

PALMETTO BUS SALES

Selling New & Used Buses Since 1965

P.O. Box 2898
West Columbia, SC 29171
Interstate - 26E @ Exit #119

803-754-3827
803-754-5326 fax
www.palmettobussales.com

June 5, 2012

RECEIVED

JUN 05 2012

Materials Management Office
11:00 A.M.

Mrs. Cheryl Patrick, CPPB
S.C. Materials Management Office
Capitol Center
1201 Main Street, Suite 600
Columbia, S.C. 29201

Mrs. Patrick:

Thank you for the opportunity to provide a bid for Bid # 5400004167 - Type "C" Conventional School Buses - Statewide Term Contract for the State Of South Carolina. Please find our entire bid packet for this contract. Our bid complies with all of the bid documents and warranties as specified and amended.

Please let me know if you have questions regarding any of this information.

Sincerely -


Bernie K. Smith
President

ORIGINAL

ORIGINAL



State of South Carolina

Invitation for Bid
AMENDMENT 1

Solicitation Number: 5400004167
Date Issued: 04/23/2012
Procurement Officer: CHERYL PATRICK, CPPB
Phone: 803-337-5171
E-Mail Address: C.patrick@dnm.sc.gov

RECEIVED

DESCRIPTION: Type C Conventional School Buses - Statewide

JUN 05 2012

USING GOVERNMENTAL UNIT: Statewide Term Contract

Materials Management Office

The Term "Offer" Means Your "Bid" or "Proposal". Unless submitted on-line, your offer must be submitted in a sealed package. Solicitation Number & Opening Date must appear on package exterior. See "Submitting Your Offer" provision.

11:00 AM

SUBMIT YOUR SEALED OFFER TO EITHER OF THE FOLLOWING ADDRESSES:

MAILING ADDRESS:
Materials Management Office
PO Box 101103
Columbia SC 29211

PHYSICAL ADDRESS:
Materials Management Office
Capitol Center
1201 Main Street, Suite 600 - MMO Conference Rm
Columbia SC 29201

SUBMIT OFFER BY (Opening Date/Time): 05/22/2012 -- 11:00 AM (See "Deadline For Submission Of Offer" provision)

QUESTIONS MUST BE RECEIVED BY: 05/04/2012 -- 2:00 PM (See "Questions From Offerors" provision)

NUMBER OF COPIES TO BE SUBMITTED: FOUR (4) - 1 Original & 3 Copies; clearly marked "COPY"

CONFERENCE TYPE: Pre Bid Conference
DATE & TIME: 05/01/2012 -- 10:30 AM

LOCATION: Capitol Center Building
MMO Conference Room, Suite 600
1201 Main Street
Columbia, SC 29201

(As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions)

AWARD & AMENDMENTS

Award will be posted on 06/15/2012. The award, this solicitation, any amendments, and any related notices will be posted at the following web address: <http://www.procurement.sc.gov>

Unless submitted on-line, you must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of thirty (30) calendar days after the Opening Date. (See "Signing Your Offer" and "Electronic Signature" provisions.)

NAME OF OFFEROR
PALMETTO BUS SALES
P.O. BOX 2898
WEST COLUMBIA, S.C. 29171
(full legal name of business submitting the offer)

Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.

AUTHORIZED SIGNATURE

(Person must be authorized to submit binding offer to contract on behalf of Offeror.)

TAXPAYER IDENTIFICATION NO. 57-1101520
(See "Taxpayer Identification Number" provision)

TITLE PRESIDENT
(business title of person signing above)

STATE VENDOR NO. 7000039459
(Register to Obtain S.C. Vendor No. at www.procurement.sc.gov)

PRINTED NAME
BARNIE K. SMITH
(printed name of person signing above)

DATE SIGNED
JUNE 5, 2012

STATE OF INCORPORATION
SOUTH CAROLINA
(If you are a corporation, identify the state of incorporation.)

OFFEROR'S TYPE OF ENTITY: (Check one)

(See "Signing Your Offer" provision.)

Sole Proprietorship Partnership Other _____
 Corporate entity (not tax-exempt) Corporation (tax-exempt) Government entity (federal, state, or local)

PAGE TWO

(Return Page Two with Your Offer)

<p>HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p>	<p>NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>803-754-3827 803-754-5326 Area Code - Number - Extension Facsimile</p> <p>bsmith@palmettobussales.com E-mail Address</p>
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<p>PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p><input type="checkbox"/> Payment Address same as Home Office Address <input type="checkbox"/> Payment Address same as Notice Address (check only one)</p>	<p>ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p><input type="checkbox"/> Order Address same as Home Office Address <input type="checkbox"/> Order Address same as Notice Address (check only one)</p>
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ACKNOWLEDGMENT OF AMENDMENTS
 Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)

Amendment No.	Amendment Issue Date						
1	4/23/12						

<p>DISCOUNT FOR PROMPT PAYMENT (See "Discount for Prompt Payment" clause)</p>	10 Calendar Days (%) <i>N/A</i>	20 Calendar Days (%) <i>N/A</i>	30 Calendar Days (%) <i>N/A</i>	___ Calendar Days (%) <i>N/A</i>
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PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

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AMENDMENT # 1:

SOLICITATION # 5400004167:

TYPE C CONVENTIONAL SCHOOL BUSES STATEWIDE

PAGE 112 WITH THE ATTACHED REVISION:

CHANGES ARE HIGHLIGHTED IN YELLOW:

THE 41-42 PASSENGER SCHOOL BUS ALSO HAS A LIFT REQUIREMENT:

1 EachWITH LIFT, WITHOUT CSRS SEATS**

1A Each WITH LIFT & 3 CSRS Seats**

FOLLOWING THE PRE BID CONFERENCE ON MAY 1ST, A COMPLETE NEW BID DOCUMENT WILL BE ISSUED (TO BE CONSISTENT WITH THE MANNER IN WHICH VEHICLE AMENDMENTS HAVE BEEN PROCESSED BY MMO IN THE PAST) WHICH WILL INCLUDE THE REVISED BID SCHEDULE PAGE 112 AS ATTACHED.

THIS AMENDMENT HAS BEEN ISSUED FOR INFORMATION PURPOSES PRIOR TO THE PRE BID CONFERENCE TO CLARIFY THAT THE 41-42 PASSENGER SCHOOL BUS DOES INCLUDE A LIFT.

VIII. BIDDING SCHEDULE / PRICE-BUSINESS PROPOSAL

CONFLICTS BETWEEN OPTION SOLICITATIONS AND SPECIFICATION REQUIREMENTS:

The following pages contain bid sheets and questionnaires. In cases where inadvertently there is a request herein for a price for a feature as an option, when in fact such feature is required in the base vehicle per the attached specifications, the requirement for the feature to be in the base vehicle takes precedence. That is, there shall be no extra charge for the feature, and instead it shall be furnished with the base vehicle.

BIDDING SCHEDULE (NOV 2007)

Item	Estimated Quantity	Unit of Measure	Base Unit Price	Extended Price
1	25	Each**WITH LIFT, WITHOUT CSRS SEATS		
1A	25	Each** WITH LIFT & 3 CSRS Seats		
Product Catg.: 55640 - Passenger School Bus				
Item Description: 41-42 Passenger School Bus – WITH AIR CONDITIONING				
Question		Response		
BODY MAKE:				
BODY MODEL:				
CHASSIS MAKE:				
CHASSIS MODEL:				
DELIVERY TIME - DAYS AFTER RECEIPT OF PURCHASE ORDER (ARO)				
HORSE POWER:				
WHEELBASE:				
CSRS SEAT MFR:				
CSRS SEAT MODEL:				
CSRS Seat \$ _____ Each				
Maximum # of CSRS seat rows (one row includes both sides of aisle) which can be furnished before any passenger capacity is lost: _____ CSRS seat rows				
Number of individual seating positions lost (vs. default seating configuration) if all allowable seat rows are CSRS: _____				

ORIGINAL

	State of South Carolina Invitation for Bid AMENDMENT 2	Solicitation Number: 5400004167 Date Issued: 05/01/2012 Procurement Officer: CHERYL PATRICK, CPPB Phone: 803-737-5717 E-Mail Address: CPATRICK@mmo.sc.gov
		

DESCRIPTION: **Type C Conventional School Buses - Statewide**

USING GOVERNMENTAL UNIT: **Statewide Term Contract**

JUN 05 2012

The Term "Offer" Means Your "Bid" or "Proposal". Unless submitted on-line, your offer must be submitted in a sealed package. Solicitation Number & Opening Date must appear on package exterior. See "Submitting Your Offer" provision.

Materials Management Office

11:00 A.M.

SUBMIT YOUR SEALED OFFER TO EITHER OF THE FOLLOWING ADDRESSES:

MAILING ADDRESS:

Materials Management Office
PO Box 101103
Columbia SC 29211

PHYSICAL ADDRESS:

Materials Management Office
Capitol Center
1201 Main Street, Suite 600 – MMO Conference Rm
Columbia SC 29201

SUBMIT OFFER BY (Opening Date/Time): **05/22/2012 -- 11:00 AM**

(See "Deadline For Submission Of Offer" provision)

QUESTIONS MUST BE RECEIVED BY: **05/08/2012 -- 2:00 PM**

(See "Questions From Offerors" provision)

NUMBER OF COPIES TO BE SUBMITTED: **FOUR (4) – 1 Original & 3 Copies; clearly marked "COPY"**

CONFERENCE TYPE: **Pre Bid Conference**

DATE & TIME: **05/01/2012 -- 10:30 AM**

(As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions)

LOCATION: **Capitol Center Building**

MMO Conference Room, Suite 600

1201 Main Street

Columbia, SC 29201

AWARD & AMENDMENTS

Award will be posted on **06/15/2012**. The award, this solicitation, any amendments, and any related notices will be posted at the following web address: <http://www.procurement.sc.gov>

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(See "Signing Your Offer" and "Electronic Signature" provisions.)

NAME OF OFFEROR

PALMETTO BUS SALES

P.O. BOX 2898

WEST COLUMBIA, S.C. 29171

(full legal name of business submitting the offer)

Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.

AUTHORIZED SIGNATURE

(Person must be authorized to submit binding offer to contract on behalf of Offeror.)

TAXPAYER IDENTIFICATION NO. **57-110152**

(See "Taxpayer Identification Number" provision)

TITLE **PRESIDENT**

(business title of person signing above)

STATE VENDOR NO. **7000039459**

(Register to Obtain S.C. Vendor No. at www.procurement.sc.gov)

PRINTED NAME

BARNIE K. SMITH

(printed name of person signing above)

DATE SIGNED

JUNE 5, 2012

STATE OF INCORPORATION

SOUTH CAROLINA

(If you are a corporation, identify the state of incorporation.)

OFFEROR'S TYPE OF ENTITY: (Check one)

(See "Signing Your Offer" provision.)

Sole Proprietorship

Partnership

Other _____

Corporate entity (not tax-exempt)

Corporation (tax-exempt)

Government entity (federal, state, or local)

COVER PAGE (NOV. 2007)

PAGE TWO

(Return Page Two with Your Offer)

<p>HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p>	<p>NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>803-754-3827 803-754-5326 Area Code - Number - Extension Facsimile</p> <p>bsmith@palmettobussales.com E-mail Address</p>
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<p>PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>___ Payment Address same as Home Office Address ___ Payment Address same as Notice Address (check only one)</p>	<p>ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>___ Order Address same as Home Office Address ___ Order Address same as Notice Address (check only one)</p>
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ACKNOWLEDGMENT OF AMENDMENTS Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)							
Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date
2	5/1/12						

DISCOUNT FOR PROMPT PAYMENT (See "Discount for Prompt Payment" clause)	10 Calendar Days (%) <i>N/A</i>	20 Calendar Days (%) <i>N/A</i>	30 Calendar Days (%) <i>N/A</i>	___ Calendar Days (%) <i>N/A</i>
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PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

PAGE TWO (SEP 2009)

End of PAGE TWO

AMENDMENT # 2:

SOLICITATION # 5400004167:

TYPE C CONVENTIONAL SCHOOL BUSES STATEWIDE

THE “QUESTIONS MUST BE RECEIVED BY” DATE & TIME (AS REFERENCED ON THE COVER PAGE OF THE SOLICITATION) HAVE BEEN EXTENDED TO:

TUESDAY, MAY 8, 2012 @ 2:00PM

NO ADDITIONAL CHANGES, CLARIFICATIONS OR CORRECTIONS ARE BEING MADE BY THIS AMENDMENT.

ORIGINAL

	State of South Carolina	Solicitation Number:	5400004167
	Invitation for Bid Amendment 4	Date Issued:	05/18/2012
		Procurement Officer:	CHERYL PATRICK, CRRP
		Phone:	803-737-4717
		E-Mail Address:	CPatrick@mmo.sc.gov

RECEIVED

JUN 05 2012

DESCRIPTION: **Type C Conventional School Buses - Statewide**

USING GOVERNMENTAL UNIT: **Statewide Term Contract**

Materials Management Office

11:00 A.M.

The Term "Offer" Means Your "Bid" or "Proposal". Unless submitted on-line, your offer must be submitted in a sealed package. Solicitation Number & Opening Date must appear on package exterior. See "Submitting Your Offer" provision.

SUBMIT YOUR SEALED OFFER TO EITHER OF THE FOLLOWING ADDRESSES:	
MAILING ADDRESS: Materials Management Office PO Box 101103 Columbia SC 29211	PHYSICAL ADDRESS: Materials Management Office Capitol Center 1201 Main Street, Suite 600 – MMO Conference Rm Columbia SC 29201

SUBMIT OFFER BY (Opening Date/Time): **06/05/2012 – 11:00 AM** (See "Deadline For Submission Of Offer" provision)

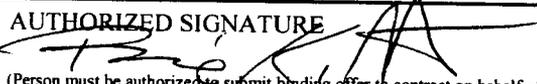
QUESTIONS MUST BE RECEIVED BY: 05/23/2012 – 4:00pm - **(Questions Limited to Amended Parts Only)**
(See "Questions From Offerors" provision)

NUMBER OF COPIES TO BE SUBMITTED: **FOUR (4) – 1 Original & 3 Copies; clearly marked "COPY"**

CONFERENCE TYPE: Intentionally Deleted DATE & TIME:	LOCATION: Intentionally Deleted
(As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions)	

AWARD & AMENDMENTS	Award will be posted on 06/19/2012 . The award, this solicitation, any amendments, and any related notices will be posted at the following web address: http://www.procurement.sc.gov
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Unless submitted on-line, you must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of thirty (30) calendar days after the Opening Date. (See "Signing Your Offer" and "Electronic Signature" provisions.)

NAME OF OFFEROR PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171 <small>(full legal name of business submitting the offer)</small>	<small>Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.</small>
AUTHORIZED SIGNATURE  <small>(Person must be authorized to submit binding offer to contract on behalf of Offeror.)</small>	TAXPAYER IDENTIFICATION NO. 57-1101520 <small>(See "Taxpayer Identification Number" provision)</small>
TITLE PRESIDENT <small>(business title of person signing above)</small>	STATE VENDOR NO. 7000039459 <small>(Register to Obtain S.C. Vendor No. at www.procurement.sc.gov)</small>
PRINTED NAME BARNIE K. SMITH <small>(printed name of person signing above)</small>	DATE SIGNED JUNE 5, 2012
STATE OF INCORPORATION SOUTH CAROLINA <small>(If you are a corporation, identify the state of incorporation.)</small>	

OFFEROR'S TYPE OF ENTITY: (Check one) (See "Signing Your Offer" provision.)	
<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Partnership
<input checked="" type="checkbox"/> Corporate entity (not tax-exempt)	<input type="checkbox"/> Corporation (tax-exempt)
<input type="checkbox"/> Government entity (federal, state, or local)	

PAGE TWO

(Return Page Two with Your Offer)

<p>HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business) PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p>	<p>NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause) PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p align="center"> _____ 803-754-3827 803-754-5326 _____ Area Code - Number - Extension Facsimile </p> <p align="center">_____BSMITH@PALMETTOBUSSALES.COM_ E-mail Address</p>
--	--

<p>PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause) PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>____ Payment Address same as Home Office Address ____ Payment Address same as Notice Address (check only one)</p>	<p>ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses) PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C. 29171</p> <p>____ Order Address same as Home Office Address ____ Order Address same as Notice Address (check only one)</p>
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ACKNOWLEDGMENT OF AMENDMENTS
 Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)

Amendment No.	Amendment Issue Date						
1	4-23-2012	2	5-1-2012	3	5-18-2012		

DISCOUNT FOR PROMPT PAYMENT (See "Discount for Prompt Payment" clause)	10 Calendar Days (%) <i>N/A</i>	20 Calendar Days (%) <i>N/A</i>	30 Calendar Days (%) <i>N/A</i>	_____ Calendar Days (%) <i>N/A</i>
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PREFERENCES -DO NOT APPLY TO THIS SOLICITATION

PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

AMENDMENT 4 – 5400004167

ONE SET OF QUESTIONS & ANSWERS WAS INADVERTENTLY LEFT OUT OF AMENDMENT 3 – PLEASE ADD THE FOLLOWING TO ATTACHMENT A:

ATTACHMENT A:

(FIFTH SET OF QUESTIONS):

Page 35 – APPROVED CHASSIS REQUIREMENTS

Basic Pupil Load 41-42
Wheel base (approximate inches) 165-193
Amend to read:
Basic Pupil Load 41-42
Wheel base (approximate inches) 165-218

Page 36 – AXLES - REAR AXLES

“The required rear axle ratio for school buses with tire size 11R22.5 and equipped with the above listed engines is between 6:43 – 6:50 inclusive.”

Amend to read: “... is between 5:57 – 6:50 inclusive.”

Page 40 – EXHAUST SYSTEM

“Tail pipe shall be minimum 16-gauge aluminized coated 409 stainless steel or aluminized coated carbon steel aft of DPF and shall not be reduced in size after it leaves muffler.”

Response: Remain as stated

Page 42 – FUEL TANK

“Fuel system to have a fuel filter and water separator (Racor Model 490 or approved equal) that shall be capable of running the Racor 490 fuel filter element which includes clear fuel bowl, water sensor and primer pump.”

Response: Remain as stated

Page 42 – ALTERNATOR

“Minimum output rating shall be at least 270 amperes.”

Response: Remain as stated

Page 54 – DIMENSIONS - BODY SIZES

The following table shall govern the body lengths:

<u>Maximum Seating Capacity</u>	<u>Approximate Body Length</u>
41-42	244-275”
Amend to read: <u>Maximum Seating Capacity</u>	<u>Approximate Body Length</u>
41-42	244-319”

Page 66 – ASSIST RAIL AND CRASH BARRIER - BROOM HOLDER –

“A non- metallic broom securement device shall be mounted in front of or on the front side of the crash barrier, behind the driver seat.”

Response: Remain as stated

Page 73 – HEATING AND VENTILATION- HEATER

“Regardless of plumbing configuration, each heater core within the bus body shall have a dedicated pair of shutoff valves ...”

Response: Remain as stated

Page 76 - REARSCOPE LENS

“All buses shall be equipped with a Rearscope prismatic lens.”

Response: Remain as stated

Page 78 - WINDOW AND DOOR GLASS

“Rear Door Windows: 50% - 53% light transmission”

Response: Remain as stated

Page 81 - LICENSE PLATE HOLDERS

“Two license plate holders shall be located on the rear of the body with indentions on left and right sides.”

Response: Remain as stated

Page 86 - EXTERIOR PAINT

“Add one (1) full length reflective stripe minimum 1-3/4” width, position reflective strip below floor level guard rail.”

Amend to read: “... below seat line guard rail.”

Page 92 - POWER LIFT DOOR

“Door is to be designed to open and close from inside of the bus.”

Response: Remain as stated

Page 94 - OCCUPANT SECUREMENT

“NOTE: All lift-equipped school buses shall be equipped with shoulder attachments for two (2) wheelchair positions and have reinforcement full length of bus to allow additional button type track installation (not to include flat floor buses).”

Response: Shoulder track attachment points may be placed mid window in location(s) where an air conditioning evaporator would impede access if track is mounted over window.

Page 95 - AIR CONDITIONING

“All refrigerant lines in A/C system shall be assembled using automotive grade crimp style fittings (as pictured below).”

Response: Remain as stated

Page 14 – DELIVERY

“serviced and fully operational upon delivery with full tank of fuel at time of delivery.”

Delete “with full tank of fuel at time of delivery”.

ORIGINAL

	State of South Carolina Invitation for Bid Amendment 3	Solicitation Number: 5400004167 Date Issued: 05/17/2012 Procurement Officer: CHERYL PATRICK, CPPB Phone: _____ E-Mail Address: cpatrack@dmms.sc.gov
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RECEIVED

DESCRIPTION: **Type C Conventional School Buses - Statewide**
 USING GOVERNMENTAL UNIT: **Statewide Term Contract**

JUN 05 2012

Materials Management Office

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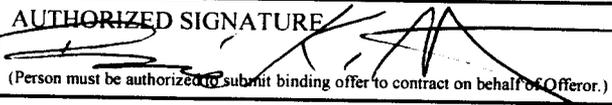
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CONFERENCE TYPE: Intentionally Deleted DATE & TIME: _____ <small>(As appropriate, see "Conferences - Pre-Bid/Proposal" & "Site Visit" provisions)</small>	LOCATION: Intentionally Deleted
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(See "Signing Your Offer" and "Electronic Signature" provisions.)

NAME OF OFFEROR PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C 29171 <small>(full legal name of business submitting the offer)</small>	<small>Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.</small>
AUTHORIZED SIGNATURE  <small>(Person must be authorized to submit binding offer to contract on behalf of Offeror.)</small>	TAXPAYER IDENTIFICATION NO. 57-1101520 <small>(See "Taxpayer Identification Number" provision)</small>
TITLE PRESIDENT <small>(business title of person signing above)</small>	STATE VENDOR NO. 7000039459 <small>(Register to Obtain S.C. Vendor No. at www.procurement.sc.gov)</small>
PRINTED NAME BARNIE K. SMITH <small>(printed name of person signing above)</small>	DATE SIGNED JUNE 5, 2012
	STATE OF INCORPORATION SOUTH CAROLINA <small>(If you are a corporation, identify the state of incorporation.)</small>

OFFEROR'S TYPE OF ENTITY: (Check one)			<small>(See "Signing Your Offer" provision.)</small>
<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Partnership	<input type="checkbox"/> Other _____	
<input checked="" type="checkbox"/> Corporate entity (not tax-exempt)	<input type="checkbox"/> Corporation (tax-exempt)	<input type="checkbox"/> Government entity (federal, state, or local)	

PAGE TWO

(Return Page Two with Your Offer)

<p>HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C 29171</p>	<p>NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C 29171</p> <p>803-754- 3827 _____ 803-754-5326_ Area Code - Number - Extension Facsimile</p> <p>_____ bsmith@palmettobussales.com _____ E-mail Address</p>
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<p>PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C 29171</p> <p>____ Payment Address same as Home Office Address ____ Payment Address same as Notice Address (check only one)</p>	<p>ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses)</p> <p>PALMETTO BUS SALES P.O. BOX 2898 WEST COLUMBIA, S.C 29171</p> <p>____ Order Address same as Home Office Address ____ Order Address same as Notice Address (check only one)</p>
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ACKNOWLEDGMENT OF AMENDMENTS
 Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)

Amendment No.	Amendment Issue Date						
1	4-23-2012	2	5-1-2012	3	5-18-2012	4	5-18-2012

<p>DISCOUNT FOR PROMPT PAYMENT (See "Discount for Prompt Payment" clause)</p>	10 Calendar Days (%) <i>N/A</i>	20 Calendar Days (%) <i>N/A</i>	30 Calendar Days (%) <i>N/A</i>	____ Calendar Days (%) <i>N/A</i>
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PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

PREFERENCES - DO NOT APPLY TO THIS SOLICITATION

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IMPORTANT NOTICE: To be consistent with the manner in which vehicle amendments have been processed in the past, the state has opted to issue a complete new document. This approach has been selected in an effort to ensure the clarity of the contract documents during both the "Pre-Award" and "Post Award" phases of this procurement. Prospective bidders should discard the original solicitation document and use this document when preparing their on-line bids.

In an effort to assist your review of the amendment, we have endeavored to highlight changes in yellow. To use this feature, offerors will need to view the electronic version of this document.

Despite our best efforts, there is a chance that a change was inadvertently left unhighlighted. Therefore, offerors are cautioned that they are responsible to review the content of the entire document and cannot rely detrimentally on highlights identifying all changes.

SCOPE OF SOLICITATION

ACQUIRE SUPPLIES / EQUIPMENT (JAN 2006)

The purpose of this solicitation is to establish a source or sources of supply for the purchase of new supplies and/or equipment as listed. [01-1015-1]

The intent of this procurement is to establish statewide contracts for the purchase of Type C – Conventional School Buses. The resulting contracts will be used by state agencies and political subdivisions per state and local requirements. This is a one (1) year contract with (2) two - 1 (one) year renewal options. The maximum contract life is 3 years. Contracts will be awarded by item. Multiple awards may be made.

MAXIMUM CONTRACT PERIOD - ESTIMATED (Jan 2006)

Start date: 07/01/2012 -- End date:06/30/2015. Dates provided are estimates only. Any resulting contract will begin on the date specified in the notice of award. See clause entitled "Term of Contract - Effective Date/Initial Contract Period". [01-1040-1]

II. INSTRUCTIONS TO OFFERORS - A. GENERAL INSTRUCTIONS

DEFINITIONS (JAN 2006)

EXCEPT AS OTHERWISE PROVIDED HEREIN, THE FOLLOWING DEFINITIONS ARE APPLICABLE TO ALL PARTS OF THE SOLICITATION.

AMENDMENT means a document issued to supplement the original solicitation document.

BOARD means the South Carolina Budget & Control Board.

BUYER means the Procurement Officer.

CHANGE ORDER means any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of any contract accomplished by mutual agreement of the parties to the contract.

CONTRACT See clause entitled Contract Documents & Order of Precedence.

CONTRACT MODIFICATION means a written order signed by the Procurement Officer, directing the contractor to make changes which the changes clause of the contract authorizes the Procurement Officer to order without the consent of the contractor.

CONTRACTOR means the Offeror receiving an award as a result of this solicitation.

COVER PAGE means the top page of the original solicitation on which the solicitation is identified by number. Offerors are cautioned that Amendments may modify information provided on the Cover Page.

OFFER means the bid or proposal submitted in response this solicitation. The terms Bid and Proposal are used interchangeably with the term Offer.

OFFEROR means the single legal entity submitting the offer. The term Bidder is used interchangeably with the term Offeror. See bidding provisions entitled Signing Your Offer and Bid/Proposal As Offer To Contract.

ORDERING ENTITY Using Governmental Unit that has submitted a Purchase Order.

PAGE TWO means the second page of the original solicitation, which is labeled Page Two.

PROCUREMENT OFFICER means the person, or his successor, identified as such on the Cover Page.

YOU and YOUR means Offeror.

SOLICITATION means this document, including all its parts, attachments, and any Amendments.

STATE means the Using Governmental Unit(s) identified on the Cover Page.

SUBCONTRACTOR means any person having a contract to perform work or render service to Contractor as a part of the Contractor's agreement arising from this solicitation.

USING GOVERNMENTAL UNIT means the unit(s) of government identified as such on the Cover Page. If the Cover Page names a Statewide Term Contract as the Using Governmental Unit, the Solicitation seeks to establish a Term Contract [11-35-310(35)] open for use by all South Carolina Public Procurement Units [11-35-4610(5)].

WORK means all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract.

[02-2A003-1]

AMENDMENTS TO SOLICITATION (JAN 2004)

(a) The Solicitation may be amended at any time prior to opening. All actual and prospective Offerors should monitor the following web site for the issuance of Amendments: www.procurement.sc.gov (b) Offerors shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on Page Two, (3) by letter, or (4) by submitting a bid that indicates in some way that the bidder received the amendment. (c) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged. [02-2A005-1]

AWARD NOTIFICATION (NOV 2007)

Notice regarding any award or cancellation of award will be posted at the location specified on the Cover Page. If the contract resulting from this Solicitation has a total or potential value of fifty thousand dollars or more, such notice will be sent to all Offerors responding to the Solicitation. Should the contract resulting from this Solicitation have a total or potential value of one hundred thousand dollars or more, such notice will be sent to all Offerors responding to the Solicitation and any award will not be effective until the eleventh day after such notice is given. [02-2A010-1]

BID/PROPOSAL AS OFFER TO CONTRACT (JAN 2004)

By submitting Your Bid or Proposal, You are offering to enter into a contract with the Using Governmental Unit(s). Without further action by either party, a binding contract shall result upon final award. Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror on the Cover Page. An Offer may be submitted by only one legal entity; "joint bids" are not allowed. [02-2A015-1]

BID ACCEPTANCE PERIOD (JAN 2004)

In order to withdraw Your Offer after the minimum period specified on the Cover Page, You must notify the Procurement Officer in writing. [02-2A020-1]

BID IN ENGLISH and DOLLARS (JAN 2004)

Offers submitted in response to this solicitation shall be in the English language and in US dollars, unless otherwise permitted by the Solicitation. [02-2A025-1]

BOARD AS PROCUREMENT AGENT (JAN 2004)

(a) Authorized Agent. All authority regarding the conduct of this procurement is vested solely with the responsible Procurement Officer. Unless specifically delegated in writing, the Procurement Officer is the only government official authorized to bind the government with regard to this procurement. (b) Purchasing Liability. The Procurement Officer is an employee of the Board acting on behalf of the Using Governmental Unit(s) pursuant to the Consolidated Procurement Code. Any contracts awarded as a result of this procurement are between the Contractor and the Using Governmental Units(s). The Board is not a party to such contracts, unless and to the extent that the board is a using governmental unit, and bears no liability for any party's losses arising out of or relating in any way to the contract. [02-2A030-1]

CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (MAY 2008)

GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.

(a) By submitting an offer, the offeror certifies that-

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to-

- (i) Those prices;
- (ii) The intention to submit an offer; or
- (iii) The methods or factors used to calculate the prices offered.

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory-

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or

(2)(i) Has been authorized, in writing, to act as agent for the offeror's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification [As used in this subdivision (b)(2)(i), the term "principals" means the person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal];

(ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.

(c) If the offeror deletes or modifies paragraph (a)(2) of this certification, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure. [02-2A032-1]

CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS (JAN 2004)

(a) (1) By submitting an Offer, Offeror certifies, to the best of its knowledge and belief, that-

(i) Offeror and/or any of its Principals-

(A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;

(B) Have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) Offeror has not, within a three-year period preceding this offer, had one or more contracts terminated for default by any public (Federal, state, or local) entity.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

(b) Offeror shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) If Offeror is unable to certify the representations stated in paragraphs (a)(1), Offer must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Offeror's responsibility. Failure of the Offeror to furnish additional information as requested by the Procurement Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the State, the Procurement Officer may terminate the contract resulting from this solicitation for default.

[02-2A035-1]

CODE OF LAWS AVAILABLE (JAN 2006)

The South Carolina Code of Laws, including the Consolidated Procurement Code, is available at: <http://www.scstatehouse.gov/code/statmast.htm>. The South Carolina Regulations are available at: <http://www.scstatehouse.gov/coderegs/statmast.htm> [02-2A040-1]

COMPLETION OF FORMS/CORRECTION OF ERRORS (JAN 2006)

All prices and notations should be printed in ink or typewritten. Errors should be crossed out, corrections entered and initialed by the person signing the bid. Do not modify the solicitation document itself (including bid schedule). (Applicable only to offers submitted on paper.) [02-2A045-1]

DISCLOSURE OF CONFLICTS OF INTEREST OR UNFAIR COMPETITIVE ADVANTAGE (MAY 2011)

You warrant and represent that your offer identifies and explains any unfair competitive advantage you may have in competing for the proposed contract and any actual or potential conflicts of interest that may arise from your participation in this competition or your receipt of an award. The two underlying principles are (a) preventing the existence of conflicting roles that might bias a contractor's judgment, and (b) preventing an unfair competitive advantage. If you have an unfair competitive advantage or a conflict of interest, the state may withhold award. Before withholding award on these grounds, an offeror will be notified of the concerns and provided a reasonable opportunity to respond. Efforts to avoid or mitigate such concerns, including restrictions on future activities, may be considered. [02-2A047-1]

DEADLINE FOR SUBMISSION OF OFFER (JAN 2004)

Any offer received after the Procurement Officer of the governmental body or his designee has declared that the time set for opening has arrived, shall be rejected unless the offer has been delivered to the designated purchasing office or the governmental bodies mail room which services that purchasing office prior to the bid opening. [R.19-445.2070(H)] [02-2A050-1]

DRUG FREE WORK PLACE CERTIFICATION (JAN 2004)

By submitting an Offer, Contractor certifies that, if awarded a contract, Contractor will comply with all applicable provisions of The Drug-free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended. [02-2A065-1]

DUTY TO INQUIRE (JAN 2006)

Offeror, by submitting an Offer, represents that it has read and understands the Solicitation and that its Offer is made in compliance with the Solicitation. Offerors are expected to examine the Solicitation thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements in the Solicitation. Failure to do so will be at the Offeror's risk. Offeror assumes responsibility for any patent ambiguity in the Solicitation that Offeror does not bring to the State's attention. [02-2A070-1]

ETHICS CERTIFICATE (MAY 2008)

By submitting an offer, the offeror certifies that the offeror has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision. If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-1150 to the procurement officer at the same time the law requires the statement to be filed. [02-2A075-2]

OMIT TAXES FROM PRICE (JAN 2004)

Do not include any sales or use taxes in Your price that the State may be required to pay. [02-2A080-1]

PUBLIC OPENING (JAN 2004)

Offers will be publicly opened at the date/time and at the location identified on the Cover Page, or last Amendment, whichever is applicable. [02-2A090-1]

QUESTIONS FROM OFFERORS (JAN 2004)

(a) Any prospective offeror desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing. Questions must be received by the Procurement Officer no later than five (5) days prior to opening unless otherwise stated on the Cover Page. Label any communication regarding your questions with the name of the procurement officer, and the solicitation's title and number. Oral explanations or instructions will not be binding. Any information given a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an Amendment to the solicitation, if that information is necessary for submitting offers or if the lack of it would be prejudicial to other prospective offerors. (b) The State seeks to permit maximum practicable competition. Offerors are urged to advise the Procurement Officer -- as soon as possible -- regarding any aspect of this procurement, including any aspect of the Solicitation, that unnecessarily or inappropriately limits full and open competition. [02-2A095-1]

REJECTION/CANCELLATION (JAN 2004)

The State may cancel this solicitation in whole or in part. The State may reject any or all proposals in whole or in part. [SC Code Section 11-35-1710 & R.19-445.2065] [02-2A100-1]

RESPONSIVENESS/IMPROPER OFFERS (JAN 2004)

(a) Bid as Specified. Offers for supplies or services other than those specified will not be considered unless authorized by the Solicitation.

(b) Multiple Offers. Offerors may submit more than one Offer, provided that each Offer has significant differences other than price. Each separate Offer must satisfy all Solicitation requirements. If this solicitation is an Invitation for Bids, each separate offer must be submitted as a separate document. If this solicitation is a Request for Proposals, multiple offers may be submitted as one document, provided that you clearly differentiate between each offer and you submit a separate cost proposal for each offer, if applicable.

(c) Responsiveness. Any Offer which fails to conform to the material requirements of the Solicitation may be rejected as nonresponsive. Offers which impose conditions that modify material requirements of the Solicitation may be rejected. If a fixed price is required, an Offer will be rejected if the total possible cost to the State cannot be determined. Offerors will not be given an opportunity to correct any material nonconformity. Any deficiency resulting from a minor informality may be cured or waived at the sole discretion of the Procurement Officer. [R.19-445.2070 and Section 11-35-1520(13)]

(d) Price Reasonableness: Any offer may be rejected if the Procurement Officer determines in writing that it is unreasonable as to price. [R. 19-445.2070].

(e) Unbalanced Bidding. The State may reject an Offer as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the State even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment. [02-2A105-1]

RESTRICTIONS APPLICABLE TO OFFERORS (JAN 2004)

Violation of these restrictions may result in disqualification of your offer, suspension or debarment, and may constitute a violation of the state Ethics Act. (a) After issuance of the solicitation, ***you agree not to discuss this procurement activity in any way with the Using Governmental Unit or its employees, agents or officials***. All communications must be solely with the Procurement Officer. This restriction may be lifted by express written permission from the Procurement Officer. This restriction expires once a contract has been formed. (b) Unless otherwise approved in writing by the Procurement Officer, ***you agree not to give anything to any Using Governmental Unit or its employees, agents or officials prior to award.*** [02-2A110-1]

SIGNING YOUR OFFER (JAN 2004)

Every Offer must be signed by an individual with actual authority to bind the Offeror. (a) If the Offeror is an individual, the Offer must be signed by that individual. If the Offeror is an individual doing business as a firm, the Offer must be submitted in the firm name, signed by the individual, and state that the individual is doing business as a firm. (b) If the Offeror is a partnership, the Offer must be submitted in the partnership name, followed by the words by its Partner, and signed by a general partner. (c) If the Offeror is a corporation, the Offer must be submitted in the corporate name, followed by the signature and title of the person authorized to sign. (d) An Offer may be submitted by a joint venturer involving any combination of individuals, partnerships, or corporations. If the Offeror is a joint venture, the Offer must be submitted in the name of the Joint Venture and signed by every participant in the joint venture in the manner prescribed in paragraphs (a) through (c) above for each type of participant. (e) If an Offer is signed by an agent, other than as stated in subparagraphs (a) through (d) above, the Offer must state that it has been signed by an Agent. Upon request, Offeror must provide proof of the agent's authorization to bind the principal. [02-2A115-1]

STATE OFFICE CLOSINGS (JAN 2004)

If an emergency or unanticipated event interrupts normal government processes so that offers cannot be received at the government office designated for receipt of bids by the exact time specified in the solicitation, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal government processes resume. In lieu of an automatic extension, an Amendment may be issued to reschedule bid opening. If state offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an Amendment will be issued to reschedule the conference. Useful information may be available at: http://www.scemd.org/scgovweb/weather_alert.html [02-2A120-1]

SUBMITTING CONFIDENTIAL INFORMATION (AUG 2002)

(An overview is available at www.procurement.sc.gov) For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Offeror contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged and confidential, as that phrase is used in Section 11-35-410. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Offeror contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Offeror submits in response to or with regard to this solicitation or request, Offeror must separately mark with the word "PROTECTED" every page, or portion thereof, that Offeror contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire response (bid, proposal, quote, etc.) as confidential, trade secret, or protected. If your response, or any part thereof, is improperly marked as confidential or trade secret or protected, the State may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation or request, Offeror (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, and documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, and (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on Offeror's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Offeror agrees to defend, indemnify and hold harmless the State of South Carolina, its officers and employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the State withholding information that Offeror marked as "confidential" or "trade secret" or "PROTECTED". (All references to S.C. Code of Laws.) [02-2A125-1]

SUBMITTING YOUR OFFER OR MODIFICATION (JAN 2004)

(a) Offers and offer modifications shall be submitted in sealed envelopes or packages (unless submitted by electronic means) - (1) Addressed to the office specified in the Solicitation; and (2) Showing the time and date specified for opening, the solicitation number, and the name and address of the bidder. (b) If you are responding to more than one solicitation,

each offer must be submitted in a different envelope or package. (c) Each Offeror must submit the number of copies indicated on the Cover Page. (d) Offerors using commercial carrier services shall ensure that the Offer is addressed and marked on the outermost envelope or wrapper as prescribed in paragraphs (a)(1) and (2) of this provision when delivered to the office specified in the Solicitation. (e) Facsimile or e-mail offers, modifications, or withdrawals, will not be considered unless authorized by the Solicitation. (f) Offers submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation. [02-2A130-1]

TAX CREDIT FOR SUBCONTRACTING WITH DISADVANTAGED SMALL BUSINESSES (JAN 2008)

Pursuant to Section 12-6-3350, a taxpayer having a contract with this State who subcontracts with a socially and economically disadvantaged small business is eligible for an income tax credit equal to four percent of the payments to that subcontractor for work pursuant to the contract. The subcontractor must be certified as a socially and economically disadvantaged small business as defined in Section 11-35-5010 and regulations pursuant to it. The credit is limited to a maximum of fifty thousand dollars annually. A taxpayer is eligible to claim the credit for ten consecutive taxable years beginning with the taxable year in which the first payment is made to the subcontractor that qualifies for the credit. After the above ten consecutive taxable years, the taxpayer is no longer eligible for the credit. A taxpayer claiming the credit shall maintain evidence of work performed for the contract by the subcontractor. The credit may be claimed on Form TC-2, "Minority Business Credit." A copy of the subcontractor's certificate from the Governor's Office of Small and Minority Business (OSMBA) is to be attached to the contractor's income tax return. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803) 898-5786, Fax: (803) 898-5888. Questions regarding subcontractor certification are to be referred to: Governor's Office of Small and Minority Business Assistance, Phone: (803) 734-0657, Fax: (803) 734-2498. [02-2A135-1]

TAXPAYER IDENTIFICATION NUMBER (JAN 2004)

- (a) If Offeror is owned or controlled by a common parent as defined in paragraph (b) of this provision, Offeror shall submit with its Offer the name and TIN of common parent.
- (b) Definitions: "Common parent," as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member. "Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.
- (c) If Offeror does not have a TIN, Offeror shall indicate if either a TIN has been applied for or a TIN is not required. If a TIN is not required, indicate whether (i) Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States; (ii) Offeror is an agency or instrumentality of a state or local government; (iii) Offeror is an agency or instrumentality of a foreign government; or (iv) Offeror is an agency or instrumentality of the Federal Government. [02-2A140-1]

VENDOR REGISTRATION MANDATORY (JAN 2006)

You must have a state vendor number to be eligible to submit an offer. To obtain a state vendor number, visit www.procurement.sc.gov and select New Vendor Registration. (To determine if your business is already registered, go to "Vendor Search"). Upon registration, you will be assigned a state vendor number. Vendors must keep their vendor information current. If you are already registered, you can update your information by selecting Change Vendor Registration. (Please note that vendor registration does not substitute for any obligation to register with the S.C. Secretary of State or S.C. Department of Revenue. You can register with the agencies at <http://www.scbos.com/default.htm>) [02-2A145-1]

WITHDRAWAL OR CORRECTION OF OFFER (JAN 2004)

Offers may be withdrawn by written notice received at any time before the exact time set for opening. If the Solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for opening. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for opening, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid. The withdrawal and correction of Offers is governed by S.C. Code Section 11-35-1520 and Regulation 19-445.2085. [02-2A150-1]

II. INSTRUCTIONS TO OFFERORS -- B. SPECIAL INSTRUCTIONS

CONFERENCE - PRE-BID/PROPOSAL (JAN 2006)

Intentionally Deleted

CLARIFICATION (NOV 2007)

Pursuant to Section 11-35-1520(8), the Procurement Officer may elect to communicate with you after opening for the purpose of clarifying either your offer or the requirements of the solicitation. Such communications may be conducted only with offerors who have submitted an offer which obviously conforms in all material aspects to the solicitation. Clarification of an offer must be documented in writing and included with the offer. Clarifications may not be used to revise an offer or the solicitation. [Section 11-35-1520(8); R.19-445.2080] [02-2B055-1]

MAIL PICKUP (JAN 2006)

The State Procurement Office picks up all mail from The US Postal Service once daily around 8:30 a.m. (excluding weekends and holidays). See provision entitled Deadline for Submission of Offer. [02-2B080-1]

OFFERING BY ITEM (JAN 2006)

Offers may be submitted for one or more items. [02-2B085-1]

PROTESTS (JUNE 2006) – Relocated from Section II.A.

Any prospective bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the solicitation of a contract shall protest within fifteen days of the date of issuance of the applicable solicitation document at issue. Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract shall protest within ten days of the date notification of award is posted in accordance with this code. A protest shall be in writing, shall set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided, and must be received by the appropriate Chief Procurement Officer within the time provided. See clause entitled "Protest-CPO". [Section 11-35-4210] [02-2A085-1]

PROTEST - CPO - MMO ADDRESS (JUNE 2006)

Any protest must be addressed to the Chief Procurement Officer, Materials Management Office, and submitted in writing
(a) by email to protest-mmo@mmo.state.sc.us
(b) by facsimile at 803-737-0639 , or
(c) by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201. [02-2B122-1]

UNIT PRICES REQUIRED (JAN 2006)

Unit price to be shown for each item. [02-2B170-1]

III. SCOPE OF WORK/SPECIFICATIONS

DELIVERY/PERFORMANCE LOCATION -- PURCHASE ORDER (JAN 2006)

After award, all deliveries shall be made and all services provided to the location specified by the Using Governmental Unit in its purchase order. [03-3015-1]

DELIVERY DATE – BY PURCHASE ORDER (JANUARY 2006)

All items shall be delivered within ** days after receipt of purchase order (ARO).

****The days ARO will be listed by the offeror on the bid schedule.**

DELIVERY

In addition to the SERVICE requirements of the attached School Bus Specifications, the completed bus (chassis and body) shall be completely serviced and fully operational upon delivery ~~with full tank of fuel at time of delivery~~ (INTENTIONALL DELETED). Any paint chips, scratches dents or damages whatsoever that are incurred as a result of the vehicle's manufacturer and transportation to the State's designated point of delivery are the responsibility of the vendor and shall be repaired and refinished by the vendor or his representative to a "like new" condition in accordance with acceptable automotive industry standards.

Delivery of all school buses will be completed within 240 consecutive calendar days after pilot model approval or receipt of purchase order (whichever is later).

Bidders are cautioned that excessive delivery schedules, as determined by Materials Management Office, may be cause for non-award. The state expects that the delivery schedule offered herein to be firm and fully expects compliance with the stated delivery schedule. Failure of the contractor to meet stated delivery schedules may be cause for termination of the contract.

In the event the delivery is not received within the contract delivery period, the contractor may be held in default in and the State may procure the articles or services from other sources and hold the contractor responsible for any excess cost occasioned thereby.

LIQUIDATED DAMAGES

A charge of \$100.00 per bus per calendar day shall be deducted from the invoice as liquidated damages for failure to complete delivery within the time specified.

OPERATIONAL MANUALS (JAN 2006)

Unless otherwise specified, contractor shall provide one operator manual for each item acquired. [03-3055-1]

PARTS & MAINTENANCE MANUALS

Parts and Maintenance manuals shall be provided for each item acquired. Contractor shall promptly provide any changes/additions/deletions to said manuals to each acquiring entity. If said manuals are made available on-line, contractor shall provide access to the manuals for each acquiring entity.

QUALITY -- NEW (JAN 2006)

All items must be new. [03-3060-1]

SPECIFICATIONS

**SOUTH CAROLINA
SCHOOL BUS
SPECIFICATIONS**

Type C – Conventional Bus

February 2, 2012

South Carolina Department of Education

Office of Transportation

The provisions/specifications contained herein are adopted from:

**NORTH CAROLINA
SCHOOL BUS AND
ACTIVITY BUS
SPECIFICATIONS**

Type C – Conventional Bus

November 10, 2011

**North Carolina Department of Public Instruction
School Support Division
Transportation Services**

These specifications are adopted under the authority of:

South Carolina General Assembly

2011-2012 Appropriation Act

Part 1B section 1 H63-DEPARTMENT OF EDUCATION

SECTION 1 - H63-DEPARTMENT OF EDUCATION

1.29. (SDE: School Bus Purchase) Any procurement of school buses with funds appropriated in this act or any other appropriation bill must meet specifications developed by the School Bus Specification Committee as established by the State Superintendent of Education. The School Bus Specifications Committee shall allow for input from all school bus chassis and body manufacturers. However, if it is safe, more economical, and in the public interest, the department may use the school bus specifications of Georgia or North Carolina in the procurement of school buses.

