Chapter 3

Federal and State Regulatory Programs

Photo credit: California *Department of Transportation*

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- Shippers now frequently utilize fewer carriers with comprehensive operating territories to take advantage of cumulative discounts and service commitments in return for guaranteed freight volumes.
- Truckload carriers establish defined traffic lanes with certain shippers (e. g., between two plants of the same shipper) and capture a steady, balanced volume of business under contract.

The traditional driver pool has been shrinking, and carriers have had to provide incentives to attract drivers. Rate discounting, however, has made low labor costs and high productivity essential to survival, so carriers find it difficult to increase driver wages and improve arduous work conditions.

Safety Implications

Trucks have become significantly bigger and heavier since deregulation, primarily in response to Federal legislation requiring States to allow longer, wider trailers and heavier gross weights. For similar reasons, double trailers are rapidly becoming commonplace on the Interstate System. These changes in truck equipment have not been matched by upgraded roadway design and capacity, and as automobile traffic has increased, urban peak-hour congestion has become severe in many jurisdictions. Such road and traffic conditions increase the likelihood of an accident.

Price discounting and low profit margins create difficult economic trade-offs for investments in safety-related equipment and maintenance. These trade-offs are particularly problematic for owner-operators and small carriers, who have to generate revenue regularly to stay in business and may have no regular maintenance facility.

Carriers are, in general, interested in safety, but will measure investments in new safety equipment and technologies against tangible economic rewards. Competition, increased costs, and low, erratic profit margins create a need to control costs that may lead to shortchanging truck maintenance and equipment improvements. **OTA concludes that Federal safety regulations will affect carriers economically with varying severity, depending on their financial reserves and stability.**

Requirements to operate trucks safely should not depend on commodity, corporate form, or destination of the cargo, the traditional basis of ICC regulation. Safety regulations have gradually been extended to trucks operating in intrastate, private, and exempt services, and these perform a large share of the Nation's highway transportation. **OTA concludes that the need for safety does not vary with the type of operation, and that no exemptions from safety regulations are warranted.**

Chapter 3

Federal and State Regulatory Programs

Highway safety, particularly for motor carriers, has long been a Federal and congressional concern. Multiple regulatory programs, administered by different agencies within the Department of Transportation (DOT) set minimum standards for vehicle equipment, driver qualifications, and commercial motor carrier operations, and for the highways on which the vehicles operate. The Federal Government also provides funds to State and local jurisdictions for construction and maintenance of highways, bridges, and tunnels, and for State highway safety programs. Although Federal economic control of the trucking industry has dwindled significantly since deregulation in 1980, some years ago Congress began a series of legislative steps toward a comprehensive Federal motor carrier safety program. Systematic efforts to improve highway safety are limited by interjurisdictional issues and conflicts at many governmental levels, however. Moreover, numerous Federal agencies and congressional committees share responsibility for creating and enforcing safety legislation, creating further complications. Because the efforts of these groups are difficult to coordinate, and no single group has ultimate responsibility, addressing truck safety in a systematic, integrated way has to date proven an unachievable task.

In addition, many States impose substantial economic and safety requirements on intrastate carriers. Yet, while Federal grants for State programs have greatly enhanced State inspection and enforcement capabilities, the scope of these programs varies significantly. Despite this extensive Federal and State regulatory and enforcement framework, heavy vehicle transportion has grown annually, and safety issues persist.

This chapter describes the Federal laws and regulatory programs governing motor carrier operations and the efforts of the Federal Government and the States to improve safety. Policy options are identified in the final section. A chronology of motor carrier legislation (appendix 3-A), and a brief history of motor carrier regulations (appendix 3-B) appear at the end of this chapter.

FEDERAL SAFETY LEGISLATION

Commercial motor vehicles are defined by law as those: 1) weighing 10,001 pounds or more, 2) designed to transport more than 15 passengers, including the driver, or 3) used to carry hazardous materials in quantities requiring vehicle placarding. (Lightweight vehicles are those weighing 10,000 pounds or less.) Although economic regulation by the Interstate Commerce Commission (ICC) of the motor carrier industry was substantially reduced in 1980, the regulatory changes did not encompass Federal safety regulations. Laws enacted since 1980 have strengthened and expanded coverage by Federal safety standards, and Congress has promoted greater national uniformity by establishing consistent size and weight laws, and by encouraging States to adopt Federal regulations.

The Surface Transportation Assistance Act of 1982

The primary goal of the Surface Transportation Assistance Act of 1982 (STAA) was to fund improvements to the Nation's highways, bridges, and mass transit facilities by raising and restructuring existing highway taxes.[1] As a concession to the commercial motor carrier industry, the statute also called for uniform weight, length, and width limitations on trucks and buses using major, federally finded highways. Overriding existing State laws, the STAA prohibited States from setting a maximum gross vehicle weight limit under 80,000 pounds for

[1] Public Law 97-424, 96 Stat. 2097 (Jan. 6, 1983).

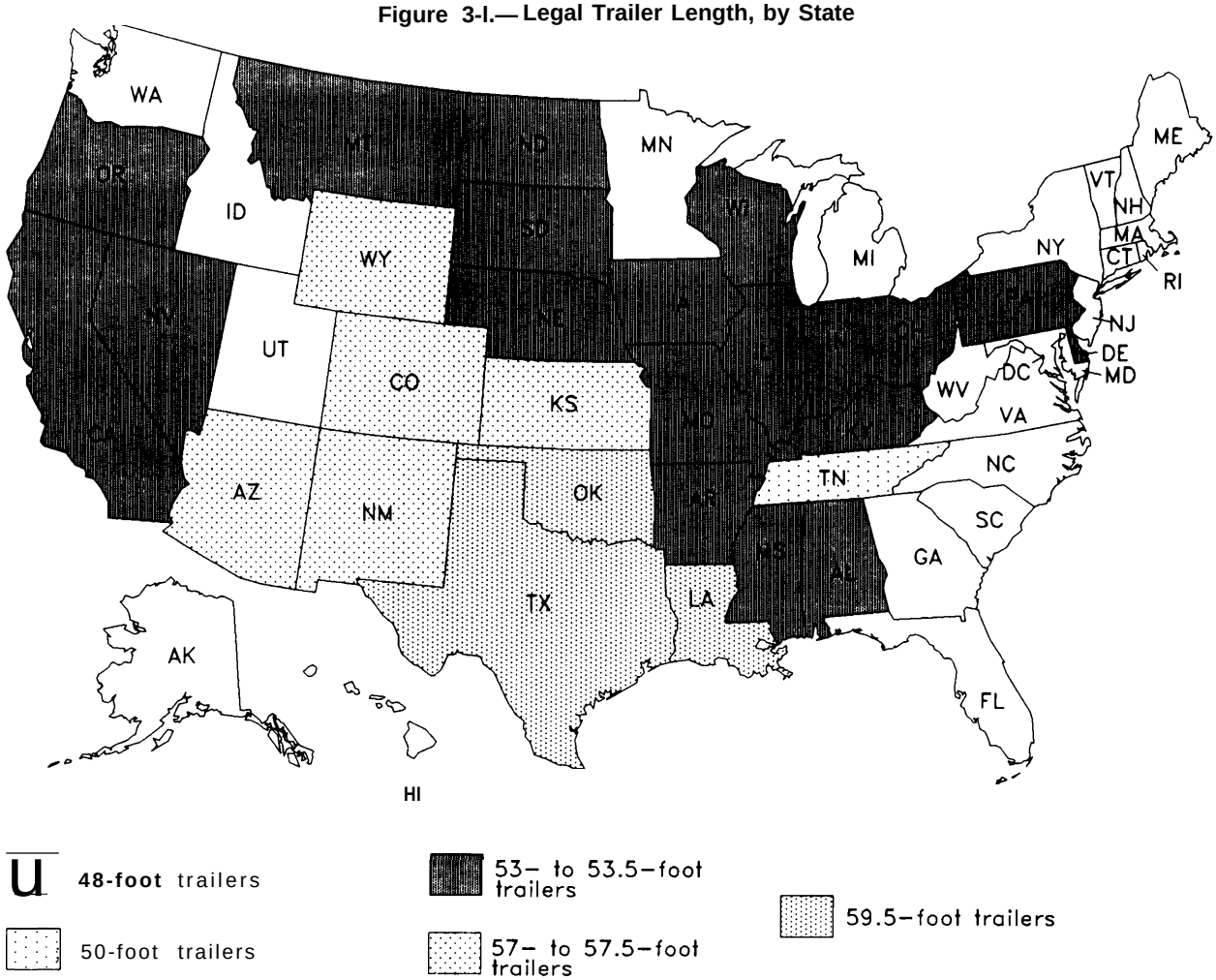
vehicles operating on any portion of the Interstate system. Additionally, the act prohibited States from denying trucks reasonable access between these highways and facilities for food, fuel, repairs, and rest; and to points of loading and unloading (for household goods carriers). In 1984, the STAA was amended to allow Governors to seek exemptions for Interstate highway segments in their States that could not safely accommodate longer trucks.[2]

In addition, States were prohibited from barring trucks with twin trailers from Interstate highways or certain Federal-Aid Primary routes designated by DOT.[3] States also were required to permit truck semitrailers of 48 feet in length for one trailing unit and 28 feet each for two trailing units on these roads. Maximum length limits were not set, however, and legal trailer lengths vary significantly among the States (see figure 3-l), with many States permitting trailers even longer than 48 feet. States were also required to establish and enforce a vehicle width limit of 102 inches for Interstate highways or any other Federal-aid highway designated by DOT, pro-

[2]Tandem Truck Safety Act of 1984, Public Law 98-554, 98 Stat. 2829. The act also modified the reasonable access provision of the Surface Transportation Assistance Act to include 28-feet by 102-inch single-trailer units; this amendment was made to codify existing industry practice, as 28-foot trailers are replacing the standard 48-foot trailers for pickup and delivery service.

[3]See 23 CFR 658, app. A.

Figure 3-l.— Legal Trailer Length, by State



NOTE: Semitrailers in Wisconsin, Indiana, and California must conform to a State specified king-pin-to-rearmost axle distance to operate without a permit.
SOURCE: Office of Technology Assessment, 1988, based on the 53 *federal Register* 19 (Jan. 19, 1988).

vialed that the traffic lanes were designed to be at least 12-feet wide. Procedures allowing a State Governor to notify DOT of highway segments not capable of accommodating 102-inch-wide vehicles and to request an exemption, identical to those relating to truck length, were established by Congress in 1984.[4]

The safety issues associated with longer, wider trucks are extremely controversial. Some segments of the trucking industry argue that longer trucks are needed to improve productivity. Other industry groups and many States and safety advocates believe that such vehicles pose a safety hazard even when operating over designated highways and access routes. Chapters 4 and 5 contain more detailed assessments of the performance and operation of longer combination vehicles on the existing highways. A discussion of State access requirements is presented later in this chapter.

The STAA also authorized funds for State inspection and enforcement programs through a Federal grant program—the Motor Carrier Safety Assistance Program (MCSAP)—to improve State capabilities to inspect heavy vehicles and enforce motor carrier safety regulations. Under this program, some DOT control over intrastate carriers was initiated—to qualify for MCSAP funds, States were required to adopt the Federal motor carrier safety regulations or compatible State requirements. MCSAP has become an important part of overall truck safety efforts in recent years, promoting uniform regulations, enforcement activities, and Federal-State coordination. The program is detailed later in this chapter.

Motor Carrier Safety Act of 1984

Concerned about inconsistent State laws and regulations and about the adequacy of existing Federal regulations, Congress passed the Motor Carrier Safety Act of 1984.[5] Specifically, the act directed DOT to promulgate revised Federal regulations establishing minimum standards to ensure that:

- commercial motor vehicles were safely maintained, equipped, loaded, and operated;
- the responsibilities imposed upon operators of commercial motor vehicles did not impair their ability to operate such vehicles safely;
- the physical condition of operators of commercial motor vehicles was adequate for them to operate such vehicles safely; and
- the operation of commercial motor vehicles did not have deleterious effects on the condition of such operators.

Before issuing revised regulations, DOT was required to consider costs and benefits as well as State laws and regulations to minimize Federal preemption. Furthermore, Congress requested a 5-year review of State motor carrier laws to identify those differing substantially from Federal requirements. Additional provisions of the 1984 act called for annual commercial motor vehicle inspections, the establishment of Federal inspection standards, a comprehensive study on the safety characteristics of heavy trucks, and an investigation and study of crash protection for truck occupants.

1986 Commercial Motor Vehicle Safety Act

The adequacy of requirements for drivers of commercial motor vehicles has been a primary concern of safety-conscious officials. A key element of the 1986 act is that truck drivers are prohibited from holding more than one State license, a provision that became effective on July 1, 1987.[6] The act also directed DOT to establish minimum written and road tests for drivers by July 15, 1988. Motor vehicles covered by the act are those weighing 26,001 pounds or more; however, the Secretary of Transportation is authorized to lower the threshold to 10,001 pounds. Motor vehicles used to carry hazardous materials or designed to transport more than 15 passengers, including the driver, are also included.

