POND EDDY BRIDGE PROJECT
TOWN OF LUMBERLAND, SULLIVAN COUNTY, NEW YORK, AND SHOHOLA TOWNSHIP, PIKE COUNTY, PENNSYLVANIA

FINDING DOCUMENTATION

PREPARED FOR

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 4-0

IN CONSULTATION WITH

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
REGION 9
AND
FEDERAL HIGHWAY ADMINISTRATION
PENNSYLVANIA DIVISION

MAY 2011

R09-0107.006

FINDING DOCUMENTATION
PIN: 980389
SHPO PROJECT REVIEW NUMBER 03PR00182

POND EDDY BRIDGE
TOWN OF LUMBERLAND,
SULLIVAN COUNTY, NEW YORK
AND
SHOHOLA TOWNSHIP,
PIKE COUNTY, PENNSYLVANIA

PREPARED FOR

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 4-0

FEDERAL HIGHWAY ADMINISTRATION
PENNSYLVANIA DIVISION

AND

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
REGION 9
44 HAWLEY STREET
BINGHAMTON, NEW YORK 13901

PREPARED BY

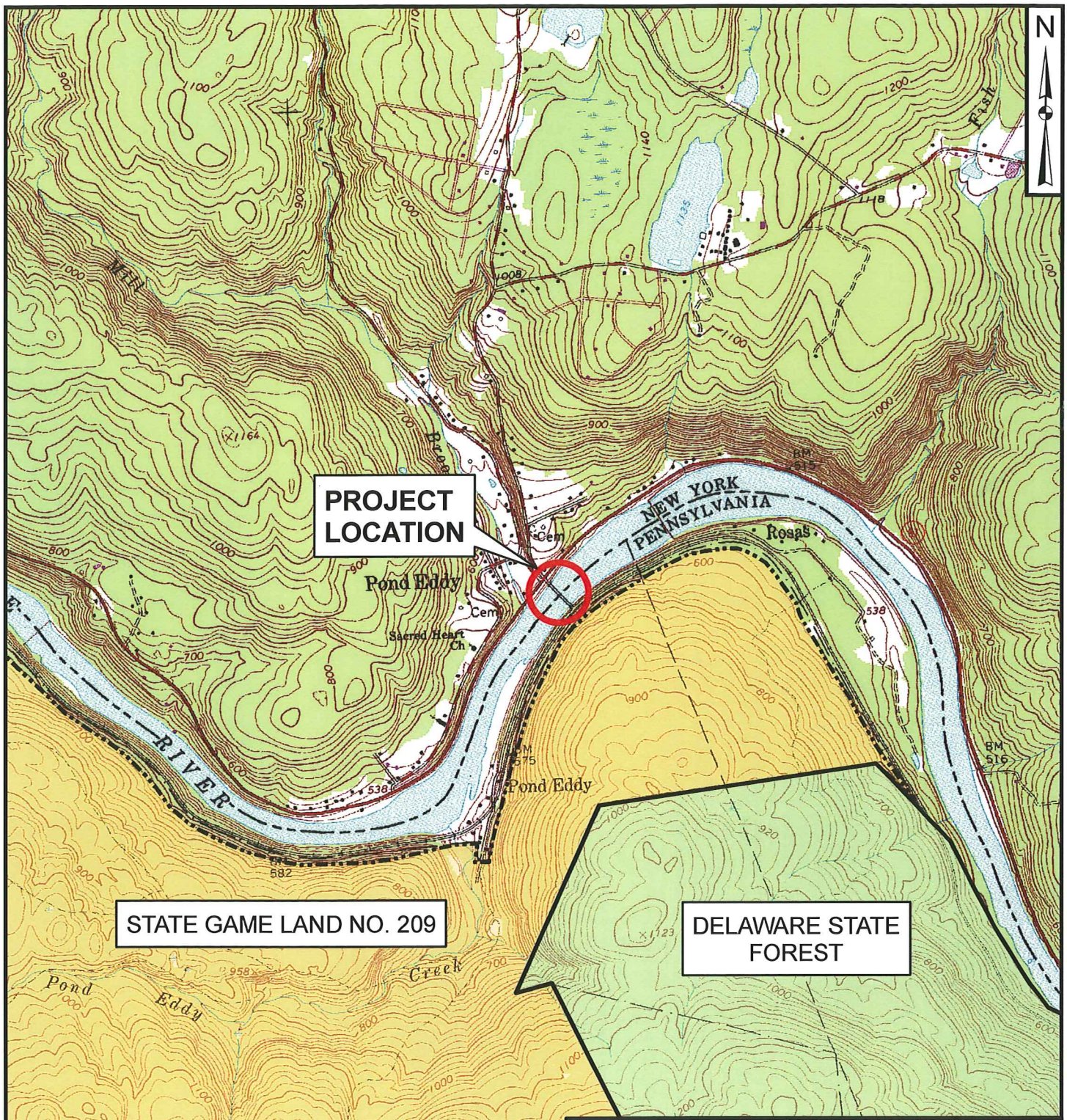
SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS
449 EISENHOWER BOULEVARD
HARRISBURG, PENNSYLVANIA 17111

MAY 3, 2011

ABSTRACT

The Pennsylvania Department of Transportation (PennDOT), as a partner in the Joint Interstate Bridge Commission (JIBC) with the New York State Department of Transportation (NYSDOT) and in cooperation with the Federal Highway Administration (FHWA) and the Northeastern Pennsylvania Alliance Rural Planning Organization (NEPA RPO), is proposing to address the structural deficiencies of the existing Pond Eddy Bridge through the implementation of a bridge improvement project. Constructed between 1904 and 1905, the existing Pond Eddy Bridge (known locally as the All Veterans Memorial Bridge) is a two-span, pin-connected, Pennsylvania (Petit) through-truss bridge carrying S.R. 1011 over the Delaware River between Shohola Township, Pike County, Pennsylvania, and the Town of Lumberland, Sullivan County, New York (Figure 1). Cultural resource investigations were completed for the Pond Eddy Bridge Project in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act.

Three separate cultural resource studies were completed for the project, including a Determination of Eligibility (which defined the Area of Potential Effects [APE]), a Phase I Archaeological Survey, and a Determination of Effect report. The Determination of Eligibility Report (March 2002) identified the Pond Eddy Bridge as the sole National Register of Historic Places listed or eligible property within the project APE. It was listed in the National Register of Historic Places on November 14, 1988. Four other aboveground historic resources, including Nolan's River Inn Restaurant and Motel, Millbrook Inn, Hollow Road Retaining Walls, and a section of the Delaware and Hudson (D&H) Canal, were determined not eligible for National Register listing. The Phase I Archaeology Report (February 2004) identified one potential archaeological resource, a turning basin for the D&H Canal, but the resource was determined to be not eligible for the National Register. Portions of the D&H Canal along the Delaware River were identified as a Natural Historic Landmark (NHL); however, because of changes associated with the construction of existing NY State Route 97, this section is not included in the NHL.



Source: U.S.G.S. 7.5' Quadrangle - Pond Eddy, New York - Pennsylvania

SKELLY and LOY, Inc.	April 2011	Figure 1

Pond Eddy Bridge Project
S.R. 1011, Section 470

PROJECT LOCATION MAP

Shohola Township
Pike County, Pennsylvania and Town of Lumberland
Sullivan County, New York

Job No: R05-0067:018	Scale: 1" = 2000'

The Determination of Effect Report (March 2006) was submitted to the Pennsylvania State Historic Preservation Office (PA SHPO) in April 2006 and to the New York State Historic Preservation Office (NY SHPO) in August 2006, assessing the Preferred Alternative (replacement of the Pond Eddy Bridge) as an Adverse Effect. The Pennsylvania Historical and Museum Commission (PHMC) issued its concurrence in May 2006. The NY SHPO acknowledged receipt of the Determination of Effect Report in September 2006 but identified concerns with the development of the project. NY SHPO terminated consultation with PennDOT and FHWA in July 2010. This March 2011 Finding Documentation has been prepared to update the evaluation of project alternatives and serve as an updated Determination of Effect Report for NY SHPO's consideration.

Off-line and on-line alternatives were developed for the Pond Eddy Bridge Improvement project. Off-line alternatives included the Pond Eddy Bridge Buyout, Alternative Access Route through State Game Lands 209 (SGL 209), Alternative Southern Access Route from Mill Rift, and Parkers Glen Alternative Access Route. None were advanced to detailed analysis, and all were evaluated as having No Adverse Effect on the Pond Eddy Bridge.

On-line alternatives included a No-Build Alternative, Rehabilitation Option 1 (Return the Bridge to Its Original Condition), Rehabilitation Option 2 (Rehabilitation with Strengthening), Rehabilitation Option 3 (Rehabilitation with Widening), Bridge Replacement, and a Dual Bridge Option. The No-Build Option would eventually lead to a finding of Adverse Effect due to demolition by neglect; Rehabilitation Option 1 and the Dual Bridge Evaluation were evaluated as having No Adverse Effect; and Rehabilitation Option 2, Rehabilitation Option 3, and the Bridge Replacement Option were assessed as having Adverse Effects. The Bridge Replacement Option was determined to be the only prudent and feasible alternative.

Extensive project coordination and evaluation of alternatives were completed for the project. PennDOT and NYDOT have determined that the Bridge Replacement is the Preferred Alternative. The replacement bridge would be located immediately upstream of the existing crossing, and the Pond Eddy Bridge would be removed. Applying the Advisory Council on Historic Preservation's Criteria of Effect and Adverse Effect, the advancement of the bridge replacement alternative would result in an Adverse Effect on the National Register Listed Pond Eddy Bridge.

TABLE OF CONTENTS

PAGE

ABSTRACT I

1.0 PROJECT DESCRIPTION 1

2.0 STEPS TAKEN TO IDENTIFY HISTORIC PROPERTIES 4

2.1 ABOVEGROUND HISTORIC PROPERTIES – NATIONAL REGISTER LISTED OR ELIGIBLE 4
2.2 OTHER ABOVEGROUND STRUCTURES CONSIDERED – NOT ELIGIBLE 4
2.3 DELAWARE AND HUDSON CANAL (D&H CANAL) 4
2.4 ARCHAEOLOGICAL PROPERTIES 5
2.5 MILL BROOK TRIBUTARY 5
2.6 SUMMARY OF ELIGIBILITY 6
2.7 DETERMINATION OF EFFECT REPORT 6
2.8 POND EDDY BRIDGE – NATIONAL REGISTER LISTED RESOURCE 7

3.0 EVALUATION OF PROJECT IMPACT ON IDENTIFIED HISTORIC PROPERTIES 9

3.1 OFF-LINE ALTERNATIVES 9
3.2 ON-LINE ALTERNATIVES 17

4.0 BASIS FOR RECOMMENDED PROJECT FINDING 27

4.1 CRITERIA OF ADVERSE EFFECT 27
4.2 MITIGATION FOR ADVERSE EFFECT 29

5.0 PUBLIC INVOLVEMENT 31

6.0 REFERENCES 33

7.0 ATTACHMENTS

ATTACHMENT A - POND EDDY BRIDGE LISTING IN NATIONAL REGISTER OF HISTORIC PLACES
ATTACHMENT B - DELAWARE AND HUDSON CANAL – NATIONAL HISTORIC LANDMARK NOMINATION FORM
ATTACHMENT C - POND EDDY BUYOUT PETITION

SKELLY AND LOY ENGINEERING • ENVIRONMENTAL CONSULTANTS

LIST OF FIGURES

NO.	DESCRIPTION	PAGE
1	PROJECT LOCATION MAP	ii
2	AREA OF POTENTIAL EFFECT	3
3	STATE GAME LAND ALTERNATE ACCESS ALTERNATIVE	11
4	MILLRIFT ALTERNATE ACCESS ALTERNATIVE	13
5	PARKER'S GLEN ALTERNATE ACCESS ALTERNATIVE	15

LIST OF TABLES

NO.	DESCRIPTION	PAGE
1	SUMMARY OF OFF-LINE PROJECT ALTERNATIVES	16
2	SUMMARY OF ON-LINE ALTERNATIVES	26
3	DEFINITION OF EFFECTS, THE POND EDDY BRIDGE	27
4	APPLICATION OF CRITERIA OF ADVERSE EFFECTS FOR THE POND EDDY BRIDGE	28

1.0 PROJECT DESCRIPTION

1.0 PROJECT DESCRIPTION

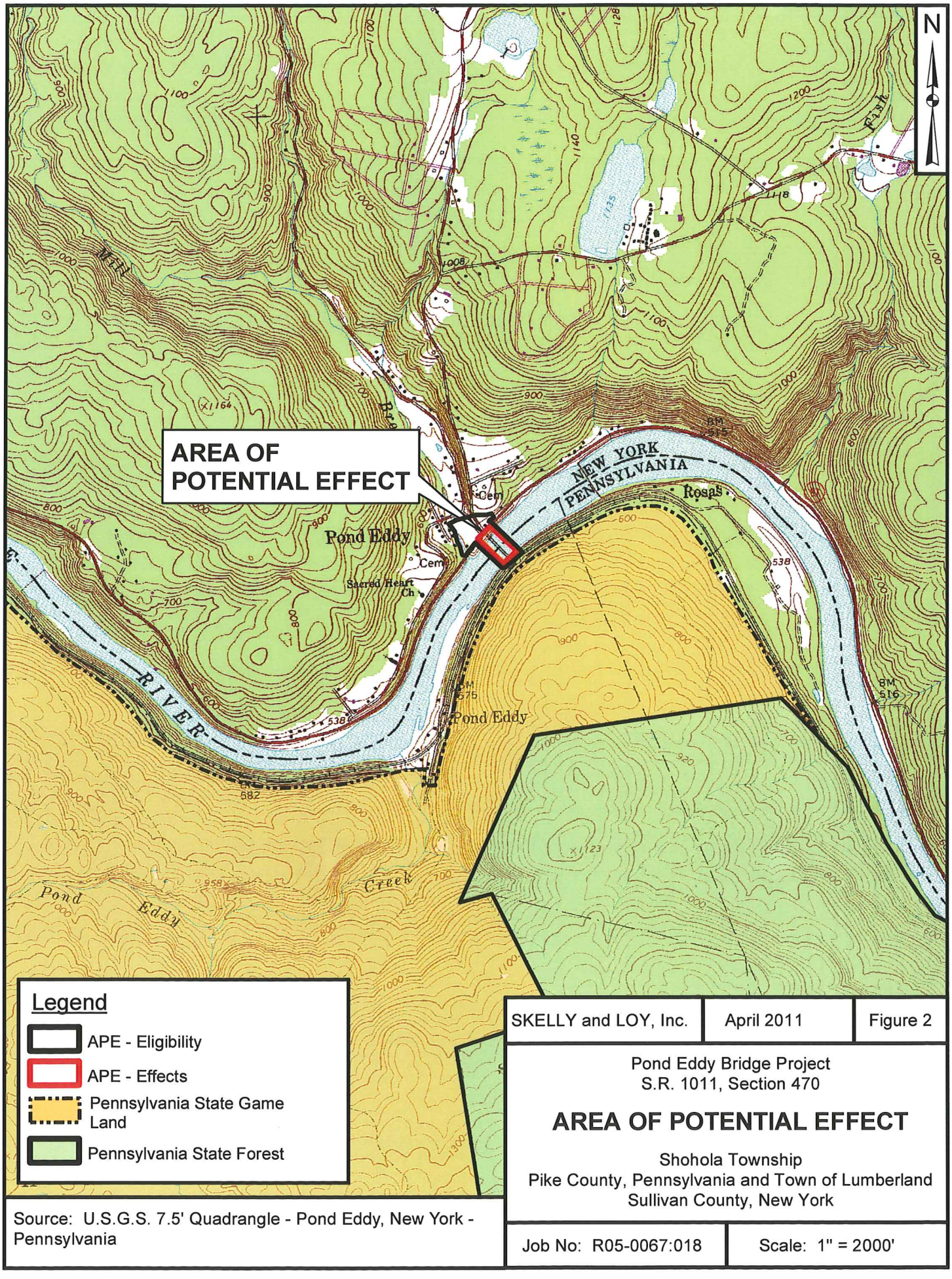
The Pennsylvania Department of Transportation (PennDOT), as a partner in the Joint Interstate Bridge Commission (JIBC) with the New York State Department of Transportation (NYSDOT) and in cooperation with the Federal Highway Administration (FHWA) and the Northeastern Pennsylvania Alliance Rural Planning Organization (NEPA RPO) is proposing to address the structural deficiencies of the existing Pond Eddy Bridge through the implementation of a bridge improvement project. Constructed between 1904 and 1905, the existing Pond Eddy Bridge (known locally as the All Veterans Memorial Bridge) is a two-span, pin-connected, Pennsylvania (Petit) through-truss bridge carrying S.R. 1011 over the Delaware River between Shohola Township, Pike County, Pennsylvania, and the Town of Lumberland, Sullivan County, New York (Figure 1).

The project area is characterized as a rural mountainous river valley with steep river banks and a mature forested landscape along the valley outslopes. The Upper Delaware River is approximately 500 feet wide and contained within deep river banks, extending approximately 20 to 25 feet in elevation. The rural mountainous terrain, coupled with the breadth of the Delaware River, contributes to the isolated nature of Pond Eddy, Pennsylvania. The Pond Eddy Bridge serves as the only access over the Delaware River from NY State Route 97 to the community of Pond Eddy, Pennsylvania. The bridge also provides access to State Game Lands 209 (SGL 209) and the Delaware State Forest.

Bridge inspections conducted since the early 1990s have revealed that the Pond Eddy Bridge has major structural and functional deficiencies which present potential safety concerns and serve to limit vehicular access to Pond Eddy. The purpose of the Pond Eddy Bridge Project is to provide a structurally sound bridge to carry S.R. 1011 over the Delaware River. The need for the project is based on the existing structural and functional deficiencies that currently prevent or limit adequate access over the Delaware River for the community of Pond Eddy, Pennsylvania. Additional information for the project purpose and need is described in the Section 4(f) Evaluation.

The Area of Potential Effects (APE) is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist" (36 CFR §800.16[d]). Additionally, the APE "is influenced by the scale and nature of an undertaking and may be different for different kinds of effects" (36 CFR §800.16[d]).

The APE for the Pond Eddy Bridge Improvement project encompasses approximately 3.5 acres in the Town of Lumberland, New York, and Shohola Township, Pennsylvania (Figure 2). The extent of the APE incudes approximately 624 feet across the river, 246 feet along the river, 150 feet in height, and a distance to the depth of the abutments and pier beneath the river bed. The archaeological APE is a subset of the larger APE. The APE includes the potential area of disturbance such as those areas required for temporary construction access for construction of the causeway and for the temporary bridge.



Source: U.S.G.S. 7.5' Quadrangle - Pond Eddy, New York - Pennsylvania

SKELLY and LOY, Inc.	April 2011	Figure 2

Pond Eddy Bridge Project
S.R. 1011, Section 470

AREA OF POTENTIAL EFFECT

Shohola Township
Pike County, Pennsylvania and Town of Lumberland
Sullivan County, New York

Job No: R05-0067:018	Scale: 1" = 2000'

2.0 STEPS TAKEN TO IDENTIFY HISTORIC PROPERTIES

2.0 STEPS TAKEN TO IDENTIFY HISTORIC PROPERTIES

2.1 ABOVEGROUND HISTORIC PROPERTIES – NATIONAL REGISTER LISTED OR ELIGIBLE

Cultural resource investigations were completed in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. A *Determination of Eligibility Report* (Eligibility Report) was prepared for the Pond Eddy Bridge Project in March 2002. The Eligibility Report identified the National Register-listed Pond Eddy Bridge as the only listed or eligible resource within the project's APE (Attachment A). The bridge is described in Section 2.8.

2.2 OTHER ABOVEGROUND STRUCTURES CONSIDERED – NOT ELIGIBLE

The Eligibility Report also evaluated three other potential aboveground historic resources on the New York side of the project: Nolan's River Inn Restaurant and Motel, Millbrook Inn, and Hollow Road Retaining Walls. PennDOT determined that these resources did not meet the qualifications for listing in the National Register of Historic Places. Nolan's River Inn Restaurant and Motel and the Millbrook Inn had been extensively altered. Both resources had nonhistoric additions, and their historic fabric (including walls, windows, and siding) have been replaced with modern materials. As a result, they no longer retained design, materials, workmanship, and feeling. The Hollow Road Retaining Walls retained historic integrity, but the report concluded that low rubble masonry walls were common throughout Pennsylvania and New York and that these walls did not embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value (Criterion C). The three resources also were not associated with events that have made a significant contribution to the broad patterns of our history (Criterion A), nor are they associated with a significant individual.

2.3 DELAWARE AND HUDSON CANAL (D&H CANAL)

The Eligibility Report also discussed the D&H Canal, a portion of which was identified within the project's APE along the eastern (New York) side of the Delaware River. The report stated that two segments of the D&H Canal had been previously determined to be National Historic Landmarks (NHL), one segment within Lackawaxen Township, Pike County, and a second segment in the vicinity of Honesdale, Wayne County (Attachment B - D&H Canal NHL

Nomination Form). However, the report further stated that the portion of the D&H Canal within the project APE had been significantly altered when NY State Route 97 was constructed over top the formal canal in the 1930s. Further coordination with the National Park Service (NPS) and a review of the NHL nomination form has revealed that this portion of the D&H Canal is not part of the NHL. No significant portions of the canal were identified within the project APE; however, while the canal has not been visually confirmed within the APE, potential archaeological remains associated with the canal may still exist. As part of the Section 106 commitments, PennDOT and the NY SHPO agreed (January 17, 2007) to have an archaeological monitor on-site if any construction is undertaken in the area of the existing NY State Route 97 roadbed.

2.4 ARCHAEOLOGICAL PROPERTIES

In 2003, Valley Forge Laboratories, Inc. (VFL) completed an archaeological investigation for the project. VFL identified one archaeological resource at the mouth of Mill Brook: a turning basin for the D&H Canal. After archaeological testing of the basin, VFL determined that the site did not have archaeological potential and its archaeological integrity was significantly reduced due to erosion from hydrologic activity. Therefore, the turning basin was determined to be not eligible for the National Register of Historic Places. No other archaeological resources (historic or prehistoric) were identified within the project's APE. VFL determined that the archaeological potential was minimal due to historic and modern construction activities, including construction associated with the bridge, canal, and underground utilities. A Phase I Archaeological Survey Report was prepared in February 2004 and the PA SHPO concurred in a letter dated April 9, 2004. As part of the Section 106 commitments, PennDOT and the NY SHPO agreed (January 17, 2007) to have an archaeological monitor on-site if any construction is undertaken in the area of the existing NY State Route 97 roadbed.

2.5 MILL BROOK TRIBUTARY

Although outside the APE, consulting parties raised the possibility that the bridge improvement project would increase flooding along Mill Brook upstream of the Pond Eddy Bridge. Background research utilizing the NY SHPO's Cultural Resources GIS identified no National Register-listed or previously surveyed properties within the potential backwater area adjacent to Mill Brook. As confirmed by PennDOT Cultural Resource staff on April 16, 2008,

many of the homes surrounding Mill Brook are 50+ years old. However, none retain historic integrity due to numerous changes, such as non-historic windows, vinyl and aluminum siding, and non-historic porches and additions. PennDOT determined that the area did not have the cohesiveness or integrity necessary to be a potential historic district and that none of the structures within the Mill Brook area possess the characteristics or historical significance necessary to be considered individually eligible for the National Register.

2.6 SUMMARY OF ELIGIBILITY

The Pond Eddy Bridge is the only historic resource located with the APE. The Pond Eddy Bridge was listed in the National Register of Historic Places on November 14, 1988, as a representative example of a multiple-span Pennsylvania (Petit) truss bridge of moderate length (Attachment A). Three other resources on the New York State side – Nolan's River Inn Restaurant and Motel, Millbrook Inn, and Hollow Road Retaining Walls – were determined to be not eligible for National Register listing. A portion of the D&H Canal located along the eastern (New York) side of the Delaware River was determined to have been significantly altered when NY State Route 97 was constructed in the 1930s. No significant portions of the canal were identified within the project APE. As part of the Section 106 commitments, PennDOT and the NY SHPO agreed to have an archaeological monitor on-site if any construction is undertaken in the area of the existing NY State Route 97 roadbed.

2.7 DETERMINATION OF EFFECT REPORT

A *Determination of Effect Report* was submitted to the PA SHPO in April 2006 and to the NY SHPO in August 2006. The report evaluated the Preferred Alternative, the replacement of the existing Pond Eddy Bridge, an Adverse Effect. The PA SHPO issued its concurrence in May 2006. The NY SHPO acknowledged receipt of the Determination of Effect Report in September 2006 but identified concerns with the development of the project. NY SHPO terminated consultation with PennDOT and FHWA in July 2010. This March 2011 Finding Documentation has been prepared to update the evaluation of project alternatives and serve as an updated Determination of Effect Report for NY SHPO's consideration.

2.8 POND EDDY BRIDGE – NATIONAL REGISTER LISTED RESOURCE

2.8.1 Bridge History

Constructed in 1904-1905, the Pond Eddy Bridge is a two-span, pin-connected, Pennsylvania (Petit) through-truss with cut stone mortared masonry abutments and a central pier. The superstructure consists of two identical simple spans, each 252 feet center to center of bearings. Each truss has 12 equal panel lengths of 21 feet and exhibits varying elevations along the upper chord, giving the "camel-back" appearance. The upper chords of the trusses are made up of two channel sections connected together with a plate across the top flanges and with the bottom flanges laced together with flat bars. The lower chords of the trusses are made from multiple eyebar links. The truss diagonals act as pure tension members, and all diagonal bracing members to the upper chords are tension tie rods. All compression members in the upper chord bracing and the main truss verticals are made up of laced angle sections. The truss members are connected together using shear pins at all the truss nodes, resulting in a pure statically determinate structure. The deck is comprised of timber flooring supported on longitudinal rolled steel stringers, which are supported on steel built up riveted floor beams. The floor beams are suspended from the shear pins at the bottom chord nodes using pin plates.

The original bridge to cross the Delaware River at this location was a Roebling-type, wooden suspension toll bridge constructed in 1871 by local resident John Decker. This original bridge sustained severe damages as a result of the "Pumpkin Flood" of October 8-9, 1903. Following the flood, the Town of Lumberland hired the Owego Bridge Company of Owego, New York, which submitted the low bid of $28,900 to replace the severely damaged 1871 bridge with the current truss bridge.

The fabrication of the Pond Eddy Bridge members took place during the summer of 1904 in the shops of the Owego Bridge Company, which were situated on the New York and Erie Railroad, making direct rail transport to Pond Eddy possible. The abutments and center pier were constructed at Pond Eddy; however, it appears that at least a portion of the existing support structures may have been reused, including part of the northern abutment. The bridge was originally designed for two traffic lanes, with a center dividing rail, but the center dividing rail was removed for deck repairs in 1911 and never replaced.

2.8.2 Bridge Maintenance

Existing records, though incomplete, indicate that repairs to the bridge were frequent, especially to the central pier, which was often damaged by the "elements," including the flow of ice and debris every year. In 1908, the bridge was painted, planking was replaced, and the central pier was repaired. Subsequent repairs were conducted in one form or another in 1911, 1914, 1916, 1918, 1919, and 1923. In 1927, the Town of Lumberland sold the Pond Eddy Bridge to the Interstate Bridge Commission for $3.00 because the bridge needed extensive repairs.

Additional maintenance repairs were performed in 1969. In 1985, PennDOT conducted its first official inspection of the Pond Eddy Bridge. As a result of this detailed bridge inspection, the deck superstructure and substructure all received condition ratings of 5, which served to warrant a posted eight-ton weight restriction. In 1987, the superstructure was given a condition rating of 4, rendering the bridge "structurally deficient." In 1999, emergency funds were used to place three new beams between deteriorated stringers. There are no records of bridge repairs conducted between 1969 and 1999.

In 2006, Pike County forces completed repairs to the wooden deck. Later that year and as a result of another detailed bridge inspection, PennDOT lowered the posted bridge restriction from eight tons to three tons. In 2007, emergency funding was secured and 14 steel stringers were repaired. Following these emergency repairs, the bridge was reposted to its current seven-ton load limit. In 2010, substantial repair efforts were completed on the pier nose and footing underpinning. In December 2010, the existing bridge was down-posted to a three-ton capacity. Substantial maintenance efforts are planned in 2011, including the replacement of 64 steel stringers. The 2011 stringer replacement efforts are intended to restore the structure to a seven-ton weight capacity. From 2007 to 2011, $820,000 have been invested into the maintenance of the existing structure. Even with the substantial maintenance efforts, emergency response vehicles and most trucks (fuel, propane, and coal) still cannot legally use the bridge. Within the next five years, additional maintenance would likely be required to maintain the existing seven-ton weight capacity.

3.0 EVALUATION OF PROJECT IMPACT ON IDENTIFIED HISTORIC PROPERTIES

3.0 EVALUATION OF PROJECT IMPACT ON IDENTIFIED HISTORIC PROPERTIES

An analysis of alternatives was completed for the project. The analysis of alternatives considered both on-site and off-site alternatives due to the sensitive nature of the different protected resources within the project area, including the Pond Eddy Bridge, the Scenic and Recreational Upper Delaware River, adjacent SGL 209, and the Delaware State Forest. The identification of alternatives for consideration was developed not only as part of the engineering feasibility studies but also for the Section 106 consulting party and public meeting forums. The scope of the alternatives analysis included an evaluation of two sets of alternatives, off-line alternatives, and on-line alternatives.

3.1 OFF-LINE ALTERNATIVES

The following set of **Off-Line Alternatives** was considered but dismissed from detailed analysis.

3.1.1 Pond Eddy Buyout Alternative

The Pond Eddy Buyout Alternative proposes the acquisition of all private properties located on the Pond Eddy, Pennsylvania, side of the Delaware River, thereby eliminating the need for a safe, reliable bridge crossing at this location. Under this alternative, all residences and other private properties located along Rosa and Flagstone Roads would be acquired via Eminent Domain and the existing Pond Eddy Bridge would be closed to vehicular traffic.

Once the Pond Eddy Bridge was taken out of service, PennDOT would market the reuse of the bridge as part of its commitment to the Section 106 consultation process toward the eventual transfer of ownership in accordance with the project's marketing plan. PennDOT would work with interested parties identified during the marketing process or other groups who present themselves to relocate or reuse all or portions of the bridge. The development and implementation of a Marketing Plan would result from the executed Memorandum of Agreement (MOA).

