



Form GSOP I-PIN (04/98)

STATE OF CALIFORNIA  
Department of General Services - Office of Procurement

**PURCHASE ORDER**

Purchase Order No. **Rev. Date**  
**62436** 6/30/2009

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
235927	57486	240 Days ARO	Destination	

CREATIVE BUS SALES ATTN: JOE ANGELI 13501 BENSON AVENUE CHINO, CA 91710 Attn: JOE ANGELI  Phone: 909-465-5528	S CA SCHOOL FOR THE DEAF h T 39350 GALLAUDET DRIVE i o FREMONT, CA 94538 P	C EDUCATION h a T CA SCHOOL FOR THE DEAF r o 39350 GALLAUDET DRIVE e FREMONT CA 94538		
	Agency Billing 21975	Agency Purchase Estimate DF08-0785	Purchase Estimate 67549	Revision 2
	Agency Contact LEEANN DREFFS	Phone 510-794-3792	Date Received	

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
<p><b>SCOPE</b> This Purchase Order is a One Time Acquisition conducted by the Department of General Services, Procurement Division on behalf of California Department of Education for a School Bus.</p> <p>THE GENERAL PROVISIONS FOR NON-IT COMMODITIES ARE HEREBY INCORPORATED BY REFERENCE. THESE GENERAL PROVISIONS CAN BE OBTAINED BY PHONING (916) 375-4400 OR BY ACCESSING OUR WEBSITE AT: <a href="http://www.documents.dgs.ca.gov/pd/modellang/GPnonIT0407.pdf">www.documents.dgs.ca.gov/pd/modellang/GPnonIT0407.pdf</a></p> <p><u>MB-SB-SB/NVSA-DVBE-NS</u></p> <p>THE FOLLOWING INFORMATION IS PROVIDED FOR AGENCY USE ONLY: PRIME CONTRACTOR: NS FISCAL YEAR: 2008 / 2009</p>						
1	1	EA	2310-999-0001-3	BUS SCHOOL (AS DESCRIBED) "SCHOOL BUS" 32 Ft., 30 Passenger, plus Driver, in accordance with Specification #2310-0789R1 of twelve (12) pages, dated August 2009.	111,864.3200	111,864.32
<p>Proposed Brand: <u>IC Bus</u></p> <p>Model: <u>CE2502</u></p> <p><u>THE FOLLOWING OPTION IS INCLUDE ON THE PURCHASE ORDER</u></p> <p>Extended Warranty: <u>Extended Engine Warranty - Eight Years / 150,000 Miles.</u></p> <p>PRICE: <u>\$3,623.00</u></p>						
<p><u>PO Miscellaneous Charges and Discounts</u></p> <p>WARRANTY</p>					<p><u>Dollar Value</u></p> <p>3,623.00</p>	
<p>Total Value:</p>						<p>115,487.32</p>

Sales and/or use tax to be extra unless noted above

Buyer  LONNIE WILLIAMS	Phone 916-375-4586	BOC Number
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**PRECONSTRUCTION CONFERENCE:**

A preconstruction conference shall be held between the State and contractor within 30 calendar days after formal Award of the purchase order. This conference shall be held prior to the start of any construction. The purpose of this meeting is to review specifications, resolve any questions concerning the specifications and/or variations of the chassis.

**Contact:**

California Department of Education  
California School for The Deaf  
Transportation Office  
39350 Gallaudet Drive  
Fremont, CA 94538  
Contact: LeeAnn Dreffs  
Phone (510) 794-3792

**FOR THE PURPOSE OF THIS AWARD**

Only Free On Board (F.O.B.) Destination will be accepted

**DELIVERY**

Delivery is to be completed in full within 240 days After receipt of Order ( ARO).

Delivery to be made during normal business hours Monday through Friday, 8:00am-12:00pm or 1:00pm-4:00pm, except State Holidays.

The School Bus is to be delivered to the following address:  
All required documentation shall be sent to the address below by the time of delivery.

California Department of Education  
California School for The Deaf  
Transportation Office  
39350 Gallaudet Drive  
Fremont, CA 94538  
Attn: LeeAnn Dreffs  
Phone: (510) 794-3792

DOCUMENTATION: The following documents shall be delivered to the consignee (receiving agency) with the vehicle:

- 1.) Completed and signed pre-delivery inspection checklist, including the purchase order number and vehicle ID
- 2.) "Line Set Tickets" or "Window Sticker" showing all options installed

Note: In accordance with paragraph 15 of the General Provisions entitled "Delivery", the contractor shall strictly adhere to the delivery terms and completion schedule as specified in this solicitation. Failure to comply with the delivery requirements, as stated, may be considered a breach of contract and subject the contractor to General Provisions 26, entitled "Rights and Remedies of the State for Default".

**RECEIVING INSPECTION**

Vehicles ordered for State use will be inspected by State of California inspector(s) at the dealer's place of business. Inspection will commence within five (5) working days of notification that vehicles are ready for inspection. Inspection will include: specification compliance, workmanship, and appearance, proper operation of all equipment and systems, and that all documents are present. In the event deficiencies are detected, the vehicle will be rejected and the delivering dealer will be required to make the necessary repairs, adjustments or replacements. Payment will not be made until the defects are corrected and the vehicle re-inspected and accepted. Completion of inspection or acceptance by the State inspector shall in no way release the dealer from satisfying the requirements of the contract, specifications, and warranty. Deviations from the specified requirements which are detected by the ordering agency shall be corrected by the dealer in an expeditious manner at no expense to the State.

