

# APPENDIX I

## Archeological Data



## Bernie Kalus

---

**From:** Randolph Hunt [rbhunt@dot.state.ny.us]  
**Sent:** Thursday, July 06, 2006 10:40 AM  
**To:** betsi\_nemeth@AKRF.com  
**Cc:** Nathan\_Riddle@AKRF.com; Stephen\_Holley@AKRF.com; bkalus@chashsells.com; ssmith@chashsells.com; James Wilson; Jimmy Lau; Peter Dunleavy; Robert. Laravie; Roger Weld; Sonia Rivera  
**Subject:** Re: PIN X027.05 - Archelological Protocal

SHPO has given its concurrence to the archeological protocol (formerly referred to as the Programmatic Agreement) for the subject project. I presume the next step is to arrange for the actual testing. Please start to work on this immediately. Please sent us the proposed procedure and proposed time frame for the actual implementation of the testing and what you need from NYSDOT. if you want have a meeting to discuss please let me know. Thanks.

That's correct - just an acknowledgement of understanding (which I take this to be) that we will be doing all the work of the Programmatic Agreement, but without the formal "signed" commitments. We just wanted to alert everyone to the change, with an opportunity to comment. We now intend to proceed - and will keep you, FHWA and NYC Landmarks abreast of our schedule and any products/findings we make. Thanks.

-Peter

>>> <Douglas.Mackey@oprhp.state.ny.us> 07/05/06 4:52 PM >>>  
Thanks,

So if I read this correctly - there is nothing you need from us at this point?

From: Peter Dunleavy [mailto:pdunleavy@dot.state.ny.us]  
Sent: Wednesday, July 05, 2006 3:29 PM  
To: Mackey, Douglas (PEB)  
Cc: Peter Dunleavy; Robert. Laravie  
Subject: RE: X027.05 - Section 106 documents final revision

Doug - I'm sorry for the delay in responding - I thought I had responded a couple of weeks ago but apparently a server was down and some messages didn't go then.

The goal of this is 106 compliance. Our environmental documentation on this project (Construction of a Greenway along the Bronx River, including several new bridges crossing the river) is an Environmental Assessment (EA) meeting state and federal requirements simultaneously.

We anticipate a "Negative Declaration" for SEQRA purposes and a "Categorical Exclusion with documentation" for federal purposes.

We have an internal checkpoint at the end of Preliminary Design where we give ourselves "Design Approval" allowing us to proceed to final design--but we don't typically do this without completing any required environmental studies (including 106 and any required federal concurrence). In this case, we have a bit of a catch-22: we don't know everything we need to in order to grant ourselves "design approval", but we need to proceed in order to develop the project and better target what we need to investigate for 106.

Our interpretation was that FHWA would not concur in our recommendation of cat ex. at this time without a PA, since we hadn't yet made a finding. After discussing with Dave Hart, he is quite comfortable not letting this rise to the "formal" level of a PA since we are pledging to complete studies within the Design phase- just not by preliminary design--so he will give us the Cate Ex concurrence we need for our



**PROTOCOL FOR RESOLUTION OF SECTION 106 ISSUES  
DURING FINAL DESIGN**

By the New York State Department of Transportation  
Regarding the Bronx River Greenway Project, PIN X027.05  
The Bronx, New York  
June 1, 2006

**WHEREAS**, the New York State Department of Transportation (NYSDOT) proposes to provide a pathway and bikeway, including four new bridges and related appurtenances, along the Bronx River from Westchester Avenue to East Tremont Avenue in the Bronx; and

**WHEREAS**, NYSDOT has implemented a set of procedures for complying with Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and the implementing regulations (36 CFR Part 800), and those revised procedures were agreed to by the Federal Highway Administration (FHWA) and the New York State Historic Preservation Office (SHPO) in 2001; and

**WHEREAS**, the Area of Potential Effect (APE) for the project has been defined for archaeological resources as the area that will be disturbed for project construction, the project site itself, and for historic resources as the project site plus, for indirect and visual effects, the area within an approximately 122-meter (400-foot) radius of the project site (the APE is shown on Figure 1 annexed to this protocol); and

**WHEREAS**, NYSDOT has conducted a cultural resource survey within the project's APE in accordance with departmental procedures for complying with Section 106 regulations and the requirements of 36 CFR Part 800.4(a); and

**WHEREAS**, the following properties within the APE (as shown on Figure 1) have been determined eligible for listing on the National Register of Historic Places:

- U.S. Post Office, West Farms Station, at 362 Devoe Avenue
- AMTRAK Northeast Corridor Line Scherzer-type bascule bridge over the Bronx River
- IRT No. 6 subway viaduct over the Bronx River

**WHEREAS**, NYSDOT has also consulted with the New York City Landmarks Preservation Commission (LPC) regarding historic properties; and

**WHEREAS**, the Westchester Avenue Station of the New York, New Haven & Hartford Railroad (NYNH&HRR), located within the APE, has been identified as eligible for designation as a New York City Landmark; and

**WHEREAS**, this project will include retaining walls and footings for new bridges within the APE, requiring heavy construction, potential excavation to depths of several meters, and possible pile driving that could cause potential vibration effects to historic properties; and

**WHEREAS**, the U.S. Post Office, West Farms Station, and the NYNH&HRR Westchester Avenue Station are not close enough to areas of heavy construction (within 90 feet as per the guidelines of the New York City Department of Buildings *Technical Policy and Procedure Notice #10/88* regarding procedures for the avoidance of damage to historic structures resulting from adjacent construction) to experience potential adverse construction effects, but the AMTRAK and IRT No. 6 subway structures are close enough to potentially experience such adverse effects; and