If taken out of service or removed, this alternative would limit public access to SGL 209, the Delaware State Forest, and the active Norfolk Southern rail line, all located on the Pennsylvania side of the Delaware River. As part of the public meeting coordination efforts for the project, PennDOT has received feedback from local officials and residents of Pond Eddy, Pennsylvania, that they oppose the Pond Eddy Buyout Alternative. The local residents and

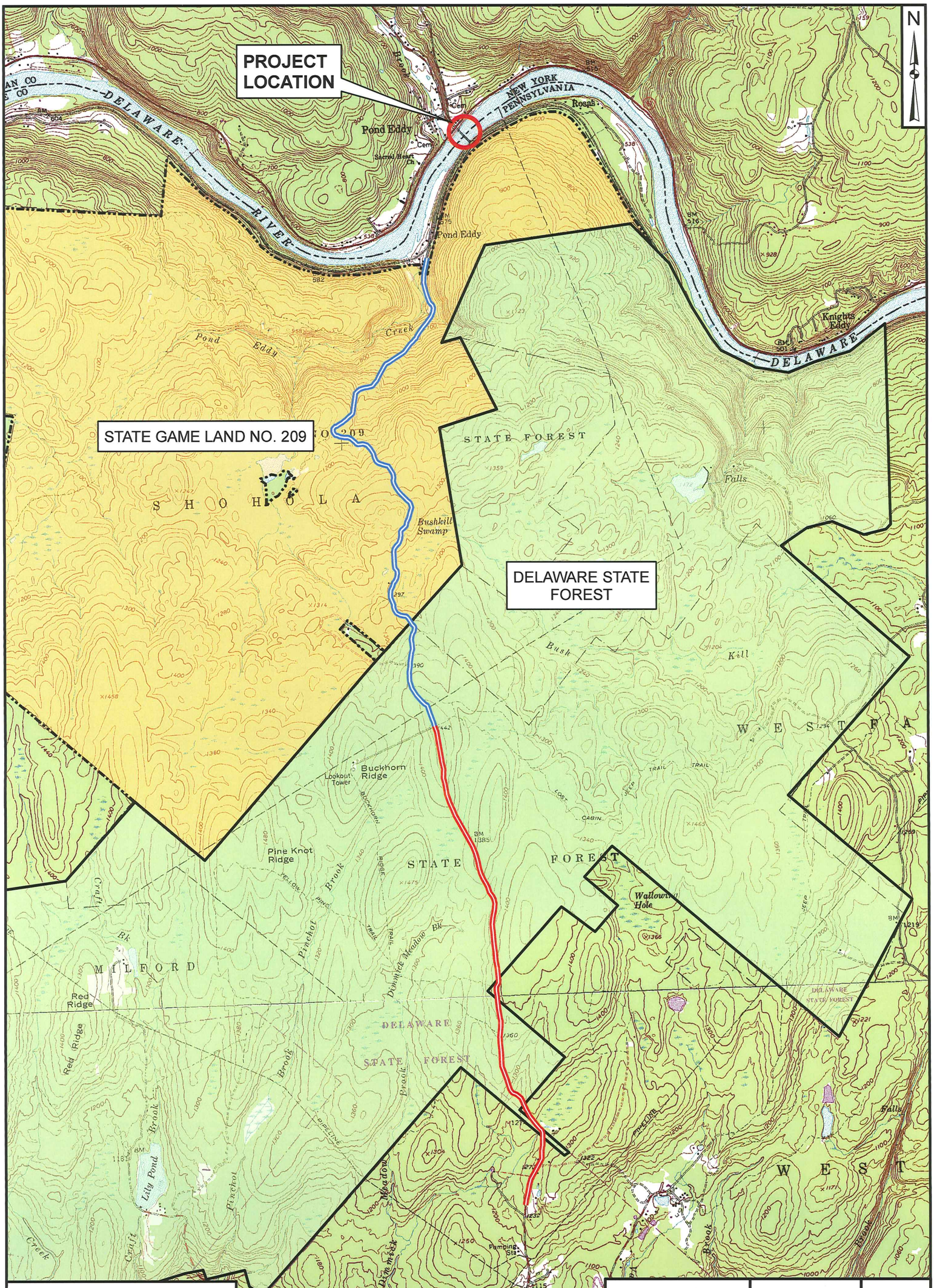
public officials signed a petition and submitted it to PennDOT documenting their opposition to the Buyout Alternative. A copy of the signed petition is provided in Attachment C. The estimated cost for the Buyout Alternative would be **$9.5 million**. Given the inability to access properties on the Pennsylvania side and the impact to the local community, the Pond Eddy Buyout Alternative was dismissed from further consideration.

3.1.2 Alternative Access through State Game Lands 209

This alternative would construct a new two-lane roadway through Pennsylvania SGL 209. The roadway would originate at State Route 6 in Milford Township, Pennsylvania, and travel in a northerly direction for a distance of 4.8 miles toward the community of Pond Eddy. Approximately two miles of the existing Fire Tower Road through the Delaware State Forest would need to be upgraded from an improved dirt road to meet current PennDOT design criteria. Approximately 2.8 miles would be extended through SGL 209 from the Buckhorn Ridge Fire Tower in the Delaware State Forest to the northern terminus of the existing S.R. 1011 roadway in Pond Eddy (Figure 3). This would require an upgrade or the construction a new at-grade road crossing of the Norfolk Southern Railroad as well as new permanent right-of-way for the roadway and stormwater conveyance features. This alternative would avoid impacts to the Upper Delaware Scenic and Recreational River/Pennsylvania Water Trail by providing an alternate public access to the community of Pond Eddy, Pennsylvania.

While this alternative would avoid impacting the Pond Eddy Bridge and Upper Delaware River, it would affect other natural resources. It would require the construction of approximately 4.8 miles of roadway, including 2.8 miles through SGL 209. This new roadway construction would traverse the rolling terrain of SGL 209 and the Pond Eddy Creek watershed.

Water uses in the Pond Eddy Creek watershed are protected for High Quality Cold Water Fishes, and the Pennsylvania Fish and Boat Commission (PFBC) identifies Pond Eddy Creek as a wild trout stream and a Class A trout waters. Wetlands located in and along the floodplain of Pond Eddy Creek and its tributaries are protected as Exceptional Value (EV) in accordance with PA DEP Chapter 105 regulations. The proposed SGL 209 Alternate Access Alternative would impact wildlife habitat, an unknown number of jurisdictional wetlands (including potential EV wetlands), and Pond Eddy Creek tributaries in addition to permanently altering recreational opportunities within the State Game Lands.



Legend

- Pennsylvania State Game Land
- Pennsylvania State Forest
- **State Game Land Alternate Access Alternative**

Source: U.S.G.S. 7.5' Quadrangle - Pond Eddy, New York and Milford, Pennsylvania

SKELLY and LOY, Inc.	April 2011	Figure 3

Pond Eddy Bridge Project
S.R. 1011, Section 470

STATE GAME LAND ALTERNATE ACCESS ALTERNATIVE

Shohola Township
Pike County, Pennsylvania and Town of Lumberland
Sullivan County, New York

Job No: R05-0067:018	Scale: 1" = 2500'

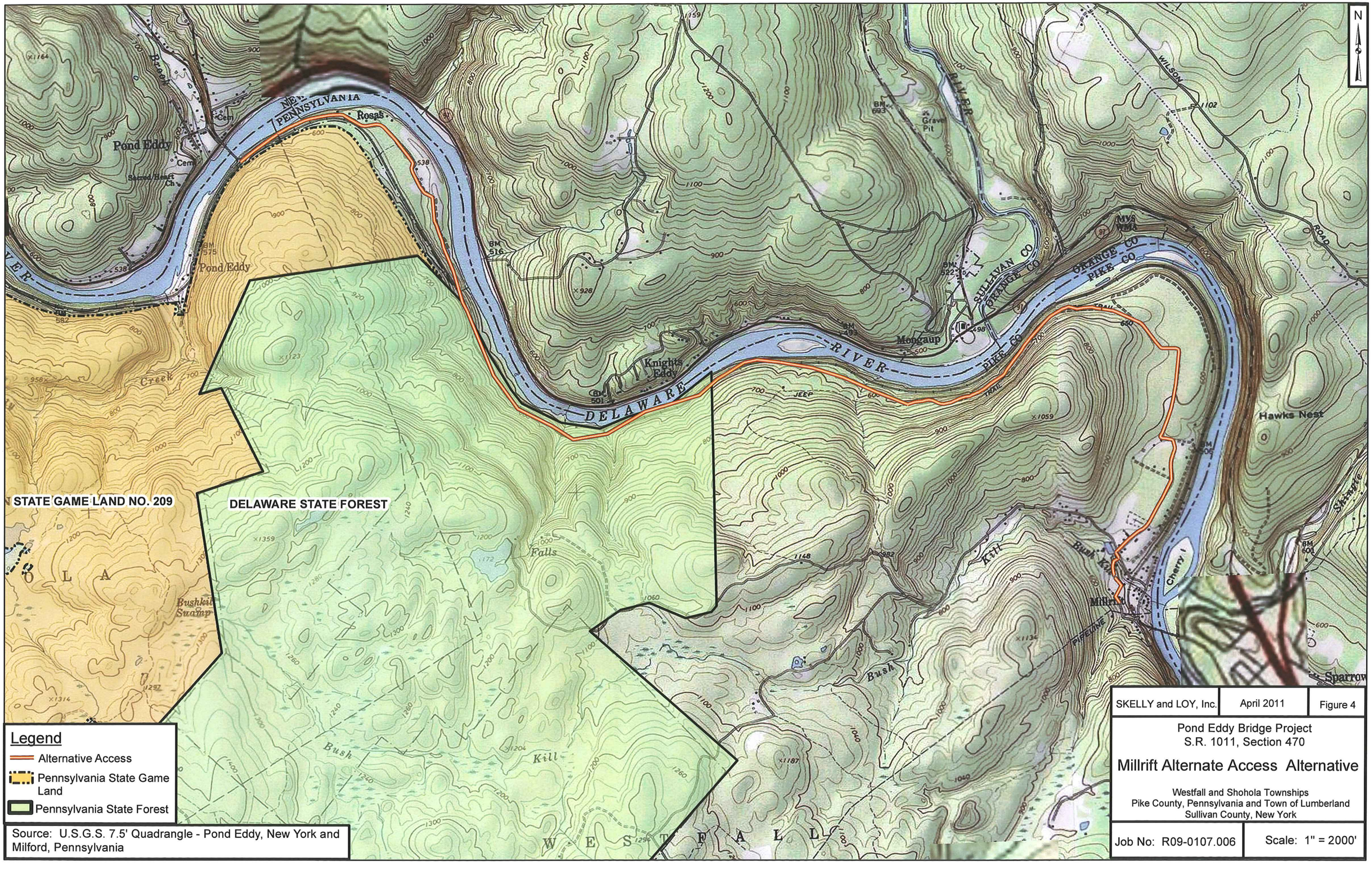
This alternative would substantially change the point of access to Pond Eddy, Pennsylvania, resulting in disruption of the community's existing travel patterns. Rather than the existing point of access from NY State Route 97 directly across the Delaware River in New York, this new roadway would be accessed off U.S. Route 6 just outside Milford, Pennsylvania. The costs for the SGL 209 Alternate Access Alternative are estimated at **$43.7 million** ($6.5 million per mile plus design 30%, inspection 10% of construction cost).

With the construction of the State Game Lands Alternate Access, there would no longer be a need for a safe, reliable bridge crossing over the Delaware River at this location and the bridge would be removed. As noted above, PennDOT would market the use or reuse of the bridge as part of its commitment to the Section 106 consultation process. The bridge would be taken out of service, and ownership would be transferred to another party, in accordance with the project's marketing plan, to use or reuse all or portions of the bridge as detailed in the executed MOA.

Due to the impacts to the State Game Lands and natural resources, the community's existing travel patterns, and substantial required costs, the State Game Lands Alternate Access Alternative was dismissed from further consideration.

3.1.3 Alternative Access, Southern Access Road from Mill Rift, Pennsylvania

This alternative would construct a new two-lane roadway through the Delaware State Forest (including the Buckhorn Natural Area and the Stairway Wild Area) and along the Norfolk Southern Railroad (Figure 4). The roadway would originate in the vicinity of Mill Rift, Pennsylvania, and travel in a northwesterly directly for a minimum of 4.5 miles toward the community of Pond Eddy, requiring similar costs and constraints as those identified with the State Game Lands Alternate Access Alternative. Additionally, this alternative would substantially change the point of access to Pond Eddy, Pennsylvania, resulting in disruption of the community's existing travel patterns. It is estimated that the construction cost for this alternative would be $41 million ($6.5 million per mile plus design 30%, inspection 10% of construction cost).


N
NEW PENNSYLVANIA
Rosas
Pond Eddy
Pond Eddy
Knights Eddy
DELAWARE RIVER
Mongaup
SULLIVAN CO
ORANGE CO
PIKE CO
Hawks Nest
Cherry I
Millrift
Sparrow
Falls
Bush Kill
Bushkill Swamp
Creek
STATE GAME LAND NO. 209
DELAWARE STATE FOREST
WESTFALL
Legend
Alternative Access
Pennsylvania State Game Land
Pennsylvania State Forest
Source: U.S.G.S. 7.5' Quadrangle - Pond Eddy, New York and Milford, Pennsylvania
SKELLY and LOY, Inc.
April 2011
Figure 4
Pond Eddy Bridge Project
S.R. 1011, Section 470
Millrift Alternate Access Alternative
Westfall and Shohola Townships
Pike County, Pennsylvania and Town of Lumberland
Sullivan County, New York
Job No: R09-0107.006
Scale: 1" = 2000'

With the construction of the Southern Access from Mill Rift, there would no longer be a need for a safe, reliable bridge crossing over the Delaware River at this location and the bridge would be removed. As noted above, PennDOT would market the use or reuse of the bridge as part of its commitment to the Section 106 consultation process. The bridge would be taken out of service, and ownership would be transferred to another party, in accordance with the project's marketing plan, to use or reuse all or portions of the bridge as detailed in the executed MOA.

