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**Snowplowable Pavement Market Test Deck Installation :
Scarborough Connector, Northbound, September 29, 2004**

Maine Department of Transportation

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Scarborough Connector, northbound

September 29, 2004, 8:30 – 11:30 AM
Overcast, temperature: 52-56°F, breezy

Personnel: Doug Gayne, MaineDOT Product Approval Coordinator; Scott McPherson, MaineDOT, Crew Supervisor and 4 crew personnel; Wayne, Denville Lines, Driver/Grinder Operator/Installer; Dave McHugh, Sales Manager, Ray-O-Lite; Al Siblik, Hallen Products, Ltd.; Ken Everhart, Avery Dennison.



Clear/Red Reflector in housing

All reflectors were clear/red except for Avery Dennison's which were one-way clear due to their clear/reds not arriving on time. Avery has requested replacing with clear/red and has been granted permission providing the work is done in a timely manner so that all units may weather alike. This work is planned within the next two weeks.

MaineDOT personnel began setting up the lane closure at 8:30 AM. As soon as the closure was in place, grinding operations began. Thirty locations were ground adjacent to the center line joint in preparation for the markers. Locations were evenly spaced on center line between "skips", which placed them 40' apart. Truck-mounted grinder unit proceeded in direction of traffic grinding on average 2 locations per minute.



*G
Grinding Operation*



Location ready for installation

After grinding, marker housings were "dry-fit" to ensure proper depth for placement of snowplowable markers. Upon completion of grinding operations and inspection, locations were then blown out with compressed air by MaineDOT personnel. Crew members used a moving truck-mounted compressor and wand for this procedure.

Thermoset EP-87 epoxy, a two part adhesive was used for anchoring the units in the road. Dark colored resin was first poured into steel paint pots followed by an equal amount of the white colored hardener. The epoxy was then mixed thoroughly by hand until blended into a grayish color indicating a thorough mix.



Mixing epoxy



Material was then immediately placed into ground-out areas of the pavement. Typically, epoxy is blended on the truck and then injected into the cut-outs on large installation projects. But, in this particular installation with only a relatively few markers installed, everything was done by hand. I am told that with the injected method there is minimal epoxy on the road surface after placement of the marker. Note the duct tape over the reflector during the cementing process to avoid smudging the reflector. The duct tape is removed after cementing and prior to final "set-up" of adhesive.

Cementing marker in roadway

Work proceeded in this manner for all 30 units. The epoxy was stiff enough (although still slightly tacky) to allow traffic at about 11:15. The lane closure was taken down and installation was complete at about 11:30.



Ready for traffic



Tag team marker installation

Doug Gayne, Product Approval Coordinator, October 5, 2004

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