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**TAPPAN ZEE BRIDGE/I-287  
ENVIRONMENTAL REVIEW**

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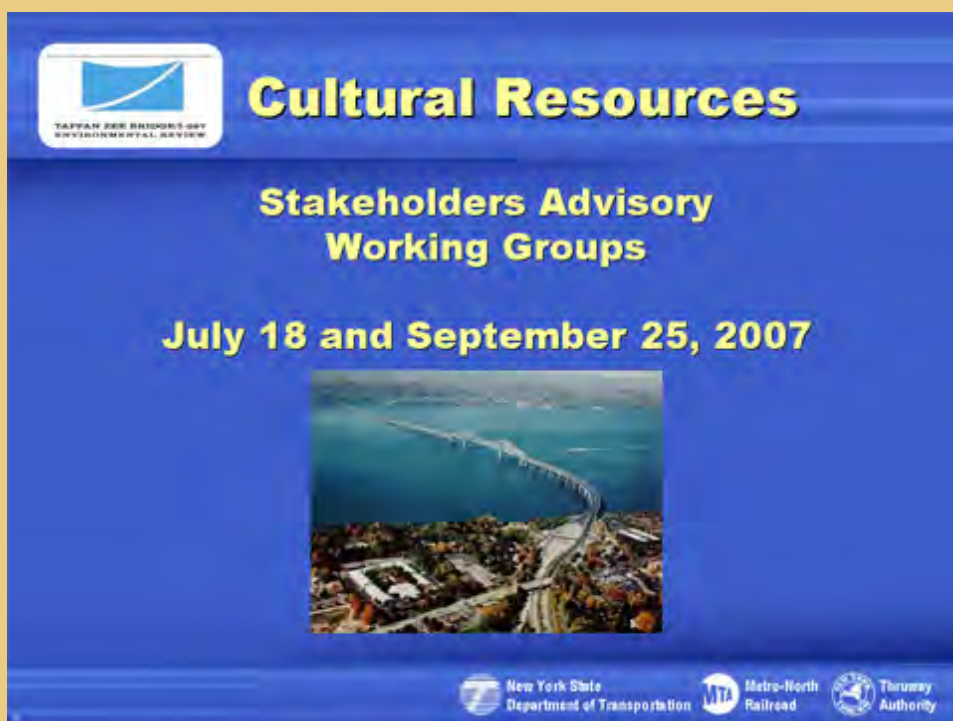
## Stakeholders' Advisory Working Group Environmental Meeting #2 and #3, July 18, September 25, 2007

The Environmental SAWG meeting #2, dealing with the Cultural Resources topic, was held on July 18, 2007 at the Crowne Plaza, White Plains, Westchester County, NY. View minutes of the meeting [here](#) (PDF, 65 KB).


The Environmental Studies SAWG meeting #3, on Cultural Resources and Archaeological topics, was held on September 25, 2007 at the Best Western in Nyack, Rockland County, NY. View minutes of the meeting [here](#) (PDF, 54KB).

The presentation for both meetings combined can be viewed in the following formats:

- [PDF format](#) (1.4MB)
- View the slides below with text narration






This introductory slide shows the Tappan Zee Bridge (TZB), the Hudson River, and the Tarrytown side of the bridge.




## Regulatory Framework

- **Federal regulations**
  - National Historic Preservation Act of 1966
  - Section 4(f) of the US Department of Transportation Act of 1966
  - Historic Sites Act of 1935
- **State regulations**
  - New York State Historic Preservation Act of 1980
- **Local regulations**


Cultural resources studies for the TZB/I-287 Environmental Review are being undertaken in compliance with federal and state regulations. These include: National Historic Preservation Act of 1966; Section 4(f) of the US Department of Transportation Act of 1966, the Historic Sites Act of 1935 and the New York State Historic Preservation Act of 1980. In addition, local historic preservation regulations will be consulted to determine whether locally protected resources are located in the proposed area of potential effect (APE).