The effective changes made to the specifications as originally written are:

Changed From	Changed To
North Carolina (NC)	South Carolina (SC)
Department of Public Instruction (DPI)	Department of Education (SCDE)
Local Education Agency (LEA)	School Bus Maintenance Facility
NCDPI	SCDE
Road Speed 45 mph	Road Speed 55 MPH
Bid Schedule	Deleted lines for bus sizes/types not being bid
Questionnaire	Deleted lines for bus size/type not being bid
Option Added	Seat Belt Equipped seats

There are additional changes to reflect South Carolina's procurement law.

General Provisions of Specifications:

STANDARDS COMPLIANCE:

The scope of this contract is limited to school buses as specified herein. These buses will be used primarily for transporting school children to and from schools and for other various related school and State functions involving children and adults. Therefore, bidders are required to assure that the buses and equipment offered fully comply with all applicable safety standards for said applications including, but not limited to, Federal Motor Vehicle Safety Standards and the South Carolina School Bus Specifications. The buses under this contract will be ordered primarily by the South Carolina Department of Education.

PILOT MODEL INSPECTIONS:

The State requires that a pilot model (complete unit) of each bus configuration ordered be made available for inspection within **90** days after issuance of initial purchase order by the State. Strict compliance with all specifications is expected and units will be thoroughly reviewed for compliance at inspection. The DOE contract administrator, on behalf of the State and other using entities, shall certify the pilot model meets all requirements of the specifications. Repairs will not be allowed on pilot models until inspection by the State is complete. All pilot model inspection requests must be submitted in writing to the DOE contract administrator. **The DOE shall be the sole approver of all pilot model(s).**

The initial pilot model inspection will be in Columbia, SC at a site designated by the State. The contractor will be required to deliver pilot model(s) required to the designated site and leave them for 2 business days for inspection by the state inspection committee. Personnel from the awarded company, dealership, or manufacturer may not participate or be present at the inspection. The contractor will be required to pick up the pilot model(s) the morning following the inspection period and will meet at that time with the inspection committee to discuss any concerns. The State will not be responsible for storing of the pilot models beyond the inspection/meeting time. The inspection dates and specific location will be addressed at the Post Award Meeting.

The State reserves the right to require a separate and prior chassis pilot model inspection, if deemed necessary, at a time, date and location determined by the State.

RE-INSPECTIONS:

Any failed inspection will require the pilot model to be ready for re-inspection within one (1) week after notification of the failed inspection. Re-inspections will be held in South Carolina at a site designated by the State. The State's inspection committee is to be undisturbed by contractor's personnel until inspection is completed. Personnel from the awarded company, dealership, or manufacturer may not participate or be present in the immediate inspection area during the inspection. All questions and clarifications will be handled after the inspection has been completed. If questions or clarifications arise during the inspection, which require an immediate response, a committee member will address such with a member of the contractor's staff in an area away from the inspection. This requirement will be strictly enforced during all inspections.

PILOT MODEL PENALTY:

Contractor must provide pilot model(s) which are in final acceptable condition to the State within 45 days of the initial inspection. All pilot model inspection requests must be submitted in writing to the DOE contract administrator. Any failed inspection will require the fully corrected pilot model to be ready for re-inspection within one (1) week after notification of the failed inspection. The State will

charge \$50 per calendar day, for the effected pilot model(s), to be deducted from the invoice as liquidated damages for failure to comply with this re-inspection requirement. Pilot models that are not in final acceptable condition within 45 days of the initial inspection will be charged liquidated damages of \$100.00 per calendar day, for the effected pilot model(s), which will be deducted from the invoice for failure to complete the pilot model approval within the time required.

No buses shall be delivered until Pilot Model(s) have been inspected and granted final approval by the DOE.

DEMONSTRATION:

The State reserves the right to require, upon its request, a demonstration/inspection of the exact and/or equivalent model school bus offered herein. Such demonstration would be performed at a facility designated by the State. Demonstration will be performed by the bidder or his authorized representative, before award of contract, for the purpose of assessing suitability of the offered equipment for the intended use and compliance with specifications. This demonstration will be at no additional charge to the State. Failure of the bidder to meet this requirement may be grounds for nullification of bid. The results of such demonstration would be considered in the award of the contract.

ORDERING CUT OFF NOTIFICATION:

Contractor is required to provide a written 30 day minimum cut-off notice for ordering buses to the DOE Contract Administrator **and** the MMO Procurement Officer responsible for the contract.

ORDERING INFORMATION:

Contractor is required, upon request of any user/ordering agency, to provide the user with catalogs and descriptive literature and a listing of authorized dealers complete with toll free PHONE and FAX numbers. This information is to be provided to the user/ordering agency within 5 business days of the request. Such information shall be provided at no charge to the user.

Contractor is required to provide toll free phone numbers, if available, for user/ordering agencies to conduct business with the contractor. If orders are required to be placed with a contractor's authorized dealer, the dealer will be required to provide a toll free number, if available.

DEVIATIONS:

Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefore. Deviations must be explained in detail herein or on an attached sheet. **However, no implication is made by the State that deviations will be acceptable.** Bidder is advised that the response (or lack thereof) on this question does not take precedence over specific responses or non-responses provided elsewhere in this bid.

INSPECTION:

Purchaser and/or their representative shall have inspection privileges during construction of school buses. Final inspection and acceptance will be at the delivery points specified in the contract. School Buses that do not comply with the grade of workmanship or type of materials in conformity with specifications and/or pilot model will not be accepted. Authorized inspectors and representatives of the State Department of Education shall be admitted to any part of the factory of the contractor at any time during normal working hours for the life of the contract. They shall be given all necessary assistance in making any tests deemed necessary to determine compliance with these specifications.

SERVICE CAPABILITY AND LOCATIONS:

Vehicles purchased from this contract will be stationed throughout the State. Therefore, it is necessary that service/repair coverage be available throughout the State for prompt and adequate services for the vehicles offered. The State expects the contractor to have numerous service locations throughout the state in areas that will allow the optimum number of users to easily access these locations without excessive travel. These facilities must be ready to perform services for this contract within 90 days of contract award. **Bidders must furnish a list of branch offices and/or authorized servicing facilities that will render services under this contract.** The State reserves the right to satisfy itself by inquiry or otherwise as to bidder's capabilities in this regard.

******* THE FOLLOWING MUST BE RETURNED WITH BID*******

Names, addresses and telephone numbers of service/repair facilities which will render services under this contract (use additional sheets if necessary): Names, addresses and telephone numbers of service/repair facilities which will render services under this contract (use additional sheets if necessary):

*** SEE ATTACHED FOR LIST OF SERVICE/REPAIR FACILITIES ****

Company Name:	Contact Person:
Address:	Phone/ Fax:
City, State, Zip:	Email:
Company Name:	Contact Person:
Address:	Phone/ Fax:
City, State, Zip:	Email:
Company Name:	Contact Person:
Address:	Phone/ Fax:
City, State, Zip:	Email:

MOBILE SERVICE TRUCKS:

Contractor shall operate several mobile service trucks as necessary for statewide coverage in South Carolina. These trucks must run on a timely schedule and be fully equipped for service and repairs as necessary. These trucks must be manned with trained repair personnel and shall be driven to user's site, anywhere in the state, for purpose of immediately diagnosing and repairing any problem occurring with units purchased from the contractor, including for example; recall work, air conditioning service, minor engine and body repairs, and electrical troubleshooting. It is not expected that the service truck will be equipped to perform major repair operations or complex diagnostic work. Mobile service trucks must be ready to perform services for this contract within 90 days of award of contract. Contractor's service trucks shall be so operated for a minimum period of five (5) years after award of contract. Service trucks shall arrive at user's site within 2 work days after request by user. All service truck calls shall be documented by contractor with date and time of initial service request and date and time of response. Contractor shall provide this information, when requested, in an electronic format within 5 days of request.

The State reserves the right to require a minimum number of service trucks if contractor does not meet the above expectations. The State also reserves the right to satisfy itself by inquiry or otherwise as to bidder's capabilities in meeting these requirements.

For information purposes only, please indicate the number of service trucks that will be used for this contract.

Number of Service Trucks: 49 (see attached for listing of service trucks)

QUESTIONNAIRE FOR TYPE C BUSES

For your convenience in replying to the questions below, they generally follow the sequence of provisions in the associated specifications. The answers to the questions in the first section, "Features common to all bus body sizes," are expected to apply to same, and therefore need to be answered only one time. However, if there ARE differences in the answers for different bus body sizes, please fully explain in your answer. The second section, "Features which vary, or may vary, with bus body size," shall be duplicated by bidder as required, in order to answer separately by bus body size.

Section 1: Features common to all bus body sizes

1. Bidder: PALMETTO BUS SALES
2. Bidder address: P.O. BOX 2898 WEST COLUMBIA, S.C. 29171
3. Engine: Make CUMMINS , Model ISB-10
Rated HP 220 , Rated torque 520
Engine meets 2010 EPA emissions level standards YES (yes/no)
Engine is certified by engine manufacturer to be B20 compatible as furnished on buses under this contract;
 YES (yes/no)
4. Transmission, number of speeds forward 5
5. Brake size, front 16.5" x 5" Brake size, rear 16.5" x 7"
6. Rear axle ratio: School bus: 6.50: 1
7. Battery CCA each 700 , Number of batteries 3 , Battery BCI group 31
8. Service brake air compressor, rating 18.7 CFM. Make: WABCO Model: 318
9. Are automatic slack adjusters provided in accordance with ("in accordance with" abbreviated henceforth as "IAW") requirements herein? YES (yes/no)
10. Is antilock braking system provided IAW requirements herein? YES (yes/no)
11. Front bumper thickness: 3/16" "
12. Is exhaust system provided IAW requirements herein? YES (yes/no)
13. Chassis frame rails: Is each of one-piece construction? YES (yes/no),
Yield strength of chassis frame rails: 50,000 psi
14. Is all chassis wiring and grounding furnished IAW requirements herein? YES (yes/no)
15. Will fuel system as provided, including tank(s), filters, water separators, fuel bowls, water sensors, primer, pumps, and all other components, meet all requirements for configuration, construction, and component mounting, and for fueling, under "Fuel Tank" in the attached specification"? YES (yes/no)

Fuel fill rate without activation of automatic shut-off feature before tank is filled to minimum of 80% full rated capacity, when bus is elevated 5" from level on side AWAY from fueling port, per requirement herein 25 gal per minute.

16. Alternator output 270 amps
17. Type of electrical system furnished is (check one):
 conventional fuses/circuit breakers, or multiplexing/electronic system control
18. Noise level at driver seat when test IAW 2005 National Standards for School Transportation, or latest revision thereof, Appendix B 74.8 decibels.
19. Is chassis rear suspension of the "air ride" type? YES (yes/no)
20. Is bus equipped with driver-controlled adjustment for tilt of the steering wheel? YES (yes/no)
21. Tire size conventional floor buses: 11R22.5, ply rating 16, load range H
 Manufacturer GOODYEAR, Model G661 HSA
22. Rim width, conventional floor 8.25"
23. Transmission: Make ALLISON, Model 2500 PTS
 Is load-based shift scheduling provided? YES (yes/no)
24. In connection of parts of the body structure (frame members to one another), in any case where adhesives are used, are they used IN COMBINATION WITH welds, rivets, or high-strength bolts (or a combination of these fastening methods), as required herein? YES (yes/no)
25. Does all cold-formed and hot-rolled steel meet the design requirements called for herein? YES (yes/no)
26. Are all coated and uncoated steel components provided IAW thicknesses required herein in all cases where thickness gauges are specified for such components? YES (yes/no)
27. Is floor designed to support all fixed and changeable loads using values therefore as required herein? YES (yes/no)
28. Body floor: Metal gauge: 14, Plywood grade (A,B, etc.): BB, No of plies: 5.
 Is plywood of the Marine type? YES (yes/no)
29. Main floor sill gauge: 3/16", Intermediate floor sill gauge (if applicable): 16
30. Sill spacing 9"
31. Describe mfr's substantiation that the strength of any joint or gusset connection in the bus body transverse and longitudinal frame members is equal to or greater than that of a continuous member:
 All joints and connections on the Blue Bird bus body utilize fasteners, welds, or a combination of both, for maximum strength. All Blue Bird Vision school bus bodies are constructed to meet Colorado Rack Test, Kentucky pole Test, and Side Intrusion Test (in addition to extensive testing required by FMVSS). The basic structural joint construction methods used on the Blue Bird Vision have remained virtually unchanged for many, many years and come with a proven track record for structural integrity.
32. Thickness (in gauge) of steps in stepwell 14 GA
33. Is floor covering under seats, over wheel housings, and in driver's compartment in accordance with all requirements herein? YES (yes/no)
 Is floor covering in aisle and entrance area in accordance with all requirements herein? YES (yes/no)
34. Body posts/bow frames:
 Depth 1.88", Thickness 14 GA, Spacing between centers 28" & 35"

Section modulus of cross section .239 in³.

Have detailed engineering drawings showing size and shape of cross section and detailed calculations verifying that section meets requirements been submitted? YES (yes/no)

35. Is each set of side post members and bow frame one continuous piece? YES (yes/no). If not, has bidder submitted detailed drawing of the joint? N/A (yes/no)
36. Has roof stringer system as designed and built been subjected to the static load test called for herein (via FMVSS), and successfully passed same? YES (yes/no)
37. Side stringer: Width before forming 7.17", Thickness 16 GA
38. If applicable, cowl post thickness 11 GA, Attaching member thickness 14 GA
39. Emergency door post thickness 11 GA
40. Skirt reinforcement cross-sectional dimensions: 1.87 x 1.64 x 11 GA
41. Is window framing constructed IAW requirements herein? YES (yes/no)
42. Exterior sheet metal skin thickness (except cowl panel, wheel housing, and body hoods) 20 GA
43. If applicable, cowl panel thickness 11 GA, Cowl panel framing thickness N/A GA
44. Wheel housing thickness 16 GA
45. Guard rail thickness 16 GA
46. Does body fully meet all applicable FMVSS requirements, specifically including FMVSS 220 and FMVSS 221?
YES (yes/no)
47. Interior roof sheet metal lining thickness 20 GA
48. Panels from window sill to seat rail, thickness 22 GA
49. Does all material used in seat cushions and backs meet FMVSS 302? YES (yes/no)
- Is all seat material of the type known as "fire-block"? YES (yes/no)
- Do all seats meet FMVSS 222? YES (yes/no)
- Do all seating configurations offered herein meet requirements for seat depth, seat width, kneespace dimension, and aisle spacings? YES (yes/no)
50. Are Child Safety Restraint Systems (CSRS) provided and installed IAW requirements herein? YES (yes/no)
- CSRS Make: C.E. WHITE Model: CR11 - 39
51. Are passenger seat cushion pads and seat back pads provided IAW requirements herein? YES (yes/no)
52. Is driver's seat of high-back air suspension type? YES (yes/no)
- Make NATIONAL, Model 2000
- Is driver's seat, with integrated 3-point lap and shoulder harness provided IAW requirements herein, including length of useable belt as defined herein? YES (yes/no)

53. Is the upholstery material used to cover all seat cushions and backs provided IAW all detailed requirements therefor herein? YES (yes/no)

Finished weight of upholstery material 25 oz./ydz

54. Does crash barrier meet FMVSS 222 and 302, and is its covering of the fire-block type? YES (yes/no)

55. Is electrical system, including wiring, grounding, control panel, relays (or multiplexing, if offered), interior lights, clearance/marker lights, eight-light warning system, flashing stop arm, turn signals, tail/stop lights, strobe light, back-up lights, license plate lights, backup warning alarm, emergency door buzzer, accessory power point receptacle, electrical panels, and all other electrical system components provided IAW requirements herein? YES (yes/no)

56. When tested IAW The Bus Body Heating System Test as defined in Appendix B of the 2005 National School Bus Transportation Specifications and Procedures, and when the bus is soaked in an ambient temperature of 0° F for 15 hours, does the bus body heating system offered create a temperature rise to 50° F inside the body shell in 20 minutes, as called for herein? YES (yes/no)

57. Is cabin heating system provided in accordance with all requirements herein for each bus configuration? YES (yes/no)

58. Are body insulation, entrance door, emergency door, and safety roof vents provided IAW requirements herein? YES (yes/no)

59. Do windshield and all other windows and glass meet all requirements applicable thereto as specified herein? YES (yes/no)

60. Are all mirror systems and all components thereof provided IAW requirements herein? YES (yes/no)

61. Is all metal used in construction of bus body coated and painted IAW the applicable requirements under "Metal Treatment and Painting" herein? YES (yes/no)

62. In lift-equipped buses, make and model of power lift: BRAUN NL917 SERIES

63. Will mobility aid securement (wheelchair anchor) and occupant securement systems, where provided (including button type track installation where called for herein), meet all requirements therefore as stated herein? YES (yes/no)

Has mobility aid securement and occupant restraint system been tested to and passed a 30 MPH/20g force impact test per SAE J2249 and the physical test requirements herein? YES (yes/no)

64. In lift equipped school bus, is continuous button tracking for wheelchair and passenger securement provided in accordance with all requirements herein? YES (yes/no)

65. Does engine coolant meet all requirements herein? YES (yes/no)

66. Will air conditioning system as furnished reduce school bus inside air temperature by 20° F in 20 minutes? YES (yes/no)

In all units where air conditioning system is required, will system be fully in accordance with all requirements herein? YES (yes/no)

Location of air conditioning system rear blower unit MOUNTED IN MIDDLE OF BUS ON LIFT UNITS AND FRONT & REAR SIDE OF BUS ON 66 PASS.

41-passenger bus: 60,000 BTU, No. of compressors 1, No. of condensers 1,
No. of flush mounted free blow units: N/A Make: RAC Model: BH2030

66-passenger bus: 120,000 BTU, No. of compressors 2, No. of condensers 2,
No. of roof mounted free blow units: 2 Make: RAC Model: BH222L
No. of flush mounted units: N/A Make: _____ Model: _____

Section 2: Features which vary, or may vary, with bus body size

67. Line item number(s): **1,2,3,13,14,15,25,26,37,38,39** _____

68. Chassis dimensions: **32 CAPACITY W/C ITEMS 2, 14, 26, 38**

Basic pupil load **42** _____ students

GVWR **30,000** _____ lbs.

Wheelbase **189** _____ "

Front axle capacity, rated **10,000** _____ lbs.

Rear axle capacity, rated **17,500** _____ lbs.

69. Body dimensions:

Overall outside body width **96** _____ "

Height of body from top of finished floor to underside of ceiling at centerline **76 3/8** _____ "

Overall length of body **358** _____ "

70. Capacity of fuel tank(s), each: tank #1 **60** _____ gal, tank #2 (if applicable) _____ gal

Fuel tank(s) location: **BETWEEN FRAME RAILS, OVERHANG** _____

71. Rear cabin heater Make: **BERGSTROM** _____ Model: **782212** _____ Rated BTU's **50,000** _____

Section 2: Features which vary, or may vary, with bus body size

67. Line item number(s): **7,8,9,19,20,21,31,32,33,43,44,45** _____

68. Chassis dimensions: **66 CAPACITY ITEMS 7,19,31,43**

Basic pupil load **66** _____ students

GVWR **30,000** _____ lbs.

Wheelbase **252** _____ "

Front axle capacity, rated **10,000** _____ lbs.

Rear axle capacity, rated **21,000** _____ lbs.

69. Body dimensions:

Overall outside body width **96** _____ "

Height of body from top of finished floor to underside of ceiling at centerline **76 3/8** _____ "

Overall length of body **442" BUMPER TO BUMPER** _____ "

70. Capacity of fuel tank(s), each: tank #1 **60** _____ gal, tank #2 (if applicable) _____ gal

Fuel tank(s) location: **BETWEEN FRAME RAILS, OVERHANG**_____

71. Rear cabin heater Make: **BERGSTROM**___ Model: **7822115**___ Rated BTU's **80,000**_____

END OF QUESTIONNAIRE

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SPECIFICATION PAGE 2

SOUTH CAROLINA TYPE – C SCHOOL BUS SPECIFICATIONS

SPECIAL INSTRUCTIONS

CONSTRUCTION - It is the intent of these specifications to describe a Type – C school bus that shall be basically of all steel construction or of some other material which has at least equivalent strength of all steel construction as certified by the bidder. All parts not specifically mentioned, which are necessary in order to provide a complete bus, shall be furnished by the successful bidder and shall conform in strength, quality of material and workmanship to which is usually provided by the engineering practice indicated in these specifications. The completed school bus shall meet all Federal Motor Vehicle Safety Standards (FMVSS), requirements of the State of South Carolina and if not in conflict, requirements of the 2005 National School Transportation Specifications and Procedures” in effect on date of manufacture except as noted. Dealer modification may be required and must be of OEM quality where OEM equipment will not meet specifications.

All parts not specifically mentioned, but necessary to provide a complete school bus, shall be furnished by the contractor and shall conform in strength, quality of materials and workmanship to those provided by engineering practices indicated in these specifications.

DOCUMENTS AND PUBLICATIONS - Successful bidders shall furnish the following items for each chassis/body that is purchased:

1. Application for certificate of title.
2. Operator's manual.
3. On-line access, available for current year model, within 30 days of first bus delivery, and shall include repair/service/parts manuals. Access for 100 school districts plus 4 DPI staff; on-line format to be kept current for the life of the bus. Note: Online access must be reviewed and approved prior to awarding of bid. Hard copy/CD may be required.
4. Manufacturer's Statement of Origin.
5. One build sheet (line-setting ticket) including all parts information relating to the chassis/body, to include all engine information (S/N), transmission information (S/N).

****NOTE:** Service policies, line setting tickets, parts and service/repair manuals and warranty cards shall be delivered directly to the (School Bus Garages). The service policy, warranty cards, and the line setting ticket shall NOT be left in or with the chassis during shipment, to include school and activity buses. One application for Certificate of Title for each unit purchased shall be filled out for vehicle identification section only.

WARRANTY - Bidder shall warrant the bus for five (5) years/120,000 miles bumper-to-bumper. Warranty must include ALL items on the bus with the exception of the following “wear” items: tires, brakes, fluids, filters, wiper blades, head lights, belts, and hoses.

Warranty will begin on day of delivery. All parts (including related cleaners, fluids, filters etc.), labor, and environmental fees, shall be the responsibility of the bidder. Correction of latent defects, undiscovered during the initial acceptance inspection by the State but appearing before the applicable warranty period has elapsed, will be the full responsibility of the bidder, at no cost to the State or the user and will require new OEM parts. Upon award, bidder will provide the State with original copies of warranties offered on the above wear items. By execution of bid, bidder agrees to the 5-years/120,000 miles bumper to bumper warranty requirement in its entirety as specified above.

By execution of bid, bidder also agrees that sample or specimen warranties which may be included with the bid are provided for informational purposes only and are NOT intended to take exception to any requirement in the warranty section.

COMPONENTS - Bidders shall guarantee that chassis offered are current models, that assembly parts are in production for use in new chassis/body and that their manufacture and sale through dealer source will not be discontinued within ten years. All chassis components shall be the same as those accepted on the pilot model unless prior written approval is obtained from the contract administrator.

WEATHER PROTECTION - All dash instruments, horn button, ignition switch, etc., of the chassis shall be adequately protected against weather while chassis are in storage or in transit.

SPECIFICATION PAGE 3

SERVICE - The complete bus shall be inspected and completely serviced before being delivered to the designated maintenance facility. This service shall include:

1. Complete lubrication of chassis.
2. Filling of steering, engine, cooling system, transmission, and rear axle to proper fluid capacities.
3. Adjustment of engine and all other mechanical features to assure perfect operation.
4. Inspect, adjust, correct, and replace any parts not in proper operating condition or are not in compliance with specifications.
5. ~~Fill fuel tank to capacity with diesel fuel.~~ (INTENTIONALLY DELETED)

TECHNICAL TRAINING - Successful bidder or capital outlay provider will be required to furnish an average of six (6) classroom man-hours of technical training per bus purchased for South Carolina transportation personnel. The exact distribution of classroom hours will be made by SCDE working with the vendor. This training shall be provided at no additional cost and shall be completed 90 days after the last replacement bus has been delivered. Training and schedule to be approved by SCDE and held at locations to cover the five established regions. Class size will be limited to 25 technicians. Duration of any class session shall not exceed 8 hours per day. (See example below.) SCDE (summer conference) training sessions will not count toward the required training hours unless training agenda approved in advance by SCDE.

The required training shall cover the following topics: (hours for each topic to be determined by SCDE).

- Online access training for parts and service manuals
- Engine maintenance/diagnostics
- Transmission maintenance/diagnostics
- Antilock brake maintenance/diagnostics
- Body electrical/ multi-plex wiring maintenance/diagnostics
- Air Conditioning maintenance/diagnostics
- Wheel chair lift maintenance/diagnostics

SCDE may request training for other topics relating to school bus maintenance as needed. The training instructor provided by the successful bidder is required to be exceptionally knowledgeable in the area of training that will be offered to SC School Bus technicians. SCDE reserves the right to verify such instruction and to require a replacement instructor if deemed necessary.

Example: 300 buses are sold to Contractor A. The requirement for six (6) classroom man-hours per bus results in $6 \times 300 = 1,800$ classroom man-hours total. If the size of each class during the entire training was 20 technicians, a requirement for $1,800 / 20 = 90$ hours actual classroom teaching time must be fulfilled by Contractor A. If each teaching day included 6 hours of actual classroom teaching time (start time to end time, excluding time taken for lunch), then there would be $90 / 6 = 15$ such 6-hour teaching days provided by Contractor A. The computation of the training provided during the contract would account for the actual number of technicians per individual class, and for each class the resulting classroom man-hours (for that class) would be credited to Contractor A against the total above requirement based on the number of buses sold.

SPECIFICATION PAGE 4

MINIMUM REQUIREMENTS OF A TYPE-C SCHOOL BUS CHASSIS

**APPROVED ELECTRONIC DIESEL ENGINES
Must meet 2010 EPA Emissions Level Standards
ENGINES MUST BE EPA APPROVED FOR INSTALLATION IN BUSES BEING PROVIDED**

<u>MAKE</u>	<u>MODEL</u>	<u>HORSEPOWER</u>	<u>TORQUE</u>
Cummins	ISB	220	520
International	Maxx Force DT	215	560
<u>OPTIONAL ITEM ONLY</u>			
International	Maxx Force 7	220	560

Approved Chassis Requirements

Basic Pupil Load	<u>41-42</u>	<u>53-54</u>	<u>65-66</u>	<u>71-72</u>
Wheel base (approximate inches)	165-193	198-236	238-259	258-279
Front Axle Capacity (lbs.)*	10,000	10,000	10,000	10,000
Rear Axle Capacity (lbs.)*	17,500	19,000	19,000	19,000
Transmission Speeds Forward	5	5	5	5

**Requirement is for the suspension/axle/tire assembly (system), not just the axle component alone.

Approved Brake Sizes

All chassis required shall be equipped with air brakes. No dust shields required.

Air - Front Outboard Drum	<u>41-42</u> 15 x 4	<u>53-54</u> 15 x 4	<u>65-66</u> 15 x 4	<u>71-72</u> 15 x 4
Air - Rear Outboard Drum	16 ½ x 7			

SPECIFICATION PAGE 5

DETAIL REQUIREMENTS – TYPE C

CONVENTIONAL SCHOOL BUS CHASSIS

AIR CLEANER - Chassis is to be equipped with a dry, element-type air cleaner, mounted in a location that prevents rainwater from entering and prevents moisture from being trapped in air cleaner assembly with hood closed. Assembly is to include a moisture vacuator device. The air cleaner and the element shall meet all appropriate SAE J726 tests, per engine application. All air cleaner assemblies shall be single-stage or dual-stage and equipped with a locking restriction gauge.

AXLES

FRONT AXLE - The front axle shall have gross weight capacity at the ground according to the chassis manufacturer's rating, equal to or exceeding that portion of the total load which is supported by the front axle. (See table for axle capacities). Include cast iron hub assemblies with unitized oil bath seals and 75W-90 (Emgard, Mobil, or equivalent) synthetic lube.

****NOTE:** Wheel alignment is to be checked and corrected AFTER body installation and before delivery, and to include caster, camber, toe-in, and rear axle tracking.

REAR AXLE - The rear axle shall be of full-floating type and have a gross weight capacity at ground according to the chassis manufacturer's rating equal to or exceeding that portion of the total load which is supported by the rear axle, except minimum as specified in table "Minimum Requirements of a Type-C School Bus Chassis." Axle shall be equipped with a magnetic fill plug, magnetic drain plug and filled to recommended level with 75W-90 synthetic lubricant (Emgard, Mobil, or equivalent). The required rear axle ratio for school buses with tire size 11R22.5 and equipped with the above listed engines is between 6:43 – 6:50 inclusive. The required rear axle ratio for school buses with Flat Floors and tire size 255/70R22.5 is between 6:43 - 6:50 inclusive. The required rear axle ratio for activity buses with tire size 11R22.5 and equipped with the above listed engines is between 6:43 – 6:50 inclusive. All buses to be equipped with these axle ratios. Rear axle housing to include tag or stamp indicating ratio and fluid requirement.

****NOTE:** AT ANY TIME DURING THE FIVE (5) YEAR WARRANTY PERIOD THAT A REAR AXLE IS DETERMINED TO BE THE CAUSE OF NOISE, (SOUND PRESSURE RADIATED TO THE INTERIOR OF A SCHOOL BUS), THE CHASSIS MANUFACTURER SHALL BE RESPONSIBLE FOR MAKING REPAIRS. THIS IS TO BE MEASURED AT A REFERENCE POINT OF ONE-INCH (1") FROM THE EAR OF ANY SEATED PERSON. IF THAT LEVEL EXCEEDS 85 DECIBELS, THE CHASSIS MANUFACTURER SHALL MAKE REPAIRS TO REDUCE THE NOISE LEVEL OF THE REAR AXLE TO ACCEPTABLE LIMITS.

BATTERY - Battery case is to be sealed maintenance free. Chassis must be equipped with two or three (2-3) BCI Group 31 batteries with a total of no less than 1900 CCA. Battery cables shall be long enough to allow full extension of battery tray. Battery cables to be one gauge or heavier, color-coded red-positive / black-ground and easily identified positive and negative. Battery ground cable shall be

of the round covered type. Battery must be grounded to the rear of the engine or frame. If grounded to frame, frame must be grounded to engine with same size cable.

All battery cables to be routed to the left frame rail without crossing over the top of any frame member. Routing and clamping of conductors shall be pre-engineered to point of termination outside left frame rail. Both battery cables shall attach to the battery post or battery terminals with a bolted connector. Buses shall be equipped with an all-weather battery disconnect switch to isolate batteries, located in battery box or approved location.

****NOTE: ANY WIRES PASSING THROUGH THE FRAME RAILS SHALL BE PROTECTED BY WIRE LOOM OR BRACKETED CLAMP, OR GROMMETED TO PREVENT CHAFING.**

SPECIFICATION PAGE 6

BRAKES - The chassis shall be equipped with four wheel brakes. Approved brake shoe dimensions are specified by capacity size under Minimum Requirements. All brake drums to be outboard mounted to facilitate brake maintenance without disturbing wheel bearings and seals. All brake lining is to be premium grade asbestos free material of FF friction rating.

AIR BRAKES - Air brakes shall have S-cam type actuation and meet FMVSS 121. Brakes to have cast iron spider. Air reservoirs shall be mounted with the top of tanks not to exceed 4 inches below top of frame rail. Air compressor may be either belt-driven or gear-driven, and is to be at least 13.2 CFM with five-ring piston (2 oil and 3 compression); air compressor and air intake is to be routed through engine air cleaner. Approved compressors – Bendix TF550, Cummins-Wabco 15.2 CFM, and Wabco 18.7. Chassis to be equipped with an air dryer, Bendix AD-9. Automatic slack adjusters (Haldex only) to be supplied on all air brake chassis. Front air chambers to be no less than type 20 Long Stroke (MGM Model CS20L or Haldex SC20L). Rear chamber to be no less than type 30/30 Long Stroke (MGM Model TR 30/30 LP3 or Haldex GC3030LHDHO) and must be mounted on forward side of axle. (Location to be approved at pilot model). Schrader valve required to be located in an accessible location in the engine compartment or on wet tank in order to recharge air brake system for towing.

AIR TANK DRAIN CONTROL - Electronic drain valve system controlled from driver's compartment, one electronic drain valve for each of the three air tanks. The number of switches is at the discretion of the vendor.

ANTI-LOCK BRAKING SYSTEM (ABS) - Bendix or Meritor four channel ABS or equivalent. Front and rear wheel speeds are to be sensed separately. Application of front brakes is to be controlled by application pressure modulator and governed by the wheel approaching lock-up to minimize steering input. Rear brake application pressure modulation is governed by individual wheel speeds to minimize braking effort. System must be activated by the ignition switch and actuated by brake application. System shall include blink code diagnostic capability.

PARKING BRAKES - Parking brake system shall be designed and constructed to meet the following requirements:

- (1) Parking brake shall hold vehicle stationary or limit traction of braked wheels on 20 percent grade under any condition of legal loading when on surface free from snow, ice and loose material.
- (2) When applied, the actuation of the parking brake shall be immediate, and parking brake shall remain in applied position with capability set forth in above, despite exhaustion of source of energy used for application or despite leakage of any kind.
- (3) Buses with air brakes shall have parking brakes of the spring applied and air release type. Control shall be of the pull to apply and push to release type and mounted in manufacturer's standard location. This control shall be clearly marked yellow. All air brake buses shall be equipped with service brake interlock.

BUMPER (FRONT) The front bumper shall be of heavy duty, straight or wrap around/curved design and constructed of 3/16 or one-fourth (1/4) inch thick C - channel approximately 11 inches wide. Bumper must extend to outer edges of fenders at bumper top line. Bumper shall be reinforced, if necessary, to allow jacking and minimal end deflection. Demonstration required at pilot model

inspection. Deflections which in the State's judgment are found to be excessive will result in rejection of the bumper.

DRIVELINE - The torque capacity of the driveline assembly shall be equal to the maximum engine torque as developed through the first transmission gear. All bearings shall have an inner race so that failure of bearing shall not damage drive shaft. Each propeller shaft shall be equipped with a protective metal guard to prevent whipping through floor or dropping to ground if broken. Driveline guard is to be 7/16-inch round U-bolt or minimum 1" x 1/4 inch flat bar.

SPECIFICATION PAGE 7

ENGINE SPECIFICATION - Diesel engines will be used in all size chassis. All engines are to have cold cranking ability to zero degrees Fahrenheit (**ether assisted system not allowed**). Acceptable engines are listed on Minimum Requirements page. Electrical system shall be of the single voltage type. All engines, fuel lines, fittings, hoses, and tank components to be B20 compatible. Bio Fuel Standards per State Contract shall be as follows: Product shall consist of a blend of 20 percent (plus or minus one percent) mono-alkyl esters of long chain fatty acids, derived from virgin vegetable oil blend-stock and/or yellow grease blend stock conforming to the requirements of ASTM D 6751 and 80 percent minimum ULSD fuel oil conforming to ASTM D 975. B20 engine certification from engine manufacturer is required with bid package.

ELECTRONIC CONTROL MODULE PROGRAM PARAMETERS AND PASSWORD – All ECM program parameters and password consisting of 0000 shall be discussed and established at the Post Award Meeting. Idle shutdown shall be programmable by the LEA through access to the ECM.

EXHAUST SYSTEM - A total exhaust system, exhaust pipe, muffler and tail pipe through bumper shall be furnished by the chassis manufacturer, pre-engineered to terminate no less than 1 inch past a school bus body rear bumper (must meet FMVSS). Tail pipe shall be minimum 16-gauge aluminized coated 409 stainless steel or aluminized coated carbon steel aft of DPF and shall not be reduced in size after it leaves muffler. Manufacturer drawings shall be provided the SCDE and the respective body companies, showing exhaust system routing and support bracket locations (upon request). The chassis manufacturer shall provide sufficient tail pipe length to allow body mounting without extension.

****NOTE:** At any point the exhaust system is 12 inches or less from the fuel tank, the fuel tank shall be properly insulated with metal shield. No adhesive shields allowed. Exhaust system components located within 4 inches of any non-metallic part shall be properly shielded to prevent heat transfer. All connections shall be slip joint connections (no butt connections) using offset band clamps compression clamp, or Marmon compression joint.

Muffler shall be constructed of stainless steel or aluminized materials that meet federal emission guidelines. Exhaust pipe, muffler and tail pipe shall be of the heavy-duty type and of sufficient size to minimize backpressure.

FENDERS AND HOOD - The 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. The fenders shall be properly braced and free from any body attachment. Hood and fenders to be assembled as one unit and of the forward tilt type. The hood stop cable shall be equipped with a spring or damping device to prevent hood damage while being opened.

****NOTE:** Under the tilt hood, there shall be installed in a convenient accessible location, a waterproof electrical disconnect plug(s) (quick disconnect of all electrical wiring to tilt hood) for all electric lines running to electric accessories mounted on the hood.

FRAME - Each frame side member shall be of one-piece construction (minimum 50,000 psi). Cross members and components attached to frame shall be installed with grade 8 fasteners. Frame shall be doubled from a point forward of front spring hanger, on rear axle, to a point equal to leading edge of rear air bag on side where torsion bar meets frame rail.

Routing of all brake lines and/or electrical wiring shall be located within the frame rail flanges.

****NOTE: ANY WIRES OR BRAKE LINES PASSING THROUGH THE FRAME RAILS SHALL BE PROTECTED BY WIRE LOOM OR BRACKETED CLAMP, OR GROMMETED TO PREVENT CHAFING.**

SPECIFICATION PAGE 8

FUEL TANK - The fuel tank shall conform to FMVSS 301 in construction and mounting. Fuel system to have a fuel filter and water separator (Racor Model 490 or approved equal) that shall be capable of running the Racor 490 fuel filter element which includes clear fuel bowl, water sensor and primer pump. Fuel filter/water separator is to be located between fuel tank and engine and mounted on the firewall, frame rail or engine, prior to any fuel pump. A separate engine mounted secondary fuel filter is also required. Tank to be equipped with a minimum of one internal baffles. Tank capacity on 41, 54, and 66 capacity buses must be at least 60 gallons with aluminized interior. A 100 gallon capacity tank of same specifications will be required on all 72 capacity buses. Tank shall be equipped for at least a 93-95% draw. Note: One (1) tank with a 60 or 100 gallon capacity is to be provided on all chassis. Multiple tanks are not acceptable. Tank to be located immediately behind the entrance door such that fueling takes place just to the rear of the entrance door in order to maximize fueling flow and convenience of remote fueling.

Fuel tank may also be mounted between the chassis frame rails. However, fuel tank, regardless of installation location, must allow a fueling rate of minimum 25 gallons per minute, without activation of the automatic fuel dispenser shut-off feature before the tank is filled to minimum 80% of its full rated capacity, when the bus is elevated 5" from level as measured on the side of the bus AWAY from the fueling port (that is, for buses fueled from the right side, the left side of the bus must be elevated 5" from level for this test). There shall be no fuel splash-back at any time during the fueling operation, such that there is no risk of damage to asphalt in fueling areas by fuel exiting from the filler neck. Unless otherwise notified by the State, the contractor must demonstrate to the State's satisfaction during the pilot model, by means of an actual fuel fill operation, the ability of the installed fuel tank to accept fuel at the simultaneous conditions specified above. If the installed fuel tank and filling system fails to meet the above requirements in full (including splash-back restriction) during the pilot model demonstration, or in any demonstration thereafter, the bus will be considered unacceptable, and the contractor is expected to make immediate, permanent, and appropriate modifications to the tank location and/or filler tube configuration, or to other factors as may be necessary, in all affected buses.

ALTERNATOR - Current shall be generated by use of an alternator of the heavy-duty 12-volt type with a built-in rectifier. Minimum output rating shall be at least 270 amperes. Voltage shall be controlled by a transistorized regulator of adequate capacity and matched to operate properly with alternator furnished. Alternator to be equipped with a SAEJ180 two legged mount or acceptable easily accessible high position equivalent mount. All chassis on order are to be equipped with the same brand name alternator (Leece-Neville 4944PA w/ internal regulator, 4949PA w/internal regulator, 4975PAA w/remote mounted regulator or Leece-Neville 320 AMP 4962PAH).

Serpentine belts shall be furnished to drive alternator and fan. Chassis/body grounding of electrical system shall be provided by the use of suitable grounding straps grounding the body to the frame, the engine to the frame and the batteries to the frame.

****NOTE:** Chassis manufacturer shall install a readily accessible terminal so that body and chassis electrical load can be recorded through the chassis ammeter and/or voltmeter. Chassis terminal shall have a minimum of 270-ampere capacity. Ammeter and/or voltmeter must give a true reading to show how the charging system is operating.

ALTERNATOR WIRING HARNESS - All conductors from the alternator to the battery shall be continuous in length and capable of carrying 270 amps. The conductors shall be sized to provide at least a 25 percent greater current carrying capacity than the design output of the alternator. The conductor between the alternator and the battery shall be routed in a manner that will provide the least distance between points of termination. A separate ground conductor from alternator to engine or frame shall be provided. A separate ground wire from the bus body to the frame shall be provided. All wiring shall be required to meet Society of Automotive Engineering (SAE) Codes.

WIRING (CHASIS): All wiring in the bus shall be in accordance with ALL applicable SAE standards, and must be of a gauge which is rated to handle on a continuous duty basis a load (amperage) which is 25% greater than the maximum rated load of the connected component, or which is 25% greater than the maximum rated combined load of all connected components if several components are served by a single conductor (whether positive or grounding side of the circuit). Any wiring serving to provide a duplication for the grounding a load must be of a gauge rated to handle on a continuous duty basis a load (amperage) which is 25% greater than the maximum rated load of the connected component. The conductors which run specifically from the alternator to the battery are addressed elsewhere herein.

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GROUNDING: All grounding on the bus shall be in accordance with ALL applicable SAE standards and shall furthermore be consistent with best industry practice. For each grounding terminal, there shall be a SINGLE particular grounding terminal type specified in the manufacturer's authorized production drawings for the vehicle, and all units delivered to the State shall be furnished with the particular terminal type so specified, for each and every grounding connection throughout the vehicle. There shall be no case on the vehicle where a particular grounding terminal type is not specified in the production drawings, or where two vehicles of same model number use different grounding terminal types for the same connection. Grounding fastener means which are permitted include bolts, welded lugs, and self-tapping screws, but each type shall be fully and permanently suitable for use in the location installed and for the number and gauges of wires served. In instances where welding is used to secure the fastener means to the vehicle frame or body component, the weld must be such that it will not fail in any expected service condition for the useful life of the vehicle. The voltage difference between any two grounding points shall be in accordance with SAE standards. For high current grounds which exceed 30 Amp loads, a cable or ground strap terminal must be bolted directly to the frame rail in pre-drilled mounting holes. During the pilot model inspection, the contractor shall make accessible any and all grounding connections which the State wishes to inspect and/or test.

WIRING DIAGRAM: A complete schematic diagram covering all wiring in the bus is required to be furnished and delivered to each LEA school bus garage statewide which orders buses from this contract. The diagram may be provided in either hard copy or digital form (including online). The same diagram may be requested by the State and will be required to be delivered (at no charge) within 3 days of the initial request to the requestor.

ROAD SPEED CONTROL - The electronically controlled engine is to be programmed to establish the maximum road speed stated on order. Note: 55 mph on all school bus chassis and 55 mph on activity bus chassis.

HORNS - The chassis shall be equipped with dual horns of manufacturer's standard make and mounted so as not to collect water inside the horn.

IGNITION - All chassis shall be equipped with an ignition switch lock, which is set up on the master key system. One key will operate all chassis furnished by any one manufacturer regardless of year model.

LIGHTS - Each chassis shall be equipped with a minimum of two extended life headlights and two turn signal lights. An appropriate size fuse/breaker shall protect turn signal lights. Turn signal shall be wired to operate as hazard warning lights and shall be connected to a variable load flasher. If two flashers are used, both shall be of the heavy-duty variable load type. All lights shall be of the proper intensity and adjustment to meet the standards of the National Bureau of Standards. The headlight switch shall be of ample capacity to handle the load added by the addition of the clearance, marker lights, and strobe lights required on the body. There shall be provided on the inside firewall or electrical panel left of driver chassis terminals for the connection of the body tail lights, stop lights, backup light and license well light. Turn signal lights shall not operate unless the ignition switch is in the ACC or ON position.

****NOTE**: Multiplexing/Electronic System Control Technology shall be acceptable in lieu of fuses/circuit breakers or other electronic controls.

DAYTIME RUNNING LIGHTS - Low beam headlights, tail lights, parking lights, and marker lights operate at full voltage with the ignition switch on and the headlight switch off. The lights shall not engage while the starter is engaged.

INSTRUMENT PANEL - The instrument panel shall be equipped with an ammeter or voltmeter, oil pressure gauge, water temperature gauge, one million mile odometer, vacuum or air pressure gauges, fuel gauge and a high water temperature and low oil pressure light and buzzer. Light indicators will not meet these requirements. All instruments and gauges should be located within 12 inches to the right or left of steering column. The instrument panel shall have lights of sufficient candlepower to illuminate all instruments.

LUBRICATION SYSTEM - Chassis lubricating system shall be of the high-pressure type, with hydraulic type fittings located in accordance with best commercial practice. The fittings are to be of a design that will permit quick attachment of the grease gun.

OIL FILTER - The oil filter shall be of the manufacturer's standard full flow type with a dry capacity of at least one (1) quart. It shall be of the spin on, throwaway type or replaceable element type filter.

SPECIFICATION PAGE 10

OPENINGS - All openings in floorboard or firewall between chassis and passenger carrying compartment, such as engine area and/or gearshift selector, shall be sealed. Any insulating or access panels on firewall or in floor shall be adequately fastened at both top and bottom and easily removable on completed bus. Maximum decibel level at driver seat to be no more than 83 d.b.a. when tested in accordance with procedures found in Appendix B of the 2005 National School Transportation Specifications and Procedures. It is the responsibility of the manufacturer to reduce the interior noise to acceptable levels.

RADIATOR - The radiator shall be of heavy-duty construction with welded headers. The radiator core shall be a welded tube to header joint for increased life. Radiator core shall not be soldered. Radiators of heavy-duty aluminum construction are considered to be an acceptable alternative. Vehicle shall be equipped with an expansion and de-aeration tank with overflow vent hose to route coolant away from the engine. The radiator shall be of sufficient size to adequately cool the engine and transmission under all operating conditions and shall have a valve for drainage. The cooling fan, mechanically belt driven, shall be equipped with an ambient-air-temperature-controlled fan clutch or an engine-water-temperature-controlled fan clutch to facilitate ease of operation and maintenance and meet or exceed OEM requirements. Coolant shall be Organic Acid Technology (OAT) Extended Life Coolant and shall meet all requirements of the respective engine manufacturer and radiator suppliers. Coolant/water mix shall be determined by engine manufacturer. Antifreeze/coolant provided shall be a type only requiring additive at midpoint of coolant life. This additive is an extender only, not containing SCA's. Coolant shall protect the cooling system to -30 degrees Fahrenheit. Engine coolant shall not cause any damage or other adverse effect on any component of the cooling system.

HOSE AND HOSE CLAMPS - All hoses shall be silicone or Ethylene Propylene Diene Monomer (EPDM) and all engine coolant hoses that require clamp connections of one inch diameter and larger on the engine or associated components shall be equipped with constant torque clamps, spring-equipped (Breeze or equivalent).

