

## TRAFFIC AND SAFETY INFORMATIONAL SERIES FREQUENTLY ASKED QUESTION #23

### HOW DOES THE COUNTY MAKE DECISIONS ABOUT PAVING GRAVEL ROADWAYS?

#### IOWA POLICY ON PAVING GRAVEL ROADS

According to Iowa state law, the decision to pave a gravel roadway within a county must be made by the county board of supervisors and the county engineer. A number of factors are considered in the decision to pave a roadway, and in 1982 the Association of County Engineers and the Association of Boards of Supervisors created a point system for these factors to establish whether and when a county roadway might be paved. The factors considered in this point system include

- roadway type,
- vehicles per day,
- proximity to other paved roadways, and
- amount of truck traffic.

A gravel roadway weakens as more traffic uses it. For this reason, the type, number, and weight of vehicles on a gravel roadway influence its overall useful life. The point system for paving a roadway includes the type and amount of traffic using the roadway. Typically, the paving of a particular roadway is more likely to be justified as average daily traffic volumes increase. In addition to the point system, county officials may also take into account the willingness of local property owners to contribute financially to the paving project.

#### ROADWAY MANAGEMENT SYSTEM

One tool that some counties use to help make a paving decision is a roadway management system. A roadway management system allows a county to assess the condition of its roadways and make more efficient financial decisions about roadway improvements. The goal is to improve the overall county roadway system by considering all of them in a systematic manner. Improvements to a particular roadway are analyzed by considering maintenance costs, riding surface, and the additional expense related to other roadways within the county. The following steps are typically included in a roadway management system. These steps are outlined in *When to Pave a Gravel Road* from the Local Transportation Information Center of the Iowa State University Extension.

1. *Inventory the county roadways*: survey the mileage and condition of the system roadways.
2. *Assess the condition of the roadways*: use consistent survey techniques from year to year to analyze the pavement.
3. *Select a roadway management strategy*: use appropriate treatments to repair problem areas.
4. *Determine present needs*: estimate the cost of repair and establish long range goals and objectives.
5. *Establish priorities*: use preventive maintenance to keep roadways in proper shape and reconstruct roadways in very poor condition.

Using a roadway management system allows a county to spend their limited funds more wisely by determining the most cost-effective and long-term improvements and maintenance for the roadway system. The system can help make more appropriate and cost effective paving decisions.

### **OTHER METHODS TO PREVENT OR CORRECT PROBLEMS WITH GRAVEL ROADWAYS (BESIDES PAVING)**

Gravel roadways can experience many problems. A number of problems, however, can be improved or prevented without the introduction of a paved surface. Four of the most common problems encountered with gravel roadways, along with a possible solution, are briefly described in Table 1.

**TABLE 1 Causes and Solutions to Problems with Gravel Roadways**

<b>Problem</b>	<b>Description</b>	<b>Reason for Concern</b>	<b>Possible Solution</b>
Corrugation	Ripples/ridges on roadway	Wears on vehicles and impairs driver control of steering and breaking	Commercial binders
Loss of material	Losing material from the surface (loose gravel)	Weakens surface and replacement cost	Dust palliative to make particles heavier or use of a motor grader to remix the gravel
Rutting	Wheel paths deform the roadway	Cause severe break up of road surface, improper drainage and traps vehicle tires	Improve drainage and add/stabilize the gravel
Potholes	Bowl-shaped depressions on gravel surfaces	Vehicle wear, and they can hold water which damages the roadway	Clean out and add new gravel; add stabilizers or dust suppressants and keep overweight vehicles off the roadway

Source: *Problems Associated with Gravel Roads*. Federal Highway Administration, May 1998.

### **SOME IMPORTANT REFERENCES ABOUT GRAVEL ROADS**

- *When to Pave a Gravel Road*, Local Transportation Information Center of the Iowa State University Extension.
- *Problems Associated with Gravel Roads*. Federal Highway Administration, May 1998.

### **For more information**

For more information, please contact \_\_\_\_\_.