



Legacy

The Newsletter of the RMC Research & Education Foundation

Did you know:

- That the Foundation recently updated the Pervious Concrete Research Compilation and that the revised edition is available for download from the Foundation's website?
- That the new officers for 2009 are:
 - Karl Watson, Jr, Chairman
 - James A. Repman, Vice Chairman
 - Scott Parson, Secretary-Treasurer

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From the Chairman

Welcome to this year's first edition of *Legacy*. While 2009 opens with uncertainty, I remain optimistic that our industry will emerge stronger than ever. Our strength lies in large part to our willingness to work together to meet challenges and improve the industry. A perfect example of this partnership is through individual and corporate support of the RMC Research & Education Foundation. Our projects are gaining national and international attention and are helping the industry to demonstrate its commitment to environmental stewardship, quality, excellence and professionalism. To provide you with a better idea of the Foundation's goals, we've included in this newsletter the Foundation's Strategic Plan, which was revised at the Board of Trustees' meeting last September. The Strategic Plan may be found on pages two and three.

The Foundation seeks to provide the industry with tools that will help improve concrete and assist professionals with their jobs. The Foundation has long been a supporter of the National Institute of Standards and Technology's (NIST) Virtual Cement and Concrete Testing Laboratory (VCCTL) consortium. Late last year, we held some webinars in an effort to educate donors on how to use this software. More information about the program is detailed below.

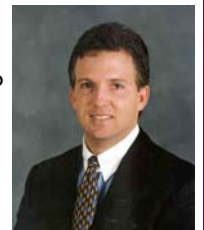
Providing quality educational programs is also an important element to keeping the industry strong. When NRMCA's Educational Activities and Business Administration Committees identified the need to develop a basic concrete business workshop, the Board of Trustees agreed that such a course would help provide a foundation for those who are already in the industry but who may be unfamiliar with business operations specific to the ready mixed concrete industry. Information on this newly-approved course, along with a calendar of upcoming Foundation-funded courses and events, may be found on page three.

Given the nation's deep concerns about fuel costs over the past year, the Foundation's study on Fuel Consumption, Emissions and Pavement Type taking place at the University of Texas at Arlington is very timely. We have received very promising preliminary data from that study and have summarized it for you on page four.

All of these successes were detailed with the Foundation's presence at the World of Concrete Show in Las Vegas earlier this month and will be featured at the Foundation's booth at NRMCA's Annual Convention next month. Details on these activities are on page two.

Although we may still face some tough times ahead, your investment in the Foundation's work is an investment that is helping to buoy the industry in these uncertain times. I look forward to my Chairmanship this year and know that with your support, we will continue to do great things for the industry and the country. I hope you enjoy this edition of *Legacy*.

Regards,
Karl Watson, Jr.
Chairman



VCCTL Webinars, Software Well-Received—Funded Again

In late 2008, the RMC Research & Education Foundation hosted a series of webinars designed to educate donors about the National Institute of Standards and Technology's (NIST) Virtual Cement and Concrete Testing Laboratory (VCCTL). The Foundation has long been a member of the VCCTL Consortium, and, based on the tremendous response to the informative webinars, chose to fund the program for another year, bringing the Foundation's total commitment

to the project up to \$220,000.

The webinars were conducted by NIST's Edward Garboczi and Jeffrey Bullard, who provided background on the history of the program and walked participants through the procedures for using the software and how it might assist them with concrete mixture decisions. A link to the software may be found on the Foundation's website at www.rmcfoundation.org/vcctl.htm. However, at this time, access to the

VCCTL site is only available through the use of Mozilla Firefox. A link to download the Firefox browser for free is available on the Foundation's VCCTL site.

Should you have questions about the VCCTL program and software, please contact NIST's Ed Garboczi at 301-975-6708 or at Edward.garboczi@nist.gov. For additional information about the Foundation's programs, please contact Jennifer LeFevre at 240-485-1151 or at jlefevre@rmcfoundation.org.

**Foundation
Participation at
WOC, Upcoming
NRMCA Convention**

Earlier this month, Foundation staff attended the World of Concrete (WOC) Show in Las Vegas, where hundreds of the Foundation's popular deliverables CDs - Research to Support the P2P Initiative and Research Supporting Sustainable Development - were distributed through donors exhibiting at WOC and to potential donors and other organizations interested in sustainability and P2P issues. "Green" initiatives and products were a principal theme for booths throughout the entire show.

The Foundation will next participate in NRMCA's Annual Convention taking place March 14-17 in Orlando, FL. The Foundation will have a booth display highlighting new and previously released deliverables and donor recognition. Updates on Foundation activities will be included on NRMCA committee agendas, including the Operations, Environmental and Safety Committee, the Educational Activities Committee and at NRMCA's Board of Directors meeting.

