



# Road Video and Pavement Video Data Collection in Nevada

Federal Task 2002  
State Planning and Research Program  
(SPR)



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# Program Summary

- *NDOT collects video imagery, GPS, pavement information and an assortment of other details on roads throughout the state. The data is used to manage our assets and report to FHWA on various required data items in both HPMS and as required by MAP-21.*
- *The program is funded in the state budget and in the State Planning and Research program as 80% (\$492,000) federal to 20% (\$123,000) state match program*



# What is Video Log

- Video Log is the process of driving down a road with dual operational cameras collecting slow speed video of the road ahead.
- The video collects frames at every 26 ft to insure that road elements are collected, including signs, lights, striping, road conditions etc.
- Other data collected during this time includes, elevation, GPS location, distance travelled, and curve & grade data.



# What is Video Pavement Collection

- Video Pavement collection allows the vehicle to be driven at posted speed down a road while taking video of the pavement ahead.
- The system is used to see the conditions and features around the vehicle, synchronized with the pavement profile data.
- The pavement data being collected includes the rutting, faulting and Roughness Index of the road surface as well as the GPS location data.



# Background

- The State has been involved in video logging the states roads since 1990's, using state staff and equipment.
- In 2005, the state gave up this service due to a change in video formats (VHS to Digital) and the need for a new vehicle.
- From 2008 to 2013, the State used consultants to provide this service at a cost exceeding \$2.5 million dollars.
- Pavement video log is relatively new. Prior to the invent of the electronic pavement video process, staff was required to manually complete this in a labor intensive method on scene.



## Background Con't.

- The use of consultants has raised concerns as to the quality of the data received, the amount of staff time needed to manage the consultant, and the limited ability to adjust contract needs.
- Recognizing these concerns and considering the future needs of this program, Staff met with FHWA representatives and discussed the State taking over the field operation of this program.
- The results of those discussions were the State submittal of the FY15 SPR plan showing the State purchasing the equipment to manage this program, and the FHWA approval of the State's plan for this fiscal year.



# Analysis

- The State is responsible for surveying:
  - 5,400 miles of State Roads and 7, 200 miles of Classified Roads
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  - 1,158 HPMS sample locations in the state
- Staff has considered the volume of work, the time constraints for reporting, the issues raised with quality of prior collected work, and the future needs of this program.
- By operating the field component of this task internally, we can:
  - control the daily quality of the data collected,
  - we can manage time adjustments better,
  - we can provide the services in a more cost effective way.
  - 1 full time staff person has been moved into this program at this time.
  - In the next two years, an additional staff person will be needed and will be sought out through current staffing.



# What's Needed Next?

- If approved today, the purchase and installation of video log equipment for both Roadway and Pavement vehicles needs take place.
- Staff requests the Transportation Board approve the expenditure of funds in the amount up to \$615,000 for the following:
  - \$405,000 for slow speed video equipment and appurtenances for Video Log of Roads
  - \$150,000 for the purchase of video electronic pavement laser and electronics for the pavement program, under the sole source process
  - \$60,000 for the purchase of data storage devices to house the collected data



# Questions?

- Concludes Staff Presentation.
- Staff from Roadway, Pavement, Fleet and Budget are here to answer any questions