

## Signing for weight restrictions

Tom McDonald, Safety Circuit Rider

PROTECTING roads and structures from damage caused by heavy loads has always been a concern of Iowa's local agencies.

Section G10, Weight Restrictions, of *Iowa Traffic Control Devices and Pavement Markings: A Manual for Cities and Counties*,

describes signing and procedures that can be employed to help protect transportation infrastructure. The manual's appendix includes sample embargoes and overweight permits.

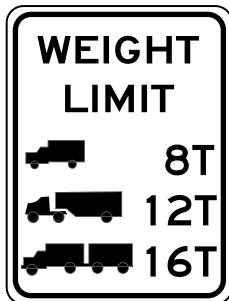
Signs R12-1 through R12-5 (from Section 2B.43 of the MUTCD) are commonly used to restrict loads on posted structures. Most popular in Iowa are R12-1, "Weight Limit," and R12-5, "Weight Limit Symbol." Iowa's manual illustrates layouts for signing restricted bridges.

### Restricting implements of husbandry

Provisions of the Code of Iowa addressing load restrictions for structures apply primarily to substandard bridges or culverts that, for whatever reason, no longer meet established state or federal standards. These structures must be "posted." Even implements of husbandry, which the Code exempts from most highway weight and size restrictions, must comply with weight limits on posted bridges.



R12-1



R12-5



R12-4

As the use of many kinds of large-capacity grain-hauling units and mobile tanks for removing waste from hog confinement facilities grows, county agencies are becoming increasingly concerned about protecting unposted structures in their jurisdictions. The heavy loads of such agricultural equipment, which can exceed 50,000 pounds on a single axle (far in excess of that allowed for commercial vehicles), have caused damaging stresses to roads and structures in many areas of the state.

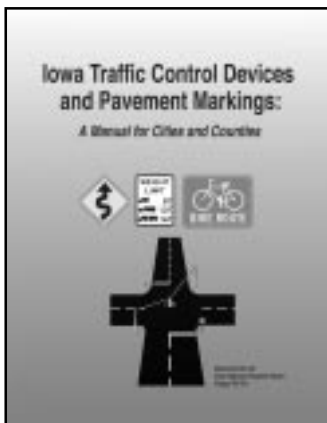
One possible solution might be to post structurally sound bridges that may be at risk, a subject on which the Code of Iowa is silent. This practice has been seen in Missouri and Michigan, and some county engineers in Iowa are contemplating posting otherwise unrestricted bridges that are showing signs of stress. The preferred signing would likely be R12-4, "Weight Limit Axle-Gross."

### What do you think?

During a recent presentation on weight restrictions at the Iowa County Engineers Association conference, it was suggested that Section G10 in Iowa's manual could be modified to better explain possible options for signing and other procedures to help protect unrestricted structures that may be vulnerable to stresses caused by heavy agricultural loads. We would appreciate your recommendations for such a revision.

Please review this section of Iowa's manual and send your comments to Tom McDonald, Iowa's Safety Circuit Rider, 515-294-6384, [tmcdonal@iastate.edu](mailto:tmcdonal@iastate.edu). •

*We would appreciate your recommendations for explaining signing options for restricting weight on unposted structures.*



*Editor's note: This article is part of a series about Iowa Traffic Control Devices and Pavement Markings: A Manual for Cities and Counties. The manual was funded by the Iowa Highway Research Board (TR-441) and supplements the MUTCD. It is available online, [www.ctre.iastate.edu/pubs/itcd/index.htm](http://www.ctre.iastate.edu/pubs/itcd/index.htm). Or contact Tom McDonald (see contact information above).*