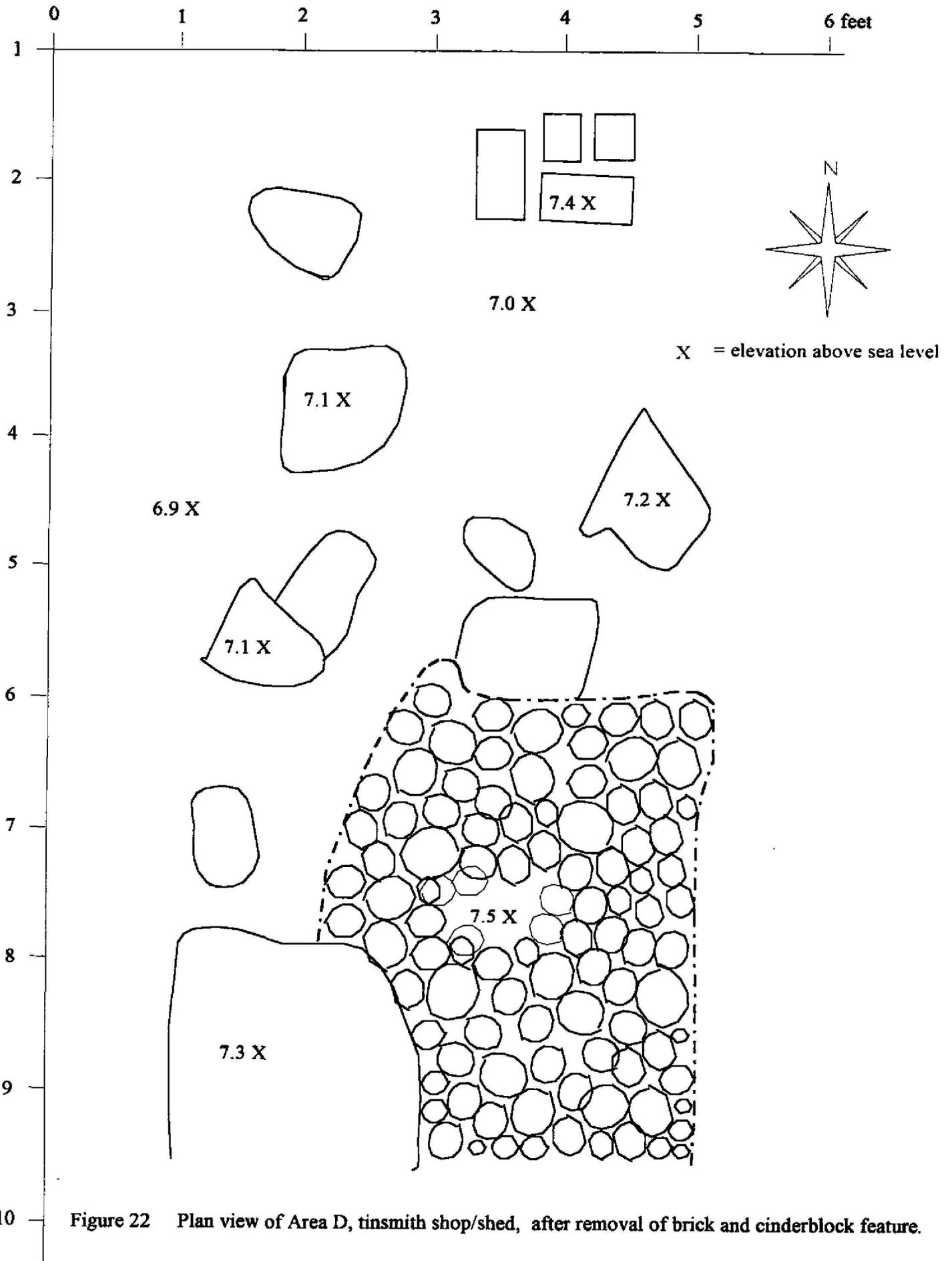


Figure 22 Plan view of Area D, tinsmith shop/shed, after removal of brick and cinderblock feature.

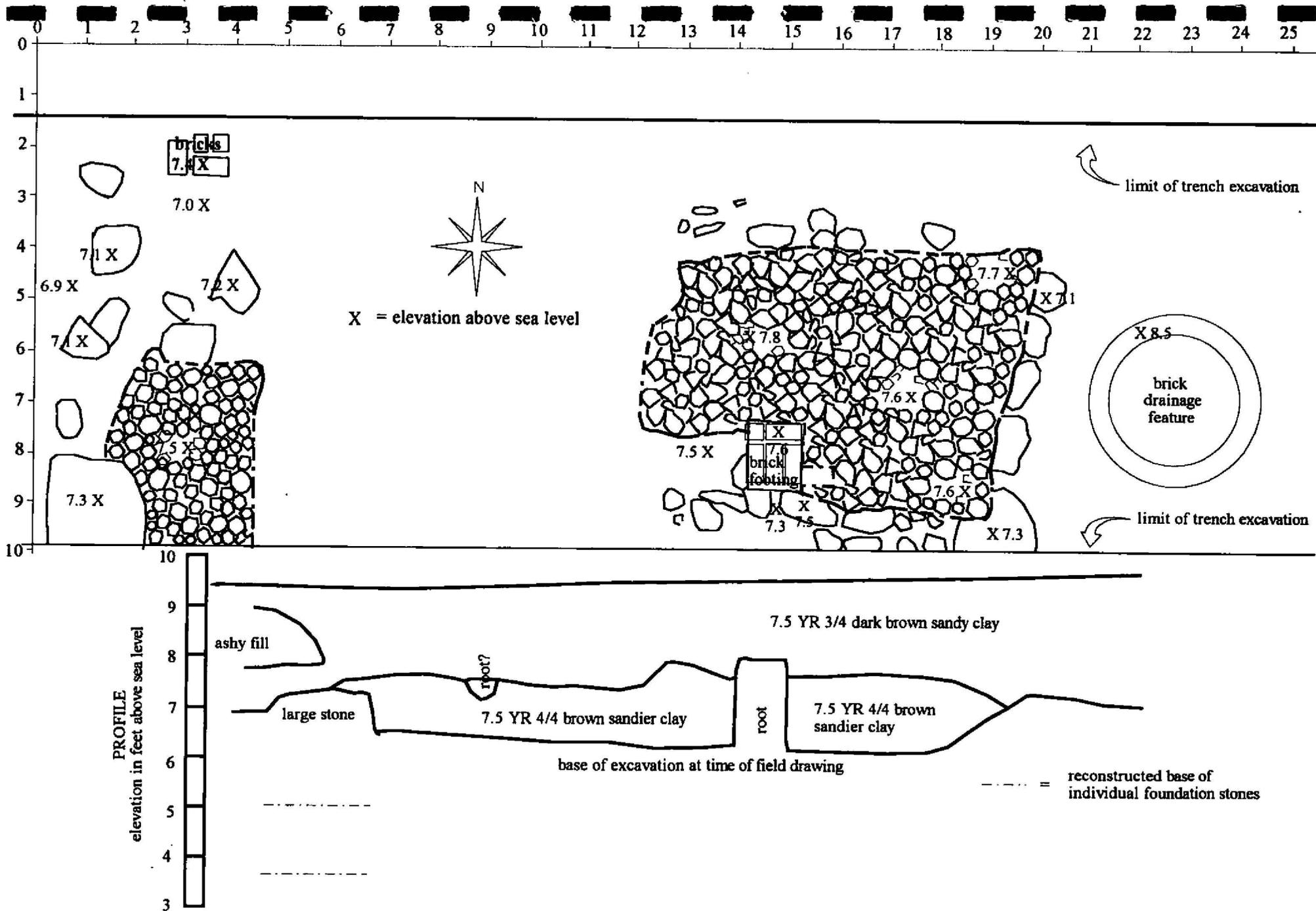


Figure 23 Tinsmith shop/shed profile and plan view, showing cobble surface, brick footings and also a brick drainage feature.



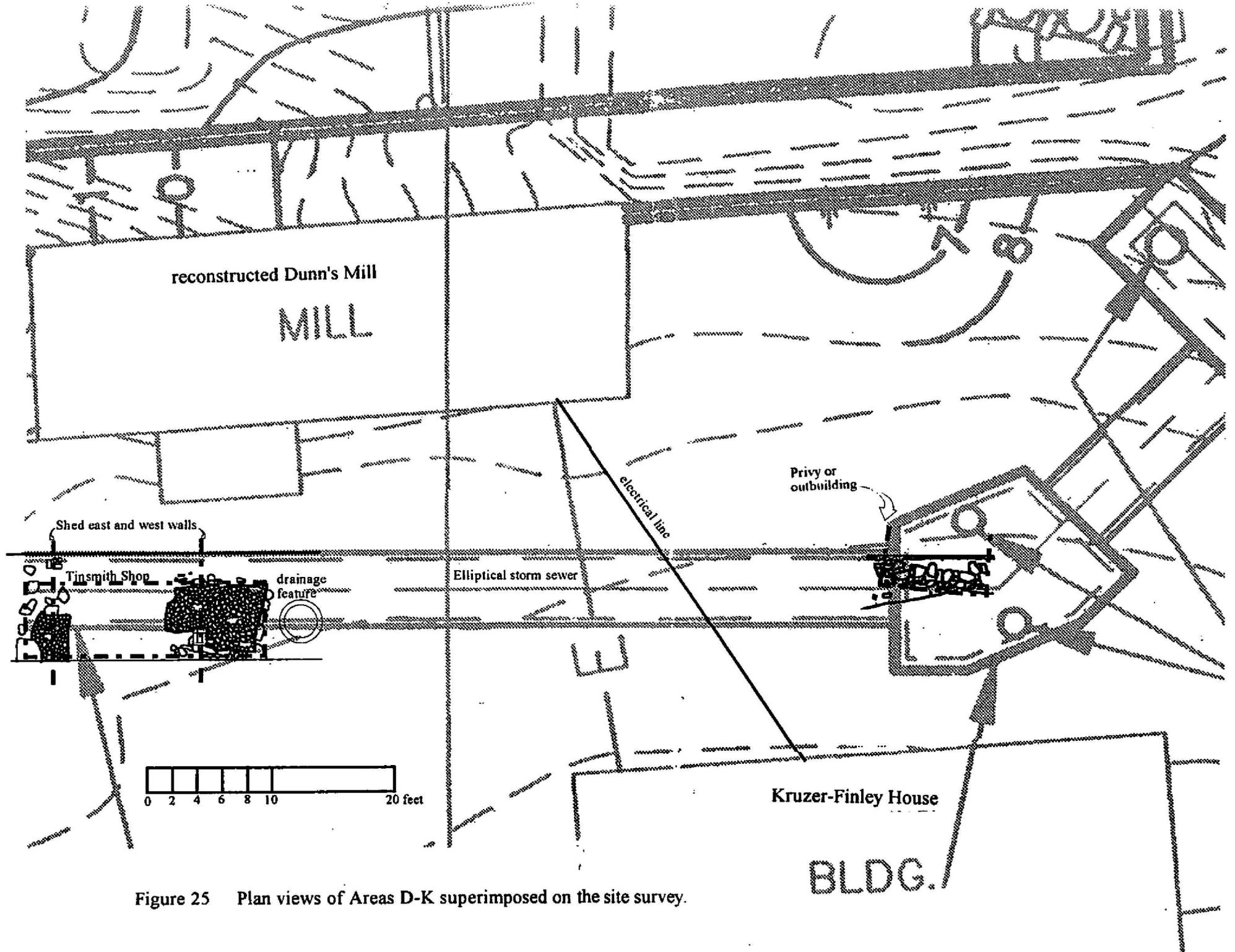


Figure 25 Plan views of Areas D-K superimposed on the site survey.