**PRE-DELIVERY CHECKLIST**

Prior to delivery, the vehicle shall be completely inspected and serviced by the delivering dealer and/or the manufacturer's pre-delivery service center. A copy of the pre-delivery service checklist shall be completed for each vehicle, signed by a representative of the organization performing the inspection/service and delivered with the vehicle.

**PREPARATION FOR DELIVERY**

The completed vehicle as presented for the "final" acceptance shall be cleaned, internally and externally (freshly washed and chamois) and delivered full of fuel and with a full charge to the battery system.

**WARRANTY**

The manufacturer's standard new vehicle warranty shall apply and shall be honored by all franchised dealers of the vehicle within the State of California. Vehicles not placed in service immediately upon receipt shall be warranted from the time the unit is placed in service. The receiving agency shall notify the vendor in writing of the actual "in-service" date.

If extended warranty coverage is included in the bid price or is purchased by the agency as an option, it shall serve as an extension of the manufacture's basic warranty.

**MANUALS**

One copy of the operating manual, service manual, and parts book shall be furnished at the time of delivery. If there are any special tools required for normal operation, one set shall be provided. All manuals and instructions shall be in the English language.

**VEHICLE REGISTRATION DOCUMENTS REQUIRED**

The original dealer's "Report of Sale" shall be furnished by all California licensed dealers at the time of delivery of each unit or units covered by these specifications.

**CALIFORNIA EMISSIONS CERTIFICATION**

The vehicle shall meet all current Federal emissions requirements without credits at time of manufacture.

An original weight certificate from a California certified Weigh Master for registration purposes must be supplied at the time of delivery of each unit.

**FEDERAL NHTSA CERTIFICATION**

Final stage manufacturers shall be certified by National Highway Traffic Safety Administration and be registered to manufacture or alter vehicles in accordance with the Code of Federal Regulation, Title 49, and Parts 567-568.

**FEDERAL EXCISE CERTIFICATE**

Federal Excise Tax Exemption Certificate will be attached to purchase order .

**ATTACHMENTS**

The following documents are attached and part of this solicitation:

1. Specification # 2310-0789-R1, off twelve (12) pages, dated, August, 2009.
2. Questionnaire Pe 67549R1tq, 30 Passenger , 32 ' School Bus dated August 2009, of five (5) pages

**SCPRS**

This Purchase order has been registered into the State Contract and Procurement Registration System (SCPRS) at (<http://www.bidsync.com>). The registration number is ep-1032610.

**PURCHASE ORDER CHANGES**

This Purchase Order may be amended, modified, or terminated at any time by mutual agreement of the parties, in writing. Change orders amending, modifying or terminating the Purchase Order, including any modifications of the compensation payable, may be issued only by the State Procurement Officer. All such change orders shall be in writing and issued only upon written concurrence of the supplier. Termination, as that term is used in this section, does not include termination for default of the supplier.



**STATE OF CALIFORNIA**  
**DRAFT**  
**Bid Specification**

**School Bus, Diesel Engine Conventional, 32-foot, 30-Passenger plus Driver**

**1.0 SCOPE:**

This specification covers the minimum requirements for a turnkey 30-passenger, plus driver, type C, Conventional school bus with a diesel engine, for the transportation of students attending the California School for the Deaf in Fremont California. The vehicle shall be designed to operate under conditions ranging from 10° F to 120° F that may be encountered when traveling in areas of California.

Only new models in current production which are catalogued by the manufacturer and for which the manufacturer's literature and printed specifications are currently available shall be acceptable. All required components of the body and chassis shall be standard or optional production items.

**2.0 APPLICABLE REGULATIONS:**

The following specifications, standards, laws and regulations, referenced (including current revisions in effect), on the date of manufacture form part of this specification.

1. Federal Motor Vehicle Safety Standard (FMVSS, 49 CFR); including but not limited to the following standards:
  - Standard # 121 - Air Brake Systems
  - Standard # 207 - Seating systems
  - Standard # 217 - Bus Emergency Exits and Window Retention and Release
  - Standard # 220 - School Bus Rollover Protection
  - Standard # 221 - School Bus Body Joint Strength
  - Standard # 222 - School Bus Passenger Seating and Crash Protection
  - Standard # 302 - Flammability of Interior materials
2. State of California Vehicle Code, CCR Title 13
3. California Air Resources Board (CARB) Regulations
4. Tire and Rim Association, Inc.; Latest Edition
5. SAE J1349 - Engine Test Code - Spark Ignition and Diesel
6. California Health and Safety Code

All component parts of the school bus shall be of sufficient size and design to safely withstand maximum stresses imposed by a capacity load. The manufacturer's rated loads for axles and bearings must not be exceeded when the bus is loaded to such capacity loads. The torque capacity of each driven part shall equal or exceed the torque capacity of its driven member. In addition, any equipment not expressly mentioned in this specification but required by FMVSS, the California Vehicle code and the California Code of Regulation Title 13 shall be furnished.

### 3.0 GENERAL REQUIREMENTS:

#### 3.1 Minimum School Bus specifications:

Table # 1

Engine	
HP	220 HP
Torque	560 ft-lbs
Wheelbase	181 Inches
Overall Length	32' max
GVWR	25,000 lbs
GAWR	
Front	8,000 lbs
Rear	17,000 lbs
Suspension	
Front	Air
Rear	Air
Headroom	76 inches
Fuel Tank Capacity	60 gallons
Transmission	Allison 2500 PTS
Passenger Capacity	30-passengers + Driver
Turning Radius (maximum)	29'9" max
Overall Height	135" max
Overall Width	96" max
Heater	50,000 BTU
Defroster	90,000 BTU
Air Conditioner	120,000 BTU
Aisle Width	12 inches

\* NOTE: Unless otherwise specified, values listed above are a minimum.

