

Eastern New York Chapter
of the
**ASSOCIATION FOR
BRIDGE CONSTRUCTION AND DESIGN**



NEWSLETTER

December 2007

VOLUME 14

NO. 1

President's Message

Let me begin my first president's message by stating that I am honored to be the president of this fine organization. The Eastern NY Chapter of ABCD is indeed a fine organization, reflecting the high caliber, diverse knowledge, dedication and professionalism of its members. It is this member resource that has, and will continue to define and build ABCD as a leading organization for area bridge interests.

To assist the Officers and Board in leading this Chapter of ABCD, we have devised and distributed a brief on-line survey. This should have been received by each member in mid-summer. Your participation in completing and returning this survey will help us keep what is working well, and improve on what could be working better. Our objective is to assure that ABCD activities reflect interests and needs of our members. I will be reporting the results of the survey, and any actions taken as a result of survey responses, throughout the year. A special note of thanks to Board Members Bob Brunner and Dominick Izzo for preparing this survey for our members.

Speaking of board members, I wish to welcome newly elected board members Eric Leclair and Craig Valente to the Board of Directors. Both Eric and Craig have hit the ground running. Eric has agreed to be the Board liaison to the Education & Program Committee; working with new committee chairman Matt Yerkey. Craig has offered to assist in preparing articles for the chapter newsletter. Please contact Eric or Craig if you have any suggestions for programs, presentations or information that you believe may be of interest to our general membership.

The 'BIG' bridge news over the summer was the collapse of a major structure in Minnesota. The sudden bridge failure, and tragic loss of life, was front page news for a brief period of time. It's unfortunate that most people, including our elected leaders, don't see the need to focus on infrastructure issues until such a tragedy happens.

I am hopeful that some good will come from this tragedy. Certainly we will learn from the cause of this failure, once the investigations are completed. This will tell our inspection teams what to look for in similar structures; like the Patroon Island Bridge. Hopefully, funding will be available to address the numerous structures that require some type of repair. (Better yet, new funding that does not take from other critical infrastructure needs.) And perhaps this tragedy will add fuel to the often quieted discussion surrounding the critical role that all infrastructure has in our safety, security, quality of life and economic well being.

The stated purposes of this organization contain the words educate, inform, improve, assist and encourage its membership, officials and the general public regarding bridge issues and technologies. If we all contribute a little bit of our thoughts, our time and our expertise, we can move toward fulfilling the objectives that are embodied in our purpose statements. I look forward to working with the organizations officers, Board and all of its members to work toward meeting those objectives.

John Brizzell, President

Eastern New York Chapter of the Association for Bridge Construction and Design, Inc. 2006 Bridge Award Program

Entrant: Ryan-Biggs Associates, P.C.

Hadley “Bow” Bridge over the Sacandaga River, Saratoga County, NY

Project Description

The Hadley “Bow” Bridge is a stunning example of late-nineteenth century bridge building and is the only remaining “half-deck” lenticular truss bridge. Constructed in 1885 atop foundations from 1813, it is listed on the National Register of Historic Places. It is one of the few examples remaining of iron bridges constructed during the transitional period when the preferred material for truss bridge construction went from primarily timber to steel.

The one lane-bridge was closed to vehicular traffic in 1983 because of severe deterioration. Furthermore, the bridge deck was removed in 2000 when it was no longer deemed safe for pedestrian use. In 2001, at the request of Saratoga County, Ryan-Biggs Associates, P.C., prepared a *Historic Structures Report*. It was determined that the existing bridge could not be strengthened to carry legal loads. Using this report, the County received a Transportation Enhancement Grant from the Federal Highway Administration. The work involved stabilization and rehabilitation of the existing bridge as well as construction of an independent structural system to support legal traffic loads.

With County, New York State Historic Preservation Office, and Department of Environmental Protection approval, the lenticular trusses were repaired, preserved, and incorporated into a new support system. Using weathering steel girders and a composite deck, the trusses were blended in such a way that the original floor beam, stringer, and deck depth was maintained, leaving the airy profile of the original bridge.

This federally-funded, locally-administered project was awarded to D.A. Collins Construction and work began in July 2005. The first construction season consisted of the painstaking restoration of the existing truss components. Deteriorated lacing bars of the vertical built-up members were removed and replaced and the existing built-up top chord, which had been savaged by snowplows over the years, was straightened locally. Lifting operations enabled the pack-rusted bearings to be replaced. The stone-masonry substructures were partially removed and rebuilt with cast-in-place concrete to accept both the existing Bow Bridge bearings as well as the new. The foundation concrete was cast using “cobbled” formliners and both integral colorant and staining to match the

existing stone masonry.

