

“Like taking a picture of a roof”

In May of 2008 Nathan Holth and I had just finished doing some photographic documentation of the State Street Bridge in Bridgeport, Michigan, and decided to stop at the Bridgeport library with the outside chance they would have some old pictures of the State Street Bridge. After we described to the librarian what we were looking for, she made a quick dash to the back of the library and came back with a newsprint booklet and turned to a picture of the bridge, a grainy black and white picture taken in April 1998. “Well, that’s not actually what I had in mind,” I told her and launched into my often repeated tale on how there were few pictures taken of historic metal truss bridges, something I discovered from years of rummaging through piles of old pictures and postcards in antique stores and local transportation offices. Our ancestors took few pictures of their local iron truss bridge. They took pictures of their horse, barn, house, the front porch, and even the outhouse, but rarely did they point a camera toward the local iron truss bridge. When I finished, the librarian, with a slightly mischievous smile, said “It’s like taking a picture of a roof.” Yes! That’s it, the attitude many of our forefathers probably had about their local bridge. It appears our forefathers simply looked at the bridge as a tool to get goods and services across the river and when the bridge was worn out, as with any tool, replaced it with a better tool. Today it is difficult to convince many people of the value in saving a historic metal truss bridge or to convince them there is something beyond the truss design and the engineering heritage of a bridge that’s worth saving. But after years of neglect and closed to vehicular traffic, the State Street Bridge will undergo a complete restoration with the aim of saving as much of the original bridge members as possible and replicating those that have deteriorated beyond repair. The restoration process began with an email from Tanya M. Moore, Landscape Architect/Planner of Spicer Group in Saginaw Michigan.

Hi Vern,

We're moving forward---MDOT has scheduled the pre-construction meeting for the historic bridge on October 15, 2009, at 10:00am, at the MDOT-Bay City TSC office.....



Nathan Holth, webmaster of *Historic Bridges of Michigan and Elsewhere*; Richard Dunnill, former manager of Bridgeport Charter Township; and Kevin Trombley, Designer for Spicer Group



Robert R Eggers, Senior Planner/Principal, and Tanya M. Moore, Landscape Architect/Planner, both of Spicer Group in Saginaw, Michigan, reviewing drawings for the State Street Bridge restoration project in Bridgeport, Michigan



Mark A. Latsch, P.E., Sr. Project Manager at Spicer Group and Engineer of record for the Bridgeport Bridge, and Vern Mesler, VJM Metal Craftsman LLC, inspecting for restoration a historic metal truss bridge in Mount Pleasant, Michigan

The meeting started with the familiar MDOT attendance sign-in sheet, *Control Section, Job Number, Date, Time* and five little square boxes for your *Name, Organization*..... Attending the Bay City MDOT meeting were Tanya Moore and Marci Plahutnik from Spicer Group; Kim Zimmer, MDOT Project Manager along with other Bay City MDOT personnel; and Heather Hendges, Assistant Project Manager of Davis Construction Co., Lansing, Michigan.

Davis Construction received the contract from MDOT for the State Street Bridge restoration project and will begin work moving the two-span bridge from its abutments this December, 2009. This is an exciting restoration project, and the Craftsman's Newsletter will be reporting on the progress of the restoration work and introducing its readers to the people working on the restoration of this historic craftsman's record. I had the pleasure of working with the team at Spicer Group in Saginaw, Michigan, led by Tanya Moore, in developing restoration procedures that protect the craftsman's record. I believe that the successful completion of the State Street Bridge project has the potential to be used as a standard for the restoration of historic metal truss bridges in Michigan and other states.

For pictures of the State Street Bridge in Bridgeport, Michigan, see Nathan Holth's website *Historic Bridges of Michigan and Elsewhere* at <http://www.historicbridges.org/truss/state/index.htm>

“Never Work With a Dull Tool”