## **Appendix A**

**Scope of Work for Archaeological Testing and Data Recovery (Phases 2/3)  
Of the Richmond Town Mill Pond Sewer Project  
Staten Island, New York  
Project Number SER 20099  
September 17, 2002**

**Scope of Work for Phase 1B Archaeological Testing Of the Mill Pond Sewer Project  
Staten Island, New York  
Project Number SER 20099  
October 3, 2002**

**Scope of Work for Archaeological Testing (Phase 1B) of the Richmond Town  
Mill Pond Sanitary Sewer Project Old Mill Road Segment  
Staten Island, New York  
Project Number SER 20099  
October 22, 2002**

SCOPE OF WORK FOR  
ARCHAEOLOGICAL TESTING AND DATA RECOVERY  
(Phases 2/3)  
OF THE RICHMOND TOWN  
MILL POND STORM SEWER PROJECT  
STATEN ISLAND, NEW YORK  
Project Number SER 20099  
September 17, 2002

The New York City Department of Environmental Protection is currently planning installation of an elliptical storm sewer, among other improvements, in the Richmondtown section of Staten Island, New York. This storm sewer will be about 450 feet in length and will require the excavation of a trench about ten feet wide and up to eight feet deep. It will extend from a point along Mill Pond east of Dunn's Mill in Richmond Town Restoration west across Arthur Kill Road to a point along Richmond Creek. Archaeological testing (Phase 1B) was conducted along much of this path in 1999 by Joan Geismar, PhD. Geismar excavated two trenches. The trench west of Arthur Kill Road, known as the Treasure House property, was 159.5 feet long measured west from the street. It was about three feet wide and about six feet deep. The trench east of Arthur Kill Road was 201.2 feet long and extended from the road all the way to Mill Pond. This trench was also about 3 feet wide and was excavated up to 7.5 feet deep. Numerous archaeological features were identified; mainly structural remains. The Geismar report describes twelve features and recommends additional archaeological work (Phase 2/3) be done to document the function, age and significance of these features. The report also recommends archaeological monitoring of the sewer segment within Arthur Kill Road because this portion of the planned sewer trench was not archaeologically tested. Archaeological monitoring was also recommended for the Treasure House lot "since it is possible that features related to Samuel Grasset's early-eighteenth-century tannery may yet be undiscovered" (Geismar 1999:7).

This scope of work has been prepared to comply with environmental review regulations. All activities indicated below shall be conducted in a manner consistent with the New York City Landmarks Preservation Commission's *Guidelines for Archaeological Work in New York City* (2002) and the New York Archaeological Council's *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State* (1993). All archeological fieldwork will be done under the direction of Linda Stone, RPA.

Preliminary analysis of the previous archaeological work was conducted to evaluate what type of archaeological data recovery may be appropriate for the storm sewer impacts. The following table provides some of the details of what was found during testing. The features are keyed to the attached plan (Geismar 1999: Figure 4). Not all features identified during testing were profiled. Those features whose widths are listed as "exposed" are extrapolated from the profiles provided in the Geismar report. Their actual widths may be larger. However a "?" on the width of "A" is because the extent of this feature is not clear from either the profile or text of the Geismar report. Known constructions listed in the table with a "?" were speculation in the Geismar report. However it seems most likely the features described as walls along property lines are the most likely associations. All the features recorded during the identification phase require some level of evaluation. This will vary depending on the actual feature.

KEY	FEATURE TYPE	CONSTRUCTION KNOWN	STRUCTURE DATES	FEET BELOW GROUND	WIDTH
A	stone wall	Hennessey House	1861-1899	4.5 - 5.5	c.6 exposed?
B	stone wall	Johnson Barn	c. 1878-1895	not provided	not provided
C	stone wall	Johnson Barn	c. 1878-1895	not provided	not provided
D	stone wall	property wall?	unknown	not provided	not provided
E	stone wall or footing	Tinsmith shop?	1878-c.1891	2.6-5	c.2.5 exposed
F	brick wall	Tinsmith shop?	1878-c.1891	c. 2.6 - 4.5	c. 5
G	brick wall	Tinsmith shop?	1878-c.1891	c. 1.7 - 4.9	c. 2
H	stone wall	unknown	unknown	not provided	not provided
I	stone wall	property wall?	unknown	c. 3.7 - 7.5	c.2.5 exposed
J	stone wall	unknown	unknown	c. 2.1 - 7.5	c.7.5 exposed
K	stone wall	unknown	unknown	not provided	not provided
L	brick foundation	modern patio?	unknown	not provided	not provided

The following mitigation measures are proposed for each feature and are summarized in the table on the following page.

**For Feature A - Hennessey House stone wall:**

Expose and document the width, depth, and construction techniques used to build this wall. Should artifact bearing features, such as builder's trenches be observed, systematic excavation would be done. No additional research is required regarding the remains of the Hennessey House. However, in the unlikely event excavation should unearth artifacts inconsistent with the time the house was standing, additional research may be necessary to determine alternate use related to the field finds.

**Features B & C - Johnson Barn stone walls:**

Initial comparison of Geismar Figure 4 with historic maps of the Johnson Barn indicate these walls are not spaced at the distance foundation walls would be expected. However they are in the location of the former barn. Therefore archaeological fieldwork is proposed to expose and document these walls and their construction and to look for evidence of associated artifacts and/or features, such as builder's trenches. If associated features are unearthed, they would be systematically excavated. Artifacts recovered would be used to correlate with the dates the barn was standing.

**Features D & I - Stone property walls:**

The primary interest in exposing property walls is to determine the depth of fill covering the

historic ground surface. These types of walls were generally dry-laid on the ground surface. During the testing phase, there was no documentation of the construction techniques of these walls nor of their exact depths. Should exposing and documenting these walls prove they are other than boundaries between properties, excavation and research would be undertaken to determine what they might be.

Features E, F, & G - Tinsmith Shop:

Preliminary analysis has determined a more modern structure was built over the location of the former tinsmith shop. This accounts for some of the confusion in analyzing the Geismar data. These features require further exposure and excavation to determine which historic structure they relate to. Construction techniques will be key, as will documenting their relationship to one another. As with the walls associated with the other buildings discussed, the method of their construction would be documented and evidence of associated features, such as builder's trenches, would be determined. If associated features are unearthed, they would be systematically excavated. Further research may also be necessary to determine the identity and function of the more modern structure as well as to relate finds potentially associated with the tinsmith shop to the building's use as such.

KEY	FEATURE TYPE	CONSTRUCTION KNOWN	FIELD WORK RECOMMENDATIONS
A	stone wall	Hennessy House	Expose the stone wall and document the feature measurements and construction techniques.
B	stone wall	Johnson Barn	Expose, excavate and document to confirm the structure is the barn since space between these stone walls is not consistent with historic maps.
C	stone wall	Johnson Barn	
D	stone wall	property wall?	Expose and excavate to determine the construction method and depth of wall.
E	stone wall or footing	Tinsmith shop?	Expose, excavate and document to confirm what these features are and if they relate to the tinsmith shop.
F	brick wall	Tinsmith shop?	
G	brick wall	Tinsmith shop?	
H	stone wall	unknown	Expose, excavate and document to evaluate the wall.
I	stone wall	property wall?	Expose and excavate to determine the construction method and depth of wall.
J	stone wall	unknown	Expose, excavate and document to evaluate the wall.
K	stone wall	unknown	Expose, excavate and document to evaluate the wall.
L	brick foundation	modern patio?	Additional research to determine the origin of this feature. No further excavation if the research proves the hypothesis.

**Features H, J, & K - Unrelated stone walls:**

These features do not match any of the locations of known buildings previously studied in relation to trench excavation. Exposure, examination of construction techniques, documentation and additional research are recommended to determine their historic associations and functions.

**Feature L - Possible modern patio:**

The shallow depth of this brick floor indicates it is relatively modern. Additional research, rather than excavation, is recommended to prove this. Should the research indicate an earlier structure may have been present, additional excavation may be recommended at that time.

Methodology for this proposed work will include two parts. The first part will be the removal of the documented fill which covers about two to four feet above the top of most features. This will be done by use of a backhoe. The backhoe will expose the locations of the features for the entire ten foot trench width, as practical in the field. Actual widths may be dictated by factors such as features occurring at depths of greater than five feet where sheeting or sloped profiles may be needed or potential for instability of standing structures if excavations are done too close. Excavations will attempt to minimize the inundation by water seepage. This will be done by exposing and excavating a minimal length of trench to complete archaeological work as quickly as possible, thus working on only one or two of the features at a time. Should features not be completed within a particular day's work, they will be covered overnight and completed the following day. Every effort will be made to minimize the need to leave any features open overnight because of water seepage and public safety issues.

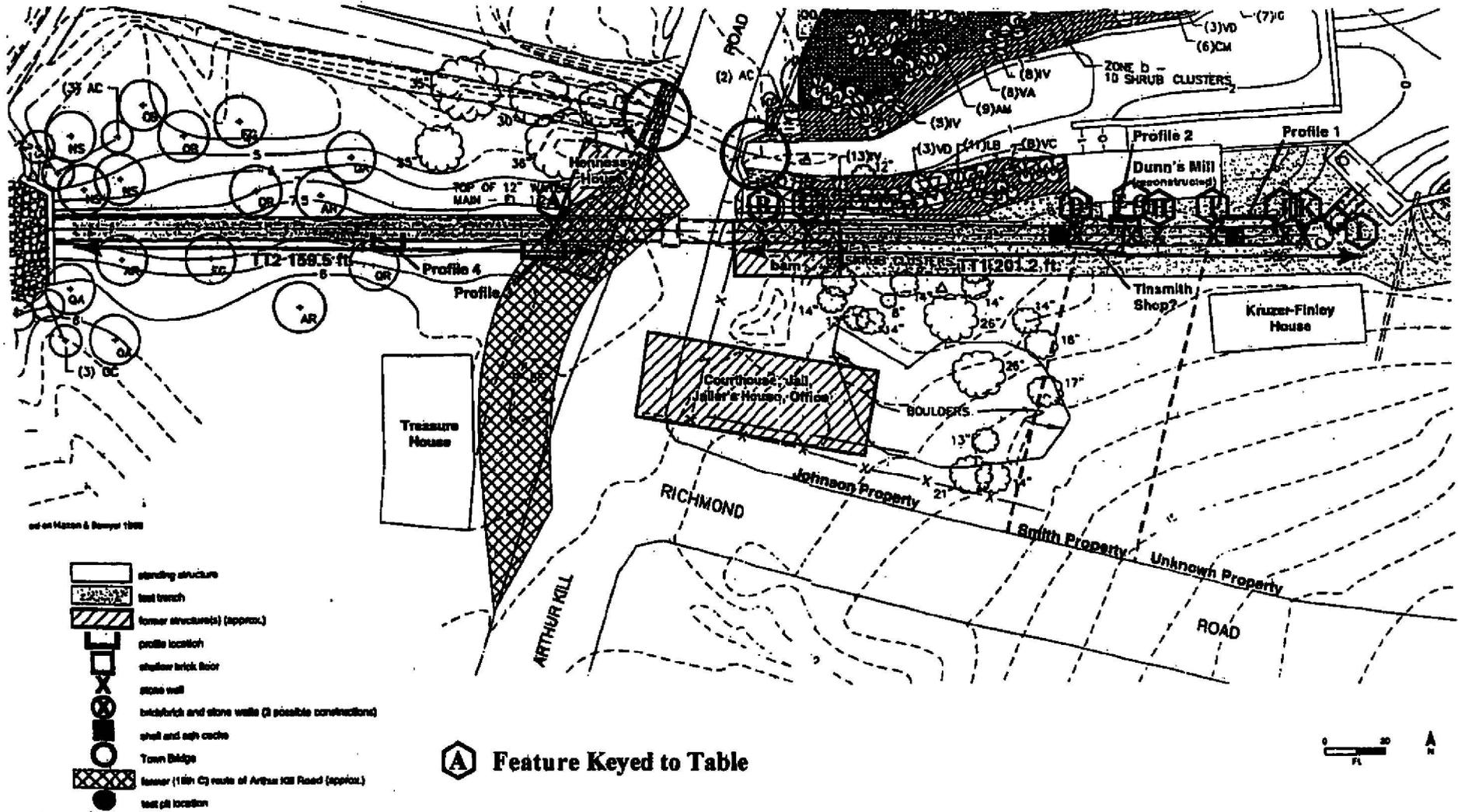
Once exposed by the backhoe, manual excavation will be done to clean the feature walls and the trench profiles. Clearing this soil will enable the identification of possible builder's trenches, or other features, as well the identification and documentation of construction techniques. Measurements relative to the current ground surface will be made as will the locations of these features in relation to the site plans. Photographs will be taken and appropriate field drawings will be done. Although the fill covering and surrounding the structural features is expected to contain artifacts, collection of these artifacts is not the aim of this proposed data recovery. The Geismar work documented this fill and the possible date of deposition of the earliest episodes as "after 1765 and possibly around 1800" (Geismar 1999: 4). However should the profiles recorded as part of this proposed work uncover stratigraphy associated with multiple fill episodes, this would be recorded and reported on. Should the manual excavations clear and expose features such as builder's trenches, these would be systematically excavated. All soils removed during these excavations would be screened through 1/4 inch mesh for the recovery of artifacts. Fieldwork associated with the exposure and documentation of the features identified during the testing phase is expected to take less than two weeks.

