



ALABAMA DEPARTMENT OF TRANSPORTATION

1409 Coliseum Boulevard, Montgomery, Alabama 36110

Bureau of Materials and Tests

3700 Fairground Road, Montgomery, Alabama 36110

Phone (334)206-2200 FAX (334)264-6263



Kay Ivey
Governor

John R. Cooper
Transportation Director

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TECHNICAL MEMORANDUM 100 -24

TO: Area Materials and Construction Engineers

From: Scott George, P.E. *AWA*
Materials and Test Engineer

RE: Trials of DOT C-10 as a substitute for Single Bituminous Surface treatments

The Bureau of Materials and Tests was involved with trials using DOT C-10, a performance graded asphalt trackless tack product, in lieu of single bituminous surface treatments such as the traditional single layer chip seals found in section 401 of ALDOT's Standard Specifications.

Trial 1: NH-038(541) on US 280 in Shelby County between MP 24.754 and MP 25.454 DOT C-10 was placed in lieu of a traditional section 401 "G" treatment. The overlay was approximately two inches thick. As of the date of this memo, after nearly four years of traffic, the experimental sections are exhibiting equivalent performance to the traditional single surface treatment placed on the rest of the project.

Trial 2: NH-FMGR-0001(622) on US 431 in Calhoun County between MP 246.784 and MP 250.885 DOT C-10 was placed in lieu of a traditional section 401 "E" treatment over the entire length of the project. The overlay was approximately two inches thick. As of the date of this memo, after nearly two years of traffic, the experimental sections are exhibiting equivalent performance to a traditional "E" treatment placed on another project, on the same route, within 10 miles of the experimental sections.

These 2 trial sections have been placed and monitored with the following observations:

- DOT C-10 applied at 0.11 to 0.14 gallons per square yard appears to be as effective at reducing reflective cracking as a traditional single layer chip seal. The application rate should be verified at the beginning of the project using ASTM D2995 Estimating Application Rate and Residual Application Rate of Bituminous Distributors.
- DOT C-10 should not be exposed to traffic. At the end of a working day DOT C-10 should be covered with another pavement layer or removed from the surface.
- If a project is let and bid with a bituminous surface treatment in the plans, and the change to DOT C-10 is made after the project is awarded, this should be accompanied by a reasonable cost reduction.

If you have any questions please contact State Testing Engineer, Chance Armstead, P.E. at armsteadc@dot.state.al.us or 334-206-2420.