

May 24, 2007

Patrick Carpenter
Delaware Department of Transportation
Highway Administration Building
P.O. Box 778
U.S. Route 113
Dover, Delaware 19903

Re: Archaeological Monitoring of the Replacement of
State Bridge NC-68 (CRS# N-12535)
Village of Rockland
New Castle County, Delaware

Mr. Carpenter:

Please accept this letter as a report on the archaeological monitoring conducted in conjunction with the replacement of State Bridge NC-68 (Rockland Road over Wilson Run) in the Village of Rockland, New Castle County, Delaware (Figure 1).

Project Background and Scope of Work

The replacement of Bridge NC-68 was the subject of a Memorandum of Agreement between the Federal Highway Administration (FHWA), Delaware Department of Transportation (DelDOT) and Delaware State Historic Preservation Office (DelSPHO) (Appendix C). The bridge was an eligible 1932 girder structure incorporating elements from a late 19th-century pony truss bridge located in the Rockland Historic District adjacent to an early mill site (Kirk Mills). DelDOT and FHWA proposed to replace the bridge with a new deck and reconstructed parapets and wingwalls. The project undertaking consisted of the replacement of Bridge NC-68 and the maintenance repair of Bridge NC-2 (Rockland Bridge), both on Rockland Road in Rockland, New Castle County, Delaware. Bridge NC-68 carries Rockland Road (N235) over Wilson Run, a tributary of the Brandywine Creek, and to the northeast, Bridge NC-2 carries the same road over the Brandywine Creek. The northeast wingwall of Bridge NC-68 abuts the southwest wingwall of Bridge NC-2. Both bridges were individually eligible for the National Register of Historic Places and are contributing resources of the Rockland Historic District (listed February 1, 1972). The Kirk Mills site is owned by Ronald Finch, formerly of the Delaware State Historic Preservation Office. There is a turbine house still standing on the west side of the bridge, and mill ruins on the east side. The bridge crosses a waterpower raceway and a gristmill and fulling mill were reportedly operating at this location by the early 18th century. Early waterpowered cotton spinning and paper milling also took place at sites in the district.

The following is a list of improvements to the bridges mentioned in the Documentation Support for a Finding of Adverse Effect and Memorandum of Agreement submitted pursuant to 36CFR Part 800.4(d)(2) and 36 CFR Part 800.5(a)(1) in accordance with 36 CFR Part 800.11(e) and 36 CFR Part 800.11(f): replacement of the superstructure, and rebuilding of the east (downstream) wingwalls; the rehabilitation of the extant upstream wingwalls and abutments including adding concrete to the backside exposed during construction to provide stability; the widening of the of the bridge deck to accommodate a new downstream sidewalk and the removal of the angular "bump out" protrusion that characterizes the existing bridge parapet. The rehabilitation of Bridge NC-2 consisted mostly of cosmetic patching to repair the spalling and delamination of the concrete girder encasements. Also on the deck, rehabilitation work consists of replacement of the strip seal at the centerline, and painting and waterproof sealing of the concrete bridge deck, including parapets.

The Area of Potential Effect (APE) was defined as the area within the Limit of Construction (LOC) and Right of Way (ROW)/Temporary Construction Easements (TCE) as indicated on the construction plans. Adjacent or contiguous properties beyond the LOC and TCE, including those within the Rockland Historic District were also considered to be within the APE.

Two main actions were called for in the Memorandum of Agreement:

1. The documentation of the bridge structure according to Delaware State Guidelines. This work was to be performed both prior to and during construction. This architectural recordation was undertaken by our subconsultants, Lichtenstein Consulting Engineers, under Hunter Research's direction. This documentation is included as Appendix D.
2. Archaeological monitoring of construction and documentation as appropriate to identify, evaluate and record any features relating to the Kirk Mills complex affected by the undertaking. This work was undertaken by Hunter Research staff. In the event that potentially significant resources were identified, there was provision for adjustments to the construction schedule to permit documentation to be completed.

