



January 2017

# SCHOOL BUS SAFETY

## Crash Data Trends and Federal and State Requirements

# GAO Highlights

Highlights of [GAO-17-209](#), a report to congressional addressees

## Why GAO Did This Study

School buses transport over 26 million students to school and other activities every day. While school buses have a strong safety record, crashes with fatalities and injuries do occur. Since school buses transport precious cargo—our children—government and industry strive to further improve their safety. Federal and state agencies both oversee school bus safety, and locally, school buses can be operated by school districts or private contractors, working on behalf of school districts.

The Fixing America's Surface Transportation Act included a provision for GAO to review school bus safety. GAO examined (1) fatal crashes involving school buses for 2000 to 2014 and (2) federal and state school-bus-related laws and regulations, among other objectives. GAO analyzed two sets of data from the National Highway Traffic Safety Administration and the University of Michigan Transportation Research Institute on fatal school bus crashes for 2000 to 2014, the latest year for which data were available; reviewed federal laws and regulations; and systematically searched state laws and regulations on school-bus inspections, driver training, and maximum vehicle age and capacity in all 50 states. GAO also interviewed federal officials from the Department of Transportation (DOT), school bus industry associations and manufacturers, and other stakeholders.

DOT reviewed a draft of this report and provided technical comments that GAO incorporated as appropriate.

View [GAO-17-209](#). For more information, contact Susan Fleming at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov).

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## SCHOOL BUS SAFETY

### Crash Data Trends and Federal and State Requirements

## What GAO Found

Based on GAO's analysis of data for 2000 to 2014, 115 fatal crashes involved a school bus on average each year—which is 0.3 percent of the 34,835 total fatal motor-vehicle crashes on average each year. The school-bus driver and school-bus vehicle (e.g., a defect) were cited as contributing factors in 27 percent and less than 1 percent of fatal school-bus crashes, respectively. Seventy-two percent of fatal crashes occurred during home-to-school and school-to-home travel times. Limited national data on school bus crashes exist beyond data on fatal school-bus crashes, but some states have richer data—for example, on the type of bus or whether the operator was a school district or private contractor.

Federal laws and regulations set requirements for certain aspects of school bus safety, and state laws and regulations in many cases go beyond the federal requirements. Federal regulations for school-bus vehicle standards and driver licensing apply to both school districts and contractors. DOT has reported that new school buses must meet more Federal Motor Vehicle Safety Standards than any other type of new motor vehicle. Federal safety regulations for commercial motor-vehicle operations apply in certain cases, such as for contractors hired by schools to provide transportation for extracurricular activities across state lines. Based on a systematic search of state laws and regulations, GAO found that all 50 states require school bus inspections while most states—GAO found 44—require refresher training for school bus drivers. However, GAO found that less than a quarter of states set specific requirements for the maximum age and seating capacity of school buses. Overall, according to stakeholders GAO interviewed, states' requirements vary by state for school bus inspections, driver training, and vehicles but tend not to differ based on the type of operator.

#### Examples of Federal and State Requirements for School Bus Safety

The infographic features a central illustration of a yellow school bus with a worker inspecting it. Three callout boxes provide details:

- Inspection:** DOT icon. 49 C.F.R. § 396.17(a) requires periodic inspections. This applies to some school bus operations; for example, a contractor providing interstate transportation for an extracurricular school activity. States may set school bus inspection requirements. For example, a state may require an annual inspection by state police or biannual inspections by inspection stations. USA icon.
- Vehicle standards:** DOT icon. Federal Motor Vehicle Safety Standard (FMVSS) No. 222 sets occupant protection requirements for school bus seating and restraining barriers.
- Drivers:** USA icon. States may set school bus driver training requirements, such as entry-level training for new drivers and periodic refresher training.

Source: GAO analysis of Department of Transportation (DOT) and state agency information. | GAO-17-209

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## Abbreviations

BIFA	Buses Involved in Fatal Accidents
FARS	Fatality Analysis Reporting System
FAST Act	Fixing America's Surface Transportation Act
FMCSA	Federal Motor Carrier Safety Administration
FMVSS	Federal Motor Vehicle Safety Standards
GES	General Estimates System
NASDPTS	National Association of State Directors of Pupil Transportation Services
NCST	National Congress on School Transportation
NHTSA	National Highway Traffic Safety Administration
UMTRI	University of Michigan Transportation Research Institute

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January 12, 2017

The Honorable John Thune  
Chairman  
The Honorable Bill Nelson  
Ranking Member  
Committee on Commerce, Science, and Transportation  
United States Senate

The Honorable Bill Shuster  
Chairman  
The Honorable Peter DeFazio  
Ranking Member  
Committee on Transportation and Infrastructure  
House of Representatives

The Honorable Edward J. Markey  
United States Senate

Every day, school buses across the country transport over 26-million students to school and other activities. The National Highway Traffic Safety Administration (NHTSA) has reported that school buses are the safest means of getting children to and from school and school-related activities. School buses have a strong safety record, but school bus crashes with fatalities and injuries still occur and are often high-profile, since they involve precious cargo—the nation’s schoolchildren. Thus, government agencies, student transportation groups, and others strive to further improve the safety of school buses. Federal, state, and local government agencies all play a role overseeing the safety of school bus transportation. For example, at the federal level, NHTSA sets vehicle standards for brakes and emergency exits, and the Federal Motor Carrier Safety Administration (FMCSA) establishes rules, including those for commercial driver licensing and drug and alcohol testing of commercial motor vehicle drivers. Also, states set additional requirements for school bus transportation, including requirements to periodically inspect school buses to help ensure their safe operation.

The Fixing America’s Surface Transportation (FAST) Act included a provision for us to review school bus safety, including examining any differences in the safety performance of different types of school bus

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operators—that is, public school districts and private contractors—and what safety requirements apply to them.<sup>1</sup> We examined:

- data federal and state agencies collect on school bus crashes and the number and characteristics of fatal school-bus crashes that have occurred since 2000;
- federal and state laws and regulations pertaining to school bus inspections, vehicles, and drivers, as well as state data on inspections' outcomes; and
- sources for leading practices for safe school-bus transportation, as identified by stakeholders and literature, as well as any areas where further federal guidance could be useful.

As part of this work, we also examined whether there were differences for school-district- and contractor-operated school buses in any of the above areas. Overall, we focused our review on the transportation of public school students from kindergarten through grade 12 (K-12) traveling to and from home and school and for extracurricular activities, and not transportation of private-school students.

To examine federal and state data on school bus crashes, we reviewed the Department of Transportation's documents describing NHTSA's and FMCSA's crash data. We also surveyed state pupil transportation directors in the 50 states to determine whether and how states collect data on the type of operators (i.e., school districts or contractors) that are involved in school bus crashes; type of operator is one school-bus-specific variable that aligned with the FAST Act provision and scope of our review.<sup>2</sup> We received completed surveys from 47 of 50 respondents for an overall response rate of 94 percent. In addition, we interviewed federal officials, industry associations, and other stakeholders to identify sources of crash data and the strengths and limitations of existing school bus crash data. To describe the number and characteristics of fatal school-bus-related crashes, we analyzed data on school bus crashes for 2000 to 2010 in the Buses Involved in Fatal Accidents (BIFA) database of the University of Michigan Transportation Research Institute (UMTRI) and data for 2011 to 2014 in NHTSA's Fatality Analysis Reporting System (FARS), the most current data available. Based on interviews with

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<sup>1</sup>Fixing America's Surface Transportation Act, Pub.L. No.114-94, § 5511,129 Stat. 1312, 1556 (2015).

<sup>2</sup>We did not include the District of Columbia or territories.

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NHTSA and UMTRI officials, as well as reviewing system documentation and electronic data testing, we determined that the data were sufficiently reliable for the purpose of describing the number of fatal school-bus crashes.<sup>3</sup>

To describe requirements pertaining to school bus safety, we reviewed federal laws and regulations for inspections, driver training, and vehicle standards that apply to school buses, in particular standards for maximum vehicle age and capacity that apply to school buses.<sup>4</sup> We also conducted a systematic search of current laws and regulations in each of the 50 states in a legal database to identify requirements in state laws or regulations in the above three categories. We took steps to verify the results of our search, including comparing the requirements we found with the lists of requirements compiled by school bus associations and other organizations. Our search sought to identify the existence of state requirements in the above areas and did not seek to identify any local requirements. We also performed additional research on and conducted in-depth interviews with officials in eight selected states—California, Illinois, Nebraska, New York, Pennsylvania, Tennessee, Virginia, and Washington—to better understand their oversight of school bus safety and discuss inspection data. We selected states to include those with the highest number of students transported daily by school bus, the highest annual route miles traveled per student, variation in the number of school buses owned by states/school districts and contractors, geographic variation, and availability of school-bus crash data.

To identify sources of leading practices and any areas where further federal guidance could be useful, we conducted a literature review of pertinent studies in peer-reviewed journals, trade publications, and conferences, among others, covering the last 15 years. We also interviewed 30 stakeholders—including federal officials, officials in the 8 selected states, industry associations, school bus manufacturers, and school bus contractors, among others—to gather their views and

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<sup>3</sup>Crashes for BIFA are selected from FARS, so the data are compatible. We used BIFA data as they were the only source of national crash data we identified that included bus-specific variables like type of operator and bus. Since BIFA data build from FARS data, we used the more recent FARS data from 2011 to 2014 to extend our analysis for other variables like atmospheric and road conditions and time of day of the crash.

<sup>4</sup>NHTSA is in the process of further researching the safety impact of requiring seat belts on all school buses. We did not examine requiring seat belts on all school buses as part of our review.

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expertise on leading practices and the other areas we examined for this review. We selected stakeholders to represent a range of roles in the school bus industry and to cover federal and state levels of government. See appendix I for more information on our scope and methodology.

We conducted this performance audit from February 2016 to January 2017, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

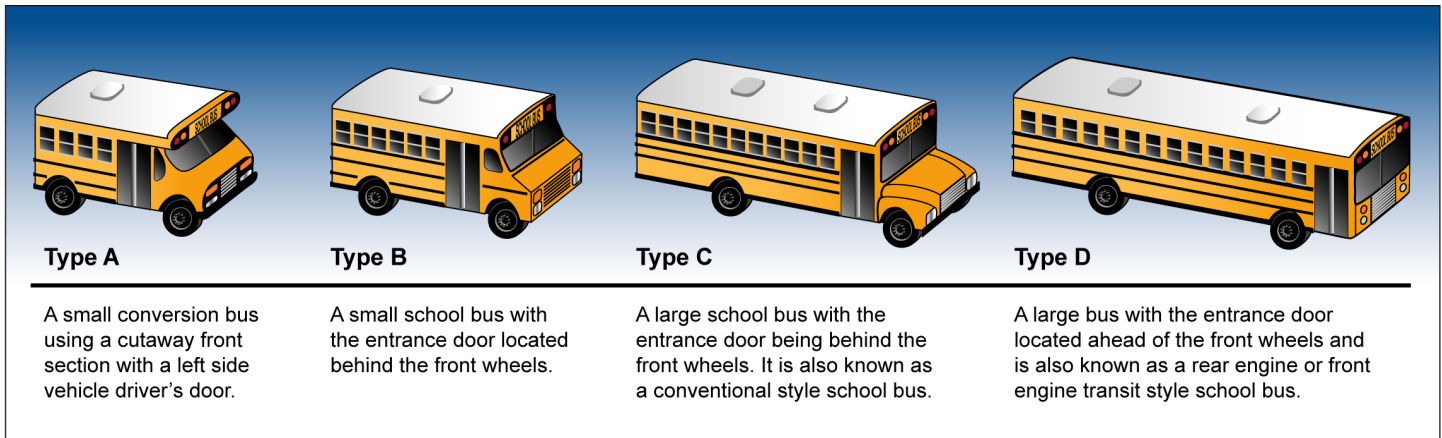
School buses are used to transport students to and from home and school and extracurricular activities like field trips and athletic events. The industry defines four basic types of school buses. Types A and B are comparatively small in size, while types C and D are comparatively large in size, as shown in figure 1. In general, the capacity of a school bus increases from type A to type D buses, and type D school buses can have a capacity up to 90 students. Type C school buses are most common, representing 70 percent of school bus sales in 2014 (23,715 of 34,021 buses) according to figures reported by *School Bus Fleet*.<sup>5</sup>

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<sup>5</sup>*School Bus Fleet* is a trade publication for school transportation professionals in the United States and Canada.



**Figure 1: Types of School Buses**



Source: GAO presentation of 2015 National School Transportation Specifications and Procedures. | GAO-17-209

School districts or private contractors can operate school buses transporting public school students. School districts have a spectrum of contracting options from which to choose school bus transportation. When a school district contracts with a private company, the contractor could manage and provide all or some aspects of student transportation, depending on the school district's needs and preferences. In full-service or "turnkey" contracts, the contractor takes on all aspects of pupil transportation services, such as hiring and training drivers and managing school bus routes. In other contracts, the district may retain ownership of school buses but have the contractor operate the buses, or the district may only have the contractor provide particular operations, such as special needs transportation.

