



**Replacement of Willis Avenue Bridge over the Harlem River  
BIN No. 2-24005-9/A/B Total Design; Contract No. HBM 1124  
New York and Bronx Counties, NY**

**Bronx Approach  
*NYS OPRHP No. 03PR00939*  
*LPC No. DOT/LA-CEQR-X***

**Final Summary of Archaeological Monitoring  
Bronx Approach  
February and October 2008**

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**February and October 2008**

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## **EXECUTIVE SUMMARY**

A Phase IA Archaeological Assessment of the Willis Avenue Bridge Replacement Area of Potential Effect (APE) completed by Historical Perspectives, Inc. (HPI) in 2001, as well as a Topic Intensive Documentary Study of the same project completed by HPI in 2004, found that the Bronx section of the project site was potentially sensitive for the below-ground remains of a ca.1870s roundhouse foundation on Historic Block 1806, just north of Willis Avenue near East 132<sup>nd</sup> Street (Figures 1 and 2). As a result of this identified sensitivity, Historical Perspectives prepared a Monitoring Protocol (12/12/07) that addressed procedures for archaeological monitoring during bridge construction, which was approved by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) and New York City Landmarks Preservation Commission (LPC).

During 2008, HPI conducted two episodes of archaeological monitoring. The first, in February, was for the excavation of trenches for proposed Piers 11 and 12A, which fell within the area of the former roundhouse (Figures 3-4). The second, in October, was for excavations around the location of an historic stone wall (Figures 5-7).

The two episodes of archaeological monitoring revealed remnants of the ca. 1870s roundhouse and an unaffiliated concrete support footing on historic Block 1806, as well as a ca. 1890s historic wall on historic Block 1805. These features were recorded by HPI. None of the features was found to be archaeologically significant and no additional investigations or further documentation were recommended.

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## I. INTRODUCTION

A Phase IA Archaeological Assessment of the Willis Avenue Bridge Replacement Area of Potential Effect (APE) completed by Historical Perspectives, Inc. (HPI) in 2001, as well as a Topic Intensive Documentary Study of the same project completed by HPI in 2004, found that the Bronx section of the project site was potentially sensitive for the below-ground remains of a ca.1870s roundhouse foundation on Historic Block 1806, just north of Willis Avenue near East 132<sup>nd</sup> Street (Figures 1 and 2). As a result of this identified sensitivity, Historical Perspectives prepared a Monitoring Protocol (12/12/07) that addressed procedures for archaeological monitoring during bridge construction, which was approved by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) and New York City Landmarks Preservation Commission (LPC).

During 2008, HPI conducted two episodes of archaeological monitoring. The first, in February, was for the excavation of trenches for proposed Piers 11 and 12A, which fell within the area of the former roundhouse (Figures 3-4). The second, in October, was for excavations around the location of an historic stone wall (Figures 5-7).

## II. METHODOLOGY

HPI's archaeological monitoring adhered to the established definition of monitoring, in accordance with the current *Standards for Cultural Resources Investigations and Curation of Archaeological Collections in New York State of the New York Archaeological Council* (NYAC 1994), the Landmarks Preservation Commission's (LPC) "Guidelines for Archaeological Work in New York City" (2002) and the "Draft Guidelines for the Use of Archaeological Monitoring as an Alternative to Other Field Techniques" (NYAC 2002). The on-site Project Directors were Sara F. Mascia, Ph.D., RPA and Faline Schneiderman, M.A., R.P.A. The on-call Forensic Anthropologist was Tom Amorosi, Ph.D.

## III. MONITORING LOCATIONS AND RESULTS

### A. Former Roundhouse Location, Historic Block 1806

#### 1. 1873 Railroad Roundhouse

The former roundhouse was located within historic Block 1806, which was bounded to the west by East 131<sup>st</sup> Street, to the east by 132<sup>nd</sup> Street, to the south by Willis Avenue, and to the north by Alexander Avenue (Figure 2). Today it is part of modern Block 2260, which includes all waterfront area southwest of East 132<sup>nd</sup> Street from St. Ann's Avenue to Lincoln Avenue. Documentary research found that historic Block 1806 was under water until the second half of the nineteenth century. Cartographic resources indicate that the uneven shoreline was slowly filled in after the 1850s (Colton 1836; Conner 1853; Beers 1860; New York Department of Parks 1873). Historical maps indicate that the railroad line was present within the project block by 1872. However, company records indicate that the first trains began running over the route on November 24, 1873. An 1873 topographic map shows a small section of a semicircular railroad roundhouse had been built by that time on the blocks southeastern corner, directly north of Willis Avenue (New York Department of Parks 1873).

The 1885 Robinson Atlas also indicates that the roundhouse had seven tracks extending from the turntable into the structure. Although the building was not enlarged, the 1887 Robinson Atlas indicates that ten tracks were then present between the roundhouse and the turntable (Figure 3). A new route for the railroad, shown on the 1887 Robinson atlas, signaled the beginning of the end for the roundhouse on Block 1806. A new roundhouse was constructed along this new route and the roundhouse within the project site was probably razed just prior to 1891 (Sanborn 1891).

