pennsylvania
DEPARTMENT OF TRANSPORTATION

Cultural Resources Submission

DATE: 10/23/2026

SUBJECT: Updated Historic Bridge Rehabilitation Analysis Report Memo

District: 8	
County: Cumberland	Municipality: North Newtown Township and West Pennsboro Township
State Route: 3007	Section: 019
Project Name: Big Spring Creek Bridge	
MPMS#: 90741	
ER#: 2023PR02941	
Concurrence Requested:	Archaeology: ☐
	Above Ground: ☐

TO: Andrea MacDonald, Deputy SHPO
Pennsylvania State Historic Preservation Office

FROM: Veronica Martin
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Environmental Policy and Development Section
Cultural Resources Unit

PennDOT, on behalf of the Federal Highway Administration (FHWA), updated the Historic Bridge Rehabilitation Analysis (HBRA) report for the bridge carrying SR 3007 (Big Spring Road) over Big Spring Creek. The purpose of the report is to assess whether the bridge can be rehabilitated to meet the project purpose and needs while maintaining its historic integrity per the Secretary of the Interior's Standards for Rehabilitation (SOI Standards). A copy of the updated report is attached to this memorandum, which summarizes the overall results of the report.

The bridge (BMS #21300701200000, Bridge Key #13931, SHPO Resource 1983RE01291/#2004RE11552) is a two-span, stone arch bridge constructed circa 1890 and measures thirty-six feet long. The bridge was determined not individually eligible for the National Register of Historic Places (National Register) in November 2001. However, the bridge is considered a contributing resource to the Big Spring Industrial and Agricultural Historic District (SHPO Resource #2009RE00255), which was determined eligible for the National Register in July 2009. The structure was rehabilitated in 2003. The bridge also underwent major repairs in 2017 after a bridge strike damaged 37 feet of the structure, pushing the spandrel wall outwards to the point of partially falling over. Additional details regarding the rehabilitation and other repairs to the bridge are available on page 2 of the report. Crash and bridge impact history is on page 6 and 7 with rehabilitation plans included in Appendix C.

The purpose and need statement for the Big Spring Creek Bridge project has changed since the previous HBRA Report. The updated purpose of the project is to provide a sustainable crossing over Big Spring Creek. The project now has one need: the inspected condition of the structure exhibits various physical defects. A full description of the project needs is available in the updated report on page 9.

Two primary rehabilitation alternatives were investigated for the project based on the updated purpose and need. These alternatives include Alternative 1 – Structure Backfill Replacement and Alternative 2 – Weephole Installation. Core Repairs are recommended for both alternatives. These repairs include the removal of shotcrete from the arch barrels, repointing of cracked or missing mortar, wingwall repairs, replacement of dislodged or missing stones, scour protection, and debris removal. A full description of the Core Repairs is on page 9 of the attached report.

Along with the Core Repairs, Alternative 1 would involve the replacement of the existing structure backfill and the installation of a spray-on waterproofing material between the new backfill and pavement. The recommended replacement fill consists of lightweight cement concrete. This option would require temporary arch support systems and more complex staging, resulting in a higher cost but with the benefit of reduced long-term maintenance. Full details regarding this option are outlined on pages 9 and 10. Alternative 2 is similar to the previous option except it would involve the installation of drainage weepholes into the existing structure backfill material following the Core Repairs. This approach minimizes construction cost; however, it does not address the lateral loading imposed by the existing fill. This could lead to more spandrel repairs in the future and more frequent maintenance to keep the weepholes clear and draining properly. Details for this alternative are on page 10.

PennDOT, on behalf of the FHWA, has determined that the SR 3007 bridge can be rehabilitated to meet the project's new purpose and need while also meeting the SOI Standards. Both rehabilitation alternatives effectively address the purpose and need while preserving its character-defining features of the bridge which contributes to the eligible Big Spring Industrial and Agricultural Historic District. PennDOT is recommending Alternative 1 as it provides a more comprehensive, long-term solution compared to Alternative 2.

PennDOT is not seeking concurrence on the updated Historic Bridge Rehabilitation Analysis report for the SR 3007 (Big Spring Road) over Big Spring Creek at this time. Rather, per Section 106 of the National Historic Preservation Act of 1966, PennDOT is inviting the PA SHPO and other consulting parties to an in-person Consulting Party meeting on Thursday, November 19, 2026, at 6 p.m. at the Newville Borough Meeting Room (103 S High St, Newville, PA 17241). A meeting invitation and additional information regarding the Consulting Party meeting has been posted to PATH along with this memorandum. PennDOT will present the results of the update HBRA report during the meeting and address any comments or questions.

If you have any questions, please contact Veronica Martin at 717-705-1482 or at vermartin@pa.gov.