Background research consisted of the review of National Register documentation on the District, and consultation with Ronald Finch and Ned Heite to identify additional research information. Additional research on the bridge structure itself was not undertaken because of the full treatment in the Delaware Bridges Survey. Lichtenstein documented the bridge prior to and during construction. The adequacy of existing pre-construction photography was assessed and additional photography was taken as required.

Archaeological Monitoring

Archaeological monitoring of the Bridge NC-68 demolition was carried out between April 26 and May 10, 2005 and focused on the demolition and removal of the 13-foot-high stone abutment and wingwalls on the south side of Wilson's Run (Figure 2). The abutment located on the north side of Wilson's Run was constructed on fill and was not monitored. The purpose of archaeological monitoring during construction was to document, evaluate and record any features affected by the undertaking relating to the 18th-century Kirk Mills complex ruins located on the east side of the bridge, and the late 19th-century turbine house still standing on the west side of the bridge. In the event that potentially significant resources were identified, there was a provision for adjustments to the construction schedule to permit documentation to be completed. Archaeological monitoring of the road improvements between Bridge NC-68 and Bridge NC-2 (Rockland Bridge) over the Brandywine Creek was also undertaken.

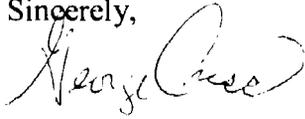
Archaeological monitoring focused primarily on an area approximately 35 feet by 50 feet encompassing the removal of the south bridge abutment and a section of the roadway leading to the bridge (Plate 1). Trackhoe excavation of the south bridge abutment revealed fill deposits to a depth of approximately 15 feet below the asphalt paving (Plate 2). Fill consisted of mixed sandy and silty clay loam with medium to large cobbles one to four feet in diameter. The south edge of the trackhoe excavation coincided with the northernmost stone foundation wall of the Kirk Mill, located immediately east of the excavation area. Machine excavation revealed the mill wall did not extend into the bridge abutment fill, indicating this section of mill wall was probably removed during construction of the 1930s bridge or possibly during earlier 19th-century construction episodes (Plate 3). Brick piers or footings and the remains of a probable concrete walkway were exposed along the eastern edge of the excavation approximately two to four feet below the top of the asphalt roadway (Plate 4). The brick piers appeared to support the concrete walkway and may relate to the metal pony truss bridge constructed *circa* 1890 or 20th-century improvements to the bridge. A section of the lower 13 feet of the turbine house foundation was also exposed during excavation (Plate 5). No distinct structural features were observed on the exposed east wall of the turbine foundation.

Conclusions and Recommendations

Archaeological monitoring of Bridge NC-68 demolition revealed no surviving foundations related to Kirk Mills within the excavation area. Excavation exposed brick piers and the remains of a probable concrete walkway along the eastern edge of the excavation. These features are probably related to late 19th- or 20th-century improvements to the bridge. The area encompassing the bridge abutment was excavated down to bedrock approximately 15 feet below the present road grade. Monitoring of road improvements between Bridge NC-68 and Bridge NC-2 revealed previously disturbed soils and extensive fill deposits. No significant cultural resources were encountered. Due to the proximity to Kirk Mill and other known and potential archaeological features related to historic milling activities located within the Rockland Historic District, any

further excavation or improvements adjacent to Bridge NC-68 and Bridge NC-2 should involve consultation with a qualified archaeologist and archaeological monitoring as they may extend into undisturbed areas.

Sincerely,

A handwritten signature in cursive script, appearing to read "George Cress".

George Cress
Principal Investigator

encl.

copy: Patrick Harshbarger, Lichtenstein Consulting Engineers, Inc.
Ian Burrow, Hunter Research, Inc.
file (04091)

Appendices

- A. Figures
- B. Plates
- C. Memorandum of Agreement
- D. Historic Documentation prepared by Lichtenstein Consulting Engineers, Inc.
- E. Resume