3.2 **Material:** The material shall be new and free of defects affecting performance, durability, safety and appearance.

3.3 **Frame and Drive Train Chassis:** Chassis frame rails shall be "C" channel straight design, truck type, certified for commercial school bus application.

#### 3.3.1 **Bumpers, Front and Rear:**

**Bumper, front:** The front bumper shall be a minimum of three sixteenth inch thickness, pressed steel channel and shall have not less than 9 inch face, painted black. The front bumper shall be capable of impact with no damage to the bumper and bus during an impact test made in accordance with SAE J980a and shall extend to protect the outer edges of the fenders. It shall be attached directly to the chassis frame with provision for easy removal. It shall be of sufficient strength to permit being pushed by another unloaded vehicle of equal gross weight without permanent distortion. The front bumper height (unloaded) shall be 22 inches maximum when measured from the bottom edge of the bumper to the level road surface.

**Bumper, rear:** The rear bumper shall be a minimum of three sixteenth inch thickness, pressed steel channel and shall have not less than 9 inch face, painted black. It shall wrap around the rear corners of the body. It shall be capable of impact with no damage to the bumper and bus during an impact test made in accordance with SAE J980A.

It shall be attached directly to the chassis frame with provision for easy removal. It shall be of sufficient strength to permit being pushed by another unloaded vehicle of equal gross weight without permanent distortion. The rear bumper shall be constructed so the tail pipe and tail pipe exhaust goes thru or under the bumper with the tip turned in a downward position. The rear bumper shall be constructed to protect the tail pipe from being crushed, and to prevent the bumper from being used as a step or foot hold.

- 3.3.2 Axle Oil Seals:** Front and rear axles shall have Stemco oil seals or comparable.
- 3.3.3 Steering:** Factory installed Integral full time hydraulic power steering equipped with a tilt steering wheel.
- 3.3.4 Drive Shaft:** Standard drive line incorporating static and dynamic balancing. Each drive shaft segment shall be equipped with a drive shaft safety guard (Safety Loop) to prevent the shaft from whipping through the floor or dropping to the ground if broken. Universal joints shall be serviceable (Spicer or comparable).
- 3.3.5 Suspension:** The suspension system shall be air and shall have a total capacity equal to and consistent with the maximum GAWR (Gross Axle Weight Rating). Front and rear suspension combined GAWR's shall have sufficient capacity to meet the required GVWR (Gross Vehicle Weight Rating).
- 3.3.6 Shock Absorbers:** The chassis shall be equipped with front and rear, heavy duty, double-acting shock absorbers direct-acting to adequately stabilize a maximum loaded bus.
- 3.3.7 Roll, Pitch, and Jerk control:** If needed (e.g. air ride), adequate radius rods and front and rear stabilizer bars shall be provided to control lateral, longitudinal, and torsional movement.
- 3.4 Wheels and Brakes:**
- 3.4.1 Wheels:** Each bus shall be provided with black painted steel disk wheels. All wheels shall be standard 10 holes 11.25 inches bolt circle, double nut Bud type or 8 or 10-hole hub piloted type.
- 3.4.2 Tires:** Tires shall be steel-belted-radial tubeless highway tread premium grade (Ref. Michelin or comparable). Minimum size supplied shall be the maximum manufacturer's standard for vehicle GVWR. All tires shall be of the same size and load range.
- 3.4.3 Service Brakes:** Service brakes shall be full air actuated. The service brake air shall be supplied from the dry tanks. A separate system shall activate the emergency or parking brake. Brakes shall be "S" cam type (Reference: Rockwell or equivalent) and shall have outboard mounted drums. A desiccant type air dryer shall be furnished. Air compressor supplied shall be gear driven. Compressor intake air shall come from the engine air intake system after filtering. The service air reservoir shall consist of at least three chambers (either one tank with three chambers or three separate tanks). Each chamber shall be clearly labeled using 2-inch letters minimum. The front, rear and wet air tank(s) shall each be equipped with a separate solenoid drain valve remotely operated from the driver's compartment. Each valve when opened shall drain only the tank indicated through a 3/8" minimum diameter hose. A pressure safety valve shall be provided in the air brake supply circuit as recommended by the brake manufacturer. The brake system (including the draining) shall be in accordance with FMVSS 121 and

CCR Title 13 requirements. Non-asbestos brake block shall be installed. Self adjusting slack adjusters shall be installed on all axle hubs. All tubing shall be identified/color coded throughout and at ends of each run.

- 3.4.4 Parking Brakes:** Air system parking brake shall be spring brake type unit mounted on rear service brake chamber, and shall maintain wheels locked on any grade which the vehicle is operated under all conditions of loading (CVC 26451). Parking brake may be automatically applied when transmission is in the parked (neutral) position and the ignition key is off.

As appropriate, for air brake system maintenance reasons, a parking brake override system shall be provided to permit the release of the parking brake during maintenance and brake adjustments. The override system shall be located in a secure location and protected from accidental use by the driver or passengers.

- 3.4.5 Antilock Braking System:** An electronic ABS (Antilock Braking System) of the manufacturer's most current design shall be provided. Individual wheel speed sensors, modulators, and an electronic controller shall monitor and control the four-wheel ends of the vehicle, compensating for wheel slip or lockup. Warning lights shall indicate system status to the driver. Manufacturers shall label and define warning lights. The system shall be compatible with any retarder system offered. An ABS failure shall not affect service brake system. Easy access to the CPU shall be provided.

