

**S-1**                    **(2301) CONCRETE PAVEMENT - SPECIAL (INTEGRALLY COLORED CONCRETE PAVEMENT)**

- *Use when there is colored concrete pavement on job.*
- *Always use SP2018-260 ((3752) MEMBRANE CURING/SEALING COMPOUND FOR COLORED CONCRETE) with this write-up.*

**NEW WRITE-UP 01/04/19 ◀DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.**

SP2018-130.1

This work consists of furnishing all materials, labor, and equipment for constructing colored concrete in accordance with MnDOT 2301, the Plan details, and the following:

S-1.1                    **MATERIALS FOR COLORED CONCRETE**

A minimum of 60 days prior to the start of colored concrete placement, provide the following information:

- (1) Color Additive.
- (2) Manufacturer's Product Data sheets.
- (3) Sample chip(s) of specified color(s) indicating color additive number(s) and required dosage rate(s). Samples indicate general color and may slightly vary from concrete finished in field.
- (4) Curing/Sealing compound.

S-1.2                    **COLORED CONCRETE MIX DESIGN REQUIREMENTS**

The Department defines the concrete mix numbers and mix design requirements for concrete pavement in accordance with Table 2301-4, "Concrete Mix Design Requirements." For colored concrete, add "CO" to the end of the mix number (3A21CO, 3A41CO, etc.).

Submit the concrete mixes in accordance with MnDOT 2301.2.L.2, "Concrete Mix Design Submittal Requirements."

S-1.3                    **COLORED CONCRETE CONTRACTOR/INSTALLER QUALIFICATIONS**

Pre-qualified Colored Concrete Contractors/Installers shall meet the following requirements:

- (1) Minimum of five (5) years of experience with work of similar scope and quality.
- (2) A minimum of five (5) projects including references completed in the last five (5) years by Contractor/Installer.
- (3) Listed on the MnDOT Pre-qualified colored concrete contractor/installers vendor list available from the MnDOT website.

S-1.4                    **PRECONSTRUCTION MEETING**

One week prior to first placement of colored concrete on the project, hold a preconstruction meeting with the Agency, Prime Contractor, Concrete Contractor, Concrete Supplier, Testing Agency and Colored Admixture Manufacturer Representative to discuss the proposed colored concrete placement and application materials.

S-1.5                    **TEST PANELS**

Prior to placing any colored concrete, demonstrate workmanship by constructing test panels of the colored concrete in accordance with the following:

- (1) For each color, a separate test panel is required.
- (2) At a location approved by the Engineer.
- (3) Using the same processes, techniques, personnel, materials, concrete supplier and concrete plant intended for use on permanent work, including stamping and curing/sealing procedures.

- (4) The minimum size of the test panels shall be 6' x 6' x 4" unless otherwise directed by the Engineer.
- (5) Retain and protect Engineer accepted test panels as the visual standard for the work of this section and quality standard for permanent work.

S-1.6 PLACING, FINISHING AND CURING COLORED CONCRETE

Construct colored concrete in accordance with products processes and techniques used on approved test panel(s). Do not add water at any time to the slab surface while finishing. Do not over finish the concrete edges.

After completing final finishing operations, cure and seal all exposed concrete surfaces meeting the following requirements and methods:

- (1) Use a curing/sealing compound approved list conforming to 3752, "Membrane Curing/Sealing Compound for Colored Concrete."
- (2) Apply the curing/sealing compound within 30 minutes of concrete placement/form removal or once the bleed water has dissipated, unless the Engineer directs otherwise in accordance with 2301.3.M.1.a, "Membrane Curing Method."
- (3) Ensure that the curing/sealing compound is applied homogeneously to provide a uniform coverage on all exposed colored concrete surfaces including the edges.
- (4) Apply an additional application of curing/sealing compound a minimum of 30 days after placement of the colored concrete.

Cover adjacent finished surfaces to protect from splatters and excess materials during colored concrete installation and curing/sealing.

S-1.7 METHOD OF MEASUREMENT

The Engineer will measure the concrete pavement placed to a uniform cross-section thickness by the surface area of the pavement as constructed, including integrant curb; without regard to grade, strength, or type of concrete, width, or thickness of the pavement in a single measurement.

S-1.8 BASIS OF PAYMENT

Payment for colored concrete pavement construction includes the cost of constructing the pavement, including the cost of installation of test panels, batch materials and mixing operations; plant-lab office; producing the concrete; fine grading; forming, including all headers; providing and installing keyway and keyway bars, tie bars, taper steel, stopper bars, and other reinforcement bars; delivering; depositing; placing; spreading; screeding; vibration monitoring; finishing; curing; protecting; sawing; and sealing the concrete.

The Department will pay for colored concrete pavement on the basis of the following schedule:

<u>Item No.:</u>	<u>Item:</u>	<u>Unit:</u>
2301.604	Concrete Pavement (Special).....	square yard