

PCANY NEWSLETTER

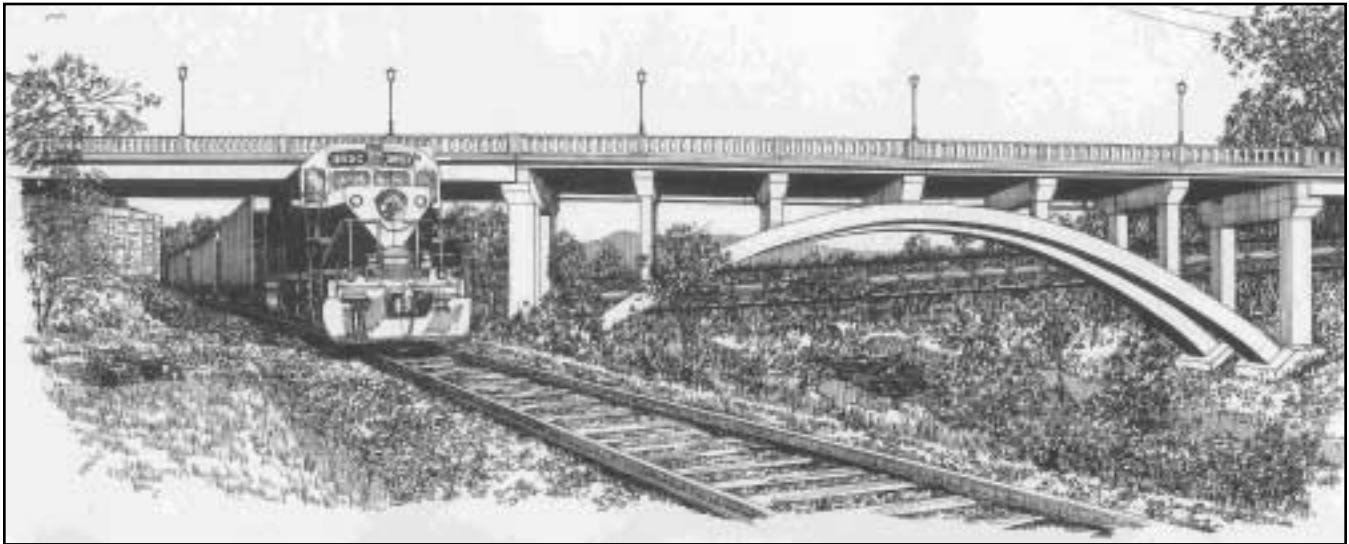
PRECAST CONCRETE ASSOCIATION OF NEW YORK, INC.

May 2008

Volume 19, No. 5

Focus of This Issue: Bridges

HISTORY REPEATS – the LIME KILN BRIDGE



Drawing of an Earlier Bridge, built in 1913-14

Photos by J.P. Carrara & Son

One of the earliest bridges in the country to employ an open spandrel design, the original Lime Kiln Bridge repre-

sented a significant advancement in engineering technology. The open spandrel represented an understanding by

designers that the area between the deck and the arch does not need to be solid because the columns transfer loads as reliably as a solid arch. Beginning in the early 20th century, this design was favored for exceptionally high or long crossings because it resulted in considerable savings in the cost for materials.

And both high and long it is. J.P. Carrara & Sons supplied 80 pre-stressed concrete beams to form the new deck. The six spans supported by the arch are made up of 12" thick by 4' wide by 21.5' long solid deck beams; the two adjacent spans are comprised of 42" deep by 4' wide box beams, 104' long on one side and 60' long on the other. Kubricky Construction Co, Glens Falls, poured the arches, columns, and transverse beams. Thanks to Joe Carrara for supplying the photos and story. □



Lime Kiln Bridge, Burlington, VT today

PA-DOT District 4-0 Emergency Projects

Thirty four years after the Agnes Flood of 72, the Northeast faced yet another severe weather event. Extremely heavy rainfall during the June 24-28, 2006 period caused flash flooding and record to near-record flood crests along many streams and rivers throughout the basin.

The resultant damage was focused in PaDOT District 4-0. A total of thirty (30) structures were lost in the June 2006 floods across Pennsylvania; twenty nine (29) of them, of which 14 were prestressed concrete, in District 4-0. Preliminary damage was estimated at approximately \$50 million.

Significant events like these are like lightning rods in the construction community. Consultants, fabricators and contractors immediately recognize that an extraordinary mission is going to be placed in their hands, and that they will be expected to produce results in the proposed timeframe. Time and again, the entire teams accomplished the mission.

The Pre-Bid meeting of July 28, 2006 provided the contractors, consultants and fabricators with a review of the flood emergency projects. Pre-bid packets included special bidding procedures, bridge location maps, proposed bridge let and package schedules, utility contacts and preliminary scope of work. Three (3) bid letting dates were established; August 10, 17 & 24, 2006.