Whether district-operated or contracted, oversight of school bus transportation occurs across all levels of government and can involve multiple agencies at each level of government.

- At the federal level, NHTSA sets vehicle safety standards for new motor vehicles and administers grant programs as part of its mission to reduce deaths, injuries, and economic losses resulting from motor vehicle crashes. NHTSA also collects and analyzes crash data for a variety of purposes, such as to determine the extent of a safety problem and steps it should take to develop countermeasures. Two data sets are used to generate national statistics: FARS is a census of fatal crashes, and the General Estimates System (GES) is a sample

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of fatal, injury, and property-damage crashes.<sup>6</sup> In addition to these activities that apply broadly to motor vehicle safety, including school buses, NHTSA provides guidance and holds workshops specific to school bus safety. For example, in December 2016 NHTSA hosted a day-long meeting on school transportation safety that included panels on school transportation risks and school bus vehicle technology, among other topics.

- Also at the federal level, FMCSA's mission is to reduce crashes and fatalities involving commercial motor vehicles. FMCSA is responsible for setting and enforcing federal safety regulations that apply to large commercial truck and bus operators. For school bus transportation, FMCSA's safety regulations for commercial motor vehicle operations do not apply to home-to-school and school-to-home transportation. These regulations apply in very limited circumstances such as for contractors hired by schools who provide transportation for extracurricular activities across state lines. The primary exception to this, however, is commercial driver's licensing; school bus drivers must have a commercial driver's license with a school bus endorsement, which requires a driver to pass additional knowledge and skills tests specific to operating a school bus, and are subject to drug and alcohol testing.<sup>7</sup> FMCSA collects data on motor vehicle crashes but focuses on crashes involving large trucks and commercial buses, given its mission and jurisdiction. This crash data is collected in the Motor Carrier Management Information System.
- At the state level, multiple agencies are often responsible for setting or enforcing state-specific requirements for school-bus driver qualifications and training, vehicles, inspections, and other operational aspects. Some states require school districts to provide students with

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<sup>6</sup>In fiscal year 2012, Congress provided \$25 million from the Safety Belt Performance Grants program, which was created to encourage states to enact and enforce seat belt laws, to NHTSA to modernize the National Automotive Sampling System, which includes GES. Under the new system, the Crash Report Sampling System will replace GES. Pub. L. No. 112-55. 125 Stat. 552, 658 (2011).

<sup>7</sup>A commercial driver's license is needed to drive a motor vehicle that has a gross combination weight rating or gross combination weight of 26,001 pounds or more, or is designed to transport 16 or more passengers including the driver, among other vehicles, according to the definition for a commercial motor vehicle in 49 C.F.R. § 383.5. Most school bus vehicles fall into this definition for a commercial motor vehicle and therefore require the driver to have a commercial driver's license.

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transportation to and from home and school, while other states allow school districts to decide whether to provide such transportation.<sup>8</sup>

- Finally, local school districts are responsible for implementing and supervising school bus operations. This includes managing and establishing routes and policies, operating and maintaining school buses, and training and assigning staff, sometimes in conjunction with contractors.

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## Detailed Data Are Limited on School Bus Crashes, but Fatal School-Bus Crashes Are a Very Low Percentage of All Fatal Motor Vehicle Crashes

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### While Little Federal Data Exist beyond School Bus Fatalities, State Data May Contain More Detailed Information

At the federal level, both NHTSA and FMCSA collect data on motor vehicle crashes that include crashes involving school buses. Since these data cover crashes involving a range of vehicles, information that is specific to school buses, like the specific type of school bus or whether it was operated by a school district or contractor, is not included in these national data. States may have richer data on school bus crashes, and we found that a small number of states collect some school-bus-specific information in their crash data, such as the type of operator. However, state data on school bus crashes vary because states determine what specific data elements to collect in crash data.

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<sup>8</sup>Federal laws and regulations require school districts (local educational agencies) to provide transportation for students in certain situations. Local education agencies must provide students experiencing homelessness with transportation to and from their schools of origin, if requested by a parent or guardian or by the local liaison on behalf of an unaccompanied homeless youth. 42 U.S.C. § 11432(g)(1)(J)(iii). Further, transportation is a related service available for students eligible for special education and related services under the Individuals with Disabilities Education Act. Pub. L. No. 101-476, 104 Stat. 1142 (1990). Decisions about whether transportation is required and the type of transportation are made at the local level as part of a child's individualized education program. 34 C.F.R. § 300.34(c)(16).

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## Federal Crash Data

NHTSA collects basic data on motor vehicle crashes, including school-bus-related crashes, but not any in-depth data specific to school buses, such as whether a school bus was district or contractor operated or the type of school bus. NHTSA's FARS and GES crash data both include a variable to identify school-bus-related crashes.<sup>9</sup> Therefore, NHTSA uses this variable to isolate school-bus-related crashes in FARS data and generates an annual report describing the number and some characteristics of fatal school-bus-related crashes.<sup>10</sup> For example, the report describes characteristics of fatal school-bus crashes such as the time of day and whether the fatality(ies) was an occupant or non-occupant of the school bus or other involved vehicles. NHTSA can also isolate school bus crashes from GES data; however, because GES is a sample of crashes and school bus crashes are such rare events, GES data cannot be used to reliably examine year-to-year trends, according to NHTSA. NHTSA's crash data aim to cover all types of traffic accidents, and as such, FARS and GES do not include additional variables tailored to accidents involving school buses. Moreover, the source for FARS and GES—police accident reports—vary from state to state and may not contain such school-bus-specific information, such as type of bus and type of operator, for NHTSA to aggregate across states.<sup>11</sup>

FMCSA's crash data for large truck and bus crashes do not include a variable to identify school-bus-related crashes.<sup>12</sup> FMCSA's crash data,

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<sup>9</sup>This variable identifies any crash that involves, directly or indirectly, a school bus or a non-school bus functioning as a school bus, transporting children to or from school or school-related activities.

<sup>10</sup>NHTSA, *School-Transportation-Related Crashes: 2005–2014 Data*, DOT HS 812 272 (Washington, DC: May 2016).

<sup>11</sup>As reported in guidance for the Model Minimum Uniform Crash Criteria, states have their own data collection guidelines, resulting in variation across states in what data are collected in police accident reports and maintained in the crash databases. GAO has also reported on this variation in the past. See, for example, GAO, *Highway Safety: Federal and State Efforts Related to Accidents That Involve Non-Commercial Vehicles Carrying Unsecured Loads*, [GAO-13-24](#) (Washington, D.C.: November 2012).

<sup>12</sup>According to FMCSA, a crash must be reported to the agency if it (1) involves a truck, used for commercial purposes, with a gross vehicle weight rating or gross combination weight rating greater than 10,000 pounds; a commercial bus designed to transport nine or more persons, including the driver; or any vehicle carrying hazardous material that requires placarding, regardless of the vehicle's weight and (2) results in at least one fatality, at least one injury involving immediate medical attention away from the crash scene, or at least one vehicle disabled as a result of the crash and transported away from the crash scene.

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which come from police accident reports, identify the vehicle involved as a bus or truck but does not further delineate the type of bus (e.g., transit bus or school bus).<sup>13</sup> In addition, it does not define or collect data on the type of school bus operator.<sup>14</sup>

## State Crash Data

States collect crash data to help implement and evaluate highway safety policies, but the specific crash data that states collect vary. Some states have richer data on all types of school bus crashes, including fatal, injury, and property-damage-only crashes than NHTSA and FMCSA, based on our review of federal and select state's crash data collection processes. However, since states have discretion in determining what specific data elements to collect, state data on school bus crashes vary. Each state has its own crash data system, and police accident reports—a key source of crash data—are unique to each state. For example, on California's police accident report, officers enter codes to identify the involved vehicles, and specific codes classify the type of school bus and operator (e.g., public or contractor). Other states' police accident reports may not collect as detailed information on a school bus involved in a crash. For example, our review of police accident reports in our selected states found that one state's police accident report had a field to indicate whether a crash involved a school bus, and another state's report used the narrative section to note a school bus's involvement.<sup>15</sup>

We surveyed states to determine whether they track the type of school bus operator in crash data, or other state data such as inspection or funding data, since information states collect on school bus crashes and

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<sup>13</sup>While FMCSA's Motor Carrier Management Information System crash data include a field that would further classify the type of bus, this field is outside the required data points that come from the police accident reports and is therefore, according to FMCSA officials, not reliable.

<sup>14</sup>Most school transportation is exempt from many Federal Motor Carrier Safety Regulations for motor carrier operations, 49 C.F.R. § 390.3(f)(1), and the exemption is based on the type of entity operating the bus and type of trip (e.g., whether it is home-to-school or school-to-home transportation, whether the trip will cross state lines).

<sup>15</sup>NHTSA and FMCSA do not have independent authority to seek changes in state police reports; however, on a voluntary basis, most states have begun collecting a similar minimum core of information in their police crash reports. See [GAO-13-24](#). These core elements are outlined in voluntary guidelines called the Model Minimum Uniform Crash Criteria, which includes a school-bus-related data element.

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operations differs.<sup>16</sup> In our survey of states, about half of states that responded (22/47) reported that they track whether school buses are district operated or contracted, though least often in crash data. States most commonly reported tracking the type of operator in funding or reimbursement data (15), followed by inspection data (10), and statewide crash data (7).<sup>17</sup> We asked these states why they tracked the type of operator, and states reported doing so most often for funding purposes (18), followed by compliance with state contracting laws (10), and educational or training purposes (7). For example, in its inspection data, New York state officials said they track the type of school bus operator along with several other variables that allow the state to analyze data on inspection outcomes, such as the number of buses passing inspection or being placed out of service, to see if there are different outcomes across these variables. For the 25 states that reported they do not track whether school buses are school-district or contractor operated, states nearly always indicated there was no need or requirement to track such data. For example, 17 states said there is no distinction made in state law or regulation on the type of operator.<sup>18</sup> Three states also reported that there are no contractors operating school buses in the state because school districts choose not to use them, so there is no need to track such information.

The Transportation Research Board noted in 2002 that fatalities and injuries involving students make up a relatively small proportion of all fatalities and injuries, so the benefits of additional data collection efforts that focus solely on school travel should be carefully considered before being recommended or implemented.<sup>19</sup> Stakeholders we interviewed had

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<sup>16</sup>Our focus was whether states tracked type of operator in crash data, but we also asked whether the states tracked type of operator in other types of databases to understand whether this was a data element that states defined or tracked at all.

<sup>17</sup>We asked states whether they tracked the type of operator in each of these types of databases or systems, so states could report that they tracked this information in more than one dataset. In addition, three states responded that while they don't specifically track the type of operator in a database, they could use information available in their systems to differentiate between types of operators, if needed.

<sup>18</sup>In addition, 11 states said there is no need or purpose to track this data and 16 states said there is no requirement to track the data. Two states said there is a lack of staff resources to collect such data. States were able to select more than one reason for not tracking the type of operator.

<sup>19</sup>Transportation Research Board. *Special Report 269: The Relative Risks of School Travel* (Washington, D.C.: 2002.)

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mixed views on whether data improvements should be a priority for the federal government. For example, one stakeholder said that the federal government could create a repository for national school-bus data that would require standardized methods of data collection by the states and that the resultant data would help illuminate key areas of school bus safety, such as illegal passing of stopped school buses, that are not currently being highlighted. However, another stakeholder we interviewed, who believes national data is lacking, said examining and collecting additional crash data for other modes of transportation may be more revealing than it would be for school buses, given the safety record of school buses. School buses continue to have a strong safety record relative to other types of motor vehicles based on more recent fatal crash data, which we discuss in more detail below. According to NHTSA, only 8 percent of fatalities in crashes involving a school bus from 2005 to 2014 were school bus occupants (i.e., drivers or passengers).<sup>20</sup> We also found that school bus crashes constituted less than 1 percent of all crashes in 6 of our selected states for which annual crash reports included a section on school bus crashes.<sup>21</sup>

NHTSA and FMCSA officials we interviewed said the agencies have no plans to change their data collection processes specific to school bus crashes, but both have efforts under way to improve the overall quality of crash data. For example, FMCSA is in the process of establishing a working group, as required in the FAST Act, to examine the information collected in police accident reports on commercial motor vehicles, a process that could lead to improvements in the data collected on crashes involving large trucks and buses.<sup>22</sup> Also, if funding is available, NHTSA officials said the agency plans to analyze states' reporting requirements for school bus crashes in fiscal year 2017. This analysis would identify sources of crash data and whether these sources provide reliable

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<sup>20</sup>For the 110 school-bus-occupant fatalities from 2005 to 2014, 46 were drivers and 64 were passengers. Of the remaining fatalities in crashes involving school buses, 71 percent were occupants of other involved vehicles and 21 percent were pedestrians and other non-occupants.

