



UNIVERSITY TRANSPORTATION CENTER RESEARCH BRIEF

PROJECT TITLE: Evaluation of Motorcyclists and Bikers' Safety on Wet Pavement Markings

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INSTITUTION: SINGLE-INSTITUTION PROJECT

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Background

Pavement markings are important guides to drivers, bikers and walkers attempting to navigate their way through the road systems. Many highways use large symbols that span the entire width of the lane, while some bike lanes are fully painted with bright colors to warn drivers of its presence. These painted road zones are beneficial in keeping road users safe and informed about their surroundings but can cause slippage issues under wet conditions. The painted markings are also susceptible to wear from vehicular loading, which needs to be accounted for in estimating their life span. There are many new bright and wear-resistant paints that are being developed for roadways. A test protocol developed for the evaluation of slip resistance for new and existing pavement markings, especially in rain and ice conditions can help ensure the safety of pavement markings. The goal of this experiment is to test paint markings in different levels of degradation under dry, wet and icy conditions to compare their slippage resistance.

Research Project

For this project, there will be multiple different field tests of the pavement markings to determine the safety evaluation. There will first be a qualitative

bike and motorcyclist rider evaluation survey to determine the slippage of marked roadways under different conditions. The same locations will also be tested using a British Pendulum Tester (BPT) to collect quantitative data. The qualitative and quantitative data will then be compared using field data. Square one-foot slabs will also be tested in the laboratory using the BPT as seen in Figure 1. Each of the tests for the qualitative and quantitative data will be evaluated under different degradations of the pavement markings as well as different surface conditions (dry, wet, and ice). The degradations will be evaluated in the field to find different levels while the laboratory testing will use a wheel abrasion tester to degrade the markings to different levels.