**WHEREAS**, the following reports have been prepared to determine the potential archaeological sensitivity of the APE and which reports have been reviewed by SHPO and LPC:

- *Archaeological Documentary Study: Bronx River Pedestrian Greenway, DOT PIN X027* (Historical Perspectives, Inc., December 2004)
- *Soil Boring Analysis: Addendum to Archaeological Documentary Study, Bronx River Greenway, DOT PIN X027* (Historical Perspectives, Inc., June 20, 2005)

**WHEREAS**, NYSDOT, in consultation with SHPO and LPC, has determined that four areas within the APE (shown on Figure 2 annexed to this protocol) are sensitive for archaeological resources and that any such deposits are potentially eligible for the National Register of Historic Places including:

- Native American resources and potential mill remains in Area 1, the northernmost portion of the project area, located on the east side of the Bronx River between East Tremont Avenue and the Cross Bronx Expressway; and
- Native American resources and 19th-century carpet factory features in Area 2, roughly bounded by the Cross Bronx Expressway and East 174th Street on the east side of the Bronx River;
- Native American resources and the footprint and associated shaft features of a 19th-century factory in Area 3, located on the east side of the Bronx River between East 174th and East 172nd Streets; and
- Native American resources in Area 4, a small triangular section of the project area bounded by the Bronx River on the west, East 172nd Street on the north, the Amtrak rail line on the east, and the Amtrak bridge over the river on the south.

**WHEREAS**, subsurface project construction in the four potentially sensitive areas of the APE could have adverse effects on archaeological resources, should such resources be present; and

**WHEREAS**, it has not been possible to definitively identify the presence of archaeological resources and to assess effects to such resources prior to beginning final project design (Specifically, bridge and retaining wall locations and structural design are still being finalized. This is due in large part to the complex nature of interagency and public coordination and permitting for this project, which has made it difficult to determine the depth, location, and extent of archaeological testing required. Additionally, test trenches, which may be required for adequate archaeological field testing, would require the mobilization of heavy equipment, for which a contact must be put into place.); and,

**WHEREAS**, the NYSDOT Region 11 office has determined that all Cultural Resource investigations sufficient to make an effect determination must be completed prior to the project Contract being advertised for construction.

**NOW, THEREFORE**, NYSDOT commits, with concurrence from SHPO and FHWA, that the project shall be implemented in accordance with the following stipulations in order to take into account the project's effects on historic properties and to mitigate any adverse effects that may be identified.

## STIPULATIONS

NYSDOT will ensure, in coordination with SHPO, that the following measures are implemented as part of the subsequent planning, design, and construction of the project:

### **A. Archaeological Resources**

Within the APE, a comprehensive program for the identification, evaluation of site significance, assessment of adverse effect, and resolution of adverse effect, including treatment of archaeological resources, will be implemented in the manner described below.

1. NYSDOT will conduct archaeological studies as necessary to determine the eligibility for National Register listing of the four project areas that have been determined to have potential archaeological sensitivity and would experience subsurface disturbance from project construction. These studies will include archaeological field testing in consultation with SHPO.
2. NYSDOT and SHPO have accepted a program for archaeological field testing in the four project areas that may contain significant archaeological resources. NYSDOT will ensure that the archaeological testing program, annexed to this protocol as Appendix A, is implemented prior to NYSDOT's bidding and awarding of the construction contract for project X027.05.
3. NYSDOT will ensure that the contractors involved in the implementation of all phases of the undertaking are aware of and comply with the requirements of this protocol.
4. NYSDOT, in consultation with SHPO, shall apply the National Register criteria for each archaeological site identified in accordance with 36 CFR Part 800.4(c). For any archaeological site determined by NYSDOT to be National Register eligible, NYSDOT will assess project effects and site avoidance and will further consult with SHPO to determine appropriate treatment measures, which may include avoidance, if possible, or data recovery as necessary. If significant resources can not be avoided, a Data Recovery plan will be prepared and submitted to SHPO. Any such Data Recovery plan will be appended to, and made part of, this protocol.
5. Public awareness of information obtained through potential Data Recovery investigations shall be addressed through options such as a brochure, display, or presentation.
6. NYSDOT shall follow the requirements set forth in the Unanticipated Discovery Plan annexed to this protocol as Appendix B. In accordance with the procedures set forth in the plan, in the event of any unanticipated archaeological discoveries during construction all activities will be suspended in the area of discovery. NYSDOT will contact SHPO no more than 48 hours after the discovery. NYSDOT and SHPO will consult to agree upon an appropriate treatment of the archaeological discovery prior to the resumption of construction activities in the area of the discovery. Any such agreement will be in writing and shall be included as an addendum to this protocol. In the event of any unanticipated archaeological discovery, the Advisory Council on Historic Preservation (the Council) will be notified per 36 CFR Part 800.

## **B. Performance Standards for Archaeological Studies**

1. All further archaeological studies shall be completed in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology* (48 FR 44734-37), the Advisory Council on Historic Preservation's *Treatment of Archaeological Properties*, the New York Archaeological Council's *Standards for Cultural Resource Investigation and the Curation of Archaeological Collections in New York State*, and the New York State Education Department's *Cultural Resources Survey Program, Work Scope Specifications for Cultural Resource Investigations on New York State Department of Transportation Projects*.
2. The archaeological sensitivity assessments and the resulting *Archaeological Documentary Study* and *Soil Boring Analysis* reports were prepared by an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44716). All further archaeological studies will be prepared by an archaeologist meeting those standards.

