



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Solicitation

NUMBER

PTR14016

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF

LAURA HOOPER
304-558-2306

*724144045 800-282-7981
NATIONAL BUS SALES & LEASING I
PO BOX 6549

MARIETTA GA 30065

DIVISION OF PUBLIC TRANSIT
KANAWHA VALLEY REGIONAL TRANS

1550 FOURTH AVENUE
CHARLESTON, WV

25325

304-343-3840

DATE PRINTED

12/04/2013

BID OPENING DATE: 01/02/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		557-15	Please See Pricing	Please See Pricing
	1-25 MID-SIZE, MEDIUM LIGHT DUTY BUSES				Page	Page
				REQUEST FOR QUOTATION (RFQ)		
				THE WEST VIRGINIA PURCHASING DIVISION, ON BEHALF OF THE WEST VIRGINIA DIVISION OF PUBLIC TRANSIT, IS SOLICITING BIDS FROM QUALIFIED VENDORS FOR AN "OPEN-END CONTRACT" TO PROVIDE 1-25 MID-SIZE, MEDIUM LIGHT DUTY BUSES PER THE ATTACHED SPECIFICATIONS.		
	***** THIS IS THE END OF RFQ			PTR14016 ***** TOTAL:		Please See Pricing
						Page
				01/14/14 12:48:17PM West Virginia Purchasing Division		

SIGNATURE

TELEPHONE

(540) 256-3246

DATE

1/14/14

TITLE

Regional Representative

FEIN

58-1216021

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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LAURA HOOPER 304-558-2306	

V E N D O R	RFQ COPY
	TYPE NAME/ADDRESS HERE

S H I P T O	DIVISION OF PUBLIC TRANSIT KANAWHA VALLEY REGIONAL TRANS
	1550 FOURTH AVENUE CHARLESTON, WV 25325 304-343-3840

DATE PRINTED
12/23/2013

BID OPENING DATE:

01/09/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 1						
THIS ADDENDUM IS ISSUED TO MODIFY THE ORIGINAL SOLICITATION PER THE ATTACHED DOCUMENTATION.						
0001	1	EA		557-15	Please See Pricing Page	Please See Pricing Page
				1-25 MID-SIZE, MEDIUM LIGHT DUTY BUSES		
***** THIS IS THE END OF RFQ PTR14016 ***** TOTAL:						Please See Pricing Page

SIGNATURE	TELEPHONE (540) 256-3246	DATE 1/14/14
TITLE Regional Representative	FEIN 58-1216021	ADDRESS CHANGES TO BE NOTED ABOVE

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KANAWHA VALLEY REGIONAL TRANS

1550 FOURTH AVENUE
CHARLESTON, WV

25325

304-343-3840

DATE PRINTED

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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
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	1-25 MID-SIZE, MEDIUM LIGHT DUTY BUSES				Page	Page
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						Page

SIGNATURE

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REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

100

destination to the Agency's designated location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery.

12.0 MISCELLANEOUS:

- 12.1 No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 12.2 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

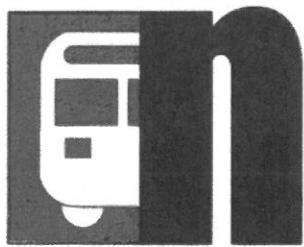
Contract Manager: Andrew Clawson
Telephone Number: (540) 256-3246
Fax Number: (770) 422-9007
Email Address: aclawson@nationalbussales.com

- 12.3 Federal funding for this project is being provided by the Federal Transit Administration through CFDA 20.500 for Sec 5309, CFDA 20.509 for Sec 5311 and CFDA 20.506 for Sec 5339 to cover 80% of the project cost.**

REQUIRED BID FORMS

The following certifications shall be properly **completed and furnished by the bidder as part of the bid**. Failure to submit any of these certifications **shall deem the bid non-responsive**.

NATIONAL



BUS SALES

MidAtlantic Region

P.O. Box 6549 ■ Marietta, GA 30065-0549

800 Pickens Drive Ext. ■ Marietta, GA 30062

GA - (770) 422-8920 ■ FAX - (770) 422-9007

Toll Free (800) 282-7981 Ext. 59

2075 West Main Street ■ Waynesboro, VA 22930

VA - (540) 943-3430 ■ Cell - (540) 256-3246

Regional Representative - Andrew Clawson

January 14, 2013

Laura Hooper
Department of Administration
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

Ref: PTR 14016

Dear Laura Hooper:

National Bus Sales and Leasing, Inc. appreciates this opportunity to submit a bid for transit vehicles to the State of West Virginia. Our offerings, a Champion Defender for classes A through G and a Glaval Entourage for Class H, meets the intent and letter of your specifications as well as amendment #1 and #2 with the following documentation, clarifications, deviations and/or explanations per your Required Bid Documentation Checklist.

Mandatory Bid Forms

Bid Form 1	Located at Enclosure A.
Bid Form 2	Located at Enclosure B.
Bid Form 3	Located at Enclosure C
Bid Form 4	Located at Enclosure D.
Bid Form 5	Located at Enclosure E.
Bid Form 6	Located at Enclosure F.
Bid Form 6A	Located at Enclosure G.
Bid Form 7	Located at Enclosure H.
Bid Form 8	Located at Enclosure I.
Bid Form 9	Located at Enclosure J.
Copy of Bus Testing STURRA Test	Located at Enclosure K for Classes A-F
	Located at Enclosure L for Class G
	Located at Enclosure M for Class H
Water Testing- Details of Process	Located at enclosure N for classes A-G
	Located at enclosure O for Class H

RBDC	Required Bid Document Checklist is located at Enclosure P.
Certification Page	Certification and Signature Page is located at Enclosure Q.
Bid Documents	Bid Documents are located at Enclosure R.
Addendum Ack.	Addendum Acknowledgement is located at Enclosure S.
Pricing Page	Located at Enclosure T.

Section

Mandatory Documentation

- 3.5 Engine ISB-07. The Cummins ISB 6.7L Engine will be provided. It is a diesel engine with 240 HP @ 2300 RPM, 2600 GOV, 560 LB/FT @ 1600 RPM. Literature can be found on the USB drive provided with the bid labeled Cummins ISB 6.7L. The engine has a 3 Year/ 200,000 mile warranty.
- 3.5b The Water Separator and Fuel Filter – A Davco Diesel Pro 243 Water Separator Fuel Filter with heated option will be provided. Literature can be found on the USB drive provided with the bid labeled Davco 243. The warranty is covered under the extended Freightliner warranty and is 3 years/ 36,000 miles.
- 3.5f A 90 gallon between the rails fuel tank is not available on the Freightliner M2 Chassis. We take an exception to this specification and provide a 100 gallon saddle mount fuel tank in place of the 90 gallon between the rails tank.
- 3.5h The High Idle System to be provided is the Intermotive Gateway 805. Literature can be found on the USB drive provided with the bid labeled Intermotive Gateway 805. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.5i Engine Heating - An Engine Block Heater is included on the chassis with the Receptacle mounted under the Driver's door. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2. 3Year/36,000 mile Warranty.
- 3.6 Transmission- The Allison 2200 PTS Automatic Transmission with Park Pawl is the transmission to be provided. Literature can be found on the USB drive provided with the bid labeled Allison 2200 PTS Transmission. The Warranty is three years/ unlimited miles.
- 3.6.c Transmission Cooling System- A water to oil transmission cooler will be included on the Freightliner M2 chassis. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2. Warranty is 3 years/36,000 miles.
- 3.6.d The Differential Gear Ratio on the Detroit DA-RS-17.5-2 L Series Axle to be provided will be 4.78 . This ratio is set by Freightliner to work for the requested application. If another ratio is preferred please specify on PO. To see available Ratios for this differential please see literature provided on the USB drive provided with the bid labeled Detroit Axle. The Drive Axle comes with a 3 year/ 50,000 mile Extended Warranty.
- 3.7.1a Heavy Duty Breaks- Heavy Duty Hydraulic Disc Brakes provided for both front and rear Axles. Documentation is located on the USB drive provided with the bid labeled

Freightliner M2 Specifications and Freightliner M2. The Brake system excluding friction Material has a 3 year/36,000 mile Extended Warranty.

- 3.7.3 Suspension System-A 10,000# Taper Leaf Front Suspension System will be provided. A Freightliner Airliner 21,000# Rear suspension will be provided for classes A-C. A 20,000# Flat Leaf Spring Rear Suspension will be provided for Classes D-F. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2. The Drive Axle comes with a 3 year/ 50,000 mile Extended Warranty.
- 3.7.4b Tire Information- Michelin XZE 245/70R19 16 Ply Radial Tires are to be provided on the vehicle. The spare tire to be provided will also be a Michelin XZE 245/70R19 16 Ply Radial Tire. Literature and can be found on the USB drive provided with the bid labeled Michelin XZE Tires. Limited Warranty from Michelin against side wall defects.
- 3.8 Electrical System- An electronic copy as well as two 11"x17" laminated print copies of the As Built Schematics will be provided with each vehicle. For information on the Electrical system please see documents on the USB Drive provided with the bid labeled Champion Electrical Training Manual and the document labeled Power Distribution Center. Minimum warranty –3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.1 Alternator- The Alternator to be provided is the Leece-Neville 12V 320Amp 4962PA Pat Mount Alternator. It is equipped with an Integral Rectifier. Literature and can be found on the USB drive provided with the bid labeled Leece-Neville Alternator. The warranty is covered under the Add On warranty and is 3 years /36,000 mile.
- 3.8.2 Batteries- The Batteries to be provided are Alliance Model 1231 Group 31 12V Maintenance Free 2250 CCA Threaded Stud Batteries. They will be mounted in a Stainless Steel Pull out tray with Battery hold downs secured with bolts.
- 3.8.3d Exterior Lights- The Rear Stop and Taillights to be provided are Trucklite Brand Exterior LED Lights. Literature and can be found on the USB drive provided with the bid labeled Truck Lite Exterior Lighting. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.3n Strobe Light- The Strobe Light to be provided is Low Profile Strobe 6810. Literature and can be found on the USB drive provided with the bid labeled Trucklite Strobe 6810W. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.3p Truck Lite Products-The exterior lighting to be provided are Trucklite Brand Exterior LED Lights. Literature and can be found on the USB drive provided with the bid labeled Truck Lite Exterior Lighting. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.4 Interior Lights- The Interior lighting to be provided are Sound Off Signal Brand LED Lights. Literature and can be found on the USB drive provided with the bid labeled Interior Lights. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.

- 3.8.5b Fuse Box Panel- Champion's Power Distribution Center will be used for the Fuse Panel. A description of the Fuse Panel can be found on the USB drive provided with the bid labeled Power Distribution Center and Champion Electrical Training Manual. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.6d Rear Alarm- A Preco Safety Model 380 112DB back up alarm is to be provided. Literature and can be found on the USB drive provided with the bid labeled Preco 380 Back Up Alarm. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.8.6d Back Up Camera- An REI Back Up camera System is to be provided. It includes Camera and a 7" LCD screen. Literature and can be found on the USB drive provided with the bid labeled REI Back Up Camera. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.9.1 Heating System-Freightliner OEM Heater, Defroster, and Air conditioner are included on the chassis. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2. Warranty is 3 years/36,000 miles. Two (2) Pro Air 65,000 BTU Heaters will be provided with a circulation pump. Literature and can be found on the USB drive provided with the bid labeled Pro Air 6500 Heater. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment. Two (2) KBC Marketing Circulations fans will be provided. A Picture can be found on the USB drive provided with the bid Circulation Fan. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.9.1c Auxiliary Heaters- Two (2) Pro Air 65,000 BTU Heaters will be provided with a circulation pump. Literature and can be found on the USB drive provided with the bid labeled Pro Air 6500 Heater. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.9.1d Stepwell Heater- An UltraHeat, Inc. Step Heater will be provided for the bottom step of the units. Literature and can be found on the USB drive provided with the bid Ultra Heat Step Heater Users Manual. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.9.2b A/C Compressor- Two (2) TM-21 Compressors will be provided. Literature and can be found on the USB drive provided with the bid labeled ACT_TM-21. ACT Warranty – 2 years / Unlimited miles.
- 3.9.2c A/C Condenser- One (1) CS-2 Condensor and 1 CS-3 Condensor by ACT will be provided. Literature and can be found on the USB drive provided with the bid labeled ACT_CS2 and ACT CS_3. ACT Warranty – 2 years / Unlimited miles.
- 3.9.2d Rear Evaporators-One (1) EZ-9 Rear Evaporator and One (1) EZ-3 Side Mount Evaporator by ACT will be provided. Literature and can be found on the USB drive provided with the bid labeled ACT_EZ9 and ACT_EZ3. ACT Warranty – 2 years / Unlimited miles.
- 3.9.2g Driver's Evaporator- Freightliner OEM Heater, Defroster, and Air conditioner are included on the chassis. Documentation is located on the USB drive provided with the

bid labeled Freightliner M2 Specifications and Freightliner M2. Warranty is 3 years/36,000 miles.

- 3.9.2j A/C Hose System- ACT's EZ- Clip Hoses and ACT's EZ-Clip Fittings will be used for the a/c system. Literature and can be found on the USB drive provided with the bid labeled ACT_EZ-Clip_Hose and ACT_EZ-Clip_Fittings. ACT Warranty – 2 years / Unlimited miles.
- 3.10 Roof Hatch- Two (2) Transpec 1900 Standard Vent Model Emergency Roof Hatches will be provided. Literature and can be found on the USB drive provided with the bid Transpec Roof Hatch. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.11 Circulation Fan- Two (2) KBC Marketing Circulations fans will be provided. A Picture can be found on the USB drive provided with the bid Circulation Fan 1 and 2. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.1 Body Construction- Champion Bus's Body Construction will be followed for each unit. A full description of the body construction can be found on the USB drive provided with the bid Champion Body Construction. The Champion Body Structure Warranty is 5 Year/75,000 mile.
- 3.12.2b Skirt Panel Seams- Fiberglass Exterior is included in our proposal. The Fiberglass skirt panels come in 40' lengths from the manufacturer. The Requested floorplans do not exceed 40' in length and do not require seams in the skirt panels.
- 3.12.2h Insulation- NCFI Polyurethanes Insulation will be used to insulate the bus body. A technical data sheet can be found on the USB drive provided with the bid NCFI Foam Insulation. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.6b Undercoating/ Rust Proofing System- Tectyl 121B will be used for Undercoating the proposed bus. Technical Data and Application procedure can be found on the USB drive provided with the bid Tectyl_121B_PI_Sheet. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.4c Door Operating Mechanism- An A&M Systems Door header will be used for the door operations mechanism. An Exterior Key Switch will be provided to control the mechanism. The Door Accuator Specifications can be found on the USB drive provided with the bid labeled A & M Header Specifications. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.5d RCA Smooth Rubber Flooring will be provided where required. Flooring Specifications and Color Selection can be found on the USB drive provided with the bid labeled RCA Rubber and RCA Transit Color .Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.5e Flooring RCA Ribbed Rubber Flooring where required will be provided. Flooring Specifications and Color Selection can be found on the USB drive provided with the bid labeled RCA Rubber and RCA Transit Color .Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment

- 3.12.6b Undercoating/ Rust Proofing- Tectyl 121B will be used for Undercoating the proposed bus. Technical Data and Application procedure can be found on the USB drive provided with the bid Tectyl_121B_PI_Sheet. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.12.7 Bumpers- The Front Bumper will be the Freightliner OEM Three Piece 14 Inch Chromed Steel Bumper with Collapsible Ends. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2. The Rear Bumper will be a Romeo Rim Help Energy Absorbing Bumper. Specifications can be found on the USB drive provided with the bid labeled Help Bumper. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.13 Lift-The Braun Millennium 2 Model NL917IB-2 will be provided. The Platform on this lift has a Clear Width of 33” and a Clear Length of 51”. A brochure and specifications for this lift can be found on the USB drive provided with the bid labeled Millennium 2-brochure and Millennium 2-Specifications. The Warranty from the Braun Corporation will be Three Years/10,000 cycles for parts and labor. It also carries a 5 Year/ 15,000 cycle powertrain warranty which covers Cable, Cylinder, Flow Control, Gear Box, Motor, Pump, Hydraulic Hose and Fittings.
- 3.13f Interlock System- An Intermotive Gateway 805 will be provided for the interlock system. Literature and can be found on the USB drive provided with the bid labeled Intermotive Gateway 805. Minimum warranty – 2 years / Unlimited miles falls under Champion Add-on equipment.
- 3.14 Floorplans for each class can be found on the USB Drive and labeled:
Class A-Floorplan
Class B-Floorplan
Class C-Floorplan
Class D-Floorplan
Class E-Floorplan
Class F-Floorplan
Class G-Floorplan
Class H-Floorplan
- 3.14a Passenger seats- The Passenger Seating package is to include the following seat types: Double ICS Seat, Feather Weight Mid High Seats, Feather Weight High Back Seats, and BV Notchback Foldaway Seats. Options to include ABS Seat Backs (where available) Aisle side US Armrest, Grab Handles on all seats except rear Row, and level 3.5 fabric. Brochures for the seating package can be found on the USB Drive provided with the bid labeled: FW_High-Back, FW_Mid-Hi, BV-AM Foldaway, ICS, and US Armrest. The Warranty on the seats by Freedman Seating is 3 Years/36,000 miles on the fabric and 5 years/unlimited miles on the Frame.
- 3.14c Under Seat Retractor System- The seat belts to be provided will be Freedman Under Seat Retractor. This seat belt complies with FMVSS 210. A description of the Freedman Under Seat Retractor is located on the USB drive provided with the bid labeled Freedman USR.

- 4.14j Child Restraint Seat- A Double Freedman Integrated Child Seat(ICS) is included as part of the seating package. A brochure for this seat is located on the USB drive provided with the bid and is labeled ICS.
- 3.14k Driver's Seat- The Driver's seat requested has not been pull tested by the chassis manufacturer and will not meet FMVSS requirements. We have to take exception to this requirement and will provide the Bostrom T910 High Back Air Suspension Seat in its place. This seat will be covered in Level 4 fabric. A brochure can be found on the USB drive provided with the bid labeled Bostrom T910 Seating.
- 3.15 Mobility Aid Securement- Surelok Titan AL712S4C securement systems will be provided for each of the Wheel Chair Positions along with sixteen (16) 16" quick straps. A brochure for this securement system is located on the USB drive provided with the bid and is labeled Surelok_Titan.
- 3.19a Exterior Mirrors- The Exterior Mirrors to be provided are the Rosco Heated Remote Mirrors for the M2. Documentation is located on the USB drive provided with the bid labeled Rosco 1, 2, 3, and 4.
- 3.21 Radio/ Communications Installation Procedures- A Grounding plate will be installed at roof level of the unit. A Ground Wire, Conduit (Loom) a pull wire and power wire will be supplied in the area for the mounting of the two way radio. This option is referred to as "Radio, Two Way Prep" in our proposed specifications. It can be found on the USB drive provided with the bid labeled Class A Mechanical Description. As the specs only call for the two way radio prep we are unable to provide literature or a description of the 2 way radio that agencies will be installing themselves. As installation instructions vary between manufacturers we will not be able to provide installation instructions. They will need to be obtained from the Radio manufacturer.
- 3.22 Radio/CD Stereo- A Panasonic AM/FM/CD/MP3 Clock Radio will be provided. Model CQ-CM130U. Literature and can be found on the USB drive provided with the bid labeled Panasonic Radio. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.24h Security Camera System: An REI HD800 DVR with two 320 GB Hard Drives and six (6) color dome cameras will be provided per bus. Literature and can be found on the USB drive provided with the bid labeled REI Mobile Video. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 3.25a Fixed Route Package Destination Signs- The Transign Destinator Destination sign will be Provided. The Front Sign display area will be 16x160 and the Side Sign display area will be 14x72. Warranty Statement, Sign Dimensions, Controller layout, Internet Programming Instructions, Operation Instructions and Programming Instructions can all be found on the USB drive provided with the bid in the folder labeled Transign. The warranty on this sign is a limited Lifetime warranty.
- 3.25b Control Panel Location- The Control Panel design is shown on the USB drive provided with the bid in the folder Transign and labeled USB Controller. The control panel will be front bulkhead mounted and easily accessible by the driver. A picture of the mounting location is on the USB drive provided with the bid labeled Destination Sign Control Panel.

- 3.25d PA System- A Jensen PA500 Universal Public Address System will be provided with Boom Microphone and Foot Pedal Control. Literature can be found on the USB drive provided with the bid labeled PA500_owners_manual.
- 3.25e Passenger Signaling System- A Pull Cord Stop Request system with chime, touchtape at the wheelchair positions, drop down cords in between windows, and a visible stop request display will be provided. A picture of the Stop Request Display is on the USB drive provided with the bid labeled Stop Request Sign. The electronic controls for the stop request system is incorporated in the power distribution center. Details can be found on the USB drive provided with the bid labeled Power Distribution Center.
- 3.27a Interior and Exterior Color Schemes- The Interior Color of the unit will be Grey.
- 3.27a Paint Scheme- The Agency's logo and striping scheme will be completed in Avery, 3M or FDC vinyl determined by best match to Agency's color scheme. Non Metallic PPG paint codes will be used to match any Agencies paint needs. A chart of available vinyl colors is provided on the USB drive provided with the bid labeled Vinyl Chart.
- 4.1 Rear Air Suspension- The Freightliner Airliner 21,000# Rear Suspension system will be provided. It is equipped with the Airliner High Position Ride Height, Standard U-Bold Pan, Ignition Controlled Electric Dump Switch, Single Air Rear Suspension Leveling Valve, Transverse Control Rods, and Rear Shock Absorbers. Documentation is located on the USB drive provided with the bid labeled Freightliner M2 Specifications and Freightliner M2.
- 4.4.2 Automatic Tire Chain Device- OnSpot Brand Automatic Tire Chains will be provided. Literature can be found on the USB drive provided with the bid labeled OnSpot. Minimum warranty – 3 years / 36,000 miles falls under Champion Add-on equipment.
- 4.7 Chassis with Gasoline Engine to be provided is the Ford F-550 with a 6.8L gas engine. The driver's seat requested cannot mount on this chassis. We will be taking an exception to this specification and be bidding the unit with the Ford OEM Drivers Seat. Ford F-550 Chassis specifications are on the USB driver provided with the bid labeled Chassis Specifications for Ford F-550.

Class H

National Bus Sales & Leasing nor it's manufacturers can provide a unit to fully comply with the specifications requested in Class H. No such vehicle that meets Class C requirements and has a CNG engine, been Altoona tested. We can however meet Class A capacity and provide a CNG engine. This unit will utilize the Ford F550 with a 6.8L engine with the hardened valve and Gaseous Prep options. Ford F- 550 Chassis literature is on the USB driver provided with the bid labeled Chassis Specifications for Ford F-550. It will have an A-1 Alternative Fuels Systems CNG Conversion with a 53 GGE Transit Fuel System. Literature on the conversion is on the USB drive provided with the bid labeled F550 CNG. The Bus body will be a Glaval Entourage. Glaval Entourage literature is on the USB drive provided with the bid labeled Glaval Entourage. The Body Construction method can be found on the USB Drive provided with the bid labeled Glaval- Allied Tube Sell Sheet. The exterior lighting to be provided on the Glaval Entourage is Sound Off Signal Brand Exterior LED Lights. Literature and can be found

on the USB drive provided with the bid labeled Sound Off Signal Exterior Lighting1 and 2. Minimum warranty – 3 years / 36,000 miles falls under Add-on equipment. The Interior lighting to be provided on the Glaval Entourage are Gustafson Brand LED Lights. Literature and can be found on the USB drive provided with the bid labeled Gustafson Interior LED Lighting. Minimum warranty – 3 years / 36,000 miles falls under Add-on equipment. Glaval Buy America and Final Assembly document can be found on the USB Drive provided with the bid labeled Glaval-2014 Buy America Final Assembly. Glaval FMVSS & ADA Cert can be found on the USB Drive provided with the bid labeled Glaval-FMVSS & ADA CERT 2014.

5.2 National Bus Sales & Leasing ensures that all deliveries will comply with the items in section 5.2.

5.11.1 Warranty on Completed Vehicle- The warranty on the complete vehicle is 3 years/36,000 miles.

5.11.2 Warranty on Basic Vehicle Structure-The Basic Body Vehicle Structure Warranty is 5 years/75,000 miles. The warranty on the frame suspension system is 3 years/36,000 miles.

5.11.3 Warranty Locations

A. Chassis – Nearest Freightliner dealer for classes A-F and nearest Ford dealer for classes G and H.

B. Bus Body – Nearest facility authorized by National Bus on behalf of Champion Bus OR Glaval . Note: If repairs required fall within the capability of the transit system, authorization and reimbursement can be made directly to the operator.

C. Major Components – Lift and A/C dealers closest to transit facility. Note: If repairs required fall within the capability and qualifications of the transit system, authorization and reimbursement can be made directly to the operator.

As a courtesy to the State of West Virginia, the following list of chassis providers is included:

A. Chassis – Northern Panhandle	FYDA Freightliner Rittsburgh
(724)514-2055	Canonsburg, PA
B. Chassis – Eastern Panhandle	VTC Freightliner
(540) 234- 0999	Weyers Cave, VA
C. Chassis – Central	Matheny Motor Truck Company
(304) 769-5860	Nitro, WV
D. Chassis – Southern	Allied Freightliner LLC
(304) 453-6154	Kenova, WV
E. Chassis- Western	Matheny Motor Truck Company
(304)485-4418	Mineral Wells, WV

As a courtesy to the State of West Virginia, the following list of body providers is included:

A. Chassis – Northern Panhandle	National Bus
(800) 282 – 7981	Customer Service Ctr
B. Chassis – Eastern Panhandle	WBPI
(540) 337 – 0140	Fishersville VA

C. Chassis – Central
(304) 622 – 5876
D. Chassis – Southern
(800) 282 – 7981

Seller's Truck N Auto
Clarksburg, WV
National Bus
Customer Service Ctr

The only authorized full service Braun dealer in the state is:

- A. WV Truck and Trailer
Nitro, WV (304) 755 – 0113
- B. All other lift repair authorizations require calling Braun directly at 1-800 THE LIFT with problem and lift serial number.

5.11.4 Warranty per specs on subsystems and components:

Engine	Three (3) Years or 200,000 Miles
Transmission	Three (3) Years or 200,000 Miles
Drive Axle	Three (3) Years or 50,000 Miles
Brake System	Three (3) Years or 36,000 Miles, Excluding Friction Material
Body Structure	Five (5) Years or 75,000 Miles
Air Conditioning	Two (2) Years/Unlimited Miles
Wheel Chair Lift System	Two (2) Years
All Add On Components	Three (3) Years, 36,000 Miles

Warranty Exceptions
for Classes G and H.
Please see page 13
of the Ford F-550 Warranty
Manual on
the USB Drive for
Coverage listing.
An A 1/14/14

6.1.2 We provided 2 completed bids in binder form with one marked for WVDPT

9.3a Please see the separate complete Mechanical Description and Chassis Description of each

Class of vehicles on the USB Drive Labeled as:

Class A- Mechanical Description
Class A- Chassis Description
Class B- Mechanical Description
Class B- Chassis Description
Class C- Mechanical Description
Class C- Chassis Description
Class D- Mechanical Description
Class D- Chassis Description
Class E- Mechanical Description
Class E- Chassis Description
Class F- Mechanical Description
Class F- Chassis Description
Class G- Mechanical Description
Chassis Specifications for Ford F-550
Class H- Mechanical Description
Chassis Specifications for Ford F-550

For warranty Information Please see Section 5.11.1-5.11.4 of our bid.

For Standard Equipment on Each Model please refer to their respective literature located on the USB drive provided with the bid.

9.3.b Floorplans for each class can be found on the USB Drive and labled:

Class A-Floorplan
Class B-Floorplan
Class C-Floorplan

Class D-Floorplan
Class E-Floorplan
Class F-Floorplan
Class G-Floorplan
Class H-Floorplan

9.3.c Curb Weight for each class can be found on the USB Drive and labled:

Class A-Curb Weight
Class B-Curb Weight
Class C-Curb Weight
Class D-Curb Weight
Class E-Curb Weight
Class F-Curb Weight
Class G-Curb Weight
Class H-Curb Weight

9.3f Nearest Depot for parts supply:

National Bus Sales & Leasing, Inc.	National Bus Sales & Leasing, Inc.
P.O. Box 6549	800 Pickens Drive Ext.
Marietta, GA 30065-0549	Marietta, GA 30062

9.3h Assembly Point A-G:

CHAMPION BUS, INC.
331 Graham Road
Imlay City, Michigan 48444

Assembly Point H:

Glaval Bus
914 County Road #1 North
Elkhart, In 46515

9.3i End User Reference list can be found on the USB drive labeled References.

9.39 National Bus Sales understands they are responsible to coordinate and help conduct 2 all day training sessions per year for the duration of the contract. It is National's responsibility to coordinate component representatives to assist in the training (i.e. wheelchair lift, securement systems and air-conditioning) The Division of Public Transit has in the past arranged for suitable location, scheduled the training and publicized training event state wide.

Please contact us immediately at (800) 282-7981 if any additional documentation is required.
Thanks again for your consideration!

Sincerely,



Andrew W. Clawson
Regional Representative
aclawson@nationalbussales.com

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

Location(s) of the Technical Service Representative(s) and parts distribution center(s) closest to the State of West Virginia.

Technical Service Representatives

Name: Andrew Clawson

Address: 51 Ivy Ridge Lane

Fishersville, Va

Telephone: (540) 256-3246

Name: Carl Henderson

Address: 800 Pickens Drive Ext.

Marietta, GA

Telephone: (800) 282-7981

Parts Distribution

Name: NBSL-Parts

Address: 800 Pickens Drive Ext.

Marietta, GA

Telephone: (800) 282-7981

Name: WBPI- Parts

Address: 51 Ivy Ridge Lane

Fishersville, VA

Telephone: (540) 337-0140

**BID FORM #2: CERTIFICATION FOR AIR POLLUTION
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

103

Pursuant to Section 8.4 of Part 1 of the Procurement, the Vendor certifies that the vehicles proposed:

 X **ARE** or

 ARE NOT (specify one)

in compliance with the regulations in 40 CFR Part 85, 40 CFR Part 86, 40 CFR Part 600 and the air pollution criteria established by the Environmental Protection Agency of the United States Government.

1/14/14

Date



Authorized Signature

Regional Representative

Title

National Bus Sales & Leasing

Company Name

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

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**BID FORM #3: DISADVANTAGED BUSINESS ENTERPRISE VENDORS/
MANUFACTURERS CERTIFICATION-- MANDATORY BID FORM-- MUST BE
SUBMITTED WITH BID**

(Check appropriate statement)

_____ The Vendor, if a transit vehicle manufacturer, hereby certifies that it has complied with the requirements of 49 CFR Section 26.49 by submitting an annual DBE goal to the Federal Transit Administration (FTA). The goal has either been approved or not disapproved by FTA.

^x_____ The Vendor, if a non-manufacturing supplier, hereby certifies that the manufacturer of the transit vehicle to be supplied has complied with the above-referenced requirement of 49 CFR Section 26.49.

1/14/14
Date


Authorized Signature

Regional Representative

Title

National Bus Sales & Leasing

Company Name

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

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**BID FORM #4: BUY AMERICA CERTIFICATION ROLLING STOCK
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

Certificate of Compliance

The bidder or offeror hereby certifies that it will comply with the requirements of section 165(b)(3), of the Surface Transportation Assistance Act of 1982, as amended, and the applicable regulations of 49 CFR 661.11:

1/14/14

Date

Authorized Signature
National Bus Sales & Leasing

Company Name
Andrew Clawson

Name
Regional Representative

Title

Certificate for Non-Compliance

The bidder or offeror hereby certifies that it cannot comply with the requirements of section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, but may qualify for an exception to the requirement consistent with section 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act, as amended, and the applicable regulations in 49 CFR 661.7.

Date

Authorized Signature

Company Name

Name

Title

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

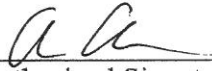
106

**BID FORM #5: FEDERAL MOTOR VEHICLE SAFETY STANDARDS
CERTIFICATION**
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID

The vendor hereby certifies that it shall submit, as required by Title 49 of the CFR, Part 663 - Subpart D, its self certification information stating that the vehicle(s) will comply with the relevant Federal Motor Vehicle Safety Standards issued by the National Highway Traffic Safety Administration in Title 49 of the Code of Federal Regulations, Part 571.

1/14/14

Date



Authorized Signature

Regional Representative

Title

National Bus Sales & Leasing

Company Name

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

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**BID FORM #6—U.S. COMPTROLLER'S DEBARMENT LIST CERTIFICATION
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

National Bus Sales & Leasing _____ hereby certifies that it

_____ **IS or**

☒ **IS NOT (specify one)**

included on the U.S. Comptroller General's Consolidated List of Persons or Firms Currently
Debarred for Violations of Various Public Contracts Incorporating Labor Standards Provisions.

11/14/14

Date

aa

Authorized Signature

Regional Representative

Title

National Bus Sales & Leasing

Company Name

REQUEST FOR QUOTATION
PTR14016 Mid-Size Medium Light Duty Transit Vehicles

108

**BID FORM #6-A: CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential contractor for a major third party contract),
National Bus Sales & Leasing (COMPANY NAME) certifies to
the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal 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) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
5. If the primary participant (applicant for an FTA grant, or cooperative agreement, or potential third party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR
COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR
THIRD PARTY CONTRACT),
National Bus Sales & Leasing, CERTIFIES OR
AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE
STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND
UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET SEQ.
ARE APPLICABLE THERETO.




Regional Representative

Signature and Title of Authorized Official

**BID FORM #7: VENDOR'S CERTIFICATION OF
UNDERSTANDING AND ACCEPTANCE
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The Vendor hereby certifies that all Technical Specifications and Contract Terms and Conditions have been carefully reviewed, are fully understood and shall be adhered to in performance and completion of any contract resulting from this bid.

1/14/14
Date


Authorized Signature

Regional Representative
Title

National Bus Sales & Leasing
Company Name

SPECIFICATION COMPLIANCE

NOTE: Please check if what is offered is in exact compliance with specifications. **Any discrepancies must be listed as an attachment to the bid proposal. Exact dimensions and/or descriptions must be provided as a part of the Vendor's bid proposal when submitted.**

 Bid proposal submitted meets and/or exceeds all specification requirements.

 x Bid proposal submitted contains deviations from specification requirements.
Detailed descriptions of these deviations have been provided with this bid proposal.

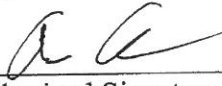
REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

**BID FORM #8: CERTIFICATION OF COMPLIANCE
WITH FTA'S BUS TESTING REQUIREMENTS
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The undersigned (Vendor/Manufacturer) certifies that the vehicle offered in this procurement complies with 49 U.S.C. 5318, as amended by MAP-21, and FTA regulations, "Bus Testing," 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 2 CFR Part 1200.

1/14/14
Date


Authorized Signature

Regional Representative

Title

National Bus Sales & Leasing

Company Name

REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

**BID FORM #9: CERTIFICATION OF RESTRICTIONS ON LOBBYING
MANDATORY BID FORM-MUST BE SUBMITTED WITH BID**

The undersigned (Vendor, Contractor) certifies, to the best of his or her knowledge and belief, that:

- a. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress regarding the award of a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, or the extension, continuation, renewal, amendment, or modification of any Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance.
- b. If any funds other than Federal appropriated funds have been or will be paid to any person to influence or attempt to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with any application for a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance, the undersigned assures that it will complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," Rev. 7-97; and
- c. The undersigned understands that the language of this certification shall be included in the award documents for all subawards at all tiers (including subcontracts, sub grants, sub agreements, and contracts under grants, loans (including a line of credit), cooperative agreements, loan guarantees, and loan insurance.

Undersigned understands that this certification is a material representation of fact upon which reliance is placed by the Federal government and that submission of this certification is a prerequisite for providing a Federal grant, loan (including a line of credit), cooperative agreement, loan guarantee, or loan insurance for a transaction covered by 31 U.S.C. 1352. The undersigned also understands that any person who fails to file a required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The (Vendor, Contractor) National Bus Sales & Leasing, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the (Vendor, Contractor) understands and agrees that the provisions of 31 U.S.C. §§ 3801, et seq., apply to this certification and disclosure.

1/14/14

Date



Authorized Signature

Regional Representative

Title

STURAA TEST

10 YEAR

350,000 MILE BUS

from

**CHAMPION BUS INC.
GENERAL COACH AMERICA INC.**

MODEL DEFENDER

DECEMBER 2009

PTI-BT-R0911

PENNSSTATE



The Thomas D. Larson Transportation Institute

201 Transportation Research Building (814) 865-1891
The Pennsylvania State University
University Park, PA 16802

Bus Testing and Research Center

2237 Old Route 220 N. (814) 695-3404
Duncansville, PA 16635

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EXECUTIVE SUMMARY

Champion Bus Inc. General Coach America Inc. submitted a model Defender. The bus is built on a Freightliner model Business Class M2 chassis, diesel-powered 29 seat (including the driver) 35-foot bus, for a 10 yr/350,000 mile STURAA test. The odometer reading at the time of delivery was 2,670 miles. Testing started on June 15, 2009 and was completed on November 27, 2009. The Check-In section of the report provides a description of the bus and specifies its major components.

The primary part of the test program is the Structural Durability Test, which also provides the information for the Maintainability and Reliability results. The Structural Durability Test was started on July 3, 2009 and was completed on November 23, 2009.

The interior of the bus is configured with seating for 29 passengers including the driver plus 2 wheelchair positions. Free floor space will accommodate 20 standing passengers resulting in a potential load of 49 persons plus 2 handicap positions. At 150 lbs per person and 600 lbs per wheelchair position, this load results in a measured gross vehicle weight of 24,540 lbs. The first segment of the Structural Durability Test was performed with the bus loaded to a GVW of 24,540 lbs. The middle segment was performed at a seated load weight of 21,630 lbs and the final segment was performed at a curb weight of 16,440 lbs. Durability driving resulted in unscheduled maintenance and failures that involved a variety of subsystems. A description of failures, and a complete and detailed listing of scheduled and unscheduled maintenance is provided in the Maintainability section of this report.

Accessibility, in general, was adequate, components covered in Section 1.3 (Repair and/or Replacement of Selected Subsystems) along with all other components encountered during testing, were found to be readily accessible and no restrictions were noted.

The Reliability section compiles failures that occurred during Structural Durability Testing. Breakdowns are classified according to subsystems. The data in this section are arranged so that those subsystems with more frequent problems are apparent. The problems are also listed by class as defined in Section 2. The test bus encountered no Class 1 or Class 4 failures. Of the three reported failures, 1 was a Class 2 and two were Class 3.

The Safety Test, (a double-lane change, obstacle avoidance test) was safely performed in both right-hand and left-hand directions up to a maximum test speed of 45 mph. The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 24.46 seconds.

The Shakedown Test produced a maximum final loaded deflection of 0.274 inches with a permanent set ranging between -0.004 to 0.002 inches under a distributed static load of 19,575 lbs. The Distortion Test was completed with all subsystems, doors and escape mechanisms operating properly. No water leakage was observed throughout the test. All subsystems operated properly.

The Static Towing Test was performed using a target load (towing force) of 19,728 lbs. All four front pulls were completed to the full test load with no damage or deformation observed. The Dynamic Towing Test was performed by means of a front-lift tow. The towing interface was accomplished using a hydraulic under-lift wrecker. The bus was towed without incident and no damage resulted from the test. The manufacturer does not recommend towing the bus from the rear, therefore, a rear test was not performed. The Jacking and Hoisting Tests were also performed without incident. The bus was found to be stable on the jack stands, and the minimum jacking clearance observed with a tire deflated was 5.0 inches.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 6.39 mpg, 6.86 mpg, and 14.21 mpg respectively; with an overall average of 7.73 mpg.

A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively.

STURAA TEST

7 YEAR

200,000 MILE BUS

from

**CHAMPION BUS INC.
GENERAL COACH AMERICA, INC.**

**MODEL
DEFENDER/CHALLENGER/AMERICAN COACH F-550 CNG**

DECEMBER 2012

PTI-BT-R1208

PENNSTATE



**The Thomas D. Larson
Pennsylvania Transportation Institute**

201 Transportation Research Building (814) 865-1891
The Pennsylvania State University
University Park, PA 16802

Bus Testing and Research Center

2237 Old Route 220 N. (814) 695-3404
Duncansville, PA 16635



MECHANICAL TESTING
CERTIFICATE 3172.01

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EXECUTIVE SUMMARY

Champion Bus Inc., General Coach America, Inc., submitted a model Defender/Challenger/American Coach F-550 CNG, CNG-powered 21 seat/33-foot bus, for a 7 yr/200,000 mile STURAA test. The odometer reading at the time of delivery was 873 miles. Testing started on May 3, 2012 and was completed on December 6, 2012. The Check-In section of the report provides a description of the bus and specifies its major components.

The primary part of the test program is the Structural Durability Test, which also provides the information for the Maintainability and Reliability results. The Structural Durability Test was started on May 15, 2012 and was completed on November 28, 2012.

The interior of the bus is configured with seating for 21 passengers including the driver and 2 wheelchair positions. ***Note: this test bus is not designed to accommodate standing passengers. Testing on this test bus was conducted with no standee ballast weight.*** At 150 lbs per person and 600 lbs per wheelchair position, this load results in a measured gross vehicle weight of 19,600 lbs. ***Note: at GVL which excludes standing passengers, the GVW is 474 lbs over the rear GAWR and 100 lbs over the GVWR.*** The first segment of the Structural Durability Test was performed with the bus loaded to a GVW of 19,600 lbs. The middle seated load weight segment was performed at the same 19,600 lbs and the final segment was performed at a curb weight of 15,310 lbs. Durability driving resulted in unscheduled maintenance and failures that involved a variety of subsystems. A description of failures, and a complete and detailed listing of scheduled and unscheduled maintenance is provided in the Maintainability section of this report.

Effective January 1, 2010 the Federal Transit Administration determined that the total number of simulated passengers used for loading all test vehicles will be based on the full complement of seats and free-floor space available for standing passengers (150 lbs per passenger). The passenger loading used for dynamic testing will not be reduced in order to comply with Gross Axle Weight Ratings (GAWR's) or the Gross Vehicle Weight Ratings (GVWR's) declared by the manufacturer. Cases where the loading exceeds the GAWR and/or the GVWR will be noted accordingly. During the testing program, all test vehicles transported or operated over public roadways will be loaded to comply with the GAWR and GVWR specified by the manufacturer.

Accessibility, in general, was adequate, components covered in Section 1.3 (Repair and/or Replacement of Selected Subsystems) along with all other components encountered during testing, were found to be readily accessible and no restrictions were noted.

The Reliability section compiles failures that occurred during Structural Durability Testing. Breakdowns are classified according to subsystems. The data in this section are arranged so that those subsystems with more frequent problems are apparent. The problems are also listed by class as defined in Section 2. The test bus encountered no Class 1, 2 or 4 failures. All 13 reported failures were Class 3.

The Safety Test, (a double-lane change, obstacle avoidance test) was safely performed in both right-hand and left-hand directions up to a maximum test speed of 45 mph. The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 21.11 seconds. The Stopping Distance phase of the Brake Test was completed with the following results; for the Uniform High Friction Test average stopping distances were 29.76' at 20 mph, 57.65' at 30 mph, 88.65' at 40 mph and 108.83' at 45 mph. The average stopping distance for the Uniform Low Friction Test was 26.38'. There was no deviation from the test lane during the performance of the Stopping Distance phase. During the Stability phase of Brake Testing the test bus experienced no deviation from the test lane but did experience pull to the left during both approaches to the Split Friction Road surface. The Parking Brake phase was completed with the test bus maintaining the parked position for the full five minute period with no slip or roll observed in both the uphill and downhill positions.

The Shakedown Test produced a maximum final loaded deflection of 0.237 inches with a permanent set ranging between -0.003 to 0.002 inches under a distributed static load of 9,075 lbs. The Distortion Test was completed with all subsystems, doors and escape mechanisms operating properly. No water leakage was observed throughout the test. All subsystems operated properly.

The Static Towing Test was performed using a target load (towing force) of 18,372 lbs. All four front pulls were completed to the full test load with no damage or deformation observed. The Dynamic Towing Test was performed by means of a front-lift tow. The towing interface was accomplished using a hydraulic under-lift wrecker. The bus was towed without incident and no damage resulted from the test. The manufacturer does not recommend towing the bus from the rear, therefore, a rear test was not performed. The Jacking and Hoisting Tests were also performed without incident. The bus was found to be stable on the jack stands, and the minimum jacking clearance observed with a tire deflated was 10.3 inches.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 0.59 M/lb, 0.99 M/lb, and 1.21 M/lb respectively; with an overall average of 0.80 M/lb.

A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively.

The Emissions Test was performed. These results are available in Section 8 of this report.

STURAA TEST
7 YEAR
200,000 MILE BUS
from
GLAVAL BUS,
a division of
FOREST RIVER, INC.
MODEL 33' ENTOURAGE
MARCH 2012
PTI-BT-R1114

PENNSSTATE



The Thomas D. Larson
Pennsylvania Transportation Institute
Vehicle Systems and Safety Program

201 Transportation Research Building (814) 865-1891
The Pennsylvania State University
University Park, PA 16802

Bus Testing and Research Center

2237 Old Route 220 N. (814) 695-3404
Duncansville, PA 16635



MECHANICAL TESTING
CERTIFICATE 3172.01

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EXECUTIVE SUMMARY

Glaval Bus, a division of Forest River, Inc. submitted a model 33' Entourage, CNG-powered 29 seat/33-foot bus, for a 7 yr/200,000 mile STURAA test. The odometer reading at the time of delivery was 2,345 miles. Testing started on August 30, 2011 and was completed on March 1, 2012. The Check-In section of the report provides a description of the bus and specifies its major components.

The primary part of the test program is the Structural Durability Test, which also provides the information for the Maintainability and Reliability results. The Structural Durability Test was started on September 14, 2011 and was completed on February 20, 2012.

The interior of the bus is configured with seating for 29 passengers including the driver plus 1 wheelchair position (4 seats stow for 2nd wheelchair position). Free floor space will accommodate 12 standing passengers resulting in a potential load of 41 persons plus 1 wheelchair position. At 150 lbs per person and 600 lbs per wheelchair position, this load results in a measured gross vehicle weight of 21,210 lbs. **Note; at Gross Vehicle Load (GVL) the weight if the rear axle is 334 lbs over the rear GAWR and 1,710 lbs over the GVWR.** The first segment of the Structural Durability Test was performed with the bus loaded to a GVW of 21,210 lbs. The middle segment was performed at a seated load weight of 19,420 lbs and the final segment was performed at a curb weight of 13,550 lbs. Durability driving resulted in unscheduled maintenance and failures that involved a variety of subsystems. A description of failures, and a complete and detailed listing of scheduled and unscheduled maintenance is provided in the Maintainability section of this report.

Effective January 1, 2010 the Federal Transit Administration determined that the total number of simulated passengers used for loading all test vehicles will be based on the full complement of seats and free-floor space available for standing passengers (150 lbs per passenger). The passenger loading used for dynamic testing will not be reduced in order to comply with Gross Axle Weight Ratings (GAWR's) or the Gross Vehicle Weight Ratings (GVWR's) declared by the manufacturer. Cases where the loading exceeds the GAWR and/or the GVWR will be noted accordingly. During the testing program, all test vehicles transported or operated over public roadways will be loaded to comply with the GAWR and GVWR specified by the manufacturer.

Accessibility, in general, was adequate, components covered in Section 1.3 (Repair and/or Replacement of Selected Subsystems) along with all other components encountered during testing, were found to be readily accessible and no restrictions were noted.

The Reliability section compiles failures that occurred during Structural Durability Testing. Breakdowns are classified according to subsystems. The data in this section are arranged so that those subsystems with more frequent problems are apparent. The problems are also listed by class as defined in Section 2. The test bus encountered no Class 1 or Class 2 failures. Of the 7 reported failures, 6 were Class 3 and 1 was a Class 4.

The Safety Test, (a double-lane change, obstacle avoidance test) was safely performed in both right-hand and left-hand directions up to a maximum test speed of 45 mph. The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 20.51 seconds. The Stopping Distance phase of the Brake Test was completed with the following results; for the Uniform High Friction Test average stopping distances were 28.12' at 20 mph, 58.09' at 30 mph, 101.61' at 40 mph and 125.83' at 45 mph. The average stopping distance for the Uniform Low Friction Test was 24.73'. There was no deviation from the test lane during the performance of the Stopping Distance phase. During the Stability phase of Brake Testing the test bus experienced no deviation from the test lane but did experience pull to the left during both approaches to the Split Friction Road surface. The Parking Brake phase was completed with the test bus maintaining the parked position for the full five minute period with no slip or roll observed in both the uphill and downhill positions.

The Shakedown Test produced a maximum final loaded deflection of 0.201 inches with a permanent set ranging between -0.001 to 0.005 inches under a distributed static load of 15,975 lbs. The Distortion Test was completed with all subsystems, doors and escape mechanisms operating properly. No water leakage was observed throughout the test. All subsystems operated properly.

The Static Towing Test was performed using a target load (towing force) of 16,260 lbs. All four front pulls were completed to the full test load with no damage or deformation observed. The Dynamic Towing Test was performed by means of a front-lift tow. The towing interface was accomplished using a hydraulic under-lift wrecker. The bus was towed without incident and no damage resulted from the test. The manufacturer does not recommend towing the bus from the rear, therefore, a rear test was not performed. The Jacking and Hoisting Tests were also performed without incident. The bus was found to be stable on the jack stands, and the minimum jacking clearance observed with a tire deflated was 7.9 inches.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 0.88 M/lb, 0.80 M/lb, and 1.53 M/lb respectively; with an overall average of 0.97 M/lb.

A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively. Emissions data are listed in Section 8.

CHAMPION QUALITY ASSURANCE WATER TEST PROCESS

The following is a description of the current water test procedure for all units produced by Champion Bus, Inc.

FACILITY

- Water test bay: 20' wide x 56' long x 18' high with attached pump room measuring 15' wide x 20' long x 9' high.
- Water jets:
- 5 Lengths of 1½" schedule 80 pipe at 45' long running lengthwise inside the building.
 - 15 Active nozzles per pipe length for a total of 75 nozzles (Model 24 WSQ Nozzles with 110° spray pattern).
 - Water supplied by 3" schedule 80 pipe with 3" schedule 80 pipe headers on each end of system.
 - System supply pump rated at 300 gpm
- Water Pressure:
- System water pressure adjustable up to 45 psi
 - Example: - 20 psi = 3.3 gpm/nozzle
 - 40 psi = 4.4 gpm/nozzle
 - System recovery pump rated at 300 gpm

PROCEDURE

1. **DRIVE VEHICLE INTO BAY.**
2. **ACTIVATE WATER SPRAY. (SYSTEM GOES ON, AUTOMATICALLY)**
- *3. ***LET VEHICLE SET FOR A MINIMUM OF 15 MINUTES PER UNIT. (MORE TIME MAY BE NECESSARY, IF VEHICLE IS SLATED FOR HARSH ENVIRONMENTS. ENGINEERING SHOULD REVIEW AND APPROVE ALL REQUESTS FOR CHANGES TO THIS SYSTEM AND PROCEDURE. USE THE "ECR" SYSTEM FOR REQUESTED CHANGES.)***

***NOTE:** Currently, our system pressure, at the main pump is set at 10 psi. this is approximately equivalent to a rainfall of 18" per a 1 hour period.

4. **EXAMINE ALL WINDOWS, DOORS, WHEELWELLS, ESCAPE HATCHES, VENTS, WALLS, CEILING, FLOOR, AND ANY OTHER JOINT FOR WATER LEAKS.**
5. **RECORD RESULTS ON "WATER TEST LOG".**
6. **TURN OFF WATER SPRAY. (SYSTEM SHUTS OFF AUTOMATICALLY.)**
7. **EXIT BOOTH AND RETURN VEHICLE TO REPAIR BAY AND REPAIR ALL LEAKS.**
8. **IF ANY LEAKS WERE FOUND, RETEST VEHICLE (STEPS 1-5).**
9. **PROVIDE COMPLETED "WATER TEST LOG" TO QA PERSON, GROUP 50 (NORTH BLDG) OR GROUP 70 (SOUTH BLDG.) FOR REVIEW AND FILING WITH VEHICLE'S MASTER FILE.**
10. **QA PRODUCTION PERSONNEL SHOULD ALERT ALL GROUPS, OF CONSISTENTLY FOUND, NON-CONFORMING ASSEMBLY CONCERNS.**

WATER TEST DOCUMENTATION

The Glaval Bus water test booth offers exceptional performance in the area of water leak detection. With nozzles directed at the roof, sidewalls, and front, nothing goes untouched in our quest for leak elimination. Using both velocity and volume in our test procedure ensures our valuable customers that we are doing the utmost to deliver a leak-free product to them.

The approximately 25' x 45' test facility utilizes 158 nozzles, (5) rows on the front, (12) rows each side, and (4) rows on the roof with 45° angled nozzles at the rear. The test booth includes two recycling tanks and utilizes a 12HP pump with a dual filtering system capable of delivering approximately 30 psi.

The water test runs for a minimum of 15 minutes per a certified timer before the visual inspection begins. The vehicle is then checked by sight and touch at no less than (12) individual inspection points while the water spray is continuing.

A complete passing test document is then signed, dated, and kept on file for review. A copy is available upon request. Visitors are always welcome to witness the test booths whenever they are in operation.



REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

REQUIRED BID DOCUMENTATION CHECKLIST

Model Year: 2014 Model: Defender

Manufacturer: Champion

Mandatory Bid Forms-must be submitted with bid

<u> x </u>	Bid form1 LOCATION(S) OF THE TECHNICAL SERVICE REPRESENTATIVE(S)
<u> x </u>	Bid form2 CERTIFICATION FOR AIR POLLUTION
<u> x </u>	Bid form3 DISADVANTAGED BUSINESS ENTERPRISE VENDORS/
<u> x </u>	MANUFACTURERS CERTIFICATION
<u> x </u>	Bid form4 BUY AMERICA CERTIFICATION ROLLING STOCK
<u> x </u>	Bid form5 FEDERAL MOTOR VEHICLE SAFETY STANDARDS CERTIFICATION
<u> x </u>	Bid form6 U.S. COMPTROLLER'S DEBARMENT LIST CERTIFICATION
<u> x </u>	Bid form6A CERTIFICATION OF PRIMARY PARTICIPANT REGARDING
<u> x </u>	DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
<u> x </u>	Bid form7 VENDOR'S CERTIFICATION OF UNDERSTANDING AND
<u> x </u>	ACCEPTANCE
<u> x </u>	Bid form8 CERTIFICATION OF COMPLIANCE WITH FTA'S BUS TESTING
<u> x </u>	REQUIREMENTS
<u> x </u>	COPY OF RELEVANT BUS TESTING REPORT- 3.4 STURAA TEST- 7 Years;
<u> x </u>	3.12.1g Water Testing- details of process
<u> x </u>	Bid form9 CERTIFICATION OF RESTRICTIONS ON LOBBYING
<u> x </u>	Pricing page

