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Mr. Mead

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COMPTROLLER GENERAL OF THE UNITED STATES
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The Honorable James J. Howard
Chairman, Subcommittee on
Surface Transportation
Committee on Public Works and
Transportation
U.S. House of Representatives

HSE03105

Dear Mr. Chairman:

[Comments on

We are providing our views on S. 1390, the "Commercial Motor Vehicle Safety Act of 1980." This bill, passed by the Senate on February 20, 1980, was referred to your Subcommittee on February 22, 1980, for consideration along with H.R. 4971--the "Truck Safety Act." While both bills would promote commercial motor vehicle safety, section 118 of S. 1390 would establish minimum truck weight and length for interstate highways. It also allows under certain conditions new maximum widths. One stated objective of section 118 is to provide uniform national weight standards for trucks operating in interstate commerce.

Section 118 of S. 1390 would prohibit any State from enforcing interstate weight limits less than 20,000 pounds for a single axle, 34,000 pounds for a tandem axle, and 80,000 pounds total loaded weight. These are also the current maximum Federal weight limits generally allowed on the interstate system. S. 1390 contains two penalties for noncompliance. A State would not receive its share of future Federal-aid funds for interstate highways, and the Secretary of Transportation could not approve any future highway projects that would normally be eligible for Federal participation.

We believe that any increases in gross weights--S. 1390 would increase weights in a number of States--should be carefully considered for several reasons:

--Increasing truck weight would most certainly cause higher State maintenance costs.

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--Several proposals now being considered would decrease Federal-aid for highways.

--Safety initiatives, the principal goal of S. 1390 and H.R. 4971, could be offset by additional truck weight or length.

--The effect that this legislation would have on other cargo-transporting industries is uncertain.

We might also point out that the bill, as presently drafted, will not establish uniform national weight standards. Section 118 provides for minimum weight limits and leaves the States free to adopt whatever higher limits would be authorized under present law.

Current law, 23 U.S.C. 127, contains exempting provisions which allow States to exceed Federal weight limits if they had authorized limits higher than the Federal ceiling (20,000 pounds for a single axle, 34,000 pounds for a tandem axle, and 80,000 pounds total loaded weight) as of July 1, 1956. As a result, higher than Federal limits are now in force in at least 20 States representing 32 percent of all interstate mileage. Since section 118 only prohibits enforcement or enactment of weight limits below the Federal ceiling, the bill would not require a rollback of these higher limits.

GAO TRUCK WEIGHT REPORT

We recently issued a report highly relevant to the purposes of section 118 of S. 1390. The report, entitled "Excessive Truck Weight: An Expensive Burden We Can No Longer Support" (CED-79-94, July 16, 1979), provides a comprehensive overview of current overweight truck practices, State enforcement efforts, and the effect of truck weight on our highway system. We concluded that:

--States are not adequately enforcing their weight limits.

--Many haulers are exceeding weight limits.

--Highways were not necessarily built for the weights they are carrying.

--Highways are deteriorating more rapidly than expected.

--Federal weight laws allow some States to impose limits higher than the current maximum Federal levels.

Based on our work, we recommended that Congress amend 23 U.S.C. 127 and provided specific proposed legislative language as an appendix to the report. The proposed amendments would:

--Make Federal weight restrictions applicable to all Federal-aid highways, including the noninterstate system.

--Establish a termination date for the applicability of current grandfather clause provisions, so that current Federal limits would apply to all Federal-aid highways.

--Specifically prohibit overweight exemptions and permits on the Federal-aid system, except for (1) those permits necessary for single trips of cargoes that cannot be reduced to meet weight limits or be shipped by other transportation modes and (2) exemptions necessary for certain specialized hauling vehicles.

We did not take a position on uniform truck weights. Thus, we neither endorsed the current 80,000 pound weight limit nor did we advocate that the 80,000 pound limit should be reduced. Currently, States provide uniformity at about 73,000 pounds.

