

TIP #: R-2813C
Date: November 6, 2003
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81

POLICE

DESCRIPTION.

Furnish Police Officers and marked Police Vehicles to direct traffic in accordance with the plans and specifications.

CONSTRUCTION METHODS.

Utilize Police Officers who are outfitted with police uniforms.

Utilize marked Police Vehicles, which are equipped with police lights mounted on top of the vehicle, and police vehicle emblems.

Utilize Police Officers and marked Police Vehicles to direct or control traffic as required by the plans or by the Engineer.

METHOD OF MEASUREMENT.

The quantity of Police Officers and marked Police Vehicles to be paid for will be the actual number of hours that each Police Officer/marked Police Vehicle is provided during the life of the project as approved by the Engineer.

There will be no direct payment for marked Police Vehicles as they are considered incidental to the pay item in this special provision.

BASIS OF PAYMENT.

The quantity of Police Officers and marked Police Vehicles measured as provided above, will be paid for at the contract unit price per hour for "Police".

Payment will be made under:

Police.....Hour

WATER FILLED BARRIER

DESCRIPTION.

Furnish, install, secure, maintain, remove, and reset Water Filled Barrier. In addition, provide an environmentally safe anti-freezing agent when required, in accordance with the plans and specifications.

MATERIALS.

(A) General:

Provide Water Filled Barrier that meets or exceed the requirements of NCHRP 350 Test Level II for work zones which have a posted speed limit of 45 mph (72 km/h) or less. Provide Water Filled Barrier that acts as it's own free standing, non-redirective end treatment

(B) Material Qualifications:

Use Water Filled Barrier which is on the North Carolina Department of Transportation's Approved Products List or is Traffic-qualified by the Traffic Control Section. For more information on the Traffic-qualification process, contact the Traffic Control Section at Century Center Building B, 1020 Birch Ridge Dr., Raleigh, NC, 27610 (919) 250-4151, or see the approved product list on NCDOT web site at:

www.doh.dot.state.nc.us/preconstruct/traffic/congestion/tc/.

(C) Historical Performance:

Historical performance of the Water Filled Barrier will be used in determining future use of the material by the NCDOT, even if the Water Filled Barrier has been traffic-qualified. Poor past or poor current performance of Water Filled Barrier at any site, whether or not related to a specific contract may be grounds for non-acceptance of a product on any project under contract.

CONSTRUCTION METHODS.

Place and install Water Filled Barrier only on roadways with posted speed limits of 45 mph (72 km/h) or less.

Place and install Water Filled Barrier units as shown in the plans and per manufacturer specifications.

TIP #: R-2813C
Date: November 6, 2003
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Use environmentally safe anti-freezing agent in the water per manufacturer specifications and recover agent when the barrier is drained.

Do not drain Water Filled Barrier into or across an existing travel lane. Provide barrier units that are capable of being lifted and moved when filled if draining is not possible.

Furnish delineators for Water Filled Barrier which meet the requirements of Section 1088-2 and Section 1170-3, (E) of the 2002 Standard Specifications.

MAINTENANCE.

Maintain Water Filled Barrier in accordance with Section 1105-4 of the 2002 Standard Specifications.

METHOD OF MEASUREMENT.

The method of measurement will be in accordance with Section 1170-05 of the 2002 Standard Specifications.

There will be no measurement made of barrier delineators as they are considered incidental to the other pay items in this special provision.

BASIS OF PAYMENT.

The quantity of Water Filled Barrier, measured as provided above, will be paid at the contract unit price per linear foot (linear meter) for "Water Filled Barrier".

The quantity of resetting Water Filled Barrier, measured as provided above, will be paid at the contract unit price per linear foot (linear meter) for "Reset Water Filled Barrier".

There will be no direct payment for barrier delineators as they are considered incidental to the other pay items in this special provision.

Payment will be made under:

Water Filled Barrier	Linear Foot (Linear Meter)
Reset Water Filled Barrier	Linear Foot (Linear Meter)

**PROJECT SPECIAL PROVISIONS
POLYUREA PAVEMENT MARKING MATERIAL WITH
STANDARD GLASS BEADS**

Section 1205-1 DESCRIPTION:

This special provision covers machine applied Polyurea pavement marking material with both incorporated glass beads 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 Polyurea pavement markings that have been pre-approved by the Traffic Control Section prior to application. Use both incorporated glass beads and drop-on 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 919 250-4159.

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 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 that 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 materials simultaneously. Apply the Polyurea resin, mixed at the proper ratio according to the manufacturer's recommendations, to the pavement surfaces within the proper application temperatures as determined by the material manufacturer. Inject reflective glass beads into the molten (liquid) Polyurea pavement markings.

Apply glass beads according to manufacturer's recommendations. 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 retroreflector. Maintain the retroreflectance values shown below for a minimum of 30 days from the time of placement of marking material.

WHITE: 375 mcd/lux/m²
YELLOW: 250 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 the 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.

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:

Provide polyurea pavement marking materials that maintain minimum retroreflectance values throughout the 180 day observation period as follows:

WHITE: 325 mcd/lux/m²
YELLOW: 200 mcd/lux/m²

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

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

Add the following just before the last paragraph:

Do not apply Polyurea pavement marking over existing pavement marking materials having less adherence than 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.