- 3.5 Electrical System:** The electrical system shall be a 12-volt system. All components shall be easily accessible for service. Coach builder shall furnish complete laminated wiring diagram showing color and number code used upon delivery.

- 3.5.1 Wiring and terminal:** All wiring, except battery wiring, shall have double insulation, shall be waterproof and shall meet specification requirement of SAE J1128. Chassis wiring may be GXL type if the entire bundle is within a loom and routed within the body walls and or covered by body panels. Bus chassis wiring exposed to the elements or in high heat areas of the engine compartment shall be SXL type. Battery wiring shall conform to specification requirements of SAE J1127 SGT. All wiring shall be uninterrupted color coded and /or numbered for identification every 18 to 24 inches throughout run length.

Design of the electrical system shall be modular so that each major component apparatus panel or wiring bundle is easily separable. Each module shall be removable and replaceable.

Main wiring harness shall be loom covered and concealed within the body or under the floor preferably in the vicinity of the "C" channel of the frame rail to maintain protection against damage. Coachbuilder shall furnish 2 or more spare wires, easily identifiable, of 14 ga. wire in each major harness complete with terminals and extra length at each end. Wiring may be hung in the vicinity of the frame so long as protection against damage is maintained. Bus body wiring may be type GXL/GPT if the entire bundle is within a loom and routed within the body walls and/or covered by body panels.

All harnesses and wiring shall be securely retained by rubber or PVC covered clips and holes/edges in metal members properly bushed with suitable grommets. Wiring shall terminate in junction blocks. Junction block shall be weather tight plastic or equal. Wiring in the engine compartment shall be insulated from heat and resistant to oil and

grease. Quick disconnect shall be high quality plastic construction. All terminals to be secure to wire conductor, insulation and shall be shielded.

All main circuits shall be protected by circuit breakers SAE type or fuses in the event circuit breakers are over loaded (above 80 AMP). All switches shall be adequately protected from weathering.

**3.5.2. Alternator:** An alternator of 12-volt DC, minimum 200 amp capacity internally regulated shall be provided. Alternator shall provide 60 percent of rated output at engine idle.

**3.5.3 Battery:** The storage batteries shall be of sufficient capacity to supply current to all electrical equipment called for by this specification and any additional equipment required in the invitation for bid or purchase order. Minimum 1900 CCA rating at 0 degree Fahrenheit, and using sealed cables shall be provided on all units. For easy maintenance, batteries shall be mounted in a lockable, heavy-duty roll out type drawer safely secured to prevent any movement when bus is driven. Additionally, a safe door lock shall be furnished. Battery cables shall be soldered. Battery disconnect shall be furnished.

**3.5.4 Instrument Panels:** The driver's instrument panel shall be equipped with at least: Speedometer, odometer, voltmeter or ammeter, tachometer, oil pressure gauge, water temperature gauge, audible warning for low oil pressure and high cooling water temperature, fuel gauge, transmission temperature gauge, upper beam head light indicator, and other indicator lamps associated with the normal monitoring functions of the diesel engine. A dual air pressure gauge with low-pressure audible (all audible warning devices shall provide a unique and distinguishable sound) and visual warning devices shall be installed. Lights in lieu of gauges are not acceptable. Premium quality switches for all functional components associated with the body and chassis and heavy-duty turn signal switch with self-canceling shall be provided. Panel shall have sufficient illumination of all instruments. All instruments shall be easily accessible for maintenance and repair and shall be mounted so that each instrument is clearly visible from the driver's line of sight.

**3.6 Body/Framework:** The bus body shall be constructed of steel structural sections with metal panels attached inside and outside. The bus body, as a unit, shall be designed and built to provide side impact and penetration protection. Bus top, body and windows shall not leak water. Entire body and support components are to be made corrosion resistant by zinc coating or zinc phosphate treatment (or comparable) before painting, and all areas sealed with compound to prevent moisture penetration. Interior of all areas shall also be primed for corrosion resistance. The body shall be drywall construction; water shall not drain into wall cavity. Areas where moisture collects from condensation shall be adequately drained and ventilated to minimize corrosion. No part of the body shall have bare steel. Galvanized steel and aluminum are not bare steel and are acceptable. Body panels shall extend to the lowest point offered by the manufacturer.

Three exterior 16 gauge X 4 inches rub rails full length shall be installed on both sides of the bus. Location shall be: under windows, seat-cushion line, and floor line or the extended skirt.

**3.6.1 Materials:** All materials utilized in the construction of the body shall be available to all body manufacturers on an equal, non-proprietary basis. For maximum occupant safety, all exterior body walls and roof shall be steel. Molded plastic or fiberglass may only be used in non-stress areas such as front and back.

## (Minimum Gauge Requirements)

-Floor	14 gauge
-Smooth Exterior Wall	16 gauge
-Interior Wall	22 gauge
-Exterior Roof	20 gauge
-Interior Roof	22 gauge
-Wall Posts	14 gauge
-Roof Bows	14 gauge
-Extended skirt	16 gauge
-Interior Window Headers	16 gauge