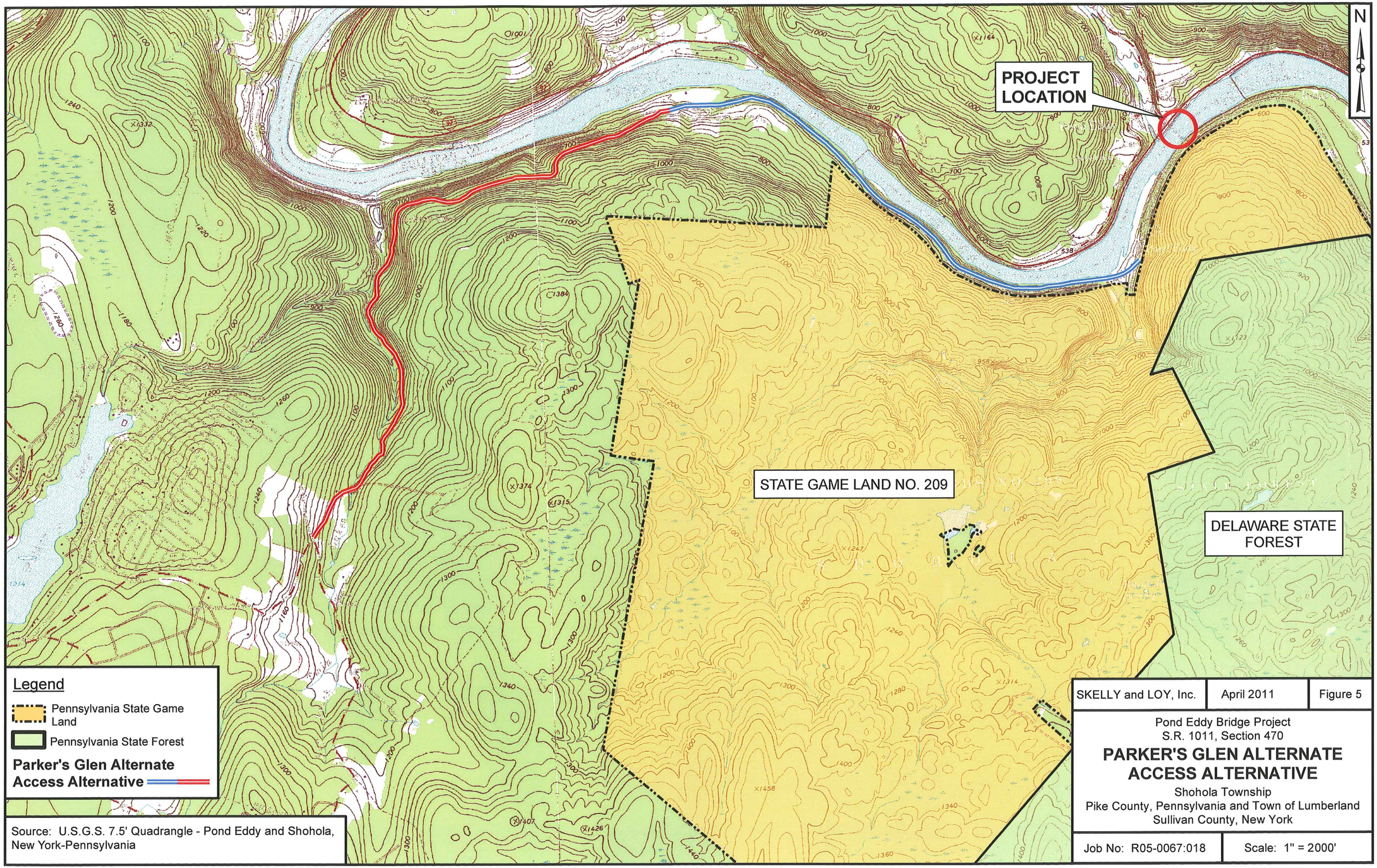
Because of the impacts to the community's existing travel patterns and to the state forest and natural resources, the Mill Rift Alternate Access Alternative was dismissed from further consideration.

3.1.4 Parker's Glen Alternate Access Alternative

This alternative considers extending Parker's Glen Road (T-446) approximately 2.5 miles alongside and within the right-of-way of the existing Norfolk Southern rail line from Parker's Glen to the northern terminus of the existing S.R. 1011 roadway in Pond Eddy (Figure 5). This alternative may avoid any adverse effects to the National Register-listed Pond Eddy Bridge and effects to the Upper Delaware Scenic and Recreational River/Pennsylvania Water Trail by providing an alternate public access to the community of Pond Eddy, Pennsylvania.

While this alternative would avoid the existing Pond Eddy Bridge, it would require the construction of approximately 2.5 miles of new roadway alongside and within the right-of-way of the existing Norfolk Southern rail line that extends from Pond Eddy to Parker's Glen and beyond. This public roadway construction within existing railroad right-of-way would create safety concerns associated with train-vehicle conflicts. Use of railroad right-of-way would require coordination and permission from Norfolk Southern.

In addition to the 2.5 miles of new roadway construction alongside the Norfolk Southern rail line, approximately 2.5 miles of the existing Parker's Glen Road (T-446) from Parker's Glen to the Walker Lake/Twin Lakes area would have to be upgraded from an improved narrow dirt road to meet current PennDOT design criteria. Currently, Parker's Glen Road consists of a narrow dirt road in a steeply sloping mountainous area. Due to the sloping nature of the terrain, any planned roadway design would need to address slope stability for the proposed road. As such, the total length of roadway improvements would be approximately 5.0 miles for the Parker's Glen Alternate Access Alternative.



SKELLY and LOY, Inc.	April 2011	Figure 5

Pond Eddy Bridge Project
S.R. 1011, Section 470

PARKER'S GLEN ALTERNATE ACCESS ALTERNATIVE

Shohola Township
Pike County, Pennsylvania and Town of Lumberland
Sullivan County, New York

Job No: R05-0067:018	Scale: 1" = 2000'

As with other alternatives discussed previously, this alternative would substantially change the point of access to Pond Eddy, Pennsylvania, resulting in disruption of the community's existing travel patterns. Rather than the existing point of access from NY State Route 97 directly across the Delaware River in New York, this new roadway would be accessed off Twin Lakes Road (S.R. 1005) from the Shohola, Pennsylvania/Barryville, New York, area, which is approximately 7.5 miles upstream of the Pond Eddy community.

The estimated construction cost for this alternative would be $6.5 million per mile, or $32.5 million plus $13 million for design and construction inspection costs (design 30%, inspection 10% of construction cost). The sum total for the Parker's Glen Alternate Access Alternative is estimated to be in excess of **$45.5 million**. Due to the undeveloped, mountainous nature of the forested hillside, this alternative would result in impact to the natural environment in the area.

With the construction of the Parkers Glen Alternative, there would no longer be a need for a safe, reliable bridge crossing over the Delaware River at Pond Eddy and the bridge would be removed. As noted above, PennDOT would market the use or reuse of the bridge as part of its commitment to the Section 106 consultation process. The bridge would be taken out of service, and ownership would be transferred to another party, in accordance with the project's marketing plan, to use or reuse all or portions of the bridge as detailed in the executed MOA.

Because of the impacts to the community's existing travel patterns and substantial costs, the Parkers Glen Alternate Access Alternative was dismissed from further consideration.

TABLE 1
SUMMARY OF OFF-LINE PROJECT ALTERNATIVES

PROJECT ALTERNATIVE	EFFECTS
Pond Eddy Buyout	**No Adverse Effect** if the bridge is retained and maintained in its present location; an **Adverse Effect** if the bridge were to be removed
State Game Lands Alternate Access	**No Adverse Effect** if the bridge is retained and maintained in its present location; an **Adverse Effect** if the bridge were to be removed
Mill Rift Alternate Access	**No Adverse Effect** if the bridge is retained and maintained in its present location; an **Adverse Effect** if the bridge were to be removed
Parkers Glen Alternate Access	**No Adverse Effect** if the bridge is retained and maintained in its present location; an **Adverse Effect** if the bridge were to be removed

Note that with each of these four alternatives, the Pond Eddy Bridge would be removed from service and no longer maintained by PennDOT or NYSDOT. To be retained and maintained at its present location, a third party would need to agree to take ownership. This would result in a likely **No Adverse Effect** finding.

3.2 ON-LINE ALTERNATIVES

The following **On-Line Alternatives** were studied in detail.

3.2.1 No-Build (or Do-Nothing) Alternative

This alternative involves taking no action (other than routine maintenance activities) and allowing the existing Pond Eddy Bridge to remain in place as is. No rehabilitative or any other significant structural improvements would be completed under this alternative. The nature of the deterioration of this structure is such that maintenance efforts cannot address it successfully. As such, this alternative would fail to correct the identified structural deficiencies and the associated weight restriction limitation of the existing bridge structure.

Without improvements, the existing bridge would continue to deteriorate, and the posted weight limit would eventually be lowered. The dependability of the structure would become questionable, and safety for motorists and pedestrians would be compromised, resulting in the eventual closure of the bridge. Closure of the bridge would result in a complete loss of the crossing of the Delaware River at this location, which would force the residents of Pond Eddy, Pennsylvania, to abandon their homes and property. Bridge closure would also limit public access to SGL 209, the Delaware State Forest, and the active Norfolk Southern rail line.

The No-Build Alternative would not address the project purpose and need. The No-Build Alternative is considered as a baseline for the comparative analysis of the alternatives for the project.

3.2.2 Bridge Rehabilitation Alternative

This alternative considers rehabilitating the existing Pond Eddy Bridge to its original as-built capacity to carry traffic over the Delaware River. Since its construction in 1904, the existing structure has weakened over the years as evinced by its down-posting to a seven-ton weight limit and, at times, the emergency posting down to a four-ton limit. Currently, the Pond Eddy Bridge has been downposted to a four-ton capacity, and emergency repairs are planned in

the Spring of 2011 to increase the capacity to seven tons. To adequately assess the condition of the bridge and evaluate the rehabilitation options, PennDOT commissioned the following engineering evaluations (Project Development Report, March 2009).

- Hatch Mott MacDonald (HMM) Engineering Feasibility Study (February 2003) with the incorporation of the in-depth bridge inspection reports prepared by McFarland-Johnson Engineers, Inc. and HNTB Corporation
- PennDOT Bridge Quality Assurance Division - Hal Rogers Report (November 2006)
- Michael Baker, Jr., Inc. - Second Opinion Report (March 2009)

These documents evaluated the structural condition of various components of the existing bridge in order to determine the level of effort necessary to rehabilitate the bridge. The evaluation of the Bridge Rehabilitation Alternatives is described as follows.

3.2.2.1 Rehabilitation Option 1 (Restore Bridge to Original As-Built Condition)

This option evaluated rehabilitative efforts to restore the existing bridge to its original as-built condition. The HMM study evaluated the components of the existing bridge, in their original non-deteriorated condition, and characterized them to have the following inventory and operating rating capacities.

- The existing interior stringers supporting the 4x8-inch timber deck were rated for flexure and shear, resulting in an inventory rating of 17 tons and operating rating of 24 tons.
- The existing floor beams were checked for flexure and shear, resulting in an inventory rating of 13 tons and operating rating of 20 tons.
- The existing hanger plates are deteriorated (as determined by McFarland-Johnson Engineers inspection) and thus checked for tension, shear, block shear, and bearing, resulting in an inventory rating of 37 tons and an operating rating of 42 tons.
- The rating of the pins was evaluated as part of the HNTB inspection (January 1970), and the pins were checked for shear, bearing, and bending, resulting in several pins failing in bending. The controlling pins were determined to be U1 and U7 with an inventory rating of 11 tons and an operating rating of 18 tons.

Significant deterioration is present in many of the bridge components, necessitating a seven-ton weight limit for the bridge.

Existing deterioration would require repair or replacement of individual bridge components (including stringers, floor beams, and truss members) to restore the bridge to its original as-built condition. The following repairs would be required:

- Replacement of the deck
- Replacement of many of the stringers and floor beams
- Repairs to the truss members
- Extensive reconstruction of the substructure
- Replacement of several deteriorated pins

Implementation of these efforts would allow for a maximum weight bridge posting of 15 to 18 tons with a life expectancy of 10 to 20 years before another major bridge rehabilitation would be necessary. The rehabilitated structure will remain a single-lane bridge with a 14-feet, 10-inch curb-to-curb width and a limited vertical clearance of 13 feet, 6 inches. Annual maintenance costs are estimated at $18,000.

Traffic could not be maintained on the existing bridge during rehabilitation. A temporary bridge would need to be constructed to maintain access across the Delaware River to Pond Eddy, Pennsylvania. Construction of the temporary support system and the temporary river crossing bridge would require additional access and impacts to the Delaware River, possibly through two construction seasons.

The temporary support system would be needed to replace the deteriorated pins. The rehabilitation of the deck, stringers, floor beams, and truss members alone would not increase the load carrying capacity of the bridge, as the pins are the bridge components that control the load rating. If the existing pins were to be left in place, it is estimated that the bridge would be posted for only 13 tons and the life expectancy of the rehabilitation would be reduced to five to ten years.

In summary, due to the advanced deterioration of the bridge, Rehabilitation Option 1 would require substantial costs associated with a temporary support system, river access, and a temporary access bridge. Replacement of the pins would be difficult and costly. This alternative would require the installation of causeways to erect a temporary support system needed to complete the bridge repairs. Additionally, because the existing bridge would require significant repair, traffic could not be maintained on the existing bridge during construction,

entailing the construction of a temporary bridge to maintain access to Pond Eddy, Pennsylvania. The cost of Rehabilitation Option 1 is estimated at **$15.3 million** and would require substantial access within the Delaware River. The life expectancy for the rehabilitation options would be expected to be 10 to 20 years and would involve annual maintenance costs estimated at $18,000. Pursuance of this alternative would involve a substantial investment for a limited life expectancy.

Following public consultation, a second evaluation of rehabilitation options was completed. This second independent review of the engineering evaluations agreed with the findings of the previous evaluations and agreed that Rehabilitation Option 1 would not adequately provide a structurally sound bridge to carry traffic over the Delaware River (Michael Baker, Jr. Inc., December 2008). Rehabilitation of the bridge is feasible; however, the engineering complexity would lead to excessive costs, substantial access within the Delaware River, and a limited life expectancy for the bridge. Rehabilitation Option1 is not considered a prudent alternative.

It is likely that Rehabilitation Option 1 would result in No Adverse Effect to the Pond Eddy Bridge. The replacement of the deteriorated members with identical ones would result in a bridge with the same structural characteristics as the existing Pond Eddy Bridge.

3.2.2.2 Rehabilitation Option 2 (Rehabilitate and Strengthen Bridge to HS-20 Capacity)

This option considered rehabilitative efforts to strengthen the existing structure to meet the HS-20 (36-ton) vehicle load capacity. The existing structure, in its original non-deteriorated condition, is sized to carry a 15- to 18-ton load capacity. In order to increase the load capacity as well as to repair significant areas of deterioration, numerous bridge components would have to be replaced or significantly modified. An analysis of the existing bridge determined that the deck, stringers, floor beams, 45% of the truss members, and several of the truss pins did not satisfy the HS-20 vehicle rating criteria.

Based on the strength of existing members and the condition of the structure, the following repairs and rehabilitation were recommended in the 2003 HMM study in order to increase the load carrying capacity of the bridge for HS-20 loading.

- Replace the existing timber deck with an open steel grid deck.
- Replace several steel stringers, W18x50, M270 Grade 36. The new stringers would be coped at the ends at the top flange to avoid interference with the existing floor beams. The stringers would be bolted

to the web of the existing floor beams using connection angles and high strength bolts.

- Strengthen the existing floor beams by adding 2½-inch steel plates, M270 Grade 36, to the top and bottom flanges. Significantly deteriorated floor beams would be replaced with new beams sized to accommodate intended higher load rating capacity.

- Strengthen the existing top chord members by using a $^{5}/_{16}$x16-inch plate at the bottom face of the member. The existing lacing bars would be removed in stages as the new plate is being installed.

- Strengthen the existing truss diagonals, verticals, and bottom chord tension members with cables or adjustable bars that are connected to the truss pins and placed directly over the existing members.

- Replace a minimum of eight pins on the upper truss chords that, based on the condition rating, do not meet the loading criteria and would need to be replaced. However, this type of truss bridge requires all members to be connected by a single pin at each of the panel points. Removing the truss pins would require disconnecting and temporarily supporting all the truss members framing into that panel, including the span itself.

- Install new steel members if existing members are severely deteriorated. As with the replacement of truss pins, truss member replacement would require temporary support of the bridge.

- In addition to strengthening of the bridge superstructure, make masonry repairs to the existing piers and abutments. The foundation of the existing pier, located in the center of the river, should also be under-pinned to alleviate ongoing scour issues.

Implementation of these efforts would allow for a maximum weight bridge posting at 36 tons with a life expectancy of 10 to 20 years, after which another major bridge rehabilitation would likely be necessary.

The extent of the repairs would include using beams and members that are larger in size, replacing lacing bars on the upper chords with steel plates, adding cables adjacent to designated truss members to increase the load carrying capacity, and replacing pins. The utilization of bigger beams and member-strengthening with cables, along with the appropriate pin replacement, will accommodate the desired increased load capacity and allow the existing bridge to remain.

The changes, however, would compromise character-defining features of the truss and impact the bridge's materials, workmanship, feeling, and association. Changes to the bridge fabric to allow for a maximum weight bridge posting at 36 tons would affect its historic integrity.

