



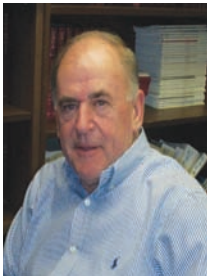
# THE CONNCRETE TIMES

The Connecticut Concrete Promotion Council (CCPC) of the Connecticut Ready Mixed Concrete Association  
 912 Silas Deane Hwy., Wethersfield, CT 06109 | <http://ctconstruction.org> | 860. 529. 6855 | fax: 860. 563. 0616

DIRECTOR'S MESSAGE

## EXPANDING

CCPC's first two newsletters under our new format were very well received. We plan to increase coverage from the current level of 4000 mailings. Requests have been received from all areas of the construction market asking for more information on our featured stories. The "Billion Dollar Bridge" in New Haven is currently under construction and we will be covering its progress with articles and photos. This issue's front page story features UCONN's 18,000 sq. ft. parking lot constructed with pervious concrete. Promotion efforts during the summer focused on solutions to stormwater runoff. The CCPC hosted events ranging from workshops to placements noting pervious and its advantages when combating runoff problems that are impacting our rivers, streams, and lakes.



The Inlands/Wetlands Commissions, Conservation Agencies and Planning and Zoning Boards of the various municipalities have been very interested in the pervious concrete story. The CCPC is eager to assist with any concrete related inquiries.

On November 14, CCPC will have a presence at Connecticut Inland Wetlands Commission 32<sup>nd</sup> Annual Conference promoting the CCPC and its members and also demonstrating the merits of pervious concrete. The conference is highly attended by members of the business community, various industries, architects, engineers, representatives of inland wetlands and conservation commissions.

All the Best,

*Jim Langlois*

## ON THE CONCRETE SCENE

### PERVIOUS — UCONN's RUNOFF SOLUTION

The University of Connecticut at Storrs has undergone major campus renovations over the last ten years. These renovation projects created areas of groundcover that surpass EPA requirements resulting in requisite reductions in order to reduce stormwater runoff. Pervious concrete was the decided-upon solution for dealing with runoff.



UConn officials choose the parking lot adjacent to Hugh Greer Field house for the first major pervious concrete installation in the state of Connecticut. The centrally located facility (one block from the Gampell Center) is approximately 18,000 square feet of parking area. The BL Companies, of Meriden, Connecticut, prepared the construction documents for the UCONN Architectural and Engineering Services. Mr. Paul Ferri, Environmental Compliance Analyst for the Office of Environmental Policy, became very familiar with pervious concrete through its use at the University of New Hampshire Stormwater



Center and via workshops throughout Connecticut sponsored by the Connecticut Concrete Promotion Council (CCPC). The workshops were partnership efforts between the National Ready-Mixed Concrete Association and the CCPC held for various state agencies and engineering & design firms located throughout Connecticut.

The design of the parking area required information as it pertains to the percolation rate of the soil, the footprint and use of the parking area (heavy duty equipment or truck use), and standards designated storm event. Tabacco & Son Inc., of Bristol, Connecticut, was the general contractor for the project and Concrete Crafters of CT Inc., of Prospect, Connecticut, was the subcontractor responsible for the pervious concrete installation. The pervious concrete producer was Builders Concrete East, located in Willimantic, Connecticut.

The project was designed with a base of 12" of ¾" stone and

*Continued on inside back cover*

# CCPC PROFESSIONAL MEMBERS

# FOR THE RECORD



## AT THE CAPITOL

*from Matthew Hallisey  
CCIA Director of Government Relations  
& Legislative Council*

### *Federal Regulations and a New State Law Would Affect Industry*

The U.S. Environmental Protection Agency has been considering new rules and the Connecticut General Assembly has passed legislation that would affect the concrete industry.

EPA will, for the first time, require large emitters of heat-trapping emissions to begin collecting greenhouse gas (GHG) data under a new reporting system. Cement production facilities that emit 25,000 metric tons of carbon dioxide equivalent per year are among a number of downstream sources that will have to monitor, collect and report data at the facility level under a final mandatory GHG emissions reporting rule issued by EPA on September 22, 2009. The regulation, which is effective January 1, 2010, will cover approximately 85% of the nation's GHG emissions and apply to roughly 10,000 facilities. For more information about the regulation, including the final rule and responses to comments, visit [www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html).