“Never work with a dull tool.” These words, spoken by a ninety one year old craftsman during a conversation I had with him on the McDowell Bridge over the Skunk River near Grinnell, Iowa, are a great metaphor for all of life's adventures, especially applicable to the restoration of historic metal truss bridges. It was Sunday morning November 8th and I, along with Nathan Holth, webmaster of *Historic Bridges of Michigan and Elsewhere*, was at the McDowell Bridge at the request of Julie Bowers, Chairperson of the newly organized Friends of the Skunk River Bridge. My first contact with Ms. Bowers was by an email she had sent me through my website requesting help for a bridge that had suffered damage from ice and debris. She expressed her fears that this rare metal truss bridge was about to be demolished because it was slightly bent, rusted, and missing a few rivets, certainly not a death sentence by my way of thinking. I immediately called Ms. Bowers and during our conversation agreed to attend (and make a presentation at) the Friends of the Skunk River Bridge first ever fundraising event scheduled for the coming weekend. A quick check on Google maps revealed a seven and a half hour route to Grinnell, not exactly a Sunday afternoon drive in the country, an indication of Ms. Bowers' persuasive talents, an important tool in saving a historic bridge that is slightly bent, rusted, with a few rivets missing. (Ms Bowers's promise of all the Stone Soup I could eat also piqued my interest.) As it turned out, the round trip went well, with only one change made by Nathan Holth to the route my GPS had mapped out: he didn't like the bridge my GPS was taking us over the Mississippi River. It was too boring, he said, and directed me to a more historic bridge with a promise that no time would be lost by doing so.



Required hardware for stone soup: three one inch steel round stock secured at the top with a handcrafted steel ring, a chain attached to it with a large cast iron pot.



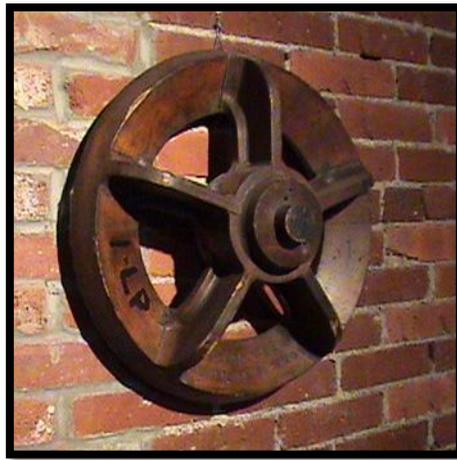
Larry Bryan adds a variety of vegetables, meat and liquid, stirring with a wood pad handcrafted by Steve Hardeman



A bowl of stone soup, a hardy meal for a craftsman



Cast iron connection member on the McDowell Bridge (*background has been changed to black and white in order to highlight the connection detail*)



Wood pattern displayed at the Heritage Discovery Center in Johnstown PA (*photo by Nan Jackson during our trip to Johnstown in 2007*)



Pattern labeled "VALVE SEAT BLAST FUR," an original wood pattern purchased at the Johnstown Area Heritage Association store.

Nathan and I began exploring every section of this fascinating bridge, probing along the top, sides, and underneath the bridge. Photographing every cast and wrought iron member to uncover the craftsmen's marks that reveal their fabrication methods in the construction of this bowstring arch truss built by King Iron Bridge and Manufacturing Company in 1883. I found the cast iron members of special interest because of their complex shapes. In the foundry these cast iron connection members would begin with a wood pattern crafted by a pattern maker with the skills of a fine cabinet maker. The skill of the pattern maker can be seen in the wood pattern displayed at the Heritage Discovery Center in Johnstown and salvaged from the pattern storage building in the historic Cambria Iron Works. The Heritage Discovery Center has an exhibit called "The Pattern Maker's Art" that showcases the museum's extensive collection of foundry patterns. Visit the Heritage Discovery Center website for more information. <http://www.jaha.org/DiscoveryCenter/virtualtour.html>



Entrance to the McDowell Bridge site



"Never work with a dull tool" Richard Bowers, father of Julie Bowers



Rose Rohr, Chair of the Jones County Historic Preservation Commission; Vern Mesler, VJM Metal Craftsman LLC; Julie Bowers, Chair of the Friends of the Skunk River Bridge

For more information about the McDowell Bridge, check out the website www.bowstringbridge.intuitwebsites.com and for current updates on the McDowell Bridge visit Julie Bowers blog <http://srbowstring.blogspot.com/>

Pictures of the McDowell Bridge can be seen on Nathan Holth's website, <http://www.historicbridges.org/iowa/mcdowell/index.php>

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.

| <i>First Day, Monday March 8</i> | <i>Second Day, Tuesday March 9</i> | <i>Third Day, Wednesday March 10</i> |
|--|---|--|
| 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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