SHOCK ABSORBERS - Chassis shall be equipped with heavy-duty, double-action hydraulic shock absorbers front and rear.

SPRINGS - Chassis spring assemblies shall be of ample resiliency under all load conditions, except minimum as specified in table "Minimum Requirements of a Type-C School Bus Chassis." Center spring through bolt shall be of proper size for holes punched in spring leaves.

1. Front springs are to be anchored at the front end and stationary eye to be protected by a wrapper leaf in addition to the main leaf.
2. Spring saddles shall be of suitable cast iron construction.
3. Rear Suspension (Air Ride) - All configurations of buses shall be equipped with rear air-ride suspension.

STEERING - The steering gear shall be designed to assure safe and accurate performance of the vehicle under any and all conditions. Steering shall have full time power assist with an integral type steering gear (external hydraulic assist cylinder not acceptable). The mechanism must provide for easy adjustment for lost motion. The upper and lower kingpin shall have roller bearings or bronze bushings.

The steering column shall be equipped with tilt feature. Tie rod ends, drag links and kingpins shall be equipped with Zerk type grease fittings unless permanently sealed.

TIRES - The chassis shall be equipped with six (6) machine-balanced tires, two on the front and four on the rear. Tires shall be of the tubeless type with full steel belted radial construction (sidewall and tread area). Tires furnished shall be tire manufacturer's top line tires and listed in the tire manufacturer's current published catalog and price list. All tires shall be 11R22.5 in size and at least sixteen- (16) ply rating and load range H.-Tires shall be Michelin XZE2, Bridgestone Model R260F, Goodyear G661 HSA.

****NOTE:** Power lift buses designed to provide a solid platform for the flat floor body configurations must be equipped with Michelin XZE Bridgestone Model R250 ED Goodyear G661 HSA P255/70R22.5 radial tires. All wheel rims shall be 22.5-inch ten-stud hub-piloted.

WHEELS - The chassis shall be equipped with six (6) wheels and rims of the ten-stud hub piloted disc wheel design. All rims are to have a width of 8.25 inches. All rims to be painted black.

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TRANSMISSION - Chassis shall be equipped with an Allison 2500 PTS series automatic transmission filled with TES-295 approved fluid. Automatic transmission shall have an integral torque converter. The transmission shifter shall be manufacturer's standard. Within the range selected, ratio changes shall be effected automatically at full engine power if desired and without use of an engine disconnect clutch. It shall have an illuminated range indicator embossed or made of metal and properly fastened. Control shall be located to the right of the steering column (dash mounting preferred).

LOAD BASE SHIFT SCHEDULING - Load-based shift scheduling is required.

SERIAL NUMBER LABEL - A metal label shall be furnished showing the Vehicle Identification Number, and permanently affixed on the firewall or dash panel visible from left front corner of bus in a position for maximum visibility and legibility (exact location to be approved). Letters and numerals shall be of the cut or embossed type. The serial letters and numerals should be a minimum of 4MM in height

TOW HOOKS - Two heavy-duty tow hooks shall be furnished and factory installed one on each frame rail at front in an approved manner. Two located just forward of rear bumper and are to be attached to the chassis rails independent of the rear bumper and capable of towing the fully loaded vehicle.

MINIMUM REQUIREMENTS FOR SC TYPE-C SCHOOL BUS BODIES

COLORADO RACKING TEST: Colorado Racking Test shall be required on or before the acceptance date of the first bus of the respective configuration.

Specifications:

In addition to complying with the test procedures described in FMVSS 220, the body manufacturers shall record and report the downward vertical movement of the force at 0, 25, 50, 75, and 100% of the maximum force (both loading and unloading). The expected force deflection curve is illustrated schematically in Figure 1a. Low load nonlinearities may indicate joint deformation; high load nonlinearities may indicate yielding in structural members.

(a) A second load cycle shall be performed following the procedure given in the first paragraph. The expected force-deflection curve is illustrated schematically in Figure 1b. Any hysteresis following the initial shakedown will be revealed by this second cycle.

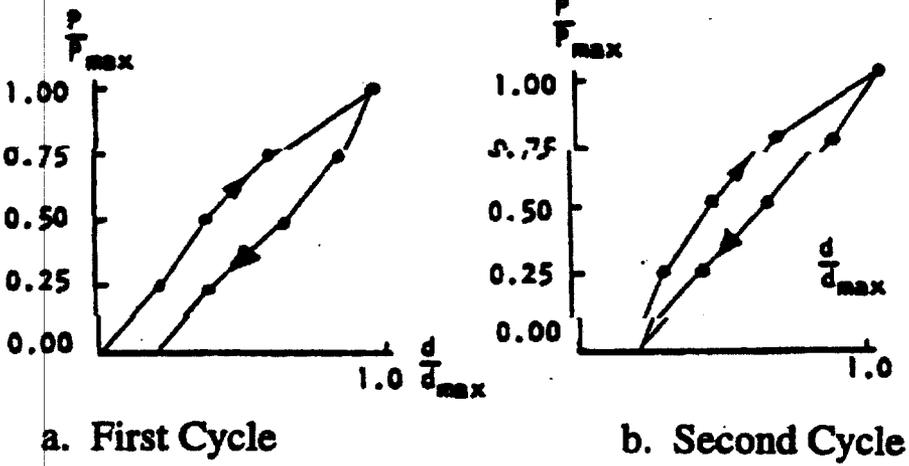


Figure 1. Static Load Test Load-Deflection Curves

SPECIFICATION PAGE 12

A diagonal (racking) load test shall be performed on Type C, school buses to assure adequate shear stiffness and strength of the bus body. Details of the test are provided below.

A two cycle loading sequence shall be conducted following the procedure described.

(a) Requirements: When a force equal to 1-1/2 times the GVW is applied to the edge of the roof of the vehicle's body structure through a force application plate as specified in (b), Test Procedures:

(a)(1) The diagonal movement of the force at any point on the application plate shall not exceed 5 1/8 inches; and

(a)(2) Each emergency exit of the vehicle provided in accordance with FMVSS 217 shall be capable of operation as specified in that standard during the full application of the force and after release of the force.

(b) Test Procedures: Each vehicle shall be capable of meeting the requirements of (1) and (2) when tested in accordance with the procedures set forth below.

(b)(1) The vehicle shall be supported on a rigid surface along the lower edge of the frame or along the body sills in the absence of a frame.

(b)(2) The load shall be applied through a force application plate that is flat and rigid. The dimensions of the plate shall be chosen to assure that the plate edges never make contact with the vehicle skin during testing. A typical width is 18 inches, and a typical length is 20 inches less than the length of the vehicle's roof measured along its longitudinal centerline.

(b)(3) Place the force application plate in contact with the edge of the vehicle roof. Orient the plate so that its flat, rigid surface is perpendicular to a diagonal line connecting the most distant points on an interior cross section of the vehicle. The rear edge of the plate shall be positioned approximately 20 inches from the rear edge of the vehicle roof. A temporary stand may be used to support the plate until a force is applied.

(b)(4) Apply an evenly distributed force in a diagonally downward direction through the force application plate at any rate not more than 0.5 inch per second, until a force of 500 pounds has been applied.

(b)(5) Apply additional force in a diagonally downward direction through the force application plate at a rate of not more than 0.5 inch per second until the force specified in (a) has been applied, and maintain this application of force.

(b)(6) Measure the diagonal movement of any point on the force application plate which occurred during the application of force in accordance with (5) and open the emergency exits as specified in (a) (2).

(b)(7) Release all diagonal force applied through the force application plate and operate the emergency exits as specified in (a) (2).

(c) Test Conditions: The following conditions apply to the requirements specified in (3).

(c)(1) Temperature: The ambient temperature is any level between 32 degrees F and 90 degrees F.

(c)(2) Windows and Doors: Vehicle windows, doors, and emergency exits are in the fully-closed position, and latched but not locked.

(d) An alternative method of testing for the racking load test shall be as follows:

The racking load shall be applied along a line connecting the most distant points on a transverse cross section of the bus interior. It produces a shear distortion of the cross section as shown in figure 2.

A representative method of loading which employs a hydraulic jack to load a two-frame test assembly is illustrated in figure 2.

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The maximum jack load for the two-frame assembly is determined by the following formula:

$J = 2P$ J - maximum jack load for two-frame test assembly

P = load/frame

where P = DVW divided by N

DVW - dynamic vehicle weight

N - total number of bus body frames

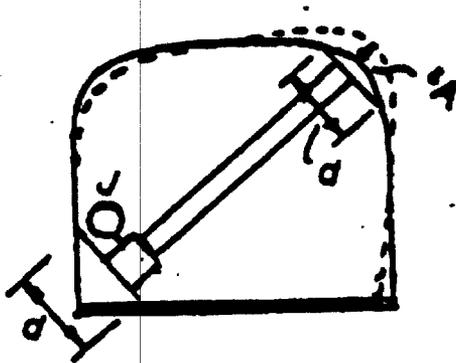
and DVW = DF x GVW

DF - dynamic factor, not less than 1.5

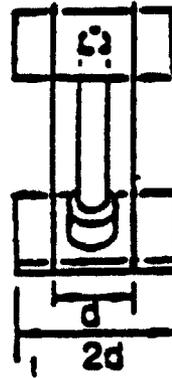
GVW - gross vehicle weight

Thus, for a DF = 1.5, a GVW = 22,000 pounds-force (lbf) and N= 11, the dynamic vehicle weight is DVW = 33,000 lbf, the load/frame is P = 3000 lbf and the maximum jack load is J = 6000 lbf.

****NOTE:** When a complete bus body is rack-loaded, the total load DVW must be distributed uniformly along the bus body. This may be accomplished by mounting a series of hydraulic jacks along the length of the bus interior. Seats may be removed to facilitate jack mounting. The rack load will be considered to be uniformly distributed when the variation in the hydraulic jack readings is less than 10 percent. A maximum load the sum of all jack readings shall equal DVW.



Transverse Cross Section



Side View

Figure 2. Arrangement of Hydraulic Jack for Rack-Loading of Two-Frame Assembly

The test may be performed on a complete bus body or on a representative section composed of at least two complete frames (body posts plus roof bows) and floor. Standard seats may be installed in the test section in a manner identical to that of the full bus body. Fabrication procedures for the test assembly shall be identical to those used in normal bus body production.

A two-cycle loading sequence shall be conducted, with intermediate and final load and deflection readings recorded according to the procedure described.

The maximum deflection in line with the jack (A, maximum) shall not exceed 4 inches.

Manufacturer shall specify which testing method was used and submit appropriate certification information.

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KENTUCKY POLE TEST: Kentucky Pole Test shall be required on or before the acceptance date of the first bus of the respective configuration.

Specifications

The body shall be impacted at any point along the roof line on the outside surface, using an eight (8) inch diameter cylinder, forty-eight (48) inches long at a thirty (30) to forty-five (45) degree angle, one (1) to three (3) inches above the top window line. The cylinder shall impact the roofline with the forty-eight (48) inches dimension in a vertical plane with a force not to exceed ten (10) inches maximum to eight (8) inches minimum penetration of the body panels into the passenger compartment after impact.

Manufacturer shall submit appropriate certification information.

DIMENSIONS

BODY SIZES - The following standards shall govern the sizes of school bus and activity bus Type-C bodies. The maximum overall outside width of the body shall be 96 inches. The height of the body from the top of the finished floor to the underside of the ceiling, at the center of the body, shall be approximately 77-78 inches.

Note: All wheel chair positions except flat floor configurations shall be aft of the rear wheel wells.

The following table shall govern the body lengths:

<u>Maximum Seating Capacity</u>	<u>Approximate Body Length</u>
41-42	244-275"
53-54	302-329"
65-66	358-376"
71-72	387-402"

VEHICLE DATA PLATE - On the inside of the bus, there shall be installed (1) on metal component of header, above the driver and to the left of the visor mounting bracket or (2) on ceiling, directly above the driver's head, a single manufacturer's name plate which can be easily read, on which shall be shown the name of the body manufacturer, the name of the chassis manufacturer, the serial number of body, the serial number of the chassis, seating capacity, GVWR, date body built, date chassis built, actual bus height, length, and weight, and actual tire size installed on bus. Actual weight does not refer to G.V.W.R., but instead shall mean the actual weight of the completed bus full of fuel (60 or 100 gallons, in accordance with tank size furnished) and fluids.

Plate to be metal with all information embossed (for fireproofing). Additional vehicle manufacturer's data plate(s) are not acceptable; all vehicle data shall be on the above single data plate.

SPECIFICATION PAGE 15

BODY CONSTRUCTION

DESIGN SPECIFICATIONS - Welds, rivets, or high strength bolts or a combination of these items in combination with adhesives may be used in connecting parts of the structural body. Bolts shall have a provision (self-locking nuts/lock-washers) to prevent loosening under vibratory loads. All bolts, nuts, washers and screws used throughout the body shall be cadmium or zinc plated, or thoroughly treated in a manner for prevention of rust (ECO 2000 coating or equivalent). Lock washer or locking devices shall be placed on all bolts used for structural purposes.

GAUGE OF MATERIALS - All gauge numbers used in these specifications refer to the U.S. Standard Gauge Number as published by the American Iron and Steel Institute. The following table lists the Manufacturer's Standard Gauge for Steel Sheets in thickness and equivalents:

<u>Gauge Number</u>	<u>Non-coated Steel</u>	<u>Coated Steel</u>
10	.1345	.1382
12	.1046	.1084
14	.0747	.0785
16	.0598	.0635
18	.0478	.0516
20	.0359	.0396
22	.0299	.0336
24	.0239	.0276

The above listed thickness, with the tolerances allowed by the American Iron and Steel Institute, are the minimum thickness acceptable for each given gauge number.

BODY FLOOR

BODY FLOOR DESCRIPTION - The body floor shall consist of floor panels or floor sections which are no greater in width than the spacing of posts or roof bow frames. The panels shall consist of a steel floor plate(s) stiffened with sills running the full width of the floor. Sills may consist of cold-formed sections of steel or of suitable hot rolled sections. All panels or sections shall be joined so as to form a leak proof and dust proof floor and connected with longitudinal members running the length of the body which are capable of distributing the roof loads from the posts or bow frame to all supporting members.

FLOOR LOADS - The floor shall be designed to support all fixed and changeable loads. Fixed loads shall consist of all parts of the body supported by the floor system. Changeable loads are live loads determined on the basis of 125 pounds per passenger with three passengers per seat. The weights of the passengers and seats may be estimated at 70 pounds per square foot of floor area. To allow for vibration and shock, all loads shall be doubled.

FLOOR PLATE - The floor of the body shall be 14-gauge Galvalume and/or zinc coated steel floor plate or equivalent and shall be covered with a minimum of 5/8-inch, Marine Grade, Grade B, 5-ply plywood. Plates shall run the full width of the floor and be supported at all edges. Openings should be made only when required such as wheel housing. All openings to

be reinforced so as to maintain the full strength of non-punctured floor and not interfere with floor tracking on raised floor models. The floor plates shall be connected to supporting members so as to function as a part of the sills in carrying loads. Access shall be provided through removable cover that provides access to fuel sending unit.

SPECIFICATION PAGE 16

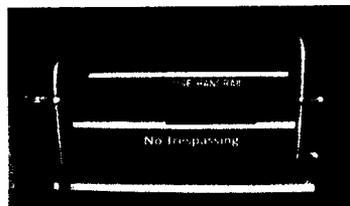
FLOOR SILLS - All cold formed floor sills are to be 14-gauge or heavier, or the main sill shall be equal to or heavier than a gauge of 10 and each intermediate sill shall be equal to or heavier than a gauge of 16. All sills shall extend the full effective width of the floor without splicing so the floor will support the roof load imposed by the side posts. Sills are not required to extend the full width of the body in the wheelhouse area, the gas filler area, or where other structural members interfere. However, if sills do not run the full width of the body, they shall be connected to the adjacent sill for continuity of strength or by other approved methods. If two hot rolled sections or plates are used to form a sill, the two sections shall be connected so as to function as a unit with the rest of the floor system without spread or slip.

There shall be a main sill at each post or bow-frame, except in the wheelhouse area, and two intermediate sills. The intermediate sills shall be equal in depth to main sills. The maximum spacing of the sills shall be 10 inches.

The ends of all main sills shall be securely connected, top and bottom, to a longitudinal side rail running the length of the body or other equivalent floor assembly method providing the same level of floor structural integrity. The connections and side rail shall be capable of distributing loads from the posts or bow-frames to all sills.

The bus body's transverse and longitudinal frame members should allow stress to flow evenly throughout the bus body. The manufacturer should substantiate the strength integrity of any joint or gusset connection of these members to prove they are of equal or greater than a continuous constructed member is. If requested, this information shall be furnished to the State for review.

STEPWELL - A stepwell, having three steps, shall be built into the front assembly and completely enclosed with doors extending to bottom step. Each step shall be 14-gauge steel construction and covered with ribbed rubber or elastomer material as per the 2010 National Standards. The top step riser is to include approximate 2 inch contrasting letters at top edge of step riser stating "USE HANDRAIL". The top edge of riser for next lower step is to include in same sized letters "NO TRESPASSING".



This location is alternative to previous slides showing separated decal location higher, out of the back zone

Entrance step shall extend below skirt line to such depth as necessary to make the distance to the ground from the bottom of the step no less than 10 inches and no more than 14 inches.

FLOOR COVERING - The floor under seat area and drivers compartment shall be covered with black, smooth finish rubber covering or elastomer covering, at least 1/8" thick. The aisle and entrance area shall be covered with black, ribbed pattern rubber or elastomer covering at least 3/16" thick. The frontal area around the driver compartment is to be covered with black sound abatement. The adhesive for laminating the cover to the floor shall be water – resistant type of trowel or spray consistency. A rust proof metal molding strip shall be applied over the edges and joints of the covering. If the chassis is equipped with transmission cover, the cover shall be placed on top of floor board and securely fastened and sealed.

SPECIFICATION PAGE 17

BODY FRAME

BODY FRAMING - Where posts or bow frames are not loaded in a plane of symmetry, they shall be braced so as to deflect without twisting. The minimum depth of member shall be at least 1 and 1/2 inches and shall be 16-gauge or equivalent. The maximum spacing shall be 30 inches on centers on all sections except one or two, each of which shall be no greater than 40 inches on center. If oversize section is used, there shall be installed additional roof reinforcement in this section.

The section modulus of the cross section shall be not less than 0.22 (in³).

Note: All bidders shall submit with their proposal complete detailed engineering drawings detailing the size and shape of a cross section of the post or bow frame along with detailed calculations verifying that the section meets requirements.

ROOF BOW - A roof bow shall be located at each post to form a bow frame or bow frames may be formed in one piece. If side post members and bow frames are not one continuous piece, when framing members are joined the connections shall be such as to develop the full strength of the cross section of the two or more members joined. Roof bows shall not be buckled or distorted out of cross section during the process of bending to the curved shape. Each post shall be connected to a main floor sill, either directly through gussets or indirectly through the side rails. These connections shall consist of fasteners at a minimum of two elevations to effectively anchor the bow frame to the floor systems.

****NOTE:** All bidders are to submit with their proposal complete detailed engineering drawings of the joint connection.

ROOF STRINGERS - Two or more roof stringers or longitudinal members shall be provided to space the roof bows and reinforce the flattest portion of the roof skin. These stringers may be installed between the roof bows or applied externally. They shall extend from the windshield header and when combined with the rear emergency doorposts, are to function as longitudinal members extending from the windshield header to the rear floor body cross member. At all points of contact between stringers or longitudinal members and other structural material, attachment shall be made by manufacturer's method of attachment. If stringers are applied internally, they shall be fastened to each roof bow. If stringers are applied externally, all joints must be lapped the full width of the roof bow and attached to each roof bow with four rivets or securely welded.

SIDE STRINGER(S) - There shall be one or more side stringers or longitudinal members to connect the vertical structural members and to provide impact and penetration resistance in the event of contact with other vehicles or objects.

The side stringer shall be installed in the area between the bottom of the window and the bottom of the seat frame and shall extend completely around the bus body, except for the door openings and body cowl panel.

The formed side stringer to be 16-gauge or equivalent metal, 3 inches wide before forming.

The side stringers are to be fastened to each vertical structural member, in any one or a combination of the following methods as long as stress continuity of the member is maintained:

1. Installed between the vertical members.
2. Behind the panels but attached to the vertical members.
3. Outside of the external panels.

The fastening method employed shall be such that the strength of the stringer is fully utilized.

The side stringer or longitudinal member may be combined with a rub rail, or be in the form of an additional rub rail, so long as the separate conditions and physical requirements for the longitudinal rub rails are met.

SPECIFICATION PAGE 18

FRONT FRAMING -The design shall recognize the weakness at the windshield by provision of frame action to carry lateral loads. The front assembly shall be sufficiently heavy to withstand vibrations transmitted to it through chassis cowl.

Cowl posts shall be 12-gauge and attaching members shall be 14-gauge or two-section, pre-stressed, "Clam shell" pillar assemblies may be utilized in lieu of cowl posts. There shall be a roof bow or reinforced header installed over these posts. Windshield or cowl posts must be of sturdy construction and so designed that the posts will not be so wide as to unnecessarily obstruct the driver's view. If cowl posts are made in two sections, the sections should be joined together by overlapping and welding in an approved manner or the sections should have an insert and be welded. The body shall be fastened to the chassis cowl in a waterproof manner.

REAR FRAMING - The emergency doorposts shall extend from the floor sill to the window header and shall be 14-gauge. There shall be installed on each side of the emergency doorposts an additional post equal in strength to the side posts, which shall extend from the floor sill to the windowsill.

SKIRT REINFORCEMENT - There shall be installed at the bottom of the outer paneling a continuous skirt stiffener, equal in strength to a 1-inch by 1/8-inch angle. If body construction is of such a design that this type stiffener cannot be used, an additional 4th guardrail shall be applied externally. Guardrail to be equal in strength and construction to the guardrails required in the Guardrail Section. This stiffener shall be supported by extending posts or bow-frames or by 16-gauge gussets.

WINDOW FRAMING - Window framing shall be constructed of a 14 to 16 gauge formed header or stringer (not a flat strip) with a minimum depth of 1 1/2 inches perpendicular to the side of the body. This stringer shall extend completely around the bus body. There shall be installed at the windowsill a stringer which extends completely around the body except for the door opening. A continuous internal and external header constructed of a minimum 18 gauge material, extending the full length of the body and attached to each rafter is acceptable. All construction must meet FMVSS.

EXTERIOR PANELING

PANEL DESIGN - Joints in roof panels should occur only at roof bows, roof stringers and window headers.

SHEET METAL SKIN - All paneling above the top of the floor except the cowl panel, wheel housing, and body hoods shall be 20-gauge or heavier. The cowl panel, if provided, shall be of 12-gauge or heavier metal, or cowl panel may be 14-gauge metal with 12-gauge framing.

Side lower skirt edge shall be at a horizontal line from the center of the front spindle to the center of the rear axle plus or minus 2 inches.

WHEEL HOUSING - The wheel housing shall be rigidly reinforced and shall be attached to the floor in such a manner as to prevent any water or dust from entering the body. They shall be designed for easy removal of tires. External wheel housing opening shall be equipped with a steel or rubber fenderette that extends past outermost portion of tire.

SPECIFICATION PAGE 19

GUARD RAILS

In addition to the side stringer or rub rail required in the above wheel housing section, there shall be applied to the outside of the body, three guard rails. These members to be corrugated so as to provide maximum stiffness and shall be 16-gauge or heavier.

Pressed-in guardrails will not meet these requirements. Guardrails shall be located at the following approximate locations: floor level, seat level, and windowsill level. The seat level and window level rails shall begin at the entrance door posts on the right side of the body and, except for the rear emergency door, extend around the rear of the body to left windshield post. Where design problems cause difficulty in installing one of the above guard rails, the floor level rail may be extended in its place or an additional stringer installed. Floor level guardrails are to begin at the entrance doorposts on the right side of the body and, except for the wheel house and gas filler and lift door area, extend to the right rear body post, and to the left windshield post. Except for the wheelhouse, they are to extend to the left rear body post, except where design does not permit installation. The guardrails are to be vented and attached at least twice to each post within their lengths. Splices, if any, are to be located at posts by lapping the full width of the supporting part of the posts. All guardrails to be cleaned primed and rust proofed underneath before being installed on body. Guardrails shall be installed utilizing Pan Head Carbon Steel Screws/stainless steel sheet metal screws/ or Drive rivets in all attaching positions



****NOTE:** In the event that continuous guard rails are not possible as stated above, reinforcement shall be installed inside the bus body to compensate for the absence of rails.

WATER TEST

GENERAL - Throughout the construction of the body, there shall be evidence of good workmanship and engineering ability.

All buses shall be water tested for leaks in a high pressure multi-angle test chamber.

****Note:** Body shall meet all applicable FMVSS requirements. If requested, this test information shall be furnished to the State for review.

INTERIOR PANELS

SHEET METAL LINING - The roof section of the body is to be lined entirely with 20-gauge perforated sheet steel. Lining panels to have a minimum of at least 2 inches of un-perforated steel for attaching to roof bows. Panels must be designed and fastened to minimize vibration and to be installed for easy removal. Panels from the windowsill to seat rail or to floor shall be 22 to 24 gauge metal textured and embossed stainless, aluminized, or clear-coated galvanized steel sheet.

MOLDINGS - At the junction of the interior paneling and the floor, there shall be installed a galvanized, aluminum or other corrosion resistant molding.

All interior lining shall be secured to meet FMVSS 221.

SPECIFICATION PAGE 20

SEATING

SEATING DESCRIPTION- Seats shall be forward facing and be spaced with the maximum knee room available within standard body lengths. All seats should be 39" or 30" wide, 15 inches deep, and 28" seat back height. The seat width shall be 39" unless otherwise required by the need for minimum aisle clearance depending on interior configuration. Seats are to be arranged in rows of two or staggered with a minimum 12-inch center aisle. All material used in the seat cushions and backs shall meet the requirements of FMVSS 302. All seat upholstery material to be of the type known as fire-block. All seats shall meet the requirements of FMVSS 222.

CHILD SAFETY RESTRAINT SYSTEMS (CSRS) - All South Carolina school buses shall be equipped with Integrated Child Restraint Seats that meet FMVSS 210, 213, 222, 225 and 302 (Fire Block Test). All CSRS attachment hardware and anchorage systems must meet FMVSS 210, Seat Belt Anchorage or FMVSS 225, Tether Anchorage and Child Restraint Anchorage Systems. (CE White Model #CR11-39 or IMMI Safeguard Model #ICS-39) Seat upholstery material shall meet FMVSS 302 and shall match seat upholstery material used on all other passenger seats.



****CSRS compliant seats shall be installed in the following standard locations;**

All bus configurations require -1st Two Rows (total of 8 seating positions)

Except on 41-42 (Non Flat Floor lift equipped bus), 1st row on one side and 2 rows on other side (total 6 seating positions.)

Some units may be ordered with additional CSRS seats up to 14, 18, 22, or 24 depending on the capacity of bus. However, some units may be ordered with NO CSRS seats which will require a deduct in price.

SEAT CUSHION PAD - The top of the seat crown should be approximately 16 inches above the floor. The cushion material should be a minimum thickness of 3 ½-inches front 2 inches rear, excluding plywood base. The cushion shall have a ½-inch thick mounting board and shall be secured to the seat frame to meet the cushion retention requirements of FMVSS 222. Seat cushion is to be covered with an approved (fire block type) upholstery fabric to include underside of seat cushion. The cushion pad is to be secured by a positive locking mechanism (see picture for approved locking mechanism) that requires the removal of a securing device before latch mechanism will unseat from frame.

SPECIFICATION PAGE 21

SEAT BACK PAD – All seat backs shall have reinforcing material equivalent to 24-gauge metal between the front and rear padding and it shall be properly fastened to the seat frame. The back pad and cover shall meet requirements FMVSS 302 and 222. The seat back is to be covered with (fire block type) upholstery fabric.

DRIVER'S SEAT – The driver's seat shall be of a high-back air suspension type with a minimum seat back adjustment of fifteen (15) degrees and a head restraint accommodating sizes through ninety-five (95) percentile adult male (as defined in FMVSS 208). The driver's seat shall be covered with black fire-block material. The driver's seat shall have minimum distance between the steering wheel and the seat back not less than eleven inches (11"), with a minimum aft adjustment of six inches (6"). The driver's seat shall provide for fore-and-aft and up and down adjustment and shall be contoured with adequate support on the sides. The seat shall be designed to provide lumbar support and positioned on the centerline of the steering wheel. Driver seat shall be C. E. White ISH-2002, The Seats Inc., or National Model 2000 school bus driver seat with integrated 3-point lap and shoulder harness

Seat shall be identified by permanently attached / approved vinyl tag containing seat manufacturer, model number, serial number and build date.

DRIVERS SEAT BELT - The amount of usable belt, as measured from the top point of the seat back, through the sliding buckle, to the point on the left side of the seat cushion where it joins the seat back (that is, near the drivers left hip) shall be at least 103". The ability to quick-release driver seat latch with weight applied is required.

**Note: Seat belt webbing shall be bright orange.

FIRE BLOCK UPHOLSTERY FABRIC - The upholstery material used to cover all seat cushions and backs shall conform to requirements of the following product specifications and testing:

The base fabrics shall be fire block, , un-dyed, and the minimum finished weight per square yard shall be 25 oz., lock stitch knit backing. The breakdown of the material shall be as follows:

Mfg: Prevail, Kevlar Mfg., or Spradling
Weight of Film: 38-oz linear yd.
Finish Weight of Material: 25-oz/sq. yd.
Product Specifications/Testing:
Grab tensile (lbs.) ASTM-D751
Tongue tear (lbs.) Fed 191A-51334
Tack tear (lbs.) ASTM D751-79 mod.
Trapezoid tear (lbs.) ASTM D1117
Adhesion (lbs./in.) ASTM D751
Seam breakage - AMC method
Flex testing (1 hr.) CFFA-10
Blocking-Fed Standard 191-5872
Low temperature (-20) #5 roller Fed STD 191A-5872
Abrasion (Wyzenbeek) Fed standard 191A-5304 240 grit-1000

Puncture Test-28 lbs.
Minimum 6 Stitches Per Inch using Tex 105 30/6 Spun Kevlar or
Higher Thread

Flammability Testing:

FMVSS - 302

FAR 25.853

Boston bag

National School Bus Standards fire block material

All sewing on cushions and backs to be securely stitched with all seams lock stitched or double stitched with Tex 105 30/6 Spun Kevlar or higher thread or equal fire block thread. Seam ends should be backstitched to prevent unraveling. The same grade of material and construction shall be used in all activity buses. Seat color is to be blue.

SPECIFICATION PAGE 22

ASSIST RAIL AND CRASH BARRIER

ASSIST RAIL - Two safety assist handles or rails shall be provided at the front entrance, located on the right and left, securely mounted inside of body and should extend to bottom step to be within approximately 28 inches of ground. The right side assist handle shall be braced to dash firewall or approved floor location. Assist handles shall be made from 1 ¼" inch OD round stainless architectural tubing or 1 ¼" inch OD anodized aluminum meeting ADA minimum requirements.

CRASH BARRIER - Crash barrier shall meet FMVSS 222 & 302 and shall be constructed and covered as per seat backs with blue seat material. Crash barrier material shall be fire block type. Crash barrier on right and left side of bus shall have a modesty panel between the stanchion bars of crash barrier from floor level to bottom of crash barrier.

BROOM HOLDER - A non-metallic broom securement device shall be mounted in front of or on the front side of the crash barrier, behind the driver seat. Exact location to be approved upon inspection of pilot model.

ELECTRICAL SYSTEM

****NOTE:** Multiplexing/Electronic System Control Technology shall be acceptable in lieu of fuses/circuit breakers or other electronic controls.

WIRING (BODY) - All wiring shall conform to the standards of the Society of Automotive Engineers. It shall be color and number coded, insulated and protected by covering with fire suppressant cover. All fuse/circuit breaker blocks shall have circuit identification decals.

Wiring should be in circuits as follows: dome and stepwell lights, flasher lights and stop arm lights, emergency door buzzer, windshield wipers, heaters and defroster, and turn signal system. The body wiring shall be enclosed with a removable cover extending from front to rear of body. All electrical connections between body and chassis should be made at the connection furnished on the chassis. Wires will not be spliced into existing chassis wiring.

Located in panel left of driver or in adjacent outside electrical panel shall be two accessory studs: one (1) each fused, functioning in "run" or "accessory" positions only, and one (1) each battery voltage fused 50 amp minimum, each such stud labeled as specified. Alternatively, six (6) each, fused 20-amp minimum accessory drop wires, with four (4) functioning as accessory and two (2) functioning as continuous hot, and so labeled. Access from driver area is required if outside electrical panel is used.

CONTROL PANEL - To the left of the driver, there shall be installed an enclosed electrical accessory panel that can be easily removed for servicing. Inside the panel shall be located all relays, switches (including heater and defroster), junction block, circuit breakers, flasher units, and door buzzer. The accessory panel should be grounded to cowl of chassis by use of 10-gauge wire. All electrical connections inside panel to be constructed so as to eliminate heat buildup in wires. Control panel shall have heavy duty, rocker type or equivalent switches that are identified using international symbols.

(See pictures for approved switch locations)

RELAYS - There shall be provided two constant service, heavy-duty master relays (Essex or Tyco) or an integrated power distribution board that provides the same function as the heavy-duty master relays. These are to be actuated by the ignition switch and through which all electrical accessories except the turn signal units are to be wired. Wiring from the chassis to the relays and from the relays to the fuse block shall be number 10-gauge wire. One master relay or integrated power distribution board to supply current for the dome lights, stepwell light, windshield wipers, and emergency door buzzer. There shall also be a manual noise abatement switch installed in the control panel, labeled and alternately colored, and wired into the activation circuit for the master body circuit relay. This shall be an on/off type switch that deactivates all body equipment that produces noise, including, at least the heaters, air conditioners, fans, and defrosters. This switch shall not deactivate safety systems such as windshield wipers or lighting systems.

The other master relay to supply current for the flashing stoplights, stop arm lights, strobe lights and flashers.

SPECIFICATION PAGE 23

LIGHTING

All lighting systems shall meet or exceed all applicable FMVSS requirements.

All LEDs must be sealed units with no weep holes.

Lens screws on all exterior lamps shall be stainless steel.

INTERIOR LIGHTING - Interior lights shall consist of at least four flush mounted ceiling lights and one adequately protected inside stepwell light. All interior lights, including the stepwell light, shall be activated when door is opened and engine switch is on.

CLEARANCE/MARKER LIGHTS LED (LIGHT EMITTING DIODE) – Combination clearance/marker lights shall be installed per specifications. These lights shall be LED (light emitting diode) with sealed electrical plugs and protective aluminum guards with the exception of the center front and rear triple clearance lamps that do not require shields when protected by recessed mounting area. Lamps are required to be LED with sealed electrical plugs. Lamp model to be approved at pilot model inspection for center triple clearance lamps. Front lenses are to be yellow in color and rear lenses are to be red in color. On bodies over 30' in length an amber marker light is to be located midway of the bus body. Lights shall be Truck-Lite 35375Y (yellow), 35375R (red) 5 LED pattern, Weldon 5181 - 4 LED pattern with sealed electrical plugs or equivalent.

EIGHT LIGHT WARNING SYSTEMS LED (LIGHT EMITTING DIODE) – Each school bus (not activity bus) shall be equipped with four (4) Weldon LED-flashing stoplights with replaceable LEDs and lens. Lens shall be at least seven inches in diameter, or if in a shape other than round, a minimum of 38 square inches. The light assembly shall be of LED design. Location of lights and direction of beam are to be approved upon inspection of pilot model. The circuit shall be wired so that one front, one rear, and stop arm light shall flash alternately with the other front, rear, and stop arm light. The switch to operate flasher lights is to be located in the control panel in the closest location to the end adjacent to the air door switch and will activate the relay from the ignition switch (location to be approved upon inspection of pilot model). Any light activation switch must have cancellation capability so that the amber lights may be deactivated without opening the door. The flasher light activation switch is to be red in color. The flasher shall be electronic (Weldon 7000 or InPower SBF94) unless the functionality is provided by an electronic system controller. System shall also include an LED Strobe Circuit Flasher.

****NOTE:** Deactivation of eight-light system must occur by closing of entrance door.

****NOTE:** LED lighting to be provided with vehicle manufacturer warranty of 5 years, and to include labor reimbursement through same period.

For each school bus, (not activity bus), in addition to four red lamps described in the above section, four (4) amber Weldon LED lights with replaceable LEDs and lens shall be installed as follows: one amber lamp shall be located near each red signal lamp at same level, but closer to vertical centerline of bus. Lens shall be at least seven inches in diameter, or if in a shape other than round, a minimum of 38 square inches. A system of red and amber signal lamps shall be

wired so that amber lamps are energized manually, and red lamps, and stop arm are automatically energized (with amber lamps being automatically de-energized) when bus service door is opened. Amber lights must be wired with capability to be deactivated without opening the door. Eight light warning lenses shall be covered with black hoods.

STOP ARM – Each school bus (not activity bus) shall be equipped with an air operated strobe flashing stop signal. This signal shall be equipped with two (2) flashing strobe lights, at least 4 inches in diameter, red in color, and double faced. The blade for the stop arm shall be metal in construction, octagonal in shape, shall be at least 18 inches in diameter, and shall be covered with 3M Hi-Intensity Prismatic sheeting. The word “STOP” shall be placed on both sides of the blade in letters 6 inches high. Specialty Model 2980 strobing LED. The stop arm air supply is to have an independent solenoid valve and regulator. Air line to be metal or nylon with suitable fittings. Assembly shall be installed as recommended by arm manufacturer.

SPECIFICATION PAGE 24

TURN SIGNALS LED (LIGHT EMITTING DIODE) – Each school and activity bus shall be equipped with two- (2) amber LED (light emitting diode), surface mounted, 7-inch round (or, if in a shape other than round, 38 square inch) directional turn signals. If round lights are used, they shall be Truck-Lite Model 91251Y or equivalent. Rear directional turn signals shall be wired to hazard warning switch. In addition to the rear directional turn signals, LED (light emitting diode) side directional lights shall be installed on the body to work in conjunction with the directional turn signals. Lights shall be Truck-Lite 21251Y or Weldon 5170.

STOP/TAIL LIGHTS LED (LIGHT EMITTING DIODE) – All buses shall be equipped with four (4) combination stop/tail lights.

1. Each school and activity bus shall be equipped with two (2) red LED (light emitting diode), surface mounted, 7 inch round (or, if in a shape other than round, 38 square inch), combination brake/tail lights. Round lights shall be Truck-Lite 91252R or equivalent.
2. Each school and activity bus shall be equipped with two (2) red LED (light emitting diode), recessed, 4 inch round brake/tail lights (or, if in a shape other than round, 12 square inch). Round lights shall be Truck-Lite 44002R or equivalent, with black rivet-style ring. Truck-Lite Model 44709 or approved vandal resistant installation. Lights shall be placed on the rear of the body between the belt line and the floor. The stop lamps shall be activated by the service brakes and the tail lamps by the parking lamp circuit. Lights shall be secured with rivets.

STROBE LIGHT - A strobe light is to be mounted on top of the bus body centered above the rear emergency door 12 – 18 inches from rear edge of roofline. The lens shall be made of clear glass with an aluminum base. The bulb shall be a replaceable double flash (10 Joules minimum) low amp draw/ high light output bulb. A replaceable remote power pack is to be mounted inside the rear 1/3 of the bus body behind an accessible panel (location to be approved at pilot model). The light is to be wired in conjunction with the ignition switch and be activated only when the ignition switch is in the on position. The light shall meet SAE J1318 and J575 standards. Strobe light is to be Specialty Model 205 or equivalent. (See picture for approved light location.) Light shall be grounded to structural support.



BACK-UP LIGHTS LED (LIGHT EMITTING DIODE) – Each school and activity bus shall be equipped with two (2) white LED (light emitting diode), recessed, 4 inch back-up lights, Truck-Lite Model 44041C or equivalent, with black rivet-style ring Truck-Lite Model 44709 or approved vandal resistant installation. Weldon 7" LED backup light, model #9186-5586-30 is acceptable when recessed lights are not available. Backup lights shall be secured with rivets and wired to the switch on transmission and be activated in reverse gear only. Lights should be mounted in a location to provide the best illumination for the driver when backing the vehicle. The LED light may be either circular or rectangular, provided the lighted surface area of each light is minimum 12.5 square inches.

LICENSE PLATE LIGHTS LED (LIGHT EMITTING DIODE) – Each school and activity bus shall have a LED (light emitting diode) license plate light. The light is required on the right side over the ■ SC State license plate. A light is not required over the safety message plate. (Truck-Lite Model 15205, Weldon 8102-0100-30)

REFLECTORS - There shall be installed on the bus body (2) amber and (4) red reflectors that meet FMVSS 108 requirements. The lenses are to be 3 inches in diameter and made from acrylic plastic with six reflecting angles. Frame (if used) is to be polished aluminum or zinc plated steel. Note: Diamond grade vinyl reflectors will be accepted.

BACKUP WARNING ALARM - An automatic audible alarm shall be installed behind the rear axle and shall comply with the Society of Automotive Engineering Standard (SAE 994b). The alarm shall be activated when the transmission is placed in reverse gear only.

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EMERGENCY DOOR BUZZER - On the rear/side emergency door post at the emergency door lock there shall be installed a switch which is actuated by a maximum of ¼ -inch travel of the lock bolt. The switch shall be covered and wired to an approved buzzer and panel light system, which meets FMVSS 217. The buzzer and panel light shall be activated to warn the driver when the emergency door is not properly fastened.

ACCESSORY POWER POINT RECEPTACLE – Panel location to be approved and must be mounted in the driver's area or on a side of the driver's storage compartment on a flat surface.

HEATING AND VENTILATION

HEATER - All body heaters will be supplied with a replaceable filter. On buses equipped with elevated driver seat platform, and if the air intake for the heater faces the rear of the bus, there shall be a steel kick plate barrier to protect the filter from damage. The barrier shall be designed to allow sufficient air intake to the heater and be designed for easy filter removal with quick-release fastener(s) on cover and without deforming filter. A heavy duty, fresh air, heater shall be provided which uses the hot engine water as a heat source. The heat exchanger shall be of the coil type and capable of withstanding an internal pressure of 175 psi for 3 minutes. Along the windshield sill, there shall be installed a metal or plastic ducting having a capacity of not less than 150 cubic feet of air per minute. The duct shall have sufficient louvers or adjustable diffusers to direct a strong flow of properly heated air over the entire windshield surface. Windshield will have an equal volume of airflow provided to each side (left and right).

The heaters shall have the capability of providing evenly distributed heat, creating a temperature rise to 50 deg. F. inside the body shell in 20 minutes when soaked in an ambient temperature of 0 deg. F. for 15 hours. The Bus Body Heating System Test as defined in Appendix B of the 2005 National School Transportation Specifications and Procedures is the heater performance test to be used.

****NOTE:** Vehicle engine shall be capable of producing and maintaining 170 degree water within 12 minutes of normal operation at 25 degrees Fahrenheit ambient air temperature, or otherwise an auxiliary heating device shall be installed to fulfill this requirement in its entirety.

All 42 lift, 54, 66, and 72 passenger buses shall have an additional plumbed heater (min. 80,000 BTU on 54, 66 & 72 pass. and min. 50,000 BTU on 42 passenger lift). Rear heater is to be located aft of wheel well under seat. A switched transfer pump is required, activated when either the front heater switch or separate rear heater switch is turned on.

All fittings and installation shall be above the floor level of the body and contained in a track designed to prevent steam or water from contacting passengers in the event of a leak, fitting separation, or other malfunction. Heater hose shall conform to SAE specifications 20R3 class D1. Brass, copper elbows or rigid plastic sleeves shall be used in the water hose when it is necessary to make a 90-degree or greater bend in the lines. Rustproof adapters shall be installed in water hose connections to the engine. There shall be installed in the water lines, between the water manifold and the engine water pump, one all-brass master shutoff in each

supply and return line. Regardless of plumbing configuration, each heater core within the bus body shall have a dedicated pair of shutoff valves located at the core, one valve in the supply line and one valve in the return line, except when doing so would conflict with FMVSS requirements for windshield defrosting. Shutoff valves to be of the quarter-turn ball valve type.

No rear heater required on 42-passenger non-lift bus. Heater location for flat floor units shall be aft of lift and on same side as lift. Front heater on all models shall be in manufacturer's standard location, to be approved at pilot.

SPECIFICATION PAGE 26

INSULATION

INSULATION MATERIAL AND LOCATION - The inside of the skirting from the floor to its bottom edge shall be completely coated with an undercoating material conforming to the Federal Specifications No. TT-C-520-1 (or latest amendment). Underside of wheel housing shall be coated with same material. The space between the exterior and interior perforated roof panels shall be completely covered with a minimum 1-½ -inch thick layer of fiberglass or acceptable equivalent. Insulation must be installed above the perforated roof panels in such a manner as to prevent any insulation from filtering through the perforations into the passenger compartment. The space from the bottom of the side windows to the floor level shall be completely covered with a minimum 1-½ inch thick layer of fiberglass insulation or acceptable equivalent.

The rear wall of bus from the bottom of rear windows to the floor level shall be completely covered with a minimum 1-½ inch thick layer of fiberglass insulation or acceptable equivalent. The firewall area of the bus shall also be insulated against engine noise, heat loss and fire penetration in the event of an engine fire.

DOORS

****NOTE:** All bus configurations shall be equipped with vandal prevention locking securement system that meets all FMVSS Standards. For the emergency door, slide-locks or similar devices are required; removable keys or removable plugs are not acceptable, since they could be lost and then prevent bus operation.

ENTRANCE DOOR - The entrance door shall be located at the front of the bus and on the driver's right. Entrance door shall be air operated on all chassis, panic free, outward opening under control of driver and so designed as to prevent accidental opening. The door switch is to be mounted to the left of the driver seat adjacent to the warning light switch. Door control mechanism shall be located overhead of door and concealed behind a removable panel and be secured with easily removed fasteners. Door shall seal against a stationary rubber and bottom step edge. An emergency release properly identified and located inside the body, forward of the entrance door is required. When activated, it releases pressure on the entrance door mechanism so that it may be pushed open if the driver's control is in the closed position. Entrance door shall be made of steel or aluminum. It shall be securely hinged with approved piano type hinges, two point steel pins, bronze bushing and/or bearing hinges or pivots. It shall be fastened to the adjoining member and shall be provided with suitable weather stripping top and bottom to prevent leaks. Minimum vertical clearance shall be 73 inches. An exterior handle for operating outward opening doors is required. A suitable safety pad shall be installed on interior of door header. Front and rear entrance door leafs to be sealed where door shafts extend into body to prevent dust and contamination from entering door actuator area. A decal shall be affixed adjacent to the emergency release valve giving instructions on the safe operation of the release valve.

The location of the decals is to be approved upon inspection of pilot model. (Decal to include explicit instructions for the operation of door release valve in an emergency and normal situation.)

EMERGENCY DOOR - An emergency door shall be located in the center of the rear of the body. It shall have a minimum horizontal clearance of 24 inches and a minimum vertical clearance of 48 inches. Door shall be hinged on the right side (when facing bus from rear) with an approved type of hinge meeting FMVSS 217 requirements. It shall open outward and shall be designed to open from both inside and outside of bus. Door should be equipped with a metal or approved strap doorstop, which shall limit its opening to a minimum of 95 degrees. A suitable safety pad shall be installed on interior of door header that will provide padding for vertical and horizontal surfaces. The words "EMERGENCY DOOR" shall be lettered on or above door on inside. Rear emergency door and side emergency door (if required by FMVSS 217) must be equipped with a hold open device which complies with FMVSS 217.

