An Archaeological Evaluation of the Greenwich Mews Project Site in New York City's Greenwich Village Historic District

Prepared for Proposition: Architecture PC

Prepared by Joan H. Geismar, Ph.D.

December 15, 1986
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Plate 3. courtesy of Proposition:Architecture PC; all other photos by Joan H. Geismar

ACKNOWLEDGMENTS
ABSTRACT

The Greenwich Mews project site, located in the Greenwich Village Historic District, was developed in the nineteenth century as a middle- or working-class enclave. Its archaeological potential does not relate to famous people or historical events, but to the urbanizing process. Since information from borings was inconclusive about site preservation, testing is recommended where proposed construction will impact two yard areas. If viable features or deposits are found, sampling and mapping may determine when city services, such as piped in water and sewage disposal, were adopted. It might also provide information about early- to late-nineteenth century vernacular commercial structures. The recommended field phase would follow demolition of the abandoned freight terminal currently on the site. This limited investigation could provide invaluable data about social and economic factors that concern the growth of the city and are only obtainable through archaeological investigation.
INTRODUCTORY SUMMARY AND RECOMMENDATIONS

Introduction

This report presents an evaluation of the historical and archaeological potential of the Greenwich Mews development site (Block 630, Lots 34 and 36) located on the southwestern periphery of the Greenwich Village Historic District, New York City's first landmarked historic district (Figures 1 and 2).

A mews complex is planned comprising seven three- and one four-story, basemented, single family dwellings (Figure 3) that will incorporate underground parking. This report was prepared for the architects, Proposition:Architecture PC, on behalf of Greenwich Street Associates, the site's developer, in anticipation of a permit review required for the parking facility.

Site Description

Comprising 9,827 square ft. in two lots, the site is irregularly shaped: approximately 26 ft. of Lot 34 (258 West 10th Street) front the south side of West 10th Street and 82 ft. of Lots 34 and 36 (687 to 693 Greenwich Street) run along the east side of Greenwich street. At this writing, an abandoned freight terminal building occupies the site. With the exception of a small, second-story extension, it is a one-story, basementless structure with loading docks and platforms large enough and high enough to accommodate trailer trucks. One part faces West 10th and another Greenwich Street (Figure 4 and Plates 1-2).

A paved lot north of the site forms the southeast corner of the West 10th and Greenwich Street intersection. Just east of this lot, creating a division between the Greenwich Street
GREENWICH MEWS General Project Location

based on Dept. of City Planning Map, 1982

- project location, approx.
GREENWICH MEWS Project Site

- project site
- one-story freight terminal
- two-story extension

West 10th St.
Christopher St.

0 40 feet
GREENWICH MEWS  Proposed Mews Development

courtesy of Proposition: Architecture PC
Plate 1. View of abandoned freight terminal on Greenwich Street (693-687 Greenwich Street) looking southeast from corner of Greenwich and West 10th Streets. To right is PATH power station and to left rear is 1934 warehouse converted into apartments. Cars are parked where a house built in about 1820 by Richard Amos stood until 1915; this lot, just beyond the project site, has been vacant since the building was demolished (photo: 6/86).

Plate 2. View of abandoned freight terminal entrance on West 10th Street (258 West 10th Street), formerly the site of a 5-story tenement built in 1886 (photo: 6/86).
and West 10th Street portions of the site, is a five-story, L-shaped building originally constructed as a warehouse but now converted into apartments. To the south is a power station erected in 1907 for the PATH system that links New Jersey and Manhattan; a passenger station for this line is located around the corner from the site on Christopher Street. Just beyond the power station is a renovated brick building that is the sole survivor of houses built on the site and adjacent Greenwich Street lots between 1844 and 1845 (Plate 3).

Historical Summary

The little suburban village of Greenwich was where those who could afford to periodically chose to escape the Yellow Fever epidemics that plagued the city late in the eighteenth century and into the first quarter of the nineteenth. It was here, in upper Greenwich, just northwest of the project site, that New York's first State Prison was opened in 1797. By the middle of the nineteenth century, the project area had become part of a middle- or working-class enclave with a commercial element along the river just to the west.

Over time, the surface of the project site has been sufficiently disturbed to eliminate evidence for any prehistoric use or occupation (this could include leveling a hill that may have crossed the site). Historically, it was farmland once included in the vast country estate of Sir Peter Warren, a British admiral who acquired this land and a preexisting dwelling in the 1740s (ultimately, he owned most of what would become Greenwich Village). His house, which was demolished more than a
Plate 3. Aerial view of project site looking east with Greenwich Street in the foreground and West 10th Street to the left. To the right of the terminal that now occupies the project site is the power station for the PATH trains (1907). South of this building is 691 Greenwich Street, the sole survivor of six row houses built in 1844-1845 (681-691 Greenwich Street). Left of the terminal on West 10th Street is a renovated warehouse and beyond it, but not visible (arrow), at 258 West 10th Street is the freight terminal entrance shown on Plate 2 (photo courtesy of Proposition: Architecture PC.)
century ago, stood northeast of the project area on the block now bounded by Bleecker, Fourth, Charles, and Perry Streets (see Plate 4). Although land that included the project block was bought by Richard Amos in 1788, and although he ultimately owned houses on the corners of both Amos (West 10th) and Christopher Streets, most of the project site remained undeveloped until the 1840s.

Amos lived on the site block at the corner of Christopher and Greenwich Streets for at least the last two decades of his life. At his death in 1836, his estate, which included holdings beyond the project area, was divided between his widow and children. His wife, Elizabeth, and daughter, Mary Hooker, inherited the project site lots. After Elizabeth's death in 1843, her Greenwich Street lots, among them what would now be numbers 687 to 691, were sold and developed while what became 258 West 10th Street and 693 Greenwich Street were retained by Mary Hooker. By 1845, the structures on the site included a store or shed erected at 258 West 10th, a shed that apparently functioned as a shop, and other commercial buildings at 693 Greenwich Street (these or similar structures had been built on this lot by 1829), and three three-story rental properties at 687-691 Greenwich Street, at least two of them multi-family dwellings.

