



## 1-50.1 Job Requirements

[Standard spec 108.7.1](#) requires the contactor's equipment to be suitable to produce the quantity and quality of work required. The engineer should call the contractor's attention to any equipment deficiencies and, if necessary, suspend work operations until satisfactory equipment is furnished.

Each unit of equipment shall have a muffler system in good operating condition, without holes or leaks. Units used for public road hauling of materials subject to spilling shall be equipped with sideboards and tailgates adequate to prevent spillage. Covers shall be used when needed to prevent spillage.

## 1-50.2 Large Loadings on Highways and Structures

### 1-50.2.1 Use of Oversize Equipment During Construction

The contractor frequently may use equipment that exceeds the statutory size and mass limitations permitted upon a public highway, especially on earth-moving operations. It is interpreted from a previous court decision that even where the contract provides maintenance of traffic during construction, if the highway under construction is open to only limited public use, the contractor has a right to use the heavy road-building equipment necessary for the work. The exemption given to large equipment for transporting materials on a construction project applies only to operations within the project limits. These vehicles are not exempt from the provisions of the Wisconsin statutes relating to size and mass on other highways, even though the highway may be traversed in connection with work on the construction project, such as hauling from a borrow pit.

Occasionally, the use of oversize or overweight equipment may be restricted within the project limits. [Standard spec 108.7.1](#) provides that equipment use shall cause no injury to the roadway, pavement, structures, adjacent property, or other highways.

### 1-50.2.2 Loads on Structures During Construction

The contractor is not permitted to operate overweight equipment over a structure until the contractor performs an analysis to ensure the equipment loading does not exceed the structural capacity of the structure. Per [standard spec 108.7.3](#), if the engineer directs, a professional engineer registered in the state of Wisconsin must perform the analysis, and a stamped and signed copy of the analysis report must be submitted to WisDOT.

To minimize vibrations and movement that may jeopardize the development of strength on freshly poured concrete decks, [standard spec 108.7.3](#) prohibits the contractor from operating heavy equipment or imposing vehicular live loads on lanes adjacent to freshly placed concrete decks until the concrete develops sufficient opening strength. Opening strength requirements are in [standard spec 502.3.10.1](#).

### 1-50.2.3 Oversize Equipment on Completed Work

The engineer has the authority to prohibit the contractor from operating overweight equipment on portions of the existing highway intended to be retained in service upon completion of the project, and over structures or other features of the project that might be damaged by such operations.

## 1-50.3 Monitoring Construction Vehicle Masses

[Standard spec 108.7.2](#) limits vehicle loads on subgrade, sub-base, base course, pavements, and structures to Class A highway loadings.

WisDOT personnel should not be concerned with enforcing the weight laws nor be interested in penalties for overloads as in the case with enforcement agencies, nor expect exact adherence to the letter of the law. They should realize the contractor will strive to haul the maximum allowable on each load and even under the best of controls and intentions an occasional truck may be slightly overloaded. They don't need to be overly concerned with minor infractions. The gross, repetitive, and damaging overloads are the ones to be eliminated.

When materials are weighed for payment, such as base course or asphaltic mixtures, it is a simple matter to compare the gross load against that permitted for the particular vehicle. However, there can be large overloads on individual axles or combinations of axles even when gross load is at or under the allowable, so axle loads must also be checked.

A videotape-training program has been developed to assist department personnel in identifying legal loadings and is available through region offices. By using the video and portable scales, and through some experience, an employee can visualize the proper position of the load within the truck bed and establish the pressure on the air axle needed to be legal. Portable scales are available by contacting the State Patrol.

The use of the air axle renders the truck less maneuverable, so it is permissible to release the air pressure and

raise the axle when turning or backing. When proceeding loaded down the highway, the air axle must be lowered with sufficient air pressure to develop the load on the axle.

If there is consistent overloading or gross overloading, the contractor should be advised and given the opportunity to correct the hauling operation and bring it within legal limits or to prove that there are not overloads. In the case of a dispute, the engineer should bring it to the attention of the region area construction supervisor for resolution. It may become necessary to bring portable scales in for weighing axles at the site.

Where the mass of a unit of equipment is in question, the contractor should be required to furnish authentic manufacturer's data on the tare and loaded masses. This will serve as a rough check.

The foregoing principles apply also to materials not normally weighed for payment, such as concrete batches.

A weight limitations summary chart can be found at the following link.

<https://dot-auth-uat.wi.gov/Documents/dmv/agri-eq-veh/wght-lmts/sp4075.pdf>

#### **1-50.4 Use of Publicly Owned Equipment**

In accordance with court decisions, it is illegal for a unit of government to engage in work for a private contractor or to rent publicly owned equipment to a private contractor, except as discussed for haul roads.

A unit of government, in performing work for a contractor or any reimbursement basis, or in renting its equipment to a contractor, would be engaging in private business and according to the court decisions would be in violation of the law, regardless of the ultimate objective of the work.

The court further held that even though the unit of government would be fully reimbursed for its costs, taxpayers money would be used and invested in the private work until such time as the unit of government had been reimbursed or paid, which in effect, would be using tax money for other than public purposes.

If it should come to the attention of the engineer that a unit of government is performing work for or renting equipment to a contractor or proposed to do such, except as discussed for haul roads, the engineer should immediately advise the unit of government or contractor or both, that such arrangement is illegal and report the circumstances to the project manager.