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<b>15. Supplementary Notes</b>			
<b>16. Abstract</b>  <p>In jointed portland cement concrete pavements, dowel bars are typically used to transfer loads between adjacent slabs. A common practice is for designers to place dowel bars at a certain, consistent spacing such that a sufficient number of dowels are available to effectively transfer anticipated loads. In many cases, however, the standards developed today for new highway construction simply do not reflect the design needs of low traffic volume, rural roads.</p> <p>The objective of this research was to evaluate the impact of the number of dowel bars and dowel location on joint performance and ultimately on pavement performance. For this research, test sections were designed, constructed, and tested in actual field service pavement. Test sections were developed to include areas with load transfer assemblies having three and four dowels in the outer wheel path only, areas with no joint reinforcement whatsoever, and full lane dowel basket assemblies as the control. Two adjacent paving projects provided both rural and urban settings and differing base materials. This report documents the approach to implementing the study and provides discussion and suggestions based on the results of the research.</p> <p>The research results indicate that the use of single three or four dowel basket assemblies in the outer wheel path is acceptable for use in low truck volume roads. In the case of roadways with relatively stiff bases such as asphalt treated or stabilized bases, the use of the three dowel bar pattern in the outside wheel path is expected to provide adequate performance over the design life of the pavement. In the case of untreated or granular bases, the results indicate that the use of the three or four dowel bar basket in both wheel paths provides the best long-term solution to load transfer and faulting measurements.</p>			
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