

5. Individual metering devices on the proportioning pumps (one indicator per pump) as well as stroke counters to monitor liter usage. All such devices shall be clearly visible.
6. All the necessary spray equipment mixers, compressors and other appurtenances to allow for the placement of reflectorized pavement marking systems in a simultaneous sequence of operations.
7. A minimum 600 mm (24 inches) long static mixer unit or an equivalent system that produces properly mixed material.
8. A completely enclosed flush and purge system to clean the lines and the guns without expelling any of the solution into the environment.

**828.05 Cleaning and Surface Preparation.** The contractor shall clean the surface to remove all debris, laitance oil and any other contaminants that may hinder the adhesion of the system to the surface. Whenever grinding, scarifying, sandblasting, shot blasting or other operations are performed, the debris generated shall be contained through vacuum type equipment or equivalent and the work shall be conducted in such a manner that the finished pavement surface is not damaged or unnecessarily scarred or left in a pattern that will mislead or misdirect the motorist. When these operations are completed, the pavement surface shall first be power broomed and then blown off with compressed air to remove residue and debris resulting from the cleaning work. All such debris shall be contained, and disposed of in the appropriate manner.

Cleaning and surface preparation work shall be conducted in such a manner as to control and minimize airborne dust, and similar debris.

Epoxy pavement markings shall not be placed on any new asphalt concrete pavement containing SBS, SBR latex, or SMA latex polymer modifiers until the pavement has been in place for 48 hours. On all other new asphalt pavements, no surface preparation is required.

For any other type of modified asphalt or for open graded friction course asphalts, the Contractor shall contact the manufacturer for surface preparation recommendations.

In all cases the manufacturer's recommendations for surface preparation shall be followed.

The cost of any surface preparation shall be included in the unit bid cost for each line or pavement marking.

Care shall be taken when performing the surface preparation and cleaning work to prevent damage to transverse and longitudinal joint sealers.

Limits of work: Surface preparation shall be confined to the surface area specified for the application of pavement marking materials on the plans or as directed by the Engineer.

Surface preparation work includes cleaning for lines or cleaning for letters and symbols. Lines will be meant to include: Solid lines; Broken lines; Dotted lines; Channelizing lines; Stop lines and Crosswalk lines.

The area of preparation will be the width of the new pavement marking, or existing line, plus 25 mm (1 inch) on each side and the length of broken lines plus 300 mm (12 inches) on each end. When letters and symbols are cleaned the area of preparation will be sufficiently large to accommodate the new marking, or to remove the existing marking. No new markings, lines, crossbars or symbols shall be applied on any pavement that has not been properly prepared as per this specification.

On new Portland cement concrete pavements, cleaning operations shall not begin until a minimum of 30 days after the placement of concrete. The extent of the cleaning work shall be to prepare the concrete surface such that: (a) There is no visible evidence of curing compound on the concrete surface. (b) There are no heavy puddled deposits of curing compound in the valleys of the textured concrete surface. (c) All remaining curing compound is intact; all loose and flaking material is removed. (d) The peaks of the textured pavement surface are rounded in profile and free of sharp edges and irregularities. (e) The extent of the cleaning should be as such to insure the laitance is removed on both old as well as new concrete.

In the event that epoxy pavement marking is to be placed over existing pavement markings, the existing pavement marking shall be removed.

Pavement markings shall be removed to the extent that 95 to 100 percent of the existing marking is removed. Removal operations shall be conducted in such a manner that no more than moderate color and/or surface texture change results on the surrounding pavement surface.

**828.06 Application.** Epoxy marking material shall be applied only when the surface is clean and dry and when the pavement and air temperature are above 10°C (50°F). The Contractor shall transfer the entire contents of each material container to the striper tanks. The material shall be thoroughly mixed at all times during application.

Epoxy marking material shall be applied uniformly to the surface to be marked at the following rate in liters per kilometer (gallons per mile) of line. To achieve this rate the thickness of binder must be 20 mils ± 1 mil.

Liters per kilometer of line	Width of line (mm)				
	100	150	200	300	600
Solid line	52	78	103	155	310
Dashed line	13	20	26	40	80
Dotted line	17	26	35	52	103
Symbols, words	0.5 l/sq. meter				

Gallons per mile of line	Width of line (Inches)				
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