The storm sewer trench archaeological testing did not test the section of the sewer which will go through Arthur Kill Road nor did it test the westernmost part of the planned sewer trench, a length of about 50 feet. Geismar recommended monitoring in these sections. Monitoring was recommended in the roadway section of the trench because it was supposed testing would not be possible in that location because of street closing issues. However this has changed and testing will be possible in that section of the trench. Testing within the road was recommended to identify possible remains of an earlier path of Arthur Kill Road. It was also noted the eastern foundation wall of the Hennessey House may be exposed there. It is not clear why the westernmost 50 feet of trench was not tested. Testing for this section was recommended in the Geismar report because of the possibility of that trench section containing remains related to an early-eighteenth century tannery. Archaeological testing in both of these sections will be

done during this mitigation phase so as to complete all archaeological work needed for the long storm sewer trench, enabling the contractor to begin their work as soon as possible. Testing in these trench segments will be done via backhoe excavation. Should any historic features be uncovered trenching will be followed by hand exposure and excavation to document these resources. This additional evaluation of archaeological resources will define their significance and extent within the planned impacts. Artifacts will be retained only if they can be associated with particular features. If features are identified, they will be exposed and excavated by hand. A similar level of documentation will be done as described for the features identified during the Geismar testing. Test trenches will be about one backhoe bucket wide and excavated to the depth of either sterile soil or the base of potential archaeological features, whichever is deepest, provided they are still within the planned storm sewer impacts. Soils, stratigraphy and artifact inclusions will be recorded on forms. Test locations will be mapped on the site plan. Photodocumentation and drawings will be done as appropriate.

Upon completion of the fieldwork described in this scope, a brief end-of-field letter will be prepared summarizing the findings. This letter may be used by the DEP to obtain interim approval from the Landmarks Preservation Commission to begin storm sewer work.

Within one month of completion of all data recovery archaeological work associated with the Mill Pond project, a written report will be provided to the DEP setting forth the results of the fieldwork. Standard methods of artifact processing, labeling, identification, evaluation and documentation will be done on the recovered materials. The report shall include a summary of the previously completed documentary research as it pertains to the planned storm sewer impacts. The report will also indicate how the fieldwork activities described above have addressed archaeological concerns in those areas. It shall also include; a record of stratigraphy within the excavated areas, a complete catalogue of artifacts recovered, and an assessment of recovered archaeological resources. Maps will be provided indicating results from these investigations with locations features indicated. Any artifacts recovered during this testing will be given to Historic Richmond Town upon acceptance of the final report.



SCOPE OF WORK FOR PHASE 1B  
 ARCHAEOLOGICAL TESTING  
 OF THE MILL POND STORM PROJECT  
 STATEN ISLAND, NEW YORK  
 Project Number SER 20099  
 October 3, 2002

The New York City Department of Environmental Protection is currently planning installation of a sanitary sewer, storm sewer connector and pocket wetlands, among other improvements, in the Richmondtown section of Staten Island, New York. The sanitary sewer will be about 1560 feet long extending east along Old Mill Road then south along Arthur Kill Road to a point north of Town Bridge and then east along the north side of Mill Pond and south, crossing Richmond Creek, to Richmond Road and St. Patrick's Place. It will require excavation of a trench about six feet wide and from eight to twenty-three feet deep. The storm sewer connectors will be a total of about 140 feet long from a point in Arthur Kill Road south of Richmond Creek south down Arthur Kill Road to Richmond Road to connect with catch basins at the north and south intersections of Arthur Kill and Richmond Roads. The connectors will require the excavation of a trench about six feet wide and eight feet deep. The pocket wetlands will encompass an area of about 240 feet wide by 160 feet deep from Richmond Road to Richmond Creek measured from the northeast corner of Richmond Road and St. Patrick's Place (see attached plan).

The Phase 1A Archaeological Documentary Research report prepared by Linda Stone concluded that these segments of the Mill Pond project contain the potential to preserve archaeological remains from both pre-contact and historic periods. This scope of work for Phase 1B archaeological testing of the above described areas has been prepared to address the concerns identified in the documentary study and to comply with environmental review regulations. All activities indicated below shall be conducted in a manner consistent with the New York City Landmarks Preservation Commission's *Guidelines for Archaeological Work in New York City* (2002) and the New York Archaeological Council's *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State* (1993). All archeological fieldwork will be done under the direction of Linda Stone, RPA.

The documentary study concluded archaeological resources may be found as follows:

IMPACT - LOCATION	FEATURE TYPE	DATES
Sanitary sewer - Old Mill Road	cemetery	c.1742-1855
Sanitary sewer - northeast of Town Bridge	carriage factory	c.1851-c.1891
	wagon shed	c.1891-c.1911
Storm sewer - in Arthur Kill Road, northwest of intersection with Richmond Road	First County Courthouse	c.1728-c.1776
pocket wetland area	19 <sup>th</sup> -century residence	c.1853-1898 +
Sanitary sewer - north and east of Mill Pond	pre-contact resources	pre-European contact

The documentary study also concluded all of these areas, except the Old Mill Road segment are covered in at least a foot of fill and up to ten feet in places. Therefore varying field strategies will be required to test this site.

In the testing of the sanitary sewer segment north of Mill Pond, there are two archaeological concerns; structural remains dating as early as the mid-nineteenth century and pre-contact material. This area generally contains only one to three feet of fill. The recommended testing strategy is two fold. First the area will be cleared of vegetation and grubbed. At the portion of the trench where the historic features may be present, the technique will be mechanical excavation of a trench to assess the presence or absence of structural remains. This trench will be excavated to the depth of up to seven feet, the planned depth of impact. It will be one bucket wide. No soil will be screened. Any structural remains will be exposed and recorded as a means of documenting them. This will also include selected trench profiling. Should associated artifact-bearing features be identified, a plan for their mitigation would be developed. The remainder of this segment will be walked over to see if any pre-contact material had been churned up during the grubbing process. Should any material be present this would be collected and its location marked on the site plan. Then a shallow trench will be mechanically excavated to a depth of one to two feet, as appropriate. Once completed, the archaeologists will manually excavate shovel tests at fifty foot intervals to evaluate for the presence or absence of pre-contact materials at deeper levels, i.e. levels below the current fill. The shovel tests will be about one to one and a half feet in diameter and excavated to the depth of non-artifact bearing subsoil, or to the maximum extent possible, to evaluate the nature of the soils and the presence or absence of archaeological remains. All soils excavated from the shovel tests will be screened through 1/4 inch mesh for the recovery of artifacts. Soils, stratigraphy and artifact inclusions will be recorded on forms. Shovel test locations will be mapped on the site plan. Photodocumentation and drawings will be done as appropriate.

The segment of the sanitary sewer which will head along the east side of Mill Pond across Richmond Creek south to Richmond Road is covered by a larger amount of fill, up to five feet. Similar archaeological testing will be conducted in this segment, however the mechanically excavated trench will be appropriately deeper.

The pocket wetland excavation area is covered by the largest amount of fill, up to ten feet. However not all of this area will be affected by wetlands excavation. Based on topographic information provided in the Phase 1A Archaeological Documentary Study, a comparison of final grades was made to the 1910/11 topographic survey. Because of substantial filling in the pocket wetlands area during the 20<sup>th</sup> century, final grades in this part of the Mill Pond project area may actually be higher than they were historically. The attached figure shows the areas of the pocket wetlands which will not have any disturbance at or below the depth of the historic ground surface. However it should be noted the northeastern portion of the pocket wetlands was not included in the recent topographic survey. The non-shaded areas on the attached figure will require archaeological testing. The figure also provides a spot check of the amount of excavation which will be done. This attached figure also defines the vicinity of the 19<sup>th</sup>-century dwelling discussed in the Documentary Study. This location cannot be precise due to the detail available on the historic maps.

Historic and pre-contact resources will necessitate two testing methods. In order to identify whether or not parts of the 19<sup>th</sup>-century dwelling still remain intact buried under fill, backhoe trenching will be necessary. The attached figure show the locations of two proposed trenches. One will be about

90 feet long and the other will be about 50 feet long. Both will be excavated to assess the presence of structural remains. These trenches will be excavated to varying depths from next to nothing near Richmond Road to up to ten feet in places, the planned depth of impact. The trenches will be one bucket wide as best as can be done at these depths. The contractor will provide sheeting as needed for safety. However should no remains be encountered, there may be no need for personnel to enter the trench once it exceeds a safe depth. No soil will be screened. Any structural remains will be exposed and recorded as a means of documenting them, including profiling the trenches in their vicinity. Should associated artifact-bearing features be identified, a plan for their mitigation would be developed.

Excavation in the pocket wetlands area is also to be done to determine the presence or absence of pre-contact archaeological materials and will use a combination of mechanical and manual excavation. There is a large amount of variation in the amount of soil to be removed from sections of the pocket wetlands, ranging from zero near Richmond Road to ten feet in the area of the proposed backhoe trenches and more northwestward toward Richmond Creek. However in many cases these depths of planned excavation are deeper than the historic ground surface. It may be assumed this area did not have any significant filling during the mid- to late-nineteenth century since there was not much activity on the parcel during that period. Therefore the archaeological concern exists at a depth of the 1910/11 ground surface. This depth is only about four feet deep, rather than the impact depth of up to ten feet. Therefore similar methodology recommended for the sanitary sewer segments is also recommended for sections of the pocket wetlands. However, due to the depth of the proposed trenches, only two will be placed. They are also depicted on the attached plan. First, once this area has been cleared and grubbed the archaeologists will do a walkover to look for evidence of pre-contact materials. Manual shovel tests will be placed in the pocket wetlands area near Richmond Road without trenching. Within the two trenches a series of manual shovel tests will be placed. All these tests will be at fifty foot intervals. They will be conducted as for the sanitary sewer segment.

