

**Regulation of Private School Buses  
in Virginia:**

**Results of a Study Mandated by the NTSB**

by

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<p><b>Abstract</b></p> <p>In response to major accidents in Florida and Alabama involving privately-owned and privately-operated school buses, the National Transportation Safety Board (NTSB) issued three safety recommendations to the governors of all states and required each state to respond regarding its efforts to comply with these recommendations. This report constitutes Virginia's response to the NTSB.</p> <p>The NTSB's recommendations require states and localities to take an active role in licensing and training the drivers of these private vehicles. Although all states comprehensively regulate public school vehicles and drivers, the NTSB observed that privately-owned vehicles used by nonpublic schools as well as churches, clubs, and other activity groups tend to be excluded from the regulatory scheme.</p> <p>This report analyzes the statutory and regulatory scheme for school buses in Virginia, assesses Virginia's compliance with the NTSB's recommendations, and identifies areas that require legislative action. It presents data on the ownership of school buses and other vehicles by nonpublic schools in Virginia. It also examines the extent to which these schools comply with the applicable statutory requirements. The report then analyzes the data on the involvement of school buses and other vehicle types in traffic accidents to determine the extent of the school bus crash problem in Virginia. Finally, the report proposes changes in the Code of Virginia and in agencies' regulatory responsibilities that would enhance Virginia's compliance with the NTSB's recommendations for private school bus safety.</p>				



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(The opinions, findings, and conclusions expressed in this report are those of the author and not necessarily those of the sponsoring agencies.)

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INTRODUCTION

Each day, thousands of children are transported to schools on Virginia's highways and roads. Most students attend public schools, and many of these students are transported on publicly-owned and publicly-operated buses. In addition, a significant number of students attend private or parochial schools and many of them are transported by privately-owned or privately-operated vehicles.

In response to major accidents in Florida and Alabama involving privately-owned and privately-operated school buses, the National Transportation Safety Board (NTSB) issued three safety recommendations to the governors of all states and required each state to respond regarding its efforts to comply with these recommendations. This report constitutes Virginia's response to the NTSB.

The NTSB's recommendations require states and localities to take an active role in licensing and training the drivers of these private vehicles. Although all states comprehensively regulate public school vehicles and drivers, the NTSB observed that privately-owned vehicles used by nonpublic schools as well as churches, clubs, and other activity groups tend to be excluded from the regulatory scheme. The NTSB's first recommendation (H-85-12) asks the states to:

Develop a model instructional program to be used by local school districts targeted at drivers of privately-owned and privately-operated pupil transportation vehicles that includes a review of all applicable laws, regulations, and policies governing pupil transportation safety, first-aid, and pretrip inspections, and encourage drivers of privately owned and privately-operated pupil transportation vehicles to participate in the program.

Further, the Board reissued Recommendations H-84-72 and H-79-31, which request the states to:

Enact appropriate legislation to require all prospective operators of noncommercial buses to demonstrate their driving skills by taking an appropriate written examination and road

test in the size vehicle for which the license is to be issued (H-84-72).

Enact legislation to require that the driver of any motor vehicle with a seating capacity of more than 16 passengers, whether so employed or acting voluntarily, shall possess, in addition to a properly classified State drivers license, a certificate authenticating such driver's successful completion of a bus driver training course which conforms to the NHTSA Highway Safety Program Standard No. 17, "Pupil Transportation Safety" (H-79-31).

This report first analyzes the statutory and regulatory scheme for school buses in Virginia, assesses Virginia's compliance with the NTSB's recommendations, and identifies areas that require legislative action. The next section presents data on the ownership of school buses and other vehicles by nonpublic schools in Virginia. It also examines the extent to which these schools comply with the applicable statutory requirements. The report then analyzes the data on the involvement of school buses and other vehicle types in traffic accidents to determine the extent of the school bus crash problem in Virginia. Finally, the report proposes changes in the Code of Virginia and in agencies' regulatory responsibilities that would enhance Virginia's compliance with the NTSB's recommendations for private school bus safety.

#### STATUTORY SCHEME

Because of ambiguities in the Code of Virginia, the applicability of some of the statutory regulations to privately-owned and privately-operated school buses is unclear. This uncertainty is apparent in the statutory definition of school buses, which defines a school bus as:

Any motor vehicle, other than a station wagon, automobile, truck, or commercial bus, which is: (i) designed and used primarily for the transportation of pupils to and from public, private or parochial schools, or used for the transportation of the mentally or physically handicapped to and from a sheltered workshop; (ii) painted yellow and bears the words "School Bus" in black letters of a specified size on front and rear; and (iii) is equipped with warning devices prescribed in § 46.1-287. . .

Va. Code § 46.1-1 (37) (1986). While this "common sense" definition may have been clear at some time, the current proliferation of different vehicle types, such as vans and minibuses, leaves the scope of the definition uncertain. The "any motor vehicle" language indicates that the definition is not limited to full-size buses; however, several other terms used in the provision -- station wagon, automobile, and commercial bus -- are not defined elsewhere.\* This ambiguity produces difficulties in enforcing other provisions which rely on the school bus definition.

