

## SECTION 634 PERMANENT PAVEMENT MARKINGS

**634.01**      **DESCRIPTION** - This subsection was revised to read as follow:

- a. This work consists of applying permanent pavement markings and raised pavement markers on the completed pavement where indicated on the plans.
- b. Pavement markings are designed as follows:
  1. Type H – Thermoplastic markings with Type 1 glass beads
  2. Raised pavement markers.

**634.02**      **MATERIAL** - This subsection was revised to read as follow:

Conform to the Latest Edition of the Manual on Uniform Traffic Control Devices, MUTCD-2009 and the following:

- a. Glass Beads. Glass beads shall conform to AASHTO M 247, Type 1, Standard Gradation. Treat beads with an adherence coating as recommended by the manufacturer.
- b. Raised Pavement Markers. Prismatic retro-reflective type markers with retro-reflective lenses. Make the exterior surface of the shell smooth. Use a retro-reflector with a minimum coefficient of (retro-reflected) luminous intensity conforming to the following:

OBSERVATION ANGLE°	ENTRANCE ANGLE°	WHITE <sup>1</sup>	YELLOW	RED
0.2	0	3.0	1.8	0.75
0.2	20	1.2	0.72	0.30

<sup>1</sup>Crystal, clear, or colorless are acceptable color designations.

Make the base of the marker flat, patterned, or textured and free from gloss or substances that may reduce its bond to the adhesive. The deviation from a flat surface shall not exceed 0.05 inch.

Pavement markers shall be of the type and color shown on the plans. Type of marker(s) indicated are:

Type “YY”              Two-way yellow reflective markers.

Type “CR”              One-way clear reflective marker.

In case the Blue Raised Pavement Markers will be needed in the roadway, in order to help emergency personnel locate fire hydrants, the CUC will provide and install.

- c. Thermoplastic Markings. Thermoplastic markings and legends shall conform to AASHTO M 249, Type H, as described in subsection 634.01. Thermoplastic markings and legends shall be performed, cold laid pavement markings and shall consist of white or yellow films with glass beads selected, blended, and applied to conform to the standard highway colors through the expected life of the film. Pre-formed works and symbols, as well as colors, shall conform to the MUTCD-2009. The retro-reflective pavement marking fil, without adhesive, shall be supplied in standard thickness of 6 mils. The marking film shall be general purpose high durability retroreflective pliant polymer film with non-skid, particles for preformed longitudinal, transverse and word/symbol markings subjected to high traffic volumes and severe wear conditions.

The preformed markings and striping shall be capable of being adhered to asphaltic ` concrete or portland cement pavement by a pre-coated pressure sensitive adhesive. The pavement marking films shall also be capable of being applied to new, dense and open graded asphaltic concrete wearing courses.

## CONSTRUCTION REQUIREMENTS

- 634.03**      **GENERAL** - Add the following to the Fifth Paragraph of this Subsection:

Make arrows, letters, stop lines, and other pre-cut symbols as shown on the plans or as directed by the Contracting Officer.

Revise the Sixth Paragraph of this Subsection to read as follows:

Make stripes 4 inches wide unless otherwise shown on the plans. Centerline markings with no passing in either direction shall be a double solid yellow line stripe. The marking shall be placed parallel to one another approximately 4 inches apart.

- 634.04**      **CONVENTIONAL TRAFFIC PAINT (TYPE A)** – Remove and delete entirely.

- 634.05**      **WATERBORNE TRAFFIC PAINT (TYPE B AND C)** – Remove and delete entirely.

- 634.06**      **EPOXY MARKINGS (TYPE D AND E)** – Remove and delete entirely.

- 634.07**      **POLYESTER MARKINGS (TYPE F AND G)** – Remove and delete entirely.

- 634.08**      **THERMOPLASTIC MARKINGS (TYPE H AND I)** – On the first paragraph, remove and delete the phrase “and old asphalt pavements”.

On the second paragraph, remove and delete the phrase “and lane lines”.

Remove and delete item (b) Type I, entirely.

- 634.09**      **PREFORMED PLASTIC MARKINGS (TYPE J)** – Remove and delete entirely.

- 634.10**      **NONREFLECTORIZED MARKINGS (TYPE K)** – Remove and delete entirely.

**634.11      RAISED PAVEMENT MARKERS** – Add the following to this Subsection:

Pavement markers shall be of the type and color specified herein:

Type "YY" Two-way yellow reflective markers

**634.13      MEASUREMENT:** Revise and amend the subsection to read as follows:

Measure Thermoplastic Markings, Type H, solid pavement stripes from end to end continuous line, by the linear foot for each color indicated, installed in-place.

**634.13.1      PAYMENT:** Add the following to this subsection:

Payment will be made under:

Pay Item No.	Pay Item	Pay Unit
63401(A)	Pavement Marking, Type H, 4-inch wide white or yellow	Linear Foot
63401(B)	Pavement Marking, Type H, 8-inch wide white or yellow	Linear Foot
63401(C)	Pavement Marking, Type H, 12-inch wide white or yellow	Linear Foot
63401(D)	Pavement Marking, Type H, 24-inch wide white or yellow	Linear Foot
63405(A)	Pavement Marking, Type H, Combination Arrow white	Each
63405(B)	Pavement Marking, Type H, Curve Arrow white	Each
63405(E)	Pavement Marking, Type H, Yield White	Each
63410(A)	Raised Pavement Marking, Type "YY"	Each
63410(B)	Raised Pavement Marking, Type "CC"	Each
63410(C)	Raised Pavement Marking, Type "CR"	Each

**END OF SECTION 634**