# DEVELOPMENT OF A NEVADA WILDLIFE-FENCING GIS DATASET

## Key · Points

*Project Number:*
342-18-803 TO 2

*Start Date:*
September 17, 2018

*Duration:*
8 months

*Project Cost:*
$72,935.00

*Researcher:*
University of Nevada, Reno

*Principal Investigator:*
Dr. Hao Xu, with
Dr. Tian and Dr. Zheng

*NDOT Champion:*
Nova Simpson
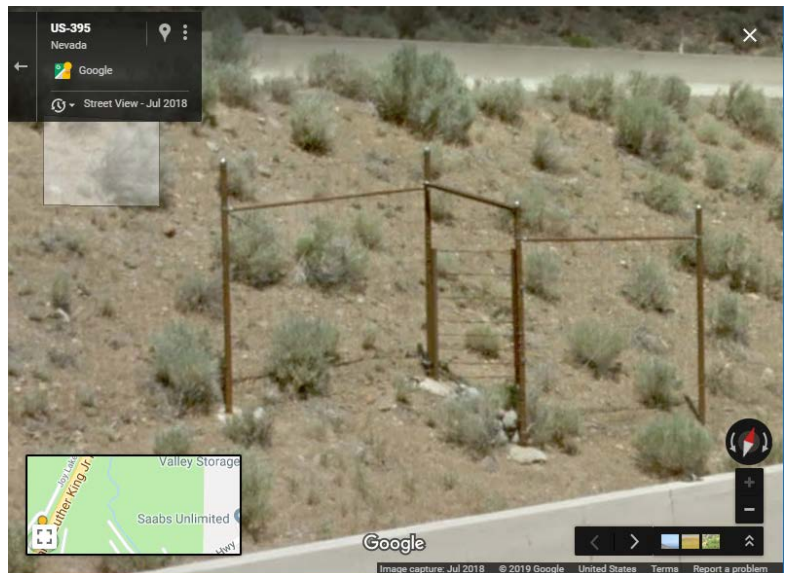Environmental Division

### PROBLEM

Wildlife fencing is one of the most commonly applied measures to separate wildlife from motorists and is also among the most cost-effective mitigation measures reducing wildlife-vehicle collisions (WVCs), however, there is no statewide wildlife-fencing GIS data that can provide integrated and accurate fencing information such as locations, fence types, end types.

### OBJECTIVE

The fencing GIS dataset will be integrated with data of highway crossing structures to study whether the existing fencing and crossing structures are well coordinated. A statewide fencing GIS dataset can be compared to the WVC distribution to evaluate the effect of wildlife fencing on reducing WVCs in Nevada.

### METHODOLOGY

Create the statewide wildlife-fencing database with Google Map Street View, Google Earth Street View (Google Map and Google Earth may provide data/information from different years), and NDOT Roadview Workstation. This project will integrate the extracted wildlife-fencing data, historical crash data, NDOT Highway Performance Monitoring System (HPMS) road network, and data of existing crossing structures on interstate and state highways. The data of crossing structures will also be collected using aerial map and street view pictures.



### IMPLEMENTATION POTENTIAL

A statewide fencing GIS dataset is essential for rural highway safety, especially when it is integrated with crash data, wildlife animal migration data, road properties, and existing crossing structure data. This dataset will also be helpful in determining which fencing type is most effective at reducing WVCs, and will assist in the planning and installation of new/different systems along new and existing roadways.