## **C. Construction Protection Measures for Historic Structures**

The potential for construction effects to the AMTRAK Northeast Corridor Line Scherzer-type bascule bridge and the IRT No. 6 subway viaduct may exist, pending completion of final designs for the footings of proposed structures, as well as research into the structural footings of both existing structures. Should the potential for construction effects exist, such effects will be minimized through the implementation of the following measures:

1. NYSDOT will protect the two historic properties during construction using fencing and signage.
2. NYSDOT will implement measures to avoid or minimize construction vibration impacts. Those measures will be developed in consultation with SHPO and specified in the Contract Documents, and they will include: (a) the examination of the conditions of the two structures by a New York State licensed engineer. These reviews will be conducted prior to the commencement of work, at locations and times during construction as determined by NYSDOT, and after the completion of work; and (b) vibration monitoring performed in accordance with a monitoring plan to be developed in consultation with SHPO.
3. If it is determined that NYSDOT construction activities caused damage to adversely affect a historic structure, NYSDOT, after consultation with SHPO, will repair the damage that is reasonably attributable to the project activities.

## **D. Public Involvement**

NYSDOT has implemented public participation activities through the Environmental Assessment process, in accordance with requirements of the New York State Environmental Quality Review Act and the National Environmental Policy Act. The project was advertised and a public hearing was held on May 19, 2005. The public had an opportunity to comment on the project and the *Draft Design Report/Environmental Assessment, Bronx River Greenway, Westchester Avenue to Tremont Avenue, Bronx County* (April 2005) at the public hearing. In addition, public outreach has been a continuous effort with NYSDOT holding meetings with civic organizations, community boards, and local residents since 1998. NYSDOT shall continue to incorporate public involvement in decision making during project design and into construction.



### **E. Project Coordination**

1. NYSDOT will provide a copy of this protocol to the project's consulting archaeologist.
2. NYSDOT will ensure that key project and construction personnel are thoroughly familiar with the contents of this protocol.
3. The outcome of this protocol will be appropriately reflected in the construction documents for this project.
4. NYSDOT will ensure that LPC is kept fully informed of the progress of all work under this protocol and shall copy them on all notifications and submittals to, as well as correspondence with, the SHPO.





**PROPOSED ARCHAEOLOGICAL TESTING PROGRAM  
BRONX RIVER PEDESTRIAN GREENWAY, THE BRONX, NY  
DOT PIN X027.05**

**June 1, 2006**

## **I. Introduction**

A Stage 1A Archaeological Documentary Study of the proposed Pedestrian Greenway project (DOT PIN X027.05) along both sides of the Bronx River was prepared by Historical Perspectives, Inc. and submitted and accepted by both the New York State Historic Preservation Office (SHPO) and the New York City Landmarks Preservation Commission (LPC). The Area of Potential Effect (APE) for the proposed New York State Department of Transportation (NYSDOT) Greenway lies between Westchester and East Tremont Avenues in the West Farms and Tremont neighborhoods of the Bronx as shown on Figure 1 of the Protocol for Resolution of Section 106 Issues During Final Design (the "Protocol"). An initial review by the LPC concluded that the site may be potentially sensitive for Native American and 19th century archaeological resources (LPC Environmental Review April 30, 2004). The Stage 1A Archaeological Documentary Study identified areas of extensive prior disturbance that now lack archaeological potential, and areas that apparently have not been disturbed and may have both precontact and/or historical archaeological sensitivity.

The project APE was artificially subdivided into seven distinct study Areas as shown on Figure 2 of the Protocol, and it was determined that Areas 1-4 are potentially sensitive for buried resources. Area 1 is located in the northernmost portion of the APE, on the east side of the Bronx River between East Tremont Avenue and the Cross Bronx Expressway. Area 2 is roughly bounded by the Cross Bronx Expressway and East 174th Street on the east side of the Bronx River. Area 3 is located on the east side of the Bronx River between East 174th and East 172nd Streets. Area 4 is a small triangular section of the APE bounded by the Bronx River on the west, East 172nd Street on the north, the AMTRAK rail line on the east, and the AMTRAK bridge over the river on the south. Figure 2 of the Protocol outlines the Areas considered archaeologically sensitive. Specifically, the study concluded that:

- Area 1 is potentially sensitive for Native American resources and potential undocumented mill remains;
- Area 2 is potentially sensitive for Native American resources and 19th-century carpet factory features;
- Area 3 is potentially sensitive for Native American resources and the footprint and associated shaft features of a 19th-century factory; and
- Area 4 is potentially sensitive for Native American resources.

The following program outlines the identified potential resources, research issues, and field testing strategies for the four Areas of the APE identified as potentially sensitive for archaeological resources.

## **II. Identified Resources and Research Issues**

### **A. Precontact Archaeological Resources**

The Stage 1A Archaeological Documentary Study (January 2005) and a subsequent Soil Boring Analysis of Areas 1 through 4 (June 2005) concluded that there may be natural strata within the Bronx River Greenway project APE that may be potentially sensitive for precontact archaeological resources. Typically, precontact resources are encountered within several feet of the predevelopment land surface. An exception to this is when resources were initially deposited on a floodplain along waterways. Yearly flooding can result in the accumulation of alluvial soils which can bury and protect precontact deposits. In an urban environment such as the Bronx, potentially sensitive strata are frequently disturbed by historical development, or buried beneath fill prior to a site being developed. However, the deep alluvial deposits recorded in the soil boring logs taken from the APE may have served to protect potential precontact resources from subsequent historic disturbance.

