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12. Performing Organization Name and Address NDDOT M+R <input checked="" type="checkbox"/> North Dakota DOT NDDOT OTHER* <input type="checkbox"/> Materials and Research Division NDSU <input type="checkbox"/> 300 Airport Road UND <input type="checkbox"/> Bismarck ND 58504-6005 UGPTI <input type="checkbox"/> OTHER* <input type="checkbox"/> *see supplementary notes		13. Sponsoring Agency Name and Address North Dakota DOT Materials and Research Division 300 Airport Road Bismarck ND 58504-6005	
14. Supplementary Notes			
15. Abstract <u>Purpose and Need</u> A supplement to the primary pavement marking system, is to install snowplowable reflective pavement markers. A snowplowable reflective pavement marker would provide additional delineation when the primary marking system is reliable and provide a backup system during times when the primary marking system is unreliable. It is also imperative that the raised pavement marker be resistant to the effects of snowplow activity. <u>Objective</u> The objective of this study is to determine, primarily, the performance of the Stimsonite Reflective Pavement Marker when exposed to snowplow activity. Performance characteristics of the reflector itself will be studied to determine what supplemental benefits it has to the primary pavement markings. <u>Scope</u> Two experimental sections of Stimsonite Lifelite snowplowable raised reflective markers were installed. One section was installed on an urban interstate highway exit ramp and the other section was installed on the turning lanes of a rural highway. These sections will be evaluated annually for four years. The reflective markers will be visually evaluated for wear and damage; and section personnel will be interviewed about the snowplowability and visibility of the raised reflective markers. The first set of raised reflective markers was placed on the southeast exit ramp (ramp 67) of the Intersection of I-29 and 19th Avenue North in Fargo, North Dakota as part of project H-8-999(003). I-29 is classified as a Rural Interstate Highway. The second set of raised markers were placed on US 52 approximately two miles southeast of Harvey, North Dakota at the intersection into a grain elevator terminal from RP 171.983 to RP 172.366 on project NH-4-052(030)167. US 52 is classified as a Interregional corridor. <u>Summary</u> Before a chip seal was placed on the US 52 test section, users of the grain handling facility near Harvey indicated that the markers were a great benefit in assisting the drivers to identify the lane markings in all types of weather. The section personnel indicated that the markers showed up very well after sanding even when the paint markings are totally obscured with the sand. A chip seal was placed on the US 52 test section and its application has reduced the visibility of the raised markers. Masking a larger area around the raised markers may have reduced the loss of visibility caused by the chip seal. The markers at the Interstate 29 ramp installation are in a location that doesn't appear to greatly affect the delineation of the ramp. The markers are located outside the painted yellow edge line and aren't very visible to traffic. The markers at both sites have shown some deterioration from age and wear from snowplows but the markers generally appear to be intact. Damage to the ears of the markers doesn't appear to have affected the performance of the markers. The only damage that has affected the visibility of the markers is damage to the lenses. At the Interstate ramp installation 1 of the 12 markers has a damaged lens and 4 of the 108 markers at the US 52 installation have damaged lenses.			
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