#### 2. Pier 11

Under the direction of Sara Mascia, archaeological monitoring of the Pier 11 location was initiated on 2/27/08. The Pier 11 foundation trench, approximately 15.7m long (51.5') and 1.2m wide (4'), revealed the severely truncated remains of the exterior edge of the late nineteenth century railroad roundhouse (Figure 4, Photographs 1-3). Typically, the foundations of early engine houses were usually brick or stone. The interior floors were typically made of cinders, cement, stone, asphalt, or timber, with the floor level flush with the top of the rails.

The exposed section of the former structure was the straight wall of the “open face” of the roundhouse and the identified southeast corner was the beginning of the curving, outside (east) wall. During the excavation of the Pier 11 Trench, approximately 12.7 meters (41.6 feet) of the wall was exposed by the construction team. Photographs, measurements, and field drawings were completed during the day with the cooperation of the Kiewit construction team.

The top of the remaining foundation rested between 70 to 118 cm (27.6” to 46.4”) below the 2008 grade. Three distinct soil levels were observed above the remaining roundhouse foundation. Level 1 was a thin gravel layer, approximately 0-17 cmbs; Level 2 was a thick dark grayish brown (10YR 3/2) fill stratum approximately 17-90 cmbs; and, Level 3 was a yellowish brown (10YR 4/4) approximately 90-118 cmbs. The fill contained modern debris of sewer pipe fragments, nails, plastic, etc.

The remaining foundation was represented by one to three courses of large, irregular, cut granite stones. There was no obvious mortar at the west end of the wall. Instead, stone shims were used for stabilization. At the east end, where the corner of the former building was observed, remnants of a sandy mortar were noted. The foundation width varied between 68 and 85 cm (26.8” and 33.5”).

Beneath the fill and the foundation wall, the soil context was a strong brown sand, prone to collapse. There was no discernible builders’ trench, and no artifacts or associated architectural elements were identified. There was no evidence of drainage channels or venting for the roundhouse operations.

Interestingly, there was no obvious cinder lens immediately surrounding the former building as noted in other roundhouse excavations (e.g., Poughkeepsie, NY and New London, CT). It is entirely possible that the remaining truncated foundation lay well beneath the activity level of the roundhouse, precluding the possible recovery of work-related resources.

### 3. Pier 12A

Archaeological monitoring of the Pier 12A location was initiated on 3/17/08 (Figure 4). The Pier 12A trench measured approximately 5.5 m (18 feet) north-south and 6.7 m (22 feet) east-west. Excavation almost immediately exposed a large concrete platform or support footing at 65 cmbs (Photograph 4). The feature was found to have four levels, each slightly larger resulting in the appearance of a step pyramid. The initial layer, closest to the surface was 1.52 m square (5 feet). Each successive concrete layer was approximately 70 cm (2.4 feet) larger on each side than the one above it. Each level was approximately 48-55 cm deep (1.57-1.8 feet). When fully exposed, the entire platform was approximately 2.13 m (7 feet) deep. Excavation halted when the feature was fully exposed. There were no other observable features in the remaining portion of Trench 12A.

The feature was not related to the former roundhouse located within this block and the original purpose of the platform was not immediately apparent. It is possible that it was a temporary support or staging platform that was constructed when the Willis Avenue Bridge was built.

### B. Stone Walls, Historic Block 1805

On Friday, October 17, 2008, William Nyman, PE, of Hardesty and Hanover, LLP (H&H), called archaeologist Cece Saunders of Historical Perspectives Inc. (HPI) to inform her that a wall had been encountered on Historic Block 1805 while excavating for Willis Avenue Bridge Pier B1 (Figure 2). The wall was located perpendicular and tangential to the south side of a historically significant granite masonry retaining wall fronting on Willis Avenue, as noted on current construction plans SD1 dated September 25, 2007 (Figures 6-7; Photographs 5-6). The Phase IA Archaeological Assessment of the project site, completed by HPI in 2001, had identified no potential historical archaeological resources in this location. Although there was an Unanticipated Discovery Plan in place in the event that human remains are recovered, Mr. Nyman took appropriate steps to ensure that this potentially significant resource was addressed regardless of the fact that there were no osteological remains associated with the find.

On Monday, October 20, 2008, archaeologist Faline Schneiderman, RPA, met with on-site construction personnel and proceeded to review the wall. Historical maps and atlases, dating from the 1880s and 1890s, showed the area



vacant until 1891 (Figure 5) when there was a stairwell shown leading from Willis Avenue up to a train platform in this approximate location (Robinson 1885, 1887; Sanborn 1891). Two other platform-access stairwells were also present; one to the east and the other to the west. The westernmost stairwell was extant (Photograph 7).

