Item 662
Work Zone Pavement Markings

1. DESCRIPTION

Furnish, place, and maintain work zone pavement markings.

2. MATERIALS

Provide thermoplastic, paint and beads, raised pavement markers (RPMs), prefabricated pavement markings, temporary flexible reflective roadway marker tabs, or other approved materials for work zone pavement markings.

Supply materials meeting:
- DMS-4200, “Pavement Markers (Reflectorized),”
- DMS-4300, “Traffic Buttons,”
- DMS-8200, “Traffic Paint,”
- DMS-8220, “Hot Applied Thermoplastic,”
- DMS-8240, “Permanent Prefabricated Pavement Markings,”
- DMS-8241, “Temporary (Removable) Prefabricated Pavement Markings,”
- DMS-8242, “Temporary Flexible, Reflective Roadway Marker Tabs,” and
- DMS-8290, “Glass Traffic Beads.”

2.1. Nonremovable Markings. Use hot-applied thermoplastic or permanent prefabricated pavement markings for nonremovable markings. Paint and beads or other materials are not allowed for nonremovable markings unless shown on the plans.

2.2. Removable and Short-Term Markings. Use RPMs, removable prefabricated pavement markings, temporary flexible reflective roadway marker tabs, or other approved materials for removable and short-term markings. Do not use hot-applied thermoplastic or traffic paint for removable markings. Use removable prefabricated pavement markings on the final pavement surface when the plans specify removable markings.

3. CONSTRUCTION

Apply pavement markings in accordance with the following Items.
- Item 666, “Retroreflectorized Pavement Markings”
- Item 668, “Prefabricated Pavement Markings”
- Item 672, “Raised Pavement Markers”

3.1. Placement. Install longitudinal markings on pavement surfaces before opening to traffic. Maintain lane alignment traffic control devices and operations until markings are installed. Install markings in proper alignment in accordance with the TMUTCD and as shown on the plans. Short-term markings will be allowed when standard markings (removable or nonremovable) cannot be placed before opening to traffic, if shown on the plans or directed.

When short-term markings are allowed for opening to traffic, place standard longitudinal markings no later than 14 calendar days after the placement of the surface. When inclement weather prohibits placement of markings, the 14-day period may be extended until weather permits proper application.
Place standard longitudinal markings no sooner than 3 calendar days after the placement of a surface treatment, unless otherwise shown on the plans.

Apply thermoplastic markings to a minimum thickness of 0.060 in. (60 mils). When paint and beads are allowed, apply to a minimum dry thickness of 0.012 in. (12 mils).

Place short-term markings in proper alignment with the location of the final pavement markings. Remove and replace short-term markings not in alignment at the Contractor’s expense.

For removable placements, use of RPMs to simulate longitudinal markings is at the Contractor’s option. Use side-by-side RPMs to simulate longitudinal lines wider than 4 in. Do not use RPMs for words, symbols, shapes, or diagonal or transverse lines.

3.2. **Marking Removal.** Remove markings that conflict with succeeding markings in accordance with Item 677, “Eliminating Existing Pavement Markings and Markers.” Remove short-term markings that interfere or conflict with final marking placement immediately before placing final pavement markings, unless otherwise directed. Remove the remainder of the short-term markings before final acceptance.

Remove all temporary markings with minimal damage to the roadway to the satisfaction of the Engineer.

3.3. **Performance Requirements.** Ensure all markings are visible from a distance at least 300 ft. in daylight conditions and at least 160 ft. in nighttime conditions when illuminated by automobile low-beam headlights. Determine visibility distances using an automobile traveling on the roadway under dry conditions.

Maintain the markings for 30 calendar days after installation. The end of the 30-day maintenance period does not relieve the Contractor from the performance deficiencies requiring corrective action identified during the 30-day period. Remove and replace markings at the Contractor’s expense if they fail to meet the requirements of this Item during the 30-day period. The 30-calendar day performance requirement will begin again after replacement of the markings.

Ensure daytime and nighttime reflected color of the markings are distinctly white or yellow. Ensure markings exhibit uniform retroreflective characteristics.

4. **MEASUREMENT**

This Item will be measured by the foot or each word, shape, symbol, or temporary flexible reflective roadway marker tab. Each stripe will be measured separately. RPMs used to simulate a marking will be measured by the foot of marking or each RPM.

This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.

5. **PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Work Zone Pavement Markings” of the type and color specified and the shape, width, and size specified as applicable. This price is full compensation for furnishing, placing, maintaining, and removing work zone pavement markings and for materials, equipment, labor, tools, and incidentals.
Elimination of nonremovable markings will be paid for under Item 677, “Eliminating Existing Pavement Markings and Markers.” Removal of short-term and removable markings will not be paid for directly but will be subsidiary to this Item.

Type II work zone pavement markings (paint and beads) used as a sealer for Type I pavement markings (thermoplastic) will be paid for under this Item.