Mandatory Documentation-must be submitted within 24 hours of request**Section
Referenced**

<u> </u>	No Debt Affidavit
<u> x </u> 3.5	Engine: ISB-07- provide description, warranty, and literature
<u> x </u> 3.5b	Water Separator and Fuel Filter- provide description, warranty, and Literature
<u> x </u> 3.5h	High Idle System- provide description, warranty, and literature
<u> x </u> 3.5i	Engine heating/cooling system- provide description, warranty, and Literature
<u> x </u> 3.6	Transmission- provide description, warranty, and literature
<u> x </u> 3.6.c	Transmission Cooling System- provide description, warranty, and literature
<u> x </u> 3.7.1a	Heavy Duty Brakes- provide description, warranty, and literature
<u> x </u> 3.7.3	Suspension System- provide description, warranty, and literature

REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

<u> x </u> 3.7.4b	Tire Information- provide description, warranty, and literature
<u> x </u> 3.8	Electrical System- provide description, warranty, and literature
<u> x </u> 3.8.1	Alternator- specify the rectifier, method of installation, provide warranty and literature
<u> x </u> 3.8.2	Batteries- specify type and capacity
<u> x </u> 3.8.3d	Exterior Lights -LED Lights- provide description, warranty, and literature
<u> x </u> 3.8.3n	Strobe Light-provide description, warranty, and literature
<u> x </u> 3.8.3p	Truck Lite Products- provide description, warranty, and literature
<u> x </u> 3.8.4	Interior Lights- provide description/details
<u> x </u> 3.8.5b	Fuse box panel- provide description/details
<u> x </u> 3.8.6b	Rear Alarm- provide description, warranty, and literature
<u> x </u> 3.8.6d	Backup camera- provide description, warranty, and literature
<u> x </u> 3.9.1	Heating System- provide description, warranty and literature
<u> x </u> 3.9.1c	Auxiliary Heaters- provide description, warranty and literature
<u> x </u> 3.9.1d	Stepwell Heater- provide description, warranty and literature
<u> x </u> 3.9.2b	A/C Compressor- provide description, warranty and literature
<u> x </u> 3.9.2c	A/C Condenser Information- provide description, warranty and Literature
<u> x </u> 3.9.2g	Driver's Evaporator- provide description, warranty and literature
<u> x </u> 3.9.2j	A/C Hose System- provide description, warranty and literature
<u> x </u> 3.10	Roof Hatch- provide description, warranty and literature
<u> x </u> 3.11	Circulation Fan- provide description, warranty and literature
<u> x </u> 3.12.1	Body Construction- provide description of body construction including materials, methods of joining and assembling components or subassemblies and method of attachment of the body to the chassis, warranty and literature
<u> x </u> 3.12.2b	Provide proof that skirt panel seams below floorline will be placed only above wheel wells or adjacent to A/C skirt condenser

REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

- x 3.12.2h Insulation- provide proof of insulation requirement per spec.
- x 3.12.6 b Description of the undercoating/rust proofing system, including warranty to be provided.
- x 3.12.4c Door Operating Mechanism- provide description/ details
- x 3.12.5d Sample of Flooring- provide color per specifications, warranty and literature
- x 3.12.5e Sample of Ribbed Flooring- provide color per specifications, warranty and literature
- x 3.12.6b Undercoating/Rust proofing- provide description, warranty, literature and application process
- x 3.12.7 Bumpers- provide description, warranty and literature
- x 3.13 Lift- provide details, model #, warranty and literature. Provide information and literature that lift will meet the NHTSA platform lift requirements.
- x 3.13f Interlock System- provide description, warranty and literature
- x 3.14 Seating Diagram- provide proposed seating diagram
- x 3.14a Passenger Seats- provide details for all proposed including flip up seats and ABS Knee Saver backs
- x 3.14c Under Seat Retractor System- provide description, warranty, literature and FMVSS 210 Report Certification
- x 3.14j Child Restraint Seat- provide description, warranty and literature
- x 3.14k Driver's Seat- provide description, warranty and literature
- x 3.15 Mobility Aid Securement- provide details of proposed system, warranty, and literature
- x 3.19a Exterior Mirrors- provide description, warranty and literature
- x 3.21 Radio/Communication Installation procedures
- x 3.22 Radio/CD Stereo- provide description, provide warranty and literature
- x 3.24h Security Camera System- provide description, warranty and literature
- x 3.25a Fixed Route Package- provide description, warranty and literature
- x 3.25b Control Panel Location- submit details

REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

- x 3.25d PA System- provide description, warranty and literature
- x 3.25e Passenger Signaling System- provide description, warranty and literature
- x 3.27a Interior and Exterior Color Schemes- provide details of schemes available
- x 3.27d Paint Scheme- provide sample of vinyl chart to be used
- x 4.1 Rear Air Suspension- provide description, warranty and literature
- x 4.4.2 Automatic Tire Chain Device- provide description, warranty and literature
- x 4.7 Chassis with Gasoline Engine-provide description, warranty and literature
- x 5.2 Items in sections a-l provide proof of compliance
- x 5.11.1 Warranty on completed vehicle
- x 5.11.2 Warranty on Basic Vehicle Structure
- x 5.11.3 Warranty Locations- A description of how and by whom warranty service will be provided in four (4) areas of WV to cover both Mechanical and body work. Provide vendor who will do warranty of both chassis and body, including bus body, air conditioning and wheelchair lifts. Four areas of WV include: Northern Panhandle, Eastern Panhandle Central WV and Southern WV
- x 5.11.4 Warranty per specs on subsystems and components
- x 6.1.2 Complete (2) bids in binder form – (1) Marked for WVDPT
- x 9.3a Complete Mechanical Description of Vehicle, its construction and equipment including manufacturer's model, model name and/or number and model year Include Warranty Information
- x 9.3b Proposed Floorplans
- x 9.3 c Curb Weight (empty weight and Gross Vehicle Weight Rating (GVWR) of vehicle
- x 9.3f Location of nearest depot which will furnish a complete supply of parts and components for the repair and maintenance of the vehicle to be supplied
- x 9.3h Location of assembly
- x 9.3i List of five users names, addresses and telephone numbers who have

REQUEST FOR QUOTATION PTR14016 Mid-Size Medium Light Duty Transit Vehicles

been provided similar equipment

 x 9.39

Training- submit letter of understanding to the terms in this section

Pricing Page:**Complete the form provided below.****Please note the awards may be made to multiple vendors.**

Class	Item Description	Unit Price	Estimated	Extended Price
		Per Vehicle	Quantity	
A	Bus; Rear Air Suspension	\$129,982.00	10	\$1,299,820.00
B	Bus; Rear Air Suspension; Extended length +4	\$133,344.00	10	\$1,333,440.00
C	Bus; Rear Air Suspension; Extended length +8	\$138,493.00	10	\$1,384,930.00
D	Bus; Automatic Tire Chain Device; full bus paint	\$133,918.00	5	\$669,590.00
E	Bus; Automatic Tire Chain Device; Extended length +4; full bus paint	\$136,354.00	5	\$681,770.00
F	Bus; Automatic Tire Chain Device; Extended length +8; full bus paint	\$141,386.00	5	\$706,930.00
G	Bus; Automatic Tire Chain Device; full bus paint; gasoline engine	\$103,866.00	5	\$519,330.00
H	Bus; Rear Air Suspension; Extended length +8; CNG	\$127,643.00	10	\$1,276,430.00
			TOTAL	\$7,872,240.00

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety, understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

National Bus Sales & Leasing

(Company)



(Authorized Signature)

Andrew Clawson, Regional Representative

(Representative Name, Title)

(540) 256-3246

(770) 422-9007

(Phone Number)

(Fax Number)

1/14/14

(Date)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input checked="" type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

National Bus Sales & Leasing

Company



Authorized Signature

1/14/14

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.