

# STRUCTURAL BUILDING COMPONENTS MAGAZINE

December 2004

## Transporting Trusses: Navigating Regulations & Enforcement (Part 1 of 3) by Sean D. Shields



With the advent of the Federal-Aid Highway Act of 1956, and the subsequent passage of various federal statutes, federal interest was institutionalized in creating and preserving the integrity of the national highway system and ensuring the safety, productivity and mobility of passenger and freight commerce moving along it.

Under the U.S. Department of Transportation (DOT) umbrella, there are two agencies given specific authority over the operation of commercial motor vehicles on both the Interstate System (approximately 43,000 miles) and the National Highway System (an additional 120,000 miles): the National Motor Carrier Safety Administration (NMCSA) and the Federal Highway Administration (FHWA). NMCSA is responsible for developing rules and regulations as they pertain to the safe operation of commercial motor vehicles. The FHWA has even broader responsibilities over the safety and integrity of the roadways themselves.

In general, federal rulemaking and corresponding state enactment is straightforward and consistent. Enforcement, however, can vary considerably due to the fact that many transportation restrictions are open for individual interpretation. WTCA is currently compiling the "Guide to Loading and Transporting Wood Trusses" to provide guidelines for component manufacturers to follow in order to ensure components and other materials are safely, efficiently and legally loaded and transported from the facility to the jobsite.

This guide will cover regulations pertaining to the allowable size and weight of commercial vehicles and the loads they transport, including issues surrounding reducible loads, new regulations concerning the securement of loads, and how to work with local enforcement entities to ensure you have the correct permits and legal remedies to address potential fines.

## SIZE & WEIGHT LAWS

Within the issue of transporting the manufactured materials of the structural building components industry from plant to building site, two federal agencies have jurisdiction: the FHWA and NMCSA. The FHWA sets size and weight limits allowable for commercial transport, whereas the NMCSA approves rules that pertain to cargo securement and issues such as reducible load permitting.

The federal rules established by the FHWA and the FCSMA establish maximums and minimums under which individual states have authority to pass even more stringent laws. In general, to perpetuate and encourage interstate trade, most states have enacted rules similar to those established by these federal agencies. In addition, even though states are given complete authority over enacting laws governing the roadways off the National Highway System, most states maintain the same standards for all roadways.

This means that in a majority of cases your cargo will be subject to the standards put in place on the federal level. However, there are numerous exceptions to this, such as the size and weight of agriculture-related equipment or the weight of commercial motor vehicles operating near our international borders with Mexico and Canada.

Maximum federal weight limits are 20,000 lbs per vehicle axle, with a gross vehicle weight limit of 80,000 lbs. In addition, the FHWA established the "bridge formula" in 1975, in an effort to reduce the risk of possible damage to expensive highway bridges. This formula dictates the spacing of axles to minimize the downward force of a load on any one axle (i.e., any point where the vehicle is in contact with the road surface). States have by and large adopted these same weight restrictions, except in cases where agricultural or trade interests have prompted the setting of a higher standard. Within the border regions of Texas, in Brownsville for example, the overall truck weight limit is 120,000 lbs.

Federal law imposes an overall vehicle width of 102". However, this width limitation does not include devices such as mirrors or handholds that promote the safe and efficient operation of the vehicle. There is no federal standard for total vehicle height, which includes the height of the cargo being transported. However, most states have established limits that range from 13.6' to 14.6'.

Under federal law, there are no limitations on overall truck length. Further, states are prohibited from imposing trailer length limits less than 48'. However, most states have passed regulations limiting the length of semi-trailers. In Oregon, for example, a single trailer length is limited to 53', with an overall vehicle length limit of 105' (including multiple trailer combinations and the semi-tractor). In California, the overall vehicle length is set at 100', but there are

various state regulations mandating what can and cannot be considered in determining the overall length. In Florida, the overall length, including tractor and trailer, is limited to 65', but numerous permits are available to exceed this limit.

## REDUCIBLE LOAD

Many states have passed laws outlining the criteria for reducible loads. A reducible load is loosely defined as any material being transported that can be, by its nature, reduced in length, width or height. As it translates to transporting wood trusses, a 60-foot truss, as part of the overall cargo inventory, cannot be reduced in length. Consequently, carrying a truss of this length, in combination with the tractor-trailer, would exceed the 65-foot restriction in Florida, and would require a "non-reducible load" permit from the state or local permitting entity.

Not surprisingly, this example is not as straightforward as it sounds. It is likely that this 60-foot truss not only exceeds the overall length requirement, but it also exceeds the overall width limit. In this instance, additional permitting may be required. In general, "non-reducible load" permits are issued only for exceeding one of the three dimensional limits.

