



NDOR SiteManager Materials Management

Standard Operating Procedures

Asphaltic Concrete

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Modification Tracking Summary

Summary of Changes	Date	Author
Standard Operating Procedures and Instructions document created	10/5/2011	Brad Finch
Updated the Division of Responsibilities	2/22/2012	Matt Beran
Updated Roles & Responsibilities	5/23/2012	Andi Clark
Updated document structure and clarified document filing	11/16/2012	Brad Finch

1. Introduction and Purpose:

This document is intended to be used in conjunction with the existing training materials provided by the NDOR (Nebraska Department of Roads), M&R (Materials & Research) Division.

1.1 Purpose:

The purpose of this document is to define the responsibilities and documentation process of the NDOR M&R personnel and construction field inspectors during:

- Pre-construction
- Construction
- Post Construction

Staff should follow this series of instructions when addressing the testing and SMGR documentation requirements for Asphaltic Concrete, 503A0101.

- Asphalt Mix Design and QA Summary of Tests
- Random Sampling Schedule
- Asphaltic Concrete Contractor Superpave Spreadsheet (with incentives – disincentives)
 - Version 2010
- Contractor Density Report

1.2 Roles and Responsibilities:

As of the publication date of this document, roles and responsibilities are defined as follows:

SiteManager Staff: 402.479.4760, DOR.SiteManagerMaterials@nebraska.gov.

Highway Materials Designer: Dean DeButts, 402.479.4809. Dean.DeButts@nebraska.gov.

Bituminous Aggregate Laboratory Manager: Larry Koves, 402.479.3851, Larry.Koves@nebraska.gov.

NDOR QA Managers:

- District 1, Lincoln: Ron Vajgrt, 402.479.4543, Ron.Vajgrt@nebraska.gov.
- District 2, Omaha: Gary Mangen, 402.595.2534, ext 286, Gary.Mangen@nebraska.gov.
- District 3 and 8: Mike Reynolds, 402.370.3476, ext 219, Mike.Reynolds@nebraska.gov.
- District 4 and 7: Calvin Splattstoesser, 308.385.6271, ext 218, Cal.Splattstoesser@nebraska.gov.
- District 5, 6, 7 and 8: Rodney McNeel, 308-535-8111, ext 226, Rodney.McNeel@nebraska.gov.

Field Inspection Team:

- The field inspection team for state projects includes the NDOR project manager and field inspector.
- The field inspection team for LPA projects includes the NDOR state representative, LPA/consultant project manager, or LPA/consultant field inspector.

1.3 Abbreviations:

ID: Identification Number

JMF: Job Mix Formula

LPA: Local Projects Agency

M&R: NDOR Materials & Research

NDOR: Nebraska Department of Roads

PM: Project Manager
QA: Quality Assurance
QC: Quality Control
RSS: Random Sampling Schedule
SMGR: SiteManager

2. Pre-Construction:

2.1 Division of Responsibility:

2.1.1 NDOR M&R Bituminous Aggregate Laboratory:

At the contract's letting, a folder to store the asphaltic concrete documents will be created at the following location: S:\Asphalt\[letting year]\[contract-project number] (ex. S:\Asphalt\2012\1450A-NH-80-9(832)).

If the folder does not exist, contact the Bituminous Aggregate Laboratory Manager.

Over the course of the letting, this collection of documents will be generated and stored in the folder:

- Asphalt Mix Design
- QA Summary of Tests
- Random Sampling Schedule
- Asphaltic Concrete Contractor Superpave Spreadsheet (with incentives – disincentives)
- Contractor Density Report

2.1.1.1 Asphalt Mix Design and QA Summary of Tests:

The contractor will create a mix design within the specified volumetric parameters and send it to the NDOR M&R Bituminous Aggregate Laboratory for mix design approval. Once approved, the mix design is sent to the project manager (PM) and contractor to begin asphalt production.

When the mix design is approved and in place, a copy of the QA Summary of Tests will be sent to the field inspection team and corresponding NDOR branch laboratory by the NDOR M&R Bituminous Aggregate Laboratory.

2.1.1.2 Random Sampling Schedule:

NDOR M&R will send the Random Sampling Schedule (RSS) to the PM soon after a project is awarded. If the RSS is not received or is lost, contact the NDOR M&R Pavement Design Section, Highway Materials Designer for a copy.