<sup>21</sup>We examined crash data for 2014, the most recent year for which data was consistently available for the states at the time of our research; for one state, 2013 data was the most recent available.

<sup>22</sup>Pub. L. No. 114-94, § 5306(a), 129 Stat. 1312, 1544 (2015). According to FMCSA, the Department of Transportation is in the process of creating a federal advisory committee to conduct this work.

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information that could be used to determine causative factors and examine potential countermeasures for all reported school bus crashes.

Additionally, states play a primary role in overseeing school bus safety, as described later in this report, and states have their own mechanisms to use state crash data to identify and use federal grant programs to address highway safety issues in their state. NHTSA and FMCSA have grant programs whereby each state identifies its priorities for highway and motor carrier safety, respectively. For example, for NHTSA's Highway Safety Grant Program, each state must develop a Highway Safety Plan based on an evaluation of highway safety data, including crash data, to identify safety problems within the state.<sup>23</sup> Therefore, if a state identifies a need for initiatives to improve school bus safety and has jurisdiction, the state could include it as a priority in its grant application and target federal and state spending for related initiatives. NHTSA and FMCSA said that, at present, no states identified school bus safety as a priority area in applications for the State and Community Highway Safety Grant Program or Motor Carrier Safety Assistance Program.<sup>24</sup>

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## Fatal Crashes Involving School Buses Constitute a Very Low Percentage of All Fatal Motor Vehicle Crashes

While national data on school bus crashes are limited, from 1999 to 2010 UMTRI collected BIFA data, with support from FMCSA; however, these data are no longer collected.<sup>25</sup> BIFA data supplemented FARS data with detailed information collected through interviews and from police accident reports about the physical configuration and operating authority of each bus involved in a fatal crash, including the type of operator. For this report, we analyzed BIFA data for 2000 to 2010 to describe characteristics of fatal crashes involving school buses during that time period. However, for variables included in BIFA data that originated in FARS data, we also analyzed data from FARS for fatal crashes involving school buses for 2011 to 2014 to provide more recent information as BIFA data were only collected through 2010. Since this analysis examined data on fatal crashes involving school buses, it is not generalizable to all types of crashes involving school buses. Further, we did not have exposure data (e.g., vehicle miles traveled by school buses

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<sup>23</sup>23 U.S.C. § 402.

<sup>24</sup>49 U.S.C. §§ 31102-31104.

<sup>25</sup>According to FMCSA officials, the agency's funding support for BIFA ended in 2011.



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of different types or used for different types of trips) to allow us to report rates of crashes for the characteristics we examined.

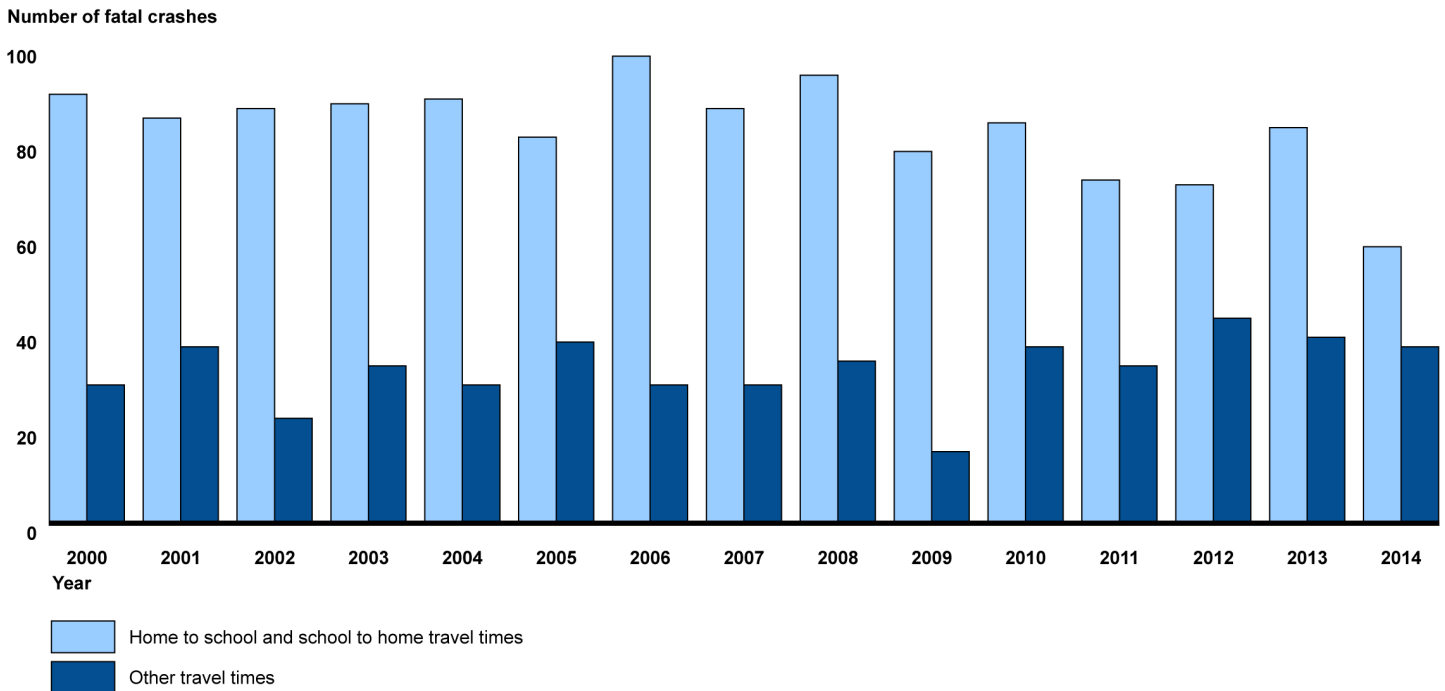
We found that from 2000 to 2010, an average of 118 fatal crashes involving a school bus occurred each year. The total number per year ranged from 93 (2009) to 128 (2008). When we extended our analysis to include 2011 to 2014, the average fell slightly to 115 fatal crashes each year, which is 0.3 percent of the 34,835 fatal motor-vehicle crashes that occurred on average each year during this time. Most fatal crashes involved local travel and occurred during times that would indicate the buses were traveling to and from school, according to our analysis. For 2000 to 2010, most fatal crashes (89 percent) were considered local, meaning the total trip distance was less than 50 miles. Seventy-four percent of fatal crashes from 2000 to 2010 occurred during home-to-school and school-to-home travel times.<sup>26</sup> From 2011 to 2014, this percentage fell to 65 percent of fatal crashes, with the remainder of fatal crashes occurring during other times (see fig. 2).<sup>27</sup>

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<sup>26</sup>No variable identified the type of school bus transportation. We approximated crashes for home-to-school and school-to-home transportation by looking at the day and time of the crash, specifically crashes occurring Monday through Friday, from September 1 to June 15, during 6:00-8:59am and 2:00-4:59pm.

<sup>27</sup>From 2000 to 2014, 72 percent of fatal crashes occurred during home-to-school and school-to-home travel times.

**Figure 2: Number of Fatal Crashes Involving School Buses, by Travel Time, 2000–2014**



Source: GAO analysis of the University of Michigan Transportation Research Institute's Buses Involved in Fatal Accidents data and the National Highway Traffic Safety Administration's Fatality Analysis Reporting System data. | GAO-17-209

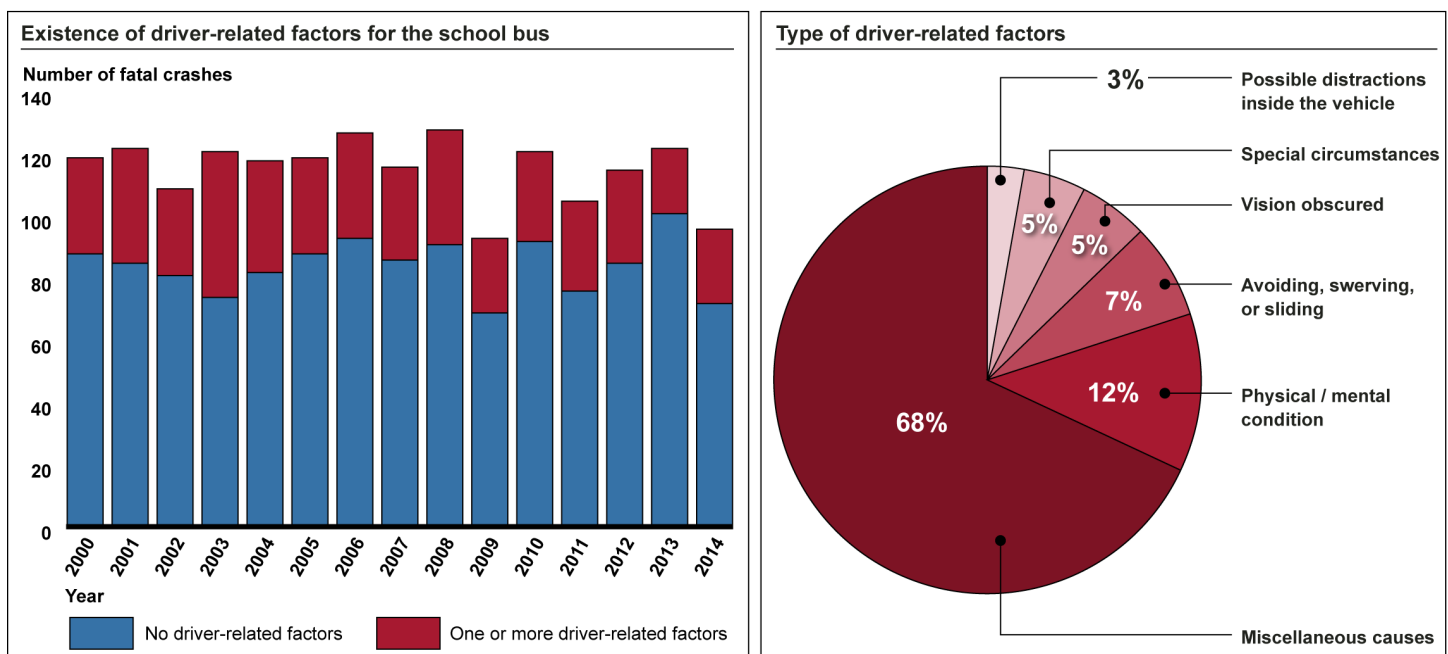
Our analysis of BIFA and FARS data also examined driver and vehicle factors that may have contributed to the fatal school bus crashes and found such factors were not prevalent.<sup>28</sup>

- *Driver-related factors:* The data on fatal school bus crashes from 2000 to 2014 identified a driver-related factor involving the school bus driver for 27 percent of these crashes (see fig. 3). The most common type of driver-related factor was miscellaneous (e.g., leaving vehicle unattended with engine running, failing to keep in the proper lane), at 68 percent of all driver-related factors. The next most common category, identified for 12 percent of driver-related factors, was physical or mental condition (e.g., careless driving, reaction to or failure to take drugs or medications). In 8 percent of fatal crashes from both 2000 to 2010 and 2011 to 2014, the school bus driver was

<sup>28</sup>We only examined factors related to the school bus driver and school bus vehicle. For the fatal crashes, there may be driver- or vehicle-related factors for the other involved vehicles.

charged with a violation. The most common type of violation fell under either the “rules of the road” turning, yielding, and signaling category (e.g., failure to signal for a turn or stop) or the reckless/careless/hit-and-run category (e.g., inattentive, careless, improper driving), representing 36 and 32 percent of all violations, respectively.

**Figure 3: Fatal School Bus Crashes by Type of Driver-Related Factors, 2000–2014**



Source: GAO analysis of the University of Michigan Transportation Research Institute's Buses Involved in Fatal Accidents data and the National Highway Traffic Safety Administration's Fatality Analysis Reporting System data. | GAO-17-209

Note: We only examined driver-related factors for the school bus vehicle involved in the fatal crash and not for other involved vehicles. More than one factor could be noted for a driver in a fatal crash.

- **Vehicle-related factors:** Vehicle-related factors involving the school bus were rarely cited in fatal crashes involving school buses. Of the 1,731 total fatal crashes from 2000 to 2014, only 5 crashes had an identified vehicle factor for the school bus—3 for brakes, 1 for tires and wheels, and 1 for other components.<sup>29</sup>

Examining other vehicle and crash characteristics, we found that about 80 percent of fatal crashes involved large school buses (type C or D)—which account for most bus sales, according to in recent sales data—and 6 percent involved small school buses (type A or B), with the remainder

<sup>29</sup>Across all years, 31 crashes were coded as unknown for vehicle-related factors.

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unknown or of another body type. Seven percent of buses involved in fatal crashes during this time were classified as special needs school buses.<sup>30</sup> In addition, the average age of the school buses in fatal crashes from 2000 to 2010 was 7 years; the average age for school buses in fatal crashes rose slightly to 8 years for 2011 to 2014.<sup>31</sup> Most of these crashes occurred on dry roads (81 percent) and in clear weather conditions (85 percent) for both the 2000 to 2010 and 2011 to 2014 time period.

We found that school districts operated 67 percent of school buses involved in fatal crashes from 2000 to 2010, and contractors working for school districts operated 25 percent of school buses involved in these fatal crashes, which is roughly proportional to the operations conducted by districts and contractors.<sup>32</sup> We found no definitive national data on the number of each type of operator or the miles driven by each type of operator, so we cannot directly compare the rates of fatal crashes for each type of operator. However, the percentage of fatal crashes involving buses operated by school districts and contractors roughly aligns with industry association estimates of operations conducted by each type of operator. One association estimates that contractors provide one-third of pupil transportation services in the United States. An official from another association estimated the extent of contracting in two ways: first, by number of buses (contractors operate about one-third of school buses); second, by the number of operations (contractors conduct about one-fourth of school bus operations).<sup>33</sup> We also examined the share of fatal

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<sup>30</sup>Since we do not have exposure data on school bus trips, we do not know what percent of all school bus trips are specifically for special needs transportation to put this number in context.

<sup>31</sup>To analyze the age of school buses for each year of BIFA data, we sorted the bus for each crash into categories by model year of the school bus (e.g., 1985 and older, 1986-1990, etc.). We then used the mid-point of the range to estimate the average age of all school buses for each year. For the 1985 and older category, we used 1985 as the basis for estimating the age of buses in that category. While this could underestimate age, only 29 of 1,731 buses fell into this category from 2000 to 2014.

<sup>32</sup>We identified public-school-district and contractor-operated buses using a variable that described the type of operating authority. The remaining 8 percent of school buses were operated by other entities, such as a private school or a charter school, or it was not clear whether the operator was a public school district or contractor transporting students for a public school district.

<sup>33</sup>A proxy in FARS data for contractors operating school buses is whether a bus has a motor carrier identification number. Twenty-one percent of buses in fatal crashes for 2000 to 2014 had a motor carrier identification number, and another 4 percent of buses were coded as “not reported” meaning that it was expected the vehicle would have a number but a state’s crash report didn’t have a field for or a narrative containing the information.

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school bus crashes with driver- or vehicle-related factors, by type of operator, and did not find any major deviations from the overall percentage of fatal crashes involving school-district and contractor-operated school buses.

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## Federal Laws and Regulations Set a Baseline for School Bus Safety, upon which State Laws and Regulations Build

Federal laws and regulations establish minimum requirements for school bus safety. Building on federal requirements, states establish more comprehensive safety requirements for school bus vehicles and operations. We found that all 50 states require school bus inspections, and most states also require driver training. However, fewer states require a specific maximum vehicle age or seating capacity for school buses. While state requirements build on federal laws and regulations, the specific requirements states set for school bus safety vary.

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## Federal Regulations Lay the Groundwork for School Bus Safety and Can Differ Based on the Type of Operator

The same two federal agencies that collect crash data set minimum safety regulations for school bus vehicles and operations.

- NHTSA sets Federal Motor Vehicle Safety Standards (vehicle safety standards) that create a baseline for school bus standards. Forty-eight out of 62 vehicle safety standards apply to new school buses, according to NHTSA.<sup>34</sup> For example, Federal Motor Vehicle Safety Standard No. 217 establishes standards for emergency exits and window retention and release, and Federal Motor Vehicle Safety Standard No. 221 specifies requirements for the strength of the body panel joints in the bodies of school buses. NHTSA has reported that new school buses have to meet more vehicle safety standards than any other type of new motor vehicle. All manufacturers of new motor vehicles and equipment must certify compliance with vehicle safety standards; therefore, school buses operated by school districts and contractors all must meet these federal standards.
- FMCSA is responsible for setting and enforcing Federal Motor Carrier Safety Regulations that apply to large commercial truck and bus operations. However, FMCSA's safety oversight of school bus operations is limited because most school bus transportation is exempt from its safety regulations. In particular, all school bus

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<sup>34</sup>Of the 48 vehicle safety standards that apply to school buses, 17 apply only to small school buses that weigh 10,000 pounds or less, according to NHTSA. The remaining 31 standards apply to all school buses.

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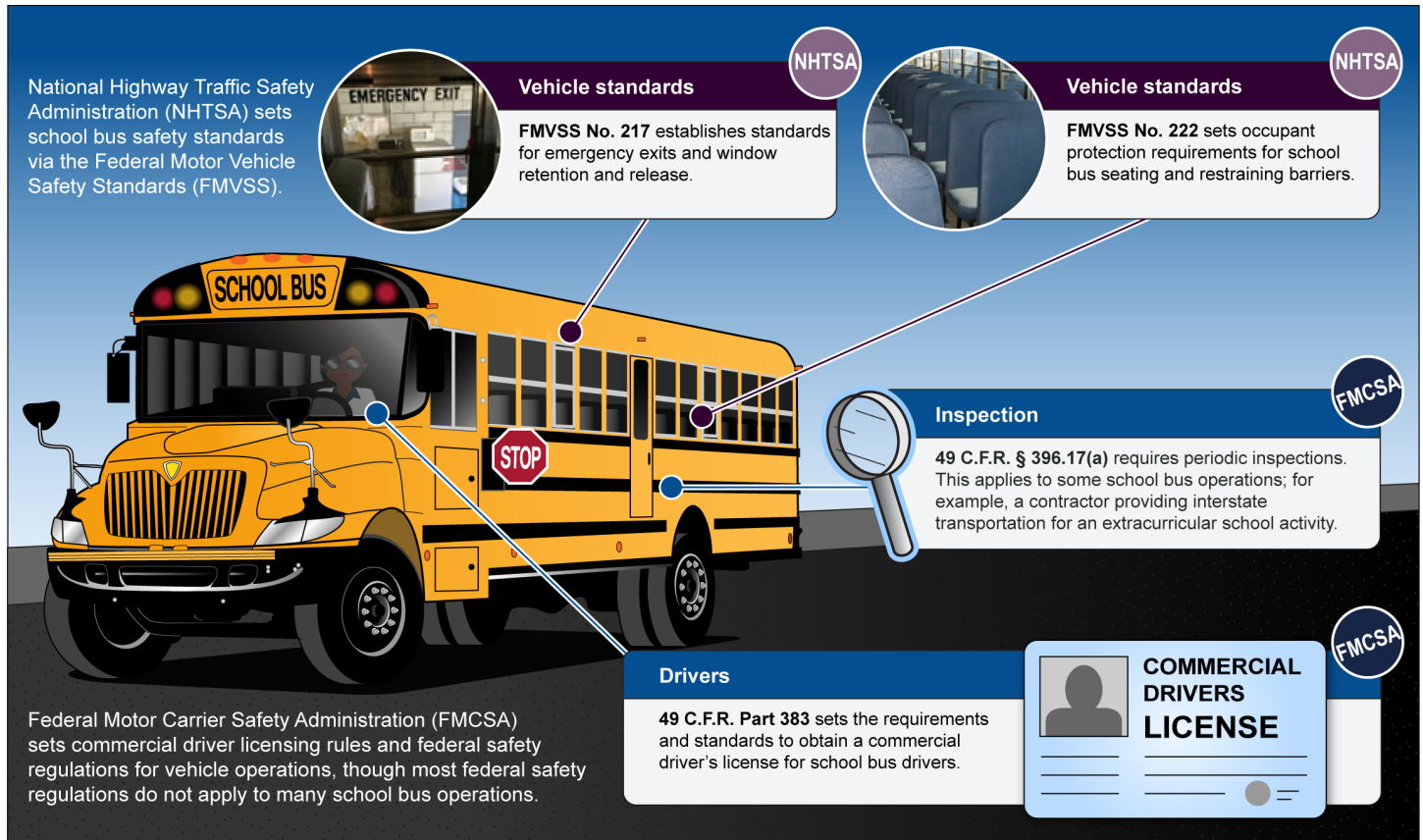
transportation to and from home and school is exempt.<sup>35</sup> Beyond home-to-school and school-to-home transportation, the type of operator—whether it is a private contractor or a school district or other governmental entity—and the type of trip—including whether the trip will cross state lines—determine whether all Federal Motor Carrier Safety Regulations apply. For example, contractors hired to provide interstate transportation for extracurricular activities, such as field trips or sporting competitions, are required to comply with other Federal Motor Carrier Safety Regulations such as limits on driving and on-duty time.<sup>36</sup> School district employees are exempt from these requirements. However, even with these exemptions, federal regulations for commercial drivers' licenses and drug and alcohol testing for commercial driver's license holders apply to all school bus drivers and operators. Figure 4 provides examples of federal regulations for school bus safety.

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<sup>35</sup>Federal Motor Carrier Safety Regulations, which apply to commercial motor vehicles, exempts "school bus operations"—the use of a school bus to transport only school children and/or school personnel from home to school and from school to home—with some exceptions, noted below. 49 C.F.R. §§ 390.3(f)(1). The exemption for school bus operations is part of a statutory exemption for transportation performed by employees and employers that are part of the federal government, a state, or any political subdivision of a state. 49 U.S.C. § 31101(2) and (3). School bus drivers, however, are subject to federal regulations that prohibit a commercial driver from operating a commercial vehicle while using a hand-held mobile telephone or texting while driving, and provide for disqualification periods for convictions of these provisions. 49 C.F.R. §§ 391.15(e), 392.80 and 392.82.

<sup>36</sup>In these cases, contractors are subject to additional Federal Motor Carrier Safety Regulations as part of their commercial operations. The scope of our review focused on inspections, driver training, and specific vehicle requirements and did not include such other regulations.

**Figure 4: Examples of Federal Laws and Regulations and Department of Transportation Oversight Agencies for School Bus Safety**



Source: GAO analysis of NHTSA and FMCSA information. | GAO-17-209

Note: FMVSS No. 220, which specifies school bus rollover protection requirements, and FMVSS No. 221, which specifies requirements for the strength of the body panel joints in the bodies of school buses, are two other standards that are specific to school buses. These vehicle standards are part of the 48 federal vehicle standards that apply to new school buses.

Within federal laws and regulations for school bus operations and vehicles, we specifically examined what federal requirements exist for school bus inspections, driver training, and maximum vehicle age and seating capacity. While many federal requirements, like vehicle standards for school buses, apply to both school districts and contractors, some federal requirements apply to only certain types of school transportation.

## School Bus Inspections

FMCSA's safety regulations require inspections of commercial motor vehicles. However, most school bus operations are exempt from this requirement, as noted above. Federal Motor Carrier Safety Regulations

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require other types of commercial operators to systematically inspect, repair, and maintain vehicles under their control, requirements that include inspecting service brakes, the steering mechanism, lighting, and tires, among other components. For inspections, commercial operators must conduct periodic (at least annual) vehicle inspections, which could be conducted in-house, at a commercial business, or through a state-run inspection program.<sup>37</sup> Therefore, a contractor's school-bus operations may be subject to this federal inspection requirement if, for instance, the contractor is hired by the school district to transport students across state lines for school-sponsored extracurricular activities; a school district's school-bus operations would not be subject to the federal inspection requirement if the district provides the transportation for this type of trip. Representatives of contractors we spoke with stated that in practice, most contractors usually comply with Federal Motor Carrier Safety Regulations, even when they are not using the school buses for interstate activities, as contractors want the flexibility and maximum ability to operate buses under different circumstances, such as chartered services on the weekend.<sup>38</sup> NHTSA does not have an oversight role in school bus operations but recommends that states establish procedures for regularly scheduled inspections of school buses in accordance with FMCSA's requirements, as described above.<sup>39</sup>

## Driver Training

FMCSA recently established minimum training regulations for entry-level school bus drivers. In December 2016, FMCSA issued a final rule requiring all drivers—employed by school districts and contractors—to complete entry-level driver training when applying for a commercial

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<sup>37</sup>49 C.F.R. § 396.17. Federal regulations set out qualifications for inspectors (49 C.F.R. § 396.19) as well as roadside inspections and inspections done through a mandatory state inspection program to meet the periodic inspection requirement.

<sup>38</sup>Depending on state requirements, contractors and school districts may be subject to a state's adoption of federal regulations for intrastate operations, particularly for extracurricular school transportation. For example, in one of our selected states, all school buses are included in the state's definition for commercial motor vehicles, and thus, all operators—contractors and school districts—are subject to the state's safety regulations, including those for inspections. However, another of our selected states adopted Federal Motor Carrier Safety Regulations in such a way that requirements for inspections apply to contractors when conducting intrastate transportation for extracurricular activities.

<sup>39</sup>NHTSA, *Highway Safety Program Guideline No. 17, Pupil Transportation Safety* (Washington, D.C.: March 2009.)



