

RESPONSE TO 1200702 – INDUSTRY REVIEW COMMENTS

Bob Burleson (4/7/06 Internal Review)

I appreciate you making this spec change. I question why the RAP must come from a FDOT project if it is stored at a DEP approved site. It seems like a lot of additional method specs for the RAP. Maybe all this is necessary, but it seems restrictive to me.

COMMENT PERSUASIVE: Addressed in 120-8.4.1

David O’Hagan to Rick Renna (4/7/06 Internal Review)

Rick:

What are your thoughts about using RAP in embankments that are subject to scour events (inland and/or coastal) such as abutments or bridge approach causeways? I wonder if the DEP has thought about it. Do we really have full confidence in our scour protection measure to be sure RAP stays put behind our rip rap? Right now the specification only says,

"Construct embankments of acceptable material including reclaimed asphalt pavement (RAP), broken portland cement reclaimed concrete pavement aggregate (RCA) and portland cement concrete rubble, but containing no muck, stumps, roots, brush, vegetable matter, rubbish, reinforcement bar or other material that does not compact into a suitable and enduring roadbed. **Do not use RAP or RCA in the top 3 feet of slopes and shoulders that are to be grassed or have other type of vegetation established.**"

and not to use it in:

- "1. Construction areas that are **below the seasonal high groundwater table elevation. ; on the top 6" of slopes and shoulders that are to be grassed or other type of vegetation established**
- 2. or as MSE Wall backfill.** Prior to placement, submit documentation to the Engineer for his approval, outlining the proposed location of the RAP material."

RESPONSE: With good hydraulic design, the permeability of RAP should lend itself to an effective filtrations system design required for Riprap in conjunction with bedding stone and filter fabric.

Donald Barnhouse

**QUESTION.....WHEN DID WE START USING RAP(RECYCLED ASPHALT PAVEMENT) IN OUR EMBANKMENT?
RESPOND PLEASE!**

In the past/future we are recycling a goodly percentage of RAP for resurfacing. There is a rising cost in liquid asphalt and with this spec's intent is to allow the contractor to bury the recyclable RAP from a project in the ground for embankment. The reason for (recycled RAP) was to cut

the cost of completely using new asphalt(liquid asphalt/hydrocarbon) . The RAP was hauled to a pug mill and recycled with gradation of aggregate and mixed with new liquid asphalt and recycled liquid asphalt. This is the basic reason for cutting the asphalt cores of the existing roadway and testing for recycling(composition report for contractors use) A new design mix to go back on the roadway resurfacing process. But this spec is entertaining the idea of "no recycling" but just to use the RAP(asphalt millings) for fill. I am sure that this can be done but are we defeating the purpose of using RAP in resurfacing valuable asphaltic material? Jim what do you think? Am I off base or what?

Response: I don't think Contractors can use up 100 % of all RAP. The economics of freight these days have created startling issues for contractors such as \$50 / ton fill in Brevard County. I honestly don't know who started using RAP first (although it was in District 4/6). The market will decide.

Andy Keel

In 1200702, section 120-7.2 refers to "**reclaimed** asphalt pavement (RAP)" and section 120-8.4 refers to "**recycled** asphalt pavement (RAP)".

COMMENT PERSUASIVE: Corrected in text.

Duane Brautigam

The referenced Joint Bulletin (Materials Bulletin No. 08-05; DCE Memorandum No. 18-05) indicated the Contractor may use RAP Materials (1) from an identifiable Department project, certifying the source OR (2) stored at a facility with an approved Florida DEP Storwater permit. Subarticle 120-8.4 seems to indicate that RAP Materials must satisfy BOTH criteria (not either/or). Please clarify the desired intent.

COMMENT PERSUASIVE: This has been corrected to reflect both options.

Also, the numbers 120-8.6 and 120-8.7 appear in error within 120-8.4.

RESPONSE: Your office has made the correction. Thank you/

Bob Dion

Change the sub-article numbers of 102-8.6 to 120-8.4.2; 102-8.7 to 120-8.4.3 and 120-8.4.3 to 120-8.4.4.

RESPONSE: Formatting error has been corrected.

Jenny Sargent

120-8.4.1 General - Has the requirement, to only use material from facilities approved by a FDEP stormwater permit, been coordinated with FDEP? Not all projects require stormwater permits, would this exclude using rap or concrete from these projects?

I think using this material as embankment would not be considered disposal. But to be safe, has there been any coordination with DEP solid waste, for their information. USEPA has recent policies to recycle(like this) rather than dispose.

Response : Yes, We first talked to FDEP before making the changes in the Bulletin/Memorandum. They have no concern with the use of RAP in roadways as we have written the specification. Their issue was that they wanted to avoid contractors who store RAP on the "side of the road" or in a "field" for say two years or more. These contractors would in effect be violating storage laws.

DISTRICT 2 MATERIALS OFFICE
Daniel Cobb

120-8.4 Recycled Asphalt Pavement (RAP) Method:
Note the reference to 102-8.6 & 8.7

Response: Corrected

120-8.4.3 Alternate Soil and RAP Layer Construction:

Consider whether the undertolerance of stabilized subgrade layers will be allowed for the soil materials?. If so perhaps the MINIMUM should be stated as LBR 35.

Response: The specification is meant to be conservative. No undertolerance is permitted. This is for embankment not stabilized subgrade layers.