The coursed-ashlar wall encountered at Pier B1 was cleared of dirt and debris and was visually and structurally found to match the existing stairwell wall located 13.05m (42.81') to the southwest (Photographs 7-8). A visual inspection of the retaining wall along Willis Avenue found that it had been modified to hide the former location of the stairwell opening (Photographs 5-6). Ashlar stones had been removed from the corner formed by the intersection of the stairwell wall and the retaining wall, and the opening was closed off to match the remainder of the retaining wall. Variations in the color of the masonry defined the outline of the "patched" area.

Additional exploratory excavations found that a second parallel wall was buried about 2.51m (8.3') to the northeast of the exposed wall, confirming that this was indeed the location of a former stairwell (Photograph 9).

Measurements were taken of the exposed stairwell wall and the existing retaining wall (see Figure 7). Both walls were photorecorded, and the stairwell was found to lack archaeological significance due to its relatively recent date of construction, the presence of an identical stairwell immediately to the west, and its lack of potential to contribute significant information about historical life ways. Construction at the pier location resumed upon completion of the recordation of the wall. No additional investigation or further documentation was warranted for the Pier B1 wall.

#### **IV. CONCLUSIONS AND RECOMMENDATIONS**

The two episodes of archaeological monitoring revealed remnants of the ca. 1870s roundhouse and an unaffiliated concrete support footing on historic Block 1806, as well as a ca. 1890s historic wall on historic Block 1805. Both of these features were recorded by HPI. None of the features was found to be archaeologically significant and no additional investigations or further documentation were recommended.

## V. REFERENCES

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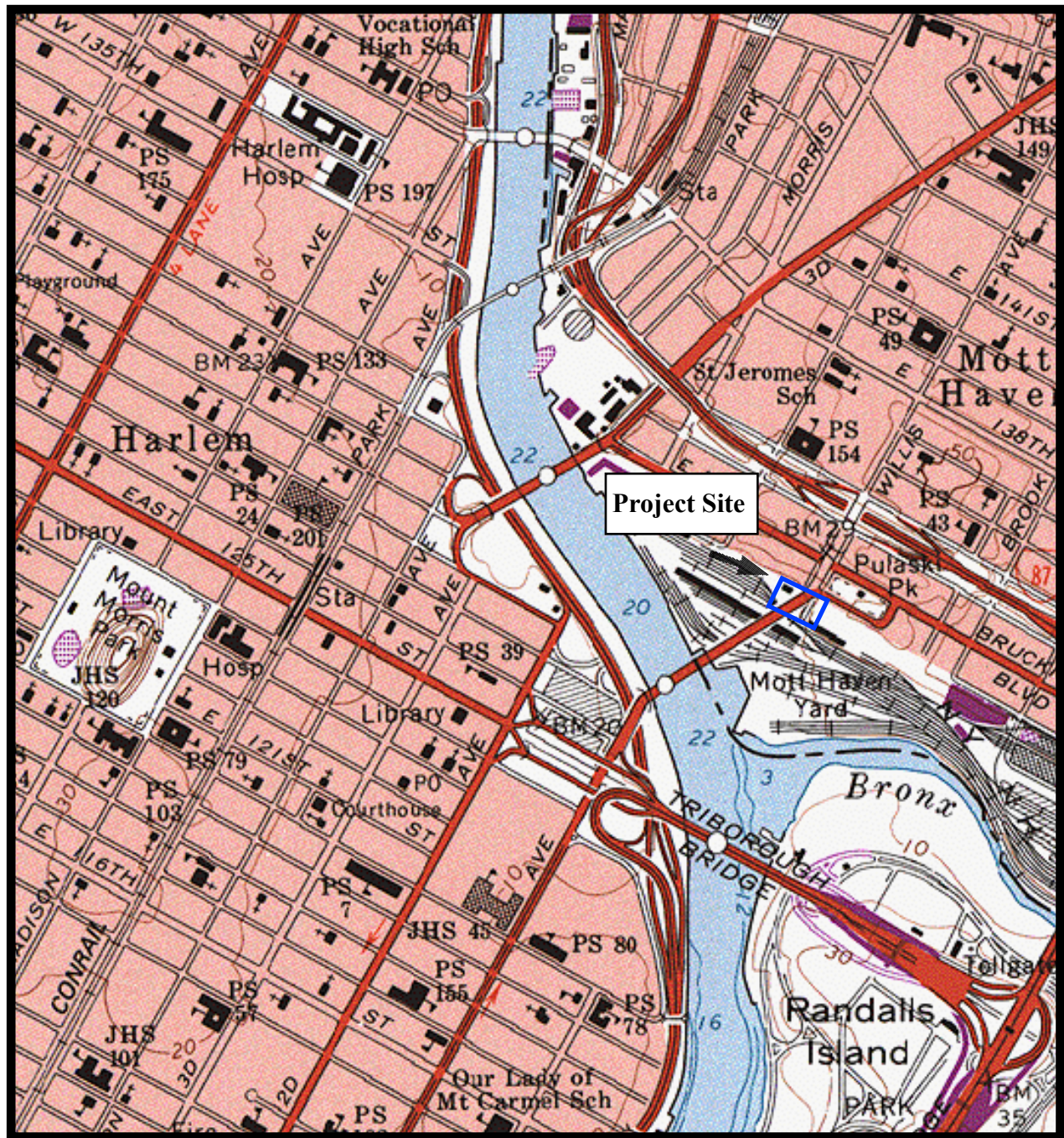
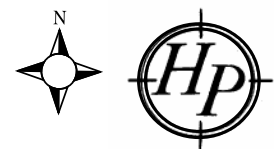


Figure 1: Project site on *Central Park, N.Y.* U.S.G.S. 7.5 Minute Quadrangle (U.S.G.S. 1999).