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driver's license, including those seeking a school bus endorsement.<sup>40</sup> As part of this final rule, FMCSA established a training curriculum to address the specific training needs of school bus drivers. Training providers are required to cover all topics in the curriculum, including loading and unloading, railroad-highway grade crossings, and emergency exit and evacuation, but FMCSA set no minimum hours for the knowledge and behind-the-wheel training for the school bus endorsement. Additionally, NHTSA developed a series of refresher (i.e., in-service) training modules for school bus drivers in 2011.<sup>41</sup> NHTSA officials told us they developed this training module because school bus stakeholders often asked NHTSA for guidance and assistance on training experienced school-bus drivers. Stakeholders we interviewed, including selected state officials, told us that they widely use NHTSA's refresher training materials for school bus drivers.

As previously noted, 48 federal vehicle safety standards apply to school buses. However, federal vehicle safety standards do not stipulate a maximum vehicle age or maximum seating capacity for school buses because, according to NHTSA, it does not have regulatory authority regarding how school buses are used. Nevertheless, NHTSA has made recommendations and issued guidance related to both of these items. In its pupil transportation guideline, issued in March 2009, NHTSA recommended replacing school buses manufactured before April 1, 1977, with school buses that meet current vehicle safety standards for buses and recommended prohibiting schools from purchasing school buses built prior to April 1, 1977, for school transportation.<sup>42</sup> For capacity, NHTSA has reported in information posted on its website that school bus manufacturers determine the maximum number of persons who can sit on a school bus seat, which is based on sitting three small elementary age school children or two high school age persons into a typical 39-inch school-bus seat. In this same posting, NHTSA also reported that states

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<sup>40</sup>81 Fed. Reg. 88732 (Dec. 8, 2016). Pursuant to federal regulations, states issue commercial driver's licenses according to different licensing classifications. School bus drivers generally receive a class B or C license and must have additional passenger and school bus endorsements, which consists of passing knowledge and skills tests in passenger and school bus safety. The rule is effective February 6, 2017, and has a compliance date of February 7, 2020.

<sup>41</sup>According to NHTSA officials, the agency plans to update the training, if needed, in fiscal year 2017, after consulting with school-bus industry stakeholders regarding the potential need to update the training.

<sup>42</sup>NHTSA is currently working to update this guideline, according to NHTSA officials.

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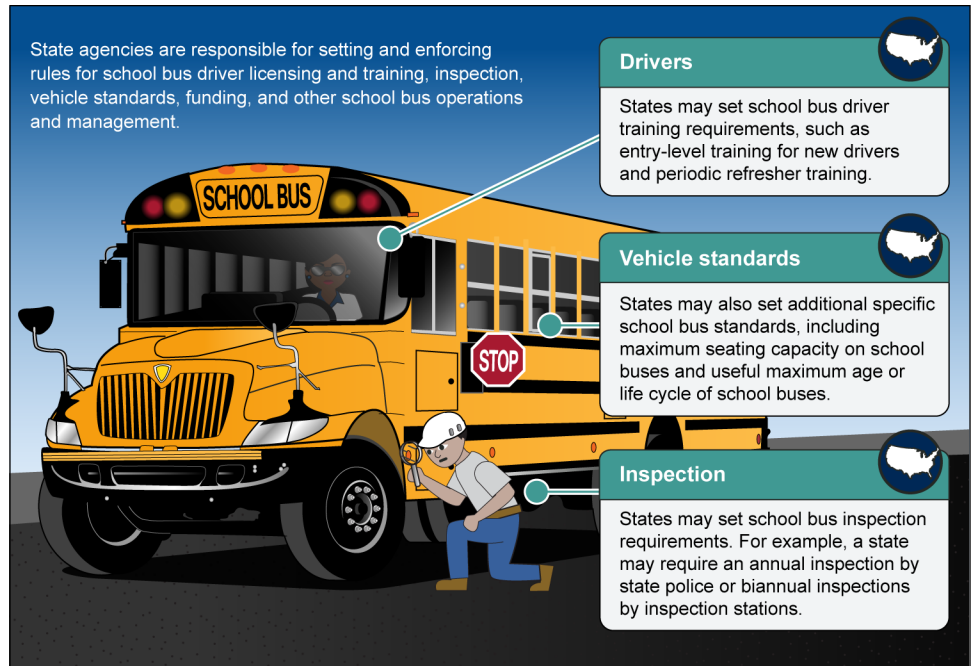
and school bus operators are responsible for determining the number of persons who can safely fit into a school bus seat, and NHTSA recommended that all passengers be seated entirely within the confines of the school bus seats while the bus is in operation. NHTSA sets vehicle safety standards, and FMCSA does not have a role setting vehicle standards for school buses.

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**Building on Federal Requirements, States Set Requirements for School Bus Safety That Vary by State but Generally Not by Type of Operator**

States build upon federal laws and regulations and usually set additional, state-specific requirements for school bus safety that generally apply to both school districts and contractors, according to stakeholders we spoke with. We found that multiple state agencies often play a role overseeing school bus vehicles and drivers. For example, in Illinois, the State Board of Education and Secretary of State oversee school bus driver training, and the Department of Transportation oversees school bus inspections, while in Pennsylvania the Department of Transportation oversees school bus driver training and the State Police oversees school bus inspections. In addition, state laws and regulations vary widely across states. For example, three school bus manufacturers we spoke with told us that no two states have the same vehicle standards for school buses, with varying requirements for eight-way flashing signal lights, content and location of first aid kits, and location of switch panels, among other things. Figure 5 describes examples of state requirements for school bus transportation.

**Figure 5: Examples of State Requirements for School Bus Safety**



Source: GAO analysis of state agency information. | GAO-17-209

Upon examination of state laws and regulations, we found that states set requirements for inspections, driver training, and vehicle standards that supplement the baseline federal requirements. States' school-bus safety requirements vary widely across states but tend not to differ based on the type of operator, according to all eight selected state officials we spoke with, as described below. Four other stakeholders we interviewed affirmed that there are no differences in state requirements for school bus transportation for different types of operators. However, for state requirements for commercial motor vehicles, which can apply to but are not specific to school buses, six stakeholders we interviewed, including manufacturers and contractors, said there are some differences in requirements for contractors and school districts. For example, two stakeholders commented that states vary in the extent to which they exempt school bus operations from state requirements for commercial motor vehicles, requirements that are not school-bus-specific but apply to a wider range of vehicles and that are similar to Federal Motor Carrier

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## School Bus Inspections

Safety Regulations.<sup>43</sup> See appendix II for additional descriptions of state requirements for school bus inspection, driver training, and maximum vehicle age and seating capacity in the eight selected states.

Based on our review of laws and regulations in the 50 states, we found that all 50 states require school bus inspections to check for defects and safety compliance with state rules at the state or local level.<sup>44</sup> We also found that the frequency of these inspections and agency conducting or overseeing inspections varies across states. For 41 states, we found that the state required periodic inspections of school buses to be conducted by state inspectors or third-party inspectors. For example, California requires its state highway patrol to inspect school buses at least once every year,<sup>45</sup> while the Illinois state transportation agency requires certified, private inspection stations to inspect school buses at least twice a year.<sup>46</sup> In the other nine states, we found the state requires local school districts to conduct inspections and/or authorizes the state to conduct spot check inspections of school buses without any set frequency. For example, Nebraska requires local school districts to conduct an inspection of each school bus before the start of the school year and then every 80 days during the school year.<sup>47</sup> According to a Nebraska state official, the state discontinued its state school bus inspection program due to resource constraints and delegated responsibility for inspections to local school districts. State officials in all eight selected states told us that all school bus operators, including contractors, are subject to the state's school-bus inspection requirements.

States may also require additional inspections to supplement the periodic inspections, including conducting random or unannounced inspections. Officials from four of the eight states we interviewed—Illinois,

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<sup>43</sup>For example, one stakeholder told us that contractors in some states are subject to stricter qualification requirements to be a school bus driver and more training; therefore, a contractor generally has to meet a higher bar than school districts.

<sup>44</sup>This and other counts of state requirements in this section are based on our search of state laws and regulations in a legal database. Our search sought to identify state requirements and did not seek to identify any local safety requirements. Therefore, there may be requirements that our search did not find for school bus inspections, driver training, and vehicle standards. For more information on our search, see appendix I.

<sup>45</sup>CAL. VEH. CODE § 2807(a) (2016).

<sup>46</sup>625 ILL. COMP. STAT. 5/13-109(a) (2016).

<sup>47</sup>NEB. ADMIN. R. & REGS. Title 92, Ch. 93 (2016).

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Washington, Tennessee, and Pennsylvania—stated that they complement annual or biannual inspections with unannounced or random school-bus inspections. For example, a Tennessee state official told us that the state conducts random inspections of school buses for at least 10 percent of the statewide school-bus fleet annually to ensure that all operators maintain their buses safely and appropriately. States may also require even more frequent inspections, sometimes on a daily basis. For example, California requires all school bus operators to inspect their school buses regularly—every 45 days or 3,000 miles, whichever occurs first—as part of a preventive maintenance program.<sup>48</sup>

To provide context to understand how states implement these requirements and the results of inspections, we asked the selected states about the data they collect on inspection outcomes. The selected states vary in how they collect and maintain inspection data and the extent to which results are accessible to the public, as was the case with the frequency of inspections. Officials from selected states told us there are different methods of collecting and compiling inspection results. For example, a Tennessee state official told us that the state uses electronic devices (e.g., tablets, laptops) to collect data during inspections and maintain results in a central database. Illinois state officials told us that private, certified inspection stations can use an electronic or paper form to document inspection results, and all completed forms are maintained by the state. Given these differences, states vary in their ability to easily search and summarize inspection results for school buses in the state. We found school bus inspection results are generally accessible to the public, but how the public can access results varies. For instance, Washington posts the number of school buses inspected and the number and percentage of buses placed out of service by school district each school year on its state agency website, while Pennsylvania and Tennessee state officials told us that school bus inspection results are accessible only through a formal request.<sup>49</sup>

Additionally, in our review of selected states' school-bus inspection results, we found that a relatively small number of school buses were placed out of service after an inspection because they were determined to

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<sup>48</sup>CAL. CODE REGS. tit. 13, § 1232 (2016).

<sup>49</sup>In several selected states, each school bus receives a sticker indicating whether the bus passed inspection. According to one state official, these stickers allow the public to see when a school bus in operation last received and passed an inspection.

be unsafe to operate without repairs. Specifically, 3 to 5 percent of inspected school buses in a given year were put out of service for violations, based on data from four of our selected states, as shown in table 1 below.<sup>50</sup> By contrast, the out-of-service rate for all types of buses nationwide is about 7 percent, according to FMCSA. Problems that could put a school bus out of service in one state we interviewed include any leaks on the exhaust system, an exterior brake or stop-arm light that doesn't work, or a bus alarm not sounding when the emergency door is opened. In three states, the most common problems identified during inspection involved brakes, lights or signals, and exhaust systems. Officials we spoke with in the six selected states that had state inspection programs stated that out-of-service school buses cannot be operated until the identified problem has been fixed and the bus passes another inspection.

**Table 1: Selected States' School Bus Inspection Results**

States	Total number of school buses inspected in most recent available year	Total number of out-of-service school buses
California	Calendar year 2015: 23,242	770 (3%)
New York	State fiscal year (April 1, 2015, to March 31, 2016): 97,163	5,172 (5%)
Tennessee	June 2015 to June 2016: 16,071	415 (3%)
Washington	2015-2016 school year: 12,773	491 (4%)

Source: GAO analysis of state data. | GAO-17-209

## Driver Training

We found that a majority of states require training for all school bus drivers.<sup>51</sup> Specifically, we found that 44 states require entry-level (i.e., pre-service) training and 44 states require refresher training for all school bus drivers.<sup>52</sup> However, as with inspection requirements, we found that the frequency, length, and other attributes of the required training vary across states. For example, Pennsylvania requires a minimum of 20

<sup>50</sup>The remaining four selected states either do not centrally collect inspection results or it would have required significant state resources to search and summarize results.

<sup>51</sup>For school bus drivers, the scope of our review focused on state requirements for driver training. However, states may set additional requirements for drivers. According to officials in selected states, additional requirements can include passing federal and state criminal background checks, annual or biannual medical exams, CPR training, and physical performance or agility tests, such as exiting the bus through the back emergency exit in 20 seconds and dragging 120 pounds down the bus aisle.

<sup>52</sup>We found that 40 states required both types of training, 4 states only required entry-level training, and 4 states only required refresher training.

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hours of school-bus-specific training for all entry-level drivers and a minimum of 10 hours of refresher training for drivers every 4 years.<sup>53</sup> Tennessee requires all school bus drivers to receive at least 4 hours of annual refresher training on various topics, including operational safety of school buses, loading and unloading of students, and managing student behavior, but the state does not require entry-level school-bus driver training, according to a Tennessee state official. While the training requirements vary across states, officials from all eight of our selected states stated that all school bus drivers must meet state training requirements, whether they are employed by a school district or contractor.

