



## ***Baseline Document Change Announcement***

### ***Removable Wet Weather Pavement Marking Tape***

**BDC03S-03**

**March 21, 2003**

**Subject: Revisions to the 2001 Standard Specifications for Road and Bridge Construction, Subsections 617.02, 617.15, 617.16, 617.17 and 912.12 Related to Removable Wet Weather Pavement Marking Tape**

Subsections 617.02, 617.15, 617.16, 617.17 and 912.12 of the 2001 Standard Specifications for Road and Bridge Construction have been revised to discontinue the use of removable pavement marking tape and replace it with the use of "Removable Wet Weather Pavement Marking Tape" exclusively.

It is expected that the use of this new product will significantly enhance the delineation through the construction zones, which will reduce accidents.

The revisions will be incorporated into the Standard Specifications via SI2001E1 and SI2001M1.

The changes to SI2001E1 are as follows:

### **SECTION 617 - TRAFFIC CONTROL**

#### **617.02 Materials.**

THE ENTIRE TEXT IS CHANGED TO:

Materials shall conform to the following Subsections:

Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape ..... 912.12  
Temporary Pavement Markers ..... 912.16

#### **617.15 Removable Pavement Marking Tape.**

THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

#### **617.15 Removable Wet Weather Pavement Marking Tape.**

Removable wet weather pavement marking tape shall be installed at designated locations and according to the Manufacturer's recommendations. The tape shall be white or yellow and shall be installed in single or double lines, as designated.

The surface upon which the tape is to be installed shall be prepared according to Subsection 618.05. Removable wet weather pavement marking tape shall be installed on dry surfaces, when the surface temperature is between 50 °F and 150 °F and when the ambient temperature is 50 °F and rising, and when the weather is otherwise favorable as determined by the Engineer. The tape shall not be overlapped, and only butt splices shall be used.

To ensure maximum adhesion, the tape shall be tamped and a truck shall be driven slowly over the tape several times. The tape shall be removed when no longer required for traffic control.

Removable tape that has become damaged and is no longer serviceable shall be replaced immediately and will not be measured for payment. Tape that is damaged by construction operations shall also be replaced without additional compensation.

**617.16 Method of Measurement.**

THE 16<sup>TH</sup> PARAGRAPH IS CHANGED TO:

Removable wet weather pavement marking tape will be measured by the linear foot of 4-inch wide strips, deducting the gaps.

**617.17 Basis of Payment.**

DELETE THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE PAVEMENT MARKING TAPE	LINEAR FOOT

ADD THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR FOOT

**912.12 Removable Pavement Marking Tape and Removable Black Line Masking Tape.**

THE SUBSECTION HEADING AND SUBPART A IS CHANGED TO:

**912.12 Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape.**

- A. Removable Wet Weather Pavement Marking Tape.** The removable wet weather pavement marking tape shall consist of polymeric, conformable backing materials with a retroreflective surface designed to provide retroreflectivity in wet conditions. The underside of the tape shall be precoated with a pressure sensitive adhesive which bonds the tape to the roadway surface so as to be able to withstand traffic immediately after installation. Primers shall be used to promote tape adhesion to the pavement only in accordance with the tape manufacturers recommendations.

Daylight color of the white tape shall be no darker than color No. 37778 of FED-STD-595B. Daylight color of the yellow tape shall conform to the FHWA color tolerance chart for highway yellow.

When measured with an Advanced Retro Technology (ART) model MX-30 handheld retroreflectometer, the tape shall have initial, minimum retroreflectance values conforming to:

**Dry Condition – ASTM D 1710**

**Entrance Angle = 88.76°**

Observation Angle (Degrees)	Specific Luminance	
	White	Yellow
1.05	950	500

Note: The angular aperture of both the photoreceptor and the light projector shall be six minutes of arc. The reference axis shall be taken perpendicular to the test sample.

**Continuous Wet Condition – ASTM E 2176**

**Entrance Angle = 88.76°**

Observation Angle (Degrees)	Specific Luminance	
	White	Yellow
1.05	750	300

Note: Specific luminance is measured in millicandelas per square foot per foot-candles.

The removable tape shall be capable of being removed manually, intact or in large pieces, at temperatures above 40 °F without the use of solvents, burning, grinding, or blasting. Only tape that has previously received the approval of the Department Bureau of Materials shall be used. Certification of Compliance shall be furnished according to Subsection 106.04.

The changes to SI2001M1 are as follows:

## SECTION 617 - TRAFFIC CONTROL

### 617.02 Materials.

THE ENTIRE TEXT IS CHANGED TO:

Materials shall conform to the following Subsections:

Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape ..... 912.12  
Temporary Pavement Markers ..... 912.16

### 617.15 Removable Pavement Marking Tape.

THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

#### 617.15 Removable Wet Weather Pavement Marking Tape.

Removable wet weather pavement marking tape shall be installed at designated locations and according to the Manufacturer's recommendations. The tape shall be white or yellow and shall be installed in single or double lines, as designated.

