



Maryland Chapter ACI Newsletter

www.aci-md.org

President's Message

Joe Bradik

Soon it will be a year since John Alexander turned over the presidency of our Chapter to me. I have enjoyed working with you and I appreciate all of your support.

As we are facing technical challenges in design and “manufacture” of concrete structures, our industries are now confronted with the fallout of the emerging global economy. The increasing demand for concrete in the rapidly developing and heavily populated countries in Asia, in the newly formed world superpower the European Union, along with the weak Dollar, rising interest rates, cost of fuel..., all these factors have impacted every aspect of business related to concrete on our shores, from manufacturing to design.

As we are trying to deal with this new reality, juggling the demands of our professional and personal lives daily, it is more difficult than ever to find time to give to volunteer organizations like ACI. As our Chapter's past presidents before me, I too am fortunate to be working with a core of people who dedicate their free time to our Chapter and its membership. In each Newsletter I want to recognize some of these fellow members.

Today I want to thank Dick and Joan Magnani whose contribution to our Chapter's successes over the years has been, in my opinion, unmatched. Since Dick served as the Chapter's president, he has stayed active working in different committees. Joan has been faithfully supporting our Chapter as its Secretary for almost 15 years!

Thank you, Dick and Joan, your support has been greatly appreciated!

15th Annual Membership Golf Outing Monday, May 23, 2005

Wakefield Valley Golf and Conference Center
1000 Fenby Farm Road, Westminster, MD
410-876-8787

8:00 a.m. Registration

9:00 a.m. Shotgun Start

2:00 p.m. Lunch and Awards

Registration Fee is \$90 per person
Hole sponsors are being accepted for \$75 each

Registrations and payment must be received by
May 10, 2005

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Chapter Meeting Schedule

May 23 rd	Golf Outing, Westminster, MD
June 1 st	Excellence in Concrete Awards Banquet, ESB Baltimore
September TBD	Dinner Meeting, ESB Baltimore
November TBD	Breakfast Meeting, Frederick, MD
December TBD	Tree Lighting Celebration, ESB Baltimore

ACI Fall 2005 Convention,

November 6-10, 2005
Marriott Hotel, New Orleans, LO

For more information contact Joe Bradik
or go to www.aci-int.org/

To serve the main purpose of our organization, to further technical education in concrete and related materials, we have, since our Fall Newsletter, put on programs on the following topics:

Self-Consolidating Concrete, Fly Ash in Concrete and P2P, Performance Driven Specifications for Concrete.

As we are preparing programs for the rest of the year, I ask you to think of topics that are of interest to you. Please let me know at jbradik@lehighcement.com.

Our next program is the Chapter's Annual Golf Outing. This is an opportunity to relax and do something for your health, while meeting your colleagues from concrete and related industries. Please join us for this May 23rd event!

I am hoping that you will continue supporting your ACI Chapter not just by renewing your membership, but also by participating in our Chapter's activities.

Have a safe and enjoyable Summer!

ACI Maryland Chapter Library

Did you know that our chapter has a library available to our members which contains numerous ACI documents and publications? The library contains many standards & reports, special publications and some miscellaneous items. Any ACI Maryland Chapter member can utilize these materials. They are maintained at the Building Congress/McGraw-Hill Dodge building in Towson. The address is 1050 Cromwell Bridge Road (just inside the beltway, I-495).

ACI Field Testing Technician Certification Programs

This year we have a challenging schedule for our ACI Grade I Examination Program. We have expanded the program to six sessions now. Thanks to Ralph Klein of Superior Concrete, who made his plant available to us, we were able to add Frederick as another testing location (in addition to Crofton @ Aggregate Industries).



At Niles Mason's "Station"

Our first exam at Superior's last month was a great success thanks mainly to Dean Plank and "Dutch". The upcoming May 22 & 23 Frederick session is already full (30+ applicants). There will be another exam in June, August and October.

Innovations in Concrete Technology 2005 Spring Showcase

Start Date: 4/28/2005

Location: NRMCA Research Lab

City: College Park, MD

Contact: Gary Mullings

Phone: 240-485-1161

Fax: 301-585-4219

Email: gmullings@nrmca.org

Description: Innovations in Concrete Technology 2005 Spring Showcase

Goal: To enhance the visibility of the International Center for Concrete Research for promotion and educational events by using it as a site for demonstration and evaluation of innovative concrete technologies.

NRMCA Lab 75th Anniversary Open House

Start Date: 4/28/2005

Location: NRMCA Research Lab

City: College Park, MD

Contact: Colin Lobo

Phone: 240-485-1160

Fax: 301-585-4219

Email: clobo@nrmca.org

Description: National Ready Mixed Concrete Association Research Lab 75th Anniversary Open House

2005 ACI Excellence in Concrete Awards Banquet

The 2005 Awards Banquet will be held at the ESB (Engineers Society of Baltimore) June 1st, 2005. We would like to thank all those who have spent the time on putting together nominations submittal packages, as we know it takes time from your busy schedules. We hope to get more involvement from the Ready Mix companies for next year; as for they are involved with supply on all worthy projects.