After 1850, a three-story rental structure was built on the 258 West 10th Street lot. This may have been replaced briefly by sheds, but records indicate that in 1886, a five-story tenement was erected on the lot. Even earlier, probably by 1877, a four-story tenement had been built at 693 Greenwich
Street. These three-, four-, and five-story buildings stood on the site until 1938. In 1945-1946, the freight terminal and loading docks currently occupying the site were constructed. By this time, all of the site lots had been at least minimally disturbed.

**Conclusions and Recommendations**

The project site was not where the rich and famous chose to live, nor apparently did it have a history of long-term residence. Therefore, rather than providing insight into historical events, the lives of famous people, or even the daily life of a particular family, its significance relates to the broader question of urban development.

Site records provide an economic and social picture, documenting a history of transient occupation by middle and working class people. Because recent site development has been relatively non-intrusive, what may remain in former backyard areas are remnants of vernacular commercial structures once located at 693 Greenwich Street and information about the introduction of city services to this district. Intensive, site-specific research has revealed both issues can be addressed only through archaeological testing. In this instance, it is information that could be amassed quickly during a short, finite testing program.

While building plans for the site as well as information about the introduction of city services to individual properties are almost nonexistent, records were found that document installation of minimal sanitation by 1913. These data also suggest
what earlier conditions may have been. Establishing when these facilities were introduced relates to documenting the economic and social development of the city, an ongoing research question in New York City archaeology and history. Two sections of the site's former backyard area that will be impacted by the proposed construction may provide some answers to these questions and are the focus of the limited testing program proposed for the site (see Figure 14).

Testing the backyards of what were formerly three-story houses at 687 and 689 Greenwich Street is recommended to determine when city services were available or adopted. It was here, where subsequent disturbance through construction appears minimal, that privies undoubtedly were located when the buildings formerly on the site were erected in 1844-1845. Currently, four town houses are planned on these two lots, one of them situated in the yard area. Testing and sampling in this area could establish when privies were no longer used and therefore when municipal services were adopted.

Another area of concern focuses on approximately 200 sq. ft. of Lot 34 (693 Greenwich Street) that functioned as a yard for the tenant house built in 1877. Over the years this yard was encroached upon until only its rear portion remained undeveloped. Beginning in 1829 until the apartment house was erected, tax records document small, commercial structures on this part of the lot. Continuously sampled but limited borings recently undertaken in this part of the site were inconclusive in terms of archaeological preservation.
Since a building now covers the former backyard area of the site, testing would have to follow its demolition. It is recommended that once the freight terminal building is demolished and the debris removed, a day be allotted to backhoe and shovel clearing the two areas of concern and to locating the sought after features. Should they be found, it is anticipated field archaeologists will require an additional four days to sample and record them. Given the research questions and site conditions, this limited investigation is expected to be sufficient to test the site’s archaeological potential and mitigate the impact of construction.

The findings and recommendations presented here are based on the detailed, documented information offered in the following sections.

SITE DEVELOPMENT

Introduction

Two aspects of the site's development are considered here: the possibility of Native American occupation in the project area before European contact and the historic or post-contact period. The prehistoric period in the metropolitan New York area includes the millennia of sparse aboriginal use that began with the retreat of the last glacier about 10,000 to 12,000 years ago; the historical period encompasses approximately three and half centuries and brings us to the present.

For the prehistoric period, there is limited archaeological literature from the early part of this century that documents Native American activity within one-half mile of the site but not on the site itself. Numerous sources provided
material to reconstruct the site and project area's historical development, a development that represents a facet of New York City's evolution into a major urban center. These include the records of several city agencies (for example, the City Register's Office for deed information and the Water Register's Office for data on water supply) and the collections of the Municipal Archives, the Borough of Manhattan President's Office (Topographic Bureau), the New York Historical Society, the New York Public Library, the New York Society Library, and the personal collection of the author.

Native American Site Considerations

As noted above, most of the archaeological literature dealing with Manhattan's prehistory dates from the beginning of the twentieth century. This was a time when the city's development was intensifying, roads were being graded on the northern part of the island that exposed Native American sites, and an interest in archaeology was growing.

People such as William Louis Calver, Alanson Skinner, and Reginald Pelham Bolton were excavating sites and compiling what amounts to the only documented evidence we have for Manhattan's prehistoric and early-historic aboriginal period. Mainly, this comprises isolated stone tools or ceramics or undated campsites and seasonal camps, the latter often with shell deposits (the trash from ancient meals often mixed with debris and human or animal burials) as their main components. As noted above, because of development occurring at the time, most of these finds were made in northern Manhattan (Skinner 1915:51).
By 1920, Bolton had used historical references to reconstruct the major routes established by Native Americans to traverse Manhattan from end to end and from side to side. One of these east-west paths was apparently located at present day Gansevoort Street, less than one-half mile north of the Greenwich Mews site. This was where Native Americans from the New Jersey mainland may have docked their canoes (Bolton 1920:303). From here, a path apparently led eastward to join the major inland route that connected the southern tip of Manhattan with Spuyten Duyvil and the mainland to the north (Bolton 1922:Map I; Figure 5 this report).

No shell heaps or middens (garbage deposits) or Native American implements are documented in the immediate site area which was neither on the shore of a major body of water—in this case the Hudson River—nor close to fresh water, two prime factors in aboriginal site location. Moreover, some early maps as well as a reconstruction of the project area’s natural terrain suggest a flat meadowland (Figure 6; see also Figure 8), a topography not typically chosen for campsites. Skinner does note, however, that a settlement was supposed to have been situated at "Sappokanican" near the Gansevoort Market as late as 1661 (this nineteenth-century market was located on a block bounded by West, Little West 12th, Gansevoort, and Washington Streets [Stokes III 1918: 959]). Sappokanican apparently meant "tobacco field" and was the Native American name some felt applied to the area known since English times as Greenwich Village (Skinner 1915:51-52). Skinner cites this as the name for all the land...
GREENWICH MEWS  Indian Paths on Manhattan

based on Bolton 1922, Map I

● Sapohanikan
〇 project site, approx.
between the North or Hudson River and Manetta Water, also known
as Bestavaar's Kill (see Figure 8).