Under the provisions of the act, a driver must be road-tested in a vehicle representative of the type he or she will operate, and minimum passing scores for written tests must be established. Furthermore, drivers taking these tests must have a working knowledge of the Federal Motor Carrier Safety Regulations (FMCSR) and vehicle safety systems. DOT must also establish a blood-alcohol concentration

[4] "Tandem Truck Safety Act of 1984, op. cit., footnote 2.
[5] Public Law 98-554, 98 Stat. 2832 (Oct. 30, 1984).
[6] Drivers are also required to notify employers if they have been disqualified from operating a commercial motor vehicle, and employers and States must be notified of all traffic violations, except parking infractions. (49 CFR 383.)

(BAC) standard by October 1988, and is currently considering a BAC level of 0.04 percent. [7]

To support an effective single-license system, DOT must establish a Commercial Driver's License Information System by January 1, 1989.[8] Data in the system, including the information required on licenses and driver compliance records, will be available to DOT, States, employers, and employees.

States are not required to have fully operational programs until 1993. Grants will be made available to develop testing and licensing programs, to test operators of commercial motor vehicles, and to participate in the national information clearinghouse.[9] However, a State that fails to comply with the requirements of this act will lose 5 percent of its Federal-aid highway funds in 1994 and 10 percent of its funds in subsequent years.

[7] To support this rulemaking effort, the Department of Transportation requested a study by the National Academy of Sciences to assess the differences between 0.10 and 0.04 blood-alcohol concentration levels. For further details, see ch. 6.

[8] The Department of Transportation has the option of operating this system in-house or using another system employed by one or more States.

[9] Between 1987 and 1991, $5 million of the Motor Carrier Safety Assistance Program funds has been earmarked for basic grants. Supplemental grants, using $3 million of the Motor Carrier Safety Assistance Program and the National Highway Traffic Safety Administration highway safety funds, will be made available to States eligible for basic grants. An additional $5 million, also from the Motor Carrier Safety Assistance Program will be used to support information clearinghouse programs.

MULTIPLE FEDERAL ROLES

As the trucking industry has expanded over the past 50 years, Congress has gradually allocated safety responsibility for motor carriers to a variety of agencies. Authority for safety-related issues such as highway design, equipment regulation, hazardous materials transportation, driver qualifications, and enforcement was divided among different Federal agencies, making a systematic approach to safety an elusive goal. Attempts to improve motor carrier safety after deregulation have been further hampered by historical carrier exemptions from regulations and the lack of reliable data on the number of operators and trucks doing business. Currently, three DOT agencies–the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), and the Research and Special Programs Administration (RSPA)–share responsibility for ensuring motor carrier safety (see table 3-1).

'Department of Transportation: Federal Highway Administration

Within FHWA, the Office of Motor Carriers (formerly the Bureau of Motor Carrier Safety) issues and enforces the FMCSR.[10] These regulations, summarized in table 3-2, govern the operations of commercial motor carriers and truck drivers. FHWA is responsible for setting minimum levels of financial responsibility for commercial motor carriers (49 CFR 387) and administering MCSAP. Data systems maintained by FHWA contain enforcement and accident statistics (see chapter 7).

In addition, interstate commercial motor carriers—public and private—must be assigned one of three safety fitness ratings by FHWA to acquire ICC approval. However, carriers may operate with temporary ICC approval while awaiting an FHWA fitness rating. At the end of a terminal inspection, known as a safety review, FHWA rates carriers satisfactory, unsatisfactory, or conditional. DOT has dropped the insufficient information rating it used to give when it lacked the information on which to base a rating.[11] The factors in determining safety ratings include any violations discovered during safety management audits and driver equipment compliance reviews in the previous 5 years, the operator's record of improvement over that period, the

[10] Under a reorganization plan announced in October 1986, the Bureau of Motor Carrier Safety was replaced by the Office of Motor Carriers.

[11] Prior to 1983, an insufficient rating was automatically elevated to a satisfactory rating after 1 year from the date it was assigned, if the rating was not, in that time, changed to unsatisfactory or conditional. Until recently, carriers assigned an insufficient information rating retained such a rating until the Department of Transportation received definitive positive or negative information on which to change a rating. See 48 *Federal Register 22565* (May 19, 1983).

Table 3-1 .—Overview of Federal Regulatory Responsibilities for Motor Carrier Safety

Department of Transportation Administration	Senior Official	Responsibilities
Federal Highway Administration (FHWA)	Associate Administrator for Engineering and Program Development	Determines how truck access affects the highway system
	Associate Administrator for Research, Development and Technology	Manages research on the adequacy of highway design to accommodate trucks
	Associate Administrator for **Motor Carriers**	Establishes and enforces operating regulations for commercial motor carriers; includes driver and maintenance requirements
	Associate Administrator for Policy	Studies the implications of longer combination vehicle used on the Nation's highway system
National Highway Traffic Safety Administration (NHTSA)		Establishes regulations for the manufacture of new vehicles and related equipment; investigates safety-related equipment defects
Research and Special Programs Administration (RSPA)		Establishes and enforces regulations for containers used in transportation of hazardous materials

SOURCE' Office of Technology Assessment, 1988

operator's accident record, and violations of State-related laws or regulations.[12]

FHWA plans to assign safety fitness ratings to the 185,000 unrated carriers within the next 3 to 5 years,[13] and recently, FHWA hired 150 new field safety investigators to conduct safety reviews and provide technical assistance to carriers. As of July 1988, ratings of 58,270 motor carriers (see table 3-3) had been completed. FHWA rated 8 percent of the carriers unsatisfactory, 40 percent conditional, and 52 percent satisfactory.

To reduce the risks associated with preventable accidents, FHWA plans to work with individual companies that have poor safety records and will meet with industry associations to discuss the use of countermeasures. This type of program was successful in FHWA's northwest region, and a small national effort has been started.

Each of the nine FHWA regional offices has an Office of Motor Carrier Safety. These regional offices investigate accidents and provide technical support and direction to safety investigators who conduct audits of motor carriers and vehicle inspections. Under MCSAP, however, States have assumed lead responsibility for roadside inspections, and most State MCSAP agencies have focused initially on developing and implementing vehicle and driver inspection programs. FHWA has greatly reduced its roadside inspection activities while increasing carrier terminal audits (see table 3-3).

FHWA has also been responsible for developing a highway access policy for large trucks, and issued a rulemaking in 1982 permitting the trucks author-

[12] 49 CFR 385.3. These factors were formally codified in 1982 in response to industry criticisms pointing to the lack of objectivity in the factors, the lack of notice to carriers of their safety ratings, and the lack of an appeals procedure. See 47 *Federal Register* 26135 (June 17, 1982).

[13] Gerald J. Davis, chief, Federal Programs Division, Office of Motor Carriers, Federal Highway Administration, personal communication, Mar. 25, 1987.

Table 3-2.—Summary of DOT Motor Carrier Safety Regulations in Title 49 of the Code of Federal Regulations

Part 325: **Compliance With Interstate Motor Carrier Noise Emission Standards.—**Establishes procedures for inspection, surveillance, and measurement of motor vehicles to determine compliance with noise emission standards.

Part 350: Commercial Motor Carrier Safety Assistance Program.— Establishes guidelines for the development and implementation of State programs for the enforcement of Federal motor carrier safety regulations. Conditions, objectives, and funding of the program are also detailed.

Part 383: Commercial Driver's License Standards; Requirements and Penalties.— Requires that drivers have a single commercial motor vehicle driver's license, and that drivers provide employers with information about previous employment and previous violations and suspensions. Also prohibits an employer from allowing a person with a suspended license to operate a commercial motor vehicle and sets penalties for violations.

Part 385: Safety Ratings.— Prescribes procedures for issuing motor carriers ratings of satisfactory, unsatisfactory, or conditional. Also lists the factors to be considered in determining a safety rating and sets procedures for notification and review.

Part 386: Rules of Practice for Motor Carrier Safety and Hazardous Materials Proceedings. —Authorizes the Associate Administrator for Motor Carriers of the Federal Highway Administration (FHWA) to determine whether a motor carrier or person subject to the jurisdiction of FHWA has failed to comply with motor carrier safety regulations. Also authorizes the Associate Administrator to compel compliance, issue a civil penalty, or both.

Part 387: Minimum Levels of Financial Responsibility for Motor Carriers.— Establishes minimum level of financial responsibility required by motor carriers and mandates that motor carriers must have proof of insurance and authorization from the Interstate Commerce Commission in order to operate.

Part 388: Cooperative Agreements With States. —Authorizes any State to enforce FHWA safety regulations, and establishes terms of eligibility, cancellation, exchange of information, and requests for assistance.

Part 389: Rulemaking Procedures— Federal Motor Carrier Safety Regulations.— Establishes rulemaking procedures that apply to the issuance, amendment, and revocation of Federal Motor Carrier Safety Regulations.

Part 380: Federal Motor Carrier Regulations, General.- Establishes definitions and applicability of regulations. (For list of exemptions, see table 3-5.)

Part 391: Qualifications of Drivers.— Establishes minimum qualifications for motor carrier drivers (i.e., to qualify to drive a commercial motor vehicle, part 391 states that a person must be at least 21 years old, have a currently valid commercial motor vehicle operator's permit, have prepared and furnished the motor carrier that employs him with a list of violations, have successfully completed and been issued a certificate of driver's road test or an equivalent). In addition, part 391 establishes minimum duties of motor carriers with respect to the qualifications of their drivers.

Part 392: Driving of Motor Vehicles.— Establishes driving practices in cases of railway grade crossings, drawbridges, and hazardous driving conditions. Also sets regulations for use of lighted lamps and reflectors, accidents and license revocation, emergency signals, fueling precautions, and specifies prohibited practices.

Part 393: Parts and Accessories Necessary for Safe Operation.— Establishes requirements for motor carriers including lighting devices, reflectors and electrical equipment, brakes, glazing and window construction, fuel systems, coupling devices and towing methods, miscellaneous parts and accessories, emergency equipment, and protection against shifting or falling cargo.

Part 394: **Notification and Reporting of Accidents.—**Defines reportable accidents and establishes duties of motor carriers to make reports and keep records of accidents that occur during their operations.

Part 395: **Hours of Service of Drivers.—** Establishes hours-of-service regulations for drivers, restricting driving periods of more than 10 hours after 8 consecutive hours off duty, for any period after having been on duty for 15 hours after 8 consecutive hours off duty, or more than 60 hours in any consecutive 7 days. Regulations are also set for recording driver duty status.

Part 396: Inspection, Repair, and Maintenance. —Establishes requirements for the inspections, repair, and maintenance of commercial motor vehicles.

Part 397: Transportation of Hazardous Materials; Driving and Parking Rules.— Establishes requirements of transportation of hazardous materials including special parking, route, tire, and smoking regulations.

Part 398: Transportation of Migrant **Workers.—** Establishes regulations governing the transportation of migrant workers for more than 75 miles when crossing the boundary of another State, a U.S. territory, or another country.

Part 399: **Employee Safety and Health Standards.** —Establishes step, handhold, and deck requirements that apply to drivers of trucks and truck-tractors, having a high profile cab-over-engine configuration for entrance, egress, and back of cab access, manufactured on or after September 1, 1982.

SOURCE: Office of Technology Assessment, based on Title 49 of the Code of Federal Regulations.

Table 3-3.–Federal Highway Administration Inspections and Audits, Fiscal Years 1980-87

	1980	1981	1982	1983	1984	1985	1986	1987
Number of Federal safety specialists	188	162	177	180	178	166	155	241
Number of driver/vehicle inspections	31,875	40,872	35,825	26,015	22,590	16,046	10,027	910
Number of motor carrier audits/reviews	7,093	9,640	12,095	11,666	13,037	10,492	6,637	23,714[a]

[a]This substantial increase reflects a transition at the Federal Highway Administration from safety audits to less in-depth Safety reviews.

SOURCE: Office of Technology Assessment, based on Federal Highway Administration information, 1988.

ized by the STAA unlimited access on the Interstate system. (For further information, see the section on "Highway Access" later in this chapter.) The Association of State Highway and Transportation Officials has also influenced decisions related to highway access because it sets the standards for the construction and reconstruction of national highways. These standards have been determined primarily by the size and maneuverability of passenger cars, and in the case of many parts of the Interstate system, by a tractor pulling a 40- or 45-foot trailer. Because the standards were set and highways constructed before the size and operating characteristics of the longer trailers authorized by the STAA were known, standards are currently being revised (for further information, see chapter 5).