0 500 1000 1500 2000 2500 FEET





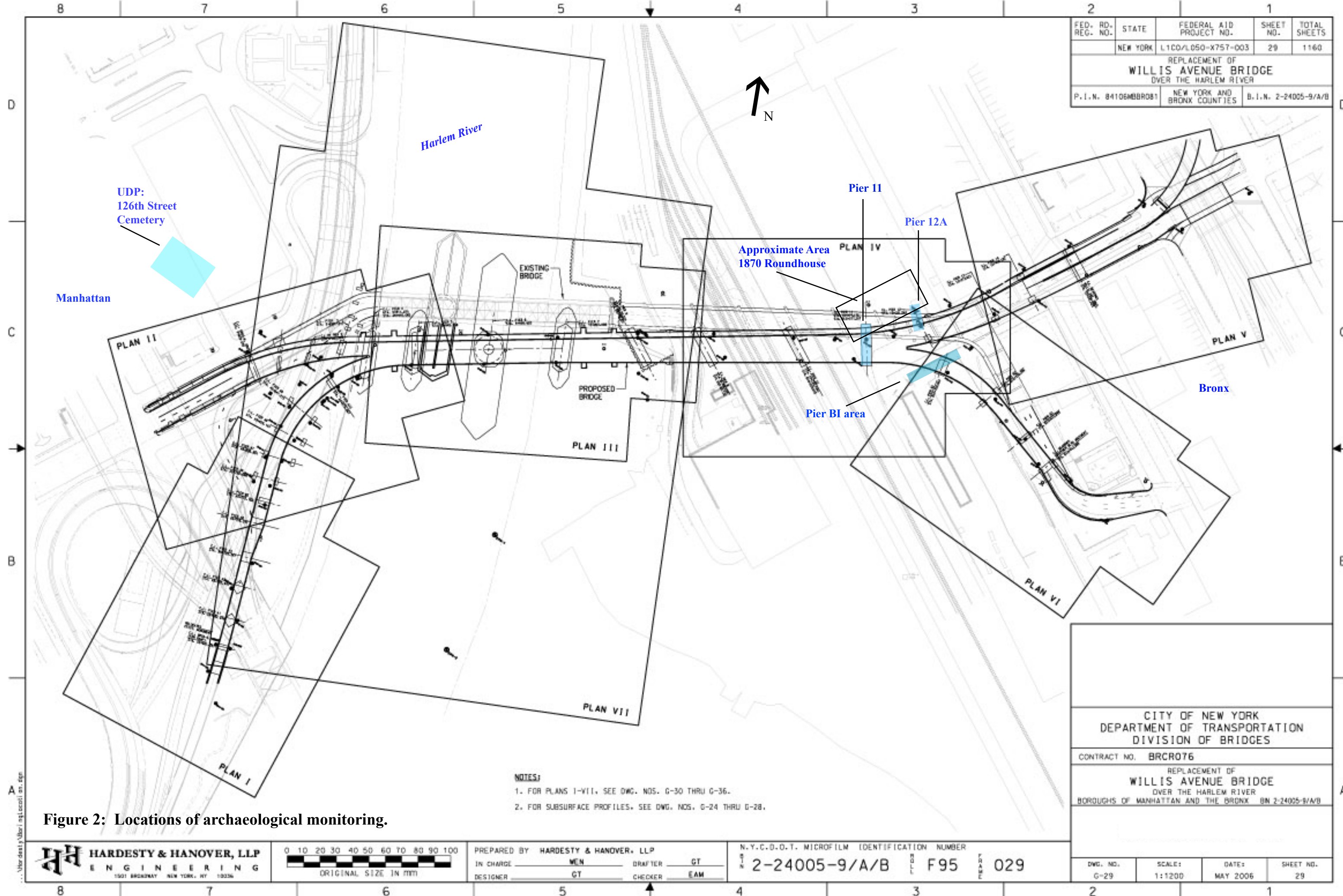


Figure 2: Locations of archaeological monitoring.