In the wake of a five-million cubic yard spill of fly ash sludge in Tennessee in December 2008, the EPA is considering new regulations, including labeling fly ash as hazardous waste. Such a classification would pose significant negative implications for the ready mixed concrete industry and potentially eliminate its beneficial use in the cement and concrete industries. While a rule has not yet been proposed, the agency may publish one by the end of the year, with comments and public hearings during 2010 and a final rule in place by the end of next year.

This fall, a 'green buildings' tax credit was passed by the General Assembly in special session and signed into law by the Governor. Starting with income years beginning on or after January 1, 2012. Public Act 09-8 allows the state to establish a corporation tax credit for taxpayers who build buildings that meet certain energy and environmental standards. The bill gives the Secretary of the Office of Policy and Management discretion on whether to issue vouchers allowing taxpayers to claim the credits. It limits the credits for all projects to \$25 million. Under the bill, eligible projects could receive a base credit that increases with the project's green rating and allows additional credits for mixed-use projects and those located in certain areas. Taxpayers could claim only 25% of the credit in any tax year, with the remainder allowed to be carried forward for up to five years. The credits would be transferable and assignable.

**A. Aiudi & Sons**  
**American Concrete Pumping**  
**Barker Steel Co. Inc.**  
**Barnes Concrete**  
**BASF**  
**The Beard Concrete Co.**  
**Castle Concrete**  
**CECO Concrete Construction**  
**Concrete Anytime**  
**Concrete Connections**  
**Concrete Crafters of CT. Inc.**  
**Concrete Enterprises**  
**Concrete Express Inc.**  
**Conn Bomanite Systems**  
**Construction Solutions Inc.**  
**Corsetti Construction, Inc.**  
**Devine Brothers Inc.**  
**Doka, USA, Ltd.**  
**ESSROC Cement**  
**F&F Concrete**  
**W. R. Grace**  
**A. H. Harris & Sons Inc.**  
**Headwaters Resources**  
**Holcim USA**  
**IMTL, Inc.**  
**Jolley Concrete & Block**  
**Kobyluck Ready-Mix Inc.**  
**LaFarge North America**  
**Lehigh Cement Company**  
**Martin Laviero Contractor Inc.**  
**Manafort Brothers**  
**Materials Testing Inc.**  
**Mobil Mix Concrete LLC**  
**Modern Concrete Pumping**  
**Mongillo Foundation Co. Inc.**  
**JJ Mottes Co. Inc.**  
**Myers Associates**  
**Norlite Corp.**  
**Northeast Solite Corp.**  
**O'Dea Concrete Products Inc.**  
**O&G Industries Inc.**  
**H. O. Penn Machinery Co. Inc.**  
**Polysteel Northeast LLC**  
**Propex Concrete Systems**  
**Purinton Builders Inc.**  
**RJB Contracting, Inc.**  
**Short Load Concrete LLC**  
**Sika Corporation**  
**L. Suzio Concrete Co. Inc.**  
**Terracon**  
**Tilcon Connecticut**  
**Wheaton Mobile**

## PEARL HARBOR MEMORIAL BRIDGE—BETTER THAN BEFORE

By Bruce Dykty — L. Suzio Concrete Company

(Construction of North Bound West Approach and River Piers, Contract B1)

Connecticut Department of Transportation # 92-532, Federal Aid Project # 0951(222)



Supplying of the Ready-Mixed Concrete on the new “Q” Bridge, Contract B1, in New Haven, CT. began in earnest in March of this year. Cianbro/Middlesex Corporations, the general contractor, spent months constructing temporary trestles in the river for their Drilled Shaft contractor, Raito Construction. They were hired to install forty (40) eight foot diameter drilled shafts which will support the four main Anchor Pier/Tower foundations. These Drilled shafts ranged from depths of 15 to 55 meters, (50 – 180 feet), which included approximately 3 meters of rock socket. Specifications called for a “Class 50”, 35MPa or 5,000 psi mix.

An extended slump life, eleven hours, was needed to maintain a liquid head as the tremie mix filled each shaft.

A 50% Portland /50% Slag mix was approved and retardation was scaled back to six hours because of the short delivery time to the jobsite, literally 500 yards away. Also, the steady placement by Raito dictated that additional retardation was not needed. Original specification called for 15% slag, instead 50% was used because its slower rate of hydration helped maintain slump life.



