



# NTSB

# SAFETY ALERT

National Transportation Safety Board

## The Impact of Oversize Loads on Our Nation's Bridges

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### *The importance of preplanning the route and acquiring a permit*

#### *The problem*

- Commercial motor vehicle carriers transporting oversize loads on the nation's highway system are continuing to impact bridge structures.
- These impacts often lead to catastrophic events that result in fatalities and injuries, as well as enormous costs to repair the bridge structures.

#### *Related accidents*

The NTSB has investigated two recent crashes in which a vehicle transporting an oversize load collided with a bridge structure, resulting in the partial collapse of the bridge.

- On May 23, 2013, in Mount Vernon, Washington, a commercial vehicle was transporting an oversize load on Interstate 5. Although the commercial vehicle carrier had acquired the necessary permit and the vehicle transporting the oversize load was being led by a pilot/escort vehicle, the vehicle with the oversize load struck the sway braces located along the top of the I-5 Bridge structure. The impact resulted in the collapse of a bridge span. Fortunately, no fatalities resulted from the crash and subsequent bridge span collapse. However, the total cost of replacing the bridge span was about \$8.5 million. The NTSB determined that the probable cause of the crash was the insufficient route planning by the commercial motor vehicle carrier and the oversize combination vehicle driver and the failure of the certified pilot/escort vehicle driver to communicate the potential hazards of the bridge's low vertical clearance. (HWY13MH012)
- On March 26, 2015, in Salado, Texas, a commercial vehicle was transporting an oversize load on Interstate 35. The commercial vehicle carrier had not obtained a permit to move the oversize load, and the load struck the concrete bridge beams of the Farm-to-Market Road 2484 Bridge over the interstate. The impact resulted in the collapse of two concrete beams onto the travel lanes of the interstate. The collapse of the beams resulted in one fatality, three injuries, and about \$150,000 of damage to the bridge. The NTSB

determined that the probable cause of the crash was the failure of the commercial motor vehicle carrier to obtain a permit for transporting the oversize load. A permit would have included a route map illustrating detours around all bridges that had insufficient vertical clearances. (HWY15IH007)

### ***What can commercial motor vehicle carriers and permitting authorities do?***

- Commercial motor vehicle carriers engaged in moving oversize loads should obtain the necessary permit(s) and provide the permitting authority with accurate information about the dimensions of the oversize load.
- Permitting authorities should compare the dimensions of the oversize load with the proposed route to determine if the oversize load can be safely moved under bridge structures along the route.
- Permitting authorities should issue oversize load permits that include a route map and “turn by turn” route list that detours commercial vehicles with oversize loads around all bridges with insufficient clearances.
- Commercial motor vehicle carriers should accurately preplan the route to determine the existence of potential hazards and the need for pilot/escort vehicles to lead (and sometimes trail) vehicles transporting an oversize load.
- Pilot/escort vehicle drivers should be properly trained and certified to perform all required duties and communicate potential hazards to the driver of the vehicle with an oversize load.

### ***Interested in more information?***

The Mount Vernon crash report is available at <http://www.nts.gov/investigations/AccidentReports/Reports/HAR1401.pdf>, and the Salado crash report is accessible from the NTSB’s Docket Management System Web page at <http://www.nts.gov/investigations/SitePages/dms.aspx>.

An overview of Oversize/Overweight Load Permits and a listing of each State Department of Transportation and the Canadian Provinces Oversize/Overweight Load Permit Contacts can be accessed from [http://www.ops.fhwa.dot.gov/Freight/sw/permit\\_report/index.htm](http://www.ops.fhwa.dot.gov/Freight/sw/permit_report/index.htm).

Additional information concerning oversize load permits and best practices may be found at the Specialized Carriers & Rigging Association website <http://www.scranet.org/>.

This NTSB Safety Alert and others can be accessed from the NTSB’s Safety Alerts Web page at <http://www.nts.gov/safety/safety-alerts/Pages/default.aspx>.