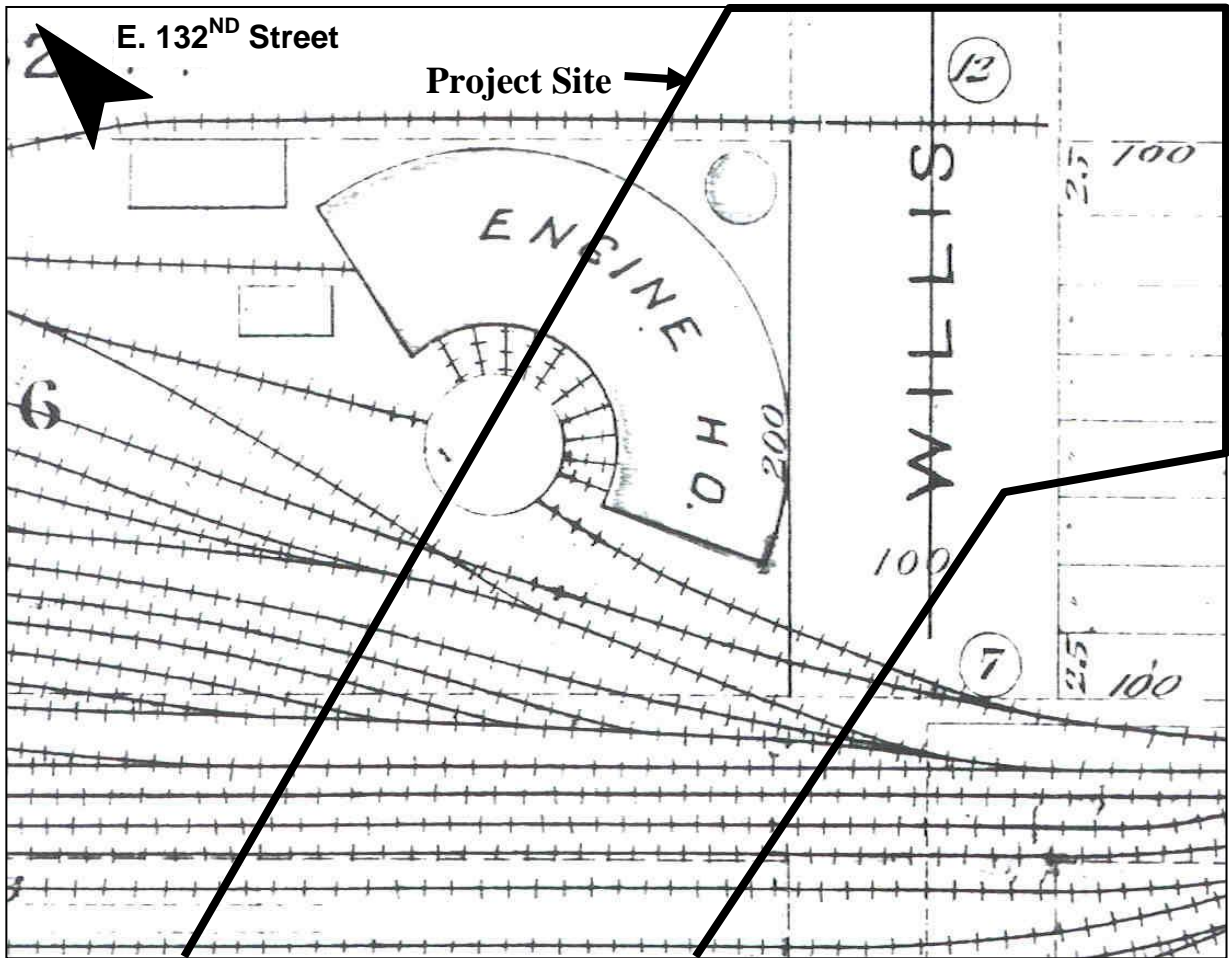
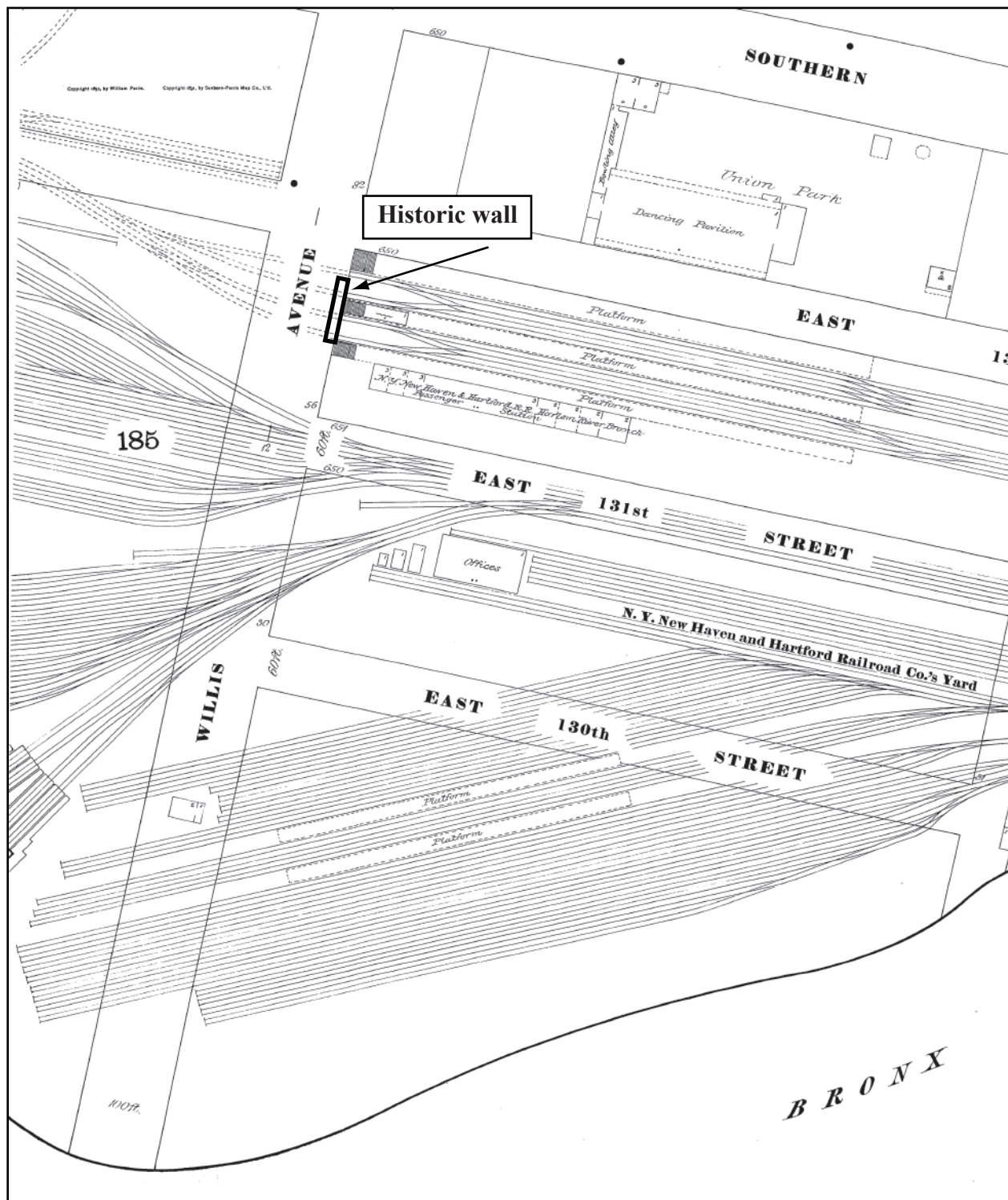