EFFECT OF TRUCK WEIGHT INCREASE

The Federal-Aid Highway Act of 1956 generally required the Secretary of Transportation to withhold Federal-aid highway funds from States allowing trucks to have more than 18,000 pounds on a single axle, 32,000 pounds on a tandem axle (2 axles), and 73,280 pounds gross or total weight. Prompted by the 1973 energy crisis, the Federal weight limits in these categories were raised in early

1975 to 20,000; 34,000; and 80,000 pounds, respectively, to allow trucks to carry more cargo. At the time of our review, 14 States had not chosen to raise their interstate limits to the new maximum apparently because they didn't want to spend more funds for highway maintenance and resurfacing.

Section 118 of S. 1390 would result in more highway wear. Research by the American Association of State Highway and Transportation Officials (AASHTO) has produced widely accepted methods to predict damage from various axle weights. The effect of the axle weight increases contemplated in the subject bill are shown below:

--An 11 percent increase in single axle weight from 18,000 pounds to 20,000 pounds causes 51 percent more damage to a 6-inch portland cement pavement; 58 percent more to a similar 11-inch pavement.

--A 6.25 percent increase in tandem axle weight from 32,000 pounds to 34,000 pounds causes 27.3 percent more damage to a 6-inch portland cement pavement; 29.8 percent more to a similar 11-inch pavement.

For bituminous pavement the increases are similar. According to the Director of Research, Federal Highway Administration (FHWA), the total effect of this weight increase is about 35 percent more traffic-related deterioration.

Although a five-axle tractor-trailer loaded to the current 80,000-pound Federal weight limit weighs about the same as 20 automobiles, the impact of the tractor-trailer is dramatically higher. Based on the AASHTO data, and confirmed by its officials, such a tractor-trailer has the same impact on an interstate highway as at least 9,600 automobiles. At the 73,280-pound limit, a single truck's impact equals 7,350 automobiles.

Highway officials do not know how much of the total highway wear is caused by weight. California officials reported that 99 percent of their pavement deterioration is caused by trucks weighing more than 60,000 pounds. Another State attributed 79 percent to trucks, 1 percent to cars, and 20 percent to weather. The climatic impact would vary widely depending on moisture conditions and

temperature fluctuations. To the extent that weather conditions and deferred maintenance contribute to an unstable road base, added truck weight would only cause more damage.

FHWA estimated that the 10 percent increase from 73,280 pounds to 80,000 pounds would add $100 million to States' maintenance costs in succeeding years. Given recent costs of petroleum base products, this estimate, which may have been conservative in 1974, is now obsolete. Maintenance expenditures nationally for 1978 were:

States	$4.1 billion
Counties and municipalities	5.3 billion
Federal Government	.1 billion
	$9.5 billion

FHWA data does not allow us to determine how much was for surface maintenance only. Regardless, any increase subjects State and local governments to more financial stress.

HIGHWAY FUNDING

One of the basic premises in highway finance is that users pay for highway construction and maintenance. Acknowledging that heavier vehicles would not pay their fair share if taxed only on fuel purchases, other taxing mechanisms were instituted. These taxes have not been adjusted since 1975 to reflect the additional damage from the 10-percent increase to 80,000 pounds.

This bill would not give the 14 States electing not to raise their weights additional funds as compensation for allowing more highway wear. The bill would cause any State failing to allow 80,000 pounds on its interstates to lose its future interstate apportionments. In addition, the Secretary of Transportation could not approve any future Federal-aid highway projects in that State. This does not seem consistent with traditional Federal highway legislation seeking State action. The general approach has been to provide incentives--a carrot and stick approach. While there was a recent exception for the 55 mile per hour speed limit legislation, that

legislation did not threaten a State's financial resources so severely. This bill would require States to pay more to take care of their highways with no direct incentive.

Even today, we find that States are looking for more Federal dollars to take care of their interstates. Our perception is that States believe interstate highways are of truly inter-State or regional concern and that State residents are not the true beneficiaries.

In effect, S. 1390 would require States to pay the price for what is claimed to be greater trucking efficiency. State highway departments are experiencing great difficulty in sustaining their highway programs. About 28 States will consider legislation raising their fuel taxes during 1980. Our current review of Federal and State highway financing shows that highway funds will probably continue to lose ability to purchase the same amount of construction and maintenance because of inflation and stable or only slowly increasing revenues.

While section 118 of S. 1390 would in effect require States to incur greater expense, other proposals currently being considered could reduce the traditional Federal highway participation. For example, some legislation would promote alternative fuels by providing fuel tax relief at the expense of Federal highway revenues. Theoretically, the Trust Fund could lose about $4 billion annually depending on the production level of alternative fuels and exemptions from the fuel tax. In addition, it is highly likely that there would be vigorous State protests, possibly even litigation because of the increased maintenance expenses.

EFFECT OF SECTION 118

We believe the mandatory minimum weight limits proposed by S. 1390 would affect more than 14 States. For example, if the trucking industry is observing the 73,280-pound limits imposed by the States along the Mississippi River, then all States along that east-west route would be affected by raising the mandatory limit to 80,000 pounds. Therefore, depending on the amount of ocean-to-ocean truck hauling and the routes, many more than 14 States would be affected.

At this time, it is uncertain who would benefit from these weight adjustments. Initially there would be gains for truckers with the assumption that these benefits would be passed on to the general public, principally through reduced rates and better service. The increased highway maintenance, reconstruction, and construction costs, however, are borne directly by the traveling public. It is also not clear what effect this increase would have on competing modes of commercial transportation.

There is also much concern about the dramatic increase in fatalities involving heavy trucks. Department of Transportation (DOT) statistics show that fatalities involving combination trucks increased 43 percent between 1975 and 1978. The same comparison for passenger cars showed a 7 percent increase.

Research has shown that the greater the size differential between colliding vehicles, the greater the possibility of fatalities in the smaller vehicle. Downsizing of automobiles is currently widening the gap between cars and trucks, and section 118 would increase that differential even further by establishing 65 foot minimum truck lengths for interstate highways.

One of the goals of section 118 of S. 1390 is to increase fuel efficiency. We are not convinced that this objective could be achieved by establishing minimum truck weights. DOT reports show that the potential savings derivable from uniformly heavier and longer trucks is relatively small compared to operating inefficiencies caused by rough pavement surfaces. For example:

--At 40 mph, motor vehicles use 34 percent more fuel on badly broken, patched concrete.

--At 50 mph, travel on very good pavement required 30 percent less fuel than traveling on poor pavement.

--Potential fuel savings from increased maintenance to provide smooth road surfaces appears substantial, especially in urban areas.

--If pavement deterioration continues at the current rate, by 1985 vehicle fuel efficiency will drop by 2.4 percent.

--Increasing truck weight from 73,280 to 80,000 pounds would decrease fuel consumption .37 percent.

--More careful truck routing could save .9 percent.

SEPARATE LEGISLATION NEEDED TO CONSIDER TRUCK WEIGHTS

The Surface Transportation Assistance Act of 1978 requires the Secretary of Transportation to study truck size and weight. The study will address the need for nationally uniform truck weights and lengths and the impacts of various alternatives. The Secretary is required to report the study findings and to make recommendations for accomplishing needed changes no later than January 15, 1981.

The issue of truck size and weight will affect and is affected by energy conservation, increased deterioration of our Nation's highways, other modes of transportation, national economics, and the financial status of State governments. We believe the truck size and weight issues as discussed herein and in our July report to the Congress deserve careful and thorough consideration in separate legislation. Furthermore, such legislation should be postponed until the Secretary of Transportation issues the pertinent report the Congress requested.

Sincerely yours,

Comptroller General
of the United States