In 2006, the second construction season began by installing steel girders. The 13.4 meter-long approach span consisted of 610 mm-deep girders, while the 41.2 meter main span consisted of 975 mm-deep plate girders. The fascia girders were outfitted with special stainless steel and polytetrafloraethylene slip connections to brace the existing trusses while permitting both the girders and existing trusses to deflect both vertically and laterally independently of one another. To reduce weight, the use of a non-standard deck thickness was permitted by NYSDOT but was reinforced with stainless steel reinforcing. The Class HP concrete deck was cast and cured. The structure was tented, and the existing trusses were blasted, cleaned, and painted.

The bridge was opened on August 25, 2006, and reconnected the Town of Hadley with unposted vehicular traffic while still maintaining its striking architectural beauty within the magnificent Sacandaga River Valley. The Hadley “Bow” Bridge is a prime example of how late-nineteenth century bridge building can continue to exist with the assistance of twenty-first century ingenuity.



The completed bridge, August 2006

Entrant: Ryan-Biggs Associates, P.C.

Project: Hadley “Bow” Bridge over the Sacandaga River, Saratoga County, NY

Key Consultants

Owner: Saratoga County Department of Public Works
Designer/EIC: Ryan-Biggs Associates, P.C. General Contractor: DA Collins Construction Co., Inc.
Concrete Supplier: Palette Stone Corp.
Rebar Supplier: Barker Steel Company, Inc. Structural Steel Supplier: Casco Bay Steel Structures, Inc.
Formliners, Stain, Joint Material Supplier: A.H. Harris & Sons, Inc.
Guide Rail Supplier: Elderlee, Inc.

Ski Bowl Road Bridge Replacement

- Location: Village of Hunter, NY
- Owner: Greene County Highway Department
- Designer: Erdman, Anthony and Associates, Inc.
- Contractor: A. Colarusso & Son, Inc.
- Construction Cost: \$2 million
- Project completion: 2006

Located within the Village of Hunter, Ski Bowl Road provides access to Hunter Mountain from New York State Route 23A. Prior to the start of this project, traffic on Ski Bowl Road crossed the Schoharie Creek via two separate structures. Traffic headed south toward Hunter Mountain crossed an historic, gas-welded, steel thru-truss, which was built in 1935. Deterioration of the steel truss, which was load posted at 15 tons, led to the need for this project. Northbound traffic was carried by a separate adjacent structure, constructed from prestressed concrete box-beam units.

The Ski Bowl Road project presented a unique opportunity to provide a context-sensitive design solution. The context-sensitive design approach centered around maintaining the existing historic truss. The most viable rehabilitation alternative for the truss was to utilize the structure for pedestrian use. In addition to cleaning and painting the truss, stamped synthetic asphalt pavement was added along with wrought-iron style railings, benches, planters, and trash receptacles. Lighting was also added to showcase the historic structure at night.

The south approach to the pedestrian bridge is one of the most noticeable context-sensitive elements of this project. Inspired by the ski slope, a slalom-style



walkway meanders through landscaped “moguls”. Stamped asphalt continues from the bridge along the walkway to the end of the road.

The old box-beam superstructure was replaced with a new prestressed concrete box-beam superstructure that carries three traffic lanes. It features architecturally finished concrete parapets. Northbound and southbound traffic are separated by a raised median that features a granite curb. The median is finished with stamped synthetic asphalt that matches the pattern and color used on the walkway. Aluminum flagpoles line the bridge median, and the flagpoles and median continue along the roadway toward Hunter Mountain. The roadway is curbed with granite on both sides and is lined with ornamental steel light poles with banner arms.

Existing portions of the abutments were rehabilitated and widened to accommodate the new superstructure. The resulting substructures are continuous units that extend from the original east wingwalls of the old box-beam structure to the west wingwalls of the historic truss. The wingwalls that existed between the structures have been replaced with abutment walls that are structurally tied to the original abutments.

The success of this project was achieved through the efforts of many contributors, including Greene County Highway Department; Erdman Anthony; A. Colarusso & Sons; Wilbur Smith Associates (construction inspectors); L.C. Whitford Co., Inc. (prestressed box beam supplier); BURT Crane & Rigging (box beam erector); Copeland Coating Company (stamped synthetic asphalt pavement subcontractor); and Mimosa Construction, Inc. (truss painting subcontractor).

Upcoming Events

1/16 Board Meeting	Malt River
1/31 Lunch Meeting	Walkway over the Hudson, Poughkeepsie, NY, Speaker Peter Melewski, Bergmann Assoc, Location TBD
1/19	Future Cities Competition
2/14 to 2/15	Engineers Week
3/5 Board Meeting	Malt River
3/20 +/- Dinner Meeting	Stroup Channel Bascule Bridge, Speaker Lou Recchia, NYSDOT, Location TBD
April	Technical Seminar Bridge Inspections
4/16 Board Meeting	Malt River
May	Dinner Meeting TBD
June	Annual Meeting TBD

Lime Kiln Road over the Winooski Gorge and New England Central Railroad

- Contractor: Kubricky Construction Corp.
- Owner: VT Agency of Transportation, Northwest Region
- Designer: VHB, Bedford, New Hampshire

The Lime Kiln Road Bridge is located between the towns of South Burlington and Colchester, Vermont. The structure carries Lime Kiln Road over the Winooski River and the New England Central Railroad. It is 284 ft long and consists of three spans. The South span is a 60 foot approach span, The center span is a 122 foot cast in place concrete Arch 80 Feet above the Winooski River at the Winooski Gorge, the third span is a 104 foot span over the Railroad Spur.

The main feature of the structure is the center span which was designed to replicate the adjacent 1914 structure. The arches are approximately 4 foot by 4 foot in area and have a rise of 30 feet. The arch supports 5 column rows which support the 12 inch thick precast slabs of the superstructure. A High Performance Concrete deck was placed on the Planks, and Texas Rail Barrier runs on both sides of the roadway.



Major Subcontractors and Suppliers

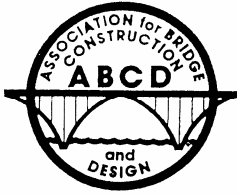
Economy Forms Co. Substructure formwork Reinforced Earth Co.
MSES wall Panels
J.P. Carrara Precast Beams and Planks
S.T. Griswold Redi-mix Concrete Dimension Fabricators
Reinforcing Steel
Thomas Drilling and Blasting Rock Exc. and Anchors
Sessler Wrecking
Bridge Demolition Hayward Baker Soldier piles and tiebacks
F. R. Lafayette Guiderail Moulison North Electrical



A prosperous and happy new year to everyone.

Typical Engineer's
Holiday Greeting





www.abcdeny.org

2007-2008 Key Contacts **Board of Directors**

<u>Name</u>	<u>Position</u>	<u>Representing</u>	<u>Phone</u>	<u>e-mail</u>
John Brizzell	President	Owner (former)	432-1654	johnbrizzell@earthlink.net
Scott Harrigan	President Elect	Supplier	695-5000	sharrigan@fmgroup.com
Mark Olstad	Treasurer	Consultant	951-2323	mark.olsad@earthtech.com
Tom Cascino	Secretary	Consultant	951-2380	thomas.cascino@earthtech.com
Jim Brundige	Board Member	Supplier	438-3976	jim.brundige@ahharris.com
Robert Brunner	Board Member	Owner	471-4255	robert.brunner@thruway.state.ny.us
Cory Ingerson	Board Member	Contractor	465-6254	nccllc4@msn.com
Dominick Izzo	Board Member	Contractor	294-9964	dizzo@lancdev.com
Eric Leclair	Board Member	Consultant	783-1887	eleclair@wilbursmith.com
Craig Valente	Board Member	Contractor	664-9855	cvalente@dacollins.com
Louis Recchia	Board Member	Owner	457-4530	lrecchia@dot.state.ny.us

Committee Chairs

<u>Standing Committee</u>	<u>Chair</u>	<u>Phone</u>	<u>e-mail</u>	<u>Board Liaison</u>
Program/Ed.	Matt Yerkey	272-6266,ext356	MYerkey@ryanbiggs.com	Leclair
Membership	Cory Ingerson	465-6254	nccllc4@msn.com	Ingerson
Nominating	Jim Brundige	438-3976	jim.brundige@ahharris.com	Brundige
Newsletter	Scott Davis	(845) 883-5078	DavisS@erdmananthony.com	Olstad
Public Relations	Dominick Izzo	294-9964	dizzo@lancdev.com	Izzo
History	Frank Naret	485-1386	fnaret@dot.state.ny.us	Brunner



Eastern New York Chapter of the
Association for Bridge Construction and Design
c/o M. Olstad, Spectra Engineering
19 British American Blvd.
Latham, NY 12110