- 3.6.2 Headroom:** Between the first and last roof bow, through the center of aisle, inside height shall not be less than 76 inches.
- 3.6.3 Insulation and Soundproofing:** All bus cavities shall be insulated. Insulation may be fiberglass (1.5" min.) or comparable. Insulation area will include the roof, roof bow, bulkhead, sides, front and rear, and driver's area. Heavy-duty thermal and sound barrier insulation shall be used in the engine compartment separating the engine compartment from the passenger compartment. Acoustical headlining shall be provided the full length of the passenger compartment.
- 3.6.4 Floor:** The floor shall consist of either one (1) inch seven-ply marine plywood or 5/8 inch marine plywood over 14 gauge steel. Floor shall be applied directly over the steel frame cross members. The joints in no two layers of floor shall coincide. Fireproof material separating fuel and engine area from passenger compartment shall be provided on vehicle. A covered access to liquid fuel tanks sending unit shall be provided.
- 3.6.5 Floor Coverings:** The under seat floor area, aisle and the wheel housings shall be covered with not less than 1/8-inch thick synthetic or rubber blend material. The aisle and entrance area shall use ribbed material. The driver's compartment shall be covered with not less than 1/8-inch thick synthetic blend or rubber blend slip and wear resistant material. The seam between the entry and passenger area shall be located and designed to allow maximum ease of replacement of the passenger floor covering. All seams of like material shall be adhesively bonded. Seams of dissimilar material shall be joined using a protective metal strip. Platform edge and step noses shall be white, minimum 1-1/2 inch wide. Interior molded wheelhouse covers shall be provided. Floor coverings shall be properly installed and securely bonded to the floor. Floor and aisle color shall be the manufacturer's standard color. All floor covering shall meet DOT FMVSS 302, Federal GSA ZZ-M-71b, ASTM E-648.
- 3.6.6 Luggage Compartment Storage:** The under-floor pass through luggage compartment shall be the maximum volume available between the wheels on both sides of the bus and shall not be reduced due to weight limitations. Luggage compartment shall have minimum two access doors, key lockable, keyed alike (two keys supplied). Each luggage compartment shall be equipped with: drain plug, pneumatic spring door holder, and have adequate inside lighting activated automatically by a switch when door is opened.
- 3.6.7 Emergency Exits:** At least four (4) emergency exits shall be provided:
- A) Two push-out side emergency exit windows. (One on each side of the bus)
  - B) One roof escape hatches with ventilators.

- C) A left side emergency exit door shall be located in the approximate middle of the bus.

Exits shall meet the legal requirements for the State of California school buses in this application.

- 3.6.8 Entrance Door:** A front entrance inward or outward opening door(s), air operated incorporating an anti-slam air control device to protect door operation. Door controls placed for convenient driver operation shall be provided. The door air actuator shall have positive stops and be fully adjustable mechanically and by air pressure. Entrance door shall be equipped with an emergency release that opens the door outward.

There shall be a three step entrance that includes wear plates with white safety edges and that complies with 13 CCR 1280 (Steps). The step risers shall be covered with scuff-resistant material. Kick plate barrier and inside lower door protection plate shall be supplied and be aluminum or aluminized steel lined. The entrance shall be equipped with an automatic entrance hooded step light system controlled by door operation. No direct light shall shine in passenger's eyes when boarding the bus.

A key security lock hardware system, easily accessible by the driver when standing outside, shall be provided. An exterior entrance door protection plate (rigid skid plate to prevent distortion of the stepwell/door) is required. An access door shall be installed over entrance door panel. Entrance door shall have header pad.

- 3.6.9 Interior Paneling:** Side interior panels below windows shall be embossed corrosion resistant or stainless steel material, no sharp edge. All ceiling panels shall be of acoustic reduction design, and painted with appropriate color. Ceiling panels shall be painted with colors selected by carrier.

- 3.6.10 Body-Chassis Insulation:** Anti-squeak material in continuous strips or rubber pads shall be firmly attached to the frame rails / cross members to insulate the chassis from the body.

**3.7 Windows and Windshield:**

- 3.7.1 Windshield:** Two or four piece windshield shall be provided with approved tinted safety glass which provides the largest field of vision to the driver. Glazing material shall conform to DOT FMVSS 205. Glass shall be laminated safety polished plate with dark tint at top, installed in a waterproof manner and slanted to reduce glare. Glass shall meet current SAE specifications and Federal Motor Vehicle Safety Standards.

**3.7.2 Windows:**

**Side Windows, Passenger, Standard:** Windows shall conform to DOT FMVSS 205. There shall be either a standard or a push-out type window accessible for each passenger seat except where it is not possible because of the installation of side emergency exits or lift door.

**A. Standard side windows:** Shall open from the top only and shall operate freely. All side windows except the driver's and the service door windows shall be split or drop sash type providing an unobstructed opening at least 12 inches in height and 264 square inches in area. Side windows that can be latched in an uneven position are not acceptable. The window openings shall be designed so that passengers are prevented

from extending their arms and other extremities outside the bus when seated. All windows shall be free opening and closing, and shall prevent rattles, drafts, and weather intrusion while closed.

**B. Side Windows, Passenger, and Push-out Type:** These windows shall be hinged at the top or front and shall be positioned for ease of egress. These windows shall provide an emergency opening at least twenty-two inches (22") wide and twelve inches (12") high, with minimal obstruction by seatbacks or other objects. Push-out windows shall be equipped with an electrical switch connected to an audible signal automatically operated and located in the driver's compartment, which shall indicate when the window is released. The switch shall be enclosed to prevent tampering. Wires leading from the switch shall be concealed in the walls. No cut-off switch shall be installed in the circuit.

**C. Service Door and Emergency Door Windows:** All glass panels in the emergency and service doors for all buses shall be safety glass panels, permanently closed, and shall be set in a waterproof manner.

**D. Rear Windows:** Each rear window glass shall have a minimum area of one hundred forty square inches (140 sq. in.) and shall be set solid in a waterproof manner. These windows shall be installed securely to prevent removal by hand. A rear "push-out" window, meeting the requirements of FMVSS No. 217, shall be provided on the rearward window on rear engine buses.

**E. Side Window, Driver's:** Driver's side window shall be tinted the same as the windshield, horizontal slide type, easily adjustable using one hand. Latch must lock window when in the close position. Provide a driver-side window sun visor.

