



## Florida Department of Transportation

**CHARLIE CRIST**  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

**STEPHANIE KOPELOUSOS**  
SECRETARY

December 22, 2010

Monica Gourdine  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 7090400  
Proposed Specification: 7090400 Traffic Stripes and Markings – Two Reactive  
Components.

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Chester Henson of the State Roadway Design Office to require the certification of proper thickness of pavement marking prior to acceptance.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4280.

Sincerely,

Rudy Powell, Jr., P.E.  
State Specifications Engineer

RP/cah  
Attachment

cc: Gregory Jones, Chief Civil Litigation  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**TRAFFIC STRIPES AND MARKINGS – TWO REACTIVE COMPONENTS.  
(REV 11-4-10)**

ARTICLE 709-4 (of the Supplemental Specification) is deleted and the following substituted:

**709-4 Application.**

**709-4.1 General:** Remove existing pavement markings, such that scars or traces of removed markings will not conflict with new stripes and markings by a method approved by the Engineer.

Before applying traffic stripes and markings, remove any material by a method approved by the Engineer that would adversely affect the bond of the traffic stripes.

Offset longitudinal lines at least 2 inches from construction joints of portland cement concrete pavement.

Apply traffic stripes or markings only to dry surfaces, and when the ambient air and surface temperature is at least 40°F and rising. Do not apply pavement markings when winds are sufficient to cause spray dust.

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and marking over existing markings, ensure that not more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Apply the Two Reactive Component product to the pavement in accordance with the manufacturer's instructions or as directed by the Engineer.

Conduct field tests in accordance with FM 5-541. *Take test readings representative of the striping performance.* Remove and replace traffic stripes and markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all final pavement markings prior to opening the road to traffic.

**709-4.2 Thickness:** Apply traffic stripes and markings to attain a minimum wet film thickness in accordance with the manufacturer's recommendations as identified on the QPL system.

*Measure, record and certify on a Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM 5-541.*

**709-4.3 Retroreflectivity:** Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m<sup>2</sup> and not less than 350 mcd/lx·m<sup>2</sup>, respectively for all longitudinal and transverse lines.

Measure, record and certify on the Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with Florida Method FM 5-541.

~~The Department reserves the right to test the markings within 3 days of receipt of the Contractor's certification. Failure to afford the Department opportunity to test the markings will result in non-payment. The test readings should be representative of the Contractor's striping performance. If the retroreflectivity values measure below~~

~~values shown above, the striping will be removed and reapplied at the Contractor's expense.~~

**709-4.4 Color:** Use materials that meet the requirements of 971-1.

**709-4.5 Reflective elements:** Apply reflective elements to all white and yellow traffic stripes or markings, at the rates determined by the manufacturer's recommendations as identified on the QPL system.

ARTICLE 709-9 thru 709-10 (of the Supplemental Specification) is deleted and the following substituted:

**709-9 Submittals.**

*709-9.1 Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for each project in the Contract. Submit the certification of quantities and daily worksheets to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.*

*709-9.2 Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:*

*(a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.*

*(b) The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.*

**709-9.10 Method of Measurement.**

The quantities to be paid for under this Section will be as follows:

(a) The length, in net miles, of 6 inch Solid Traffic Stripe, authorized and acceptably applied.

(b) The total traversed distance in gross miles of 10-30- or 3-9- skip line. The actual applied line is 25% of the traverse, distance for 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.

(c) The net length, in feet, of all other types of lines and stripes, authorized and acceptably applied.

(d) The area, in square feet, of Remove Existing Pavement Markings, acceptably removed.

**709-10.1 Basis of Payment.**

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 709	Two Reactive Components Traffic Stripes, Solid – per net mile.
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7090400

All Jobs

Traffic Stripes, Solid – per foot.

Traffic Stripes, Skip – per gross mile.

Traffic Stripe – Two Reactive Components,

Remove – per square foot.

**TRAFFIC STRIPES AND MARKINGS – TWO REACTIVE COMPONENTS.  
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Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and marking over existing markings, ensure that not more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible.

Apply the Two Reactive Component product to the pavement in accordance with the manufacturer's instructions or as directed by the Engineer.

Conduct field tests in accordance with FM 5-541. Take test readings representative of the striping performance. Remove and replace traffic stripes and markings not meeting the requirements of this Section at no additional cost to the Department.

Apply all final pavement markings prior to opening the road to traffic.

**709-4.2 Thickness:** Apply traffic stripes and markings to attain a minimum wet film thickness in accordance with the manufacturer's recommendations as identified on the QPL system.

Measure, record and certify on a Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM 5-541. **709-4.3 Retroreflectivity:** Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m<sup>2</sup> and not less than 350 mcd/lx·m<sup>2</sup>, respectively for all longitudinal and transverse lines.

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- (a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.
- (b) The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

**709-10 Method of Measurement.**

The quantities to be paid for under this Section will be as follows:

- (a) The length, in net miles, of 6 inch Solid Traffic Stripe, authorized and acceptably applied.
- (b) The total traversed distance in gross miles of 10-30 or 3-9 skip line. The actual applied line is 25% of the traverse, distance for 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.
- (c) The net length, in feet, of all other types of lines and stripes, authorized and acceptably applied.
- (d) The area, in square feet, of Remove Existing Pavement Markings, acceptably removed.

**709-11 Basis of Payment.**

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 709	Two Reactive Components
	Traffic Stripes, Solid – per net mile.
	Traffic Stripes, Solid – per foot.
	Traffic Stripes, Skip – per gross mile.
	Traffic Stripe – Two Reactive Components,
	Remove – per square foot.