Had it been a hill or bluff rather than the flat meadow-
land depicted on the Viele reconstruction or the Ratzer Map of
1767, the site might have been attractive to Native American
hunters, perhaps as a campsite where game could be spotted. A
mid-nineteenth-century report notes that a hill was leveled that
rose north of Christopher Street and crossed between Hudson and
Greenwich Streets, a location that might have included the
project site (Citizens Association Report [hereafter CAR] 1866:
177). However, the Goerck and Mangin map of 1803 (Figure 7),
indicates this hill may have run just east of the site. If the
project site was adjacent to a leveled hill, it undoubtedly
would have been drastically altered and disturbed by the level-
ing activities. If, on the other hand, it was a flat, unwatered
meadowland as depicted on the Viele and Ratzer maps, a terrain
that suggests only an isolated tool or projectile point lost in
the hunt might be the concern, these artifacts would not have
survived subsequent development. In either case, prehistoric or
early historic Native American deposits or artifacts are not an
issue in the planned development.

Historical Considerations

The site is situated within the southwestern limits of
the Greenwich Village Historic District (see Figure 2), the
largest, most heterogeneous landmarked district in the city
(Goldstone and Dalyrmple 1976:150). In 1750, this part of Man-
hattan was a collection of country seats belonging to illus-
note hill east of project area; this is not found on Viele (Figure 6) and Ratzer (Figure 8). Number 34 on this map is the State Prison built 1796-1797.
trious British Colonial families such as the Warrens and the De Lanceys (DeVoe 1862:400). It was a section of the island noted for its healthful aspect (e.g., CAR 1865:116), and it became a respite for the wealthy from the summer yellow fever epidemics that first struck the city in the late 1790s and intermittently returned during the first quarter of the nineteenth century (e.g., CAR 1866:116).

By the mid-eighteenth century, almost all the land now included in Greenwich Village belonged to Sir Peter Warren, an admiral in the British Navy. Between 1731, the year he married Susanah De Lancey, a member of one of Colonial New York's most prominent families, and 1746, the year he left New York for good, Warren had acquired his farm in parcels (Stokes VI 1928:166-169).

The project site is located in a parcel designated D in the reconstruction of original farms and grants presented in Stokes' Iconography of Manhattan Island. This portion of Warren's property has been traced back to Edward Wilson and Francois Listley (Leslie) who received it before 1638 from Wooter Van Twiller, then the Dutch Governor (Stokes VI 1928:164). At that time it was land located at "Saphackenican", the Sappokanican" noted by Skinner in 1915 (see the Prehistoric section above). This undeveloped land, also called Bossen Bow-erie, changed hands several times before Warren acquired it from James Henderson in 1744 (Stokes VI 1928:167).

Although Stokes first reported that Warren built his mansion just northeast of the project site in 1740 (Stokes III
I 1918:866), subsequent research caused him to revise this view. It appears that James Henderson--in some documents a merchant, in others a physician--acquired this 23-morgan parcel in 1726 through a deed of partition; about the same time, he built what later became known as the Warren mansion (Stokes VI 1928:166).

While the ownership review in Stokes notes several seventeenth-century homesteads within what became Warren's holding, none are documented on the project site. Through the early-nineteenth century, the nearest building was Warren's mansion located on the block later bounded by Perry, Fourth, Bleecker, and Charles Streets (Bussing 1907; see Plate 4 this report). Abraham Van Ness (or Nest [?]), a merchant, acquired it in 1819; the building was demolished in 1865, a year after he died (Stokes III 1918:866).

Warren died in England in 1752, and after his wife's death, his property was divided between his three daughters in 1768. Just prior to its division and settlement, it is shown on the 1767 Ratzer map as the Estate of Lady Warren (Figure 8). In the settlement, the portion that included the Warren mansion and extended south to Christopher Street went to Charlotte Willoughby, the wife of the Earl of Abingdon, for whom Abingdon Square is named. Another daughter married William Skinner, and Skinner Road, now Christopher Street, was named for him; the third married Charles Fitzroy, later the Baron Southampton. Fitzroy Road, apparently another name for Greenwich Lane, was named in his honor (see Figure 9 this report).

In 1788, Charlotte's inheritance was sold to Richard Amos, listed as a gardener in the deed between him and Willough-
Plate 4. 1854 view of the Warren Mansion then bounded by Bleecker, Fourth, Charles, and Perry Streets. The building was originally erected about 1726 and became Sir Peter Warren's country home in 1744, two years before he left America for good. The building was demolished in 1865 (engraving from Valentine's Manual 1854).
site location, approx.

note Bestavaar's Kill (arrow) or Manetta Brook, the southern limit of Greenwich Village
project site location, approx.

State Prison
by's agent (Liber of Deeds [LD] 53 1788:1-5). At the time of
the Amos purchase, eight years were left on a twenty-one year
lease; it was not until 1796, when this lease expired, that Amos
recorded his deed for the nine acres that included the project
site.

By 1817, Amos had divided this purchase into lots (Corn-
ing 1817) apparently in anticipation of development. The earli-
est tax record indicating Amos owned a house in the project area
dates from 1815, but its location is vague (Ninth Ward Tax Rolls
[NWTR] 1815). However, according to information found in the
Minutes of the Common Council (MCC), by 1807 he apparently had
built a dwelling on what became the project block. Two years
later, when he granted the city land to run streets through his
property, he stipulated that "the old building he has now
erected the corner of which will be in Greenwich Street" would
be undisturbed for five years (MCC V 1930:760). By 1816, he had
apparently moved to the northeast corner of Greenwich and
Christopher Streets where he lived until his death in 1836 (NY

Amos's will devised the property that became the project
site to his widow, Elizabeth, and his daughter, Mary Hooker who
had formerly been married to a man named Charles Fleming. Other
property in the project area and beyond went to his numerous
sons, daughters, widowed sons-in-law, and grandchildren. Of his
two surviving sons, only Samuel, a boatman, remained in New York
City and lived on Washington Street property inherited from his
father (LW 76:200; NY Directories 1839-42); Richard Amos, Jr.,
had apparently moved to the family farm in Bergen County before his father's will was proved (LW 76:207).

Amos's widow inherited the homestead at the corner of Christopher and Greenwich Streets as well as six vacant lots along Greenwich Street (NWTR 1836-1844), three of them now part of the project site. Mary Hooker inherited four lots that comprised the southeast corner of Amos (it did not become West 10th Street until 1858) and Greenwich Streets. At this time, a house that was a rental property stood on the corner beyond the project site and a commercial "shed", also a rental property, was located on the adjoining lot that became 693 Greenwich Street and is now part of project Lot 36. According to tax records, the house had been erected by 1820 and the shed (actually probably a shop) by 1829 (NWTR 1820-1829).

