

I-76 is Introduced to...

The first rubblization plus asphalt overlay project in Colorado is underway on I-76 and was introduced in grand style on June 22 with a day long seminar and project tour. Approximately 120 participants were in attendance including representatives from the DOT's of seven western states. The seminar portion of the program included discussions on rubblization techniques along with technical presentations from several rubblization experts at the national level.

The seminar was co-sponsored by the Asphalt Institute, the Colorado Asphalt Pavement Association, the Colorado Department of Transportation, the Federal Highway Administration and the National Asphalt Pavement Association. In addition, prime contractor Asphalt Paving Co. of Golden hosted the reception the night before the seminar.

The highlight of the day was a field trip to the construction project site. Located on a 3 mile stretch of I-76 northeast of the Sterling interchange, participants were given an opportunity to see first hand the rubblization process in action. The primary benefit of the rubblization process is to eliminate the potential for reflective cracking. Phase I construction, westbound rubblization, was underway and both the multi-head breaker and the resonant breaker process were demonstrated.



Rubblization Seminar, Northeastern Junior College, Sterling, Colorado.



"INTRODUCING RUBBLIZATION TO COLORADO"

Asphalt Overlay to Rehabilitate PCC Pavements

NOTE: DATE CHANGE

Tuesday, June 22, 1999

Northeastern Junior College, Sterling, Colorado

[Project Location, I-76 northeast of Sterling]

OPEN HOUSE AND SEMINAR

Sponsored By

DOT
Colorado Department of Transportation
Colorado Asphalt Pavement Association
NAPA
National Asphalt Pavement Association
U.S. Department of Transportation
Federal Highway Administration



THE MULTI-HEAD HAMMER.

RUBBLIZATION



IN ACTION...

THE RESONANT PAVEMENT BREAKER.

Due to extensive alkali-silica reactivity (ASR) deterioration in the existing concrete pavement, the crack and seat process was not effective and unable to crack the pavement full depth. As a result, a crack and seat test section will not be included in the project.

Both westbound lanes were completely rubblized in a very impressive 2 working days. “We actually stretched the process out so that we weren’t done before the project open house,” stated **Phil Kirk of Resonant Machines Inc.**, one of the rubblization subcontractors. Kirk also stated in his presentation that a highway reconstructed by rubblizing and asphalt overlay can be completed in 20% of the time and 25-35% of the cost of the concrete alternate.

The rubblization specifications for this project were developed using compiled specifications from West Virginia, Indiana, Arkansas, and Louisiana.

CDOT Project Engineer Jeff Vickers gave an overview of the project and explained some of the advantages that the rubblization plus asphalt overlay has over the traditional approach used on I-76.

To handle the extensive loading of interstate traffic, a Superpave mix design was selected. 3-2" lifts of HBP Grading S (109 gyrations) will be utilized together with a PG70-34. Also, to avoid the potential of entrapped water in the roadway, underdrains are being installed as part of the roadway design. Underdrains have been used extensively in other states in conjunction with rubblization.

According to Vickers, three of the advantages of the rubblization plus asphalt overlay are reduced cost, shorter time of construction, and the ability to be performed under traffic thus eliminating the need for expensive traffic control and reducing the hazard to the traveling public.

The bridge reconstruction work has slowed the construction process but the westbound lanes are expected to be rubblized in August or early September and paving to be complete by October. ♦



I-76 rubblization project tour, at left, CDOT Deputy Chief Engineer John Unbewust and Project Engineer Jeff Vickers.



I-76 Project Tour, Phase I - westbound construction, a rubblized roadway, near Sterling Interchange.