To complicate matters, if a load does not have a singular item that exceeds a dimension limit, but the overall load being carried could be performed by inverting three stacks of 25-foot trusses, this arrangement would exceed two of the three dimensions (length and width). In this case, the load would be reducible by removing one of the three stacks of trusses to be under the length limitation, and therefore not eligible for a "non-reducible" load permit.

The real problem lies in the fact many states do not have concise definitions as to what is and isn't considered in determining a commercial vehicle's "load." For instance, a crane transported with the trusses can be considered part of the load, and may be deemed "reducible" under the permitting guidelines. This does not make sense from an operational standpoint, but may make obtaining and adhering to a permit difficult.

## LOAD SECUREMENT

In the September 2002 issue of the Federal Register, the FMCSA published its final rules on the securement of loads transported with commercial vehicles. The new cargo securement standards were based on their North American Cargo Securement Standard Model Regulations, which were created from the results of a multi-year comprehensive re-search program that evaluated U.S. and Canadian cargo securement regulations, the commercial motor vehicle (CMV) industry's best practices, and recommendations presented during a series of public meetings involving U.S. and Canadian industry experts, Federal, State and Provincial enforcement officials, and other interested parties.

The new rules, which took effect on January 1, 2004, require motor carriers to change the way cargo securement devices are used to prevent articles from shifting on or within, or falling from, CMVs. In some instances, the changes require motor carriers to increase the number of tiedowns used to secure certain types of cargoes. However, in most cases the rule does not prohibit the use of tiedowns or cargo securement devices that are already in use. As a consequence,

transporters should not have to purchase new cargo securement equipment to comply with the rule, however they will probably have to use more of such devices to comply. The intent of this rule change, according to the FSCMA, was to reduce the number of accidents caused by cargo shifting on or within, or falling from, CMVs operating in interstate commerce, and to harmonize to the greatest extent practicable U.S., Canadian and Mexican cargo securement regulations.

In formulating the American Cargo Securement Standard Model Regulations that the rules were based on, the FCSMA conducted a series of tests. These tests examined the fundamental issues of anchor points, tiedowns, blocking and friction, and issues related to securement of dressed lumber, large metal coils, concrete pipe, intermodal containers, and other commodities. In the end, the securement of wood trusses were excluded from specified guidelines like those pertaining to large metal coils, but they were specifically addressed in regulation [49 CFR 393.110 (3)(d)] because their design, size, shape, or weight must be fastened by special methods.

## LOCAL ENFORCEMENT

In the end, it is on the local level where transportation issues affect the building component industry the greatest. In most cases, established law enforcement agencies such as the state patrol are given authority over conducting inspections of commercial motor vehicles. These law enforcement officers are required to take inspection training, and must re-new their certification if and when standards are changed.

This arrangement leaves open the opportunity for individuals responsible for conducting the inspection training to provide their personal interpretation of laws. It is then possible for individual law enforcement officers to use their own discretion when following their inspection training. As a consequence, while these individuals practice due diligence and perform with the utmost level of professionalism, it is still possible for there to be a wide variance in the way standards are applied and enforced.

In many cases, permits are available when loads exceed established standards. Many of you, through the operation of your business, have participated in this permitting process. However, even with permits, local interpretation of laws can make it particularly difficult to comply. In addition, while many state inspection training officials insist a commercial vehicle will not be pulled over and inspected unless other obvious safety-related infractions exist (improper signage or a nonfunctioning taillight, for example), in practice this is always the case.

In response to issues component manufacturers have encountered, particularly within enforcement and reducible load permitting, the WTCA is putting together the "Guide to Loading and Transporting Wood Trusses." This document will explain what the federal and state laws are, and supply strategies for working with local inspection and enforcement authorities to ensure products are loaded and transported practically, efficiently and legally.

Copyright © 2004 by Truss Publications, Inc. All rights reserved. For permission to reprint materials from SBC Magazine, call 608/310-6706 or email [editor@sbcmag.info](mailto:editor@sbcmag.info).

The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing of structural building components to ensure growth and continuity, and to be the information conduit by staying abreast of leading-edge issues. SBC will take a leadership role on behalf of the component industry in disseminating technical and marketplace information, and will maintain advisory committees consisting of the most knowledgeable professionals in the industry. The opinions expressed in SBC are those of the authors and those quoted solely, and are not necessarily the opinions of any of the affiliated associations (SBCC, WTCA, SCD & STCA).