



# EVALUATION OF DATA FROM TEST APPLICATION OF OPTICAL SPEED BARS TO HIGHWAY WORK ZONES

Report Number: K-TRAN: KU-00-4

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## Introduction

The issue of traffic speed in highway work zones has long been an issue receiving much attention. Over the past three decades, many different measures have been developed to address the issue of speed in work zones. The use of optical speed bars, transverse bars set out at gradually decreasing spacing in order to provide drivers with a heightened perception of speed to slow traffic entering a work zone was evaluated.

## Project Objective

Evaluate the effectiveness of optical speed bars at reducing speed and speed variations in highway work zones. Optical speed bars have been documented to work well with large desired speed reductions (i.e. from highway speeds to a stop or near stop), but have not been evaluated in work zones where only small reductions of speed are desired.

## Project Description

A literature review was performed on optical speed bars and a methodology was developed for evaluating them in a work zone. The optical speed bars were evaluated using a series of drive-through simulations. Once a pattern was selected it was included in a set of plans and data collected during the construction of the project to evaluate the use of the optical speed bars.

## Project Results

The pattern of the optical speed bars was found to cause reductions in mean and 85<sup>th</sup> percentile speeds, as well as in standard deviations. Changes in speeds were small, and resulted from both warning effects and perceptual effects. The warning effects persisted downstream of the pattern while the perceptual effects did not, as drivers increased their speed once out of the area with graduating spacing. Reductions in speed variations also persisted downstream of the pattern. The work zone pattern did not appear to have any effect on speed or speed variations.

## Report Information

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