The larger shafts took approximately 300 c.m. or 400 c.y. of concrete. Delivery spacing was critical to ensure that the tremie pipe and head of plastic concrete would progress steadily upward. What proved to be the biggest obstacle was maintaining the slump range of 175mm (7”) to 225mm (9”). Ambient temperatures and aggregate moisture content, both fine and coarse, needed constant attention by Suzio’s QC department.

As Raito completed the Drilled Shafts for the Anchor Pier/Tower foundations, Cianbro Corporation, who is responsible for the concrete work, began forming the four foundations. (These are considered “Mass” concrete and a Thermal Control Plan had to be designed.) The foundations measured approximately 49 meters (150ft.) long and 14 meters (46ft.) wide. Four lifts completed each foundation; each lift was approximately 1.2 meters/4 feet thick.

The first lift on top of the shafts was the tremie seal. CONNDOT specified the mix as Class “A” Underwater Concrete. This mix contained a maximum sized aggregate of 1 ¼” stone and 10% more cement due to the fact that this mix was tremied into varying depths of brackish water. This mix also contained a superplasticizer. This mix performed exceptionally well and proved to be the easiest to

maintain. The next three lifts on each foundation utilized a dynamic mix to help alleviate the possibility of Thermal Cracking. The designed mix combined three mixes into one, submitted as the “Combined 40-50-60”. This helped the Cianbro field personnel when ordering, having just one mix instead of three.

Also, the design called for 75% slag, 25% Portland cement to help maintain a lower heat of hydration. Extensive testing went into developing this mix that had to be pumped yet

not exceed the allowable slump. This window proved to be very, very tight. There was about 25mm (1 inch) of tolerance. Too tight and it would strain the concrete pump and at the upper limits of the slump range, rejection loomed. The volatility of this mix, like Ratio’s, was so sensitive to ambient temperatures and aggregate moistures that a constant vigil had to be maintained by our Quality Control Department.

Both the Cianbro/Middlesex Corporations and the State of Connecticut District 3A office have been great to work with. With close to 19,000 c.m. or 25,000 c.y.s in place to date, we are over half way there.



## THE “Q” BRIDGE BILLION DOLLAR STORY

By Jim Langlois

*Aerial photo of the Q Bridge circa 1950's*



The Pearl Harbor Memorial Bridge, (commonly referred to as the “Q” Bridge) is in the midst of a **\$2 billion plus renovation**, making it the largest total dollar project in CONNDOT history. The bridge and its approaches were built in the 1950's as part of the Connecticut Turnpike system. Renovations to the “Q” were first conceived in 1989 by CONNDOT and the FHWA as an improvement to the I-95/I-91/Route 34 corridor. Over the years delays were caused by:

- Tower heights interfering with Tweed Airport traffic
- Yale University's historic boathouse
- The historic Fitch Foundry
- Lack of escalator clauses covering fuel and raw materials

All this led to the project being split into six contracts pushing the completion date to 2016.

The CCPC newsletter will focus on the Pearl Harbor Memorial Bridge replacement that is anticipated to cost \$490 million and be completed in 2016. Upon completion, the 10-lane extradosed cable-stayed bridge may be the first of its kind in the United States. Extradosed bridges have structural characteristics similar to concrete box girder and cable-stayed bridges which have been successful in Europe and Japan according to CONNDOT.

The photo at the top of the page is the 1950's New Haven/I-95 crossing which was designed for 40,000 vehicles per day and today routinely sees 140,000 per day. Construction of the bridge abutments and pier foundations for the northbound lanes was awarded to the joint venture of the Middlesex Company and the Cianbro Corporation

in April 2008. The CCPC, along with L. Suzio Concrete representatives, had an opportunity to sit down with Mr. Chet Muckenhirn, Manager of Projects for Cianbro, to discuss the uniqueness of the “Q” Bridge project. Chet noted that maturity meters have been positioned in the concrete placements for monitoring purposes and to report temperature variances. The 13,340 CY's of mass concrete have upwards of 75% slag replacement for the Portland cement. The foundations are utilizing 750,000 lbs. of #36 rebar which has a 1.4 inch width. The 10,000 tons of fabricated precast column piles have been barged from Chesapeake, Virginia. The columns have a compressive strength of 6500 PSI. Chet anticipates that Cianbro's contract will be completed in 2011. CCPC *Concrete Times* newsletters will continue to keep you updated on the construction progress and give you a closer look at the bid results favoring concrete over steel in the bridge design.

