This procedure outlines the recommended steps for the installation of the Ennis-Flint® Stimsonite® Lens Cradle Model 201 snowplowable raised pavement markers.

Note: Do not install markers unless air temperature and humidity are within the specifications outlined by the epoxy manufacturer.

1. Determine location to place the marker

Place the snowplowable marker so that the reflective face is perpendicular to the roadway centerline. When using snowplowable markers to supplement a solid pavement stripe, offset the markers 2 inches from the edge of the stripe. This permits the painting of the line without affecting the Snowplowable marker. DO NOT put snowplowable markers in longitudinal or transverse pavement joints or in cracks in the pavement surface. Place the marker at least 2 inches from any joint or crack in the pavement surface. Cut the pavement to fit the marker.

IMPORTANT: Markers must be installed in a new saw cut. Never attempt to reuse an existing hole that previously held a marker.

Using an 18 or 20-inch diameter cutting blade, cut the pavement at a groove width of 5.25 inches and a groove length of either 7 or 9 feet. Make a tapered cut that gradually cuts to a 0.40-inch depth for approximately three feet in length. Then, the blade should plunge to a depth of approximately one inch at a length of one foot. For a single marker application, after the plunge cut, the groove depth should return to the 0.40-inch depth and taper up for three feet. For a two-marker application, after the first plunge cut, the groove depth should return to 0.40 inch depth for one foot and then make a second plunge cut to a one-inch depth for one foot. After the second plunge cut, the groove depth should return to the 0.40-inch depth and taper for three feet. For a visual image of the groove dimensions, please see the Lens Cradle brochure. (Please note that equipment modifications may be necessary to accommodate the above groove dimensions)

2. Clean and dry the saw cut

The saw cut area MUST BE DRY and free of dust, dirt, or any material which will adversely affect the bond of the adhesive.

3. Apply epoxy adhesive

Combine and mix an epoxy meeting AASHTO Designation M237, Type IV (or approved equal), just prior to anchoring the markers. Automatic dispensing equipment is recommended. Hand mixing should be limited to very small projects. When using a 1:1 epoxy, combine equal parts of components A and B. Mix thoroughly. Properly mixed, the epoxy will be uniform gray without visible streaks. (Follow manufacturer’s instructions for other approved epoxies) Pour the epoxy into the 1-inch-deep groove and fill until the epoxy is within 3/8 inches of the pavement surface.

NOTE: Epoxy adhesive cures best at temperatures above 60°F (15.5°C) and low relative humidity. Always follow epoxy manufacturer’s guidelines for use.

4. Place the marker

Place the casting by hand into the epoxy-filled saw cut. For a dual casting application of two castings per 9-foot groove, place one casting at the point of the groove where the cut has descended to 1-inch depth and then place a second casting at the other plunge point 1-inch deep. The distance between the two markers should be approximately 2 feet from center point to center point. Both levelling tabs must rest flat on the pavement surface. Epoxy should flow over the top of the ridged casting border. Add additional epoxy as needed to ensure that all ridges are covered. Overfilling the hole with epoxy may cause the lens to become submerged.

IMPORTANT: It is critical that the two tabs rest directly on the asphalt surface and that the replaceable C40 marker is completely below the pavement surface. If this is not the case, then the installation is improper and the casting must be removed and reinstalled in a new saw cut. Make certain that the epoxy does not flow onto the reflective face or the plate in front of it. Protect markers from traffic until the epoxy completely hardens.