

May 3, 2016

Some Things Are Worth The Effort 5th Street Bridge Improvements- Adair, Iowa



The bridge was built in 1923 and is actually quite attractive. But the 2012 inspection report didn't pull any punches:

- **Structural Evaluation:** Basically intolerable requiring high priority of corrective action
- **Deck Geometry:** Basically intolerable requiring high priority of replacement
- **Deck:** Serious condition

Technically, the structure is known as an open spandrel arch bridge and is rather rare. But given its condition, the City wanted to simply knock it down and replace it. With Federal funds involved, however, and the State Historic Preservation Office insisting that the bridge be preserved, WHKS engineers set out to find a way to protect the historic structure while making it safe and suitable for modern day use.



Using a 'bridge snooper,' an awkward-looking lift that lets inspectors have a close look at the underside of the structure, WHKS engineers 'sounded' the concrete, tapping at the concrete with hammers and listening for the telltale hollow sound that indicates hidden deterioration

of the substructure. Having identified the many concrete repairs needed, they laid out a plan for rehabilitation.

With an active line of the Iowa Interstate Railroad passing below, a great deal of coordination between the engineers, the bridge snooper contractor and the railroad ensured a safe working environment and minimal disruption.

As this is written, extensive repairs are ongoing to the substructure, the entire bridge deck is being replaced and the historic and elegant barrier rails are being replaced with a similar aesthetic rail while meeting new safety standards. The decorative columns at either end of the bridge have been preserved and the City of Adair will soon have a structurally sound, yet historically accurate and attractive bridge of which to be proud.

