

Partners in Quality

A Publication of the Maryland Quality Initiative Steering Committee (MdQI)

Spring/Summer 2009

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MdQI
Maryland Quality Initiative

Going Green - Moving in New Directions A Look at the 16th Annual MdQI Conference

An environmentally responsible industry and society is something we owe to future generations and this year's 16th Annual MdQI Conference championed that cause in full force. Over 700 attendees and 60 vendors made this one of the most successful conferences held to date. Everyone left recognizing that the power to "go green" was within all of us.

Transportation leaders from both the government and private sectors congregated at the Sheraton Baltimore City Center Hotel to continue a yearly tradition that has served as a forum for discussing ideas, networking, educating and improving the industry as a whole for the citizens of Maryland.



MdQI Co-Chairman, Greg Welker, addresses the conference attendees

This year's conference got under way with the introduction of the new MdQI Co-Chairman and SHA's Deputy Administrator/ Chief Engineer for Operations, Greg Welker by his predecessor Doug Rose. Everyone was pleased to hear Greg speak of his commitment to continue partnering amongst all stakeholders in the highway industry, even in the face of uncertain times. He was followed by SHA Administrator Neil Pederson who stressed the importance of this year's theme by stating that our future was dependant on the credibility we establish as being good environmental stewards. He spoke of his determination to answer the call for a more sustainable transportation system. The second keynote speaker for the morning session was Ms. Dominique Lueckenhoff from the Environmental Protection Agency who spoke about the Green Highways Partnership. Some key points of her address included the need to build better relationships between regulatory agencies and local governments for faster and more efficient

results. Dominique also spoke of the push for greener projects under the anticipated stimulus bill and how encouraging this was important since existing ecosystems were currently failing. She acknowledged there is still much improvement that needs to be made with respect to preserving the natural environment without halting progress.

Day Two started with renewed enthusiasm. A continental breakfast ushered in a much anticipated address by Neil Pederson on the stimulus bill and ongoing efforts to identify funding so that jobs will be 'shovel-ready' in the shortest possible time. Information regarding the proposed stimulus bill will continually be updated on the MDOT website as Congress provides it. He was followed by King Gee, the Associate Administrator of FHWA, who went on to elaborate on Secretary LaHood's recovery program. King also recognized the exceptional leadership in Maryland which continues to position the state as a national leader in areas such as partnering, workforce training and quality assurance. The recovery program is focused on safety, economic health, sustainability, and supporting people and their communities. At least \$27 billion has been earmarked by the senate for the highway, transit, rail and port funding; and new laws for more accountability and transparency in how it will be spent are being put into place. King closed by telling the audience



Conference attendees begin checking in at the registration booth.



Conference attendees enjoy the vendor exhibits.

Continued on Page 4

Chairman's Letter

Welcome to 2009 and a new year of MdQI. I want to thank everyone for the warm welcome I have received in my new role in MdQI. In particular, I want to thank Doug Rose for his many years of leadership in SHA and MdQI, and for his work to ensure a smooth transition as I took on my new duties as SHA's Deputy Administrator/Chief Engineer for Operations in January. Each time I work with the members of the MdQI community I realize how special that partnership is and how MdQI benefits the transportation industry in Maryland. Our conference "Going Green - Moving in New Directions" once again showed us how we as an industry can move forward in these new and challenging times.

Every year, the success of this conference is owed to the diligent work and commitment exercised by the Conference Planning Committee and other sub-committees. We also had an immense amount of support from our vendors and other industry entities. I wish to thank them all for their 'behind the scenes' work that makes such a production possible. The sub-committees have already begun working on next year's MdQI conference which is slated to be held on January 27 and 28th at the Sheraton City Center- Baltimore. We will continually provide updates to this information both on the website and future newsletters. Our website (<http://www.mdqi.org>) has been updated and you will find many of the presentations from this year's breakout sessions and a list of all our Awards of Excellence winners posted.

One of the most popular attractions this past year amongst the 731 attendees was the inaugural pinewood derby track race which was affectionately dubbed the 'Rose Cup' (after the previous SHA Deputy Administrator- Doug Rose). Out of the 60 vendors, 9 of them entered their cars for the race. P.Flanigan and Sons came out the winner and were rewarded with a trophy and the opportunity to provide a giveaway in next year's conference bag. The trophy will be passed on to the winner each year as we hope to make this a recurring event at every annual conference.

My letter wouldn't be complete without also recognizing the outstanding jobs by our key-note and guest speakers. They embraced the 'green' theme and provided us with insightful speeches that were relevant to the present state our industry finds itself in. The lunch time entertainment (both the ALP presentation and the Doug/Charlie skit) was also received extremely well by the audience, as evident by the quiet banquet hall and the evaluation form comments.

MdQI is more than just the conference itself as our partnership with other industry agencies and entities extends throughout the year. This is evident in many of our activities including the extremely popular 'Career Day'. We have been blessed with industry partners that have the foresight to realize the importance of engineering/construction education and recruitment amongst high school students. This is vital for the future of our trade and I was pleased to see the attention it received from the media. I would like to offer my sincere thanks to Alban Tractors (who provided the location for this year's event) and to all of our sponsors.

In closing, I want to express my appreciation to all of the members of the transportation community who have made the 16th Annual MdQI Conference a success, and to all of you who support the MdQI initiatives throughout the year by participating in our work teams and outreach programs. I look forward to working with all of you during 2009 as we work to keep Maryland safe.



Greg Welker

MdQI Co-Chairman, SHA Deputy Administrator/Chief Engineer for Operations

Industry News & Upcoming Events

SAVE THE DATE ---

Planning for the **2010 MdQI Conference** has already begun. Be sure to mark your calendar for our 17th Annual Conference to be held on January 27th and 28th at the Sheraton Baltimore City Center Hotel. Conference information can be found on the MdQI website at www.mdqi.org.

CEAM Spring Conference was held on May 13th-15th at the Rocky Gap Resort in Flinstone, MD. **CEAM's Fall Conference** will be in Ocean City, MD. Please visit the CEAM website for details. www.countyengineers-md.org

2010 Concrete Conference is to be held on April 14th at the Maryland State Fairgrounds. For more information, visit our website at www.marylandconcrete.com.

MDQI AWARDS OF EXCELLENCE NOMINATIONS---

The MDQI Awards Committee looks forward to your 2009 Awards applications! The awards application process will be starting very soon! The full list of award categories, award application information and instructions will be on the MdQI website by the end of June. The projects must be accepted for maintenance between July 1, 2008 and September 30, 2009 with the exception of planning projects where a Record of Decision is required in the same time frame. The awards applications will be due to the sponsoring agencies by September 23, 2009. The sponsoring agencies will screen the applications and submit the screened applications to the Awards Committee by October 16, 2009. The Awards Committee will then review the applications and short list them to up to 3 per category. The shortlisted projects will be highlighted at the 2010 MDQI Conference and the winners will be announced at the MDQI Awards Banquet.

We will have a new "Green" awards category this year! More information on this will be on the MdQI web site in **June!**

Start thinking about your award winning projects so you are ready when the applications hit the website! If you have any questions, contact the Awards Committee Chairman, Dana Knight at 410-662-7400 or dpknight@mccormicktaylor.com.

Awards of Excellence Presented at 16th Annual MdQI Conference

PUBLIC AGENCY IN-HOUSE HIGHWAY DESIGN

MD 16/MD Town Of East New Market

SHA - Office of Highway Development
Bid Amount: \$6.2 million

PUBLIC AGENCY IN-HOUSE ENVIRONMENTAL DESIGN

"River Walk: A Rain Garden Showcasing Plants Native to the DelMarVa Coastal Plain "

Queen Anne's County

CONSULTANT HIGHWAY DESIGN

Lusby Southern Connection - MD 760 & MD 765

Design Firm: Wallace Montgomery & Associates, Llp
Calvert County DPW

CONSULTANT STRUCTURE DESIGN

Mouth Of Monocacy Road Over CSX Railroad

Design Firm: Greenhorne & O'Mara, Inc.
Montgomery County Government

CONSULTANT ENVIRONMENTAL DESIGN

Anacostia East Wetland Mitigation (WWB)

Design Firm: EA Engineering, Science, & Technology, Inc.

SHA - Office Of Environmental Design
Project Cost: \$8 million

CONTEXT SENSITIVE PROJECT DEVELOPMENT

MD 16/MD Town Of East New Market

SHA - Office Of Highway Development
SHA -Environmental Planning Division
SHA - Construction
Project Cost : \$6.2 million

MAJOR ROADWAY

MD 210 Interchange (WWB)

Corman Construction, Inc.
SHA Construction
Project Cost: \$40.8 million

MINOR ROADWAY / RESURFACING

US 50 From MD 328 To Dutchman's Lane

David A. Bramble, Inc.
SHA Construction
Project Cost: \$4.3 million

STRUCTURE NEW / REHABILITATION (OVER \$5 MILLION)

MD 210 Interchange (WWB)

