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Montana Department of Transportation
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Memorandum

To: Distribution

From: Matthew R. Strizich, PE – Materials Engineer MRS

Date: January 4, 2006

Subject: ½ in (12.5 mm) Plant Mix Surfacing

Revised guidelines for the use of ½ in (12.5 mm) plant mix surfacing on future projects are provided below. These guidelines supersede those given in my April 7, 2005 Surfacing Design Guidelines Memo.

When using Grade S, the selection of nominal aggregate size, ½ in (12.5 mm) or ¾ in (19 mm), should be based on the design thickness and the condition of the existing roadway. The two sizes are considered equivalent structurally, but due to the higher binder content required for the ½ in (12.5 mm) PMS, it is more expensive.

1. Specify ¾ in (19 mm) Grade S on all projects where 0.15 ft (45 mm) or greater of new plant mix surfacing is needed.
2. Specify ½ in (12.5 mm) Grade S on all projects where less than 0.15 ft (45 mm) of new plant mix surfacing is required and all of the following criteria are met.
    - The existing surface to be overlaid has an average rut of 0.20 inches or less.
    - The existing surface to be overlaid has an average ride value of 80 in/mile or less.
    - An isolation lift is required for the project.

Note: The surfacing depth criteria listed above are applied to the specified surfacing thickness and does not include leveling or isolation lifts.

Consult Surfacing Design prior to specifying an overlay depth less than 0.15 ft (45 mm). Specify 0.13 ft (40 mm) overlay depth when using ½ in (12.5 mm) Grade S.

Effective Dates

The surfacing specified in each contract and the basis for plan quantity of the asphalt cement will reflect these changes starting with the March 2006 letting. Surfacing Design will reevaluate all overlay projects scheduled for letting in March 2006 or later and notify the project manager if it is necessary to change the specified plant mix surfacing. Do not

change any projects to ½ in (12.5mm) Grade S if the current design is to use ¾ in (19 mm) Grade S.

Follow Paul Ferry's December 14, 2005 Isolation Lifts memo for specifying ½ in Grade S with isolation lifts except show the minimum plant mix thickness as 0.20 ft. This thickness provides for a 0.07' isolation lift and a 0.13' overlay.

MRS

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