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## **SNOWPLOWABLE PAVEMENT MARKERS:**

(03-19-19)

Revise the *2018 Standard Specifications* as follows:

**Pages 10-177 and 10-178, Subarticle 1086-3 SNOWPLOWABLE PAVEMENT MARKERS**, delete items (A), (B) and (C)(1) and replace with the following:

### **(A) General**

Use snowplowable pavement markers evaluated by NTPEP. The snowplowable pavement marker shall consist of a housing with one or more glass or plastic face lens type reflective lenses to provide the required color designation. Shape the housing to deflect a snowplow blade upward in both directions without being damaged. Plastic lens faces shall use an abrasion resistant coating.

Use recycled snowplowable pavement markers that meet all the requirements of new snowplowable pavement markers except Subarticle 1086-3(B)(1). Recycled snowplowable pavement markers with minimal variation in dimensions are acceptable only when the reflector fits in the housing of the recycled snowplowable pavement marker as originally designed.

### **(B) Housings**

#### (1) Dimensions

The dimension, slope and minimum area of reflecting surface shall conform to dimensions as shown in the plans. The minimum area of each reflecting surface shall be 1.44 sq.in.

#### (2) Materials

Use snowplowable pavement markers that are on the NCDOT Approved Products List.

#### (3) Surface

The surface of the housing shall be free of scale, dirt, rust, oil, grease or any other contaminant which might reduce its bond to the epoxy adhesive.

#### (4) Identification

Mark the housing with the manufacturer's name and model number of marker.

**(C) Reflectors**

(1) General

Laminate the reflector to an elastomeric pad and attach with adhesive to the housing. The thickness of the elastomeric pad shall be 0.04".

**Pages 12-14, Subarticle 1250-3(C) Removal of Existing Pavement Markers, lines 19-29,** delete and replace with the following:

Remove the existing raised pavement markers or the snowplowable pavement markers including the housings, before overlaying an existing roadway with pavement. Repair the pavement by filling holes as directed by the Engineer.

When traffic patterns are changed in work zones due to construction or reconstruction, remove all raised pavement markers or snowplowable markers including housings that conflict with the new traffic pattern before switching traffic to the new traffic pattern. Lens removal in lieu of total housing removal is not an acceptable practice for snowplowable markers.

Properly dispose of the removed pavement markers. No direct payment will be made for removal or disposal of existing pavement markers or repair of pavement, as such work will be incidental to other items in the contract.

**Pages 12-16 and 12-17, Subarticle 1253-3 CONSTRUCTION METHODS,** delete items (A), (B) and (C) and replace with the following:

**(A) General**

Bond marker housings to the pavement with epoxy adhesive. Mechanically mix and dispense epoxy adhesives as required by the manufacturer's specifications. Place the markers immediately after the adhesive has been mixed and dispensed.

Install snowplowable pavement marker housings into slots sawcut into the pavement. Make slots in the pavement to exactly duplicate the shape of the housing of the snowplowable pavement markers.

Promptly remove all debris resulting from the saw cutting operation from the pavement surface. Install the marker housings within 7 calendar days after saw cutting slots in the pavement. Remove and dispose of loose material from the slots by brushing, blow cleaning or vacuuming. Dry the slots before applying the epoxy adhesive. Fill the cleaned slots totally with epoxy adhesive flush with the surface of the existing pavement. Install snowplowable pavement markers according to the manufacturer's recommendations.

Protect the snowplowable pavement markers until the epoxy has initially cured and is track free.

**(B) Reflector Replacement**

In the event that a reflector is damaged, replace the damaged reflector by using adhesives and methods recommended by the manufacturer of the markers and approved by the Engineer. This work is considered incidental if damage occurs during the initial installation of the marker housings and maintenance of initial snowplowable markers specified in this section. This work will be paid for under the pay item for the type of reflector replacement if the damage occurred after the initial installation of the snowplowable pavement marker.

Missing housings shall be replaced. Broken housings shall be removed and replaced. In both cases the slot for the housings shall be properly prepared prior to installing the new housing. Removal of broken housings and preparation of slots will be considered incidental to the work of replacing housings.

**(C) Recycled Snowplowable Pavement Marker Housings**

Use properly refurbished snowplowable pavement marker housings as approved by the Engineer such that approved new reflectors can be installed inside the housings.