States administer school bus driver training in different ways, and additional training requirements may exist at the local level. For example, in Virginia and New York, the state departments of education oversee school bus driver training programs and train and certify instructors, who can be school district or contractor employees, to provide training to drivers. In Nebraska, the state department of education contracts with the Nebraska Safety Center at the University of Nebraska to develop training curriculum and train instructors to provide training. Beyond state requirements, local school districts and contractors may have additional training programs and requirements for school bus drivers. Contractors we spoke with told us that they also require entry-level and refresher training for their drivers that meets or exceeds state requirements. State officials in California, Pennsylvania, and Tennessee also told us that local school districts may require additional, supplemental training for drivers. For example, a state official told us that one large school district requires drivers to complete a minimum of 40 hours of gang awareness training.

Additionally, all eight selected states require school bus drivers to receive training on transporting students with special needs. Drivers in these states typically receive training on transporting special needs students as part of the training curriculum for entry-level or refresher training for school bus drivers. For example, in New York, under state law, entry-level school bus drivers are required to take a minimum of two hours of instruction related to transporting special needs students during the first year of employment, and all school bus drivers are required to take one hour of annual training related to transporting special needs students.<sup>54</sup>

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<sup>53</sup>67 PA. CODE § 71.5 (2016).

<sup>54</sup>N.Y. COMP. CODES R. & REGS. tit. 8, § 156.3(b)(5)(ii)(a) and (b) (2016).

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State officials in a few of our selected states said additional training on special needs transportation is provided to drivers at the local level. A Washington state official told us that the state trains all instructors on special needs transportation topics so the instructors can in turn provide more targeted training to drivers, such as how to secure wheelchairs on a particular bus model.

In our search of state laws and regulations, we found six states that set a requirement for the maximum vehicle age for when a school bus must be replaced or no longer used. The requirements in these six states varied. For example, Tennessee sets a maximum age for school buses that applies to school districts and contractors; specifically, type A and B buses can be used for up to 15 years, and type C and D buses can be used for up to 18 years with unlimited miles, or up to 19 years for buses with less than 200,000 miles that have passed inspections twice a year.<sup>55</sup> According to a state official, Tennessee has a maximum vehicle age requirement because older school buses may not be cost-effective to maintain, as older vehicles have more mechanical and maintenance issues. In other states, all types of school buses were subject to the same maximum age, such as stating that school buses used to transport students cannot be more than 20 or 25 years old.

In addition to these six states with specific requirements, we also found instances where states provide funding or set a school bus depreciation schedule to replace school buses. Although these programs do not necessarily prohibit school bus operators from operating school buses that exceed the parameters of a state's funding program, they encourage school districts to regularly replace school buses. For example, according to a state official, Washington provides replacement funding for school buses to school districts and contractors, and the state established a useful life cycle for each type of school bus, but the state does not require school districts and contractors to retire or stop using a bus at the end of the established life cycle. Washington sets an 8-year life cycle for type A buses and a 13-year life cycle for type C and D buses owned by the

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<sup>55</sup>TENN. CODE ANN. § 49-6-2109, TENN. COMP. R. & REGS. ch. 0520-01-05-.01 (2016). School buses older than 15 years are subject to biannual inspections, according to a Tennessee official.



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school district.<sup>56</sup> In Virginia, the state has a 15-year life cycle for all school bus types, but according to state officials, a school bus older than 15 years can continue to be used as long as it passes inspections.

While states do not typically set maximum school bus age requirements, local school bus operators usually make decisions on when to replace a school bus, according to stakeholders we interviewed. In particular, according to seven stakeholders we interviewed—3 manufacturers, 3 state agencies that conduct inspections, and 1 contractor—local operators make these decisions based on a business case that includes factors such as maintenance costs and environmental conditions. Representatives from two school bus manufacturers we interviewed told us that most states do not have a maximum vehicle age requirement and that many school districts will continue to use buses as long as they pass inspections and maintenance costs are not too high. State officials from Washington and Virginia said school bus operators need to maintain any school buses that are used for longer than the state-established life cycle and that these buses must pass the state inspection.

With regard to school bus seating capacity, we found eight states that have a specific requirement for maximum seating capacity on school buses. Eight states set a specific maximum capacity or parameter that would yield a specific maximum capacity. For example, New York has a maximum seating capacity of 84 student passengers in type C and D school buses.<sup>57</sup> We also found that about half of the states (23) had other types of seating capacity requirements, such as explicitly restricting school buses from transporting more student passengers than the manufacturer's rated seating capacity. For example, Illinois does not allow a school bus to be operated with more passengers than recommended by the manufacturer's rated seating capacity.<sup>58</sup>

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<sup>56</sup>According to a Washington state official, the replacement system for school-district-owned vehicles provides enough funding to replace the bus at the end of the established life cycle. The state uses a different replacement system for contractor-owned buses, where it provides payments to the districts for school buses on a straight line depreciation based on the original cost of the buses.

<sup>57</sup>N.Y. COMP. CODES R. & REGS. tit. 17, § 720.4 (p)(2)(i) (2016).

<sup>58</sup>625 ILL. COMP. STAT. 5/12-707 (2016).

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## Stakeholders Identified Voluntary Industry Standards as a Primary Source of Leading Practices, and Work Is Under Way in Areas Where Stakeholders Most Often Said Additional Federal Guidance Would Be Useful

Stakeholders from the school bus industry most commonly cited the National Congress on School Transportation (NCST) and its *National School Transportation Specifications and Procedures* as a source of leading practices for safe school bus transportation.<sup>59</sup> Seventeen of the 30 stakeholders we interviewed, including state directors of student transportation and manufacturers, identified NCST and the voluntary document as a national standard for school bus safety.<sup>60</sup> An NCST official told us that the *National School Transportation Specifications and Procedures* is meant to build on federal laws and regulations and for states to consider when establishing their standards, specifications, regulations, and guidelines for school transportation.

NCST holds a congress roughly every 5 years. The primary purpose and product of the congresses is the specifications and procedures document that contains recommendations across different aspects of student transportation, including school-bus body and chassis specifications, procedures for conducting school bus inspections, and selecting and training drivers. As the congress meets regularly, NCST has discussed new safety concerns or needed guidance and amended its specifications and procedures document accordingly. For example, one stakeholder we spoke with said a relatively recent change in the document was the inclusion of criteria, based largely on federal regulations, to use in a school-bus inspection program to determine when a school bus should be placed out of service.

Stakeholders also cited federal and state requirements and industry associations and experts as sources of leading practices. Eleven of 30 stakeholders we spoke with identified state laws and regulations, while 10 stakeholders identified federal laws and regulations and industry associations as sources they turn to for leading practices. Eight stakeholders also mentioned federal guidance as sources of best practices for school bus operations and inspections. For federal guidance, two stakeholders mentioned they look to NHTSA's *Highway Safety Program Guideline No. 17, Pupil Transportation Safety*, which recommends strategies for a school bus safety program at the state level. For example, this guideline recommends developing a training plan for

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<sup>59</sup>NCST consists of representatives of state agencies responsible for administering student transportation, school district officials, contract operators, and representatives from other professional organizations and groups.

<sup>60</sup>We did not ask four of the 30 stakeholders to identify leading practices as the question did not apply (e.g., focus of interview was sources of school bus crash data).

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drivers and establishing a systematic preventive-maintenance program for school buses that includes periodic vehicle inspections.

Our literature review identified these same sources and also provided general practices for states and local school districts and contractors to follow. For example, we found NCST's specifications and procedures document, NHTSA's *Highway Safety Program Guideline No. 17*, and textbooks that often cited federal vehicle safety standards and FMCSA's safety regulations in our literature research. In our review of these sources, including NCST's specifications and procedures document, we found recommended practices for maintaining school buses, including establishing an inspection program with uniform criteria for placing school buses out of service and analyzing the intended life cycle of school buses with ongoing efficiencies associated with vehicle replacement.

A few stakeholders we spoke with indicated that specific, national leading practices for certain aspects of school bus transportation may not always be appropriate, as school bus operations are driven by local or regional factors such as available funding and environmental and geographic conditions. For example, stakeholders we spoke with said that different factors, like weather and road conditions, can contribute to how long a school bus should remain in use. Three stakeholders, including a manufacturer, noted that school buses operating in adverse road and weather conditions in some states may need to be replaced more frequently due to higher maintenance costs. A 2002 National Association of State Directors of Pupil Transportation Services (NASDPTS) report noted that accurate and thorough records on operating and maintenance costs of a school bus fleet provide data needed to analyze and understand costs and said that establishing school bus replacement policies are important.<sup>61</sup> As noted earlier, states and local districts largely oversee school bus safety, and as such, school bus transportation is subject to local district decisions, practices, and differences in operations.

When we asked stakeholders what additional federal research and guidance would benefit the school bus industry, there was no consensus among the stakeholders. Seven of thirty stakeholders said current federal

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<sup>61</sup>NASDPTS represents state directors responsible for student transportation in all 50 states. NASDPTS works with federal agencies that influence student transportation and other school bus industry associations at the state and national level. The 2002 report also suggested, under normal operating conditions, anticipated lifetimes of 8- to 10-years for type A and B school buses and 12- to 15-years for type C and D school buses.

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research and guidance is sufficient and did not cite a need for additional guidance.<sup>62</sup> For the two areas stakeholders mentioned most often, federal agencies have related efforts under way.

- Five stakeholders said data on or guidance to combat illegal passing of school buses would be useful. NASDPTS conducts an annual survey on illegal passing, whereby school bus drivers voluntarily count the number of vehicles that pass them when they stop to load and unload students. For each of the 5 years NASDPTS has collected this data, participating school bus drivers have observed more than 74,000 instances of illegal passing on a single day.<sup>63</sup> In 2000, NHTSA issued a best practices guide on reducing the illegal passing of school buses. Further, NHTSA officials told us that research on the effectiveness of using cameras to enforce laws on passing school buses is currently under way with data collected at multiple locations, to be completed in early 2018. Based on the results of this research, NHTSA officials said they may update the content of the best practices guide on reducing the illegal passing of school buses.
- Four stakeholders said that additional federal guidance on school bus driver training on various topics, including loading and unloading students and technology distraction, would be helpful. As previously mentioned, FMCSA recently established minimum training regulations for entry-level training for school bus drivers when applying for commercial driver's license, and two school bus associations—NASDPTS and the National School Transportation Association—were part of the negotiated rulemaking committee that helped develop the training regulations. Additionally, NHTSA's 2011 refresher training for school bus drivers covers several topics, including loading and unloading students. NHTSA officials said they plan to update the content, if needed, after consulting with school-bus industry stakeholders in fiscal year 2017.

Finally, NHTSA officials and stakeholders commented that the school bus industry is a close-knit community that keeps one another informed with

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<sup>62</sup>We did not ask four of the 30 stakeholders to identify areas for federal guidance or research as the question did not apply; three of these stakeholders were federal agencies, as we instead asked them about current and future research on school-bus safety issues.

<sup>63</sup>NASDPTS encourages states and school bus drivers to track illegal passing of school buses for one day between March 1 and May 31 of each year and report the illegal passing data to NASDPTS. NASDPTS publishes the survey results in July to help inform back-to-school safety efforts for the upcoming school year. School bus drivers in about 30 states participate in the survey each year.

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conferences and networks across all levels of government. Stakeholders we spoke with said that much of the school bus industry's awareness comes from annual forums and conferences at the state and national level. For example, the annual NASDPTS conference held in November 2015 included sessions on incidents of dragging students in bus doors and FMCSA's then proposed rule on entry-level driver training. Another stakeholder told us that they confer with state school transportation associations—state organizations of school bus drivers and transportation managers—to identify and address any school-bus safety issues in the state. In addition, NHTSA and FMCSA officials and one stakeholder told us that three of the national school bus associations meet annually with FMCSA and NHTSA to discuss various school-bus safety issues.

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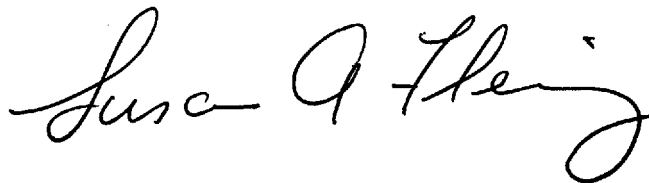
## Agency Comments

We provided a draft of this product to the Department of Transportation for comment. The Department of Transportation provided technical comments, which we incorporated as appropriate.

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We are sending copies of this report to the appropriate congressional committees, the Secretary of the Department of Transportation, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.



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Director,  
Physical Infrastructure Issues

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# Appendix I: Objectives, Scope, and Methodology

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The Fixing America's Surface Transportation Act included a provision for GAO to conduct a review of school bus safety, including examining any differences in the safety performance of different types of school bus operators—that is, school districts and contractors—and what safety requirements apply to them.<sup>1</sup> We examined: (1) data federal and state agencies collect on school bus crashes and the number and characteristics of fatal school-bus crashes that have occurred since 2000; (2) federal and state laws and regulations pertaining to school bus inspections, vehicles, and drivers, as well as state data on inspections' outcomes; and (3) sources for leading practices for safe school-bus transportation, as identified by stakeholders and literature, as well as any areas where further federal guidance could be useful. As part of our work, we also examined whether there were differences for school-district and contractor-operated school buses in any of the above areas. Overall, we focused our review on the transportation of public K-12 students traveling to and from home and school and for extracurricular activities and not transportation of private school students.