## Federal Regulations

### National Historic Preservation Act of 1966 (NHPA)

- Established the National Register of Historic Places
- Established system of state historic preservation offices (SHPOs)
- Established the Section 106 Process



The National Historic Preservation Act, the primary federal regulation guiding the

cultural resources studies, established: The National Register of Historic Places (NRHP); a system of State Historic Preservation Officers (SHPOs); and the Section 106 Process.



## Federal Regulations: National Register

### Criteria of Historic Significance

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in **districts, sites, buildings, structures, and objects over 50 years old**, and possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- That are associated with **events** that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of **persons** significant in our past; or
- That embody the **distinctive characteristics** of a type, period, or method of construction, or that represent the **work of a master**, or that possess **high artistic values**, or that represent a **significant and distinguishable entity** whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.**

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The National Register of Historic Places is the nation's official list of cultural resources worthy of preservation. Buildings, structures, sites, districts and objects over 50 years old are eligible for listing in the National Register if they retain integrity and meet one of the following criteria: association with significant events, association with significant persons; distinctive design or construction, and/or likely to yield important prehistoric or historic information or data.



## Federal Regulations: Section 106 Participants

### Lead Federal Agencies

- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)

### Lead State Agencies

- New York State Thruway Authority (NYSTA)
- New York State Department of Transportation (NYSDOT)
- Metro-North Railroad (MNR)

### Review Agency

- New York State Historic Preservation Office (NYSHPO)

### Other Participants

- Advisory Council on Historic Preservation (ACHP)
- Consulting (Interested) Parties
- General Public



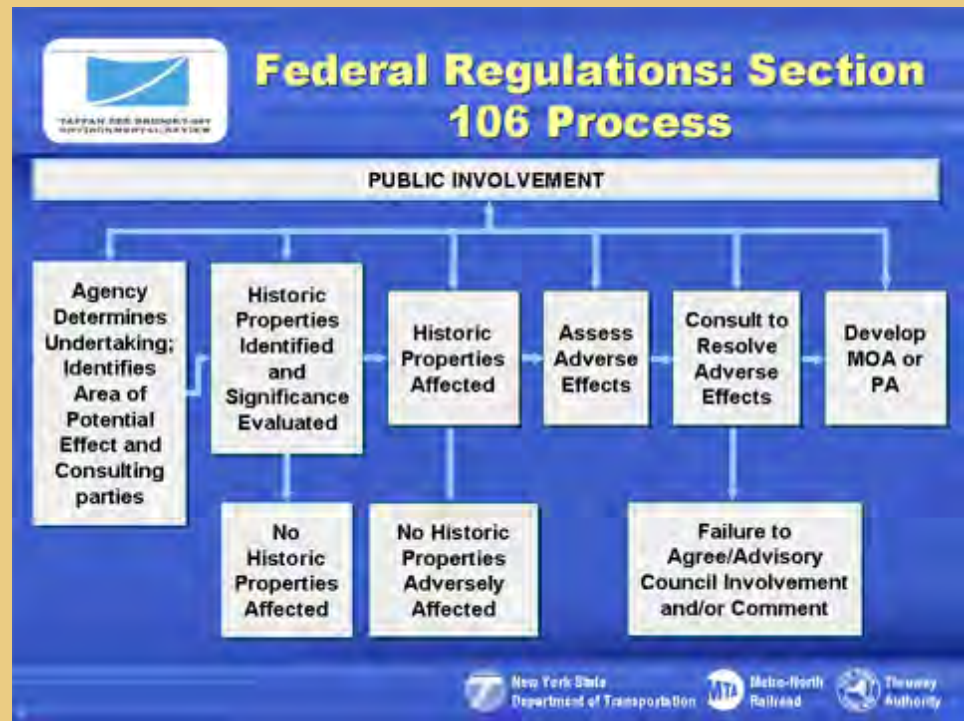


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The Section 106 Process for the Tappan Zee Bridge/I-287 Environmental Review



has multiple participants, including: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), New York State Department of Transportation (NYSDOT), New York State Thruway Authority (NYSTA), Metro-North Railroad (MNR), New York State Historic Preservation Office (NYSHPO), Advisory Council on Historic Preservation (ACHP), Consulting (interested) parties, and the general public.