In particular, replacing existing beams and members with larger ones will alter the fabric. The addition of cables and adjustable bars would not only alter the fabric, it would add visual components incongruous with the original design and construction.

Character-defining features of a Pennsylvania truss bridge include the shape and components of the truss: upper chords, lower chords, verticals, diagonals, substruts and subties, pins, and floor beams. The additive nature of the necessary replacement of a large number of components, as well as numerous visual modifications, would diminish the historic integrity of the original bridge design and alter the characteristics that make the Pond Eddy Bridge eligible for inclusion in the National Register.

The rehabilitated structure will remain a single-lane bridge with a 14-foot, 10-inch curb-to-curb width. Additionally, traffic could not be maintained on the existing bridge during construction. A temporary bridge would need to be constructed to maintain access across the Delaware River to Pond Eddy, Pennsylvania. Construction of the temporary support system and the temporary river crossing bridge would require additional access and impacts to the Delaware River. The implementation of these rehabilitative efforts would be costly ($16.3 million), require substantial access within the Delaware River, and diminish the historic integrity of the original bridge design. This alternative would result in an Adverse Effect to the Pond Eddy Bridge.

3.2.2.3 Rehabilitation Option 3 (HS-20 Loading with Deck Widening)

This option considered rehabilitating the structure to meet the HS-20 (36-ton) load capacity along with widening the existing structure to maintain two lanes of traffic. To do so, the existing structure would need to be dismantled to rehabilitate the truss members, and the entire floor system (deck, stringers, and floor beams) would need to be replaced. A new lateral bracing system for the truss would be constructed to accommodate the wider structure and would also require the in stream pier and abutments to be widened to accommodate a two-lane bridge crossing.

Similar to **Rehabilitation Option 2**, the extent of the repairs would include new beams and members that are larger in size, the replacement of lacing bars on the upper chords with steel plates, the addition of adjustable cables adjacent to designated truss members to increase load carrying capacity, and selective pin replacement. The utilization of bigger beams and member-strengthening with cables, along with the appropriate pin replacement, will accommodate the desired increased load capacity and allow the existing bridge to remain.

Character-defining features of a Pennsylvania truss bridge include the shape and components of the truss: upper chords, lower chords, verticals, diagonals, substruts, subties, pins, and floor beams. The additive nature of the necessary replacement of a large number of components, as well as numerous visual modifications, would diminish the historic integrity of the original bridge design and alter the characteristics that make the Pond Eddy Bridge eligible for inclusion in the National Register.

Construction of the temporary support system and the temporary river access would also require additional access and impacts to the Delaware River. The implementation of these rehabilitative efforts would be costly ($18.5 million), require substantial access within the Delaware River, and diminish the historic integrity of the original bridge design. This alternative would also result in an Adverse Effect to the Pond Eddy Bridge.

3.2.2.4 Summary of the Rehabilitation Options 2 and 3

Due to the advanced deterioration of the bridge, rehabilitation would require substantial costs associated with a temporary support system, river access, and a temporary access bridge. Replacement of the pins and or widening the structure would be difficult and costly. The rehabilitation would require the installation of causeways in the river so that a temporary support system could be erected to complete the bridge repairs. Additionally, because the existing bridge would require significant repair, traffic could not be maintained on the existing bridge during construction, requiring a temporary bridge to maintain access to Pond Eddy, Pennsylvania.

The minimum rehabilitation costs for Option 2 (with strengthening) and Option 3 (strengthening with widening) are estimated at $16.3 million and $18.5 million, respectively, which may change due to the extent of deterioration and the strengthening needs. Life expectancy for both options would be expected to be approximately 10 to 20 years. Pursuance of these rehabilitation options would involve a substantial investment for a limited life expectancy. In addition, both of these options would result in an Adverse Effect to the Pond Eddy Bridge.

Design exceptions under PennDOT's Design Manual Standards or with the Smart Transportation Policy allow a down-posting to accommodate lower load ratings (MS-13.5 ≈ 23 tons) for bridge crossings in certain applicable circumstances. In the case of a sole crossing across the Delaware River, this would not be an applicable site. Local residents have stated their need to have an effective and safe crossing over the Delaware River not only for their

personal transportation but also for basic and emergency services, as documented under the Purpose and Need Section. Therefore, rehabilitation with strengthening to a lower load rating is not considered to be prudent based on the access needs for the community of Pond Eddy, Pennsylvania. Rehabilitating the bridge with strengthening and/or widening may be feasible. However, due to the engineering complexity, it would require excessive costs and substantial access within the Delaware River, result in a limited life expectancy, and impact the historic integrity (Adverse Effect) of the bridge, and it would only partially meet the project purpose and need. Rehabilitation – Options 2 and 3 are not considered to be prudent alternatives.

3.2.3 Bridge Replacement Alternative

This alternative would involve the construction of a new bridge structure immediately upstream of the existing Pond Eddy Bridge. Four bridge design options were considered for the Bridge Replacement Alternative.

- Three-span continuous steel multi girder bridge (Option A-1)
- Four-span prestressed concrete I-beam bridge (Option A-2)
- Two-span simply supported steel through truss bridge (Option A-3)
- Two-span continuous welded steel plate girder bridge (Option A-4)

The two-span continuous welded steel plate girder bridge (Option A-4) was initially determined to pose potential backwater and flooding concerns associated with required beam depths; therefore, it was not further considered. Cost estimates were developed for comparison of the three remaining replacement options.

Each replacement alternative would involve the use of a temporary causeway in order to maintain traffic on the existing bridge during project construction. Following project construction, the existing Pond Eddy Bridge would be removed and marketed for reuse at another location. The replacement alternative would be designed to meet current FHWA, NYSDOT, and PennDOT design criteria for safety and load carrying capacity. This alternative would meet the project purpose and need by providing a structurally sound bridge to carry traffic over the Delaware River. As such, this alternative qualifies as a feasible and prudent project alternative.

This alternative, however, would result in an adverse effect to the National Register-listed Pond Eddy Bridge. The permanent impacts to the bridge would be the removal of the historic bridge and the construction of the new bridge with the placement of piers at potentially new locations in the river. The replacement option includes a balanced consideration of impacts

(minimizing flooding and direct encroachment within the Delaware River) with economic costs while meeting the purpose and need of the project. The replacement alternative has been hydraulically modeled and shown to avoid backwater flooding impacts. Advancement of this alternative would involve further consideration of measures to mitigate the Adverse Effect to the historic resource.

3.2.4. Dual Bridge Alternative

This alternative would consist of constructing a new bridge immediately upstream of the existing Pond Eddy Bridge. Assuming a new owner could be identified through the marketing plan, the existing bridge would remain in place but would be closed to traffic as a means of preserving the National Register-listed bridge. In effect, this alternative would result in two side-by-side bridge crossings of the Delaware River at Pond Eddy.

This alternative was developed in response to comments issued by the Section 106 Consulting Parties related to the preservation of the existing Pond Eddy Bridge. The Dual Bridge Alternative would meet the project purpose and need by providing a safe, structurally sound means for vehicular traffic crossing over the Delaware River. The NPS, however, notified PennDOT that a dual bridge alternative would be in conflict with the NPS's ten-bridge limit management policy for the implementation of Section 7 of the National Wild and Scenic Rivers Act for the Upper Delaware River.

The NPS also expressed concern regarding the aesthetic tunneling effect of passing under two adjacent bridges and the associated impact that this alternative could have on the recreational experience of local boat traffic. Additionally, the Dual Bridge Alternative would result in an increase in the number of piers within the river, including potentially three piers for the proposed new structure and the lone center pier for the existing bridge. The increased number of piers would result in an increase in the 100-year flood elevation and raise backwater flooding concerns. Based on the opposition by the NPS, the direct impacts to the Delaware River, and the potential backwater flooding concerns, this alternative does not appear to be a feasible or prudent project alternative.

The Dual Bridge Alternative would result in no adverse effect to the Pond Eddy Bridge as long as a new owner for the bridge could be identified. If a new owner could not be identified, the bridge would need to be removed, which would result in an Adverse Effect. PennDOT would market the use or reuse of the bridge as part of its commitment to the Section 106 consultation process.

TABLE 2
SUMMARY OF ON-LINE ALTERNATIVES

PROJECT ALTERNATIVE	EFFECTS
No-Build	No Adverse Effect; however, this alternative would eventually result in demolition by neglect, an Adverse Effect.
Rehabilitation (Option 1)	No Adverse Effect; however this alternative would be costly, with a short service-life span.
Rehabilitation with Strengthening and/or Widening (Options 2 and 3)	Adverse Effect; so much of the fabric of the bridge would be replaced that character defining features of the original bridge would be lost.
Replacement	Adverse Effect.
Dual Bridge	Likely No Adverse Effect; however, a new owner for the bridge would be required. If no owner could be found, this alternative would have an Adverse Effect, as the bridge would be removed.

4.0 BASIS FOR RECOMMENDED PROJECT FINDING

4.0 BASIS FOR RECOMMENDED PROJECT FINDING

Of the project alternatives considered, PennDOT and NY DOT have determined that the Bridge Replacement Alternative is the only feasible and prudent alternative. This alternative proposes the construction of a new bridge structure immediately upstream of the existing Pond Eddy Bridge such that the existing bridge can be used to maintain traffic during project construction. Following project construction, the existing Pond Eddy Bridge would be removed. This would be an Adverse Effect to the historic property, the Pond Eddy Bridge.

The Rehabilitation Alternative (Option 1) would have No Adverse Effect. However, it would be more expensive and have a shorter service life than a replacement bridge. Assuming a 20-year service lifespan for approximately $15.3 million (2010 dollars), the Rehabilitation Alternative would cost approximately $765,000 per year. The Replacement Alternative, assuming a minimum 75-year service-life span and a cost of $9.6 million (2010 dollars), would cost $128,000 per year. Although an Adverse Effect, the Replacement Alternative would cost approximately 85 percent less per year than the Rehabilitation Alternative, costs borne by the public. PennDOT has determined that the Rehabilitation Alternative (Option 1) is not a prudent alternative.

TABLE 3
DEFINITION OF EFFECTS
THE POND EDDY BRIDGE

DEFINITION OF EFFECT	EVALUATION
An effect may occur when there is alteration to the characteristics of a historic property qualifying it for inclusion in or eligible for the National Register as defined in Section 800.16(i)	The project would replace the existing steel truss bridge with a new bridge on a new adjacent alignment
FINDING: ***Historic Property Affected***	

4.1 CRITERIA OF ADVERSE EFFECT

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, design, 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.

TABLE 4
APPLICATION OF CRITERIA OF ADVERSE EFFECTS FOR THE POND EDDY BRIDGE

EXAMPLES OF ADVERSE EFFECTS PURSUANT TO SECTION 800.5(A)(2)	EVALUATION
Adverse effects on historic properties include, but are not limited to, the following:	
i) Physical destruction of or damage to all or part of the property	a) The bridge will be removed from its current location and a new bridge will be built on a new alignment.
ii) 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 § 68) and applicable guidelines	b) The bridge will be altered due to its removal from its historic location, a treatment not in keeping with the Secretary's Standards for the Treatment of Historic Properties.
iii) Removal of the property from its historic location	c) The bridge will be removed from its present location.
iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance	d) As a result of the bridge removal from its location, the bridge will no longer function as a bridge; therefore, its historic use and significance will be lost.
v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features	e) Not applicable
vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization	f) Not applicable
vii) Transfer, lease, or sale of a property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance	g) The proposed project will explore the feasibility of selling the bridge so that it can remain intact, therefore preserving its historic significance.
DETERMINATION: The proposed action will directly alter the characteristics that qualify the Pond Eddy Bridge for the National Register and will diminish the integrity of the bridge's location, design, setting, materials, workmanship, feeling, and association. The project will have an ***Adverse Effect*** on the Pond Eddy Bridge.	

4.2 MITIGATION FOR ADVERSE EFFECT

The Replacement Alternative is the Preferred Alternative. The Preferred Alternative would constitute an "Adverse Effect" under Section 106 of the National Historic Preservation Act. As such, FHWA and PennDOT have developed a Memorandum of Agreement (MOA) to document the various measures (or stipulations) that would be employed to mitigate the project's Adverse Effect. The following suggested mitigation measures have been incorporated into the draft MOA.

- **Marketing the Reuse of Bridge:** PennDOT will work with interested parties identified during the marketing process to relocate or reuse all or portions of the bridge. Should a group come forward to assume ownership of the bridge, PennDOT will require a preservation covenant which states that the buyer shall be responsible for rehabilitating and/or maintaining the bridge upon its removal and relocation in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation (NPS, 1992).

- **Recordation:** The Pond Eddy Bridge will be documented to the standards of the Historic American Engineering Record (HAER) or appropriate state-level recordation. This recordation will document through description and photography, the characteristics and history of the bridge including the setting, context, and its local significance. This documentation will be submitted to the PA SHPO and NY SHPO and made available for an appropriate local repository to be designated by the PA SHPO and NY SHPO.

- **Pond Eddy Bridge Design Advisory Committee:** A Design Advisory Committee (DAC) will be formed for the project. PennDOT will organize the formation of the DAC by inviting a representative member from the interested local municipalities, counties, consulting parties, local emergency service providers, and the local public to take part in workshops to discuss the aesthetic design of the new bridge. Once the DAC has been established, a series of three workshops will be held so that PennDOT can solicit input from the committee members regarding the aesthetics, engineering elements, cost, and constructability of the structure. With the formation of the DAC, PennDOT, NYSDOT, and FHWA are committed to investigate and consider bridge design concepts, approaches, and appurtenants that would result in the construction of an aesthetically appealing design to fit the context of the setting and comply with PennDOT's design manual and fiscal constraints. Concepts to be investigated could include, but are not limited to, a supersized single-lane bridge, a pedestrian promenade, a faux truss, use of local materials, and other design measures to be considered for a context sensitive bridge. The design of the new bridge shall be consistent with PennDOT Design Manual, Part 2, Highway Design (Publication 13M), as supplemented by the American Association of Highway and Transportation Officials

(AASHTO) Green Book (2001); FHWA Flexibility in Highway Design; PennDOT Strike-off Letter 432-08-03 "Project Right-Sizing Policy"; and the PennDOT Smart Transportation Manual.

PennDOT solicited initial interest in the potential for marketing the bridge in January 2007. PennDOT posted the bridge on its marketing website (www.penndotcrm.org) in July 2009. In addition, PennDOT submitted a general inquiry to 25+ different entities to solicit interest in acquiring or re-using the bridge if the opportunity developed. The majority of the entities did not respond and three declined interest. The Town of Fallsburg, New York, and the Redevelopment Authority of the County of Cumberland, Pennsylvania, responded to PennDOT indicating their potential interest in acquiring the Pond Eddy Bridge, should it become available. PennDOT in conjunction with NYSDOT will continue to coordinate the development of the project through the Section 106 process with their respective state historic offices including review of the project MOA. Upon execution of the MOA, mitigation efforts would be initiated relative to the marketing, recordation, and the design advisory committee. The marketing initiatives would include contacting the following in this sequence: (1) state agencies, (2) municipalities and other local governmental organizations, and (3) the public. One of the methods used to contact members of the public is through a comprehensive list of groups including but not limited to preservation groups, trails to trails organizations, contractors, golf courses, etc. The Town of Fallsburg and the Redevelopment Authority of the County of Cumberland will be recontacted through this marketing process.

