**MGPEC Form #9 (1/26/2012)**

- **Mixture Design Requirements for Hot Mix Asphalt Pavements (HMA)**

This MGPEC Form #9 is a mandatory part of the bid documents, and shall be filled out by the AGENCY for each mix specified. The Contractor shall include a copy of this form with each Mix Design submittal after the contract is awarded.

**Street Classification:** ____________________________ (examples: Residential, Collector, Arterial, Industrial, Parking Lot or actual name for Project)

- **Construction Application:**
  - Top Lift
  - Intermediate Lift(s)
  - Bottom Lift
  - Patching
  - Other ________________

- **Aggregate Gradation:**
  - Grading ST (1.5” or less lifts, 3/8” NMPS)
  - Grading SX (2.5” or less lifts)
  - Grading S (2.5”+ to 3.5” lifts)
  - Grading SG*1 (3.5” or thicker lifts)
  - SMA (Top lift only)
  - 3/8”
  - ½”
  - ¾”

  *1Note = Grading SG depends on approved texture of mix, Grading SG lower lift(s) only.

- **RAP Quantity, Maximum:**
  - 0%
  - 20%
  - 25%

**Notes:**
- A quality control plan for RAP will be required when RAP is used
- Top lift Maximum RAP content allowed is 20%

**Superpave Gyratory Mix Design Compaction Level, Recommended usage and Recommend binder(s):**

<table>
<thead>
<tr>
<th>Design Level</th>
<th>Recommended Traffic Levels</th>
<th>Recommended PG Binder(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N&lt;sub&gt;design&lt;/sub&gt;=50</td>
<td>Low volume</td>
<td>PG 58-28 or PG 64-22</td>
</tr>
<tr>
<td>N&lt;sub&gt;design&lt;/sub&gt;=75</td>
<td>0 to &lt;3 million ESALs</td>
<td>PG 64-22 or PG 58-28</td>
</tr>
<tr>
<td>N&lt;sub&gt;design&lt;/sub&gt;=100</td>
<td>3 million to &lt;30 million ESALs</td>
<td>PG 64-22 or PG 76-28</td>
</tr>
</tbody>
</table>

**Notes:**
- The binders are shown in order they should be considered.
- Polymer modified PG Binders are typically used in the top lift only
- PG 58-28 Binder recommended for residential developments with less than 2 million ESAL’s
- Target job Mix Optimum Asphalt Content Selection, Choose target % as close to 4.0 as possible (3.5% to 4.5% air voids per MGPEC 2008)
- Target Job Mix optimum Binder content for SMA grading at 3.0% to 4.0% air voids

**Warm mix asphalt (WMA) is allowed as an alternate to hot mix asphalt provided all material requirement and specification standards are met and as approved by the Agency.**

A completed MGPEC Form #9 shall supplement the MGPEC Construction Specifications defining the contract specific requirements of Item 9: Hot Mix Asphalt Pavement (HMA). Refer to the Specifications for details.

**MGPEC Form #9**

1-26-12) to be used with: MGPEC Pavement Design Standards and Construction Specifications - Project Special Provisions for Hot Mix Asphalt Pavements (HMA) - Item 9 Mixture Design and Production Requirements