

# Economics of Upgrading an Aggregate Road

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## ABSTRACT

This research provides local government agencies with information and procedures to make informed decisions about advantageous times for upgrading and paving gravel roads. It also provides resources to explain to the public why certain maintenance or construction techniques are used or policies are decided. Two approaches were used for estimating future costs. The first was a historical cost analysis based on the spending history for low-volume roads, found in the annual reports of selected Minnesota counties. The effects of traffic volume and road surface type on cost are included in the analysis. The second was a method for estimating the cost of maintaining gravel roads, which is useful when the requirements for labor, equipment, and materials can be predicted. Additional information was gleaned from interviews with local road officials. Considered maintenance and upgrading activities included maintenance grading, regrading, dust control/stabilization, reconstruction/regarding, paving, and others. As part of this presentation, an analysis will be presented that compares the cost of maintaining a gravel road with the cost of upgrading to a paved surface. This analysis can be modified to address local conditions. Such an analysis may be used as a tool to help make decisions about upgrading a gravel road to a paved road.

Note: This research was still in progress at the time of publication; contact the lead author above for more information.

**Key words: aggregate road—costs—decisions—gravel road—maintenance**