The Section 106 Process has a structured process that includes the following steps:

1. The lead Federal agency (FHWA and FTA) determine the "undertaking" (the project), identify an Area of Potential Effect (APE), and identify consulting parties to be involved.
2. Historic properties are identified and are evaluated for significance. If no historic properties are affected, the process is complete.
3. A determination is made as to whether the effects on the historic properties are adverse. If there are no adverse effects, the process is complete.
4. The lead agency works with the consulting parties to resolve (avoid, minimize, mitigate) the adverse effects. If an agreement is not reached, the ACHP is involved.
5. The agency and consulting parties develop a Memorandum of Agreement or a Programmatic Agreement.



## Federal Regulations: Section 4(f)

The FHWA/FTA may not approve **use** of land from a public park, recreation area, wildlife/waterfowl refuge, or **historic site** unless a determination is made that:

- There is no feasible and prudent alternative to use.
- Action includes all possible planning to minimize harm.



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Historic properties are also covered by Section 4(f) of the US Department of Transportation Act of 1966. Section 4(f) requires that FHWA/FTA ensure that historic sites not be "used" without engaging in all possible planning to avoid and minimize harm.



## Historic Sites Act of 1935

Declared it a national policy to preserve for public use historic sites, buildings and objects of national significance for the inspiration and benefit of the people.

- Established the **National Historic Landmarks** program administered by the National Park Service.



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The Historic Sites Act of 1935 established the National Historic Landmarks Program, which is administered by the National Park Service. National Historic Landmarks are included in the Section 106 process and agencies must "to the maximum extent possible...minimize harm" to these properties. Section 110(f) of the National Historic Preservation Act sets forth specific actions required when an undertaking would affect a National Historic Landmark.



## State Regulations

### New York State Historic Preservation Act of 1980, Section 14.09

- Established New York State Register of Historic Places
- Established State equivalent of Federal Section 106 Process



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The New York State Historic Preservation Act of 1980 established a review process similar to that of the National Historic Preservation Act of 1966 for state-initiated undertakings.



## Local Regulations: Rockland County

Local Government	Historic Preservation Regulations
Rockland County	In 2002, county became a certified local government (CLG) under NHPA. -Twelve-member county board established to advise county government, towns and villages on historic preservation issues -Board participates in and supports nomination of worthy properties to the National/State Register
Town of Clarkstown	-Code of Town of Clarkstown, New York, Part I, Administrative Legislation -Chapter 25, Historical Review Board -Code of Town of Clarkstown, New York (1974) -Part II, General Legislation, Chapter 153, Historic Road Preservation (2002)
Town of Orangetown	-Code of Town of Orangetown, New York, Chapter 12, Historic Areas -Chapter 18A, Historical Area Board of Review (1968) -Chapter 19, Historic Road Preservation (1993)
Village of Nyack	In the 1980s, Nyack established a Historic Districts & Landmarks Preservation Commission. The commission was disbanded in 1989, and the village no longer has active, enforceable historic preservation regulations.



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Multiple local governments in Rockland County have adopted historic preservation regulations, including: Rockland County, Clarkstown, Orangetown and Nyack. Nyack no longer has an active landmarks commission.





## Local Regulations: Westchester County

Local Government	Historic Preservation Regulations
Westchester County	<ul style="list-style-type: none"> <li>—County Planning Department maintains Westchester County Inventory of Historic Places</li> <li>—Incorporates historic preservation issues into capital plan</li> <li>—Coordinates efforts of Historic Preservation Advisory Committee</li> </ul>
Town of Greenburgh	Code of the Town of Greenburgh, New York, Chapter 235, Historic Districts and Landmarks (2003)
Village of Tarrytown	Code of the Village of Tarrytown, New York, Chapter 191, Historic Districts and Landmarks (1978, 1988) <i>Regulation inactive since the 1990s</i>
Village of Irvington	<i>Irvington Historic District regulations currently under consideration</i>
City of Rye	Code of the City of Rye, Landmarks Preservation Ordinance, Chapter 117 (1977)



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Multiple local governments in Westchester County have adopted historic preservation programs and regulations, including: Westchester County, Greenburgh, Tarrytown, Rye and Irvington. Irvington is considering adopting local historic district regulations to protect the National Register–eligible Main Street Historic District.