In addition, the federal Commercial Motor Vehicle Safety Act of 1986 (CMVSA) will affect the licensing and testing of school bus operators. The CMVSA defines commercial vehicles as vehicles that exceed 26,001 pounds (although the Department of Transportation may adopt regulations that lower the threshold to 10,001 pounds) or that are "designed to transport more than 15 passengers, including the driver." 49 U.S.C. 2716 (1987 Supp.) Although the school bus definition in the Virginia Code does not refer to any particular seating capacity, several other provisions already incorporate the fifteen passenger standard. For instance, section 46.1-169.1 forbids vehicles with seating capacity in excess of fifteen passengers from being painted yellow, unless the vehicle is used for transporting pupils who "attend public, private, or parochial" schools and meets the definition of a school bus. Va. Code § 46.1-161.1 (1986). The reference to seating capacity is repeated in section 46.1-287.1, which authorizes organizations to hire school buses. The provision states:

Any private individual, corporation or civic, charitable or eleemosynary organization, for the purpose of transporting children to or from school, camp or any other place during any part of the year, may contract to hire motor vehicles identified as regular school buses, having a seating capacity of more than fifteen persons, which are painted yellow, and if such motor vehicles are used for such purpose they shall be equipped and operated in the same manner as are regular school buses. . . .

Va. Code § 46.1-287.1 (1986). Although the licensing and training provisions of the Code must abide by the new federal commercial vehicle standards, the basic school bus definition should probably not incorporate the seating threshold. A specific reference to seating capacity might unduly limit the applicability of other provisions relating to school buses (such as the applicability of driver qualifications), which should be applied to smaller vehicles that otherwise meet the school bus definition because of their use and special safety equipment. Ambiguities as to which vehicles are within the scope of the definition

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\* It is unclear whether "automobile" is more or less inclusive than "passenger car," which is defined as any vehicle transporting up to 10 passengers. See Va. Code § 46.1-1(18a)(1986).

could be clarified by requiring the DMV to establish a special registration for school buses. This would also facilitate the enforcement of other statutory requirements that rely on the school bus definition.

### Vehicle Regulations

Based on the school bus definition, many statutory regulations of school buses apply to vehicles used by both public and private schools. For instance, section 46.1-286.1 requires "motor vehicles, except commercial buses, station wagons, automobiles or trucks, transporting pupils to and from public, private or parochial school" to be painted yellow, bear the words "School Bus" on the front and rear, and have the proper warning devices. Va. Code § 46.1-286.1 (1986). However, only vehicles used for daily transportation have to abide by these requirements: "[A] vehicle which merely transports pupils, residents of a school, from one point to another without intermittent stops for the purposes of picking up or discharging pupils, need not comply with the requirements of this section. Id. The exemption thus permits boarding schools or extracurricular activities (and apparently churches and other activity groups) to use vehicles which are not technically school buses; consequently, the drivers of such vehicles are not required to be licensed as school bus drivers.

Several statutory provisions apply to both public and private school buses. For example, drivers must stop when approaching a "clearly marked publicly or privately owned school bus" that is stopped to pick up or discharge passengers. Va. Code § 46.1-213 (1986). Further, "[a]ll school buses transporting pupils to and from all public, private or parochial schools or in connection with such schools" must be routed so that passengers will not have to cross a divided highway. Va. Code § 46.1-169.1 (1986). Finally, section 46.1-193(d) limits speeds of any "vehicle [that] is being used as a school bus carrying children" to 45 mph on interstate highways and 35 mph or the minimum speed on other roads, and appears to apply indiscriminately to all vehicles used for pupil transportation.

### Inspection

All vehicles registered in the Commonwealth must be inspected annually. Passenger cars are inspected by licensed inspection stations, and vehicles larger than 10,000 pounds are inspected, according to the standards for commercial vehicles, by inspection stations licensed by the Department of State Police. Most school buses fall into the latter category. Because the inspection manual for such commercial vehicles does not include safety devices unique to school buses, the annual inspection of school buses does not focus on these special features.

This annual inspection is the only inspection private school buses (and buses owned by churches or activity groups) must obtain.

In addition to the official State Police inspection, public school buses are subject to three other types of inspections. First, the drivers themselves perform daily pretrip inspections in accordance with the requirements of the Board of Education embodied in the driver's manual and training program. Second, each local school division is required by the Board of Education to perform an inspection of the public school buses within its territory every thirty days or 1,500 miles (whichever comes first) in accordance with the inspection and maintenance program manual. Third, each bus is inspected annually by the Department of Education (DOE) for compliance with state standards and specifications. The DOE inspects the safety equipment as well as approving or disapproving the general condition of the bus.

Thus, public school vehicles are subject to much more rigorous inspection procedures than private school buses.

#### Licensing

There are three possible endorsements private school bus drivers may need, depending on how their vehicle is classified. First, a school bus endorsement (Class "S" license) is necessary only if the vehicle complies with the school bus definition in Virginia Code section 46.1-1(37). Va. Code § 46.1-373(4) (1986). The Class B endorsement is required "to operate passenger carrying buses other than school buses equipped with more than 32 passenger seats." Va. Code § 46.1-373(1) (1986). Finally, a "chauffeur's" license under section 46.1-373(5) must be obtained by "[e]very person employed for the principal purpose of operating a motor vehicle and every person who drives a motor vehicle while in use as a public or common carrier of persons . . ." Va. Code § 46.1-1(2) (1986). School bus drivers are exempt from obtaining a chauffeur's license. Va. Code § 46.1-374 (1986).

All applicants for these special endorsements, except for Class S, must state that they have driven at least 500 miles in the type of vehicle for which a license is sought. Va. Code § 46.1-373 (1986). However, no verification of the applicant's statement is required. Applicants for a chauffeur's license need only take an additional eye test. Applicants for Class S and Class B licenses must take specialized written and road tests. The Code of Virginia specifically addresses only the school bus licensing examination, authorizing the DMV to adopt regulations concerning school bus licensing. See Va. Code § 46.1-370 (1986).

The CMVSA may require some changes in these provisions and their implementation. First, the federal definition of "commercial motor

vehicle" as a vehicle designed to transport more than fifteen passengers will mandate the lowering of the Class B license requirement from thirty-two to fifteen passengers. Second, although the DMV currently requires written and road tests for all bus drivers, the content of the test may have to be altered to meet the federal requirements that will be established by the U.S. Department of Transportation. See 49 U.S.C. 2704 (1987 Supp.)

### Qualifications

The statutory qualifications for school bus drivers and the scope of administrative authority over privately-owned and privately-operated school buses are enumerated in Title 22.1, which governs pupil transportation by the DOE. The Board of Education is authorized to establish regulations regarding "the construction, design, operation, equipment, and color of public school buses." Va. Code § 22.1-177 (1986) (emphasis added). The term "public school bus" is not defined in Title 22.1; however, the Pupil Transportation Division of the DOE has defined its authority to extend to all buses driving students to public schools, including buses contracted from other sources but not owned by the public schools. However, because of the limited "public school bus" language in § 22.1-177, the DOE has interpreted its jurisdiction to include only vehicles transporting pupils to public schools and to exclude all vehicles going to non-public schools (except those transporting handicapped pupils under contract with the public school board). This limitation in the regulatory authority of the DOE leaves a significant gap in enforcing the licensing and other requirements for school bus drivers.

Further, the Board of Education is authorized to "develop a training program for persons applying for employment, and employed, to operate school buses and shall promote its implementation." Va. Code § 22.1-181 (1986) (emphasis added). This provision on its face is not restricted to public school bus drivers. Indeed, while the DOE requires only public school bus drivers to complete the training program, the program is open to school bus drivers employed by private schools as well. However, due to cutbacks in § 406 federal funds, private bus drivers are no longer invited to attend these workshops, although they may attend at their own expense. Thus, while the DOE has limited authority under § 22.1-181 to provide training to private school bus drivers, budgetary constraints prevent the full implementation of such programs.

The Code also specifies qualifications for public school bus drivers and a method for enforcing these requirements. Drivers employed by public school boards must have a school bus license, an annual physical exam, two character references, and a clean DMV record. See Va. Code § 22.1-178 (1985). The local school board is responsible for

maintaining files on each driver. Va. Code § 22.1-178(d) (1985). At the beginning of each school year, or whenever changes need to be made, the local school board must furnish the DOE with the names and driver's license numbers of all school bus drivers. Va. Code § 46.1-370.01 (1986). The statute further requires the DMV to notify the DOE whenever a license with a school bus endorsement is suspended or revoked, or the driver is convicted of reckless driving or DUI. Id. The DOE must then notify the local school of the violation. Id.

Private schools are not included in the Section 46.1-370.01 reporting requirements. They are, however, mandated to hire only those drivers who comply with the same qualifications as public school bus drivers. Va. Code § 22.1-180 (1985). There is no statutory enforcement mechanism for ensuring that private schools comply with the driver requirements; the Code only requires the DOE to furnish the qualification forms on request by the school or other organization; it does not mandate that private schools maintain files on each driver. According to the DOE, fewer than 2% of private schools have requested these forms.

As this analysis suggests, the mere fact that the legislature has mandated that school buses and their drivers meet certain standards does not alone ensure that these requirements will be fulfilled in practice. In some cases, the problem may be due to an ambiguity in the coverage of the statute (such as with the Code's definition of school bus). Such situations may be remedied by statutory amendment clarifying the scope of coverage.

In other cases, such as enforcing driver qualifications, the disparity in treatment between private and public school buses could be remedied by expanding the authority of the relevant state agencies over private school buses.

Although such legislative changes would be required to place Virginia in full compliance with the NTSB's recommendations, they would also increase the burdens on the DMV and the DOE in administering the pupil transportation requirements. To determine the extent of these added burdens, it is necessary to know more about private schools' ownership and operation of vehicles as well as their current compliance with applicable regulations. Because the DOE does not currently regulate pupil transportation to and from private schools, no such data exist. Thus, it was necessary to conduct a survey of private schools in the Commonwealth to establish their current status in these areas. The methodology and results of this survey are reported below.

## SURVEY OF VEHICLE OWNERSHIP AND OPERATION BY PRIVATE SCHOOLS

### Methodology

In November 1986, questionnaires were sent to all accredited private schools in Virginia that were on the 1983-84 list supplied by the DOE, which was the most recent listing of accredited schools then available (See Appendix A). A follow-up letter was sent in December to schools that had not responded, submitted incomplete questionnaires, or been added to the 1984-85 accredited list. Responses were obtained from 116 of the 134 schools from the 1983-84 and 1984-85 lists for a response rate of 87%.