After Elizabeth's death in 1843, her Greenwich Street house and lots were sold to Thomas and Lewis Radford, New York City grocers (LD 451:123-126). By 1844 or 1845, they had built a row of six three-story houses as rental properties (see Plate 5); beginning in 1851, Thomas Radford lived around the corner at 137 Christopher Street (NY Directory 1851). On Mary Hooker's Amos Street Lot (later either 258 or 260 West 10th Street), a commercial shed was built by 1844 (NWTR 1844); changing street numbers make the location of this structure somewhat vague, but

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1This documentation refutes information in the Greenwich Village Historic District Designation report indicating that early-Federal buildings occupied two of these lots and the Amos homestead was at 685 Greenwich Street in the middle of the block (Bailey 1969:234).
Plate 5. 681 Greenwich Street, the sole survivor of six row houses built in 1844-1845. The front stoop has been removed and a skylight top floor added. The entrance is now at 137a Christopher Street. The PATH power station is to the left and a 3-story structure that replaced Richard Amos' homestead in 1900 is to the right at the corner of Greenwich and Christopher Streets (photo: 6/86).
it appears to be the project lot on West 10th Street (for example, see Plates 6-8). By 1859, this shed was replaced by a three-story rental structure (NWTR 1859).

Although the row houses built by the Radfords may have been intended for single family use, by 1851 all but one on the project site were multiple-occupancy. This and a pattern of transiency are documented in city directories and the 1850 census manuscript (Table 1). For example, the census manuscript lists five families and the 1851 Street Directory (Doggett 1851) four at 691 (later 687) Greenwich Street. (It should be noted that Doggett's 1851 Street Directory is the only city directory listed by street and number rather than by surnames.) Two families are listed in the 1850 census and six in the Street Directory for the building on the corner of Greenwich and Amos Streets inherited by Mary Hooker. However, some of these occupants may have been located on the adjoining project-site lot that does not appear to have a street address in 1851 (Doggett lists eight addresses for nine lots). By 1854, when it had become 693 Greenwich Street [see Plate 7], all the occupants documented in 1850-1851 had moved.

By 1913, two of the three Radford row houses on the project lots were no longer apartments but furnished rooms (Water Register's Records [WRR] 1913): at 687 Greenwich Street there were thirteen furnished rooms serviced by a single water closet or toilet in the yard; at 691 there were eleven rooms and a basement apartment with one water closet or toilet also in the basement. The other row house (689 Greenwich) within the pro-
Plate 6. This 1852 Dripps map shows the mid-nineteenth century site development. Note the six rowhouses on Greenwich Street and a small structure (a shop?) on the first lot from the corner of Amos (West 10th) and Greenwich Streets. At this time, a 3-story structure stood at what became 258 Amos Street, part of the project site (note: the project block is defined by a dashed line; New York Public Library Map Division).
Plate 7. 1854 Perris map showing Greenwich Street numbered as it is today. The row houses that extended from 681 to 691 were brick with frame extensions. Note three frame buildings at 693 Greenwich Street, two in front may have been dwellings with stores, or just stores; the rear frame building is depicted as as a dwelling, but according to census data from 1850, no families are listed here. Frame buildings on the project site are indicated with an F, brick with a B. (New York Public Library Map Division)

Plate 8. 1859 Perris map shows almost the same configuration as the earlier version. A variation is found at 693 Greenwich Street where the size and situation of the three frame structures on the lot have changed (New York Public Library Map Division).
Table 1. GREENWICH MEWS PROJECT Occupants of 695-687 Greenwich Street 1850-1851 (Based on the 1850 Census, Doggett's 1851 Street Directory, and the New York Directories 1844-1854)

<table>
<thead>
<tr>
<th>Modern Address</th>
<th>695 Greenwich</th>
<th>693 Greenwich</th>
<th>691 Greenwich</th>
<th>689 Greenwich</th>
<th>687 Greenwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850-1852 Address</td>
<td>699 Greenwich</td>
<td>no address</td>
<td>697 Greenwich</td>
<td>695 Greenwich</td>
<td>693 Greenwich</td>
</tr>
</tbody>
</table>

Family Name and Occupation (1850 Census)

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<th>Modern Address</th>
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<th>693 Greenwich</th>
<th>691 Greenwich</th>
<th>689 Greenwich</th>
<th>687 Greenwich</th>
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<tbody>
<tr>
<td>1850-1852 Address</td>
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<td>no address</td>
<td>697 Greenwich</td>
<td>695 Greenwich</td>
<td>693 Greenwich</td>
</tr>
</tbody>
</table>

Family Name and Occupation (1851 Street Directory)

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<th>Modern Address</th>
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<th>693 Greenwich</th>
<th>691 Greenwich</th>
<th>689 Greenwich</th>
<th>687 Greenwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850-1852 Address</td>
<td>699 Greenwich</td>
<td>no address</td>
<td>697 Greenwich</td>
<td>695 Greenwich</td>
<td>693 Greenwich</td>
</tr>
</tbody>
</table>

Length of occupation in years is taken from the NY Directories and shown in parentheses; (f) represents a short occupation indicated only in the 1851 Street Directory.

*This lot is just north of the project site at the southeast corner of Greenwich and West 10th; it is included here (without length of occupancy) since it is likely that several occupants listed in the 1851 Street Directory were actually at modern 693 Greenwich Street, a project lot, but one which had no address in the directory (8 addresses are listed for 9 lots).

**Welsh and his wife were apparently living in the Josephs household; he is not found in the 1851 Street Directory.
ject site was a two-family dwelling with one water closet or toilet in the yard and another on the second floor.

From its initial row house development in the 1840s, a constant turnover of site occupants is documented for the few years this information is available. Based on directory listings, John G. Davis was its most steadfast occupant in the mid-nineteenth century. Davis was a merchant who lived with his family at 695 (later 689) Greenwich Street for seven years (NY Directories 1845/46 to 1852/53). His neighbor and apparently his business associate, Samuel Furman, rented next door at 697 (later 691) Greenwich Street for six years. Both men were probably the first to lease and occupy their respective houses.

