"The River Knew the Bridge Didn't Belong Here"

A stack of twisted metal, shapeless and unrecognizable, was once a wrought iron bridge built by the Wrought Iron Bridge Co. of Canton, Ohio, in 1889. Most recently it had spanned the Shiawassee River in Chesaning, Michigan. Now it was ready to be scrapped and recycled, another craftsmen's unwritten record lost. Frank Hatfield, P.E. (Professor Emeritus, Civil and Environmental Engineering, Michigan State University) and I were in Chesaning to select bridge parts for the March 2010 LCC/NCPTT workshop to be used for demonstrations and research. Listed in Charles K. Hyde's book *Historic Highway Bridges of Michigan* as the Ditch Road Bridge (1889) from its previous location in Parshallburg, Michigan, it is described as "the oldest example of the Thacher truss in the United States … over the Shiawassee River in Saginaw County." In 1999, thanks to critical bridge funding and a transportation enhancement grant, the bridge was moved to the Village of Chesaning and restored for use as a pedestrian bridge. Now the bridge lay in ruins. I met Brian White from Chesaning Recycling to mark out bridge parts, and as Brian talked about the bridge it became apparent to me that this bridge meant more to Brian than the money he would make from it as scrap. "The River knew the bridge didn't belong here," he said, his comment revealing a deeper connection with the Parshallburg Bridge. In later conversation I learned that in 1902 Brian's grandfather Floyd White was born in a house next to the bridge at its original location on Ditch Road. Brian grew up near the bridge, often fishing from it, and he was part of an early community effort to save the bridge at its original location.

See Craftsman's Newsletters on the Parshallburg Bridge at:
http://www.historicbridgerestoration.com/newsletters_events.htm

The Parshallburg Bridge restored for pedestrian use in Chesaning, Michigan, as it looked on July 2, 2006

Shiawassee River flooding and heavy chunks of ice begin destroying the Parshallburg Bridge, January 2, 2009

Remnants of the Parshallburg Bridge. The bridge was removed from the Shiawassee River August 17, 2009, at a total loss. Frank Hatfield and Vern Mesler select bridge parts for research.

I'd like to thank Tom M. Meder, Coordinator of the Shiawassee River Restoration Program in Chesaning, Michigan, and Joe Sedlar, Jr., Mayor of Chesaning, in helping to secure historic wrought iron parts from the Parshallburg Bridge.

Videotaping At Lansing Community College Welding Lab

After weeks of preparations for videotaping restoration processes for the informational DVDs that are part of our National Center for Preservation Technology and Training (NCPTT) grant, our first session was set up to help Fred Stephens and Andra Scott Price from Lansing Community College's Media Department with equipment and lighting requirements.
Over several days of videotaping, Fred and Andra worked to ensure that each segment was professionally done, and when I made a point that a particular process was important they worked to make sure each one was well documented. The videotaping is done and now the video scripting needs to be completed, a task as formidable as the videotaping.

Bill Eggleston and Fred Stephens preparing to tape a restoration procedure on an 1890's historic wrought iron bridge member

Andra Scott Price and Fred Stephens view video tape.

Preparing to videotape removing rivets with the oxyacetylene process

See more photos on: http://www.historicbridgerestoration.com/newsletters_events.htm

I would like to express my thanks to the following people for their work in setting up and participating in the videotaping: Roy Bailiff, Bill Eggleston, Shane Fagan, Brian Hanford, Frank Hatfield, Nan Jackson, Roger Morrison, Kathy Shell, David Snider, and Tom Walsh.

In addition, the following companies and organizations provided valuable assistance. Videotaping would have been difficult without the help of those listed below:

Douglas Steel http://www.douglassteel.com/

East Jordon Iron Works: http://www.ejiw.com/

Lansing Community College Trucking Driver Training: http://www.lcc.edu/tet/truck_driver_training/

Calhoun County Road Commission: http://www.calhouncrc.net/

The Lincoln Electric Company: http://www.lincolnelectric.com/

Math students visit Lansing Community College Welding Lab

Math students from Lansing Community College visited the LCC welding lab to view rivet heating and to record data for a mathematical model of the temperature of the rivets in the forge. LCC professor Nan Jackson incorporated the project into her teaching of a summer course *Introduction to Differential Equations*.