The Foundation's Spring Board of Trustees meeting will cap off the Convention on the morning of Wednesday, March 18th. We hope to see you in Orlando!

Foundation Revised Strategic Plan

At their Fall Board meeting, the RMC Research & Education Foundation Board of Trustees approved revisions to its Strategic Plan for 2009-2011. Below please find the current Strategic Plan as approved on September 24, 2008.

Vision

The RMC Research & Education Foundation is a Lasting Resource for Increasing Quality and Professionalism in the Ready Mixed Concrete Industry by Maintaining its Endowment.

Mission

The Mission of the RMC Research & Education Foundation is to Increase Quality and Professionalism in the Ready Mixed Concrete Industry by Funding High Quality, High Value, Non-Proprietary Research and Education Programs.

Goals

- 1.0 Enhance Concrete Quality and Promote Sustainability, Safety and Environmental Stewardship Through Concrete Research**
 - 1.1 Conduct Research that Supports Concrete Quality and Performance**
 - 1.2 Conduct Research that Promotes Safety in the Industry and for the General Public**
 - 1.3 Conduct Research that Promotes Environmental Stewardship Within the Industry and Sustainable Development for the Good of the General Public**
 - 1.4 Develop and Support a Strong Network of Qualified Entities, Capable of Doing Quality Research**
 - 1.5 Identify Partners and Potential Sources of Matching Funds for Concrete Industry Research**
- 2.0 Increase Availability, Professionalism, and Career Opportunities for the Concrete Industry Workforce Through Education and Development of Training Tools**
 - 2.1 Support and Develop Education Resources to Increase the Knowledge-Base and Professionalism of the Ready Mixed Concrete Industry Workforce**
 - 2.2 Support Programs That Help Recruit, Develop and Retain a Highly Qualified Workforce for the Ready Mixed Concrete Industry**
 - 2.3 Fill Gaps in Education that Support Best Practices for Methods of Placing Various Ready Mixed Concrete Applications**
 - 2.4 Identify Partners and Potential Sources of Matching Funds for Concrete Industry Education**
- 3.0 Promote Collaboration, Technology Transfer, and Educational Opportunities for Concrete Industry Organizations and Stakeholders**
 - 3.1 Participate on Committees and Boards of Targeted National and International Allied Organizations to Share Information on Research and Education Priorities and Findings**
 - 3.2 Distribute Research Findings and Programs Expeditiously to Stakeholders Through Presentations, Press Releases, Mailing of Research Results to Donors, Allied Organizations and Other Stakeholders, and Through the Foundation's Website**

Foundation Revised Strategic Plan, continued

- 3.3 Ensure Active Participation on the RMC Research & Education Foundation's Board of Trustees, Committees and Advisory Council**
- 4.0 Build an Endowment to Support Approximately \$1 Million Annually in Research and Education Funding**
- 4.1 Raise Approximately \$25 Million in Pledges to Achieve a \$20 Million Endowment Level**
- 4.1.1 Raise \$25 Million in Pledges to Compensate for Principal Monies Spent to Demonstrate Early Value as the Foundation's Endowment was Building**
- 4.1.2 Maintain the Foundation's Endowment as a Lasting Resource for Industry Education and Research**
- 4.2 Continue with Limited Fundraising Campaign Targeted Primarily at New Stakeholders and Individual Donors Once the Goal Endowment Level is Reached**
- 4.2.1 Identify New Targets for Ongoing Fundraising Campaign to Ensure Maintenance of the Endowment**
- 4.3 Identify and Pursue Joint Funding Opportunities and/or Grants with Foundations, Associations, Government Agencies and Universities**
- 4.4 Continue Communications Activities to Demonstrate and Quantify the Value of the Foundation's Work to Current and Potential Donors**
- 5.0 Operate the Foundation in a Manner Consistent with its Adopted Bylaws, Accounting Policies and Investment Policies**
- 5.1 Ensure the Proper Direction of the Foundation's Work and Fulfillment of Pledge Commitments by Engaging Industry Executive Participation in the Foundation's Board of Trustees and Advisory Council**
- 5.2 Review the Bylaws, Accounting Policies and Investment Policies at Least Every Two Years**
- 5.3 Develop a Succession Plan to Ensure High-Level Management of the Foundation's Work and Financial Resources**
- 5.3.1 Create a Succession Plan for Foundation Personnel**
- 5.3.2 Follow Succession Plan for Continued Operation of the Officer, Board, and Committee Structure as Outlined in the Bylaws**
- 5.4 Maintain an Efficient, but Thorough, Process for Soliciting and Approving or Rejecting Project Proposals Received by the Foundation**
- 5.4.1 Maintain a Regular Calendar of Meeting Dates for the Program Committee and Advisory Council to Review Proposals and Make Recommendations to the Board of Trustees**
- 5.4.2 Develop a Formalized System for Avoiding Duplication and Maximizing Investment of Funds**
- 5.4.3 Communicate Approvals Process to Potential Grant Applicants**

Should you have any questions about the Foundation, its programs or its Strategic Plan, please contact Executive Director Julie Garbini at jgarbini@rmc-foundation.org or at 240-485-1150.