The storm sewer connector near the corner of Arthur Kill and Richmondtown Roads potentially contains a quite significant finding. Should remains of the First County Courthouse exist, they could answer many questions regarding the structure, its location and its construction, as well as questions regarding the change of course of Arthur Kill Road and lot line locations of the late-18<sup>th</sup> century. Field investigations to unearth archaeological evidence of this building will be done using backhoe trenching. The methodology will be similar to the testing proposed for other structural remains associated with the Mill Pond project. However since this work is to be done in the roadway there will be a couple of differences in logistics. First, all road work must be done at night. The contractor will provide sufficient lighting. The other difference has to do with planning a contingency for mitigating impacts to the project from any archaeological resources. To avoid delays and having to potentially open the street twice, the following measures are proposed, using similar methodology already approved by the Landmarks Preservation Commission for the elliptical storm sewer segment of the Mill Pond project. The archaeological fieldwork is proposed to expose and document building walls and their construction and to look for evidence of associated artifacts and/or features, such as builder's trenches. If associated features are unearthed, they would be systematically excavated. Artifacts recovered would be used to correlate with the dates the Courthouse was standing.

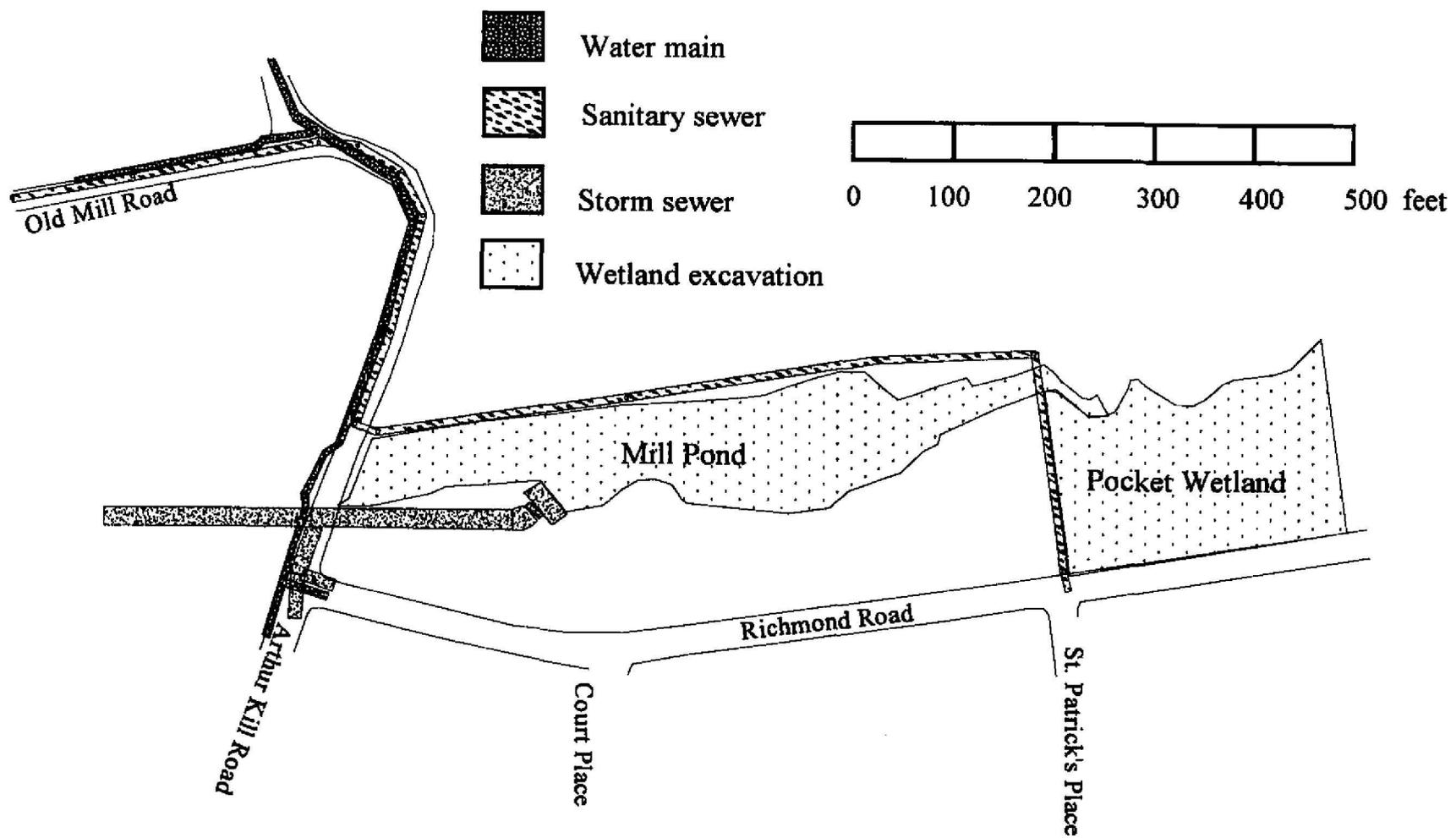
Once exposed by the backhoe, manual excavation will be done to clean the feature walls and the trench profiles. Clearing this soil will enable the identification of possible builder's trenches, or other features, as well the identification and documentation of construction techniques. Measurements relative to the current ground surface will be made as will the locations of these features in relation to the site

plans. Photographs will be taken and appropriate field drawings will be done. Although the expected fill covering and surrounding the possible Courthouse walls is expected to contain artifacts, collection of these artifacts is not the aim of this proposed data recovery. Should the manual excavations clear and expose features such as builder's trenches, these would be systematically excavated. All soils removed during these excavations would be screened through 1/4 inch mesh for the recovery of artifacts.

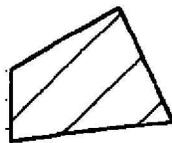
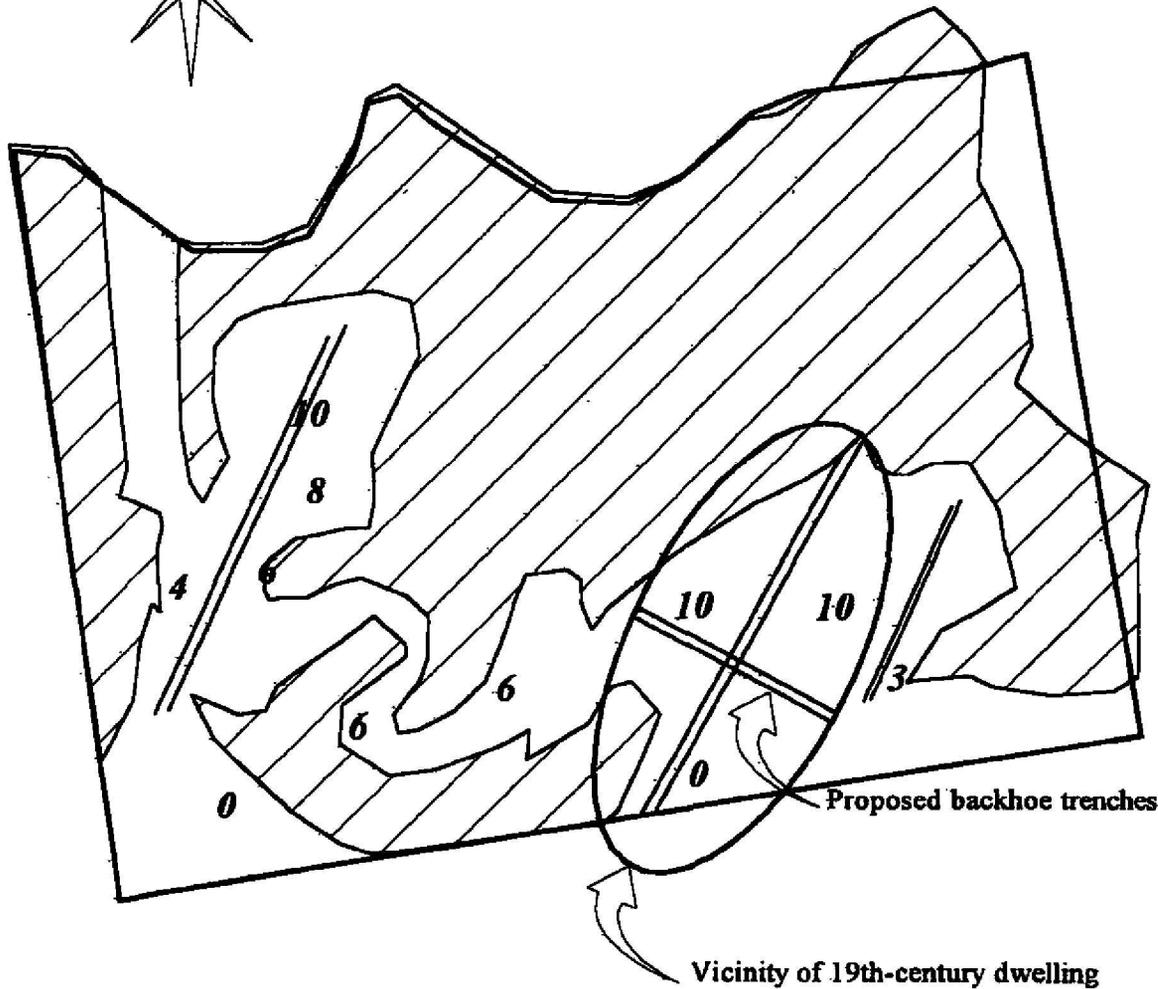
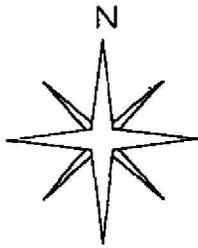
Archaeological monitoring will be done along the sanitary sewer route which goes along Old Mill Road adjacent to the St. Andrew's Church cemetery to ensure no unmarked graves are disturbed. Although historic cemetery records are frequently inaccurate, because this part of the Mill Pond project area is outside the boundary of the cemetery and because work within the road to the south of the project area revealed no remains at a depth of four feet, the likelihood of such finds is low. However due to the sensitive nature of buried human remains, archaeological monitoring of the contractor's excavations is recommended. An archaeological monitoring plan will be prepared for agency approval at least three weeks in advance of scheduled work, written according to the New York Archaeological Council's Monitoring Guidelines (3/25/02).

Upon completion of the fieldwork described in this scope, a brief end-of-field letter will be prepared summarizing the findings. This letter may be used by the DEP to obtain interim approval from the Landmarks Preservation Commission to begin storm sewer work.

Within one month of completion of all archaeological field testing associated with the Mill Pond project, a written report will be provided to the DEP setting forth the results of the field testing. Standard methods of artifact processing, labeling, identification, evaluation and documentation will be done on the recovered materials. The report shall include a summary of the previously completed documentary research as it pertains to the planned impacts. The report will also indicate how the fieldwork activities described above have addressed archaeological concerns in those areas. It shall also include; a record of stratigraphy within shovel tests and trenches, a complete catalogue of artifacts recovered, and an assessment the locations of archaeological resources for which data recovery, if needed, is recommended. Maps will be provided indicating results from these investigations with locations trenches and shovel tests indicated. Any artifacts recovered during this testing will be given to Historic Richmond Town upon acceptance of the final report.



