EMBRACING A QUALITY CULTURE

Flexible Pavements of Ohio, 49th Annual Meeting
“More Tons Through Value”

Harold Mullen
Texas Asphalt Pavement Association
DALLAS COWBOYS STADIUM
How ‘Bout Them Cowboys…Parking Lot

- Recycled Asphalt Pavement (RAP)
- Recycled Asphalt Shingles (RAS)
- Warm Mix Asphalt (WMA)
Combining Technologies

- WMA with 15% RAP and 5% RAS
  - 83 lbs. of carbon emissions per ton of mix as compared to 109 lbs. with HMA and no recycled materials

That’s over a 23% reduction in carbon emissions
THE DALLAS COWBOYS GO GREEN WITH WARM MIX ASPHALT

Inside
Member Forum
Forging Ahead in the Face of Challenges

Events
The Upcoming TxAPA 2009 Annual Meeting

Reports
TxAPA’s History: A Decade of Accomplishments
WE HAVE A GREAT STORY TO TELL

- Perpetual Pavements to Thin Overlays
- Any traffic or load condition
- Speed of construction
- Ease of maintenance
- Environmental benefits
- Economic value
- Emerging technology
Honda and Harley Riders Prefer Smooth Asphalt Pavements
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We see our industry and customers changing and evolving Today

- Agencies doing more with less
- QC/QA specification affecting field expertise
- More environmental demands
- Need more durable, longer lasting pavements
- Economics
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Industry Response

- Partner to assist agencies
- Train and equip and do our homework
- Adapt and accept environmental demands
- Focus on quality through partnering
- More homework: economical materials, emerging technology
- Find solutions to challenges
More Tons Through Value

- Traveling Public
- DOT'S
- Cities
- Counties
- Private Developers
- Contractors

- Quality: Engineering Performance
- Quality: Economic Benefits
- Quality: Environmental Benefits
How we approach the issues!

Dedicated to Quality
Partners In Quality
Commitment  Communication
Cooperation
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WE WERE TOLD

WE HEARD
Partners in Quality

Got Committed
started Communicating
and we wanted to
Cooperate
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COMMITMENT

Strategic Planning Session

- Partnering, Awards Program
- Education, Training, Certification
- Committee Activities
- External and Internal Communications

We looked at every aspect of our association with a focus on quality

Changed our logo to remind us of our dedication to quality
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Partnering (Partners In Quality)

- Quality starts with partnering

**Partners In Quality Meetings**

- Held in each of TxDOT’s 25 districts, some quarterly, twice a year or annually
- Contractors, TxDOT DE, CE, AE’s, Lab, Maint. are invited
- Meet over lunch with an agreed to agenda set by TxAPA members and TxDOT
Partners in Quality Meetings

- Meetings cover asphalt industry issues and topics submitted by both TxDOT and TxAPA members
  - Discussion on RAP, RAS, WMA, etc.
  - Discussion on quality construction, best practices, costs reduction
  - How can we achieve more HMA or WMA award winning quality projects
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Partnering (Partners In Quality)

- Meet regularly with TxDOT management
- TxDOT invited to our Strategic Planning Session
- Joint committees on test procedures, specifications, and QC/QA certification program
- TxDOT/TxAPA Quality Pavement Awards Program
TxDOT/TxAPA Quality Paving Awards Program
Education and Training

- Joint Programs with TxDOT and Cities and Counties
- Paving and Compaction Seminars
- Superpave and Mix Design Seminars
- Specification Seminars
- Associate Member Technology Showcases
- NAPA Seminars
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QC/QA Certification

Hot Mix Asphalt Center (HMAC)

- Continuously updating our Certification Program as a partner with TxDOT
  - Level 1 A Plant Production Specialists
  - Level 1B Roadway Specialists
  - Level 2 Mix Design Specialists
- More than 1000 students annually
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HMAC, We stress

- Their technician job is important
- Accurate test results are essential for quality asphalt projects
- Be Partners in Quality and work together
- Productive pre-paving and planning meetings bring quality and value to the project