The emergency door is to be equipped with a gear and rack-fastening device or equivalent. Rack shall be 1-¼ inches by 5 ½ inches by 3/8-inch steel and shall be designed for 1 ¼ inch of travel in locking. Rod for operating lock should be a minimum of ½ inch by 4 ¾ inches long with non-detachable handles.

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REARSCOPE LENS - All buses shall be equipped with a Rearscope prismatic lens. This lens is to be mounted on the rear door upper glass area with the recently updated manufacturer's current and best mounting system. Materials to be a solid acrylic – reversing lens (size 14" x 14"),

SAFETY ROOF VENTS - All buses except 41-passenger shall be equipped with two roof hatch-type emergency exits: one to be located in the front 1/3 of the body and one to be located in the rear 1/3 of the body. The 41-passenger bus shall have one roof vent centrally located. Hatches must meet the following:

1. Shall comply with all requirements of FMVSS 217 for emergency exits. Note:
2. Simple release handles shall be provided permitting operation as emergency exit(s), accessible inside and outside the vehicle.
3. All emergency exits shall be marked with instructions for proper use and all emergency exits must be outlined with reflective tape which meets FMVSS 217.
4. Hatch to be supported on all four sides by structural bracing.

Hinged low profile roof escape hatch shall include an internal and external release mechanism and a buzzer (audible warning tone not allowed) which alerts the driver when the hatch is open. Hatch to be secured with adhesive to eliminate leaking. Specialty Model 9245-0200 or 9245-0300.

WINDOWS AND WINDSHIELD

SIDE WINDOWS - There shall be installed on each side of the body an adjustable split sash window between each framing post. Bottom sash shall be stationary with a minimum clear vertical opening of not less than 12 inches. The 12-inch clear vertical opening would be accomplished by lowering the top sash. A finger touch type opener shall control window opening.

Window visors/drip rail are to be provided for all side windows. All side passenger windows shall be tinted glass as per requirements in Glass Section.

EMERGENCY WINDOWS -The minimum number of push out windows (location to be approved upon inspection of pilot model) must be installed in order to meet FMVSS 217. The same number of windows should be installed on each side. All push out windows must be marked with reflective tape which complies with FMVSS 217 and be of the side-hinged design. Use yellow tape on yellow buses, and white tape on all other colors of buses. Instructions to operate emergency exit windows shall be permanently affixed to both the inside and outside of the window glass. Both sets of instructions must be legible from the inside of the bus. Instructions shall be clear and concise for the operation of the emergency window handles. The words "EMERGENCY EXIT" to be lettered on inside at top of windows.

DRIVER'S WINDOW - There shall be installed to the left of the driver a window with a sliding sash, easily operated from the driver's seat, and which is to include a metal locking device. Adjoining the ventilator sash, there shall be a window, which will permit easy exit in case of emergency. Glass used in driver's window is to be installed in sash of the same quality as side windows.

REAR DOOR WINDOWS - There shall be installed in the rear door, two windows, which are set solid in a suitable and waterproof manner. The upper window shall have a minimum glass area of 400 square inches and the bottom window shall have a glass area of approximately 350 square inches. Rear door glass is to be tinted same as indicated below

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REAR WINDOWS - There shall be installed at the rear of the body on each side of the emergency door, a window set solid in a suitable and waterproof manner-to be tinted same as side passenger windows.

ENTRANCE DOOR WINDOWS - There shall be installed in each section of the entrance door one or two glasses.

GLASS QUALITY - All glass used in the body shall be of the laminated or tempered safety type conforming to requirements of the American Safety Code for Safety Glazing Materials. All glass should be legibly and permanently marked with safety code.

WINDSHIELD GLASS - The glass in windshield shall be heat-absorbent, laminated plate. It shall have a horizontal gradient band starting slightly above the line of the driver's vision and gradually decreasing in light transmission to 20 percent or less at top of windshield.

WINDOW AND DOOR GLASS - The glass used in the doors and windows shall be of the AS-2 quality meeting FMVSS 205.

Glass shall be high quality tinted safety glass.

****NOTE:** Percentage of light transmission shall be as specified below. "Light transmission" means the amount of natural light transmitted through the glass:

Side Windows: 26% -31% light transmission
Driver's Window: 70% - 78% light transmission
Rear Door Windows: 50% - 53% light transmission
Rear Windows: 26% - 53% light transmission
Entrance Door Windows: 70% - 76% light transmission

BATTERY CARRIER

The body shall have a battery carrier with a pull-out roller bearing sliding tray located under the body floor with a lockable access door through the left body skirt panel. (All locks keyed the same.) Carrier must be protected against water and dirt and should have a drain shield over top of door. Inside of carrier should be primed and painted with (1) asphalt varnish, (2) acid resistant paint, or (3) E-coat primer with powder coat paint. Battery is to be fastened to pull-out roller bearing sliding tray for easy servicing and sliding tray is to be provided with locking device to securely hold it in place in the battery carrier. Battery box shall - be approximately 14 inches high x 25 inches wide x 16 inches deep. Battery box shall be capable of accommodating three (3) BCI Group 31 batteries with a total of no less than 1900 CCA. Battery door shall be lockable and keyed the same as any other lockable access panels and have metal pin-style hinge. The battery compartment door shall be identified with the word BATTERY in 2-inch Black lettering.

BUMPER (REAR)

REAR BUMPER SIZE - The rear bumper shall be of pressed steel channel at least .1875 + or - .005 inch in thickness and minimum 8 inches (high). It shall be wrapped around the back corners of the bus and it is to extend forward a minimum of 12 inches, measured from the rear most point of the body at the floor line. Rear bumper shall be equipped with 2-inch yellow diagonal Reflexite or 3M yellow for yellow bus, white for activity buses.

REAR BUMPER ATTACHMENT - The bumper shall be attached to the chassis frame in such a manner as to be easily removed and be so braced as to develop the full strength of the bumper section. This is also to include rear or side impact and shall be so attached as to prevent hitching of rides. Rear bumper shall extend beyond the rear most part of the body surface at least one inch, measured at the floor line.

SPECIFICATION PAGE 29

MIRRORS

INTERIOR MIRROR - There shall be securely installed on the windshield header a 6"x30" driver-adjustable rearview mirror (Tiger Model # 1444, Tiger Model # 1449, or Rosco Lever Lock Model 630LL) so located as to give the driver a clear view of the interior of the bus and the road behind. Interior mirror must be mounted securely enough to prevent mirror vibration over the life of the bus. Securement to be approved at pilot model. Manufacturer and model number shall be attached to mirror.

REAR VIEW MIRROR SYSTEM - There shall be installed on each side distortion-free glass mirrors. Mirrors shall be mounted on both the left and right side of the bus in an anodized or etched aluminum frame. Mirrors shall be fully adjustable so as to give the driver a clear view of the rear wheels of the bus and be mounted in accordance with FMVSS 111. The rear vision mirror system shall be capable of providing a view along the right and left sides of the vehicle which will provide the driver a view of the rear tires at ground level, and a minimum distance of 200 feet to the rear of the vehicle. Mirror system shall be Mirror Lite Super Double Nickels or Rosco Open View ES Mirror System, heated (all models), with remote controls. Both mirror heads must be of similar size and viewing area. Switch must be rocker type – no joystick.

****NOTE:** The mirror manufacturer and model number shall be stamped or permanent vinyl tag attached to mirror housing.

CROSSOVER MIRROR SYSTEM - There shall be installed on each front fender of the chassis one heated mirror. These mirrors shall be mounted on the front corners of the hood assembly. These mirror brackets shall have sufficient supports (steel plate or approved equivalent) located on the inside of the hood to prevent the fasteners from pulling through the hood assembly (Rosco Hawk-Eye Model 2365H).

Note: The mirror manufacturer and model number shall be stamped or permanent vinyl tag attached to mirror housing.

****NOTE:** The heating elements in rearview and crossover mirrors must all be controlled by a single momentary switch incorporated with a 15-20 minute timer located left of driver.

ACCESSORIES

SUN VISOR - There shall be installed on the windshield header an interior sun visor which is double bracketed, adjustable, and not less than 6 inches x 24 inches in size. Visor is to be mounted in a manner that will not interfere with opening and closing of the overhead storage compartments and centered with steering wheel and driver seat.

WINDSHIELD WIPERS – The bus shall be equipped with two heavy-duty electric windshield wipers. The wipers shall be equipped with one (1) or two (2) windshield wiper motors. The design of the wiper shall be such to afford the maximum wiped area and good driver view. If a single wiper motor is used, the system shall meet the requirements of SAE standard J198. Wiper motor(s) shall have a minimum of two (2) speeds with intermitting feature, operated by a single switch. Electric powered windshield washers shall be installed as per FMVSS 104 to operate through "wet" wiper arms, operated by the same switch.



LICENSE PLATE HOLDERS – Two license plate holders shall be located on the rear of the body with indentions on left and right sides. Holes for license plates shall be bored on the left and right sides.

SAFETY INFORMATION LICENSE PLATE – A safety information license plate shall be mounted on the **RIGHT** side license plate holder. The plate will be supplied by SCDE and installed by vendor.

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FIRST AID KIT - There shall be installed a Grade A first aid kit in a transparent box which shall contain the following contents:

4-inch bandage compresses	2 pkg.
2-inch bandage compresses	2 pkg.
1-inch adhesive compress (16 per pkg.)	2 pkg.
40-inch triangular bandage with two safety pins	2 pkg.
Non-latex exam gloves 2 pair (1 medium, 1 large)	

First aid kit to be secured in "Safety Equipment Storage Box" and is to include breakable tamper seal.

FIRE EXTINGUISHER - One 5-pound dry chemical stored pressure type with pressure gauge meeting UL and U.S. Coast Guard requirements is required. Fire extinguisher shall have an all metal discharge head and valve (no plastic valves). The fire extinguisher is to be secured in "Safety Equipment Storage Box" in a universal mount that will accept any 5 lb. fire extinguisher. In addition the fire extinguisher shall be labeled: Property of South Carolina Public Schools.

WARNING DEVICES - Each school bus shall contain at least three reflective triangle road-warning devices enclosed in a storage box which is mounted in the "Safety Equipment Storage Box" and must meet requirements of FMVSS 125.

BELT CUTTER - A Tie-Tech belt cutter shall be installed on all school buses in the side pouch on left side of driver seat cushion.

BODY FLUID CLEAN-UP KIT - Each bus shall have a removable and moisture-proof body fluid clean-up kit accessible to the driver. It shall be properly mounted and identified as a body fluid clean-up kit in a transparent box.

Kit shall contain:

- 1 - 2 oz. package T.I.L.S.C. powder, sanitizes-deodorizes-encapsulates
- 1 - Odor reducing mask
- 1 - pr. - non-latex exam gloves (large)
- 2 - Antiseptic wipes
- 2 - Paper crepe towels
- 1 - Scraper
- 1 - Plastic disposal bag w/scoop and tie

Body fluid clean-up kit to be secured in the "Safety Equipment Storage Box" and is to include breakable tamper seal.

OVERHEAD STORAGE COMPARTMENT - A lockable compartment, separate from the safety equipment storage box, shall be located left of driver over side window or in other approved location. Compartment is to have a hinged door and metal prop rod is required.

SAFETY EQUIPMENT STORAGE BOX - Each bus shall be equipped with a safety equipment storage box of sufficient size to house the fire extinguisher, first aid kit, body fluid

clean-up kit and road warning triangles. Each item in the box should be easily accessible and this compartment shall be located in the front bulkhead. In the event structural bracing will not allow space for safety equipment in the specified location, the storage box shall be located left of driver over side window. The approved location shall not interfere with the driver fan. Outside lid of box is to be lettered in 2" vinyl lettering with the following "SAFETY EQUIPMENT INSIDE".

All latches shall be equipped with locks, all keyed the same as other lockable compartments, and all locks shall be attached to the vehicle warning buzzer and ignition interlock system.

The compartment door shall be hinged and metal prop rod is required.

SPECIFICATION PAGE 31

WINDSHIELD STEPS - There shall be installed on each side of the body on the lower section of the cowl, a folding windshield step and a suitably located handle for easy cleaning of windshield. Handle may be either chrome-plated, black poly material, or painted National School Bus Yellow.

FUEL FILLER OPENING COVER - A latch able door of 20-gauge metal is to be installed over fuel filler opening on side of body. The door must be held in the open and closed positions with a spring device. A suitable panel in the body floor shall provide access to the fuel sending unit and fuel lines. Fuel capacity shall be permanently labeled on the inside of fuel door.

CROSSING CONTROL ARM - An air-operated polycarbonate crossing control arm shall be mounted on the right end of front bumper and operated through stop arm switch in conjunction with a switch mounted on front door control. Arm shall extend approximately 5 ½ feet when in operation. Crossing arm is to have an independent solenoid valve and regulator (Specialty Model 28000 series air operated or Specialty 8100 series). An electro-magnetic mount (or other approved retention mechanism; NOTE: approval must be requested no later than 10 days before bid opening) shall be installed on the left side of the front bumper that secures the crossing arm stationary when the ignition switch is in the on position. Arm shall not exceed 90 degrees when fully deployed and be parallel to ground. Magnetic mount shall be Specialty Model 8101 or equivalent. Note: Crossing control arm not required on activity buses.

DRIVER'S FAN - A 12 volt electric fan shall be installed in the driver's vicinity or a suitable automotive style ventilating system providing air conditioning and heat through ducted vents in the driver's compartment shall be provided. (Standard dashboard ducting for air conditioning may be eliminated if driver's electric fan is provided.) The driver's fan shall have a separate switch with high, low and off positions. The fan shall be a Bergstrom motor # 202270 having a metal housing, mounting bracket, fan guard, and blade. Fan shall be fully adjustable and not block view of right side rear view mirror.

PASSENGER ADVISORY SYSTEM – Each school bus shall be equipped with a passenger advisory system that is armed when the red lights are turned on at first passenger stop. If the driver attempts to exit the bus prior to deactivation procedures, the horn shall sound immediately. The proper procedure for deactivation is by placing the ignition key in the “OFF” position and then pressing a button located on the rear bulkhead on driver's side of bus prior to opening passenger door to exit. The deactivation device shall be tamper-proof such that it cannot be disabled by students or other passengers. Explicit instructions for operating this system shall be installed above entrance door. Instructions shall be on a plastic type material that will adhere to the applied surface.

****NOTE:** Passenger advisory system is not to sound the horn unless passenger door or rear emergency door are opened prior to system deactivation, at which time the immediate sounding of horn shall occur. Timer delays of any type are prohibited.

SPLASHGUARDS – Each school bus and activity bus shall be equipped with rubber front and rear splashguards to prevent debris from being thrown under the bus body. Width to be approved at pilot model inspection.

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CHASSIS MOUNTING

CHASSIS PREPARATION - In preparing the chassis frame for body mounting, rivet heads shall not be removed except on the extreme rear cross member and then only when necessary to move rear cross member to conform to body length. If tail pipe brackets must be removed due to body obstructions, they shall be replaced with new ones of equal strength as supplied by the chassis manufacturer.

CHASSIS INSTALLATION - The bid price shall include mounting the body upon the chassis. The body shall be securely attached to each chassis side rail. At the front and rear ends of the body on each chassis side rail there shall be installed a through bolt of not less than seven-sixteenth inch in diameter. Bolts to be grade 5 with S.A.E. threads and lock nut. All attachments shall be made at main body sills. In addition to the above required tie downs, the following minimum number of approved type tie downs will be required: 41 passenger - 6; 54 passenger - 8; and 66 passenger - 10. Bolts for these attachments shall be not less than 7/16 inch in diameter with S.A.E. threads and lock nuts.

Rubber and fiber inserts, equal to or thicker than chassis rivet heads, shall be securely attached to each body sill and installed at all points of contact between sills and chassis.

At any point where body sill sits on a rivet head, the rubber and fiber insert shall deform so that floor will be smooth.

METAL TREATMENT AND PAINTING

METAL TREATMENT - All metal used in construction of bus body is to be mill applied zinc-coated, copper bearing steel, aluminum-coated, or treated by an equivalent process before bus is constructed. (Included is such items as structural members, inside and outside panels, floor panels and floor sills; excluded are door handles, grab bar handles, stanchions, interior decorative parts, and other interior plated parts.) All structural members lighter than 12-gauge, wheelbase and step well, are to be mill applied zinc-coated steel or equivalent. All metal parts that are to be painted shall be, in addition to above requirements, chemically cleaned etched, zinc-phosphate coated, and zinc-chromate or epoxy-primed or conditioned by equivalent process. Documentation to be provided upon request. In providing for these requirements, particular attention shall be given to lapped surfaces, welded connections of structural members, cut edges, punched or drilled hold areas in sheet metal, closed or box sections, non-vented or non-drained areas, and surfaces subjected to abrasion during vehicle operation.

****NOTE:** 10 year no-rust-through warranty is required on all exterior sheet metal, sheet metal flooring components, and rub rails (if metal).

PAINT - All paint shall be unleaded. The body, hood, fenders, and cowl of all school buses shall be painted with National School Bus Yellow polyurethane paint which meets Federal Standard No. 595a, color 13432. The same brand of paint must be used on the body and chassis. Bumper, frame, driveline, and wheels shall be painted with jet-black enamel, e-coated

or powder coated. The paint shall be covered by a 5 year unlimited-mileage warranty against all defects in materials and workmanship.

EXTERIOR PAINT - The exterior of the complete school bus body shall be painted with National School Bus Yellow polyurethane per Federal Standard No. 595a. The same brand of paint must be used on the body and chassis. The applied primer and polyurethane shall yield a dry film thickness of 2 to 3 mils. A 1 ½-inch thick black border shall be painted around the flashing stoplights with approved type polyurethane or high grade black vinyl overlay. Rear bumper shall be painted black and shall be equipped with 2-inch yellow diagonal Reflexite or 3M. School bus rub rails shall be painted National School Bus Yellow same as bus body. Activity bus colors may vary. Activity bus rub rails may be painted different colors (no decals).

Add one (1) full length reflective stripe minimum 1-3/4" width, position reflective strip below floor level guard rail. Yellow on yellow bus, white on activity buses.

SPECIFICATION PAGE 33

INTERIOR PAINT - The entire interior paneling of the bus, except the sections of aluminized steel and /or clear coated metal, shall be painted. Paint color to be approved. All other interior items such as the heater, instrument control panel, seat frames, chassis cowl and modesty panel may be painted a compatible color. One prime coat and finish coat shall be required.

FLOOR AND STRUCTURAL METAL PAINT - The underside of the floor, including the chassis metal fenders and cowl and all other exposed structural metals used in the body, shall be painted with black enamel or undercoated. Air brake control valves and brake lines are color-coded and are not to be undercoated.

ACTIVITY BUS PAINT - Activity bus paint must meet the same standards as the school bus paint except the bus manufacturer shall be required to paint the hood and cowl to match final body color. This cost shall be included in bid price. Bus bodies shall be painted one solid color with appropriate lettering from manufacturer's selection of standard colors.

MANUFACTURER LOGO - No manufacturer logo or names are permitted on the bus exterior except a small nameplate may be installed on the bus exterior in a location to be approved upon inspection of the pilot model. (Note: includes activity bus body).

LETTERING

LETTERING TYPE - Lettering and numbering shall conform to "Series B of Standard Alphabets for Highway Signs".

VINYL LETTERING - The material should be a premium 2-mil high gloss cast vinyl for solvent resistance, fade resistant and withstand severe weather and handling conditions. The vinyl will have permanent acrylic adhesive with an adhesion factor of 4/lbs. per square inch and should not lose its shape or adhesion due to extreme temperatures from -40 to 100+ degrees Fahrenheit. The backing paper sheet for the vinyl should be standard #78 lb. Kraft liner.

INTERIOR LETTERING- Above the windshield or other approved acceptable location; the words "SEATING CAPACITY" shall be in letters at least 1 inch high. The seating capacity will be based upon the number of seats installed and listed as follows:

<u>14 Seats</u>	<u>18 Seats</u>	<u>22 Seats</u>	<u>24 Seats</u>
K-5 (42Pupils)	K-5 (54 Pupils)	K-5 (66 Pupils)	K-5 (72 Pupils)
6-8 (35 Pupils)	6-8 (44 Pupils)	6-8 (54 Pupils)	6-8 (60 Pupils)
9-12 (28 Pupils)	9-12 (36 Pupils)	9-12 (44 Pupils)	9-12 (48 Pupils)

****NOTE:** Any lift-equipped bus must reflect the seating capacities for K-5, 6-8, and 9-12 plus 2 wheelchair positions. Activity bus capacities must be adjusted for optional seating configurations.

****NOTE:** K-5 capacity may need to be adjusted due to the small rear seat.

SCHOOL BUS LETTERING

SIDE LETTERING – SCHOOL BUS - The words "South Carolina Public Schools" shall be on each side of body in letters 6 inches high. The county number assigned to bus shall be on each side of the bus in an approved place in numerals 6 inches high. The name of the county or school unit to which bus is assigned shall be placed below the words "South Carolina Public Schools" on each side in letters 3 inches high.

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FRONT LETTERING – SCHOOL BUS - On the roof panel of outer visor shall be the words "SCHOOL BUS" in letters not less than 8 inches high. County number assigned to bus shall be on front of body or chassis in an approved location in letters 6 inches high. "SCHOOL BUS" shall be on retro-reflective high intensity material (Reflexite or 3M).

REAR LETTERING – SCHOOL BUS - On the rear of the body "SCHOOL BUS" shall be in letters not less than 8 inches high. On or over the emergency door shall be the words "EMERGENCY DOOR" in letters 2 inches high. "SCHOOL BUS" shall be on retro-reflective high intensity material (Reflexite or 3M). County number assigned to bus shall be centered on rear door in letters 6 inches high.

****NOTE:** See "Disability Identification Symbol" section for proper placement of ADA symbols.

ACTIVITY BUS LETTERING

SIDE LETTERING – ACTIVITY BUS - The applicable school system name is to be on each side of the body in letters approximately 6 inches high; such to be designated on the purchase order or by the owner.

FRONT LETTERING – ACTIVITY BUS - On the roof panel of outer visor shall be the words "ACTIVITY BUS" in letters 8 inches high. County number assigned to bus shall be on front of body or chassis in an approved location in letters 6 inches high. "ACTIVITY BUS" to be in retro-reflective high intensity or equal material (Reflexite or 3M).

REAR LETTERING – ACTIVITY BUS - On the rear of the body, "ACTIVITY BUS" shall be in letters 8 inches high. On or over the emergency door, shall be the words "EMERGENCY DOOR" in letters 2 inches high. "ACTIVITY BUS" to be on retro-reflective high intensity material (Reflexite or 3M). County number assigned to bus shall be on rear in letters 6 inches high.

NOTE: Any particular bus number and/or color lettering will be designated on the purchase order or by the owner. Bus bodies to be painted standard one solid color with appropriate lettering from manufacturer's standard body color selections.

POWER LIFT (when requested)

All lift-equipped buses shall be equipped with Braun NL917series or Ricon S5510 series. Lift must meet all ADA regulations and FMVSS 403 and 404.

****NOTE:** Front or rear mount pump to be determined by bus manufacturer.

- I. The lift shall have a rated lifting capacity of 800 pounds and shall have been successfully tested to a minimum static load of 2400 pounds. Lift to be of the gravity down power-up type.

2. When the platform is in the fully up position, it shall be locked in position mechanically by means other than a support or lug in the door.
3. Controls shall be provided that enables the operator to easily open and close the lift door from inside the bus. The door control mechanism and handle shall be located adjacent to the lift door in a readily accessible location. The handle shall be padded. The lift mechanism must be operable from either inside or outside the bus. There shall be means of operating the lift in the event of power failure.
4. Power lifts shall be so equipped that they may be manually raised in the event of power failure of the power lift mechanism.

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5. Lift travel shall allow the lift platform to rest securely on the ground.
6. All edges of the platform shall be designed to protect the wheelchair, wheelchair occupant's feet and operator's feet from being entangled during the raising and lowering process.
7. Platform (minimum size of 33 inches in width and 51 inches in length) shall be fitted on both sides and rear with full width shields (which extend above the floor line of the lift platform).
8. A restraining device shall be affixed to the outer edge (curb end) of the platform that fully extends to ground level.
9. A self-adjusting, skid-resistant plate (ramp) shall be installed on the outer edge of the platform to minimize the incline from the lift platform to the ground level. This plate, if so designated, may also suffice as the restraining device described in the above item. The lift platform must be skid resistant.
10. A circuit breaker or fuse shall be installed between the power source and lift motor.
11. The lift mechanism shall be equipped with adjustable limit switches or by-pass valves to prevent excessive pressure from building in the hydraulic system when the platform reaches the full up position.
12. Lights shall be provided in the wheelchair area, over lift mechanism and exterior position (location to be approved upon inspection of pilot model). Doorways in which lifts are installed shall have, when a lift is to be used, illumination sufficient to light the entrance, and on the lift, when deployed at the vehicle floor level or at ground level.

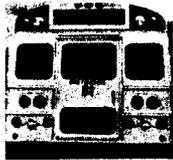
Note: Lighting must meet the above requirements and the FMVSS requirements.

13. All sharp edges in power lift area, including door, shall be properly padded.

****NOTE:** Rear heater housing edges to be rounded or may have a rounded cap securely and permanently affixed thereto. Exposed sharp edges are not acceptable.

14. All school buses equipped with a power lift shall provide a 30-inch aisle leading from any wheelchair/mobility aid position to at least one emergency door and the lift area.

DISABILITY IDENTIFICATION SYMBOL – Buses with power lifts used for transporting individuals with disabilities shall display below the window line the International Symbol of Accessibility. Such emblems shall be white on blue background, shall be approximately four (4”) to six (6”) inches in size, and shall be of high-intensity reflective material meeting U.S. Department of Transportation’s Federal Highway Administration (FHWA) FP-85 Standards. Location of symbols to be as follows: (A) on the rear door adjacent to bus number; (B) on the right lettering belt, rear of entrance door after bus number; (C) fore or aft of the stop sign.



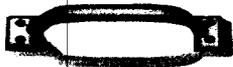
SPECIFICATION PAGE 36

FIRE BLANKET - Each lift-equipped school bus shall be equipped with a Tietech Model #1007 fire blanket. It shall be a 62" x 80" wool blanket. The blanket shall be enclosed in a non-metallic pouch. It shall be identified on the front as to the contents. The pouch shall be mounted on the left side interior wall in the buffer zone, behind the left rear seat as close to the rear entrance door opening as practical on a horizontal and vertical line no higher than the horizontal metal portion of the seat frame.



POWER LIFT DOOR - The door shall be located on the right side (when facing bus from the rear) of the bus. It shall have a minimum horizontal clearance of 42 inches and a minimum vertical clearance of 58.5 inches. Door shall be hinged on the forward side with an approved type of hinge and open outward meeting FMVSS 217 requirements. Door is to be designed to open and close from inside of the bus. Door release and opening and closing device to be approved upon inspection of pilot model. Lift door closing handle to be equipped with a stop to prevent handle from swinging out of reach of operator during lift operation. On interior lift door latch assembly, the handle in closed position is to be horizontal positioned and pointed toward rear of bus, and in the open position is to be vertical with the handle pointing upward. Latch must be of the same design as the rear emergency door latch. Lift door shall be metal, double wall and shall be provided with suitable weather stripping to prevent leaks. An audible buzzer shall sound when the lift door is opened and will deactivate when the lift door reaches the fully opened position. A red light shall be activated in the dash area (location to be approved) at all times that the lift door is opened.

****NOTE:** Must have handle which is easily reachable from inside the bus to assist in closing door during latch procedure.



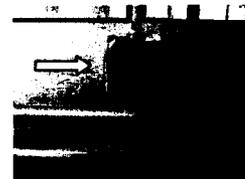
WHEELCHAIR ANCHORS AND OCCUPANT SECUREMENT SYSTEM

1. The Mobility Aid Securement and Occupancy Restraint System shall be designed, installed and operated to accommodate passengers in a forward facing orientation within the vehicle.
2. For each Mobility Aid Securement System provided, a Type 2, three point occupant restraint system consisting of a lap (pelvic) belt and a shoulder (upper torso) belt complying with all applicable provisions of 49CFR, Part 571, shall be provided for use by mobility aid users.
3. The Occupant Restraint System shall be equipped with a single point, push-button "quick disconnect" for the lap belt and the lower end of the shoulder belt, to provide immediate release of the occupant in the event of an emergency evacuation.
4. The shoulder belt system shall provide a vertical height adjuster with 12 inches of vertical adjustment for proper placement of the shoulder belt.

5. The Mobility Aid Securement System shall utilize four adjustable securement strap assemblies that attach to structural members of the mobility aid at four separate points: two strap assemblies for attachment to the front of the mobility aid, and two strap assemblies for attachment to the rear of the mobility aid.
6. Each front securement strap assembly shall be capable of withstanding a minimum static load force of 5,000 pounds. Each rear securement strap assembly shall be capable of withstanding a minimum static load force of 6,000 pounds.
7. The Mobility Aid Securement System shall utilize positive-locking anchorage and attachment hardware to prohibit accidental or inadvertent release of the system.

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8. The Mobility Aid Securement Strap Assemblies shall be composed of a different size or color of material than the Occupant Restraint Belts to provide quick visual identification of the two systems and to distinguish the separate function.
9. Each of the individual securement straps and restraint belt assemblies shall be marked with the manufacturer's name, part number, month and year of manufacture.
10. The Mobile Aid Securement and Occupant Restraint System shall be subjected to, and successfully pass, a dynamic 30mph/20g force Impact Test per Society of Automotive Engineer's SAEJ2249 Wheelchair Tie down and Occupant Restraint Systems for use in Motor Vehicles document. The testing shall be performed by experienced personnel using an impact simulator and proven ability to provide reliable, accurate and repeatable results. The mobility aid used for testing purposes shall be a powered wheelchair with batteries (or weights to simulate batteries) that weighs a minimum of 150 pounds, or an approved surrogate. A 50th percentile male test dummy, weighing a minimum of 165 pounds, shall be used in the test. Test results shall be provided upon request.
11. A storage container shall be provided for each securement station to allow for clean storage of the system straps and belts when not in use. A separate space within the container shall also be provided to insert detailed operation instructions for use of the entire system.



OCCUPANT SECUREMENT

All wheelchair positions shall be equipped with a "Type II" occupant protection and securement system meeting the requirement of FMVSS 209 and 210. The design of the securement system shall reference, as a standard, the Surelock or Q'Straight four point wheelchair anchorage part number FF612-4c-7 or -9
 Continuous button tracking (4 pieces) for wheelchair and passenger securement is required from rear of passenger seat forward of wheelchair area to rear wall of bus, which meets all ADA requirements.

NOTE: All lift-equipped school buses shall be equipped with shoulder attachments for two (2) wheelchair positions and have reinforcement full length of bus to allow additional button type track installation (not to include flat floor buses).

(See Flat Floor Power Lift School Bus section for flat floor requirements.)

FLAT FLOOR - POWER LIFT SCHOOL BUS (Additional/requirements/specifications and/or modifications) – “INTENTIONALLY DELETED”

BODY DESIGN FOR FLAT FLOOR CONFIGURATION - The floor shall be designed to provide a solid platform for the flat floor body configuration that allows the elimination of wheelhouse intrusion.

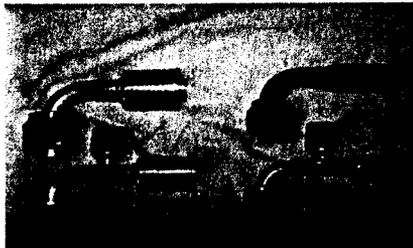
This floor design shall have been successfully crash tested to provide compliance with FMVSS. In addition, the floor shall be equipped with (4 pieces) continuous aluminum button tracks full length of bus floor to include wheel chair securement and CSRS seats. Button style tracking shall be installed continuous length of bus above all windows on flat floor buses for shoulder belt attachment. This will provide maximum flexibility in seating and wheelchair positions. Fully seat remainder of bus with 39-inch seats and leave space for two wheel chair positions.

**NOTE: Flat floor buses shall come equipped with securement belts for two wheelchairs. Rivet heads or other protrusions inside the mounting track shall be low enough to allow attachment in any position in the track.

SPECIFICATION PAGE 38

AIR CONDITIONING

Air conditioning shall be provided and installed on all configurations of South Carolina school buses. Air conditioning should be capable of reducing school bus inside air temperature by 20 degrees F within a 20-minute time frame. Test results shall be provided upon request. All buses shall be equipped with one (1) inside roof-mounted free blow type unit mounted in passenger compartment and one (1) flush mounted unit in rear bulkhead or inside roof mounted free blow type on side in rear portion of passenger compartment (in approved location) with driver controlled thermostat for each unit located left of driver except for the 41-passenger size, which shall be equipped with one (1) inside free blow type unit mounted at the midpoint of the passenger compartment from front to rear of bus with driver controlled thermostat located left of driver. Drawings will be required showing exact location of units prior to approval being granted for location. Optional location for driver controlled A/C Thermostat, for all passenger sizes, shall be dash panel right of driver if bus is equipped with additional ventilation controls in that location. All refrigerant lines located in rear wheel well area shall be shielded by metal protective covering. All refrigerant lines in A/C system shall be assembled using automotive grade crimp style fittings (as pictured below). Barb style fittings with screw or crimp style clamps will not be accepted.



Sight glass required with moisture indicator.

****NOTE:** Carrier, Transair, Rifled, ACC & MCC are acceptable manufacturers. All A/C manufacturers shall use Model # TM21 compressors.

- 41 - passenger – 60,000 BTU minimum
One compressor
One condenser
- 53 - passenger - 96,000 BTU minimum
Two compressors
Two condensers
- 66 - passenger - 120,000 BTU minimum
Two compressors
Two condensers

- 72 - passenger - 120,000 BTU minimum
Two compressors
Two condensers

****NOTE:** Air conditioning is optional on all activity buses.

-----END OF SPECIFICATION-----

TRANSPORTATION CHARGES:

All buses ordered under this contract shall be shipped complete FOB to school bus maintenance facilities as designated by South Carolina Department of education or the ordering entity, as specified on the Purchase Order.

IV. INFORMATION FOR OFFERORS TO SUBMIT

INFORMATION FOR OFFERORS TO SUBMIT -- GENERAL (JAN 2006)

Offeror shall submit a signed Cover Page and Page Two. Offeror should submit all other information and documents requested in this part and in parts II.B. Special Instructions; III. Scope of Work; V. Qualifications; VIII. Bidding Schedule/Price Proposal; and any appropriate attachments addressed in section IX. Attachments to Solicitations. [04-4010-1]

DOCUMENTS REQUIRED WITH BID

Bidder must furnish with the bid the documents listed below.

- (a) Completed questionnaire for each line item offered.
- (b) Scale drawings of body layout, showing all seating positions for all body configurations identified in the bid.
- (c) Drawings of specific components or subassemblies, as may be required elsewhere herein.
- (d) Calculations, as may be required elsewhere herein.
- (e) Manufacturer's unaltered published literature describing standard chassis and body, including listing of standard exterior colors. It is understood that the standard bus described in such literature may not be exactly the same as the equipment offered herein.
- (f) Listing of locations of stocks of repair parts for chassis, powertrain, and body.
- (g) Warranty specimens, if requested elsewhere herein. If not so requested by execution of bid, bidder agrees that any such warranty specimens included with the bid will be considered for informational purposes only, and will not be considered in the determination of the contract award.
- (h) Lists of equipment to be furnished with the vehicle(s) are NOT required, and if provided with the bid will not be considered in the determination of the contract award.
- (i) Any other documentation that may be elsewhere required herein.

Bids which do not comply with these requirements may be subject to rejection.

****NOTE:** The State reserves the right to request additional drawings and documentation as it deems necessary. Any additional drawings or documentation requested must be provided within 5 days of request at no charge to the State.

MINORITY PARTICIPATION (JAN 2006)

Is the bidder a South Carolina Certified Minority Business? Yes No

Is the bidder a Minority Business certified by another governmental entity? Yes No

If so, please list the certifying governmental entity: _____

Will any of the work under this contract be performed by a SC certified Minority Business as a subcontractor? Yes No

If so, what percentage of the total value of the contract will be performed by a SC certified Minority Business as a subcontractor? _____

Will any of the work under this contract be performed by a minority business certified by another governmental entity as a subcontractor? Yes No

If so, what percentage of the total value of the contract will be performed by a minority business certified by another governmental entity as a subcontractor? _____

If a certified Minority Business is participating in this contract, please indicate all categories for which the Business is certified:

- Traditional minority
- Traditional minority, but female
- Women (Caucasian females)
- Hispanic minorities
- DOT referral (Traditional minority)
- DOT referral (Caucasian female)
- Temporary certification
- SBA 8 (a) certification referral
- Other minorities (Native American, Asian, etc.)

(If more than one minority contractor will be utilized in the performance of this contract, please provide the information above for each minority business.)

For a list of certified minority firms, please consult the Minority Business Directory, which is available at the following URL:<http://www.govoepp.state.sc.us/osmba/>
[04-4015-1]

V. QUALIFICATIONS

QUALIFICATION OF OFFEROR (JAN 2006)

To be eligible for award of a contract, a prospective contractor must be responsible. In evaluating an Offeror's responsibility, the State Standards of Responsibility [R.19-445.2125] and information from any other source may be considered. An Offeror must, upon request of the State, furnish satisfactory evidence of its ability to meet all contractual requirements. Unreasonable failure to supply information promptly in connection with a responsibility inquiry may be grounds for determining that you are ineligible to receive an award. S.C. Code Section 11-35-1810. [05-5005-1]

VI. AWARD CRITERIA

AWARD BY ITEM (JAN 2006)

Award will be made by individual item. [06-6005-1]

AWARD CRITERIA – BIDS (JAN 2006)

Award will be made to the lowest responsible and responsive bidder(s). [06-6020-1]

AWARD TO MULTIPLE OFFERORS

Award may be made to more than one Offeror.

The State anticipates making award(s) to multiple bidders by individual line item and therefore by individual configuration of bus. "Configuration" means type of bus (school or activity), passenger capacity, floor type (flat or conventional wheel well), with/without air conditioning, and with/without wheel chair lift. Each different configuration is listed as a SEPARATE line item in the Bidding Schedule. There is no guarantee of award to any specific number of bidders.

Award(s) may be considered to:

1. The lowest responsive and responsible bidder for each line item, and
2. Other responsive and responsible bidders whose price is within 4% of the lowest responsive and responsible bid for that same line item.

SPECIAL PRIMARY CUSTOMER NOTICE:

If more than one vendor is awarded a contract for a particular size (capacity) bus, the South Carolina Department of Education, a primary customer for any statewide term contract(s) resulting from this solicitation, will consider the "default vendor" in each school bus size/configuration category to be the one offering the lowest price for that line item. SCDE will then utilize the "default vendor" for its purchases. Also see paragraph below for "Optional Use" provision.

If the lowest priced awarded contract is terminated or non-renewed prior to the last day of the maximum contract period (includes initial term plus all option terms), the remaining contract(s) automatically changes to an "Optional Use" contract(s) for state agencies, including the SC Department of Education, higher education and political subdivisions. Governmental entities, regardless of type, may order via the remaining contract(s) at their discretion. If it is advantageous to the state, however, the remaining contract(s) shall be terminated without penalty/damages on the effective start date of newly solicited contracts. When the higher-priced awarded contract(s) shifts to an "Optional Use" status, the contractor(s) waives any perceived protest rights regarding a new solicitation for school buses on the grounds that they have an ongoing contract(s) for same.

UNIT PRICE – CSRS:

The unit price offered for CSRS seats will be the pricing used to order additional seats and will also be used as the deduct price to replace CSRS seats with conventional seats.

BID EVALUATION

Manufacturer's standard published brochures providing drawings, photographs, colors, warranty information, warranty specimens, or list of equipment to be furnished with the buses and general information about the buses offered will be reviewed by the State for general information purposes, but will not be considered in the detailed technical evaluation of the bid.

FURNISH AND DELIVER AS INDICATED

Low bid by item will be determined by the total for each line item. Bidders are to offer a price for the base bus (without CSRS seats) and CSRS seats separately. The bus price and the cost for the CSRS seats as indicated will be added together to get the overall total for each item. This total price will determine the bid ranking and will be the awarded price for each item. All buses ordered will include 4 CSRS seats unless indicated otherwise.

The unit price offered for CSRS seats will be the pricing used to order additional seats and will also be used as the deduct price to replace CSRS seats with conventional seats.

CALCULATION OF EVALUATED AMOUNT FOR AWARD PURPOSES

The "Base Unit Price" includes all specified items that are not stated at "optional" or "options." This price represents the unit configuration intended to be purchased the majority of the time.

Low bid by item will be determined by the total for each item. Bidders are to offer a price for the base bus (without CSRS seats) and CSRS seats separately. The bus price and the cost for the CSRS seats, as indicated, will be added together to get the overall total for each item. This total price will determine the bid ranking and will be the awarded price for each item. All buses ordered will include 4 CSRS seats unless indicated otherwise

COMPETITION FROM PUBLIC ENTITIES (JAN 2006)

If a South Carolina governmental entity submits an offer, the Procurement Officer will, when determining the lowest offer, add to the price provided in any offers submitted by non-governmental entities a percentage equivalent to any applicable sales or use tax. S.C. Code Ann. Regs 117-304.1 (Supp. 2004). [06-6057-1]

UNIT PRICE GOVERNS (JAN 2006)

In determining award, unit prices will govern over extended prices unless otherwise stated. [06-6075-1]

VII. TERMS AND CONDITIONS – A. GENERAL

ASSIGNMENT (JAN 2006)

No contract or its provisions may be assigned, sublet, or transferred without the written consent of the Procurement Officer. [07-7A004-1]

BANKRUPTCY (JAN 2006)

- (5) Notice. In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish written notification of the bankruptcy to the Using Governmental Unit. This notification shall be furnished within five (5) days of the initiation of the proceedings relating to the bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of all State contracts against which final payment has not been made. This obligation remains in effect until final payment under this Contract. (b) Termination. This contract is voidable and subject to immediate termination by the State upon the contractor's insolvency, including the filing of proceedings in bankruptcy. [07-7A005-1]

CHOICE-OF-LAW (JAN 2006)

The Agreement, any dispute, claim, or controversy relating to the Agreement, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation. [07-7A010-1]

CONTRACT DOCUMENTS and ORDER OF PRECEDENCE (JAN 2006)

- (5) Any contract resulting from this solicitation shall consist of the following documents: (1) a Record of Negotiations, if any, executed by you and the Procurement Officer, (2) documentation regarding the clarification of an offer [e.g., 11-35-1520(8) or 11-35-1530(6)], if applicable, (3) the solicitation, as amended, (4) modifications, if any, to your offer, if accepted by the Procurement Officer, (5) your offer, (6) any statement reflecting the state's final acceptance (a/k/a "award"), and (7) purchase orders. These documents shall be read to be consistent and complimentary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. (b) The terms and conditions of documents (1) through (6) above shall apply notwithstanding any additional or different terms and conditions in either (i) a purchase order or other instrument submitted by the State or (ii) any invoice or other document submitted by Contractor. Except as otherwise allowed herein, the terms and conditions of all such documents shall be void and of no effect. (c) No contract, license, or other agreement containing contractual terms and conditions will be signed by any Using Governmental Unit. Any document signed or otherwise agreed to by persons other than the Procurement Officer shall be void and of no effect. [07-7A015-1]

DISCOUNT FOR PROMPT PAYMENT (JAN 2006)

- (5) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a discount for prompt payment in conjunction with the offer, offerors awarded contracts may include discounts for prompt payment on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the state annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day
[07-7A020-1]

DISPUTES (JAN 2006)

- (5) Choice-of-Forum. All disputes, claims, or controversies relating to the Agreement shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws, or in the absence of jurisdiction, only in the Court of Common Pleas for, or a federal court located in, Richland County, State of South Carolina. Contractor agrees that any act by the Government regarding the Agreement is not a waiver of either the Government's sovereign immunity or the Government's immunity under the Eleventh Amendment of the United States Constitution. As used in this paragraph, the term "Agreement" means any transaction or agreement arising out of, relating to, or contemplated by the solicitation. (2) Service of Process. Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any disputes, claims, or controversies relating to the Agreement; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided as the Notice Address on Page Two or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States mail. [07-7A025-1]

EQUAL OPPORTUNITY (JAN 2006)

Contractor is referred to and shall comply with all applicable provisions, if any, of Title 41, Part 60 of the Code of Federal Regulations, including but not limited to Sections 60-1.4, 60-4.2, 60-4.3, 60-250.5(a), and 60-741.5(a), which are hereby incorporated by reference. [07-7A030-1]

FALSE CLAIMS (JAN 2006)

According to the S.C. Code of Laws Section 16-13-240, "a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty" of a crime. [07-7A035-1]

FIXED PRICING REQUIRED (JAN 2006)

Any pricing provided by contractor shall include all costs for performing the work associated with that price. Except as otherwise provided in this solicitation, contractor's price shall be fixed for the duration of this contract, including option terms. This clause does not prohibit contractor from offering lower pricing after award. [07-7A040-1]

NON-INDEMNIFICATION (JAN 2006)

Any term or condition is void to the extent it requires the State to indemnify anyone. [07-7A045-1]

NOTICE (JAN 2006)

- (5) After award, any notices shall be in writing and shall be deemed duly given (1) upon actual delivery, if delivery is by hand, (2) upon receipt by the transmitting party of automated confirmation or answer back from the recipient's device if delivery is by telex, telegram, facsimile, or electronic mail, or (3) upon deposit into the United States mail, if postage is prepaid, a return receipt is requested, and either registered or certified mail is used. (B) Notice to contractor shall be to the address identified as the Notice Address on Page Two. Notice to the state shall be to the Procurement Officer's address on the Cover Page. Either party may designate a different address for notice by giving notice in accordance with this paragraph. [07-7A050-1]

PAYMENT and INTEREST (MAY 2011)

- (5) Unless otherwise provided in this Solicitation, the State shall pay the Contractor, after the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified herein, including the purchase order, payment shall not be made on partial deliveries accepted by the Government. (b) Unless otherwise provided herein, including the purchase order, payment will be made by check. (c) Notwithstanding any other

provision, payment shall be made in accordance with S.C. Code Section 11-35-45, which provides the Contractor's exclusive means of recovering any type of interest from the Owner. Contractor waives imposition of an interest penalty unless the invoice submitted specifies that the late penalty is applicable. Except as set forth in this paragraph, the State shall not be liable for the payment of interest on any debt or claim arising out of or related to this contract for any reason. (d) Amounts due to the State shall bear interest at the rate of interest established by the South Carolina Comptroller General pursuant to Section 11-35-45 ("an amount not to exceed fifteen percent each year"), as amended. Any other basis for interest, including but not limited to general (pre- and post-judgment) or specific interest statutes, including S.C. Code Ann. Section 34-31-20, are expressly waived by both parties. If a court, despite this agreement and waiver, requires that interest be paid on any debt by either party other than as provided by items (c) and (d) above, the parties further agree that the applicable interest rate for any given calendar year shall be the lowest prime rate as listed in the first edition of the Wall Street Journal published for each year, applied as simple interest without compounding. [07-7A055-2]

PUBLICITY (JAN 2006)

Contractor shall not publish any comments or quotes by State employees, or include the State in either news releases or a published list of customers, without the prior written approval of the Procurement Officer. [07-7A060-1]

PURCHASE ORDERS (JAN 2006)

Contractor shall not perform any work prior to the receipt of a purchase order from the using governmental unit. The using governmental unit shall order any supplies or services to be furnished under this contract by issuing a purchase order. Purchase orders may be used to elect any options available under this contract, e.g., quantity, item, delivery date, payment method, but are subject to all terms and conditions of this contract. Purchase orders may be electronic. No particular form is required. An order placed pursuant to the purchasing card provision qualifies as a purchase order. [07-7A065-1]

SETOFF (JAN 2006)

The state shall have all of its common law, equitable, and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the state with regard to this contract, any other contract with any state department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the state for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. [07-7A070-1]

SURVIVAL OF OBLIGATIONS (JAN 2006)

The Parties' rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses: Indemnification – Third Party Claims, Intellectual Property Indemnification, and any provisions regarding warranty or audit. [07-7A075-1]

TAXES (JAN 2006)

Any tax the contractor may be required to collect or pay upon the sale, use or delivery of the products shall be paid by the State, and such sums shall be due and payable to the contractor upon acceptance. Any personal property taxes levied after delivery shall be paid by the State. It shall be solely the State's obligation, after payment to contractor, to challenge the applicability of any tax by negotiation with, or action against, the taxing authority. Contractor agrees to refund any tax collected, which is subsequently determined not to be proper and for which a refund has been paid to contractor by the taxing authority. In the event that the contractor fails to pay, or delays in paying, to any taxing authorities, sums paid by the State to contractor, contractor shall be liable to the State for any loss (such as the assessment of additional interest) caused by virtue of this failure or delay. Taxes based on Contractor's net income or assets shall be the sole responsibility of the contractor. [07-7A080-1]

TERMINATION DUE TO UNAVAILABILITY OF FUNDS (JAN 2006)

Payment and performance obligations for succeeding fiscal periods shall be subject to the availability and appropriation of funds therefor. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period, the contract shall be canceled. In the event of a cancellation pursuant to this paragraph, contractor

will be reimbursed the resulting unamortized, reasonably incurred, nonrecurring costs. Contractor will not be reimbursed any costs amortized beyond the initial contract term. [07-7A085-1]

THIRD PARTY BENEFICIARY (JAN 2006)

This Contract is made solely and specifically among and for the benefit of the parties hereto, and their respective successors and assigns, and no other person will have any rights, interest, or claims hereunder or be entitled to any benefits under or on account of this Contract as a third party beneficiary or otherwise. [07-7A090-1]

WAIVER (JAN 2006)

The State does not waive any prior or subsequent breach of the terms of the Contract by making payments on the Contract, by failing to terminate the Contract for lack of performance, or by failing to strictly or promptly insist upon any term of the Contract. Only the Procurement Officer has actual authority to waive any of the State's rights under this Contract. Any waiver must be in writing. [07-7A095-1]

VII. TERMS AND CONDITIONS – B. SPECIAL

ACCEPTANCE OF OFFERS 10% BELOW PRICE (JAN 2006)

If the state is offered the exact same item on the exact same terms and conditions as those provided under this contract by a vendor other than the contractor (the "alternate vendor") for a price that is at least ten percent less than the contract price, the state may purchase those items from the alternate vendor if the contractor does not agree to meet the offered price. Any acquisition pursuant to this clause must be documented by the Procurement Officer in sufficient detail to satisfy the requirements of an external audit. [07-7B010-1]

CHANGES (JAN 2006)

(5) **Contract Modification.** By a written order, at any time, and without notice to any surety, the Procurement Officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:

- (a) drawings, designs, or specifications, if the supplies to be furnished are to be specially manufactured for the [State] in accordance therewith;
- (b) method of shipment or packing;
- (c) place of delivery;
- (d) description of services to be performed;
- (e) time of performance (i.e., hours of the day, days of the week, etc.); or,
- (f) place of performance of the services. Subparagraphs (a) to (c) apply only if supplies are furnished under this contract. Subparagraphs (d) to (f) apply only if services are performed under this contract.

