October 4, 2019

REVISION OF SECTION 401

THIN LIFT COMPACTION TEST SECTION - DENSITY

1. **NOTICE**

This is a standard special provision that revises or modifies CDOT’s *Standard Specifications for Road and Bridge Construction*. It has gone through a formal review and approval process and has been issued by CDOT’s Project Development Branch with formal instructions regarding its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions unless such use is first approved by the Standards and Specifications Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies that use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

**Instructions for use on CDOT construction projects:**

Use this standard special provision only with the concurrence from the Region Materials Engineer.

Insert this specification when 1.5” inches thick or less of HMA is placed on a roadway with a Drivable Life of **“Moderate” or “Good” as defined by the Pavement Management Program (4 years or greater)** and the project is scheduled to be constructed within one year of the date the Drivable Life was determined.

This specification should only be used when there is only one HMA layer placed.

This specification should not be used when pre-overlay work such as planing, leveling course, heater remixing, or other in-place recycling processes are specified.

Section 401 of the Standard Specifications is hereby revised for this project as follows:

Subsection 401.17 shall include the following:

All Hot Mix Asphalt (HMA) materials or work will be evaluated for conformity to the Contract in accordance with subsection 105.05 except HMA that is used for patching and temporary pavement. The Contractor shall determine the necessary roller compaction process needed to produce a target pavement density of 94.0 percent of the average daily theoretical maximum specific gravity (RICE) values in accordance with Colorado Procedure 44 Method B. During the first day of production, three stratified random locations will be selected by the Department. At each location, a minimum of three 4-inch diameter cores shall be taken by the Contractor within an 18-square foot area of pavement. The Department will take possession of the set of three cores from each location and determine the intermediate percent relative compaction for each core. Each set of three cores will be averaged to produce the percent compaction for each location. A minimum of three locations will be used to measure the percent compaction of the first day of production. All coring shall be completed by the Contractor and submitted to the Department.

Full production of the thin lift shall not begin until the required project compaction process is successfully established by the Contractor and approved by the Engineer. The approved compaction process shall be used for the duration of the thin lift paving. Changes to the thin lift mixture shall require a new roller compaction process.

During production, density tests shall be taken at a frequency of one set of three cores per 500 tons of HMA placed. Each 4-inch diameter core in the set shall be taken by the Contractor within an 18- square foot area of pavement at each stratified random location. The Department will take possession of a set of three cores from each location to determine the intermediate percent compaction for each core. Each set of three cores will be averaged to produce the percent compaction for each location.

The Contractor will be immediately notified when the Department locates areas of in-place density less than 89.8 percent of average RICE for the material. The actual area of pavement to be removed full width and replaced will be determined by the Contractor, taking one 4-inch diameter exploratory core at 50-foot intervals or less in each direction from the affected location until two successive locations are found in each direction which are greater than 90.9 percent of the average RICE for the material.

In subsection 401.22 delete the sixth paragraph and replace with the following:

Coring for in-place density, coring for longitudinal joint density, core hole repair, and associated expenses will not be paid for separately but shall be included in the work. Traffic control for this work will be paid for in accordance with the contract.