An interior adjustable transparent sun shield shall be installed in a position convenient for use by the driver. The sun shield shall have a finished edge and measure not less than 6 inches x 30 inches wide.

**3.7.3 Windshield Wipers:** Windshield wipers shall be heavy duty electric design incorporating both variable and intermittent speed control of sufficient size and power to provide maximum swept area proportional to windshield area, and unobstructed, clear vision at all times. Wiper blades shall be maximum length to adequately clear driver view and provide a maximum swept area proportional to the windshield. Wipers shall return to park position when turned to off position. The washer reservoir shall incorporate an electrically operated windshield washer with a minimum capacity of 1 gallon. Wet arm windshield wiper shall be required.

### **3.8 Seating:**

**3.8.1 Driver's Seat:** Driver's seat shall be heavy duty, air ride, pedestal mount. It shall be adjustable forward, rearward and height without the use of tools. It shall be provided with a 3 point, retracting, inertia locking seat belt system and with easy access to the buckle. **The driver's seat shall be color coordinated with passenger seats.**

**3.8.2 Passenger Seats:** The first three rows on each side of the bus shall be "Integrated Toddler Restraint seats" conforming to the National Highway Traffic Safety Administration (NHTSA) reg. 213. The remaining passenger seats shall be "Standard Student Bench Seat" design. The seat frame shall be adequately reinforced at all stress points and may be supported by a rail on the wall side. The legs on the aisle side shall be offset and not infringe on the aisle clearance. All seats shall be forward facing. All

back cushions shall be color coordinated with the interior vehicle color. The Cushion and seat cover shall be of the slipcover type, removable and replaceable without removing the entire seat.

3-point seat belts, conforming to the requirements of the California Vehicle Code, Chapter 5, Article 3, Division 12, section 27316.5 (a), (b), and (c), School Pupil Activity Bus Passenger Restraint System shall be provided for each passenger.

Seat backs shall be fully padded with polyurethane foam or heat resistant material. The outer upholstery shall be minimum level-4 flame resistant vinyl material. The bidder shall furnish a complete description of the seat materials upon request. If requested, certified test results must show conformance to FMVSS and to the flammability requirements stated above.

Passenger and driver seat(s) shall be compliant to the State of California Vehicle Code CCR Title 13 standards for school bus seats.

- 3.8.3 Restraining Barriers:** A barrier shall be provided to the rear of the entrance step, any floor level emergency exits, and in the back of the driver's seat shielding passengers in both front seats. Quality of barrier shall conform to FMVSS and CCR standards and be padded and upholstered with same material.

#### **4.0 HEATING AND AIR CONDITIONING**

- 4.1 Heaters:** Minimum equipment shall consist of engine coolant type heaters. The BTU ratings are for individual heater units, not a combined system rating. One (1) minimum 12,000 BTU/hr two-speed auxiliary heater unit shall be located at the driver's seat. Two (2) passenger under-seat heaters shall each have a minimum rating of 50,000 BTU/hr each and shall include two-speed heater fans that blow air toward the front and the rear. Location of the heaters and fans shall be determined at the preconstruction conference. All heaters shall have their controls readily accessible to the seated driver and have a separate maintenance switch and valve control (valves can be located in the engine compartment). A heater booster pump shall be included.

**Heater plumbing shall consist of:** stainless, copper or brass pipe and silicone or EPDM hose with constant torque clamps. The plumbing system design shall maximize the use of ridged pipe and use flexible hose only for serviceability. Heater plumbing shall be mounted under the floor except when entering and exiting the heat exchanger. Shut-off valves shall be located at the engine inlet and outlet to isolate the heater system. No valves shall be accessible to the passengers. The type of hoses linking the engine and heater to the metal pipe shall be of silicone or EPDM type hoses.

- 4.2 Defroster and Defrosting Fans:** The independently operated defroster units shall be incorporated in the heater system to force an even flow of hot air over the interior of the windshield in sufficient quantity and velocity to keep the entire windshield surface clear of fog, ice or snow under California weather conditions (minimum 90,000 BTU). It shall be ducted to the entrance door, driver's side window, and full length across the windshield. All defrosters shall have their controls readily accessible to the seated driver and have a separate maintenance switch and valve control (valves can be located in the engine compartment).

Additionally, two six (6) inch caged windshield defroster fans shall be mounted one above the driver and over the left windshield, one over the right windshield to provide an even flow of air over the entire windshield. Fans shall not obstruct the driver's view in any way.

- 4.3 **Air Conditioner:** The bus shall be equipped with a CFC free air-conditioner which is designed for transport applications (minimum rating of 120,000 BTU/hr). The unit shall include a multi-zone temperature control system that can be programmed for either manual or automatic operation. The air conditioning system shall have controls readily accessible to the seated driver.

## 5.0 **PAINTING AND UNDERCOATING**

- 5.1 **Paint and Finish:** Prior to application of the finish coats to body, all surfaces shall be cleaned and treated as per paint manufacturer's recommendation for proper paint adhesion. **The bus shall be painted School bus yellow and shall meet National School Bus Chrome (Federal Standard No.595 Chrome yellow No. 13432) for color.** The paint shall have a super high gloss polyurethane enamel finish rating of at least 85 at 60 degrees and a distinctness of image rating of an average of at least 50 measured using the same method specified for gloss under warranties (Super high glass polyurethane enamel).

The exterior roof shall be painted polyurethane white.

The interior paneling except for the guardrails, side panels and trim, shall be painted with a neutral shade (e.g. brown, tan, grey) interior color comparable with the floor and upholstery color selected and agreed upon by the purchaser.