Mill Pond project site plan



= Pre-1911 grade that will not be impacted - no archaeological concerns

#

= Number of feet to be excavated below ground surface.



0 20 40 60 80 100 200 300 feet

Areas of pocket wetlands not to be affected by the Mill Pond project.

SCOPE OF WORK FOR  
ARCHAEOLOGICAL TESTING  
(Phases 1B)  
OF THE RICHMOND TOWN  
MILL POND SANITARY SEWER PROJECT  
OLD MILL ROAD SEGMENT  
STATEN ISLAND, NEW YORK  
Project Number SER 20099  
October 22, 2002

The New York City Department of Environmental Protection is currently planning installation of a sanitary sewer, among other improvements, in the Richmondtown section of Staten Island, New York. This scope of work is for the Old Mill Road section of that sewer and supplements my October 3, 2002 scope of work for the rest of that sewer and follows the same guidelines. That scope suggested archaeological monitoring would be done for this segment of the sewer trench. However, after consultation with Father Michael Delaney of the Church of St. Andrew and Joe Lione of Bedford Construction, it was determined the most efficient way to alleviate any archaeological concerns about finding human remains in this trench segment would be to conduct archaeological testing prior to construction excavation. The purpose of this testing will be to identify potential grave sites and remove and reinter these individuals within the church cemetery. The purpose of the testing is not to look for or to collect artifacts. No screening of soils is recommended. However, should diagnostic materials be observed associated with particular stratigraphy, they would be recorded and collected.

Archaeological testing would consist on backhoe excavation of a trench of up to seven feet deep and three feet wide for a length of roughly 275 feet. This represents about a fifty-percent sample of the planned Old Mill Road sanitary trench width. The sanitary sewer will require excavation of a trench of about six feet wide and up to 23 feet deep. The archaeological documentary study found a trench had previously been excavated north of and adjacent to the stone wall that surrounds St. Andrew's cemetery and therefore there is minimal archaeological concern up to a depth of about four feet below the current ground surface. Archaeological excavation proposed for this upper section of the sewer trench includes directing the backhoe operator to take care and precaution, however does not require the same level of archaeological attention as does the excavation of deeper layers. These deeper layers will be excavated by removing one bucket of soil at a time, perhaps representing six inches of soil. This careful removal should allow the archaeologist to observe the stratigraphy and evaluate the presence of grave shafts prior to disturbing any human remains. Identification of a grave shaft would mean excavation would be temporarily halted in that area to take appropriate measures for reinternment. Should human remains be inadvertently disturbed, the archaeologist would also stop the excavation. Father Delaney has requested he be the initial contact should any burials be present within the test trench. He would then contact Hanley's Funeral Home and Bob Grille to exhume the remains for reburial within the current bounds of the church cemetery. Father Delaney estimates this will take no more than two days. During this period of time, it may or may not be possible to continue archaeological work in other parts of Old Mill Road. This will depend on the level of protection necessary to preserve any exposed grave shaft or grave without disturbing it.

Whether or not any graves are encountered in the test trench, soils, stratigraphy and artifact

inclusions will be recorded. Should graves be identified, their locations would be documented and mapped on the site plan. Photodocumentation and drawings will be done as appropriate. Upon completion of the fieldwork described in this scope, a brief end-of-field letter will be prepared summarizing the findings. This letter may be used by the DEP to obtain interim approval from the Landmarks Preservation Commission to begin storm sewer work.

Within one month of completion of all archaeological testing associated with the Mill Pond project, a written report will be provided to the DEP setting forth the results of the fieldwork. Standard methods of artifact processing, labeling, identification, evaluation and documentation will be done on the recovered materials, should there be any. The report shall include a summary of the previously completed documentary research as it pertains to the planned impacts. The report will also indicate how the fieldwork activities described above have addressed archaeological concerns in that area. It shall also include; a record of stratigraphy within the trench, a complete catalogue of artifacts recovered, and an assessment of recovered archaeological resources. Maps will be provided indicating results from these investigations with locations features indicated. Any artifacts recovered from burial contexts would be given to the church and artifacts associated with the trench fill recovered during this testing will be given to Historic Richmond Town upon acceptance of the final report.

**Appendix B**

**CONTEXT NUMBER KEY**

## Context Number Key for Artifact Labels

CON- TEXT #	DATE RECOVERED	AREA	TEST. LEVEL	FILL	LOCATION	BGS	BTD	DISCARDED IN THE FIELD
1	10/8/2002			<input type="checkbox"/>	in stone wall? at Johnson Barn			
2	10/8/2002	B/C		<input type="checkbox"/>	interior boulders trench of Johnson Barn			
3	10/9/2002	D/E		<input type="checkbox"/>	below ash, W. of blocks	2.2		
4	10/9/2002	D/E		<input type="checkbox"/>	east of brick wall below ash	2		
5	10/9/2002			<input type="checkbox"/>	from ?? of ash, E. under blocks	2		
6	10/9/2002			<input type="checkbox"/>	Johnson Barn backdirt			
7	10/9/2002			<input checked="" type="checkbox"/>	S. of Dunn's Mill	1.5		
8	10/9/2002			<input type="checkbox"/>	surrounding stone wall inside Johnson Barn			
9	10/10/2002	D		<input type="checkbox"/>	inside shed and tinsmith shop, S. of Dunn's Mill	2.5		
10	10/10/2002	D		<input type="checkbox"/>	outside shed and tinsmith shop, S. of Dunn's Mill	2.5		
11	10/15/2002	D/E		<input type="checkbox"/>	screened - 1 bucket, NW corner of cobbles section			corroded nail, shell, wood
12	10/15/2002	E/G		<input checked="" type="checkbox"/>	above and between areas of cobbles	2		
13	10/15/2002	E/G		<input type="checkbox"/>	directly above and within brick floor, in front of ramp			
14	10/15/2002	E/G		<input type="checkbox"/>	in cobbles near manhole	2		
15	10/15/2002			<input type="checkbox"/>	screened - 1 bucket, NE corner of cobble floor			3 corroded nails, coal
16	10/15/2002			<input type="checkbox"/>	screened - 2 bucket, W cobble section			shell, brick, cinder
17	10/17/2002			<input type="checkbox"/>	amongst manhole bricks, directly S. of east side of Mill ramp	6.75		
18	10/17/2002			<input checked="" type="checkbox"/>	below level of tinsmith shop cobble floor, S. of ramp			
19	10/21/2002		9.3	<input type="checkbox"/>	north of Mill Pond			
20	10/21/2002		10.1	<input type="checkbox"/>				
21	10/21/2002		11.1	<input type="checkbox"/>	north of Mill Pond			
22	10/21/2002		11.2	<input type="checkbox"/>				
23	10/22/2002	J		<input type="checkbox"/>	adjacent to stone wall near SW corner	3.5		coal, 1 corroded nail, 1 bone frag
24	10/22/2002	J		<input checked="" type="checkbox"/>				
25	10/22/2002	K		<input type="checkbox"/>	between possible foundation stones	3	4.3	
26	10/22/2002	K		<input type="checkbox"/>	between possible foundation wall stones		4.6	
27	10/22/2002	K		<input type="checkbox"/>	off southeast corner of foundation		3.9	
28	10/23/2002	J/K		<input type="checkbox"/>	east, west and southwest of stone wall			
29	10/23/2002	J/K		<input type="checkbox"/>	screening and troweling amongst stone wall			coal, cinder, clinker, corroded nail, brick, shell frag.
30	10/23/2002	J/K		<input checked="" type="checkbox"/>	south and west of stone wall			corroded nail, metal, wood
31	10/23/2002	J/K		<input type="checkbox"/>	west of stone wall			

CON- TEXT #	DATE RECOVERED	AREA	TEST. LEVEL	FILL	LOCATION	BGS	BTD	DISCARDED IN THE FIELD
32	10/22/2002			<input checked="" type="checkbox"/>	from fill near Kruser-Finley House			
33	11/21/2002		15.2	<input type="checkbox"/>	near base			
34	11/21/2002		15.3	<input type="checkbox"/>	nickel			
35	11/21/2002		Trench B	<input checked="" type="checkbox"/>	from shell cache	3.3		
36	11/21/2002		Trench D	<input checked="" type="checkbox"/>	west segment, below rocks	3		
37	11/22/2002			<input type="checkbox"/>	troweling near wagon shed/carriage factory above floor?			
38	2/4/2003			<input type="checkbox"/>	wagon shed/carriage shop, adjacent to stone			
39	3/31/2003	A		<input type="checkbox"/>	west of Arthur Kill Rd, near Hennessy House under pipe trench			
40	3/31/2003	A		<input type="checkbox"/>	east of Hennessy House foundation rocks	3		
41	3/31/2003	A		<input type="checkbox"/>	west of Hennessy House, burned stratum	3.5		
42	4/1/2003	A		<input type="checkbox"/>	Hennessy House at water main; above large stones			shell
43	4/2/2003	A		<input type="checkbox"/>	above Hennessy House foundation			
44	4/2/2003	A		<input type="checkbox"/>	between Hennessy House foundation, next to southern stone			
45	4/2/2003			<input type="checkbox"/>	east side Arthur Kill Rd. early road; screened			
46	4/14/2003	B		<input type="checkbox"/>	near Johnson Barn, shell pocket in north end of pit			shell
47	4/14/2003	B		<input type="checkbox"/>	amongst stones at Johnson Barn	1		
48	4/14/2003	B		<input type="checkbox"/>	under 1st level of stones at Johnson Barn, after drawing 1			
49	4/14/2003	B		<input type="checkbox"/>	between stones of Johnson Barn, after drawing 2			
50	4/14/2003	B		<input type="checkbox"/>	amongst stones of west wall of Johnson Barn		3.5	

**KEY**

- Area = keyed to plan as part of elliptical storm sewer feature excavations.  
 Test.Level = shovel test and level numbers used in testing phase.  
 Fill = context was noted as fill during excavations.  
 Location = as noted on field bag.  
 BGS = elevation below ground surface.  
 BTD = elevation below temporary datum.