## Architectural Survey

- Establish Area of Potential Effect (APE)
- Identify previously designated cultural resources
- Conduct survey
- Assess project impacts to cultural resources
- Mitigate adverse effects to cultural resources



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There are two types of historic sites considered under Section 106: architectural sites and archaeological sites. We will start by reviewing the process by which historic architectural sites are identified and addressed. The first step of the architectural survey process is to establish the Area of Potential Effect (APE) for the project.



## Area of Potential Effect

Section 106 defines the APE as:

*"the geographic area or areas within which an undertaking may **directly** or **indirectly** cause alterations in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking"* (36 CFR Part 800, Section 800.16).



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The APE must take into account both direct and indirect impacts of undertakings. The size of the APE should be directly linked to the scale and nature of the undertaking. Depending on the project, the APE may account for physical, visual, noise, and vibration impacts that would result from the construction or operation of the project.



## Proposed TZB/I-287 APE for Architectural Resources

Construction Type	Area of Potential Effect <sup>1</sup>
Thruway modifications	500' from either side of the centerline of the I-287 alignment
CRT, LRT, or BRT alignments within an <i>existing</i> rail corridor or on an <i>existing</i> street	50' from either edge of existing track bed or road bed
CRT or LRT alignments at grade within a <i>new</i> rail corridor	100' from either edge of the new track bed
Tunnels, below grade CRT or LRT tracks, and subsurface stations	50' from either edge of the tunnel walls or from the edge of the subsurface station footprint
Surface parking lots	50' from the footprint of the lot
Above-ground structures	500' from the construction boundary
Temporary construction impacts	100' from the construction boundary

<sup>1</sup> If property line falls within the APE, all buildings on property will be surveyed.



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The proposed APE for the Tappan Zee Bridge/I-287 Environmental Review would include all areas that would be physically impacted by any of the alternatives and a buffer area to encompass any indirect impacts. The size of this buffer varies depending on the type of activity and the possible impacts that could result.





## Architectural Survey

- Establish Area of Potential Effect (APE)
- **Identify previously designated cultural resources**
- Conduct survey
- Assess project impacts to cultural resources
- Mitigate adverse effects to cultural resources



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The second step of the architectural survey process involves identification of previously designated cultural resources within the APE.



## Cultural Resource Designations

- National Historic Landmarks
- National/State Register-Listed Resources
- National/State Register-Eligible Resources
- Local Landmarks and Historic Districts



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Four types of sources were reviewed for previously identified cultural resources located within the study area.



## National Historic Landmarks

There are 3 National Historic Landmarks within the APE.



Lyndhurst, Tarrytown



Sunnyside, Tarrytown



Old Croton Aqueduct,  
Westchester County


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Three National Historic Landmark sites are located within the study area: Lyndhurst (Tarrytown); Sunnyside (Tarrytown); and Old Croton Aqueduct (Westchester County).

No National Historic Landmarks are located within the Rockland County portion of the study area.



## National/State Register- Listed Resources

There are 15 National/State Register-Listed Resources within the APE.



The NSR-listed Wayside Chapel in Grand View-on-Hudson is located in the Recommended NR-Eligible River Road Historic District.



The White Plains Armory is located at the southern tip of the historic White Plains village green, now known as Tibbits Park.



The Bronx River Parkway Reservation in Westchester County is one of two NSR-listed linear resources within the APE. The other is the Palisades Interstate Parkway in Rockland County.


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Fifteen National/State Register-listed resources are located within the study area. Some examples include: Wayside Chapel (Grand View-on-Hudson); White Plains Armory; and Bronx River Parkway Reservation.

These sites have already been listed on the National/State Register.



## National/State Register-Eligible Resources

There are 18 National/State Register-Eligible Resources within the APE.



