

## **Executive Summary**

### **Rickert Road (Bridge 21) Over Morris Run Category C**

Taylor Wiseman & Taylor provided Design Services for replacing Rickert Road (Bridge 21) over Morris Run in Hilltown Township, PA. This structure, originally built in 1908, consisted of a single-span, steel-reinforced concrete arch, and was substandard for both roadway width and horizontal sight distance, with a 4-ton posted load limit. Deterioration worsened significantly during design, requiring closure of the bridge in 2011. A several-mile detour resulted, raising concerns about delays in emergency response times.

There was significant interest by consulting parties in the existing bridge's historic eligibility, and a rigorous feasibility study of alternatives was performed to determine if it could be rehabilitated. However, additional deck failures were imminent and maintenance repairs would fail to correct structural defects, resulting in continued decline in the bridge's load carrying capacity, and requiring it to remain closed. It was also determined that concrete removal during structural rehabilitation would destroy the arched deck girders – the historic elements of the bridge. Therefore, the bridge had to be replaced.

Design services included survey/base mapping, studies/alternatives analyses for Section 106 Consulting Parties compliance, cultural resource investigations, hydrology/hydraulic analysis, geotechnical engineering, structural design, right-of-way documents, roadway design, environmental permits, contract bid documents including schedule, and construction services with shop drawing review. The replacement bridge is a 60'-span, precast concrete single-arch with plain white concrete parapets of similar appearance, a result of the Memorandum of Agreement with the Consulting Parties and PA State Historic Preservation Office.