



TECHNICAL SUMMARY

Kansas Department of Transportation 2025 Passing Lane Guidance

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Introduction

This report provides comprehensive guidance for planning, locating, designing, and evaluating passing lanes on Kansas rural two-lane highways. It describes the role of passing in improving mobility by reducing platooning, lowering percent time spent following, and increasing travel speeds. Multiple passing lane configurations are outlined, with guidance on selecting locations that maximize operational benefits while minimizing construction, environmental, and access-related constraints.

Project Description

The report details the use of HCM6 operational procedures, which was preferred over HCM7 for passing-lane analysis, as well as TWOPAS simulation model to evaluate design alternatives and define target levels of service for current and future traffic conditions. Safety effectiveness is addressed through referencing crash modification factors, demonstrating that passing lanes and short four-lane sections can substantially reduce crash frequency.

Project Results

Geometric design recommendations include lane and shoulder widths, taper design, and preferred passing-lane lengths of 1.5 to 2 miles. Additional improvements that may be incorporated into passing-lane projects are also discussed. Overall, the guidance offers a consistent, research-based framework to support KDOT in enhancing safety and traffic operations on the state's rural two-lane highway system.

Project Information

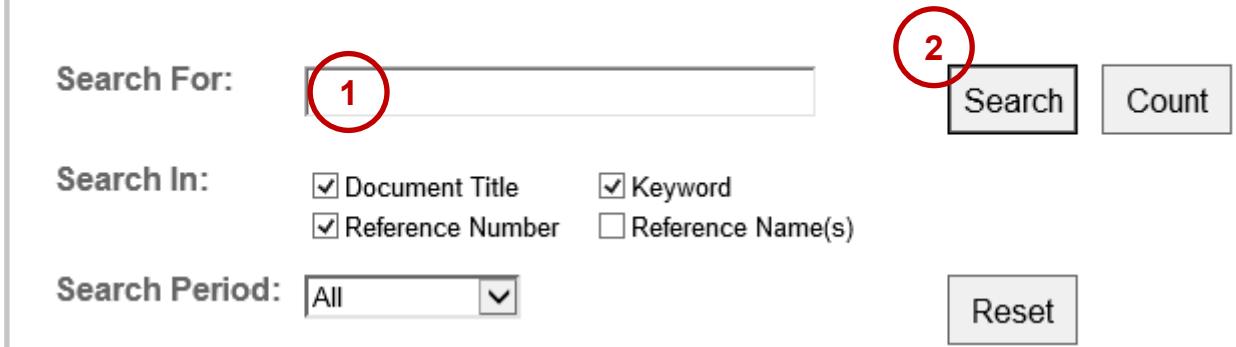
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