Despite the high response rate, it should be remembered that because the state does not maintain records of unaccredited schools, the survey was not a comprehensive catalog of all private schools in Virginia. The survey also did not attempt to locate or poll activity groups, clubs, and church groups since most of the current statutory regulations do not apply to these organizations. Nevertheless, it is unlikely that the few unaccredited schools would have substantially different use patterns from the schools surveyed, or that the other groups would contribute significantly to the total regulatory burden. Thus, the data should provide a starting point for understanding the usage of vehicles by private organizations and their knowledge of applicable statutory regulations.

### Survey Population

The private schools responding to the survey ranged in size from 50 to 1725 students. The distribution of schools by size is presented in Figure 1. More than half of the schools (63) had between 100 and 300 pupils. Only 4 schools were smaller than 100 pupils, but 21 were larger than 500, with 5 of those larger than 1,000. The difference between the median school size of 255 pupils and the mean of 344 illustrates the irregularity of the distribution, which is skewed toward the larger schools. For purposes of data analysis, schools were divided into three groups: small (1-199 pupils, 35%), medium (200-399 pupils, 34%), and large (400 or more pupils, 30%).

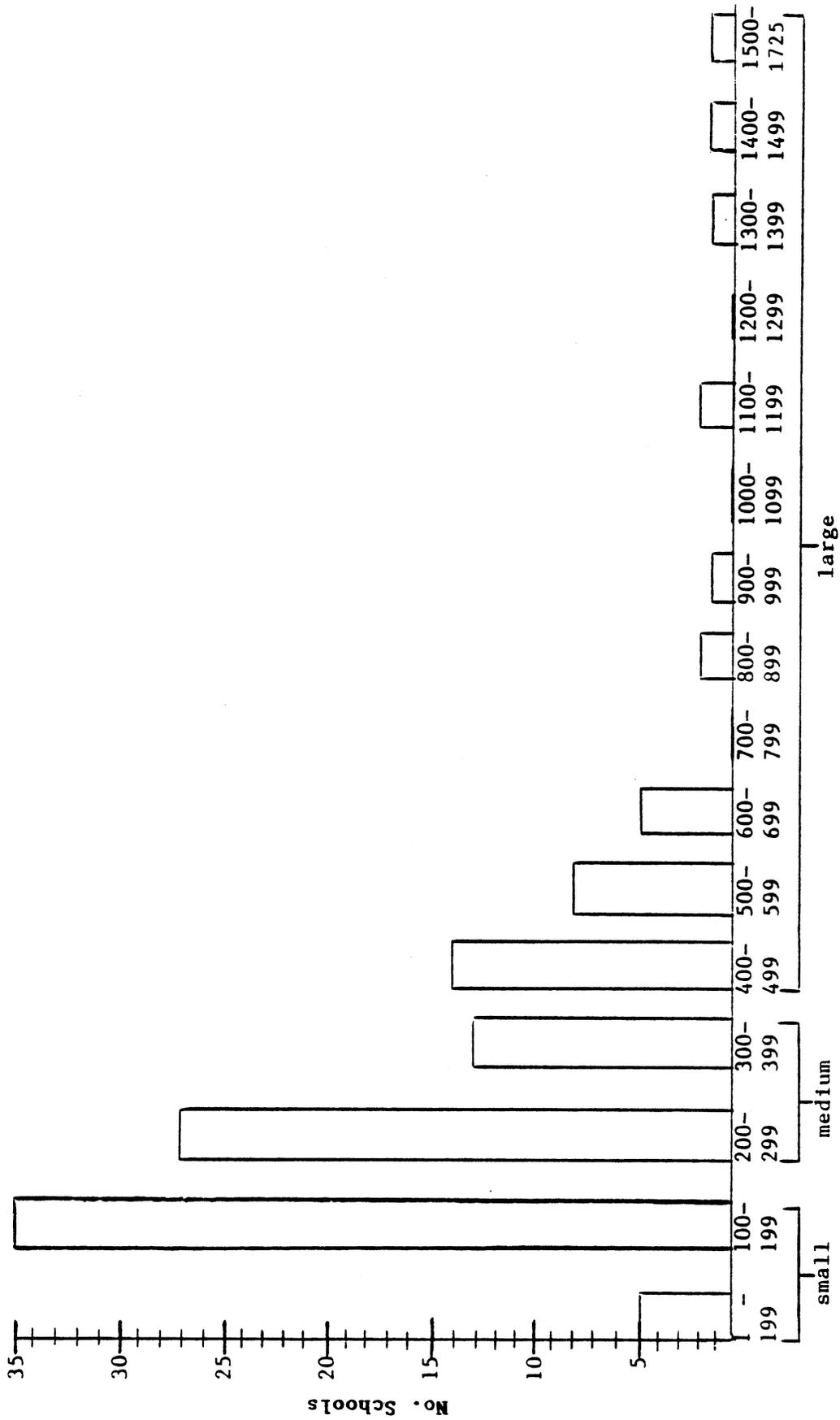


FIGURE 1: DISTRIBUTION OF SCHOOL BY SIZE

### Vehicle Ownership

The survey respondents owned a total of 555 vehicles. Nearly two-thirds -- 75 of 116 -- owned at least one vehicle. Of those owning vehicles, 48% (36 schools) owned between 1 and 5, 33% (25 schools) owned 6 to 10, and 10% (14) schools owned more than 11.