The Tappan Zee Bridge over the Hudson River.



The original New York & Erie Railroad Company alignment extends from Piermont to Dunkirk, and occurs within the APE in Rockland County.





An additional 18 sites in the study area have been previously identified as being eligible for the National/State Register. This determination grants these resources the same level of protection as resources that have been formally listed on the National/State Register. Two examples of such resources within the study area include the Tappan Zee Bridge and the original New York & Erie Railroad Company alignment.



## Local Landmarks and Historic Districts

There are 10 Local Landmarks and Historic Districts within the APE.



114 Strawtown Road is located in the locally designated West Nyack Historic District in Rockland County.



99 White Plains Road is a locally designated landmark in Tarrytown.





Ten locally protected landmarks and historic districts are located within the study area. Examples (shown here) include the West Nyack Historic District and 99 White Plains Road in Tarrytown.






## Architectural Survey

- Establish Area of Potential Effect (APE)
- Identify previously designated cultural resources
- **Conduct survey**
- Assess project impacts to cultural resources
- Mitigate adverse effects to cultural resources








The next step in the architectural survey process is to conduct a survey to identify any additional sites within the APE that may be eligible for listing on the National/State Register.



## Architectural Survey Results to Date

Resource Type	Designation			
	NHL <sup>1</sup>	NSRL <sup>2</sup>	NSRE <sup>3</sup>	Recommended NRE <sup>4</sup>
Historic Districts	-	1	2	14
Sites	-	4	-	-
Buildings	2	10	12	24
Structures	1	1	4	-
Objects	-	-	-	-

<sup>1</sup>NHL=National Historic Landmark  
<sup>2</sup>NSRL=National/State Register-listed  
<sup>3</sup>NSRE=National/State Register-eligible  
<sup>4</sup>Includes survey-evaluated Local Landmarks and Historic Districts

Architectural survey results to date have identified an additional 14 districts and 24 buildings that are recommended as being eligible for the National Register.



## Recommended Eligible Resources

### Individual Residential Buildings



88 Scotland Hill Road in the Village of Chestnut Ridge is a highly intact example of the early Federal period vernacular architecture.



44 South Highland Avenue in the Village of Nyack is a highly intact example of the early 20<sup>th</sup>-century Craftsman style.





Recommended National Register–eligible resources include residential buildings, institutional/commercial buildings, districts, and landscapes. Shown are two residential properties, one in the Village of Chestnut Ridge and one in the Village of Nyack, that were recommended as eligible for the National Register.



## Recommended Eligible Resources

### Institutional and Commercial Buildings



The Clarkstown Reformed Church located in the proposed Strawtown Road Historic District in West Nyack.



An early 20<sup>th</sup>-century commercial building located on Lafayette Avenue in Suffern.





Institutional/commercial buildings recommended as National Register–eligible include the Clarkstown Reformed Church in West Nyack and an early 20<sup>th</sup> Century commercial building in Suffern.



## Recommended Eligible Resources

### Historic Districts



A high-style mid-20th-century suburban residence located in the proposed Harrison Historic District.



Modest early 20th-century suburban homes located in the proposed Tappan Landing Historic District.



The proposed East Hillburn Historic District is composed of early 20th-century workers' houses associated with the Ramapo Ironworks.





Examples of districts recommended as National Register–eligible include the proposed Harrison, Tappan Landing, and East Hillburn Historic Districts.



## Recommended Eligible Resources

### Historic Landscapes



Historic Tibbits Park in the City of White Plains is bordered by early 20th-century apartment houses such as Broad Park Lodge (center).





Historic Tibbits Park in the City of White Plains is an example of a historic landscape recommended as eligible for listing on the National Register.






## Architectural Survey

- Establish Area of Potential Effect (APE)
- Identify previously designated cultural resources
- Conduct survey
- **Assess project impacts to cultural resources**
- Mitigate adverse effects to cultural resources

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The fourth step of the architectural survey process requires assessment of impacts to the resources identified above.



## Section 106 Impacts Analysis


"An **adverse effect** is found when an undertaking may alter, *directly or indirectly*, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would *diminish the integrity of the property's location, setting, materials, workmanship, feeling, or association*.

Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative."  
(36 CFR 800.5[a][1])

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Section 106 requires impacts analysis to take into account direct and indirect impacts to historic properties.

"An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register..."






## Possible Adverse Effects to Architectural Resources

**Direct Impacts:**

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's *Standards for the Treatment of Historic Properties* (36 CFR Part 68).
- Removal of the property from its historic location.

**Indirect Impacts:**

- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.
- Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.

Direct impacts to historic properties include: physical destruction or damage, alteration inconsistent with historic elements and removal of a property from its historic location.

Indirect impacts can include: change in character of use or setting and visual, atmospheric, or noise impacts.



## Architectural Survey

- Establish Area of Potential Effect (APE)
- Identify previously designated cultural resources
- Conduct survey
- Assess project impacts to cultural resources
- **Mitigate adverse effects to cultural resources**





The final step of the architectural survey process is to develop mitigation measures to offset any adverse effects. NYSHPO and other consulting parties must concur with these measures.



**TAPPAN ZEE BRIDGE ENVIRONMENTAL REVIEW**

## Mitigation Options for Architectural Resources

- Documentation
- Public Education Programs
  - Lecture series
  - Websites
- Museum Exhibits




Tappan Zee Bridge








Mitigation measures can vary depending on the resource and the type of impact. As an example, if the National Register–eligible Tappan Zee Bridge were replaced by the project, mitigation could include documentation of its design, development of public education programs, or the development of exhibits at local museums.



**TAPPAN ZEE BRIDGE ENVIRONMENTAL REVIEW**


## Archaeology Survey

- **Establish Area of Potential Effect (APE)**
- ✦ Phase 1 Archaeological Survey
- ✦ Phase 2 Archaeological Survey
- ✦ Phase 3 Archaeological Survey

The goal of the archaeological survey is similar to that of the architectural one in that it seeks to identify sites that are potentially eligible for the National Register. However, because the resources are located below ground, the process is somewhat different. Similar to the architectural survey, the first step of the archaeological survey is to establish the APE.









## Proposed TZB/I-287 APE for Archaeological Resources

The area directly impacted by construction activities resulting in disturbance to the ground surface such as:

- Excavation
- Cutting/filling, grading
- Compression from movement or storage of heavy objects or equipment
- Vibrations such as those caused by movement of heavy equipment








Because they are located below ground, only direct impacts to archaeological resources are considered during the survey. Direct impacts can include excavation, cut/fill or grading, compression resulting from heavy objects and vibration. The APE for the archaeological survey is designed to encompass all areas that may be impacted in these ways during construction of the alternatives.




## Archaeology Survey

- Establish Area of Potential Effect (APE)
- **Phase 1 Archaeological Survey**
- Phase 2 Archaeological Survey
- Phase 3 Archaeological Survey

Following the delineation of the APE, a Phase 1 Archaeological Survey is conducted.






## Phase 1 Archaeological Survey

**Phase 1A Tasks:**  
**Assessment of Potential**

1. Background research
2. NYSHPO site files search
3. Documentation of past land use
4. Evaluation of past ground disturbance
5. Site walk-over of targeted areas
6. Evaluation of the archaeological potential

**Phase 1B Tasks:**  
**Presence/Absence Testing**

1. Devise testing plan
2. Conduct shovel test pit (STP) survey
3. Analyze recovered artifacts
4. Stratigraphic analysis
5. Recommend for or against Phase 2 Survey

The Phase 1 Survey has two distinct phases. Phase 1A assesses the potential for the presence of archaeological resources through background research including NYSHPO files, local archives, etc. and through a site walk-over. This evaluation identifies areas to be investigated further during Phase 1B. Phase 1B uses shovel test pits to verify the presence or absence of artifacts. Based on the results, a recommendation is made regarding further in-ground testing.



## Phase 1 Archaeological Survey



- A staked STP transect in rural Suffolk County, NY





This photo shows an example of a Phase 1B survey area in rural Suffolk County, New York. Archaeologists have marked a transect line using flagged stakes at 15-meter intervals where shovel test pits will be dug.