5.0 PUBLIC INVOLVEMENT

5.0 PUBLIC INVOLVEMENT

Public involvement and agency coordination have been ongoing throughout the development of the Pond Eddy Bridge Project. Public meetings were held on July 28, 1998; December 8, 1998; December 15, 1999; June 29, 2005; November 8, 2006; August 23, 2007; and April 2, 2009. The purpose of these meetings was to provide information to the general public regarding the scope and schedule of the proposed bridge project.

In addition to these public meetings, numerous efforts have been made throughout the development of the project to keep various resource/regulatory agencies informed of the project. Examples of this agency coordination include correspondence with the Pennsylvania Department of Conservation and Natural Resources (PA DCNR), PFBC, Pennsylvania Game Commission (PGC), and U.S. Fish and Wildlife Service regarding threatened and endangered species, correspondence with the PA DCNR and PGC regarding off-line alternate access alternatives, correspondence with the U.S. Coast Guard regarding the navigability status of the Delaware River, coordination with the NPS regarding the National Wild and Scenic status of the Delaware River, coordination with the PA and NY SHPOs regarding the project's cultural resource studies, and coordination with the U.S. Army Corps of Engineers regarding a jurisdictional wetland determination. In addition to these specific agency coordination efforts, a comprehensive agency field view meeting was held on July 7, 1997.

As part of the project development process, PennDOT has conducted extensive project-specific coordination with the NPS and Section 106 entities relative to the implementation of the Pond Eddy Bridge Project. The NPS has concurred with the need to replace the Pond Eddy Bridge and has agreed to be a participating party to the MOA. As part of the August 2007 consulting party meeting, concerns were raised by the consulting parties regarding the potential loss of the historic bridge and its visual quality in the valley. In understanding the consulting parties concerns, PennDOT and FHWA committed to develop a DAC as part of the project so that a bridge crossing solution could be developed with solicitation of input into the context appearance of the crossing.

Agency coordination for cultural resources remains ongoing. Three Section 106 Consulting Party meetings have been held for the Pond Eddy Bridge Project. These consulting party meetings were held on June 29, 2005; August 23, 2007; and April 7, 2009. Additionally, a meeting with ACHP, FHWA, and PennDOT was held on May 5, 2009, to discuss the project with respect to the Section 106 process. Also, in accordance with Section 106 requirements, the *Determination of Effect* report (2006) was distributed for consulting party review. Monthly

project updates and or coordination meetings have been held with the NY SHPO, PHMC, ACHP, NYSDOT, PennDOT, FHWA, NPS, and Upper Delaware Council from 2007 to 2011 (currently). The NY SHPO terminated consultation on July 15, 2010. However, continued coordination between PennDOT and NYSDOT have progressed the project development process and this Findings Documentation has been prepared re-establish coordination with the NY SHPO.

6.0 REFERENCES

6.0 REFERENCES

1. Christine E. Davis, Determination of Eligibility, S.R. 1011, Section 470, Pond Eddy Bridge, Shohola Township, Pike County, Pennsylvania, and Town of Lumberland, Sullivan County, New York, ER #02-8033-103, Valley Forge Laboratories, prepared for the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation, November 2002.

2. Michael Wong, Phase I Archaeological Survey, S.R. 1011, Section 470, Pond Eddy Bridge, Shohola Township, Pike County, Pennsylvania, and Town of Lumberland, Sullivan County, New York, ER # 02-8033-103, Valley Forge Laboratories, prepared for the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation, November 2001.

3. Christine E. Davis and Mindy J. See, Determination of Effect, S.R. 1011, Section 470, Pond Eddy Bridge, Shohola Township, Pike County, Pennsylvania, and Town of Lumberland, Sullivan County, New York, ER #02-8033-103, Valley Forge Laboratories, prepared for the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation, March 2006.

7.0 ATTACHMENTS

ATTACHMENT A -
POND EDDY BRIDGE LISTING IN NATIONAL REGISTER OF HISTORIC PLACES

ATTACHMENT "A"

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
BUREAU FOR HISTORIC PRESERVATION
BOX 1026
HARRISBURG, PENNSYLVANIA 17108-1026

January 6, 1989

Randolph A. Gregory, Chairman
Pike County Commissioners
County Administration Building
506 Broad Street
Milford, Pennsylvania 18337

Re: Pond Eddy Bridge, Pond Eddy, Pike County, Pennsylvania, Lumberland, Sullivan County, New York

Dear Chairman Gregory:

I am pleased to inform you that the above referenced property was placed on the National Register of Historic Places on November 14, 1988. Entry upon the National Register gives recognition to the historical, architectural or cultural merits of properties. Properties listed on the National Register receive consideration during the review of federal projects and may qualify for federal historic preservation tax credits or other assistance when available. (Currently no grant-in-aid funds are available). Enclosed is a brochure explaining the National Register program.

Sincerely,

Brenda Barrett
Director

BB/DGD/dc
cc: county official
local official
preparer of nomination

ATTACHMENT B -
DELAWARE AND HUDSON CANAL -
NATIONAL HISTORIC LANDMARK
NOMINATION FORM

1. NAME OF PROPERTY

Historic Name: Delaware and Hudson Canal

Other Name/Site Number:

2. LOCATION

Street & Number: Orange, Sullivan and Ulster Counties, New York
Wayne County, Pennsylvania
Not for publication:

City/Town: Vicinity:

State: NY & PA County: Orange, Sullivan, Ulster (NY) Code: 071, 105, 111
Wayne (PA) 127
Zip Code:

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	X	Building(s):	
Public-Local:	X	District:	X
Public-State:		Site:	
Public-Federal:		Structure:	
		Object:	

Number of Resources within Property

Contributing	Noncontributing	
1		buildings
		sites
11		structures
		objects
12		Total

Number of Contributing Resources Previously Listed in the National Register:

Name of Related Multiple Property Listing:

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

___ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain):

Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	Transportation Industry/Processing/Extraction	Sub:	water-related waterworks
Current:	Recreation and Culture	Sub:	museum outdoor recreation

7. DESCRIPTION

Architectural Classification:

Materials:

Foundation:
Walls: stone; concrete; brick
Roof:
Other: metal (aqueduct cables)

Describe Present and Historic Physical Appearance.

There are many traces of the Delaware and Hudson Canal left between Kingston, New York, and Honesdale, Pennsylvania. However, five sections of the canal appear to be especially well preserved and to best illustrate its history.

Locks at High Falls, New York

Some of the best preserved locks remaining on the Delaware and Hudson Canal are Locks 15 through 20 located in High Falls, New York. Built in 1852, the locks are precision cut and fitted. Other important remains in the area are the abutment of an aqueduct built in 1849 by John A. Roebling, and the DePuy Hostelry built in 1797. The Delaware and Hudson Canal Historical Society has leased the locks from the High Falls Fire Department. The Society would like to acquire the DePuy Hostelry for a museum.

Alligerville Section, New York

Running west from Alligerville is a two mile section of the Delaware and Hudson Canal that is relatively undisturbed. The first 5,000 foot section contains water. Only one other section (at Cuddebackville) is water-filled. The towpath on the north bank makes an excellent hiking trail. The section is heavily wooded. The other major feature of the Alligerville district is the Peter Davis Basin. Designed to permit canal boats to change directions, the basin also contains water.

Cuddebackville Section, New York

The Cuddebackville section is one of the best preserved sections of the Delaware and Hudson Canal. Like the section at Alligerville it contains water. Features that enhance the value of this section of the canal are the Cuddebackville Basin, the Neversink Feeder, and the remains of the Neversink Aqueduct. Near the canal are a number of buildings of interest—the Jeffersonian House (a canal hotel) c. 1840-1850, Simon Berman's General Store (now the town clerk's office), the Blacksmith's House, and the DeWitt Clinton Birthplace. The buildings, however, have been altered in more recent times, and a careful job of restoration would be required in order to bring them back to the canal period. The Regional Chamber of Commerce has recently endorsed a proposal to set aside the Cuddebackville district as a public park.

Roebling Aqueduct, New York and Pennsylvania

Between Lackawaxen, Pennsylvania, and Minisink Ford, New York, the Delaware and Hudson Canal had to cross the Delaware River. In the beginning the company utilized the river and floated its boats across against the current, but it was a tedious process and one plagued by mishap. Further resistance came from raftsmen who were quick to bring suit in case of accident. To remedy the situation, company managers in 1846 authorized the construction of an aqueduct that would carry the canal and its passengers across the Delaware in elevated style. The firm accepted the plans of John A. Roebling for a wire suspension aqueduct on January 6, 1847.

Roebling finished the aqueduct before the end of 1848. Three masonry piers supported two 8 ½ inch cables. From these cables – using wire rope hangers for the first time – the canal trunk was suspended with a planked towpath on each side. In his book Coal Boats to Tidewater, Manville Wakefield described the completed structure:

> The aqueduct contained nearly eight thousand cubic yards of hydraulic cement masonry in its abutments and piers and with the extensions covered a distance of six hundred feet. Consisting of four spans, the width of its trunk at the water line was nineteen feet with a water depth of six feet. The diameter of its wire cable measure out to eight and one-half inches. The maximum strength of each cable was nineteen hundred tons with the total weight of cables and anchor chains placed at four hundred and ninety thousand pounds.

After the abandonment of the canal in 1898, the aqueduct became a bridge. The conversion necessitated the removal of the canal box, so that today only the piers and the cables date from 1848. The bridge remains in good condition. In continuous use by vehicular traffic since 1898, it is now a privately owned toll bridge.

Office of the Delaware and Hudson Canal, Pennsylvania

Located at 1810 Main Street in Honesdale, Pennsylvania, the Office of the Delaware and Hudson Canal Company remains in good condition. Practically unchanged since 1898 when the company abandoned the building and leased it to the Wayne County Historical Society, the one-story brick structure has served as a county museum for over a hundred years.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide:__ Locally:

Applicable National Register Criteria: A__ B__ C__ D

Criteria Considerations (Exceptions): A__ B__ C__ D__ E__ F__ G

NHL Criteria: 1 and 4

NHL Theme(s):
V. Developing the American Economy
2. distribution and consumption
3. transportation and communication

VI. Expanding Science and Technology
2. technological applications

Areas of Significance:
commerce
engineering
transportation

Period(s) of Significance: 1825-1899

Significant Dates:

Significant Person(s):

Cultural Affiliation:

Architect/Builder:

Historic Contexts:
XII. Business
L. Shipping and Transportation

XIV. Transportation
C. Canals

VIII. Technology (Engineering and Invention)
B. Transportation

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Completed in 1828, the Delaware and Hudson Canal was the main waterway from the anthracite coal fields of northeastern Pennsylvania to the industrial and domestic furnaces of New York. Stretching 108 miles from Honesdale, Pennsylvania, to Kingston, New York, the canal proved to be enormously profitable during the middle years of the 19th century. During the 1860s when anthracite was the main source of power and the chief fuel for the industrial system of the United States, northeastern Pennsylvania produced from 40 to 50 percent of the entire supply, and the Delaware and Hudson Canal carried the greater share of it to tidewater. The growth of railroads led to the demise of the canal in 1899. Especially noteworthy remains of the canal are the Company Office at Honesdale, Pennsylvania; the Roebling Aqueduct (now a vehicular bridge) between Minisink Ford, New York, and Lackawaxen, Pennsylvania; the basin and canal bed at Cuddebackville, New York; a 5,000-foot section at Alligerville, New York; and Locks 15 through 20 at High Falls, New York.

History

The Delaware and Hudson Canal was one of three waterways built in the 1820s to make the anthracite coal of eastern Pennsylvania marketable in New York. As the new nation grew in population and began to develop industrially, the demand for sources of heat, light, and power increased. By the third decade of the 19th century, wood had become very expensive. The only deposits of soft coal then known were near Richmond and Pittsburgh. The first was small and the second inaccessible. The existence of anthracite beds in Pennsylvania was a matter of common knowledge, but few realized the value of hard coal as fuel. One who did was William Wurts, a Philadelphia merchant.

Wurts owned coal fields in the Pennsylvania mountains around Carbondale. Quantities of the fuel were mined and shipped to Philadelphia by wagon and barge, but the returns were marginal: transportation costs were high and there were competing fields closer to the city. Wurts decided what he needed was a canal that would make it feasible for him to ship his coal to New York City and what promised to be a seller's market. The route he envisioned was from Honesdale, Pennsylvania, down the Lackawaxen River to the Delaware, then along the Delaware to the boundary of New York State, and then up the Neversink River and across the flat country to Roundout Creek. From there it was a short distance to Kingston and the Hudson River. The distance from Honesdale to Kingston by this route was 108 miles.

Early in 1823 Wurts and his brothers organized the Lackawaxen Coal Mine and Navigation Company to realize the dream. From the Pennsylvania legislature they obtained the right to improve the navigability of the Lackawaxen and to collect tolls to finance the work. In the event that a separate facility was needed to parallel the river, which proved to be the case, they also obtained permission to construct a waterway. In New York the brothers were able to interest a number of businessmen in the venture. In April, a group of New York financiers led by Philip Hone formed the Delaware and Hudson Canal Company, and the New York legislature authorized incorporation. Stock for the company sold in half a day. Original capitalization was $500,000, but the estimate proved much too low, and in 1824 the company increased its capital stock to $1,500,000.

Philip Hone became the first president of the company, and it was he who broke ground for the canal from Kingston to the Delaware River on July 13, 1825. Work progressed rapidly, and by September, 1827, it was ready for business. In the beginning the company had difficulty maintaining the water level at four feet, but if conditions were not optimal, they were not prohibitive, and barges found little

difficulty in making the journey.

In 1827, the Delaware and Hudson Canal Company bought the charter of the Lackawaxen Company and a share in the Wurts mine for $40,000. After obtaining a loan of $800,000 from the New York legislature and the privilege of borrowing up to $300,000 elsewhere, the company was able to finance completion of the canal to Honesdale, Pennsylvania in the fall of 1828. The first ship to travel the length of the canal was the Orange, which left Kingston on October 28. The finished canal was 28 feet wide at the top, 20 feet wide at the bottom, and four feet deep. There were 110 locks in 108 miles, which overcame a total grade of 1,075 feet.

To get the coal from Carbondale to the docks at Honesdale, the company constructed a gravity railroad some 17 miles in length. At one point it descended over 500 feet in one mile. To prevent cars from going too fast in the descent, engineers equipped them with rear propellers. Connected to the gearing, they revolved so as to exert a backward pull and reduced the rate of speed to four miles an hour. Until workmen completed the railroad in 1829, wagons carried the coal down the mountains.

In the summer of 1829 the gravity railroad was the scene of the first experiment in America with a steam locomotive on a permanent track. The company wanted to find an inexpensive means of returning coal cars from the docks to the mines – mules were slow and their services costly – and decided to give one of the new-fangled contraptions a chance to prove its worth. The engine chosen for the test was the "Stourbridge Lion," a locomotive made in England. On August 8, the company engineer bravely drove the "Lion" over trestles that trembled under its weight. Although the trip ended successfully, company officials thought the engine too heavy for its roadbed and abandoned the idea on grounds of safety. The achievement of the "Lion" apparently had little effect on American railroading: it influenced practically no one and preceded more meaningful and widely-published experiments in other localities by only a short time.

During the 1830s the company struggled to stay solvent. Strikes, depressions, and cholera epidemics made things difficult. But perhaps more basic in the long run was the fact that the canal was not operating as planned. Its capacity had been estimated at 540 tons per day or 180,000 tons in a year of 200 working days, but in the beginning it carried only 43,000 tons. Improvements gradually enabled the canal to realize its potential, and in 1841 the company managed to ship 148,000 tons of coal to Kingston and beyond. During the 1840s workmen deepened the canal on three different occasions so that by the end of the decade it had reached a depth of 6 feet. In 1851 the company enlarged the locks from 79 feet by 9 feet to 100 feet by 15 feet. The surface and bottom widths of the canal changed little over the years. The company also improved the gravity railroad. One major alteration occurred between 1841 and 1843, when the company relocated the track on the east side of the mountain.

