

TIP# R-2206AA
Date:10/12/04
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65

TRAFFIC CONTROL DEVICES TO REMAIN ON PROJECT

DESCRIPTION.

Furnish, install, maintain during the life of the project, and leave Traffic Control Devices on the project at its completion in accordance with the plans and specifications.

CONSTRUCTION METHODS.

Install and leave on the project the Traffic Control Devices necessary to accommodate the traffic pattern shown on sheets **PM-10, PM-14, PM-15, PM-16, and PM-17** of the Traffic Control Plan, unless otherwise directed by the Engineer.

Provide devices to remain on the project, which meet the requirements of their respective specifications in the 2002 Standard Specifications or their respective special provisions.

Provide devices to remain on the project that are in good condition and subject to the approval of the Engineer.

The devices required to remain on the project at its completion will become the property of the Department.

BASIS OF PAYMENT.

No additional payment will be made specifically for leaving devices on the project. These devices will be paid under their respective pay items in the Contract which will include full compensation for furnishing, installing, maintaining during the life of the project, and leaving the devices on the project at its completion.

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66

TRAFFIC CONTROL DEVICES REMAINING FROM PREVIOUS PROJECT

DESCRIPTION.

Accept ownership, monitor, maintain, replace, and remove the following traffic control devices, which are remaining from the previous project in accordance with the plans and specifications.

- 1- Drums
- 2- Barricades

MATERIALS.

Replace any of the above mentioned devices which do not meet the material requirements of their respective specifications as directed by the Engineer.

CONSTRUCTION METHODS.

Accept ownership and maintenance responsibilities of the above mentioned devices and retain ownership at the completion of the project.

Section 1105-03 of the 2002 Standard Specifications applies to this special provision.

MAINTENANCE.

Maintain the above mentioned devices in accordance with Section 1105-4 of the 2002 Standard Specifications.

BASIS OF PAYMENT.

No separate payment will be made for the maintenance, replacement, and removal of the above mentioned devices. Such work will be considered as incidental to the other traffic control items listed in the contract.

**PROJECT SPECIAL PROVISIONS
POLYUREA PAVEMENT MARKING MATERIAL WITH
“HIGHLY REFLECTIVE” GLASS BEADS**

Section 1205-1 DESCRIPTION:

This special provision covers machine applied Polyurea pavement marking material with both incorporated reflective elements and drop-on glass beads. All remaining Articles in Section 1205 shall be as described in the 2002 Standard Specification for Roads and Structures with the exceptions below.

Section 1205-2 Materials

(A) General

Replace Article (A) with the following:

Section 1087-Articles 1, 3, 5 & 6 (General, Color, Packaging for Shipment, and Storage Life) shall be as described in the 2002 Standard Specifications for Roads and Structures. The manufacturer may recommend any remaining information necessary for the placement of Polyurea pavement markings.

(B) Material Qualification

Replace Article (B) with the following:

Use only “Highly Retroreflective” polyurea pavement markings that have been pre-approved by the Traffic Control Section prior to application. Use highly reflective glass beads according to the manufacturer’s recommendations in order to meet the retroreflectivity requirements as stated in Section 1205-3(G)(8) as measured by a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer.

Furnish a Type 3 Material Certification and Type 4 Material Certification in accordance with Article 106-3 as described in the 2002 Standard Specifications for Roads and Structures.

For more information, contact the Traffic Control Section at 919 250-4151.

Section 1205-3 Construction Methods

Section 1205-3(B) (1) General for all Application Equipment: Add the following sentence after the last paragraph:

Do not use handliners or any other non-truck mounted pavement marking machine to install “Highly Retroreflective” polyurea pavement markings on long-line applications.

Add the following Section immediately following Section 1205-3(G)(8)

Section 1205-3 (G) (9) Polyurea Application:

Produce Polyurea pavement marking lines which have a minimum dry thickness of 20 mils (0.50mm) when placed on concrete and asphalt pavements.

Using the Polyurea application equipment, apply the pavement marking materials simultaneously. Apply the Polyurea resin, mixed at the proper ratio according to the manufacturer recommendations, to the pavement surfaces within the proper application temperatures as determined by the material manufacturer. Inject reflective elements into the molten (liquid) Polyurea pavement markings.

Apply reflective elements according to manufacturer's recommendation to immediately produce a highly reflective marking.. At the time of installation, provide in-place marking with the minimum reflectance values shown below, as obtained with a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer. Maintain the retroreflectance values shown below for a minimum of 30 days from the time of placement of marking material.

WHITE: 450 mcd/lux/m2

YELLOW: 300 mcd/lux/m2

Produce marking, which upon cooling, is uniformly reflectorized and has the ability to resist deformation caused by traffic throughout its entire length.

The manufacturer of the Polyurea pavement marking material shall certify the Contractor to place the material. Provide at least one member of each crew that completed this training. Furnish the Engineer written confirmation of this training from the material manufacturer prior to the beginning of work. The manufacturer's technical representative shall be onsite during the entire installation of product.

Provide a manufacturer's technical representative that is knowledgeable and familiar with the Contractors application equipment prior to the installation of the Polyurea pavement markings.

Add the following Section immediately following Section 1205-3(H)

Section 1205-3(H)(1) Observation Period for Polyurea Pavement Markings:

Replace the first paragraph with the following:

Thermoplastic, epoxy, and polyurea pavement markings are subject to a 180 day observation period.

Add the following just before the last paragraph:

The minimum reflectance values at the end of the 180 day Observation period shall be as follows:

WHITE: 390 mcd/lux/m²

YELLOW: 240 mcd/lux/m²

These measurements will be taken within 30 days prior to the end of the Observation Period. The reflectance values will be taken using a LTL 2000, LTL-X or Department approved 30m mobile retroreflectometer.

Section 1205-3(I) Removal of Pavement Markings:

Replace Section 1205-3(I) with the following:

Do not apply Polyurea pavement marking over existing pavement marking materials having less adherence than the Polyurea. Remove existing lines according to the manufacturer's recommendations.

Measurement and Payment:

Measurement and payment shall be in accordance with Section 1205 of the North Carolina Standard Specifications for Roads and Structures.