Whether a school owned vehicles is unrelated to the size of the school, although the number of vehicles owned is size-related. As Table 1 shows, roughly a third of small (15), medium (14), and large (12) schools did not own any vehicles. However, 8 (23%) of the large schools had more than 11 vehicles, compared to 5 (13%) of the medium schools and 1 (2%) of the small schools.

TABLE 1: SIZE OF SCHOOL AND VEHICLE OWNERSHIP

<u>Number of Vehicles</u>	<u>Size of School</u>			<u>Total</u>
	<u>Small</u>	<u>Medium</u>	<u>Large</u>	
0	15(37%)	14(35%)	12(34%)	41(36%)
1-5	17(41%)	13(33%)	6(17%)	36(31%)
6-10	8(20%)	8(20%)	9(26%)	25(21%)
more than 11	1(2%)	5(13%)	8(23%)	14(12%)

### Buses

Of the 555 vehicles owned by private schools, 268 (or 48%) were full size buses. This figure is dwarfed by the 9,130 public school buses in service (1984/85 school year).\* Only a third of the small (15) and medium-sized schools (16) own buses, compared to two-thirds (23) of the large schools (See Table 2).

Of the 54 schools that own at least one bus, two-thirds (35) own between 1 and 5 buses, with nearly a fourth (13 schools) owning only one bus. Fourteen schools (27%) own between six and ten buses, whereas only five schools - four large and one medium sized - own more than eleven.

\* Data supplied by the Pupil Transportation Division of the DOE.

TABLE 2: SIZE OF SCHOOL AND OWNERSHIP OF BUSES

<u>Number of Buses</u>	<u>Size of School</u>			<u>Total</u>
	<u>Small</u>	<u>Medium</u>	<u>Large</u>	
0	26(63%)	24(60%)	12(34%)	62(54%)
1-5	12(29%)	9(23%)	14(40%)	35(30%)
6-10	3( 7%)	6(15%)	5(14%)	14(12%)
more than 11	0( 0%)	1( 3%)	4(11%)	5( 4%)

Vans and Other Vehicles

Vans constitute a significant proportion of the vehicle fleet owned by private schools. Private schools own a total of 202 vans. Of the 58 schools that own vans, 54 own fewer than 5. Two schools, owning 22 and 25 vans, utilize vans as their exclusive means of providing daily pupil transportation.

Other vehicle types account for a relatively small proportion of private school transportation. Private schools own 31 station wagons, 11 minibuses, and 41 other vehicles, such as passenger cars and pickup trucks.

Use of Transportation

Private schools rely on a variety of methods to provide daily and extracurricular transportation for their students, which are summarized in Table 3. The data reveal numerous variations in the uses of vehicles and in the methods of providing transportation. Some schools use their own drivers and vehicles for daily transportation and hire buses through private companies for major extracurricular trips; other schools use a private bus service for daily purposes and use their own vehicles for transportation to sports and other activities. Because of the large number of permutations and the relatively small size of the survey sample, only the aggregate data will be examined.

Fifty-five of the schools providing transportation use their own drivers, either hired, volunteers, or teachers. Thirty schools contract with private bus companies to supply some part of their transportation needs. Additionally, parents contract directly with bus companies in twelve cases. Three parochial schools have a hybrid arrangement whereby the church (or an incorporated organization affiliated with the church) legally owns the buses and the school contracts with the church to provide transportation.

TABLE 3: HOW SCHOOLS PROVIDE TRANSPORTATION

<u>Method</u>	<u>Size of School</u>			<u>Total</u>
	<u>Small</u>	<u>Medium</u>	<u>Large</u>	
Use own drivers	19	19	17	55
School contracts with company	9	11	10	30
Carpools	6	4	9	19
Parents drive	6	6	4	16
Parents contract with company	4	3	5	12
Metro/Public Transportation	1	1	5	7
Students drive	0	0	3	3
School contracts with church	0	1	2	3
Bolling AFB bus	0	1	2	3
No answer	7	6	1	14

\* Note: percentages were not calculated since multiple responses to the question were permitted.

Parents and students also bear a substantial burden of providing daily transportation. Nineteen schools rely on carpools arranged by parents, sixteen stated that parents drive their own children, and three schools reported that students drive themselves. Other sources of transportation used are the Metro servicing the Northern Virginia area or other public transportation (seven schools) and buses supplied by Bolling Air Force Base for children living on the base (three schools).

In light of the variety of mechanisms used to provide daily transportation, many of the drivers are not currently subject to state regulation.

## Compliance With Driver Requirements

As noted previously, the Virginia Code does not establish any enforcement mechanism to ensure that drivers to public schools who are required by statute to meet requirements specified in section 22.1-178 actually comply. Section 22.1-180 of the Virginia Code prohibits private schools from hiring, employing, or entering into agreements "with any person for the purpose of transporting pupils by motor vehicle" unless the driver satisfies the public school bus driver requirements of section 22.1-178 (Class S license, DMV record check, annual physical exam, and references). In theory, all drivers hired directly by the schools or employed by a bus company are clearly within the statutory mandate. However, contracts between parents and a bus company, outside bus sources, or carpools are only arguably within the statutory coverage on the theory that such providers have implicitly agreed with the school to provide such transportation. The scope of the statutory coverage must be expanded to bring these mechanisms for providing pupil transportation to private schools unambiguously under the regulatory umbrella.

