



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

NEWSLETTER

March 2006

VOLUME 13

NO. 4

President's Message

Our organization is made up of consultants, suppliers, owners and contractors. While this time of year is special to all of us, speaking from a contractor's point of view this is the best time of all.

A great contractor (yes, there are some) once said "there is nothing like the sound of a hoe ram in the morning". I am sure the traveling public and local residents may not have that opinion when the work starts at 7:00 AM.

Bridgework and roadwork will be getting into full swing soon and this is when all the designing and planning gets put to the test. As bridge builders, seeing the substructures come out of the ground and the superstructures being set in place is great satisfaction and part of why we are all in this business.

We live in fast paced times and the rehabilitation or reconstruction of structures is done on a "get in, get out, and stay out" tempo. "Limited interruption or inconvenience to the traveling public" is one of the major priorities in the business we are part of. Another priority--excuse me, a greater priority-- is the safety and protection of human life. In the past two years we have seen a couple of fatalities involving workers on major interstate jobs in New York State. NYSDOT has recently advertised meetings for owners, consultants and contractors to review plans prior to completion, to get input on the Maintenance and Protection of Traffic plans for an upcoming project. This is a great idea.

One of the reasons I feel we are part of ABCD is the opportunity for "networking". We all share ideas, previous successes and, unfortunately, previous failures. If we can share ideas to eliminate fatalities or accidents at worksites, we will be helping everyone.

I would like to take this opportunity to thank the board and the members for making my term as President a successful and enjoyable experience. I look forward to future networking so that we can build better bridges and provide safer worksites for the members of our industry.

The system has served the country well; unfortunately it is showing its age. The recent incident on I-787 has made it very clear to those of us in the upstate New York area that a lot of work needs to be done to just maintain this vital part of our day to day lives.

Recent increases in the price of gas and diesel fuels have produced calls for eliminating use taxes to ease the burden of the traveling public. As the old saying goes "pay me now, or pay me later". By eliminating the use taxes we remove monies from the funds needed to maintain the roads and bridges we all use daily. No funds turns into poor roads and bridges which reduces fuel efficiencies and delays the inevitable.

In November the voters approved a Transportation Bond Act. As an industry we should appreciate increased spending on the infrastructure that we depend on as designers and builders. We should also, as taxpayers, make sure that the money is spent wisely on projects that are needed and serve the communities best.

I ask you to take the time to inform your representatives of your concerns regarding these issues. As an industry we owe it to ourselves to see that the infrastructure is taken care of, and as professionals we owe it to the tax paying public that it is done correctly.

John Walsh

Ski Bowl Road Update, Village of Hunter Greene County, New York

The reconstruction of Ski Bowl Road, which links Hunter Mountain to NYS Route 23A and the Village of Hunter, is on schedule to be completed this year. The project features the replacement of a prestressed box-beam superstructure that will carry three lanes of traffic and rehabilitation of a steel truss that will be modified for pedestrian use.

Project History

Prior to the start of this project, traffic on Ski Bowl Road crossed the Schoharie Creek via two separate structures, both with span lengths of approximately 34 m (112 ft). Southbound traffic, headed toward Hunter Mountain, crossed an historic, gas-welded, steel thru-truss superstructure, which was built in 1935. Northbound traffic was carried by a prestressed box-beam superstructure that was built in 1978. Deterioration of the steel truss, which was load posted at 15 tons, led to the need for this project.



Design Alternative

The final design includes the replacement of the existing box-beam superstructure with a prestressed box-beam superstructure that accommodates all traffic traveling on Ski Bowl Road. The new superstructure consists of 14 box-beams, each spanning 33.9 m (111 ft) and measuring 1.2 m (4 ft) wide by 1.07 m (3.5 ft) deep. The bridge section includes three travel lanes, a raised median, shoulders, sidewalk, and concrete parapets.

The existing abutments and east wingwalls remain in place and the substructures have been widened to the west (toward the existing truss) to accommodate the wider superstructure.

The steel truss will be rehabilitated and modified to accommodate a pedestrian walkway. Rehab work includes cleaning and painting the superstructure, removing the existing cantilevered sidewalk, replacing the existing steel bearings with steel-laminated elastomeric bearings, and replacing the bridge joints and railings.

Context-Sensitive Elements

The concrete parapets on the new superstructure were constructed with architectural form-liners and dyed concrete, providing the appearance of stone parapets lining the approach

to Hunter Mountain. The bridge and roadway median will feature a line of flagpoles, and the roadway will be lined with decorative light posts. The raised median and crosswalk areas will be finished with stamped asphalt top surfaces.



