SECTION 702
INVERTED PROFILE, WET WEATHER TRAFFIC STRIPES

702-1 Description.

Apply traffic stripes, in accordance with the Contract Documents.

702-2 Materials.

702-2.1 Striping Material: Use striping materials listed on the Qualified Products List (QPL). Meet the requirements of 971-1 and 971-23.

702-2.2 Glass Spheres (for Reflective Traffic Stripes): Use glass spheres listed on the QPL. Meet the requirements of 971-1 and 971-23.3.

702-2.3 Material Sampling:

702-2.3.1 Thermoplastic: The Engineer will take random samples in accordance with the Department's Sampling, Testing and Reporting Guide schedule.

702-2.3.2 Glass Spheres: The Engineer will take random samples in accordance with ASTM D 1155 and the Department's Sampling, Testing and Reporting Guide schedule.

702-3 Equipment.

Use equipment constructed to provide continuous uniform heating of the striping material to temperatures exceeding 390ºF [200ºC], mixing and agitation of the material reservoir and the line dispensing devices to prevent accumulation and clogging. Use equipment that will maintain the striping material at a plastic temperature, in all mixing and conveying parts, including the line dispensing device. Use equipment which can produce varying width traffic stripes and which meets the following requirements:

(a) is mobile and capable of traveling at a uniform, predetermined rate of speed, both uphill and downhill, in order to produce a uniform application of striping material and maneuverable to the extent that straight lines can be followed and normal curves can be made in a true arc.

(b) is capable of applying glass spheres to the surface of the completed traffic stripe by an automatic sphere dispenser attached to the striping machine such that the glass spheres are dispensed closely behind the installed traffic stripe. Use a dispenser equipped with an automatic cut-off control synchronized with the cut-off of the striping material and applies the glass spheres uniformly on the entire traffic stripe surface with 50 to 60% embedment. Provide each nozzle with suitable line guides, either metallic shrouds or air blasts.

(c) is equipped with a special kettle for uniformly melting and heating the striping material. The kettle must be equipped with an automatic temperature control device and material thermometer for positive temperature control and to prevent overheating or scorching of the striping material.

(d) meets the requirements of the National Fire Protection Association, state and local authorities.

702-4 Application.

702-4.1 General: Before applying traffic stripes, remove any material that would adversely affect the bond of the traffic stripes by a method approved by the Engineer.

Before applying traffic stripes to any portland cement concrete surface, apply a two-part epoxy primer sealer recommended by the manufacturer.

Apply striping material to the pavement by extrusion. Remove and replace traffic stripes not meeting the requirements of this Section at no additional cost to the Department.

Remove existing traffic stripes such that scars or traces of removed markings will not conflict with new traffic stripes by a method approved by the Engineer.

Apply traffic stripes only to dry surfaces and when the ambient air and surface temperature is at least 55ºF [13ºC] and rising. Follow the manufacturer's recommendations for application temperature.

Offset traffic stripes a minimum of 2 inches [50 mm] from any longitudinal joints.

The Engineer will conduct field tests in accordance with Florida Test Method FM 5-541.

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

Apply striping to the same tolerances in dimensions and in alignment specified in 710-5.

702-4.2 Dimensions: Apply traffic stripes such that, after application of drop-on glass spheres, when measured in accordance with Florida Test Method FM 5-541, the thickness of the traffic stripes is a minimum of 0.140 inch [3.56 mm]. Ensure the thickness of the traffic stripes in the bottom of the profile is from 0.025-0.050 inch [0.635-1.270 mm]. Locate the individual profiles transversely across the full width of the traffic stripe at approximately 1.0 inch [25 mm] on center, with a bottom width between 0.090-0.310 inch [2.286-7.874 mm].