To describe what data federal and state agencies collect on school bus crashes, we reviewed agency documents that describe or use National Highway Traffic Safety Administration (NHTSA) and Federal Motor Carrier Safety Administration (FMCSA) crash datasets, including the *2014 FARS/NASS GES Coding and Validation Manual* and *Large Truck and Bus Crash Facts 2014*. We interviewed NHTSA and FMCSA officials to understand what data each agency collects on school bus crashes and whether they track the type of operator involved in school bus crashes. We also asked about any planned or ongoing efforts to change or improve the data collected on school bus crashes. To understand crash data collected by states, we reviewed NHTSA guidance on crash data systems, primarily the *Traffic Records Program Assessment Advisory*. We also interviewed school-bus industry associations, the Association of Transportation Safety Information Professionals, and other stakeholders to identify national and state data on school bus crashes and to discuss the strengths and limitations of existing datasets.

We also administered an e-mail survey to the 50 state pupil-transportation directors to gather information on school bus data. Specifically, the survey asked whether states systematically collect data on the type of school bus

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<sup>1</sup>Fixing America's Surface Transportation Act, Pub. L. No.114-94, § 5511, 129 Stat. 1312, 1556 (2015).

operator—that is, school district or contractor—in crash or other data, and the reasons why these data were or were not collected.<sup>2</sup> We obtained contact information for the survey recipients from the National Association of State Directors of Pupil Transportation Services (NASDPTS) and administered the survey between June 20, 2016, and August 8, 2016. Because this was not a sample survey, there are no sampling errors. However, the practical difficulties of conducting any survey may introduce errors, commonly referred to as nonsampling errors. For example, difficulties in how a particular question is interpreted can introduce unwanted variability into the survey results. We took steps in the development of the questionnaire, the data collection, and the data analysis to minimize these nonsampling errors. For example, we pretested the survey with the pupil transportation directors in three states and NASDPTS to ensure that questions were clear and unbiased and to minimize the burden the survey placed on respondents. Based on feedback from the pretests, we made minor changes to the content and format of survey questions. We received completed surveys from 47 respondents for an overall response rate of 94 percent.<sup>3</sup>

To describe the number and characteristics of fatal school-bus crashes since 2000, we analyzed data from two data sets. First, we analyzed Buses Involved in Fatal Accidents (BIFA) data from the University of Michigan Transportation Research Institute (UMTRI) for calendar years 2000 to 2010 to describe the attributes of crashes involving school buses. BIFA includes data on fatal traffic crashes in the United States involving a bus.<sup>4</sup> We used BIFA data as they were the only source of national crash data we identified that included bus-specific variables like type of operator and bus, and 2010 was the last year for which BIFA data were collected. Cases for BIFA are selected from NHTSA's Fatality Analysis Reporting System (FARS) file. BIFA supplements the FARS data; UMTRI collected police reports for each crash and trained interviewers to contact owners, operators, or drivers of the buses to collect detailed information on the bus, operator, and driver. Our analysis of BIFA data included variables collected by UMTRI, such as the type of bus, type of operator (school district or contractor), and length of trip, as well as FARS variables, such as driver- and vehicle-related factors, model year of the vehicle, and road

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<sup>2</sup>We did not include the District of Columbia or territories.

<sup>3</sup>Georgia, Mississippi, and New Hampshire did not respond to our survey.

<sup>4</sup>For BIFA, a bus is defined as a vehicle with seating for nine or more occupants, including the driver, not for personal use (such as a family) or for 15 or more passengers.

and atmospheric conditions. Since the BIFA data were last collected for calendar year 2010, we reviewed NHTSA's school-transportation-related analysis for 2000 through 2014 to compare the overall number of fatal school-bus crashes during and after BIFA data collection and examine whether there were any trends or changes after 2010. We also examined whether there were any changes to federal rules for school bus vehicles and operators that would substantially change the regulatory landscape for school bus operations after 2010. In reviewing the data and federal rule changes, we found no substantial changes that would raise concerns about using the BIFA data from 2000 to 2010 for our review. For BIFA, we identified crashes using the included variable for "school-bus-related crashes." Second, we analyzed FARS data for calendar years 2011 to 2014, the latest year for which data were available, to examine this more recent FARS data to extend our analysis for certain variables like atmospheric and road conditions and time of day of the crash. For FARS, we implemented guidance NHTSA provided to use four variables from the accident and vehicle data files to identify school-bus-related crashes. Based on interviews with NHTSA and UMTRI officials, as well as reviewing system documentation and electronic data testing, we determined that the data were sufficiently reliable for the purpose of describing the number and type of fatal school-bus crashes. While these data sets allow us to describe the attributes of fatal crashes, the descriptive information is not generalizable to crashes with non-fatal injuries or with property damage only. Moreover, we did not have exposure data, such as the total miles traveled by different types of buses or operators, so we could not calculate crash rates that would allow for directly comparing different types of crashes.

To describe federal school bus safety requirements, we reviewed federal laws and regulations on school bus inspections, driver training, and vehicle standards—specifically, vehicle age and seating capacity of school buses. We primarily focused our review on these three areas based on our initial research into school bus safety requirements and the content of the mandate. We reviewed inspection requirements in the Federal Motor Carrier Safety Regulations that would apply to school bus operators, but the scope of our review did not include all other aspects of these regulations, such as hours-of-service requirements for drivers and driver qualifications. We did not examine seat belts as part of our review due in part to NHTSA's current effort to further research seat belts on all



school buses.<sup>5</sup> We also reviewed and analyzed guidance and reports from NHTSA, FMCSA, and the National Transportation Safety Board, including NHTSA's *Highway Safety Program Guideline No. 17, Pupil Transportation Safety*; National Transportation Safety Board's accident investigation reports involving school buses; and FMCSA's March 2016 Notice of Proposed Rulemaking and December 2016 Final Rule on entry-level driver training.<sup>6</sup> We also interviewed officials from those agencies to understand the scope and applicability of federal laws and regulations for school bus vehicles and operators.

To describe state laws and regulations, we systematically searched laws and regulations for all 50 states to determine the extent to which states set requirements for school bus inspections, driver training, and vehicle standards. Specifically, we searched for state requirements for: (1) school bus inspections;<sup>7</sup> (2) entry-level or refresher training for school bus drivers; (3) maximum age, mileage, or use that require retiring or no longer using school buses;<sup>8</sup> and (4) maximum seating capacity for school buses. We conducted this search on state statutes and administrative codes in a legal database. In consultation with GAO's Office of General Counsel and our librarian, we developed search terms and protocols and used a data collection instrument for each of the requirements to ensure consistent collection of information. For example, for our searches on state requirements for school bus inspections, we used the search term "school bus w/10 inspect!" and increased the proximity of the key words from within 10 words to within 15 and 20 words. When our search returned no results for a state, we then searched the websites of the state's education, transportation, motor vehicle, and/or police agencies and used any information found from these searches, such as a legal citation or terminology, to direct additional searches in a legal database.

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<sup>5</sup>In July 2015, NHTSA held a daylong workshop on occupant protection, including seat belts, and since that time has met with states that require seat belts on school buses.

<sup>6</sup>81 Fed. Reg. 11944 (Mar. 7, 2016) and 81 Fed. Reg. 88732 (Dec. 8, 2016).

<sup>7</sup>Our search focused on state requirements for school bus inspections and not more broadly on state requirements for commercial-motor-vehicle inspections. Also, as with our review of federal laws and regulations, our scope did not include other state requirements for commercial-motor-vehicle operators.

<sup>8</sup>In our search on maximum vehicle age or use, we did not include states that required retiring school buses based on a single date of manufacture. In several cases, we found that states set these requirements for purposes such as reducing emissions that were outside of scope of our review.

We also consulted with our Office of General Counsel on coding the results of our searches in the data collection instrument. After completing our searches, we compared the results of our search on states' school-bus inspection requirements with the 2011 survey results from South Carolina and NASDPTS on school bus inspection practices to verify our research. We also compared the results of our research on vehicle age with a list provided by the National Conference of State Legislatures and the results of our research on vehicle age and seating capacity with a stakeholder's compiled list of state requirements and practices on school bus vehicle age/life cycle use and seating capacity. We took steps to reconcile any identified differences, including conducting further research in a legal database and state agency websites and contacting state officials to clarify and verify the information we found in our legal search. We also validated our search results with eight selected states as part of our in-depth review on how selected states implement school-bus safety requirements, as further described below. Finally, our Office of General Counsel reviewed and verified the search results for all 50 states. The scope of our research did not include local requirements, and thus we did not include any local requirements for school bus inspections, driver training, or maximum vehicle age or seating capacity that may be applicable to school bus operators. In addition, our search terms and protocols aimed to identify states with requirements, but due to the nature of keyword searches, we may not have identified all relevant school bus requirements. Further, for states for which we didn't identify requirements, we attempted several types of searches to try to find state inspection, driver training, or maximum age or capacity requirements. However, we cannot definitively conclude that there are no requirements in the mentioned categories for these states.

To better understand implementation of federal and state rules and whether public and private bus operators face different safety requirements, we performed additional research on and conducted in-depth interviews with state officials from eight selected states. Using *School Bus Fleet's* 2013–2014 school year school transportation data, we selected states to include those with the highest number of students transported daily by school bus, the highest annual route miles traveled per student, and variation in the number of school buses owned by states/school districts and contractors. We also selected states that vary geographically and maintained data available on school bus involved accidents and school bus inspections. We selected eight states: California, Illinois, Nebraska, New York, Pennsylvania, Tennessee, Virginia, and Washington. These eight states account for about 28 percent of public K-12 students transported daily on school buses. We

conducted semi-structured interviews with state officials from the selected eight states and, when available, collected data on the outcomes of school bus inspections and the age of school buses. These eight selected states are a non-probability sample of states, and thus, the information we obtained is used for illustrative purposes and is not generalizable.

To identify sources of leading practices, we conducted a literature search to identify leading practices on school bus inspections, driver training, and maximum vehicle age and seating capacity. We reviewed literature for the last 15 years for pertinent studies in peer-reviewed journals, trade publications, and conferences, among others, to identify sources and leading practices. We also interviewed school bus industry stakeholders, including officials from school-bus industry associations, federal agencies, select state agencies, school bus manufacturers, and school bus contractors, to identify sources of leading practices. We selected stakeholders to represent a range of roles in the school bus industry and the federal and state levels of government. A full list of stakeholders interviewed for this review is provided in table 2 below. In these interviews, we asked stakeholders an open-ended question for them to generate sources of leading practices, rather than offering a list of possible sources. Therefore, not every stakeholder we interviewed commented on whether a particular document or organization represented a source of leading practices; we can only report counts of stakeholders that identified a particular document or organization. We also asked school bus industry stakeholders what areas of additional federal guidance and research, if any, are needed. In identifying sources of leading practices and areas of further federal guidance and research, our questions did not apply to 4 of the 30 stakeholders in both cases. For example, we did not ask federal agencies about what additional federal research or guidance would be useful as we instead asked them about current or future research on school bus safety. The views of these school bus stakeholders are not generalizable to the entire school bus community, but they provide us with valuable insights. We analyzed the content of interviews with stakeholders and identified sources of leading practices from our literature review in the areas of inspections, driver training, and vehicle standards.

**Table 2: List of Interviewed School Bus Safety Stakeholders**

Association of Transportation Safety Information Professionals
Blue Bird (manufacturer)
California Department of Education
California Highway Patrol
Federal Motor Carrier Safety Administration
First Student (contractor)
IC Bus (manufacturer)
Illinois Department of Transportation
Illinois State Board of Education
National Association for Pupil Transportation
National Association of State Directors of Pupil Transportation Services
National Congress on School Transportation
National Express (contractor)
National Highway Traffic Safety Administration
National Safety Council
National School Transportation Association
National Transportation Safety Board
Nebraska Department of Education and Nebraska Safety Center
New York State Department of Transportation
New York State Education Department
Pennsylvania Department of Transportation
Pennsylvania State Police
Pupil Transportation Safety Institute
<i>School Bus Fleet</i> (periodical)
Tennessee Department of Safety and Homeland Security
Thomas Built (manufacturer)
Transportation Advisory Services (consultant)
Virginia Department of Education
Washington Office of Superintendent of Public Instruction
Washington State Patrol

Source: GAO. | GAO-17-209

# Appendix II: Description of Eight Selected States' Requirements on School Bus Safety

In our review of eight selected states, we found variation in state requirements for and implementation of school bus inspection, driver training, and vehicles standards for maximum age and seating capacity, as shown in table 3 below.