Department of Transportation: National Highway Traffic Safety Administration

NHTSA develops and enforces safety standards for newly manufactured vehicles and equipment, addressing such items as brakes, lights, tires, and seat belts. To support standard development, the agency collects accident data and sponsors research. However, these activities have not led to major new truck safety equipment standards in recent years. (For further details, see chapter 5.) NHTSA enforcement programs focus on vehicle and equipment testing and inspections to ensure compliance with existing standards. The agency also conducts investigations of safety-related defects[14] and issues criteria for inspections of motor vehicles that are used by State highway programs. '5

Equipment Regulations

Responsibility for developing highway safety standards for use by State agencies is shared by NHTSA and FHWA:

- NHTSA administers the State standards for motor vehicle inspections, registration, driver education, traffic laws, traffic records, police traffic service, debris cleanup, and accident investigations and reporting.
- FHWA set standards for highway design, construction, and maintenance, traffic engineering, and identification and surveillance of accident locations through a number of agency divisions. These groups do not regularly coordinate with NHTSA or the Office of Motor Carriers. FHWA also has primary responsibility for the highway transportation of hazardous materials and enforcement activities for the highway mode.

Although FHWA and NHTSA regulations cover comparable areas, the rulemaking efforts of these agencies are distinct from each other. Moreover, historically poor interagency coordination within DOT has led to inconsistent regulations for newly manufactured vehicles and for operating standards for commercial motor carriers. Congressional action was required to resolve conflicting NHTSA and FHWA regulations for front brakes, for example; several inconsistencies in other brake requirements persist.

Recently, FHWA published a proposed rule that would require vehicle inspections at least once a year, as mandated by the Motor Carrier Safety Act of 1984.[16] Under the new rules, commercial vehicle operators are responsible for having all vehicles inspected, according to explicit standards, by individuals meeting specified FHWA qualifications. Inspectors would be required to complete vehicle inspection reports and operators to retain such reports for 1 year. Special markings on trucks and trailers would indicate the month and year of the last inspection. Operators registered in a State with an inspection program that meets the objectives of the FHWA program would be permitted to comply with State requirements in lieu of Federal regulations.

Department of Transportation: Research and Special Programs Administration

Regulations governing the transportation of more than 30,000 hazardous materials are issued by the Office of Hazardous Materials Transportation within

[14] Regulations for enforcement of the National Highway Traffic Safety Administration standards and defects investigations are contained in 49 CFR 554.

[15] Subpart B of 49 CFR 570 specifies the criteria for vehicles with gross \'chicle weight ratings of more than 10,000 pounds.

[16] 52 *Federal Register* 5913 (Feb. 26, 1987). In an earlier notice, the Federal Highway Administration requested comments on this issue. See 50 *Federal Register 1245* (Jan. 10, 1985).

RSPA in DOT. RSPA regulations prescribe requirements for packaging to ensure effective containment during transport, and communication of the hazards posed by these materials through special shipping papers, markings, labels, and vehicle placards.[17]

RSPA's authority encompasses requirements for the design and performance of packages used to ship low-level radioactive materials and highway routing of all radioactive materials. The Nuclear Regulatory Commission is responsible for containers used to transport high-level radioactive materials.[18]

Interstate Commerce Commission

ICC regulates the motor carrier industry by granting operating authority to common and contract carriers, collecting economic operating data from the larger motor carrier companies, and monitoring rates. Although deregulation substantially eased the entry requirements for interstate for-hire motor carriers, operating authority must still be obtained from ICC by common and contract carriers and private carriers seeking for-hire authority.[19] Carriers exempt from ICC regulation include those engaged in private carriage, including intercorporate hauling, and in the transportation of specified agricultural commodities.[20]

Furthermore, purely intrastate motor carriage and transportation within ICC-designated commercial zones are not subject to ICC regulation.[21] A commercial zone is composed of a base municipality, all its contiguous municipalities, and all other municipalities and unincorporated areas within U.S. boundaries that are within specified distances of the base jurisdiction.[22] In April 1987, ICC issued a proposal to increase the size of commercial zones substantially and extend economic exemptions.

National Transportation Safety Board

The National Transportation Safety Board (NTSB), an independent agency reporting directly to Congress, has issued a number of special studies related to the qualifications of commercial motor vehicle drivers as well as numerous accident investigation reports containing extensive recommendations for amendments to FHWA regulations and industry practices. NTSB is currently focusing on the effects of drugs and alcohol on driver performance and commercial vehicle safety.

Motor Carriers Exempt From Federal Safety Regulations

While the FMCSR apply to common, contract, and private motor carriers of property, they do not cover several other categories of carriers (see table 3-4). Private motor carriers of passengers, such as school buses, are exempt from Federal regulations, while for-hire motor carriers of passengers, like Trailways and charter bus services, are not. Because Federal safety statutes have historically applied only to interstate transportation, many operations conducted solely within the boundaries of a State need not comply with the FMCSR.

In addition, vehicles and drivers used wholly within a municipality or a DOT-designated commercial zone, even if State lines are crossed, were for years exempt from Federal safety regulations unless they were transporting large quantities of hazardous materials.[23] In response to pressure from safety advocates, including Congress and industry organizations, FHWA finally issued a rulemaking that requires vehicles and drivers used in such local operations to comply with Federal safety regulations by November 15, 1988.

[17] Hazardous materials regulated by the Research and Special Programs Administration are listed in 49 CFR 171. Regulations for containers are specified in 49 CFR 173, 178, and 179. Specific modal requirements are contained in Parts 174 (rail), 175 (air), 176 (nonbulk water transport), and 177 (highway). Regulations for bulk water shipments, developed by the U.S. Coast Guard, are specified in 46 CFR. Hazard communication requirements are in 49 CFR 172.

[18] Nuclear Regulatory Commission authority is derived from the Atomic Energy Act of 1954, 42 U.S.C. 2011. Issues related to the transportation of radioactive materials and hazardous substances were addressed in a 1986 OTA assessment, the *Transportation of Hazardous Materials*.

[19] Interstate Commerce Commission jurisdiction over motor carriers is specified in 49 U.S.C. 10521.

[20] Carriers exempt from the Interstate Commerce Commission's regulations are specified in 49 U.S.C. 10522-10524 and 10526. However, companies that intend to conduct intercorporate hauling must notify the Interstate Commerce Commission as required by 49 CFR 1167.

[21] 49 U.S. C. 10525 and 10526(b). Intrastate transportation that is regulated by the Interstate Commerce Commission includes two situations where: 1) the normal route of a carrier between two points in the same State includes a highway ourside the State, or 2) transportation between two points in the same State that precede or follow interstate movement are considered interstate in nature because they pass the "essential character of commerce" test. Daniel Sweeney et al., *Transportation Deregulation: What's Deregulated and What isn't* (Washington, DC: NASSTRAC, 1986), pp. 109-110.

[22] For example, the distance for municipalities with populations under 2,500 is 3 miles, while the distance for municipalities with populations over 1 million is 20 miles. See 49 CFR 1048.101.

[23] 49 CFR 390.16. This exemption did not apply to operations in Hawaii.

Table 3-4.—Regulatory Exemptions to Title 49 of the Code of Federal Regulations

Vehicle/driver type	Parts (for summary of parts, see table 3-2) 391'	392	393	394	395	396	397
Vehicles owned, operated, and regulated by Federal, State, or local governments	X	X	X	X	X	X	X
Private carrier of passengers (i.e., school buses)	X	X	X	X	X	X	X
Intracity operations	X	X	X			X	X
Lightweight mail trucks[c]	X	X	X	X	X	X	
Farm custom operations		X					
Certain farm vehicle drivers[e]			X				
Farm-to-market operations[f]				X			
Apiarian industries[g]			X				
Drivers traveling beyond a commercial zone, transporting cargo other than explosives or other dangerous articles							X

KEY: X = exemption from requirement.
[a]Drivers in the following categories are exempt from portions of Part 391: drivers regularly employed before Jan, 1, 1971; intermittent or occasional drivers; drivers furnished by other motor carriers; drivers of articulated farm vehicles; intrastate drivers of vehicles transporting combustible liquid; and drivers operating in the State of Hawaii. The Department of Transportation has ended this exemption effective Nov. 15, 1988.
[b]This exemption applies to vehicles or drivers wholly within a municipality or commercial zone, unless transporting hazardous materials that require a placard and weigh 2,500 pounds or more in the case of one dangerous article, or 5,000 pounds or more in the case of more than one dangerous article. The exemption does not apply to drivers in the State of Hawaii. The Department of Transportation has ended this exemption effective Nov. 15, 1988.
[c]This exemption applies to motor carriers used exclusively to tranport mail under contract with the U.S. Postal Service that have a gross vehicle weight Of 10,000 pounds or less.
[d]This exemption applies to drivers who operate motor vehicles controlled and operated by a person engaged in custom-harvesting, if the vehicle is used to transport farm machinery or supplies to or from a farm for custom-harvesting operations, or used to transport custom-harvested crops to storage or market.
[e]This exemption applies to farm vehicle drivers, except those driving articulated motor vehicles with gross vehicle weights, including loads, of more than 10,000 pounds,
[f]This exemption applies to drivers of vehicles controlled and operated by a farmer who, as a private carrier, is using the vehicle to transport agricultural products from his farm, or to transport farm machinery, farm supplies, or both to his farm. Drivers transporting hazardous materials that require a placard are not exempt.
[g]This exemption applies to drivers operating motor vehicles controlled and operated by a beekeeper engaged in the seasonal transportation of bees.

SOURCE: Office of Technology Assessment, based on 49 CFR 390.33.

STATE PROGRAMS

State economic and safety regulatory programs governing the operations of motor carriers are extensive. States require motor carriers to register their vehicles, obtain operating authority and insurance, pay a variety of taxes, adhere to truck weight and size limitations, and comply with safety regulations, including special routing or scheduling restrictions. In most States, multiple agencies are responsible for administering these programs. For instance, departments of finance or revenue assess taxes, departments of motor vehicles or transportation register vehicles, and a public utilities commission or commerce department may grant operating authority. Safety regulations, including those for the transportation of hazardous materials, maybe issued and enforced by departments of transportation, public safety, health, or environment, or by the State police (see table 3-5 for a sample of State agency authority).

Improving State Capabilities

Beginning in the late- 1960s, FHWA entered into cooperative agreements with States to bolster roadside inspection activities. However, no Federal financial support was provided, limiting the effectiveness of most State programs. Ten years later, FHWA funded demonstration programs in Alaska, Idaho, Michigan, and Utah to improve safety inspections and to monitor truck size and weight. These States were encouraged to adopt the FMCSR, and State inspectors were trained to enforce them. The data collected underscored the importance of effective State enforcement as an accident prevention tool. For example, in the year Utah increased its inspections by 330 percent, a 43-percent reduction in accidents involving commercial motor vehicles occurred. Similarly, Idaho experienced 37 percent fewer commercial accidents in the year that it increased its inspections by 268 percent and its weighings by 218 percent.[24]

Many State motor carrier safety programs have altered significantly since 1980. At that time, reduc-

[24]U.S. Department of Transportation, Federal Highway Adminstration, Bureau of Motor Carrier Safety, "Interim Report, Commercial Motor Carrier Safety Inspection and Weighing Demonstration Program, " unpublished manuscript, August 1981.

Table 3=5.—Agencies Administering Motor Carrier Requirements in Selected States

State motor carrier requirements	Arizona	New York	Virginia	Iowa	Minnesota
Registration and taxes					
Vehicle registration	MVD	DMV	DMV	MVD	DPS
Fuel use tax	MVD	TAX	DMV	MVD	DOR
Fuel sales tax	—	TAX	DMV		—
Out-of-State fuel tax....	—	TAX		MVD	—
Fuel surtax	—		SCC [a]	–	—
Gross receipts tax	—	TAX[b]	—	—	—
Weight/distance tax	MVD	TAX	—	—	—
Economic regulation					
initial ICC regulation	—	DOT	Scc	MVD	DOT
Supplemental ICC registration	—	—	—	MVD	DOT
Identification stamp	—	DOT	Scc	MVD	DOT
Other regulations					
Certificate of insurance	MVD	DMV	SCC	MVD	DOT
Safety issues	MVD	DMV	SP	MVD	DOT
Hazardous materials	DHS	DEC	DOH	TRA	DOT
Size and weight	MVD	DMV	DH&T	MVD	DOT

KEY:DEC = Department of Environmental Control
DH&T = Department of Highways and Transportation
DHS = Department of Health Services
DMV = Department of Motor Vehicles
DOH = Department of Health
DOR = Department of Revenue
DOT = Department of Transportation
DPS = Department of Public Safety
ICC = Interstate Commerce Commission
MVD = Motor Vehicle Division
SCC = State Corporation Commission
SP = State Police
TAX = Department of Taxation and Finance
TRA = Transportation Regulatory Authority

avirginia considers this a second structure tax.
bNew York also imposes a Franchise Tax.