(2) **Adjustments of Price or Time for Performance.** If any such change increases or decreases the contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, an adjustment shall be made in the contract price, the delivery schedule, or both, and the contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the Price Adjustment Clause of this contract. Failure of the parties to agree to an adjustment shall not excuse the contractor from proceeding with the contract as changed, provided that the State promptly and duly make such provisional adjustments in payment or time for performance as may be reasonable. By proceeding with the work, the contractor shall not be deemed to have prejudiced any claim for additional compensation, or an extension of time for completion.

(3) **Time Period for Claim.** Within 30 days after receipt of a written contract modification under Paragraph (1) of this clause, unless such period is extended by the Procurement Officer in writing, the contractor shall file notice of intent to assert a claim for an adjustment. Later notification shall not bar the contractor's claim unless the State is prejudiced by the delay in notification.

(4) **Claim Barred After Final Payment.** No claim by the contractor for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this contract.

[07-7B025-1]

CONTRACT CHANGES

Contract changes, if any, over the life of the contract shall be approved and implemented by change order issued by the Materials Management Office to the contractor. If the contractor is accepting orders and/or delivering through other parties, for example a manufacturer accepting orders and delivering through a dealer network or dealers receiving orders through a network of other dealers, then it is the responsibility of the contractor to apprise such parties of all change orders.

CISG (JAN 2006)

The parties expressly agree that the UN Convention on the International Sale of Goods shall not apply to this agreement. [07-7B030-1]

DEFAULT (JAN 2006)

(5) (1) The State may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to:

- (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;
- (ii) Make progress, so as to endanger performance of this contract (but see paragraph (a)(2) of this clause); or
- (iii) Perform any of the other material provisions of this contract (but see paragraph (a)(2) of this clause).

(2) The State's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Procurement Officer) after receipt of the notice from the Procurement Officer specifying the failure.

(b) If the State terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Procurement Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the State for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.

I Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the State in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

(d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.

I If this contract is terminated for default, the State may require the Contractor to transfer title and deliver to the State, as directed by the Procurement Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Procurement Officer, the Contractor shall also protect and preserve property in its possession in which the State has an interest.

(f) The State shall pay contract price for completed supplies delivered and accepted. The Contractor and Procurement Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property; if the parties fail to agree, the Procurement Officer shall set an amount subject to the Contractor's rights under the Disputes clause. Failure to agree will be a dispute under the Disputes clause. The State may withhold from these amounts any sum the Procurement Officer determines to be necessary to protect the State against loss because of outstanding liens or claims of former lien holders.

(g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the State, be the same as if the termination had been issued for the convenience of the State. If, in the foregoing circumstances, this contract does not contain a clause providing for termination for convenience of the State, the contract shall be adjusted to compensate for such termination and the contract modified accordingly subject to the contractor's rights under the Disputes clause.

(h) The rights and remedies of the State in this clause are in addition to any other rights and remedies provided by law or under this contract. [07-7B075-1]

INTELLECTUAL PROPERTY INFRINGEMENT (JAN 2006)

- (5) Without limitation and notwithstanding any provision in this agreement, Contractor shall, upon receipt of notification, defend and indemnify the State, its instrumentalities, agencies, departments, boards, political subdivisions and all their respective officers, agents and employees against all actions, proceedings or claims of any nature (and all damages, settlement payments, attorneys' fees (including inside counsel), costs, expenses, losses or liabilities attributable thereto) by any third party asserting or involving an IP right related to an acquired item. State shall allow Contractor to defend such claim so long as the defense is diligently and capably prosecuted. State shall allow Contractor to settle such claim so long as (i) all settlement payments are made by Contractor, and (ii) the settlement imposes no non-monetary obligation upon State. State shall reasonably cooperate with Contractor's defense of such claim. (b) In the event an injunction or order shall be obtained against State's use of any acquired item, or if in Contractor's opinion, the acquired item is likely to become the subject of a claim of infringement or violation of an IP right, Contractor shall, without in any way limiting the foregoing, and at its expense, either: (1) procure for State the right to continue to use, or have used, the acquired item, or (2) replace or modify the acquired item so that it becomes non-infringing but only if the modification or replacement does not adversely affect the specifications for the acquired item or its use by State. If neither (1) nor (2), above, is practical, State may require that Contractor remove the acquired item from State, refund to State any charges paid by State therefor, and take all steps necessary to have State released from any further liability. (c) Contractors obligations under this paragraph do not apply to a claim to the extent (i) that the claim is caused by Contractor's compliance with specifications furnished by the State unless Contractor knew its compliance with the State's specifications would infringe an IP right, or (ii) that the claim is caused by Contractor's compliance with specifications furnished by the State if the State knowingly relied on a third party's IP right to develop the specifications provided to Contractor and failed to identify such product to Contractor. (d) As used in this paragraph, these terms are defined as follows: "IP right(s)" means a patent, copyright, trademark, trade secret, or any other proprietary right. "Acquired item(s)" means the rights, goods, or services furnished under this agreement. "Specification(s)" means a detailed, exact statement of particulars such as a statement prescribing materials, dimensions, and quality of work. Contractor's obligations under this clause shall survive the termination, cancellation, rejection, or expiration of this Agreement.

PERMITS/LICENSE:

All permits and licenses required per South Carolina law are required for this contract

PRE-PERFORMANCE/POST AWARD CONFERENCE

Unless waived by the Procurement Officer, a pre performance/post award conference between the contractor, state and Procurement Officer may be held at a location selected by the state within 30-days after contract award, and prior to any buses being built. This meeting may be held in Columbia, South Carolina at a date and time to be determined by the State. This meeting will be held to answer any questions and discuss contract expectations. No buses are to be built prior to this meeting. The responsibilities of all parties involved will be discussed to assure a meeting of the minds of all concerned. The successful contractor or his duly authorized representative shall be required to attend at contractor's expense.

PRICE ADJUSTMENT – LIMITED – AFTER INITIAL TERM ONLY (JAN 2006)

Upon approval of the Procurement Officer, prices may be adjusted for any renewal term. Prices shall not be increased during the initial term. Any request for a price increase must be received by the Procurement Officer at least ninety (90) days prior to the expiration of the applicable term and must be accompanied by sufficient documentation to justify the increase. If approved, a price increase becomes effective starting with the term beginning after approval. A price increase must be executed as a change order. Contractor may terminate this contract at the end of the then current term if a price increase request is denied. Notice of termination pursuant to this paragraph must be received by the Procurement Officer no later than fifteen (15) days after the Procurement Officer sends contractor notice rejecting the requested price increase.

PRICE ADJUSTMENTS – LIMITED BY PPI (Modified)

Upon request and adequate justification, the Procurement Officer may grant a price increase up to, but not to exceed, the unadjusted percent change for the most recent 12 months for which data is available, that is not subject to revision, in the Producer Price Indexes (PPI) for the applicable commodity, as determined by the Procurement Officer (for the last contract: PCU3361203361203 for buses). The Bureau of Labor and Statistics publishes this information on the web at www.bls.gov.

PRICING DATA – AUDIT – INSPECTION (JAN 2006)

[Clause Included Pursuant to Section 11-35-1830, - 2210, & -2220] (a) Cost or Pricing Data. Upon Procurement Officer's request, you shall submit cost or pricing data, as defined by 48 C.F.R. Section 2.101 (2004), prior to either (1) any award to contractor pursuant to 11-35-1530 or 11-35-1560, if the total contract price exceeds \$500,000, or (2) execution of a change order or contract modification with contractor which exceeds \$100,000. Your price, including profit or fee, shall be adjusted to exclude any significant sums by which the state finds that such price was increased because you furnished cost or pricing data that was inaccurate, incomplete, or not current as of the date agreed upon between parties. (b) Records Retention. You shall maintain your records for three years from the date of final payment, or longer if requested by the chief Procurement Officer. The state may audit your records at reasonable times and places. As used in this subparagraph (b), the term "records" means any books or records that relate to cost or pricing data submitted pursuant to this clause. In addition to the obligation stated in this subparagraph (b), you shall retain all records and allow any audits provided for by 11-35-2220(2). (c) Inspection. At reasonable times, the state may inspect any part of your place of business which is related to performance of the work. (d) Instructions Certification. When you submit data pursuant to subparagraph (a), you shall (1) do so in accordance with the instructions appearing in Table 15-2 of 48 C.F.R. Section 15.408 (2004) (adapted as necessary for the state context), and (2) submit a Certificate of Current Cost or Pricing Data, as prescribed by 48 CFR Section 15.406-2(a) (adapted as necessary for the state context). I Subcontracts. You shall include the above text of this clause in all of your subcontracts. (f) Nothing in this clause limits any other rights of the state. [07-7B185-1]

PRODUCT RECALL:

In submitting this bid, bidder expressly assumes full responsibility for prompt notification of any product recall in accordance with the applicable state or federal regulations.

PURCHASING CARD (JAN 2006) – clause intentionally deleted.

RELATIONSHIP OF USING GOVERNMENTAL UNITS (JAN 2006)

Each Using Governmental Unit's obligations and liabilities are independent of every other Using Governmental Unit's obligations and liabilities. No Using Governmental Unit shall be responsible for any other Using Governmental Unit's act or failure to act. [07-7B210-1]

SHIPPING / RISK OF LOSS (JAN 2006)

F.O.B. Destination. Destination is the shipping dock of the Using Governmental Units' designated receiving site, or other location, as specified herein. (See Delivery clause) [07-7B220-1]

STATEWIDE TERM CONTRACT (JAN 2006)

With this solicitation, the state seeks to establish a term contract (as defined in Section 11-35-310(35)) available for use by all South Carolina public procurement units (as defined in Section 11-35-4610(5)). Use by state governmental bodies (as defined in Section 11-35-310(18)), which includes most state agencies, is mandatory except under limited circumstances, as provided in Section 11-35-310(35). See clause entitled "Acceptance of Offers 10% Below Price" in Part VII.B. of this solicitation. Use by local public procurement units is optional. Section 11-35-4610 defines local public procurement units to include any political subdivision, or unit thereof, which expends public funds. Section 11-35-310(23) defines the term political subdivision as all counties, municipalities, school districts, public service or special purpose districts. The State shall be entitled to audit the books and records of you and any subcontractor to the extent that such books and records relate to the performance of the work. Such books and records shall be maintained by the contractor for a period of three years from the date of final payment under the prime contract and by the subcontractor for a period of three years from the date of final payment under the subcontract, unless a shorter period is otherwise authorized in writing by the Chief Procurement Officer. [07-7B225-1]

STATEWIDE TERM CONTRACT – SCOPE (JAN 2006)

The scope of this contract is limited by the Bidding Schedule / Cost Proposals and by the description included in Part I, Scope of Solicitation. Sales of supplies or services not within the scope of this contract are prohibited. See clause entitled

Contract Limitations. [07-7B230-1]

SUBSTITUTIONS PROHIBITED – END PRODUCT PREFERENCES (SEP 2009)

If you receive the award as a result of the South Carolina end product or United States end product preference, you may not substitute a nonqualifying end product for a qualified end product. If you violate this provision, the State may terminate your contract for cause and you may be debarred. In addition, you shall pay to the State an amount equal to twice the difference between the price paid by the State and your evaluated price for the item for which you delivered a substitute. [11-35-1534(B)(4)] [07-7B236-1]

SUBSTITUTIONS:

Substitutions including but not limited to design, function, or cosmetic are not permitted during the contract period without prior written approval of the Materials Management Office. Failure of the contractor to comply with this requirement may result in the removal of the contractor from the contract

TERM OF CONTRACT – EFFECTIVE DATE / INITIAL CONTRACT PERIOD (JAN 2006)

The effective date of this contract is the first day of the Maximum Contract Period as specified on the final statement of award. The initial term of this agreement is 1 year from the effective date. Regardless, this contract expires no later than the last date stated on the final statement of award. [07-7B240-1]

TERMINATION FOR CONVENIENCE (JAN 2006)

- (1) Termination. The Procurement Officer may terminate this contract in whole or in part, for the convenience of the State. The Procurement Officer shall give written notice of the termination to the contractor specifying the part of the contract terminated and when termination becomes effective.
- (2) Contractor's Obligations. The contractor shall incur no further obligations in connection with the terminated work and on the date set in the notice of termination the contractor will stop work to the extent specified. The contractor shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. The Procurement Officer may direct the contractor to assign the contractor's right, title, and interest under terminated orders or subcontracts to the State. The contractor must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.
- (3) Right to Supplies. The Procurement Officer may require the contractor to transfer title and deliver to the State in the manner and to the extent directed by the Procurement Officer: (a) any completed supplies; and (b) such partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the contractor has specifically produced or specially acquired for the performance of the terminated part of this contract. The contractor shall, upon direction of the Procurement Officer, protect and preserve property in the possession of the contractor in which the State has an interest. If the Procurement Officer does not exercise this right, the contractor shall use best efforts to sell such supplies and manufacturing materials in accordance with the standards of Uniform Commercial Code Section 2-706. Utilization of this Section in no way implies that the State has breached the contract by exercise of the Termination for Convenience Clause.
- (4) Compensation. (a) The contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data required by Section 11-35-1830 bearing on such claim. If the contractor fails to file a termination claim within one year from the effective date of termination, the Procurement Officer may pay the contractor, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.
(b) The Procurement Officer and the contractor may agree to a settlement and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of supplies and manufacturing materials under Paragraph (3) of this clause, and the contract price of the work not terminated; I Absent complete agreement under Subparagraph (b) of this Paragraph, the Procurement Officer shall pay the contractor the following amounts, provided payments agreed to under Subparagraph (b) shall not duplicate payments under this Subparagraph:
 - (i) contract prices for supplies or services accepted under the contract;
 - (ii) costs reasonably incurred in performing the terminated portion of the work less amounts paid or to be paid for accepted supplies or services;
 - (iii) reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Paragraph (2) of this clause. These costs must not include costs paid in accordance with Subparagraph I(ii) of this paragraph;
 - (iv) any other reasonable costs that have resulted from the termination. The total sum to be paid the contractor under this

Subparagraph shall not exceed the total contract price plus the reasonable settlement costs of the contractor reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.

(d) Contractor must demonstrate any costs claimed, agreed to, or established under Subparagraphs (b) and (c) of this Paragraph using its standard record keeping system, provided such system is consistent with any applicable Generally Accepted Accounting Principles.

(5) Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not (i) affect the state's right to require the termination of a subcontract, or (ii) increase the obligation of the state beyond what it would have been if the subcontract had contained an appropriate clause. [07-7B265-1]

VIII. BIDDING SCHEDULE / PRICE-BUSINESS PROPOSAL

CONFLICTS BETWEEN OPTION SOLICITATIONS AND SPECIFICATION REQUIREMENTS:

The following pages contain bid sheets and questionnaires. In cases where inadvertently there is a request herein for a price for a feature as an option, when in fact such feature is required in the base vehicle per the attached specifications, the requirement for the feature to be in the base vehicle takes precedence. That is, there shall be no extra charge for the feature, and instead it shall be furnished with the base vehicle.

BIDDING SCHEDULE (NOV 2007)

Item	Estimated Quantity	Unit of Measure	Base Unit Price	Extended Price
1	25	Each**WITH LIFT, WITHOUT CSRS SEATS	\$ 82,595	\$ 2,064,875
1A	25	Each** WITH LIFT & 3 CSRS Seats	\$ 84,151	\$ 2,103,775
Product Catg.: 55640 - Passenger School Bus				
Item Description: 41-42 Passenger School Bus - WITH AIR CONDITIONING				
Question		Response		
BODY MAKE:		BLUE BIRD		
BODY MODEL:		BBCV 2311		
CHASSIS MAKE:		BLUE BIRD		
CHASSIS MODEL:		BBCV		
DELIVERY TIME - DAYS AFTER RECEIPT OF PURCHASE ORDER (ARO)		240 ARO		
HORSE POWER:		220 HP		
WHEELBASE:		189"		
CSRS SEAT MFR:		C.E. WHITE		
CSRS SEAT MODEL:		CR11 -39		
CSRS Seat \$ <u>780</u> Each				
Maximum # of CSRS seat rows (one row includes both sides of aisle) which can be furnished before any passenger capacity is lost: <u>3L/3R</u> CSRS seat rows				
Number of individual seating positions lost (vs. default seating configuration) if all allowable seat rows are CSRS: <u>3</u>				

Item	Estimated Quantity	Unit of Measure	Base Unit Price	Extended Price
2	25	Each	\$ 84,532	\$ 2,113,300
2A	25	Each** WITH 4 CSRS Seats		
Product Catg.: 55640 - Passenger School Bus				
Item Description: 65-66 Passenger School Bus – WITH AIR CONDITIONING				
Question		Response		
BODY MAKE:		BLUE BIRD		
BODY MODEL:		BBCV 3011		
CHASSIS MAKE:		BLUE BIRD		
CHASSIS MODEL:		BBCV		
DELIVERY TIME - DAYS AFTER RECEIPT OF PURCHASE ORDER (ARO)		240 ARO		
HORSE POWER:		220 HP		
WHEELBASE:		252"		
CSRS SEAT MFR:		C.E. WHITE		
CSRS SEAT MODEL:		CR11 -39		
CSRS Seat \$ <u>780</u> Each				
Maximum # of CSRS seat rows (one row includes both sides of aisle) which can be furnished before any passenger capacity is lost: <u>2L/5R</u> CSRS seat rows				
Number of individual seating positions lost (vs. default seating configuration) if all allowable seat rows are CSRS: <u>9</u>				

Item	Estimated Quantity	Unit of Measure	Base Unit Price	Extended Price
3	25	Each		
3A	25	Each** WITH 4 CSRS Seats	\$ 76,232	\$ 1,905,800
Product Catg.: 55640 - Passenger School Bus				
Item Description: 65-66 Passenger School Bus - WITHOUT AIR CONDITIONING				
Question		Response		
BODY MAKE:		BLUE BIRD		
BODY MODEL:		BBCV 3011		
CHASSIS MAKE:		BLUE BIRD		
CHASSIS MODEL:		BBCV		
DELIVERY TIME - DAYS AFTER RECEIPT OF PURCHASE ORDER (ARO)		240 ARO		
HORSE POWER:		220 HP		
WHEELBASE:		252"		
CSRS SEAT MFR:		C.E. WHITE		
CSRS SEAT MODEL:		CR11 - 39		
CSRS Seat \$ <u>780</u> Each				
Maximum # of CSRS seat rows (one row includes both sides of aisle) which can be furnished before any passenger capacity is lost: <u>2L/5R</u> CSRS seat rows				
Number of individual seating positions lost (vs. default seating configuration) if all allowable seat rows are CSRS: <u>9</u>				

OPTIONAL EQUIPMENT FOR CONVENTIONAL SCHOOL AND ACTIVITY BUSES (Where Applicable)

The items listed below are optional only. The State may or may not award these items. There is no guarantee that items will be purchased. The bid prices offered below will not be considered in the evaluation of offers, however, items may not be awarded if the pricing is deemed excessive in the State's sole judgment.

ITEM	QTY.	UOM	DESCRIPTION	UNIT COST
1.	1	Each	FMVSS 210 compliant 39" seat to replace standard 39" seat.	\$ <u>150</u>
2.	1	Each	FMVSS 210 compliant 30" seat to replace standard 30" seat.	\$ <u>100</u>
3.	1	Each	Lap/shoulder belt equipped seat (3 positions) to replace standard 39" seat.	\$ <u>550</u>
4.	1	Each	Lap/shoulder belt equipped seat (2 positions) to replace standard 30" seat.	\$ <u>475</u>
5.	1	Each	Maximum seat spacing to better accommodate high school students for 66 Passenger Bus – Show Deduct Price Revised Bus Capacity: 57	\$ <u>150</u>
6.	1	Each	Shop Manuals -- (additional per unit ordered)	\$ <u>150</u>
7.	1	Each	Parts Manuals -- (additional per unit ordered)	\$ <u>150</u>

IV. ATTACHMENTS TO SOLICITATION

LIST OF ATTACHMENTS

ATTACHMENTS LIST [09-9002-1]

The following documents are attached to this solicitation:

NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING

OFFEROR'S CHECKLIST (JUN 2007)

ATTACHMENT A:

QUESTIONS RECEIVED AS A RESULT OF THE PRE BID CONFERENCE (5-1-20120 & CORRESPONDING ANSWERS FROM THE SC DEPARTMENT OF TRANSPORTATION

NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING

IMPORTANT TAX NOTICE - NONRESIDENTS ONLY

Withholding Requirements for Payments to Nonresidents: Section 12-8-550 of the South Carolina Code of Laws requires persons hiring or contracting with a nonresident conducting a business or performing personal services of a temporary nature within South Carolina to withhold 2% of each payment made to the nonresident. The withholding requirement does not apply to (1) payments on purchase orders for tangible personal property when the payments are not accompanied by services to be performed in South Carolina, (2) nonresidents who are not conducting business in South Carolina, (3) nonresidents for contracts that do not exceed \$10,000 in a calendar year, or (4) payments to a nonresident who (a) registers with either the S.C. Department of Revenue or the S.C. Secretary of State and (b) submits a Nonresident Taxpayer Registration Affidavit - Income Tax Withholding, Form I-312 to the person letting the contract.

The withholding requirement applies to every governmental entity that uses a contract ("Using Entity"). Nonresidents should submit a separate copy of the Nonresident Taxpayer Registration Affidavit - Income Tax Withholding, Form I-312 to every Using Entity that makes payment to the nonresident pursuant to this solicitation. Once submitted, an affidavit is valid for all contracts between the nonresident and the Using Entity, unless the Using Entity receives notice from the Department of Revenue that the exemption from withholding has been revoked.

Section 12-8-540 requires persons making payment to a nonresident taxpayer of rentals or royalties at a rate of \$1,200.00 or more a year for the use of or for the privilege of using property in South Carolina to withhold 7% of the total of each payment made to a nonresident taxpayer who is not a corporation and 5% if the payment is made to a corporation. Contact the Department of Revenue for any applicable exceptions.

For information about other withholding requirements (e.g., employee withholding), contact the Withholding Section at the South Carolina Department of Revenue at 803-898-5383 or visit the Department's website at: www.sctax.org

This notice is for informational purposes only. This agency does not administer and has no authority over tax issues. All registration questions should be directed to the License and Registration Section at 803-898-5872 or to the South Carolina Department of Revenue, Registration Unit, Columbia, S.C. 29214-0140. All withholding questions should be directed to the Withholding Section at 803-896-1420.

PLEASE SEE THE "NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING" FORM (FORM NUMBER I-312) LOCATED

AT: <http://www.sctax.org/Forms+and+Instructions/withholding/default.htm>

[09-9005-1]

OFFEROR'S CHECKLIST (JUN 2007)

OFFEROR'S CHECKLIST -- AVOID COMMON BID/PROPOSAL MISTAKES

Review this checklist prior to submitting your bid/proposal.

If you fail to follow this checklist, you risk having your bid/proposal rejected.

- Do not include any of your standard contract forms!
- Unless expressly required, do not include any additional boilerplate contract clauses.
- Reread your entire bid/proposal to make sure your bid/proposal does not take exception to any of the state's mandatory requirements.
- Make sure you have properly marked all protected, confidential, or trade secret information in accordance with the instructions entitled: SUBMITTING CONFIDENTIAL INFORMATION. **DO NOT mark your entire bid/proposal as confidential, trade secret, or protected! Do not include a legend on the cover stating that your entire response is not to be released!**
- Have you properly acknowledged all amendments? Instructions regarding how to acknowledge an amendment should appear in all amendments issued.
- Make sure your bid/proposal includes a copy of the solicitation cover page. Make sure the cover page is signed by a person that is authorized to contractually bind your business.
- Make sure your Bid/proposal includes the number of copies requested.
- Check to ensure your Bid/proposal includes everything requested!
- If you have concerns about the solicitation, do not raise those concerns in your response! **After opening, it is too late! If this solicitation includes a pre-bid/proposal conference or a question & answer period, raise your questions as a part of that process!** Please see instructions under the heading "submission of questions" and any provisions regarding pre-bid/proposal conferences.

[09-9010-1]

ATTACHMENT A:

(FIRST SET OF QUESTIONS):

Page 100 – AWARD TO MULTIPLE OFFERORS

Award(s) may be considered to:

1. *The lowest responsive and responsible bidder for each line item, and*
2. *Other responsive and responsible bidders whose price is within 4% of the lowest responsive and responsible bid for that same line item.*

Response: Remain as stated

Page 35 – ENGINES

***APPROVED ELECTRONIC DIESEL ENGINES
Must meet 2010 EPA Emissions Level Standards***

<u>MAKE</u>	<u>MODEL</u>	<u>HORSEPOWER</u>	<u>TORQUE</u>
<i>Cummins</i>	<i>ISB</i>	<i>220</i>	<i>520</i>
<i>International</i>	<i>Maxx Force DT</i>	<i>215</i>	<i>560</i>

Response: Engines must be EPA approved for installation in buses being provided.

Page 63 – SEATING - CHILD SAFETY RESTRAINT SYSTEMS (CSRS)

“Except on 41-42 (Non Flat Floor lift equipped bus), 1st row on one side and 2 rows on other side (total 6 seating positions.)”

Response: Requirement for Lift Equipped bus is found in Amendment 1 and will be reflected in the Bid Schedule.

BID OPENING

Response: THE BID OPENING DATE HAS BEEN EXTENDED TO: JUNE 5, 2012

(SECOND SET OF QUESTIONS):

Page 17 – PILOT MODEL INSPECTIONS

“The contractor will be required to pick up the pilot model(s) the morning following the inspection period and will meet at that time with the inspection committee to discuss any concerns.”

Response: The meeting to discuss issues resulting from the inspection will be held at the facility where the bus is inspected. The bus would still be available at that time.

Page 17 – RE-INSPECTION

“Any failed inspection will require the pilot model to be ready for re-inspection within one (1) week after notification of the failed inspection.”

Response: Any bus failing the Pilot Inspection is to have repairs made and be ready for re-inspection within one week from the failed inspection.

Page 17 – PILOT MODEL PENALTY

“Pilot models that are not in final acceptable condition within 45 days of the initial inspection will be charged liquidated damages ...”

Response: Depending on issues resulting from a failed Re-Inspection; subsequent inspections may be required. If the Pilot Model and all necessary repairs are not completed and approved as acceptable within 45 days of the initial inspection, liquidated damage charges shall apply.

Page 36 – AIR BRAKES

“Schrader valve required to be located in an accessible location in the engine compartment or on wet tank in order to recharge air brake system for towing. (Location to be approved at pilot model.)”

Response: Location identified in picture submitted is acceptable.

Page 48 – SERIAL NUMBER LABEL

“... permanently affixed on the firewall or dash panel visible from left front corner of bus in a position for maximum visibility and legibility (exact location to be approved).”

Response: Location identified in picture submitted is acceptable.

Page 48 – TOW HOOKS

“... installed one on each frame rail at front in an approved manner.”

Response: Location identified in picture submitted is acceptable.

Page 37 – BATTERY

“Battery cables to be one gauge or heavier, color-coded red-positive/black-ground and easily identified positive and negative. If grounded to frame, frame must be grounded to engine with same size cable.”

Response: Cable size stated is Minimum Requirement.

Page 54 – VEHICLE DATA PLATE

“... actual bus height, length, and weight, and actual tire size installed on bus.”

Response: The height, length, and weight would be the same as the Pilot model for all units of similar capacity/construction.

Page 59-61 – BODY FRAME

All sections

Response: Construction method approved by NCDPI is acceptable.

Page 64 - DRIVER'S SEAT

“Seat shall be identified by permanently attached / approved vinyl tag containing seat manufacturer, model number, serial number and build date.”

Response: Tag/Location identified in picture submitted is acceptable.

Page 66 - ASSIST RAIL

“The right side assist handle shall be braced to dash firewall or approved floor location.”

Response: Installation method shown in picture submitted is acceptable.

Page 66 –BROOM HOLDER

“Exact location to be approved upon inspection of pilot model.”

Response: Location identified in picture submitted is acceptable.

Page 66 – CONTROL PANEL

“The accessory panel should be grounded to cowl of chassis by use of 10-gauge wire.”

Response: Grounding method approved by NCDPI is acceptable.

Page 68 – CLEARANCE/MARKER LIGHTS LED

“... Weldon 5181 - 4 LED pattern with sealed electrical plugs or equivalent.”

Response: Installation method approved by NCDPI is acceptable.

Page 68 – EIGHT LIGHT WARNING SYSTEMS

“The switch to operate flasher lights is to be located in the control panel in the closest location to the end adjacent to the air door switch and will activate the relay from the ignition switch ...”

Response: Location identified in picture submitted is acceptable.

Page 70 – STROBE LIGHT

“A replaceable remote power pack is to be mounted inside the rear 1/3 of the bus body behind an accessible panel (location to be approved at pilot model).”

Response: Location identified in picture submitted is acceptable.

Page 74 – ENTRANCE DOOR

“It shall be securely hinged with approved piano type hinges, two point steel pins, bronze bushing and/or bearing hinges or pivots.”

Response: Installation method approved by NCDPI is acceptable.

Page 75 – ENTRANCE DOOR

“The location of the decals is to be approved upon inspection of pilot model.”

Response: Location identified in picture submitted is acceptable.

Page 75 – EMERGENCY DOOR

“Door shall be hinged on the right side (when facing bus from rear) with an approved type of hinge meeting FMVSS 217 requirements.”

Response: Installation method approved by NCDPI is acceptable.

Page 78 – BATTERY CARRIER

“Battery box shall - be approximately 14 inches high x 25 inches wide x 16 inches deep.”

Response: Installation method approved by NCDPI is acceptable.

Page 80 – INTERIOR MIRROR

“Securement to be approved at pilot model.”

Response: Securement shown in picture submitted is acceptable.

Page 81 – SAFETY INFORMATION LICENSE PLATE

“A safety information license plate shall be mounted on the left side license plate holder.”

Response: The information license plate will be mounted on the RIGHT side. SC license plate will be mounted on the LEFT side. The LEFT side license plate will be lighted.

Page 83 – SAFETY EQUIPMENT STORAGE BOX

“Outside lid of box is to be lettered in 2” vinyl lettering with the following “SAFETY EQUIPMENT INSIDE”.”

Response: Additional lettering shown in picture submitted is acceptable.

Page 84 – SPLASH GUARDS

“Width to be approved at pilot model inspection.”

Response: Splash guards shown in pictures submitted are acceptable.

Page 87 – MANUFACTURER LOGO

“...exterior except a small nameplate may be installed ...”

Response: Logo/location shown in picture submitted is acceptable.

Page 87 – INTERIOR PAINT

“Paint color to be approved.”

Response: Paint color shown in picture submitted is acceptable.

Page 87 – INTERIOR LETTERING

“Above the windshield or other approved acceptable location; ...”

Response: Location shown in picture submitted is acceptable.

Page 88 – SIDE LETTERING – SCHOOL BUS

“The county number assigned to bus shall be on each side of the bus in an approved place ...”

Response: Location shown in picture submitted is acceptable.

Page 89 – FRONT LETTERING – SCHOOL BUS

“... on front of body or chassis in an approved location place ...”

Response: Location shown in picture submitted is acceptable.

Page 90 – POWER LIFT

“Lights shall be provided in the wheelchair area, over lift mechanism and exterior position (location to be approved upon inspection of pilot model).”

Response: Lighting shown in pictures submitted is acceptable.

Page 92 – POWER LIFT DOOR

“Door release and opening and closing device to be approved upon inspection of pilot model.”

Response: Installation method approved by NC is acceptable.

Page 92 – POWER LIFT DOOR

“A red light shall be activated in the dash area (location to be approved)...”

Response: Location shown in picture submitted is acceptable.

Page 95 - AIR CONDITIONING

“All refrigerant lines in A/C system shall be assembled using automotive grade crimp style fittings (as pictured below).”

Response: Remain as stated

Page 112 -VIII. BIDDING SCHEDULE / PRICE-BUSINESS PROPOSAL

Response: The only body capacities being considered are listed in the Bid Schedule. Requirement for Lift Equipped bus is found in Amendment 1.

(THIRD SET OF QUESTIONS):

Page 115 – OPTIONAL EQUIPMENT

Request to add 2010 Navistar Maxxforce 7 engine

Response: Request was untimely

(FOURTH SET OF QUESTIONS):

Page 18 – DEVIATIONS

“Any deviations from specifications and requirements herein must be clearly pointed out by bidder.”

Response: Deviations from final bid specifications will not be accepted.

Page 34 – SERVICE

“5. Fill fuel tank to capacity with diesel fuel.”

Delete Item 5

Page 14 – DELIVERY

“serviced and fully operational upon delivery with full tank of fuel at time of delivery.”

Delete “with full tank of fuel at time of delivery”

Page 35 – ENGINES

APPROVED ELECTRONIC DIESEL ENGINES
Must meet 2010 EPA Emissions Level Standards

<i>MAKE</i>	<i>MODEL</i>	<i>HORSEPOWER</i>	<i>TORQUE</i>
<i>Cummins</i>	<i>ISB</i>	<i>220</i>	<i>520</i>
<i>International</i>	<i>Maxx Force DT</i>	<i>215</i>	<i>560</i>

Response: Engines must be EPA approved for installation in buses being provided.

Page 35 – ENGINES

"Must meet 2010 EPA Emissions Level Standards"

Response: Remain as stated

FLOOR PLAN

Response: 41-42 Body w/ Wheelchair Lift will have a Minimum Capacity of 27 Seated plus 2 wheelchair positions.

****NOTES****

- THE BID OPENING DATE HAS BEEN EXTENDED TO JUNE 5, 2012 – 11:00 AM
- QUESTIONS RELATING TO AMENDED PARTS ONLY OF THE SOLICITATION MAY BE RECEIVED UNTIL 5-23-2012 @ 4:00PM.

BLUE BIRD VISION®



Technical Specification Highlights

CAPACITY	Multiple floor plans available with passenger seating up to 77	TRANSMISSION	Allison® PTS 2500
EXTERIOR WIDTH	96"	ENGINE	Cummins® ISB-07, 200-240hp
INTERIOR WIDTH	90 3/4"	TIRE SIZE	11R22.5(G)
AISLE WIDTH	Varies by floor plan	ALTERNATOR	200 amp
SKIRT LENGTH	16 1/4"	BRAKES	Hydraulic disc brakes with 4-wheel anti-lock brakes
INTERIOR HEADROOM	74" standard; 77" optional	SUSPENSION	Front - 8,000 lb. parabolic springs Rear - 17,000 - 21,000 lb. 2-stage leaf springs (rating varies by wheelbase)
OVERALL HEIGHT	124" - 127"	STEERING	TAS 55
WHEELBASE	189" / 217" / 238" / 252" / 273"	FRONT AXLE	12,000 lb.
FUEL TANK	60-gallon between the frame rails in rear overhang	REAR AXLE	21,000 lb.
ENTRANCE DOOR	27" wide x 78" high / double "full view" outward opening	WHEEL CUT	50°
REAR DOOR	37.7" wide x 52.5" high	GVWR	Up to 31,000 lb.

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BLUE BIRD VISION® SPECIFICATIONS



Chassis

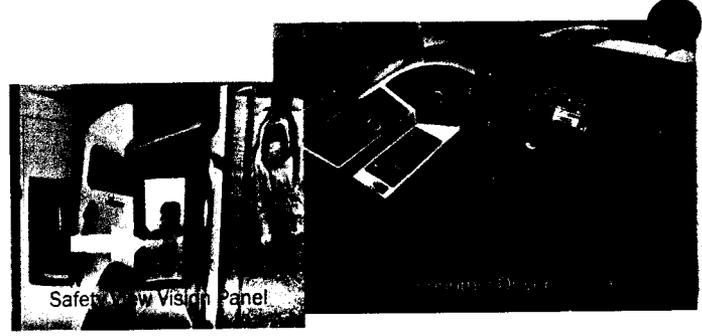
- 50,000 psi steel frame rails 10 1/8" high x 3" flanges x 5/16" thick
- Cummins® ISB-07; 200 - 240 horsepower
- Allison® automatic transmission, PTS 2500
- Synthetic transmission fluid
- 60 gal. fuel tank between frame rails in rear overhang
- 200 amp alternator
- 11R22.5(G) tires
- Large, easy to read gauges
- 12,000 lb. front axle with 8,000 lb. parabolic spring suspension
- 21,000 lb. rear axle with a two-stage rear suspension system (rating varies by wheelbase)
- Blue Stripe rubber coolant hoses with constant torque clamps
- Hydraulic brake system
- Anti-lock brakes
- 15" steel front bumper
- Tilt/telescoping steering column
- "Group 31" batteries
- "Huck Spin" fasteners on all permanent frame fixtures

Durability

- All parts are pre-primed or thoroughly rust-proofed after fabrication and before assembly
- Entire underbody (body skirt and floor) is undercoated before mounting on chassis
- Exterior surfaces are painted with heat-cured polyurethane
- Interior surfaces are painted with high-quality, hot-sprayed, baked-on enamel
- 1/8" Smooth black rubber flooring, 3/16" ribbed rubber aisle
- Goodyear Hi-Miler heater hose with constant torque clamps
- Blue Stripe rubber cooling hoses with constant torque clamps
- Synthetic transmission fluid
- 11R22.5(G) tires
- Spicer "lubed for life" driveline
- Rubber molded wheelhouse
- 12,000 lb. front axle with 8,000 lb. parabolic spring suspension
- 21,000 lb. rear axle with a two-stage rear suspension system (rating varies by wheelbase)
- Side exhaust before rear wheels
- "Huck Spin" frame fasteners

Strength

- 14-gauge steel, hat shaped posts and roof bows
- Rigid 16-gauge steel roof longitudinal internal structural members
- 16-gauge, channeled interior steel window headers
- A massive 16-gauge continuous belt of interior steel armor above and below floor line
- Riveted and welded construction
- Four full-length, 16-gauge exterior side rub rails
- 20-gauge fluted exterior side panels
- 22-gauge interior galvalume side panels
- 14-gauge steel floor panels
- 50,000 psi steel chassis frame, 5/16" thick with permanent fixtures and attached with "Huck Spin" fasteners



Safety

- 4-wheel anti-lock brakes
- Single halogen headlights
- Driver's three-point seat belt with adjustable 7 1/2" pillar loop
- "Full view" outward-opening entrance door with 1,350 square-inch tempered safety glass
- "Safety View" vision panel with a wide angle Fresnel lens for view of loading/unloading zone
- Best driver's line of sight in the school bus industry for a Type C product
- 50-degree wheel cut reduces need for backing
- Flat and convex rearview mirrors
- Oval shape crossover mirrors
- Electric horn with high and low note
- Blue Bird's unitized construction of the passenger compartment
- 15" steel front bumper, 12" steel rear bumper
- Side exhaust before rear wheels
- 8.25 x 22.5 Disc, hub-piloted steel wheels
- 11R22.5(G) tires

Serviceability

- Chassis multiplex wiring
- Large work space under hood
- Easy hood assist requires less than 15 lb. opening effort
- Body wiring terminal is easily accessible through exterior electrical compartment
- Wiring is color coded and continuously numbered for easy identification
- Automatic resetting circuit breakers for body wiring
- Tempered glass, split-sash windows
- Grease fittings on emergency door hinges
- Easy-opening, outward opening entrance door; features long-lasting, oil-impregnated, bronze pivotal bearings
- Body wiring is encased in "easy to access" ABS molding above passenger windows
- Side exit exhaust

Comfort & Convenience

- 74" headroom at aisle, front to rear
- Split-sash, tempered windows
- Tinted windshield
- 90,000 btu front heater and defroster
- Power accessory socket for cellular phones, CB radios, etc.
- Full "panoramic" cockpit view
- Full body insulation
- Acoustic headlining (Driver's and 1st Sections)

Driver Ergonomics

- "Best in class" driver visibility
- 50-degree wheel cut reduces need for backing
- Power steering with tilt/telescoping column
- Large, easy to read gauges
- Backlit, easy to reach switch panel with rocker switches
- Electric, intermittent, single switch windshield wipers
- Manual "glide-type" outward opening door
- 3-point seat belt with 7 1/2" vertical adjustment
- Fully adjustable driver's seat
- Cruise control
- Improved vision in loading zone with "Safety View" window and large glass paneled door
- Wraparound dash

Optional Features

- Cummins® ISB-07 diesel engine 200-240 hp
- Allison® PTS 2200 & PTS 3000 Transmission
- Hendrickson® front and rear air ride suspension
- Electric, remote control and heated mirrors
- Laminated glass
- 77" headroom/12" split sash windows
- Dedicated door and wheelchair lifts, along with recessed wheelchair securements for special-needs passengers
- Underfloor luggage compartments with locking doors
- Tinted glass
- Mud flaps
- Vandal locks
- AM/FM/CD Radio with deluxe speakers
- 100 gallon fuel tank
- Air brake system
- Bode® electric door
- 10,000 lb. front springs
- Plywood subfloor

Dimensions

Headroom	74"
Width Exterior	96"
Width Interior	90 3/4"
Skirt Length	16 1/4"
Overall Length	289" - 471"
Overall Height	124" - 127"
Wheelbase/Passenger Capacity	189" = 48 217" = 54 238" = 60 252" = 66 273" = 72/77

Specifications shown were in effect on the date they were approved for printing. In keeping with its policy of continual product improvement, Blue Bird reserves the right to change specifications without notice and without incurring obligations. Some equipment and features shown may be optional- your Blue Bird Dealer will explain. SB-VIS-CU-0508 © 2008 Blue Bird Corporation