## Phase 1 Archaeological Survey



- Flagged transect along Route 67 in suburban Connecticut



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This photo shows another example of a Phase IB survey area along a road corridor in suburban Connecticut. The crew member is screening dirt for artifacts from a shovel test pit.



## Phase 1 Archaeological Survey



- Excavating STPs in rural northeastern Connecticut



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This photo shows another example of a Phase IB survey area in rural Connecticut. Crew members are working along a flagged transect in the Village Green area that would be impacted by proposed road construction.





## Phase 1 Archaeological Survey




- Backhoe trenching in urban New Jersey

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This photo shows an example of Phase 1B supplemental testing in an urban setting. Heavy machinery was required to safely excavate a trench below approximately 10 feet of fill in search of deeply buried wooden wharf/dock-related features.




## Archaeology Survey


- Establish Area of Potential Effect (APE)
- Phase 1 Archaeological Survey
- **Phase 2 Archaeological Survey**
- Phase 3 Archaeological Survey

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A Phase 2 Archaeological Survey is conducted, if warranted, based on the results of the Phase 1B survey.



## Phase 2 Archaeological Survey

### Site Delineation and National Register Eligibility Determination

1. Additional subsurface testing
2. Additional research
3. Artifact analysis
4. Stratigraphic analysis
5. Evaluation of the integrity of the resource
6. Determination of the National Register eligibility based on the criteria of significance
7. Assessment of impacts to resource
8. If National Register-eligible, then recommendation of Phase 3 mitigation

The Phase 2 survey has two major objectives: 1. To delineate the boundaries of the encountered resource; and 2. To evaluate the National Register eligibility of the encountered resource.

The Phase 2 survey includes additional subsurface testing, research, analysis of artifacts, and stratigraphic analysis. The integrity of the resources is evaluated and its eligibility for the National Register is determined. Finally, an assessment of the impacts of the project on the resource is completed.

If the resource is determined to be eligible for the National Register, Phase 3 mitigation is recommended.



## Phase 2 Archaeological Survey



- Stone foundation wall encountered in test pit





This photo shows an example of a Phase 2 excavation unit showing a stone wall segment that was first encountered during the Phase IB survey in the Village Green area in rural Connecticut.



## Phase 2 Archaeological Survey



- Test unit expanded to delineate feature

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This photo shows the expansion of the Phase 2 excavation unit to delineate the stone wall. The darker soil to right of wall represents interior deposits of a 19th century building.



## Phase 2 Archaeological Survey




- Excavating to relocate historic landscape features

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  Metro-North Railroad
  Thruway Authority


This photo shows a Phase 2 trench excavation to locate historic landscape features in the Henry Wadsworth Longfellow House garden in Cambridge, Massachusetts for the National Park Service.






## Archaeology Survey

- Establish Area of Potential Effect (APE)
- Phase 1 Archaeological Survey
- Phase 2 Archaeological Survey
- **Phase 3 Archaeological Survey**





If resources encountered during the Phase 2 survey are determined to be National Register eligible, a Phase 3 Archaeological Survey is recommended. The goal of the Phase 3 survey is to mitigate impacts to the resource.



## Phase 3 Archaeological Survey

### Mitigation Plan

**Option 1:** Avoidance of resource by project redesign

**Option 2:** Data recovery excavation of resource, including:

- Excavation of certain percentage of site
- Analysis of all recovered artifacts, field data, and background research
- Final report serves as site documentation
- Public participation – exhibits, presentations, and brochures





The Phase 3 Archaeological Survey develops a plan to mitigate the adverse impacts of the proposed project actions on the National Register eligible resource. Two options are typically considered. Option 1: avoidance of the resource through project redesign. This is the preferred option, if possible. If Option 1 is not possible, then Option 2 may be chosen. Option 2 requires data recovery, including: Site excavation; Research, analysis and curation of artifacts; and Public Outreach to share results.



