

GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF MATERIALS AND RESEARCH

Standard Operating Procedure (SOP) 40

Approval of Contractor Job Mix Formulas

I. General

Monitoring the quality of all Bituminous Materials used on Georgia Department of Transportation (GDOT) projects is the responsibility of the Bituminous Construction Branch of the [Office of Materials and Research](#).

[Qualified Products List 45 \(QPL45\)](#) is maintained to reference approved hot mix producers. Bituminous materials meeting Specification requirements can be obtained from these hot mix producers by those performing work on GDOT projects with an approved Job Mix Formula.

II. Job Mix Formula Approval Process

The approval of Job Mix Formulas for use on GDOT projects shall conform to the following criteria.

A. Request for Job Mix Formula Approval

The Contractor shall request Job Mix Formula approval for each mix in writing to the Office of Material and Research's Bituminous Branch under the outlined approval procedure. The Job Mix Formula proposed for each mixture type to be used is based on an approved mix design. Variance from the approved mix design based on past field performance must be approved by the Bituminous Technical Services Engineer. The Contractor or Hot Mix Producer must provide mix designs for all Superpave and 4.75 mixes to be used. The Department will provide mix design results for SMA, OGFC and PEM mixes to be used. The Contractor will be advised of any contributing circumstances if the submitted Job Mix Formula is not approved. The written request for Job Mix Formula shall conform to the following requirements:

1. Original Job Mix Formula Approval

a. After the Contract has been awarded, Job mix Formulas must be submitted at least two weeks prior to the beginning of mixing operations in accordance with Subsection 400.1.03.C.

b. No asphaltic concrete work will be started until the Bituminous Technical Services Engineer has approved a Job Mix Formula for the mixture to be used. No mixture will be accepted until the Job Mix Formula is approved.

2. Revised Job Mix Formula Approval

The Contractor may request a revision to the original Job Mix Formula during the adjustment period in accordance with Subsection 400.3.06.B if improvement in density is required. The Bituminous Construction Technical Services Engineer may make revisions to the Job Mix Formula to address any mixture quality control issues.

a. Job Mix Formula revisions must be submitted in writing meeting the requirements of **Section II**

b. Job Mix Formulas will not be revised after the beginning of a lot of asphaltic concrete. If a revision is required during production, the lot will be closed and new one established prior to any revisions being used on the 159.

B. Information Required on the Job Mix Formula

The submitted Job Mix Formula must provide the following information in an approved format:

- Specific project for which the mixture will be used
- Source and description of the materials to be used
- Mixture I.D. Number

- Proportions of raw materials to be combined in the paving mixture
- Single percentage of the combined mineral aggregates passing each specified sieve
- Single percentage of asphalt by weight of the total mix to be incorporated in the completed mixture
- Single temperature at which to discharge the mixture from the plant
- Theoretical specific gravity of the mixture at the designated asphalt cement content
- Name of the person responsible for quality control of the mixture during production

C. Distribution of approved Job Mix Formula

The distribution of approved Job Mix Formulas is the responsibility of the Bituminous Branch of the Office of Materials and Research. Copies of the approved Job Mix Formula will be forwarded out within 3 days of approval to the following:

- Contractor and/or hot mix producer
- District Office
- Area Engineer
- Bituminous Technical Services Engineer
- District Testing Management Lab
- Bituminous Construction Branch
- Central Lab files

D. Responsibility of the Hot Mix Producer to Adhere to the approved Job Mix Formula

The Contractor/Hot Mix Producer must produce the asphaltic concrete mixtures in accordance with the approved Job Mix Formula. Any changes or adjustments in mixture ingredients or composition must be approved by the Bituminous Branch of the Office of Materials and Research.

E. Asphalt Cement Price Adjustment

The calculation of asphalt cement quantity for each mix type will be based on the asphalt cement content (*AC %*) of the approved Job Mix Formula (JMF) as specified in Subsection 400.5.01.F.4.

III. Invalidation of an approved Job Mix Formula

The Georgia Department of Transportation reserves the right to invalidate any approved Job Mix Formula if conditions related to mixture quality control indicate a need to do so. The notice of cancellation of the approved Job Mix Formula will be distributed under the guidelines established in **Section II C**.

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