Prosperity finally came in the 1840s, and it was worth waiting for: the profits were enormous. Although its capital had doubled by this time, the company still earned from 10 to 20 percent net per annum. In 1864 the company raised its capital stock to $10,000,000, and even this amount earned 31 percent the following year. Part of the reason for this prosperity was due to the acceptance of anthracite coal as an excellent fuel for domestic, commercial, and industrial uses. Naturally the enlarged capacity of the canal permitted the company to bring more coal to its buyers. A contributing factor was the Pennsylvania Coal Company, which began to use the canal in the 1850s.

After the 1860s, however, the company began to decline. The increasing use of bituminous coal by industry meant fewer profits. But, most of all, a better means of transportation had been developed. The railroad was faster, and it was cheaper. For a time the company rallied by buying railroads to supplement the canal and reach wider markets. In 1872 the canal carried its peak load of 2,930,333 tons of coal down to tidewater. After that year, however, its tonnage steadily declined as railroads proliferated. In 1899 it was over. The company dropped the word "Canal" from its name and ceased to operate the waterway and the gravity railroad.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Davis, Lance E., Jonathan R.T. Hughes, and Duncan M. Macdaugall. *American Economic History.* Homewood, Illinois: 1965.

Dunbar, Seymour. *A History of Travel in America.* New York: 1939.

Harlow, Alvin T. *Old Towpaths.* New York: 1926.

Hurlburt, Dorothy. *Carrying Coals to Rondout.* Ellenville, New York: 1965.

Kirkland, Edward Chase. *A History of American Economic Life.* New York: 1939.

New York Writers Project. *New York – A Guide to the Empire State.* New York: 1940.

Pennsylvania Writers Project. *Pennsylvania – A Guide to the Keystone State.* State College: University of Pennsylvania, 1940.

Steinman, David B. *The Builders of the Bridge: The Story of John Roebling and His Son.* New York: 1945.

Wakefield, Manville B. *Coal Boats to Tidewater: The Story of the Delaware & Hudson Canal.* South Fellsburg, New York: 1965.

Whitford, Noble E. *Supplement to the Annual Report of the State Engineer and Surveyor of the State of New York for the Fiscal Year Ending September 30, 1905.* Albany, New York: 1906.

Personal Interviews

Crosby, Carol. Secretary of the Wayne County Historical Society, Honesdale, Pennsylvania, July 11, 1968.

Ross, Don. Former President of the Delaware and Hudson Canal Historical Society, High Falls, New York, July 11, 1968.

Previous documentation on file (NPS):

___ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
___ Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
___ Designated a National Historic Landmark.
___ Recorded by Historic American Buildings Survey: #
___ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

__ State Historic Preservation Office
__ Other State Agency
__ Federal Agency
__ Local Government
__ University
__ Other (Specify Repository):

10. GEOGRAPHICAL DATA

Acreage of Property:

UTM References: **Zone Easting Northing**

Verbal Boundary Description:

Locks at High Falls – Beginning at a point 50 feet directly above the northeast corner of the north end of the old Roebling aqueduct abutment located north of Route 213 in the center of High Falls, Ulster County, New York, the boundary proceeds in a westerly direction for 100 feet, then turns south at a right angle to parallel the aqueduct at a distance of 50 feet. The boundary continues to parallel the canal until it reaches the DePuy Tavern, where it moves westward enough to pass at a distance of 50 feet the west side of the structure and then returns to a point 50 feet from the west bank of the canal. The boundary then continues in a southerly direction past Locks 16, 17, 18, 19, and 20. The boundary then turns at a right angle to parallel the south end of Lock 20 until it passes 50 feet beyond the southeast corner of Lock 20. At that point the boundary turns at a right angle and proceeds in a northerly direction at a point 50 feet east of the canal bed and Locks 20, 19, 18, 17, 16, and 15 to the point of beginning.

Alligerville Section – The eastern boundary is the eastern bank of the Peterskill. The northern boundary is Roundout Creek. The southern boundary begins at a point on the eastern bank of the Peterskill 50 feet south of the most southerly shore of Peter Davis Basin. After the boundary passes 50 feet west of the most westerly shore of Peter Davis Basin, it angles in a northwesterly direction until it reaches a point 50 feet from the nearest bank of the canal and continues to parallel the canal at a distance of 50 feet until it intersects the western boundary. The western boundary is a line running due south from Roundout Creek to the southern boundary at a point two miles down the middle of the canal from the eastern bank of the Peterskill.

Cuddebackville Section – The northern boundary of the district is a line running west from U.S. Highway 209 at a distance of .3 of a mile north and exactly parallel to the center of the Oakland Valley Road until it reaches a distance of .2 of a mile from the point of beginning. Then it runs due south to the Oakland Valley Road and proceeds in a westerly direction down the center of said road .4 of a mile, where it turns due south to intersect with Prospect Hill Road, which forms the southern boundary of the district. The eastern boundary is U.S. Highway 209.

Roebling Aqueduct – Spans the Delaware River between Minisink Ford, Sullivan County, New York and Lackawaxen, Pike County, Pennsylvania.

Office of the Delaware and Hudson Canal – 1810 Main Street, Honesdale, Wayne County, Pennsylvania.

Boundary Justification:

11. FORM PREPARED BY

Name/Title: John D. McDermott
Historian
Division of History
National Park Service

Address: Washington, DC

Telephone:

Date: August 5, 1968

Edited and placed on current NHL nomination form by:

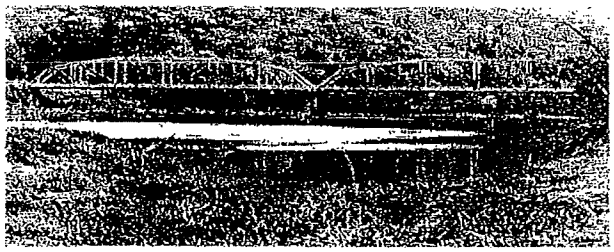
Patty Henry
National Park Service
National Historic Landmarks Program
1849 C St., N.W. (2280)
Washington, DC 20240

Telephone: (202) 354-2216

Date: March 14, 2008

NATIONAL HISTORIC LANDMARKS PROGRAM
March 14, 2008

ATTACHMENT C -
POND EDDY BUYOUT PETITION



POND EDDY PA HOMEOWNERS ASSOCIATION

P. O. Box 61 POND EDDY, NY 12770

February 13, 1999

PennDOT District 4-0
Charles Mattei, District Engineer
P.O. Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear Mr. Mattei:

The homeowners and residents of Pond Eddy, PA wish to express their desires regarding the future of the Pond Eddy Bridge and our community. We met to discuss your study and have attached to this letter responses from nearly all of our community. In addition, you should have received several residents' letters sent individually under separate cover. We are virtually unanimous in our wish for a new bridge as a first alternative. Our second choice would be rehabilitating and upgrading the current bridge. No one wants the bridge to remain in its current state, and only one resident may be interested in a buy-out.

There are several reasons for a new bridge, which we hope you will consider in your study.

- Besides allowing access to the 26 private properties, this bridge is the only link to the State Game Land in the 20-mile stretch of river from Matamoras/Port Jervis to Shohola/Barryville. Without any bridge, response to forest fires will be severely compromised. Without a new bridge, weight limitations restrict access by rescue and fire vehicles.

- Freight train service along the river is being dramatically increased. There is also talk about passenger service along this line. Only a new bridge will allow adequate response by rescue vehicles to any derailments.

- We do not want to be bought out, and will fight to keep our homes. Even if the decision is made to buy us out, and you are successful, our homes and properties would then be removed from all future tax rolls of the county, the townships, and the school district. Tax income for the area will be permanently affected.

- You have expressed serious concerns about rehabilitating the current bridge. Once repairs of the bridge are begun, many unforeseen problems may be exposed which would compound the cost and time involved in this project.

- Finally, a bridge project will bring jobs and additional income to both Pike and Sullivan counties.

We hope that with these considerations in mind, you conclude that the only logical alternative is to replace the current bridge, protect the area and keep our community alive.

Sincerely,

Daniel I. Cotlowitz
Pond Eddy PA Homeowners Association

Attachments

Cc: Robert Doble, Asst. District Engineer, PennDOT (w/att.)
Zenon Wojcik, BAC Killam Consulting Engineers
State Senator Charles Lemmond
State Representative Jerry Birmelin (w/att.)
Sally Thompson, Pike County Commissioner
George Fluhr, Shohola Township Supervisor
Richard Maggs, Westfall Township Supervisor
Bill Bradley, Upper Delaware River Council
Donald Madl, Pennsylvania Game Commission
John Oliver, Pennsylvania Forestry Service

PennDOT and others involved in the Pond Eddy Bridge study have expressed a desire to have some sort of consensus about what we the residents actually want. Therefore, please check off your preference and sign your name.

PRINT NAME	SIGNATURE	NEW BRIDGE	REPAIR BRIDGE	BUY-OUT	NO CHANGE
DANIEL I. COTLOWITZ	[illegible]	✓	2	NO	NO
Fred Jo. Ann Novelli	[illegible]	✓	2nd Choice	NO	NO
Chris Gordon	[illegible]	✓	2	NO	NO
Virginia Ollert	[illegible]	✓	2nd Choice	NO	NO
George Ollert	[illegible]	✓	2nd Choice	NO	NO
John Johnstone	[illegible]	✓	2nd choice	NO	NO
Michael Mackey	[illegible]	✓	UNTIL BRIDGE IS BUILT	NO	NO
Leonard Bolch	[illegible]	✓	2nd choice	NO	NO
Robert Streicher	Robert Streicher		✓	NO	
MIKE WHALEN	[illegible]	✓	✓	NO	NO
William DR Hissar	[illegible]	✓	✓	NO	NO
MICHAEL SADAITYS / G. ONDRESKO	[illegible]	✓		NO	NO
LORI AYERS	[illegible]	✓	2nd	NO!	NO
JOHN R. MAUCEMES	[illegible]	✓	2nd	No	No

Date: 1-28-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Anna Babek

Print name ANNA BABEK

Mailing Address: 12 LOUIS STREET, HACKENSACK, N.J. 07601

Date: 1/29/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Eric Keller

Print name Eric C. Keller

Mailing Address: 101 N. Fairview St Nazareth, Pa 18064

Date: FEB 1, 1999

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: George Ondrejko Jr.

Print name GEORGE ONDREJKO JR.

Mailing Address: 26 SATINWOOD ROAD
BAYVILLE L.I. N.Y. 11709-1812

Date: 2-16-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly, Eleanor Kinzel

Signature: Michelle Dell
Eleanor Kinzel

Print name Michelle Dell

Mailing Address: P.O. Box 1 Pond Eddy, NY 12770

January 21, 1999

Re: Pond Eddy Bridge

To: PennDOT District 4
Charles Mattei
District Engineer
Box 111
Scranton, PA 18501

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. In no case do I want a buyout or for the current bridge to be maintained at it's current capacity. Please take this into consideration when making your plans.

Yours truly,

Print name Jessica Sutton

Address: PO Box 69 Pond Eddy NY 12770
Pond Eddy PA Flagstone Rd

Date: 2/8/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Richard Sunesson

Print name RICHARD SUNESON

Mailing Address: 41 CLOVER ST, YONKERS NY 10703-1120

Date: 1-31-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Matthew Abbadessa

Print name Matthew Abbadessa

Mailing Address: P.O. Box 3, Pond Eddy N.Y. 12770

Date: FEB 9 1999

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature:

Print name MICHAEL WHALEN

Mailing Address: 136 GEORGI CIRCLE MILFORD PA 18337

Date: 2-9-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Francis J Lemon Jr

Print name FRANCIS J. LEMON JR

Mailing Address: 100 BLVD. O MATAMORAS, PA 18336

Date: 2-7-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Edward J. ODonnell

Print name EDWARD J. ODONNELL

Mailing Address: 400 AV. K, MATAMORAS, PA. 18336

Date: 3/9/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Leonard L Balch Jr

Print name Leonard L. Balch, Jr.

Mailing Address: 111 Ave P, Matamoras PA 18336

Date: 2/7/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Thomas A. Terracino

Print name THOMAS A. TERRACINO

Mailing Address: 205 AVE M. MATAMORAS PA 18336

Date: 2/8/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Kenneth L. Travis

Print name Kenneth L. Travis

Mailing Address: 600 Ave M. Matamoras Pa 18336

Date: Feb. 7, 1999

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: John Heckman

Print name JOHN HECKMAN

Mailing Address: 112 10th ST. MATAMORAS, PA.

Date: Feb. 7, 1999

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Richard W Savannah

Print name RICHARD W. SAVANNAH

Mailing Address: 611 AVE. M, MATAMORAS, Pa 18336

Date: 2-7-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Gary M Polakis

Print name GARY M. POLAKIS

Mailing Address: 907 2ND ST MATAMORAS PA - 18336

Date: 2-7-99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Dave Crawford

Print name Dave Crawford

Mailing Address: 308 AOE. M. Matamoras Pa. 18336

Date: 2/9/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Jack Drake

Print name JACK DRAKE

Mailing Address: 807 AVE. N MATAMORAS PA 18336

Date: 2/8/29

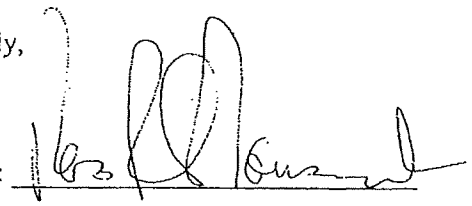
To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: 

Print name Ross Toussaint

Mailing Address: Stone Hunting Club

Date: 2/8/99

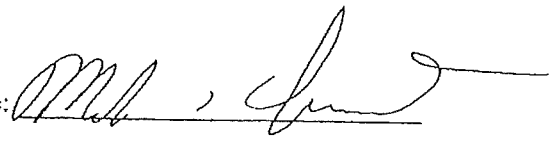
To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: 

Print name Mark Toussaint

Mailing Address: 604 Rt. Dr. Matamoras Pa
18336

Date: 1/8/99

To: PennDOT District 4-0
Charles Mattei, District Engineer
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge
E.S. # 981102f

Dear PennDOT:

As a resident or homeowner in Pond Eddy, PA, I wish to make known my desire for a new bridge to serve our town. My second preference would be to upgrade the existing bridge. Maintaining the current bridge at its current capacity is an unacceptable solution. In no case do I want a buy-out. Please take this into consideration when making your plans.

Yours truly,

Signature: Peter W. Toussaint

Print name Peter W Toussaint

Mailing Address: 904 AVE P MATAMORAS, PA. 18336

VIRGINIA OLLERT
218 CLEVELAND AVENUE
HASBROUCK HEIGHTS, NEW JERSEY 07604

January 29, 1999

PennDot
P.O. Box 111
Scranton, PA 18501

ATTENTION: Robert Doble, Assistant District Engineer-Design

Gentlemen:

I am a homeowner in Pond Eddy, PA and a member of the Pond Eddy Pennsylvania Homeowners Association, I am enclosing copies of news articles that were published in the Pike County Dispatch, (December 17, 1998 and January 21, 1999) and The River Reporter, (December, 1998) about the Pond Eddy Bridge.

All of the residents/homeowners desire a new bridge and do not want a buy-out. There is only one resident Skip Hendershot who is interested in a buy-out. As you can see the residents/ homeowners are concerned about the outcome of the study.