## Phase 3 Archaeological Survey



- Initial test unit layout of data recovery trench



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This photo shows an example of Phase 3 data recovery excavation units along a road corridor in suburban Connecticut. This prehistoric site was located during the Phase 1B survey and was determined National Register–eligible during the Phase 2 survey. Data recovery was conducted to mitigate unavoidable adverse impacts to resource.



## Phase 3 Archaeological Survey



- Data recovery trench nearing completion



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This photo shows data recovery excavation of a National Register–eligible prehistoric site nearing completion along a road corridor in suburban Connecticut.



## Phase 3 Archaeological Survey



- Projectile points excavated from data recovery trench





This photo shows examples of projectile point types recovered from the data recovery excavation of the National Register–eligible prehistoric site in suburban Connecticut.



## Phase 3 Archaeological Survey



- Data recovery in progress in urban New Jersey





This photo shows a data recovery excavation in progress in an urban setting in Elizabeth, New Jersey. Replacement of the US Route 1 & 9 viaduct over the Elizabeth River required the taking of this late–18th century house, which was determined to be National Register–eligible.





## Phase 3 Archaeological Survey



- Early 19<sup>th</sup>-Century trash midden excavated in urban New Jersey



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This photo shows an early-19th century domestic trash midden encountered in the driveway/side yard area of a late-18th century house in Elizabeth, New Jersey. Historic ceramic shards, oyster and clam shells, and butchered bone comprised the bulk of the 8,000-plus artifacts recovered.



## Phase 3 Archaeological Survey



- Backhoe assisted data recovery in urban New Jersey



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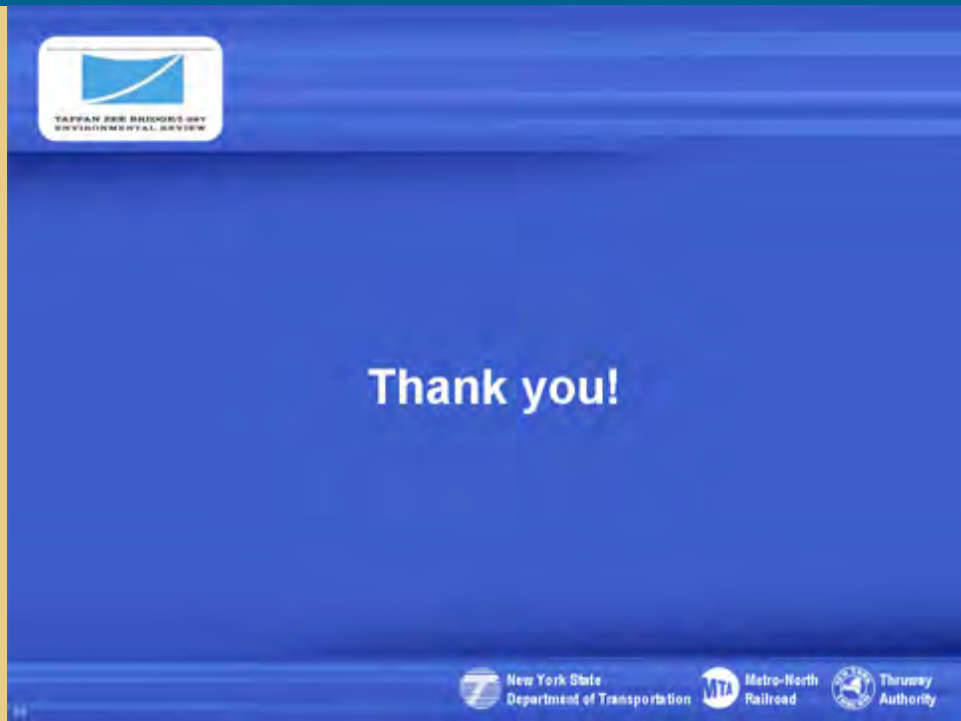
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This photo shows a data recovery excavation in progress in Elizabeth, New Jersey. A backhoe and steel shoring box were necessary to safely excavate a trench through over ten feet of fill to expose deeply buried wooden wharf/dock related features along the Elizabeth River.



Thank you!