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BLUE BIRD

AUTHORIZED WARRANTY REPAIR FACILITIES

UNITED AUTOMOTIVE & DIESEL PERFORMANCE	1036 TOOLBECK ROAD	AIKEN	SC	29803	803-643-7278
WAYNE'S AUTOMOTIVE	1997 RICHLAND AVE, EAST	AIKEN	SC	29801	803-649-0228
CMS GARAGE & SERVICE CENTER	1219 S. MAIN STREET	ANDERSON	SC	29624	864-225-7346
KC'S AUTOMOTIVE SPECIALISTS, INC	4024 CLEMSON BLVD	ANDERSON	SC	29621	864-261-7877
McLEES GARAGE & BODY SHOP	312 SAYRE STREET	ANDERSON	SC	29624	864-225-5421
MOORE AUTOMOTIVE SERVICE	17 SEABOARD ROAD	ANDREWS	SC	29510	843-221-4040
THREE D METAL WORKS, INC.	152 SEABOARD ROAD	ANDREWS	SC	29510	843-833-9257
BROWN'S AUTO SALES OF AYNOR, LLC	2603 HWY 501	AYNOR	SC	29511	843-222-3691
WAYNE'S AUTO CLINIC	3738 MAIN HWY	BAMBERG	SC	29003	803-245-5255
BOUCHILLON PAINT & BODY, INC	11218 ELLENTON STREET	BARNWELL	SC	29812	803-259-2185
PALMETTO TRUCK & TRAILER SERVICE	5585 HWY 70 E	BARNWELL	SC	29817	803-259-2200
AUTO PARTS OF BEAUFORT	36 ROBERT SMALL PKWY	BEAUFORT	SC	29906	843-473-9689
AUTOMOTIVE AIR	3108 PALOMINO DRIVE	BEAUFORT	SC	29906	843-522-8899
BEAUFORT COLLISION CENTER	2811 BOUNDARY STREET	BEAUFORT	SC	29906	843-522-8347
CERTIFIED AUTO REPAIR	2030 BOUNDARY STREET	BEAUFORT	SC	29902	843-522-1234
COMPLETE CAR CARE OF BEAUFORT	11 NEIL ROAD	BEAUFORT	SC	29906	843-986-9451
FIRST VEHICLES SERVICES	120 SHANKLIN ROAD	BEAUFORT	SC	29906	843-470-6452
TRIPLE 'S' GARAGE	1915 SUMTER HWY	BISHOPVILLE	SC	29010	803-428-3999
BOB JOHNSON BODY SHOP	1746 AIRPORT BLVD	CAYCE	SC	29033	803-796-8400
LOVE CHEVROLET	1255 KNOX ABBOTT DIRVE	CAYCE	SC	29033	803-794-9002
ROAD ONE TRANSIT SERVICES, INC.	1931 AIRPORT ROAD	CAYCE	SC	29033	803-794-5155
CHAPIN COLLISION SERVICE	855 CHAPIN RD	CHAPIN	SC	29036	803-345-9821
CAROLINA INTERNATIONAL TRUCKS	2580 OSCAR JOHNSON DRIVE	CHARLESTON	SC	29405	843-747-3040
CHARLESTON TRUCK & BUS SERVICE	1080 MORRISON DRIVE	CHARLESTON	SC	29403	843-722-2631
GARY'S PAINT AND BODY INC.	1935 BELGRADE AVE	CHARLESTON	SC	29407	843-763-5777
GENERAL DIESEL	2150 IRON ROD COURT	CHARLESTON	SC	29406	843-577-6881
HUGHES MOTOR COMPANY	6841 BULLDOG DRIVE	CHARLESTON	SC	29419	843-553-6410
LOUIE & SONS BODY SHOP	429 FLEMING RD	CHARLESTON	SC	29412	843-795-0823
RICK HENDRICK CHEVROLET	1500 SAVANNAH HIGHWAY	CHARLESTON	SC	29407	843-402-6671
ROAD ONE	2102 MEETING STREET	CHARLESTON	SC	29405	843-529-2075
W.W. WILLIAMS	7100 DESIGN STREET, BLDG 200	CHARLESTON	SC	29418	843-225-7121
WILLIAMS TIRE & AUTO SERVICE	3995 DORCHESTER ROAD	CHARLESTON	SC	29405	843-554-0700
HARPE FAMILY AUTOMOTIVE	970 CHESTERFIELD HWY	CHERAW	SC	29520	843-537-9876
J & J AUTO BODY	109 W. UNION STREET	CHESNEE	SC	29323	864-461-3198
BEACH AUTO REPAIR	217 MANN ROAD	COLUMBIA	SC	29223	803-865-8771
CAPITAL CHEVROLET	111 NEWLAND ROAD	COLUMBIA	SC	29229	800-588-9543
CAROLINA INTERNATIONAL TRUCKS - COLA	1619 BLUFF ROAD	COLUMBIA	SC	29202	803-799-4923
CHUCK'S AUTO SERVICE	2350 TWO NOTCH ROAD	COLUMBIA	SC	29204	803-254-7371
CUMMINS ATLANTIC - COLUMBIA	2791 SHOP ROAD EXT	COLUMBIA	SC	29209	803-799-2410
DYNAMIC TRUCK REPAIR	1611 BLUFF ROAD	COLUMBIA	SC	29201	803-806-8708
PRECISION TRUCK SERVICE	1940 BLUFF ROAD	COLUMBIA	SC	29201	803-765-1656
SHEALY TRUCK INC	1340 BLUFF ROAD	COLUMBIA	SC	29211	803-771-0176
BENNETT GROUP dba CONWAY TRUCK SHOP	231 HWY 544	CONWAY	SC	29526	843-347-5222
CAROLINA AUTO & TRUCK PARTS	1617 4th AVENUE	CONWAY	SC	29526	843-248-4885
PALMETTO CHEVROLET CO., INC.	1122 4th AVENUE	CONWAY	SC	29526	800-922-5826
MORGAN'S TRUCK REPAIR	814 TIMMONSVILLE HWY	DARLINGTON	SC	29532	843-393-0473
DILLON BODY SHOP	1304 HWY 301 NORTH	DILLON	SC	29536	843-774-2407
BENSON FORD MERCURY, INC.	4701 CALHOUN MEMORIAL HWY	EASLEY	SC	29641	800-728-5706
GRANT BODY SHOP	1623 GENTRY MEMORIAL HWY	EASLEY	SC	29640	864-855-2335
MIKE JOHNSON AUTOMOTIVE	410 ROSS AVENUE	EASLEY	SC	29640	864-306-1988
FIRST VEHICLE SERVICES	6746 FRIENDFIELD ROAD	EFFINGHAM	SC	29541	843-665-3047
WILLIAMS FRAME & BODY	5010 SOUTH IRBY ST	EFFINGHAM	SC	29541	843-665-7825
ADVANTAGE MOTOR SOLUTIONS	2293 SOUTH IRBY	FLORENCE	SC	29505	843-667-8605
BLANCHARD MACHINERY-FLORENCE	3031 CATERPILLAR LANE	FLORENCE	SC	29506	843-678-8520
CAROLINA INTERNATIONAL TRUCKS-FLORENCE	350 EAST CAMPGROUD RD	FLORENCE	SC	29506	843-468-9566

AUTHORIZED WARRANTY REPAIR FACILITIES

DIESEL SPECIALIST	2204 E. NATIONAL CEMETERY ROAD	FLORENCE	SC	29506	843-667-1500
JONES AUTO WRECKING	1408 W. DARLINGTON STREET	FLORENCE	SC	29501	843-662-4314
PETERBUILT OF FLORENCE	302 E BLANCHARD RD	FLORENCE	SC	29502	843-667-8177
PETERBUILT OF FLORENCE	302 E BLANCHARD RD	FLORENCE	SC	29502	843-667-8177
STONE TRUCK CENTER	2813 W. BLACK CREEK ROAD	FLORENCE	SC	29501	843-665-7244
TRUCK SERVICE OF FLORENCE	1811 TRADE STREET	FLORENCE	SC	29501	843-667-4601
WILLIE'S FRAME & BODY SHOP	1987 WALL STREET	FLORENCE	SC	29501	843-292-0210
FOUNTAIN INN BODY WORKS	1134 N. MAIN STREET	FOUNTAIN INN	SC	29644	864 862-4489
SOUTHERN BODY SHOP	233 BELLINGER LANE	GASTON	SC	29053	803-939-0975
PREMIER PAINT & BODY	286 SUDLOW LAKE ROAD	GRANITEVILLE	SC	29829	803-594-1233
A-TECH SERVICES LLC	1321-B WHITE HORSE ROAD	GREENVILLE	SC	29605	864-236-9997
ALLTIME TRUCK & TRAILER REPAIR	1727 WHITE HORSE ROAD, UNIT B	GREENVILLE	SC	29605	864-295-6751
BLANCHARD MACHINERY-GREENVILLE	6755 FRONTAGE ROAD	GREENVILLE	SC	29605	864-672-0500
BUCHANAN & SONS TIRE & AUTO	401 POINSETT HWY	GREENVILLE	SC	29609	864-232-3509
CAROLINA MOBILITY SALES, LLC	563 WOODRUFF ROAD	GREENVILLE	SC	29607	864-599-9099
FAIRWAY FORD	2323 LAURENS ROAD	GREENVILLE	SC	29607	864-242-5060
McCURLEY'S BODY SHOP	400 WADE HAMPTON BLVD	GREENVILLE	SC	29609	864-430-0735
OSTEEN COLLISION REPAIR	3409 CALHOUN MEMORIAL HWY	GREENVILLE	SC	29611	864-269-2155
PALMETTO LIFT SERVICES	39 FAIRFOREST WAY	GREENVILLE	SC	29607	864-449-0616
PENSKE TRUCK LEASING	1116 WHITE HORSE ROAD	GREENVILLE	SC	29605	864-295-2870
W.N. WATSON TIRE & AUTO	333 W BROAD STREET	GREENVILLE	SC	29601	864-232-4066
DINKS BODY SHOP	2514 MONTAGUE AVENUE EXT	GREENWOOD	SC	29649	864-229-6478
GARY RUSS CHEVROLET	1205 BYPASS 72 NE	GREENWOOD	SC	29649	864-229-2521
ROBERT'S BODY SHOP & WRECKER SERVICE	2312 MONTAQUE AVE EXT	GREENWOOD	SC	29649	864-223-7117
BRUCE'S BODY SHOP	402 WAYMON DRIVE	GREER	SC	29651	803-754-3827
CAROLINA INTERNATIONAL TRUCKS, INC.	2520 HWY 14 SOUTH	GREER	SC	29650	864-968-2239
D & D MOTORS	1000 W. WADE HAMPTON BLVD	GREER	SC	29650	864-877-0224
W.W. WILLIAMS	1835 HIGHWAY 101, SOUTH	GREER	SC	29651	864-877-0935
JOHNSON AUTO SERVICE	6908 OLA LOOP	GRESHAM	SC	29546	843-362-0784
DICKIE POLK AUTOMOTIVE	103 ELM STREET, WEST	HAMPTON	SC	29924	803-943-5333
BLANCHARD MACHINERY-HARDEEVILLE	WHYTE HARDEE ROAD	HARDEEVILLE	SC	29927	843-784-6766
J&M AUTO REPAIR & WELDING	2020 N. 5th STREET	HARTSVILLE	SC	29550	843-332-3470
ADVANCED AUTO BODY INC.	10 CARDINAL ROAD #A	HILTON HEAD	SC	29925	843-342-4909
H & H AUTO BODY	17 CARDINAL ROAD	HILTON HEAD	SC	29926	843-681-4600
BUDDY'S TRUCK & TRAILER REPAIR	407 LAKE CITY HWY	JOHNSONVILLE	SC	29555	843-386-3736
DMP AUTOMOTIVE	245 HOLMES POND RD	JOHNSTON	SC	29832	803-439-7492
P & P AUTOMOTIVE	245 HOLMES POND ROAD	JOHNSTON	SC	29832	803-275-3163
RICHARD'S BODY SHOP	2353 WHITE OAK ROAD	KINGSTREE	SC	29556	843-382-5540
ALTMAN AUTOMOTIVE	426 S. RON McNAIR BLVD	LAKE CITY	SC	29560	843-374-2000
BURNS AUTOMOTIVE	2001 CHARLOTTE HWY	LANCASTER	SC	29720	803-286-4414
LANCASTER MOTOR COMPANY	1616 CHARLOTTE HWY	LANCASTER	SC	29720	803-283-2076
SOLAR SOLUTIONS GLASS	1328 REECE ROAD	LANCASTER	SC	29720	803-285-2424
HENSON COLLISION	22575 ASHEVILLE HWY	LANDRUM	SC	29356	864-457-5446
BRYANT'S BODY SHOP	223 BYPASS 127	LAURENS	SC	29360	864-984-4077
SMITH CHEVROLET	229 E. MAIN STREET	LAURENS	SC	29360	864-984-3921
KIRKS BODY SHOP INC	244 EAST CHURCH STREET	LEESVILLE	SC	29070	803-532-4845
TURNER'S TRUCK REPAIR	1120 SUMMERLAND AVE	LEESVILLE	SC	29070	803-604-0094
EDMUND REPAIR SERVICE	2682 S. LAKE DRIVE	LEXINGTON	SC	29073	803-755-3774
KOLORS BY KEISLER	5935 EDMUND HIGHWAY	LEXINGTON	SC	29073	803-955-0093
CUMMINS ATLANTIC - LORIS	3137 HIGHWAY 701 SOUTH	LORIS	SC	29569	843-716-7072
LUGOFF PAINT & BODY	106 LONGTOWN ROAD	LUGOFF	SC	29078	803-438-3483
WOODY BILTON FORD	1511 HWY 52	MONCK'S CORNER	SC	29461	843-761-8284
BEACH FORD	851 JASON BLVD	MYRTLE BEACH	SC	29577	843-626-3666
EASTERN DIESEL	400 ABC DRIVE	MYRTLE BEACH	SC	29577	843-626-1642
SQUIRREL'S AUTOMOTIVE	5357 MILL POND RD	MYRTLE BEACH	SC	29588	843-236-4198

AUTHORIZED WARRANTY REPAIR FACILITIES

AAA ACTION AUTO COLLISION CENTER	4325 GWINNETT ST	N CHARLESTON	SC	29418	843-552-1777
PALMETTO COLLISION	4155 DORCHESTER ROAD	N CHARLESTON	SC	29405	843-554-1426
COPPOCKS COLLISION	14081 CR KOON HWY	NEWBERRY	SC	29108	803-276-9729
KIBLER'S AUTO BODY	355 WILSON ROAD	NEWBERRY	SC	29108	803-276-2569
BEST AUTO	4427 SAVANNAH HWY	NORTH	SC	29112	803-360-5386
PROTECH	7960 DORCHESTER ROAD	NORTH CHARLESTON	SC	29418	843-760-9933
BELL'S AUTOMOTIVE	1070 BOULEVARD STREET	ORANGEBURG	SC	29115	803-536-4554
CAROLINA COLLISION REPAIR	1616 JOE JEFFORDS HWY	ORANGEBURG	SC	29115	803-536-9928
DANNY'S COLLISION	1360 WHITTAKER PKWY	ORANGEBURG	SC	29115	803-536-0100
DWIGHT'S BODY SHOP	1461 JOE S. JEFFORDS HWY	ORANGEBURG	SC	29115	803-533-1620
FOUR HOLES SALES & SERVICE	3232 FIVE CHOP ROAD	ORANGEBURG	SC	29115	803-535-0371
JOHNSON AUTO GLASS	230 MIKE DR	ORANGEBURG	SC	29118	803-347-4084
LARRY'S TRUCK REPAIR	5660 NORTH ROAD	ORANGEBURG	SC	29118	803-534-8257
POOSER'S MUFFLER & ALIGNMENT	1183 BOULEVARD STREET	ORANGEBURG	SC	29115	803-534-5360
STILLINGERS BODY SHOP	3150 BAMBERG ROAD	ORANGEBURG	SC	29115	803-534-8213
WILLIAMS AUTO ELECTRIC, INC.	350 JOHN C. CALHOUN DRIVE	ORANGEBURG	SC	29115	803-536-5105
STEGALL'S PAINT & BODY	808 N. PEARL STREET	PAGELAND	SC	29728	843-672-3300
BAZEMORE'S AUTO AND TRUCK	850 FORTS POND ROAD	PELION	SC	29123	803-894-4966
ANDERSON BROTHERS	1711 HWY 86 @ I-85	PIEDMONT	SC	29673	864-845-0888
CHRISTOPHER TRUCKS	108 HARRIS ROAD	PIEDMONT	SC	29673	864-679-8344
PETERBUILT OF GREENVILLE	2605 RIVER ROAD	PIEDMONT	SC	29673	800-624-3260
BURNS CHEVROLET	2515 CHERRY ROAD	ROCK HILL	SC	29732	803-366-9416
DAVENPORT TRUCK & AUTO	904 ALBRIGHT ROAD	ROCK HILL	SC	29730	803-899-0685
ITR, INC. dba INTERSTATE FLEET SERVICES	450 CORPORATE BLVD	ROCK HILL	SC	29730	803-329-9755
LAKESIDE COLLISION	5963 MOUNT GALLANT ROAD	ROCK HILL	SC	29732	803-831-1995
JERRY'S GARAGE	38 COLIE EDWARDS ROAD	RUBY	SC	29741	843-634-5579
TWIN LAKES AUTO BODY & RV REPAIR	645 TWIN LAKES ROAD	SENECA	SC	29678	864-972-7830
A1 SIMPSONVILLE COLLISION	3005 KEMET WAY	SIMPSONVILLE	SC	29681	864-963-7081
SIMPSONVILLE CHEVROLET	3431 N. INDUSTRIAL DRIVE	SIMPSONVILLE	SC	29681	864-271-7771
AUTO GLASS SERVICE	264 EAST KENNEDY ST	SPARTANBURG	SC	29302	864-583-9494
CUMMINS ATLANTIC - SPARTANBURG	260 COMMERCIAL ROAD	SPARTANBURG	SC	29303	864-208-2666
M & S TRUCK & TRACTOR SERVICE	7001 WHITE AVENUE	SPARTANBURG	SC	29303	864-582-0875
WESTSIDE COLLISION, INC	9110 WARREN H ABERNATHY HWY	SPARTANBURG	SC	29301	864-574-1063
FLEETWORLD, INC.	9324 CHARLESTON HWY 178	ST. GEORGE	SC	29477	843-563-8301
LYNARD BODY SHOP	101 FOLLY RD	ST. HELENA ISLAND	SC	29920	843-838-5731
BRUNSON PAINT & BODY SHOP	87 RIDGEWOOD COURT	ST. MATTHEWS	SC	29135	803-378-5938
CALHOUN AUTOMOTIVE WORKS	115 OLD #6 HWY	ST. MATTHEWS	SC	29135	803-655-6111
AUTO 1 OF SUMMERVILLE	825 W. RICHARDSON AVENUE	SUMMERVILLE	SC	29483	843-851-9955
CUMMINS ATLANTIC-SUMMERVILLE	231 FARMINGTON ROAD	SUMMERVILLE	SC	29483	843-851-9819
DIESEL EQUIPMENT SERVICES	330 INDUSTRIAL ROAD	SUMMERVILLE	SC	29483	843-873-8041
FARRELL BROTHERS, INC.	2451 HWY 17-A SOUTH	SUMMERVILLE	SC	29483	843-696-6699
ATLAS TRANSMISSION	301 W. LIBERTY STREET	SUMTER	SC	29150	803-775-4501
GOODWIN COLLISION CENTER	2700 BROAD STREET	SUMTER	SC	29151	803-469-2595
JONES CHEVROLET CO., INC.	1230 BROAD STREET	SUMTER	SC	29150	803-469-2515
MCLAUGHLIN MOTORS, INC.	950 N. MAIN STREET	SUMTER	SC	29150	803-773-1481
SOUTHERN AUTO PARTS	530 BROAD STREET	SUMTER	SC	29150	803-775-9353
PHILLIPS BODY SHOP	911 CHICK SPRING RD	TAYLORS	SC	29687	864-268-0249
WEST COLUMBIA COLLISION CENTER	2217 PLATT SPRINGS RD	W COLUMBIA	SC	29169	803-926-0099
BRICKYARD AUTO REPAIRS	9 PICKENS STREET, NE	WAGENER	SC	29164	803-564-3032
WOODY & SON INC	1299 S HIGHWAY 11	WALHALLA	SC	29691	864-638-9646
BISHOPS BODY SHOP	1109 S JEFFERIES BLVD	WALTERBORO	SC	29488	843-549-1111
RIZER CHEVROLET	351 N. JEFFERIES BLVD	WALTERBORO	SC	29488	843-549-6311
TOMMIE'S AUTO DIESEL	2674 JEFFERIES HWY	WALTERBORO	SC	29488	843-538-2128
BLANCHARD MACHINERY-WEST COLUMBIA	3151 CHARLESTON HWY	WEST COLUMBIA	SC	29169	803-791-7100
CAROLINA MOBILE GLASS	1610 AUGUSTA ROAD	WEST COLUMBIA	SC	29169	803-479-7895

AUTHORIZED WARRANTY REPAIR FACILITIES

EAST COAST TRUCK & TRAILER REPAIR	3925 HWY 321 SOUTH	WEST COLUMBIA	SC	29172	803-955-9215
PROFLEET OF THE CAROLINAS	2542 FISH HATCHERY ROAD	WEST COLUMBIA	SC	29172	803-794-8665
R & F AUTOMOTIVE	147 SHELTON ROAD	WEST COLUMBIA	SC	29170	803-996-4770
REELEY'S BODY SHOP	1005 MEETING STREET	WEST COLUMBIA	SC	29169	803-794-6930
SOUTHERN DIESEL REPAIR	409 CHARLESTON HWY	WEST COLUMBIA	SC	29169	803-755-9888
W.W. WILLIAMS	2610 AUGUSTA ROAD, WEST	WEST COLUMBIA	SC	29169	803-791-5910
WILLIAMS AUTO	320 CHARLESTON HWY	WEST COLUMBIA	SC	29169	803-794-5395
EDWARDS AUO SALES	3440 BLUE RIDGE BLVD	WEST UNION	SC	29696	864-638-5473
WHITTLE MOTOR COMPANY	12 E. MAIN STREET	WILLISTON	SC	29853	803-266-7575
WILSON CHEVROLET	798 HIGHWAY 321 NORTH	WINNSBORO	SC	29180	803-779-3861
GEORGIA ROAD PAINT & BODY	1410 W. GEORGIA ROAD	WOODRUFF	SC	29388	864-476-7832
WOODRUFF CHEVROLET	6007 HWY 101	WOODRUFF	SC	29388	864-476-8181

CUMMINS DEALERS

<p>CUMMINS ATLANTIC, LLC 2791 SHOP ROAD EXTENSION COLUMBIA, SC 29209 Phone:(803) 799-2410 Fax:(803) 779-3427</p>	<p>FOUR (4) ON-THE-ROAD SERVICE VEHICLES</p>
<p>CUMMINS ATLANTIC, LLC 231 FARMINGTON ROAD SUMMERVILLE, SC 29483 Phone:(843) 851-9819 Fax:(843) 875-4338</p>	<p>SIX (6) ON-THE-ROAD SERVICE VEHICLES</p>
<p>CUMMINS ATLANTIC, LLC 3137 HWY 701 S LORIS, SC 29569 Phone:(843) 716-7072 Fax:(843) 756-6112</p>	<p>TWO (2) ON-THE-ROAD SERVICE VEHICLES</p>
<p>CUMMINS POWER SOUTH, LLC 2923 RIVERWEST DRIVE AUGUSTA, GA 30907 Phone:(706) 722-8825 Fax:(706) 722-7553</p>	<p>NO ON-THE ROAD SERVICE VEHICLES</p>
<p>CUMMINS ATLANTIC, LLC 3700 JEFF ADAMS DRIVE CHARLOTTE, NC 28206 Phone:(704) 596-7690 Fax:(704) 596-3038</p>	<p>TEN (10) ON-THE-ROAD SERVICE VEHICLES</p>
<p>CUMMINS POWER SOUTH, LLC 5534 AUGUSTA ROAD SAVANNAH, GA 31407 Phone:(912) 232-5565 Fax:(912) 232-5145</p>	<p>ONE (1) ON-THE-ROAD SERVICE VEHICLE</p>
<p>CUMMINS ATLANTIC, LLC 260 COMMERCIAL ROAD SPARTANBURG, SC 29303 Phone:(864) 208-2657 Fax:(864) 208-2658</p>	<p>FIVE (5) ON-THE-ROAD SERVICE VEHICLES</p>

ALLISON DEALERS

Allison Distributor Branch 2610 Augusta Rd. W. W. Columbia (Columbia), SC 29169 Phone: 803-791-5910 Fax: 803-794-2527	THREE (3) ON-THE-ROAD SERVICE VEHICLES
Yancey Truck Centers 1357 Gordon Highway Augusta, GA 30901 Phone: 706-724-2240 Fax:	NO ON-THE-ROAD SERVICE VEHICLES
Cooper Kenworth, Inc. 230 East Westinghouse Boulevard Charlotte, NC 28273 Phone: 704-909-3799 Fax: 704-909-3936	NO ON-THE-ROAD SERVICE VEHICLES
Clarke Power Services-East 1815 Starita Rd. Charlotte, NC 28206-1247 Phone: 704-596-8000 Fax: 704-596-8915	THREE (3) ON-THE-ROAD SERVICE VEHICLES
W. W. Williams Southeast, Inc. 1835 SR-101 Greer, SC 29651 Phone: 864-877-0935 Fax: 864-848-1176	THREE (3) ON-THE-ROAD SERVICE VEHICLES
Rush Truck Center 3502 Jeff Adams Drive Charlotte, NC 28217 Phone: 704-597-8600 Fax: 704-597-8764	NO ON-THE-ROAD SERVICE VEHICLES
Mack Truck Sales of Charlotte, Inc. 3609 Trailer Drive Charlotte, NC 28269 Phone: 704-597-1240 Fax: 704-596-5923	TWO (2) ON-THE-ROAD SERVICE VEHICLES
W. W. Williams Southeast, Inc. 7100 Design Street , Building 200 North Charleston, SC 29418 Phone: 843-225-7121 Fax: 843-225-7122	Six (6) ON-THE-ROAD SERVICE VEHICLES

BRAUN WARRANTY DEALERS

CAROLINA MOBILITY SALES
3624 FERNANDINA RD.
COLUMBIA, SC 29210
Tel: (866) 826-5438
Fax: 1-803-791-7191

THEY DO NOT HAVE ON-THE-ROAD SERVICE VEHICLES BUT THE WARRANTY IS 24-HOUR. IF THE LIFT IS DOWN THEY WILL COME TO YOUR FACILITY.

ADAPTIVE DRIVING SOLUTIONS
3027 RIVER WATCH PKWY.
AUGUSTA, GA 30907
Tel: (706) 364-2688
Fax: 1-706-364-2699

ILDERTON CONVERSIONS OF CHARLESTON LLC
8550 RIVERS AVE.
NORTH CHARLESTON, SC 29406
Tel: (843) 576-0414
Fax: 1-843-576-0418

ILDERTON CONVERSIONS OF CHARLOTTE
5518 WESTPARK DR.
CHARLOTTE, NC 28217
Tel: (704) 523-2022
Fax: 1-704-523-2023

CAROLINA MOBILITY SALES
4025 QUEEN CITY DR.
CHARLOTTE, NC 28208
Tel: (704) 399-0900
Fax: 1-704-399-9009

CAROLINA MOBILITY
563 WOODRUFF RD.
GREENVILLE, SC 29607
Tel: (888) 886-5438
Fax: 1-864-599-0555

CAROLINA MOBILITY SALES/SAVANNAH MOBILITY SALES
3938 OGEECHEE ROAD
SAVANNAH, GA 31405
Tel: (912) 233-1050

Blue Bird Body Company - Sales Quotation

95399 - - SC DEPT OF EDUCATION

Market	PLBT	Prod Code	Length	Capacity	Chassis	Wheelbase	Qty	Promise Date
US School Bus	BBCV	RG-PRODUCTION UNIT	3011	66	BB-BBCV	252.0	1	12/20/2012

[Send as Email](#)

Quoted To: SC DEPT OF EDUCATION
RICHLAND County
1429 SENATE STREET

Quoted By: Palmetto Bus Sales

COLUMBIA SC 29201

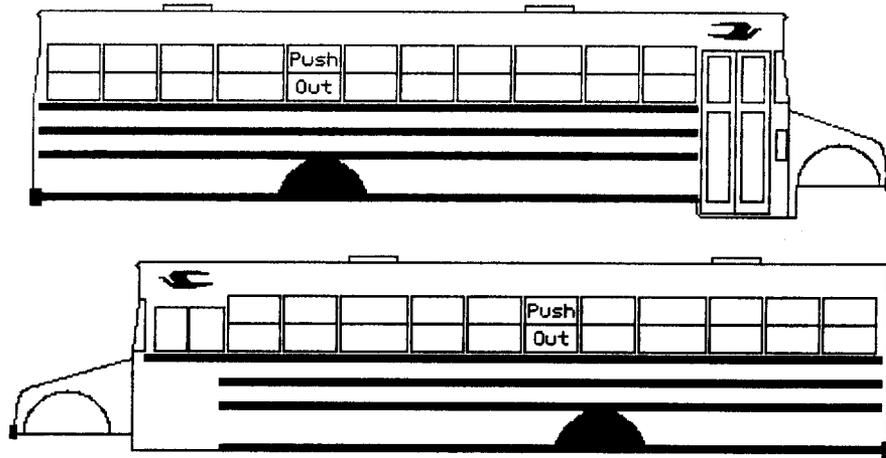
Quote ID: 95399

Quantity	Base Model/Feature	Description
1	BBCV / 3011	B.B. CONVENTIONAL

Quote ID: 95399

Body Plan / Seat Plan Information

Body Plan ID: 5009748



Seat Plan ID: 15418

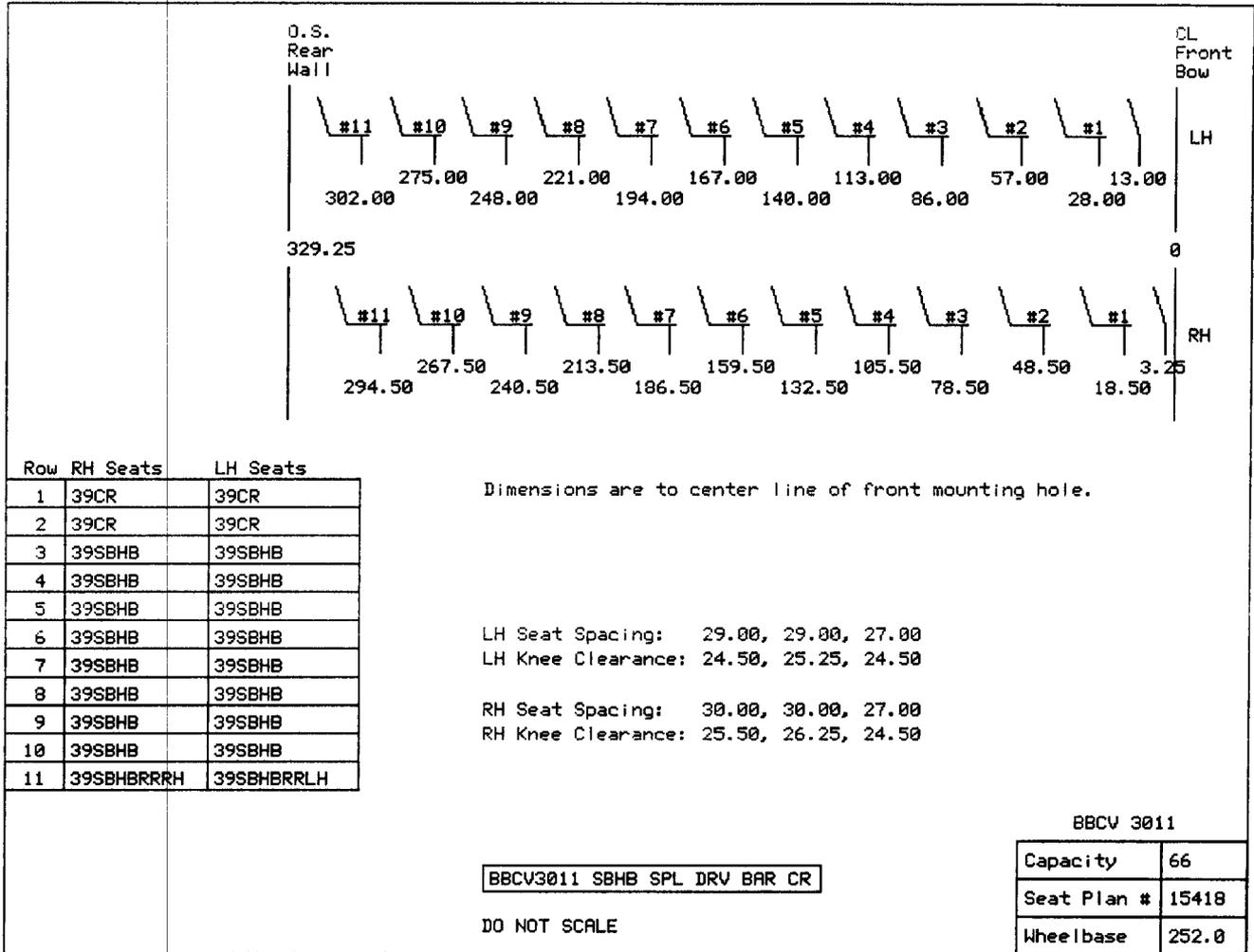
SP: 15418 BBCV 3011, 66 CAP



Quote ID: 95399

Seat Plan Spacing Chart

SP: 15418 BBCV 3011, 66 CAP



Blue Bird Body Company - Sales Quotation

95695 -- SC DEPT OF EDUCATION

Market	PLBT	Prod Code	Length	Capacity	Chassis	Wheelbase	Qty	Promise Date
US School Bus	BBCV	RG-PRODUCTION UNIT	2311	32	BB-BBCV	189.0	1	10/19/2012

[Send as Email](#)

Quoted To: SC DEPT OF EDUCATION
RICHLAND County
1429 SENATE STREET

Quoted By: Palmetto Bus Sales

COLUMBIA SC 29201

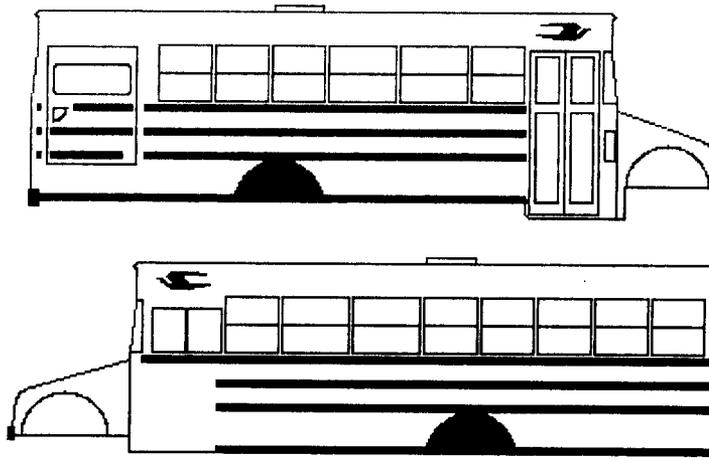
Quote ID: 95695

Quantity	Base Model/Feature	Description
1	BBCV / 2311	B.B. CONVENTIONAL

Quote ID: 95695

Body Plan / Seat Plan Information

Body Plan ID: 5008963



Seat Plan ID: 16159

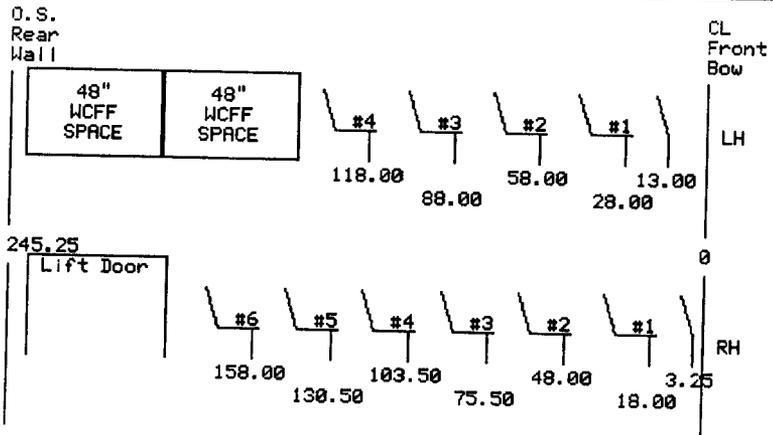
SP: 16159 BBCV 2311, 32 CAP



Quote ID: 95695

Seat Plan Spacing Chart

SP: 16159 BBCV 2311, 32 CAP



Row	RH Seats	LH Seats
1	39CR	39CR
2	39SBHB	39CR
3	39SBHB	39SBHB
4	39SBHB	39SBHB
5	39SBHB	
6	39SBHB	

Dimensions are to center line of front mounting hole.

LH Seat Spacing: 30.00, 30.00, 30.00
 LH Knee Clearance: 25.50, 26.25, 27.50
 RH Seat Spacing: 30.00, 27.50
 RH Knee Clearance: 26.25, 25.00

BBCV2311 SPL DRV ST BAR PLN CR

DO NOT SCALE

BBCV 2311	
Capacity	32
Seat Plan #	16159
Wheelbase	189.0

Blue Bird Body Company - Sales Quotation

95705 - - SC DEPT OF EDUCATION								
Market	PLBT	Prod Code	Length	Capacity	Chassis	Wheelbase	Qty	Promise Date
US School Bus	BBCV	RG-PRODUCTION UNIT	2311	32	BB-BBCV	189.0	1	10/19/2012

[Send as Email](#)

Quoted To: SC DEPT OF EDUCATION
 RICHLAND County
 1429 SENATE STREET

Quoted By: Palmetto Bus Sales

COLUMBIA SC 29201

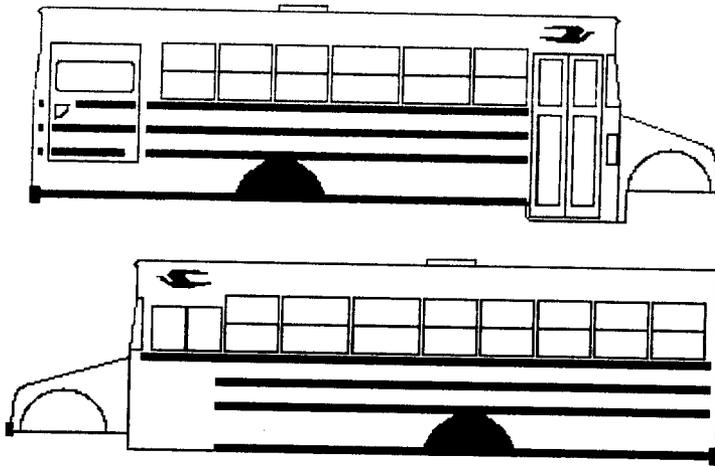
Quote ID: 95705

Quantity	Base Model/Feature	Description
1	BBCV / 2311	B.B. CONVENTIONAL

Quote ID: 95705

Body Plan / Seat Plan Information

Body Plan ID: 5008963



Seat Plan ID: 15387

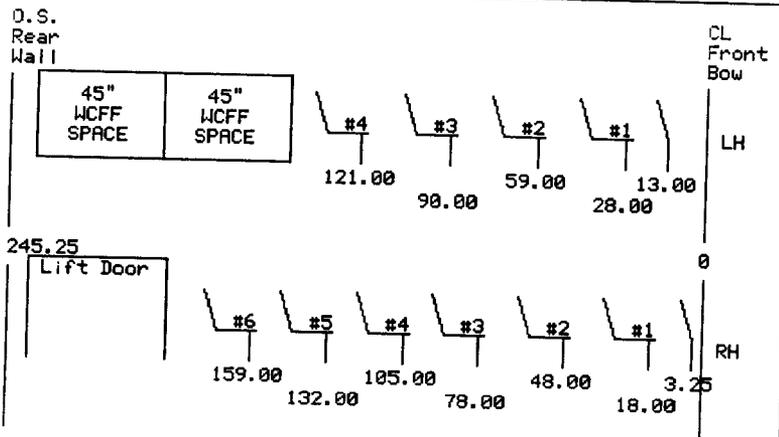
SP: 15387 BBCV 2311, 32 CRP



Quote ID: 95705

Seat Plan Spacing Chart

SP: 15387 BBCV 2311, 32 CAP



Row	RH Seats	LH Seats
1	39SBHB	39SBHB
2	39SBHB	39SBHB
3	39SBHB	39SBHB
4	39SBHB	39SBHB
5	39SBHB	
6	39SBHB	

Dimensions are to center line of front mounting hole.

LH Seat Spacing: 31.00
LH Knee Clearance: 28.50

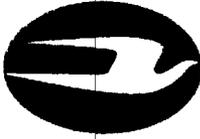
RH Seat Spacing: 30.00, 27.00
RH Knee Clearance: 27.50, 24.50

BBCV 2311

BBCV2311 02 SBHB SPL DRV ST BAR PLN

Capacity	32
Seat Plan #	15387
Wheelbase	189.0

DO NOT SCALE



BLUE BIRD

June 4, 2012

Ms. Cheryl Patrick
Materials Management Office
Capitol Center
1201 Main Street, Suite 600 – MMO Conference Rm
Columbia SC 29201

RE: BLUE BIRD CERTIFICATION OF SCHOOL BUSES FOR SOUTH CAROLINA

Dear Ms. Patrick,

As required by the SOUTH CAROLINA SCHOOL BUS SPECIFICATIONS, TYPE C – CONVENTIONAL BUS, dated February 12, 2012, the following certification is submitted:

Blue Bird Body Company certifies that the Vision conventional body and chassis manufactured by Blue Bird for the 2012-2013 school year complies with all applicable Federal Motor Vehicle Safety Standards (Title 49, CFR Part 571), requirements of the State of South Carolina and, if not in conflict, requirements of the *2005 National School Transportation Specifications and Procedures*. Compliance with state and federal specifications is accomplished by the use of standard and optional equipment.

Compliance with the Colorado Racking Test, as required on South Carolina Specification Page 13, has been demonstrated, and certification was documented on June 28, 1982. The school bus was tested in accordance to the requirements for an alternative method of testing as outlined on in Section (d), Specification Page 12. The results of the 1982 testing have been rechecked, and they apply to Blue Bird school bus bodies manufactured for the 2012-2013 school year.

Compliance with the Kentucky Pole Test, as required on South Carolina Specification Page 14, has been demonstrated, and certification was documented in October, 1990. The results of the 1990 testing have been rechecked, and they apply to Blue Bird school bus bodies manufactured for the 2012-2013 school year.

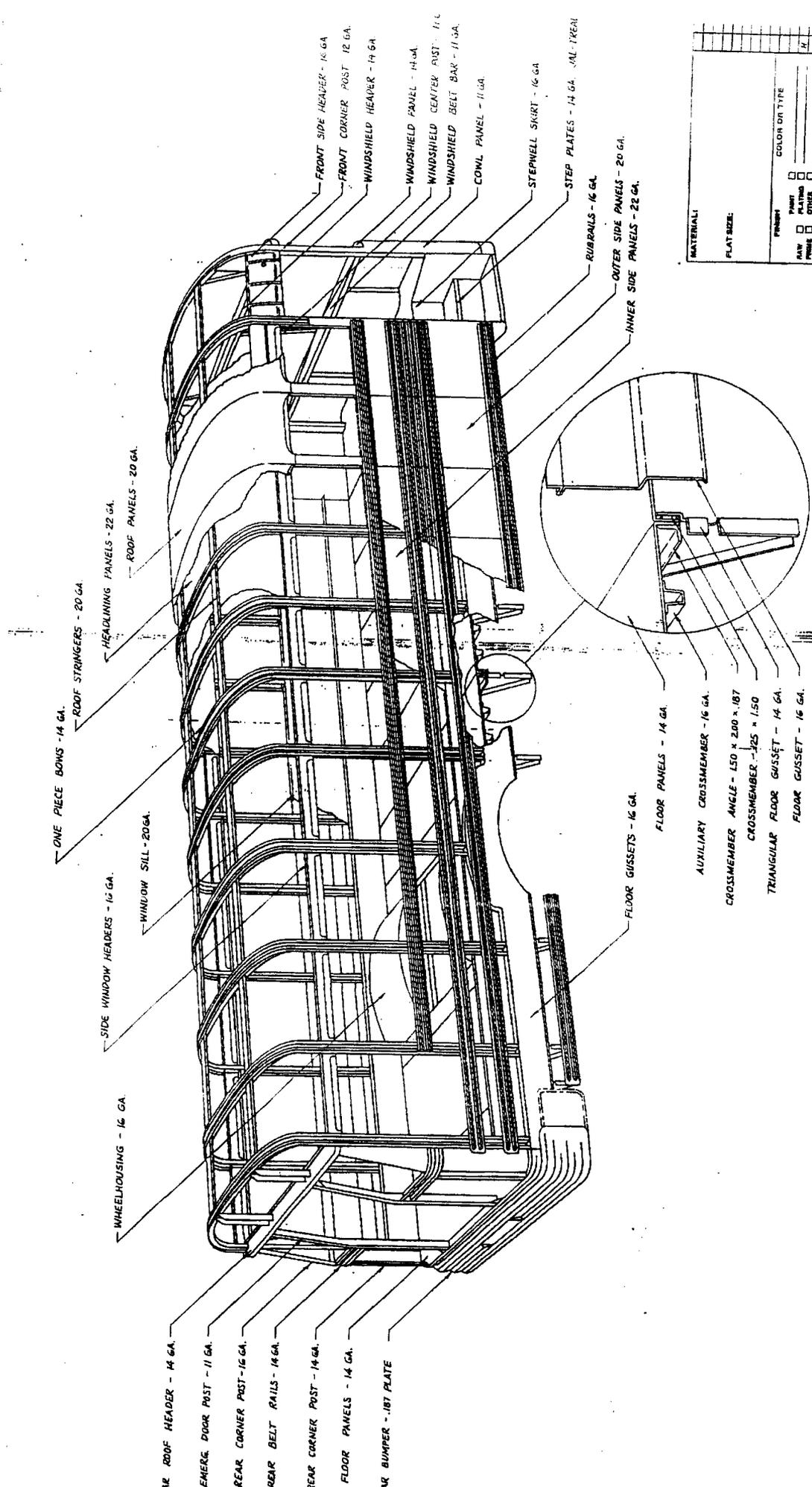
Please contact me if you have questions.

Sincerely,

Tony Woodard

Tony Woodard
Specifications Coordinator
Engineering Services
Blue Bird Body Company

BLUE BIRD BODY COMPANY
P.O. Box 937 • Fort Valley, Georgia • 478.825.2021



MATERIAL		COLOR OR TYPE	
PLAT SIZE		SCALE	
<input type="checkbox"/> PAINT <input type="checkbox"/> PRIME <input type="checkbox"/> FINISH <input type="checkbox"/> PREFORMED	<input type="checkbox"/> ALTERNATE <input type="checkbox"/> MILLING / MGR	DD MAT. SCALE	1/4" = 1'-0" 1/8" = 1'-0" 1/16" = 1'-0" 1/32" = 1'-0" 1/64" = 1'-0" 1/128" = 1'-0" 1/256" = 1'-0" 1/512" = 1'-0" 1/1024" = 1'-0" 1/2048" = 1'-0" 1/4096" = 1'-0" 1/8192" = 1'-0" 1/16384" = 1'-0" 1/32768" = 1'-0" 1/65536" = 1'-0" 1/131072" = 1'-0" 1/262144" = 1'-0" 1/524288" = 1'-0" 1/1048576" = 1'-0" 1/2097152" = 1'-0" 1/4194304" = 1'-0" 1/8388608" = 1'-0" 1/16777216" = 1'-0" 1/33554432" = 1'-0" 1/67108864" = 1'-0" 1/134217728" = 1'-0" 1/268435456" = 1'-0" 1/536870912" = 1'-0" 1/1073741824" = 1'-0" 1/2147483648" = 1'-0" 1/4294967296" = 1'-0" 1/8589934592" = 1'-0" 1/17179869184" = 1'-0" 1/34359738368" = 1'-0" 1/68719476736" = 1'-0" 1/137438953472" = 1'-0" 1/274877906944" = 1'-0" 1/549755813888" = 1'-0" 1/1099511627776" = 1'-0" 1/2199023255552" = 1'-0" 1/4398046511104" = 1'-0" 1/8796093022208" = 1'-0" 1/17592186044416" = 1'-0" 1/35184372088832" = 1'-0" 1/70368744177664" = 1'-0" 1/140737488355328" = 1'-0" 1/281474976710656" = 1'-0" 1/562949953421312" = 1'-0" 1/1125899906842624" = 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$$A = 2(.071)(.685) + 2(.071)(1.88) + .071(1.238)$$

$$A = .09727 + .26696 + .087898$$

$$A = .452128$$

$$.452128 X = 2(.048635)(1.8445) + 2(.13348)(.94) + (.087893)(.0355)$$

$$.452128 X = .1794145 + .2509424 + .0031203$$

$$X = \frac{.4334772}{.452128}$$

$$X = .9587488$$

$$I = \frac{BH^3}{12} + AD^2$$

$$I = 2 \left\{ \frac{.685(.071)^3}{12} + .048635(.8857512)^2 \right\} + 2 \left\{ \frac{.071(1.88)^3}{12} + .13348(.01875)^2 \right\}$$

$$+ \left\{ \frac{1.238(.071)^3}{12} + .087898(.92325)^2 \right\}$$

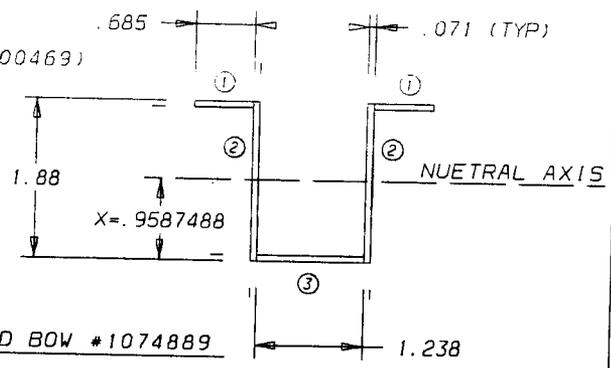
$$I = 2(.0000204 + .0381568) + 2(.0393 + .0000469)$$

$$+ (.0000369 + .07492)$$

$$I = .0763544 + .0786938 + .0749569$$

$$I = .2300051$$

$$Z = \frac{I}{C} = \frac{.2300051}{.9587488} = .2399013$$



1456326

1456326 ASECTION MODULUS, BOW CROSS SECTION

MATERIAL:

FLAT SIZE:

FINISH COLOR OR TYPE

RAW PAINT

PRIME PLATING

OTHER

LET.	WAS	REVISIONS	DR.	CK.	APP.	CCN	DATE	REL.