**Table 3: Selected Eight States' School Bus Safety Requirements**

State	Inspections	Driver training <sup>a</sup>	Maximum age and seating capacity <sup>b</sup>
<b>Number of school buses and K-12 public students transported daily in 2013–2014 school year</b>			
<b>California</b>			
<ul style="list-style-type: none"> <li>15,926 district- and stated-owned buses</li> <li>8,287 contractor-owned buses</li> <li>666,314 students</li> </ul>	<ul style="list-style-type: none"> <li>California Highway Patrol oversees school bus inspections.</li> <li>State inspectors annually inspect all school buses. (CAL. VEH. CODE § 2807(a) (2016))</li> <li>All school bus operators are required to inspect their school buses every 3,000 miles or every 45 days, whichever occurs first (CAL. CODE REGS. tit. 13, § 1232(b) (2016))</li> </ul>	<ul style="list-style-type: none"> <li>California Department of Education oversees school bus driver training.</li> <li><u>Entry-level training</u>: A minimum of 20-hours classroom and 20-hours behind-the-wheel training. (CAL. EDUC. CODE § 40082 (2016))</li> <li><u>Refresher training</u>: A minimum of 10 hours each year. (CAL. EDUC. CODE § 40085 (2016))</li> <li>State-certified instructors train school bus drivers.</li> </ul>	<ul style="list-style-type: none"> <li>No state requirements on maximum vehicle age or seating capacity.</li> </ul>
<b>Illinois</b>			
<ul style="list-style-type: none"> <li>29,000 buses<sup>c</sup></li> <li>1,157,791 students</li> </ul>	<ul style="list-style-type: none"> <li>Illinois Department of Transportation oversees school bus inspections.</li> <li>Private, certified inspectors inspect all school buses every 6 months or 10,000 miles, whichever occurs first, at official testing stations. (625 ILL. COMP. STAT. 5/13-109 (a) (2016))</li> <li>State inspectors also conduct random inspections of school buses. (625 ILL. COMP. STAT. 5/13-109 (b) (2016))</li> </ul>	<ul style="list-style-type: none"> <li>Illinois State Board of Education and Secretary of State oversee driver training program.</li> <li><u>Entry-level training</u>: Training is required, but no set minimum hours. It generally takes a minimum of 8-hours. (625 ILL. COMP. STAT. 5/6-106.1 (2016))</li> <li><u>Refresher training</u>: A minimum of 2-hours of training is required annually. (625 ILL. COMP. STAT. 5/6-106.1 (2016) and 92 ILL. ADM. CODE § 1035.10 (2016))</li> </ul>	<ul style="list-style-type: none"> <li>No state requirements on maximum vehicle age.</li> <li>School buses cannot operate with more passengers than manufacturer's recommended capacity. (625 ILL. COMP. STAT. 5/12-707 (2016))</li> </ul>

**Appendix II: Description of Eight Selected States' Requirements on School Bus Safety**

State	Inspections	Driver training <sup>a</sup>	Maximum age and seating capacity <sup>b</sup>
<b>Number of school buses and K-12 public students transported daily in 2013–2014 school year</b>			
<b>Nebraska</b>			
<ul style="list-style-type: none"> <li>• 5,743 district-owned buses</li> <li>• 1,310 contractor-owned buses</li> <li>• 44,619 students</li> </ul>	<ul style="list-style-type: none"> <li>• Local districts and contractors are required to inspect school buses before the beginning of school year and every 80 days thereafter during the school year. (NEB. ADMIN. R. &amp; REGS. Title 92, Ch. 93 (2016))</li> </ul>	<ul style="list-style-type: none"> <li>• Nebraska Department of Education contracts with University of Nebraska - Nebraska Safety Center to provide training.</li> <li>• <u>Entry-level training</u>: A minimum of 11 hours. (NEB. ADMIN. R. &amp; REGS. Title 92, Ch. 91, 002.5 (2016))</li> <li>• <u>Refresher training</u>: A minimum of 3 hours within 5 years of completing entry-level training and then every 5 years thereafter. (NEB. ADMIN. R. &amp; REGS. Title 92, Ch. 91, 002.7 and 003.03C3 (2016))</li> <li>• Instructors are experienced school bus drivers trained by the Nebraska Safety Center.</li> </ul>	<ul style="list-style-type: none"> <li>• No state requirements on maximum vehicle age.</li> <li>• School buses cannot operate with more passengers than manufacturer's recommended capacity. (NEB. REV. STAT. § 79-609 (2016))</li> </ul>
<b>New York</b>			
<ul style="list-style-type: none"> <li>• 25,000 district-owned buses</li> <li>• 25,000 contractor-owned buses</li> <li>• 1,875,000 students</li> </ul>	<ul style="list-style-type: none"> <li>• New York State Department of Transportation oversees school bus inspections.</li> <li>• New York State Department of Transportation inspectors inspect all school buses every six-months. (N. Y. COMP. CODES R. &amp; REGS. tit. 17, § 720.2 (2016))</li> </ul>	<ul style="list-style-type: none"> <li>• New York State Education Department oversees school bus driver training.</li> <li>• <u>Entry-level training</u>: A minimum of 3 hours of initial instruction (i.e., pre-service) and 30-hour basic training course within the first year of employment, including at least 2 hours of training on transporting special needs students. (N. Y. COMP. CODES R. &amp; REGS. tit. 8, § 156.3(b)(5)(ii)(a)(b) (2016))</li> <li>• <u>Refresher training</u>: A minimum of 2 hours is required at least twice a year. (N. Y. COMP. CODES R. &amp; REGS., tit. 8, § 156.3(b)(5)(iii) (2016))</li> <li>• State-certified instructors, who are school district employees or contractors, train school bus drivers.</li> </ul>	<ul style="list-style-type: none"> <li>• No state requirement on maximum vehicle age.</li> <li>• State has a maximum seating capacity of 84 student passengers. (N. Y. COMP. CODES R. &amp; REGS. tit. 17, § 720.4 (p)(2)(i) (2016))</li> </ul>

**Appendix II: Description of Eight Selected States' Requirements on School Bus Safety**

State	Inspections	Driver training <sup>a</sup>	Maximum age and seating capacity <sup>b</sup>
<b>Number of school buses and K-12 public students transported daily in 2013–2014 school year</b>			
<b>Pennsylvania</b>			
<ul style="list-style-type: none"> <li>4,418 district-owned buses</li> <li>17,400 contractor-owned buses</li> <li>1,525,579 students</li> </ul>	<ul style="list-style-type: none"> <li>Pennsylvania State Police oversees school bus inspections.</li> <li>State inspectors annually inspect all school buses. (67 PA. CODE § 171 (2016))</li> <li>State inspectors also conduct spot checks on school buses between October and May of each year.</li> </ul>	<ul style="list-style-type: none"> <li>Pennsylvania Department of Transportation oversees school bus driver training.</li> <li><u>Entry-level training</u>: A minimum of 20 hours including 14 hours classroom training and 6 hours behind-the-wheel training. (67 PA. CODE § 71.5 (c)(1)(2) (2016))</li> <li><u>Refresher training</u>: A minimum of 10 hours including at least 7 hours in classroom and 3 hours behind-the-wheel, every 4 years. (67 PA. CODE § 71.5 (d) (2016))</li> <li>State-certified instructors train school bus drivers.</li> </ul>	<ul style="list-style-type: none"> <li>No state requirements on maximum vehicle age or seating capacity.</li> </ul>
<b>Tennessee</b>			
<ul style="list-style-type: none"> <li>6,319 district-owned buses</li> <li>1,991 contractor-owned buses</li> <li>654,785 students</li> </ul>	<ul style="list-style-type: none"> <li>Tennessee Highway Patrol oversees school bus inspections.</li> <li>State inspectors annually inspect all school buses, and inspect older school buses twice a year. (TENN. COMP. R. &amp; REGS. CH. 1340-03-03-.03 (2016))</li> <li>State inspectors also conduct random inspections of at least 10 percent of the statewide school bus fleet annually.</li> </ul>	<ul style="list-style-type: none"> <li>Tennessee Highway Patrol also oversees and provides driver training.</li> <li><u>Entry-level training</u>: No entry-level training required.</li> <li><u>Refresher training</u>: An annual minimum of 4 hours is required. (TENN. COMP. R. &amp; REGS. CH. 1340-03-03-.07 (2016))</li> <li>School-district staff can also provide training with oversight and approval from the state.</li> </ul>	<ul style="list-style-type: none"> <li>State limits using small buses up to 15 years and large buses up to 18 years. Large school buses can also be used up to 19 years as long as it has less than 200,000 miles and has passed inspections. (TENN. CODE ANN. § 49-6-2109 (2016), TENN. COMP. R. &amp; REGS. 0520-01-05-.01 (2016))</li> <li>School buses cannot operate with more passengers than manufacturer's recommended capacity. (TENN. CODE ANN. § 49-6-2110 (2016))</li> </ul>

**Appendix II: Description of Eight Selected States' Requirements on School Bus Safety**

State	Inspections	Driver training <sup>a</sup>	Maximum age and seating capacity <sup>b</sup>
<b>Number of school buses and K-12 public students transported daily in 2013–2014 school year</b>			
<b>Virginia</b>			
<ul style="list-style-type: none"> <li>• 16,020 district-owned buses</li> <li>• 159 contractor-owned buses</li> <li>• 860,999 students</li> </ul>	<ul style="list-style-type: none"> <li>• Local districts and contractors are required to inspect school buses every 45 days or 5,000 miles. (VA. CODE ANN. 20-70-130 (2016))</li> <li>• Virginia Department of Education staff conduct periodic fleet assessments of school buses and transportation operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Virginia Department of Education oversees driver training.</li> <li>• <u>Entry-level training</u>: A minimum of 24-hours classroom and 24-hours behind-the-wheel training. (VA. CODE ANN. § 22.1-181 (2016), VA. ADMIN. CODE, tit. 8, § 20-70-350 (2016))</li> <li>• <u>Refresher training</u>: A minimum of 4 hours of training each year—2 hours before the school year starts and 2 hours during second half of the school year. (VA. CODE ANN. § 22.1-181 (2016), VA. ADMIN. CODE, tit. 8, § 20-70-360 (2016))</li> <li>• State-certified instructors train school bus drivers.</li> </ul>	<ul style="list-style-type: none"> <li>• No state requirements on maximum vehicle age or seating capacity.</li> <li>• State has a funding program to replace school buses with a 15-year life cycle, but operators can use buses beyond this life cycle.</li> </ul>
<b>Washington</b>			
<ul style="list-style-type: none"> <li>• 8,839 district- and stated-owned buses</li> <li>• 1,310 contractor-owned buses</li> <li>• 355,288 students</li> </ul>	<ul style="list-style-type: none"> <li>• Washington State Patrol oversees school bus inspections.</li> <li>• State inspectors annually inspect all school buses. (WASH. REV. CODE § 46.32.010 (2016) and WASH. ADMIN. CODE § 392-143-035 (2016))</li> <li>• State also requires an unannounced, second inspection of 25 percent of each school bus operator's fleet each year.</li> </ul>	<ul style="list-style-type: none"> <li>• Washington Office of Superintendent of Public Instruction oversees driver training.</li> <li>• <u>Entry-level training</u>: Training is required, but no set minimum hours. It generally takes about 48-to-58 hours based on driver's previous experience. (WASH. ADMIN. CODE § 392-144-101 (2016))</li> <li>• <u>Refresher training</u>: Training is required, but no set minimum hours. It generally takes about 4 hours and is required by November 1 of each year. (WASH. ADMIN. CODE § 392-144-102 (2016))</li> <li>• State-trained instructors, who are school district employees or contractors, train school bus drivers.</li> </ul>	<ul style="list-style-type: none"> <li>• No state requirements on maximum vehicle age or seating capacity.</li> <li>• State has a funding program to replace small school buses, with a life cycle of 8 years for small buses and 13 years for large buses, but operators can use buses beyond these life cycles. (REV. CODE WASH. § 28A.160.205 (2016))</li> </ul>

Source: GAO analysis of state data and interviews with state officials. | GAO-17-209



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**Appendix II: Description of Eight Selected States' Requirements on School Bus Safety**

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<sup>a</sup>Across the eight states, we use the terms entry-level training and refresher training to consistently distinguish training required for new drivers before or as they start driving school buses from training required of all drivers on a regular basis in our report. However, individual states may use other terms in law, regulation, and guidance. For example, entry-level training may also be called pre-service, basic, original, or initial training, and refresher training may also be called in-service, recurrent, or renewal training.

<sup>b</sup>For the selected states where our search did not identify state requirements for maximum vehicle age or seating capacity on school buses, state officials confirmed that no state requirements existed.

<sup>c</sup>According to a state official, this is an estimated number of school buses.

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# Appendix III: GAO Contact and Staff Acknowledgments

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## GAO Contact

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## Staff Acknowledgments

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