Appendix C

SHOVEL TEST STRATIGRAPHY

MILL POND PROJECT - RICHMONDTOWN, STATEN ISLAND  
SHOVEL TEST STRATIGRAPHY

TEST	LEVEL	DEPTH	MUNSELL	COLOR	TEXTURE	ARTIFACTS (not retained from field)
1	1	2.0			backhoe removed fill	
	2	3.5	10YR 4/3	brown/dark brown	stoney silty loam/fill	1 amber glass, 1 sewer pipe frag, 3 flat glass, 4 clear glass, 2 wire nails, cut wood
	3					
	4					
	5					
	6					
	7					
-----						
2	1	1.6			backhoe removed fill	
	2	2.1	7.5YR 2.1/1	black	oily fill	coal, cinder, glass
	3	2.6	7.5YR 2.5/1	black	loamy	glass
	4	3.8	7.5YR 3/1	very dark gray	wet clay	
	5					
	6					
	7					
increasingly wet with depth						
-----						
3	1	1.8			backhoe removed fill	
	2	2.4	10YR 3/3	dark brown	clayey loam with roots	1 small slag, 6 coal
	3	3.1	7.5YR 4/3	brown	moist silty sand	5 coal, 1 glass, 1 small slag
	4	3.3	10YR 3/3	dark brown	wet clayey loam with root	
	5	4.1	10YR 4/3	brown/dark brown	fine sandy silt	
	6					
	7					
-----						
4	1	1.6			backhoe removed fill	
	2	2.0	10YR 4/3	brown	silt	1 glass
	3	2.2	7.5YR 3/4	dark brown	coarse sand	
	4	4.5	10YR 3/2	very dark gray brown	gravelly sandy silt	
	5					
	6					
	7					
began getting wet at 1.8'						
-----						
5	1	1.6			backhoe removed fill	
	2	2.6	10YR 3/2	very dark gray brown	loamy clay	
	3	2.7	5YR 2.5/1	black	stoney loam with roots	
	4	3.7	7.5YR 3/3	dark brown	stoney sandy loam	
	5					
	6					
	7					
-----						

MILL POND PROJECT - RICHMONDTOWN, STATEN ISLAND  
SHOVEL TEST STRATIGRAPHY

TEST	LEVEL	DEPTH	MUNSELL	COLOR	TEXTURE	ARTIFACTS (not retained from field)
6	1	2.2			backhoe removed fill	
	2	2.6	7.5YR 3/4	brown	coarse sand	
	3	3.4	7.5YR 3/3	dark brown	sandy silt	
	4	3.6	7.5YR 2.5/1	black	organic soil	
	5	4.5	7.5YR 3/3	dark brown	silty sand	
	6	4.6	10YR 3/2	very dark gray brown	sandy silt	
	7					
-----						
7	1	1.8			backhoe removed fill	
	2	2.5	7.5YR 4/4	brown	moist clean sand	
	3	2.8	7.5YR 4/3	brown	clayey silt	
	4	3.4	10YR 2/2	very dark brown	clayey loam with root mat	
	5	3.7	10YR 3/2	very dark gray brown	wet silty sand	
	6					
	7					
-----						
8	1	1.4			backhoe removed fill	
	2	3.2	7.5YR 3/3	brown	sandy silt	
	3	3.4	7.5YR 4/3	brown	organic sandy silt	
	4					
	5					
	6					
	7					
					standing water at 1.8'	
-----						
9	1	1.4			backhoe removed fill	
	2	1.5	7.5YR 3/3	dark brown	loamy sand fill	1 amber glass, 1-2" piece of painted wood
	3	2.5	7.5YR 2.5/2	very dark brown	moist loam with root mat	2 clear glass, 1 coal
	4	3.0	10YR 3/2	very dark gray brown	wet fine silty sand	
	5					
	6					
	7					
					wooden plank 1.1-1.4'; filled with water at 1.3'	
-----						
10	1	1.1			backhoe removed fill	
	2	1.6	10YR 4/4	dark yellowish brown	oily sandy silt fill	glass
	3	3.2	7.5YR 2.5/1	black	wet sandy silt	
	4					
	5					
	6					
	7					
					wooden plank at 0.8'; increasingly wet with depth	
-----						

MILL POND PROJECT - RICHMONDTOWN, STATEN ISLAND  
SHOVEL TEST STRATIGRAPHY

TEST	LEVEL	DEPTH	MUNSELL	COLOR	TEXTURE	ARTIFACTS (not retained from field)
11	1	1.6			backhoe removed fill	
	2	2.3	7.5YR 2.5/2	very dark brown	loamy fill	2 oyster shell, 1 screw, 3 coal, 4 clear glass, cinder
	3	2.8	7.5YR 4/4	brown	fine silty sand	1 coal
	4	3.3	7.5YR 3/2	dark brown	sandy silt	tin can, burned wood
	5					
	6					
	7					
pipe in center of trench at 3.2'						
12	1	4.9			backhoe removed fill	
	2	6.1	10YR 4/2	dark grayish brown	silty clay fill	plastic, cinder, foil, glass, shell
	3	9.0			backhoe removed fill	creosoted wood and other fill
	4					
	5					
	6					
	7					
13	1	7.0			backhoe removed fill	
	2	9.9		black/gray	clay	
	3					
	4					
	5					
	6					
	7					
water seeping in at 5'; base of excavation 10'						
14	1	3.0			backhoe removed fill	
	2	3.3			gravel	1 clam shell frag.
	3	4.2	10YR 5/6	yellowish brown	gravelly mottled silt	brick frags, shell, coal, faunal bone, dry wall, 1 nail frag.
	4	4.9	10YR 4/4	dark yellowish brown	wet gravelly clayey loam	clam shell frag, 2 clear bottle frags
	5	5.1	7.5YR 4/4	brown	loamy clay	
	6					
	7					
15	1	0.5	10YR 3/3	dark brown	wet sandy loam	
	2	0.7	7.5YR 4/6	strong brown	compact stoney clay silt	plastic, paper, corroded nail, paper, clear glass
	3	1.3		pink/red mottling		paper, plastic, fabric, glass, Pepsi cap
	4	1.9	10YR 3/3	dark brown	gravelly loam	
	5	2.1	5YR 4/6	yellowish red	silt	
	6					
	7					

**Appendix D**

**ARTIFACT INVENTORY**

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
1	Bone	faunal			2	butchered fragments	
		faunal			1	fragment	
		faunal			9	spalls	
Sum for Bone (3 records) = 12							
1	Ceramic	creamware		white	1		1762-1820
		kaolin	smoking pipe stem	white	1		
		pearlware		white	3	blue transfer print one side	c.1780-early 20th C.
		pearlware	base	white	1	blue transfer print interior	c.1780-early 20th C.
		pearlware	rim	white	1	blue transfer print	c.1780-early 20th C.
		redware		red	1	clear and manganese glaze	c.1775-1900
		redware		red	2	spalls	c.1725-present
		redware	marble	red	1	unglazed; 1/2 " diameter	
		refined earthenware		white	1	annular ware; brown, blue and white banded exterior	1790s-1930s
		refined earthenware		white	2	blue transfer print	c.1780-early 20th C.
		refined earthenware		white	1	mocha ware?; brown band, blue splotch	1790s-1930s
		refined earthenware		white	1	spall; blue transfer print one side; geometric	c.1780-early 20th C.
		refined earthenware		white	1	spall; blue transfer print; floral	c.1780-early 20th C.
		stoneware		gray	1		1720s-present
		whiteware		white	1	spall	early 19th C.-1900+
		whiteware	rim	white	1		early 19th C.-1900+
		whiteware	rim	white	2	mends	early 19th C.-1900+
Sum for Ceramic (17 records) = 22							
1	Glass		curved	clear	1		
Sum for Glass (1 record) = 1							
1	Metal	iron	nail		1	whole; 3 1/4"; square shank; corroded	1798-c.1890
Sum for Metal (1 record) = 1							
1	Plaster			white	1		
Sum for Plaster (1 record) = 1							
1	Shell	oyster			1		
Sum for Shell (1 record) = 1							

## MILL POND ARTIFACT INVENTORY

Page 2 of 14

Context #	Material	Identity	Form	Color	Count	Description	Date Range	
Total Number of Artifacts for Context # 1 (24 records) = 38								
2	Bone	faunal	rib		1			
					Sum for Bone (1 record) = 1			
2	Ceramic	pearlware		white	1		1779-1820+	
		redware		red	2	brick?		
		refined earthenware		white	1	blue transfer print both sides	c.1780-early 20th C.	
		refined earthenware		white	1	blue transfer print one side	c.1780-early 20th C.	
		whiteware		white	1	spall	early 19th C.-1900+	
					Sum for Ceramic (5 records) = 6			
2	Coal			black	2			
					Sum for Coal (1 record) = 2			
2	Glass		curved	clear	1	ribbed		
				flat	clear	1	1/4" thick	1820-present
					Sum for Glass (2 records) = 2			
2	Metal	iron			1	corroded hardware		
					Sum for Metal (1 record) = 1			
2	Stone	slate			1			
					Sum for Stone (1 record) = 1			
Total Number of Artifacts for Context # 2 (11 records) = 13								
3	Ceramic	bisque	doll	white	1	impressed "E..."; pink exterior	1860-1925	
		porcelain	rim	white	1	burned		
		whiteware			white	5	spalls	early 19th C.-1900+
		whiteware	base		white	1	spall	early 19th C.-1900+
					Sum for Ceramic (4 records) = 8			
3	Glass		button	white	1	5/16" diameter; missing shank	1835-1880	
					Sum for Glass (1 record) = 1			
Total Number of Artifacts for Context # 3 (5 records) = 9								
4	Bone	faunal			1			
					Sum for Bone (1 record) = 1			
4	Ceramic	kaolin	smoking pipe stem	white	1			
		pearlware	plate base		white	6	mends; polychrome floral interior; blue, brown, & green underglaze, silver ring overglaze	1795-1835

**MILL POND ARTIFACT INVENTORY**

Saturday, April 26, 2003

Page 3 of 14

Context #	Material	Identity	Form	Color	Count	Description	Date Range
4	Ceramic	porcelain	part. handle/body	light blue	1	burned	
		refined earthenware		white	1	red and green decoration one side	1830s-late 19th C.
		whiteware		white	1		early 19th C.-1900+
					Sum for Ceramic (5 records) =	10	
4	Cinder				1		
					Sum for Cinder (1 record) =	1	
4	Coal			black	3		
					Sum for Coal (1 record) =	3	
4	Glass		bottle base	blue	1	partial kick-up	1890s-1960s
					Sum for Glass (1 record) =	1	
					Total Number of Artifacts for Context # 4 (9 records) =	16	
5	Metal	iron	nail		1	whole; 2 1/2", corroded	
					Sum for Metal (1 record) =	1	
					Total Number of Artifacts for Context # 5 (1 record) =	1	
6	Ceramic	refined earthenware	rim	white	1	blue transfer print; scalloped edge	c.1780-early 20th C.
					Sum for Ceramic (1 record) =	1	
					Total Number of Artifacts for Context # 6 (1 record) =	1	
7	Ceramic	redware		red	1	manganese glaze interior	c.1775-1900
		refined earthenware	plate base	white	1	blue transfer print	c.1780-early 20th C.
					Sum for Ceramic (2 records) =	2	
					Total Number of Artifacts for Context # 7 (2 records) =	2	
8	Bone		fish		1	possibly ivory; carved; 2 3/4" long	
					Sum for Bone (1 record) =	1	
8	Glass		curved	clear	1	large facets; white paint?	18th C.-present
					Sum for Glass (1 record) =	1	
					Total Number of Artifacts for Context # 8 (2 records) =	2	
9	Ceramic	porcelain		white	1	spall	
		porcelain	bowl	white	1	soft paste	
		redware		red	3	mends; yellow and white slip glaze interior	c.1775-1900
		redware	flower pot rim	red	1		c.1725-present
		refined earthenware		white	1	polychrome, black, red, blue and green	c.1848-early 20th C.
		stoneware	plate	buff	1	4 1/2" diameter, manganese glaze both sides	c.1800-1870