Furthermore, the need for an enforcement mechanism depends on whether the private schools do, in fact, voluntarily comply with the statutory requirements. The survey questionnaire asked private school personnel, "How do you ensure that school bus drivers have complied with applicable state regulations concerning driver training, licensing, etc.?" An open-ended question was used to discover whether the person completing the form (typically the school official responsible for pupil transportation) had actual knowledge of the specific statutory requirements.

The results indicate that compliance with the statutory requirements is relatively low. As Table 4 indicates, of the fifty-six schools providing a definite response, thirty-three mentioned the S endorsement or the written or road tests required to obtain a school bus license, and sixteen schools said they check the driver's DMV record.\* Three schools specified requiring drivers to take physical exams, and only one school mentioned references. The larger schools were somewhat more likely than small or medium-sized schools to be aware of statutory requirements. Judging from the data gathered from the private school survey, many private schools do not comply with, and are probably not even aware of, the statutory requirements applicable to their drivers.

The survey data also reveal, however, that some schools go far beyond the minimum statutory requirements. Fourteen schools (eight of which are large) provide in-house training for their bus drivers, and

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\* Forty-seven respondents did not answer the question, and an additional thirteen schools made only a vague, positive response.

another four schools require drivers to complete other outside training courses. An additional four schools require drivers to attend periodic safety seminars or distribute safety handbooks to bus drivers. Two schools require drivers to complete a driving test administered by the school. It therefore appears that some private schools take an active role to ensure that drivers comply with the relevant statutory requirements and to promote safety through training programs.

TABLE 4: HOW PRIVATE SCHOOLS ENSURE COMPLIANCE WITH REGULATIONS

<u>Method</u>	<u>Size of School</u>			<u>Total</u>
	<u>Small</u>	<u>Medium</u>	<u>Large</u>	
S license	11	8	14	33
Check DMV record	4	4	8	16
In-house training	3	3	8	14
Company responsibility	2	2	9	13
Seminars/handbook	0	2	2	4
Other training	1	1	2	4
Physical exam	0	1	2	3
Driving test	2	0	0	2
No van requirements	0	2	0	2
References	0	0	1	1
Interview	0	1	0	1
Vague positive response	3	4	6	13
No answer	21	20	6	47

Other schools appear either unaware of the requirements or unwilling to comply with them. Moreover, thirteen schools that contract with private companies to provide transportation frankly stated that they are not involved in ensuring drivers' compliance because it is the company's responsibility. (It is unknown to what degree the companies themselves know about or comply with school bus driver requirements). Additionally, the two schools that rely entirely on vans for daily transportation stated that they do not comply with the regulations because van drivers do not have to meet any special requirements.

The picture that emerges from the results of the survey illustrates a wide variation in the degree of compliance with and awareness of driver requirements among private schools. Some schools have developed extensive training programs and rigorously police the compliance and performance of their employees. Other schools appear to have minimal awareness of the basic statutory criteria, such as an S endorsement. Thus, although private schools are legally required to obey the statutory mandate to use only school bus drivers who fulfill certain requirements, it appears that compliance is far from universal.

#### CRASH INVOLVEMENT OF SCHOOL BUSES

Before imposing a potentially expensive and intrusive regulatory burden on both private schools and on state agencies, it is important to identify the safety problem presented by private school vehicles. The major source of information for this is the crash statistics compiled from accident report forms.

Unfortunately, the crash statistics are a very imperfect device for measuring both experiences and causes of crashes involving private school vehicles. The major problem involves the vehicle classifications: none of the categories distinguishes vehicles based on use or ownership. Private school vehicles may be classified as school buses if they are yellow and otherwise meet the statutory definition. However, they may also be categorized with "city transit" buses, which includes non-yellow, privately-owned buses (including those owned by churches). Commercial buses under contract with private schools may be counted in the "commercial/intercity bus" category. Consequently, vehicles that are used by private schools for pupil transportation, including buses and vans, are categorized with numerous other vehicles.

Likewise, it is impossible to extract vans used for transporting private school pupils or other groups and to distinguish them from other commercially-used or family vans. In addition, the vehicle categories were changed in 1983; prior to that year, vans were not categorized separately, and buses were only classified as either "school buses" or "other buses." In light of these difficulties, the data analysis which

follows will be unable to offer any firm conclusions about the crash involvement and safety of private school vehicles. Nevertheless, it may illustrate the divergence in the crash experience and characteristics among different types of vehicles and suggest an appropriate perspective to put school bus accidents in the context of the overall highway safety picture.

### Bus Accidents

Accidents involving buses constitute a small fraction of the total number of motor vehicle accidents in the Commonwealth. The most recent figures indicate that in 1986, there were 577 school bus crashes, which amounts to less than one half of one percent of the the number of crashes involving passenger cars (181,657). Furthermore, even considering accidents involving all types of buses, not just school buses, the total is less than one percent of the passenger car figure.

As Table 5 reveals, school bus accidents have declined substantially over the past 20 years. The number of school bus accidents increased rapidly to 1,008 in 1972 and peaked at 1,114 in 1974. Since that time, the number has decreased significantly reaching a low of 532 in 1983. In 1984, the number of school bus crashes increased to 606, but declined slightly to 596 in 1985 and 577 in 1986. The current number of school bus accidents is at a level comparable to that in 1961.

