Montana Department of Transportation Research Program June 2003

EXPERIMENTAL PROJECT FOR THE EVALUATION OF DETECTABLE WARNING DEVICES (Workplan)

Location:	Great Falls, Montana 6 th Street NW – Central Ave. W. to NW Bypass Urban Route 5201
Project Number:	STPU 5201(11)
Type of Project:	Evaluation of effective applications of Detectable Warning Devices using Truncated Domes
Principal Investigators:	Scott Keller, MSU Design Section Supervisor Craig Abernathy, Research Project Manager
ADA Advisor:	Debra Riemann, ADA, Civil Rights

Objective

Test the ability of several manufactures designs in the use of truncated domes as a preferred detectable warning devises (DWD) for use by the visually and mobility impaired. Report on the construction application of each treatment, durability and maintenance requirements of such products.

Experimental Design

Install seven similar types of truncated domes on 15 random curb ramp locations in a seven block linear area of 6th Street NW. Several of the newly constructed curb ramps will not receive DWD applications and will be used for experimental controls. The following are the names of the chosen manufacturers and the products selected:

1. ADA Fabricators

Copolymer Composite Tiles

2. Disability Devices

Wet Anchors Box Systems Polyurethane Detectable Warning Mat

3. Vanguard ADA Products of America Applied Truncated Domes

4. Strongwarn Industries Applied Latex Modified Mortar Domes

5. Cote-L Industries

Safti-Trax Plastic Sheets Safti-Trax New Rubber Mat

See Attachment A for the experimental layout.

Estimated Cost

Forthcoming.

Evaluation Procedures

Research will publish a construction report to be used a base qualifier for future evaluations. This report will focus on research's need for documentation of the application process for each treatment. On a regular basis, each treatment will be inspected for visual distress, which may include damaged or missing domes, wearing rate of domes, fading, discoloration or scarring of the material. Any debonding or displacement of the DWD material or panel. Reporting of the panel performance will done by a grid system stating damage by coordinates (example: 25 domes were missing in the central west section of the panel, etc.) All information will be tied to digital images.

Evaluations will center on winter activities such as in how snow was removed and what chemicals may have been used. Warm weather evaluations will report on visual attributes as in color retention of the panels as well as ongoing durability. Since the public may be responsible in the winter upkeep at these locations, there will be an effort to interview those individuals on regular basis to add to the performance data.

In addition to reporting on construction and durability issues, the members of the visually and mobility impaired population of Great Falls will be asked to visit the test site and comment on the effectiveness of the different treatments.

A final report will be published with an performance analysis of all products tested.

Evaluation Schedule

Research staff will monitor performance for a period of five years semiannually, or sooner if information received from the field warrants evaluation outside the scope of inspections. This is in accordance with the Department's "Experimental Project Procedures". Semiannual reports are required as well as a Final Project Report (responsibility of Research).

2003: Installation Installation scheduled for August. Product installation will be monitored and report to be generated by Research.
2003-2008: Semiannual Evaluations Progress reports
2008: Final report

All reporting will be available in hardcopy through Research, sent through established distribution lists, and be posted in PDF format on the Department's website.