Table of Contents

STANDARDS FOR IDAHO SCHOOL BUSES AND OPERATIONS 19

INTRODUCTION TO SCHOOL BUS CONSTRUCTION STANDARDS 19

STATUTORY AUTHORITY 20

RESPONSIBILITIES OF SUPPLIERS 20

DEFINITIONS 21

A. National School Transportation Specifications & Procedures – School Bus Types 21

B. Code of Federal Regulations, 49 CFR Part 390.5 - Definitions 21

C. Section 33-1504, Idaho Code - School Buses 22

D. Section 49-120 (5), Idaho Code – School Buses 22

E. Technology and Equipment, New 22

WAIVERS 23

IDAHO SCHOOL BUS STANDARDS 24

A. Air Cleaner 24

B. Air Conditioning (Non-Reimbursable Option – see exception) 24

C. Aisle 24

D. Axles 24

E. Back-Up Warning Alarm 24

F. Battery 24

G. Brakes (General) 24

H. Brakes (Hydraulic) 25

I. Brakes (Air) 25

J. Bumper (Front) 26

K. Bumper (Rear) 27

L. Certification 27

M. Color 28

N. Communications 28

O. Construction 28

P. Crossing Control Arm (Optional) 29

Q. Defrosters 29

R. Doors, Entrance 30

S. Drive Shaft 31

T. Electrical System 31

1. Battery 31
2. Alternator 31
3. Wiring 32
4. Circuits 33
5. Daytime Running Lamps (DRL) 33
6. Switches 33

U. Emergency Exits and Emergency Exit Alarm Systems 33

V. Emergency Equipment 35
1. Fire extinguisher: 35
2. Firstaid kit: 35
3. Body fluid clean-up kit: 36
4. Warning devices: 36

W. Exhaust System 37

X. Fenders: Front-Type C Vehicles 38

Y. Floors 39

Z. Frame 39

AA. Fuel System 39

BB. Governor 40

CC. Handrails 40

DD. Heaters and Air Conditioning Systems 40

EE. Hinges 44

FF. Horn 44

GG. Identification 44

HH. Inside Height 46

II. Instruments and Instrument Panel 46

JJ. Insulation (Optional) 47

KK. Interior 47

LL. Lamps and Signals 48
1. Illumination Lamps 48
2. Body Instrument Panel Lamps 48
3. School Bus Alternately Flashing Signal Lamps: 48
4. Turn Signal and Stop/Tail Lamps: 49

MM. Metal Treatment 51

NN. Mirrors 51

OO. Mounting 51

PP. Mud Flaps 52

QQ. Oil Filter 52

RR. Openings 52

SS. Overall Length 52

TT. Overall Width 52

UU. Passenger Load 52

VV. Public Address System 52
WW. Reflective Material 53
XX. Retarder System (Optional Equipment) 53
YY. Road Speed Control 53
ZZ. Rub Rails 53
AAA. Seats and Restraining Barriers 54
1. Passenger Seating: 54
2. Pre School Age Seating: 55
3. Driver Seat: 55
4. Driver Restraint System: 55
BBB. Shock Absorbers 56
CCC. Steering Gear 56
DDD. Steps 56
EEE. Step Treads 56
FFF. Stirrup Steps 57
GGG. Stop Signal Arm 57
HHH. Storage Compartment (Optional) 57
III. Sun Shield 58
JJJ. Suspension Systems 58
KKK. Throttle 58
LLL. Tires and Rims 58
MMM. Tow Attachment Points 59
NNN. Traction Assisting Devices (Optional) 59
OOO. Transmission 60
PPP. Trash Container and Holding Device (Optional) 60
QQQ. Turning Radius 60
RRR. Undercoating 60
SSS. Ventilation 61
TTT. Wheel housing 61
UUU. Windows 62
VVV. Windshield Washers 62
WWW. Windshield Wipers 62
XXX. Wiring 62

STANDARDS FOR SPECIALLY EQUIPPED SCHOOL BUSES 93

A. Introduction 93
B. Definition 93
C. General Requirements 94
D. Aisles 94

E. Communications 94
F. Glazing 94
G. Identification 94
H. Passenger Capacity Rating 94
I. Power Lifts 94
J. Vehicle Lifts & Installations 95
K. Regular Service Entrance 98
L. Restraining Devices 98
M. Seating Arrangements 98
N. Securement and Restraint System for Wheel Chair Occupant and Wheel Chair Seated Occupants 98
O. Special Light 100
P. Special Service Entrance 100
Q. Special Entrance Doors 100
R. Support Equipment and Accessories 101
S. Technology and Equipment 102

STANDARDS FOR ALTERNATIVE FUELS FOR SCHOOL BUSES 103

A. Introduction 103
B. General Requirements 103

SCHOOL BUS WITHDRAWAL FROM SERVICE STANDARDS 109

STANDARDS FOR STUDENT TRANSPORTATION OPERATIONS 109

A. Introduction 109
B. School Travel Choices 109
C. Administration 110
D. Local School District or Charter School Administration 111
E. Written Policies 111
F. Additional Requirements Not Covered Under Policies 113
G. Personnel Qualifications and Training 113
1. Prerequisite Qualifications and Job Descriptions 113
2. Insulin-Treated Diabetes Mellitus 114
3. School Bus Driver Training 118
4. Student Transportation Personnel File 118
5. Student Transportation Maintenance and Service Personnel 119
H. Vehicle Operation 120
I. Student Management 122
J. Student Eligibility 123
1. Eligible Students 123
2. Ineligible Students 123
3. Non-Public (Private or Parochial) School Students 124

4. Non-Student Rider 124
K. Student Transportation Support Program – Financial Reporting 124
L. Administrative and Program Operation Costs 126
M. Safety Busing 128
N. Contract For Transportation Services 128
O. Leasing District-Owned Buses 129
P. Ineligible Vehicles 129
Q. Liability Insurance 129
R. Non-Traditional Educational Programs 130
S. Capital Investment 130
T. Depreciation 130
U. Depreciation Account 134
V. Program Support 134
W. Reimbursement/Non-Reimbursement Matrix 134
X. Appeals and Waivers 134

STANDARDS FOR IDAHO SCHOOL BUSES AND OPERATIONS 15

(IDAPA 08.02.02.004) 15

INTRODUCTION TO SCHOOL BUS CONSTRUCTION STANDARDS 15

STATUTORY AUTHORITY 16

RESPONSIBILITIES OF SUPPLIERS 16

DEFINITIONS 17

A. National School Transportation Specifications & Procedures – School Bus Types 17
B. Code of Federal Regulations 49CFR390.5 - Definitions 18
C. Section 33-1504, Idaho Code - School Buses 18
D. Section 49-120 (5), Idaho Code – School Buses 18
E. Technology and Equipment, New 18

WAIVERS 19

SCHOOL BUS STANDARDS 20

A. Air Cleaner 20
B. Air Conditioning (Non-Reimbursable Option – see exception) 20
C. Aisle 20
D. Axles 20
E. Back-Up Warning Alarm 20
F. Battery 20

~~G. Brakes (General) 21~~
~~H. Brakes (Hydraulic) 21~~
~~I. Brakes (Air) 22~~
~~J. Bumper (Front) 22~~
~~K. Bumper (Rear) 23~~
~~L. Certification 24~~
~~M. Color 24~~
~~N. Communications 25~~
~~O. Construction 25~~
~~P. Crossing Control Arm (Optional) 26~~
~~Q. Defrosters 26~~
~~R. Doors, Entrance 27~~
~~S. Drive Shaft 28~~
~~T. Electrical System 28~~
~~1. Battery 28~~
~~2. Alternator: 29~~
~~3. Wiring: 29~~
~~4. Circuits: 30~~
~~5. Daytime Running Lamps (DRL): 30~~
~~6. Switches: 30~~
~~U. Emergency Exits and Emergency Exit Alarm Systems 31~~
~~V. Emergency Equipment 32~~
~~1. Fire extinguisher: 32~~
~~2. First-aid kit: 33~~
~~3. Body fluid clean-up kit: 34~~
~~4. Warning devices: 34~~
~~W. Exhaust System 35~~
~~X. Fenders: Front-Type C Vehicles 36~~
~~Y. Floors 36~~
~~Z. Frame 37~~
~~AA. Fuel System 37~~
~~BB. Governor 38~~
~~CC. Handrails 38~~
~~DD. Heaters and Air Conditioning Systems 39~~
~~EE. Hinges 43~~
~~FF. Horn 43~~
~~GG. Identification 43~~
~~HH. Inside Height 45~~
~~II. Instruments and Instrument Panel 45~~
~~JJ. Insulation (Optional) 46~~

~~KK. Interior ..... 47~~

~~LL. Lamps and Signals ..... 48~~
~~1. Illumination Lamps ..... 48~~
~~2. Body Instrument Panel Lamps ..... 48~~
~~3. School Bus Alternately Flashing Signal Lamps: ..... 48~~
~~4. Turn Signal and Stop/Tail Lamps: ..... 49~~

~~MM. Metal Treatment ..... 50~~

~~NN. Mirrors ..... 51~~

~~OO. Mounting ..... 51~~

~~PP. Mud Flaps ..... 52~~

~~QQ. Oil Filter ..... 52~~

~~RR. Openings ..... 52~~

~~SS. Overall Length ..... 52~~

~~TT. Overall Width ..... 52~~

~~UU. Passenger Load ..... 52~~

~~VV. Public Address System ..... 53~~

~~WW. Reflective Material ..... 53~~

~~XX. Retarder System (Optional Equipment) ..... 53~~

~~YY. Road Speed Control ..... 54~~

~~ZZ. Rub Rails ..... 54~~

~~AAA. Seats and Restraining Barriers ..... 54~~
~~1. Passenger Seating: ..... 54~~
~~2. Pre School Age Seating: ..... 55~~
~~3. Driver Seat: ..... 55~~
~~4. Driver Restraint System: ..... 56~~

~~BBB. Shock Absorbers ..... 56~~

~~CCC. Steering Gear ..... 56~~

~~DDD. Steps ..... 57~~

~~EEE. Step Treads ..... 57~~

~~FFF. Stirrup Steps ..... 58~~

~~GGG. Stop Signal Arm ..... 58~~

~~HHH. Storage Compartment (Optional) ..... 58~~

~~III. Sun Shield ..... 59~~

~~JJJ. Suspension Systems ..... 59~~

~~KKK. Throttle ..... 59~~

~~LLL. Tires and Rims ..... 59~~

~~MMM. Tow Attachment Points ..... 60~~

~~NNN. Traction Assisting Devices (Optional) ..... 60~~

~~OOO. Transmission ..... 61~~

~~PPP. Trash Container and Holding Device (Optional) ..... 61~~

QQQ. Turning Radius 61
RRR. Undercoating 62
SSS. Ventilation 62
TTT. Wheel housing 63
UUU. Windows 63
VVV. Windshield Washers 63
WWW. Windshield Wipers 64
XXX. Wiring 64

STANDARDS FOR SPECIALLY EQUIPPED SCHOOL BUSES 100

A. Introduction 100
B. Definition 101
C. General Requirements 101
D. Aisles 101
E. Communications 101
F. Glazing 101
G. Identification 101
H. Passenger Capacity Rating 102
I. Power Lifts 102
J. Vehicle Lifts & Installations 102
K. Regular Service Entrance 106
L. Restraining Devices 106
M. Seating Arrangements 106
N. Securement and Restraint System for Wheel Chair Occupant and Wheel Chair Seated Occupants 106
O. Special Light 108
P. Special Service Entrance 108
Q. Special Entrance Doors 109
R. Support Equipment and Accessories 110
S. Technology and Equipment 111

STANDARDS FOR ALTERNATIVE FUELS 111

A. Introduction 111
B. General Requirements 112

SCHOOL BUS WITHDRAWAL FROM SERVICE STANDARDS 118

STANDARDS FOR STUDENT TRANSPORTATION OPERATIONS 118

A. Introduction 118
B. School Travel Choices 119

C. Administration 119
D. Local School District or Charter School Administration 120
E. Written Policies 120
F. Additional Requirements Not Covered Under Policies 122
G. Personnel Qualifications and Training 123
1. Prerequisite Qualifications and Job Descriptions 123
2. Insulin Treated Diabetes Mellitus 123
3. School Bus Driver Training 128
4. Student Transportation Personnel File 129
5. Student Transportation Maintenance and Service Personnel 130
H. Vehicle Operation 130
I. Student Management 133
J. Student Eligibility 134
1. Eligible Students 134
2. Ineligible Students 134
3. Non Public (Private or Parochial) School Students 135
4. Non-Student Rider 135
K. Student Transportation Support Program – Financial Reporting 136
L. Administrative and Program Operation Costs 138
M. Safety Busing 140
N. Contract For Transportation Services 140
O. Leasing District-Owned Buses 141
P. Ineligible Vehicles 142
Q. Liability Insurance 142
R. Non-Traditional Educational Programs 142
S. Capital Investment 142
T. Depreciation 143
U. Depreciation Account 147
V. Program Support 147
W. Reimbursement/Non-Reimbursement Matrix 147
X. Appeals and Waivers 147
STANDARDS FOR IDAHO SCHOOL BUSES AND OPERATIONS 6
(IDAPA 08.02.02.004) 6
INTRODUCTION TO SCHOOL BUS CONSTRUCTION STANDARDS 6
STATUTORY AUTHORITY 7
RESPONSIBILITIES OF SUPPLIERS 7
DEFINITIONS 8
A. National School Transportation Specifications & Procedures – School Bus Types 8

B. Code of Federal Regulations 49CFR390.5 - Definitions 9
C. Section 33-1504, Idaho Code - School Buses 9
D. Section 49-120 (5), Idaho Code – School Buses 9
E. Technology and Equipment, New 9

WAIVERS 10

SCHOOL BUS STANDARDS 11

A. Air Cleaner 11
B. Air Conditioning (Non-Reimbursable Option – see exception) 11
C. Aisle 11
D. Axles 11
E. Back-Up Warning Alarm 11
F. Battery 11
Buses may be equipped with a battery shut-off switch. The switch is to be placed in a location not readily accessible to the driver or passengers. 11
G. Brakes (General) 12
H. Brakes (Hydraulic) 12
Buses using hydraulic-assist brakes shall meet requirements of the Federal Motor Vehicle Safety Standards (FMVSS) No.105. Type A buses may be OEM standard. 12
I. Brakes (Air) 12
J. Bumper (Front) 13
K. Bumper (Rear) 14
L. Certification 14
M. Color 15
N. Communications 15
O. Construction 15
P. Crossing Control Arm (Optional) 16
Q. Defrosters 17
R. Doors, Entrance 17
S. Drive Shaft 18
T. Electrical System 18
1. Battery 18
2. Alternator: 19
3. Wiring: 19
4. Circuits: 20
5. Daytime Running Lamps (DRL): 20
6. Switches: 20
U. Emergency Exits and Emergency Exit Alarm Systems 20
V. Emergency Equipment 22
1. Fire extinguisher: 22

2. First aid kit: 22
3. Body fluid clean-up kit: 23
4. Warning devices: 24

W. Exhaust System 24

X. Fenders: Front Type C Vehicles 26

Y. Floors 26

Z. Frame 26

AA. Fuel System 27

BB. Governor 28

CC. Handrails 28

DD. Heaters and Air Conditioning Systems 28

EE. Hinges 31

FF. Horn 31

GG. Identification 32

HH. Inside Height 33

II. Instruments and Instrument Panel 33

JJ. Insulation (Optional) 35

KK. Interior 35

LL. Lamps and Signals 36
1. Illumination Lamps 36
2. Body Instrument Panel Lamps 36
3. School Bus Alternately Flashing Signal Lamps: 37
4. Turn Signal and Stop/Tail Lamps: 37

MM. Metal Treatment 39

NN. Mirrors 39

OO. Mounting 40

PP. Mud Flaps 40

QQ. Oil Filter 40

RR. Openings 40

SS. Overall Length 41

TT. Overall Width 41

UU. Passenger Load 41

VV. Public Address System 41

WW. Reflective Material 41

XX. Retarder System (Optional Equipment) 42

YY. Road Speed Control 42

ZZ. Rub Rails 42

AAA. Seats and Restraining Barriers 43
1. Passenger Seating: 43
2. Pre School Age Seating: 44

3. Driver Seat: 44
4. Driver Restraint System: 44
BBB. Shock Absorbers 45
CCC. Steering Gear 45
DDD. Steps 45
EEE. Step Treads 46
FFF. Stirrup Steps 47
GGG. Stop Signal Arm 47
HHH. Storage Compartment (Optional) 47
III. Sun Shield 47
JJJ. Suspension Systems 47
KKK. Throttle 47
LLL. Tires and Rims 47
MMM. Tow Attachment Points 48
NNN. Traction Assisting Devices (Optional) 48
OOO. Transmission 49
PPP. Trash Container and Holding Device (Optional) 49
QQQ. Turning Radius 49
RRR. Undercoating 50
SSS. Ventilation 50
TTT. Wheel housing 50
UUU. Windows 51
VVV. Windshield Washers 51
WWW. Windshield Wipers 51
XXX. Wiring 51
STANDARDS FOR SPECIALLY EQUIPPED SCHOOL BUSES 53
A. Introduction 53
B. Definition 54
C. General Requirements 54
D. Aisles 54
E. Communications 54
F. Glazing 54
G. Identification 54
H. Passenger Capacity Rating 55
I. Power Lifts 55
J. Vehicle Lifts & Installations 55
K. Regular Service Entrance 57

L. Restraining Devices 58
M. Seating Arrangements 58
N. Securement and Restraint System for Wheel Chair Occupant and Wheel Chair Seated Occupants 58
O. Special Light 60
P. Special Service Entrance 60
Q. Special Entrance Doors 61
R. Support Equipment and Accessories 62
S. Technology and Equipment 62

STANDARDS FOR ALTERNATIVE FUELS 63
A. Introduction 63
B. General Requirements 63

SCHOOL BUS WITHDRAWAL FROM SERVICE STANDARDS 65

STANDARDS FOR STUDENT TRANSPORTATION OPERATIONS 66
A. Introduction 66
B. School Travel Choices 66
C. Administration 67
D. Local School District or Charter School Administration 68
E. Written Policies 68
F. Additional Requirements Not Covered Under Policies 70
G. Personnel Qualifications and Training 71
1. Prerequisite Qualifications and Job Descriptions 71
2. Insulin-Treated Diabetes Mellitus 71
3. School Bus Driver Training 71
4. Student Transportation Personnel File 72
5. Student Transportation Maintenance and Service Personnel 73
H. Vehicle Operation 73
I. Student Management 76
J. Student Eligibility 77
1. Eligible Students 77
2. Ineligible Students 78
3. Non-Public (Private or Parochial) School Students 78
4. Non-Student Rider 79
K. Student Transportation Support Program – Financial Reporting 79
L. Administrative and Program Operation Costs 81
M. Safety Busing 83
N. Contract For Transportation Services 84
O. Leasing District-Owned Buses 84
P. Ineligible Vehicles 85

~~Q. Liability Insurance ..... 85~~
~~R. Non-Traditional Educational Programs ..... 85~~
~~S. Capital Investment ..... 85~~
~~T. Depreciation ..... 86~~
~~U. Depreciation Account ..... 89~~
~~V. Program Support ..... 90~~
~~W. Reimbursement/Non-Reimbursement Matrix ..... 90~~
~~X. Appeals and Waivers ..... 90~~

~~**STANDARDS FOR IDAHO SCHOOL BUSES AND OPERATIONS**~~

~~**(Rule by Reference – IDAPA 08.02.02.150-219)**~~

~~**INTRODUCTION TO SCHOOL BUS CONSTRUCTION STANDARDS ..... 6**~~

~~**STATUTORY AUTHORITY ..... 7**~~

~~**RESPONSIBILITIES OF SUPPLIERS ..... 7**~~

~~**DEFINITIONS ..... 8**~~
~~A. National School Transportation Specifications & Procedures – School Bus Types ..... 8~~
~~B. Code of Federal Regulations 49CFR390.5 - Definitions ..... 8~~
~~C. Idaho Code 33-1504 - School Buses ..... 9~~
~~D. Idaho Code 49-120 (5) – School Buses ..... 9~~
~~E. Technology and Equipment, New ..... 9~~

~~**WAIVERS ..... 10**~~

~~**SCHOOL BUS STANDARDS ..... 11**~~
~~A. Air Cleaner ..... 11~~
~~B. Air Conditioning (Non-Reimbursable Option – see exception) ..... 11~~
~~C. Aisle ..... 11~~
~~D. Axles ..... 11~~
~~E. Back-Up Warning Alarm ..... 11~~
~~F. Battery ..... 11~~
~~Buses may be equipped with a battery shut-off switch. The switch is to be placed in a location not readily accessible to the driver or passengers. ..... 11~~
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~~H. Brakes (Hydraulic) ..... 12~~
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~~I. Brakes (Air) ..... 12~~

~~J. Bumper (Front) ..... 13~~
~~K. Bumper (Rear) ..... 14~~
~~L. Certification ..... 14~~
~~M. Color ..... 15~~
~~N. Communications ..... 15~~
~~O. Construction ..... 15~~
~~P. Crossing Control Arm (Optional) ..... 16~~
~~Q. Defrosters ..... 17~~
~~R. Doors, Entrance ..... 17~~
~~S. Drive Shaft ..... 18~~
~~T. Electrical System ..... 18~~
~~1. Battery ..... 18~~
~~2. Alternator: ..... 19~~
~~3. Wiring: ..... 19~~
~~4. Circuits: ..... 20~~
~~5. Daytime Running Lamps (DRL): ..... 20~~
~~6. Switches: ..... 20~~
~~U. Emergency Exits and Emergency Exit Alarm Systems ..... 20~~
~~V. Emergency Equipment ..... 22~~
~~1. Fire extinguisher: ..... 22~~
~~2. First-aid kit: ..... 22~~
~~3. Body fluid clean-up kit: ..... 23~~
~~4. Warning devices: ..... 24~~
~~W. Exhaust System ..... 24~~
~~X. Fenders: Front-Type C Vehicles ..... 26~~
~~Y. Floors ..... 26~~
~~Z. Frame ..... 26~~
~~AA. Fuel System ..... 27~~
~~BB. Governor ..... 28~~
~~CC. Handrails ..... 28~~
~~DD. Heaters and Air Conditioning Systems ..... 28~~
~~EE. Hinges ..... 31~~
~~FF. Horn ..... 31~~
~~GG. Identification ..... 32~~
~~HH. Inside Height ..... 33~~
~~II. Instruments and Instrument Panel ..... 33~~
~~JJ. Insulation (Optional) ..... 35~~
~~KK. Interior ..... 35~~
~~LL. Lamps and Signals ..... 36~~
~~3. School Bus Alternately Flashing Signal Lamps: ..... 36~~
~~4. Turn Signal and Stop/Tail Lamps: ..... 37~~

~~MM. Metal Treatment ..... 39~~
~~NN. Mirrors ..... 39~~
~~OO. Mounting ..... 40~~
~~PP. Mud Flaps ..... 40~~
~~QQ. Oil Filter ..... 40~~
~~RR. Openings ..... 40~~
~~SS. Overall Length ..... 40~~
~~TT. Overall Width ..... 41~~
~~UU. Passenger Load ..... 41~~
~~VV. Public Address System ..... 41~~
~~WW. Reflective Material ..... 41~~
~~XX. Retarder System (Optional Equipment) ..... 42~~
~~YY. Road Speed Control ..... 42~~
~~ZZ. Rub Rails ..... 42~~
~~AAA. Seats and Restraining Barriers ..... 43~~
~~1. Passenger Seating: ..... 43~~
~~2. Pre School Age Seating: ..... 44~~
~~3. Driver Seat: ..... 44~~
~~4. Driver Restraint System: ..... 44~~
~~BBB. Shock Absorbers ..... 45~~
~~CCC. Steering Gear ..... 45~~
~~DDD. Steps ..... 45~~
~~EEE. Step Treads ..... 46~~
~~FFF. Stirrup Steps ..... 46~~
~~GGG. Stop Signal Arm ..... 47~~
~~HHH. Storage Compartment (Optional) ..... 47~~
~~III. Sun Shield ..... 47~~
~~JJJ. Suspension Systems ..... 47~~
~~KKK. Throttle ..... 47~~
~~LLL. Tires and Rims ..... 47~~
~~MMM. Tow Attachment Points ..... 48~~
~~NNN. Traction Assisting Devices (Optional) ..... 48~~
~~OOO. Transmission ..... 49~~
~~PPP. Trash Container and Holding Device (Optional) ..... 49~~
~~QQQ. Turning Radius ..... 49~~
~~RRR. Undercoating ..... 49~~
~~SSS. Ventilation ..... 50~~
~~TTT. Wheel housing ..... 50~~

~~UUU. Windows ..... 51~~
~~VVV. Windshield Washers ..... 51~~
~~WWW. Windshield Wipers ..... 51~~
~~XXX. Wiring ..... 51~~

~~**STANDARDS FOR SPECIALLY EQUIPPED SCHOOL BUSES ..... 53**~~

~~A. Introduction ..... 53~~
~~B. Definition ..... 54~~
~~C. General Requirements ..... 54~~
~~D. Aisles ..... 54~~
~~E. Communications ..... 54~~
~~F. Glazing ..... 54~~
~~G. Identification ..... 54~~
~~H. Passenger Capacity Rating ..... 55~~
~~I. Power Lifts ..... 55~~
~~J. Vehicle Lifts & Installations ..... 55~~
~~K. Regular Service Entrance ..... 57~~
~~L. Restraining Devices ..... 57~~
~~M. Seating Arrangements ..... 58~~
~~N. Securement and Restraint System for Wheel Chair Occupant and Wheel Chair Seated Occupants ..... 58~~
~~O. Special Light ..... 60~~
~~P. Special Service Entrance ..... 60~~
~~Q. Special Entrance Doors ..... 60~~
~~R. Support Equipment and Accessories ..... 61~~
~~S. Technology and Equipment ..... 62~~

~~**STANDARDS FOR ALTERNATIVE FUELS ..... 63**~~

~~A. Introduction ..... 63~~
~~B. General Requirements ..... 63~~

~~**SCHOOL BUS WITHDRAWAL FROM SERVICE STANDARDS ..... 65**~~

~~**STANDARDS FOR STUDENT TRANSPORTATION OPERATIONS ..... 66**~~

~~A. Introduction ..... 66~~
~~B. School Travel Choices ..... 66~~
~~C. Administration ..... 67~~
~~D. Local School District or Charter School Administration ..... 68~~
~~E. Written Policies ..... 68~~
~~F. Additional Requirements Not Covered Under Policies ..... 70~~

~~G. Personnel Qualifications and Training ..... 70~~
~~2. Insulin-Treated Diabetes Mellitus ..... 71~~
~~3. School Bus Driver Training ..... 71~~
~~4. Student Transportation Personnel File ..... 72~~
~~5. Student Transportation Maintenance and Service Personnel ..... 73~~
~~H. Vehicle Operation ..... 73~~
~~I. Student Management ..... 76~~
~~J. Student Eligibility ..... 77~~
~~1. Eligible Students ..... 77~~
~~2. Ineligible Students ..... 77~~
~~3. Non-Public (Private or Parochial) School Students ..... 78~~
~~4. Non-Student Rider ..... 78~~
~~K. Student Transportation Support Program – Financial Reporting ..... 79~~
~~L. Administrative and Program Operation Costs ..... 80~~
~~M. Safety Busing ..... 83~~
~~N. Contract For Transportation Services ..... 83~~
~~O. Leasing District-Owned Buses ..... 84~~
~~P. Ineligible Vehicles ..... 84~~
~~Q. Liability Insurance ..... 84~~
~~R. Non-Traditional Educational Programs ..... 85~~
~~S. Capital Investment ..... 85~~
~~T. Depreciation ..... 85~~
~~U. Depreciation Account ..... 89~~
~~V. Program Support ..... 89~~
~~W. Reimbursement/Non-Reimbursement Matrix ..... 90~~
~~X. Appeals and Waivers ..... 90~~

STANDARDS FOR IDAHO SCHOOL BUSES AND OPERATIONS
(~~Rule by Reference –~~ IDAPA 08.02.02.~~150-219~~004.02)

INTRODUCTION TO SCHOOL BUS CONSTRUCTION STANDARDS

A. This edition of Standards for Idaho School Buses and Operations – July 1, ~~2012~~2017, is based on the latest report from the ~~Fifteenth~~ Sixteenth National Congress on School Transportation, ~~Warrensburg, Missouri~~Des Moines, Iowa, May ~~2010~~2015, (National School Transportation Specifications & Procedures) and~~(~~ Title 33, Chapter 15~~33-1511~~, Idaho Code~~)~~.

B. This portion of Standards for Idaho School Buses and Operations – July 1, ~~2012~~ 2017, is divided into ~~five~~ four sections: ~~Chassis Standards, Body~~ Idaho School Bus Standards, Standards for Specially Equipped School Buses, Standards for Alternative Fuel for School Buses, and~~,~~ Removal from Service Criteria and Student Transportation Operations. ~~There are two basic reasons for this format: (1) to define minimum chassis and body standards and (2) to assign responsibility for providing specific equipment. Items delineated in the chassis standards are to be provided by the chassis manufacturer. Items delineated in the body standards are to be provided by the body manufacturer. Most of the items delineated in the Specially Equipped School Bus Section are to be provided by the body manufacturer and most of the requirements for Standards for Alternative Fuel for School Buses are the responsibility of the chassis manufacturer. Therefore, whenever a school district purchases these types of vehicles, special attention must be given to both the chassis specifications and the body specification as they relate to the specific manufacturers.~~

C. For new vehicles, it is the responsibility of the vehicle manufacturers to certify compliance with applicable federal standards by installing a certification plate in the driver's area on each vehicle. However, as the vehicle is maintained over its useful life, it is the responsibility of those who supervise and perform work on the vehicle to assure on-going compliance with all applicable standards. When routine maintenance checks reveal any unsafe condition as defined in these standards, the school district will remove the vehicle from service and will eliminate the deficiency before returning the vehicle to service. For this reason, maintenance personnel training, quality components, quality workmanship and thorough maintenance records are essential.

STATUTORY AUTHORITY

A. The State Board of Education (SBOE) shall adopt, publish and distribute, and from time to time as need therefore arises, amend~~,~~ minimum standards for the construction of school buses, the basis of which standards shall be those incorporated in the latest report of the National Conference on School Transportation, which report shall be filed with the Idaho State Police (Section 33-1511, Idaho Code).

B. ~~-~~All school buses shall at all times conform to the standards of construction prescribed therefore by the ~~state board of education~~ SBOE. Before any newly acquired school bus is used for transporting pupils, it shall be inspected by a duly authorized representative of the ~~s~~State ~~d~~Department of ~~e~~Education~~,~~. ~~and i~~If, upon inspection, it conforms to prescribed standards of construction, or such other standards prescribed by law or regulation, it may be used for transporting pupils; otherwise, no such school bus shall be used for that purpose. The ~~B~~board of ~~T~~trustees of each school district shall provide for an annual inspection of all school buses by district personnel or upon contract at intervals of not more than twelve (12) months. The district, over the signature of the superintendent, shall file with the ~~state department of education~~ SDE its report of inspection of the school buses operated by the authority of the school district. At intervals of not more than sixty (60) days during each school year, the board of trustees shall cause inspection to be made of all school buses operating under the authority of the board. In addition, the ~~state department of education~~ SDE shall conduct random~~,~~ spot inspections of school buses throughout the school year. Whenever any school bus is found, upon inspection, to be deficient in any of the prescribed standards, or is found in any way to be unsafe or unfit for the transportation of pupils, such vehicle shall be withdrawn from service and shall not be returned to service until the district certifies the necessary repairs have been made (Section 33-1506, Idaho Code).

C. Section 33-1506, Idaho Code, requires the filing of inspections to the SDE of all school buses as defined in Sections 49-120(5) and 33-1504, Idaho Code. School buses shall not be removed from SDE inventory unless the bus is being decommissioned in accordance with Section 49-1422, Idaho Code.

~~C.~~D. Administrative Rules of the State Board of Education: IDAPA 08.0202.004.02, 08.02.02.150 and ~~IDAPA~~ 08.02.02.160.

RESPONSIBILITIES OF SUPPLIERS

Delivery Requirements: The school bus manufacturer shall provide the following materials to the purchaser of a new school bus at the time the unit is delivered to the purchasing school district or contractor. Also, the new school bus dealer, school district or contractor shall temporarily provide the following materials to the state school bus inspector at the time the unit undergoes its new school bus state inspection~~.~~:

A. Line set tickets for each bus built; ~~as a complete unit, and a separate set of line set tickets for buses manufactured in two pieces.~~

B. A copy of a completed pre-delivery inspection (PDI) form for each individual unit~~.~~;

C. Warranty book and statement of warranty for each individual unit (**Note:** All warranties shall commence on the day that the purchaser accepts possession of the completed bus.);

D. Service manual (or related resource) for each individual unit or group of identical units.;

E. Parts manual (or related resource) for each individual unit or group of identical units.; and

F. A copy of district bid specifications with the dealerships comments.

DEFINITIONS

A. National School Transportation Specifications & Procedures – School Bus Types

1. Type A

A Type "A" school bus is a van conversion or bus constructed utilizing a cutaway front-section vehicle with a left side driver's door. The entrance door is behind the front wheels. This definition includes two (2) classifications: Type A-1, with a Gross Vehicle Weight Rating (GVWR) less than or equal to fourteen thousand five hundred (14,500) pounds; and Type A-2, with a GVWR greater than fourteen thousand five hundred (14,500) pounds and less than or equal to twenty-one thousand five hundred (21,500) pounds.

~~2. Type B~~

~~A Type "B" school bus is constructed utilizing a stripped chassis. The entrance door is behind the front wheels. This definition includes two classifications; Type B1, with a GVWR less than or equal to 10,000 pounds; and Type B2, with a GVWR greater than 10,000 pounds.~~

~~3.~~2. Type C

A Type "C" school bus is constructed utilizing a chassis with a hood and front fender assembly. The entrance door is behind the front wheels also known as a conventional style school bus. This type also includes ~~the cut away~~ a truck chassis ~~or truck chassis with cab with or without a left side door and~~ with a GVWR greater than twenty-one thousand five hundred (21,500) pounds.

~~4.~~3. Type D

A Type "D" school bus is constructed utilizing a stripped chassis. The entrance door is ahead of the front wheels also known as a rear engine or front engine transit style school bus.

B. Code of Federal Regulations, 49 CFR Part 390.5 - Definitions

1. **Bus** means any motor vehicle designed, constructed, and/-or used for the transportation of passengers, including taxicabs.

2. **School bus** means a passenger motor vehicle, which is designed or used to carry more than ten (10) passengers in addition to the driver, and which the U.S. Secretary of Transportation determines is likely to be significantly used for the purpose of transporting preprimary, primary, or secondary school students to such schools from home or from such schools to home.

3. **School bus operation** means the use of a school bus to transport only school children and/or personnel from home to school and from school to home.

C. ~~Idaho Code~~ Section 33-1504, Idaho Code - School Buses

A motor vehicle shall be deemed a "school bus" when it has a seating capacity of more than ten (10) persons and meets the current national and state minimum standards for school bus construction, and is owned and operated by a school district or a common carrier and is used exclusively for transporting pupils, or is owned by a transportation contractor and is used regularly for transporting pupils.

D. ~~Idaho Code~~Section 49-120 (5), Idaho Code – School Buses

"School bus" means every motor vehicle that complies with the color and identification requirements set forth in the most recent edition of "Minimum Standards for School Buses" and is used to transport children to or from school or in connection with school approved activities and includes buses operated by contract carriers.

E. Technology and Equipment, New

1. It is the intent of these standards to accommodate new technologies and equipment that will better facilitate the transportation of all students. When a new technology, piece of equipment or component is desired to be applied to the school bus and it meets the following criteria, it may be acceptable.

2. The technology, equipment or component shall not compromise the effectiveness or integrity of any major safety system, unless it completely replaces the system. (Examples of safety systems include, but are not limited to, compartmentalization, the eight-lamp warning system, emergency exits, and the yellow color scheme.)

3. The technology, equipment or component shall not diminish the safe environment of the interior of the bus.

4. The technology, equipment or component shall not create additional risk to students who are boarding or exiting the bus or are in or near the school bus loading zone.

5. The technology, equipment or component shall not create undue additional activity and/or responsibility for the driver.

6. The technology, equipment or component shall generally increase efficiency and/or safety of the bus, or generally provide for a safer or more pleasant experience for the occupants and pedestrians in the vicinity of the bus or generally assist the driver or make his/her many tasks easier to perform.

WAIVERS

The State Board of Education (SBOE) may grant a waiver of any construction standard not required by state or federal law to any school district, school bus manufacturer, or school bus dealer upon written request. Written requests shall be submitted to the State Department of Education Student Transportation staff which shall make an appropriate recommendation to the ~~State Board of Education~~ SBOE subsequent to review by the Student Transportation Steering Committee. The Board will not grant waivers of any construction standard required by state or federal law. State and federal law includes case law (including consent decrees), statutes, constitutions, and federal regulations ~~.~~ (~~IC~~ Section 33-1506, Idaho Code, IDAPA 08.02.01.001).

IDAHO SCHOOL BUS ~~CHASSIS~~ STANDARDS

A. Air Cleaner

1. A dry element type air cleaner shall be provided.

2. All diesel engine air filters shall include a latch-type restriction indicator that retains the maximum restriction developed during operation of the engine. The indicator should include a reset control so the indicator can be returned to zero when desired. Type A buses are not exempt from this requirement.

B. Air Conditioning (Non-Reimbursable Option – see exception)

1. ~~Chassis installed a~~Air conditioning must meet the ~~same~~ requirements ~~as those~~ cited in the bus body standards under "Heatersing and Air Conditioning Systems."

2. Reimbursement Exception: Air conditioning shall be reimbursable under the pupil transportation support program when the school district can demonstrate a need subsequent to ~~an~~ Individuals with Disabilities Education Act (IDEA) mandated related service and where a cooling vest would not be sufficient.

C. Aisle

All emergency exit doors shall be accessible by a twelve (12) ~~-inches~~ minimum aisle. The aisle shall be unobstructed at all times by any type of barrier, seat, wheelchair, or tie down. Flip seats are not allowed.

D. Axles

The front and rear axle and suspension systems shall have gross axle weight rating (GAWR) at ground commensurate with the respective front and rear weight loads of the bus loaded to the rated passenger capacity.

E. Back-Up Warning Alarm

An automatic audible alarm shall be installed behind the rear axle, providing a minimum of 112 dBA, and shall comply with the published Backup Alarm Standards ~~(~~[Society of Automotive Engineers (SAE) J994B~~)~~]. ~~, providing a minimum of 112 dBA, or shall have a variable volume feature that allows the alarm to vary from 87 dBA to 112 dBA sound level, staying at least 5 dBA above the ambient noise level.~~

F. Battery

Buses may be equipped with a battery shut-off switch. The switch is to be placed in a location not readily accessible to the driver or passengers.

G. Brakes (General)

1. The ~~chassis~~ brake system shall conform to the provisions of the Federal Motor Vehicle Safety Standards (FMVSS) No. 105, No. 106 and No. 121 as applicable. All buses shall have either a parking pawl in the transmission or a park brake interlock that requires the service brake to be applied to allow release of the parking brake.

2. The anti-lock brake system (ABS), provided in accordance with FMVSS No. 105 or No. 121, shall provide wheel speed sensors for each front wheel and for each wheel on at least one rear axle. The system shall provide anti-lock braking performance for each wheel equipped with sensors (Four Channel System).

3. All brake systems should be designed to permit visual inspection of brake lining wear without removal of any chassis component(s).

4. The brake lines, booster-assist lines, and control cables shall be protected from excessive heat, vibration and corrosion and installed in a manner which prevents chafing.

5. The parking brake system for either air or hydraulic service brake systems may be of a power assisted design. The power parking brake actuator should be a device located on the instrument panel within seated reach of a 5th percentile female driver (FMVSS No. 208). As an option, the parking brake may be set by placing the automatic transmission shift control mechanism in the "park" position.

6. The power-operated parking brake system may be electronically interlocked to the engine key switch. Once the parking brake has been set and the ignition switch turned to the "off" position, the parking brake cannot be released until the key switch is turned back to the "on" position.

H. Brakes (Hydraulic)

~~Buses using a hydraulic assist brake shall be equipped with audible and visible warning signals that provide a continuous warning to the driver of loss of fluid flow from the primary source and of a failure of the back-up pump system.~~Buses using hydraulic-assist brakes shall meet requirements of FMVSS No.105. -Type A ~~and B~~ buses may be an Original Equipment Manufacturer (OEM) standard.

I. Brakes (Air)

The air pressure supply system shall include a desiccant-type air dryer installed according to the manufacturers' recommendations. The air pressure storage tank system may incorporate an automatic drain valve.

1. The ~~chassis~~ manufacturer should provide an accessory outlet for air-operated systems ~~installed by the body manufacturer~~. This outlet shall include a pressure protection valve to prevent loss of air pressure in the service brake reservoir.

2. For air brake systems, an air pressure gauge shall be provided in the instrument panel capable of complying with Idaho Commercial Driver's License (CDL) pre-trip inspection requirements.

3. Air brake-equipped buses may be equipped with a service brake interlock. If so equipped, the parking brake shall not release until the brake pedal is depressed.

4. Air brake systems shall include a system for anti-compounding of the service brakes and parking brakes.

5. Air brakes shall have both a visible and audible warning device whenever the air pressure falls below the level where warnings are required under FMVSS No. 121.

J. Bumper (Front)

1. All school buses shall be equipped with a front bumper. ~~The front bumper shall be furnished by the chassis manufacturer as part of the chassis on all school bus types unless there is a specific arrangement between the chassis manufacturer and body manufacturer.~~

2. The front bumper shall be of pressed steel channel or equivalent material ~~(~~[except Type A-1 buses having a GVWR of fourteen thousand five hundred (14,500) pounds or less which may be OEM supplied~~)~~] at least three-sixteenths (3/16)~~"~~ inch thick and not less than eight (8) inches wide (high). It shall extend beyond forward-most part of the body, grille, hood, and fenders and shall extend to outer edges of the fenders at the bumper's top line.

3. Type A buses having a GVWR of fourteen thousand five hundred (14,500) pounds or less may be equipped with an OEM-supplied front bumper. The front bumper shall be of sufficient strength to permit being pushed by another vehicle on a smooth surface with a five (5) degree (8.7 percent) grade, without permanent distortion. The contact point on the front bumper is intended to be between the frame rails, with as wide a contact area as possible if the front bumper is used for lifting, the contact points shall be under the bumper attachments to the frame rail brackets unless the manufacturer specifies different lifting points in the owner's manual. Contact and lifting pressures should be applied simultaneously at both lifting points.

4. Front bumper, except breakaway bumper ends, shall be of sufficient strength to permit pushing a vehicle of equal gross vehicle weight without permanent distortion to the bumper, chassis, or body.

5. A towing device (hooks, eyes, and bar) shall be furnished on all school bus types and attached so as not to project beyond the front bumper. Towing devices attached to the frame chassis shall be furnished by the chassis manufacturer. This installation shall be in accordance with the chassis manufacturer's specifications. Tow hooks or eyes shall have an individual strength rating of thirteen thousand five hundred (13,500) pounds each, for a combined rating of twenty-seven thousand (27,000) pounds. For pulling and lifting purposes, tow hooks are meant to be used simultaneously. For pulling, angularity applied to the tow hooks will decrease the capacities of the tow hooks.

NOTE: Type A buses are exempt from this requirement for front tow hooks or eyes due to built-in crush zones. ~~Rear tow devices are addressed in the Bus Body Specifications under Towing Attachments Points.~~

6. The bumper shall be designed or reinforced so that it will not deform when the bus is lifted by a chain that is passed under the bumper (or through the bumper if holes are provided for this purpose) and attached to the towing (~~t~~Type A may be OEM) device(s). For the purpose of meeting this specification, the bus shall be empty and positioned on a level, hard surface and the towing device(s) shall share the load equally.

K. Bumper (Rear)

1. The bumper on Type A-1 bus shall be a minimum of eight (8) inches wide (high) and Type A-2, ~~B,~~ C, and D bus bumper shall be a minimum of nine and one-half (9 ½) inches wide (high). The bumper shall be of sufficient strength to permit being pushed by another vehicle of similar size or lifted without permanent distortion.

2. The bumper shall wrap around back corners of the bus. It shall extend forward at least twelve (12) inches, measured from the rear-most point of the body at the floor line, and shall be flush-mounted to body sides or protected with an end panel.

3. The bumper shall be attached to the chassis frame in such a manner that it may be removed. It shall be braced to resist deformation of the bumper resulting from impact from the rear or side. It shall be designed to discourage hitching of rides by an individual.

4. The bumper shall extend at least one (1) inch beyond the rear-most part of the body surface measured at the floor line.

5. The bottom of the rear bumper shall not be more than thirty (30) inches above ground level.

L. Certification

The ~~chassis manufacturer~~"seller of the new bus", upon request of the ~~Idaho State Department of Education~~ SDE Student Transportation Department, shall certify that its product meets all Idaho minimum construction standards (Standards for Idaho School Buses and Operations) ~~on~~ for items not covered by the FMVSS certification requirements of 49 CFR~~,~~ Part 567.

~~a. The body manufacturer upon request of the Idaho State Department of Education Student Transportation Section shall certify that its product meets all Idaho minimum construction standards (Standards for Idaho School Buses and Operations) for items not covered by the FMVSS certification requirements of 49 CFR, Part 567.~~

~~M. Clutch~~

~~a. Clutch torque capacity shall be equal to or greater than the engine torque output.~~

~~b. A starter interlock shall be installed to prevent actuation of the starter if the clutch pedal is not depressed.~~

~~N.~~M. Color

1. The chassis, including axle hubs and front bumper, shall be black. Body cowl, hood, and fenders shall be in national school bus yellow (NSBY). The flat top surface of the hood may be non-reflective black or non-reflective NSBY, according to School Bus Manufacturers Technical Council publication - 008.

2. The entire rub rail and body exterior paint trim shall be black. Entrance door exterior (excluding glass) shall be NSBY or black, or unpainted aluminum. Passenger and driver window frames shall be painted NSBY, black to match body trim, or shall be unpainted aluminum. The area between the passenger and driver window frames shall be NSBY.

3. Optionally, the roof of the bus may be painted white (non-reimbursable) except that the front and rear roof caps shall remain NSBY, according to National School Transportation Specifications & Procedures Placement of Reflective Markings. If required by automated painting processes a maximum three (3) inch black transition strip is allowed between the white roof cap and the NSBY body paint above the windows.

4. Rims ~~may~~ shall be gray or black~~ as received from the manufacturer~~.

5. Multi-Function School Activity Buses (MFSABs) shall be exempt from these requirements.

~~O.~~N. Communications

All school buses used to transport students shall be equipped with two-way voice communication or SDE pre-approved device other than CB radios.

~~P.~~O. Construction

1. **Side Intrusion Test:** The bus body shall be constructed to withstand an intrusion force equal to the curb weight of the vehicle, or exceed twenty thousand (20,000) pounds, whichever is less. Each vehicle shall be capable of meeting this requirement when tested in accordance with the procedures set forth below.

2. The complete body structure, or a representative seven-body section mock up with seats installed, shall be load-tested at a location twenty-four (24)~~-~~ inches plus or minus two (2) inches above the floor line, with a maximum ten (10)~~-~~ ~~-~~inch diameter cylinder, forty-eight (48)~~-~~ inches long, mounted in a horizontal plane.

3. The cylinder shall be placed as close as practical to the mid-point of the tested structure, spanning two (2) internal vertical structural members. The cylinder shall be statically loaded to the required force of curb weight or twenty thousand

(20,000) pounds, whichever is less, in a horizontal plane with the load applied from the exterior toward the interior of the test structure. Once the minimum load has been applied, the penetration of the loading cylinder into the passenger compartment shall not exceed a maximum of ten (10) inches from its original point of contact. There can be no separation of lapped panels or construction joints. Punctures, tears or breaks in the external panels are acceptable but are not permitted on any adjacent interior panel.

4. Body companies shall certify compliance with this intrusion requirement, including test results, if requested.

5. Construction shall be reasonably dust-proof and watertight.

P. Crossing Control Arm (Optional)

1. Buses may be equipped with a crossing control arm mounted on the right side of the front bumper. This arm when opened shall extend in a line parallel with the body side and positioned on a line with the right side wheels.

2. All components of the crossing control arm and all connections shall be weatherproofed.

3. The crossing control arm shall incorporate system connectors (electrical, vacuum or air) at the gate and shall be easily removable to allow for towing of the bus.

4. The crossing control arm shall be constructed of noncorrosive or nonferrous material or treated in accordance with the body sheet metal specifications (see METAL TREATMENT).

5. There shall be no sharp edges or projections that could cause injury or be a hazard to students. The end of the arm shall be rounded.

6. The crossing control arm shall extend a minimum of seventy (70) inches (measured from the bumper at the arm assembly attachment point) when in the extended position.

7. The crossing control arm shall extend simultaneously with the stop arm(s) by means of the stop arm controls.

8. An automatic recycling interrupt switch should be installed for temporary disabling of the crossing control arm.

9. The assembly shall include a device attached to the bumper near the end of the arm to automatically retain the arm while in the stowed position. That device shall not interfere with normal operations of the crossing control arm.

Q. Defrosters

1. Defrosting and defogging equipment shall direct a sufficient flow of heated air onto the windshield, the window to the left of the driver and the glass in the viewing area directly to the right of the driver to eliminate frost, fog and snow.

Exception: The requirement of this standard does not apply to the exterior surfaces of double pane storm windows.

2. The defrosting system shall conform to SAE J381.

3. The defroster and defogging system shall be capable of furnishing heated, outside ambient air, except that the part of the system furnishing additional air to the windshield, entrance door and step well may be of the recirculating air type.

4. Auxiliary fans are not considered defrosting or defogging systems.

R. Doors, Entrance

1. The entrance door shall be in the driver's control, designed to afford easy release and to provide a positive latching device on manual operating doors to prevent accidental opening. When a hand lever is used, no part shall come together that will shear or crush fingers. Manual door controls shall not require more than twenty-five (25) pounds of force to operate at any point throughout the range of operation, as tested on a ten ~~10~~ percent (10%) grade both uphill and downhill.

2. The entrance door shall be located on the right side of the bus, opposite and within direct view of driver.

3. The entrance door shall have a minimum horizontal opening of twenty-four (24) inches and a minimum vertical opening of sixty-eight (68) inches.

4. The entrance door shall be a split-type door and shall open outward.

5. All entrance door glass ~~-~~shall be of approved safety glass. The bottom of each lower glass panel shall not be more than ten (10) inches from the top surface of the bottom step. The top of each upper glass panel when viewed from the interior shall not be more than three (3) inches below the interior door control cover or header pad.

6. Vertical closing edges on entrance doors shall be equipped with flexible material to protect children's fingers.

7. There shall be no door to left of driver on Type ~~B,~~ C or D vehicles. All Type A vehicles may be equipped with the chassis manufacturer's standard left-side door.

8. All doors shall be equipped with padding at the top edge of each door opening. Padding shall be at least three (3) inches wide and one (1) inch thick and extend the full width of the door opening.

9. On power-operated entrance doors, the emergency release valve, switch or device to release the entrance door must be placed above or to the immediate left or right of the entrance door and must be clearly labeled. The emergency valve, switch or device shall work in the absence of power.

S. Drive Shaft

The drive shaft shall be protected by a metal guard or guards around the circumference of the drive shaft to reduce the possibility of its whipping through the floor or dropping to the ground, if broken.

T. Electrical System

~~1. Battery:~~

~~a. The storage battery shall have minimum cold cranking capacity rating (cold cranking amps) equal to the cranking current required for 30 seconds at 0 degrees Fahrenheit and a minimum reserve capacity rating of 120 minutes at 25 amps. Higher capacities may be required, depending upon optional equipment and local environmental conditions.~~

~~b. Since all batteries are to be secured in a sliding tray in the body (type A and B buses may be OEM), chassis manufacturers shall temporarily mount the battery on the chassis frame, except that van conversion or cutaway front-section chassis may be secured in accordance with the manufacturer's standard configuration. In these cases, the final location of the battery and the appropriate cable lengths shall be agreed upon mutually by the chassis and body manufacturer. However, in all cases the battery cable provided with the chassis shall have sufficient length to allow some slack, and be of sufficient gauge to carry the required amperage.~~

1. Battery

   a. The manufacturer shall securely attach the battery on a slide-out or swing-out tray in a closed, vented compartment in the body skirt or chassis frame so that the battery is accessible for convenient servicing from the outside. When in the stored position, the tray shall be retained by a securing mechanism capable of holding the tray [with battery(ies)] in position when subjected to a 5g load from any direction. The battery compartment door or cover if separate from the tray shall be hinged at the front or top. It shall be secured by a positive operated latching system or other type fastener. The door may be an integral part of the battery slide tray. The door or cover must fit tightly to the body, and not present sharp edges or snagging points. Battery cables shall meet SAE requirements. Battery cables shall be of sufficient length to allow the battery tray to fully extend. Any chassis frame mounted batteries shall be relocated to a battery compartment on Type A buses.

   ~~a.~~b. If equipped with a battery disconnect switch it shall not interfere with the backup portion of a hydraulic brake system.

2. Alternator:

   a. All Type A-2 buses ~~and Type B buses~~ with a GVWR of fifteen thousand (15,000) ~~lbs.~~ pounds or less shall have, at a minimum, a one hundred thirty (130) ampere alternator. Buses equipped with an electrically powered

wheelchair lift and/or air conditioning shall be equipped with the highest rated capacity available from the chassis OEM.

b. Types A-2 ~~and Type B~~ buses over fifteen thousand (15,000) ~~lbs.~~ pounds GVWR and all Type C and D buses shall be equipped with a heavy-duty truck or bus-type alternator, having a minimum output rating of ~~160~~ two hundred (200) amperes or higher, and should produce a minimum current output of fifty~~50~~ percent (50%) of the rating at engine idle speed.

c. All other buses than those described in ~~B1~~ 2.a. ~~Buses~~ equipped with an electrically powered wheelchair lift and/or air conditioning ~~or other accessories~~ shall have a minimum alternator output of two hundred forty (240) amps and may be equipped with a device that ~~monitors the electrical system voltage and~~ advances the engine idle speed when the voltage drops to, or below, a pre-set level.

~~d. Buses equipped with an electrically powered wheelchair lift, air conditioning or other accessories may be equipped with a device that monitors the electrical system voltage and advances the engine idle speed when the voltage drops to, or below, a pre-set level.~~

~~e. A belt alternator drive shall be capable of handling the rated capacity of the alternator with no detrimental effect on any other driven components. (See SBMTC; "School Bus Technical Reference," for estimating required alternator capacity, available at http://www.nasdpts.org)~~

~~f. A direct drive alternator is permissible in lieu of a belt driven alternator.~~

3. Wiring:

a. All wiring shall conform to current ~~applicable recommended practices of the~~ Society of Automotive Engineers (SAE) standards.

b. All wiring shall use color and at least one other method of identification. The other method shall be either a number code or name code, and each chassis shall be delivered with a wiring diagram that illustrates the wiring of the chassis.

c. The chassis manufacturer shall install a readily accessible terminal strip or plug on the body side of the cowl or in an accessible location in the engine compartment of vehicles designed without a cowl. The strip or plug shall contain the following terminals for the body connections:

1) Main 100-amp body circuit;

2) Tail lamps;

3) Right turn signal;

4) Left turn signal;

5) Stop lamps;

6) Back up lamps; and

7) Instrument panel lamps (rheostat controlled).

d. Multiplex wiring is recommended and may exempt manufacturers from some of the above wiring standards.

4. Circuits:

a. An appropriate identifying diagram (color plus a name or number code) for all chassis electrical circuits shall be provided to the body manufacturer for distribution to the end user.

b. The headlamp system must be wired separately from the body-controlled solenoid.

c. Multiplex wiring is recommended and may exempt manufacturers from some of the above circuitry standards.

5. Daytime Running Lamps (DRL): A daytime running lamps system meeting chassis manufacturer's specifications shall be provided.

6. Switches: All control switches shall be labeled to identify their function.

U. Emergency Exits and Emergency Exit Alarm Systems

1. Any installed emergency exits and all exit alarm systems shall comply with the requirements of FMVSS No. 217 and 49 CFR Part 571.217.

2. The upper portion of the emergency door shall be equipped with approved safety glazing, the exposed area of which shall be at least four hundred (400) square inches. The lower portion of the rear emergency doors on Types A-2, ~~B,~~ C, and D vehicles shall be equipped with a minimum of three hundred fifty (350) square inches of approved safety glazing.

3. There shall be no steps leading to an emergency door.

4. The words "~~EMERGENCY DOOR" or~~ EMERGENCY EXIT," in letters at least two (2~~"~~) inches high, shall be placed at the top of or directly above the emergency exit, ~~or on the door in~~ on the ~~metal~~ panel above the top glass, both inside and outside the bus.

5. The emergency door(s) shall be equipped with padding at the top edge of each door opening. Padding shall be at least three (3) inches wide and one (1) inch thick, and shall extend the full width of the door opening.

6. There shall be no obstruction higher than one-quarter (¼) inch across the bottom of any emergency door opening. Fasteners used within the emergency exit opening, shall be free of sharp edges or burrs.

7. (In accordance with Federal Regulations Title 49 CFR 571.217 eEach school bus shall have the designation "Emergency Door" or "Emergency Exit," as appropriate, in letters at least five (5) centimeters high, of a color that contrasts with its background. For emergency exit doors, the designation shall be located at the top of, or directly above, the emergency exit door on both the inside and outside surfaces of the bus. Concise operating instructions describing the motions necessary to unlatch and open the emergency exit shall be located within sixteen (1516) centimeters of the release mechanism on the inside surface of the bus. These instructions shall be in letters at least one (1) centimeter high and of a color that contrasts with its background. [Examples: (1) Lift to Unlatch, Push to Open; (2) Turn Handle, Push Out to Open.] Outside may consist of a black arrow pointing in direction of handle travel. No other lettering shall obstruct or interfere with the placement of operation instructions mounted on the interior or exterior of the emergency exit door.

8. The rear emergency window shall have a lifting assistance device that will aid in lifting and holding the rear emergency window open.

9. Each emergency exit door of a school bus shall be equipped with a positive door opening device that, after the release mechanism has been operated, bears the weight of the door; keeps the door from closing past the point at which the door is perpendicular to the side of the bus body, regardless of the body's orientation; and provides a means for release or override. The positive door opening device shall perform the functions specified in paragraph (a)(3)(i) (A) and (B) of this section without the need for additional action beyond opening the door past the point at which the door is perpendicular to the side of the bus body (. Emergency door(s) holder – language (49 CFR Part 571.217, S.5.4.2.1(a) Emergency Exit Doors).

10. Types A, B, C, and D vehicles shall be equipped with a total number of emergency exits as follows for the indicated actual passenger capacityies of vehicles. Exits required by FMVSS No. 217 may be included to comprise the total number of exits specified.

Number of Passengers	Number of Emergency Exits per Side	Number of Roof Hatches
0 - 42	1	1
43 - 78	2	2
79 - 90	3	2

- Zero to 42 Passengers = one emergency exit per side and one roof hatch.
- 43 Forty-three to 78 Passengers = two emergency exits per side and two roof hatches.

- ~~79 Seventy-nine to 90 Passengers = three emergency exits per side and two roof hatches.~~

~~10.~~11. Side emergency exit windows, when installed, may be vertically hinged on the forward side of the window. Operation instructions shall be clearly readable of a contrasting color, and be located within six (6) inches of the release mechanism. No side emergency exit window will be located above a stop arm. Emergency exit doors, side emergency exit windows and emergency exit roof hatches shall be strategically located for optimal egress during an emergency evacuation of the bus.

~~11.~~12. Emergency exit doors shall include an alarm system that includes an audible warning device at the emergency door exit and also in the driver's compartment. Emergency exit side windows shall include an alarm system that includes an audible warning device in the driver's compartment. Roof hatches do not require an alarm system, but if so equipped, they must be operable and include an audible warning device in the driver's compartment.

~~12.~~13. Vandal lock may be installed, if applicable, the interlock and vandal lock should be interconnected.

V. Emergency Equipment

1. Fire extinguisher:

   a. The bus shall be equipped with at least one (1) UL-approved pressurized, dry chemical fire extinguisher complete with hose. The extinguisher shall be mounted and secured in a bracket, located in the driver's compartment and readily accessible to the driver and passengers. A pressure gauge shall be mounted on the extinguisher and be easily read without moving the extinguisher from its mounted position. Fire extinguisher shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.

   b. The fire extinguisher shall have a total rating of 2A10BC or greater. The operating mechanism shall be sealed with a type of seal (breakable) that will not interfere with the use of the fire extinguisher.

2. First -aid kit:

   a. The bus shall have an easily removable, metal moisture-proof and dustproof first aid kit sealed with a breakable type seal and mounted in the driver's compartment in a location that is physically accessible to all drivers. It shall be properly mounted and secured and identified as a first aid kit. The location for the first aid kit shall be marked. First -aid kit shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.

   b. Contents shall, at a minimum, include:

      1) Two (2) - 1 inch x 2 1/2 yards adhesive tape;

2) Twenty-four (24) –sterile gauze pads, 3 inches x 3 inches;

3) One-hundred (100) - 3/4 inch x 3 inches adhesive bandages;

4) Eight (8) - 2 inch bandage compress;

5) Ten (10) - 3 inch bandage compress;

6) Two (2) - 2 inch x 6 feet sterile gauze roller bandages;

7) Two (2) –non-sterile triangular bandages approximately 39 inches x 35 inches x 54 inches with two (2) safety pins;

8) Three (3) –sterile gauze pads, 36 inches x 36 inches;

9) Three (3) –sterile eye pads;

10) One (1) –rounded-end scissors;

11) One (1) –mouth-to-mouth airway; and

12) One (1) –pair medical examination gloves.

3. Body fluid clean-up kit:

a. Each bus shall have an easily removable -metal ~~removable~~ and moisture-proof body fluid clean-up kit. It shall be sealed with a breakable type seal. It shall be properly mounted in the driver's compartment in a location that is physically accessible to all drivers and identified as a body fluid clean-up kit. Body fluid clean-up kit shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.

b. Contents shall, at a minimum, include:

1) One (1) –pair medical examination gloves;

2) Absorbent;

3) One (1) –scoop;

4) One (1) –scraper or hand broom;

5) Disinfectant; and

6) Two (2) –plastic bags.

4. Warning devices:

Each school bus shall contain at least three (3) reflectorized triangle road warning devices that meet requirements in FMVSS No.125. The warning

device(s) shall be enclosed in an approved box that shall be sealed with a breakable type seal. The warning device(s) and approved box shall be mounted in an accessible place within the driver's compartment of the bus and shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc. ~~The lid of the approved box may be designed so as to reveal the contents of the box without opening the lid.~~

5. Any of the emergency equipment may be mounted in an enclosed compartment, provided the compartment is labeled in not less than one (1) inch letters, identifying each piece of equipment contained therein.

6. Tape(s) and silicone sealants do not meet breakable type seal requirement. Breakable type seal(s) shall be replaced as appropriate and necessary and also during every annual school bus inspection following a thorough inspection for deterioration and required contents.

7. Ignitable flares and axes are not allowed on school buses.

~~**2. Engine Fire Extinguisher (Non-Reimbursable Option – see exception)**~~

~~The chassis manufacturer may provide an automatic fire extinguisher system in the engine compartment, which may be reimbursable with prior approval.~~

W. Exhaust System

1. The exhaust pipe, muffler, tailpipe, and after treatment system shall be outside the bus body compartment and attached to the chassis so as not to damage any other chassis component.

2. The tailpipe shall be constructed of a corrosion-resistant tubing material at least equal in strength and durability to 16-gauge steel tubing of equal diameter. The tailpipe may be flush with, but shall not extend out more than two (2) inches beyond, the perimeter of the body for side-exit pipe or the bumper for rear-exit pipe.

~~2.~~3. The tailpipe shall exit to the left or right of the emergency exit door in the rear of vehicle or to the left side of the bus in front or behind the rear drive axle. The tailpipe exit location on school bus Type A-1 may be according to the manufacturer's standard. The tailpipe shall not exit beneath any fuel filler location or beneath any emergency door. Exhaust may exit through the bumper.

~~3.~~4. ~~Chassis m~~Manufacturers shall furnish an exhaust system with tailpipe of sufficient length to exit the rear of the bus or at the left side of the bus body no more than eighteen (18) inches forward of the front edge of the rear wheel house opening. If designed to exit at the rear of the bus, the tailpipe shall extend at least five (5) inches beyond the end of the chassis frame. If designed to exit to the side of the bus, the tailpipe shall extend at least forty-eight and one-half (48½) inches [~~(~~fifty-one and one-half (51½) inches if the body is to be one hundred two (102) inches wide~~)~~] outboard from the chassis centerline. The tailpipe may be flush with or shall not extend more than two (2) inches beyond, the perimeter of the body for side exit or the, bumper for rear exit pipe. The exhaust system shall be designed such that exhaust gas will not be trapped under the body of the bus.

~~4.~~5. On Types C and D vehicles, the tailpipe shall not exit beneath a fuel fill or emergency door exit.

~~5.~~6. Type A ~~and B chassis~~ may be furnished with the manufacturer's standard tailpipe configuration.

~~a. **NOTE:** See Bus Body Standards under Tailpipe.~~

~~6.~~7. The exhaust system ~~on a chassis~~ shall be adequately insulated from the fuel system.

~~7.~~8. The muffler shall be constructed of corrosion-resistant material.

9. The exhaust system ~~on the chassis~~ may be routed to the left of the right frame rail to allow for the installation of a power lift unit on the right side of the vehicle. The tailpipe may extend through the bumper.

~~8.~~10. Exceptions to Idaho exhaust system standards may be necessary in order to comply with changing federal emission standards on school buses. School bus manufacturers may submit a written request for an exception to an Idaho exhaust system standard to the SDE Student Transportation. Any exhaust system exception to standard request must be linked to federal emission standards rationale. The request will then be reviewed by the Student Transportation Steering Committee.

~~9.~~11. The design of the after treatment systems shall not allow active (non-manual) regeneration of the particulate filter during the loading and unloading of passengers. Manual regeneration systems will be designed such that unintentional operation will not occur.

~~10.~~12. For after treatment systems that require Diesel Exhaust Fluid (DEF) to meet federally mandated emissions:

a. The composition of Diesel Exhaust Fluid (DEF) must comply with International Standard ISO 22241-1. Refer to engine manufacturer for any additional DEF requirements.

b. The DEF supply tank ~~should~~ shall be ~~designed~~ sized to meet a minimum ratio of three (3) diesel fills to one (1) DEF fill.

X. Fenders: Front-Type C Vehicles

1. Total spread of outer edges of front fenders, measured at fender line, shall exceed total spread of front tires when front wheels are in straight-ahead position.

2. Front fenders shall be properly braced and shall not require attachment to any part of the body.

Y. Floors

1. The floor in the under-seat area, including tops of wheel housing, driver's compartment and toe board, shall be covered with rubber floor covering or equivalent, having a minimum overall thickness of 0.125 inch, and a calculated burn rate of 0.1 mm per minute or less, using the test methods, procedures and formulas listed in FMVSS No. 302. The driver's area on all Type A buses may be manufacturer's standard flooring and floor covering

2. The floor covering in the aisles shall be of aisle-type rubber or equivalent, wear-resistant and ribbed. Minimum overall thickness shall be 0.187 inch measured from tops of ribs.

3. The floor covering must be permanently bonded to the floor and must not crack when subjected to sudden changes in temperature. Bonding or adhesive material shall be waterproof and shall be a type recommended by the manufacturer of floor-covering material. All seams must be sealed with waterproof sealer.

4. On Types ~~B,~~ C and D buses, a flush-mounted, screw-down plate that is secured and sealed shall be provided to access the diesel or gasoline fuel tank sending unit and /or fuel pump. This plate shall not be installed under flooring material.

Z. Frame

1. Any secondary manufacturer that modifies the original chassis frame shall provide a warranty at least equal to the warranty offered by the original equipment manufacturer (OEM), and shall certify that the modification and other parts or equipment affected by the modification shall be free from defects in material and workmanship under normal use and service intended by the OEM.

2. Frames shall not be modified for the purpose of extending the wheelbase.

3. Holes in top or bottom flanges or side units of the frame, and welding to the frame, shall not be permitted except as provided or accepted by chassis manufacturer.

4. Frame lengths shall be established in accordance with the design criteria for the complete vehicle.

AA. Fuel System

1. Fuel tank (or tanks) having a minimum ~~30~~twenty-five (25)~~-~~ gallon capacity shall be provided by the chassis manufacturer. The tank shall be filled and vented to the outside of the body and the fuel filler should be placed in a location where accidental fuel spillage will not drip or drain on any part of the exhaust system.

2. Fuel lines shall be mounted to the chassis frame in such a manner that the frame provides the maximum possible protections from damage.

3. The fuel system shall comply with FMVSS No. 301.

4. Fuel tank(s) may be mounted between the chassis frame rails or outboard of the frame rails on either the left or right side of the vehicle.

5. The actual draw capacity of each fuel tank shall be, at a minimum, eighty-three~~83~~ percent (83%) of the tank capacity.

6. Installation of alternative fuel systems, including fuel tanks and piping from tank to engine, shall comply with all applicable fire codes in effect on the date of manufacture of the bus.

7. Installation of liquefied petroleum gas (LPG) tanks shall comply with the National Fire Protection Association, ~~(~~NFPA~~)~~ 58: Liquefied Petroleum Gas Code, 2014 Edition.

8. Installation of Compressed Natural Gas (CNG) containers shall comply with FMVSS No. 304, Compressed Natural Gas Fuel Container Integrity.

9. The C~~G~~NG Fuel System shall comply with FMVSS No. 303, Fuel System Integrity of Compressed Natural Gas Vehicles.

BB. Governor

An electronic engine speed limiter shall be provided and set to limit engine speed, not to exceed the maximum revolutions per minute, as recommended by the engine manufacturer.

~~**3. Heating System, Provision for**~~

~~The chassis engine shall have plugged openings for the purpose of supplying hot water for the bus heating system. The engine shall be capable of supplying coolant at a temperature of at least 170 degrees Fahrenheit at the engine cooling thermostat opening temperature. The coolant flow rate shall be 50 pounds per minute at the return end of 30 feet of one-inch inside diameter automotive hot water heater hose, according to School Bus Manufacturers Technical Council publication - 001.~~

CC. Handrails

At least one handrail shall be installed. The handrail shall be a minimum of one (1) inch diameter, and be constructed from corrosion resistant material(s). The handrail(s) shall assist passengers during entry or exit, and be designed to prevent entanglement, as evidenced by the passage of the National Highway Traffic Safety Administration (NHTSA) string and nut test, as defined in National School Transportation Specifications & Procedures School Bus Inspection.

DD. Heaters and Air Conditioning Systems

~~The chassis engine shall have plugged openings for the purpose of supplying hot water for the bus heating system.~~ The engine shall be capable of supplying coolant at a temperature of at least ~~170~~ one hundred seventy degrees Fahrenheit (170° F) at the engine cooling thermostat opening temperature. The coolant flow rate shall be

fifty (50) pounds per minute at the return end of thirty (30) feet of one (1)- inch inside diameter automotive hot water heater hose, according to School Bus Manufacturers Technical Council (SBMTC) ~~p~~Publication - 001.

1. Heating System:

    a. The heater shall be hot water and/or combustion type, electric heating element, or heat pump.

    b. If only one heater is used, it shall be fresh-air or combination fresh-air and recirculation type.

    c. If more than one heater is used, additional heaters may be recirculating air type.

    d. The heating system shall be capable of maintaining bus interior temperatures as specified in SAE test procedure J2233.

    e. Auxiliary fuel-fired heating systems ~~(non-reimbursable)~~ are permitted, provided they comply with the following:

        1) The auxiliary heating system fuel shall utilize the same type fuel as specified for the vehicle engine.

        2) The heater(s) may be direct hot air or connected to the engine's coolant system.

        3) An auxiliary heating system, when connected to the engine's coolant system, may be used to preheat the engine coolant or preheat and add supplementary heat to the bus's heating system.

        4) Auxiliary heating systems must be installed pursuant to the manufacturer's recommendations and shall not direct exhaust in such a manner that will endanger bus passengers.

        5) Auxiliary heating systems which operate on diesel fuel shall be capable of operating on #1, #2, or blended diesel fuel without the need for system adjustment.

        6) The auxiliary heating system shall be low voltage.

        7) Auxiliary heating systems shall comply with all applicable FMVSSs, including FMVSS No. 301, as well as with SAE test procedures.

        8) All forced air heaters installed by body manufacturers shall bear a name plate that indicates the heater rating in accordance with SBMTC-001. ~~The plate shall be affixed by the heater manufacturer and shall constitute certification that the heater performance is as shown on the plate.~~ Low profile heaters are not allowed within the clear floor area required to accommodate a wheelchair.

f. Portable heaters shall not be allowed

g. Heater hoses shall be adequately supported to guard against excessive wear due to vibration. The hoses shall not dangle or rub against the chassis or any sharp edges and shall not interfere with or restrict the operation of any engine function. Heater hoses shall conform to SAE J20c. Heater lines, cores and elements on the interior of bus shall be shielded to prevent scalding or burning of the driver or passengers. All heater hose shields shall completely cover all parts of the hose and connectors in such a way as to prevent burning subsequent to significant heat transferring to the shield. They shall not incorporate any openings that would allow a passenger to be injured by sharp edges or hot surfaces.

h. Each hot water system installed by a body manufacturer shall include one (1) shut-off valve in the pressure line and one (1) shut-off valve in the return line with both valves at the engine in an accessible location, except that on all Type~~s~~ A ~~and B~~ buses, the valves may be installed in another accessible location.

i. All heaters of hot water type in the passenger compartment shall be equipped with a device, installed in the hot water pressure line, which regulates the water flow to all passenger heaters. The device shall be conveniently operated by the driver while seated. The driver and passenger heaters may operate independently of each other for maximum comfort.

j. All combustion heaters shall be in compliance with current Federal Motor Carrier Safety Administration (FMCSA) Regulations.

k. Accessible bleeder valves of hot water type shall be installed in an appropriate place in the return lines of body company-installed heaters to remove air from the heater lines.

l. Access panels shall be provided to make heater motors, cores,~~-~~ elements, and fans readily accessible for service. An outside access panel may be provided for the driver's heater.

2. Air Conditioning (Non-Reimbursable Option Except When Driven By IEP)~~:~~

The following specifications are applicable to all types of school buses that may be equipped with air conditioning. This section is divided into two parts: Part 1 covers performance specifications, and Part 2 covers other requirements applicable to all buses.

a. Part 1 - Performance Specifications:

~~1) The installed air conditioning system should cool the interior of the bus down to at least 80 degrees Fahrenheit, measured at a minimum of three points, located four feet above the floor at the longitudinal centerline of the bus. The three points shall be: (1) near the driver's location, (2) at the mid-point of the body, and (3) two feet forward of the rear emergency door, or, for Type D rear-engine buses, two feet forward of the end of the aisle.~~

~~2) The test conditions under which the above performance must be achieved shall consist of: (1) placing the bus in a room (such as a paint booth) where ambient temperature can be maintained at 100 degrees Fahrenheit (2) heat soaking the bus at 100 degrees Fahrenheit with windows open for at least one hour and (3) closing windows, turning on the air conditioner with the engine running at the chassis manufacturer's recommended low idle speed, and cooling the interior of the bus to 80 degrees Fahrenheit or lower within a maximum of 30 minutes while maintaining 100 degrees Fahrenheit outside temperature.~~

~~Alternately, and at the user's discretion, this test may be performed under actual summer conditions, which consist of temperatures above 85 degrees Fahrenheit, humidity above 50 percent with normal sun loading of the bus and the engine running at the manufacturer's recommended low idle speed. After a minimum of one hour of heat soaking, the system shall be turned on and must provide a minimum 20-degree temperature drop in the 30-minute time limit.~~

The manufacturer shall provide test results that show compliance of standard systems. If the bid specifies, the manufacturer shall provide facilities for the user or user's representative to confirm that a pilot model of each bus design meets the above performance requirements.

b. Part 2 - Other Requirements:

1) Evaporator cases, lines and ducting (as equipped) shall be designed in such a manner that all condensation is effectively drained to the exterior of the bus below the floor level under all conditions of vehicle movement and without leakage on any interior portion of bus.

2) Any evaporator or ducting system shall be designed and installed so as to be free of injury-prone projections or sharp edges. Any ductwork shall be installed so that exposed edges face the front of the bus and do not present sharp edges.

3) On specially equipped school buses, the evaporator and ducting (if used) shall be placed high enough that they will not obstruct occupant securement shoulder strap upper attachment points. This clearance shall be provided along entire length of the passenger area on both sides of the bus interior to allow for potential retrofitting of new wheelchair positions and occupant securement devices throughout the bus.

4) The body may be equipped with insulation, including sidewalls, roof, firewall, rear, inside body bows and plywood or composite floor insulation to aid in heat dissipation and reflection.

5) All glass (windshield, entrance and emergency doors, side and rear windows) may be equipped with maximum integral tinting allowed by federal, state (Section 49-944, Idaho Code) or ~~ANSI~~ American

National Standards Institute standards for the respective locations, except that windows rear of the driver's compartment, if tinted shall have approximately twenty-eight28 percent (28%) light transmission.

6) Electrical generating capacity shall be provided to accommodate the additional electrical demands imposed by the air conditioning system.

7) Roofs may be painted white to aid in heat dissipation, according to National School Transportation Specifications & Procedures Placement of Reflective Markings.

EE. Hinges

All exterior metal door hinges which do not have stainless steel, brass or nonmetallic hinge pins or other designs that prevent corrosion shall be designed to allow lubrication to be channeled to the center seventy-five75 percent (75%) of each hinge loop without disassembly.

FF. Horn

The bus shall be equipped with two (2) horns of standard make with each horn capable of producing a complex sound in bands of audio frequencies between two-hundred fifty (250) and two thousand (2,000) cycles per second and tested in accordance with SAE J-377.

GG. Identification

1. The body shall bear the words “SCHOOL BUS” in black letters at least eight (8) inches high on both front and rear of the body or on signs attached thereto. Lettering shall be placed as high as possible without impairment of its visibility. Letters shall conform to “Series B” of Standard Alphabets for Highway Signs. “SCHOOL BUS” lettering shall have a reflective background, or as an option, may be illuminated by backlighting.

2. MFSABs are exempt from these requirements.

3. Required lettering and numbering shall include:

   a. School district owned vehicles will be identified with black lettering ([minimum four (4) inches high)] on both sides of the school bus using the district name and number listed in the Idaho Educational Directory. Contractor-owned school buses under contract with a school district must also comply with the same identification standards as district-owned buses and shall be identified by either the contractor or district name, as decided by the district.

   b. Each district-owned or contracted school bus will be separately identified with its own number in two (2) places on each side of the bus in the logo panel/belt line using six (6)- inch (6”) high black numbers. Numbers on the

passenger side shall be as close to the first and last passenger windows as possible and on the driver's side as close to the stop arm and last passenger window as possible.

c. Unauthorized entry placards shall be displayed in the most visible location when observed by persons approaching the vehicle with the door in the open position. Permanence of the placard should be a consideration when choosing a location for attachment. Placard shall read as follows:

WARNING
IT IS UNLAWFUL TO:
Enter a school bus with the intent to commit a crime
Enter a school bus and disrupt or interfere with the driver
Refuse to disembark after ordered to do so by the driver
(Sections 18-1131522 and; 18-1131522, Idaho Code)

State Department of Education Student Transportation Section may shall provide unauthorized entry placards.

d. Other lettering, numbering, or symbols, which may be displayed on the exterior of the bus, shall be limited to:

1) Bus identification number on the top, front and rear of the bus, in addition to the required numbering on the sides.

2) The location of the battery(ies) identified by the word "BATTERY" or "BATTERIES" on the battery compartment door in two (2) inch maximum lettering.

3) Symbols or letters not to exceed sixty-four (64) square inches of total display near the entrance door exterior displaying information for identification by the students of the bus or route served. No symbols, letters, or other signage shall be permitted on the first two passenger windows or on entrance door glass which may block or obscure clear visibility.

e. All other signage must have prior written SDE approval.

f. Manufacturer, dealer or school identification or logos displayed so as not to distract significantly from school bus body color and lettering specifications.

g. Symbols identifying the bus as equipped for or transporting students with special needs (see Specially Equipped School Bus section).

h. Lettering on the rear of the bus relating to school bus flashing signal lamps electronic warning sign or railroad stop procedures. This lettering shall not obscure or interfere with the operation instructions displayed on the exterior portion of the rear emergency exit door.

i. Identification of fuel type in ~~two~~ one (1) ~~–~~inch maximum lettering adjacent to the fuel filler opening.

~~j. One 4" x 10"(maximum) decal promoting school bus safety on rear bumper.~~

HH. Inside Height

Inside body height shall be seventy-two (72) inches or more, measured metal to metal, at any point on longitudinal centerline from front vertical bow to rear vertical bow. Inside body height of Type A-1 buses shall be sixty-two (62) inches or more.

II. Instruments and Instrument Panel

1. The chassis shall be equipped with the instruments and gauges listed below:~~.~~ *(**Note:** Telltale warning lamps in lieu of gauges are not acceptable, except as noted.)*

   a. Speedometer;

   b. Tachometer (**Note:** For Types ~~B,~~ C~~,~~ and D buses, a tachometer shall be installed so as to be visible to the driver while seated in a normal driving position~~.~~);

   c. Odometer which will give accrued mileage (to seven digits), including tenths of a mile~~s~~, unless tenths of a mile~~s~~ are registered on a trip odometer. Odometer shall be available to read without use of the vehicle's key;~~.~~

   d. Voltmeter (**Note:** An ammeter with graduated charge and discharge indications is permitted in lieu of a voltmeter; however, when used, the ammeter wiring must be compatible with the current flow of the system~~.~~);

   e. Oil pressure gauge;

   f. Water temperature gauge;

   g. Fuel gauge;

   h. Upper beam headlamp indicator;

   i. Brake air pressure gauge (air brakes), brake indicator lamp (vacuum/hydraulic brakes), or brake indicator lamp (hydraulic/hydraulic)~~.~~ [**Note:** A warning lamp indicator in lieu of gauge is permitted on a vehicle equipped with a hydraulic-over-hydraulic brake system];

   j. Turn signal indicator; and

   k. ~~Glow-plug~~ Intake heater indicator lamp where appropriate.

~~1.~~2. All instruments shall be easily accessible for maintenance and repair.

~~2.~~3. The instruments and gauges shall be mounted on the instrument panel so that each is clearly visible to the driver while seated in a normal driving position.

~~3.~~4. The instrument panel shall have lamps of sufficient candlepower to illuminate all instruments, gauges and shift selector indicator for the automatic transmission or as required by FMVSS No. 101.

~~4.~~5. Multi-function gauge (MFG) (Optional):

a. The driver must be able to manually select any displayable function of the gauge on a MFG whenever desired.

b. Whenever an out-of-limits condition that would be displayed on one or more functions of a MFG occurs, the MFG controller should automatically display this condition on the instrument cluster. This should be in the form of an illuminated telltale warning lamp as well as having the MFG automatically displays the out-of-limits indications. Should two or more functions displayed on the MFG go out of limits simultaneously, then the MFG should sequence automatically between those functions continuously until the condition(s) are corrected.

c. The use of a MFG does not relieve the need for audible warning devices, where required.

JJ. Insulation (Optional)

1. If thermal insulation is specified, it shall be fire-resistant, UL approved, with minimum R-value of 5.5. Insulation shall be installed so as to prevent sagging.

2. If floor insulation is required, it shall be five-ply nominal five-eighths (⅝) inch thick plywood, and it shall equal or exceed properties of the exterior-type softwood plywood, C-D Grade, as specified in standard issued by U.S. Department of Commerce. When plywood is used, all exposed edges shall be sealed. Type A-1 buses may be equipped with nominal one-half (½) inch thick plywood or equivalent material meeting the above requirements. Equivalent material may be used to replace plywood, provided it has an equal or greater insulation R-value, deterioration, sound abatement and moisture resistance properties.

KK. Interior

1. The interior of bus shall be free of all unnecessary projections, which include luggage racks and attendant handrails, to minimize the potential for injury. This specification requires inner lining on ceilings and walls. If the ceiling is constructed to contain lapped joints, the forward panel shall be lapped by rear panel and exposed edges shall be beaded, hemmed, flanged, or otherwise treated to minimize sharp edges. Buses may be equipped with a storage compartment for tools, tire chains and/or tow chains (see S~~TORAGE~~torage C~~OMPARTMENT~~ompartment.)~~.~~

2. Non-reimbursable interior overhead storage compartments may be provided if they meet the following criteria:

   a. Meet head protection requirements of FMVSS No. 222, where applicable~~.~~;

   b. Have a maximum rated capacity displayed for each compartment~~.~~;

   c. Be completely enclosed and equipped with latching doors which must be sufficient to withstand a force of five (5) times the maximum rated capacity of the compartment~~.~~;

   d. Have all corners and edges rounded with a minimum radius of one (1) inch or padded equivalent to door header padding~~.~~;

   e. Be attached to the bus sufficiently to withstand a force equal to twenty (20) times the maximum rated capacity of the compartment~~.~~; and

   f. Have no protrusions greater than one-quarter (¼) inch.

3. The driver's area forward of the foremost padded barriers will permit the mounting of required safety equipment and vehicle operation equipment. All equipment necessary for the operation of the vehicle shall be properly secured in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.

4. Every school bus shall be constructed so that the noise level taken at the ear of the occupant nearest to the primary vehicle noise source shall not exceed 85 d~~b~~BA when tested according to National School Transportation Specifications & Procedures Noise Test Procedure.

LL. Lamps and Signals

1. Illumination Lamps

Interior lamps shall be provided which adequately illuminate the aisle and step well. The step well lamps shall be illuminated by an entrance service door-operated switch, to illuminate only when headlamps and/or clearance lamps are on and the entrance door is open. An additional exterior mounted lamp shall be mounted next to the entrance door to adequately illuminate the outside approach to the door. It shall be actuated simultaneously with the step well lamps.

2. Body Instrument Panel Lamps

Body instrument panel lamps shall be controlled by an independent rheostat switch.

3. School Bus Alternately Flashing Signal Lamps:

a. The bus shall be equipped with two (2) red lamps at the rear of the vehicle and two (2) red lamps at the front of the vehicle.

b. In addition to the four (4) red lamps described above, four (4) amber lamps shall be installed so that one (1) amber lamp is located near each red signal lamp, at the same level, but closer to the vertical centerline of bus. The system of red and amber signal lamps, when in its operational mode, shall be wired so that amber lamps are energized manually, and red lamps are automatically energized (with amber lamps being automatically de-energized) when stop signal arm is extended or when bus entrance door is opened. An amber pilot lamp and a red pilot lamp shall be installed adjacent to the driver controls for the flashing signal lamp to indicate to the driver which lamp system is activated.

c. Air and electrically operated doors may be equipped with an over-ride switch that will allow the red lamps to be energized without opening the door, when the alternately flashing signal lamp system is in its operational mode. The use of such a device shall be in conformity with the law and SDE loading/unloading training procedures, as contained in Idaho's school bus driver training curriculum.

d. The area around the lenses of alternately flashing signal lamps extending outward from the edge of the lamps approximately three (3) inches ~~(+/- one quarter inch)~~ to the sides and top and minimum one (1) inch to the bottom, shall be black in color on the body or roof area against which the signal lamp is seen ~~(~~[from a distance of five hundred (500) feet along axis of the vehicle~~)~~].

e. Red lamps shall flash at any time the stop signal arm is extended.

f. All flashers for alternately flashing red and amber signal lamps shall be enclosed in the body in a readily accessible location.

4. Turn Signal and Stop/Tail Lamps:

a. Bus body shall be equipped with amber rear turn signal lamps that are at least seven (7) inches in diameter or, if a shape other than round, a minimum thirty-eight (38) square inches of illuminated area and shall meet FMVSS No. 108. These signal lamps must be connected to the chassis hazard-warning switch to cause simultaneous flashing of turn signal lamps when needed as vehicular traffic hazard warning. Turn signal lamps are to be placed as wide apart as practical and their centerline shall be a maximum of twelve (12) inches below the rear window. Type A-1 conversion vehicle front lamps must be at least twenty-one (21) square inches in lens area and must be in the manufacturer's standard color.

b. Buses shall be equipped with amber side-mounted turn signal lamps. One turn signal lamp on the left side shall be mounted rearward of the stop signal arm and one turn signal lamp on the right side shall be mounted rearward of the entrance door. Both front side-mounted turn signal lamps shall be mounted forward of the bus center-line. An additional side

mounted turn signal lamp may be mounted on each side of the bus to the rear of the bus center-line.

c. Buses shall be equipped with four (4) combination red stop/tail lamps:

1) Two (2) combination lamps with a minimum diameter of seven (7) inches, or if a shape other than round, a minimum thirty-eight (38) square inches of illuminated area shall be mounted on the rear of the bus just inside the turn signal lamps.

2) Two (2) combination lamps with a minimum diameter of four (4) inches, or if a shape other than round, a minimum of twelve (12) square inches of illuminated area, shall be placed on the rear of the body between the beltline and the floor line. The rear license plate lamp may be combined with one (1) lower tail lamp. Stop lamps shall be activated by the service brakes and shall emit a steady light when illuminated. Type A-1 buses with bodies supplied by chassis manufacturer may be equipped with manufacturer's standard stop and tail lamps.

d. On buses equipped with a monitor for the front and rear lamps of the school bus, the monitor shall be mounted in full view of the driver. If the full circuit current passes through the monitor, each circuit shall be protected by a fuse or circuit breaker or electronic protection device against any short circuit or intermittent shorts.

e. An optional white flashing strobe lamp may be installed on the roof of a school bus, at a location not ~~to exceed 1/3 the body length forward~~ closer than twelve (12) inches or more than six (6) feet from the rear of the roof edge. However, if the bus is equipped with a roof hatch, or other roof mounted equipment, falling within the above mentioned measurements, the strobe lamp may be located directly behind that equipment. The lamp shall have a single clear lens emitting light 360 degrees around its vertical axis and may not extend above the roof more than maximum legal height. A manual switch and a pilot lamp shall be included to indicate when lamp is in operation. Operation of the strobe lamp is limited to periods of inclement weather, nighttime driving, emergency situation or whenever students are onboard. Optionally, the strobe lamp may be mounted on the roof in the area directly over the restraining barrier on the driver's side, may be wired to activate with the amber alternately flashing signal lamps, continuing through the full loading or unloading cycle, and may be equipped with an override switch to allow activation of the strobe at any time for use in inclement weather, nighttime driving or emergency situation.

f. The bus body shall be equipped with two (2) white rear backup lamps that are at least four (4) inches in diameter or, if a shape other than round, a minimum of twelve (12) square inches of illuminated area, meeting FMVSS No. 108 and ~~Idaho Code~~Section 49-920, Idaho Code. If backup lamps are placed on the same horizontal line as the brake lamps and turn signal lamps, they shall be to the inside.

MM. Metal Treatment

1. All metal except high-grade stainless steel or aluminum used in construction of the bus body shall be zinc-coated or aluminum-coated or treated by an equivalent process before bus is constructed. Included are such items as structural members, inside and outside panels, door panels and floor sills. Excluded are such items as door handles, grab handles, interior decorative parts and other interior plated parts.

2. All metal parts that will be painted, in addition to the above requirements, shall be chemically cleaned, etched, zinc phosphate-coated and zinc chromate-or epoxy-primed, or the metal may be conditioned by an equivalent process. This includes but not limited to such items as crossing arm and stop arm.

3. In providing for these requirements, particular attention shall be given to lapped surfaces, welded connections of structural members, cut edges on punched or drilled hole areas in sheet metal, closed or box sections, unvented or undrained areas and surfaces subjected to abrasion during vehicle operation.

4. As evidence that the above requirements have been met, samples of materials and sections used in the construction of the bus body shall be subjected to a cyclic corrosion testing as outlined in SAE J1563.

NN. Mirrors

1. The interior mirror shall be either clear view laminated glass or clear view glass bonded to a backing which retains the glass in the event of breakage. The mirror shall have rounded corners and protected edges. All Type A buses shall have a minimum of a six-inch x ~~16~~sixteen-inch (6 x 16 inch) mirror and Types ~~B,~~ C and D buses shall have a minimum of a six-inch x ~~30~~thirty-inch (6 x 30 inch) mirror.

2. Each school bus shall be equipped with exterior mirrors meeting the requirements of FMVSS No. 111. Mirrors shall be easily adjustable but shall be rigidly braced so as to reduce vibration. The right side rear view mirror shall not be obscured by the un-wiped portion of the windshield.

3. Heated external mirrors may be used.

4. Remote controlled external rear view mirrors may be used.

OO. Mounting

1. The chassis frame shall support the rear body cross member. The bus body shall be attached to chassis frame at each main floor sill, except where chassis components interfere, in such a manner as to prevent shifting or separation of the body from the chassis under severe operating conditions.

2. Isolators shall be installed at all contact points between body and chassis frame on Types A-2, ~~B,~~ C, and D buses, and shall be secured by a positive means to the chassis frame or body to prevent shifting, separation, or displacement of the isolators under severe operating conditions.

PP. Mud Flaps

Rear vehicle ~~mad~~ mud flaps shall be required on all school buses, except when not provided as an option by the school bus manufacturer. Front mud flaps are optional

QQ. Oil Filter

An oil filter with a replaceable element shall be provided and connected by flexible oil lines if it is not a built-in or an engine-mounted design. The oil filter shall have a capacity in accordance with the engine manufacturer's recommendation.

RR. Openings

All openings in the floorboard or firewall between the chassis and passenger compartment (e.g., for gearshift selector and parking brakes lever) shall be sealed.

SS. Overall Length

Overall length of bus shall not exceed forty-five (45) feet, excluding accessories.

TT. Overall Width

Overall width of bus shall not exceed one-hundred and two (102) inches, excluding accessories.

UU. Passenger Load

1. Actual gross vehicle weight (GVW) is the sum of the chassis weight, plus the body weight, plus the driver's weight, plus total seated student weight. For purposes of calculation, the driver's weight is one hundred fifty (150) pounds and the student weight is one hundred twenty (120) pounds per student.

2. Actual GVW shall not exceed the chassis manufacturer's GVWR for the chassis, nor shall the actual weight carried on any axle exceed the chassis manufacturer's Gross Axle Weight Rating (GAWR).

3. When requested, the manufacturer's GVWR for a particular school bus shall be furnished by manufacturers in duplicate (unless more copies are requested) to the purchasing school district or contractor.

VV. Public Address System

1. Buses may be equipped with AM/FM audio and/or public address system having interior and/or exterior speakers.

2. No internal speakers, other than the driver's communication systems, may be installed within four (4) feet of the driver's seat back in its rearmost upright position.

WW. Reflective Material (See National School Transportation Specifications & Procedures Placement of Reflective Markings)

1. The front and/or rear bumper may be marked diagonally 45 degrees down to centerline of pavement with 1.75 to 2.25 ~~two-inch ± one quarter~~ inch wide strips of non-contrasting reflective material.

2. The rear of bus body shall be marked with strips of reflective NSBY material to outline the perimeter of the back of the bus using material which conforms to the requirements of FMVSS No. 131, Table 1. The perimeter marking of rear emergency exits per FMVSS No. 217 and/or the use of reflective "SCHOOL BUS" signs partially accomplish the objective of this requirement. To complete the perimeter marking of the back of the bus, strips of at least one ~~and three-quarters (1¾)~~ (1) inch reflective NSBY material shall be applied horizontally above the rear windows and above the rear bumper, extending from the rear emergency exit perimeter, marking outward to the left and right rear corners of the bus. Vertical strips of at least one and three-quarters (1¾) inch retroreflective NSBY material shall be applied at the corners connecting these horizontal strips.

3. "SCHOOL BUS" signs, if not of lighted design, shall be marked with retro reflective NSBY material comprising background for lettering of the front and/or rear "SCHOOL BUS" signs.

4. Sides of bus body shall be marked with at least one and three-quarters (1¾) inch retro reflective NSBY material, extending the length of the bus body and located (vertically) between the floor line and the beltline.

5. Signs, if used, placed on the rear of the bus relating to school bus flashing signal lamps or railroad stop procedures may be of retro reflective NSBY material comprising background for lettering.

XX. Retarder System (Optional Equipment)

A retarder system, if used, shall limit the speed of a fully loaded school bus to 19.0 mph on a seven ~~7~~ percent (7%) grade for 3.6 miles.

YY. Road Speed Control

When it is desired to accurately control vehicle maximum speed, a vehicle speed limiter may be utilized.

ZZ. Rub Rails

1. There shall be one (1) rub rail located on each side of the bus approximately at seat cushion level which extends from the rear side of the entrance door completely around the bus body (except the emergency door or any maintenance access door) to the point of curvature near the outside cowl on the left side.

2. There shall be one (1) additional rub rail located on each side at, or no more than ten (10) inches above the floor line. The rub rail shall cover the same longitudinal area as upper rub rail, except at the wheel housings, and it shall, at a minimum, extend to radii of the right and left rear corners.

3. Both rub rails shall be attached at each body post and all other upright structural members.

4. Each rub rail shall be four (4) inches or more in width in their finished form, shall be constructed of 16-gauge steel or suitable material of equivalent strength and shall be constructed in corrugated or ribbed fashion. Each entire rub rail shall be black in color.

5. Both rub rails shall be applied outside the body or outside the body posts. Pressed-in or snap-on rub rails do not satisfy this requirement. For Type A-1 vehicles using the body provided by the chassis manufacturer or for Types A-2, ~~B,~~ C, and D buses using the rear luggage or the rear engine compartment, rub rails need not extend around the rear corners.

6. There shall be a rub rail or equivalent bracing located horizontally at the bottom edge of the body side skirts.

AAA. Seats and Restraining Barriers

1. Passenger Seating:

   a. All seats shall have a minimum cushion depth of fifteen (15) inches, a seat back height of twenty-four (24) inches above the seating reference point, and must comply with all requirements of FMVSS No. 222. School bus design capacities shall be in accordance with 49 CFR~~,~~ Part 571.3 and FMVSS No. 222. In addition to the fastener that forms the pivot for each seat retaining clip, a secondary fastener may be used in each clip to prevent the clip from rotating and releasing the seat cushion unintentionally.

   b. All restraining barriers and passenger seats may be constructed with non-reimbursable materials that enable them to meet the criteria contained in the School Bus Seat Upholstery Fire Block Test or the American Society for Testing and Materials (ASTM) E2574/E2574M – 12a Standard Test Method for Fire Testing of School Bus Seat Assemblies. ~~(National School Transportation Specifications & Procedures School Bus Seat Upholstery Fire Block Test).~~

   c. Each seat leg shall be secured to the floor by ~~a minimum of two~~ bolts, washers, and nuts in order to meet the performance requirements of FMVSS No. 222. Flange-head nuts may be used in lieu of nuts and washers, or seats may be track-mounted in conformance with FMVSS No. 222. If track seating is installed, the manufacturer shall supply minimum and maximum seat spacing dimensions applicable to the bus, which comply with FMVSS No. 222. This information shall be on a label permanently affixed to the inside passenger compartment of the bus.

d. All seat frames attached to the seat rail shall be fastened with ~~two~~ bolts, washers and nuts or flange-head nuts.

e. All school buses (including Type A) shall be equipped with restraining barriers which conform to FMVSS No. 222.

f. The use of a “flip seat” adjacent to any side emergency door is prohibited.

2. Pre School Age Seating:

~~When installed, a~~All passenger seats designed to accommodate a child or infant carrier seat shall comply with FMVSS No. 225. These seats shall be in compliance with NHTSA's "Guideline for the Safe Transportation of Pre-school Age Children in School Buses". Child Safety Restraint Systems (CSRSs) shall not be placed in school bus seats adjacent to emergency exits.

3. Driver Seat:

a. The driver's seat supplied by the body company shall be a high back seat with a minimum seat back adjustable to fifteen (15) degrees, without requiring the use of tools, and a head restraint to accommodate a 5th percentile female to a 95th percentile adult male, as defined in FMVSS No. 208. The driver's seat shall be secured with nuts, bolts and washers or flanged-head nuts.

b. Type A buses may use the standard driver's seat provided by the chassis manufacturer.

4. Driver Restraint System:

a. A Type 2 lap/shoulder belt shall be provided for the driver. On buses where the driver’s seat and upper anchorage for the shoulder belt are both attached to the body structure, a driver’s seat with an integrated Type 2 lap/shoulder belt may be substituted. On buses where the driver’s seat and upper anchorage for the shoulder belt are separately attached to both body and chassis structures (i.e., one attached to the chassis and the other attached to the body), a driver’s seat with an integrated Type 2 lap/shoulder belt should be used.

b. The assembly shall be equipped with an emergency locking retractor for the continuous belt system. On all buses except Type A equipped with a standard chassis manufacturer's driver's seat, the lap portion of the belt system shall be guided or anchored to prevent the driver from sliding sideways under it. The lap/shoulder belt shall be designed to allow for easy adjustment in order to fit properly and to effectively protect drivers varying in size from 5th percentile adult female to 95th percentile adult male.

c. Each bus shall be equipped with durable webbing cuter having a full width handgrip and a protected, replaceable or non-corrodible blade. The required belt cutter shall be mounted in a visible location accessible to the seated driver in an easily detachable manner.

BBB. Shock Absorbers

The bus shall be equipped with double-action shock absorbers compatible with manufacturer's rated axle capacity at each wheel location. Shock absorbers shall be of sufficient length to allow for adequate travel in all situations without damage to the shock absorber or mounts.

CCC. Steering Gear

1. The steering gear shall be approved by the chassis manufacturer and designed to ensure safe and accurate performance when the vehicle is operated with maximum load and at maximum speed.

2. If external adjustments are required, steering mechanism shall be accessible to make adjustments.

3. No changes shall be made in the steering apparatus which are not approved by the chassis manufacturer.

4. There shall be a clearance of at least two (2) inches between the steering wheel and cowl, instrument panel, windshield, or any other surface.

5. Power steering is required and shall be of the integral type with integral valves.

6. The steering system shall be designed to provide a means for lubrication of all wear-points, which are not permanently lubricated.

DDD. Steps

1. The first step at entrance door shall be not less than ten (10) inches and not more than fourteen (14) inches from the ground when measured from top surface of the step to the ground, based on standard chassis specifications, except that on Type D vehicles, the first step at the entrance door shall be twelve (12) inches to sixteen (16) inches from the ground. On chassis modifications which may result in increased ground clearance (such as four-wheel drive) an auxiliary step shall be provided to compensate for the increase in ground-to-first-step clearance. The auxiliary step is not required to be enclosed.

2. Step risers shall not exceed a height of ten (10) inches. When plywood is used on a steel floor or step, the riser height may be increased by the thickness of the plywood.

3. OEM steps shall be enclosed to prevent accumulation of ice and snow.

4. OEM, retrofit, or after-market steps shall not protrude beyond the side body line, except during the loading or unloading of passengers.

EEE. Step Treads

1. All steps, including the floor line platform area, shall be covered with ~~3/16 inch rubber~~ an elastomer floor covering ~~or other materials equal in wear and abrasion resistance to top grade rubber.~~ having a minimum overall thickness of 0.187 inch.

2. The ~~metal back of the tread shall be permanently bonded to the step tread material~~step covering shall be permanently bonded to a durable backing material that is resistant to corrosion.

3. Steps, including the floor line platform area, shall have a one and one-half (1-½) - inch nosing that contrasts in color by at least seventy ~~70~~ percent (70%) measured in accordance with the contrasting color specification in 36 CFR, Part 1192, ADA, Accessibility Guidelines for Transportation Vehicles.

4. Step treads shall have the following characteristics:

   a. Abrasion resistance: Step tread material weight loss shall not exceed 0.40 percent, as tested under ASTM D-4060, Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser~~;~~ (CS-17 Wheel, 1000 gram, 1000 cycle);

   b. Weathering resistance: Step treads shall not break, crack, or check after ozone exposure (seven days at 50 phm at 40 degrees C) and Weatherometer exposure (ASTM D-750, Standard Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus, seven days);

   c. Flame Resistance: Step treads shall have a calculated burn rate of 0.01 mm per minute or less using the test methods, procedures and formulas listed in FMVSS No. 302, Flammability of Interior Materials; and

   d. A spray on application type material may be used in lieu of item 1. that meets the requirements of items 2~~.~~ through 4. The material shall be applied not only to the interior surfaces of the service door step treads but the exterior as well if not covered by undercoating.

FFF. Stirrup Steps

When the windshield and lamps are not easily accessible from the ground, there may be at least one (1) folding stirrup step or recessed foothold and suitably located handles on each side of the front of the body for easy accessibility for cleaning. Steps are permitted in or on the front bumper in lieu of the stirrup steps, if the windshield and lamps are easily accessible for cleaning from that position.

GGG. Stop Signal Arm

The stop signal arm(s) shall comply with the requirements of FMVSS No. 131.

HHH. Storage Compartment (Optional)

A storage container for tools, tire chains, and/or tow chains may be located either inside or outside the passenger compartment. If inside, it shall have a cover capable of being securely latched and fastened to the floor (the seat cushion may not serve this purpose), convenient to either the entrance door or the emergency door.

III. Sun Shield

1. An interior adjustable transparent sun shield, with a finished edge and not less than six inches by thirty ~~30~~ inches (6 x 30 inches) for Types ~~B,~~ C~~,~~ and D vehicles, shall be installed in a position convenient for use by the driver.

2. On all Type A buses, the sun shield (visor) shall be installed according to the manufacturer's standard.

JJJ. Suspension Systems

1. The capacity of springs or suspension assemblies shall be commensurate with the chassis manufacturer's GVWR.

2. Rear leaf springs shall be of a progressive rate or multi-stage design. Front leaf springs shall have a stationary eye at one end and shall be protected by a wrapped leaf, in addition to the main leaf.

~~**4. Tail Pipe**~~

~~a. The tailpipe may be flush with, but shall not extend out more than two inches beyond, the perimeter of the body for side-exit pipe or the bumper for rear-exit pipe.~~

~~b. The tailpipe shall exit to the left or right of the emergency exit door in the rear of vehicle or to the left side of the bus in front or behind the rear drive axle. The tailpipe exit location on school bus types A-1 or B-1 buses may be according to the manufacturer's standard. The tailpipe shall not exit beneath any fuel filler location or beneath any emergency door.~~

KKK. Throttle

The force required to operate the throttle shall not exceed sixteen (16) pounds throughout the full range of accelerator pedal travel.

LLL. Tires and Rims

1. Rims of the proper size and tires of the proper size and load rating commensurate with the chassis manufacturer's gross vehicle weight rating shall be provided. The use of multi-piece rims and/or tube-type tires shall not be permitted on any school bus ordered after December 31, 1995.

2. Dual rear tires shall be provided on Type A-2, ~~Type B,~~ Type C and Type D school buses.

3. All tires on a vehicle shall be of the same size, and the load range of the tires shall meet or exceed the GVWR, as required by FMVSS No. 120.

4. If the vehicle is equipped with a spare tire and rim assembly, it shall be the same size as those mounted on the vehicle.

5. If a tire carrier is required, it shall be suitably mounted in an accessible location outside the passenger compartment.

MMM. Tow Attachment Points

1. Rear towing devices (i.e. tow hooks, tow eyes, or other designated towing attachment points) shall be furnished to assist in the retrieval of buses that are stuck and/or for towing buses when a wrecker with a “wheel lift” or an “axle lift” is not available or cannot be applied to the towed vehicle.

2. Towing devices shall be attached to the chassis frame either by the chassis manufacturer or in accordance with the chassis manufacturer’s specifications.

3. Each rear towing device shall have a strength rating of thirteen thousand five hundred (13,500) pounds with the force applied in the rearward direction, parallel to the ground, and parallel to the longitudinal axis of the chassis frame rail.

4. The towing devices shall be mounted such that they do not project rearward of the rear bumper.

NNN. Traction Assisting Devices (Optional)

1. Where required or used, sanders shall:

   a. Be of hopper cartridge-valve type~~.~~;

   b. Have a metal hopper with all interior surfaces treated to prevent condensation of moisture~~.~~;

   c. Be of at least 100-~~-~~pound (grit) capacity~~.~~;

   d. Have a cover on the filler opening of hopper, which screws into place, thereby sealing the unit airtight~~.~~;

   e. Have discharge tubes extending to the front of each rear wheel under the fender~~.~~;

   f. Have non-clogging discharge tubes with slush-proof, non-freezing rubber nozzles~~.~~;

   g. Be operated by an electric switch with a telltale pilot lamp mounted on the instrument panel~~.~~;

   h. Be exclusively driver-controlled~~.~~; and

i. Have a gauge to indicate that the hopper needs refilling when it reaches one-quarter (¼) full.

2. Automatic traction chains may be installed.

OOO. Transmission

1. Automatic transmissions shall have no fewer than three (3) forward speeds and one (1) reverse speed. Mechanical shift selectors shall provide a detent between each gear position when the gear selector quadrant and shift selector are not steering-column mounted.

~~2. In manual transmissions, second gear and higher shall be synchronized, except when incompatible with engine power. A minimum of three forward speeds and one reverse speed shall be provided.~~

~~3.~~2. Automatic transmissions ~~incorporating a parking pawl~~ shall have a transmission shifter interlock controlled by the application of the service brake to prohibit accidental engagement of the transmission.
~~All non-park pawl transmissions shall incorporate a park brake interlock that requires the service brake to be applied to allow release of the parking brake.~~

PPP. Trash Container and Holding Device (Optional)

Where requested or used, the trash container shall be secured by a holding device that is designed to prevent movement and to allow easy removal and replacement; and it shall be installed in an accessible location in the driver's compartment, not obstructing passenger use of the entrance door or the entrance grab handle, and in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc. Trash cans shall not be installed in the passenger compartment which includes the back of the bus.

QQQ. Turning Radius

1. A chassis with a wheelbase of two-hundred sixty-four (264) inches or less shall have a right and left turning radius of not more than forty-two and one-half (42½) feet, curb-to-curb measurement.

2. A chassis with a wheelbase of two-hundred sixty-five (265) inches or more shall have a right and left turning radius of not more than forty-four and one-half (44½) feet, curb-to-curb measurement.

RRR. Undercoating

1. The entire underside of the bus body, including floor sections, cross member and below floor line side panels, shall be coated with rust-proofing material for which the material manufacturer has issued a notarized certification of compliance to the bus body builder that materials meet or exceed all performance and

qualitative requirements of ~~paragraph 3.4 of Federal Specification TT-C-520b, using modified test procedures* for the following requirements:~~ SAE J1959.

~~1. Salt spray resistance-pass test modified to five percent salt and 1,000 hours~~

~~2. Abrasion resistance-pass~~

~~3. Fire resistance-pass~~

~~4. *Test panels are to be prepared in accordance with paragraph 4.6.12 of TT-C-520b with modified procedure requiring that test be made on a 48-hour air-cured film at thickness recommended by compound manufacturer.~~

2. The undercoating material shall be applied with suitable airless or conventional spray equipment to the recommended film thickness and shall show no evidence of voids in the cured film. The undercoating material shall not cover any exhaust components of the chassis.

SSS. Ventilation

1. Auxiliary fans shall meet the following requirements:

   a. Fans ~~for left and right sides~~ shall be placed in a location where they can be adjusted for maximum effectiveness and where they do not obstruct the driver's vision or interfere with the safe operation of necessary equipment~~.~~; ~~vision to any mirror or through any critical windshield area. Note: Type A buses may be equipped with one fan.~~

   b. Fans shall be of six (6) inch nominal diameter~~.~~;

   c. Fan blades shall be covered with a protective cage; and

   ~~c.~~d. ~~.~~Each fan shall be controlled by a separate switch.

2. The bus body shall be equipped with a suitably controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without having to open windows except in extremely warm weather.

3. Static-type, non-closeable exhaust ventilation shall be installed, preferably in a low-pressure area of the roof.

4. Roof hatches designed to provide ventilation in all types of exterior weather conditions may be provided.

TTT. Wheel housing

1. The wheel housing opening shall allow for easy tire removal and service.

2. The wheel housings shall be attached to floor sheets in such a manner so as to prevent any dust, water or fumes from entering the body. The wheel housings shall be constructed of at least 16-gauge steel.

3. The inside height of the wheel housing above the floor line shall not exceed twelve (12) inches.

4. The wheel housings shall provide clearance for installation and use of tire chains on single and dual (if so equipped) power-driving wheels.

5. No part of raised wheel housing shall extend into the emergency door opening.

UUU. Windows

1. Each full side window, other than emergency exits designated to comply with FMVSS 217, shall provide an unobstructed opening of at least nine (9) inches but not more than thirteen (13) inches high and at least twenty-two (22) inches wide, obtained by lowering the window. One side window on each side of the bus may be less than twenty-two (22) inches wide. Passenger and driver window frames shall be painted NSBY, black to match body trim, or shall be unpainted aluminum. The area between the passenger and driver window frames shall be NSBY.

2. ~~Optional t~~Tinted ~~(non-reimbursable)~~ and/or frost-free glazing may be installed in all doors, windows, and windshields consistent with federal, state, and local regulations.

VVV. Windshield Washers

A windshield washer system shall be provided.

WWW. Windshield Wipers

1. A two-speed windshield wiping system with an intermittent time delay feature shall be provided.

2. The wipers shall meet the requirements of FMVSS No. 104.

XXX. Wiring

1. All wiring shall conform to current SAE standards.

2. Wiring shall be arranged in circuits, as required, with each circuit protected by a fuse, breaker or electronic protection device.

3. A system of color and number coding shall be used and an appropriate identifying diagram shall be provided to the end user, along with the wiring diagram provided by the chassis manufacturer. The wiring diagrams shall be specific to the bus model supplied and shall include any changes to wiring made by the body manufacturer. Chassis wiring diagrams shall be supplied to the end

user. A system of color and number-coding shall be used on buses. The following body interconnecting circuits shall be color-coded as noted:

FUNCTION	COLOR
Left Rear Directional Lamp	Yellow
Right Rear Directional Lamp	Dark Green
Stop Lamps	Red
Back-up Lamps	Blue
Tail Lamps	Brown
Ground	White
Ignition Feed, Primary Feed	Black

4. The color of cables shall correspond to SAE J1128.

5. Wiring shall be arranged in at least six (6) regular circuits as follows:

   a. Head, tail, stop (brake) and instrument panel lamps;

   b. Clearance lamps and step well lamps that shall be actuated when the entrance door is open;

   c. Dome lamps;

   d. Ignition and emergency door signal;

   e. Turn signal lamps; and

   ~~e.~~f. Alternately flashing signal lamps.

6. Any of the above combination circuits may be subdivided into additional independent circuits.

7. Heaters and defrosters shall be wired on an independent circuit.

8. There shall be a manual noise suppression switch installed in the control panel. The switch shall be labeled and alternately colored. This switch shall be an on/off (a momentary or spring loaded switch does not meet this requirement) type that deactivates body equipment that produces noise, including, at least, the AM/FM radio, two–way communications, heaters, air conditioners, fans and defrosters. This switch shall not deactivate safety systems, such as windshield wipers or lighting systems.

9. Whenever possible, all other electrical functions (such as sanders and electric-type windshield wipers) shall be provided with independent and properly protected circuits.

10. Each body circuit shall be coded by number or letter on a diagram of circuits and shall be attached to the body in a readily accessible location.

11. The entire electrical system of the body shall be designed for the same voltage as the chassis on which the body is mounted.

12. All wiring shall have an amperage capacity exceeding the design load by at least twenty-five ~~25~~ percent (25%). All wiring splices are to be done at an accessible location and noted as splices on wiring diagram.

13. A body wiring diagram of a size that can be easily read shall be furnished with each bus body or affixed in an area convenient to the electrical accessory control panel.

14. The body power wire shall be attached to a special terminal on the chassis.

15. All wires passing through metal openings shall be protected by a grommet.

16. Wires not enclosed within the body shall be fastened securely at intervals of not more than eighteen (18) inches. All joints shall be soldered or joined by equally effective connectors, which shall be water-resistant and corrosion-resistant.

17. Multiplex wiring may exempt manufacturers from some of the above wiring standards.

18. Buses may be equipped with a 12-volt power port in the driver's area.

~~BUS BODY STANDARDS~~

~~5. Air Conditioning (Non-Reimbursable Option – see exception)~~

~~1. Body manufacture, or after-market, installed air conditioning must meet the same requirements as those cited under "Heating and Air Conditioning."~~

~~a. Reimbursement Exception: Air conditioning shall be reimbursable under the Pupil Transportation Support Program when the school district can demonstrate a need subsequent to an IDEA mandated related service.~~

~~6. Aisle~~

~~1. All emergency exit doors shall be accessible by a 12-inch minimum aisle. The aisle shall be unobstructed at all times by any type of barrier, seat, wheelchair or tie down. Flip seats are not allowed.~~

~~7. Back-Up Warning Alarm~~

~~An automatic audible alarm shall be installed behind the rear axle and shall comply with the published Backup Alarm Standards (SAE J994B), providing a minimum of 112 dBA, or shall have a variable volume feature that allows the alarm to vary from 87 dBA to 112 dBA sound level, staying at least 5 dBA above the ambient noise level.~~

~~8. Battery~~

1. ~~The battery is to be furnished by the chassis manufacturer.~~

2. ~~When the battery is mounted as described in the "Bus Chassis Specifications", the body manufacturer shall securely attach the battery on a slide-out or swing-out tray in a closed, vented compartment in the body skirt, so that the battery is accessible for convenient servicing from the outside. The battery compartment door or cover shall be hinged at the front or top, and be secured by an adequate and conveniently operated latch or other type fastener. Battery cables installed by the body manufacturer shall meet chassis manufacturer and SAE requirements. Battery cables shall be of sufficient length to allow the battery tray to fully extend. The battery compartment is required on Type A-1 diesel buses.~~

3. ~~Buses may be equipped with a battery shut-off switch. If so equipped, the switch is to be placed in a location not readily accessible to the passengers.~~

~~9. Brakes (General)~~

7. ~~The chassis brake system shall conform to the provisions of FMVSS No. 105, No. 106 and No. 121 as applicable.~~

8. ~~The anti-lock brake system (ABS), provided in accordance with FMVSS No. 105 or No. 121, shall provide wheel speed sensors for each front wheel and for each wheel on at least one rear axle. The system shall provide anti-lock braking performance for each wheel equipped with sensors. (Four Channel System).~~

9. ~~All brake systems should be designed to permit visual inspection of brake lining wear without removal of any chassis component(s).~~

10. ~~The brake lines, booster-assist lines, and control cables shall be protected from excessive heat, vibration and corrosion and installed in a manner which prevents chafing.~~

11. ~~The parking brake system for either air or hydraulic service brake systems may be of a power assisted design. The power parking brake actuator should be a device located on the instrument panel within seated reach of a 5th percentile female driver. As an option, the parking brake may be set by placing the automatic transmission shift control mechanism in the "park" position.~~

12. ~~The power-operated parking brake system may be electronically interlocked to the engine key switch. Once the parking brake has been set and the ignition switch turned to the "off" position, the parking brake cannot be released until the key switch is turned back to the "on" position.~~

~~10. Brakes (Hydraulic)~~

~~Buses using a hydraulic assist brake shall be equipped with audible and visible warning signals that provide a continuous warning to the driver of loss of fluid flow from the primary source and of a failure of the back-up pump system. Type A and B buses may be OEM standard.~~

~~11. Brakes (Air)~~

6. ~~The air pressure supply system shall include a desiccant-type air dryer installed according to the manufacturers' recommendations. The air pressure storage tank system may incorporate an automatic drain valve.~~

7. ~~The Chassis manufacturer should provide an accessory outlet for air-operated systems installed by the body manufacturer. This outlet shall include a pressure protection valve to prevent loss of air pressure in the service brake reservoir.~~

8. ~~For air brake systems, an air pressure gauge shall be provided in the instrument panel capable of complying with CDL pre-trip inspection requirements.~~

9. ~~Air brake-equipped buses may be equipped with a service brake interlock. If so equipped, the parking brake shall not release until the brake pedal is depressed.~~

10. ~~Air brake systems shall include a system for anti-compounding of the service brakes and parking brakes.~~

11. ~~Air brakes shall have both a visible and audible warning device whenever the air pressure falls below the level where warnings are required under FMVSS No. 121.~~

~~12. Bumper: Front~~

~~On a Type D school bus, if the chassis manufacturer does not provide a bumper, it shall be provided by the body manufacturer. The bumper will conform to the standards described in the "Bus Chassis Specifications."~~

~~13. Bumper: Rear~~

6. ~~The bumper on Type A-1 bus shall be a minimum of 8 inches wide (high) and Type A-2, B, C and D bus bumper shall be a minimum of 9 1/2 inches wide (high). The bumper shall be of sufficient strength to permit being pushed by another vehicle of similar size or lifted without permanent distortion.~~

7. ~~The bumper shall wrap around back corners of the bus. It shall extend forward at least 12 inches, measured from the rear-most point of the body at the floor line, and shall be flush-mounted to body sides or protected with an end panel.~~

8. ~~The bumper shall be attached to the chassis frame in such a manner that it may be removed. It shall be braced to resist deformation of the bumper resulting from impact from the rear or side. It shall be designed to discourage hitching of rides by an individual.~~

9. ~~The bumper shall extend at least 1 inch beyond the rear-most part of the body surface measured at the floor line.~~

10. ~~The bottom of the rear bumper shall not be more than 30 inches above ground level.~~

~~14. Ceiling~~

~~See Insulation and Interior, this section.~~

~~15. Certification~~

~~The body manufacturer upon request of the Idaho State Department of Education Student Transportation Section shall certify that its product meets all Idaho minimum construction standards (Standards for Idaho School Buses and Operations) for items not covered by the FMVSS certification requirements of 49 CFR, Part 567.~~

~~16. Chains (Tire)~~

~~See Wheel housing, this section.~~

~~17. Color~~

1. ~~The school bus body shall be painted National School Bus Yellow (NSBY), according to School Bus Manufacturers Technical Council publication - 008.~~

2. ~~The entire rub rail and body exterior paint trim shall be black. Entrance door exterior (excluding glass) shall be NSBY or black, or unpainted aluminum. Passenger and driver window frames shall be painted NSBY, black to match body trim, or shall be unpainted aluminum. The area between the passenger and driver window frames shall be NSBY (National School Bus Yellow).~~

3. ~~Optionally, the roof of the bus may be painted white (non-reimbursable) except that the front and rear roof caps shall remain NSBY, according to National School Transportation Specifications & Procedures Placement of Reflective Markings. If required by automated painting processes a maximum three (3) inch black transition strip is allowed between the white roof cap and the NSBY body paint above the windows.~~

~~18. Communications~~

~~All school buses used to transport students shall be equipped with two-way voice communication other than CB radios.~~

~~19. Construction~~

6. ~~**Side Intrusion Test:** The bus body shall be constructed to withstand an intrusion force equal to the curb weight of the vehicle, or exceed 20,000 pounds, whichever is less. Each vehicle shall be capable of meeting this requirement when tested in accordance with the procedures set forth below.~~

7. ~~The complete body structure, or a representative seven-body section mock up with seats installed, shall be load-tested at a location 24 inches plus or minus two inches above the floor line, with a maximum 10-inch diameter cylinder, 48 inches long, mounted in a horizontal plane.~~

8. ~~The cylinder shall be placed as close as practical to the mid-point of the tested structure, spanning two internal vertical structural members. The cylinder shall be statically loaded to the required force of curb weight or 20,000 pounds, whichever is less, in a horizontal plane with the load applied from the exterior toward the interior of the test structure. Once the minimum load has been applied, the penetration of the loading cylinder into the passenger compartment shall not exceed a maximum of ten inches from its original point of contact. There can be no separation of lapped panels or construction joints. Punctures, tears or breaks in the external panels are acceptable but are not permitted on any adjacent interior panel.~~

9. ~~Body companies shall certify compliance with this intrusion requirement, including test results, if requested.~~

10. ~~Construction shall be reasonably dust-proof and watertight.~~

~~20. Crossing Control Arm (Optional)~~

10. ~~Buses may be equipped with a crossing control arm mounted on the right side of the front bumper. This arm when opened shall extend in a line parallel with the body side and positioned on a line with the right side wheels.~~

11. ~~All components of the crossing control arm and all connections shall be weatherproofed.~~

12. ~~The crossing control arm shall incorporate system connectors (electrical, vacuum or air) at the gate and shall be easily removable to allow for towing of the bus.~~

13. ~~The crossing control arm shall be constructed of noncorrosive or nonferrous material or treated in accordance with the body sheet metal specifications. (see METAL TREATMENT)~~

14. ~~There shall be no sharp edges or projections that could cause injury or be a hazard to students. The end of the arm shall be rounded.~~

15. ~~The crossing control arm shall extend a minimum of 70 inches (measured from the bumper at the arm assembly attachment point) when in the extended position.~~

16. ~~The crossing control arm shall extend simultaneously with the stop arm(s) by means of the stop arm controls.~~

17. ~~An automatic recycling interrupt switch should be installed for temporary disabling of the crossing control arm.~~

18. ~~The assembly shall include a device attached to the bumper near the end of the arm to automatically retain the arm while in the stowed position. That device shall not interfere with normal operations of the crossing control arm.~~

~~21. Defrosters~~

5. ~~Defrosting and defogging equipment shall direct a sufficient flow of heated air onto the windshield, the window to the left of the driver and the glass in the viewing area directly to the right of the driver to eliminate frost, fog and snow.~~ ~~**Exception:** The requirement of this standard does not apply to the exterior surfaces of double pane storm windows.~~

6. ~~The defrosting system shall conform to SAE J381.~~

7. ~~The defroster and defogging system shall be capable of furnishing heated, outside ambient air, except that the part of the system furnishing additional air to the windshield, entrance door and step well may be of the recirculating air type.~~

8. ~~Auxiliary fans are not considered defrosting or defogging systems.~~

~~22. Doors, Entrance~~

9. ~~The entrance door shall be in the driver's control, designed to afford easy release and to provide a positive latching device on manual operating doors to prevent accidental opening. When a hand lever is used, no part shall come together that will shear or crush fingers. Manual door controls shall not require more than 25 pounds of force to operate at any point throughout the range of operation, as tested on a 10 percent grade both uphill and downhill.~~

10. ~~The entrance door shall be located on the right side of the bus, opposite and within direct view of driver.~~

11. ~~The entrance door shall have a minimum horizontal opening of 24 inches and a minimum vertical opening of 68 inches.~~

12. ~~The entrance door shall be a split-type door and shall open outward.~~

13. ~~All entrance door glass shall be of approved safety glass. The bottom of each lower glass panel shall not be more than ten inches from the top surface of the bottom step. The top of each upper glass panel when viewed from the interior shall not be more than 3 inches below the interior door control cover or header pad.~~

14. ~~Vertical closing edges on entrance doors shall be equipped with flexible material to protect children's fingers.~~

15. ~~There shall be no door to left of driver on Type B, C or D vehicles. All Type A vehicles may be equipped with the chassis manufacturer's standard left-side door.~~

16. ~~All doors shall be equipped with padding at the top edge of each door opening. Padding shall be at least three inches wide and one inch thick and extend the full width of the door opening.~~

17. ~~On power-operated entrance doors, the emergency release valve, switch or device to release the entrance door must be placed above or to the immediate~~

~~left or right of the entrance door and must be clearly labeled. The emergency valve, switch or device shall work in the absence of power.~~

~~23. Emergency Exits and Emergency Exit Alarm Systems~~

~~13. Any installed emergency exits and all exit alarm systems shall comply with the requirements of FMVSS No. 217.~~

~~14. The upper portion of the emergency door shall be equipped with approved safety glazing, the exposed area of which shall be at least 400 square inches. The lower portion of the rear emergency doors on Types A-2, B, C, and D vehicles shall be equipped with a minimum of 350 square inches of approved safety glazing.~~

~~15. There shall be no steps leading to an emergency door.~~

~~16. The words "EMERGENCY DOOR" or EMERGENCY EXIT," in letters at least 2" high, shall be placed at the top of or directly above the emergency exit, or on the door in the metal panel above the top glass, both inside and outside the bus.~~

~~17. The emergency door(s) shall be equipped with padding at the top edge of each door opening. Padding shall be at least three inches wide and one inch thick, and shall extend the full width of the door opening.~~

~~18. There shall be no obstruction higher than ¼ inch across the bottom of any emergency door opening. Fasteners used within the emergency exit opening, shall be free of sharp edges or burrs.~~

~~19. (In accordance with Federal Regulations Title 49 CFR 571.217 each school bus shall have the designation "Emergency Door" or "Emergency Exit," as appropriate, in letters at least 5 centimeters high, of a color that contrasts with its background. For emergency exit doors, the designation shall be located at the top of, or directly above, the emergency exit door on both the inside and outside surfaces of the bus. Concise operating instructions describing the motions necessary to unlatch and open the emergency exit shall be located within 15 centimeters of the release mechanism on the inside surface of the bus. These instructions shall be in letters at least 1 centimeter high and of a color that contrasts with its background. Examples: (1) Lift to Unlatch, Push to Open (2) Turn Handle, Push Out to Open). Outside may consist of a black arrow pointing in direction of handle travel. No other lettering shall obstruct or interfere with the placement of operation instructions mounted on the interior or exterior of the emergency exit door.~~

~~20. The rear emergency window shall have lifting assistance device that will aid in lifting and holding the rear emergency window open.~~

~~21. Each emergency exit door of a school bus shall be equipped with a positive door opening device that, after the release mechanism has been operated, bears the weight of the door; Keeps the door from closing past the point at which the door is perpendicular to the side of the bus body, regardless of the body's orientation; and Provides a means for release or override. The positive door opening device~~

~~shall perform the functions specified in paragraph (a)(3)(i) (A) and (B) of this section without the need for additional action beyond opening the door past the point at which the door is perpendicular to the side of the bus body. Emergency door(s) holder – language (CFR 571.217)~~

~~22. Types A, B, C and D vehicles shall be equipped with a total number of emergency exits as follows for the indicated capacities of vehicles. Exits required by FMVSS 217 may be included to comprise the total number of exits specified.~~

~~0 to 42 Passengers = 1 emergency exit per side and 1 roof hatch.~~
~~43 to 78 Passengers = 2 emergency exits per side and 2 roof hatches.~~
~~79 to 90 Passengers = 3 emergency exits per side and 2 roof hatches.~~

~~23. Side emergency exit windows, when installed, may be vertically hinged on the forward side of the window. Operation instructions shall be clearly readable of a contrasting color, and be located within 6" of the release mechanism. No side emergency exit window will be located above a stop arm. Emergency exit doors, side emergency exit windows and emergency exit roof hatches shall be strategically located for optimal egress during an emergency evacuation of the bus.~~

~~24. Emergency exit doors shall include an alarm system that includes an audible warning device at the emergency door exit and also in the driver's compartment. Emergency exit side windows shall include an alarm system that includes an audible warning device in the driver's compartment. Roof hatches do not require an alarm system, but if so equipped, they must be operable and include an audible warning device in the driver's compartment.~~

~~25. Vandal lock may be installed, if applicable, the interlock and vandal lock should be interconnected.~~

~~24. Emergency Equipment~~

~~1. Fire extinguisher:~~

~~c. The bus shall be equipped with at least one UL-approved pressurized, dry chemical fire extinguisher complete with hose. The extinguisher shall be mounted and secured in a bracket, located in the driver's compartment and readily accessible to the driver and passengers. A pressure gauge shall be mounted on the extinguisher and be easily read without moving the extinguisher from its mounted position. Fire extinguisher shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.~~

~~d. The fire extinguisher shall have a total rating of 2A10BC or greater. The operating mechanism shall be sealed with a type of seal (breakable) that will not interfere with the use of the fire extinguisher.~~

~~2. First-aid kit:~~

c. ~~The bus shall have a removable, moisture-proof and dustproof first aid kit sealed with a breakable type seal and mounted in the driver's compartment in a location that is physically accessible to all drivers. It shall be properly mounted and secured and identified as a first aid kit. The location for the first aid kit shall be marked. First-aid kit shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.~~

d. ~~Contents shall, at a minimum, include:~~

~~13) 2- 1 inch x 2 1/2 yards adhesive tape~~

~~14) 24 - sterile gauze pads 3 inches x 3 inches~~

~~15) 100 - 3/4 inch x 3 inches adhesive bandages~~

~~16) 8 - 2 inch bandage compress~~

~~17) 10 - 3 inch bandage compress~~

~~18) 2 - 2 inch x 6 feet sterile gauze roller bandages~~

~~19) 2 - non-sterile triangular bandages approximately 39 inches x 35 inches x 54 inches with 2 safety pins~~

~~20) 3 - sterile gauze pads 36 inches x 36 inches~~

~~21) 3 - sterile eye pads~~

~~22) 1 - rounded-end scissors~~

~~23) 1 - mouth-to-mouth airway~~

~~24) 1 - pair medical examination gloves~~

~~3. Body fluid clean-up kit:~~

~~4. Each bus shall have a removable and moisture-proof body fluid clean-up kit. It shall be sealed with a breakable type seal. It shall be properly mounted in the driver's compartment in a location that is physically accessible to all drivers and identified as a body fluid clean-up kit. Body fluid clean-up kit shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.~~

~~5. Contents shall, at a minimum, include:~~

~~7) 1 - pair medical examination gloves~~

~~8) Absorbent~~

~~9) 1 – scoop~~

~~10) 1 - scraper or hand broom~~

~~11) Disinfectant~~

~~12) 2 - plastic bags~~

~~6. Warning devices:~~

~~Each school bus shall contain at least three (3) reflectorized triangle road warning devices that meet requirements in FMVSS 125. The warning device(s) shall be enclosed in an approved box that shall be sealed with a breakable type seal. The warning device(s) and approved box shall be mounted in an accessible place within the driver's compartment of the bus and shall be mounted in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc. The lid of the approved box may be designed so as to reveal the contents of the box without opening the lid.~~

~~6. Any of the emergency equipment may be mounted in an enclosed compartment, provided the compartment is labeled in not less than one-inch letters, identifying each piece of equipment contained therein.~~

~~7. Tape(s) and silicone sealants do not meet breakable type seal requirement. Breakable type seal(s) shall be replaced as appropriate and necessary and also during every annual school bus inspection following a thorough inspection for deterioration and required contents.~~

~~8. Ignitable flares and axes are not allowed on school buses.~~

~~25. Floors~~

~~5. The floor in the under-seat area, including tops of wheel housing, driver's compartment and toe board, shall be covered with rubber floor covering or equivalent, having a minimum overall thickness of .125 inch, and a calculated burn rate of 0.1 or less, using the test methods, procedures and formulas listed in FMVSS No. 302. The driver's area on all Type A buses may be manufacturer's standard flooring and floor covering~~

~~6. The floor covering in the aisles shall be of aisle-type rubber or equivalent, wear-resistant and ribbed. Minimum overall thickness shall be .187 inch measured from tops of ribs.~~

~~7. The floor covering must be permanently bonded to the floor and must not crack when subjected to sudden changes in temperature. Bonding or adhesive material shall be waterproof and shall be a type recommended by the manufacturer of floor-covering material. All seams must be sealed with waterproof sealer.~~

~~8. On Types B, C and D buses, a flush-mounted, screw-down plate that is secured and sealed shall be provided to access the fuel tank sending unit and /or fuel pump. This plate shall not be installed under flooring material.~~

~~26. Handrails~~

~~At least one handrail shall be installed. The handrail(s) shall assist passengers during entry or exit, and be designed to prevent entanglement, as evidenced by the passage of the NHTSA string and nut test, as defined in National School Transportation Specifications & Procedures School Bus Inspection.~~

~~27. Heaters and Air Conditioning Systems~~

~~3. Heating System:~~

~~m. The heater shall be hot water and/or combustion type.~~

~~n. If only one heater is used, it shall be fresh-air or combination fresh-air and recirculation type.~~

~~o. If more than one heater is used, additional heaters may be recirculating air type.~~

~~p. The heating system shall be capable of maintaining bus interior temperatures as specified in SAE test procedure J2233.~~

~~q. Auxiliary fuel-fired heating systems (non-reimbursable) are permitted, provided they comply with the following:~~

~~r. The auxiliary heating system fuel shall utilize the same type fuel as specified for the vehicle engine.~~

~~s. The heater(s) may be direct hot air or connected to the engine's coolant system.~~

~~t. An auxiliary heating system, when connected to the engine's coolant system, may be used to preheat the engine coolant or preheat and add supplementary heat to the bus's heating system.~~

~~u. Auxiliary heating systems must be installed pursuant to the manufacturer's recommendations and shall not direct exhaust in such a manner that will endanger bus passengers.~~

~~v. Auxiliary heating systems which operate on diesel fuel shall be capable of operating on #1, #2 or blended diesel fuel without the need for system adjustment.~~

~~w. The auxiliary heating system shall be low voltage.~~

~~x. Auxiliary heating systems shall comply with all applicable FMVSSs, including FMVSS No. 301, as well as with SAE test procedures.~~

~~y. All forced air heaters installed by body manufacturers shall bear a name plate that indicates the heater rating in accordance with SBMTC-001. The plate shall be affixed by the heater manufacturer and shall constitute certification that the heater performance is as shown on the plate. Low~~

~~profile heaters are not allowed within the clear floor area required to accommodate a wheelchair.~~

~~z. Portable heaters shall not be allowed~~

~~aa. Heater hoses shall be adequately supported to guard against excessive wear due to vibration. The hoses shall not dangle or rub against the chassis or any sharp edges and shall not interfere with or restrict the operation of any engine function. Heater hoses shall conform to SAE J20c. Heater lines on the interior of bus shall be shielded to prevent scalding of the driver or passengers. All heater hose shields shall completely cover all parts of the hose and connectors in such a way as to prevent burning subsequent to significant heat transferring to the shield. They shall not incorporate any openings that would allow a passenger to be injured by sharp edges or hot surfaces.~~

~~bb. Each hot water system installed by a body manufacturer shall include one shut-off valve in the pressure line and one shut-off valve in the return line with both valves at the engine in an accessible location, except that on all Types A and B buses, the valves may be installed in another accessible location.~~

~~cc. All heaters in the passenger compartment shall be equipped with a device, installed in the hot water pressure line, which regulates the water flow to all passenger heaters. The device shall be conveniently operated by the driver while seated. The driver and passenger heaters may operate independently of each other for maximum comfort.~~

~~dd. All combustion heaters shall be in compliance with current Federal Motor Carrier Safety Administration Regulations.~~

~~ee. Accessible bleeder valves shall be installed in an appropriate place in the return lines of body company-installed heaters to remove air from the heater lines.~~

~~ff. Access panels shall be provided to make heater motors, cores, and fans readily accessible for service. An outside access panel may be provided for the driver's heater.~~

~~4. Air Conditioning (Non-Reimbursable Option Except When Driven By IEP):~~

~~g. The following specifications are applicable to all types of school buses that may be equipped with air conditioning. This section is divided into two parts: Part 1 covers performance specifications and Part 2 covers other requirements applicable to all buses.~~

~~h. **Part 1 - Performance Specifications:**~~

~~3) The installed air conditioning system should cool the interior of the bus down to at least 80 degrees Fahrenheit, measured at a minimum~~

~~of three points, located four feet above the floor at the longitudinal centerline of the bus. The three points shall be: (1) near the driver's location, (2) at the mid point of the body, and (3) two feet forward of the rear emergency door, or, for Type D rear-engine buses, two feet forward of the end of the aisle.~~

~~4) The test conditions under which the above performance must be achieved shall consist of: (1) placing the bus in a room (such as a paint booth) where ambient temperature can be maintained at 100 degrees Fahrenheit (2) heat soaking the bus at 100 degrees Fahrenheit with windows open for at least one hour and (3) closing windows, turning on the air conditioner with the engine running at the chassis manufacturer's recommended low idle speed, and cooling the interior of the bus to 80 degrees Fahrenheit or lower within a maximum of 30 minutes while maintaining 100 degrees Fahrenheit outside temperature.~~

~~5) Alternately, and at the user's discretion, this test may be performed under actual summer conditions, which consist of temperatures above 85 degrees Fahrenheit, humidity above 50 percent with normal sun loading of the bus and the engine running at the manufacturer's recommended low idle speed. After a minimum of one hour of heat soaking, the system shall be turned on and must provide a minimum 20-degree temperature drop in the 30-minute time limit.~~

~~6) The manufacturer shall provide facilities for the user or user's representative to confirm that a pilot model of each bus design meets the above performance requirements.~~

~~i. **Part 2 - Other Requirements:**~~

~~8) Evaporator cases, lines and ducting (as equipped) shall be designed in such a manner that all condensation is effectively drained to the exterior of the bus below the floor level under all conditions of vehicle movement and without leakage on any interior portion of bus.~~

~~9) Any evaporator or ducting system shall be designed and installed so as to be free of injury-prone projections or sharp edges. Any ductwork shall be installed so that exposed edges face the front of the bus and do not present sharp edges.~~

~~10) On specially equipped school buses, the evaporator and ducting (if used) shall be placed high enough that they will not obstruct occupant securement shoulder strap upper attachment points. This clearance shall be provided along entire length of the passenger area on both sides of the bus interior to allow for potential retrofitting of new wheelchair positions and occupant securement devices throughout the bus.~~

11) ~~The body may be equipped with insulation, including sidewalls, roof, firewall, rear, inside body bows and plywood or composite floor insulation to aid in heat dissipation and reflection.~~

12) ~~All glass (windshield, entrance and emergency doors, side and rear windows) may be equipped with maximum integral tinting allowed by federal, state or ANSI standards for the respective locations, except that windows rear of the driver's compartment, if tinted shall have approximately 28 percent light transmission.~~

13) ~~Electrical generating capacity shall be provided to accommodate the additional electrical demands imposed by the air conditioning system.~~

14) ~~Roofs may be painted white to aid in heat dissipation, according to National School Transportation Specifications & Procedures Placement of Reflective Markings.~~

~~28. Hinges~~

~~All exterior metal door hinges which do not have stainless steel, brass or nonmetallic hinge pins or other designs that prevent corrosion shall be designed to allow lubrication to be channeled to the center 75 percent of each hinge loop without disassembly.~~

~~29. Identification~~

4. ~~The body shall bear the words "SCHOOL BUS" in black letters at least eight inches high on both front and rear of the body or on signs attached thereto. Lettering shall be placed as high as possible without impairment of its visibility. Letters shall conform to "Series B" of Standard Alphabets for Highway Signs. "SCHOOL BUS" lettering shall have a reflective background, or as an option, may be illuminated by backlighting.~~

5. ~~MFSABs are exempt from these requirements.~~

6. ~~Required lettering and numbering shall include:~~

   k. ~~School district owned vehicles will be identified with black lettering (minimum four inches (4") high) on both sides of the school bus using the district name and number listed in the Idaho Educational Directory. Contractor-owned school buses under contract with a school district must also comply with the same identification standards as district-owned buses and shall be identified by either the contractor or district name, as decided by the district.~~

   l. ~~Each district-owned or contracted school bus will be separately identified with its own number in two (2) places on each side of the bus in the logo panel/belt line using six inch (6") high black numbers. Numbers on the passenger side shall be as close to the first and last passenger windows as possible and on the driver's side as close to the stop arm and last passenger window as possible.~~

m. Unauthorized entry placards shall be displayed in the most visible location when observed by persons approaching the vehicle with the door in the open position. Permanence of the placard should be a consideration when choosing a location for attachment. Placard shall read as follows:

WARNING
IT IS UNLAWFUL TO:
Enter a school bus with the intent to commit a crime
Enter a school bus and disrupt or interfere with the driver
Refuse to disembark after ordered to do so
(18-1522; 18-113, Idaho Code)

1) State Department of Education Student Transportation Section may provide unauthorized entry placards.

n. Other lettering, numbering, or symbols, which may be displayed on the exterior of the bus, shall be limited to:

o. Bus identification number on the top, front and rear of the bus, in addition to the required numbering on the sides.

p. The location of the battery(ies) identified by the word "BATTERY" or "BATTERIES" on the battery compartment door in two-inch maximum lettering.

q. Symbols or letters not to exceed 64 square inches of total display near the entrance door exterior displaying information for identification by the students of the bus or route served. No symbols, letters, or other signage shall be permitted on the first two passenger windows or on entrance door glass which may block or obscure clear visibility.

r. All other signage must have prior written SDE approval.

s. Manufacturer, dealer or school identification or logos displayed so as not to distract significantly from school bus body color and lettering specifications.

t. Symbols identifying the bus as equipped for or transporting students with special needs (see Specially Equipped School Bus section).

u. Lettering on the rear of the bus relating to school bus flashing signal lamps or railroad stop procedures. This lettering shall not obscure or interfere with the operation instructions displayed on the exterior portion of the rear emergency exit door.

v. Identification of fuel type in two-inch maximum lettering adjacent to the fuel filler opening.

w. One 4" x 10" (maximum) decal promoting school bus safety on rear bumper.

~~30. Inside Height~~

~~Inside body height shall be 72" or more, measured metal to metal, at any point on longitudinal centerline from front vertical bow to rear vertical bow. Inside body height of Type A-1 buses shall be 62" or more.~~

~~31. Insulation (Optional)~~

3. ~~If thermal insulation is specified, it shall be fire-resistant, UL approved, with minimum R-value of 5.5. Insulation shall be installed so as to prevent sagging.~~

4. ~~If floor insulation is required, it shall be five-ply nominal 5/8 inch thick plywood, and it shall equal or exceed properties of the exterior-type softwood plywood, C-D Grade, as specified in standard issued by U.S. Department of Commerce. When plywood is used, all exposed edges shall be sealed. Type A-1 buses may be equipped with nominal ½ inch thick plywood or equivalent material meeting the above requirements. Equivalent material may be used to replace plywood, provided it has an equal or greater insulation R-value, deterioration, sound abatement and moisture resistance properties.~~

~~32. Interior~~

2. ~~The interior of bus shall be free of all unnecessary projections, which include luggage racks and attendant handrails, to minimize the potential for injury. This specification requires inner lining on ceilings and walls. If the ceiling is constructed to contain lapped joints, the forward panel shall be lapped by rear panel and exposed edges shall be beaded, hemmed, flanged, or otherwise treated to minimize sharp edges. Buses may be equipped with a storage compartment for tools, tire chains and/or tow chains. (see STORAGE COMPARTMENT)~~

3. ~~Non-reimbursable interior overhead storage compartments may be provided if they meet the following criteria:~~

   g. ~~Meet head protection requirements of FMVSS 222, where applicable.~~

   h. ~~Have a maximum rated capacity displayed for each compartment.~~

   i. ~~Be completely enclosed and equipped with latching doors which must be sufficient to withstand a force of five times the maximum rated capacity of the compartment.~~

   j. ~~Have all corners and edges rounded with a minimum radius of one-inch or padded equivalent to door header padding.~~

   k. ~~Be attached to the bus sufficiently to withstand a force equal to twenty times the maximum rated capacity of the compartment.~~

   l. ~~Have no protrusions greater than ¼ inch.~~

4. ~~The driver's area forward of the foremost padded barriers will permit the mounting of required safety equipment and vehicle operation equipment. All equipment necessary for~~

~~the operation of the vehicle shall be properly secured in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.~~

5. ~~Every school bus shall be constructed so that the noise level taken at the ear of the occupant nearest to the primary vehicle noise source shall not exceed 85 dbA when tested according to National School Transportation Specifications & Procedures Noise Test Procedure.~~

~~33. Lamps and Signals~~

5. ~~Interior lamps shall be provided which adequately illuminate the aisle and step well. The step well lamps shall be illuminated by an entrance service door-operated switch, to illuminate only when headlamps and or clearance lamps are on and the entrance door is open. An additional exterior mounted lamp shall be mounted next to the entrance door to adequately illuminate the outside approach to the door. It shall be actuated simultaneously with the step well lamps.~~

6. ~~Body instrument panel lamps shall be controlled by an independent rheostat switch.~~

7. ~~School Bus Alternately Flashing Signal Lamps:~~

   g. ~~The bus shall be equipped with two red lamps at the rear of vehicle and two red lamps at the front of the vehicle.~~

   h. ~~In addition to the four red lamps described above, four amber lamps shall be installed so that one amber lamp is located near each red signal lamp, at the same level, but closer to the vertical centerline of bus. The system of red and amber signal lamps, when in its operational mode, shall be wired so that amber lamps are energized manually, and red lamps are automatically energized (with amber lamps being automatically de-energized) when stop signal arm is extended or when bus entrance door is opened. An amber pilot lamp and a red pilot lamp shall be installed adjacent to the driver controls for the flashing signal lamp to indicate to the driver which lamp system is activated.~~

   i. ~~Air and electrically operated doors may be equipped with an over-ride switch that will allow the red lamps to be energized without opening the door, when the alternately flashing signal lamp system is in its operational mode. The use of such a device shall be in conformity with the law and SDE loading/unloading training procedures, as contained in Idaho's school bus driver training curriculum.~~

   j. ~~. The area around the lenses of alternately flashing signal lamps extending outward from the edge of the lamps three inches (+/- ¼ inch) to the sides and top and minimum one inch to the bottom, shall be black in color on the body or roof area against which the signal lamp is seen (from a distance of 500 feet along axis of the vehicle).~~

   k. ~~Red lamps shall flash at any time the stop signal arm is extended.~~

~~l. All flashers for alternately flashing red and amber signal lamps shall be enclosed in the body in a readily accessible location.~~

~~8. Turn Signal and Stop/Tail Lamps:~~

~~j. Bus body shall be equipped with amber rear turn signal lamps that are at least seven inches in diameter or, if a shape other than round, a minimum 38 square inches of illuminated area and shall meet FMVSS No. 108. These signal lamps must be connected to the chassis hazard-warning switch to cause simultaneous flashing of turn signal lamps when needed as vehicular traffic hazard warning. Turn signal lamps are to be placed as wide apart as practical and their centerline shall be a maximum of 12 inches below the rear window. Type A-1 conversion vehicle front lamps must be at least 21 square inches in lens area and must be in the manufacturer's standard color.~~

~~k. Buses shall be equipped with amber side-mounted turn signal lamps. One turn signal lamp on the left side shall be mounted rearward of the stop signal arm and one turn signal lamp on the right side shall be mounted rearward of the entrance door. Both front side-mounted turn signal lamps shall be mounted forward of the bus center-line. An additional side mounted turn signal lamp may be mounted on each side of the bus to the rear of the bus center-line.~~

~~l. Buses shall be equipped with four combination red stop/tail lamps:~~

~~3) Two combination lamps with a minimum diameter of seven inches, or if a shape other than round, a minimum 38 square inches of illuminated area shall be mounted on the rear of the bus just inside the turn signal lamps.~~

~~4) Two combination lamps with a minimum diameter of four inches, or if a shape other than round, a minimum of 12 square inches of illuminated area, shall be placed on the rear of the body between the beltline and the floor line. The rear license plate lamp may be combined with one lower tail lamp. Stop lamps shall be activated by the service brakes and shall emit a steady light when illuminated. Type A-1 buses with bodies supplied by chassis manufacturer may be equipped with manufacturer's standard stop and tail lamps.~~

~~m. On buses equipped with a monitor for the front and rear lamps of the school bus, the monitor shall be mounted in full view of the driver. If the full circuit current passes through the monitor, each circuit shall be protected by a fuse or circuit breaker or electronic protection device against any short circuit or intermittent shorts.~~

~~n. An optional white flashing strobe lamp may be installed on the roof of a school bus, at a location not to exceed 1/3 the body length forward from the rear of the roof edge. The lamp shall have a single clear lens emitting light 360 degrees around its vertical axis and may not extend above the roof more than maximum legal height. A manual switch and a pilot lamp shall be~~

~~included to indicate when lamp is in operation. Operation of the strobe lamp is limited to periods of inclement weather, nighttime driving, emergency situation or whenever students are onboard. Optionally, the strobe lamp may be mounted on the roof in the area directly over the restraining barrier on the driver's side, may be wired to activate with the amber alternately flashing signal lamps, continuing through the full loading or unloading cycle, and may be equipped with an override switch to allow activation of the strobe at any time for use in inclement weather, nighttime driving or emergency situation.~~

o. ~~The bus body shall be equipped with two white rear backup lamps that are at least four inches in diameter or, if a shape other than round, a minimum of 12 square inches of illuminated area, meeting FMVSS No. 108 and Idaho Code 49-920. If backup lamps are placed on the same horizontal line as the brake lamps and turn signal lamps, they shall be to the inside.~~

~~34. Metal Treatment~~

5. ~~All metal except high-grade stainless steel or aluminum used in construction of the bus body shall be zinc-coated or aluminum-coated or treated by an equivalent process before bus is constructed. Included are such items as structural members, inside and outside panels, door panels and floor sills. Excluded are such items as door handles, grab handles, interior decorative parts and other interior plated parts.~~

6. ~~All metal parts that will be painted, in addition to the above requirements, shall be chemically cleaned, etched, zinc phosphate-coated and zinc chromate-or epoxy-primed, or the metal may be conditioned by an equivalent process. This includes but not limited to such items as crossing arm and stop arm.~~

7. ~~In providing for these requirements, particular attention shall be given to lapped surfaces, welded connections of structural members, cut edges on punched or drilled hole areas in sheet metal, closed or box sections, unvented or undrained areas and surfaces subjected to abrasion during vehicle operation.~~

8. ~~As evidence that the above requirements have been met, samples of materials and sections used in the construction of the bus body shall be subjected to a cyclic corrosion testing as outlined in SAE J1563.~~

~~35. Mirrors~~

5. ~~The interior mirror shall be either clear view laminated glass or clear view glass bonded to a backing which retains the glass in the event of breakage. The mirror shall have rounded corners and protected edges. All Type A buses shall have a minimum of a six-inch x 16-inch mirror and Types B, C, and D buses shall have a minimum of a six-inch x 30-inch mirror.~~

6. ~~Each school bus shall be equipped with exterior mirrors meeting the requirements of FMVSS No. 111. Mirrors shall be easily adjustable but shall be rigidly braced so as to reduce vibration. The right side rear view mirror shall not be obscured by the un-wiped portion of the windshield.~~

7. Heated external mirrors may be used.

8. Remote controlled external rear view mirrors may be used.

36. Mounting

3. The chassis frame shall support the rear body cross member. The bus body shall be attached to chassis frame at each main floor sill, except where chassis components interfere, in such a manner as to prevent shifting or separation of the body from the chassis under severe operating conditions.

4. Isolators shall be installed at all contact points between body and chassis frame on Types A-2, B, C, and D buses, and shall be secured by a positive means to the chassis frame or body to prevent shifting, separation, or displacement of the isolators under severe operating conditions.

37. Overall Length

Overall length of bus shall not exceed 45 feet, excluding accessories.

38. Overall Width

Overall width of bus shall not exceed 102 inches, excluding accessories.

39. Public Address System

3. Buses may be equipped with AM/FM audio and/or public address system having interior or exterior speakers.

4. No internal speakers, other than the driver's communication systems, may be installed within four feet of the driver's seat back in its rearmost upright position.

40. Reflective Material (See National School Transportation Specifications & Procedures Placement of Reflective Markings)

6. The front and/or rear bumper may be marked diagonally 45 degrees down to centerline of pavement with two-inch ±¼ inch wide strips of non-contrasting reflective material.

7. The rear of bus body shall be marked with strips of reflective NSBY material to outline the perimeter of the back of the bus using material which conforms to the requirements of FMVSS No. 131, Table 1. The perimeter marking of rear emergency exits per FMVSS No. 217 and/or the use of reflective "SCHOOL BUS" signs partially accomplish the objective of this requirement. To complete the perimeter marking of the back of the bus, strips of at least one and three-quarters (1¾) inch reflective NSBY material shall be applied horizontally above the rear windows and above the rear bumper, extending from the rear emergency exit perimeter, marking outward to the left and right rear corners of the bus. Vertical strips shall be applied at the corners connecting these horizontal strips.

8. ~~"SCHOOL BUS" signs, if not of lighted design, shall be marked with retro reflective NSBY material comprising background for lettering of the front and/or rear "SCHOOL BUS" signs.~~

9. ~~Sides of bus body shall be marked with at least one ¾ inch retro reflective NSBY material, extending the length of the bus body and located (vertically) between the floor line and the beltline.~~

10. ~~Signs, if used, placed on the rear of the bus relating to school bus flashing signal lamps or railroad stop procedures may be of retro reflective NSBY material comprising background for lettering.~~

~~41. Rub Rails~~

7. ~~There shall be one rub rail located on each side of the bus approximately at seat cushion level which extends from the rear side of the entrance door completely around the bus body (except the emergency door or any maintenance access door) to the point of curvature near the outside cowl on the left side.~~

8. ~~There shall be one additional rub rail located on each side at, or no more than ten inches above the floor line. The rub rail shall cover the same longitudinal area as upper rub rail, except at the wheel housings, and it shall, at a minimum, extend to radii of the right and left rear corners.~~

9. ~~Both rub rails shall be attached at each body post and all other upright structural members.~~

10. ~~Each rub rail shall be four inches or more in width in their finished form, shall be constructed of 16-gauge steel or suitable material of equivalent strength and shall be constructed in corrugated or ribbed fashion. Each entire rub rail shall be black in color.~~

11. ~~Both rub rails shall be applied outside the body or outside the body posts. Pressed-in or snap-on rub rails do not satisfy this requirement. For Type A-1 vehicles using the body provided by the chassis manufacturer or for Types A-2, B, C and D buses using the rear luggage or the rear engine compartment, rub rails need not extend around the rear corners.~~

12. ~~There shall be a rub rail or equivalent bracing located horizontally at the bottom edge of the body side skirts.~~

~~42. Seats and Restraining Barriers~~

a. ~~Passenger Seating:~~

   3. ~~All seats shall have a minimum cushion depth of 15 inches, a seat back height of 24 inches above the seating reference point, and must comply with all requirements of FMVSS No. 222. School bus design capacities shall be in accordance with 49 CFR, Part 571.3 and FMVSS No. 222. In addition to the fastener that forms the pivot for each seat retaining clip, a~~

~~secondary fastener may be used in each clip to prevent the clip from rotating and releasing the seat cushion unintentionally.~~

4. ~~All restraining barriers and passenger seats may be constructed with non-reimbursable materials that enable them to meet the criteria contained in the School Bus Seat Upholstery Fire Block Test (National School Transportation Specifications & Procedures School Bus Seat Upholstery Fire Block Test).~~

5. ~~Each seat leg shall be secured to the floor by a minimum of two bolts, washers, and nuts. Flange-head nuts may be used in lieu of nuts and washers, or seats may be track-mounted in conformance with FMVSS No. 222. If track seating is installed, the manufacturer shall supply minimum and maximum seat spacing dimensions applicable to the bus, which comply with FMVSS No. 222. This information shall be on a label permanently affixed to the inside passenger compartment of the bus.~~

6. ~~All seat frames attached to the seat rail shall be fastened with two bolts, washers and nuts or flange-head nuts.~~

7. ~~All school buses (including Type A) shall be equipped with restraining barriers which conform to FMVSS No. 222.~~

8. ~~The use of a “flip seat” adjacent to any side emergency door is prohibited.~~

b. ~~Pre School Age Seating:~~

~~When installed, all passenger seats designed to accommodate a child or infant carrier seat shall comply with FMVSS No. 225. These seats shall be in compliance with NHTSA's "Guideline for the Safe Transportation of Pre-school Age Children in School Buses".~~

c. ~~Driver Seat:~~

c. ~~The driver's seat supplied by the body company shall be a high back seat with a minimum seat back adjustable to 15 degrees, without requiring the use of tools, and a head restraint to accommodate a 5th percentile female to a 95th percentile adult male, as defined in FMVSS No. 208. The driver's seat shall be secured with nuts, bolts and washers or flanged-head nuts.~~

d. ~~Type A buses may use the standard driver's seat provided by the chassis manufacturer.~~

d. ~~Driver Restraint System:~~

d. ~~A Type 2 lap/shoulder belt shall be provided for the driver. On buses where the driver’s seat and upper anchorage for the shoulder belt are both attached to the body structure, a driver’s seat with an integrated Type 2 lap/shoulder belt may be substituted. On buses where the driver’s seat and upper anchorage for the shoulder belt are separately attached to both body and chassis structures (i.e., one attached to the chassis and the other~~

~~attached to the body), a driver's seat with an integrated Type 2 lap/shoulder belt should be used.~~

~~e. The assembly shall be equipped with an emergency locking retractor for the continuous belt system. On all buses except Type A equipped with a standard chassis manufacturer's driver's seat, the lap portion of the belt system shall be guided or anchored to prevent the driver from sliding sideways under it. The lap/shoulder belt shall be designed to allow for easy adjustment in order to fit properly and to effectively protect drivers varying in size from 5th percentile adult female to 95th percentile adult male.~~

~~f. Each bus shall be equipped with a durable webbing cuter having a full width handgrip and a protected, replaceable or non-corrodible blade. The required belt cutter shall be mounted in a location accessible to the seated driver in an easily detachable manner.~~

~~43. Steering Wheel~~

~~See Chassis section.~~

~~44. Steps~~

~~5. The first step at entrance door shall be not less than ten inches and not more than 14 inches from the ground when measured from top surface of the step to the ground, based on standard chassis specifications, except that on Type D vehicles, the first step at the entrance door shall be 12 inches to 16 inches from the ground. On chassis modifications which may result in increased ground clearance (such as four-wheel drive) an auxiliary step shall be provided to compensate for the increase in ground-to-first-step clearance. The auxiliary step is not required to be enclosed.~~

~~6. Step risers shall not exceed a height of ten inches. When plywood is used on a steel floor or step, the riser height may be increased by the thickness of the plywood.~~

~~7. OEM steps shall be enclosed to prevent accumulation of ice and snow.~~

~~8. OEM, retrofit, or after-market steps shall not protrude beyond the side body line, except during the loading or unloading of passengers.~~

~~45. Step Treads~~

~~5. All steps, including the floor line platform area, shall be covered with 3/16 inch rubber floor covering or other materials equal in wear and abrasion resistance to top grade rubber.~~

~~6. The metal back of the tread shall be permanently bonded to thestep tread material.~~

7. ~~Steps, including the floor line platform area, shall have a one ½ inch nosing that contrasts in color by at least 70 percent measured in accordance with the contrasting color specification in 36 CFR, Part 1192 ADA, Accessibility Guidelines for Transportation Vehicles.~~

8. ~~Step treads shall have the following characteristics:~~

9. ~~Abrasion resistance: Step tread material weight loss shall not exceed 0.40 percent, as tested under ASTM D-4060, Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser; (CS-17 Wheel, 1000 gram, 1000 cycle)~~

10. ~~Weathering resistance: Step treads shall not break, crack, or check after ozone exposure (7 days at 50 phm at 40 degrees C) and Weatherometer exposure (ASTM D-750, Standard Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus, 7 days)~~

11. ~~Flame Resistance: Step treads shall have a calculated burn rate of .01 or less using the test methods, procedures and formulas listed in FMVSS No. 302, Flammability of Interior Materials~~

~~46. Stirrup Steps~~

~~When the windshield and lamps are not easily accessible from the ground, there may be at least one folding stirrup step or recessed foothold and suitably located handles on each side of the front of the body for easy accessibility for cleaning. Steps are permitted in or on the front bumper in lieu of the stirrup steps, if the windshield and lamps are easily accessible for cleaning from that position.~~

~~47. Stop Signal Arm~~

~~The stop signal arm(s) shall comply with the requirements of FMVSS No. 131.~~

~~48. Storage Compartment (Optional)~~

~~A storage container for tools, tire chains, and/or tow chains may be located either inside or outside the passenger compartment. If inside, it shall have a cover capable of being securely latched and fastened to the floor (the seat cushion may not serve this purpose), convenient to either the entrance door or the emergency door.~~

~~49. Sun Shield~~

3. ~~An interior adjustable transparent sun shield, with a finished edge and not less than six inches by 30 inches for Types B, C, and D vehicles, shall be installed in a position convenient for use by the driver.~~

4. ~~On all Type A buses, the sun shield (visor) shall be installed according to the manufacturer's standard.~~

~~50. Tail Pipe~~

a. ~~The tailpipe may be flush with, but shall not extend out more than two inches beyond, the perimeter of the body for side-exit pipe or the bumper for rear-exit pipe.~~

b. ~~The tailpipe shall exit to the left or right of the emergency exit door in the rear of vehicle or to the left side of the bus in front or behind the rear drive axle. The tailpipe exit location on school bus types A-1 or B-1 buses may be according to the manufacturer's standard. The tailpipe shall not exit beneath any fuel filler location or beneath any emergency door.~~

~~51. Tow Attachment Points~~

5. ~~Rear towing devices (i.e. tow hooks, tow eyes, or other designated towing attachment points) shall be furnished to assist in the retrieval of buses that are stuck and/or for towing buses when a wrecker with a "wheel lift" or an "axle lift" is not available or cannot be applied to the towed vehicle.~~

6. ~~Towing devices shall be attached to the chassis frame either by the chassis manufacturer or in accordance with the chassis manufacturer's specifications.~~

7. ~~Each rear towing device shall have a strength rating of 13,500 pounds with the force applied in the rearward direction, parallel to the ground, and parallel to the longitudinal axis of the chassis frame rail.~~

8. ~~The towing devices shall be mounted such that they do not project rearward of the rear bumper.~~

~~52. Traction Assisting Devices (Optional)~~

3. ~~Where required or used, sanders shall:~~

   j. ~~Be of hopper cartridge-valve type.~~

   k. ~~Have a metal hopper with all interior surfaces treated to prevent condensation of moisture.~~

   l. ~~Be of at least 100 pound (grit) capacity.~~

   m. ~~Have a cover on the filler opening of hopper, which screws into place, thereby sealing the unit airtight.~~

   n. ~~Have discharge tubes extending to the front of each rear wheel under the fender.~~

   o. ~~Have non-clogging discharge tubes with slush-proof, non-freezing rubber nozzles.~~

   p. ~~Be operated by an electric switch with a telltale pilot lamp mounted on the instrument panel.~~

   q. ~~Be exclusively driver-controlled.~~

r. Have a gauge to indicate that the hopper needs refilling when it reaches one-quarter full.

4. Automatic traction chains may be installed.

53. Trash Container and Holding Device (Optional)

Where requested or used, the trash container shall be secured by a holding device that is designed to prevent movement and to allow easy removal and replacement; and it shall be installed in an accessible location in the driver's compartment, not obstructing passenger use of the entrance door or the entrance grab handle, and in such a way as to prevent the entanglement of clothing, backpack straps, drawstrings, etc.

54. Undercoating

3. The entire underside of the bus body, including floor sections, cross member and below floor line side panels, shall be coated with rust-proofing material for which the material manufacturer has issued a notarized certification of compliance to the bus body builder that materials meet or exceed all performance and qualitative requirements of paragraph 3.4 of Federal Specification TT-C-520b, using modified test procedures* for the following requirements:

    5. Salt spray resistance-pass test modified to 5 percent salt and 1000 hours

    6. Abrasion resistance-pass

    7. Fire resistance-pass

    8. *Test panels are to be prepared in accordance with paragraph 4.6.12 of TT-C-520b with modified procedure requiring that test be made on a 48-hour air-cured film at thickness recommended by compound manufacturer.

4. The undercoating material shall be applied with suitable airless or conventional spray equipment to the recommended film thickness and shall show no evidence of voids in the cured film. The undercoating material shall not cover any exhaust components of the chassis.

55. Ventilation

5. Auxiliary fans shall meet the following requirements:

    d. Fans for left and right sides shall be placed in a location where they can be adjusted for maximum effectiveness and where they do not obstruct vision to any mirror or through any critical windshield area. Note: Type A buses may be equipped with one fan.

    e. Fans shall be of six inch nominal diameter.

f. ~~Fan blades shall be covered with a protective cage. Each fan shall be controlled by a separate switch.~~

6. ~~The bus body shall be equipped with a suitably controlled ventilating system of sufficient capacity to maintain proper quantity of air under operating conditions without having to open windows except in extremely warm weather.~~

7. ~~Static-type, non-closeable exhaust ventilation shall be installed, preferably in a low-pressure area of the roof.~~

8. ~~Roof hatches designed to provide ventilation in all types of exterior weather conditions may be provided.~~

~~56. Wheelhousing~~

6. ~~The wheel housing opening shall allow for easy tire removal and service.~~

7. ~~The wheel housings shall be attached to floor sheets in such a manner so as to prevent any dust, water or fumes from entering the body. The wheel housings shall be constructed of at least 16-gauge steel.~~

8. ~~The inside height of the wheel housing above the floor line shall not exceed 12 inches.~~

9. ~~The wheel housings shall provide clearance for installation and use of tire chains on single and dual (if so equipped) power-driving wheels.~~

10. ~~No part of a raised wheel housing shall extend into the emergency door opening.~~

~~57. Windows~~

3. ~~Each full side window, other than emergency exits designated to comply with FMVSS 217, shall provide an unobstructed opening of at least nine inches but not more than 13 inches high and at least 22 inches wide, obtained by lowering the window. One side window on each side of the bus may be less than 22 inches wide. Passenger and driver window frames shall be painted NSBY, black to match body trim, or shall be unpainted aluminum. The area between the passenger and driver window frames shall be NSBY (National School Bus Yellow).~~

4. ~~Optional tinted (non-reimbursable) and/or frost-free glazing may be installed in all doors, windows, and windshields consistent with federal, state, and local regulations.~~

~~58. Windshield Washers~~

~~A windshield washer system shall be provided.~~

~~59. Windshield Wipers~~

3. ~~A two-speed windshield wiping system with an intermittent time delay feature shall be provided.~~

4. The wipers shall meet the requirements of FMVSS No. 104.

60. Wiring

19. All wiring shall conform to current SAE standards.

20. Wiring shall be arranged in circuits, as required, with each circuit protected by a fuse, breaker or electronic protection device.

21. A system of color and number coding shall be used and an appropriate identifying diagram shall be provided to the end user, along with the wiring diagram provided by the chassis manufacturer. The wiring diagrams shall be specific to the bus model supplied and shall include any changes to wiring made by the body manufacturer. Chassis wiring diagrams shall be supplied to the end user. A system of color and number-coding shall be used on buses. The following body interconnecting circuits shall be color-coded as noted:

FUNCTION	COLOR
Left Rear Directional Lamp	Yellow
Right Rear Directional Lamp	Dark Green
Stop Lamps	Red
Back-up Lamps	Blue
Tail Lamps	Brown
Ground	White
Ignition Feed, Primary Feed	Black

22. The color of cables shall correspond to SAE J 1128.

23. Wiring shall be arranged in at least six regular circuits as follows:

f. Head, tail, stop (brake) and instrument panel lamps

g. Clearance lamps and step well lamps that shall be actuated when the entrance door is open

h. Dome lamps

i. Ignition and emergency door signal

j. Turn signal lamps

1) Alternately flashing signal lamps.

24. Any of the above combination circuits may be subdivided into additional independent circuits.

25. Heaters and defrosters shall be wired on an independent circuit.

26. ~~There shall be a manual noise suppression switch installed in the control panel. The switch shall be labeled and alternately colored. This switch shall be an on/off (a momentary or spring loaded switch does not meet this requirement) type that deactivates body equipment that produces noise, including, at least, the AM/FM radio, two–way communications, heaters, air conditioners, fans and defrosters. This switch shall not deactivate safety systems, such as windshield wipers or lighting systems.~~

27. ~~Whenever possible, all other electrical functions (such as sanders and electric-type windshield wipers) shall be provided with independent and properly protected circuits.~~

28. ~~Each body circuit shall be coded by number or letter on a diagram of circuits and shall be attached to the body in a readily accessible location.~~

29. ~~The entire electrical system of the body shall be designed for the same voltage as the chassis on which the body is mounted.~~

30. ~~All wiring shall have an amperage capacity exceeding the design load by at least 25 percent. All wiring splices are to be done at an accessible location and noted as splices on wiring diagram.~~

31. ~~A body wiring diagram of a size that can be easily read shall be furnished with each bus body or affixed in an area convenient to the electrical accessory control panel.~~

32. ~~The body power wire shall be attached to a special terminal on the chassis.~~

33. ~~All wires passing through metal openings shall be protected by a grommet.~~

34. ~~Wires not enclosed within the body shall be fastened securely at intervals of not more than 18 inches. All joints shall be soldered or joined by equally effective connectors, which shall be water-resistant and corrosion-resistant.~~

35. ~~Multiplex wiring may exempt manufacturers from some of the above wiring standards.~~

36. ~~Buses may be equipped with a 12-volt power port in the driver's area.~~

STANDARDS FOR SPECIALLY EQUIPPED SCHOOL BUSES

A. Introduction

~~Equipping buses to accommodate students with disabilities is dependent upon the needs of the passengers. While one bus may be fitted with a lift, another may have lap belts installed to secure child seats. Buses so equipped are not to be considered a separate class of school bus, but simply a regular school bus that is equipped for special accommodations.~~

The specifications in this section are intended to be supplementary to specifications in the chassis and body sections. In general, specially equipped buses shall meet all the requirements of the preceding sections plus those listed in this section. It is recognized by the entire industry that the field of special transportation is characterized by varied needs for individual cases and by a rapidly emerging technology for meeting those needs. A flexible, “common-sense” approach to the adoption and enforcement of specifications for these vehicles, therefore, is prudent.

1. ~~As defined by the Code of Federal Regulations (CFR) 49§571.3, "Bus means a motor vehicle with motive power, except a trailer, designed for carrying more than ten persons" (eleven or more including the driver). This definition also embraces the more specific category, school bus. Vehicles with ten or fewer passenger positions (including the driver) are not classified as buses. For this reason, the federal vehicle classification multipurpose passenger vehicle (CFR 49§571.3), or MPV, must be used by manufacturers for these vehicles in lieu of the classification school bus. The definition of designated seating position in 49 CFR § 571.3 states that, in the case of “vehicles sold or introduced into interstate commerce for purposes that include carrying students to and from school or related events” and which are “intended for securement of an occupied wheelchair during vehicle operation,” each wheelchair securement position shall be counted as four designated seating positions when determining the classification (whether school bus or IMPV). This classification system does not preclude state or local agencies or the National School Transportation Specifications & Procedures from requiring compliance of school bus-type MPVs with the more stringent federal standards for school buses. The following specifications address modifications as they pertain to school buses that, with standard seating arrangements prior to modifications, would accommodate eleven or more including the driver. If by addition of a power lift, mobile seating device positions or other modifications, the capacity is reduced such that vehicles become MPVs, the intent of these standards is to require these vehicles to meet the same standards they would have had to meet prior to such modifications, and such MPVs are included in all references to school buses and requirements for school buses which follow.~~

B. Definition

A specially equipped school bus is any school bus that is designed, equipped, or modified to accommodate students with special transportation needs.

C. General Requirements

1. School buses designed for transporting students with special transportation needs shall comply with Standards for Idaho School Buses and Operations and with Federal Motor Vehicle Safety Standards (FMVSS) applicable to their Gross Vehicle Weight Rating (GVWR) category.

2. Any school bus to be used for the transportation of children who utilize a wheelchair or other mobile positioning device, or who require life-support equipment that prohibits use of the regular service entrance, shall be equipped with a power lift. ~~, unless a ramp is needed for unusual circumstances related to passenger needs.~~

D. Aisles

All school buses equipped with a power lift shall provide a minimum thirty (30)~~-~~ inch pathway leading from any wheelchair/mobility aid position to at least one thirty (30) inch wide emergency exit door. A wheelchair securement position shall never be located directly in front of (blocking) a power lift door location.

E. Communications

All school buses that are used to transport individuals with disabilities shall be equipped with a two-way electronic voice communication system other than CB radio.

F. Glazing

Tinted glazing may be installed in all doors ~~(non-reimbursable)~~, windows ~~(non-reimbursable)~~, and windshields consistent with federal, state, and local regulations.

G. Identification

Buses with power lifts used for transporting individuals with disabilities shall display below the window line on the lift and rear doors the International Symbol of Accessibility. Such emblems shall be white on blue background, shall not exceed twelve~~12~~ inches by twelve~~12~~ inches (12 x 12 inches) or be less than four inches by four inches (4 x 4 inchs) in size, and shall be of a high-intensity reflectorized material meeting Federal Highway Administration (FHWA) FP-85 Standards.

H. Passenger Capacity Rating

In determining the passenger capacity of a school bus for purposes other than actual passenger load (e.g., vehicle classification or various billing/ reimbursement models), any location in a school bus intended for securement of an occupied wheelchair/mobility aid during vehicle operations are regarded as four (4) designated seating positions. Similarly, each lift area may be regarded as four (4) designated seating positions.

I. Power Lifts ~~and Ramps~~

The power lift shall be located on the right side of the bus body when not extended. Exception: The lift may be located on the left side of the bus if, and only if, the bus is primarily used to deliver students to the left side of one-way streets.

~~1. A ramp device may be used in lieu of a mechanical lift if the ramp meets all the requirements of the Americans with Disabilities Act (ADA) as found in 36 CFR §1192.23 Vehicle ramp.~~

~~2. A ramp device that does not meet the specifications of ADA but does meet the specifications delineated below may be installed and used, when, and only when, a power lift system is not adequate to load and unload students having special and unique needs. A readily accessible ramp may be installed for emergency exit use. If stowed in the passenger compartment, the ramp must be properly secured and placed away from general passenger contact. It must not obstruct or restrict any aisle or exit while in its stowed or deployed position.~~

~~3. All specially equipped school buses shall provide a level-change mechanism or boarding device (e.g., lift or ramp), complying with the Ramp Section, with sufficient clearances to permit a wheelchair or other mobility aid user to reach a securement location.~~

J. Vehicle Lifts & Installations

1. Vehicle lifts and installations shall comply with the requirements set forth in FMVSS No. 403, Platform Lift Systems for Motor Vehicles, and FMVSS No. 404, Platform Lift Installations in Motor Vehicles.

2. The design load of the vehicle lift shall be at least eight hundred (800) pounds. Working parts, such as cables, pulleys and shafts, which can be expected to wear, and upon which the vehicle lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame and attachment hardware that would not be expected to wear shall have a safety factor of at least three, based on the ultimate strength of the material.

3. The vehicle lifting mechanism and platform shall be capable of operating effectively with a wheelchair and occupant mass of at least eight hundred (800) pounds.

4. Controls: (See 49 CFR Part 571.403, S6.7, Control Systems).

5. Emergency Operations: (See 49 CFR Part 571.403, S6.9, ~~backup~~ Backup Operation).

6. Power or Equipment Failures: (See 49 CFR Part 571.403, S6.2.2, Maximum Platform Velocity).

7. Platform Barriers: (See 49 CFR Part 571.403, S6.4.2, S6.4.3, Platform Requirements) (See~~,~~ also “Wheelchair or Mobility Aid Envelope” figure at the end of this section).

8. Platform Surface: (See 49 CFR Part- 571.403,S6.4.2, S6.4.3, Platform Requirements) (See, also "Wheelchair or Mobility Aid Envelope" figure at the end of this subsection).

9. Platform Gaps and Entrance Ramps: (See 49 CFR Part 571.403, S6.4.4, Gaps, Transitions, and Openings).

10. Platform Deflection: (See 49 CFR Part 571.403, S6.4.5, Platform Deflection).

11. Platform Movement: (See 49 CFR Part 571.403, S6.2.3, Maximum Platform Acceleration).

12. Boarding Direction: The lift shall permit both inboard and outboard facing of wheelchair and mobility aid users.

13. Use by Standees: Lifts shall accommodate persons who are using other aids/devices other than a wheelchair (resulting in other than a seated position) who need to use to the lift. Such persons should use a wheelchair or other wheel-based mobility device for boarding or exiting the bus, and then should be transferred to a bus seat for the ride. During lift operations no one shall be allowed to stand on the lift platform, unless otherwise noted in an Individualized Education Program (IEP) or 504 Plan in accordance with an aid riding with a student on the lift. [**Note:** This item refers to equipment specifications].

14. Handrails: (See 49 CFR Part 571.403, S6.4.9, Handrails)

15. Circuit Breaker: A resettable circuit breaker shall be installed between the power source and the lift motor if electrical power is used. It shall be located as close to the power source as possible, but not within the passenger/driver compartment.

16. Excessive Pressure: (See 49- CFR Part 571.403, S6.8 Jacking Prevention)

17. Documentation: the following information shall be provided with each vehicle equipped with a lift:

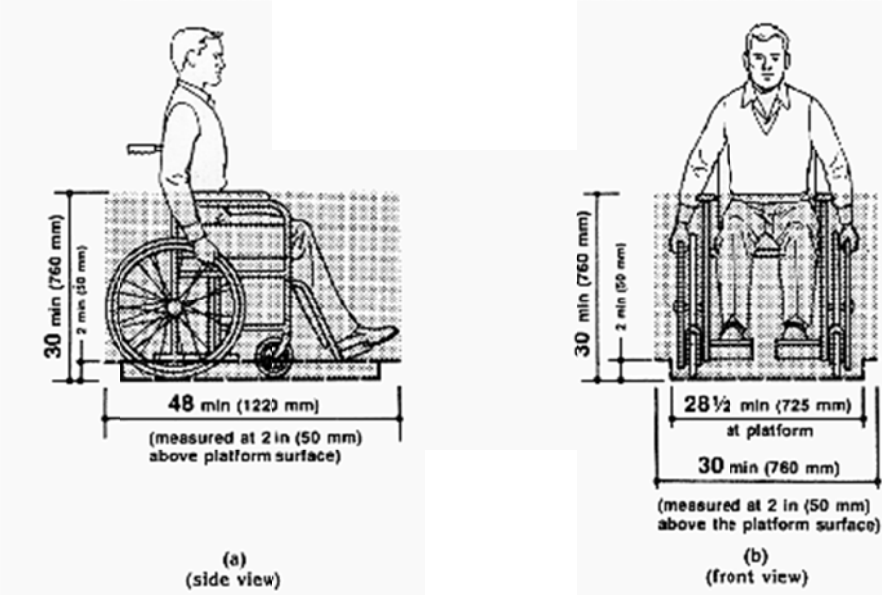
    a. A phone number where information can be obtained about installation, repair, and parts. (Detailed written instructions and a parts list shall be available upon request.)

    b. Detailed instructions regarding use of the lift shall be readily visible when the lift door is open, including a diagram showing the proper placement and positioning of wheelchair/mobility aids on the lift.

18. Training Materials: The lift manufacturer shall make training materials available to ensure the proper use and maintenance of the lift. These may include instructional videos, classroom curriculum, system test results or other related materials.

19. Identification and Certification: Each lift shall be permanently and legibly marked or shall incorporate a non-removable label or tag that states it confirms to all applicable requirements of the current National School Transportation

Specifications and Procedures. In addition and upon request of the original titled purchaser, the lift manufacturer or an authorized representative shall provide a notarized Certificate of Conformance, either original or photocopied, which states that the lift system meets all the applicable requirements of the current National School Transportation Specifications and Procedures.



~~2. Vehicle Ramp~~

~~a. A ramp device may be used in lieu of a mechanical lift if the ramp meets all the requirements of the Americans with Disabilities Act (ADA) as found in 36 CFR §1192.23, Vehicle ramp.~~

~~b. A ramp device that does not meet the specifications of ADA, but does meet the specifications of paragraph 3 (a-d) of National School Transportation Specifications and Procedures (NSTSP of May 2010 Edition), this section, may be installed and used, when, and only when, a power lift system is not adequate to load and unload students having special and unique needs. A readily accessible ramp may be installed for emergency exit use.~~

~~c. If a ramp is used, it shall be of sufficient strength and rigidity to support at least 800 lbs. over an area of 26" x 26. It shall be equipped with a protective flange on each longitudinal side to keep the special device on the ramp.~~

~~d. The surface of the ramp shall be constructed of non-skid material.~~

~~e. The ramp shall be equipped with handles and shall be of weight and design to permit one person to put the ramp in place and return it to its storage place. It shall be stored outside the passenger compartment.~~

~~f. Ramps used for emergency evacuation purposes may be installed in raised floor buses by manufacturers. They shall not be installed as a substitute for a lift when a lift is capable of serving the need.~~

K. Regular Service Entrance

1. On power lift-equipped vehicles, the bottom step shall be the full width of the step well, excluding the thickness of the doors in open position.

2. In addition to the handrail required in the School Bus Standards ~~BUS BODY AND CHASSIS~~ section, an additional handrail may be provided on all specially equipped school buses. This rail shall be located on the opposite side of the entrance door from the rail required in the School Bus Standards ~~BUS BODY AND CHASSIS~~ section and shall meet the same requirements for handrails.

L. Restraining Devices

1. On power lift-equipped vehicles with a GVWR of ten thousand (10,000) pounds or more, seat frames may be equipped with attachment points to which belt assemblies can be attached for use with child safety restraint systems (CSRSs) that comply with FMVSS No. 213, Child Restraint Systems. Any belt assembly anchorage shall comply with FMVSS No. 210, Seat Belt Assembly Anchorages.

   a. Alternatively, a child restraint anchorage system that complies with FMVSS No. 225, Child Restraint Anchorage Systems, may be installed.

2. Belt assemblies, if installed, shall conform to FMVSS No. 209, Seat Belt Assemblies.

3. Child safety restraint systems, which are used to facilitate the transportation of children who in other modes of transportation would be required to use a child, infant, or booster seat, shall conform to FMVSS No. 213.

M. Seating Arrangements

Flexibility in seat spacing to accommodate special devices shall be permitted to meet passenger requirements. All seating shall be forward-facing, School Bus Passenger Seating and Crash Protection and meet requirements of FMVSS No. 222.

N. Securement and Restraint System for Wheel Chair Occupant and Wheel Chair Seated Occupants

For purposes of understanding the various aspects and components of this section, the term securement and tie down and the phrases securement system or tie down system are used exclusively in reference to the devices that anchor the wheelchair to the vehicle. The term restraint and the phrase restraint system are used exclusively in reference to the equipment that is intended to limit the movement of the wheelchair occupant in a crash or sudden maneuver. The term ~~w~~Wheelchair ~~t~~Tie-down and ~~o~~Occupant ~~r~~Restraint ~~s~~System (WTORS) is used to refer to the total system that secures the wheelchair and restrains the wheelchair occupant.

1. **WTORS—General Requirements**

   a. A wheelchair tie down and occupant restraint system installed in specially equipped school buses shall be designed, installed, and operated for the use with forward-facing wheelchair-seated passengers and shall comply with all applicable requirements of FMVSS No. 222, School Bus Passenger Seating and Crash Protection, and SAE J2249, Wheelchair Tie-Ddown and oOccupant rRestraint sSystems for use in motor vehicles.

   b. The WTORS, including the anchorage track, floor plates, pockets or other anchorages, shall be provided by the same manufacturer or shall be certified to be compatible by manufacturers of all equipment/systems used.

   c. A device for storage of the WTORS shall be provided. When the system is not in use, the storage device shall allow for clean storage of the system, shall keep the system securely contained within the passenger compartment, shall provide reasonable protection from vandalism and shall enable the system to be readily accessed for use.

   d. The WTORS, including the storage device, shall meet the flammability standards established in FMVSS No. 302, Flammability of Interior Materials.

   e. The following information shall be provided with each vehicle equipped with a securement and restraint system:

   f. A phone number where information can be obtained about installation, repair, and parts. (Detailed written instructions and parts list shall be available upon request.)

   g. Detailed instructions regarding use, including a diagram showing the proper placement of the wheelchair/mobility aids and positioning of securement devices and occupant restraints, including correct belt angles.

   h. The WTORS manufacturer shall make training materials available to ensure the proper use and maintenance of the WTORS. These may include instructional videos, classroom curriculum, system test results or other related materials.

2. **Wheelchair Securement/Tie down:** (See 49 CFR Part 571.403, S5.4.1, S5.4.2)

   Each wheelchair position in a specially equipped school bus shall have a minimum clear floor area of thirty 30 inches laterally by forty-eight 48 inches (30 x 48 inches) longitudinally. Additional floor area may be required for some wheelchairs. Consultation between the user and the manufacturer is recommended to insure that adequate area is provided.

3. **Occupant Restraint System:** (See 49 CFR Part 571.403, S5.4.3, S5.4.4)

If the upper torso belt anchorage is higher than forty-four (44) inches, measured from the vehicle floor, an adjustment device, as part of the occupant restraint system, shall be supplied.

O. Special Light

Doorways in which lifts are installed shall have for use during lift operation a special light(s) providing a minimum of two (2) foot-candles of illumination measured on the floor of the bus immediately adjacent to the lift.

P. Special Service Entrance

1. Power lift-equipped buses shall have a special service entrance to accommodate the power lift.

   Exception: If the lift is designed to operate within the regular service entrance, and is capable of stowing such that the regular service entrance is not blocked in any way, and that persons entering or exiting the bus are not impeded in any way, a special service entrance shall not be required.

2. The special service entrance and door shall be located on the right side of the bus and shall be designed so as not to obstruct the regular service entrance.

   Exception: A special service entrance and door may be located on the left side of the bus if, and only if, the bus is used primarily to deliver students to the left side of one-way streets and its use is limited to that function.

3. The opening may extend below the floor through the bottom of the body skirt. If such an opening is used, reinforcements shall be installed at the front and rear of the floor opening to support the floor and give the same strength as other floor openings.

4. A drip molding shall be installed above the opening to effectively divert water from entrance.

5. Door posts and headers at the entrance shall be reinforced sufficiently to provide support and strength equivalent to the areas of the side of the bus not used for the special service entrance.

Q. Special Entrance Doors

1. A single door or double doors may be used for the special service entrance.

2. A single door shall be hinged to the forward side of the entrance unless doing so would obstruct the regular service entrance. If, due to the above condition, the door is hinged to the rearward side of the doorway, the door shall utilize a safety mechanism that will prevent the door from swinging open should the primary door latch fail. If double doors are used, the system shall be designed to prevent the door(s) from being blown open by the wind resistance created by the forward

motion of the bus, and/or shall incorporate a safety mechanism to provide secondary protection should the primary latching mechanism(s) fail.

3. All doors shall have positive fastening devices to hold doors in the “open” position.

4. All doors shall be weather sealed.

5. When manually-operated dual doors are provided, the rear door shall have at least a one-point fastening device to the header. The forward-mounted door shall have at least three one-point fastening devices. One shall be to the header, one to the floor line of the body, and the other shall be into the rear door. The door and hinge mechanism shall be of a strength that is greater than or equivalent to the emergency exit door.

6. Door materials, panels and structural strength shall be equivalent to the conventional entrance and emergency doors. Color, rub rail extensions, lettering and other exterior features shall match adjacent sections of the body.

7. Each door shall have windows set in rubber that are visually similar in size and location to adjacent non-door windows. Glazing shall be of same type and tinting (if applicable) as standard fixed glass in other body locations.

8. Door(s) shall be equipped with a device that will actuate an audible or flashing signal located in the driver's compartment when door(s) is not securely closed and the ignition is in the "on" position.

9. A switch shall be installed so that the lifting mechanism will not operate when the lift platform door(s) is closed.

10. Special service entrance doors shall be equipped with padding at the top edge of the door opening. Padding shall be at least three (3) inches wide and one (1) inch thick and shall extend the full width of the door opening.

R. Support Equipment and Accessories

1. In addition to the webbing cutter required in the bus standards ~~BUS BODY AND CHASSIS~~ section, each specially equipped school bus ~~that is~~ set up to accommodate wheelchairs or other assistive or restraint devices with belts attached shall contain an additional webbing cutter properly secured in a location to be determined by the purchaser. The belt cutter shall meet the requirements listed in the bus standards ~~BUS BODY AND CHASSIS~~ section.

2. Special equipment or supplies ~~that are~~ used on the bus for mobility assistance, health support or safety purposes shall meet any local, federal or engineering standards that may apply, including proper identification.

3. Equipment that may be used for these purposes includes, but is not limited to:

a. Wheelchairs and other mobile seating devices. (Ssee section on Securement and Restraint System for Wheelchair and Wheelchair-seated Occupant.):

b. Crutches, walkers, canes and other ambulating devices.; and/or

c. Medical support equipment, which may include respiratory devices such as oxygen bottles ([which should be no larger than twenty-two (22) cubic feet for liquid oxygen and thirty-eight (38) cubic feet for compressed gas)] or ventilators. Tanks and valves should be located and positioned to protect them from direct sunlight, bus heater vents or other heat sources. Other equipment may include intravenous and fluid drainage apparatus. If transporting oxygen, refer to Ambulance Manufactures Division, Standard 003.

4. All portable equipment and special accessory items, including the equipment listed above, shall be secured at the mounting location to withstand a pulling force of five (5) times the weight of the item or shall be retained in an enclosed, latched compartment. The compartment shall be capable of withstanding forces applied to its interior equal to five (5) times the weight of its contents without failure to the box's integrity and securement to the bus. Exception: If these standards provide specific requirements for securement of a particular type of equipment, the specific standard shall prevail (e.g., wheelchairs).

S. Technology and Equipment

It is the intent of these specifications to accommodate new technologies and equipment that will better facilitate the transportation of students with special needs. New technology and equipment is acceptable for use in specially equipped vehicles if:

1. It does not compromise the effectiveness or integrity of any major safety system. (Examples of safety systems include, but are not limited to, compartmentalization, the eight-lamp warning system, emergency exits and the approved color scheme.)

2. It does not diminish the safety of the bus interior.

3. It does not create additional risk to students who are boarding or exiting the bus or are in or near the school bus loading zone.

4. It does not require undue additional activity and/or responsibility for the driver.

5. It generally increases efficiency and/or safety of the bus, generally provides for a safer or more pleasant experience for the occupants and pedestrians in the vicinity of the bus and/or generally assists the driver and makes his/her many tasks easier to perform.

STANDARDS FOR ALTERNATIVE FUELS FOR SCHOOL BUSES

A. Introduction

This section is designed to be used as an overview of the alternative fuels being utilized for student school transportation. It is not designed to replace current applicable federal, state, manufacturing or safety specifications that may exceed requirements within this section. There may be advancements in engineering and improvements in equipment fabrication methods and operating practices that differ from those specifically called for in this section. Such deviations or improvements may provide safety and may meet the intent of, and be compatible with, this section. Entities wishing to purchase alternative fuel school buses should use this section only as a starting point. More detailed specifications, including specific design and performance criteria and safety specifications, should be researched by prospective purchasers of alternative-fuel school buses.

B. General Requirements

Alternative fuel school buses shall meet the following requirements:

1. Chassis shall meet all standards previously mentioned in IDAHO SCHOOL BUS ~~CHASSIS~~ STANDARDS.

2. Chassis shall meet all applicable Federal Motor Vehicle Safety Standards (FMVSS).

3. The fuel system integrity shall meet the specified leakage performance standards when impacted by a moving contoured barrier in accordance with test conditions specified in FMVSS No. 301 or ~~FMVSS~~ No. 303, or with the Canadian Motor Vehicles Safety Standard 301.1, as applicable.

4. Original equipment manufacturers (OEMs) and conversion systems

   using compressed natural gas (CNG) shall comply with National Fire Protection Association (NFPA) Specification ~~52 A~~ 2013, "Compressed Natural Gas Vehicular Fuel Systems," in effect at the time of installation. Fuel systems using liquefied petroleum gas (LPG) shall comply with NFPA Specification ~~58 A~~ 2014, "Liquefied Petroleum Gases Engine Fuel Systems" ~~in effect at the time of installation~~.

5. ~~All alternative fuel buses shall be capable of traveling not less than 200 miles with a full load, except those powered by electricity shall be capable of traveling not less than 80 miles~~Fuel tank(s) for vehicles of less than fifty-four (54) passenger capacity powered by LPG or CNG shall have a minimum 40-gallon capacity. Fuel tank (s) for vehicles of fifty-four (54) or more passenger capacity powered by LPG or CNG shall have a minimum 60-gallon capacity.

6. Natural gas-powered buses ~~shall~~ may be equipped with an interior/exterior gas detection system. All natural gas-powered buses ~~shall~~ may be equipped with an automatic or manual fire detection and suppression system.

7. All materials and assemblies used to transfer or store alternative fuels shall be installed outside the passenger/driver compartment.

8. All Types C and D buses using alternative fuels shall meet the same base requirements of IDAHO SCHOOL BUS ~~CHASSIS~~ STANDARDS for passenger load.

9. The total weight shall not exceed the GVWR when loaded to rated capacity.

10. The manufacturer supplying the alternative fuel equipment must provide the owner and operator with adequate training and certification in fueling procedures, scheduled maintenance, troubleshooting and repair of alternative fuel equipment.

11. All fueling equipment shall be designed specifically for fueling motor vehicles and shall be certified by the manufacturer as meeting all applicable federal, state and industry standards.

12. All on-board fuel supply containers shall meet all appropriate requirements of the American Society for Mechanical Engineering (ASME) code, DOT regulations or applicable FMVSSs and NFPA standards.

~~13. All fuel supply containers shall be securely mounted to withstand a static force of eight times their weight in any direction.~~

~~14.~~13. All safety devices that discharge to the atmosphere shall be vented to the outside of the vehicle. The discharge line from the safety relief valve on all school buses shall be located in a manner appropriate to the characteristics of the alternative fuel. Discharge lines shall not pass through the passenger compartment.

~~15.~~14. ~~A~~ CNG buses shall have a positive quick-acting (one quarter turn) shut-off control valve shall be installed in each gaseous fuel supply line, as close as possible to the fuel supply containers. The valve controls shall be placed in a location easily operable from the exterior of the vehicle. The location of the valve control shall be clearly marked on the exterior surface of the bus.

~~16.~~15. An electrical grounding system shall be required for grounding of the fuel system during maintenance-related venting.

~~17.~~16. Fuel systems identified as compatible with bio-diesel must be provided with components compatible with Bio-Diesel ~~must conform~~ conforming to the specifications of ASTM Biodiesel Standards.

~~18.~~17. High voltage-powered school buses utilizing a high voltage propulsion system ~~(~~[more than forty-eight (48) nominal volts~~)~~] shall meet the requirements of FMVSS 305, except for the following:

a. The propulsion power source (batteries, fuel cells, etc.) shall be located outside the passenger compartment.

b. The propulsion power source enclosure shall be constructed to conform to the power source manufacturer's requirements and recommendations.

c. Due to the much larger size and quantities of the propulsion power sources on large vehicles, buses over ten thousand (10,000) ~~lbs.~~pounds are permitted to exceed the 5.0 liter spillage constraint of 49 CFR Part 571.305,~~Section~~ S5.1, ~~"E~~electrolyte ~~damage~~spillage from propulsion batteries~~."~~, and the requirements to statically rotate the vehicle on its longitudinal axis post test.

~~C. Characteristics of Alternative Fuels~~

~~1. For the purpose of this section, alternative fuels refer to the specific fuels listed below. A brief description of each fuel is shown. (See National School Transportation Specifications & Procedures Alternative Fuels Comparison Chart)~~

~~2. Note: Two other more exotic fuels are being examined, hydrogen and solar power. These two energy sources are in their infancy as alternative fuels for motor vehicles and are not covered within the scope of this section.~~

~~3. Liquid Alternative Fuels:~~

~~1. Methanol, a liquid at normal ambient temperatures, is colorless, and is made primarily from natural gas or coal. Extensive experiments have been conducted with automobile and truck engines powered by methanol. There are a number of urban transit bus fleets currently using methanol. California has experience with methanol as an alternative fuel for school buses through their School Bus Demonstration Project. The findings clearly determined methanol fuel to be costly to operate and unreliable. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)~~

~~b. Ethanol is a distilled agricultural alcohol product that is a liquid and is colorless at normal ambient temperatures. Corn is the current primary grain source. It has many of the same characteristics as methanol. Currently, ethanol is used primarily in a mixture with gasoline, usually no more than 10% ethanol.~~

~~c. Clean diesel was one of the alternative fuels approved in the Clean Air Act Amendments of 1990. The first step to be undertaken was further refining to reduce sulfur content and hence the significant particulate emissions caused by the sulfur. Significant advancement in this process has resulted in the development of ultra-low sulfur content diesel fuel. Refinery techniques can now produce diesel fuel with a sulfur content below 15 parts per million (PPM). The availability of this fuel supports the installation of an advanced exhaust after-treatment device in the form of a continuously regenerating trap (CRT). This CRT technology reduces the exhaust particulate content by approximately 90 percent from currently mandated levels (to essentially zero) and the hydrocarbons to an unmeasurable level (to essentially zero). Further steps are being developed to add cetane~~

boosters, which increase efficient combustion. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)

d. Reformulated gasoline is a specially blended fuel with the following properties: (1) lower vapor pressure that reduces evaporation during operation and refueling, and (2) more efficient combustion through the addition of high-octane oxygenates. Reformulated gasoline aromatic levels have been lowered, which provides less in the way of hydrocarbon tail pipe emissions. Reformulated gasoline (RFG) is required by the EPA in certain metropolitan areas. However, those areas are becoming fewer. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)

4. Gaseous Alternative Fuels:

a. Natural gas is primarily methane as it comes from the well, and it burns quite cleanly in its unprocessed state. Natural gas has a higher ignition point (temperature) and a narrower fuel/oxygen mixture combustion range than other fuels. Energy is consumed in processing natural gas to achieve sufficient vehicle storage (i.e., compression or cryogenic processes). (See Compressed Natural Gas and Liquid Natural Gas below.) Natural gas is lighter than air in ambient conditions and does not pool on the ground, a condition that requires buildings used for indoor housing of natural gas vehicles to be adequately ventilated at the ceiling.

b. Compressed natural gas, or CNG, consists primarily of mixtures of hydrocarbon gases and vapors, consisting principally of methane (CH_4) in gaseous form, which is compressed for use as a vehicular fuel. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)

c. Liquid natural gas, or LNG, utilizes the same natural gas source (primarily methane) as CNG, but requires purification of the gas and cooling and storage below -260 degrees Fahrenheit to liquefy the natural gas. Converting natural gas to liquid form provides storage of a much greater amount on the vehicle than can be achieved in the gaseous state. The process of liquefying the natural gas also yields almost pure methane gas with predictable performance characteristics. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)

d. Propane, also known as Liquefied Petroleum Gas or LPG, is sometimes available directly from wells, but is normally produced as a by-product of the gasoline refining process. It has been used for a number of years in light-duty commercial vehicles in urban areas around the world. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May – 2010 Alternative Fuels.)

e. Electric Power or the use of electricity as a power source for school buses is an emerging technology that is under considerable research due to the

~~potential for reduced overall emissions. Research is centering on ways to increase the capacity and reduce the weight of batteries, as well as improving the motors used to power the vehicles and the associated electronics. Recharging technology is also developing rapidly. Most of these efforts have the goals of improving the range and performance of electric vehicles, reducing their cost and addressing operational concerns, such as recharging.~~

f. ~~Hybrid electric and plug-in hybrid electric vehicles, while technically not an alternative fuel, are treated as such in most federal and state programs due to the novel approach to energy use. Straight hybrid electric vehicles are, by far, the largest and fastest growing sector of alternative fuel vehicles. Plug-in hybrid electric vehicles take advantage of the straight hybrid system, but also allow the user to precharge the battery packs to gain additional range and reduce combustion engine usage. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May – 2011Alternative Fuels.)~~

g. ~~Biodiesel is a fuel manufactured from vegetable oils, recycled cooking greases, or animal fats. The term "biodiesel" refers to the pure fuel. Biodiesel blends or BXX refers, to a fuel that is composed of XX% biodiesel and XX% diesel fuel. The City of Seattle, for example, has been using B20 which is 20% biodiesel blended with 80% low sulfur diesel. B100 is pure biodiesel. The diesel fuel can be No. 1 or No. 2. Biodiesel and biodiesel blends should only be used in compression-ignition engines that are designed to be operated on diesel fuel as described in ASTM 975 or related military specifications. Biodiesel or blends should never be put into a gasoline engine. Biodiesel fuel can be used in compression-ignition engines in cars, trucks, construction equipment, boats, generators, and in most other applications where diesel is typically used. Biodiesel fuel is renewable, is domestically produced and is commercially available in all fifty (50) states. It provides similar performance to diesel; has high cetane, high lubricity, high flash point, and is the safest of all fuels to store and handle. Biodiesel has the highest BTU content of any alternative fuel.~~

h. ~~Clean diesel was one of the alternative fuels approved in the Clean Air Act Amendments of 1990. The first step to be undertaken was further refining to reduce sulfur contents and hence the significant particulate emissions caused by the sulfur. Significant advancement in this process has resulted in the development of ultra-low sulfur content diesel fuel. Refinery techniques can now produce diesel fuel with a sulfur content below 15 parts per million (PPM). The availability of this fuel supports the continuously regenerating filter, known as a diesel particulate filter. This technology reduces the exhaust particulate content by approximately 90 percent from currently mandated levels (to essentially zero). Further steps are being developed to add cetane booster, which increase efficient combustion. (Advantages and disadvantages listed in National School Transportation Specifications and Procedures May 2010 – Alternative Fuels.)~~

SCHOOL BUS WITHDRAWAL FROM SERVICE STANDARDS

The SDE staff shall develop, maintain and periodically distribute out-of-service criteria (a matrix), the basis of which shall be the latest published document from the most recent National Conference on School Transportation. The Out-of-Service Matrix shall be subsequent to input from the Student Transportation Steering Committee ~~and new school bus state inspectors~~, as needed. These standards are intended to ensure that all Idaho school buses are maintained in a safe manner. When inspection of a bus reveals a maintenance condition that is below an out-of-service standard it shall be the duty of the technician performing the inspection to remove the vehicle from service until the discrepancy has been corrected. These standards shall apply to both new and used buses and shall be the criteria used whenever an Idaho school bus is inspected. These standards are to be used whenever a sixty (60)- day, Annual or New School Bus Inspection is being performed by state inspectors or district, contractor, or outside contracted maintenance personnel (~~IC~~ Section 33-1506, Idaho Code).

STANDARDS FOR STUDENT TRANSPORTATION OPERATIONS

A. Introduction

The success of any school transportation operation depends largely on the performance and degree of dedication displayed by those involved. The school bus is an extension of the classroom and as such, the ride to school should be safe and efficient in an atmosphere conducive to learning readiness. Open and honest communication between all stakeholders is vital for the success of the transportation program. Transportation is critical to the education process, and the school bus is the safest form of transportation. Therefore, transportation to and from school on a school bus shall be offered to all eligible students. Districts or the governing body responsible for pupil transportation shall have an eligibility policy, which takes safety into account, addressing distances from school for ~~all~~ different age groups. If transportation eligibility is maximized, the result will be more students on buses and therefore, safer access to students' educational opportunities. The sole criterion used to establish transportation eligibility should not be only the distance between a student's home address and the student's school of attendance; rather, travel to and from school must take into account various criteria. Safety must be the primary concern, and criteria should take into account the ages of students and potentially hazardous situations, such as roadway and walk pathway conditions, speed limits, railroad crossings, lighting conditions, etc. The criteria should also take into account students' levels of maturity, grade levels, cognitive and physical abilities. Similar criteria should be used in establishing maximum distances between a student's home and the assigned bus stop per district guidelines.

B. School Travel Choices

1. Children in the United States travel to and from pre-school, school and related activities by a variety of modes. Administrators, parents and students often

choose or encourage the use of modes of travel for reasons other than maximizing safety or minimizing risk (e.g., convenience, flexibility, and budget). **It is recommended that all eligible school students be transported in a school bus**.

2. Each travel mode has its inherent risks, which vary from community to community, school to school and program to program, and any shifts from one mode to another can have a marked effect on the overall safety of travel for a particular community, school or program. The goal is to improve safety for all children traveling to and from pre-school, school and related activities and to provide communities with the information needed to make informed choices that balance their needs and resources.

C. Administration

In compliance with ~~IC~~ Section 33-1511, Idaho Code, the SDE shall provide the following:

1. Leadership in the development of a comprehensive student transportation program for statewide application.

2. A state supervisor of ~~student~~ school transportation with the staff and resources necessary for optimal job performance.

3. A comprehensive school bus operator and school bus technician training program.

4. Frequent visits to local school districts and charter schools to audit, inspect, review and evaluate student transportation programs and financial systems (including reimbursement claim accuracy) and provide direction as necessary. Adequate frequency shall be defined as, at least once every ~~three~~ two (2) years.

5. The ~~Supervisor~~ Director of Student Transportation, based upon results of program reviews, fiscal audits, and spot inspections as set forth in S~~s~~ection ~~IC~~ 33-1506, Idaho Code will provide school districts a list of required corrective actions, when necessary (~~IC~~ Section 33-1511, Idaho Code).

6. Follow-up visits to ensure implementation of corrective action plans. The ~~Supervisor~~ Director of Student Transportation shall require school districts to submit progress reports on those corrective actions developed by the ~~Supervisor~~ Director of Student Transportation to the SDE at prescribed intervals until deficiencies are corrected or the corrective actions no longer apply (~~IC~~ Section 33-1511, Idaho Code).

7. The ~~Supervisor~~ Director of Student Transportation may withhold all or a portion of a district's pupil transportation reimbursement funding in instances of noncompliance with the requirements of ~~IC~~ Sections 33-1506~~1511(6)~~ or ~~IC~~ 33-~~1506~~1511(6), Idaho Code.

8. Managing the state's student transportation program to include planning, budgeting, and forecasting requirements for the operation.

9. Collecting and analyzing statistical and financial data.

10. Developing, preparing and organizing manuals, handbooks and written training programs for student transportation personnel.

11. Providing consulting services and assistance to local districts as necessary.

D. Local School District or Charter School Administration

1. The local district or charter responsible for student transportation shall supervise the overall transportation operation within the respective district.

2. Assign adequately trained staff responsible for implementing and/or supervising a comprehensive student transportation program.

3. Ensure compliance with federal and state student transportation laws, regulations and policies, including drug/alcohol testing programs as required in the Omnibus Transportation Employee Testing Act of 1991, and in compliance with 49 CFR~~,~~ Parts~~-~~ 40 and 382.

E. Written Policies

In compliance with ~~IC~~ Sections 33-1501 through ~~IC~~ 33-1512, Idaho Code, the local board of trustees or the governing body will establish and adopt a set of written policies governing the student transportation system, including policies for disabled students. Contracting school districts or charters shall ensure compliance to written policies by student transportation contractors. The district's or charter's written policies shall, at a minimum, include:

1. Student transportation operations, including participation in training programs for all transportation personnel.

2. The evaluation of school bus routes and the periodic evaluation of student transportation personnel. The transportation supervisor or the district's school bus driver trainer shall evaluate a minimum of once per year each route and each driver for the purpose of assessing driver performance and the safety of routes and bus stops (National School Transportation Specifications & Procedures, Identification and Evaluation of School Bus Route and Hazard Marking Systems). The time schedule for pickup and delivery of children shall be followed as accurately as possible. Documentation of the driver and route evaluation shall be retained in the driver's personnel file. The SDE staff shall develop and maintain model evaluation procedures and forms.

3. The investigation and reporting of accidents and other transportation problems. Drivers shall report all school bus accidents to local school authorities and the appropriate law enforcement agency in accordance with Title 49, Chapter 13 of Idaho Code. Subsequent to the accident or incident, a Uniform School Bus Accident/Injury or appropriate Incident Report Form shall be completed by the driver or transportation supervisor and submitted to the SDE within fifteen (15) days.

4. Providing supervision of loading and unloading areas at or near schools during unloading and loading of school buses. Schools ~~districts~~ shall provide an adequate number of supervisors for the size of the loading area and number of students present and ensure close, continuous and interactive supervision whenever students and/or buses are present in the loading area (~~IC~~Section 33-512(4), Idaho Code).

~~4.~~5. Each school district that provides activity bus transportation for pupils shall have comprehensive policies and guidelines regarding activity transportation (IDAPA 08.02.02.180).

~~5.~~6. Ensure that instruction in passenger safety, including student participation in practical emergency evacuation drills, is an integral part of the school curriculum. Instruction should comply with state requirements and/or Federal Highway Safety Guideline 17 and with 45 CFR Part 1310, as may be applicable, and should include, but not be limited to, the following:

a. At least once each school semester, provide all ~~students~~ passengers transported to and from schools in a school bus or multifunction school activity bus with instruction in the location and operation of all emergency exits. Also, provide supervised practical emergency exit drills to each student transported to or from schools in a school bus or multifunction school activity bus.

1) Each bus route should have a written emergency evacuation plan. This plan should reflect each student's ability to evacuate or help others. Students with disabilities should participate in required evacuation drills and should only be excluded if their participation would present a health risk. Parents should be notified in advance of such barriers to their child's participation. Every effort should be made to ensure that ALL students have a reasonable understanding of the concept of an emergency and how they will exit the bus.

2) The driver and the attendant must be familiar with any equipment in the bus that would aid in an actual evacuation, (e.g., the use of all emergency exits, emergency/fire blankets, webbing cutters, etc.). It is important to enlist the help of school liaisons, parents and other personnel (e.g., physical therapists) to train and help students and staff understand emergency procedures including how to exit the bus safely without the use of their mobility devices and equipment (wheelchair, etc.). Local emergency personnel should be involved in developing the plans, especially if the students transported have complex medical conditions.

~~a.~~b. Before departure on each activity trip, provide all ~~students~~ passengers transported in a school bus, ~~school-chartered bus or multifunction school activity bus~~ instruction on the location of all emergency exits and demonstrations of their operation. Instruction should include a general review of safe riding practices, rules and procedures.

c. Limit the amount of carry-on items, especially large items such as luggage, coolers, sports/band equipment, etc., in school buses~~, school-chartered buses or multifunction school activity buses~~. Aisles and emergency exits in school ~~buses,~~buses ~~school-chartered buses and multifunction school activity buses~~ must be kept clear at all times. Any item that is brought on board must be safely stowed and secured away from any aisle or emergency exit.

~~6.~~7. Ensure compliance with Electronic device regulations, meeting compliance with Federal Motor Carrier Safety Administration Regulations, 49 CFR Part 392.82.

8. Student transportation operations shall be included in the district's service animals planning. Related training shall be provided to school bus drivers related to district plans (IEP, 504 Plan, definitions, handling, care, emergency evacuations, health certificates, etc.).

F. Additional Requirements Not Covered Under Policies

1. Provide the necessary library of resources to ensure that transportation personnel have the proper tools to operate a safe and efficient program. These resources include, but are not limited to:

   a. Applicable federal, state and local laws, codes and regulations.

   b. Applicable manuals and guidelines.

   c. On-line connectivity for access to all internet and other resources.

   d. Applicable trade journals and organizations' publications.

2. Provide contract management (if applicable). If a private carrier is utilized in a school transportation operation, it is imperative that a clear partnership is established with all parties. Clear expectations and contract review, along with on-going training, communication and practice/procedure development should be developed with a working partnership in mind.

G. Personnel Qualifications and Training

1. Prerequisite Qualifications and Job Descriptions

In compliance with ~~Federal Motor Carrier Safety Administration~~ FMCSA Regulations, ~~(~~49 CFR Part ~~-~~ 383~~)~~, and ~~IC~~ Sections 33-130, 33-1508, and 33-1509, Idaho Code, the local board of trustees/administration will establish and adopt a set of written prerequisite qualifications and job descriptions governing student transportation personnel, which shall, at a minimum, include:

a. Completion of an application form, which includes a personal and occupational history~~.~~;

b. A satisfactory driving record as revealed through pre-employment and annual checks with the state driver licensing division~~.~~;

c. A satisfactory work history as verified through professional references~~.~~; and

d. The ability to manage resources, students and personnel necessary to achieve a desired objective.

~~1.~~2. Insulin-Treated Diabetes Mellitus

In compliance with Federal Motor Carrier Safety Administration Regulations (Parts 381 and 383) and ~~IC~~Section 33-1509, Idaho Code, the SDE Student Transportation staff will establish an exemption process governing student transportation personnel diagnosed with insulin-treated diabetes mellitus (ITDM). In considering exemptions, the Department must ensure that the issuance of diabetes exemptions will not be contrary to the public interest and that the exemption achieves an acceptable level of safety. Applications must be submitted to the SDE Student Transportation staff using the application form. ~~Therefore, the Department will only consider granting exemptions to ITDM individuals who meet certain conditions and who submit the following information and documentation:~~

~~1) Number of years driving school bus.~~

~~2) Approximate number of miles per year driving school bus.~~

~~3) Estimated number of miles driven per week.~~

~~4) Estimated number of daylight driving hours per week.~~

~~5) Estimated number of nighttime driving hours per week.~~

~~6) Supporting documentation of current Commercial Drivers License to drive school bus issued by the State of Idaho.~~

~~7) Supporting documentation certifying applicant has operated a commercial motor vehicle (CMV) with a diabetic condition controlled by the use of insulin while under the care of an endocrinologist (may have consulting relationship with driver's personal physician) familiar with the treatment and monitoring of Diabetes Mellitus.~~

~~8) Idaho Transportation Department driving record (for the three-year period immediately preceding application) containing no suspensions or revocations, no involvement in an accident for which the applicant received a citation for a moving traffic violation while operating a CMV, no involvement in an accident for which the applicant contributed to the cause of the accident, and no convictions for a~~

~~disqualifying offense or more than one serious traffic violation, as defined in 49 CFR 383.5, while operating a CMV.~~

9) ~~Supporting documentation certifying no other disqualifying conditions including diabetes related complications.~~

10) ~~Supporting documentation certifying no recurrent (two or more) hypoglycemic reactions resulting in a loss of consciousness or seizure within the past five years. A period of one year of demonstrated stability is required following the first episode of hypoglycemia.~~

11) ~~Supporting documentation certifying no recurrent hypoglycemic reactions requiring the assistance of another person within the past five years. A period of one year of demonstrated stability is required following the first episode of hypoglycemia.~~

12) ~~Supporting documentation certifying no recurrent hypoglycemic reactions resulting in impaired cognitive function that occurred without warning symptoms within the past five years. A period of one year of demonstrated stability is required following the first episode of hypoglycemia.~~

13) ~~Supporting documentation certifying the applicant has been examined by a board-certified or board-eligible endocrinologist (who is knowledgeable about diabetes) who has conducted a complete medical examination. The complete medical examination must consist of a comprehensive evaluation of the applicant's medical history and current status with a report including:~~

- ~~The date insulin use began;~~
- ~~Diabetes diagnosis and disease history;~~
- ~~Hospitalization records;~~
- ~~Consultation notes for diagnostic examinations;~~
- ~~Special studies pertaining to the diabetes;~~
- ~~Follow-up reports;~~
- ~~Reports of any hypoglycemic insulin reactions within the last five years;~~
- ~~Two measures of glycosylated hemoglobin, the first 90 days before the last and current measure;~~
- ~~Insulin dosages and types, diet utilized for control and any significant factors such as smoking, alcohol use, and other medications or drugs taken; and~~

- ~~Examinations to detect any peripheral neuropathy or circulatory insufficiency of the extremities.~~

14) ~~Submits a signed statement from an examining endocrinologist indicating the following medical determinations:~~

- ~~The endocrinologist is familiar with the applicant's medical history for the past five years, either through actual treatment over that time or through consultation with a physician who has treated the applicant during that time;~~

- ~~The applicant has been using insulin to control his/her diabetes from the date of the application back to the date driving experience began or the previous three years, whichever is less;~~

- ~~The applicant has been educated in diabetes and its management, thoroughly informed of and understands the procedures which must be followed to monitor and manage his/her diabetes and what procedures should be followed if complications arise; and~~

- ~~The applicant has the ability and has demonstrated willingness to properly monitor and manage his/her diabetes.~~

15) ~~Submits a separate signed statement from an ophthalmologist or optometrist that the applicant has been examined and that the applicant does not have diabetic retinopathy and meets the vision standard at 49 CFR 391.41(b) (10), or has been issued a valid medical exemption. If the applicant has any evidence of diabetic retinopathy, he or she must be examined by an ophthalmologist and submit a separate signed statement from the ophthalmologist that he or she does not have unstable proliferative diabetic retinopathy (i.e., unstable advancing disease of blood vessels in the retina).~~

b. ~~There are special conditions attached to the issuance of any exemption for ITDM. The Department will impose the following requirements:~~

1) ~~Individuals with ITDM shall maintain appropriate medical supplies for glucose management while preparing for the operation of a CMV and during its operation. The supplies shall include the following:~~

- ~~An acceptable glucose monitor with memory;~~

- ~~Supplies needed to obtain adequate blood samples and to measure blood glucose;~~

- ~~Insulin to be used as necessary; and~~

- ~~An amount of rapidly absorbable glucose to be used as necessary.~~

c. Prior to and while driving, the individual with ITDM shall adhere to the following protocol for monitoring and maintaining appropriate blood glucose levels:

1) Check glucose before starting to drive and take corrective action if necessary. If glucose is less than 100 milligrams per deciliter (mg/dl), take glucose or food and recheck in 30 minutes. Do not drive if glucose is less than 100 mg/dl. Repeat the process until glucose is greater than 100 mg/dl;

2) While driving check glucose every two to four hours and take appropriate action to maintain it in the range of 100 to 400 mg/dl;

3) Have food available at all times when driving. If glucose is less than 100 mg/dl, stop driving and eat. Recheck in 30 minutes and repeat procedure until glucose is greater than 100 mg/dl; and

4) If glucose is greater than 400 mg/dl, stop driving until glucose returns to the 100 to 400 mg/dl range. If more than two hours after last insulin injection and eating, take additional insulin. Recheck blood glucose in 30 minutes. Do not resume driving until glucose is less than 400 mg/dl.

d. In addition to the requirements for controlling ITDM, the Department will monitor exemption recipients during the period that the exemption is valid. The Department will conduct monitoring by requiring the exemption recipients to submit the following information to the Idaho State Department of Education Student Transportation Section:

1) Provide written confirmation from the endocrinologist on a quarterly basis:

- The make and model of the glucose monitoring device with memory; and

- The individual's blood glucose measurements and glycosylated hemoglobin are generally in an adequate range based on daily glucose measurements taken with the glucose monitoring device and correlated with the daily records of driving time and a current measurement of glycosylated hemoglobin.

2) Submit on an annual basis, a comprehensive medical evaluation by an endocrinologist. The evaluation will include a general physical examination and a report of glycosylated hemoglobin concentration. The evaluation will also involve an assessment of the individual's willingness and ability to monitor and manage the diabetic condition.

e. Provide on an annual basis confirmation by an ophthalmologist or optometrist that there is no diabetic retinopathy and the individual meets the

~~current vision standards at 49 CFR 391.41(b) (10). If there is any evidence of diabetic retinopathy, provide annual documentation by an ophthalmologist that the individual does not have unstable proliferative diabetic retinopathy.~~

~~f. Submit annual documentation by an endocrinologist of ongoing education in management of diabetes and hypoglycemia awareness.~~

~~g. Report all episodes of severe hypoglycemia, significant complications, or inability to manage diabetes.~~

~~h. Report any involvement in an accident or any other adverse event whether or not they are related to an episode of hypoglycemia.~~

~~School bus drivers applying for ITDM exemption should refer to Federal Highway Administration Diabetes Waiver Program – Appendix A.~~

3. School Bus Driver Training

   a. All new school bus drivers ~~will~~ shall complete a prior-approved school bus driver training program, which shall include documented knowledge and skill tests, as well as ~~10~~ six (6) inclusive hours of behind-the-wheel, ~~and/or~~ four (4) hours route observation, and an Emergency Evacuation practical, before being allowed to drive a school bus loaded with students. As a support to school district personnel, the SDE staff shall develop and maintain model classroom and behind-the-wheel training curricula incorporating nationally recognized driver training methods and resources (~~IC~~ Sections 33-1508, 33-1509, and 33-1511, Idaho Code).

   b. All experienced school bus drivers ~~will~~ shall complete at least ten (10) hours refresher school bus driver training each fiscal school year. At least three (3) hours of pre-service training shall be provided before school begins in the fall. In addition, at least three (3) in-service training sessions shall be provided during the school year utilizing, at a minimum, thirty (30) minute, topic specific and documented, training blocks.

   c. School districts/contractors shall request documentation of all previous school bus driver training and driving experience, in accordance with Federal Motor Carrier Safety Administration CDL licensing requirements. Documentation of previous training, similar to SBOE training requirements, may be used to comply with new school bus driver training hours. Regardless of any previous out-of-district training, all newly hired school bus drivers shall have sufficient training provided by the hiring district or contractor, along with accompanying documentation, illustrating proficient school bus driving skills. If the district/contractor is unable to obtain documentation of previous school bus driver training, the individual shall complete the training requirements for new school bus drivers. If the applicant has gaps in excess of four years of ongoing school bus driving experience, the individual shall complete the training requirements for new school bus drivers.

4. Student Transportation Personnel File

Each district that operates or contracts student transportation services shall cause to have filed for each school bus driver, in a secure area with limited access, the following information (~~IC~~ Sections 33-1506, 33-1508 and 33-1509, Idaho Code):

a. Copy of original application to drive school bus.

b. Copy of current original physical examination form, along with any applicable waivers.

c. Historical training records should contain, at a minimum~~,~~:

- ~~a~~Accurate information certifying attendance and satisfactory completion of all state, or district and or company required training~~.~~; and
- ~~–~~Details about all topic specific school bus drivers training supported by a training program agenda, including the number of hours of instruction, date of instruction, instructor and drivers signature. ~~The following is a list of minimum training to be documented:~~

~~c.~~d. Copy of SDE/Classroom Curriculum tests (11 total) with score of eighty percent (80%) or better. Plus:

- Classroom Training
- Pre-Service
- In-Service
- Behind-the-Wheel Training

~~d.~~e. Copy of current commercial driver's license.

~~e.~~f. Copy of annual driving record check in compliance with CDL licensing requirements. The district shall request each fiscal year a driving record check report from the Idaho (or neighboring state or both states, as applicable) State Transportation Department, Motor Vehicles Division, for those individuals who are going to drive a school bus during the current fiscal school year. District/Contractor shall request a driver records check between July 1st and the first day of regular school (Section 33-701, Idaho Code).

~~f.~~g. Copy of all annual driver and route evaluations. New drivers shall have a driver evaluation before being allowed to drive a school bus loaded with students.

~~g.~~h. Copies of a driver emergency evacuation drills shall be maintained for a period of three (3) years.

5. Student Transportation Maintenance and Service Personnel

a. Each district that operates or contracts student transportation services shall perform maintenance functions on a timely basis consistent with safe transportation and work environments (Section~~IC~~ 33-1506, Idaho Code).

b. The SDE Student Transportation staff shall develop and maintain student transportation staffing guidelines designed to promote efficiency and cost containment. These guidelines shall be for informational purposes. School districts shall not be financially penalized when falling outside SDE staffing guidelines.

H. Vehicle Operation

All school districts and school bus drivers must meet all operations and performance requirements in conformity with law and with rules and regulations of the Department of Law Enforcement and the SBOE (~~IC~~ Section 33-1508, Idaho Code). The ~~B~~board of ~~T~~trustees or its designee shall be responsible for delineating in writing vehicle operations and the duties of bus drivers, which shall, at a minimum, include:

1. The driver shall ensure the safe condition of the school bus by conducting an initial and thorough daily pre-trip/post trip/child check school bus inspection. The district/contractor shall provide drivers with a pre-trip inspection form. The SDE staff shall develop and maintain a model pre-trip/post trip inspection form using nationally recognized criteria for the school bus pre-trip inspection. Each subsequent trip shall require an additional pre-trip school bus inspection, which at a minimum shall ensure that all safety equipment is in working order, i.e.~~,~~ brakes, tires, all lighting systems, steering and horn.~~,~~ During post trip inspections, importance should be placed upon locating any sleeping students, articles left on the bus (Idaho CDL Manual, Section 10.2.6), and all defects which shall be reported by the school bus ~~driver.~~driver.