The surface upon which the tape is to be installed shall be prepared according to Subsection 618.05. Removable wet weather marking tape shall be installed on dry surfaces, when the surface temperature is between 10 °C and 65 °C and when the ambient temperature is 10 °C and rising, and when the weather is otherwise favorable as determined by the Engineer. The tape shall not be overlapped, and only butt splices shall be used.

To ensure maximum adhesion, the tape shall be tamped and a truck shall be driven slowly over the tape several times. The tape shall be removed when no longer required for traffic control.

Removable tape that has become damaged and is no longer serviceable shall be replaced immediately and will not be measured for payment. Tape that is damaged by construction operations shall also be replaced without additional compensation.

### 617.16 Method of Measurement.

THE 16<sup>TH</sup> PARAGRAPH IS CHANGED TO:

Removable wet weather pavement marking tape will be measured by the linear foot of 100-MM wide strips, deducting the gaps.

### 617.17 Basis of Payment.

DELETE THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE PAVEMENT MARKING TAPE	LINEAR METER

ADD THE FOLLOWING PAY ITEM:

<i>Pay Item</i>	<i>Pay Unit</i>
REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR METER

### 912.12 Removable Pavement Marking Tape and Removable Black Line Masking Tape.

THE SUBSECTION HEADING AND SUBPART A IS CHANGED TO:

#### 912.12 Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape.

A. **Removable Wet Weather Pavement Marking Tape.** The removable wet weather pavement marking tape shall consist of polymeric, conformable backing materials with a retroreflective surface designed to provide

retroreflectivity in wet conditions. The underside of the tape shall be precoated with a pressure sensitive adhesive which bonds the tape to the roadway surface so as to be able to withstand traffic immediately after installation. Primers shall be used to promote tape adhesion to the pavement only in accordance with the tape manufacturers recommendations.

Daylight color of the white tape shall be no darker than color No. 37778 of FED-STD-595B. Daylight color of the yellow tape shall conform to the FHWA color tolerance chart for highway yellow.

When measured with an Advanced Retro Technology (ART) model MX-30 handheld retroreflectometer, the tape shall have initial, minimum retroreflectance values conforming to:

**Dry Condition – ASTM D 1710**

**Entrance Angle = 88.76°**

<b>Observation Angle (Degrees)</b>	<b>Specific Luminance</b>	
	<b>White</b>	<b>Yellow</b>
1.05	950	500

Note: The angular aperture of both the photoreceptor and the light projector shall be six minutes of arc. The reference axis shall be taken perpendicular to the test sample.

**Continuous Wet Condition – ASTM E 2176**

**Entrance Angle = 88.76°**

<b>Observation Angle (Degrees)</b>	<b>Specific Luminance</b>	
	<b>White</b>	<b>Yellow</b>
1.05	750	300

Note: Specific luminance is measured in millicandelas per square foot per foot-candles.

The removable tape shall be capable of being removed manually, intact or in large pieces, at temperatures above 4 °C without the use of solvents, burning, grinding, or blasting. Only tape that has previously received the approval of the Department Bureau of Materials shall be used. Certification of Compliance shall be furnished according to Subsection 106.04.

**Instructions to Designers**

Effective immediately, all projects requiring the use of Removable Pavement Marking Tape shall specify the use of “Removable Wet Weather Pavement Marking Tape”. For the advertised projects awaiting the opening of bids, these changes shall be incorporated via Addendum.

For projects under design, the Project Manager may choose to instruct designers to make necessary plan sheet changes if such changes do not result in additional cost and/or delays. If the schedule and/or cost is affected, an Addendum shall be issued during the advertising period. The Pay Item numbers to be used are as follows:

**English Units**

<i>Pay Item Number</i>	<i>Pay Item Description</i>	<i>Pay Unit</i>
6Q32P	REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR FOOT

**Metric Units**

<i>Pay Item Number</i>	<i>Pay Item Description</i>	<i>Pay Unit</i>
6Q32P	REMOVABLE WET WEATHER PAVEMENT MARKING TAPE	LINEAR METER

## **Instructions to Project Managers and Resident Engineers**

If it is appropriate in the opinion of the Resident Engineer, this new product may be used via a Change Order.

The specification revision has been incorporated in the Standard Inputs SI2001E1 and SI2001M1 updated as of March 21, 2003.

Designers may access updated versions of the Standard Inputs SI2001E1 and SI2001M1 from the following New Jersey Department of Transportation Web Page:

<http://www.state.nj.us/transportation/cpm/StandardInputs/standardinputs.htm>.

## **Distribution and Announcement Access Information**

This announcement is being distributed electronically to our in-house staff and various public agencies based on our Standard Specifications distribution list maintained by the Engineering Documents Unit.

Internet access to this BDC Announcement can be downloaded and viewed from the following New Jersey Department of Transportation Web Page:

<http://www.state.nj.us/transportation/cpm/BaselineDocuments/bdcdownloads.htm>.

Hard copies of this document can be acquired on a limited basis by contacting:

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