Coastal and riverine areas could provide a mix of aquatic, estuarial, and terrestrial resources. In particular, the confluences of streams and/or rivers were considered choice sites for habitation and have a high potential to yield precontact-period archaeological resources. Furthermore, riparian land often bears evidence of riverine resource harvesting and processing.

Area 1 is potentially sensitive for precontact resources within the APE. The depth of sensitivity varies, but is generally thought to be from the current grade down to at least the depth of the borings (approximately 33 feet or 10 meters). However, it should be noted that historical development of an amusement park in this vicinity has disturbed the uppermost strata in specific locations which are generally south of East 177th Street and outside of the boring sampling program.

Area 2 possesses seemingly natural soil levels from the current grade down to approximately 49 feet (15 meters) below grade. The water table was encountered at 12 feet (3.6 meters) below grade, suggesting that any precontact deposits below this depth would be inundated. Portions of Area 2 were disturbed by the late-19th/early-20th century construction of an amusement park. Deeply excavated park features, such as a reservoir and pool, would have disturbed at least the top several feet of the ground surface, if not more. Outside of the location of these features, Area 2 is still considered potentially sensitive for precontact resources.

Area 3 is potentially sensitive for precontact archaeological deposits from the current grade down to the depth of potential impacts, which is estimated to be no more than 30 feet (9 meters) below grade, with the exception of the top two feet (60cm) of fill in one area. However, since the water table was encountered between five and nine feet (1.5 to 2.7 meters) below grade, any potential resources below this depth would probably be inundated. Testing efforts would require dewatering below this depth.

Area 4 is potentially sensitive for precontact resources. Two boring logs previously reviewed showed some fill extending from the surface down to between 6 and 10 feet (1.9 to 3 meters) below grade. Potentially sensitive strata may exist below the fill, where it exists, and from the surface down to the depth of bedrock where fill is not evident. However, since the water table ranges from about two to 15 feet (60 cm to 4.5 meters) below grade, any potential resources beneath this depth may be inundated. As with Area 3, testing below the water table would require dewatering.

## B. Historical Archaeological Resources

The potential historical archaeological features that may exist within the APE can not be specifically sited on the modern landscape due to the imprecise nature of historical mapping. Nineteenth-century maps and atlases consulted for this project were vague in their siting of structures on the landscape, and sometimes the location of a structure varied depending on the cartographer. Furthermore, the rerouting of the Bronx River and surrounding roads has altered topographic and manmade landmarks from their 19th century configuration. Therefore, while the Stage 1A Archaeological Documentary Study identified locations that are potentially sensitive for historical archaeological resources, the precise footprints and locations of these historical features are not known.

Historical archaeological resources relating to residential and manufacturing sites are often preserved in privies, cisterns, or wells, which in the days before the construction of municipal services - namely sewers and a public water supply - were an inevitable part of daily life. These shafts became convenient receptacles for all sorts of trash, providing a valuable time capsule of stratified deposits for the modern archaeologist. They frequently provide the best resources recovered on urban sites. Truncated portions of these deep shaft features are often encountered because the shafts' deeper, and therefore earlier, layers remain undisturbed by subsequent construction.

Area 1 was found to be potentially sensitive for an unmapped mill or mills in the APE that may have been associated with a water control feature that once ran through this Area. There are no historical Mapped Documented Structures (MDS) in Area 1. David Lydig, who owned this parcel in the 19th century, had a series of prominent mills on the Bronx River north of East Tremont Street. Although none of his mills were mapped in the APE, at one point there was an offshoot of the Bronx River diverted through Area 1 and a dam was built across it. It is possible that there may have been a mill which operated along the river or its offshoot at some point in the vicinity of the APE. The offshoot of the river was filled by 1921 and Area 1 was redeveloped south of East 177th Street as the Starlight Amusement Park. South of East 177th Street were a carousel, a theater, and pony track while to the north were four small structures, one of which was a gas station. A comparison of the historical route of the river, when mills may have been located along it, to the river's current location, which was altered by the creation of a bulkhead line and the 1950's realignment, suggests that any mills once located on the banks of the river would have been located west of the current project site boundaries. However, the historical presence of a water control feature in the APE – the offshoot of the river and a dam across it - suggest that a mill or mills may have been present on Lydig's property in the APE.

Area 2 was originally part of William W. Astor's landholdings. In the mid-19th century Smith's Carpet Factory was located somewhere on or adjacent to this tract. Mid-19th century maps conflict in their portrayal of the exact location of the factory. One map places it in the APE, while another places it west of the APE on the opposite bank of the Bronx River. Regardless, this was the original carpet factory of Alexander Smith - who established his manufacturing business in West Farms in 1845. Smith moved his factory to Yonkers in the mid-1860s where he expanded it into an enormous manufacturing facility with 45 buildings, 800 looms, and over 4,000 workers. In 1929 Alexander Smith & Sons was the largest manufacturer of carpets and rugs in the world, eventually merging with Mohawk Carpets. From the early 20th century forward, Area 2 was developed in the same manner as Area 1. By 1927 Area 2 hosted race car tracks, a roller coaster, numerous gaming stands and rides, a restaurant and dance hall, and a large swimming pool, complete with an artificial beach and reservoir just north of 174th Street. Excavations for the reservoir and swimming pool probably disturbed any historical archaeological resources that may have once existed in these locations, but the remainder of the APE is considered potentially sensitive for the ca. 1845-1865 carpet factory and associated shaft features.