## MILL POND ARTIFACT INVENTORY

Saturday, April 26, 2003

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Context #	Material	Identity	Form	Color	Count	Description	Date Range
9	Ceramic	whiteware		white	1		early 19th C.-1900+
		whiteware	base	white	1		early 19th C.-1900+
		whiteware	base	white	1	partial impressed makers mark, encircled "CHI.." at bottom	early 19th C.-1900+
		yellowware	rim	buff	1		1830-1900
					Sum for Ceramic (10 records) =	12	
9	Coal			black	1		
					Sum for Coal (1 record) =	1	
9	Glass		ink bottle	aqua	1	whole; umbrella type; 2 1/2" diameter base; 2" high; hand finished	c.1850-1870s
					Sum for Glass (1 record) =	1	
9	Metal	iron	horseshoe		1	6" long; 5" wide; corroded	
					Sum for Metal (1 record) =	1	
					Total Number of Artifacts for Context # 9 (13 records) =	15	
10	Ceramic	whiteware	plate base/rim	white	1		early 19th C.-1900+
					Sum for Ceramic (1 record) =	1	
10	Glass		flat	clear	1	1/4" thick; 2 partial etched letters	late 19th C.-present
					Sum for Glass (1 record) =	1	
10	Plastic		button	white	1	4 hole; 7/8" diameter	c.1930-present
					Sum for Plastic (1 record) =	1	
					Total Number of Artifacts for Context # 10 (3 records) =	3	
11	Glass		flat	clear	1		
					Sum for Glass (1 record) =	1	
					Total Number of Artifacts for Context # 11 (1 record) =	1	
12	Ceramic	creamware		white	8		1762-1820
		pearlware		white	1		1779-1820+
		porcelain		white	1		
		redware		red	1	clear glaze	c.1750-1900+
		redware	rim	red	1	handled vessel; manganese glaze both sides	c.1775-1900
		refined earthenware		white	1	hand painted red leaf?	1830s-late 19th C.
		refined earthenware		white	1	polychrome, blue & green	c.1852-early 20th C.
		refined earthenware	base	white	1	black stippled transfer print; floral	1785-1864
		refined earthenware	rim	white	2	mends; embossed tasseel edge; glazed blue	1780s-early 29th C.

**MILL POND ARTIFACT INVENTORY**

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Context #	Material	Identity	Form	Color	Count	Description	Date Range
12	Ceramic	refined earthenware	rim	white	3	mends; purple stippled transfer print marley	c.1814-1867
		stoneware		buff	2	two tone brown glaze	1820-present
		whiteware		white	1		early 19th C.-1900+
		whiteware	plate base	white	1	makers mark-unicorn & lion crest "TRADEMARK"/"STONE CHINA"	1871-1888
		yellowware		buff	1	dark brown exterior band	1830-1900
					Sum for Ceramic (14 records) =	25	
12	Glass		button	black	1	metal shank; 7/16" diameter, wheat and dot pattern	1835-1880
			curved	clear	1		
			toy bowl?	black	1	5/8" diameter base	
					Sum for Glass (3 records) =	3	
Total Number of Artifacts for Context # 12 (17 records) = 28							
13	Ceramic		marble	white	1	unglazed; 1" diameter	
		kaolin	smoking pipe stem	white	1		
		porcelain		white	1	burned	
		porcelain	rim	white	1		
		redware		red	1	manganese glaze both sides	1775-1900
		refined earthenware		white	1	black transfer print	1785-1864
		whiteware		white	1		early 19th C.-1900+
					Sum for Ceramic (7 records) =	7	
13	Glass		curved	clear	2		
					Sum for Glass (1 record) =	2	
13	Plaster			white	1		
					Sum for Plaster (1 record) =	1	
Total Number of Artifacts for Context # 13 (9 records) = 10							
14	Metal	alloy	pendant		1	religious symbol?; oval, 5/8" long, 1/2" wide	
					Sum for Metal (1 record) =	1	
Total Number of Artifacts for Context # 14 (1 record) = 1							
15	Glass		curved	aqua	1		
			curved	green	1		
					Sum for Glass (2 records) =	2	
Total Number of Artifacts for Context # 15 (2 records) = 2							

## MILL POND ARTIFACT INVENTORY

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Context #	Material	Identity	Form	Color	Count	Description	Date Range
16	Ceramic	refined earthenware		white	2	blue transfer print interior, floral	c.1780-early 20th C.
		refined earthenware	base	white	1	blue transfer print interior	c.1780-early 20th C.
		refined earthenware	rim	white	2	mends; blue transfer print interior, floral	c.1780-early 20th C.
					Sum for Ceramic (3 records) =	5	
16	Glass		curved	green	1		
							Sum for Glass (1 record) =
					Total Number of Artifacts for Context # 16 (4 records) =	6	
17	Ceramic	refined earthenware		white	1	partially blue underglaze decoration one side	c.1780-early 20th C.
		stoneware		buff	2	mends; brown slip interior	c.1800-present
					Sum for Ceramic (2 records) =	3	
					Total Number of Artifacts for Context # 17 (2 records) =	3	
18	Ceramic	redware	flask?	buff	1	whole; clear glaze exterior, manganese interior; 2 1/2" diameter base, 5 1/4" high	18th C.-mid.19th C.
							Sum for Ceramic (1 record) =
					Total Number of Artifacts for Context # 18 (1 record) =	1	
19	Ceramic	porcelain		white	1	handled vessel sherd; 1 gold band overglaze exterior	1860s-early 20th C.
							Sum for Ceramic (1 record) =
					Total Number of Artifacts for Context # 19 (1 record) =	1	
20	Ceramic	whiteware		white	2	spalls	early 19th C.-1900+
							Sum for Ceramic (1 record) =
					Total Number of Artifacts for Context # 20 (1 record) =	2	
21	Ceramic	refined earthenware		white	1	blue shell edge	1780s-1840s
		whiteware		white	1		early 19th C.-1900+
					Sum for Ceramic (2 records) =	2	
					Total Number of Artifacts for Context # 21 (2 records) =	2	
22	Glass		curved	clear	1	red painted letters worn off one side	
			curved	clear	1	ribbed interior	1867-present
			curved	clear	1	ribbed interior; molded lettering exterior "T-S"/MADE IN U.S.A."	1867-present
					Sum for Glass (3 records) =	3	
					Total Number of Artifacts for Context # 22 (3 records) =	3	
23	Ceramic	kaolin	smoking pipe stem	white	1		
		redware		red	1	manganese glaze one side, clear glaze one side	c.1775-1900
		refined earthenware		white	1	3 light blue annular bands	c.1780-1920+

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
23	Ceramic	refined earthenware		white	1	3 light blue annular bands	c.1780-1920+
		refined earthenware		white	2	blue transfer print, geometric	c.1780-early 20th C.
		refined earthenware		white	1	blue underglaze leaves	c.1780-early 20th C.
		whiteware		white	2	spalls	early 19th C.-1900+
				Sum for Ceramic (6 records) =	8		
23	Glass		curved	blue	1	side mold seam; embossed "...RE"	1890s-1960s
						Sum for Glass (1 record) =	1
							Total Number of Artifacts for Context # 23 (7 records) = 9
24	Ceramic	refined earthenware		white	1	purple stippled transfer print one side	c.1814-1867
		whiteware	plate base	white	1		early 19th C.-1900+
				Sum for Ceramic (2 records) =	2		
24	Glass	milk glass	lid	white	2	mends; 2 5/8" diameter ;embossed logo encircled by "CONSOLIDATED FRUIT JAR COMPANY NEW YORK" on edge, "23" exterior	1871-1908
						Sum for Glass (1 record) =	2
							Total Number of Artifacts for Context # 24 (3 records) = 4
25	Ceramic	stoneware		buff	1	brown slip interior, clear exterior	1820-present
		stoneware	jug	buff	1	brown slip interior, clear exterior with blue glaze	1820-present
		stoneware	jug	buff	1	part of handle attached; brown slip interior, clear exterior with blue glaze	1820-present
				Sum for Ceramic (3 records) =	3		
25	Stone	slate			1		
						Sum for Stone (1 record) =	1
							Total Number of Artifacts for Context # 25 (4 records) = 4
26	Ceramic	redware	flower pot	red	1		c.1725-present
				Sum for Ceramic (1 record) =	1		
26	Coal			black	1		
						Sum for Coal (1 record) =	1
							Total Number of Artifacts for Context # 26 (2 records) = 2
27	Ceramic	pearlware		white	1		1779-1820+
		redware		red	3	clear glaze both sides	c.1750-1900+
		redware		red	2	clear glaze interior, some manganese on exterior	c.1775-1900
		redware	base	red	2	mends; clear glaze both sides, unglazed exterior base	c.1750-1900+
		redware	body	red	1	from handled vessel; clear glaze interior, some manganese on exterior	c.1775-1900

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
27	Ceramic	redware	rim	red	1	clear glaze	c.1750-1900+
		redware	rim	red	1	clear glaze with some manganese on exterior	c.1775-1900
		stoneware		buff	1	gray exterior, brown slip interior	c.1800-present
		yellowware		buff	3		1830-1900
					Sum for Ceramic (9 records) =	15	
27	Glass		flat	clear	1		
					Sum for Glass (1 record) =	1	
							Total Number of Artifacts for Context # 27 (10 records) = 16
28	Ceramic	kaolin	smoking pipe stem	white	1		
		porcelain	bottle stopper	white	1	lightning type	1882-present
		redware		red	1		c.1750-1900
		refined earthenware		white	2	blue transfer print one side	c.1780-early 20th C.
		stoneware		gray	1	brown slip exterior glaze; unglazed interior	1820-present
		stoneware		gray	1	clear glaze exterior	1720s-present
		stoneware	base	white	1	salt glazed	c.1720-1805
		whiteware		white	1		early 19th C.-1900+
		whiteware	base/rim	white	1		early 19th C.-1900+
		whiteware	rim	white	1		early 19th C.-1900+
					Sum for Ceramic (10 records) =	11	
28	Glass		bottle base	clear	1		
			curved	blue	1		1890s-1960s
			curved	clear	5		
			flat	clear	2		
			melted	clear	1		
					Sum for Glass (5 records) =	10	
28	Metal	copper alloy	handle?		1		
					Sum for Metal (1 record) =	1	
							Total Number of Artifacts for Context # 28 (16 records) = 22
29	Bone	faunal			2		
					Sum for Bone (1 record) =	2	

## MILL POND ARTIFACT INVENTORY

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Context #	Material	Identity	Form	Color	Count	Description	Date Range
29	Ceramic	ironstone		white	2	mends	early 19thC.-present
		pearlware		white	1		1779-1820+
		porcelain		white	3		
		redware		red	2		c.1750-1900
		refined earthenware		white	2	blue underglaze	c.1780-early 20th C.
		refined earthenware		white	1	flow blue	c.1830-c.1920
		refined earthenware	rim	white	1	brown stippled transfer print interior	1840-c.1860
		refined earthenware	rim	white	1	spall with blue edge	c.1780-early 20th C.
		whiteware		white	2		early 19th C.-1900+
Sum for Ceramic (9 records) = 15							
29	Glass		bottle base	aqua	1	molded	1860-present
			curved	green	1		
			milk glass	white	1		1890s-1960s+
Sum for Glass (3 records) = 3							
29	Metal	iron	nail		1	whole; 3" long; badly corroded	
Sum for Metal (1 record) = 1							
Total Number of Artifacts for Context # 29 (14 records) = 21							
30	Ceramic	ironstone	base	white	1		early 19thC.-present
		ironstone	rim	white	1		early 19thC.-present
		ironstone	rim	white	1	molded with impressed design	early 19thC.-present
		porcelain		white	1		
		redware	tile?	red	1	clear glaze one side	c.1750-1900+
		refined earthenware		white	3	blue transfer print one side	c.1780-early 20th C.
		refined earthenware	rim	white	1	blue transfer print; geometric pattern	c.1780-early 20th C.
		refined earthenware	rim	white	5	mends; blue transfer print; geometric pattern at edge; leaf pattern toward center	c.1780-early 20th C.
		whiteware		white	6		early 19th C.-1900+
		whiteware	base	white	1		early 19th C.-1900+
		whiteware	base	white	2	mends	early 19th C.-1900+
		whiteware	rim	white	1		early 19th C.-1900+
Sum for Ceramic (12 records) = 24							

