0-6798: Seal Coat Binder Specification

Background
Each year Texas Department of Transportation (TxDOT) districts develop district-wide preventive maintenance contracts to maximize the benefit of the available funding level. In 2012, TxDOT allocated approximately $336.68 million for preventive maintenance work throughout the state. These contracts predominantly utilize seal coats to treat roadways selected by district staff. The roadways selected to receive a seal coat treatment are determined by evaluating the current Pavement Management Information System data along with visual inspections and recommendations of maintenance supervisors and area engineers.

A prioritized list of projects including corresponding project cost estimates is typically developed and compared to the preventive maintenance funding allocated to the district. This research project evaluated the success of this system to date by 1) identifying districts with chip seal projects accomplished under this system; 2) interviewing TxDOT personnel, material suppliers, and contractors with experience under this system; 3) summarizing the experience of the various parties; 4) analyzing the information; and 5) reporting the results.

The contracting method included the development and implementation of the Seal Coat Material Selection Table (Figure 1). The goal associated with the implementation of the table was to reduce construction costs through increased competition and contract flexibility. The Seal Coat Material Selection Table provides a three-tiered approach based on average annual daily traffic for the selection of an asphalt binder to be used for the corresponding projects.

What the Researchers Did
Researchers held district meetings that varied from one to another but generally included district engineers, area engineers, maintenance and operations engineers, designers, materials engineers, construction engineers, planners, seal coat supervisors, and maintenance supervisors. Researchers dispersed questionnaires and conducted interviews.

As information was gathered, the research team compiled the detailed comments and searched for common responses. While there was not a unanimous response among participants to any given issue, the consensus of the responses was synthesized, and the minority responses were noted.

What They Found
The districts interviewed seemed to have very clear ideas about why the table was developed. Most believed that it was intended to increase competition between contractors, while some mentioned lowering costs, increasing contractor flexibility, improving the uniformity of
contracting practices statewide, and finally matching the binders to the appropriate roadways.

There is not a consensus among districts on whether the tier system is saving the department money. From an administrative point of view, the table appears to have made contract management generally easier.

When asked if binders within a given tier were equivalent, there was not a consensus among the various districts, although most believe that within a given tier there are problems in equating performance among binders.

**What This Means**

The tier system is working as it was intended for the most part. It has spurred competition among binder suppliers.

There is a general sense of satisfaction with the current tier system although at least one district and one contractor expressed negative opinions about the system. The binder suppliers expressed appreciation of the system so long as it is being used as it was intended.

The tier system is saving money as calculated by TxDOT. Over a 2.5-year period, it is estimated that the system has saved more than $33 million.

There are opportunities for the tier system to be improved.

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