

1600000 STABILIZING
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (5-14-15, Internal)

Suggestion:

Under section 914-2.2 - Use the acronym RAP with reclaimed asphalt to be consistent with section 160-2.2.1

Response:

Juan Castellanos
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Comments: (5-15-15, Internal)

I have 3 comments on 160. No comments on 914.

1. 160-3.2.1: Delete “As an exception,”. Just leave last sentence as: *The Engineer may waive these testing requirements if the additive stabilizing materials consist mostly of RAP.*

Response:

2. 160-3.4: Change subtitle to “**Mixed Materials Requirements:**” since this article deals with more requirements than just the maximum particle size.

Response:

3. 160-4.2.4.2: “When RAP materials....”. Shouldn’t we include RAP blended materials as well?

Response:

David Sadler
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Comments: (5-15-15, Internal)

Two questions for 160 spec:

1. For the highlighted sentence, if the material isn’t non-plastic it wouldn’t need to be tested? Or if it is non-plastic but doesn’t fail the organic content requirements of Section 914 because of the RAP materials, then it wouldn’t need to be tested?

The way it’s written as an “or” condition raises that question.

160-2.2.2 Reclaimed Asphalt Pavement (RAP) or RAP Blended (Different Project): When RAP is obtained from another project or there is a concern with contaminants, the Engineer will determine the acceptability of the material. If the material is non-plastic and fails the organic content requirements of Section 914 because of the RAP materials, sample and test in accordance with 160-4.2.4.2.

Response:

2. How much is mostly?

160-3.2.1 Sampling and Testing of Local Material before Mixing: When local materials are used for stabilizing, randomly select locations for sampling using a random number generator approved by the Engineer in accordance with the sampling procedure described in FM 1-T 267. Test at the minimum frequency listed in the table below before mixing. As an exception, the Engineer may waive these testing requirements if the additive stabilizing materials consist mostly of RAP.

Response:

Pat McCann
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Comments: (6-3-15)

1. 160-3.2.1: This section should exclude RAP/Blended, etc. since you have two new sections to address these and these are still considered “Local Materials”.

Response:

2. 160-4.2.4.1 and-4.2.4.1: These refer to material properties but are located in the density section of the spec. Suggest moving them up and re-numbering in 160-3. Please check the proposed spec. changes vs 120-8.4. As an example, this section says not to use RAP in the upper 12" of the embankment.

Response:

Kevin Price
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Comments: (5-28-15)

I am having issue with the section 160 revision. We have been using RAP and “Local Materials” - Clay for as long as i can remember. These rules and requirements now being imposed provide

no value to the department and only add excessive cost and testing. I will give a couple of examples:

1. Before we start on this one, someone will say “we are already doing this”, i still do not agree with it. We are sampling the source excessively prior to approval. We expect that the material is going to be what it was tested out to be. So now we have to wait for it to be spread out, then sample it and wait for the results to come back before we can mix. This sampling is to be done every 1000’. The source approval method that we have been using in the past has worked well and does not delay construction. Additionally, there are LBR and proctor samples done after mixing that will vet out any undesirable material.

materials are required, spread the material uniformly over the area to be stabilized. ¶
→ → **160-3.2.1-Sampling and Testing of Local Material before Mixing:** When local materials are used for stabilizing, randomly select locations for sampling using a random number generator approved by the Engineer in accordance with the sampling procedure described in FM1-T267, and Test at the minimum frequency listed in the table below before mixing. As an exception, the Engineer may waive these testing requirements if the additive stabilizing materials consist mostly of RAP. ¶

Response:

2. First, how are we to field determine whether the material is 2 microns or less in size? Then, I expect, we are to have several laborers walk behind the mixing operation and pick out any lumps over 1”?? What is the value to this? If the material meets the liquid and plastic limits, what is the issue? Clay does not mix like sand does. It holds together and will only “blend” in this manner if it is completely dry. This is a field operation and since we are in Florida and usually within feet of the water table, it will never be completely dry. We have had lumps in subgrade for as long as I can remember and it has never impacted the final product. If it is mixed well enough for the contractor to meet the density requirements, that is all that needs to be done.