*(Please see the reverse side of this newsletter for an in depth report from the concrete supplier, L. Suzio Concrete, describing the various concrete designs in the Cianbro/Middlesex contract.)*

*For more info, visit: [195newhaven.com](http://195newhaven.com)*



## SETTING NEW SITES

### NRMCA-REGIONAL PROMOTION

from Douglas O'Neill, LEED® AP  
National Resource Director  
National Ready Mixed  
Concrete Association

### NRMCA Webinars— A Great Value!

Due to the current economic downturn many companies in the concrete industry have cut back on their travel and training budgets. Unfortunately for our industry this is a real setback since we all know that to stay ahead of the marketplace it's critical that our people be trained and kept abreast of new technologies. In response to these new limitations, NRMCA has developed a tremendous selection of Webinars available to our members. A Webinar is a simple link that when clicked brings the viewer directly to a website where you can follow a live presentation. The audio portion is a simple conference call. The cost is per location (\$35-\$65) and the benefits are that a company can train a room full of employees for one low price and no travel expenditures.

Some of the more popular topics include "Understanding Concrete's Environmental Edge," "LEED and Concrete," "The 5 Steps to Successful Concrete Parking Lot Promotion," "Designing and Specifying Pervious Concrete" and many others. NRMCA also offers programs aimed directly at specifiers and designers so a producer member or state affiliate organization could invite several local design professions into one location and offer them continuing education credits via our webinars.

For more information on NRMCA's webinars or to find out how to customize a program specifically for your company, visit our website at [www.nrmca.org](http://www.nrmca.org) or contact Doug O'Neill at [doneill@nrmca.org](mailto:doneill@nrmca.org).

## CCPC KUDOS

*Continued from front page*

6" pervious concrete using a pea stone for the coarse aggregate. Placement began in early August with a determined completion window of August 28, (the day students would be arriving on campus and parking cars on a striped pervious parking lot). The placement was completed and ready for use on August 28.

The contractors and their employees should be congratulated on a job well done within a very tight time frame. The corresponding photographs are a sample of work executed during



the placement and some of the specialized equipment required. A few of the specialized pieces are the roller screed, cross roller and "pizza cutter" along with non-woven geotech fabric and a seven day curing cycle. Media interest in this growing technology was evident. The project was well covered by

Channel 3 with some evening news features, and feature articles by *The Daily Reminder* and *The Chronicle*. *The Engineering News Record* did a national magazine story and video, and the Portland Cement Association covered it with a national story featuring the ENR video.

Moreover, the UCONN pervious concrete parking lot has received local and national attention from media, design and engineering firms, Inland/Wetland agencies, and the CT DEP citing it as a potential answer to stormwater runoff issues. The parking lot will be monitored by UCONN and results will be reported in future *CONNCRETE TIMES* editions.

## STRATEGIES FOR SUCCESS

*Schedule, registration forms, and information available at CCPC office.*

**CT ASSOCIATION of CONSERVATION and I/W's**  
Workshop @ MountainRidge,  
Wallingford, CT  
November 14, 2009

**BUILD BOSTON BSA/AIA**  
Workshops @ Seaport World  
Trade Center Boston, MA  
November 18-20, 2009

**CCPC MONTHLY MEETING DECEMBER**  
Meeting @ CCIA Offices  
Wethersfield, CT  
December 8, 2009 9:00 AM

**WORLD OF CONCRETE**  
Meeting @ Las Vegas Convention  
Center Las Vegas, NV  
February 1-5, 2010

### NATIONAL READY MIXED CONCRETE ASSOCIATION NATIONAL CONVENTION

Convention@Barton Creek  
Austin, Texas  
March 14-16, 2010



*Your*

# CONCRETE TIMES CONNECTION

## IN THIS ISSUE

**Pervious—UCONN's Solution to Stormwater Runoff**

**Progress on Billion Dollar Bridge**

**Updates on the Capitol Scene**

**Webinars Making the Scene**

**Certification and Strategies for Success**

## WELCOME NEW MEMBERS

### **Doka USA, Ltd.**

Little Ferry, NJ, Local Office: Southwick, MA  
Senior Account Manager: Chris Brockbank  
cell: 860.716.0445

### **Propex Concrete Systems**

Weatogue, CT  
Contact: Mike Skidmore 860.559.9051



*To become a member of a growing  
professional trade organization,  
contact Jim Langlois at CCPC  
860.529.6855*

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