SOURCE: Office of Technology Assessment, adapted from National Governors' Association Working Group on State MotorCarriers Issues, "Current EffortstoImprove the Administration of State Motor Carrier Requirements, Report No. 7," November 1985, pp. 11-17.

tions in Federal inspection activities, major changes in the motor carrier industry, and concerns about truck-related accidents, all pointed to the need for stronger State enforcement. With Federal support, State inspection and enforcement programs expanded, and a higher percentage of trucks and drivers are placed out of service for violations.

However, until the STAA was passed in 1982, requiring States accepting Federal funding for enforcement to adopt Federal regulations, no formal means of coordinating Federal and State regulations existed. With the participation of State-based organizations, such as the National Governors' Association, some progress has been made in coordinating State economic and safety regulatory policies and activities. Nonetheless, varied and changing State regulations still affect interstate carriers.

The Motor Carrier Safety Assistance Program

Based on the success of these demonstration programs, State commercial motor vehicle safety programs have been federally supported by MCSAP since 1984.[25] The primary goal of MCSAP is to increase and improve State capabilities to enforce uniform motor carrier safety and hazardous materials regulations for both interstate and intrastate motor carriers and drivers through safety inspections of commercial motor vehicles in terminals and along roadsides. Data collection and analysis is a secondary goal, and States may use grant funds to develop an accurate database on regulatory compliance. Currently, all States except Alaska, New Mexico, South Dakota, Vermont, and Wyoming participate in MCSAP.[26] Because recent legislation intended to phase in the FMCSR in Texas was challenged by industry, Texas is not qualified to receive funds from MCSAP, at least for the present.

Two types of State grants–development and implementation—are available under MCSAP.[27] Development grants, available for a maximum of

[25]The Motor Carrier Safety Assistance Program was authorized under the Surface Transportation Assistance Act of 1982, Public Law 97-424.

[26]In addition, participating U.S. territories include American Samoa, Guam, Puerto Rico, and the Virgin Islands.

[27]Requirements for State participation in the Motor Carrier Safety Assistance Program are contained in 49 CFR 350.

3 years, may be used by States to establish or substantially modify an enforcement program. Development activities include program planning, initiating legislative or regulatory action, formulating a budget, designating the State agency responsible for administering MCSAP, and preparing a State Enforcement Plan (SEP). FHWA guidelines require that an SEP cover the following:

- current status of commercial motor carrier operations, including traffic volume, seasonal patterns, and accident statistics;
- current enforcement efforts, including the role of State agencies, the personnel involved, the facilities and equipment utilized, and the number of inspections and audits conducted;
- evaluation of the current motor carrier safety program and the identification of problem areas;
- objectives and goals of the State program, such as hiring and training additional staff, increasing the number of inspections and audits, and revising legislation;
- description of how resources will be used to accomplish objectives; and
- method for evaluating program effectiveness.[28]

Development grants were awarded to 21 States and territories during fiscal year 1985. By 1987, however, most States had progressed to the implementation phase of MCSAP.

Implementation grants provide funding for States ready to initiate enforcement programs or enhance established ones. Activities may include recruiting and training of personnel, acquiring and maintaining equipment, conducting new or expanded inspections, and establishing an "out-of-service" and compliance enforcement system. To qualify for an implementation grant, a State must:

. agree to adopt and enforce the FMCSR (49 CFR 390-399), including highway-related portions of the Federal Hazardous Materials Regulations (49 CFR 171-173 and 177-178) or compatible State rules, regulations, standards, and orders applicable to motor carrier safety;
. submit an SEP and designate a lead agency for administering the plan;
- agree to devote adequate resources to administration of the program and enforcement of rules, regulations, standards, and orders;
- have established statutory authority to enforce Federal or compatible State regulations, regulate private and for-hire carriers, and provide for right-of-entry into vehicles and facilities;
- agree to adopt uniform reporting requirements and submit reports as requested by FHWA; and
- require registrants of commercial motor vehicles to declare knowledge of applicable Federal or compatible State regulations.

MCSAP is financed by the Highway Trust Fund and State appropriations. Federal grants of 80 percent must be matched by 20 percent from States.[29] Initially, incremental funding for MCSAP was authorized over a 5-year period: $10 million was authorized for fiscal year 1984, and $10 million was to be added each year, up to a maximum of $50 million by fiscal year 1988. However, grants awarded in 1985 and 1986 were significantly lower than authorized funding levels—less than $15 million in 1985 and approximately $17 million in 1986. For fiscal year 1987, the Secretary of Transportation requested that the $50 million maximum funding level for MCSAP be authorized to meet the needs of expanding State programs; State grant requests for 1987 exceeded $44 million. Due to budget cuts for fiscal year 1988, State grant requests were just under $42 million.

While a primary objective of MCSAP is to encourage States to adopt uniform regulations and implement consistent inspection and enforcement policies and procedures, significant differences among State programs persist. Among the factors affecting the scope and effectiveness of State programs are:

- the degree to which State legislation allows compliance with MCSAP, including the authority to regulate for-hire and private carriers;
- the adoption of Federal regulations or compatible State rules;

[28] 49 CFR 350.13, app. A, and U.S. Department of Transportation, Federal Highway Adminstration, "Suggested Standard Implementation Grant Application," unpublished manuscript, April 1986.

[29] Funds available to any State for proposed program development may not exceed $50,000 per year. Implementation grant funds are distributed to the States according to an allocation formula based on the following factors in equal proportion: road mileage (all highways), vehicle-miles traveled (all vehicles), number of commercial vehicles over 10,000 pounds, population, and special fuel consumption (net reciprocity adjustment). See 49 CFR 350.21.

- the extent to which accident and inspection data are collected, analyzed, and used to support regulatory and enforcement policies;
- the extent to which States conduct safety audits at carrier facilities, in addition to roadside inspections;
- the number of inspectors employed, the ability of State agencies to compensate employees for overtime, and the availability and quality of inspector training programs; and
- the ability of enforcement officers to issue citations for violations and the issuance of penalties sufficiently high to be a deterrent to noncompliance.[30]

Regulatory Consistency

States participating in MCSAP often must pass enabling legislation authorizing the adoption and enforcement of Federal motor carrier safety and hazardous materials regulations or compatible State regulations. In addition, State regulations must apply to both private and for-hire carriers, and State enforcement personnel must have authority to conduct inspections of both intrastate and interstate motor carriers. Yet, despite these Federal requirements, laws in a number of States continue to limit the scope and applicability of motor carrier safety programs. FHWA has under way a review to determine the status of motor carrier safety legislation in each State—a task that FHWA officials estimate will take more than a year.

In addition, some States restrict the activities of law enforcement personnel. Kentucky prohibits audits of motor carrier operations, and Mississippi inspectors received authorization to inspect carriers other than for-hire carriers of property or persons as recently as July 1, 1988. Enforcement officials in Maryland are limited by State legislation prohibiting adoption of hours-of-service regulations for intrastate drivers working within a 100-mile radius.[31] State hazardous materials transportation laws also vary, with some States exempting specific commodities, while others apply hazardous materials regulations only to quantities that require placards under Federal law.[32]

To address the issue of regulatory consistency, Congress requested a 5-year review of State commercial motor carrier safety laws and regulations.[33] A panel convened by the Secretary of Transportation is determining whether State laws and regulations are more or less stringent than Federal requirements. State laws and regulations that are found to be less stringent than their Federal counterparts will be preempted and may not remain in effect after October 30, 1989. A State law or regulation that is more stringent will not be preempted unless there is no safety benefit associated with it, the law is not compatible with Federal regulations, or enforcement of it causes an undue burden on interstate commerce.

Highway Access

Highway access policies differ markedly from State to State. FHWA was instructed to develop rules and guidelines for a National Truck Network for the larger trucks authorized under the STAA.

FHWA's rulemaking authorized trucks that met the uniform size and weight limits to travel on all Interstate highways and designated State primary highways and to have reasonable access off these highways to terminals and to facilities for food, fuel, repairs, and rest.[34] Because States resisted Federal limitations on their authority to restrict movements of these trucks, States were allowed to interpret the terms "reasonable access" and "terminal."[35] This permitted significantly varying State interpretations (see table 3-6), leading inevitably to industry appeals for uniform Federal standards. Carriers protest limits on access to shippers and terminals, and drivers claim that inadequate signage and complex route listings hamper their ability to travel legally.

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[30] For further information, see U.S. Congress, Senate Committee on Commerce, Science, and Transportation, *Motor Carrier Safety Assistance Program (MCSAP): Options intended To Improve a Generally Successful and Cooperative Federal/State Partnership Promoting Truck and Bus Safety* (Washington, DC: U.S. Government Printing Office, June 1988).

[31] Ron Lipps, Maryland State Department of Transportation, Safety Division, personal communication, Oct. 8, 1987.

[32] Placards are symbols placed on the ends and sides of motor vehicles indicating the hazards of the cargo. Shipments of some hazardous materials, such as etiologic agents and consumer commodities, do not require placards. In addition, shipments of less than 1,000 pounds of certain types of hazardous materials do not have to be placarded. See 49 CFR 172.504.

[33] The Motor Carrier Safety Act of 1984, Public Law 98-554 (Oct. 30, 1984), 49 U.S.C. 2501 et seq.

[34] 23 CFR 658.

[35] Porter K. Wheeler, "State Regulatory Programs for Motor Carriers," OTA contractor report, May 1987.

Table 3-6.—Reasonable Access Provisions

State	Access policy: 1/2 mile	1 mile	3 miles	5 miles	10 miles	Unlimited	Comments
Alabama		X					From identified designated interchanges.
Alaska						X	
Arizona						X	Width restrictions.
Arkansas						X	Unless otherwise posted.
California	X						Terminal access beyond 1/2 mile by signed routes from identified access points.
Colorado						X	Unless otherwise posted.
Connecticut		X					Special driver license needed for twins.
Delaware							By permit only.
District of Columbia							By permit only.
Florida							From identified interchanges: rural—1 mile (2 lane) and 3 mile (4 lane); urban—1 mile on crossroads with 12-foot lanes; carriers must petition terminals outside above limits,
Georgia		X					From identified interchanges: 60-foot limit.
Hawaii						X	Length restrictions.
Idaho						X	
Illinois				X			State highways and local roads to facilities.
Indiana						X	
Iowa							All U.S. and State routes. 5 miles from National Truck Network; all streets served by designated routes and 3-10 miles outside cities, depending on population.
Kansas						X	All U.S. and State routes.
Kentucky				X			
Louisiana			X				
Maine							2 miles in rural areas; 1/2 mile in urban areas.
Maryland							Shortest possible route to terminals.
Massachusetts							By permit only.
Michigan				X			
Minnesota							To facilities or for route continuance.
Mississippi						X	
Missouri					X		
Montana						X	
Nebraska						X	All U.S. and State routes.
Nevada						X	
New Hampshire							By permit only for twins.
New Jersey							By permit only for twins.
New Mexico							20 miles from Interstate, designated roads
New York							Permit required beyond 1,500 feet.
North Carolina			X				
North Dakota					X		
Ohio						X	All U.S. and State routes.
Oklahoma							Reasonable access (up to the discretion of enforcement officers).

(table continued on next page)

Table 3-6.—Reasonable Access Provisions—continued

State	Access policy: 1/2 mile	1 mile	3 miles	5 miles	10 miles	Unlimited	Comments
Oregon							Unlimited on all but local roads—width only; twins, tractor-semitrailers not restricted.
Pennsylvania							0.2 miles.
Rhode Island							Doubles restricted to 1 urban mile; 1 mile on 2-lane roads and 3 miles on 4-lane roads in rural areas; others by permit only.
South Carolina						x	Twins to terminals allowed.
South Dakota						x	Access limited to loading docks, terminals, and maintenance facilities,
Tennessee						x	Shortest reasonable route.
Texas						x	Unless otherwise posted.
Utah						x	
Vermont							1/2 rnile on designated interchanges; further distance by permit only.
Virginia	X						Perrnit required beyond1/2 mile.
Washington						x	
West Virginia							Within 2 miles of designated route.
Wisconsin				X			
Wyoming						x	

SOURCE: Office of Technology Assessment, based on *Commercial* Carrier *Journal*, April 1988, pp. SO-81.

Several States, especially in the East, have relatively restrictive access provisions. In Pennsylvania for example, access to roads off the designated network is limited to 0.2 miles, except on specific routes listed in an 84-page manual.[36] Massachusetts has designated only a portion of its State highways as part of the National Truck Network, and has adopted a $50 permit requirement for carriers who want access to most other roads.[37] Connecticut requires all drivers of twin trailers to be tested and licensed in-State.[38] Many carriers support legislation to amend the STAA, establishing a uniform definition of "terminal" and "reasonable access" and permitting STAA trucks to travel on most roads and highways, unless a State convincingly demonstrates that a road cannot safely accommodate large trucks.