Criteria	Test Method
Average Organic Content $\leq 2.5\%$	FM1-T267
Individual Organic Content Result $\leq 4.0\%$	FM-1-T267
Liquid Limit ≤ 30	AASHTO T89
Plastic Index ≤ 8	AASHTO T90
Asphalt Content $\leq 4.0\%$	FM5-563 (excluding Gradation Analysis)

¶
→ → **Ensure** that the gradation of the material within the limits of the area being stabilized is such that 97% will pass a 3/16 inch sieve and that the material does not have a plasticity index greater than eight or liquid limit greater than 30. Remove any materials not meeting the plasticity requirements from the stabilized area. Break down or remove from the stabilized area materials, including clay lumps or lumps made of clay-size particles (any particle size 2 microns or less), not meeting the gradation requirements. Remove any lumps of clay or clay-sized particles greater than one inch that do not meet the requirements of 160-3.2. Remove any materials not meeting the requirements of this Section from the stabilized area. ¶

Response:

3. 160-4.2.4.1 - How can we have a verification test, when there is not QC? Also, we are testing these material far beyond what is needed. I can buy brand new limerock from a mine and not have to do this testing but if we try to save the tax payers money by using the onsite materials, we have to test it to excess. At a minimum RAP will have limerock aggregate but we are at the point where we are finding more and more granite materials. What is the value of performing an extraction/gradation on rap every 1000'? Since Asphalt cement generally repels water I cannot even see how an attempt could be made to run a LL/PI. All we need here is source approval. Add the material to the road bed and mix it in, sample for LBR at the standard frequency and test for density at the standard frequency. We have sweetened the existing soils and made them better AND we have recycled materials in a way that can be considered green.

160-4.2.4.1 Local Materials: When local materials are tested in accordance with 160-3.2.1 and meet the requirements of 160-2.2, the Engineer will sample and test at a minimum frequency listed in the table below.			
<u>Test Name</u>	<u>Quality Control</u>	<u>Verification</u>	<u>Verification for Shoulder-Only, Shared Use Path and Sidewalk Construction</u>
<u>Organic Content, Gradation, LL/PI, and Soil Classification</u>	<u>Not required</u>	<u>One per eight consecutive LOTs</u>	<u>One per four LOTs</u>

160-4.2.4.2 RAP or RAP Blended Materials: When RAP or RAP blended materials are used for stabilizing that are not tested in accordance with 160-3.2.1, conduct QC sampling and testing at a minimum frequency listed in the table below. The Engineer will sample and test at a minimum frequency listed in the table below.			
<u>Test Name</u>	<u>Quality Control</u>	<u>Verification</u>	<u>Verification for Shoulder-Only, Shared Use Path and Sidewalk Construction</u>
<u>Asphalt Content, Gradation, LL/PI, and Soil Classification</u>	<u>One per two consecutive LOTs</u>	<u>One per eight consecutive LOTs</u>	<u>One per four LOTs</u>

Response:

4. I take exception to what is supposed to be a verification of quality control is being used as an independent sample. All throughout the contract QC samples are split samples with the department. The splits are run and compared to “verify” that the QC’s results are accurate. QC is “Verified Acceptance”. Now we have the verification sample for LBR being taken independently by the department staff with no QC test being done to compare it to. It’s purely a pass/fail test. This is not the how the verified QC system is supposed to work.

→	→	160-4.3.2: Department Verification Tests:
→	→	160-4.3.2.1 Bearing Value & Soil Classification: The Engineer will collect a sample at a location other than the location where the sample was collected in 160-4.3.1.3, and test the stabilized subgrade for determination of the LBR in accordance with FM5-515. The Engineer will select test locations, including stations and offsets, using a Random Number generator, based on the LOTs under consideration.

Response:

D5 Construction

Comments: (6-18-15)

How do we know if the RAP from the project is not contaminated? I still think it needs to be tested.

Response:
