

DATE: January 4, 1994

TO: All Bridge Designers

FROM: A. J. Siccardi

SUBJECT: Technical Memorandum #16
Live Loads for Structure Design

All structures shall now be designed for HS25-44 instead of HS20-44. The HS25-44 vehicle shall be used in all instances where the AASHTO Standard Specifications call for application of the HS vehicle. This is effective immediately for all projects using Load Factor Design (see Technical Memorandum #14). Projects where final design is substantially complete will be excluded if changing from HS20 to HS25 would adversely impact the schedule.

I have made this decision in order to insure we obtain adequate capacity for overloads when using load factor design. Designing for the Permit Vehicle (AASHTO load group IB), as well as the HS live load, is fundamental to bridge design to obtain overload capacity. With this decision to use HS25, the Permit Vehicle will generally not control over the HS vehicle when performing load factor design. However, designers shall verify and document whether the Permit Vehicle controls. The live load tables given in Subsection 3.2 may be used for this purpose.

When evaluating existing structures for rehabilitation or widening, using HS20 and the Permit Vehicle will be acceptable where necessary to provide justification to leave existing members in-place, and to obtain new and existing structural elements with similar live load capacities.

Inventory and Operating bridge ratings for all current designs shall be reported in HS (instead of tons) and based on the load factor method. This is effective immediately for all bridges where the rating package has not been submitted, including those bridges designed with the working stress method.

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The CDOT Bridge Design Manual will be revised as necessary to conform with this memorandum. Until that time, this memorandum shall govern over the contents of the manual as stipulated in Article 1.1.4.A of the CDOT Bridge Design Manual.

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