

Montana Department of Transportation
Research Program
June 2003

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

Location: Great Falls, Montana
6th 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

Safty-Trax Plastic Sheets

Safty-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.