Corman Construction, Inc.
SHA Construction
Project Cost: \$40.8 million

STRUCTURE NEW / REHABILITATION (UNDER \$5 MILLION)

Freeland Road Over I-83

Kinsley Construction, Inc.
SHA Construction
AND

Sudbrook Lane Bridge Over CSX Railroad

The Six M Company
Baltimore County

TRAFFIC AND SAFETY

MD 65 From Taylors Landing Road To 0.18 Mi. North Of MD 68

C. William Hetzer, Inc.
SHA Construction
Project Cost: \$3 million

LANDSCAPE/STREETScape

MD 16 From West Of Linkwood Road To Corporate Town Limit And MD 14 From Creamery Road To East Of MD 392

David A. Bramble, Inc.
SHA Construction
Project Cost: \$6.2 million

MATERIAL/SUPPLIER

I-495 / I-95 Woodrow Wilson Bridge & Approaches Over Potomac River - MD Approach To Bascule Span

Potomac Constructors, LLC.
SHA Construction
Project Cost: \$191 million

ENVIRONMENTAL

US 113 From Market Street To North Of MD 365

David A. Bramble, Inc.
SHA Construction
Project Cost: \$15.4 million

DBE/MBE

US 113 From Market Street To North Of MD 365

Guardrails, Etc.
SHA Construction
Project Cost: \$15.4 million

PARTNERING WINNER

I-495 Over Potomac River Bridge #151000 Blastech Enterprises, Inc.

SHA Construction
SHA Office Of Bridge Development
Design Firms: Greenhorne & O'Mara, Inc. and Whitman, Requardt & Associates, LLP



Concrete 2009 Conference - Nine Years and Counting

The Maryland State Highway Administration has been partnering with the concrete industry and the FHWA for the past nine years to plan and produce a one-day conference of networking and learning about concrete products for highways projects. Products and service displays compliment an array of expert speakers from within the SHA, FHWA and around the country. The Concrete 2009 Conference was held in Timonium, Maryland again this year on March 24, at the Crown Plaza.

The agenda included the following topics / speakers:

- ❖ Keynote - Greg Welker, Deputy Administrator, MD SHA
- ❖ Overview of Concrete on the ICC - Mark Coblentz, MD SHA
- ❖ Woodrow Wilson Bridge Update - Frank Flynn, MD SHA
- ❖ SHA Concrete Mix Update - Paul Finnerty, MD SHA
- ❖ I-35 W Bridge in Minneapolis - Brice Urquhart, FIGG Bridge & Dustin Thomas, MN DOT
- ❖ Pre-Cast/Post Tensioned Pavements - Gary Hoffman, Applied Research Associates
- ❖ Pavement Selection - Bob Long, ACPA
- ❖ WV Route 9 Concrete Paving - Mike Durst, Hi-Way Paving, Inc.
- ❖ Pavement Surface Characteristics - Leif Wathne, ACPA National
- ❖ I-95 Section 100 Update - Gradon Tobery, STV, Inc.
- ❖ Bay Bridge Pre-Cast Slabs & MOT - Geoffrey Kolberg, MdTA
- ❖ Concrete Elements on ICC - Jake DiGate & Phil Colflesh, CONTECH Construction Products
- ❖ Life-365 Service Life Methodology - Tony Kojundic, Silica Fume Assn / Elkem Materials

This year's conference planning committee, lead by Vicki Stewart and Tom Evans included the following people from SHA, FHWA, Harford County and industry: Paul Finnerty, Vachel Davis, Tom Ball, Lou Triandafilou, Azmat Hussain, Naveed Shaw, Bob Long, Tim Almany, Tom Sparks and Kevin Clisham.

The Concrete 2010 Conference has been scheduled for April 14, 2010 and will be held at the Maryland State Fairgrounds, which allows for several outside full-scale demonstrations and placements. For more information, contact Tom Evans at 301-694-4899.



16th Annual MdQI Conference

Continued from Page 1

that the Chinese word for crisis can be translated as both 'danger and opportunity' and that we should not fail to recognize the "opportunity" that could result from the current economic situation.

The highlight of the day was undoubtedly the luncheon skit performed by Doug Rose and Charlie Adams, as well as the presentation by the SHA Advanced Leadership Program class. The former had the audience rolling off their chairs with laughter, while the latter served as a sobering reminder of our moral duty to be environmentally responsible. Both were extremely well received by the audience and were highly rated on the evaluation forms.