Trim and bumpers shall be black. Lead-free paint shall be used on all interior and exterior surfaces of the body and chassis.

- 5.2 **Lettering:** All lettering and identification required by the California Code of Regulations (CCR 13) section 1256.5, the California Vehicle Code, the CHP, and the California Department of Education shall be included. Vehicle number, if any, will be provided by the school.
- 5.3 **Undercoating:** The entire underside of the body and chassis including floor members, side panels below floor level, and fender wells shall be coated with not less than 1/8 inch thick undercoating material. All openings in the floorboards or firewall shall be sealed. Undercoating offering comparable protection is acceptable (Ref. Zibar material). All openings in the floorboards or firewall shall be sealed. Chassis components that are not undercoated for service reasons shall be factory painted for the life of the component.

## 6.0 **SAFETY ITEM AND MISCELLANEOUS**

- 6.1 **AM/FM Radio/CD/Public Address (PA)- Radio Antenna:** All driver units and amplifier shall be mounted in a manufacturer provided enclosure that brings the radio out and down so that it is more accessible to the driver's compartment. Conduits for the AM/FM radio leads shall be installed at the factory.

Solid state combination AM/FM radio / CD / PA system with microphone, 6 interior speakers and 1 exterior speakers with volume controls and removable dynamic microphone with a coiled extension cord at the driver's position (microphone not battery

operated) shall be provided. A P. A. horn may be substituted for the two exterior speakers, and shall be weather protected and located in the front side body areas. Antenna wiring shall not interfere with insulation. Speaker(s) located adjacent to the driver's compartment shall be equipped with a speaker disconnect switch. Exterior speakers shall be weather protected and mounted inside the front body panels of the bus.

**6.2 Digital Camera Student Monitoring System:** A Digital Camera Student Monitoring System (Ref; 24/7, ADT or equivalent) shall be provided. The system shall include all necessary camera(s), hardware and other equipment required to provide a complete, turn-key system. The system shall provide an unobstructed view of the entire passenger area.

The exact mounting location of the camera shall be determined at the pre-construction conference.

**6.3 Miscellaneous Equipment:** The following miscellaneous equipment shall be furnished and meet CCR, 13 requirements. Where available and approved, LED lighting shall be provided in place of incandescent lighting.

1. Approved amber turn signal system with indicator light(s), self-canceling switch, pilot light, and emergency flashing capability.
2. Side mounted turn signals, front side lamps located above front wheel wells and rear side turn signals located in line with front side lamps located above rear wheel wells.
3. Double row of interior dome lights on both right and left side. Front and rear lights and overhead map light in driver's area shall be on a separate switch. An automatic step-well light is required. Dimmer rheostat switch to control driver's compartment dash and driver's dome lights.
4. Two approved stop / tail lights LED.
5. Two approved red, rear reflectors.
6. Two back-up lamps.
7. Required side lamps LED and / or reflectors.
8. Dual electric horns.
9. Back-up alarm meeting California Vehicle Code 27000(b) requirements.
10. One master electrical switch that shall isolate battery(s) during routine maintenance procedures.
11. Interior rear view mirror 10" x 30" safety glass.
12. One 7" x 16" minimum left side flat exterior, remote controlled, heated mirror mounted on the left front side of the bus in such a way that a driver's field of vision is not blocked when scanning to the left.
13. One 7" x 20" minimum right side flat exterior, remote controlled, heated mirror mounted on the right front side of the bus. (Reference: Lo-Mar or equivalent)
14. One GVW plate.
15. DMV registration holder.
16. Rubber front and back mud flaps on each wheel well.
17. Molded rubber front and rear fenderettes over each wheel opening.
18. One or more driver's glove box(s) in the bulkhead to hold first aid and miscellaneous items, locking.
19. Two tow hooks on front and rear
20. One approved 10 BC unit, fire extinguisher located at the front
21. One approved 24- unit first aid kit
22. Body Fluid Cleanup Kit (National Standard or equivalent)
23. One (1) set of three (3) safety triangles (warning reflectors)
24. Roof mounted, white/clear strobe light with switch and control light on dashboard.

- 25. One 12 Volt accessory plug on or near dash.
- 26. Approach light(s) for entrance door.
- 27. Hinged Sign-Front "School Bus".
- 28. Hinged Sign-Rear "School Bus".
- 29. Covers Red and Amber lights.

**7.0 POWER UNIT AND FUELING SYSTEM:** The power unit (engine) will be the chassis manufacturer standard, or optional engine for the model bus, which meets or exceeds the power requirements specified herein, at not more than the engine manufacturer's rated operating speed. The engine, including all peripherals specific to the fuel type shall be manufactured by an original engine manufacturer.

**7.1 Engine Starting:** Engine shall start satisfactorily without secondary fuels or refillable devices that are not self-contained on the vehicle at temperature down to -10 degrees F., and within 30 seconds of cranking.

**7.2 Fuel Tank and Fuel System:** The fuel tank shall be constructed of 14 gauge steel with coating suitable for use with diesel fuel. A keyed lock shall be provided on the fuel compartment door. Fuel tank sending units shall be accessible for servicing. Appropriate labels and warnings shall be placed inside and outside of fuel door.

All fuel system components including tank(s), valves, manifolds, lines, regulators and fittings shall be free of undercoating and paint and shall be accessible for inspection of parts and markings. Fuel lines may be braided nylon or comparable and shall comply with SAE ratings for diesel fuel lines.