MILL POND ARTIFACT INVENTORY

Context #	Material	Identity	Form	Color	Count	Description	Date Range
30	Cinder				1		
					Sum for Cinder (1 record) = 1		
30	Glass		curved	dark green	1		
					Sum for Glass (1 record) = 1		
Total Number of Artifacts for Context # 30 (14 records) = 26							
31	Ceramic	ironstone	base/rim	white	8	mends; molded marley decoration; impressed mark "...DEN..A..." SHAPE" encircled with an English registry mark with "21" on right, "5" on bottom	1861
		ironstone	rim	white	1	same marley design as base/rim from this context	early 19thC.-present
		refined earthenware	rim	white	1	blue transfer print interior	c.1780-early 20th C.
					Sum for Ceramic (3 records) = 10		
31	Glass		curved	clear	1		
					Sum for Glass (1 record) = 1		
Total Number of Artifacts for Context # 31 (4 records) = 11							
32	Bone	faunal	rib		1		
					Sum for Bone (1 record) = 1		
32	Ceramic	pearlware		white	1		1779-1820+
		pearlware	base	white	1	scalloped edge	1779-1820+
		redware		red	1	clear glaze exterior; clear and manganese glaze on interior	c.1775-1900
		refined earthenware		white	1	blue transfer print interior	c.1780-early 20th C.
		whiteware		white	1		early 19th C.-1900+
		whiteware	base	white	1		early 19th C.-1900+
					Sum for Ceramic (6 records) = 6		
Total Number of Artifacts for Context # 32 (7 records) = 7							
33	Ceramic	whiteware		white	1		early 19th C.-1900+
					Sum for Ceramic (1 record) = 1		
Total Number of Artifacts for Context # 33 (1 record) = 1							
34	Metal	alloy	coin		1	nickel	1986
					Sum for Metal (1 record) = 1		
34	Plastic	bakelite	flat	white	1	ribbed one side; putty on one edge	1907-c.1940+
					Sum for Plastic (1 record) = 1		
Total Number of Artifacts for Context # 34 (2 records) = 2							
35	Ceramic	pearlware		white	1		1779-1820+

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
35	Ceramic	redware		red	1	brick fragment?	
		refined earthenware	rim	white	1	blue glaze one side	c.1780-early 20th C.
		Sum for Ceramic (3 records) = 3					
35	Glass		base	clear	1	machine made?	late 19th C.-present
		Sum for Glass (1 record) = 1					
Total Number of Artifacts for Context # 35 (4 records) = 4							
36	Ceramic	porcelain	rim	white	1		
		whiteware	base	white	1		early 19th C.-1900+
		Sum for Ceramic (2 records) = 2					
Total Number of Artifacts for Context # 36 (2 records) = 2							
37	Ceramic	ironstone	rim	white	1		early 19thC.-present
		stoneware	sewer pipe?	buff	1	dark glaze interior	
		Sum for Ceramic (2 records) = 2					
37	Glass		bottle base	clear	1	embossed "NEW JERSEY...RK" around edge and "...TERED" across center	c.1890-present
			curved	amber	1		
			curved	clear	1	faceted exterior	1867-present
			curved	green	1	heavy patina	
			rim	blue	2	molded feather pattern on one side	1867-present
		Sum for Glass (5 records) = 6					
Total Number of Artifacts for Context # 37 (7 records) = 8							
38	Ceramic	earthenware		buff	1	clear glaze exterior; Albany slip interior	c.1800-early 20th C.
		redware		red	1	spall; clear glaze one side	c.1750-1900+
		redware	base	red	1	manganese glaze interior	1775-1900
Sum for Ceramic (3 records) = 3							
38	Glass		bottle finish	clear	1	soda type; machine made	late 19th C.-present
			curved	amber	1	mold seam	1867-present
Sum for Glass (2 records) = 2							
38	Metal	iron	hardware		1	1120 grams; possible large hinge; extremely corroded	
		iron	hardware		1	75 grams; possible handle; 3" long; extremely corroded	
Sum for Metal (2 records) = 2							
Total Number of Artifacts for Context # 38 (7 records) = 7							

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
39	Ceramic	redware	rim	red	1	clear glaze	1820-1900
					Sum for Ceramic (1 record) =	1	
					Total Number of Artifacts for Context # 39 (1 record) =	1	
40	Stone		scraper?		1	1-3/4" long	
					Sum for Stone (1 record) =	1	
					Total Number of Artifacts for Context # 40 (1 record) =	1	
41	Ceramic	kaolin	smoking pipe bow	white	1	burned interior	
		kaolin	smoking pipe stem	white	1		
		redware	base	red	1	glazed one side; corroded iron adhesion	c.1750-1900+
		whiteware		white	2		early 19th C.-1900+
					Sum for Ceramic (4 records) =	5	
41	Glass		rim	clear	1	mold seam below edge; possible cross mend with context 42	1867-present
					Sum for Glass (1 record) =	1	
					Total Number of Artifacts for Context # 41 (5 records) =	6	
42	Ceramic	refined earthenware	rim	white	1	blue transfer print	c.1780-early 20th C.
					Sum for Ceramic (1 record) =	1	
42	Glass		rim	clear	1	mold seam below edge; possible cross mend with context 41	1867-present
					Sum for Glass (1 record) =	1	
42	Stone	chert ?	core?		1		
					Sum for Stone (1 record) =	1	
					Total Number of Artifacts for Context # 42 (3 records) =	3	
43	Ceramic	redware		red	1	spall; clear glaze	c.1800-1900
		redware	rim	red	1	spall; clear glaze	c.1800-1900
					Sum for Ceramic (2 records) =	2	
43	Glass		bottle base	clear	1	molded; embossed "QUA".../30"	c.1890-present
			flat	dark green	1	1/4" thick	
					Sum for Glass (2 records) =	2	
					Total Number of Artifacts for Context # 43 (4 records) =	4	
44	Ceramic	white granite	base	white	1		1840s-c.1900
					Sum for Ceramic (1 record) =	1	
44	Metal	aluminum	cap		1	5/16" diameter with 3/16" x 1/16" cut-out	
					Sum for Metal (1 record) =	1	
					Total Number of Artifacts for Context # 44 (2 records) =	2	

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
45	Ceramic		brick	red	1	fragment	
		refined earthenware	rim	white	1	blue transfer print	c.1780-early 20th C.
					Sum for Ceramic (2 records) = 2		
45	Coal			black	7	15 grams	
					Sum for Coal (1 record) = 7		
45	Shell		oyster		22	15 grams; small fragments	
					Sum for Shell (1 record) = 22		
45	Wood		cut		4	<5 grams; 2 are mends of 1/4" thick x 3/4" wide; 2 frags are 5/16" thick	
					Sum for Wood (1 record) = 4		
					Total Number of Artifacts for Context # 45 (5 records) = 35		
46	Ceramic	kaolin	smoking pipe stem	white	1		
					Sum for Ceramic (1 record) = 1		
					Total Number of Artifacts for Context # 46 (1 record) = 1		
47	Ceramic	pearlware		white	1		1779-1820+
					Sum for Ceramic (1 record) = 1		
47	Metal		nail		1	whole; square shank; 2-1/2" long	1798-c.1890
					Sum for Metal (1 record) = 1		
					Total Number of Artifacts for Context # 47 (2 records) = 2		
48	Ceramic	kaolin	smoking pipe stem	white	1		
		pearlware		white	1		1779-1820+
		pearlware		white	1	blue transfer print	1795-1840
		redware	flower pot base	red	1		c.1725-present
		redware	rim	red	1	manganese glaze	c.1800-1900
		whiteware		white	1		early 19th C.-1900+
					Sum for Ceramic (6 records) = 6		
48	Glass	milk glass		white	2		1890s-1960s+
					Sum for Glass (1 record) = 2		
					Total Number of Artifacts for Context # 48 (7 records) = 8		
49	Ceramic	hotelware		white	1		1880s-1940s
		pearlware	base	white	1		1779-1820+
		redware	handle	red	1	manganese glaze both sides	1775-1900
		redware	rim	red	1	manganese glaze both sides	1775-1900

**MILL POND ARTIFACT INVENTORY**

Context #	Material	Identity	Form	Color	Count	Description	Date Range
49	Ceramic	refined earthenware		white	2	blue transfer print	c.1780-early 20th C.
		refined earthenware		white	1	brown stippled print	1840-c.1860
		refined earthenware	rim	white	1	blue transfer print	c.1780-early 20th C.
					Sum for Ceramic (7 records) =	8	
49	Metal		latch		1	2-1/4' long	
					Sum for Metal (1 record) =	1	
					Total Number of Artifacts for Context # 49 (8 records) =	9	
50	Ceramic	refined earthenware	rim	white	1	polychrome; hand painted green & red dots & brown line	1820s-c.1860
		whiteware	lid?	white	1		early 19th C.-1900+
					Sum for Ceramic (2 records) =	2	
					Total Number of Artifacts for Context # 50 (2 records) =	2	
<b>Total Artifacts Recovered</b>						380	

ARTIFACTS RECOVERED FROM FILL CONTEXTS  
 AT HISTORIC RICHMOND TOWN  
 DURING ARCHAEOLOGICAL EXCAVATIONS  
 PLACED IN THE BASEMENT OF THE TREASURE HOUSE

DATE RECOVERED	LOCATION FOUND	ARTIFACTS
10/9/02	South of Dunn's Mill under sod layer	Salt shaker base, c. 1.5 inches diameter
10/17/02	South of Dunn's Mill in fill	Plastic bus, red "CITY BUS CO/RENWAL PRODUCT #124/MADE IN USA
		Lamp tin, metal
		Ceramic frag., porcelain, Chinese pattern
		Ceramic frag., salt glaze yellowware
		Tin plate, partial
		Pie pan, metal, c. 6 inch diameter
10/22/02	Near Kruser-Finley house in fill	Bone frag.
		Ceramic rim, transfer print
		Ceramic sherd, redware
		Ceramic frag, white body ware, plate
		Ceramic frag, white body ware, scallop edge base
		Ceramic frag, white body ware, base
		Ceramic frag, white body ware
	South of east corner of Dunn's Mill in fill	Bottle, whole, green, molded "J.A. LARKIN/PR/SI, hand tooled lip
		Flask base, light green
		Bag with fragments of bone, glass & ceramic
10/24/02	From Refreshment stand	24 whole beverage bottles
		Whole bottle, with straight sides
		Bottle frag., "The Hadkins B.../...TTENVIL..."
		Wheel drum, metal
	North of Town Bridge, east of Arthur Kill Road	Milk bottle neck, "QUALITY TRADE/BORDEN"
		Ash tray?, glass
		Bottle frag., medicine type, "...EW YO.."
		Bottle frag., "...N HO.." or "...OH N.."
		Shoes, leather, 2 large and 1 small
		Milk glass lid
		Bottle, medicine type "...NIML.."
		Bottle frag., amber
		Bottle base half, blue green
		Bottle base, clear "ILLE/..Y.." and logo design