Nan Jackson conducts a portion of her math class in the welding lab at the forge.

Students enrolled in MATH 254, Introduction to Differential Equations, watch the forge and record its temperature.

Temperature gauge is attached to the forge and a clock is handy for recording temperatures at one-minute intervals after the rivets are placed inside.

Rivet Training at the Hays Street Bridge in San Antonio Texas

On August 3rd the news of the day in San Antonio, Texas, was the temperature: 102 degrees Fahrenheit. It was the 36th day straight of triple digit temperatures. The only shade on the jobsite was the morning shadow from the worksite office and tool shed. I was in San Antonio to train a crew to hot rivet for Jay-Reese Contractors http://www.jayreese.net/ , the company contracted to do the rehabilitation on the 1881/1910 Hays Street Bridge for a bicycle and pedestrian crossing.

Hays Street Bridge with the 130ft Pratt Truss Bridge in the foreground and the Whipple truss in the background.

Rivet instructions:
Vern Mesler with Jay-Reese workers Jacob Loza, and Guillermo Gonzalez

Patrick Sparks of Sparks Engineering, Inc. reviews restoration work with Andrew Roberts, Site Superintendent for Jay Reese Contractors

The Hays Street Bridge consists of two wrought iron truss bridges, one a Phoenix Whipple truss 225 foot span and the other a Pratt truss 130 foot. The Hays Street Bridge was brought into San Antonio in 1910 to span railroad tracks at Hays Street, and it was closed to traffic in 1982. Patrick Sparks of Sparks Engineering, Inc. www.sparksengineering.com is the design consultant for the project; he specified that rivets were to be replaced with rivets, not with bolts or pretend rivets. The training consisted of heating rivets, driving rivets with a rivet hammer, Holder-On procedures, and pack rust removal. Training was also conducted at the jobsite in the use of an oxy-acetylene torch to remove rivets with a scarfing and cutting tip.

See more pictures of Hays Street Bridge and rivet training on:
http://www.historicbridgerestoration.com/newsletters_events.htm

Township Road (TR) 241 Bridge

The Hancock Park District Headquarters is located on the Old Mill Stream Scenic Byway in Findlay, Ohio. On Wednesday July 18, 2007, my wife and I were there to meet Tim Brugeman, Director of the Hancock Park District, and Al Holtzscher, President of the Hancock Parks Foundation, to discuss the restoration of a historic bridge. We were early and the receptionist took us to the coffee room for a place to sit while we waited. Walking through the office I noticed a beautifully crafted model of a wooden bridge and I began to wonder whether these folks knew I don't restore wooden bridges. I was ready to tell the receptionist that I think there's been a misunderstanding when Al Holtzscher came in and cleared everything up. The wooden model was of a proposed covered bridge for the main entrance into the Riverbend Recreation Area, to replace the wrought iron bridge now on TR 241 across the Blanchard River. When we later visited the site, I found a historic metal truss bridge that was in great shape, with some sections rehabbed to accommodate higher load limits. These rehabbed sections were plates welded to the original riveted connections on the floor beams, connections that can be restored to their original condition. My wife and I made several trips to TR 241 and on November 9, 2008, I presented at the Hancock Historical Museum and Hancock Parks Foundation in Findlay on the history and restoration of the Township Road 241 Bridge. The presentation was part of a report I prepared for Tim Brugeman for the placement of the TR 241 Bridge in the Hancock County Riverbend Park after its removal from the Blanchard River to make way for the construction of the covered wooden bridge. During the week of August 24, 2009, the TR 241 Bridge was removed from its abutments by Dingey Movers, Inc. out of Zanesville, Ohio. New abutments are being prepared for the bridge placement in nearby Riverbend Park.
See more pictures of the TR 241 Bridge: http://www.historicbridgerestoration.com/newsletters_events.htm