The 1851 Street Directory also lists a "David Hosack, candies" at Furman's address, suggesting there was a store beneath his dwelling (the 1850 census documents Hosack's household one block north on Greenwich Street). Based on directory information, other families living on the site in 1850-1851 remained for up to two years. Some occupations were so transient (see Table 1) they do not appear in the annual directories. It appears that multiple, transient occupancy was the norm on this block much as it was throughout Greenwich Village in the mid-nineteenth century (Spann 1984:109-110).

Both the Hooker and Radford properties remained family holdings for most of the nineteenth century. However, the Hooker property passed to succeeding generations through inheritance and was developed during the last quarter of the century. By 1877, this included a four-story tenement at 693
Greenwich Street (NWTR 1877-1879) and by 1886, a five-story apartment dwelling or tenement at 258 West 10th Street (New Building Application [NBA] 1885:1816-86; see Figure 10). All the buildings erected by 1886 endured into at least the second decade of the twentieth century, but over the years some were extended into backyard areas (compare Plate 9 and Figure 11).

In 1867, an experimental elevated railroad was introduced on Greenwich Street south of the site (Stokes IV 1923:1926). By 1870, an improved passenger line that undoubtedly changed the ambiance of the project area ran north to 30th Street; ultimately, as the Ninth Avenue Line, it ran from South Ferry to 155th Street. It has been noted that although elevated railroads aided transportation, they added blight to neighborhoods and turned their route-streets into dark, noisy eyesores (Delaney and Lockwood 1984:vi). In the project area this condition would have persisted for seventy years until demolition of the line in 1940 (NY Times 9/8/40; 10/8/40).

As noted above, two of the three-story row houses on the project site were converted into rooming houses at least by 1913; two others immediately to the south were replaced in 1907 by a power station for the PATH trains that link New York and New Jersey (NBA 1118-06). Currently, only one row house remains (681 Greenwich Street), and has been converted to apartments and an architect's office with its entrance on Christopher Street (see Plate 5). The Amos homestead on the northeast corner of Christopher and Greenwich Streets, also beyond the project site, was replaced at the turn of the century by a three-story building that still stands (NBA 411-00).
While its accuracy may be questionable, this rendering suggests the kind of development that occurred on the site block and in the general site area by the late-1870s. Note the large building beyond the row houses on Greenwich Street on the site block which undoubtedly represents the 4-story tenant building constructed in 1877. Also note the entrance off Christopher Street to the block's yard area and interior buildings. An elevated line is shown on Greenwich Street.
Plate 9. 1897 Bromley Atlas with the project block defined with a dashed line. Note the size of the yard behind the 4-story tenement at 693 Greenwich Street and compare it with Figure 11 (New York Public Library Map Division).
project site

backyards, 1934
The three-story frame structure built by Amos about 1820 on the corner of Greenwich and Amos Streets was still standing in 1913, but its upper floors had been vacant for years (WRR 1913). The building was finally demolished in 1915 (Demolition Permit [DP] 79-15) and the lot has remained undeveloped. Currently it is a paved parking area (see Plate 3; also see Figure 11 for the Greenwich Street building configuration in 1934).

The project site's nineteenth-century buildings were all torn down in 1938 (DP58-33, 61-33) and the low freight terminal now occupying the site was built in 1945. Plans for the terminal called for shallow support piers extended only 4 ft. below grade and a loading platform and first floor raised 3 ft. above grade (NBA 269-45). The terminal virtually wraps around a building (260 West 10th Street) that was originally a warehouse built in 1934 (NBA 93-34) and converted into apartments by 1975 (CO 17453; see Plates 1-3 and Figure 4).

THE STATE PRISON AND THE GREENWICH MARKET

Introduction

Eighteenth-century Greenwich was not entirely the home of the wealthy and famous, nor solely a health resort and refuge (Chapin 1917:51). Lower and upper Greenwich—the latter the location of the project site—were humbler offshoots, and the west village became a middle- and working-class enclave in the nineteenth century (e.g., Delaney and Lockwood 1984:iv; CAR 186 :120). It was here, just west of the project site, that two structures were built that both caused and were the result of the area's development: The State Prison that opened at the
foot of Amos Street in 1797 became an attraction; the Greenwich Market operating at the foot of Christopher Street in 1813 was a response to the needs of a growing population (an informal market had sprung up somewhere in this vicinity in 1806, but was removed almost immediately [DeVoe 1862:382-383]).

The State Prison

Originally two state prisons were planned, one at Albany the other at New York City but only the New York City facility was built, and its first prisoners were received in 1797 (Valentine 1853:161). Initially, the building and 204 ft. of its four-acre grounds fronted on Washington Street (see Figures 7 and 9), but over time this was added to, ultimately requiring land reclamation along the Hudson (Stokes I 1915:456). Surrounding the compound was a stone wall 23 ft. high on the river side and 14 ft. high on Washington Street (Valentine 1853:461), undoubtedly presenting a formidable appearance.

It appears that upper Greenwich was quite proud of this institution and it may actually have spurred development; ads for local hotels even used it as an enticement (e.g., Chapin 1917:52). Perhaps it is not totally coincidental that Richard Amos recorded his deed in 1796 (see Historical Considerations), the year construction of the prison began.

In 1829, the last prisoners were transferred to Sing-Sing (Stokes III 1923:973) and by 1847, within a few years of the construction of the three-story rental properties on the project block, the building became a brewery (NY Directories 1847; see the Empire Brewery [Nash & Beadleston] on Plate 6). It
continued to function as a brewery well into the twentieth century (e.g., Hyde 1912:72).

The Greenwich Market

By 1813, the public Greenwich Market had opened on the south side of Christopher Street between Greenwich and Washington Streets. Initially planned a few blocks north at modern Perry (formerly Henry) Street, Trinity Church ceded land for the Christopher Street site with the stipulation that when the market closed it would revert back to the church (DeVoe 1862:399).

During its twenty-two-year operation, the market was enlarged twice, in 1819 when a cellar was added and again in 1828 (DeVoe 1862:401-402). An 1825 plan of the market has been located that shows seventeen stalls and three cellar entrances as well as steps on Washington Street and a plaza on Greenwich (Figure 12).

