



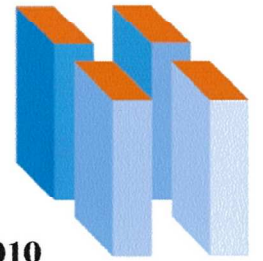
THE CAI REPORT

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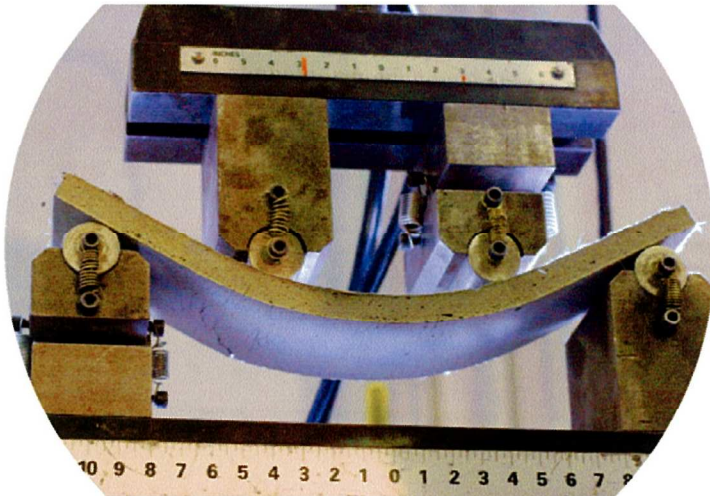
Documented progress of innovation in construction sponsored by the Construction Advancement Institute of Westchester and the Mid-Hudson Region

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BENDABLE CONCRETE...IT'S SELF-HEALING & FOR REAL!



Yes, there really is such a thing as bendable concrete---and it's exploding on the construction scene in the form of exterior building sheathing, bridge deck panels, hurricane protection façade panels and any other form of building materials that can justify a 3X greater cost than conventional concrete. However, in addition to its capability to flex beyond belief, the 3X greater cost factor also buys you a *self-healing* concrete that is virtually as strong, if not stronger, than the original!

Bendable concrete has been under development for the past 10 years at the University of Michigan. It has passed all of its field testing with flying colors. Ordinary concrete, for example, will simply crumble under 5% tensile strain, while bendable simply bows and snaps back to its original shape. Incredibly, bendable is also self-healing! When forced into a V-shape, bendable develops hairline cracks. When rain (or any kind of water) hits these cracks and mixes with carbon dioxide in the air, calcium carbonate, a strong bonding compound is automatically formed, making the bendable concrete even stronger than it was originally.

Bendable concrete has been developed and nurtured by Dr. Victor Li, Ph.D, the E. Benjamin Wylie Collegiate Chair Professor of Civil & Environmental Engineering at the U. of Michigan. Fundamentally a fiber-reinforced concrete, nylon or polypropylene fibers are generally used in building construction where, for architectural and decorative concrete products, a minimum visual impact is critical. In most civil and engineering type projects, steel fibers are preferred.

Proponents of bendable concrete claim its higher initial costs are more than offset by the fact it is 500X more resistant to cracking, has a far greater usable lifetime, is 40% lighter, reduces material volume, labor costs, steel reinforcement and reduces repair costs dramatically. As a bridge deck, bendable at a 5 centimeter thickness has a life expectancy of 100 years!

In building construction, bendable has already proven its seismic resistance, so owners don't have to buy and install costly devices to counter seismic activity. Japan's tallest residential building at 60-stories utilizes bendable in its core. Here in the USA, bendable is finding a place in the housing market, currently as a hurricane protection façade panel and amongst larger builders and developers, as a possible exterior sheathing panel.

SIX SCHOLARSHIPS AWARDED IN 2010



Six lucky, but more than deserving, students were selected this year as the first round of CAI's new scholarship program came full cycle. Each of the students received a \$3,000, one (1) year scholarship that may be continued if they reapply again next year.

Any high school senior graduating in 2011, or any full-time college student already enrolled, may apply for the scholarship. Students must be studying architecture, mathematics, engineering or building construction sciences. Applicants must be

immediate family members of employees working for BCA firms that are contributing members to the IAP fund. The family of members of the carpenters', laborers', engineers' and bricklayers' unions would also qualify to receive consideration.

The six CAI scholarship winners for 2010 are Danielle Ferri of Cortlandt Manor, NY; Eric Lorenz, Briarcliff Manor, NY; Joseph Piazza, South Salem, NY; Lia Ferri, Cortlandt Manor, NY; Justin Lundy, Walkkill, NY; and Molly Rooney, Patchogue, NY (not pictured).

MISSION STATEMENT

The Construction Advancement Institute (CAI) was formed to undertake a unique mission. That mission is to serve as a bridge between the myriad of new technologies impacting the construction marketplace today, and what may well become the new standards for tomorrow!

CAI focuses on taking the most creative and innovative design and construction thinking, methods and materials and putting them in front of the practical architects, engineers, owners and contractors to prove or disprove their value under real field construction conditions.

CAI disseminates the details of the most cutting edge technologies it explores in reports such as this one and, especially, through its own modest quarterly publication called "INNOVATION In Construction". [See adjacent abstract on bendable concrete.] If you do not currently receive INNOVATION and would like to, please call (718) 727-4366 and you will be put on the mailing list free of charge.



CAI PROMOTES STRONG EDUCATIONAL GOALS FOR ALL BUILDING PROFESSIONALS

C.E. COURSES

One of CAI's most notable successes has been the unique, 6-pt/lu... Continuing Education courses it has created for both architects and engineers. To date, seven of these courses, six for architects and one for engineers, have been held with 277 A/Es earning completion certificates.

The field trip that was part of the first engineering course held this Spring was to the unique \$1.4 billion CAT-DEL UV Water Treatment plant in Mt. Pleasant, NY (photo below).



LEED SEMINARS

CAI is a strong proponent of the green building movement and sustainable design and construction goals. Consequently, CAI was a joint sponsor, just last month, in conjunction with the Sustainable Investment Group, of a LEED Green Associate Exam Prep program.

Held in CAI headquarters in Tarrytown, NY, this program was to assist attendees in preparing for their qualification exam to be held at the Prometric Testing Center.

For additional information on this and other CAI programs, please contact Ms. Laurel Brunelle, CAI Program Director.

CONSTRUCTION CAREER DAY

To attract young people to careers in construction, CAI, CIC, BCA and four other major construction organizations will again sponsor the 11th Construction Career Day, scheduled for April 1, 2011.

With 27 high schools and one community college sending students to the active demonstrations and exhibits, the gathering generally has between 600-700 students in attendance.

Normally only one of the seven sponsors, talks are now underway that may lead to CAI managing the whole event!

THE MEN WHO GUIDE CAI

We introduce and thank our Trustees who give of themselves tirelessly to help CAI live up to its Mission Statement. (Back row, L to R) Andrew Arena, President, Arena Construction Co., Inc.; Antonio Rodrigues, President of Roger & Sons Concrete, Inc.; and Ross Pepe, Executive Director of the CAI, and Pres./CEO of the Construction Industry Council.

(Front Row, L to R) Vincent Colletti, CAI's Chairman of the Board & President of The Colletti Companies, one of NY's oldest Plastering Contractors; Mark Fante, President, Darante Construction, Mason Contractors; Jay Martino, V.P., JPC Builders, LLC; and Dominic Calgi, President, Calgi Construction Management Co., Inc.