RELEASED 7-20-89 GT 9999 CCN BLUE BIRD BODY CO. SCALE .50

FORT VALLEY, GEORGIA, U.S.A.

INACTIVATES NOS. _____

REPLACED BY NOS. _____

DO NOT SCALE

TOLERANCE ON ALL DIMENSIONS IS, PLUS _____

OR MINUS _____ UNLESS OTHERWISE SPECIFIED.

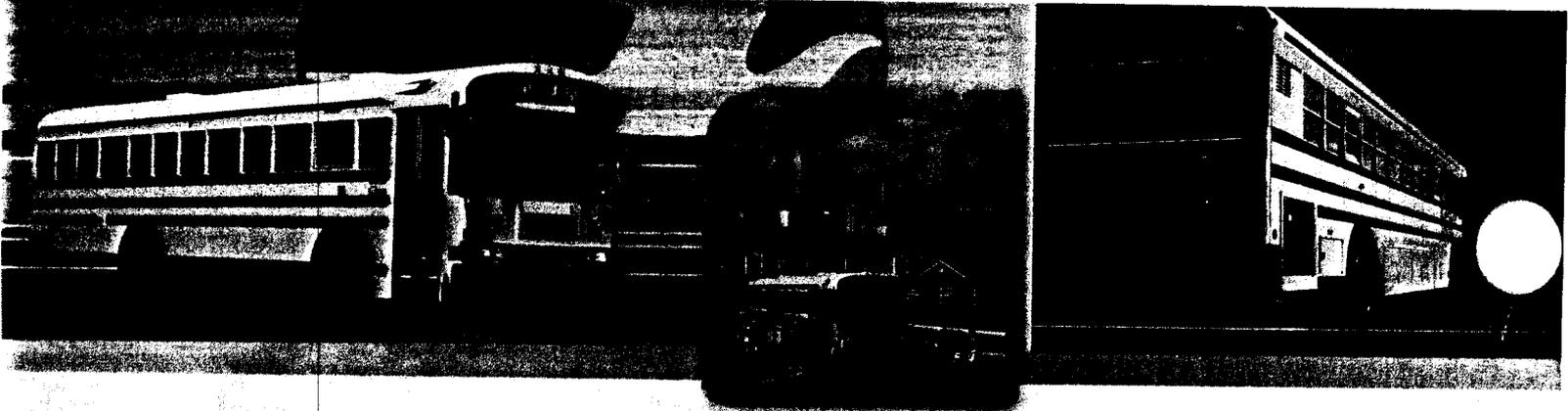
DR. 7-19-89 BY GAD

CK. 7-19-89 BY JWS

APP. 7-19-89 BY JWS

SIZE A 1456326

9999\$0000G0JS



Blue Bird & PPG's Commitment to Customer Satisfaction

This color selector represents Blue Bird's commitment to ensure that our customers have the latest selection of special order colors available.

To satisfy the demand for a durable, attractive, high quality paint finish we are using PPG's Delfleet® paint system.

PPG Industries is a major supplier of primers, topcoats and clears for commercial OEM and Refinish applications. You can always be assured that we are offering you the latest, high quality paint technologies.

For more information, please contact your Blue Bird Dealer or your local PPG Refinish Distributor.





ACRYLIC URETHANE FINISHES



907675 Fire Red



907670 Green 2



907662 Medium Blue



907664 Antique White



907673 Target Red



907652 Blue Grass



909507 Airforce Blue



907658 Bengal Tan



907641 Dark Red



907657 Dark Green



907666 Purple Plum



907663 Tan



907672 Maroon



907647 Light Blue



907659 Bright White



907651 Brown



907644 Orange



907655 Sky Blue



907645 Mellow White



907668 Dark Brown



907669 Red 1



907646 Go-Blue



907642 White



907665 Light Gray



907656 Cream



907654 Medium Blue



907650 White



907671 Medium Gray



907660 Light Green



907643 Bahamas Blue



907648 Limestone White



907653 Dark Gray



909506 Forest Green



907667 Vibrant Blue



907649 Warm White



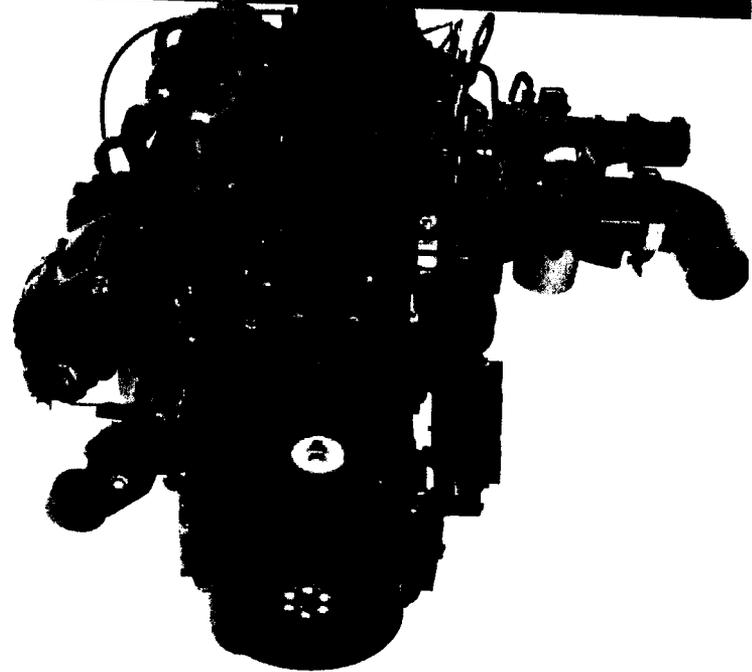
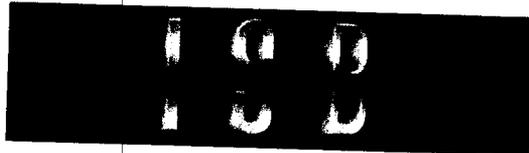
907661 Black



EVERYTM ROUTE.



SCHOOL BUS APPLICATIONS.



The Cummins ISB is the perfect engine to power your school bus. Reliable, efficient and quiet, the ISB delivers the power you need to transport students on time, safely and dependably.

Cummins B Series family of engines has long been the preferred choice of school bus operators. The ISB EPA '07 takes this legendary family a leap forward. Exhaust emissions are reduced by 90%. Ratings are increased to 325 hp. Yet the ISB EPA '07 maintains its excellent fuel efficiency.

To achieve this balance of improved emissions and performance, we've increased the displacement, enhanced the electronic engine controls, added a Variable Geometry Turbocharger (VG Turbo) and increased the number of injection events per combustion cycle. These upgrades enhance the position of the ISB as the quietest engine in its class, a big safety factor in school buses, along with improving vehicle performance. Plus, the ISB continues to lead its class with the lowest total cost of ownership.

At 6.7 liters (a 13% increase in displacement), this new ISB delivers increased power, performance and productivity. Enhancements to the High Pressure Common Rail fuel system deliver the optimum balance of performance, emissions control and fuel economy across the entire operating range. The aftertreatment system is designed to operate automatically, with no impact on vehicle performance.

Ratings

ENGINE MODEL	ADVERTISED HORSEPOWER (KW)	PEAK TORQUE LB-FT (N•M) @ RPM	GOVERNED SPEED
ISB 325	325 (243)	750 (1017) @ 1800	2600 RPM
ISB 300	300 (224)	620 (841) @ 1600	2600 RPM
ISB 280	280 (209)	660 (895) @ 1600	2600 RPM
ISB 260	260 (194)	620 (841) @ 1600	2600 RPM
ISB 240	240 (179)	620 (841) @ 1600	2600 RPM
ISB 240	240 (179)	560 (759) @ 1600	2600 RPM
ISB 220	220 (164)	520 (705) @ 1600	2600 RPM
ISB 200	200 (149)	520 (705) @ 1600	2600 RPM

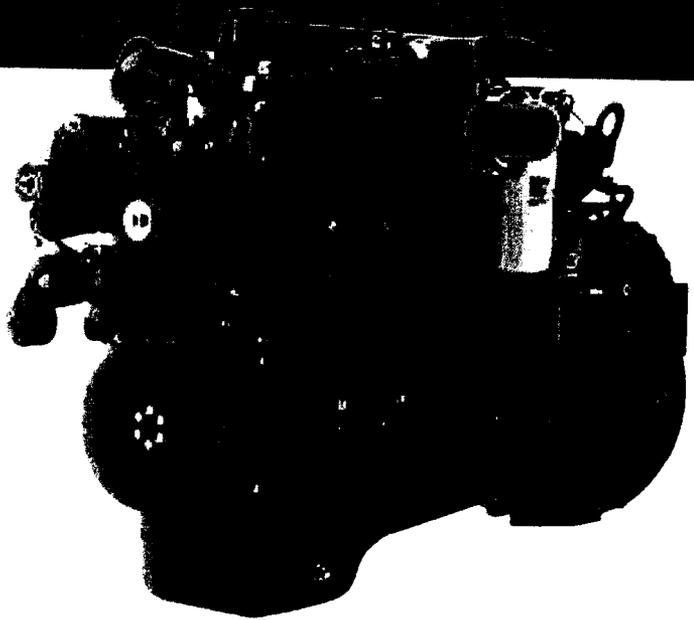
Specifications

ADVERTISED HORSEPOWER	200-325 HP	149-243 KW
PEAK TORQUE	520-750 LB-FT	705-1017 N•M
GOVERNED SPEED	2600 RPM	
CLUTCH ENGAGEMENT TORQUE	400 LB-FT	542 N•M
NUMBER OF CYLINDERS	6	
OIL SYSTEM CAPACITY	4.0 U.S. GALLONS	15.1 LITERS
SYSTEM WEIGHT	1,190 LB	540 KG
ENGINE (DRY)	1,150 LB	522 KG
AFTERTREATMENT*	40 LB	18 KG

*INCREASE OVER STANDARD MUFFLER.

Features And Benefits.

- Responsiveness and Reliability – The VG Turbo features enhanced response and control with electric actuation for infinite adjustment, providing exact boost across the operating range. The patented sliding-nozzle design increases reliability, durability.
- Quietest Operation – An increased number of injection events per combustion cycle along with a rear gear train design keep the ISB the quietest diesel in its class, providing increased safety and driver comfort.
- Exceptional Power-to-Weight Ratio – Up to 325 hp and 750 lb-ft of peak torque, from an engine that weighs just 1,150 lb.
- Lower Operating Costs – Lowest total cost of ownership over the 15-year life of your school bus. Optimized to provide exceptional fuel economy, long maintenance intervals, ease of repair and cost-effective overhaul options.
- Clean, Efficient Operation – High Pressure Common Rail fuel injection and cooled Exhaust Gas Recirculation (EGR) combine with the Cummins Particulate Filter to ensure complete combustion while reducing particulate matter by more than 90%. The total package from air intake to exhaust has been designed and manufactured by Cummins for uncompromising performance and reliability with minimum maintenance.



Electronic Features.

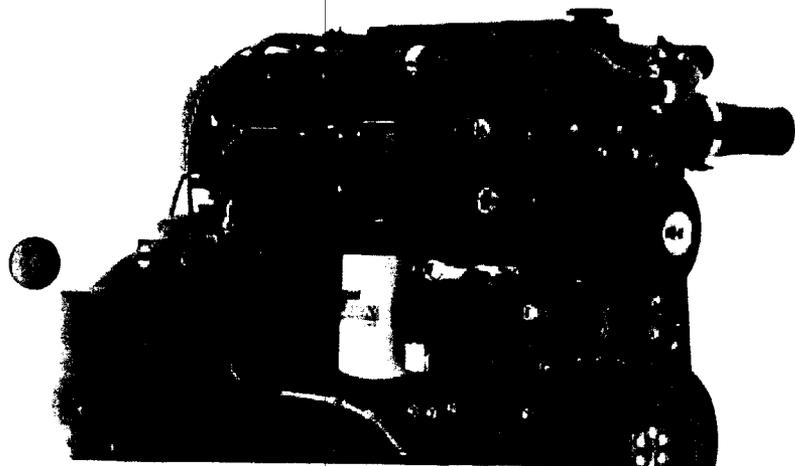
The electronic hardware and software on the ISB use a common architecture with all other Cummins engines, technology that is time-tested and proven. Plus, the ISB has every diagnostic, maintenance monitoring and engine protection feature that you need.

Dependability. Every Day And Every Year.

Cummins ISB is designed for years of dependable service. The proven B Series block has been designed for even greater structural capability. Targeted piston-cooling nozzles lower piston temperatures for increased durability in lower ratings, while gallery cooling achieves the same goal in higher horsepower ratings. Plus, it features a state-of-the-art Fleetguard[®] oil filter for extended component and engine life.

Optional Equipment.

- You can replace the standard 15.2 cfm WABCO air compressor with either an 18.7 or 30.4 cfm unit.
- Water-in-fuel sensor alerts drivers of water buildup in the fuel filter. This is a warning sign that there may be excess water in the fuel, which could cause performance and durability problems.
- An innovative oil level sensor operates like an electric dipstick, eliminating the need for the daily check of oil level.
- A larger 18-quart oil pan allows longer oil change intervals.



ISB Maintenance Intervals.

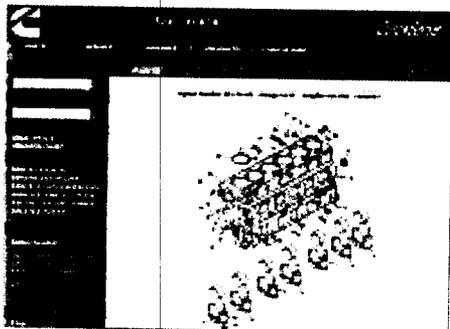
	MILES KILOMETERS	HOURS	MONTHS
OIL AND FILTER	15,000 24,000	500	6
FUEL FILTER	15,000 24,000	500	6
COOLANT FILTER	NONE*	NONE*	NONE*
OVERHEAD ADJUSTMENT	150,000 241,500	5,000	48
COALESCING FILTER	60,000 90,000	2,500	24
PARTICULATE FILTER CLEANING	200,000 - 400,000 320,000 - 640,000		

*If engine is equipped with an optional coolant filter, it will need to be replaced on the same intervals as the oil filter.

The Cummins Particulate Filter is designed to last the life of your engine. Regeneration is fully automated and controlled by the ECM. See Owner's Manual for complete details.

Every Repair.

- **INSITE™** – For years Cummins INSITE software has been making it easy for technicians to troubleshoot, repair and service our electronic engines through easy-to-follow steps on your computer. Providing the kind of uptime you demand from your buses.
- **QuickServe® Online** – Gives Cummins school bus fleets rapid access to parts and service information for over nine million engine serial numbers. Part numbers and diagrams, maintenance information and service bulletins, warranty details and more are available every minute of every day via quickserve.cummins.com.



Every Confidence.

Cummins base engine coverage for school buses is 5-year/100,000-mile (160,935 km) total coverage, with 3-year/300,000-mile (482,804 km) major components coverage. Coverage includes full parts and labor on warrantable failures, and all consumables not reusable due to covered failure, with no deductible.



Every Coverage.

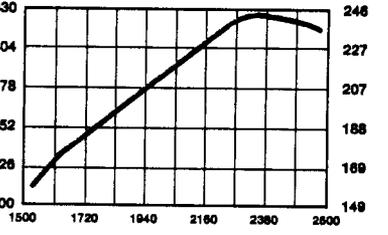
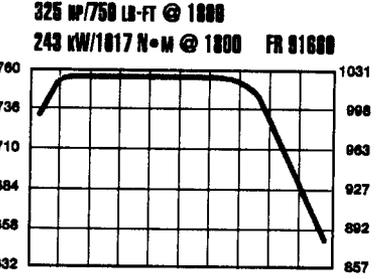
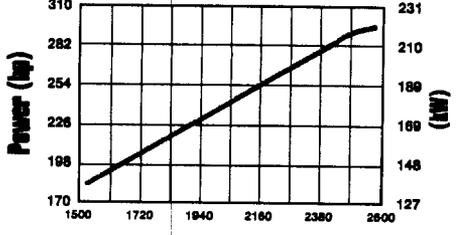
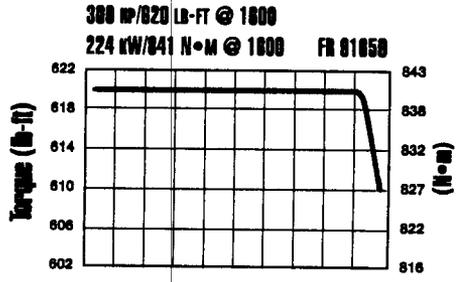
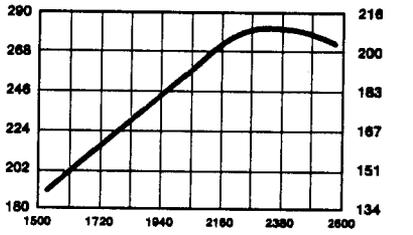
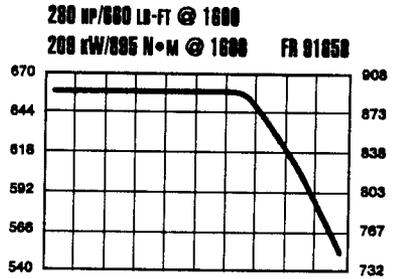
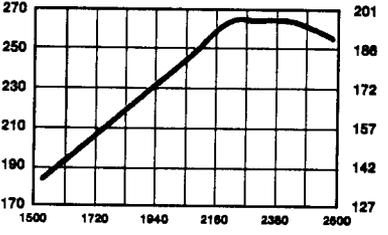
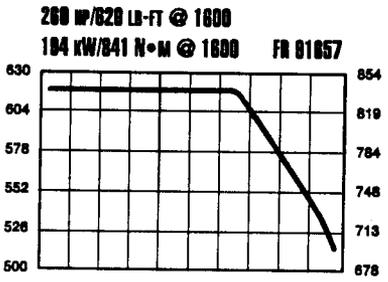
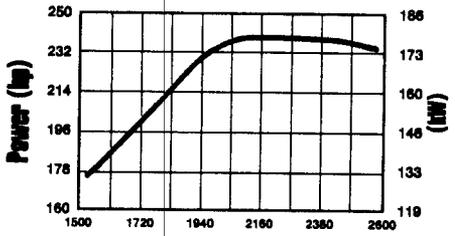
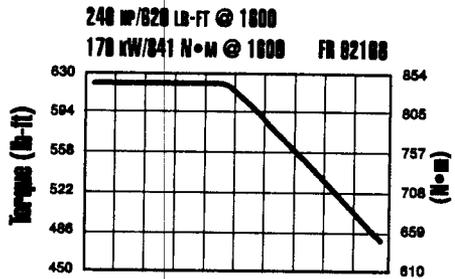
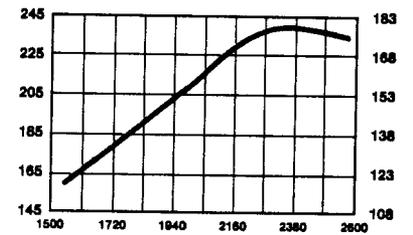
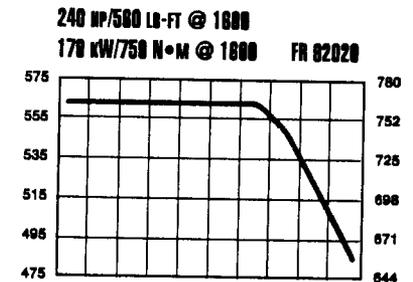
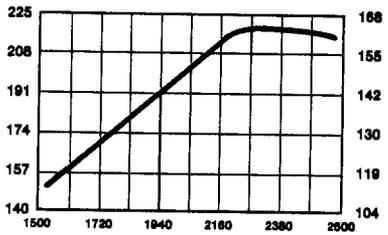
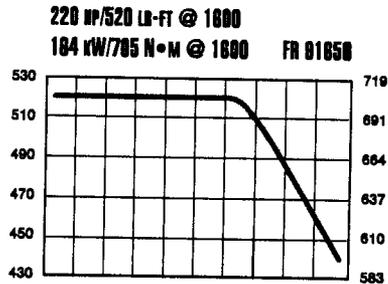
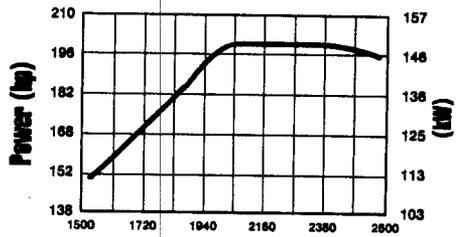
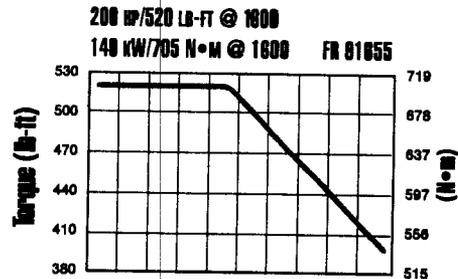
Cummins offers extended coverage options on the ISB engine that are among the best in the school bus industry. For specific details, contact your local distributor.



Every Question. Answered.

- **Service Network** – Cummins engines are backed by nearly 3,500 authorized parts or service outlets in North America.
- **Customer Assistance Center** – Call the Cummins specialists for technical assistance and service locations at 1-800-DIESELS (1-800-343-7357).
- **Cummins E-Mail** – For online assistance to Cummins-related questions, click the Contact Us link in the header at everytime.cummins.com.
- **Cummins Web Site** – For product literature or additional information, log on to everytime.cummins.com.
- **Cummins Online Registration** – Register all your Cummins engines quickly and easily at everytime.cummins.com to ensure quality parts and service for your engine.

ISB TORQUE AND POWER CURVES



Cummins is a pioneer in product improvement. Thus specifications may change without notice. Illustrations may include optional equipment.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

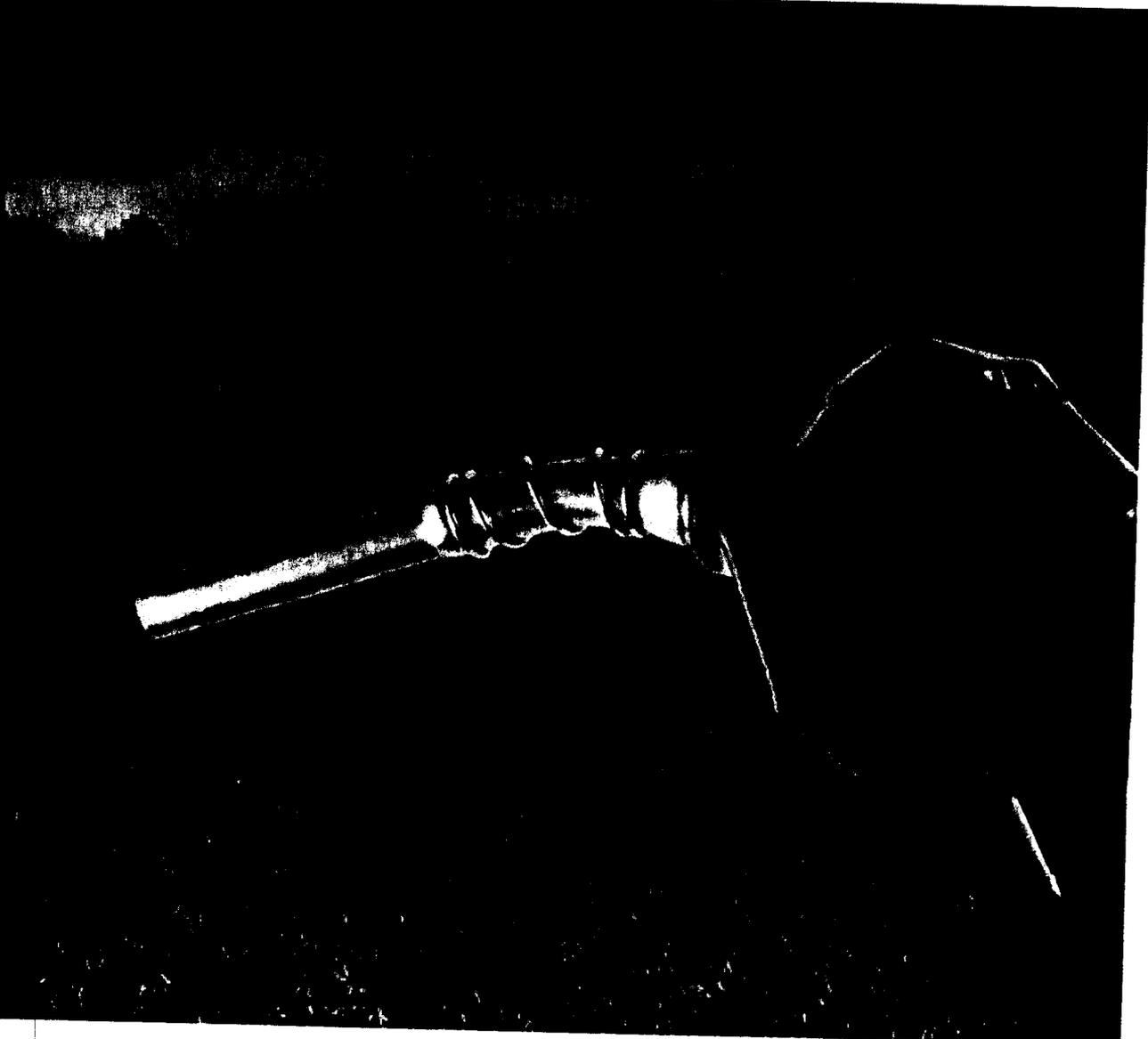
PLATEAU
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Every™ Advantage.

Biodiesel Fuel For Cummins Engines.



What Is Biodiesel?

Biodiesel is a methyl/ethyl ester fuel that is derived from organic sources, most commonly from soybeans in the U.S. and rapeseed in Europe. Because it uses renewable resources as its origin, biodiesel can help reduce the world's dependence on petroleum-based diesel fuel. It is biodegradable and non-toxic, and it reduces carbon monoxide, unburned hydrocarbons and particulate matter in the atmosphere. It also reduces CO₂ emissions in a life cycle basis.

Biodiesel is most often blended with petroleum-based fuel, with the percentage identified in its name. B5 is fuel with 5% biodiesel and 95% petroleum-based diesel. B20 is a blend of 20% biodiesel and 80% diesel.

Biodiesel has different physical and chemical properties than traditional diesel fuel. For instance, it has a higher cetane number, no sulfur and no aromatics. Blends up to B20 are fully compatible with many Cummins engines and their aftertreatment systems. Biodiesel also has a higher lubricity than diesel fuel.

In order for Cummins to approve biodiesel use in its engines (with the full warranty in effect), there had to be thorough testing to gain scientific evidence and to ensure that it is being produced to stringent quality standards.

How Is The Quality Measured?

In the United States there is a National Biodiesel Accreditation Commission which has set up a quality systems program for both producers and certified marketers of biodiesel fuel. This is known as BQ-9000 accreditation. Cummins requires that the biodiesel fuel blend be purchased from a BQ-9000 Certified Marketer (distributor). The B100 biodiesel

fuel used in the blend must be sourced from a BQ-9000 Accredited Producer. This ensures that it will meet the ASTM D6751* and ASTM D7467** standards. A list of BQ-9000 Certified Marketers and Accredited Producers can be found at www.bq-9000.org.

In Europe, specifications are issued under EN 14214, published by the European Committee for Standardization.

*Revised to include B100 cold soak test requirement.

**New specification including an oxidation stability requirement for blends B6 - B20.

Making The Switch To Biodiesel.

The first step is to confirm that your Cummins engine is approved for biodiesel use. Then, before you pump the first gallon into your tank, you need to install a new fuel filter(s). The first two fuel filter changes will have to be performed at half the standard interval; after that you can return to the normal change interval. Biodiesel doesn't have as long of a shelf life as petrodiesel, and should be used within six months of its manufacture. Equipment should not be stored longer than three months with biodiesel blends in the fuel system. Complete details can be found in the Fuels for Cummins Engines - Service Bulletin 3379001, which is available through Cummins dealers, distributors and on our web site at quickserve.cummins.com.

You should also contact your equipment manufacturer to make sure that all of their supplied components are compatible, including fuel tanks and lines.

Cummins Approved Biodiesel Blends.

■ **B5** - Any Cummins diesel can be run safely on B5 biodiesel blend and be fully covered under its original warranty.

■ **B20** - In the on-highway market, Cummins ISX, ISM, ISL, ISC and ISB engines that are certified to EPA '02 emissions standards or later are approved for the use of B20 biodiesel, along with ISL, ISC and ISB engines certified to Euro III.

In off-highway use, B20 is approved for Tier 3/Stage IIIA QSX, QSM, QSL, QSC, QSB6.7, QSB4.5 and QSB3.3, along with QSM marine and QSM G-Drive engines.

In High Horsepower use, B20 is approved for engines built after January 1, 2008, including QSK78, QSK60, QSK50, K2000E, K50, QSK45, QSK38, K1500E, K38, QST30, QSK23, QSK19, and K19; Marine engines include QSK60, QSK50, K50, QSK45, QSK38, K38, QSK19, K19.

For Cummins engines in Dodge Ram trucks, B20 may be used in municipal, government and commercial fleets only. This applies to selected model year vehicles. Please consult an authorized Dodge Ram service center for specific requirements and approved vehicle models.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

Phone: 1-800-DIESELS (1-800-343-7357)
Fax: 1-800-232-6393
Internet: everytime.cummins.com

Cummins Ltd
UK

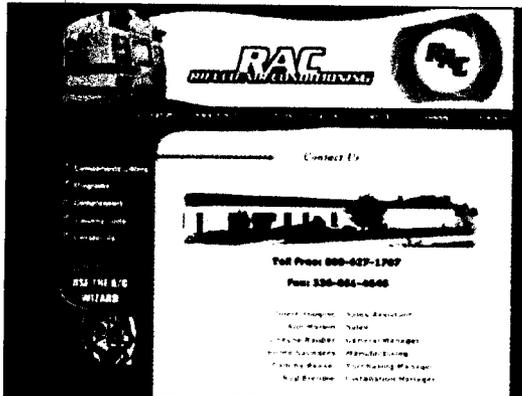
Phone: +44 (0) 1327 886484
Fax: +44 (0) 870 2413180

For other countries, see
everytime.cummins.com/customercenter

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Rifled Air Conditioning Systems (RAC) Inc.

ESTABLISHED 1994



RAC manufactures an array of air conditioning systems and was the first to bring grooved, copper-coiled technology to the bus industry.

Fast Facts

- **Founded by:** Brad Matthews / Matthews Group Inc.
- **Year founded:** 1994
- **Headquarters:** Archdale, N.C.
- **Number of employees:** 40
- **Key products:** RE-20 (60,000 BTU) Evaporator, RC-30 (80,000 BTU) Condenser
- **Head of company:** Brad Matthews
- **Website:** www.rifledair.com
- **Phone:** (800) 627-1707

History

• **What was the original name of your company, and how did it get started?**
Rifled Air Conditioning Systems Inc. (RAC) began in the transportation industry by installing A/C, wheelchair lifts, video systems and other aftermarket products to buses.

Recognizing a continuing need for air conditioning, the company used its more than 20 years of expertise to expand its business into manufacturing. RAC was the first to bring grooved copper coiled technology to the bus industry. The design of the coils increases the surface area by 50 percent. The increased area enables cooling with greater efficiency. The internal grooving on the coils of the system is similar to the grooves in the barrel of a rifle. The company also gets its name from this technology.

• **Tell us about some of your company's historical highlights.**

RAC's success stems from the solid foundation of long-standing relationships with customers across the country. Over time, these relationships have enabled dealers to expand their market shares within their region or state.

• **How have your products evolved?**

RAC products are continually reviewed and updated as needed to meet customer and user demands. The latest improvement is a line of Bulkhead Evaporators. These units are designed to fit inside the front or rear bulkhead of a bus to create an integrated appearance. While the bulkhead evaporators maintain the same quality of other RAC products, they also produce an aesthetically pleasing final product.

• **What has been the biggest change in the industry over the past decade?**



The last decade has shown a steady increase of A/C systems installed in school buses.

Today's school buses are five times more likely to have air conditioning than a decade ago. Of nearly 40,000 new school buses, approximately 10,000 will be equipped with air conditioning.

Current Conditions

• **What is your most popular product?**
RE-20 Evaporator.

• **What is your company's greatest strength?**

Our strength is the ability to adapt quickly to the needs of the marketplace.

The Future

• **How will the advance of technology influence your company?**

Technology has already enabled RAC to improve the manufacturing process with state-of-the-art equipment. The company's investment in world-class machinery has delivered increased production capabilities, improved efficiency and maintained quality assurance standards. RAC's in-house machinery and knowledgeable employees allow the company to remain innovative and flexible in its approach to quickly meet changes in market demands and customer needs. Total control of engineering, quality and turnaround keeps RAC a leader in the industry.

• **What's the biggest challenge facing the pupil transportation industry?**

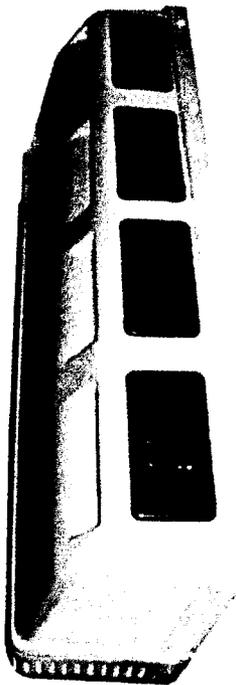
The transportation industry has been affected across the board by increasing material and fuel costs. Even with these rising costs, pupil transportation professionals are expected to do more with less funding.



RIFLED AIR CONDITIONING, INC.

SYSTEMS

Evaporator-Accepts Heat
Liquid to a Gas



Expansion Valve
Meters Refrigerant

- **Compressor:** a rotating machine that causes the refrigerant to continuously circulate through the vapor cycle loop
- **Evaporator:** a heat exchanger that accepts heat from the area being cooled and transfers heat to the refrigerant
- **Condenser:** a heat exchanger that rejects heat contained in the refrigerant to the outside (ambient)
- **Expansion Valve:** a small metering orifice that causes the circulating condensed (liquid) refrigerant contained at high pressure in the Condenser to drop and flow into the low pressure in the Evaporator

Basic Refrigeration Cycle

Compressor
Pumps Refrigerant



Discharge Line
High Pressure Gas (Hot)

From Compressor to Condenser
#10 Line

Rifled Air Conditioning
2810 Earham Place
High Point, NC 27263

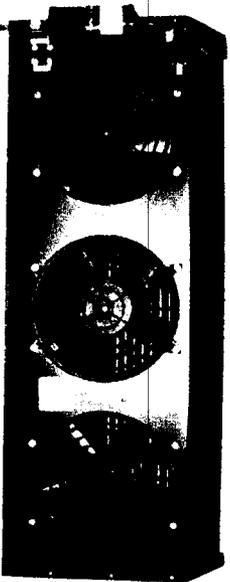
1-800-627-1707

Fax: 1-336-861-4646

www.rifledair.com

Filter Drier
Removes Moisture And
Impurities
From Refrigerant

Sight Glass
Allows Visual Inspection
Of Moisture Level



Condenser-Rejects Heat
Gas to a Liquid

Suction Line
Low Pressure Gas (Cool)

From Evaporator to Compressor
#12 Line

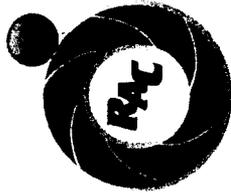
Low-Pressure Side
High-Pressure Side

**Most Common Causes
For System Failure**

- inadequate lubrication
- moisture and other contaminants in the A/C loop

Liquid Line
Liquid (Warm)

From Condenser to Evaporator
#8 Line



RIFLED AIR CONDITIONING, INC.
SYSTEMS

RETROFIT

I WANT MY RAC



OLD BUS, NEW COLD LIFE!

RETROFITTING: RAC HAS THE SOLUTION!

Rifled Air Conditioning is currently being proactive in the retrofit field as the need arises in the industry to upgrade older fleets with A/C. More and more we are fielding inquiries as to how Rifled Air Conditioning can provide school bus fleets with proven quality A/C at affordable prices and with a timely install schedule.

Rifled Air Conditioning is committed to be the industry leader in product innovation, quality and service. Once again, RAC is stepping forward to take the lead and provide the right system that your fleet needs. Lets examine the types of questions you need to ask yourself when you decide to retrofit. Below is the information needed to provide a quote.

BUS INFORMATION

1. VIN #
2. Bus Year & Manufacturer
3. Chassis Manufacturer
4. Body Style/Type
5. Engine Size & Manufacturer
6. Alternator Manufacturer:
Size & Case Type
7. Number of Buses

Engine Location:

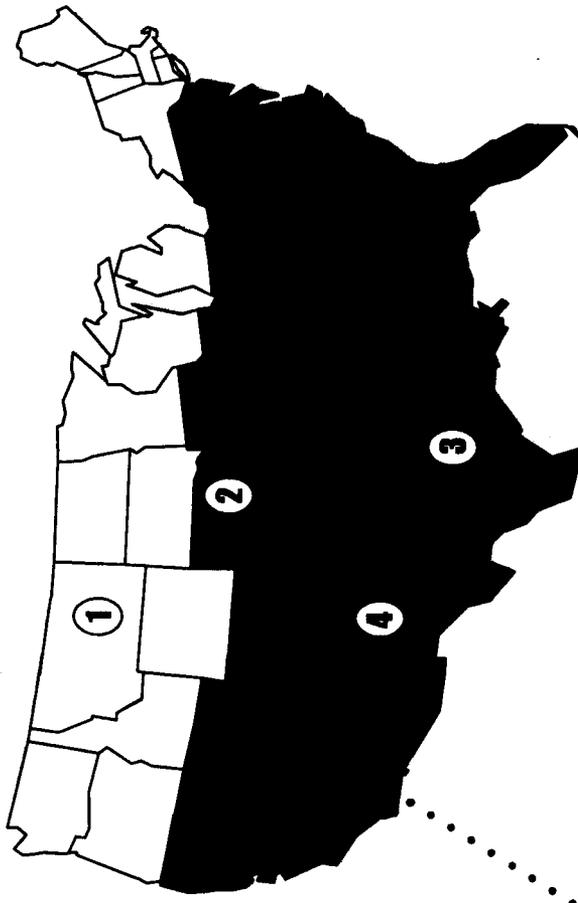
- 1: Front
- 2: Rear

Factory Dash Air

- 1: Yes
- 2: No

I WANT MY RAC!
I WANT MY RAC!

Air Conditioning Climate Zone Selection Guide



BUS LENGTH	ADULT PASSENGERS	CHILD PASSENGERS	BTU			
			ZONE 1	ZONE 2	ZONE 3	ZONE 4
16' & Less	10-15	6-32	26,000	30,000	40,000	48,000
16'-20'	15-22	32-40	40,000	42,000	45,000	52,000
20'-24'	22-28	40-48	45,000	48,000	52,000	60,000
24'-28'	28-34	48-56	52,000	60,000	78,000	86,000
28'-32'	34-40	56-64	78,000	86,000	92,000	104,000
32'-36'	40-46	64-72	92,000	96,000	104,000	120,000
36'-40'	46-52	72-83	104,000	108,000	108,000	126,000 134,000

Use our Climate Zone Selection Guide to determine the Rifled Air Conditioning System that will best suit your A/C needs. Match your zone, bus size, and then give us a call. We're here for all your RETROFIT needs. Visit our web at www.rifledair.com

I WANT MY RAC! I WANT MY RAC! I WANT MY RAC!

These are suggested BTU Ratings. For additional information or questions regarding RAC Air Conditioning Systems, please contact us at 1-800-627-1707.

I WANT MY RAC

RETROFIT

To answer the demand for retrofits, Rifled Air Conditioning is implementing a mobile team to service your fleet. The "Mobile-RETRO-Command" unit will be able to install at your facility or in close proximity so as to keep your buses rolling with as little down time as possible.

With budgets tightening, fuel prices and temperatures rising, contact RAC and lets put a system together that works for you and your budget. **I WANT MY RAC!**

MOUNT KIT GUIDE

Due to continuous changes to bus bodies and engines, mount kit designs are constantly changing. As with new buses, there is information needed to make sure that a mount kit is available for your older vehicle as well. These questions need to be asked.

- Bus Year Model
- Body Manufacturer & Body Type
- Chassis Manufacturer
- Engine Manufacturer & Size
- Engine Location
- Alternator Manufacturer & Size
- Does the bus have air brakes?
- Does the bus have factory dash air?
- Is the engine pre-or-post 2007 emissions?

The more information you have the better we can quickly provide answers. Call at 1-800-627-1707 or visit us at www.rifled.com to find out why we want to be your A/C choice.

The Alternator Factor:
Buses that did not have OEM air installed and other amp depleting products may not have the capacity to handle the added amperage draw that a new Rifled Air Conditioning System will add. Remember the importance of this when filling out your request form for that new cold air. And one other item.....**WE WANT TO RETROFIT YOUR FLEET!**

Rifled Air Conditioning, 2801 Earlham Place, High Point, NC 27263
Phone: 1-800-627-1707 FAX: 336-501-4456 www.rifled.com

Man it's HOT! Is there anything we can do for our fleets?

RAC has the answer!!



RETROFIT

THAT BUS!