Area 3 may be potentially sensitive for remnants of a mid-to-late 19th century factory that was mapped in the project site in 1868, but disappeared from maps by 1872. A structure in the same approximate location was later depicted as a dwelling and then an ice house in the early 20th century. The ca. 1868 structure stood prior to the availability of sewer and water lines – which were laid in Westchester Avenue in the late 19th century and documented on Bronx River Avenue between 1921 and 1927 – so there is the potential for shaft features associated with the structure to exist in the APE.

Area 4 was determined to lack historical archaeological potential.

### **III. Testing Program**

The objective of field testing is to (1) ascertain the presence/absence of precontact and/or historical archaeological resources on the project site and (2) determine the potential significance and National Register eligibility of recovered resources in accordance with 36 CFR Part 800.4(c).

All archaeological studies shall be completed in accordance with the New York State Education Department's *Cultural Resources Survey Program, Work Scope Specifications for Cultural Resource Investigations on New York State Department of Transportation Projects*, March 2004. Archaeologists meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44716) will oversee the field investigations.

The archaeology team is required to notify SHPO when testing is scheduled to begin and it is anticipated that each agency's staff may visit the site during the testing process. The field testing program will involve a combination of hand-excavated shovel tests and machine-aided trenches, restricted to locations identified as potentially sensitive within Areas 1-4, which would

experience subsurface development-related impacts and that are outside of the locations of known disturbance. As soon as the final design documents are sufficiently developed to reliably ascertain the precise depths and locations of such impacts, the archaeology team, working with the engineering team, will map them in relation to the areas where potential resources are anticipated. This resulting Field Testing Plan will be submitted to SHPO with a two-week maximum review time requested; testing will not commence until the Plan is approved (with agency comments, if any, addressed). Since testing will occur on portions of the project site that are located on New York State-owned land, the Field Testing Plan will also be submitted to the New York State Education Department for review and approval. Further, a permit granted under Section 233 of the State Education Law for the authorization to collect or excavate archaeological materials will be required from the New York State Museum for archaeological testing (and any subsequent archaeological work including further examination and collection) on State-owned portions of the project site.

Prior to the field investigations, contact information for the NYSDOT designated Engineer-in-Charge, who will oversee Construction aspects of any field operations, will be supplied to all parties. Testing areas will be secured by NYSDOT with fencing. If the depths of potential impacts and the proximity of the area of potential sensitivity to the bulkhead wall along the river's edge necessitate the installation of sheeting, it will be installed during the final design phase, immediately prior to archaeological field testing.

**Stage 1:** Establishing the presence or absence of cultural material within each Area.

This first level of fieldwork, the testing phase of a standard archaeological investigation, is designed to ascertain the presence/absence, type, and extent, of archaeological resources on a site. The subsurface testing for archaeological resources is limited to those project areas that will experience a direct impact. It is not, however, a full-scale data recovery excavation. It may be that the field testing will not reveal any potentially significant precontact or historical features, deposits, or intact soil strata as there is a strong possibility that prior excavations associated with rerouting the river and building adjacent highways and roads may have disturbed the APE. If that is the case, no further archaeological consideration would be warranted, and a report to that effect would be prepared for SHPO.

**Step 1:** The testing procedure will first entail completing a series of shovel tests where precontact and historical archaeological resources may be located and for which subsurface impacts are anticipated. A photographic record of the field testing process will be undertaken. If precontact and/or historical resources are found, then additional hand excavations will be undertaken to determine the nature and extent of the deposit. It is believed that utilizing hand excavated exploratory units to guide the subsequent mechanical trenching – if warranted - will insure that intact precontact deposits and/or shaft features will not be inadvertently impacted.

**Step 2:** If no archaeological resources are found through hand excavations, test trenches that are large enough to allow for the sides to be canted during excavation, as allowed by OSHA, will be machine excavated. Furthermore, if features are encountered during the hand excavations, mechanical excavations may be employed to

further explore resources. A plan indicating the number and placement of backhoe trenches will be proposed by the archaeologist in consultation with SHPO.

Backhoe trenches will be excavated in such a way that soil strata may be examined, profiled, recorded, photographed, and sampled safely. A complete and detailed profile of any trench will be included in the technical report, including the depth, length, and width of the trench. Additionally, the final location of each backhoe trench will be mapped and included in the technical report. Photographs of profiles will be taken with a photo board and vertical scale. The ground surface of the trench must be clearly visible in the photograph. NYSDOT will ensure that all deep testing is performed in compliance with OSHA standards while attaining the necessary soils and resource information. Depth of any such trenching will not exceed the anticipated depth of excavation required for construction of the particular project element to be sited at that specific location, and, in any case, the depth of trenching is not expected to exceed 3 meters. All excavations will proceed under the direction of a professional archaeologist who will be experienced working with heavy machinery, and who will have the authority to direct the depth and breadth of all mechanical action, including suspending excavations. SHPO will be consulted if the conditions of the site indicate that archaeological recovery will be extraordinarily difficult.

