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Our Mission

The mission of TPPC, in joint collaboration with the Center for Transportation Research (CTR) of the University of Texas at Austin and the Texas Transportation Institute (TTI) of Texas A&M University, is to promote the use of pavement preservation strategies to provide the highest level of service to the traveling public at the lowest cost.

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Issue Highlights

TRB 87th Annual Meeting

The Transportation Research Board is a division of the National Research Council, which serves as an independent adviser to the federal government and others on scientific and technical questions of national importance. TRB's mission is to promote innovation and progress in transportation through research. The Transportation Research Board's 87th Annual Meeting will bring more than 10,000 transportation professionals from around the world to Washington, DC on January 13-17, 2008. The TRB Annual Meeting program will consist of over 3,000 presentations in 600 sessions. Summaries of selected seminar papers related to pavement preservation will be included in the next issue.

Mark Your Calendar: TPPC Seal Coat Training Courses

As part of our continuing efforts to advance the field of pavement preservation, the Texas Pavement Preservation Center is proud to offer two new training courses on seal coats, also known as chip seals. Each course is designed to primarily target one group of maintenance professionals: "Seal Coat Inspection and Applications" is intended mainly for inspectors, while "Seal Coat Planning and Design" is tailored to the educational needs of maintenance engineers. The courses have 6 and 5 chapters, respectively, and cover topics from pavement preservation concepts to equipment inspection. All those attending one of the approximately 8 hour long courses will have the opportunity to receive 0.8 Continuing Education Units (CEUs), provided they score above passing on the corresponding quizzes. The first two rounds of courses will be held in Fort Worth on February 27-28 and Austin on March 18 and 19. The final round of courses will be in Lubbock, TX from April 15-16. For more information on this and other continuing education courses, or to request a course in your area, contact Dr. Yetkin Yildirim at yetkin@mail.utexas.edu.

2008 – TxAPA Seal Coat Conference

The Texas Asphalt Pavement Association (TxAPA) and Texas Department of Transportation (TxDOT) held their 2008 West Texas Regional Seal Coat Conference on February 5-6, 2008 in Abilene, Texas. The conference is designed to provide seal coat inspectors, seal coat managers, and maintenance seal coat crews with a comprehensive overview of the current safest and most efficient practices for seal coat operations. This year's presenters included Kelly Durham, Tom O'Leary, Steve Douglas, David Stroud, Bill Wiese, Chuck Dannheim, and Pat Wootton. Their presentation topics ranged from best practices in seal coating, seal coat asphalts and aggregates, cold weather seals, fog seals, chip seals, crack seals, and prime seals. All of the presenters worked hard to demonstrate how seal coats affect Texas pavements in order to improve road safety and increase our knowledge of pavement preservation methods.

Chip Seal Equipment: General Information presented by Kelly Durham

Kelly Durham's presentation focused on chip seal equipments and proper chip application. Durham emphasized that operation safety comes from knowledge of the materials and equipment used in the sealing process. Therefore, it is important for all attendees to understand how asphalt is made, how the vehicles used for sealing work, and the general process of chip seal application. Durham listed poor weather conditions during construction as a major cause of many chip seal failures and suggested that construction should take place in mild or warm weather. The presentation concluded with a few notes on workmanship. Durham strongly emphasized that success results from good teamwork; it is therefore imperative for the whole crew to be on the same page. Durham's presentation showed that while it is important to correctly calibrate sealing equipment and prepare against weather conditions, it is equally important to calibrate the work crews.

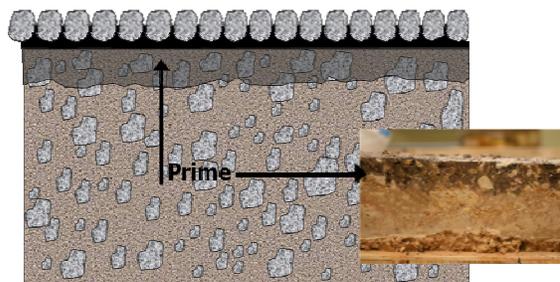


Seal Coat Best Practices presented by Tom O'Leary

O'Leary's presentation discussed the best and most efficient seal coat application techniques. In order to improve seal coat practices, he suggested that preservation crews focus on the life expectancy of the road and how to improve pavement safety, work with the limitations of the seal coat, and take note of the public's response to the various aspects of road repair. O'Leary listed the following as the five keys to success: 1) Timely, quality prep work around 90 to 180 days before construction begins, 2) Surface inspection the day of the application to determine rates and make knowledgeable adjustments in the field, 3) Use of variable rate spray bars and modified emulsions/asphalts on higher volume roadways 4) Timely application of asphalt and aggregate to optimize aggregate embedment, and 5) Re-visiting previous jobs to learn what worked and what did not.

Prime Seals, Cool Weather Seals, Multiple Course and Fog Seals presented by David Stroud, Steve Douglas, and Bill Wiese

This presentation had three different sections. The first identified the primary functions of a prime coat and explained the types of base materials used. It also reviewed the rewards, risks, optimum conditions, and problems facing cool weather seals. The presenter explained the function of a double seal and finished his portion of the presentation by providing tips on how best to correct bleeding and raveling/rock loss should either occur.



The second portion of the presentation focused on seal coat preparation. The presenter provided information for various types of seal coat, including fog seal and crack seal, and gave tips on using herbicide and repairing pavement edges. The presentation also emphasized the importance of repairing the cause of pavement failures, rather than just patching over them. The crew should complete all repairs at least three months prior to seal coat application and select the appropriate aggregate and asphalt application rates for each road under treatment. If done correctly, a seal coated roadway may last five to seven years.

In the last section of the presentation, Steve Douglas explained the functions of fog seals and their

application and dilution rates, as well as some construction guidelines to improve performance life. Douglas ended his portion of the presentation with a summary of the advantages to using fog seal in road repair: it is inexpensive, effective, efficient, and acceptable on most surfaces.



Seal Coat Asphalts presented by Chuck Dannheim

Dannheim's presentation first identified the two types of seal coat asphalt: hot applied and emulsion. Within hot applied asphalts, there are two more types: one is pure asphalt cement and the other is polymer-modified asphalt cement. During the application of hot applied seal coat, a pre-coated aggregate is recommended. Hot applied products are designed for efficient quick applications but leave little room for mistakes. Emulsions are ideal for situations requiring just the opposite. They have three classifications: anionic (meaning negatively charged), cationic (positively charged), and nonionic (neutral). It is recommended that emulsions are used with "non-coated" aggregate. They have a slower cure time, provide a big margin of error, and are easier than hot applied products to work with.



Seal Coat Aggregates presented by Pat Wootton

Wootton discussed the different types of aggregate available. The types used in Texas include crushed stone, crushed slag, crushed and uncrushed gravel and traprock (basalt). Wootton also highlighted the difference between the various surface aggregate classifications, identifying Class A and B as normally required for surface treatment, with Class A as an aggregate which only allows blending for HMA. Another aspect of the presentation focused on seal coat aggregate properties: Wootton demonstrated the effects of different properties on pavement performance. For example, different mineral types affect the pavement's resistance to polishing, affinity for asphalt absorption, and skid resistance. Finally, the presentation concluded with information on testing procedures for seal coat aggregates. Wootton emphasized that in order to correctly access the procedures, crews must obtain an adequate sample size from non-segregated sampling locations.



2008 TxAPA Seal Coat Conference participants