TABLE 5: CRASHES BY VEHICLE TYPE  
1961 - 1986

<u>Year</u>	<u>School Buses</u>	<u>Other Buses</u>	<u>Cars</u>	<u>Vans</u>
1986*	577	654	181,657	7,557
1985	596	614	178,041	6,733
1984	606	591	161,406	5,958
1983	532	523	149,853	5,472
1982	600	520	145,505	N/A
1981	620	667	152,360	N/A
1980	610	727	147,756	N/A
1979	720	642	167,100	N/A
1978	751	711	182,756	N/A
1977	981	786	203,098	N/A
1976	774	718	188,043	N/A
1975	762	857	186,730	N/A
1974	1,114	1,151	210,679	N/A
1973	1,100	1,137	232,154	N/A
1972	1,008	1,024	234,065	N/A
1971	828	992	217,003	N/A
1970	768	975	206,080	N/A
1969	661	945	198,593	N/A
1968	649	909	181,273	N/A
1967	659	924	167,593	N/A
1966	696	955	175,553	N/A
1965	591	835	168,532	N/A
1964	653	1,003	167,227	N/A
1963	569	940	150,556	N/A
1962	545	976	143,582	N/A
1961	569	955	129,487	N/A

\* Data in Table compiled from Crash Facts Publication. 1986 data taken directly from CAPP tape, so it may not be directly comparable to prior years.

N/A: Prior to 1983 vans were not classified separately.

### Defects

Overall, vehicle defects -- such as worn tires, motor trouble, defective lights, brakes, and steering -- are apparent in less than five percent of all motor vehicle crashes (see Table 6). School buses have a slightly lower defect rate than other vehicle types. In 1986, defects were apparent in 1.7% of accidents involving school buses (10 of the 577) compared with 2.3% for passenger cars (4,263 of 181,657), 2.8% for vans (210 of 7,557), and 3.8% for other types of buses (25 of 654). As Table 6 illustrates, the defect rate in school buses has been considerably lower in the past two years than in previous years. There are also a larger percentage of defects apparent in other types of buses, in which defects have averaged 4.2% since 1980, than in school buses, which have averaged only 3.0% defective in that period of time.

Unfortunately, it is impossible to determine from the crash data whether the relatively low level of defects apparent in school buses is due to the rigorous inspection procedures for public school buses, or whether improved inspection procedures for other vehicles would have an identifiable impact on accidents. Moreover, the crash data do not indicate whether the defect caused the crash, or the seriousness of the crash caused the defect. Finally, these data show only the defects apparent in vehicles involved in crashes and cannot be used to calculate the defects in the total vehicle population on the road. Despite these limitations in the data, it is apparent that while school buses involved in crashes have had the lowest defect rate over the past two years, the rate does not differ substantially from the defect rates of other vehicles.

### Vehicle Maneuver

The vehicle maneuver variable, as coded on the accident report forms, describes what the vehicle was doing -- going straight, turning, stopped, backing up, etc. -- when it was involved in the accident. Most vehicles of all types that are involved in accidents are simply going straight ahead. As Table 7 shows, in 48% (276) of the school buses involved in accidents in 1986, the school bus was simply going straight ahead. Similarly, 54% (98,357) of passenger cars, 51% (3879) of vans, and 44% (268) of city transit buses were going straight.

The most significant difference between buses and other vehicles is the crashes occurring while the vehicle was stopped in the traffic lane -- obviously a frequent maneuver for buses, which must stop to pick up and discharge passengers. In 1986, nearly one fourth of the bus accidents [23% (133) of school buses and 27% (131) of city transit buses] occurred when the bus was stopped in the traffic lane. In contrast, only 11% of cars (19,613) and 13% of vans (1,014) were stopped when their crash occurred.

TABLE 6: VEHICLE DEFECTS

Year	<u>School Bus</u>			<u>Other Buses</u>			<u>Cars</u>			<u>Vans</u>		
	<u>No. Crashes</u>	<u>No. Defects</u>	<u>Percent</u>									
1986	577	10	1.7	654	25	3.8	181,657	4,263	2.3	7,557	210	2.8
1985	596	10	1.7	614	21	3.4	178,041	5,003	2.8	6,733	231	3.4
1984	606	16	2.6	591	22	3.7	161,406	4,793	3.0	5,958	218	3.7
1983	532	24	4.5	523	18	3.1	149,853	4,633	3.1	5,472	207	3.8
1982	600	13	2.2	520	22	4.2	145,505	4,523	3.1			
1981	620	25	4.0	667	40	6.0	152,360	4,958	3.3			
1980	610	28	4.6	727	34	4.7	147,756	4,918	3.3			
Since 1980	4,141	126	3.0	4,296	182	4.2	1,116,578	33,091	3.0	25,720*	866*	3.4*

\*Since 1983

TABLE 7

## FIVE MOST PREVALENT MANEUVERS IN CRASHES BY VEHICLE TYPE AND YEAR

Maneuvers		1986 Percent	1985 Percent	1984 Percent	1983 Percent
Going Straight Ahead	School Bus	48	49	43	46
	City Bus	44	49	43	47
	Van	51	51	47	49
	Car	54	53	49	50
Stopped in Traffic Lane	School Bus	23	18	19	17
	City Bus	22	15	17	16
	Van	13	10	11	11
	Car	11	10	10	10
Slowing or Stopping	School Bus	7	7	5	7
	City Bus	11	7	7	6
	Van	6	7	6	6
	Car	5	5	5	5
Making Left Turn	School Bus	7	9	12	10
	City Bus	5	10	9	8
	Van	9	10	11	11
	Car	13	12	13	13
Making Right Turn	School Bus	5	6	6	6
	City Bus	6	7	8	7
	Van	4	4	4	4
	Car	2	3	4	4
TOTALS	School Bus	516	497	506	462
	City Bus	534	438	405	341
	Van	6,268	5,396	4,734	4,362
	Car	152,584	142,654	130,189	121,247