Figure 3: *Atlas of the City of New York*. Robinson 1887.

No Scale Available.

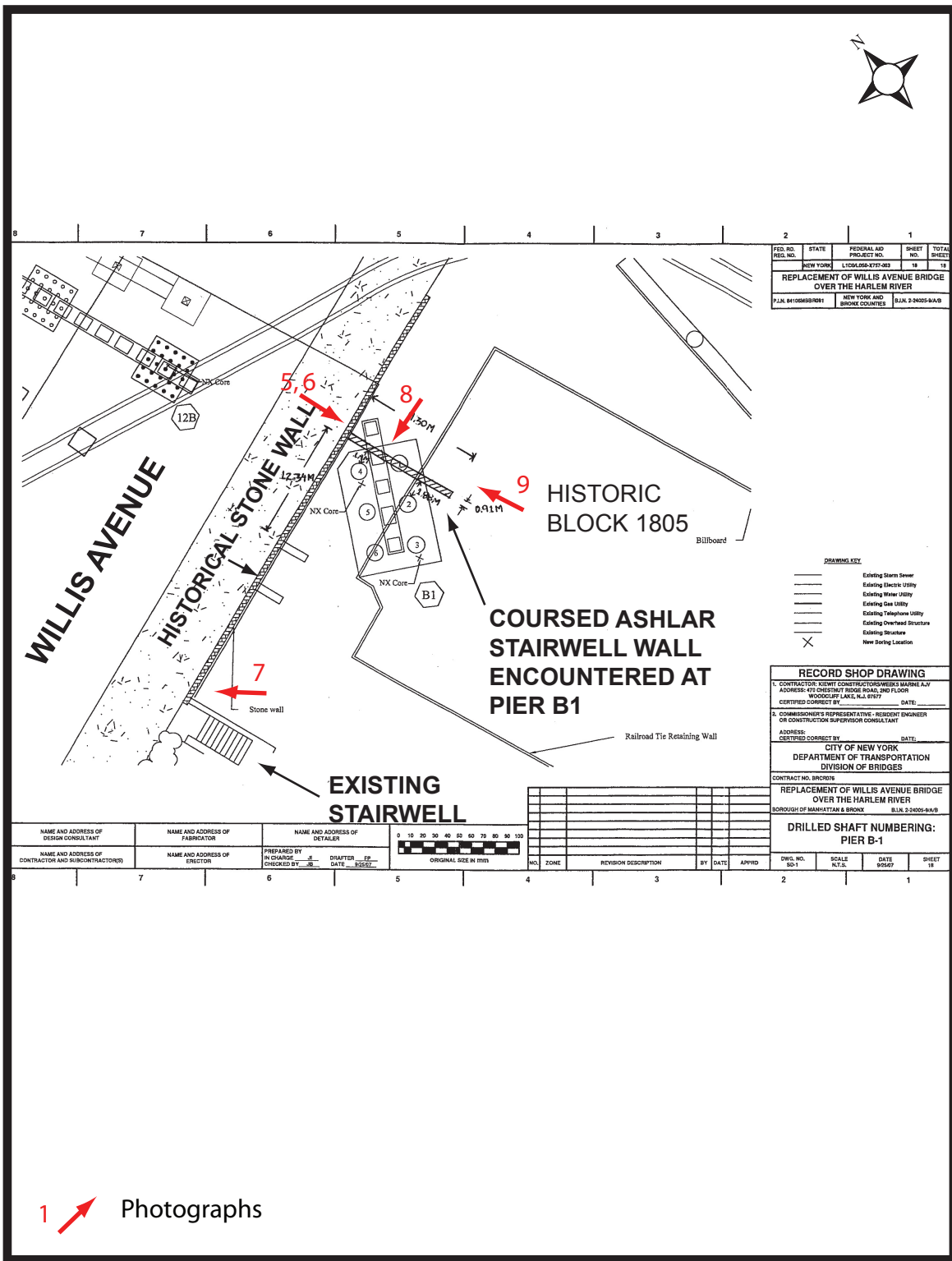






**Figure 5: Location of historic Wall on 1891 Sanborn map.**





SOURCE: NEW YORK CITY DEPARTMENT OF TRANSPORTATION, DIVISION OF BRIDGES.