The Tandem Truck Safety Act of 1984 authorized universal access by double 28-foot trailers, aiding companies that operate doubles by granting unlimited access for pick up or delivery purposes once the twin trailers were uncoupled. Large carriers have taken advantage of this access provision, building terminals close to Interstate highways where each 28-foot trailer can be attached to a separate tractor, or the contents of the trailers transferred to smaller vehicles. Many small companies, however, claim they do not have the funds or type of operation necessary to develop this kind of network.[39]

[36] J. Terry Turner, "Statementofthe Interstate Carriers Conference on the Matter ofReasonable Access to the Designated Highway System," testimony before the Senate Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation, Apr. 21, 1988, app. A.

[37] Duane W. Acklie, president, Crete Carrier Corp., testimony before the Senate Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation, Apr. 21, 1988, p4.

[38] Thomas R. Stedman, vice president, National Private Trucking Association, testimony before the Senate Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation, Apr. 21, 1988, p. 9.

[39] Richard D. Henderson, executive vice president, private Truck Council of America, Inc., letter to Senator Exon, U.S. Congress, May 12, 1988.

Data Collection and Analysis

Establishing databases that track motor carrier compliance with safety regulations is an important component of many State programs. Data are used to target carriers for inspections and audits and to support legislative or regulatory actions.

Although MCSAP funds maybe used to develop information systems, the extent to which various States collect and analyze data varies, and many States cite inadequate data as a major implementation problem for MCSAP. Enforcement efforts are hampered by incomplete records of carrier, vehicle, and driver violations. In addition, poor accident data prevent State authorities from identifying carriers with high preventable accident rates and from conducting regulatory compliance education programs.

The ability of a State to obtain a complete compliance profile of an interstate motor carrier or driver, by accessing Federal and State databases, is a key element of a current demonstration program. SAFETYNET, a Federal-State automated network, will eventually link FHWA's motor carrier safety database, containing information on more than 200,000 interstate carriers and 25,000 hazardous materials shippers, with State data systems. FHWA's database, described in more detail in chapter 7, includes information on driver and vehicle violations, basic demographic and profile data on interstate carriers and shippers, data from accident reports filed by carriers, and Federal enforcement actions.[40] Approximately 35 States currently retrieve information from the central database in Washington, DC. Of these, 22 States also transmit data to the central computer.[41]

Four States–Colorado, Michigan, North Carolina, and Oregon—were selected to participate in a SAFETYNET demonstration program. During the initial phase, users of SAFETYNET will be able to: input driver and vehicle inspection data; update and query inspection data and carrier census data; query safety management audit summary data, accident report summary data, and inspection workload data; and generate system reports.[42] Eventually, all States are expected to participate in SAFETYNET; however, full implementation may take as long as 10 years.

[40]See J.A. Reyes Associates, Inc., "SAFETYNET: The Motor Carrier Safety Information Network, " prepared for U.S. Department of Transportation, Federal Highway Administration, November 1984.

[41]Angeli A. Sebastian, Federal Highway Administration, personal communication, Aug. 4, 1988.

Inspection and Audit Programs

States conduct two basic types of inspections—roadside checks of vehicles and drivers and safety management audits. During a roadside check, an inspector examines a vehicle for mechanical problems and inspects documents, such as a driver's hours-of-service record and license, as well as shipping papers or route plans, if applicable. An audit, which is conducted at a carrier's terminal or other business office, involves a review of records on vehicle use and maintenance, driver files and logbooks, and accident and violation reports and records. Management policies and procedures may also be assessed, and any vehicles in the terminal at the time of an audit may be inspected as well.

In most States, the development of safety audit programs has lagged behind establishment of roadside inspection programs. Obtaining authority to conduct audits from State legislatures and providing adequate training for State inspectors have proven to be major obstacles. Because uniform standards and procedures for audits have not been established, State audit programs differ in the criteria used for targeting carriers, the analysis of data obtained from a carrier's files, and the extent to

[42]J.A. Reyes Associates, Inc., op. cit., footnote 40.

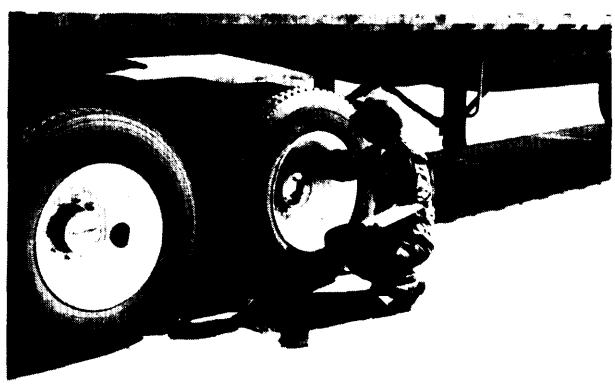


Photo credit: Commercial Vehicle Safety Alliance

Roadside inspections are a critical part of the MCSAP program.

which compliance education and monitoring efforts are undertaken. Examples of well-developed State audit programs are provided in box 3-A. In addition, at least 17 States are assisting FHWA in rating carriers by conducting less in-depth safety and compliance reviews.[43]

Many States initially concentrate on roadside inspections, and States that have added enforcement personnel and increased inspections are placing higher percentages of vehicles and drivers out of service (see figure 3-2). For example, in Maine, when five new roadside inspectors were hired with MCSAP funds, 60 to 70 percent of the commercial motor vehicles inspected were placed out of service.[44] Similarly, in 1986, inspection teams in New York State failed 58 percent of approximately 3,200 trucks checked during roadside inspections on the Long Island Expressway and on highways near Albany and Buffalo.[45] In Connecticut, 13 Federal inspectors were hired in 1986 to assist 1 I State officials in conducting roadside inspections. Subsequently, 5,000 motor carriers were placed out of service in fiscal year 1987, an increase of 1,500 over the previous fiscal year.[46]

Strategies for selecting vehicles to inspect vary among the States. Some conduct random roadside inspections, while others, such as Maryland, have begun to target trucks that appear to be in poor condition. Under Maryland's system, the percentage of vehicles placed out of service rose from 32 percent in 1985 to 63 percent in 1986, and the driver out-of-service rate increased from 3.7 to 8.3 percent during the same period.[47] In July 1986, Idaho implemented its inspection saturation program, which concentrates on one area of the State for 3 to 4 days. Officers are dispatched throughout surrounding areas, hindering driver attempts to avoid vehicle inspections.[48]

[43]Robert L. Bleakley, Federal Highway Administration, Personal communication, Oct. 10, 1987.

[44]*Maine Times,* "Losing Control: Deregulation May Have Made It Too Easy to Get Into the Trucking Business," May 8, 1987, p. 2.

[45]Robert Hanley, "60% of Trucks Fail New York Area Inspections," *New York Times,* Oct. 8, 1986, p. B1.

[46]William Shaefer, coordinator, Motor Carrier Safety Assistance Program, Connecticut Department of Transportation, personal communication, Jul 22, 1987.

[47]OTA research, 1987.

[48]L.J. Nickerson, Idaho State Police Department, personal communication, July 21, 1987.

Many State inspection programs have strengthened emphasis on the driver, since enforcement officials believe that increased driver surveillance will reduce the number of operator-related accidents.

Box 3-A.—Selected State Audit Programs

Washington.—In Washington, carriers are targeted by the number of accidents during the past 3 years, the number of critical violations, and the number of hazardous materials violations.[1] During an audit, State officials examine records on hours of service, speeding violations, maintenance, and hazardous materials incidents. They also analyze accident reports and review the carrier's safety management system and its hiring practices for drivers. Eighty-nine audits were conducted between September 1985 and September 1987: of these, 20 were rated satisfactory, 51 were rated marginal, and 18 were rated unsatisfactory.[2]

Educating motor carriers about safety policies and requirements is an important component of Washington's program. Carriers are carefully monitored for 3 years to see if they maintain compliance with State standards. After 3 years of successful compliance, carriers are monitored less heavily but are still accountable to Motor Carrier Safety Assistance Program (MCSAP) authorities. Administrative sanctions are imposed if a carrier fails to bring its operations into compliance. State MCSAP officials found that the use of enforcement sanctions has reduced by 5 percent the number of carriers targeted for audits.

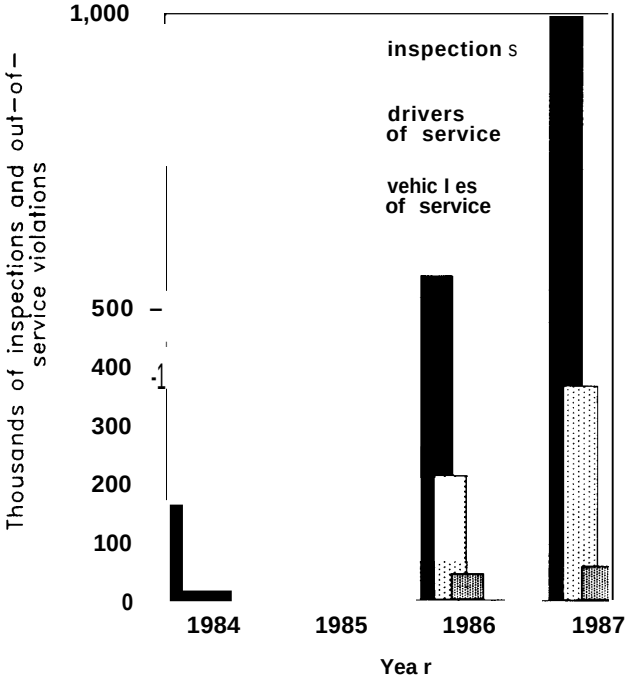
Oregon.—Oregon officials consider three factors when selecting carriers for audits: out-of-service violations greater than the industry average; complaints from industry members or the public about a particular carrier; and a carrier's preventable accidents. Audits performed in Oregon emphasize equipment inspections and the checking of daily logs or other time documents kept by drivers. Civil penalties are assessed for all out-of-service violations (except brake adjustment), and enforcement action is taken when drivers are found to be in violation of hours-of-service regulations after the first audit.[3]

[1]Accident rates are often the figure focused because interstate carriers do not report mileage statistics to Washington State authorities. Although carriers may be requested to submit mileage data, the reliability of the information received is questionable. Alan Scott, transportation operations manager, Washington Utility and Transportation Commission, personal communication, Sept. 25, 1987.

[2]Ibid.

[3]OTA research, 1987.

Figure 3-2.— Motor Carrier Inspections and Out-of-Service Violations, 1984.87



SOURCE: U.S. Congress, Senate Committee on Commerce, Science and Transportation, Motor Carrier Safety Assistance Program: Options Intended to Improve a Generally Successful and Cooperative Federal/State Partnership Promoting Truck and Bus Safety (Washington, DC: US. Government Printing Office, 1988), Table 3, p 18

Currently, human error accounts for over 60 percent of all commercial motor vehicle accidents (see chapters 4 and 6 for further information). Special efforts aimed at drivers have been instituted in a number of States. Nevada's "Driver Check" program has resulted in a 3.7-percent decline in accidents caused by driver error. Using a hardwired remote terminal connected to the State's mainframe computer, enforcement personnel at fixed locations can check local, regional, and interstate drivers. During these license checks, enforcement personnel can identify cases of suspension, revocation, outstanding warrants, and multiple licenses.[49] Tennessee has a special drug and alcohol enforcement program. Inspectors are taught to recognize probable cause for drugs and are equipped with manuals and a field test kit that help them identify paraphernalia and illegal drugs.[50]

[49] "Federal Highway Administration, "Innovative MCSAP Programs," unpublished manuscript, July 25, 1987, p. 9.
[50] "Ibid.

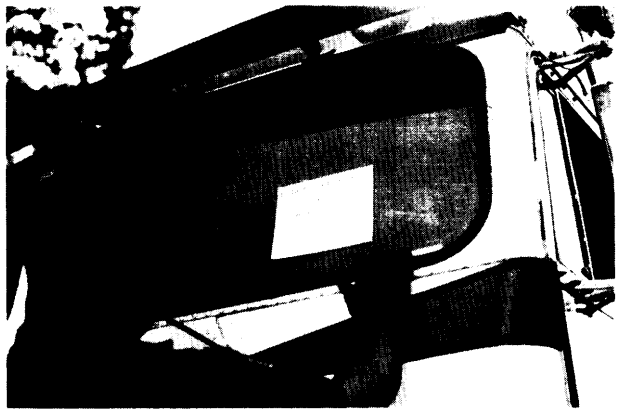


Photo credit: Rhode Island State Police

Once a truck is placed out of service, appropriate repairs must be made before it can be driven again.

