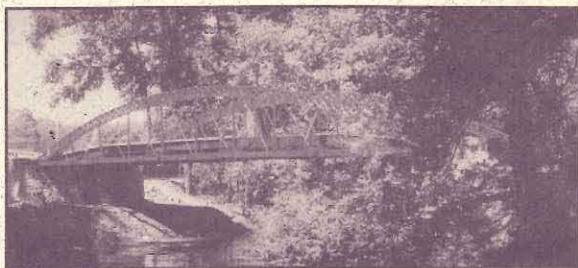


Rededication of
The 1873 Paint Creek Iron Bridge



Sunday, October 10, 1999 at 4:00 P.M.
Canal Park Annex
Delphi, Indiana

2,000 grant was secured from the IDNR's Hometown
na funds and was matched by volunteer labor and
donations from Robert and Carolyn Schmidt,
and McCain, and several other individuals. The City
lphi and its Park Department are also to be praised
eir team efforts.



Carroll County Wabash & Erie Canal, Inc.
765-564-6572
www.carlnet.org/canal
1030 N. Washington Street
Delphi, IN 46923

Sponsored by
Carroll County Wabash & Erie Canal, Inc.
Carroll County Historic Bridge Coalition

Welcome
Sam Deiwert

We Can Do It!
Dan McCain, Canal Board President

One Piece at a Time
Ross Brown, Blacksmith

A Place to Cross the Canal
Ed Gruber, Co-chairman Delphi Historic Trails

The Bridge has Left Its Mark
Paul Brandenburg, Carroll County Historic Bridge Coalition

Honor Roll of Supporters
Volunteers
Businesses / Organizations

Together We Sing
Camden Fifth Graders
"The Bridge that Got Away" by Susan Yoder

A Student's View
Michael Carbaugh, Camden Fifth Grader

Grand opening
Hands Across the Bridge
Hillcrest Fifth Graders
Driving the Golden Spike

Hip Hip Hooray
Refreshments by Psi Iota Xi Sorority

Paint Creek Iron Bridge
Project Volunteers

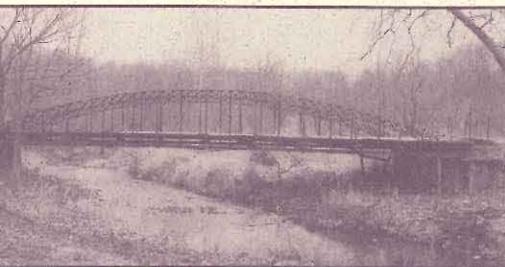
Sally Bancroft
Daniel Boone
Dick Bradshaw
Paul Brandenburg
Bill Brown
Ross Brown, Blacksmith
Camden / Delphi 4th graders
Dan Cassens,
Wood Technology
Jack Cohee
Bob Conner
Jim Cooper,
Technical Coordinator
Sherri Cripe
Vernon Cripe
Bernie and Beth Dahl
Wallace Dolan
Bill & Pat Draper
John Dugan
Ron Dust
Robert Deel
Steve Ellicott
Tom Flora
Charles Gerard, Historian
Rollin and Wylan Graybill
Mike Griffey
Ed Gruber
Wayne Floy
Dave Hanna
John Hampton
Charles Harris
Rick Harris & Pack #9
Indy Cub Scouts
Nancy Hartman
Wilmer Hodges,
Bridge Donor
Paul Howell
Don Huff
Dan Isley
Wilbur Jones
Ken Kavanugh
Donnie Kelly
Lyn Kirschner
Jim Klatch
Fran Lacy
Terry Lacy
Ben & Susan Lipscomb
Larry Lucas
Tom Martin,
Purdue Engineer
Charlotte May
Barb McCain
Dan McCain,
Project Coordinator
Marshall McCammack
George Mears
Mary Mears
Dale Miner
Don Mitchell
Greg Mueller
Bill Mullin
Lewis Mullin
Wade Mullin

Joe Needham
Jim Nowacki
George Obear
Roy Patrick
Fred Petersen
Psi Iota Xi Sorority,
lunch workers
Bob Quinn
Don Robbins
Ray Romein
Jeromy Rush
Clay Sledd
Mark and Janette Sloan
Donnie Smith
Bruce Stokdyk
Lisa Towery
Shannon Toole
Gerry Underhill
Tom VanSickle
Dick Walters
Ron Walters
Mary Sue Wasser
Richard "Bud" Weidner,
Engineer
Steve Weintraut,
Engineer
John Williams
Don Willy
Jack Wilson
Rex Wilson
David Wise
Jack Wroten
Rick Yoder
Susan Yoder
Frank Zakrajsek
John and Jed Zborek

Industrial / Business
and Organization
Contributors

The Andersons
Big R Farm Store
Brim Concrete
Canal Society of Indiana
City of Delphi & Parks
Department
Cohee Excavation
Delphi Body Works
Delphi Hardware & Paint
Hydro Conduit Corp.
McCain Farm
Pearsons of Delphi
Peters-Revington
Furniture
Pike Lumber Company
Psi Iota Xi Sorority
Q Graphics
Robert and Carolyn
Schmidt
Sherwin-Williams Paint
Western Tar Products

Most Modern Iron Span for Paint Creek



Paint Creek Bridge in its original location east of Camden, Indiana. The bridge was donated by Mr. and Mrs. Wilmer Hodges to the Carroll County Canal Association in 1997.

