

Gravel and Non-Paved Roads in El Paso County

By Andre P. Brackin, P.E.

County Engineer

El Paso County Public Services Department

We have seen a significant increase in average daily traffic on much of the non-paved road system. The increase in the number of vehicles per day, in addition to the introduction of new driveways and other accesses, result in increased attention needed for maintenance, and more trips by maintenance equipment to return the condition to expectations of residents. While the need for added maintenance steadily increases, the resources and equipment we have to do this job remains the same.

Driving Gravel Roads

Gravel roads which comprise most non-paved roads in El Paso County require different driving skills and technique than driving on paved roads. The main difference in the condition between paved and non-paved roads is that the surface condition of non-paved roads is constantly changing due to mostly changing weather conditions but also traffic levels. Rural non-paved roads have more inconsistencies in geometry, materials, and cross-section as compared to paved roads and require more frequent maintenance of shoulders and surface to return the road to an acceptable condition.

Extra caution to be exercised

Gravel roads are inherently hazardous as compared to paved roads. All are posted at a maximum of 45mph, however due to changing weather conditions; extra care should be used at all times on these roads. When the surface becomes particularly dry, the road may seem safe, but loss of traction at lower speeds easily occurs with loose gravel, combined with the "washboard" effect. Over-correcting when loss of traction occurs, results in many accidents at the road shoulder and ditch. Driving at high speed is especially dangerous on gravel roads.

Washboards are caused by braking and acceleration of vehicles typically at driveway locations, bridge approaches, intersections, or other locations where vehicles may stop or slow down frequently. Due to changing traffic usage and the unpredictability of weather, it is impossible to guarantee when a gravel road will deteriorate to a bad surface condition. When leaving the pavement to drive on gravel, a driver must recognize the important differences and change driving habits needed to drive on gravel.

Our number one goal is to improve and maintain safe public roads. The County commits a large amount of resources to the non-paved road system but with current resources and above stated conditions, cannot guarantee a continuous condition level that will always allow driving these roads safely at the posted limit. It's always incumbent on motorists to determine their own safe driving practices based upon conditions encountered.

Standard maintenance practices

To maintain gravel roads, moisture in terms of rainfall or mechanically applied water is critical. Without moisture, little or no improvement to the condition can be achieved. The County has an allotted amount for maintenance use from the Big Sandy Groundwater District, and from the Upper Black Squirrel Groundwater district. It can be purchased also but would be very costly in the amounts required. We also apply dust control chemical to the roads with higher traffic volumes (greater than 200 vehicles / day) to control dust, but the surface condition is worked at the same time. Most gravel roads are maintained on a 6 week schedule. Section line roads and higher traffic roads get more attention. The goal when working these roads is to re-establish a "crown", or cross slope to the roadway, address drainage issues with the ditches, and to regrade the surface to remove washboards and improve the overall condition. Roads with higher traffic require this maintenance to occur more frequently, and so more of our resources have to be committed to these roads than to lower volume roads.

Drought impacts felt by the road system

The current drought has had a large impact on our ability to maintain good surface conditions on most gravel roads. The "washboard" effect returns more quickly and is a greater challenge to grade with very dry road conditions. And we are not seeing any change in rainfall and snow amounts which are relied upon for working the roads. After rainfall or snowfall are the times when residents are likely to see the motor graders out working, not just to move snow from the road, but also to re- condition the roads.

How do we improve the status quo of gravel roads?

This Department is resource limited. This effort requires certain types of equipment, trained operators, and large amounts of water. Additional equipment and committing more personnel to the rural areas is necessary to increase the amount of maintenance and better the overall conditions. Until additional resources can be determined, we will do our best to prioritize the roads based upon traffic levels and weather, so that available resources are used most efficiently.

Safety remains our number one priority in all we do, and committing available resources to the extent possible to increase safety of motorists.