Buses

State officials also have the authority to inspect for-hire, interstate, and intrastate buses. (Private carriage of passengers is exempt from the Federal safety regulations.) Although all but 11 MCSAP States inspect buses, only a few devote a significant portion of their resources to bus inspection programs; more often, States conduct annual, terminal audits for buses registered in State. In Minnesota, for example, the State legislature mandates that all school buses must pass a terminal inspection each year.[51]

States that do conduct bus inspections usually inspect unloaded buses only. Inspectors focus on areas where a number of buses can be inspected at once, such as sports complexes, casinos, and amusement parks. This strategy is considered most efficient because passengers are not inconvenienced and companies usually have the time and resources to get a replacement if a bus is placed out of service. Michigan, for example, routinely inspects buses at Detroit's sports facilities; bus drivers are usually cooperative—as well as unaware of safety defects on their vehicles.[52]

Under MCSAP, New Jersey has developed a bus inspection team that targets both loaded and unloaded buses, many of them en route to Atlantic City. Of the 8,900 roadside inspections conducted between April 1987 and April 1988, 718 buses were

[51] Larry Klukow, Minnesota State Police, personal communication, May 27, 1988.
[52] William Murphy, Department of Motor Carriers, Michigan State Police, personal communication, Apr. 26, 1988.

Photo credit: California Department of Transportation

Photo credit: California Department of Transportation

Some States have special roadside inspection programs for buses. Brake and steering system deficiencies are frequent safety violations.

placed out of service. Officials have reported that since the roadside inspection program began, fewer buses have out-of-service violations.[53]

In California, the vast majority of buses receive annual, terminal inspections. However, State officials have also inspected loaded buses since they discovered that the "gamblers specials," offering tours to Reno or Las Vegas, Nevada, were often operating illegally and unsafely. Bus companies that advertised 24-hour turnaround operations appeared to be particularly hazardous, and officials discovered that drivers often violated hours-of-service regulations by staying with the tour the entire time. Several highly publicized bus accidents in California were attributed to driver fatigue. To bring these operations under control, State officials created a task force to develop a State roadside inspection program in 1981. Brakes, tires, and defective steering systems as well as driver violations are common safety problems.[54]

Commercial Vehicle Safety Alliance

To promote interstate cooperation and a more efficient motor carrier safety inspection system, agencies in 46 States and 10 Canadian provinces have agreed to adopt uniform truck inspection standards as members of the Commercial Vehicle Safety Alliance (CVSA). Formed in 1980 under the leadership of California, Idaho, Oregon, and Washington, CVSA is independent of the Federal Government, although FHWA now coordinates closely with CVSA in a major outreach effort.

CVSA is organized into four regions, each with its own elected officials who concentrate on local or regional issues. Special CVSA national committees address issues related to data collection, drivers, vehicles, research, training, and hazardous materials. Industry associations and companies are encouraged to express their concerns and to become nonvoting associate members of CVSA.

CVSA States and provinces use common inspection standards and out-of-service criteria developed in cooperation with DOT. In addition, members affix and recognize common inspection decals on trucks; the decals are valid for 3 months and indicate the quarter in which the last inspection took place. Vehicles that pass a CVSA North American Standard Inspection can usually pass through member States and provinces without further inspection, unless a readily visible defect is detected or a decal expires.

One reason CVSA was formed was to reduce delays caused by duplicative inspections of interstate vehicles; however, many factors undermine the effectiveness of the strategy to provide uniformity. Because only certain State agencies belong to the CVSA, other State agencies with power of enforce-

[53] Sebastian Messina, chief of Motor Carrier Inspection and Investigation, Office of Regulatory Affairs, New Jersey Department of Transportation, personal communication, Apr. 27, 1988.

[54] Charles S. Allen, commander, Department of the California Highway Patrol, Motor Carrier Section, personal communication, May 2, 1988.

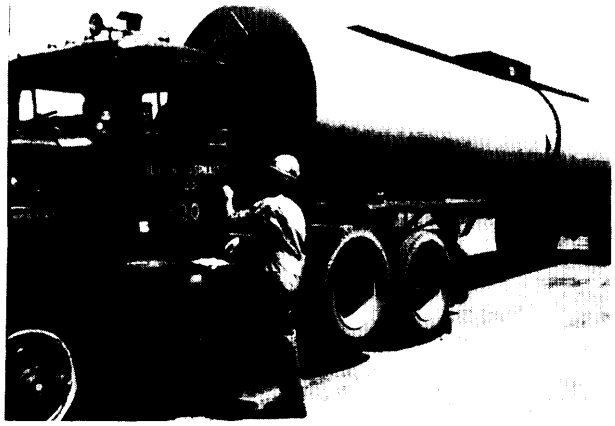


Photo credit' New York State Department of Transportation

Photo credit: New York State Department of Transportation

After examining a tanker for safety violations, an inspector applies a Commercial Vehicle Safety Alliance decal, good for three months. The decal is proof to inspectors in "other CVSA member States that the truck has passed inspection and need not be rechecked.

ment or inspection sometimes refuse to recognize or issue the decals. In addition, inspectors will not give decals to trucks that pass inspections other than the North American Standard. Standards for issuing the inspection stickers have been inconsistent among the member agencies, though CVSA officials are working to resolve this through better communication.

Drivers complain that their trucks are subjected to additional inspections, sometimes as frequently as three times a month, causing costly and unnecessary delays. Independent drivers and owner-operators are particularly affected because their vehicles are not readily identifiable as belonging to a large fleet whose maintenance practices are known and respected by inspectors.[55] CVSA acknowledges startup problems and claims that the majority of complaints have been from drivers in the States that have recently joined CVSA and where personnel need experience with inspection procedures.[55]

Personnel and Training

State inspection forces vary in size and capability. A majority of States train some members of the highway patrol to be certified MCSAP inspectors. Civilians in a number of States are also empowered to enforce safety regulations and are trained to work with the officers. More ambitious States attempt to instruct most or all members of the highway patrol to recognize fundamental safety violations, usually brakes out of adjustment and hours-of-service violations. For the most part, however, instruction in truck safety is not provided at State police academies, and a limited number of enforcement personnel are responsible for conducting roadside inspections.

Unless a State has developed its own program, training is provided either by Federal officials or by instructors from the Training Safety Institute (TSI) in Oklahoma City. FHWA has divided MCSAP States into nine regions. The Federal employees in each region train inspectors in their States in cooperation with trainers from TSI. Usually two instructors train an average of 30 participants in 4 to 5 days. All State participants are taught to inspect vehicles and cargo and to check driver qualifications.[57] States that have developed notable training programs are highlighted in box 3-B.

Instruction provided for FHWA staff is more intensive than the courses offered to State participants, although by October 1988, training courses for State officials will cover the same material taught to Federal officials. FHWA trainees attend 5-week classes at TSI and learn to conduct safety reviews instead of inspections. Between June 1986 and June 1987, the Federal staff of safety specialists doubled when 150 Federal officials graduated from TSI.

[55] Rita Bontz, president, Independent Truck Drivers Association, personal communication, Apr. 24, 1988.

[56] Russ Fiste, Commercial Vehicle Safety Alliance, personal communication, May 25, 1988.

[57] Robert L. Bleakley, Federal Highway Administration, personal communication, Nov. 11, 1987.

Since Federal support for training began in 1984, well over 4,000 State inspectors have been trained. 58 Few regions, however, have the resources to meet all training needs. For example, recently trained Federal investigators need additional hazardous materials training, and Federal officials who usually train State inspectors have redirected their efforts toward these employees.

Training officers are also unable to meet the demand for refresher courses in some regions. Although many inspectors receive on-the-job recur-

[58]William Nalley, Federal Highway Administration, personal communication, Nov. 3, 1987.

Box 3-B.—A Sample of State Training Programs

Michigan.—Michigan's training program is designed to instruct State officials, other than certified inspectors, in how to conduct a motor vehicle inspection. The 24-hour course emphasizes commercial vehicle safety standards, with instruction in hours-of-service and log record violations, driver qualifications, size and weight violations, driver licensing, and registration violations. Michigan officials are also creating a training videotape to be used by other States interested in duplicating the program.[1]

Oregon.—The Public Utility Commission of Oregon sponsors a 2-week training course about five times a year, with 18 students enrolled in each. To enroll, participants must have 1 week of driver and vehicle inspection experience with a qualified commercial vehicle inspector. The course curriculum includes in-depth training in safety regulations such as brake systems, vehicle out-of-service criteria, and hazardous materials regulations. In addition to in-State participants, trainees include officials from other States and from the Federal Highway Administration, as well as members of the trucking industry.[2]

Arizona.—Arizona has two training programs: a 6-week session for its motor carrier investigators and a 40-hour training program for State highway patrol officers. Each of the 30 motor carrier investigators authorized to enforce Federal safety regulations participates in an intensive 6-week training class taught by field training officers. Once trained, investigators conduct audits and work at ports of entry instead of enforcing regulations on the State highways. Enforcement on the highways is the responsibility of the State patrol.

Highway patrol officers attend a 40-hour training program that emphasizes the driver. All officers are taught how to understand and enforce the hours-of-service regulations. Approximately half of Arizona's 460 officers have attended this course. Training is provided by 10 safety specialists, whose primary responsibility is roadside inspections and who respond to requests for other training courses in the State. Training was requested for city enforcement officials in Tucson and Phoenix last year, and both cities subsequently developed motorcycle squads dedicated to enforcing truck safety.

Arizona's motor carrier accident rate decreased 12 percent between 1985 and 1986, and officials attribute this decline to their substantial training and enforcement efforts. Although Arizona's safety record continues to improve, statistics indicate that after the initial impact of the State's programs, the accident rate may decline at a slower pace—the rate of decrease fell only 1 percent from 1986 to 1987.[3]

California.—The Highway Patrol Academy teaches a 2-week Commercial Enforcement Training Course with 48 hours of classroom instruction and 32 hours of field training. The classroom training includes lessons in size and weight enforcement, brake equipment laws, hazardous materials transportation regulations, commercial vehicle registration, inspection procedures, loading regulations, logbook requirements, and lighting laws. During the field training, participants are guided through the inspection process.

The course is taught at the academy four times a year, and in other areas of the State twice a year. A maximum of 24 students can participate (2 trainees per inspector). The academy is not federally funded. All graduates enforce motor carrier regulations on a full-time basis, so the number of enforcement officers in California continues to increase. Approximately 139 civilian inspectors and 296 uniformed personnel currently enforce the safety regulations.[4]

[1]Daniel Folstad, Michigan Department of State Police, personal communication, Aug. 25, 1987.
[2]Paul R. Henry, deputy administrator, Transportation Safety Division, Public Utility Commission of Oregon, personal communication, Sept. 30, 1987.
[3]R.L. Hoffman, commander, Special Services Division, Arizona Department of Public Safety, personal communication, Oct. 13, 1987 and Aug. 16, 1988.
[4]Larry Blood, California Highway Patrol, personal communication, Nov. 6, 1987.

rent training, changing procedures and regulations necessitate refresher courses. Regional officials stressed that, in particular, they lack the capability to provide additional hazardous materials courses.

Recognizing that uniform training is an essential basis for consistent commercial vehicle inspections, CVSA, FHWA, and TSI have combined efforts to standardize training courses. In June 1986, a DOT/State training committee was formed to recommend ways to standardize hazardous materials and vehicle inspection training. Members agreed that both course content and instructors should be certified, training should be accomplished at a local level, refresher training should be conducted annually, and a train-the-trainer program should be created. Many of these recommendations, such as the train-the-trainer program, are being implemented, although budget and time constraints hamper efforts. In some States, instructors have been told to condense their training and teach the same course in only a few hours. Nevertheless, TSI trainers expect that the number of certified commercial vehicle inspectors should increase significantly as a result of the program.[59]

Recognizing the need for more trained State personnel, CVSA, FHWA, and TSI are cooperating to create a new training package with several levels of training. FHWA contracted with Michigan to complete the package by May 1, 1988; CVSA supervised the project; and members of TSI are incorporating hazardous materials training and will keep material up-to-date. The package includes four courses:

- Full Inspection .—This duplicates the North American Standard Inspection course currently taught,
- Walk Around Vehicle Inspection.—This course is geared towards highway patrol officers who have many additional responsibilites. Michigan is currently reviewing the results of a pilot study conducted last spring, when 125 of their patrol officers were given a day and half of training in motor carrier safety. Although lack of time limited their ability to enforce safety regulations, most participants felt they benefited from the course.
- Driver Inspection.—This driver-only course was developed partly in response to the commercial driver's license law and partly because so much evidence indicates that the majority of motor carrier accidents are the fault of the driver.
- Special Road Inspection.—This is a course for special inspections that focus on either a type of truck (i.e., cargo tanks) or one aspect of trucks (i.e., brakes).[60]

The course package has been submitted to DOT for review and assimilation into MCSAP procedures. Current FHWA plans call for States to dedicate 75 percent of enforcement time to the full inspection course, and 25 percent to the others,

The new training package and the train-the-trainer program are also intended to increase each State's role in roadside inspections. State officials are now encouraged to attend the MCSAP management course at TSI, a course previously limited to Federal employees. Although regional Federal instructors will continue to train State inspectors, the train-the-trainer courses and the MCSAP management course allow for more State control over roadside inspections; Federal officials will focus on audits and safety reviews.

