

FY 2010 RESEARCH PROBLEM STATEMENT

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TITLE ([more info](#))

Factors Effecting Sign Retroreflectivity

PROBLEM (Description of need) ([more info](#))

In 2001 the research department completed a report on factors effecting sign retroreflectivity, specifically age and orientation. In the report there were several issues that were identified as needing further study (effects of climate and weather, effects of anti-graffiti coatings, maintenance programs to promote sign retroreflectivity). With the current FHWA ruling to require minimum sign retroreflectivity standards and a sign retroreflectivity management program on all signs by the year 2011, it would be a good time to further the research already started, to help maintenance section develop a program for maintenance of sign retroreflectivity as part of a statewide management program.

This study should look at the potential cost of instituting each of the 5 different management proposals allowed by FHWA 1) Visual Nighttime Inspections 2) Measured Retroreflectivity 3) Expected Sign Life 4) Blanket Replacement and 5) Control Signs and make a recommendation on what would probably work best in Oregon as well as being the most cost effective.

The study should also look at the different types of sign sheeting that are available and make some recommendations on which sheeting combinations (legend/background) could provide the most effective signing that would help meet the new FHWA requirements.

This study would not only provide guidance for ODOT practice on sign sheeting, but could be a reference document for city and county sign departments to help them with their efforts to also comply with the new FHWA standards.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY ([more info](#))

1. Complete a literature search on studies that have been done by different states on the cost effectiveness of the different sign management strategies.
2. Contact neighboring states and major Oregon cities and counties to identify their plans for meeting the new FHWA standards
3. Document with digital photos and hopefully video, the appearance of many signs as viewed at night to get an idea of current conditions
4. Evaluate all 5 of the FHWA management proposals for cost effectiveness as well as the ability for ODOT crews to undertake the efforts
5. Review current policies on the sign sheeting types that are used for signs on the state highways. Compare this to policies in other states or local cities and counties.
6. Make a recommendation on a best management practice method for ODOT's sign retroreflectivity management program.
7. Make a recommendation on type of inspections and inspection frequency.
8. Review current problems with lack of retroreflection on signs under certain conditions that cause condensation on sign faces at night, make recommendations on what could be done to alleviate this.

BENEFITS [\(more info\)](#)

The information from this study will help ODOT maintenance section make a strong recommendation on what they should do as a management program for sign retroreflectivity to make ODOT compliant with the new FHWA standards.

The research will also help ODOT be able to make recommendations to local cities and counties on how to make their programs FHWA compliant.

The information will also help ODOT improve sign design standards to more cost effectively manage sign standards on a statewide basis

CONTACT INFORMATION:

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Problem Statement Number: