412 Preventative Maintenance Thin Lift Surface

412.1 Description

This work consists of an asphalt plant thin lift surface course composed of crushed stone or screenings, natural sand, fractionated recycled asphalt, asphalt binder, and hydrated lime as an anti-strip additive. The primary purpose of this mixture is to provide a preventative maintenance surface to encourage longer lasting wearing courses. This mixture is mixed in an approved plant and constructed in accordance with the lines, grades, dimensions, thickness and typical cross section shown on the plans or as otherwise specified. All applicable special provisions and sections of Standard Specifications, except noted herein apply.

412.2 Materials

412.2.1 Aggregate

Ensure that aggregates used in the Preventative Maintenance Thin Lift Surface meet the applicable requirements of Subsection 401.2.2 of the 2007 Standard Specifications. Use crushed stone, fractionated recycled asphalt, natural sand, and or screenings for all aggregates used in this mixture. Ensure that the parent stone or gravel meets the Los Angeles Abrasion requirements and Sodium Sulfate requirements specified in Subsection 401.2.2.4 of the 2007 Standard Specifications and that no aggregate has an absorption value greater than 1.5% when tested in accordance with AASHTO T85.

412.2.2 Asphalt Binder

Conform the liquid asphalt binder to all requirements of AASHTO M320 and ensure that it is PG64-22 performance grade unless otherwise specified.

412.2.3 Hydrated Lime

Use hydrated lime as an asphalt anti-stripping additive meeting the requirements of AASHTO M303, Type 1. Blend the hydrated lime with the damp aggregate at a rate of 1.0% by weight of dry aggregate and meet all requirements of Section 401.2.1.3 and 401.4.11 of the 2007 Standard Specifications.

412.3 Composition of Mixture

412.3.1 Mix Design Criteria

Combine the aggregates with asphalt binder in such proportions that the composition by weight of the aggregate is within the limits specified below.

<table>
<thead>
<tr>
<th>Required Job Mix Criteria</th>
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<tr>
<td><strong>Sieve Designation</strong></td>
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<tr>
<td>1/2&quot;</td>
</tr>
<tr>
<td>3/8&quot;</td>
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<tr>
<td>No. 4</td>
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<td>No. 8</td>
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<td>No. 30</td>
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<td>No. 100</td>
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<td>No. 200</td>
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<tr>
<td>Binder Content (%)</td>
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<td>Gyratory Stability (95 +/-5mm)</td>
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A combination of the standard gradations for coarse aggregate, fractionated recycled asphalt (25% maximum) conforming to section 401.2.2.6.6 of the 2007 Standard specifications, manufactured screenings, regular screenings, natural sand, and hydrated lime will normally meet the above requirements.

The mixture composition shall be submitted to the Office of Materials and Research in Columbia for review and approval at least 30 working days prior to construction of the mixture. Dust/Asphalt Ratio and Moisture Susceptibility requirements do not apply to this mixture.

412.3.2 Field Criteria

Once the mix meets the mix design criteria apply the job tolerances based on 401.2.3.3 of the 2007 Standard specifications. Do not extend the tolerance range beyond the mix design range limits listed in 412.3.1. Ensure that that the minimum field gyratory stability is 2500 lbs using SC-T-96.

412.4 Construction

Conform all work to Section 401 of the Standard Specifications and other applicable supplemental specifications and special provisions except when noted in this specification. Place and compact the Preventative Maintenance Thin Lift Surface in a manner to provide the desired in-place compaction, and to produce a smooth riding surface.

412.5 Roadway

412.5.1 Tack Coat

Apply an approved emulsified polymer asphalt CRS-2P to the surface on which the HMA thin lift seal course will be placed. Conform tack coat materials and application to the requirements of Subsection 401.4.18 of the 2007 Standard Specifications. The tack rate may be adjusted to a rate outside of the specified range if the RCE deems necessary.

412.5.2 Temperature Requirements

Conform the placement of this mixture to the weather and surface temperature restrictions and mixture preparation and delivery temperature restrictions of Section 401 of the 2007 Standard Specifications.

412.5.3 Spreading, Finishing, and Compaction

Spread the Preventative Maintenance Thin Lift Surface at the rate of 50-60 pounds per square yard or as specified in the contract, and promptly roll it with an 8 – 12 ton tandem steel-wheel roller. Cease rolling as soon as the mixture is properly seated to the underlying surface.

412.6 Measurement

Measure this work as specified in Subsection 401.5 of the 2007 Standard Specifications.

412.7 Payment

This work will be paid for as specified in Subsection 401.6 of the 2007 Standard Specifications.

Required Acceptance Criteria: Acceptance of this mixture will be based on the Supplemental Technical Specification titled, Hot Mix Asphalt (HMA) Quality Assurance Acceptance of Hot Mix Asphalt Mixtures (SC-M-400), following the stipulations for Surface Type E.