Figure 6: Location of coursed ashlar wall, Pier BI, historic Block 1805.





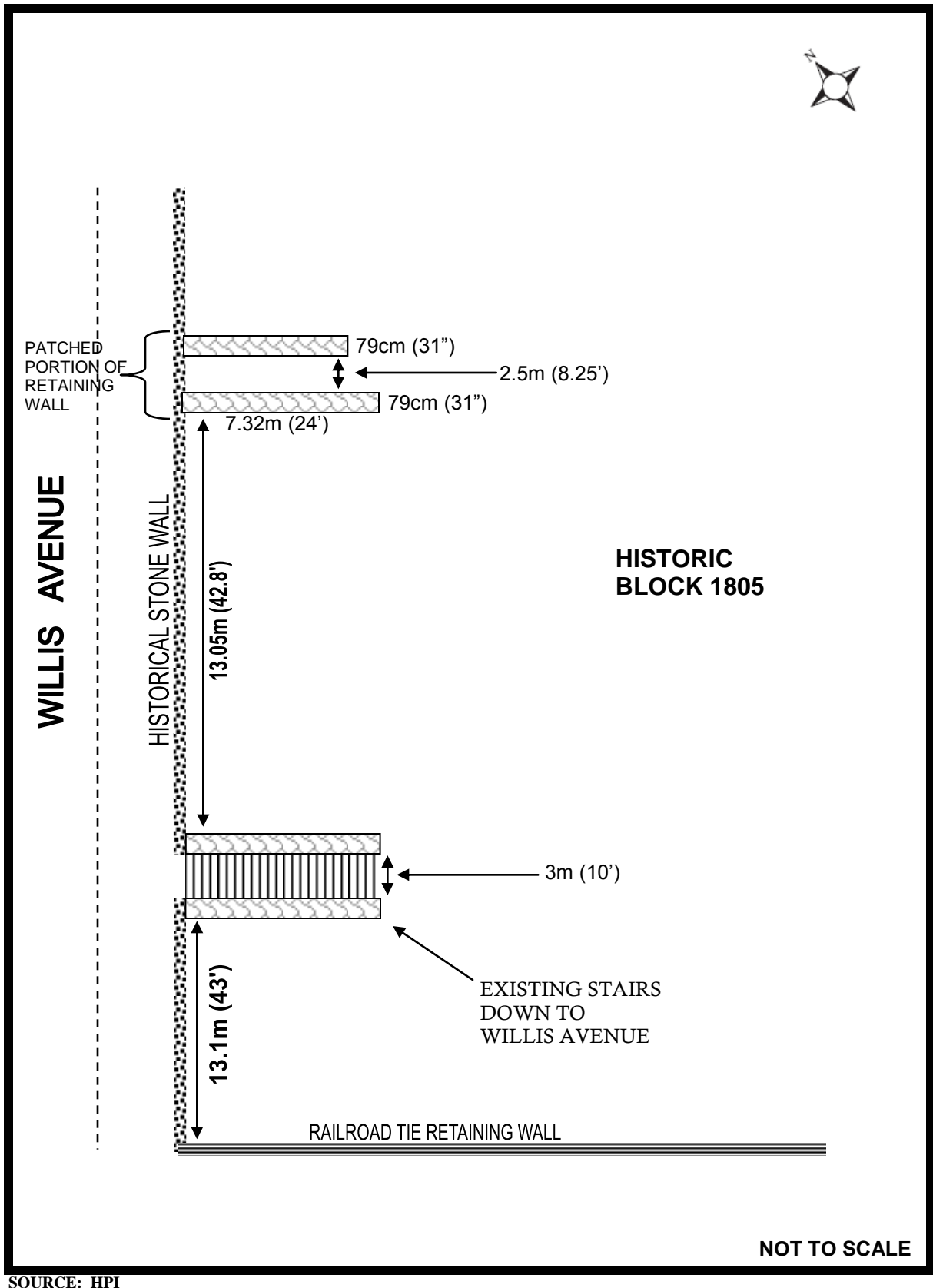


Figure 7: Field recordation of coursed ashlar wall, Pier BI, historic Block 1805.





Photograph 1: Exterior edge of the 1870s railroad roundhouse wall, shown within Pier 11 trench. View looking southeast.



Photograph 2: Top of 1870s railroad roundhouse wall within Pier 11 trench, showing its width. View looking northwest.



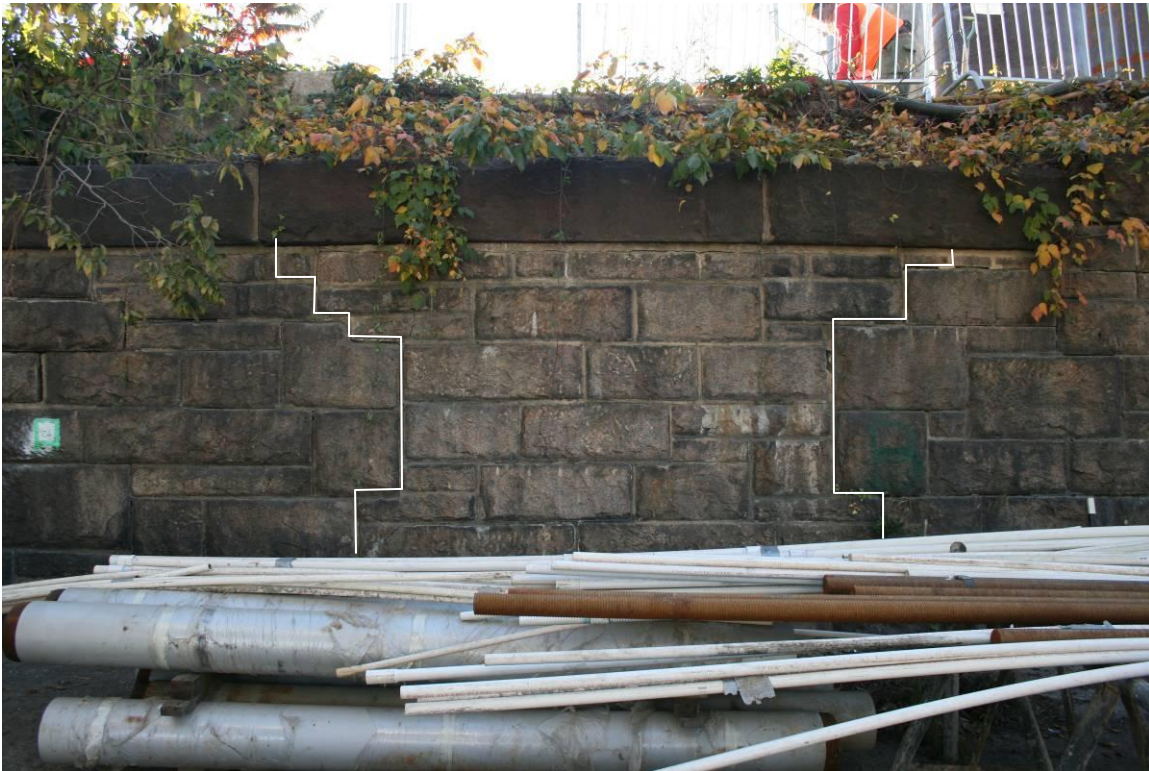


Photograph 3: Outside edge of roundhouse wall in Pier 11 trench. View looking northeast.



Photograph 4: Concrete platform or support footing in Pier 12A trench. View looking northeast.





Photograph 5: Historical stone wall at northern end of historic Block 1805 on Willis Avenue, facing southwest. Note the location of the patched portion of the retaining wall, outlined in white, which was formerly the access for a staircase up to a train platform. Man in orange vest at top of picture marks the location of the perpendicular coursed ashlar wall found in the excavation pit for Pier BI.



Photograph 6: Close up of historical stone retaining wall on Willis Avenue, facing southwest. Note the cracked joints that demarcate where the wall was patched after the stairwell was abandoned and sealed up.





Photograph 7: Extant stairwell at northern end of historic Block 1805 that descends to Willis Avenue, facing northwest.



Photograph 8: Stone wall encountered in excavation pit for Pier BI, facing west. Note that the material and design match both the extant stairwell and the historical retaining wall, and that the northern end of the wall abuts the historical retaining wall, at the right.



Photograph 9: First stone wall encountered in Pier BI on left, and second stone wall encountered at right. Note that the men are standing in what would have been the stairwell before it was filled. The patched historical stone retaining wall that fronts onto Willis Avenue is between the two stairwell walls in the rear of the photograph.