Enforcement Issues

State officials agree that placing a vehicle out of service is the enforcement measure most likely to deter drivers and carriers from violating safety regulations. Most officials have also been responsive to the efforts of CVSA and FHWA to create uniform inspection standards and have adopted the Federal out-of-service criteria.[61] However, State officials acknowledge that personnel limits hamper effective enforcement, and admit that modified inspection procedures and inspection stickers may be necessary to permit more motor carrier inspections and ease the burden on industry posed by multiple inspections.

[59] Frank Tupper, Training Safety Institute, personal communication, Nov. 2, 1987.

[60] Commercial Vehicle Safety Alliance, "Bylaws and Memorandum of Understanding," unpublished manuscript, October 1986. These inspection levels were adopted at the Commercial Vehicle Safety Alliance annual meeting at Bar Harbor, ME, Oct. 24, 1986.

[61] Taken from an Informal telephone survey of 45 States conducted by the Office of Technology Assessment in October 1987. Unless otherwise noted, information given in this section is derived from this survey.

Carriers claim, and OTA research confirms that uniform inspections are still the exception rather than the rule—enforcement measures vary among and within States, creating many uncertainties for carriers. For example, enforcement strategies for vehicles that violate safety regulations but do not meet the out-of-service criteria vary. In some States, a fine is issued for each violation. In others, the driver is given an inspection form that must be completed by the carrier, usually within 15 to 30 days, and returned to the enforcement agency when repairs have been made. The most stringent States do both. A driver stopped for any inspection, however, loses precious time needed for load delivery within his deadline, regardless of whether violations are found or penalties imposed.

Classifications of safety violations also vary. In many States, the enforcement officer will cite an offender for either a criminal or civil offense, depending on the severity of the violation. Fines and penalties for similar violations often differ, not only from State-to-State, but by jurisdictions, as well. To increase uniformity of penalties, several States now classify motor carrier safety violations as civil penalties with set fines consistent within a State unless contested by the offender. However, enforcement officials in a number of States claim that offenders who protest tickets are too often rewarded for their efforts. They argue that judges and magistrates are not only inconsistent in their deliberations, but often uninformed about the gravity of safety violations and lenient with violators. For example, in Maryland, drivers with out-of-service violations theoretically can receive $1,000 fines, but fines are often significantly reduced at the judicial level. Moreover, Maryland law prohibits State patrol officers from fining trucks more than $30 for routine violations, and some drivers and carriers consider this just a cost of doing business in Maryland. Other States also find that low fines are not effective deterrents to safety violations.

In particular, officials report, judges do not appear to understand the safety implications of weight limit violations, viewing them as minor offenses. In Maine, for example, some judges consistently dismiss charges for overweight vehicles, despite a State statute that sets penalties for these offenses. In some counties in Kansas, officers have stopped citing drivers for excessive cargo because judges invariably refuse to fine them.

State officials complain that lack of change at the legislative level hinders improvements in the judicial system. In Ohio, fines have not increased since 1923.[62] Safety officials also complain that legislators place little priority on safety and are reluctant to limit judicial authority by establishing statutes for safety violations. Enforcement efforts are further undermined by lack of communication between judicial and enforcement officials, between members of the trucking industry and enforcement agencies, and between enforcement agencies in the same State. In some States where the Public Utilities Com-

[b] David Leland and staff, Public Utilities Commission of Ohio, "Ohio Transportation Regulation: Back to the Future," unpublished manuscript, 1987, p. 28.

Photo credit: Commercial Vehicle Safety Alliance

Penalties for safety violations may vary widely by jurisdiction or, in some States, by officer discretion.

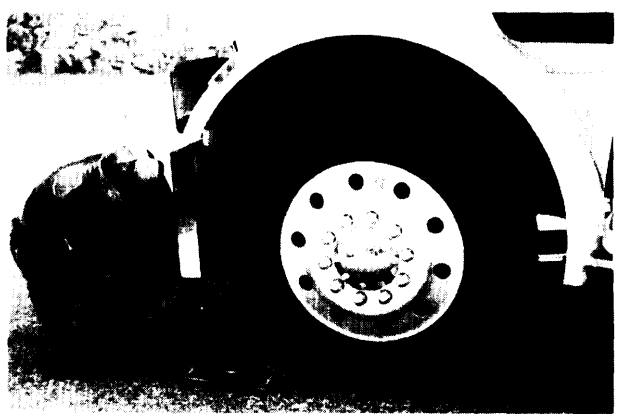


Photo credit: Rhode Is/and State Police

Temporary scales are used to check compliance with truck weight limits at some roadside inspection sites.

mission has been designated the lead agency, its employees do not work closely with officers from the highway patrol and are unfamiliar with the enforcement efforts of the State police.

A number of State enforcement agencies have begun educating legal officials themselves. In West Virginia, for example, a State supervisor meets with local legal officials to explain which violations should be considered most serious before inspections are conducted at a new site. The Department of Safety in Missouri sponsors annual seminars on truck safety for judges in the St. Louis area, and is considering expanding this program to other regions of the State. In Idaho and Ohio, a legal attorney has been hired to assist State prosecutors and judges in cases of violations of motor carrier safety regulations. At a recent conference in Tucson, Arizona, truck safety specialists were given their first opportunity to address State judges. In Rhode Island, the arresting officer must be present at the hearing to explain the circumstances and potential hazards of a safety violation to the judicial authority.

Some officials feel that education should be aimed at the drivers, especially in States where Federal safety regulations have been most recently adopted. Delaware sponsored two seminars for members of the industry this year, hoping not only to educate truckers, but also to improve the relationship between enforcement officers and drivers. In New Hampshire, the Department of Safety organizes informal coffee breaks at truck stops to try to increase driver understanding of the Federal regulations and what to expect at roadside inspections. California has a well-established public information campaign that includes presentations to trucking companies as well as efforts to establish a better rapport between truck drivers and members of the California Highway Patrol.

Difficulty identifying carriers and drivers with multiple violations is yet another impediment to effective enforcement. Although most States keep records of driver and vehicle violations, few have the capability to identify repeat offenders. In smaller States, name recognition is used to pinpoint carriers with safety records. Rhode Island has begun fining carriers instead of drivers for economic violations to target carriers cited for multiple violations,[63] and can now identify carriers that repeatedly incur or neglect to pay fines. This policy developed when officials decided that responsibility for vehicle maintenance rested with the carrier instead of the driver. One goal is to encourage drivers to alert enforcement officials voluntarily when forced to drive trucks that violate equipment regulations.

Arizona adopted civil penalties in 1986 to target repeat offenders. Multiple or hazardous materials violations are automatically subject to higher fines. If a motor carrier is guilty of repeated violations after being informed of noncompliance, the carrier's operating license is suspended.

California's new computerized Management Information System of Terminal Evaluation Records contains carrier fleet information, hazardous materials spills, license history, citation information, accident involvement, and terminal ratings. This system identifies carriers and drivers with particularly poor safety records, and after its first year of operation, officials discovered that some carriers had received between 600 and 800 citations.[64] When SAFETYNET becomes operational, this type of information will be accessible nationwide,

In Maryland a special enforcement team, the Bus and Truck Patrol, has been created to increase bus and truck compliance with safety regulations.[65] This seven-person team is dispatched to one area for 1 to 6 months. Plainclothes officers, who are certified MCSAP inspectors using unmarked cars, try to reduce the number of moving violations, such as speeding and tailgating; they can place trucks out of service, if necessary,

[63] William A. Maloney, associate administrator of Motor Carriers, Rhode Island Division of Public Utilities and Carriers, personal communication, Aug. 4, 1987.

[64] Phyllis Myers, California Highway Patrol, personal communication, Nov. 11, 1987.

[65] Millard M. Bell, supervisor, Special Traffic Enforcement, Maryland State Police, personal communication, Oct. 8, 1987.

CONCLUSIONS AND POLICY OPTIONS

A comprehensive national truck safety program requires continuing emphasis on programs developed over the last 5 years and a more systematic Federal-State approach. **OTA concludes that the top priorities are: 1) improving State enforcement capabilities, 2) increasing State regulatory uniformity, and 3) better coordination and cooperation among agencies within DOT at the Federal level.** Congressional mandates and DOT actions since 1980, such as requirements for vehicle inspections and national standards for driver licensing, can make major contributions to highway safety if uniformly applied.

MCSAP has firmly established the role of States as an essential adjunct to Federal highway safety efforts. **OTA concludes that continued Federal financial support at current levels for State inspection and enforcement activities through MCSAP is crucial. Additional trained personnel are needed across the country.** Monitoring industry, through State terminal audits and ensuring the safety fitness of all motor carriers, is an important component of a systematic safety program. Because State audit programs are such valuable additions to Federal enforcement efforts, FHWA could be required to develop guidelines and handbooks for States to encourage more States to train inspectors and begin auditing carriers. Efforts undertaken by FHWA to improve regulatory compliance materials for industry would be helpful for the States as well.

OTA concludes that industry complaints about inconsistent State inspection and enforcement procedures and penalties are symptoms of the need for stronger Federal-State cooperation for national uniformity. CVSA's goal of establishing uniform inspection and out-of-service criteria provides an excellent model for States to use in working together toward consistent nationwide programs. However, any efforts will be ineffective unless States make the commitment to have their executive agencies cooperate toward this goal. To help resolve conflicts in State agency agendas, strong DOT support for consistent enforcement programs will be needed, once FHWA's review and evaluation of State laws and regulations has been completed. Cooperative efforts with State officials and bar associations are key. State executive agencies, legislative bodies, and law enforcement organizations may accept the need for uniformity more readily if they are involved and informed at an early stage. **Congress may wish to consider requiring DOT to provide technical assistance and technology transfer for additional educational materials for State officials, law enforcement personnel, and judges.** An enforcement handbook providing general guidance on the safety regulations and safety factors to consider when setting penalty amounts for various types of violations could be helpful.

In the Motor Carrier Act of 1984, Congress made clear that decisions on access to State roads for large trucks are the province of the States. However, States have found developing routes and communicating access decisions clearly to industry to be complex and difficult tasks, requiring hard work, patience, good will, and good humor from all parties. Where this process has failed, carriers travel on the routes they deem necessary to reach their destinations, often traveling small rural or urban roads in violation of State law and endangering themselves and other motorists.

OTA concludes that varying State access, inspection, and enforcement policies pose significant problems for industry. A national truck safety program should apply equivalent safety requirements to all heavy trucks. This implies that no exemptions to the commercial driver's license are warranted. Congress may wish to encourage States to develop more uniform safety requirements. Congress may also wish to consider eliminating all exemptions from Federal truck safety regulations and encouraging DOT to play a more active and assertive role in facilitating State/industry dialog and resolving difficult access issues. Technology transfer of innovative approaches and working actively with appropriate State and industry organizations are two possible approaches. For further discussion of the technical aspects of the access issue, see chapter 5.

Finally OTA finds that the division of responsibility for different aspects of roadway, vehicle, and driver issues among multiple agencies hampers safety problem solving at DOT. The extent

to which DOT will be able to respond effectively to congressional safety directives depends on better cooperation and more systematic coordination among Federal agencies. For example, better accident data analysis at NHTSA could provide information to the Office of Motor Carriers for driver training guidelines or hours-of-service rules. Information about vehicle characteristics and design standards could be exchanged by NHTSA and FHWA to guide program development.

Congress may wish to require DOT to develop a plan to integrate the technical expertise now divided between NHTSA and the motor carrier and highway design sections of FHWA to address issues such as roadway and vehicle compatibility guidelines, upgraded safety equipment standards, national guidelines for training for maintenance personnel and drivers, and accident reduction and mitigation strategies. The approach that DOT has taken to developing the commercial driver's license program is commendable; it could serve as a model for efforts to deal with equipment requirements and highway design issues.

OTA further concludes that DOT agencies need to cooperate and coordinate in collecting and analyzing data, conducting research programs, and developing regulatory proposals. Establishing special work groups to address issues of common concern, jointly funding research activities, and sharing staff expertise are examples of strategies that could bring benefits at little or no extra cost.

Additional DOT technical assistance for State agencies in developing more uniform data management systems and analytical capabilities, especially in tracking preventable accidents and violation statistics, would be an effective use of limited funding. States could use this information to target carriers for audits and inspections. As FHWA and ICC implement new procedures for assessing the safety fitness of commercial vehicle operators, explicit procedures for monitoring ongoing safety performance will be needed. State personnel and FHWA field inspectors alike could benefit from consistent guidelines for deciding whether to initiate a compliance education program or an enforcement action. Improved educational materials on Federal safety requirements that could be distributed to States and motor carriers on model programs for amending laws, implementing Federal standards, and developing an information clearinghouse would also be extremely useful.