702-4.3 Retroreflectivity: Apply traffic stripes meeting the following:

	White		Yellow	
Retroreflectance	Dry	Wet	Dry	Wet
Initial*	300 mcd/lx·m^2	150 mcd/lx·m^2	250 mcd/lx·m^2	125 mcd/lx·m^2
Intermittent and Final**	150 mcd/lx·m^2	75 mcd/lx·m^2	150 mcd/lx·m^2	75 mcd/lx·m^2
* Initial retroreflectance is measured within 14 days of exposure to traffic.				
** Intermittent retroreflectance is measured at the discretion of the Department and final retroreflectance is measured at 3 years ± 2 weeks after exposure to traffic.				

702-4.4 Durability: Durability is the measured percent of striping material completely removed from the pavement. The striping material line loss must not exceed 5.0%.

702-4.5 Correction for Deficiencies: Remove and reapply per this Specification, at no additional cost to the Department any LOT as defined and tested by Florida Test Method FM 5-541, which fails to meet any of the following requirements:

a. Dimensions
b. Glass Spheres
c. Retroreflectivity
d. Color, and
e. Durability

702-5 Contractor's Responsibility for Notification.

Notify the Engineer prior to the placement of the striping materials. Furnish the Engineer with the manufacturer's name and LOT numbers of the striping materials and glass spheres to be used. Ensure the approved LOT numbers appear on the striping materials and glass spheres packages. Submit a certified test report to the Engineer indicating the striping materials meet all requirements specified.

702-6 Protection of Newly Applied Traffic Stripes.

Do not allow traffic onto newly applied traffic stripes until they are sufficiently dry to permit vehicles to cross them without damage. Remove and replace any portion of the traffic stripes damaged by passing traffic or from any other cause, at no additional cost to the Department.

702-7 Method of Measurement.

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

(a) The net length, in feet [meters], of each of the various types of lines, stripes and bands, authorized and acceptably applied.

(b) The total traversed distance in gross miles [gross kilometers], of skip line. The actual applied line is 25% of the traverse distance from a 1:3 ratio. This equates to 1,320 feet [250 m] of traffic stripes per mile [per kilometer] of single line.

(c) The area, in square feet [square meters], of Remove Existing Traffic Stripes, acceptably removed.

(d) The length, in net miles [per kilometers], of Solid Traffic Stripes, authorized and acceptably applied.

(e) The length, in gross miles [gross kilometers], of Alternating Skip Traffic Stripe, authorized and acceptably applied.

702-8 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 incidental necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

Item No. 702- 7-	Remove Existing Pavement Markings – per square foot.
Item No. 2702- 7-	Remove Existing Pavement Markings – per square meter.
Item No. 702-31-	Skip Traffic Stripe, Inverted Profile (White) – per gross mile.
Item No. 2702-31-	Skip Traffic Stripe, Inverted Profile (White) – per gross kilometer.
Item No. 702-32-	Skip Traffic Stripe, Inverted Profile (Yellow) – per gross mile.
Item No. 2702-32-	Skip Traffic Stripe, Inverted Profile (Yellow) – per gross kilometer.
Item No. 702-33-	Skip Traffic Stripe, Inverted Profile (White) – per foot.
Item No. 2702-33-	Skip Traffic Stripe, Inverted Profile (White) – per meter.
Item No. 702-34-	Skip Traffic Stripe, Inverted Profile (Yellow) – per foot.
Item No. 2702-34-	Skip Traffic Stripe, Inverted Profile (Yellow) – per meter.
Item No. 702-35-	Solid Traffic Stripe, Inverted Profile (White) – per foot.
Item No. 2702-35-	Solid Traffic Stripe, Inverted Profile (White) – per meter.
Item No. 702-36-	Solid Traffic Stripe, Inverted Profile (Yellow) – per foot.
Item No. 2702-36-	Solid Traffic Stripe, Inverted Profile (Yellow) – per meter.
Item No. 702-37-	Solid Traffic Stripe, Inverted Profile (White) – per net mile.
Item No. 2702-37-	Solid Traffic Stripe, Inverted Profile (White) – per net kilometer.
Item No. 702-38-	Solid Traffic Stripe, Inverted Profile (Yellow) – per net mile.
Item No. 2702-38-	Solid Traffic Stripe, Inverted Profile (Yellow) – per net kilometer.