Student Awards Dinner

In a joint meeting, National Capital and Maryland Chapters, on April 12, 2005, in Tysons Corner, VA, recognized students from seven universities in the Baltimore/ Washington area for their achievements in concrete related studies and special assignments. In the pictures from the Awards Dinner:

Left: Dr. Amory, Morgan S.U., Dept. of Civil Engineering, Chair, receiving the award for student Randall Knieriem; Joe Bradik, MD Chapter ACI, President, and Hamid Ahmady, past President, National Capital Chapter

Right: Joe Bradik, Dick Magnani (filling in for Johns Hopkins University student Nathaniel Jones and professor Rajah Anande) and Hamid Ahmady

Below: Awarded students with their professors



Maryland Chapter Member Teaches U of M Solar House Students About Placing Concrete

“Reds” House, of ACI/MD Chapter member S&G Concrete, recently helped the University of Maryland Solar Decathlon Team to place and finish concrete for 20 portable footings for the Solar Powered House that the students are designing and building.

The Solar House contest is put on by the US Department of Energy. Eighteen Universities from across the country and around the world are participating in the Solar Decathlon, including several from California, one from Madrid Spain and another from Puerto Rico. At the end of this September, all of the fully functioning, 500 to 800 square foot Solar Houses will be transported to the National Mall in Washington, DC to be displayed and judged during a two week period in October.

This is the second time the Solar Decathlon, which is held every three years, involved a solar powered house. Previous Solar Decathlons involved a solar powered car.

The U of M Solar Decathlon Team is constructing their House on the Campus at College Park. After the house is complete and functional, the house will be partially disassembled and transported to the National mall, where it will be reassembled on temporary foundations. The house will be fully furnished and functional, and must be powered from photovoltaic solar cells. Thirty two, 185 pound lead acid batteries will store the captured electrical energy for use when the sun is not shining. Water and waste storage tanks will also be used at the Mall. During the contest, several showers must be taken every day and meals must be cooked with one meal being the microwaving of a frozen dinner. Also, clothes must be washed and dried.

The rules do not allow digging into the ground or driving stakes more than eighteen inches deep. Since only eight days are allotted for construction time at the mall, portable temporary concrete footings are being used for the house foundations on Campus and at the Mall. The twenty footings were poured inside a warehouse adjacent to the on Campus construction site. Pouring the footings inside the warehouse provided a flat, smooth surface on which to pour the portable footings. This also gives the Students an opportunity to practice moving and positioning the footings to the 1/16” tolerance for the location of anchor bolts



Reds House of ACI/MD Member S&G Concrete
Directs the Placing of Concrete in the Footing
Forms While Some of the Solar House Students
Consolidate and Screed the Concrete

The footings are all 8” thick, vary in size from 2’-0” square to 3’-4” square and are all reinforced

with 4 #4 rebars each way, bottom and 1 #4 rebar each way top, the top reinforcing for lifting and transporting purposes. Each footing has a single 5/8" diameter all-thread anchor bolt at its center. This bolt will be used to lift the footing so that a fork truck can be used to move the footings to their position in the foundation plan.

Since the footings will be sitting on the surface of the ground, it was decided to form the footings, finish the top surface by floating followed by a single troweling. Also, the top edges were tooled. In addition to the appearance of the footings, the finishing of them gave the students a hands on (or in) appreciation of the skills required for concrete work. There were no observers at this pour. Reds would state *"this is not a spectator sport"* as he thrust a shovel or trowel into the hands of a student not already hard at work.

The students calculated the volume of concrete required and placed an order for 3.5 cubic yards of a 4,000 psi mix with ACI National Capitol Chapter member Rockville Feed and Gravel, who donated the concrete. A hard lesson was learned; the 3.5 yards filled only 17 of the 20 forms, 1/3 of a yard short. Rather than have another truck delivered, Rob Murray, the Team's project Manager, decided to send someone to Home Depot, who donated a credit card to the Team, for 16 bags of concrete mix and a mixing hoe.

About 15 student members of the Solar Decathlon Team helped with pouring and finishing the footings. This group included Architectural, Civil, Mechanical, Electrical and Construction Management students, both male and female, none of which had ever been involved with pouring concrete. The weekend before the pour, a number of the students constructed the twenty forms, placed the rebar, and secured the anchor bolts in place.

As constructed on the Mall, the Solar House will have one bedroom, a living area, a kitchen/dining area, a full bath and a utility room. After the event is over, the Solar House will be donated to Habitat for Humanity, the house moved to its final site and placed on a concrete block basement. At the final site, an addition with two more bedrooms and a partial bath will also be constructed.

The University of Maryland Solar Decathlon Team extends its thanks to S&G Concrete for allowing Reds House to teach them some real life lessons.

Chapter member Dick Magnani is the structural advisor to the students and is the engineer of record for the permit drawings.

For more information on the Solar Decathlon, go on line to www.solardecathlon and www.solarhouse.umd.edu.



Clean Up and Sound Advice

2004-2005 Chapter Officers

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