Wyoming Co., SR 3003 over Sugar Hollow Creek (GC: Glenn O Hawbaker)

5 Spread Box Beams, 48" wide by 30" deep by 73.08' long (weight 31.3 tons each)

Photos by Schuylkill Products

“After the meeting on the 28th, we had an idea of the scope of work for SPI (Schuylkill Products, Inc). We identified the structures that would require prestressed concrete beams, we ran preliminary designs through the “QuikBeam” software to size the beams, and production and engineering received the preliminary information to review and plan their schedules,” explained Mark Pishock, Sales Manager. “Based on experience we didn’t have a major concern with the bearing pads. The potential size of the beams did not present potentials for exotic pad types. We did, however, start to contact vendors to give them a heads-up and discover their backlogs relative to the projected need period.”

A few hectic weeks followed, leading up to the first round of bids in August. SPI was heavily involved in various aspects of the different projects, including providing pricing for various superstructure arrangements to the consultant groups, tracking projects weekly, ensuring designs were in hand for bearing pads, and disseminating information to the production and transportation departments.

As the teams of consultants and contractors formed, both groups were requested to provide SPI with information about beam sizes and bearing pad sizes as it became available.



PA Wyoming Co., SR 3003, (GC: Glenn O. Hawbaker)

5 Spread Box Beams, 48" wide by 30" deep by 73.08' long (31.3 tons each)

(continued on next page)

PA-DOT District 4-0 Emergency Projects (continued)

Changes could be made from this preliminary information, ensuring a more efficient turnaround.

“We had a dilemma based on the projected bid dates. We knew there would be multiple consultants involved all working toward the same time goal,” explained Ken DePauli, Engineering Manager. “Since we could not prepare fabrication shop drawings without final design information, we decided to tell the contractors that we would assign drafting on a first-come, first-serve basis. As the final designs hit our shop, we started in the order received.”

As more information was received, it became easier to assess the scope of each project. “As the picture started to clear up with the beam sizes and types matched to delivery commitments, we were feeling much better about our ability to fabricate to meet the contractor’s schedules,” explained George Litsch, Vice President of Operations. As the approved fabrication drawings became available, we scheduled production, stored the beams in our yard and applied for payment of stored materials. We were way out in front of the delivery commitments.”



PA Luzerne Co., SR 118 (GC: Susquehanna Supply)
Six 48” wide by 27” deep by 60’ long Spread Box Beams (24 tons each)

The first structure was delivered on January 2, 2007 – six months after the first round of damaging storms. The extraordinary weather-related events of 2006 and the team’s quick response to the repairing or replacing of 29 structures in

Northeastern Pennsylvania reinforced SPI’s commitment to the efficient construction of a quality product. Thanks to Denise Wiederhold, Sales & Contracts Administrator, Schuylkill Products, Inc. for this article and the photos. □

Precast Concrete Plant Maintains OSHA VPP Star Status

Congratulations once again to Oldcastle Precast, Manchester, NY upon successfully re-certifying its OSHA Voluntary Protection Program (VPP) Star Status, a certification achieved by fewer than 1,700 of the 7 million manufacturing facilities in the United States. The highest achievable level in VPP, the Star Program, is designed for exemplary worksites with comprehensive, successful safety and health management systems who have achieved injury and illness rates at or below the national average of their respective industries.

The very first precast concrete manufacturer in the country to obtain VPP status, Oldcastle in Manchester became a Merit Worksite in March 2003, then upgraded to a Star Worksite in November of 2004. (There are only three precast concrete manufacturers in the country with VPP status.) Every three to five years, all Star Worksites must be re-evaluated for ongoing performance and continuous improvement. Three OSHA inspectors spent three and a half days scrutinizing all written safety and training programs, and interviewing shop floor employees at the Manchester location. They were impressed with the knowledge and passion for safety demonstrated by each and every employee.

And congratulations to Bonita Petti, Oldcastle Precast Safety Coordinator in Manchester, as well as every employee. (Since it is my old plant, you all make me very proud! ... *the editor*) □

Recent Articles of Interest:

Implementing an Accelerated Bridge Construction Program in Utah – an interesting article in the March 2008 issue of *FOCUS*, published by the Federal Highway Association. You can check out *FOCUS* online at www.tfhrc.gov/focus/focus.htm.

HPC Spans San Francisco Bay – another interesting article regarding the concrete, admixtures, engineering properties, etc. used in the CIP and Precast Segmental work for this. The superstructure uses a total of 452 precast, post-tensioned, segmental units that are constructed with high performance concrete designed to provide a service life of at least 50 years. □

RETURN SERVICE REQUESTED

New Associate Member

Welcome to **Bob Rex, Superior Precast Consulting Inc.**, Ardmore, PA, who has joined PCANY as an Associate Member.

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