

JC-16 Little Mill Creek Road Bridge Replacement Over Little Mill Creek

Client: Jefferson County Commissioners, Brookville, PA

Year: 2017 Cost: \$250,000



Built in 1948, the JC-16 Bridge was a narrow substandard multi-beam steel stringer bridge with a timber deck. A replacement structure through the conventional PennDOT process would have cost \$750,000.

The Commissioners turned to its county bridge engineer, Gwin, Dobson & Foreman, to design a replacement structure that complied with all regulatory requirements, but at a much lower cost through the county Liquid Fuels program. GD&F achieved this lower cost by employing the following design elements:

- 25-foot single span, prefabricated aluminum box culvert structure. The arch structure was supported by new concrete spread footings.

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- Bridge location was adjusted to accommodate the natural stream alignment of Little Mill Creek. The vertical alignment was increased to allow more superstructure depth and waterway opening during flood conditions.
- A temporary crossing was constructed upstream for detoured traffic and construction access across an environmentally sensitive area.

GD&F did all preliminary and final design engineering work including a line and grade report; hydrology and hydraulics report; general permit application; foundation design; right-of-way plans; drawings; specifications; cost estimate and construction administration and observation.

The project was completed ahead of schedule and under budget.

All design and construction work was approved by PennDOT Engineering District 10-0, Indiana, PA.