It has been noted that business was generally good at this upper Greenwich location, particularly in the summer when the population seasonally increased, and the market continued to flourish until 1832. After this, a slackened business was compounded by the opening of the Jefferson Street Market to the northeast at Sixth Avenue and Greenwich Lane (Greenwich Avenue) in 1833. Two years later, age and neglect prompted the closing of the Greenwich Market, but to keep the property from reverting back to the Church, it was to be paved and appropriated as a market (DeVoe 1862:403). By the end of the century it had become the site of the U.S. Appraiser's Offices and Sample Stores which served a customs-related function (King 1984:787). This
GREENWICH MEWS 1825 Manuscript Map of the Greenwich Market

Washington St.

Christopher St.

Smith, 1825

no scale indicated
building is currently being considered for renovation into apartments.

THE INTRODUCTION OF CITY SERVICES RELATED TO THE SITE'S ARCHAEOLOGICAL POTENTIAL

Introduction

An ongoing research question in Manhattan's archaeological investigations pertains to the introduction of city services to the city's various districts and neighborhoods. For example, records for the 175 Water Street site in seaport area of lower Manhattan suggested privately piped in water was available by 1820 or earlier and that city sewers were in place by 1855. However, archaeological evidence indicated that cisterns were used for private water collection through the 1860s and privies even longer, some of them until the turn of the century (Geismar 1985).

Intensive research suggests when City services were theoretically available in the project area; however, as was found at 175 Water Street, availability does not necessarily mean adoption. Unfortunately, it appears to be impossible to pinpoint when these amenities were introduced into the project site through research alone.

Research Findings

The Croton Water system that still supplies the city's water was initiated in 1842 (e.g., Anon. 1917:63). As early as 1844, water pipes and street faucets may have been installed on Greenwich, Amos, and Christopher Streets as was apparently the
case throughout the city (Board of Aldermen: File 329). After water was available, sewers could be installed, and the 1857 annual report of the Croton Aqueduct Department (CAD) presents a listing of city sewers built prior to 1856. Among those listed are an Amos Street sewer installed between Fourth Street and the Hudson River in September, 1853, and a Christopher Street sewer installed between Greenwich Avenue and the river in March, 1853 (CAD 1857: 110, 118). There is none indicated for Greenwich Street (nor does a city sewer map list any), implying that sewage was probably ultimately removed from this part of the block through connection with one or both of the side street sewers.

In relation to these installations, an interesting social and economic aside is found in the petition for and the remonstrance against the Amos Street sewer in 1853. Reasons cited for wanting the sewer included damp cellars, the standing water in the street, and the inability to enjoy the benefits of the Croton water. Among the petitioners was Nash Beadleston, the owner of the brewery mentioned above that replaced the State Prison just north of the project area (Petition 1853; see Plate 6).

Objections raised against the sewer were that it "was not wanted, Necessity [sic] does not call for it, nor our comfort or convenience demand it;" moreover, it was felt the large Croton water pipe previously installed in the street precluded it. A more honest objection related to the taxes it would generate for property owners on Amos Street (apparently most of the signers were property owners who did not live on Amos Street) and the cross streets such as Hudson and Bleecker (and probably Green-
wich) where there were no connections. And finally, the class of houses did not "warrant or require the modern luxuries of bathing rooms and indoor conveniences that would make the construction of a sewer a necessity" (Remonstrance 1853). Among those signing the objection were Walter T. Fleming, Eliza J. Thorp, and A. Van Buren, all of them grandchildren of Richard Amos and property owners on Amos Street, but none of them living there.

Another clue as to when amenities were available or adopted again comes from a Croton Aqueduct Department Annual Report. In 1863, both Christopher and West 10th Streets at Greenwich still had street pumps in use (CAD 1864:100-102), suggesting piped in water was not yet common. On the other hand, the earliest water records available for the four-story building erected at 693 Greenwich Street in 1877, indicate cold running water and one toilet per floor by at least 1928; conceivably these amenities were part of the building's original design, but this remains a question. As noted previously, they also disclose that by 1913, and possibly before, some of the older row buildings had been converted into rooming houses where sanitary conditions were more primitive, providing only yard or basement toilets or water closets.

It appears that indoor plumbing was unavailable in the project area prior to 1853 and probably not until after 1863; it is also possible that yard privies were augmenting minimal indoor facilities in 1913 and perhaps even later. Sewerage in the general district was discussed in the 1865 Citizen's Association.
report and found to be defective in both quality and quantity, a circumstance prevailing throughout the city (CAR 1866:118), in some places this condition persisted into the twentieth century. However, based on documentation, just how late it lasted on the site and in the general project area remains an unknown. It is a research question that may be amenable to archaeological investigation.

**SUBSURFACE TESTING: BORING DATA**

In March of 1986, four borings were drilled by the Heller Drilling Co. to obtain subsurface data for construction purposes. Samples were recovered at 5-ft. intervals with one boring (B1) taken to 40 ft. and the others (B2 to B4) to 30 ft. None were taken to bedrock and all indicated an upper level of between 10 to 14 ft. of fill (see Appendix A). These borings, which were drilled before this archaeological evaluation was undertaken, were all located where mid- to late-nineteenth century buildings had stood (Figure 13). Consequently, additional testing to recover continuous samples in one backyard area was undertaken in September of 1986 (Appendix B).

The goal of the second testing program was to determine the conditions in a yard area where minimal disturbance caused by subsequent construction was anticipated. Since the abandoned freight terminal now occupying the site covers all the former yard areas, the efficacy of testing was questionable. However, a lightweight, tripod rig was used to sample three borings located within the freight terminal where a yard segment behind 693 Greenwich Street was located. This was where remnants of
GREENWICH MEWS PROJECT Boring Location Plan

- project site
- one-story freight terminal
- second-story extension
- approx. location of Borings B1-B4, April, 1986
- approx. combined location of Borings B1a-B3a, September, 1986
- rear building line, Greenwich St. buildings, 1934
early nineteenth-century commercial structures and later privies that could offer information about the introduction of city services might be located. It was also thought that testing here would ascertain general conditions beyond former building lines.

Borings B1a to B3a were located under the freight terminal's second story extension. Boring B1a was terminated at 4 ft. because of refusal (it should be noted that no drilling to bypass obstructions was possible with the tripod rig); the entire sample was fill, but because the terminal floor is approximately 3 1/2 ft. above grade, this boring just barely reached below grade deposits. Fill was also found in the next boring (B2a), and to save time, sampling of this fill did not begin until a depth of 5 ft. was reached.