In addition, over the past four years this percentage has been increasing for buses, but much less significantly for both vans and cars. In 1983, 17% of the school bus accidents occurred while the bus was stopped, compared to 19% in 1984, 18% in 1985 and 23% in 1986. Comparable figures are evident for city transit buses, where the crashes while stopped have risen from 16% in 1983 to 22% in 1986. On the other hand, 10% of cars in 1983, 1984, and 1985 and 11% in 1986 were in crashes while stopped.

The crash statistics indicate that regardless of the effectiveness of programs aimed at school bus safety, the overall accident rate for all vehicles will not decrease appreciably. Further, because private school buses constitute such a small fraction of all school buses on the road, safety measures aimed at private school vehicles are unlikely to have a visible impact on overall school bus crash statistics. Nevertheless, efforts to reduce particularly prevalent types of bus crashes (i.e., while stopped in traffic lane) could significantly enhance the safety of bus operations.

#### CONCLUSIONS AND RECOMMENDATIONS

1. Issue: Ambiguous definition of "school bus" in Section 46.1-1(37).  
  
Problem: The definition of "school bus" in the Motor Vehicle Code is uncertain because it refers to other vehicles ("automobile," "station wagon," and "commercial bus"), which are not defined elsewhere.  
  
Options: (a) Define in § 46.1-1 the terms "automobile," "station wagon," and "commercial bus."  
  
(b) Require vehicles meeting the definition to obtain a special registration from the DMV.
2. Issue: Lack of authority of the DOE to regulate the transportation of private school students.  
  
Problem: The DOE lacks authority to specify the mechanical requirements for private school vehicles and to enforce compliance with the statutory qualifications for private school bus drivers. The survey of accredited private schools in Virginia indicated that voluntary compliance with the statutory requirements is quite low.

- Options:
- (a) Incorporate the definition of "school bus" from Title 46.1 in Title 22.1, deleting the reference to "public" school buses in Section 22.1-177, to give regulatory authority over private school transportation to the DOE.
  - (b) Require private schools to provide the DOE driver information forms on each school bus driver who is either employed directly by the school or supplies services pursuant to a contract with the school or a group of parents.
  - (c) Require the DOE to maintain records on each school bus driver employed by private schools and to notify the school when the driver is charged with the traffic infractions specified in § 46.1-370.01.

3. Issue: Licensing and training of drivers who transport private school students or members of activity groups.

Problem: Drivers of vehicles that are considered neither school buses nor full-size buses do not have to obtain any special licenses or training; consequently, many drivers who supply transportation to private schools or to activity groups are virtually unregulated. While the DOE has the authority to encourage private school drivers to attend training programs, it does not have the power to compel either private school drivers or other drivers to complete such programs. The deficiencies place Virginia in clear noncompliance with the NTSB recommendations.

- Options:
- (a) Change the requirement for a Class B (other bus) license to apply to vehicles with a capacity in excess of fifteen passengers, rather than the current thirty-two passengers in Va. Code §46.1-373(1).
  - (b) Require all drivers of all motor vehicles with a capacity in excess of fifteen passengers, whether employed or acting voluntarily to carry with their license a certificate of completion of a bus driver training course.
  - (c) Require applicable applicants for a Class B or S license to complete bus driver training course prior to obtaining the special endorsement and to have a written statement of completion of a course at the time of securing such license.

- (d) Require applicants for renewal of Class S or B licenses to attend a refresher seminar prior to obtaining a license renewal.
- (e) Require the DOE to provide appropriate training courses to applicants for Class S licenses and to approve such courses given by private schools or other organizations.

4. Issue: Inspection of private school buses.

Problem: Significant disparities exist between private school buses, which receive only annual inspections, and public school buses, which receive daily pretrip inspections by their drivers, monthly inspections by local school boards, annual inspections by DOE personnel, and the official annual inspection. Because the data do not indicate that buses present a significant safety problem in terms of defects, an extensive burden of requiring additional inspections may not be warranted.

- Options:
- (a) Provide the DOE or the Department of State Police with the authority to spot-check private school buses as they deem necessary.
  - (b) In conjunction with training programs, require drivers to complete daily pretrip inspections.

5. Issue: Public awareness of rules applicable to school buses.

Problem: Virginia motorists may not be aware of some of the special traffic rules applicable to school buses. The crash data demonstrate that buses are involved in a significantly larger proportion of accidents while decelerating or stopped in a traffic lane. It may be that some of these accidents are caused by tailgating due to motorists' lack of awareness that the maximum speed for school buses is 45 MPH. A public education campaign to alert drivers to the special traffic rules applicable to school buses and motorists' obligations to stop might alleviate these accidents.

- Options:
- (a) Post the maximum speed allowed for school buses (i.e., 45 MPH) on roads used as major bus routes.
  - (b) Affix stickers alerting motorists to the 45 MPH limit to the rear of school buses.