APPENDIX 3-A: CHRONOLOGY OF FEDERAL LEGISLATION RELATING TO THE MOTOR CARRIER INDUSTRY (1935-87)

1935—Motor Carrier Act. Formally regulated the motor carrier industry by authorizing the Interstate Commerce Commission (ICC) to regulate common, contract, and private carriers engaged in interstate or foreign commerce. Granted ICC authority to establish requirements for employee qualifications and hours of service, and safety standards for operation and equipment.

1944—Federal-Aid Highway Act. [1] Authorized the designation of a 40,000-mile system of highways, now known as the Interstate Highway System.

1948—Reed Bulwinkle Act. Granted Rate Bureaus immunity from antitrust laws, promoting joint service arrangements between competing carriers. Information about rates and classifications, published by Rate Bureaus, were also used by carriers and shippers to negotiate individual rates.

1956—Highway Trust Fund. Established a fund comprised of proceeds from Federal motor vehicle fuel taxes and various excise taxes to finance construction of all Federal-aid highways.

1966–Highway Safety Act. Directed the Secretary of Commerce to issue standards for driver education and licensing; vehicle registration, operations, and inspections; accident investigations and reporting; and traffic control, highway design, and maintenance. Required States to establish highway safety programs in accordance with these Federal standards and match Federal funds received. Directed the Department of Commerce to expand highway safety research and development activities.

1966–National Traffic and Motor Vehicle Safety Act. Mandated the development of minimum manufacturing standards for motor vehicles. Required a new agency, the National Traffic Safety Agency, to issue safety standards for passenger automobiles, trucks, buses, and motorcycles; to conduct research, testing, development, and training necessary to reduce traffic accidents and related deaths and injuries; and to expand the National Driver Register to identify individuals whose motor vehicle operating licenses had been denied, terminated, or temporarily withdrawn. Prohibited ICC from adopting or continuing safety standards for motor vehicles under its jurisdiction that differed from the standards established under this act.

[1] Federal-Aid Highway Acts 1954, 1956, 1958, 1960, 1962, 1964, 1966, 1974, 1981, and 1982 are not detailed in this appendix; the acts primarily authorized funds for highway construction.

1966—Department of Transportation Act. Transferred safety responsibilities of ICC and the Department of Commerce to the Department of Transportation (DOT). Internal agencies created included the Federal Highway Administration (FHWA), the National Highway Safety Bureau, and the National Traffic Safety Bureau.

1968–Federal-Aid Highway Act. Required DOT to establish national bridge inspection standards and a program designed to train employees to carry out bridge inspections.

1970—Federal-Aid Highway Act. Created an internal DOT agency, the National Highway Traffic Safety Administration (NHTSA), to carry out highway safety programs; research and development relating to highway safety, traffic construction and maintenance, traffic control devices, identification and surveillance of accident locations, and highway-related aspects of pedestrian safety. Authorized the creation of a special bridge replacement program.

1973–Federal-Aid Highway Act. Authorized funding for highway safety construction programs to reduce roadway hazards such as rail-highway crossings and improve highway engineering standards. Authorized the establishment of a pavement-marking demonstration project to provide greater vehicle and pedestrian safety. Directed DOT to carry out research on drug use and driver behavior and to investigate the use of mass media for informing and educating the public of ways and means for reducing the number and severity of highway accidents.

1975–Hazardous Materials Transportation Act. Authorized DOT to set regulations applicable to all modes of transportation.

1976—Federal-Aid Highway Act. Authorized funding for bridge reconstruction and development, and for eliminating hazards of railway crossings. Authorized DOT to provide incentive grants to States that had significantly reduced traffic fatalities and to penalize States with weak safety programs.

1978—Surface Transportation Assistance Act. Authorized funds for highway construction. Directed DOT to inventory penalties for weight violations in each State, and required each State to report weight violation penalties annually to DOT. Authorized the establishment of a bridge replacement and rehabilitation program. Appropriated funds to NHTSA and FHWA for safety programs

and to carry out highway safety research and development.

1980–Motor Carrier Act. Directed ICC to relax standards for entry into the industry. Established that common and contract carriers needed to show only that they were fit, willing, and able. Expanded the private carrier exemption to allow intercorporate hauling between a parent company and its subsidiaries. Required owner-operators to meet the fitness test only if they haul specified processed food and other commodities and the owner is in the truck during the trip.

1982—Bus Regulatory Reform Act. Duplicated the motor carrier act of 1980 for the bus industry by relaxing standards for entry.

1982–Surface Transportation Assistance Act (STAA). Authorized and financed higher levels of Federal expenditures by raising and restructuring highway taxes. Established uniform truck weight, length, and width limitations for the Nation's highways. Established a new Federal grant program, the Motor Carrier Safety Assistance Program, to improve State capabilities to conduct inspections of vehicles and enforce motor carrier safety regulations.

1984—Motor Carrier Safety Act. Directed DOT to promulgate revised Federal regulations, establish fitness standards for commercial motor carriers, and undertake a 5-year review of State motor carrier laws to identify those that are more or less stringent than Federal requirements.

1984—Tandem Truck Safety Act. Allowed State Governors to seek exemptions for Interstate highway segments that could not safely accommodate trucks; modified reasonable access provision of the STAA to include 28-foot by 102-inch trailer units.

1986–Commercial Motor Carrier Safety Act. Established a new driver's licensing program that prohibits operators of commercial motor vehicles from holding more than one State license and requires drivers to pass a written examination and a road test in a vehicle that is representative of the type that will be operated.

1987—Surface Transportation and Uniform Relocation Assistance Act. Authorized funds for the construction of highways and for mass transportation programs. Directed DOT to establish a national bridge inspection program. Appropriated funds to NHTSA for purposes of research and development in highway safety.

APPENDIX 3-B: THE HISTORICAL FRAMEWORK

Although Federal regulation of motor carriers did not begin until 1935, many States enacted legislation in the 1920s governing various aspects of truck and bus transportation, including economic operations, highway protection, and safety.[1] Led by Texas, a number of States established regulatory programs for both common and contract carriers. Requirements for contract carriers, generally less extensive than those for common carriers, were imposed to protect the operations of common carriers.[2] Interstate carriers were not generally subject to State economic regulations; however, several Supreme Court decisions upheld the application of State safety and highway requirements to interstate carriers.[3]

The absence of Federal control over interstate carriers encouraged intense competition within the motor carrier industry. Finally, with the support of the railroads and the large, established trucking companies, Federal legislation governing commercial motor carriers was passed in 1935.[4] The Motor Carrier Act of 1935 authorized the Interstate Commerce Commission (ICC) to regulate motor carriers engaged in interstate or foreign commerce. The authority extended to intrastate operators handling shipments moving in interstate and foreign commerce.[5] Three major categories of motor carriers were addressed by the act:

- Common carriers–for-hire carriers holding themselves out to serve the public;
- Contract carriers–for-hire carriers operating under special contracts, usually for shipments over a specified period of time; and
- Private carriers—carriers transporting goods for their own use or uses incidental to their businesses.

[1] By 1932, all States except Delaware had attempted to regulate the transportation of passengers, and 29 States had laws controlling the carriage of property by motor vehicles. Philip D. Locklin, *Economics of Transportation* (Homewood, IL: Richard D. Irwin, Inc., 1972), pp. 673-674.

[2] The Texas law required contract carriers to obtain permits, while common carriers were issued certificates of public convenience and necessity. In addition, minimum rates for contract carriers, which could not be lower than railroad rates, were prescribed. It should also be noted that earlier attempts by States to regulate contract carriers were struck down by the U.S. Supreme Court, because they were not found to be businesses providing services with a public interest. Ibid., p. 675.

[3] State control over Interstate carriers was invalidated by a 1925 Supreme Court decision that ruled that States could not forbid, limit, or prohibit competition in interstate commerce. See Buck v. Kuykendall, 267 U.S. 307 (1925).

[4] Public Law No. 255, 49 Stat. 543 (1935).

[5] While the original act permitted such Intrastate operators to transport persons or property within the State under State authorization, a 1962 amendment to the act eliminated the ability of Intrastate carriers to engage in Interstate commerce. Locklin, op. cit., footnote 1, p. 676.

In addition, requirements for transportation brokers were included.[6]

The Motor Carrier Act of 1935 also authorized ICC to establish requirements for driver qualifications and hours of service, and safety standards for operations and equipment. The first set of regulations, issued by ICC in 1940, applied to all common, contract, and private carriers.

The Federal-Aid Highway Act of 1944 authorized the Interstate Highway System–eventually to total over 42,000 miles–to connect metropolitan areas, serve the national defense, and link U.S. highways with major routes in Canada and Mexico. In 1956, Congress established the Highway Trust Fund, composed of proceeds from Federal motor vehicle fuel taxes and various other excise taxes, to finance construction of all Federal-aid highways, including the Interstate Highway System. Highway funds could be withheld from States that allowed trucks on the Interstate system with more than 18,000 pounds on a single axle, 32,000 pounds on a tandem axle, and 73,280 pounds gross vehicle weight (GVW). (In 1975, the maximum GVW limit was raised to 80,000 pounds.) However, under a grandfather clause, States could retain limits allowing wider or heavier vehicles that were in effect as of July 1, 1956. Moreover, each State was permitted to set different size and weight standards for other highways within its jurisdiction,

As the Nation's dependence on motor vehicles for personal and commercial uses grew, so did the number of serious accidents and fatalities. In 1965 alone, 49,000 persons were killed in highway accidents, 1.5 million suffered disabling injuries, and the economic costs associated with these accidents came to an estimated $8.5 billion.[7] To address these problems, Congress took a series of steps to improve highway safety.

The Highway Safety Act of 1966 directed the Secretary of Commerce to issue standards for driver education and licensing; vehicle registration, operations, and inspections; accident investigations and reporting; traffic control; and highway design and maintenance." States were required to establish highway safety programs in accordance with these Federal standards and to match Federal funds received. States that did not implement safety programs were subject to a 10-percent reduction in their Federal highway funds. By 1970, all 50 States, the District of Columbia, and 4 territories had established highway safety programs.[8]

Concerned about the automobile industry's emphasis on style and performance instead of safety and collision protection, Congress also passed the National Traffic and Motor Vehicle Safety Act in 1966,[9] Under this act, a new agency within the Department of Commerce—the National Traffic Safety Agency–was empowered to issue safety standards for passenger automobiles, trucks, buses, and motorcycles; conduct research, testing, development, and training necessary to reduce traffic accidents and related deaths and injuries; and expand the National Driver Register to identify individuals whose motor vehicle operating licenses had been denied, terminated, or temporarily withdrawn. " Although State motor vehicle equipment standards had to be identical to the Federal regulations, stricter standards could be imposed for those vehicles procured by States or the Federal Government.

Shortly after safety statutes were enacted in 1966, Congress authorized the establishment of a Federal transportation agency—the Department of Transportation (DOT). " While the ICC retained economic regulatory authority over motor carriers, its safety responsibilities and those assigned to the Department of Commerce were transferred to DOT. Within DOT, the Federal Highway Administration was created to administer the regulatory programs related to employee qualifications and hours of service as well as to highway transportation operations and equipment safety. Separate agencies—the National Highway Safety Bureau and the National Traffic Safety Board–were formed to implement the provisions of the new safety laws. In addition, the National Transportation Safety Board was established to: 1) determine and report on the cause or probable cause of transportation accidents, 2) conduct special studies on transportation safety and accident prevention, and 3) make regulatory recommendations to the Secretary of Transportation.[13]

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[6] "Brokers were required to obtain Interstate Commerce Commission licenses and bonds or other security. In addition, the Commission was authorized to specify accounting and recordkeeping requirements.

[7] "Senate Public Works Committee Report 1302 to accompany S. 3052, Highway Safety Act of 1966 (June 23, 1966).

[8] Public Law 89-564, 80 Stat. 731 (Sept. 9, 1966).

[9] Insurance Institute for Highway Safety, *Status Report, vol. 21, No. 11,* Sept. 9, 1986.

[10] Public Law 89-563, 80 Stat. 718 (Sept. 9, 1966).

"The National Driver Register, originally established in 1960 by the Department of Commerce, was a voluntary driver record exchange program. Although all States participated in the program, the program provided only summary reports of license suspensions or revocations related to drunk driving or fatal accidents. The 1966 amendments allowed States to file reports on license denials and withdraws for any reason, except for withdrawls of less than 6 months based on an accumulation of minor violations. Senate Commerce Committee Report 1301 to accompany S. 3005, National Traffic and Motor Vehicle Safety Act of 1966, June 23, 1966.

"U.S. Department of Transportation Act, Public Law 89.670, 49 U.S.C. 1651.

[13] In 1974, the National Transportation Safety Board became an Independent agency and its role was expanded.