RIFLED AIR CONDITIONING, INC.
-SYSTEMS-

2910 EARLHAM PLACE
HIGH POINT, NC 27263

I WANT MY RAC



1-800-627-1707

I WANT MY RAC
RETROFIT



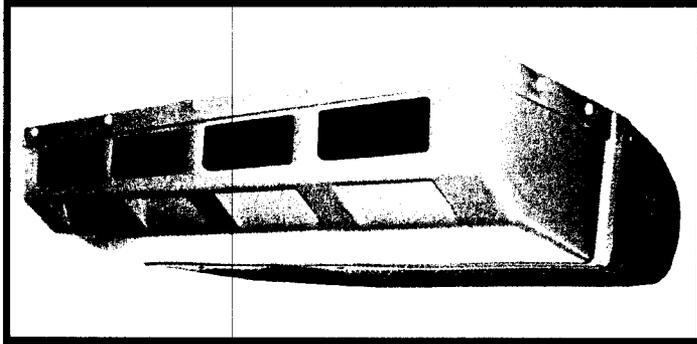
RIFLED AIR CONDITIONING

SYSTEMS



RAC EVAPORATOR MODEL: RE-29

Rated Capacity: 30,000 BTU/HR (7,560 Kcal/Hr) 800 CFM



The RE-29 is a low profile evaporator designed for smaller buses and raised roof type vans. This unit can also be driven off the O.E.M. condenser

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized steel top plate. Powder coated galvanized steel drain pan and blower front add strength and durability
- Balanced blower motor for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow
- Integral air return grille attaches to cover
- **2 Year Unlimited Mileage Warranty**
- **5 Year Exclusive Coil Warranty**



Configuration: Side Mount Free Blow

Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 48.8 feet tube length, 30,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Cover:** Impact resistant ABS gray plastic
- **Blower:** Quantity: (2) dynamically balanced three speed heavy duty dual scroll blower with 400 CFM rated capacity. 800 CFM total
- **Size:** 6.75" High x 33.5" Wide x 16" Deep
- **Weight:** 41 LBS.
- **DC Current Draw:** 24 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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**All RAC Systems Operate on R-134A Environmentally Friendly Refrigerant*

*Note: Warranty Offerings Subject To Common Industry Terms, Conditions and Limitations

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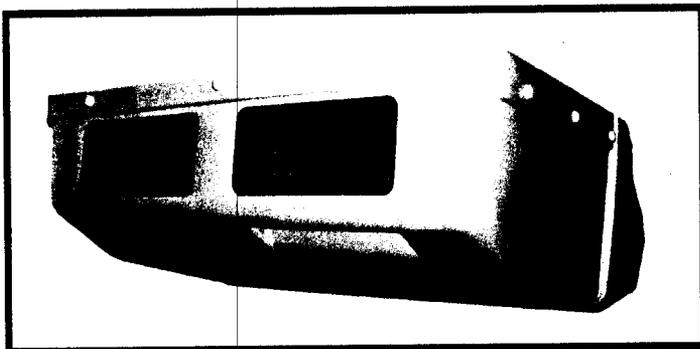
RIFLED AIR CONDITIONING

SYSTEMS



RAC EVAPORATOR MODEL: RE-10

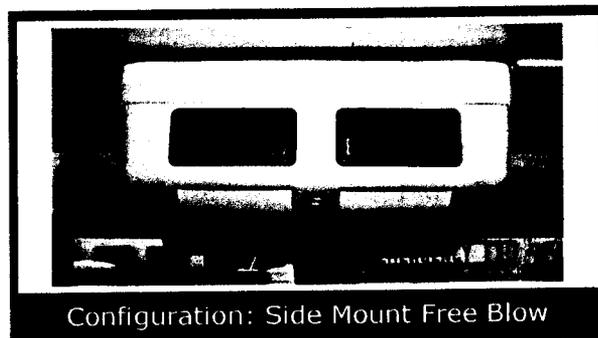
Rated Capacity: 36,000 BTU/HR (9,072 Kcal/Hr) 800 CFM



The compact design of the RE-10/11 offers the flexibility and performance needed in smaller bus applications where size, weight, and amperage draw are considerations. The RE-10/11 matches well in both dual and triple systems such as the RAC-1230 and RAC-12233. Also comes as a ducted unit, RE-12.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized steel top plate. Powder coated galvanized steel drain pan and blower front add strength and durability
- Balanced blower motor for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow
- Integral air return grille attaches to cover
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Configuration: Side Mount Free Blow

Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 58 feet tube length, 36,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Cover:** Impact resistant ABS gray plastic
- **Blower:** Quantity: (1) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity
- **Size:** 9.75" High x 25.0" Wide x 20.25" Deep
- **Weight:** 46 LBS.
- **DC Current Draw:** 15 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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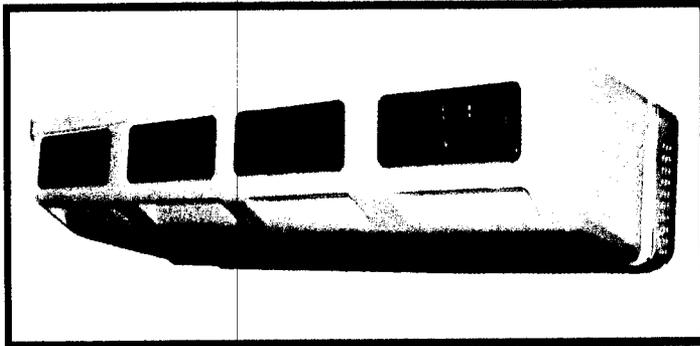
RIFLED AIR CONDITIONING

SYSTEMS



RAC EVAPORATOR MODEL: RE-20

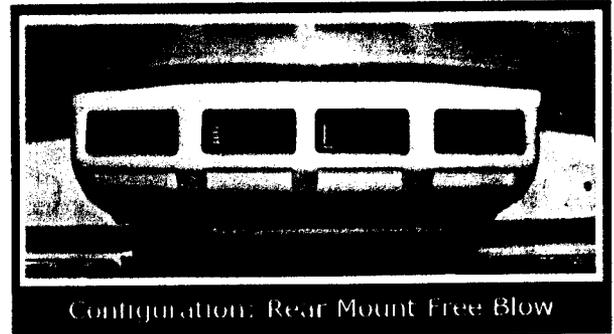
Rated Capacity: 60,000 BTU/HR (15,120 Kcal/Hr) 1600 CFM



The RE-20 is RAC's most popular evaporator unit. This free blow unit can be rear or side mounted. Designed for the medium sized bus or as part of a multiple system for larger applications.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized steel top plate. Powder coated galvanized steel drain pan and blower front add strength and durability
- Balanced blower motors for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow
- Integral air return grille attaches to cover
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Configuration: Rear Mount Free Blow

Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 99.3 feet tube length, 60,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Cover:** Impact resistant ABS gray plastic
- **Blower:** Quantity: (2) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity each. 1600 CFM total
- **Size:** 9.75" High x 41.0" Wide x 20.25" Deep
- **Weight:** 67 LBS.
- **DC Current Draw:** 30 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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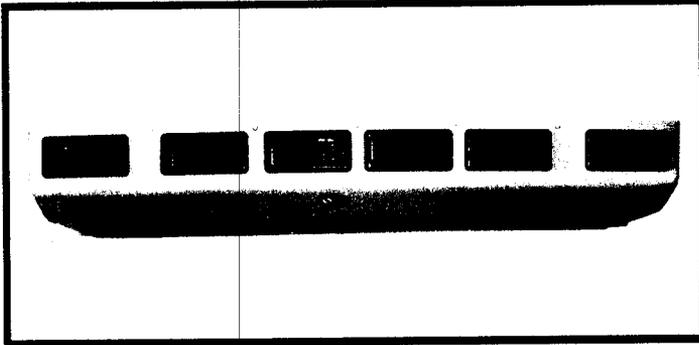
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RAC EVAPORATOR MODEL: RE-30

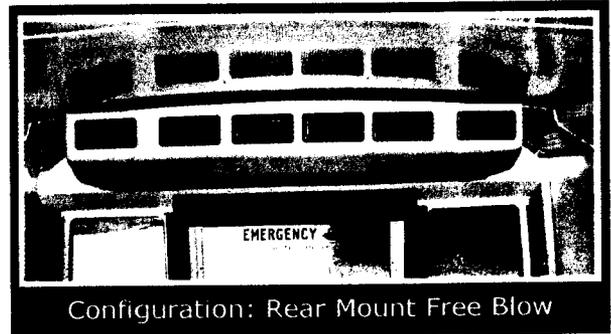
Rated Capacity: 90,000 BTU/HR (22,680 Kcal/Hr) 2400 CFM



Our largest evaporator available. Utilizes split core for enhanced performance and reliability. Designed for larger buses and when there is a need for maximum evaporator capacity.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized steel top plate. Powder coated galvanized steel drain pan and blower front add strength and durability
- Balanced blower motors for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow
- Integral air return grille attaches to cover
- **2 Year Unlimited Mileage Warranty**
- **5 Year Exclusive Coil Warranty**



Configuration: Rear Mount Free Blow

Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 146 feet tube length, 90,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Cover:** Impact resistant ABS gray plastic
- **Blower:** Quantity: (3) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity each. 2400 CFM total
- **Size:** 9.75" High x 59.25" Wide x 21" Deep
- **Weight:** 88 LBS.
- **DC Current Draw:** 45 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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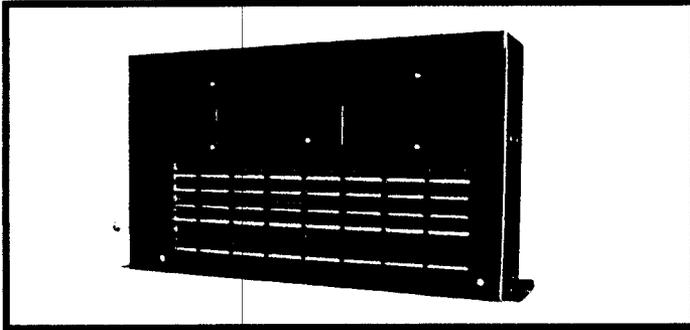
RIFLED AIR CONDITIONING

SYSTEMS



RAC EVAPORATOR MODEL: BH-10

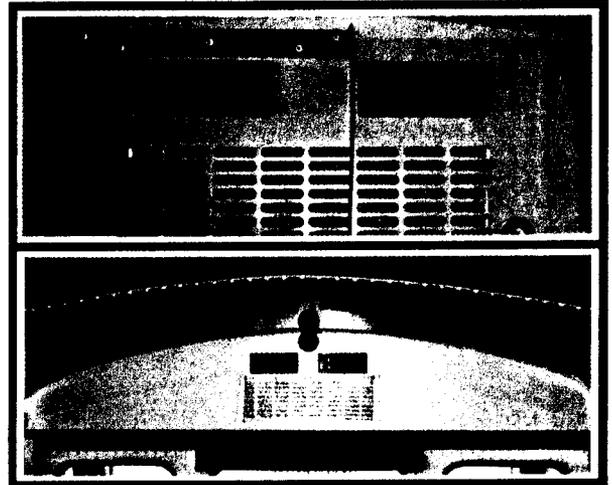
Rated Capacity: 36,000 BTU/HR (9,072 Kcal/hr) 800 CFM



Compact design of the BH-10 offers the flexibility in a bus application where interior headroom, size, weight, and amperage draw are considerations. The BH-10 also works well with multiple units. Mounting locations include front and rear bulkhead.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized, powder coated drain pan
- Shaped and molded to fit contour of the bus
- Balanced blower motor for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow through new style grill and louvers
- Easily serviced through access panel and removable blower face plate
- Integral air return grille in cover
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 58 feet heat transfer surface, 36,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Cover:** Color matched aluminum
- **Blower:** Quantity: (1) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity
- **Size:** 16" High x 27" Wide x 6.75" Deep
- **Weight:** 46 LBS.
- **DC Current Draw:** 15 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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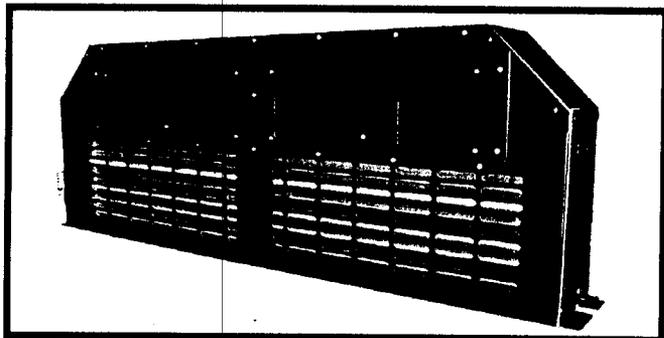
RIFLED AIR CONDITIONING

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RAC EVAPORATOR MODEL: BH-20

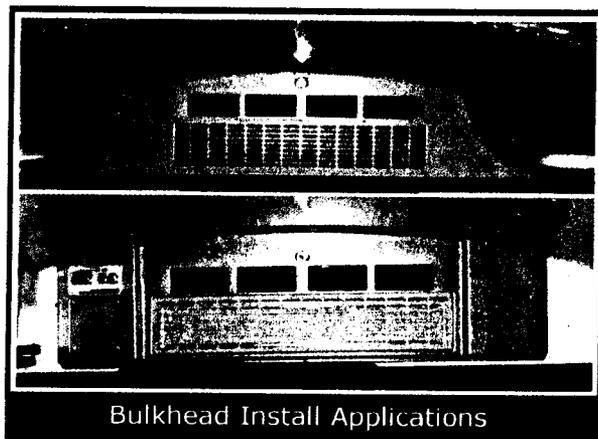
Rated Capacity: 60,000 BTU/HR (15,120 Kcal/hr) 1600 CFM



Mounted in the front or rear bulkhead, the BH series combines style and function with minimal cabin intrusion.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized, powder coated drain pan
- Shaped and molded to fit contour of the bus
- Balanced blower motors for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow through new style grill and louvers
- Easily serviced through access panel and removable blower face plate
- Integral air return grille in cover
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Bulkhead Install Applications

Technical Specification Data:

- Heat Exchanger Cooling Coil: High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 99.3 feet tube length, 60,000 BTU/HR rated
- Filter System: Cleanable aluminum mesh
- Cover: Impact resistant ABS gray plastic or color matched aluminum
- Blower: Quantity: (2) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity each. 1600 CFM total
- Size: 42.75" Long x 5.75" Deep x 14.75" High
- Weight: 44 LBS.
- DC Current Draw: 30 Amperes @ 13.5 Volts
- Low Pressure Switch: Mounted on Evaporator

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Note: Warranty Offerings Subject To Common Industry Terms, Conditions and Limitations

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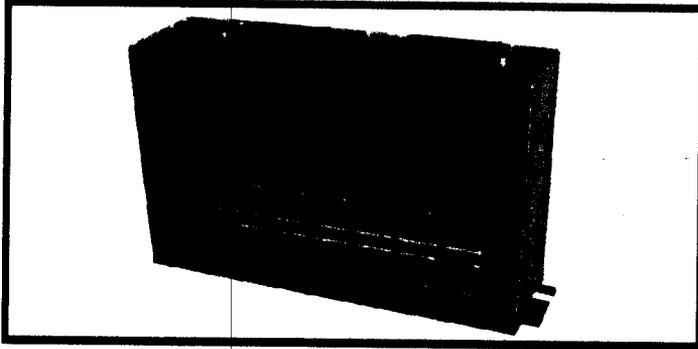
RIFLED AIR CONDITIONING

SYSTEMS



RAC EVAPORATOR MODEL: RE-ICDA10

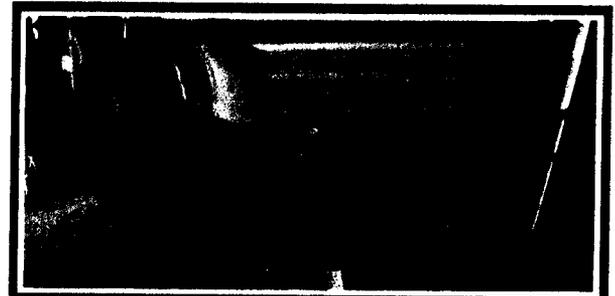
Rated Capacity: 36,000 BTU/HR (9,072 Kcal/Hr) 800 CFM



The RE-ICDA10 is a dash air designed for IC Conventional School Bus applications, either OEM or aftermarket. Utilizing plenum and flex hoses, this unit is versatile for other applications as well.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables cooling with greater efficiency
- Rust resistant, light weight aluminum construction with galvanized, powder coated drain pan
- Balanced blower motor for quiet operation
- 13.5 DC rated component
- High volume, widely dispersed air-flow
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



IC Dash Air - IC Conventional School Bus

Technical Specification Data:

- **Heat Exchanger Cooling Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 58 feet tube length, 36,000 BTU/HR rated
- **Filter System:** Cleanable aluminum mesh
- **Blower:** Quantity: (1) dynamically balanced three speed heavy duty dual scroll blower with 800 CFM rated capacity
- **Size:** 9.00" High x 24.0" Wide x 12.5" Deep
- **Weight:** 27 LBS.
- **DC Current Draw:** 15 Amperes @ 13.5 Volts
- **Low Pressure Switch:** Mounted on Evaporator

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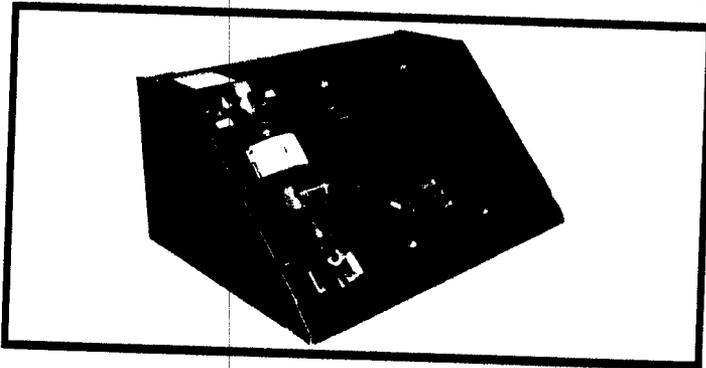


RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-10

Rated Capacity: 41,400 BTU/HR (10,433 Kcal/Hr) 950 CFM



The RC-10 is our smallest condenser. The larger rated capacity allows for max performance from the matched evaporators. Evaporators include the RE-10/11, BH-10, and Dash A/C.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Rust resistant, light weight aluminum construction. Corner mounting locations are reinforced with powder coated galvanized steel
- High performance fan
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty

Technical Specification Data:

- Heat Exchanger Coil: High efficiency, high performance internally grooved *Rifled Tube* copper design. Four tube rows, 84.3 feet tube length, 41,400 BTU/HR rated
- Filter Drier: 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- Fans: Quantity: (1) Size: 11"-12VDC Axial motor fans, permanent magnet, closed motor, drip through design, 950 CFM
- Size: 12.5" High x 23.0" Wide x 16" Deep
- Weight: 32 LBS.
- DC Current Draw: 9 Amperes @ 13.5 Volts

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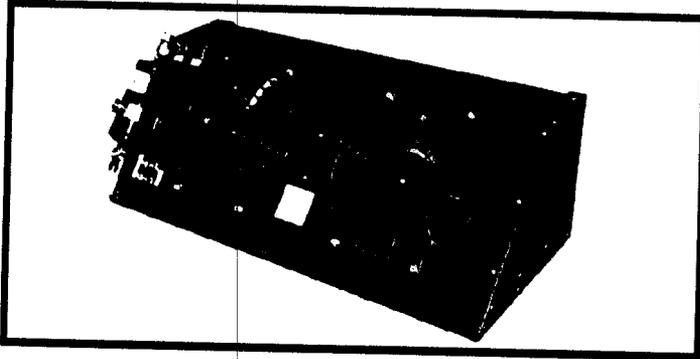


RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-20

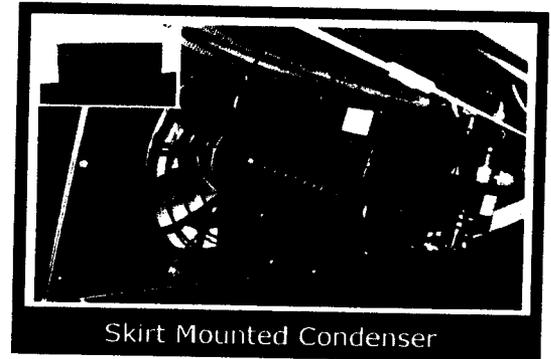
Rated Capacity: 60,000 BTU/HR (15,120 Kcal/Hr) 1900 CFM



A true medium sized bus condenser. Various system options include the RE-10, 15, and 20. On larger buses, a combination makes for a true dual system. For example, an RAC-2222.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Rust resistant, light weight aluminum construction. Corner mounting locations are reinforced with powder coated galvanized steel
- High performance fans
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Skirt Mounted Condenser

Technical Specification Data:

- **Heat Exchanger Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Three tube rows, 103.5 feet tube length, 60,000 BTU/HR rated
- **Filter Drier:** 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- **Fans:** Quantity: (2) Size: 11"-12VDC Axial motor fans, permanent magnet, closed motor, drip through design with 950 CFM rated capacity each. 1900 CFM total.
- **Size:** 12.5" High x 35.75" Wide x 16" Deep
- **Weight:** 49 LBS.
- **DC Current Draw:** 18 Amperes @ 13.5 Volts

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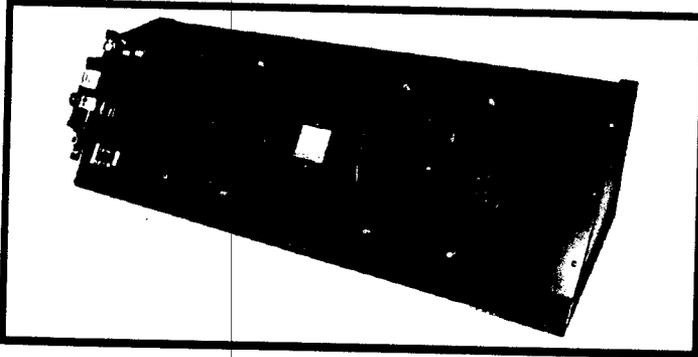


RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-22

Rated Capacity: 80,000 BTU/HR (20,160 Kcal/Hr) 1900 CFM



Often used in HOT designated climates to improve performance and reduce head pressures over smaller two fan condensers. Reducing amperage draw while maintaining the same btu/hr capacity rating make this an attractive alternative to the competitors standard 3 fan condensers.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Rust resistant, light weight aluminum construction. Corner mounting locations are reinforced with powder coated galvanized steel
- High performance fans
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- **2 Year Unlimited Mileage Warranty**
- **5 Year Exclusive Coil Warranty**

Technical Specification Data:

- **Heat Exchanger Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Three tube rows, 138.5 feet tube length, 80,000 BTU/HR rated
- **Filter Drier:** 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- **Fans:** Quantity: (2) Size: 11"-12VDC Axial motor fans, permanent magnet, closed motor, drip through design with 950 CFM rated capacity each. 1900 CFM total
- **Size:** 12.5" High x 48.0" Wide x 16" Deep
- **Weight:** 55 LBS.
- **DC Current Draw:** 18 Amperes @ 13.5 Volts

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RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-30

Rated Capacity: 80,000 BTU/HR (20,160 Kcal/Hr) 2850 CFM



Mounted in the skirt location, the RC-30 is RAC's largest condenser and is most often used in HOT climates on larger buses in combination with other condensers. Usually paired with the RE-20, the combination is one of RAC's most popular systems.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Rust resistant, light weight aluminum construction. Corner mounting locations are reinforced with powder coated galvanized steel
- High performance fans
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Skirt Mounted Condenser

Technical Specification Data:

- **Heat Exchanger Coil:** High efficiency, high performance internally grooved *Rifled Tube* copper design. Three tube rows, 138.5 feet tube length, 80,000 BTU/HR rated
- **Filter Drier:** 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- **Fans:** Quantity: (3) Size: 11"-12VDC Axial motor fans, permanent magnet, closed motor, drip through design with 950 CFM rated capacity each. 2850 CFM total
- **Size:** 12.5" High x 48.0" Wide x 16" Deep
- **Weight:** 71 LBS.
- **DC Current Draw:** 27 Amperes @ 13.5 Volts

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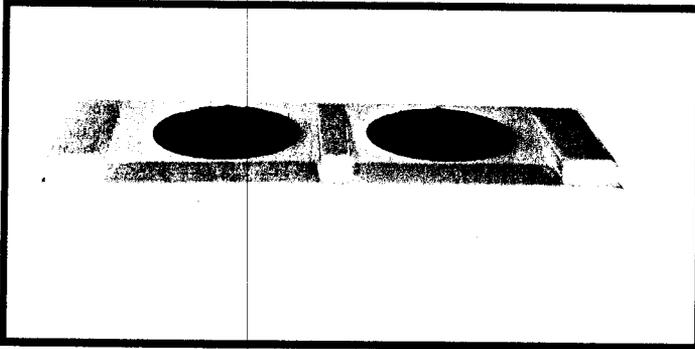


RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-31

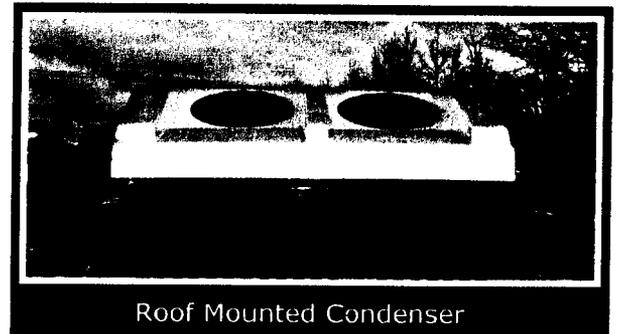
Rated Capacity: 80,000 BTU/HR (20,160 Kcal/Hr)



A low profile roof top condenser used in hot climates where under body space is a consideration or in colder climates where skirt mounted condensers receive damage from ice and snow.

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Constructed out of galvanized powder coated steel for strength and durability.
- High performance fans
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- 2 Year Unlimited Mileage Warranty
- 5 Year Exclusive Coil Warranty



Roof Mounted Condenser

Technical Specification Data:

- Heat Exchanger Coil: High efficiency, high performance internally grooved *Rifled Tube* copper design. Three tube rows, 138.5 feet tube length, 80,000 BTU/HR rated
- Filter Drier: 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- Cover: Impact resistant ABS UV white plastic
- Fans: Quantity: (2) Size: 12" - 12VDC dust proof/water resistant permanent magnet, IP-68 Rated
- Size: 10" High x 48.0" Wide x 23" Deep
- Weight: 76 LBS.
- DC Current Draw: 27 Amperes @ 13.5 Volts

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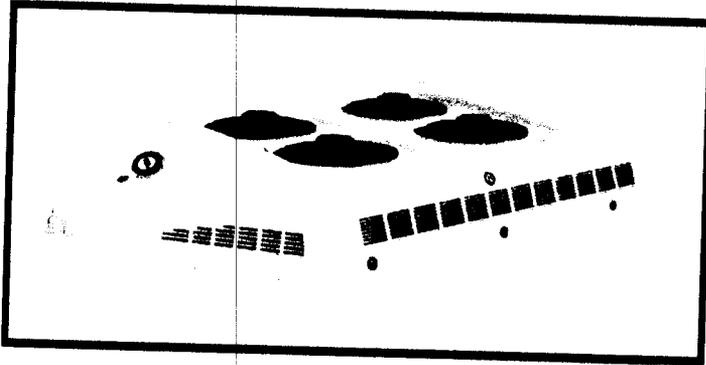


RIFLED AIR CONDITIONING SYSTEMS



RAC CONDENSER MODEL: RC-41

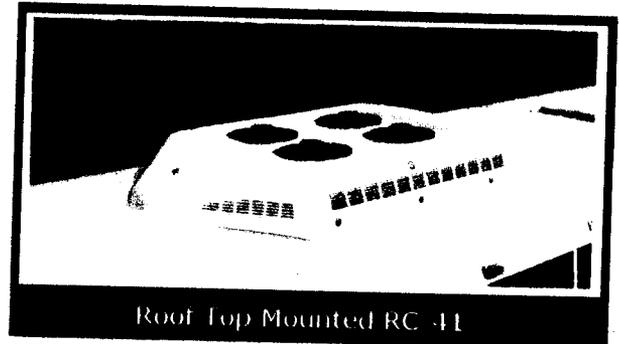
Rated Capacity: 136,000 BTU/HR (34,272 Kcal/Hr)



Our largest low profile roof top condenser. Used in HOT climates and on buses where under body space or road dust and debris are a consideration. In cold climates, damage from ice, snow, and salt make roof mounting an attractive alternative to skirt mounting. The RC-41 can drive whole systems such as the RS-46 Ducted, RAC-3341D, or with other evaporator configurations

Standard Design Features:

- Advanced *Rifled Tube Coil* technology enables heat transfer with greater efficiency
- Constructed out of galvanized powder coated steel for strength and durability
- High performance fans
- High volume, widely dispersed air flow
- Designed for easy installation and maintenance
- **2 Year Unlimited Mileage Warranty**
- **5 Year Exclusive Coil Warranty**



Roof Top Mounted RC-41

Technical Specification Data:

- **Heat Exchanger Coil:** Quantity: (2) High efficiency, high performance internally grooved *Rifled Tube* copper design. Three tube rows, 138.5 feet tube length each, total of 277 feet. 136,000 BTU/HR rated
- **Filter Drier:** Quantity: (2) 30 cubic inch, male 1/2" "O" Ring insert with sealed sight glass
- **Cover:** Impact resistant ABS UV white plastic
- **Fans:** Quantity: (4) Size: 12" - 12VDC dust proof/water resistant permanent magnet, IP-68 Rated
- **Size:** 9.25" High x 48.5" Wide x 61.5" Long
- **Weight:** 167 LBS.
- **DC Current Draw:** 36 Amperes @ 13.5 Volts

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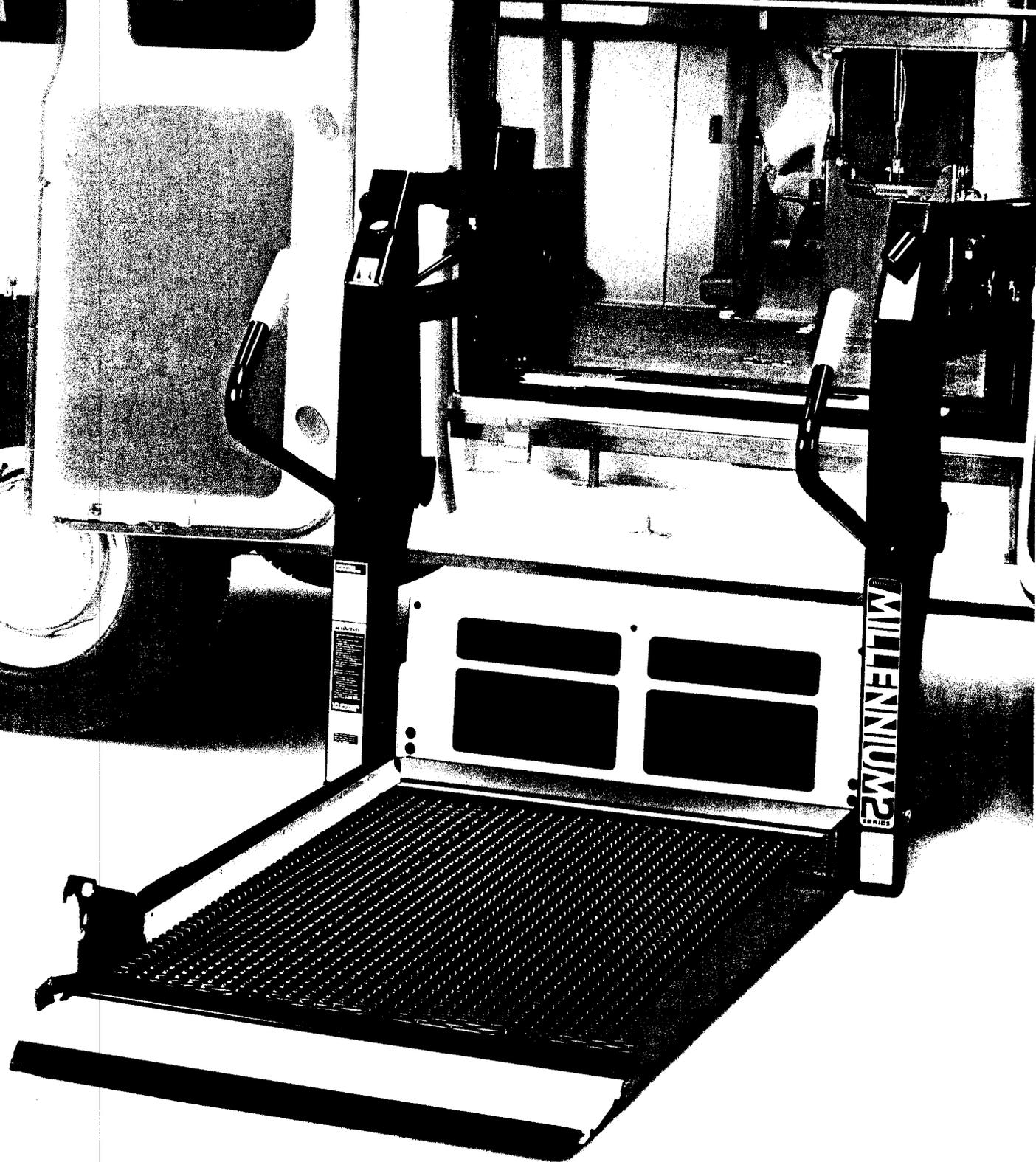
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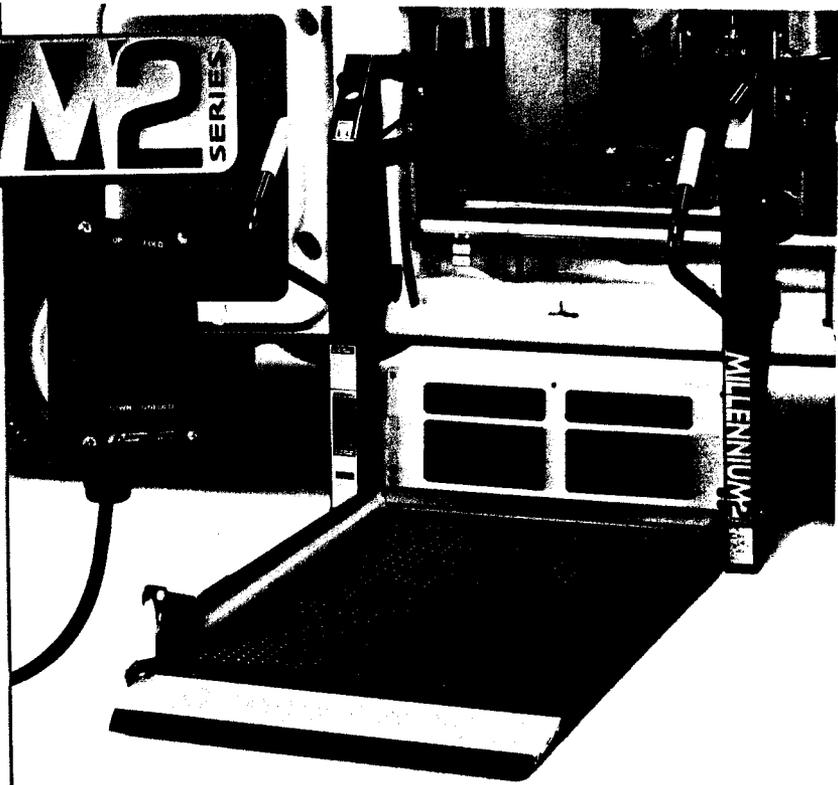
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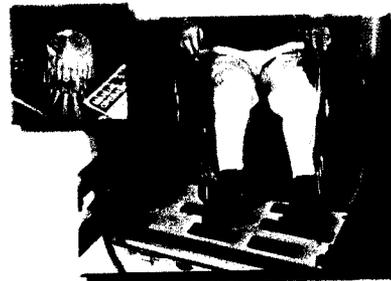
- fully automatic NHTSA compliant lift, operated by an attendant
- loading position - either direction
- interfaces with OEM interlocks
- lift mounted lights - active when interlocks are met and lift is powered
- hand-held control box with illuminated functions
- locking mechanical Inboard Barrier (IB), powder coated yellow for safety and high visibility, prevents operation if occupied
- pump design prevents platform folding when occupied, quiet operation & low current draw
- durable redesigned baseplate reduces lift weight and allows for quicker and easier service of hose/wiring
- easily installed, step-by-step installation instructions, no peripheral hardware required
- platform movement prevented during unsafe operation
- hydraulic outer barrier that will be in the fully up position before the platform leaves the ground, complete with durable rubber nose guard
- transition areas marked with durable high-gloss yellow powder coating for safety & visibility
- side or rear door application
- several platform widths and lengths
- dual handrails for security and convenience
- bridging feature permits the wheelchair user to board the lift from sidewalks or inclines
- floor to ground travel is 42" or 48"
- lifting capacity is 800 lbs
- integrated back-up pump
- equipped with an adjustable anti-rattle feature to avoid unpleasant noise in the vehicle during transit
- durable high-gloss powder coated finish
- Lift-Tite system stows the lift platform securely while the vehicle is in transit
- pump module with removable cover offers easy access to all components



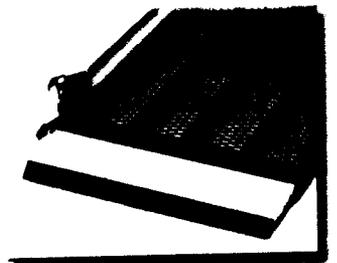
Integrated dual handrails provide added security for wheelchair users and standees



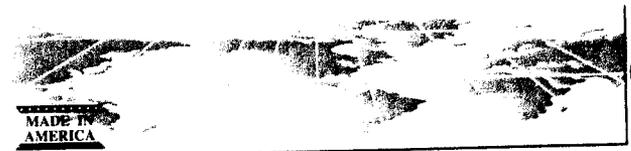
Visual and audible warnings alert both passengers and attendants to unsafe conditions



Hydraulic roll stop engages and locks before the platform leaves the ground



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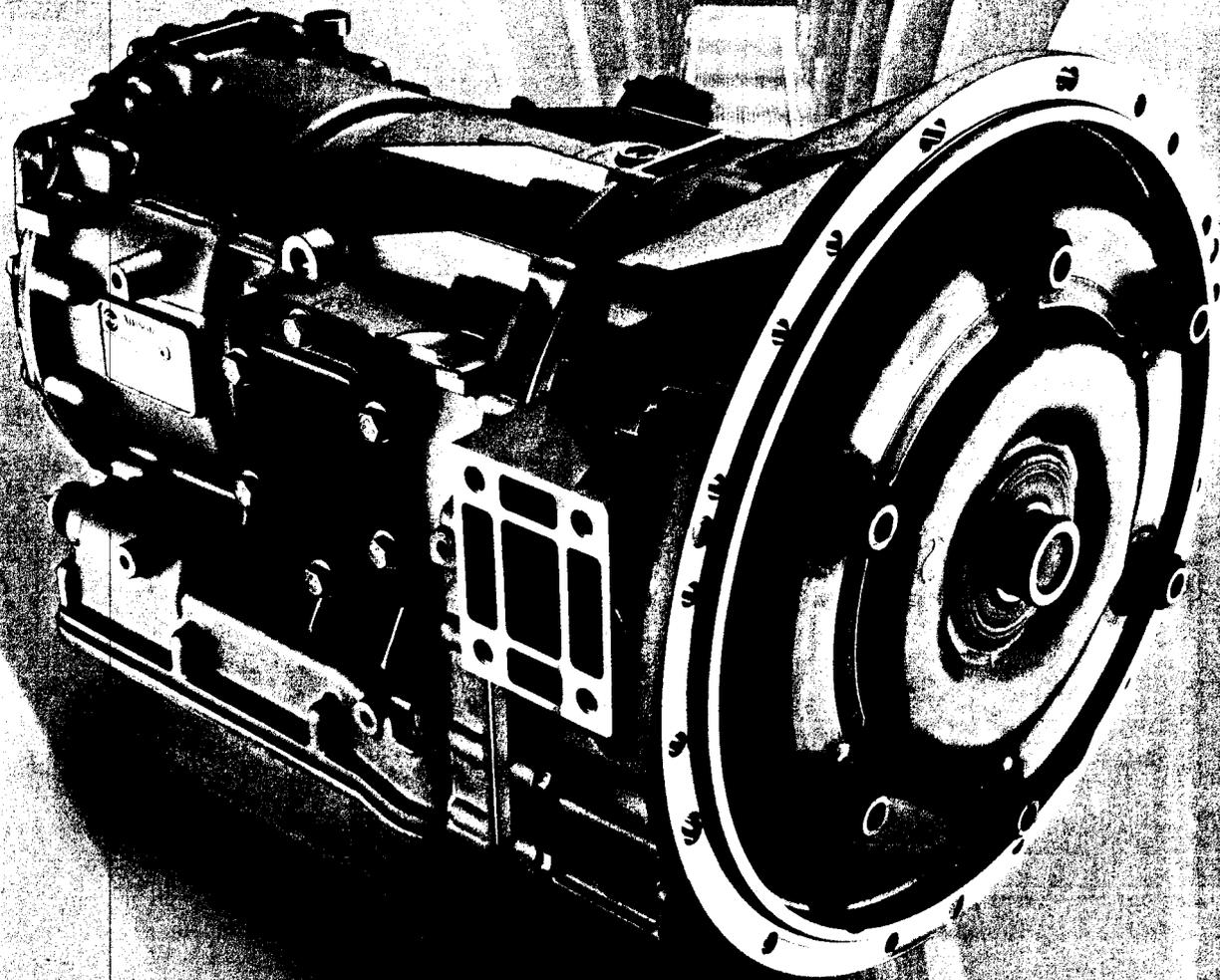


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The same technology that has made Allison the most trusted name at neighborhood bus stops also provides easy operation, reliable performance and economical maintenance to non-school and shuttle bus fleets everywhere.

Allison Automatics are truck-based transmissions designed to withstand the rigors of heavy-duty usage and engineered for efficient, effective shuttle bus operation.



When you factor in all life cycle costs — vehicle purchase price, insurance, fuel, tires, preventive maintenance, component repair, driver wages, taxes, license, permits and retail resale value — along with the increased productivity, an Allison Automatic-equipped vehicle costs less per mile* to operate than a comparable automated manual-equipped vehicle.

*Results may vary depending on your operating conditions. See your local Authorized Allison Dealer to find the potential gains for your particular application.

Select 1000 PTS and 2000 PTS models feature Shift Energy Management (SEM) to help conserve fuel, provide better acceleration and help carry passengers more efficiently. With SEM, the transmission electronically controls the engine during shifts to maintain a constant output of torque. SEM helps get all the torque needed to get the job done.

ENGINE hp (kW)

300-325 (224-242)

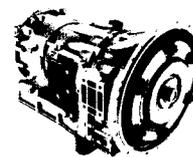
TORQUE lb-ft (N·m)

550-950 (746-1288)

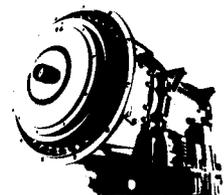
GVW lbs (kg)

SCHOOL BUS 19,500-unlimited (8,845-unlimited)

SHUTTLE BUS 19,500-33,000 (8,845-15,000)



1000 PTS, 2100 PTS, 2200 PTS,
2300 PTS, 2350 PTS, 2500 PTS,
2550 PTS



3000 PTS

Ratings and Specifications

RATINGS

MODEL	RATIO	PARK PAWL	MAX INPUT POWER ¹ hp (kW)	MAX INPUT TORQUE ¹ lb-ft (N • m)	MAX INPUT TORQUE w/SEM, OR TORQUE LIMITING ^{1,2} lb-ft (N • m)	MAX TURBINE TORQUE ³ lb-ft (N • m)	MAX GVW lbs (kg)	MAX GCW lbs (kg)
1000 PTS								
- School Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	19,500 (8,845)	26,000 (11,800)
- Shuttle Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	19,500 (8,845)	26,000 (11,800)
2100 PTS								
- School Bus	Close Ratio	No	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	26,000 (11,800)	26,000 (11,800)
- Shuttle Bus	Close Ratio	No	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	26,000 (11,800)	26,000 (11,800)
2200 PTS								
- School Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	26,000 (11,800)	26,000 (11,800)
- Shuttle Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	565 (766)	850 (1152)	26,000 (11,800)	26,000 (11,800)
2300 PTS⁹								
- School Bus	Close Ratio	No	325 (242)	n/a	450 (610)	850 (1152)	33,000 (15,000)	33,000 (15,000)
2350 PTS⁶								
- School Bus	Close Ratio	Yes	300 ⁴ (224) ⁴	550 (746)	660 ^{7,8} (895) ^{7,8}	850 (1152)	30,000 (13,600)	30,000 (13,600)
2500 PTS⁵								
- School Bus	Wide Ratio	No	300 (224)	550 (746)	660 ^{6,7,8} (895) ^{6,7,8}	850 (1152)	33,000 (15,000)	33,000 (15,000)
2550 PTS⁶								
- School Bus	Wide Ratio	Yes	300 (224)	550 (746)	660 ^{7,8} (895) ^{7,8}	850 (1152)	30,000 (13,600)	30,000 (13,600)
3000 PTS								
- School Bus	Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	-	-
- Shuttle Bus	Close Ratio	n/a	300 (224)	950 (1288)	n/a	1470 (1995)	33,000 (15,000)	33,000 (15,000)

¹ Gross ratings as defined by ISO 1585 or SAE J1995. ² SEM = engine controls with Shift Energy Management. ³ Turbine torque limit based on ISCAAN standard deductions. ⁴ Gross input power rating is 340 hp/254 kW for VORTEC 8.1L gasoline powered engines. ⁵ 2500 PTS available for School Bus applications only. ⁶ Check with your OEM to ensure offerings. ⁷ Only available in gears three through six. ⁸ SEM and torque limiting are required to obtain this rating. ⁹ Only available for VORTEC 8.1L gasoline powered engine applications.

GEAR RATIOS - TORQUE CONVERTER MULTIPLICATION NOT INCLUDED

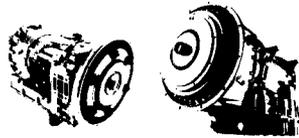
MODEL	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	REVERSE
1000 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2100 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2200 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2300 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2350 PTS	3.10:1	1.81:1	1.41:1	1.00:1	0.71:1	0.61:1 ¹	-4.49:1
2500 PTS	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1 ¹	-5.09:1
2550 PTS	3.51:1	1.90:1	1.44:1	1.00:1	0.74:1	0.64:1 ¹	-5.09:1
3000 PTS	3.49:1	1.86:1	1.41:1	1.00:1	0.75:1	0.65:1	-5.03:1

¹ Check with your OEM to ensure offerings.

ENGINE SPEEDS

MODEL	FULL LOAD GOVERNED SPEED	IDLE SPEED IN DRIVE	OUTPUT SHAFT SPEED
	Min-Max (rpm)	Min-Max (rpm)	rpm
1000	2200-4600 ¹	500-820	5000
/2200/2300/2350	2200-4600 ¹	500-820	5000
2500/2550	2200-3200	500-820	4500
3000	2000-2800	500-800	3600 ²

¹ Engines with full load governed speed greater than 3800 rpm require Application Engineering review. ² Retarder-equipped models only.



Ask for the Allison

PUPIL TRANSPORT/SHUTTLE SERIES

Ask your truck dealer for a complete listing of vehicle models featuring Allison Pupil Transport/Shuttle Series transmissions, or contact your Authorized Allison Distributor. For the representative close to you visit www.allisontransmission.com.

DRIVING TRANSMISSION TECHNOLOGY™



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Smart controls. Our experience in this vocation has given us the knowledge and insight to design optional features into our transmissions that help make drivers' jobs easier and passengers' trips safer. Allison Pupil Transport/Shuttle Series automatic transmissions are available with optional electronic controls that meet the specific needs of school bus, non-school bus and shuttle bus operations.

DIRECTION CHANGE ENABLE

To safeguard against unwanted direction changes, the transmission's electronic controls prohibit the driver from shifting out of Neutral into Drive or Reverse without first pressing a dash switch or applying the service brakes.

AUTOMATIC NEUTRAL



When the vehicle comes to a stop, the transmission's electronic controls automatically command to Neutral. The driver must re-select a moving range to shift out of Neutral.

SECONDARY SHIFT SCHEDULE

Driver can select between two pre-programmed shift patterns – quickly and easily. Shift characteristics are matched to driving conditions with the simple push of a button.

AUXILIARY FUNCTION RANGE INHIBIT

It's like having an extra set of eyes so the driver always knows it's safe to shift out of Neutral and into Drive or Reverse. The vehicle simply will not shift into a moving range unless the service brakes are applied. It's that simple. And safe.



Keeping it safe. Since an Allison Automatic is a true, fully automatic transmission, the driver has more time to check mirrors and to look forward and behind. There simply aren't as many distractions. And that gives the driver more time to do what's necessary. And what's necessary is being safe on the street and at bus stops.

No power interrupts. On a vehicle with an automated manual transmission, the power interrupts that occur during shift changes result in lower average wheel horsepower. With an Allison Automatic, there is no power interrupt during shift changes. The inertia energy built up by the engine is maintained and this equates to higher continuous wheel horsepower. By making full use of the engine's horsepower, an Allison Automatic may allow you to specify a smaller engine, saving you money in the long run. No power interrupts also contribute to a smoother ride.

Torque converter. The heavy-duty Allison torque converter is at the heart of what makes an Allison Automatic the most effective, efficient and productive commercial transmission in the world. Increased shifting performance, faster acceleration, greater operating flexibility and minimal rollback are all advantages that can be attributed to it. Its cushion effect reduces shock and strain on the entire driveline – including engine, universal joints, driveshafts and rear axle – prolonging the operating life of the components.



Comprehensive coverage. All Allison Pupil Transport/Shuttle Series vocational models offer comprehensive coverage with 100% parts and labor. Coverage may vary by model and by application. Please contact your Authorized Allison Dealer for further details.

Low maintenance costs. The single largest indirect cost of maintenance comes from downtime. Routine oil and filter changes are the only regular preventive maintenance required with an Allison Automatic. Easily accessible integral and spin-on oil filters reduce labor costs and valuable downtime. TranSynd™ TES 295 transmission fluid greatly extends oil change intervals for most applications.

PUPIL TRANSPORT/SHUTTLE SERIES

PUPIL TRANSPORT/SHUTTLE SERIES

OPTIONAL RETARDER PROVISION
- INTEGRAL, HYDRAULIC TYPE

BASE MODEL	TORQUE CAPACITY lb-ft (N • m)	POWER CAPACITY hp (kW)
3000		
- High	1600 (2170)	600 (447)
- Medium	1300 (1760)	500 (373)
- Low	1100 (1490)	400 (298)

TORQUE CONVERTER SPECIFICATIONS

BASE MODEL	TORQUE CONVERTER	NOMINAL STALL TORQUE
1000		
	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58
2000		
	TC-210	2.05
	TC-211	1.91
	TC-221	1.73
	TC-222	1.58
3000		
	TC-411	2.71
	TC-413	2.44
	TC-415	2.35
	TC-417	2.20
	TC-418	1.98
	TC-419	2.02
	TC-421	1.77

PHYSICAL DESCRIPTION

BASE MODEL	LENGTH ¹ in (mm)	DEPTH ² w/DEEP OIL PAN/SUMP in (mm)	DEPTH ² w/SHALLOW OIL PAN/SUMP in (mm)	DRY WEIGHT lbs (kg)
1000				
- SAE No. 3 mounting	28.01 (711.4)	11.22 (284.9)	10.71 (272.0)	330 (150)
- SAE No. 2 mounting	28.39 (721.1)	11.22 (284.9)	10.71 (272.0)	330 (150)
2000				
- SAE No. 3 mounting	28.01 (711.4)	11.22 (284.9)	10.71 (272.0)	330 (150)
- SAE No. 2 mounting	28.39 (721.1)	11.22 (284.9)	10.71 (272.0)	330 (150)
3000				
- Basic model	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	535 (243)
- With retarder only	28.29 (718.6)	12.90 (327.8)	11.14 (283.1)	615 (279)

¹ Length measured from flywheel housing to end of output shaft. ² Depth measured below transmission centerline.

OIL SYSTEM

BASE MODEL	CAPACITY ¹ quarts (liters)	MAIN CIRCUIT FILTER	LUBE CIRCUIT FILTER	ELECTRONIC OIL LEVEL SENSOR (OLS)
1000		Spin-On Canister	-	-
- Deep Oil Pan	5.3 ² (5.0) ²			
- Shallow Oil Pan	3.2 ² (3.0) ²			
2000		Spin-On Canister	-	-
- Deep Oil Pan	5.3 ² (5.0) ²			
3000		Integral	Integral	Standard
- Deep Oil Sump	29 ³ (27) ³			

Recommended oil types for all models are TranSynd™ / TES 295 approved.

¹ Transmission only. Does not include cooler, hoses or fittings. ² Amount of oil necessary to facilitate start up. ³ Amount of oil necessary to fill a dry transmission.

POWER TAKEOFF PROVISION

Not Available on Pupil Transport/Shuttle Series