Success is not final, failure is not fatal, it is the courage to continue that counts. Winston Churchill
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- Implemented Soils and Base Certification Program
  - Five Levels of Certification
- Seal Coat training and education is held through the HMAC
- Developed New Web Site for Technicians
  - HMAC, www.txhmac.org
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COMMUNICATION

- Communication for industry and awarding agencies
  - Texas Asphalt Magazine
  - eTxAPA newsletter
  - Webinars
  - TxAPA Web Page
  - HMAC Web Page
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COMMUNICATION

- Communication for industry and awarding agencies
- Technology Update Seminars
- Annual Meeting
- Technical Presentations at other Association
- Brown Bag/Lunch and Learn Seminars
- Outreach – External Customers
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COMMUNICATION
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COOPERATION

- Hamburg Wheel Test
- Material Transfer Device
- Substitute Binder (RAP) (RAS)
- WMA
- IR Pave System
- Roline Laser – tougher ride specification
- Overlay Tester (Cracking)
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COOPERATION

- Custody of Cores
- Proficiency Testing
- Lab Equipment
- Test Procedures
- Specifications
High Price HMA Going The Way Of The Cave Man?

By Dale A. Rand, P.E.

Background
In 2008, the reasons beyond our control, the supply of both asphalt and polymers became very tight, or in some cases nearly non-existent. As a result, the price of liquid asphalt and polymers skyrocketed along with the price of HMA and highway construction in general. All of this combined with severe funding shortages caused us to re-examine how we do business.

In 2009, material and construction prices have dropped considerably. However, TxDOT is still experiencing serious funding shortages, causing the Department to look for ways to stretch the available funds. From lane closures to paper clips, the Department is cutting costs elsewhere to preserve funds for pavement construction, rehabilitation, and maintenance, while at the same time implementing ways to reduce the cost associated with these three activities. The Construction Division of TxDOT has worked with TxDOT, the Associated General Contractors of Texas, and other industry partners to develop specifications that emphasize both cost reduction and quality improvements to HMA in Texas.

Special Provision 340-004 was recently approved and will be required for use on all projects beginning with the January 2010 construction letting. This special provision contains at least five significant changes that will affect the paving industry.

Here, we will focus on the three issues that have potential to significantly reduce the cost of hot mix asphalt (HMA) and RAS.

The proper use of substitute binders and as well as RAP and RAS enable suppliers to reduce the cost of HMA by more than 20% in some cases. Combining these three options will produce a mixture that is more affordable and arguably more flexible than using RAP or RAS alone.

Some would argue that the Department may be going too far in allowing the use of these materials to proliferate. It should be pointed out that TxDOT’s administration previously made the commitment to allow the use of RAP on almost all HMA projects, and the Department is already benefiting from the cost savings associated with its use.

Since RAS contains roughly four times as much asphalt as RAP, it is logical that if the Department allows RAP, it should also allow RAS. Note that RAS is currently used successfully in HMA in a number of other states and has been used as a limited basis in Texas.

Although the use of both RAP and RAS is that these materials contain asphalt that is highly refined, which if not used properly, can adversely affect HMA. There is no doubt that a mixture with PE 70-22 virgin binder plus RAP and RAS will be very stiff. As a general rule, this use of 20 percent RAP or 5 percent RAS will have about the same effect on the HMA as using the Binder grade (in this example) from a PG 64-22 to a PG 70-22.

Results from the Rubber Wheel Test (RWT) confirm this stiffening effect. As a result, it is often recommended that the binder be dropped one grade (e.g., from PG 70-22 to PG 64-22).
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- Our industry is changing
- Customer needs changing
- We need to have solutions to challenges and changes
- Work as Partners in Quality
- Be dedicated to quality
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Quality… Sells Hot Mix

- Give us the quality materials we specify
- Accurately run and pass quality control and assurance test
- Build projects with quality to our specifications
- It will perform with quality to our design life
Texas Favorites
THANKS
FPO