Coming Down the Pike – A Calendar of Upcoming Releases, Events and Programs

- * Release of Self-Consolidating Concrete Formwork Pressure Study – Winter 2009
- * Plant Manager Certification Course – March 24-27, 2009, Des Moines, IA – visit www.nrmca.org
- * NRMCA Annual Convention – Foundation to have Booth Display – March 15-17, 2009, Orlando, FL
- * Board of Trustees Spring Meeting – March 18, 2009, Orlando, FL

Trustees Approve New Educational Program

The first project approved by the Foundation's Board of Trustees this year will fund the development of a new educational course, "Introduction to RMC Business Organization & Management Workshop." This new course, which will be developed by Timothy McMahon & Co., came with the strong recommendation of NRMCA's Business Administration Committee (BAC) and Educational Activities Committee (EAC). Members of both committees recognized that some within the industry would benefit from a course that would provide an understanding of basic ready mixed concrete operations, including how the business is structured and what the decision making process is. While many professionals within the industry may have general business experience, the Foundation Trustees felt that the development of such a course specific to the ready mixed concrete industry would help these professionals in their jobs and would also help participants gain more from any subsequent courses they may take.

The Foundation will work once again with Timothy McMahon & Co., who developed the Sales Manager's Training Course, which has received rave reviews. The first course is expected to take place by this fall.

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Mission:
To support research
and educational pro-
grams that will in-
crease professionalism
and quality in the
concrete industry



Fuel Consumption/Emissions Study Show Promising Early Results

One of the RMC Research & Education Foundation's current programs is a research study evaluating the effect of pavement type on fuel consumption and emissions. The study, taking place at the University of Texas at Arlington (UTA), focuses on urban driving conditions on streets and local roads. Dr. Sia Ardekani, the lead researcher on the project, will present some of the study's early results, which are extremely promising, at the Sustainable Communities Conference in Dallas next month.

The study includes data collected from multiple runs of an instrumented passenger van driven on city streets on two pavement types: Portland cement concrete (PCC) vs. asphaltic concrete (AC); in two driving modes: constant speed vs. acceleration; and with two surface ambient conditions: dry vs. wet. Other factors that may influence fuel consumption were controlled or kept the same during data collection. Variables recorded for the study include date, time, ambient air temperature, atmospheric pressure, humidity, wind speed and direction, the temperature of the fuel flowing into and out of the tank, vehicle weight, tire pressure and

auxiliary devices (e.g. A/C, radio, headlights, windows).

There were eight factor-level combinations: four each for PCC and AC - constant speed-dry, constant speed-wet, acceleration-dry and acceleration-wet. There were five replicates for each factorial combination resulting in 40 runs.

The chart below summarizes the results for fuel consumption and CO₂ emissions of one set of factors measured: constant speed under dry conditions for both PCC and AC. The data clearly show that the fuel consumption per unit distance is lower on PCC vs. AC under dry pavement conditions for a typical city-street speed.

Additional tests for this study are on-going and will include measurements on several other sections of both PCC and AC, as well as on wet pavement sections. The researchers will also attempt to take roughness measurements on all test sections, if possible.

Given the national stated goal of reducing dependence on oil and the world-wide interest in reducing emissions and promoting "green" initiatives, the timing of this study could not be better. The additional testing noted above will



PCC Test Section:
Abram St., Arlington, TX



AC Test Section:
Pecandale Dr., Arlington, TX

be performed this spring with final study results expected later in 2009.

This study will complement the many other sustainable development resources available from the RMC Research & Education Foundation's website at www.rmc-foundation.org. Or please contact Julie Garbini or Jennifer LeFevre for more information on the Foundation's work.

| | Fuel Consumed (million gals/yr) | Total CO ₂ (10 ³ metric tons/yr) |
|--------------------------|------------------------------------|--|
| PCC, Constant Speed, Dry | 3,598 | 18,527 |
| AC, Constant Speed, Dry | 3,775 | 19,438 |

PCC = Portland Cement Concrete/AC = Asphaltic Concrete