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5. Title and Subtitle  Use of Stainless Steel Alternative for a Corrosion Resistance Structure				6. Report Type <a href="#">Click on link to open report</a>		7. Project No.	
				Work Plan <input type="checkbox"/>		8. Project No.	
				<a href="#">Construction</a> <input checked="" type="checkbox"/>		9. Project No.	
				Evaluation <input type="checkbox"/>		10. Project No.	
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14. Supplementary Notes							
15. Abstract							
<b><u>Purpose and Need</u></b>							
<p>The deterioration of reinforced concrete structures has long been a problem to highway agencies. The major cause of the deterioration results from corrosion of the steel due to chlorides. The cost of using stainless steel rebar is prohibitive for highway construction at this time but a new product known as Nuovinox, a carbon steel rebar clad with stainless steel is reported to be a stainless steel alternative priced considerably lower than stainless steel.</p>							
<b><u>Objective</u></b>							
<p>The objective of this research study is to determine if a carbon steel rebar clad with stainless steel is a cost effective new method of combating the effects of chloride intrusion.</p>							
<b><u>Scope</u></b>							
<p>A bridge was constructed with stainless steel clad rebar as part of project number is IM-2-094(011)289. The bridge is located West of Valley City on Interstate 94 at reference mile 290. The National Bridge Number is 94-290.803. The bridge is 0.025 Miles long and begins at station 5353+67.69 and ends at station 5354+98.69. The project will be evaluated at five, ten, fifteen, and twenty years. The bridge deck will be inspected for cracks, delamination, deterioration, and will also be tested for chloride intrusion.</p>							
<b><u>Summary</u></b>							
<p>Comments from Mike Flaagen, NDDOT project engineer: If we continue to use this material, we need to learn more about it's characteristics. We need to know how to accept it in the field and look for irregularities in the coating. The supplier should do a better job of bending the bars to the correct dimensions. Many of the bent bars were not exactly bent to the dimensions shown in the plans. This mainly affected installation because the bars were tougher to fit in place. In some cases the contractor had to cut bars to the correct length and cap them.</p> <p>Other than these comments, Mike Flaagen reported that no other differences were noticed in construction using the stainless steel clad rebar.</p>							
16. Key Words Stainless Steel Corrosion Bridge Deck Rebar Stelax Nuoviox 316L		17. Distribution Statement No restrictions. This document is available to the public from:  North Dakota Department of Transportation Materials and Research Division: 300 Airport Road Bismarck ND 58504-6005 Office: (701) 328-6900 Fax: (701) 328-0310				18. No. of Pages 39	
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