Like Boring B1a, Boring B2a encountered fill until refusal at 11.5 ft. below the terminal floor, or 8 ft. below grade. Refusal was apparently caused by a brick obstruction that could be a fill fragment or part of a yard feature.

Boring B3a also revealed fill, here to 10 ft. below grade (13.5 ft. below the terminal floor). The brick, cinder, and sand fill was followed by about 4 ft. of brown sand with silt and gravel before a sandstone obstruction that caused refusal was reached. Again, this sandstone could be a cobble, boulder, or yard feature and perhaps the brown soil another fill.

Since sampling could not continue past the obstructions encountered in Borings B2a and B3a, the nature of the material and what it represents remains a question. Consequently, the results of testing within the confines of the terminal were inconclusive in relation to the site's archaeological potential.
ARCHAEOLOGICAL POTENTIAL

General Discussion

As noted in the introduction, the archaeological potential of the Greenwich Mews site does not pertain to the rich and famous or to an historical event. Based on intensive archival research and, to a lesser degree, on borings, the Greenwich Mews project site potentially offers insight into the urbanizing process. More specifically, it could offer information about the adoption of city services in the project area. It is also possible that remnants of early- to late-nineteenth century vernacular commercial buildings, the foundations of small, shed-like structures, might be preserved in the rear segment of the yard at 693 Greenwich Street (Lot 36).

Maps indicate the row house yards at 691 to 687 Greenwich Street remained undeveloped until a relatively non-intrusive freight terminal was built a century later (for example, see Figure 11). Any privies and wells that have been filled and are preserved in these yards may contain artifacts to date their abandonment and determine when city services were adopted. It is anticipated this adoption would be staggered, and that it would depend on the function of individual structures. For example, by the early-twentieth century, 687 and 691 Greenwich Street were rooming houses with minimal sanitary conveniences that may have necessitated the continuing use of yard privies later than on other parts of block. On the other hand, 689 Greenwich Street, which in 1913 comprised two apartments with a toilet or water closet in the yard and another on the second
floor (WWR 1913), may be more representative of when municipal services were available and adopted by individuals on the block. It is also possible these features may be found in the undeveloped yard segment documented for 693 Greenwich Street (Figure 11), the location of a four-story tenement built about 1877. Should these features exist, dating their contents might determine whether it was constructed with indoor plumbing as suggested earlier. Since water records for the tenement at 258 West 10th Street built in 1886 document two hall toilets or water closets per floor, it appears likely these facilities were included in the building's original design. Consequently, no investigation of the small yard segment associated with this structure is recommended.

The research proposed here addresses questions about the urbanizing process. It is meant to explore nineteenth-century social and economic considerations on a middle- and working-class block developed as commercial properties by its owners, and now part of an historic district.

IMPACTS AND MITIGATIONS

Intensive research has revealed the nature and general development of the Greenwich Mews site. However, some aspects of this development, particularly when city services were adopted and the nature of vernacular early-nineteenth century commercial structures, remain unknown. These are both issues that can be addressed through minimal archaeological investigation.

Since construction of the Greenwich Mews townhouses will impact any relatively shallow yard features that remain, and
since boring data were inconclusive in regard to preservation, a minimal testing program is recommended. After demolition of the freight terminal building and removal of the demolition debris, it is recommended that backhoe and shovel clearing be undertaken in the vicinity of 693, 691, and 687 Greenwich Street (Areas A and B on Figure 14). Testing these areas will determine if significant features are preserved, and mapping and sampling them will provide data to answer questions about the site and block's development.

To date, no archaeological data have been recovered from a comparable Manhattan location or, for that matter, situation. The development of this block in a neighborhood that was originally neither rich nor poor and its ultimate decline and current gentrification is all part of the ongoing development of the city. Minimal archaeological investigation prior to development could provide some valuable and otherwise unobtainable information about this process without interfering with construction schedules.

Upon approval of the New York City Landmarks Preservation Commission and direction of the developer or architects, a scope of work would be provided for the testing and limited site investigation recommended for the Greenwich Mews Project site.
GREENWICH MEWS  Proposed Test Areas

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West 10th St.

Christopher St.

- project site
- freight terminal
- backyard area as of 1934
- proposed drive
- proposed test areas

0 40

feet
REFERENCES


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Spann, Edward K.

Stokes, I. N. P.

Valentine, David

Viele, Egbert L.

Water Register's Records
APPENDIX A

Borings B1-B4

March, 1986
### Subsurface Investigation

**Location of Boring:**
- **Location:** Greenwich, New York
- **Date:** Start: 1/25/86, Finish: 2/26/86

**Ground Water Observations**
- **Date:**
  - 0.0' to 12.0'
  - 12.0' to 33.0'
  - 33.0' to 40.0'

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**Notes:**
- **Classification of Materials:**
  - Miscellaneous Fill (Brick, Sand, Gravel, Cinders) (11-65)
  - Brown sand, trace silt, little cmf Gravel SM (7-65)
  - Bottom of Boring at 40.0'
# Subsurface Investigation

**Client:** Ambassador Construction Company  
**Location:** 60 East 42nd Street, NY, NY 10165  
**Project:** Greenwich News  
**Address:** 687 Greenwich St., NY, NY  
**Date Start:** 3/22/86  
**Date Finish:** 3/24/86

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**The Haller Drilling Company, Inc.**

Dril: K. Tschida  
Hal: J. Evans
### Subsurface Investigation

**Location:** Greenwich, NY, NY 10165

**Date, Start:** 3/24/86  
**Finish:** 3/25/86

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**I.D. Casing:** 2-1/2"

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#### Classification of Materials

- **0.0'** Concrete
- **MISCELLANEOUS FILL (Brick, Sand, Gravel, Cinders) (11-65)**
- **Brown cmf SAND, trace Silt, little cmf Gravel SM (8-65)**
- **Brown mf SAND, trace Silt**
- **SM (8-65)**

**Bottom of Boring at 30.0'**
## Subsurface Investigation

**Job No.** 6-2841-1  
**Report No.** D-2841-1

**Client:** Ambassador Construction Company  
**Location of Boring:** As shown on plan

**Project:** Greenwich News  
**Address:** 687 Greenwich St., NY, NY

**Date, start:** 3/24/86  
**Finish:** 3/24/86

### Boring No. 4  
**Sheet 1 of 1**

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- Fall: 24 in.