**7.3 Filters:**

**7.3.1 Fuel Filter and Fuel /Water Separator:** Secondary fuel filter shall be spin-on disposable type. Primary fuel / water filter separator shall be furnished (Reference: Racor 500 FG or equivalent)

**7.3.2 Oil Filter:** Full flow, replaceable element or throw away type.

**7.3.3 Engine Air Filter:** One or two stages. For rear engine single stage intake shall be installed above top of rear window.

**7.4 Cooling System:** The cooling system shall have a heat rejection capacity of 125 per cent (Minimum) required by the engine and transmission manufacturers with the vehicle loaded to the rated GVWR, in ambient temperatures ranging from minus 30 degrees F to plus 125 degrees F without loss of coolant. The complete cooling system design shall take into consideration continuous operation at all drive-able altitudes and grades. The cooling system shall maintain optimum operating temperature under all required conditions. All cooling system hoses shall be silicone or EPDM with constant torque clamps. A drain outlet shall be provided to allow complete cooling system drainage.

The cooling requirements are based upon traditional mechanically controlled engine / transmission combinations. Electronic type controlled power trains using automatic temperature, pressure and or flow sensors and controls to protect from overheating are acceptable as meeting the requirements of this specification.

**7.5 Compression/Exhaust Brake:** The engine shall include a compression and/or Exhaust Brake System (Jacobs, BD Power or equivalent).

# Questionnaire 30-Passenger 32' School Bus

PLEASE RESPOND TO ALL QUESTIONS. UNANSWERED QUESTIONS MAY CAUSE YOUR BID TO BE REJECTED AS NON-COMPLIANT.

**Make**

IC Bus

**Model**

CE2502

### ENGINE:

**CARB Certified**

Comply as specified (EO attached)

**Net HP**

✓ 225 HP

**Torque**

✓ 560 ft lbs

**Exhaust Brake**

✓ Comply

### CHASSIS:

**Wheel base**

✓ 218" inches

**Overall Length**

✓ 30'8" ft

**Fuel Tank Capacity**

✓ 65 gallons

**Passenger Capacity**

✓ 30 passengers

**Headroom**

✓ 78 inches

**Aisle Width**

✓ 12" inches

**Overall Height**

✓ 117" inches

**Overall Width**

✓ 96 inches

**Turning Radius (in feet)**

✓ 29'5" ft

<u>GVWR/GAWR</u>		
GVWR	✓	25,500 lbs
GAWR Front Axle	✓	8,000 lbs
GAWR Rear Axle	✓	17,500 lbs

<u>SUSPENSION</u>		
Front	Air Ride	✓ Spring
Rear	Air Ride	✓ Air ride

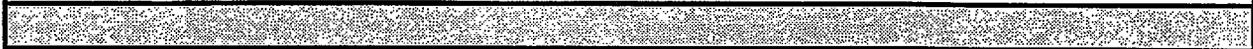
<u>TRANSMISSION</u>	
Type/speeds	✓ Allison 2500 PTS/ 5 speed

<u>HEATER/DEFROSTER/AIR CONDITIONER</u>	
HEATER	
Driver	✓ 90,000 BTUs
Passenger (Rear)	✓ 50,000 BTUs
Passenger (Front)	✓ 50,000 BTUs
DEFROSTER	✓ 90,000 BTUs
AIR CONDITIONER	✓ 120,000 BTUs



**BUMPERS:**

Front	/	<input type="text" value="12"/>	face in inches
Rear	/	<input type="text" value="12"/>	face in inches



**STEERING**

Power Steering w/Telescoping Wheel /  with tilt steering (see section 3.3.3)

ANTI-LOCK BRAKING SYSTEM /



**ELECTRICAL:**

Battery /  CCA

Alternator /  amps



**MATERIALS, GAUGE REQUIREMENTS:**

Floor /  gauge

Smooth Exterior Wall /  gauge

Interior Wall /  gauge

Exterior Roof /  gauge

Interior Roof	-	<input type="text" value="22"/>	gauge
Wall Posts	-	<input type="text" value="14"/>	gauge
Roof Bows	/	<input type="text" value="14"/>	gauge
Extended Skirt	/	<input type="text" value="16"/>	gauge
Interior Window Headers	/	<input type="text" value="16"/>	gauge

**EMERGENCY EXITS:**

2-Push Out Side emergency Windows	/	<input type="text" value="Comply"/>
2-Roof Escape Hatches with Ventilators	/	<input type="text" value="Comply"/> with one roof hatch (see section 3.6.7.B)
Left Side Emergency Exit door	/	<input type="text" value="Comply"/>

**PASSENGER SEATS:**

Standard Seat Design	/	<input type="text" value="Comply"/>
3-Rows Toddler Seats	/	<input type="text" value="Comply"/>
3-Point Seat Belts	/	<input type="text" value="Comply"/>
AM/FM Radio/CD System/PA Address	/	<input type="text" value="Comply"/>

**DIGITAL CAMERA STUDENT MONITORING SYSTEM:**

Brand/Make/Model

Other - Explain Below:

**NOTE: THIS QUESTIONNAIRE SHALL BECOME PART OF THIS BID AND TAKE PRECEDENT OVER ACCOMPANYING LITERATURE. FAILURE TO COMPLETE THIS QUESTIONNAIRE IN FULL MAY CAUSE YOUR BID TO BE REJECTED AS NON-COMPLIANT. Page 5 is blank for additional comments.**

Company Creative Bus Sales, Inc.

Street Address 13501 Benson Ave

City, State, Zip Code Chino, CA 91710

Telephone Number (909) 465-5528

Name and Title Joseph Angeli, School Bus Sales Manager

Signature 

Date September 15, 2009

Page 5 Additional comments If Any