

North Carolina DOT lax in limiting truck loads on state bridges

Excess weight lessens life, adds to upkeep, of 1,000-plus spans



By PAT STITH, Staff Writer

The state Department of Transportation has ignored a series of increases in truck weights approved by the legislature and failed to protect more than 1,000 bridges that are not strong enough to routinely handle the added weight.

Federal regulations and the DOT's own policy require it to impose weight limits on a bridge -- by posting signs at each end -- when truck weights allowed by state law are too high for that bridge.

North Carolina legislators passed laws increasing weight limits for trucks carrying certain commodities in 1993, 1997, 2002 and 2004. The DOT now acknowledges that it should have followed up by identifying and posting bridges that couldn't handle that extra weight; but it did not.

Steve Varnedoe, who became DOT's chief engineer less than two years ago, said last week that the need to post additional bridges had not been brought to his attention.

"Nothing has hit my radar that there's an issue on how they're going about doing that -- I mean, until you just brought it up," he said. "So I haven't had any discussions with anybody about it."

Later, after talking with subordinates in the DOT's bridge maintenance unit and the top Federal Highway Administration official in North Carolina, Varnedoe said the DOT would begin taking the heavier weight limits into consideration and would post the bridges that don't measure up.

Varnedoe said engineers in DOT's bridge maintenance unit think the weight laws would have had little impact on bridge postings until last year, when legislators allowed dump trucks loaded with aggregate to carry more weight.

The DOT restricts truck weight on its weakest bridges for two reasons: to save lives and to save money.

John Emerson, head of the DOT's bridge maintenance unit, and one of his assistants, Don R. Idol, say there is almost no danger that any of the unposted bridges will collapse because a

substantial margin of safety is built in. But they say the extra weight will force taxpayers to replace those bridges sooner and, in the meantime, pay more for repairs.

How much sooner? How many more repairs?

No one can put a number on that, Idol said.

"We know, as engineers, that they do wear out quicker," he said. "How much quicker is what we don't know."

The DOT spent about \$78 million on bridge replacement and \$50 million on bridge maintenance last fiscal year. Even so, Emerson said, there's a backlog of more than a year on repairs.

The Federal Highway Administration reviews the DOT bridge inspection program each year and could have flagged the DOT's failure to post additional bridges in the annual report given to Varnedoe's office in March, but it did not.

In the past 12 years, legislators have passed 10 laws allowing heavier trucks on state-controlled secondary and primary highways. None of the extra-weight allowances apply to interstate highways, where Congress sets the limits.

Some of those state laws didn't specifically deal with weight limits. Instead, they allowed fully loaded trucks on roads that were not strong enough to handle such loads.

Breaks for trucking

For example, the DOT has posted lower weight limits on 2,305 miles of roads. Trucks with a single-axle weight of more than 6.5 tons -- about two-thirds of the normal maximum axle weight of 10 tons -- are barred. But the legislature brushed aside that restriction and allowed trucks hauling garbage, seafood, logs, sludge, Christmas trees, crops and other materials to use some posted roads.

Before 1993, the statewide weight limit for all trucks was 80,000 pounds. That year, the legislature granted its first break: It allowed farm trucks to weigh up to 88,000 pounds; in 1997, the limit was raised to 90,000 pounds.

In 2002, lawmakers increased the weight limit of trucks hauling wood chips and other wood products to 84,000 pounds. Two years later they gave that same advantage to trucks hauling dirt, sand and rock.

In each case, the laws also allowed higher axle weights. That can be more harmful to bridges than increases in the gross weight limit.

Idol estimates that up to 1,300 bridges -- almost 10 percent of the bridges in the state, excluding culverts -- would have been posted, or had their current posted limits lowered, if the DOT had taken the increased weight limits into consideration. He estimated that 500 to 800 bridges would have been posted for the first time and that 500 would have had their posted limits reduced.

Emerson, his boss, agrees.

"Whatever he says, I believe," Emerson said, "because Don has been around a long time. And he has lived with all of these changes from the get-go, and he knows all that stuff."

Varnedoe expressed the same confidence in Idol, who has 39 years of experience at the DOT, all in bridge design or maintenance.

"He knows every bridge in the state," Varnedoe said.

Idol, 62, said he was not particularly concerned about the 1993 and 1997 farm truck legislation because the long truck length specified in the law meant that, even at 90,000 pounds, those trucks would not have as severe an impact on bridges as some shorter trucks carrying less weight. And he didn't think there were that many of them. Idol said he wasn't particularly concerned about trucks hauling wood chips and other wood products either, for the same reasons.

Dump truck damage

But the 2004 law allowing dump trucks hauling stone, dirt and sand to carry more weight was a horse of a different color -- because those trucks are relatively short and because there are so many of them.

"You're talking about a tremendous number of those vehicles, all over the state," Idol said.

More than a third of the bridges maintained by the DOT are posted now -- 4,718 -- but that number has been dropping steadily over the past several years.

Federal regulations require North Carolina and other states to inspect bridges every two years, and normally that's when the decision is made to post a bridge. But Idol said federal highway officials pressed last week for faster evaluation of bridges that should have been posted with weight limits.

"My feeling is we'll have to do it ... just off the top of my head, in six months or nine months," he said. One reason the DOT has not posted more bridges is politics, according to Idol.

Some bridges that would have to be posted are on major highways, and posting them would create a hardship on business. The DOT does not post bridges on interstates -- it fixes them if they have deteriorated -- and it tries not to post bridges on other major highways, because it's in everyone's interest to try to keep trucks moving.

Sometimes the DOT is able to make immediate repairs or shore up a bridge, such as the one on the northbound lanes of I-95 over the Little River in Johnston County.

Emerson said interstate bridges are "so important that, if something is happening ... we take care of it immediately."

But 182 bridges on state and federal routes have been posted because there isn't enough maintenance money to shore up or repair them, Emerson said.

"The budget doesn't permit it," he said.

Other DOT initiatives to mitigate damages to the North Carolina highway system caused by the weight legislation are coming, perhaps in September.

DOT Secretary Lyndo Tippett told members of the N.C. Board of Transportation in June that Gov. Mike Easley had encouraged him to "take whatever action is appropriate" to mitigate damage cause by overweight trucks. He said he would do that; but at the July and August meetings of the board, Tippett made no mention of his plan.

"We're trying to do a comprehensive plan to address the issue," Tippett said. "When I take a bite, I want to get a mouthful."

What does that mean, he was asked.

"It means I'm not going to tell you."

(Database editor David Raynor and news researcher Brooke Cain contributed to this report.)

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