Over the years, two things people have come to expect of the MdQI Conference are relevant and varied breakout sessions, along with fun activities. This year was no different. An excellent array of informative sessions encompassing environmental initiatives, safety, mega project updates, partnering, traffic management, communications and new regulations/procedures to name a few, kept attendees busy and engaged on both days. The fun activities didn't disappoint either and the inaugural pinewood derby track race drummed up huge interest from everyone who cheered for the nine qualifying vendor participants, including one "joint venture" racing team. The event was such a success that it will be repeated next year in what will hopefully be the start of a new tradition.

The two day conference was capped off with the Awards of Excellence presentations during dinner. Popular emcee Wesley Mitchell kept the audience entertained and the winners were given due recognition for their worthy accomplishments in the year past. A detailed list of the winners in each category can be found on Page 3 of the newsletter, and also on the MdQI website (<http://www.mdqi.org>), along with a host of other useful information that is continuously updated.



Conference attendees enjoy one of the many technical sessions.



First Annual Pinewood Derby Race Track

The tremendous success of the 16th Annual MdQI Conference is owed to the painstaking contributions of everybody who had a hand; big or small, in planning, participating, sponsoring and volunteering. Their commitment to, and belief in MdQI's purpose is why everyone can look forward to an even better conference next year. If you have comments or suggestions on conference topics for MdQI's 2010 Conference, please contact the Conference Subcommittee Co-Chair Ray Moravec at r_moravec@wallacemontgomery.com.

MD's 6th Highway Construction & Engineering Career Day This Event Just Keeps Getting Better

MdQI's 6th Highway Construction & Engineering Career Day event was held on March 18, 2009 at Alban/Caterpillar's Rosedale, MD facility in Baltimore County. Over 400 Baltimore County students, teachers, counselors, and other adult chaperones participated. Alban/Caterpillar served as excellent hosts, and they went "all out" in transforming a portion of their facility to house interactive presentations on a number of civil engineering disciplines, as well as hands-on construction activity stations and heavy equipment displays. The Baltimore County Workforce Development Office provided lunch for all participants (including industry volunteers).

The event also included a tour of Alban's equipment remanufacturing center, which is located about a mile from the Pulaski Highway site. BGE provided staff to help with bus flow and parking, and in directing students to the orientation area. Career information was provided in each of the giveaway bags, and each participant received their very own hard hat to remember the day. The feedback from students, teachers, and Alban officials was very positive. A de-briefing meeting was held on April 29 to discuss the next event. More details will be provided in upcoming editions of this newsletter and on the MdQI website. If your company is interested in hosting the event next spring, please contact Barry Catterton at 443-572-5051.

An excellent video was produced by Baltimore County Public Schools' Education Channel. It aired 7:00 am, 11:00 am, & 6:30 pm throughout the month of April on: The Education Channel, Comcast Cable Channel 73 & Verizon FiOS Channel 35. You can watch the excellent 3+ minute clip of the Construction and Engineering Career Day at http://www.bcps.org/news/ed_channel/default.html. Just click on the second to last clip on the web page, or select "view previous stories" if the video is no longer on the main page when you visit the site.



The MdQI Steering Team and Training & Recruitment Subcommittee would like to thank our event sponsors:

Gold Level Sponsors:

❖Alban Tractor, ❖Baltimore County Workforce Development, ❖Corman Construction, ❖Harford County Contractor's Association, ❖Johnson, Mirmiran & Thompson, ❖MD Asphalt Association, ❖MD Transportation Builders & Materials Association, and ❖Whitman, Requardt & Associates

Silver Level Sponsors:

❖G.A. & F.C. Wagman, ❖KCI Technologies, and ❖Midasco, LLC

Bronze Level Sponsors:

❖AECOM (formerly DMJM Harris), ❖A. Morton Thomas & Associates, ❖Development Facilitators, Inc., ❖EBA Engineering, ❖RJM Engineering, ❖Whitney, Bailey, Cox & Magnani

Equipment Sponsors:

❖P. Flanigan & Sons, ❖Gray & Son, ❖Hunt Valley Contractors, ❖M.T. Laney, and ❖Rowen Concrete

Leaders from the MD Asphalt Association, MD Transportation Builders and Materials Association, MD Ready Mix Concrete Association, and American Concrete Paving Association also played key roles in carrying out the event and securing sponsors. Special thanks also to ACEC/MD and McCormick Taylor for assisting with sponsorships, and in securing giveaway bags and other items for attendees. Engineers from the following organizations gave enthusiastic, hands-on presentations that engaged the students and showed how vital the profession is for society: Johnson, Mirmiran & Thompson; KCI Technologies (construction hands-on area); McCormick Taylor; RK&K; SHA; STV, Inc.; Wallace, Montgomery & Associates; Whitney, Bailey, Cox and Magnani; and Whitman, Requardt & Associates.

