

**Tennessee Department of Transportation  
Division of Materials and Tests**

**Standard Operating Procedure 3-6  
Concerning the  
Submittal and Approval of Microsurface Mix Designs**

Purpose: The purpose of this document is to establish an acceptance procedure for microsurface mix designs.

Discussion: Microsurface mix designs submitted to the TDOT must exhibit certain performance properties and composition requirements indicated in Standard Specification 414.03.B.

Procedure: A new microsurface design shall be subject to the following procedure prior to being approved for use in TDOT work:

1. A mix design laboratory shall test the mixture at a minimum of 3 binder contents to determine a mixture that meets the specifications in Table 414.03-3 (with the exception of the Loss on Ignition) composed of the materials to be utilized in the mixture in the contract and proportioned to meet the requirements of 414.03.B.2.
2. A minimum of 2 full weeks prior to planned start of microsurface operations submit the following to HQ Materials & Tests
  - a. A lab report detailing all test results for the required tests in Table 414.03-3 for each binder content tested and a recommended design.
  - b. The completed microsurface mix design JMF indicating the proportion of each mix ingredient, the supplier and source, and the test results at the binder content selected for the design.
  - c. 2000 gram sample of the aggregate to be used. (If blending aggregate submit 2000 g of each aggregate).
  - d. A list of the contracts the mix design is to be utilized on. If there are multiple routes and different designs will be used on the project, indicate which routes the mix design will be used on. Additional contracts may be

added to this list after the mix design is approved but at least 1 week before work begins.

3. The Department will review the lab report, JMF for approval. The department will do a due diligence review the project plans to determine if the ADT of the project and the surface aggregate are acceptable. The Department will conduct an Loss On Ignition test on the aggregate sample provided and set the LOI for the project. (Note variation from this LOI by more than 2% will result in liquidated damages per **414.12**)

#### Appendix

Link to Microsurface JMF: [https://www.tn.gov/content/dam/tn/tdot/hq-materials-tests/field-operations/Microsurface\\_Design\\_Blank.xls](https://www.tn.gov/content/dam/tn/tdot/hq-materials-tests/field-operations/Microsurface_Design_Blank.xls)

Current Email Contact for all submittals: [matthew.chandler@tn.gov](mailto:matthew.chandler@tn.gov)

Ship samples of aggregate to:

ATTN: MICROSURFACE DESIGN  
TDOT Central Asphalt Lab  
6601 Centennial Blvd  
Nashville, TN 37243