The existing truss will be paved with stamped asphalt, which will continue along a meandering walkway that continues toward the ski slope. Decorative lighting, benches, and planters on the bridge will help the bridge to remain a key element of this tourist-friendly area.

Construction

Construction began in May, 2005, and the prestressed box-beam units were installed in August. The composite concrete deck was poured in the same season and the new bridge was open in time for the 2005-2006 ski season at Hunter Mountain. The truss rehabilitation, pedestrian walkway, landscaping, and additional site work will be completed during this construction season.



Owner: Greene County
Contractor: A. Colarusso & Son
Prestressed Beam Supplier: L.C. Whitford Co.
Beam Erector: J&J Structures
Designer: Erdman Anthony & Associates
Construction Inspection: Wilbur Smith Associates

Submitted by Matt Smullen, Erdman Anthony & Associates

Photographs by Ken Korona, Wilbur Smith Associates

**Replacement of Ralph Street over Kayaderosseras Creek
Village of Ballston Spa, Saratoga County**

Owner: Saratoga County
 Designer: Prime Consultant: Earth Tech Northeast, Inc.
 Subconsultant: M.J. Engineering and Land Surveying, P.C.
 Contractor: Delaney Construction Corporation
 Precast Supplier: Schuylkill Products
 Construction Cost: \$1,200,000

This Locally Administered Federal Aid Project involved the complete replacement of an existing simple span non-composite plate-girder floorbeam system structure with a concrete filled steel grate deck. The existing structure had a 24.5 meter span, is 6.7 meters wide from face of curb to face of curb and is 9.8 meter wide from out to out. The structure was originally constructed in 1937 and subsequently went through a major rehabilitation in 1965 when additional steel girders were erected adjacent to the existing structure to provide for a sidewalk.

The new structure was constructed on an improved vertical and horizontal alignment and the roadway width was increased in order to meet current design standards. The new bridge carries 2 – 3.3 meter wide travel lanes, 2 – 0.6 meter wide shoulders, and a 1.525 meter wide sidewalk. The new structure consists of eight 840 mm- deep adjacent prestressed concrete box beams with a 150 mm thick, high performance concrete deck. The new superstructure is supported on concrete abutments founded on HP 310x79 steel piles. The span of the new structure was increased to 26.6 meters. The final span and beam depth were chosen after a repetitive process considering maximizing the freeboard and maximizing the improvements to the vertical alignment.



The proposed bridge has attached to its north fascia an 8 NPS ductile iron water line, an 8 NPS gas line, and an 8 NPS ductile iron sewer line. Overall, the Contractor installed approximately 150 meters of sewer line, 65 meters of water line, and 180 meters of storm sewer piping.

The bridge is located in close proximity to the Kelley Park and the Michael A. Spensieri Park. Both parks are opened during the summer months and receive substantial visitors, a majority being children. The Contractor's operations were conducted in a manner which stressed safety to the public, and due to this approach, no incidents occurred as part of the Contractor's operations.



In close proximity to the existing bridge was an approximately 6 meter tall laid-up brick sanitary sewer manhole that was built around the same time as the existing bridge. This manhole was the start of a siphon sewer system that runs

beneath the Kayaderosseras Creek and extends to a manhole adjacent to the Ralph Street / Kent Street intersection. As part of the bridge reconstruction project it was determined that the proposed sanitary line could be changed to a gravity line, thereby removing the siphon system.

Project difficulties included a by-pass of the existing sanitary sewer line. The Contractor installed approximately 300 meters of temporary sewer line adjacent to Kelley Park, which terminated in a manhole that is part of the 1.2 meter sewer trunk line. Additional difficulties included working in close proximity to an adjacent roadway and building, private utility relocation, and minimal clearance to a 1.2 meter sanitary sewer trunk line.

Although there was a substantial amount of work required to be completed as part of this project, Delaney Construction was able to adhere to their original contract schedule even with occasional delays. The bridge was closed to traffic for only 136 days, closing on July 25, 2005 and reopening on December 8, 2005.



Upcoming Events

On 27 April, Salman Bhutta, PhD, PE, Principal Materials and Pavements Engineer of Trow Associates, Inc., will present "High-Tech Asphalt Pavement on the Lewiston-Queenston Bridge." This was also presented to WNY ABCD last November.

On 14 September, William Moreau, PE, Chief Engineer for the New York State Bridge Authority will present "Bridge Movements and Serviceability." This was also presented to WNY ABCD last November.



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2005-2006 Key Contacts

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