If the trench needs to be expanded or moved, SHPO will be consulted prior to this action. If archaeological features are exposed by the backhoe, shovel shaving and/or hand excavation testing methods will be employed. Any identified features would be sufficiently sampled so as to indicate if further testing is necessary.

Should any historical shaft features be encountered, the excavation and evaluation of such features is a relatively standard and confined process. Any finds will immediately be reported to the NYSDOT and consultation with SHPO may be indicated. In order to maximize the understanding of the feature, a portion of it would be exposed by hand and/or machine aided excavation in order to examine it more fully. SHPO will be consulted for their concurrence of proposed excavation plans, and diagrams and other illustrative material will be submitted as required by each agency. While it is anticipated that the documentary research conducted for the Stage 1A Archaeological Documentary Study will be sufficient to address any general questions, additional research may be required if site and/or resource-specific questions are raised by the testing of *in situ* features. This additional primary documentation may be necessary in order to sufficiently interpret the findings.

Upon the completion of the initial shovel tests and trenches, a reevaluation of potential sensitivity will be made. First, a memorandum detailing findings to date will be submitted to the NYSDOT for submission to SHPO, with a two-week maximum review period requested. The memorandum will provide an account of subsurface conditions. Any recommendations for further testing must be approved by SHPO. If, at this stage, it is determined that there are no precontact sites or historical features, then no additional testing may be warranted. If that is the case, there would be no further stage



of archaeological activity and a report reflecting the situation would be prepared for the review agency.

If resources are identified, resource documentation will include written descriptions, maps indicating the location of resource(s), color photographs, and limited architectural drafting. Coordination with the construction management team to secure locations with archaeological deposits will be initiated. It will also be essential to work with the management team to map the locations of features in relation to a previously established site datum. If intact resources are found within the Bronx River Greenway APE, then SHPO may require further testing and mitigation, if warranted, after consultation.

**Stage 2:** If intact archaeological resources (non-human osteological remains) are found on the project site, then an evaluation of potential significance will be conducted through more intensive and focused Stage 2 field and documentary investigations. This component of the site review will be aimed at assessing each resource's potential eligibility for the National Register of Historic Places (NR), and must document resource integrity including physical elements and boundaries. During this stage of the assessment, additional documentary research on the historical and cultural significance of the resource types encountered may be required in order to place the resource within a historical framework. An assessment of the information that the property has yielded or may be likely to yield will be completed for NYSDOT for submission to SHPO.

There may be the need for off-site laboratory analysis during this stage of research. This could include undertaking lithic analysis, ceramic analysis, botanical analysis, faunal analysis, carbon-14 dating, and/or thermoluminescence dating. It may also be necessary to consult with a paleo-geologist to assist with interpreting depositional episodes.

If this stage of research identifies significant archaeological resources (i.e., properties that are NR eligible) that will be impacted by the proposed project, and impacts are unavoidable, then a mitigation plan will be developed. A scope of work for the mitigation plan would be created for the NYSDOT depending on the type and extent of resources encountered. The mitigation plan would be created in conjunction with, and for approval by, the SHPO.

#### **IV. Recordation and Laboratory Analysis**

Professional standards for excavation, screening, recording of features and stratigraphy, labeling, mapping, photographing, and cataloging will be applied. It is assumed that the field excavations will take two to four weeks, but they could take longer in the case of inclement weather or the need to pump water from test locations. It is further assumed, based on the number of features/artifacts recovered from other urban excavations from this time period, that the proposed testing might encounter a variety of resources and artifacts. Archaeologists will clean, stabilize, and inventory all cultural material removed from the field in an on-site, temporary lab facility. An artifact catalog, recording the depth and location of each recovered artifact, will be created.

## **V. Repository**

This program must address the possibility of a collection of artifacts retrieved at the site, and an intended repository for such artifacts. Although any artifact collection removed from the project site will be the property of the project site owner, the professional archaeologists will properly curate the collection and assist the owner in locating an appropriate long-term repository. An appropriate repository, such as the New York State Museum, must be selected. Funds for the long-term curation of a collection will most likely be requested. Any artifact collection that is removed from State-owned portions of the project site is the property of New York State and must go to the New York State Museum in accordance with Section 233 of the State Education Law.

## **VI. Report**

The report documenting the findings will be prepared within four to six weeks of the completion of fieldwork according to the standards of the New York Archaeological Council and the New York State Education Department as recommended by SHPO. If the testing locates features, e.g., *in situ* shaft features or precontact sites, the research in the Stage 1A Archaeological Documentary Study (census records, city directories, conveyance records, tax assessments, etc.) would be integrated into the evaluation of the recoveries. A New York State site inventory form will be completed.

The archaeology team will submit the draft report to the NYSDOT for review prior to submission to SHPO, and will be responsible for reasonable additions and/or corrections as requested by them and/or the review agencies.

## **VII. Project Coordination**

As required by SHPO, field investigations will be under the direction of archaeologists that meet the qualifications of the National Park Service (36 CFR Part 61). The professional team of archaeologists will notify each agency when testing is scheduled to begin and assist in arranging agency staff site visits if requested.

## **VIII. Unanticipated Discovery Plan**

The current *Standards for Cultural Resources Investigations and Curation of Archaeological Collections in New York State* of the New York Archaeological Council (NYAC), the New York State Historic Preservation Office's Phase I Archaeological Report Format Requirements that provides a protocol for handling human remains, and the guidelines for the treatment of human remains prepared by the Advisory Council on Historic Preservation (1988a, 1988b, 1988c) shall be followed. The latter guidelines include the Advisory Council on Historic Preservation 1988a "Policy Statement Regarding Treatment of Human Remains and Grave Goods," 1988b "Memorandum on Treatment of Human Remains Under Section 106," and 1988c "Treatment of Human Remains and Grave Goods, Police Interpretation Memorandum 89-1."

