

Montana Department of Transportation
Research Programs
January 2014

EXPERIMENTAL PROJECTS WORK PLAN

Electric Wildlife Deterrent Mat (EWDM) Evaluation

Location: Sanders County/Missoula District: Montana 200 (P-6),
Reference Point 57

Project Name: East of Thompson River - East

Project Number: STPP 6-1(126)57

Experimental Project No.: MT-14-01

Type of Project: Wildlife Crossing Structure

Principal Investigator: Craig Abernathy: Experimental Project Manager (ExPM)

Technical Contact: Aaron Mason: Helena Road Design - Missoula

Description

Generically known as electric mats, these structures are crossing deterrents to discourage animals from entering an area deemed necessary to be 'animal free' to mitigate conflicts with travelling motorists. These mats incorporate a mild electric shock when a hooved animal attempts to enter the crossing.

These EWDM units are embedded directly in the pavement (plastic and fiberglass composite material) across a low-volume road. Electric mats serve as an alternative to cattle guards and other non-electric crossing structures to manage ungulate movements.

The information gathered and analyzed from this project may result in a better understanding of how existing roadways may be utilized as wildlife barrier structures. In addition, to gain a better understanding of how "funnel" fencing can be used on existing and future projects. The end result will be a roadway system that is safer for motorists and wildlife.

Experimental Design

The project will incorporate wildlife fencing and will require two EWDM installations at each end of the designated ungulate free zone. One will be located at the west end of the bridge

over the Thompson River at approximately Station 21+03 and the other at the east end of the project at Station 168+14.74; refer to page 4 for approximate layout diagram. The mats will be extended the full width of the roadway at the bridge end. The mat at Station 168+14.74 will be extended to the clear zone on each side of the road where it will connect with the wildlife fence.

There are two manufacturers of the EWDM and is proposed to split the mat installations among those two providers as a comparison of the efficacy of EWDM systems. The following are the vendor's information:

CrossTek LLC
2212 Queen Anne Avenue N 519
Seattle, WA US 98109
330.414.1955
Contact: Tim Hazlehurst
timhazl@aol.com

Lampman Wildlife Management Services
180 Rutherford Ave.
Aylmer Ontario Canada N5H 2W6
519-476-0092
Contact: Richard Lampman
rlampman20@me.com

Monitor Wildlife-Vehicle Conflict: After fence and mat installation, Research along with Biology and Maintenance staff will gather data related to the location and/or frequency of potential wildlife/vehicle conflicts along the stated study area. These data will be compared to the current statistics prior to wildlife deterrent installation. In addition information will be added regarding any activities associated with maintaining these units and/or repairs required to maintain performance.

Evaluation Procedures

Construction Documentation: The Research Section will document the construction methods and equipment, material placement, weather, and specification conformance etc.

Post Documentation: Will entail semi-annual site visits/inspections of the study area, collection/analysis of available data, and data interpretation for inclusion in to the annual and final reports; in addition to include any maintenance activities associated with the EWDM units.

Evaluation Schedule

Research will monitor and report on performance for a minimum period of five years annually, with every year up to *ten years (informally). This is in accordance with the Department's "Experimental Project Procedures". Delivery of a construction/installation report, interim, annual or semi-annual reports is required as well as a final project report (responsibility of Research). A web page will be dedicated to display all reporting from the project.

2015: Installation/Construction Report

2016-2019: Semi-Annual Inspections/ Annual Evaluation Reports

2020: Final Evaluation/Final Report

*If considered the extra data collection and analysis will add value to the overall results of the project.

UPDATE 2019: The vendor Lampman is no longer a supplier of the EWDM. Due to ROW issues this project may be delayed until 2020.

Overview of Approximate Location of the West and East Electrified Mat Installations