As a member of the Pond Eddy Pennsylvania Homeowners Association, I would appreciate any information you can furnish me about the bridge, so that I may submit same to the Association.

I can be reached at Phone (201) 461-0034 day - Fax 288-4755.

Very truly yours,

Virginia Ollert
cc: Senator Charles Lemmond
Representative Jerry Birmelin
Pond Eddy Pennsylvania Homeowners Association

SUPERVISORS OF WESTFALL TOWNSHIP

Box 247
Matamoras, PA 18336
(717) 491-4065 Fax (717) 491-6353

5812

PENNSYLVANIA PUBLIC UTILITY COMMISSION
SECRETARY'S OFFICE
99 FEB 17 AM 8:34

February 10, 1999

Bradley L. Mallory
Secretary of Transportation
Forum Place 9th Floor
555 Walnut Street
Harrisburg, PA 17101-1900

Dear Secretary Mallory,

On behalf of some of our residents from Pond Eddy, Pennsylvania, we are writing you to advise that we are in total support of their efforts to keep their homes intact and still be able to enjoy a quality of life they have come to know.

We support their cause to have the present bridge vacated and the construction of a new bridge with a standard 40 ton weight limit built. The new bridge will allow emergency vehicles and essential service companies (ie. fuel, oil, and electric repair trucks) much more accessibility.

We further support this project based on the fact that Westfall Township is responsible for the maintenance of .2 (two tenths) of a mile of Township road, located in Pond Eddy, Pennsylvania.

Please feel free to contact us at any time for any assistance we may offer.

Sincerely,

Westfall Township Board of Supervisors

Lisa Green

Lisa Green
Secretary

cc: Lori Ayers
Pond Eddy Homeowners Association

GJR 5/20
CAT ___
Pl: cc: BAC
Thanks
Geo.

SHOHOLA TOWNSHIP
159 Twin Lakes Road
Shohola PA 18458
(570) 559 7394
Fax (570) 559 7523

From the office of
Shirley Brunner
Township Secretary
Office Hours: Tuesday & Thursday 9-Noon

May 14, 1999

Re: Resolution 1999-2

The *Shohola Township Board of Supervisors,* at their regular Supervisors Meeting held May 13, 1999, unanimously approved the attached resolution concerning the Pond Eddy Bridge.

Sincerely,

Shirley Brunner

Shirley Brunner

SHOHOLA TOWNSHIP
BOARD OF SUPERVISORS
159 Twin Lakes Road
Shohola PA 18458

RESOLUTION 1999-2

A RESOLUTION OF THE *SHOHOLA TOWNSHIP BOARD OF SUPERVISORS* CONCERNING THE POND EDDY BRIDGE

Whereas, residents of Pond Eddy, Pennsylvania have expressed concerns for access to their community, and they are entitled to safe access for heavy vehicles including fuel trucks, septic cleaning trucks, delivery trucks, and construction equipment, and

Whereas, Pond Eddy residents and the *Shohola Township Volunteer Fire And Rescue Department* has expressed concern for access in emergencies by fire trucks and other emergency vehicles, and

Whereas, increased railroad traffic and increased use of state lands increases the need for adequate emergency access, and

Whereas, several thousand acres of Pennsylvania State Game Lane and Pennsylvania State Forest Land are accessed via the bridge, and

Whereas, the approximately one-quarter million annual visitors to the Upper Delaware area are entitled to utilize the Pennsylvania State Game Land and the State Forest Land, and

Whereas, in the long term, increased railroad service including passenger service, may eventually return to the area and adequate access to the railroad at Pond Eddy would have a positive economic effect on the area, and

Whereas, the overwhelming majority of residents of Pond Eddy, Pennsylvania have indicated that they do not wish to sell their private property, and

Whereas, the present Pond Eddy Bridge is on the National Register of Historic sites and on the Pennsylvania Register of Historic Highway Bridges, and

Whereas, the Upper Delaware River is a segment of the National Wild And Scenic Rivers System, and the scenic value of Pond Eddy which was identified in the historic literature over two centuries ago, warrants preservation, and

Whereas, the National Park Service, by its reconstruction of the Roebling Aqueduct Bridge, about twelve miles up the river, has shown commendable cooperation in fulfilling its mandate to preserve historic and scenic values on the

SHOHOLA TOWNSHIP
BOARD OF SUPERVISORS
159 Twin Lakes Road
Shohola PA 18458

Upper Delaware, and at the same time aiding the local people by preserving their right to vehicular transportation across the river, therefore:

It is hereby resolved by the *Board of Supervisors of Shohola Township* that:

1. The Board absolutely opposes any plan for public condemnation of private property in Pond Eddy, Pennsylvania and urges its federal, state and local partners in the Upper Delaware Council to fulfill their obligations in this regard and oppose condemnation, and
2. The Board supports the People of Pond Eddy Pennsylvania and the Township Emergency Services in urging a rapid solution to the need for access by heavy vehicles to their community , and
3. The Board urges that serious consideration be given to upgrading or rebuilding the present bridge in order to preserve the historic and scenic heritage of the Pond Eddy area, and, if this is not feasible, to replace the bridge with a larger and stronger but similar replica at the same location, and
4. The Board urges that the National Park Service, as a Federal Agency charged with protection of historic and scenic values of Wild and Scenic rivers endeavor to obtain federal financial and other assistance to the Interstate Bridge Commission of the States of Pennsylvania and New York to accomplish this goal and
5. The Board urges the National Park Service and the Upper Delaware Council to enter seriously into discussions with the Bridge Commission and other appropriate agencies to accelerate a solution to these concerns.

Date May 13 1999

Supervisor Chairman, George J Fluhr

Supervisor Henry Prigge

Supervisor

Attest Shirley Brunner
Township Secretary
Shirley Brunner

Shohola Township
Board of Supervisors

George J Fluhr, Steve Dellert, Henry Prigge
159 Twin Lakes Road Shohola PA 18458

Phone (570) 559-7394
Fax (570) 559-7523

December 18, 2003

Harold Hill
PA/NY Joint Interstate Bridge Commission
PENNDOT – Engineering District 4-0
PO Box 111
Scranton, PA 18501

Re: Pond Eddy Bridge Safety Concerns

Dear Mr. Hill;

The Board of Supervisors of Shohola Township, Pike County, urges you to expedite the planned replacement of the Pond Eddy Bridge.

About twenty years ago, concerned about the safety of residents living in Pond Eddy, Pennsylvania, we wrote concerning the condition of the Pond Eddy Bridge. An extensive presentation was made on behalf of our Township before the Interstate Bridge Commission in Binghamton N.Y. on May 19, 1992.

Discussions, which followed, involved the Interstate Bridge Commission, Pennsylvania Department of Transportation, our Congressman's office, State Representative Birmelin, local officials of Lumberland NY, and Westfall PA, and others. Expressions of support for action came from the Upper Delaware Council, the Pike County Firemen's Association, and many private citizens.

After several public meetings were held, and after a feasibility study, it was announced in the year 2000 that the Interstate Bridge Commission approved a work schedule to target replacement of the bridge for the year 2002.

The bridge continues to deteriorate.

It currently has a weight limit of 8 tons, which prohibits crossing by any heavy service vehicles such as oil delivery trucks, or septic system cleaning trucks, and potentially most tragic, any major fire-fighting vehicles.

The bridge is also the only road access for several miles in either direction to railroad tracks over which hazardous materials are transported. With nearly quarter million annual visitors to the Upper Delaware, contingency planning for evacuation of canoeists and campers in potential emergencies has heightened awareness of the bridge's condition.

Please be aware that our concern for safety is not simply speculation. In the past, on several occasions, our fire department has actually responded over that bridge for fires and for train wrecks. We sincerely hope that the inadequacy of the bridge will not be the cause of a tragedy in the future.

Being aware of the decisions made to date regarding replacement of the bridge, we are concerned over what appears to be recent delay.

We urge you now, as we have urged for more than twenty years, to expedite action.

Sincerely yours,

George J. Fluhr.
Chairman

cc: Representative Jerry Birmelin
Pike County Commmissioners
William Douglas, UDC Dir.
John LiGreci, Supervisor, Lumberland
Nadia Rajsz, Lumberland UDC Rep.
Bruce Selneck, Shohola Township UDC Rep.
Kenneth Theil, Supervisor, Westfall Township
Michael Mrozinski, Pike County Planning Commission
Dave Forney, Superintendent, National Park Service

SHOHOLA TOWNSHIP
BOARD OF SUPERVISORS

George J. Fluhr-Steve Dellert-Henry Prigge
159 Twin Lakes Road
Shohola PA 18458
(570) 559-7394
Fax (570) 559-7523

ROUTING	DATE	INFO	ACTION
DIST. ENGR. ✓	7/8	✓	
C.R.C.			
Asst. D.E. Des. ✓	7/8	✓	✓
Asst. D.E. Cons.			
Asst. D.E. Maint.			
PERSONNEL			
FISCAL			
Bob K			
Qual. Coord.			
E.D.P.			
MASTER FILE			
DIVISION FILE			
DESTROY			

July 5, 2005

Robert T. Doble, P.E.
Assistant District Engineer-Design
PennDOT Engineering District 4-0
55 Keystone Industrial Park
Dunmore, PA 18512

Dear Mr. Doble

Thank you for the information provided at the recent meeting concerning the Pond Eddy Bridge in Shohola. We see the beginnings of progress and the clarification of several items.

In this regard, we would like to reiterate the position of Shohola Township.

The Township Supervisors believe that everyone in the township, including in the hamlet of Pond Eddy, is entitled to safe access to their residences for themselves and those who service them with oil delivery, septic cleaning, construction delivery, and other heavy vehicles. They are also entitled to an adequate road which heavy road building equipment cannot now access. They are also entitled to adequate fire protection.

The Shohola Fire and Rescue, as well as other local fire departments which provide mutual aid, have stressed the need to provide access to Pond Eddy, Pennsylvania, to protect the people homes and property there, to protect the extensive state forest and game land there, and to respond to train wrecks there. Lack of an adequate bridge delays response time and limits equipment that can be brought in.

Now it appears obvious that the existing bridge cannot be upgraded to allow fire trucks, septic trucks, oil trucks, fire trucks and similar heavy vehicles. At the June 29th meeting, the consultant's concept of a new bridge, as opposed to repairing the existing bridge, received overwhelming support.

In order to move ahead expeditiously we therefore respectfully request that quarterly meetings be convened to facilitate further opportunities for public input and information exchange as per the Section 106 process. We would hope that a satisfactory mitigation

project will in some measure satisfy those who wanted to preserve he bridge, and we will have several ideas and suggestions in that regard in due time.

Recognizing that completion of a new bridge will take time, we must voice several related concerns. Shohola Township has, under contract, been snow-plowing the Pond Eddy Bridge and Flagstaff Rd – SR 1011. At present, with the condition of the road, we cannot safely plow it next winter. Several residents are now using the dangerous railroad right-of way to avoid using that state road. We are also concerned about the liability of assigning a township employee to plow on the bridge given the present condition of the bridge, which has exceeded its life expectancy. Prior to the winter season, the Supervisors will make a final determination, and we would appreciate any input before this decision is made.

In addition to the Pond Eddy concerns, we would like to call your attention to two other major concerns of our township residents:

1. The landslide which closed the Twin Lakes Road SR 1005 during Hurricane Ivan will apparently not be remedied for a year or two. This is most distressing and in fact last week caused all traffic on Route 434 to shut down for over an hour during an accident because the Twin Lakes Road could not be used as an alternate route. To add insult to injury, after the Township had signed the Supplemental agreement initiated by PennDOT offices last winter to plow the isolated portion, the contract was never processed by PennDOT and our employees worked all winter. We are now told that because PennDOT Staff did not sign the contract and never told us they wouldn't until <u>we</u> contacted <u>them</u> in April, we will not be paid for plowing and salting. This is totally unacceptable and certainly not in a spirit of working together.

2. The closure of the (County) Aumuller Bridge on TR 440 has continued too long. We have been informed by the County that funding for the repair has been allocated but that the job will not be let out to bid until October 2005. This letting so late in the season will undoubtedly delay construction until spring or even summer 2006. Is this delay necessary?

The Township's greatest concern regarding all of the projects discussed is the potential for serious delays in emergency services response which could adversely affect the health, safety and welfare of the residents and visitors to Shohola Township.

We greatly appreciate your interest in and concern for our Township's problems, and await your response to our concerns.

Sincerely yours,

George J. Fluhr, Chairman, Board of Supervisors

Cc; Edwin Abrahamsen, Township Solicitor
Stephen J. Shimko, P.E., P.L.S. District Executive

SHOHOLA TOWNSHIP
BOARD OF SUPERVISORS

George J. Fluhr-Steve Dellert-Henry Prigge
159 Twin Lakes Road
Shohola PA 18458
(570) 559-7394
Fax (570) 559-7523

April 10, 2006

Robert T. Doble, P.E.
PennDOT District 4-0
Assistant District Engineer-Design
55 Keystone Industrial Park
Dunmore, PA 18512

Re: Pond Eddy Bridge

Dear Mr. Doble,

In your letter of 7/22/2005 you told us that you had asked your staff to set up a informational meeting regarding the progress of the plans for the Pond Eddy Bridge later that year.

This meeting still has not occurred. We are extremely concerned for the health, safety and welfare of the residents of Pond Eddy, Pike County, Pa due to the continuing deterioration of the existing Pond Eddy Bridge.

We therefore request the following;

1. Please arrange for a well advertised public meeting to update the public regarding the progress and plans for the design and rehab/replacement of the existing bridge,
2. Please arrange for a new engineering study of the bridge in order that the Supervisors may determine whether or not it will be safe to allow Township equipment and employees over the bridge during the winter 2006-2007 plowing season.

Thank you for your time,

The Board of Supervisors, Shohola Township

Cc: Edwin Abrahamsen, Solicitor
Pike County Road Task Force

SHOHOLA TOWNSHIP
BOARD OF SUPERVISORS

George J. Fluhr-Steve Dellert-Henry Prigge
159 Twin Lakes Road
Shohola PA 18458
(570) 559-7394
Fax (570) 559-7523

September 15, 2006

Richard H. Hogg, P.E.
Pa. Dept of Transportation
400 North Street, 8th floor
Harrisburg, Pa 17120

We request that the Department of Transportation initiate discussions with the Pennsylvania Department of Conservation and Natural Resources and the Pennsylvania Game Commission regarding the construction of a Road from Route 6 either through Milford Township or Westfall Township to Pond Eddy.

For over twenty years, the Supervisors of Shohola Township have been concerned about the condition of the Pond Eddy Bridge. Experience with the currently under construction Shohola-Barryville Bridge shows that construction of a bridge will take over ten years.

Inter-state controversy regarding the replacement of the Pond Eddy Bridge continues to cause delay as the current bridge continues to deteriorate. We fear potential disasters including bridge collapse, house fires, railroad wrecks, and more.

A road, possibly using much of century old road routes, should be under consideration. A road, in addition to serving the residents of Pond Eddy would serve the added purpose of opening the comparatively inaccessible extensive State Forest and State Gamelands. There are many who believe access to these lands should be improved and will eventually be improved whether or not a new bridge is constructed.

While the township continues to support the construction of a bridge, we also see the economic and recreational value of a road to Pond Eddy, and urge that serious discussions of this project be initiated.

Sincerely,

George J. Fluhr, Chairman BOS Shohola Township

Cc: Pike County Commissioners
Pike County Road Task Force
DCNR
Pa Game Commission
Robert T. Doble, P.E. Penndot District 4-0