Although there is no research to indicate that the Bronx River Greenway APE was ever the location of human interments, an Unanticipated Discovery Plan has been prepared under Stipulation A.6 of the Protocol in the unlikely event that human remains are encountered on the site. Such a plan is recommended on all city sites so that the archaeological field team can be prepared to act swiftly and with sensitivity if such discoveries are made. The Unanticipated Discovery Plan is annexed to the Protocol as Appendix B.



**P.I.N. X027.05  
BRONX RIVER GREENWAY  
BRONX COUNTY  
NEW YORK**

---

***UNANTICIPATED DISCOVERY PLAN:  
CULTURAL RESOURCES AND HUMAN REMAINS***

---

Prepared for:  
**New York State Department of Transportation**

by:  
**Historical Perspectives Inc.  
P. O. Box 3037  
Westport, Connecticut 06880**

**May 2006**

## **I. INTRODUCTION**

The NYSDOT Engineer-In-Charge (EIC) will serve as the cultural resources Construction Manager for this project. The EIC will adhere to the following procedures, established by NYSDOT, to be used in the event that previously unreported and unanticipated archaeological resources or human remains are found during construction of the Bronx River Greenway, Bronx County, New York.

The procedures differ depending on whether unanticipated non-human cultural materials (see part III, section 6A below) or human remains (see part III, section 6B below) are encountered.

## **II. GOALS OF UNANTICIPATED DISCOVERY PLAN**

- To establish the commitment of the project team to the appropriate action in the event of the unanticipated discovery of cultural resources.
- To create an understanding of the procedures for cultural resource identification and processing so that project construction schedules are not adversely impacted.
- To develop within the on-site construction employees and supervisors a sense of stewardship for and participation in the potential recovery and understanding of cultural resources related to the Bronx River waterfront in the immediate environs of the proposed Greenway.

## **III. IMPLEMENTATION OF UNANTICIPATED DISCOVERY PLAN**

This document outlines the procedure for managing unanticipated discoveries of cultural resources and human remains during construction. These procedures are 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).

### Environmental Inspector

The NYSDOT Resident Engineer (typically a consultant hired by NYSDOT for Construction Inspection, working under the direction of the EIC) for this project will act as the on-site Environmental Inspector to handle the cultural resource compliance issues for this project. The Environmental Inspector will serve as a member of the supervisory team and will also undertake responsibility for implementation of the Unanticipated Discovery Plan for Cultural Resources in coordination with a professional archaeologist (the Cultural Resources Manager) who meets the standards of the NYAC and the National Park Service (NPS) 36 CFR Part 61. The Environmental Inspector will obtain, review, and file on site the Unanticipated Discovery Plan and the *Archaeological Documentary Study* and *Addendum* (HPI, 2004 and 2005) prepared for the Bronx River Greenway project. The NYSDOT EIC and the Environmental Inspector shall initiate implementation of the Unanticipated Discovery Plan by sponsoring, and participating in, an awareness session with the Cultural Resources Manager and the on-site construction management personnel.

Cultural resource discoveries that require reporting and notification to the Environmental Inspector include:

- any human remains
- any recognizable, potentially significant concentrations of artifacts or archaeological features or evidence of human occupation in areas that were not exempted because of prior disturbance identified by the archaeological assessment; or clearly intact deposits in areas previously considered disturbed.

### Notification

The following notification procedures will always be adhered to if the unanticipated discovery of archaeological resources or human remains occurs during project construction.

1. The Contractor must stop work immediately in the area of the find to protect the integrity of the find. The Contractor will not restart work in the area of the find until the on-site Environmental Inspector, with the concurrence of the NYSDOT EIC, has granted clearance.
2. The Contractor will immediately notify the designated on-site Environmental Inspector of the find.

Contact, Environmental Inspector: To be determined  
Telephone:  
Fax:  
Address:

3. The Environmental Inspector will immediately notify the EIC of the find. The notification will include the specific location of the discovery within the disturbed area of the project site and the nature of the discovery. The Environmental Inspector will identify the location and date of the discovery on the project plans.

Contact, Engineer-in-Charge (EIC): To be determined  
Telephone:  
Fax:  
Address:

4. The EIC will promptly notify the on-call Cultural Resources Manager, who will coordinate an on-site archaeological consultation to evaluate the find. The notification will include: town, county, and state; project name and street address; municipal block and lot identification; specific location of discovery within the disturbed area of the project site; and the nature of the discovery.

Contact, Cultural Resources Manager: To be determined  
Telephone:  
Fax:  
Address:

5. The Cultural Resources Manager will immediately notify the EIC by telephone regarding the preliminary significance of the find.
6. If the materials found are human remains, refer to the procedures in section B. Otherwise, refer to the procedures in section A below.

A. Discovery of potentially significant cultural materials

- 1) The EIC will promptly order the Contractor to flag or fence off the site. [Any discovery made on a weekend will be protected until all appropriate parties are notified of the discovery.]
- 2) The EIC will direct the Cultural Resources Manager to begin a more detailed assessment of the find's significance and the potential effect of construction.
- 3) The EIC will promptly notify the New York State Historic Preservation Office (SHPO) of the find.

Contact, SHPO: Douglas Mackey, Archaeologist  
NYSHPO, Field Services Bureau  
Telephone: (518) 237-8643, ext. 3291  
Address: P. O. Box 189, Waterford, NY 12188-0189  
Express Address: Delaware Ave., Cohoes, New York 12047  
Email Address: Douglas.mackey@OPRHP.state.ny.us

- 4) The notification to the SHPO will either: (a) explain why the Cultural Resources Manager believes the resource is not significant and request approval for construction to proceed, or (b) describe a scope of work for evaluating the significance of the resource and evaluating project effects on it. In the latter case, the notification to the SHPO will include a request for authorization to implement the scope of work. All work to evaluate significance will be confined to the project's area of effect.
- 5) The EIC will notify other parties, as directed by the SHPO, or as indicated by city/state law.

[NYSDOT should assume that the SHPO will recommend a courtesy consultation with Amanda Sutphin, Archaeologist with the New York City Landmarks Preservation Commission.]



Contact, LPC: Amanda Sutphin, Director of Archaeology  
NYC Landmarks Preservation Commission  
Telephone: (212) 669-7823  
Address: 1 Centre Street, 9th Floor  
New York, NY 10007

- 6) The EIC will then contact the SHPO, and other parties (as directed above), regarding the Cultural Resource Manager's assessment of the find.
- 7a) If the find is determined to be significant, and continuing construction may damage more of the site, then the EIC will request recommendations from the SHPO and other parties regarding appropriate measures for site treatment. These measures may include:
  - i) Formal archaeological evaluation of the site;
  - ii) Visits to the site by the SHPO, and other parties;
  - iii) Preparation of a mitigation plan by NYSDOT for approval by the SHPO;
  - iv) Implementation of the mitigation plan; and
  - v) Approval to resume construction following completion of the fieldwork component of the mitigation plan.
- 7b) If the find is determined to be isolated or completely disturbed by construction activities, then the EIC will consult with the SHPO, and other parties, and will request approval to resume construction.
- 8) The EIC will notify the on-site Environmental Inspector who will grant clearance to the Contractor to resume project construction.

B. Discovery of human remains

According to NYAC policy, the discovery of human remains and items of cultural patrimony, as defined by Section 3001 of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), requires special consideration and care.

- 1) The EIC will promptly order the Contractor to flag or fence off the site and protect the site from damage and disturbance. [Any discovery made on a weekend will be protected until all

appropriate parties are notified of the discovery.] At all times human remains must be treated with the utmost dignity and respect. Human remains will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

- 2) The EIC will immediately notify both the New York City Police and the Medical Examiner's office of the find and cooperate with the coroner's office to notify, as required, the appropriate city law enforcement agency(s).

Contact, NYPD: 48th Precinct  
Telephone: (718) 299-3900  
Address: 450 Cross Bronx Expressway  
Bronx, NY 10457

Contact,  
Medical Examiner: Van Etten Hospital  
Bronx Municipal Campus  
Telephone: (718) 829-2030  
Address: Pelham Parkway and Eastchester Road  
Bronx, NY 10461

- 3) The EIC will immediately notify the SHPO.

Contact, SHPO: Douglas Mackey, Archaeologist  
NYSHPO, Field Services Bureau  
Telephone: (518) 237-8643, ext. 3291  
Address: P. O. Box 189, Waterford, NY 12188-0189  
Express Address: Delaware Ave., Cohoes, New York 12047  
Email Address: Douglas.mackey@OPRHP.state.ny.us

- 4) The EIC will notify other parties, as directed by the SHPO, or as indicated by city/state law.

[NYSDOT should assume that the SHPO will recommend a courtesy consultation with Amanda Sutphin, Archaeologist with the New York City Landmarks Preservation Commission.]

- 5) Since any potential human remains may potentially constitute a crime scene, the Medical Examiner's office must make an official determination on the nature of the remains before any substantial archaeological work can take place.
- 6) It is currently anticipated that basic forensic anthropological

analyses of any human remains uncovered during this project will be undertaken. This work is important to fulfill the provisions of the NAGPRA. A forensic anthropologist will conduct a complete and thorough analysis of all intact and fragmentary individuals uncovered and/or disinterred from the site in accordance with current professional standards.

- 7) If it is determined that human remains are Native American, they will be left in place and protected from further disturbance until a plan for their protection or removal can be prepared. In accordance with NAGPRA guidance, NYSDOT will consult with the SHPO and appropriate Native American groups to determine a plan of action.
- 8a) If it is determined that Euro-American human remains are present and may be disturbed by continuing construction, then the EIC will consult with the next of kin (if known), the SHPO, and other parties regarding additional measures to avoid or mitigate further damage. These measures may include:
  - i) Formal archaeological evaluation of the site;
  - ii) Visits to the site by the SHPO, and other parties, e.g. the New York City Landmarks Preservation Commission;
  - iii) Preparation of a mitigation plan by NYSDOT, including procedures for disinterment and re-interment, for approval by the SHPO;
  - iv) Implementation of the mitigation plan; and
  - v) Approval to resume construction following completion of the field work component of the mitigation plan.
- 8b) If the find is determined to be isolated or completely disturbed by construction activities, then the EIC will consult with the SHPO, and other parties, and will request approval to resume construction, subject to any further mitigation that may be required by state and/or federal law.
- 9) Archaeological work on the site will resume only after consultations with the SHPO and other appropriate parties.