We look forward to our next event (in the 2009-2010 school year), which will allow us to expose more of the future workforce to the great career opportunities available in our industry! Please visit www.mdqi.org for the latest news on future events and your opportunities to participate. Work is underway to develop a database of interested students from career day in order for us to provide additional information they are interested in, and to encourage them to choose highway construction or civil engineering as a career.



Concrete Pavements and Sustainability

By Leif Wathne, P.E. (ACPA)

Sustainability is not simply a trend or a politically-correct watchword, it is a way of life, and will continue to be so, for the transportation-construction community around the world. To better understand sustainability, let's start with a definition. Sustainability is a three-pronged approach that involves balancing the needs of the environment with our societal needs and the economic realities we live in. It involves "meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs" [UN General Assembly 1987]

Longevity of Concrete Pavements: Longevity is one of the hallmarks of concrete pavements. Although historically pavements have had an intended design life (typically 20 years), concrete pavements consistently meet or exceed that design life while minimizing maintenance and repair. In fact, concrete pavements often can last 30 to 40 years before any resurfacing is necessary. Why is this longevity important? The longevity of concrete not only means less frequent rehabilitation and reconstruction, it also means lower consumption of raw materials (cement, aggregates, steel, etc.); lower energy consumption; less raw material processing; less air pollution; and less traffic congestion from work zones. This also has a safety and cost benefit to the traveling, tax-paying public. Because of this, longevity is the single most important sustainability benefit of any infrastructure element, including pavements.

Other Environmental Benefits: As it turns out, there are a whole host of additional sustainability benefits of concrete pavements beyond longevity that are less commonly known. 1) Concrete pavements are light colored and cool, two factors that have a significant impact on reducing urban heat island effect. 2) Concrete pavement is an effective mitigation strategy, because it can lower city temperatures; lower cooling costs; and reduce smog formation. The potential energy savings of implementing cool pavement strategies in the United State alone is about \$2 billion per year, according to the Lawrence Berkeley National Laboratory (2008). 3) The inherent light color of concrete also results in improved pedestrian and vehicle safety and reduced lighting and energy requirement, which allow either fewer fixtures or lower wattage. Either way, this can result in annual energy savings amounting to as much as 33%.

Re-Use, Recycling, and Renewal: Concrete is the most recycled material in United States, according to Construction Materials Recycling Association (2008), which reports some 140 million tons of concrete are recycled annually. Concrete is 100% reusable and is also recycled. Recycled concrete aggregate (RCA) can be used in new concrete, subbases, granular fill, and can be used for two-lift construction, which is currently the subject of research and field evaluations by the FHWA.

Concrete pavements also can be renewed through diamond grinding, which restores the driving surface by removing any surface roughness, thereby creating a smoother and longer lasting driving surface. A 2005 study by ARA for the California Department of Transportation (Caltrans) suggests an additional 17 years service life gained from diamond grinding on California concrete pavements.

Diverting Materials from Landfills: In addition to recycling, reuse, and renewal of concrete pavements, the concrete mixtures also use a significant amount of materials that otherwise would be diverted to landfills. For example, fly ash (from coal-fired power plants) and slag (from steel mills) have performance features and benefits that are resulting in their increased use in pavements. Up to 25% fly ash, and up to 50% slag cement, along with ternary mixes and sometimes blended cements, are common today in concrete pavements. Over 15,000,000 tons of fly ash is used in concrete in the United States annually (according to the American Coal Ash Association, 2006).

Another way the industry is reusing waste materials is through the diversion of tires away from landfills. Currently, more than 53 million used tires are used for fuel in cement kilns, according to the U.S. Environmental Protection Agency (2003).

Moving Forward: The concrete pavement industry, along with its partners in the FHWA and academia, continue to pursue ways to improve concrete pavements, as well as their constituent materials. The concrete pavement industry remains committed to advancing the science of sustainability, all with the goal of producing concrete pavements that meet the needs of our society. The industry in the United States strongly supports and is committed to sustainable development. In our view, sustainability is not only defined as a balance of societal needs, the environment, and economic realities, it is the key to our future.

The MdQI Steering Committee is jointly sponsored by representatives of the following agencies



The MdQI Mission - "To provide the Maryland Highway Industry a forum that fosters Coordinated and Continuous Quality Improvement in order to ensure Safe, Efficient, and Environmentally Sensitive Highways which meet the needs of all Transportation Stakeholders"



Don't forget to visit our [website at www.mdqi.org](http://www.mdqi.org)