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- Fall: 30 in.

**Ground Elev.**  
- I.D. Casing: 2-1/2"

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<td>19'8&quot;</td>
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</tr>
</tbody>
</table>

### Classification of Material

<table>
<thead>
<tr>
<th>Depth</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5'</td>
<td>CONCRETE</td>
</tr>
<tr>
<td></td>
<td>MISCELLANEOUS FILL (Brick, Sand, Gravel, Cinders) (11-65)</td>
</tr>
<tr>
<td>13.0'</td>
<td>Brown Mf SAND, trace Silt SM (7-65)</td>
</tr>
<tr>
<td>30.0'</td>
<td>BOTTOM OF BORING AT 30.0'</td>
</tr>
</tbody>
</table>

---

**The Haller Drilling Company, Inc.**

**Driller:** J. J. OLIVOS  
**Helper:** J. EVANS

-58-
APPENDIX B

Borings Bla-B3a

September, 1986
### THE HALLER DRILLING COMPANY, INC.

**SUBSURFACE INVESTIGATION**

**Job No.** 

**Report No.**

**CLIENT:** AMBASSADOR CONSTRUCTION COMPANY  

**Location of Boring:** STAKED OUT BY CLIENT

**PROJECT:** GREENWICH MENS  

**287 GREENWICH ST., NY, NY**

**Date, start:** 9/25/86  
**Finish:** 9/26/86

**Boring No. 1 (a) Sheet 1 of 1**

<table>
<thead>
<tr>
<th>Casing Hammer</th>
<th>Sampler Hammer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wt. 140 lbs.</td>
<td>Wt. 140 lbs.</td>
</tr>
<tr>
<td>Fall 24 in.</td>
<td>Fall 30 in.</td>
</tr>
</tbody>
</table>

**Ground Elevation:**

<table>
<thead>
<tr>
<th>Ground Elevation</th>
<th>T.D. Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1/2''</td>
<td></td>
</tr>
</tbody>
</table>

**Ground Water Observations**

- **Depth:**  
- **Casing at:**

**Classification of Material**

- **0'2''** CONCRETE  
- **FILL (Brick, Sand, Cinders) (11-65)**  
- **REFUSAL**

*refusal, brick (JHG)*

**DEPTH**

- 0'2''
- 4'0''
- BOTTOM OF BORING AT 4'0''
**NEW YORK, N.Y.  WATERTOWN, MASS.  E. WINDSOR, CONN.  PLAINFIELD, N.J.**

**THE HALLER DRILLING COMPANY, INC.**

**SUBSURFACE INVESTIGATION**

**Job No.**

**Report No.**

**CLIENT:** AMBASSADOR CONSTRUCTION COMPANY

**Address:**

**Location of Boring:**

**PROJECT:** GREENWICH NERS

**Address:**

**Date, start:** 9/26/86  **Finish:** 9/26/86

---

**Boring No. 2 (a)  Sheet 1 of 1**

<table>
<thead>
<tr>
<th>Casing Hammer</th>
<th>Sampler Hammer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wt. 140 lbs.</td>
<td>Wt. 140 lbs.</td>
</tr>
<tr>
<td>Fall 24 in.</td>
<td>Fall 30 in.</td>
</tr>
</tbody>
</table>

**Ground Elev.**

**I.D. Casing**

2-1/2"  

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>SAMPLED</th>
<th>SAMPLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0' 2&quot;</td>
<td>CONCRETE</td>
<td>FILL (Brick, Cinders, Crushed Stone) (11-65)</td>
</tr>
<tr>
<td>5' 6&quot;</td>
<td>1 5.0 7.0 SS 2/3/6/2</td>
<td></td>
</tr>
<tr>
<td>5' 6&quot;</td>
<td>2 7.0 9.0 SS 4/5/1/2</td>
<td></td>
</tr>
<tr>
<td>6' 10&quot;</td>
<td>2 9.0 11.0 SS 1/40/63/150</td>
<td></td>
</tr>
<tr>
<td>11' 0&quot;</td>
<td>4 11.0 11.5 SS 240</td>
<td></td>
</tr>
<tr>
<td>11' 5&quot;</td>
<td>FILL (Brick and brown mf Sand) (11-65)</td>
<td></td>
</tr>
<tr>
<td>11' 5&quot;</td>
<td>REFUSAL *</td>
<td></td>
</tr>
<tr>
<td>11' 5&quot;</td>
<td>BOTTOM OF BORING AT 11.5'</td>
<td></td>
</tr>
</tbody>
</table>

*refusal, brick (JHG)
# Subsurface Investigation Report

**Client:** Ambassador Construction Company

**Location of Boring:** Staked Out by Client

**Project:** Greenwich News

**Job No.:** D-2641-2

**Report No.:** 287 Greenwich St., NY, NY

**Date:** Start: 9/25/86, Finish: 9/26/86

## Boring No. 3 (a)

### Ground Elevation: 60 East 42nd St., NY, NY

### Casing Hammer
- **Wt.:** 140 lbs
- **Fall:** 24 in

### Sampler Hammer
- **Wt.:** 140 lbs
- **Fall:** 20 in

### Boring Observation

**Date:** 9/26/86

### Ground Water Observations

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Depth</th>
<th>Casing at</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Classification of Material

<table>
<thead>
<tr>
<th>Depth</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0'</td>
<td>CONCRETE</td>
</tr>
<tr>
<td>12.0'</td>
<td>FILL (Brick, Cinders, Sand) (11-65)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>17.4'</td>
<td>BOTTOM OF BORING AT 17.4&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*refusal, sandstone (JHG)
ACKNOWLEDGMENTS

As always, many people and institutions are to be thanked for the cooperation and support that made this report possible. Among them are Ken Stopfel and Tom Reid of Proposition: Architecture PC and Mike Flood of Ambassador Construction. My particular thanks go to Harry Kleiderman of the Borough President's Office, Kenneth R. Cobb, Deputy Director of the Municipal Archives and his staff, and Stephanie Mackler of the Municipal Reference Library, all of whom provided invaluable help. My thanks also to the staff of the New York Historical Society Library and, as always, to Alice Hudson, Chief of the Map Division of the New York Public Library, and Nancy Kandorian, her assistant.