2.1.1.3 Asphaltic Concrete Contractor Superpave Spreadsheet:

At the pre-construction meeting, the field inspection team shall verify the contractor has the latest copy of the asphaltic concrete contractor Superpave spreadsheet.

If a new copy is needed, contact the NDOR State Representative or NDOR M&R Bituminous Aggregate Laboratory.

2.1.1.4 Contractor Density Report:

At the pre-construction meeting, the field inspection team shall verify the contractor has the latest copy of the Contractor Density Report.

To verify the latest version or obtain a new copy, contact the NDOR M&R Bituminous Aggregate Laboratory or go to [\\dorimage3\asphalt\Density Forms](#).

3. Construction:

3.1 Division of Responsibility:

3.1.1 Asphalt Mix Design:

The field inspection team in coordination with the NDOR branch laboratory and NDOR M&R Bituminous Aggregate Laboratory, shall review the contractor's results throughout construction to verify the aggregate gradations fall within the appropriate tolerances of the mix design.

Any changes that exceed these tolerances will result in the contractor submittal of a new mix design or new mix design targets to the NDOR M&R Bituminous Aggregate Laboratory for approval.

It is the contractor's responsibility to request new mix design targets as they approach the gradation tolerances.

3.1.2 QA Summary of Tests:

The QA Summary of Tests worksheet will be completed by the NDOR branch laboratory personnel after each validation test is completed.

The worksheet will be issued weekly by the NDOR branch laboratory to the appropriate project personnel (PM, Flexible Pavement Engineer, NDOR M&R Bituminous Aggregate Laboratory, and contractor) for review.

The PM and field inspector in coordination with the NDOR QA Manager and NDOR M&R Bituminous Aggregate Laboratory Manager, shall review the contractor's QC results throughout construction to verify they meet the required specifications.

Note: Changes to the mix design will prompt the issuance of a revised QA Summary of Tests worksheet with the new job mix formula (JMF).

3.1.3 Random Sampling Schedule:

The RSS will be used during the project by the field inspector to determine the sub-lot tonnage requirement and location where the contractor will take an asphalt sample to split for QA/QC testing. The sheet will also designate which sample from each lot will be tested by the NDOR branch laboratory for verification. If for any reason a sample cannot be obtained at the designated tonnage, a note shall be made on the RSS justifying the change and the new designated tonnage.

At no time will the contractor have access to the RSS. If there is reason to believe the RSS has been compromised, contact the NDOR M&R Pavement Design Section, Highway Materials Designer for a revised RSS with new sampling locations.

3.1.4 Asphaltic Concrete Contractor Superpave Spreadsheet:

The field inspection team shall regularly review the Superpave software results to verify they meet the contract specifications. Any split sample sent to the NDOR branch laboratory for verification testing shall include a copy of the corresponding contractor results.

The field inspector may also review the pay factor summary tables to confirm the correct values have been used for the pay factor percentages and density test results.

3.1.5 Contractor Density Report:

The field inspection team shall regularly review the Contractor Density Report to verify the values have been entered correctly and meet the contract specifications. These values should be compared to the density values entered into the Superpave Software to confirm that no reproduction errors have been made.

4. Post Construction:

4.1 Division of Responsibility:

4.1.1 Field Inspection Team:

Inform the NDOR M&R Bituminous Aggregate Laboratory Manager when the asphaltic concrete is complete.

If not previously completed, verify the values for the pay factor summary tables on the contractor's Superpave spreadsheet

Copy these documents to the S:\Asphalt\[letting year][contract-project number] (ex. S:\Asphalt\2011\1450A-NH-80-9(832))

- Random Sampling Schedule
- Asphaltic Concrete Contractor Superpave Spreadsheet (with incentives – disincentives)
- Contractor Density Report

4.1.2 NDOR M&R Bituminous Aggregate Laboratory:

Create and authorize a sample record using the URL attachment feature so the documentation is tracked in SMG. For more information, refer to Create and Authorize an Asphaltic Concrete Sample Record Instructions.

The following items shall be added to the Central File:

- Contractor's Superpave Spreadsheet Summary sheet (with incentives – disincentives) (for each lot)
- Asphalt Mix Design sheet
- QA Summary of Test sheets
- Random Sampling Schedule
- Contractor Density Report
- Asphalt Concrete Density Correlation Report