2. A school bus shall be backed only as a last resort. Buses shall not back to turn around on a public roadway, unless the local board finds there is no alternative to backing buses on certain roads. The local board then, by official action, may allow backing of school buses on certain public roadways (~~IC~~ Section 33-1502, Idaho Code).

3. No passenger shall be permitted to operate the school bus.

4. The school bus driver shall not allow guns or inflammable or explosive substances such as gasoline to be carried on a school bus. School districts shall develop policy identifying other perceived unsafe items prohibited from being transported in the passenger compartment of a school bus, such as skis, skateboards, large instruments, etc. Students are to only carry objects on~~-~~to the bus that can fit safely within the seat compartment, preferably on the student's lap. The student shall not carry hazardous materials, objects, or ~~potentially disruptive~~ animals (with the exception to IEP and 504 Plan service animals) on the bus.

5. School bus drivers shall properly wear a seat belt whenever the bus is in motion.

6. School bus doors shall remain closed while the bus is in motion. No school bus shall start in motion before all passengers have been seated. The driver shall require each passenger on the bus to be seated in a manufacturer's school bus passenger seat. No student shall be allowed to stand while the bus is in motion.

7. School districts shall establish school bus stops in safe locations with at least one-hundred (100) yards clear visibility in both directions, whenever possible, and at least forty (40) feet from intersections, whenever possible. ~~(~~[No motor vehicle shall block an intersection (Section 49-660, Idaho Code). No bus stop shall be established less than one and one-half (1½) miles from the nearest appropriate school except when, in the judgment of the ~~B~~board of ~~T~~trustees, the age or health or safety of the student warrants (~~IC~~Sections 33-1501 and 33-1502, Idaho Code)].

8. All school buses shall stop to load/unload passengers at designated bus stops in accordance with the law (~~IC~~ Section 49-915 and 49-1422, Idaho Code). The SDE staff shall maintain model student loading/unloading training curriculum, the basis of which shall be in conformity with nationally recognized procedures (National School Transportation Specifications & Procedures). The student shall not leave or board the bus at locations other than the assigned home stop or assigned school unless arrangements for doing so have been approved by appropriate authority. Appropriate authority and the approval process shall be defined in local district policy.

9. School bus drivers shall load and unload from the right side of the roadway. School bus drivers shall not allow students to cross roadways having more than three (3) lanes for purposes of loading or unloading and shall only load or unload students who live on the right side of such a roadway, except at locations having easily accessible traffic control signals (~~IC~~ Section 49-1422, Idaho Code).

10. When it is necessary for the student to cross the roadway, the driver shall require the student to cross twelve (12) feet in front of the bus in accordance with state loading/unloading training curriculum. SDE endorses the joined fingers, open palm, single arm wave and eye contact with the driver for student crossing. Long steady blast of the horn is to be used as a danger signal.

11. School bus drivers shall report the license number of any vehicle, which violates any law endangering school children to his/her immediate supervisor (~~IC~~ Section 33-1509, Idaho Code).

12. Student transportation operations shall be included in the district's crises planning and related training shall be provided to school bus drivers related to district crises plans. School bus drivers shall remain vigilant and report suspicious behavior or conditions which could become harmful to students or be indicative of impending acts of terror. School bus drivers shall be provided training in homeland security awareness.

13. A driver on a school bus route shall not leave an occupied bus. In case of a breakdown the driver shall request assistance via two-way communication whenever possible. Otherwise, the driver should ask a passing motorist to make contact with the district, send a school bus aide or at least two (2) responsible students to make contact with the district, or wait for help.

14. Whenever it is necessary for the school bus driver to leave an unoccupied bus or leave the driver's seat of an occupied bus, he/she should shut off the motor, curb the wheels where appropriate, set the brakes and remove the ignition key.

15. The school bus driver shall give consideration to engine idling during extended wait times. Consideration should be given to varying climate conditions. All buses equipped with an auxiliary heater shall not be allowed to idle for more than three to five consecutive minutes. (**Eexceptions:** pre-trips, passenger stops, .) Heater shall be used to provide pre-heated water in the cooling system for starting cold engines as well as providing heat to the passenger compartment during cold weather without running the engine. Reduced idling will reduce student transportation costs and improve air quality. Allowing engines to idle for more than three (3) minutes may cause districts (including contracted districts) to lose funding for purchasing fuel.

16. All school and activity buses shall stop at all railroad grade crossings in accordance with the law (IC Sections 33-1508, 49-648 and 49-649, Idaho Code). The SDE staff shall develop and maintain railroad grade crossing training curriculum, the basis of which shall be in conformity with nationally recognized procedures (National School Transportation Specifications & Procedures).

17. School districts shall limit on-duty and driving time of school bus drivers similar to the limitations imposed by the Federal Motor Carrier Safety Administration regulations for drivers of similar commercial motor vehicles. Drivers shall use FMCSA over-the-road hours-of-service trip logs, a trip agenda, or other trip documentation validating applicable driving hours on all out-of-district trips in excess of one-hundred (100) miles (FMCSA Regulations, Hours of Service of Drivers).

18. At no time shall a driver exceed sixty-five (65) miles per hour or a lesser posted speed limit.

I. Student Management

1. Student transportation is another component in the school district's overall education program. An effective student transportation management program must have the support of the school district administration, school bus drivers, students, and parents. Each school district should institute a comprehensive student-management program that is designed to share the responsibility for student safety and well-being, as well as protecting the interests of all others involved in the program.

2. Every school district which operates a student transportation system shall have a written policy which sets forth the student's right to "due process" when disciplinary action is taken and defines the duties and responsibilities of students when taking advantage of student transportation. The school district's student transportation student management policy, including the duties and responsibilities of students, teachers and drivers shall be in concert with the district's written classroom policies (IC Section 33-512, Idaho Code).

3. School bus drivers shall establish proper rapport with students. Drivers should instruct students in appropriate behavior in accordance with the district's student management policy. Drivers should be aware that they represent the school system and present a positive image in dress, language, and manner.

4. The SDE staff shall develop and maintain model student management guidelines, suggested rules and regulations in its school bus driver training curriculum.

J. Student Eligibility

1. Eligible Students

   a. Student eligibility for state funded student transportation services is defined in ~~IC~~ Sections 33-1501, 33-1502, and 33-5208, Idaho Code.

   b. A student with disabilities who's Individualized Education Plan (IEP) requires transportation is eligible for transportation as a related service (IDEA) under the Student Transportation Support Program regardless of distance from the school.

   c. It is the aim of the SDE staff, in keeping with the "inclusion" concept, to arrange transportation for the student with disabilities as closely as possible to that of the student without disabilities. Whenever possible, students with disabilities will ride with students without disabilities on regular routes.

   d. Students who attend school at an alternate location as assigned by the local board of trustees may be expected to walk reasonable distances between schools (~~IC~~ Section 33-1501, Idaho Code). Transporting or shuttling students between schools or buildings in conjunction with non-reimbursable programs is a non-reimbursable expense and all such mileage shall be documented and tracked as non-reimbursable shuttle miles.

2. Ineligible Students

   a. An ineligible student shall be defined as any properly enrolled public school student who does not otherwise meet ridership eligibility by virtue of school or district boundary, distance, age, health, or safety.

   b. If a school district allows ineligible but properly enrolled public school students on a bus and their presence does not create an appreciable increase in the cost of the bus run, as determined by the SDE staff (in computing to and from school state allocations), the district shall not be penalized.

   c. Ineligible students may ride existing bus runs, and to and from an existing bus stop, on a "space available" basis provided that neither time, mileage, or other appreciable cost is added as a result of this service. Ineligible students shall be reported as such on the bus ridership count report and are not eligible for additional rider count funding.

d. Properly enrolled students living in district of residence but attending school in a non-resident district, under the provisions of ~~IC~~ Section 33-1402, Idaho Code, ~~(e~~Enrollment options~~)~~, may be transported; however, all related "yellow school bus" mileage shall be reported as non-reimbursable. Exceptions shall be permitted when transporting student(s) to out-of-district school demonstrates cost effectiveness, as determined by the SDE staff, in which case the related mileage shall be reported as reimbursable. Other exceptions include but are not limited to~~,~~ mileage related to provisions of the McKinney-Vento Homeless Assistance Act ~~and the "No Child Left Behind Act (NCLB)" in concert with Idaho's Academic Yearly Progress Plan (when school districts opt to provide transportation services to a neighboring school district)~~. In any event, cooperative written agreements, as detailed in ~~IC~~ Section 33-1402, Idaho Code, shall be required.

3. Non-Public (Private or Parochial) School Students

   The cost of transporting non-public school students must be deducted when submitting the transportation reimbursement claim. Each school district must recover the full cost of transporting non-public school students, and in no event may that cost be determined to be zero (~~IC~~ Section 33-1501, Idaho Code).

4. Non-Student Rider

   A non-student rider shall be defined as any transported person who is not properly enrolled in a pre-K through twelve school program. Each school district must recover the full cost of transporting non-students, except that dependent children of young mothers who are properly enrolled in a public school program, SDE student transportation staff, district supervisory personnel and/or administrators and aides may ride on to and from school bus routes. Other persons and teachers who have officially been appointed as chaperones may be allowed on a school bus for field and extracurricular trips. If the local district policy allows, exceptions may be made for passengers other than properly enrolled school students to ride the bus when special circumstances exist and space is available. An appropriate authority must give prior permission before non-students may ride. No eligible transported student is to be displaced or required to stand in order to make room for an ineligible, nonpublic, or non-student rider.

K. Student Transportation Support Program – Financial Reporting

1. Each school district operates motor vehicles of many sizes and types, such as school buses, small and large trucks, cars for administration and driver education, pickups, delivery vans, and other miscellaneous small motor vehicles. All school district vehicle operating costs must be charged to the appropriate individual account or accounts according to their use. Costs for transporting eligible students to and from school or related activities shall be accounted for separately in accordance with SBOE approved procedures (~~IC~~Section 33-1006, Idaho Code, and IDAPA 08.02.02.004.150-190).

2. Section 33-1506, Idaho Code, requires the filing of inspections to the SDE of all school buses as defined in Section 33-1504 and 49-120 (5), Idaho Code. School buses shall not be removed from inventory to comply with Section 33-1506, Idaho Code, unless the bus is being decommissioned in accordance with Section 49-1422, Idaho Code.

~~2.~~3. Accurate mileage records shall be kept for reimbursable and non-reimbursable programs so eligible and non-eligible miles can be accurately determined. No indirect costs are allowed. Financial supporting documents shall be maintained throughout the fiscal year for each program category for audit purposes.

~~3.~~4. Annual odometer readings (end of day, June 30, or start of day, July 1) on all district owned or contracted "yellow school buses" used to transport students to and from school or related activities shall be annually submitted to the SDE staff upon request. No "yellow school bus" used to transport public school students shall be excluded.

~~4.~~5. School districts shall annually report all miles linked to a "yellow school bus" as reimbursable or non-reimbursable on Schedule C of the Student Transportation Reimbursement Claim Form.

~~5.~~6. Revenues generated from the use or lease of a district owned "yellow school bus" shall be reported as follows:

a. When the revenues correlate to reported "reimbursable" miles and their related costs, the revenue shall be reported on the student transportation reimbursement claim form under revenues received.

b. When the revenues correlate to reported "non-reimbursable" miles and their related costs, the revenue shall not be reported.

~~6.~~7. Each school district ~~that operates~~operating a student transportation system will maintain accurate records of operations including runs, run mileage, categori~~ze~~zed bus mileage, student rider counts and other related costs on uniform record-keeping forms provided by the SDE staff.

~~7.~~8. The SDE Student Transportation staff shall conduct on-site spot inspections of school district student transportation operations at a frequency adequate to ensure compliance with state law, accuracy of data and reimbursement claims, and safety of school buses. Priority for selecting districts for review and audit shall be given to those districts that exceed both the most recent annual state average reimbursable cost per mile and the state average reimbursable cost per rider as calculated by the Department, unless the Supervisor of Student Transportation determines otherwise (~~IC~~ Section 33-1511, Idaho Code). Adequate frequency shall be defined as, at least once every two (2) years.

~~8.~~9. The SDE Student Transportation staff shall, subsequent to on-site review and spot inspection, provide school district with a list of required corrective actions, as necessary. School districts shall submit to the ~~Department~~ SDE

written corrective action plans at prescribed intervals until deficiencies are corrected or the corrective action no longer applies (subject to the provisions of ~~IC~~ Section 33-1511, Idaho Code).

~~9.~~10. The ~~Department~~ SDE shall annually review school district student transportation claims and make available analyses of reported and adjusted costs, including specific cost trends, to individual school districts and charter schools in a secure website location or published document.

~~10.~~11. Information will be made available to the SDE staff for audit purposes upon request. Information will be compiled and retained for a minimum of four (4) years, including the current fiscal year~~, in the following areas~~ (~~IC~~ Section 33-1006, Idaho Code).

~~11.~~12. Districts will be notified of the outcome of the review. The notification document will include an appeals due date by which, if the district does not agree with the findings of the review, a written appeal may be filed by the district. The appeal shall include (additional) documentation the district wants SDE to consider as part of the appeals review. Upon further review of the appeals documentation, SDE may make adjustments to the review findings.

L. Administrative and Program Operation Costs

1. The school district administrative reimbursement will be seven and one-half percent (7.5%) of all approved reimbursable operation costs for transporting pupils except administration costs, depreciation, and contracted services, as reported to the SDE staff on the Annual Pupil Transportation Claim for Reimbursement (Schedule B); or actual administrative costs, program operation costs, operation of plant, maintenance of plant, fixed costs, and other pupil transportation costs identified in ~~IC~~ Section 33-1006, Idaho Code, which are directly related, charged and reported as transportation costs to the SDE staff on the Annual Student Transportation Claim for Reimbursement (Schedule A).

2. Districts will be permitted flexibility in scheduling bus routes; however, before-school and after-school activity or other program busing that result in duplicating transportation service to a geographic area is not reimbursable, except that the Idaho Reading Indicator (IRI) shall be reimbursable under the Pupil Transportation Support Program. Transportation costs for other before-school and after-school academic programs may be reimbursable and will be considered on a case-by-case basis when specific written requests for consideration are submitted to the SDE staff on or before March 31 of the school year in which the busing began.

3. All academic ~~and activity~~ summer programs will be non-reimbursable under the Student Transportation Support Program, except transportation costs for Migrant Summer School, the Idaho Reading Indicator (IRI), and Extended Reading Intervention ~~School Year (ESY~~) Special Needs programs will be reimbursable.

4. The SDE staff shall develop support staffing (supervisor, driver trainer, secretary/dispatcher, etc.) and school bus inventory guidelines for school district student transportation operations.

5. The district will maintain accurate records of all bus routes and runs, including rider counts, mileage and other related operation and vehicle maintenance costs (~~IC~~ Section 33-1006, Idaho Code). A "route" is defined as anything one bus does during the morning (a.m. route), midday (noon route), or afternoon (p.m. route) and may be comprised of one or more morning, midday, or afternoon to – from school "run(s)." ~~The Department~~SDE staff shall require school districts to submit tri-annually a data specific "route report" including but not limited to, number of riders. Additionally, for purposes of equity and accuracy, school districts shall take ridership counts on specific dates and frequency ~~(~~[minimum of ten (10) counts per school year~~)~~] annually set by ~~the Department~~SDE staff, which shall be reported and submitted in a format approved by ~~the Department~~SDE staff.

6. If the local board of trustees authorizes the use of school buses to transport students to and from school-sponsored activities or field trips, the local board will use school buses that are in safe mechanical condition. No school bus shall be operated, loaded, or equipped in such a way as to constitute a hazard to the safety of the students being transported. School bus emergency egress systems shall remain operable and the bus aisle shall remain clear of obstruction while students are being transported (~~IC~~ Section 33-1506, Idaho Code).

7. If the local board of trustees authorizes the use of non-conforming vehicles to transport students to and from school-sponsored activities or field trips, the local board will use vehicles that are in safe mechanical condition. No non-conforming vehicle shall be operated, loaded, or equipped in such a way as to constitute a hazard to the safety of the students being transported.

8. The district shall maintain accurate records of all trips in all school buses and non-conforming vehicles used in the transportation of students and transportation personnel, including the purposes of the trip, mileage and operation and vehicle maintenance costs. An annual odometer reading will be taken at the end of each fiscal school year (June 30) on all district owned vehicles used in the transportation of students. The district shall reconcile annual mileage reports with all recorded reimbursable and non-reimbursable program miles. School districts that contract for student transportation services shall report all reimbursable and non-reimbursable program miles. The district shall maintain accurate mileage records of all trips in all district owned non-conforming vehicles used for shuttling school bus drivers to and from their school buses for purposes of efficiency and cost containment. The district shall maintain accurate mileage records of all trips in all district-owned shop trucks and supervisor/trainer cars used in support of yellow school buses to repair school buses, deliver parts, and check road/route/bus stop conditions. Support mileage will be tracked separately and reimbursed at the State Board of Examiners rate established at the beginning of each school year. Mileage for transportation personnel home-to-work-to-home that is not cost effective in lieu of using a bus for home-to-work-to-home; or mileage in vans or other nonconforming vehicles used to transport students is non-reimbursable.

9. The costs of transporting athletes or students to and from extracurricular activities and field trips are not reimbursable. As only miles for which costs may be reimbursed shall be those directly associated with transporting students for

the purposes of regular school attendance during regular days and hours, any costs associated with the operation of non-conforming vehicles shall be removed from the total costs. Costs shall be removed by pro-rating the percentage of total student transportation miles not on SDE inventoried vehicles to the total student transportation fleet miles.

10. Shuttle trip mileage is reimbursable only if directly associated with transporting students for the purposes of regular school attendance during regular days and hours. Shuttle trip mileage is limited to miles between any district-owned or exclusively-leased facility for regularly reoccurring days of that individual class, which transportation is for regular school attendance during regular days and hours.

M. Safety Busing

All school districts submitting applications for safety busing reimbursement approval shall have established a board policy for evaluating and rating all safety busing requests and shall have on file a completed measuring or rating instrument for all submitted requests (which shall include a break off point and ad hoc committee). The SDE staff shall develop and maintain a measuring instrument model, which shall include an element for validating contacts with responsible organizations or persons responsible for improving or minimizing hazardous conditions. Each applying district will be required to annually affirm that conditions of all prior approved safety busing requests are unchanged. The local board of trustees shall annually, by official action (IC Section 33-1502, Idaho Code), approve all safety busing locations. School districts that receiveing state reimbursement of costs associated with safety busing will re-evaluate all safety busing sites at intervals of at least every three (3) years using the local board adopted measuring or scoring instrument. In order to qualify for reimbursement, the local school board will, by official action, approve the initial safety busing request and allow the students in question to be transported before the application is sent to the state. Consideration for reimbursement will be contingent on the application for safety busing being received by the SDE Student Transportation staff on or before March 31st, of the school year in which the safety busing began.

N. Contract For Transportation Services

1. School districts and charter schools that contract for services shall follow IC Section 33-1510, Idaho Code, and its requirements to obtain services.

2. School districts that contract shall require contractors to accurately track all mileage related to student transportation and said mileage shall not be considered to be proprietary. However, mechanisms and methodologies used in calculating actual costs for purposes of bidding (using district non-proprietary route mileages and route data) may be proprietary (IC Section 9-340D340d, Idaho Code).

3. School districts that contract for the provision of student transportation services must report actual contractual costs to SDE for reimbursement on the annual Student Transportation Reimbursement Claim form (Schedule C). In addition, school districts that contract for the provision of student transportation services may also report the costs of employing not more than one transportation contract

manager for reimbursement on the annual Student Transportation Reimbursement Claim form (Schedule A). Notwithstanding, the total reimbursement to school districts that contract for the provision of student transportation services shall not exceed the limits provided under Idaho law (~~IC~~ Section 33-1006(5), Idaho Code).

4. School districts that contract student transportation services and also operate a district-owned student transportation program may submit specific costs related to district salaries benefits, purchased services, supplies, etc. (Schedule A or Schedule B) when the costs can be reconciled to district-owned and operated school buses.

5. Accurate mileage and contract costs (reimbursable and non-reimbursable) must be reported and submitted annually. School districts that contract shall require contractors to accurately track all mileage related to student transportation.

6. Contracting school districts shall be responsible for determining and reporting reimbursable and non-reimbursable trip mileage and shall be able to reconcile all mileage to contractor invoices.

O. Leasing District-Owned Buses

School districts will develop and use a policy approved by the local board of trustees delineating responsibility and use of rental or leased buses. Any costs to the district will not be reimbursable under the Transportation Support Program. A school district that allows a school bus to be operated by a non-district employee as part of a lease or rental agreement might not be insured under the terms of its insurance policy. Therefore, districts will maintain adequate liability insurance coverage on rented or leased buses and shall notify its insurance carrier when renting or leasing a school bus and shall request written confirmation of continued insurance coverage during the particular circumstances of the rental or lease arrangement. Districts will maintain accurate records on all district-owned leased buses, including mileage, to whom leased and revenues received (~~IC~~ Section 33-1512, Idaho Code).

P. Ineligible Vehicles

Costs incurred when transporting students in any vehicle that does not meet all SBOE, state and federal standards for a school bus will not be reimbursable within the Transportation Support Program, except as permitted in ~~IC~~ Section 33-1006, Idaho Code.

Q. Liability Insurance

1. Every policy or contract of insurance or comprehensive liability plan for each contractor-owned school bus shall provide that the insurance carrier pay on behalf of the insured local school district to a limit of not less than $500,000 per person limited to $3,000,000 for bodily or personal injury, death, or property damage or loss as the result of any one occurrence or accident, regardless of the number of persons injured or the number of claimants (~~IC~~ Section 33-1507, Idaho Code).

2. Every policy or contract of insurance or comprehensive liability plan for each district-owned school bus will provide that the insurance carrier pay on behalf of the insured local school district to a limit of not less than $500,000 for bodily or personal injury, death, or property damage or loss as the result of any one occurrence or accident, regardless of the number of persons injured or the number of claimants (~~IC~~ Sections 6-924 and 33-1507, Idaho Code).

R. Non-Traditional Educational Programs

Costs of transporting students for purposes of accessing alternate, special or unique educational programs outside normal school hours or outside the normal school year are not reimbursable. However, districts will not be financially penalized for incorporating the transportation of ineligible student riders into a reimbursable educational run when there is no subsequent appreciable increase in the allocation of transportation resources.

S. Capital Investment

Purchase of school buses with approved reimbursable options and two-way voice communication radios installed in a new bus will be the only capital investment items allowed in the reimbursement program. Reasonable cellular telephone basic service contract costs and reasonable repeater service contract costs are reimbursable. No more than two (2) basic cellular telephone service contracts will be allowed per school district. Reimbursement for basic cellular telephone service contract costs in excess of two (2) must have prior approval. Mobile cellular telephone, additional cellular airtime, roaming and long distance charges are non-reimbursable costs. The cost of a cellular telephone may be reimbursable when the cost is in-lieu of a hard-wired two-way voice radio.

T. Depreciation

1. ~~The purchase date for purposes of depreciation is determined to be July 1 of the state fiscal year in which the bus is delivered.~~ Buses will be placed on a depreciation schedule after they have been inspected by SDE staff, delivered to the district, mileage reported from the district to SDE and entered into IBUS. When a bus is sold or traded prior to its life expectancy according to the district's SDE generated depreciation schedule, the district shall forfeit an amount equal to total depreciation received, minus depreciation calculated at straight-line method, plus fifty ~~50~~ percent (50%) of the projected depreciation amount for the year in which the bus is sold or traded. Emergency circumstances resulting of property loss (school bus) or documented high maintenance costs ("lemon bus") may exempt a school district from this penalty (~~IC~~ Section 33-1006, Idaho Code).

2. Before any newly acquired school bus is used for transporting pupils, it shall be inspected by a duly authorized representative of the SDE (~~IC~~ Section 33-1506, Idaho Code).

3. Depreciation Ineligibility

Any used school bus purchased by a district will not be eligible for depreciation if the bus is over five (5) years old, using the body manufacturers and state inspection fiscal year dates. Used school buses new to the state no older than five (5) years will be placed on the district's depreciation schedule, using an accelerated declining balance method of calculating depreciation, which shall include a percentage rate equal to one, divided by the remaining years life expectancy of the bus ~~(~~[according to a life expectancy of ten (10) years~~)~~], multiplied by two (2). Used bus depreciation maximums will be based on used bus values in the most current Yellow School Bus Book and subject to review by the Student Transportation Steering Committee.

4. Depreciation Standards

In order to be eligible for depreciation and operation costs a school bus must meet all federal and Idaho minimum construction standards and SBOE. Further, the bus shall be assigned and used daily on to ~~and~~ /from school routes, except those new buses purchased for spare, activity and field trip purposes may be placed on the district's depreciation schedule if they are also used on to ~~–~~/from school routes.

5. Retrofit Standards

   a. Any vehicle that has been retrofitted to be used as a school bus will meet current Idaho minimum construction standards.

   b. Any school bus that undergoes a partial retrofit will meet current Idaho minimum construction standards applicable to the retrofitted part(s).

6. Size Categories

All school buses will be categorized by ~~size~~ actual capacity as follows:

- 85 or more students ~~and up,~~
- 73 - 84 students~~,~~
- 59 - 72 students~~,~~
- 47 - 58 students~~,~~
- 35 - 46 students~~,~~
- 20 - 34 students~~, and~~
- 01 - ~~one to~~ 19 students~~.~~

~~6.~~7. Basic Bus

The SDE Student Transportation staff shall write bid specifications for the purpose of defining Idaho's basic school bus(es) and shall advertise for an indefinite contract, indefinite quantity bid. The bid award shall be used to establish a "depreciation reimbursement benchmark" for statewide district school bus purchases for specific size categories. For purposes of depreciation reimbursement, add-on bus component costs may be allowed specific to school district needs that are in accord with ~~IC~~ Section 33-1006, Idaho Code (~~IC~~ Sections 33-601, 67-2803, and 67-2806, Idaho Code).

7.8. Life Expectancy

For depreciation purposes, all school buses will be categorized according to size and depreciated according to a twelve (12)- year life expectancy or a life expectancy based on use and mileage (as defined by the student transportation steering committee and approved by the SDE Student Transportation staff), whichever is most advantageous to the school district (see SDE "Depreciation Calculator"). Activity and lLift-equipped buses will be categorized for purchase and depreciation purposes as if they had full seating capacity. The cost of activity bus options (e.g., air conditioning, partially reclining passenger seats, interior overhead storage compartments, etc.) will not be included when calculating depreciation.

8.9. Twelve12- Year Depreciation

The school bus depreciation schedule within the allowable costs of the Pupil Transportation Support Program, for school buses with life expectancy of twelve (12) years will be determined by using an accelerated declining balance method of calculating depreciation ([declining balance schedule to include a percentage rate of 16.67 percent per year for useful life expectancy of twelve (12) years)] (IC Section 33-1006, Idaho Code).

9.10. Use and Mileage Depreciation

The school bus use and mileage depreciation schedule within the allowable costs of the Pupil Transportation Support Program will be determined by using an accelerated declining balance method of calculating depreciation (use and mileage declining balance schedule to include a variable percentage rate triggered by use and mileage categories as defined by the SDE Student Transportation staff). (See SDE "Depreciation Calculator.")

10.11. Purchase Price

a. The purchase price of each bus will include the total chassis, body, special equipment, freight costs, pre-delivery inspection fees and any other costs directly related to acquiring the bus within the constraints of Idaho's basic bus specifications, indefinite contract/quantity bid award and Idaho Code. Costs of non-reimbursable options will be subtracted for purposes of calculating the district's reimbursable bus depreciation, as necessary (IC Sections 33-1006 and , 33-1506, Idaho Code).

b. Any or all bid quotations may be rejected by the school district; however, all bid prices will be evaluated and adjusted as necessary by the SDE Student Transportation staff with recommendations for depreciation adjustment from the Student Transportation Steering Committee. The lowest responsive and responsible bid will be used in calculating the district's depreciation reimbursement. Verifiable differences in school bus construction quality may be justification for bid rejection (Section 33-601, Idaho Code).

c. School districts may purchase from a contract issued by the SDE secondary to awarding an indefinite contract/quantity or through a contract that has been competitively bid by the state of Idaho, one of its subdivisions, or an agency of the federal government (~~IC~~ Sections 67-2803 and 67-2806, Idaho Code).

~~11.~~12. School Bus Delivery Costs

a. The SDE Student Transportation staff may consider (subject to the constraints of Idaho's basic bus specifications, indefinite contract/quantity bid award and Idaho Code) ~~FOB~~ Freight on Board (FOB) district bus delivery costs reflected in school district bid specifications and subsequent vendor invoice to be considered part of the bus purchase price for purposes of depreciation reimbursement.

b. Districts will not report any new school bus delivery mileage on the Pupil Transportation Reimbursement Claim form. Districts will record the initial mileage on all new school buses delivered to the district and will track and record all subsequent mileage for purposes of reimbursement.

~~12.~~13. Non-reimbursable Costs

No finance charges, leases, rent, or interest will be included in the purchase price. These are not reimbursable costs on the depreciation schedule. A school district that leases a school bus on a short-term emergency basis must receive prior approval, for purposes of reimbursement.

~~13.~~14. Inoperable Bus

Any school bus that is wrecked, sold, inoperable, or for any other reason does not or cannot meet all federal, state and SBOE construction and operational standards will be removed from the depreciation schedule. Revenues received subsequent to an insurance claim, associated with any district owned vehicle that receives state pupil transportation reimbursement consideration, shall be reported on the pupil transportation reimbursement claim form under revenues/reimbursements received or as a credit to the district's parts and supplies budget account.

~~14.~~15. Bus Trade-In

Trade-in values reflected in district bid specifications and subsequent invoicing will not be subtracted from the purchase price of the new bus for purposes of depreciation reimbursement.

~~**3. Program Support**~~

~~a) The State Department of Education shall develop a "best practice" model and cost containment guidelines for school district pupil transportation operations, which shall include school bus lifecycle costing and school bus replacement models based on mileage, age and use criteria.~~

~~b) The State Department of Education shall develop guidelines for use in advertising for transportation bids, reviewing transportation bids and awarding transportation bids.~~

U. Depreciation Account

1. All school bus depreciation money received by school districts from the state shall be placed into a separate account and used only for the purchase of school buses. Any revenue received by the school district subsequent to the sale of any used school bus will be placed into a separate account and used only for the purchase of school buses. Trade-in values reflected in district bid specifications and subsequent invoicing will not be subtracted from the purchase price of the new bus for purposes of depreciation reimbursement.

2. School districts shifting from district-owned to contracted transportation programs may use the funds previously placed into the bus depreciation account for any expenses pertaining to running a contracted transportation program.

V. Program Support

1. The SDE staff shall develop a “best practice” model and cost containment guidelines for school district pupil transportation operations, which shall include school bus lifecycle costing and school bus replacement models based on mileage, age and use criteria.

2. The SDE staff shall develop guidelines for use in advertising for transportation bids, reviewing transportation bids and awarding transportation bids.

W. Reimbursement/Non-Reimbursement Matrix

The SDE will, as a matter of policy, periodically publish and distribute a reimbursement matrix.

X. Appeals and Waivers

1. The SBOE may grant a waiver of any rule not required by state or federal law to any school district upon written request, as provided in IDAPA 08.02.01.001. Written requests for such a waiver shall be submitted to the SDE Student Transportation staff using the waiver request form. The SDE staff shall submit the waiver request to the SBOE, along with any appropriate recommendation(s). All waiver requests must include supporting rationale and detailed justification for the request. The Board will not grant waivers of any rule required by state or federal law. State and federal law includes case law (including consent decrees), statutes, constitutions, and federal regulations.

2. A school district may appeal the application of the one hundred three percent (103% ~~percent~~) limit on reimbursable costs to the SBOE, as provided in ~~IC~~ Section 33-1006(5), Idaho Code. Appeals must be submitted to the SDE Student Transportation staff using the appeal application form. The SDE shall submit the appeal to the SBOE, along with any appropriate recommendation(s). All appeals

must include supporting documents demonstrating qualifying hardship bus runs (~~IC~~ Section 33-1006, Idaho Code).