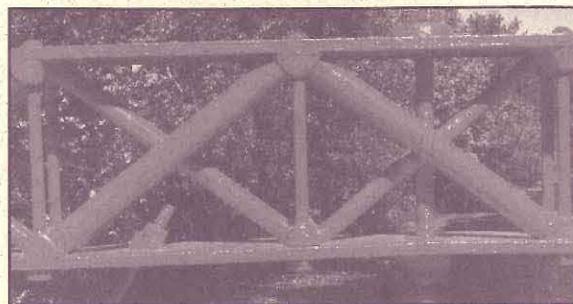
For their spring session in 1873, the Carroll County commissioners faced a stack of petitions from citizens for the building of new bridges even as the officials questioned their established construction practices. The commissioners had regularly contracted with Alpheus Wheelock of Auburn, Indiana, for most of the county's longer spans. Wheelock, who worked on the Wabash and Erie canal corridor in the northern part of the state with considerable success, started as a partner in the Smith Bridge Company of Toledo, Ohio, which prefabricated timber trusses. He later organized the Wheelock Bridge Company to erect spans on his own or of others' manufacture. Unfortunately for Wheelock, troubles with the recently-built Adams Mill dam and bridge unsettled Carroll county routines.

Wheelock also faced increasingly stiff competition. The rise of the railroad westward with and after the Civil War undercut the dominance of the Wabash and Erie canal across northern Indiana and challenged the companies which had built market networks dependent on the canal. Part product and part instigator of the growing iron industry, the iron horse carried a cadre of agents across Indiana from a number of new Ohio bridge-building companies located beyond the easy reach of the canal system. Many of the new companies offered competitively-priced, iron-truss spans.

With public demand for new bridges high and old building and selling practices shifting, the board of commissioners decided to turn the county's contracting into a two-step process—first, determining bridge design, and then selecting builders. In early September 1873, the board sought “plans and specifications” of “either of wood or iron” for bridges at three locations, including one between Camden and Leonard's Mill across Paint Creek. For a fourth location, it prescribed iron. Having received on 20 October “plans and specifications for the several bridges proposed to be erected in this county, and hearing the merits of each plan and kind of bridge discussed by builders and contractors,” the board adjourned for some private conversation before making its judgment public. In a few days, the board formally ruled that the four structures plus a fifth included in the September advertisement—one over the Wabash and Erie canal at Washington Street, Delphi—would be constructed of iron using Joseph Davenport's patented “Wrought Iron, Howe Truss Arch” design.

In December, Davenport's Massillon Iron Bridge Company of Massillon, Ohio, won the contracts to fabricate the iron work for all five structures. In the specific case of the Paint Creek Bridge, the firm proposed a 70.66-foot superstructure with an 18-foot roadway priced at \$18.55 per lineal foot or at \$1,310.86 in total. Henry Wolf of Logansport bid successfully to build the stone abutments.

Joseph Davenport shared a lot with others who invented metal trusses or bridge devices in the middle half of the nineteenth century. His firms built timber as well as iron trusses in the 1870s and 1880s. The Massillon Bridge Company made half-wooden and half-wrought-iron covered trusses patterned after William Howe's 1840 patent and sold a number of them in Indiana. For the web between his top and bottom timber chords, Howe prescribed timber X-braces in compression bordered by iron vertical rods in tension. Davenport also copied the Howe pattern into his own all-iron patented trusses. In the 1850s, he invented a “Howe Truss Straight” design or lattice girder in which iron X-braces between vertical posts webbed two flat pieces “of common boiler-plate iron.”



For longer spans than his straight design could efficiently carry, Davenport experimented with the bowstring truss, the arc of whose top chord (or “bow”) was held by tying its ends in place through a lower chord (or “string”). He used the Howe pattern of webbing between the two plates of his arched top chord and patented the resulting model in 1867. Tinkering led Davenport to a second patent in 1868. Thereafter he bypassed the patent system and simply imbedded improvements in the designs he successfully enclosed with bids offered for specific sites in Carroll and other counties.

Joseph Davenport did not limit his inventive genius to bridge trusses. He and his brother built the first American-made railroad passenger cars for the Boston and Lowell Railroad. Other early firsts included designing a snowplow for a B&L locomotive, converting the plow into a cow-catcher, and enclosing the work space in the locomotive as a cab. Later, he invented a passenger-carrying steam car and built two prototypes of his street-car or trolley.

Relocation and Restoration

The relocated Paint Creek Bridge site—an abandoned railroad spur—is an especially fitting one, being only a few hundred feet away from the Washington Street

crossing of the Wabash and Erie canal where Davenport erected a sister bowstring span in 1874. Some of the stone used to face the new abutments came from the substructure which Henry Wolf had erected at the original location. While the original timbers on the deck disintegrated long ago, the kinds of wood, the size of timbers, and the spacing of the replacement decking follow the original 1874 specifications. At least ninety percent of the wrought and cast iron in the trusses and floor beams of the restored structure remains original. Only the railings—an accommodation to the safety of pedestrians required in contemporary America—are a modern addition. The paint, too, is modern, although its color mirrors that which was widely used on iron highway spans when Carroll County still practiced bridge maintenance.

Significance

The state-of-the-art trusses erected over Paint Creek in 1874 and re-erected over the Wabash and Erie canal in 1999 underscore who we are by reminding us of who we have been. Within the context of the county, the bridge was one of five which reflected an important shift from timber to iron-truss bridges. As the only example of that pivotal moment to survive, it carries the significance of the whole. At the state level, the bridge is the only Davenport patented span to survive essentially intact within Indiana. In short, the Paint Creek Bridge was significant to Carroll County when constructed, and it has grown to statewide importance and beyond in the century since its building: once a most modern iron span for Paint Creek; now a too rare reminder of our nineteenth-century industrial inventiveness.

*James L. Cooper, PhD
Bridge Historian*