

**COLORADO DEPARTMENT OF TRANSPORTATION  
SUBMITTAL OF NEW SPECIFICATION  
OR SPECIFICATION CHANGE**

Log No. (Assigned by Standards and Specifications Unit)  
713-2-fy24

TO: Standards & Specifications Unit  
Project Development Branch

FROM: HQ Traffic Safety & Engineering  
(Region, Branch or Technical Committee)

SPECIFICATION SECTION NO.  
713

ITEM  
.18

Priority

Routine

Fast

Reason for this new or changed specification:

Colorado does support the use Permanent Raised Pavement Markers as they can be damaged from snowplows. Added Temporary Raised Pavement Marker language for Chip Seal and Seal Coat projects to 713.18 and left permanent language as it is used on a case-by-case basis.

See Attached

NOTE: See Procedural Directive 513.1 for a description of appropriate specification development procedures.

1  
Revision of Section 713  
Raised Pavement Markers

September 7, 2023

Revise Section 713 of the Standard Specifications as follows:

Revise Subsection 713.18 as shown below:

**713.18 Raised Pavement Markers.**

**(a) Raised Pavement Markers (Permanent)**

Raised pavement markers shall not be less than 3.5 inches or more than 4.5 inches in the major dimension and not more than 0.75 inch in height. The marker shall contain a retroreflective element at least 0.38 square inch in area. The color of the marker and the retroreflective element shall match the color of the pavement marking line. The reflective quality requirements shall be at least equal to the following minimum values:

**Commented [1]:** Added subtitle to differentiate permanent markers and temporary.

**Table 713-12  
Raised Pavement Marker Reflective  
Quality Requirements**

Observation Angle Degrees	Entrance Angle Degrees	Specific Intensity Candela per Lux	
		White	Yellow
0.1	0	0.09	0.06
0.1	20	0.04	0.02

The marker shall be ceramic or plastic and shall be secured to old or new pavement using an adhesive approved by the marker manufacturer.

**(b) Raised Pavement Markers (Temporary)**

Markers shall be a "L" shape, with minimum nominal dimensions of 4 in long x 2 in high (vertical face) x 1 in wide (base leg). The marker shall be manufactured from an impact resistant flexible material. Retroreflective sheeting used shall conform to subsection 713.10. The color and pattern of the raised pavement markers shall simulate the color and pattern of the markings for which they substitute. The raised pavement markers (Temporary) shall have the following:

- (1) A pressure-sensitive adhesive with a paper release liner to the bottom of the base leg.
- (2) Strips of reflective sheeting on both sides of the vertical face.
- (3) A clear plastic cover to protect the reflective strip. The cover shall withstand a chip-seal operation and is easily removed after the operation.

**Commented [2]:** Can this be looked at in conjunction with 627.03? That states that we need full compliance markings at the end of the day and most people in R5 that I talk to indicate that they believe that temp raised pavement markers are NOT considered "full compliance". And so these are never used and we pour money into temporary paint (not to mention having to have a striping crew on the project for the entire life of the project instead of just coming in for a few days at the end...very expensive)

If temp markers are considered acceptable as "full compliance for the purposes of 627.03, it'd be great to have it mentioned somewhere

**Commented [3R2]:** 627.04 (e) addresses temporary raised pavement markers. "Full-compliance final pavement markings shall be placed within one week of completion of the seal coat project."