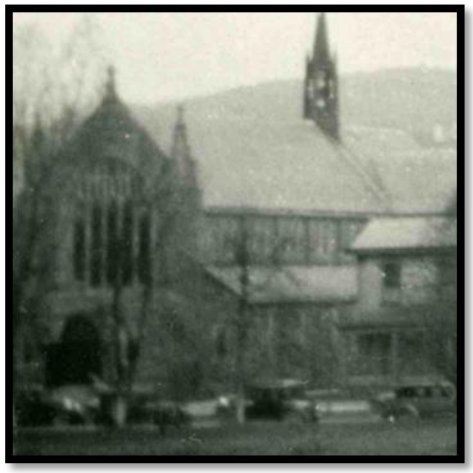
TR 241 Bridge July 18, 2007

Bart Dingey from Dingey Movers, Inc. http://www.dingeymovers.com/ directs the removal of the TR 241 Bridge from the Blanchard River on August 26, 2009.

The TR 241 Bridge in position to move to the Riverbend Park nearby.

Mystery Bridge Found

Matthew Bunner from HDR One Company in Pittsburgh, Pennsylvania, supplied the information for the bridge pictured in my 35 cent photograph. The bridge in the photograph, built in 1874, spans the Allegheny River in Kittanning, Pennsylvania, about forty miles north of Pittsburgh, believed to be the third bridge built at this crossing. The fourth bridge at the site, currently still in use, was built in the early 1930's. For more information and photos of the bridge see: http://www.historicbridges.org/pennsylvania/kittanning/index.htm



Butler Road Bridge over the Allegheny River in Kittanning, Pennsylvania

St. Paul's Episcopal Church in Kittanning, Pennsylvania

The Armstrong County Courthouse in Kittanning, Pennsylvania

LCC/NCPTT Workshop
Preservation of Historic Iron and Steel Bridges and Other Historic Structures

Below is a tentative schedule of activities for the March 2010 Workshop. Visit www.lcc.edu/tet/welding/ ***and*** ***www.HistoricBridgeRestoration.com*** ***for updated information, including registration forms.***

First Day, Monday March 8	*Second Day, Tuesday March 9*	*Third Day, Wednesday March 10*
Presentations MDOT "Michigan Historic Bridge Inventory" Dr. Frank Hatfield "Engineering and Historic Metal Truss Bridges" David A. Simmons ""The Continuous Clatter": Practical Field Riveting" Dr. James Cooper "Historic Bridge Preservation" Luncheon Speaker William Vermes "Design and Performance of Riveted Bridge Connections" Dr. Dario Gasparini "Wrought Iron and Historic Steel" Lincoln Electric Company "Arc Welding Wrought Iron and Historic Steel"	Shop lectures followed by demonstrations on each of the following processes and their applications for restoration of historic metals: Heating steel rivets Rivet hammer safety Driving rivets using field riveting equipment Rivet hammer safety for field riveting Pack rust removal and rivet removal Heat straightening wrought and steel	Shop lectures followed by demonstrations on each of the following processes and their applications for restoration of historic metals: OFW (Oxygen Fuel Welding and Brazing) SMAW (Shielded Metal Arc Welding) ACA (Air Carbon Arc Gouging) GMAW (Gas Metal Arc Welding) FCAW (Flux Core Arc Welding)

Registration forms are now on Lansing Community College website www.lcc.edu/tet/welding/ for the March 2010 workshop. The web page provides the workshop schedule, registration form and scholarship application.

Register before February 10, 2010 for the discounted price of $250.00 for all 3 days! Last day to register is February 24, 2010. Only thirty five positions are open for the second and third days of the workshop.

Registration fee for just the first day of lectures is $125.00, with eighty five seats available.

Arrangements have been made for lodging for workshop participants at Quality Suites, Lansing. When making your reservations, please mention the group name: LCC Grant Workshop.

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