

Specifications for a 71-Passenger School Bus with Air Conditioning

Design Capacity: 71 + Driver
Equipped Capacity: 71 + Driver
Wheelbase: 276"
Year Model: 2023 or latest model year

The bus shall meet all Alabama Minimum Specifications for School Buses and local specifications listed below.

Bids will be accepted only from vendors who are the manufacturers' authorized sales and service agent for the product offered, who are authorized and qualified to conduct business in Alabama, and whose existing factory authorized sales and service area of responsibility includes Gulf Shores, Alabama. The authorized sales and service facility shall not be more than three hundred (300) miles from Gulf Shores City Board of Education shop facility. Each specification requires a complete response, not simply a "manufacturer's standard."

Quantity: 2 Delivery of buses desired within 210 days of purchase order receipt.

BUS CHASSIS Specifications

1. Engine and Transmission: The engine shall be Cummins B 6.7, electronic diesel. Cylinder configuration shall be in-line six. The engine shall produce not less than 250 HP and 660 lb.-ft. of torque at rated RPM and will include engine exhaust brake with variable vane turbocharger. The engine shall meet all current emission standards. The bus shall be provided with an engine alarm system that includes both visual and audible alarms notifying the driver in the event of low oil pressure or high-water temperature. The transmission shall be Allison 2500 Series, 5-speed with overdrive. Synthetic transmission oil shall be provided. NO EXCEPTION
2. Warranty: Quote as option (1) extended Cummins engine warranty to 10 year / 100,000 mile covering all engine components, engine electronics (2) Towing to an authorized warranty center for engine or chassis related occurrence extended to 2 years unlimited miles. The electronic transmission shall be warranted for at 7 years without mileage limitation. Extended warranty costs will be separate line items on bid proposal form and will not determine low bidder. Provide itemized documentation explaining base and extended warranty coverage with bid proposal. NO EXCEPTION
3. Steering Column: Tilting and telescoping. NO EXCEPTION
4. Axle and Suspension: 10,000 lb. capacity front with shock absorbers; 21,000 lb. capacity rear air ride 9.25" ride height with shock absorbers. NO EXCEPTION

5. Exhaust System: The exhaust system shall include a DPF and long exhaust pipe. The tail pipe shall be frame mounted with suspension hangers and clamps and shall exit at the left rear of the bus through the rear bumper. For increased heat deflection, a heat shield shall be installed between the fuel tank and the DPF. EXCEPTION

6. Electrical System: 12 volts. For ease of maintenance, all wiring shall be color coded and continuously numbered. For increased durability, all wiring shall be protected in continuous loom and include grommets. For improved serviceability and lower maintenance cost, all chassis connectors shall be moisture sealed and locking type.
EXCEPTION: _____

7. Alternator shall be 325-amp minimum. Bus shall include three (3) maintenance free batteries with a minimum 1950 CCA (total). For serviceability, the battery box shall be body or frame mounted, vented, and sealed from road contaminants. In addition, the battery box shall be equipped with nylon, stainless or steel rollers for ease of movement. Batteries shall be accessible through an outside door with a positive keyed alike latch (#545). Provide 300A weather resistant battery shut-off switch in battery compartment. Switch will disconnect power to the chassis and body to increase battery power and life.
EXCEPTION: _____.

8. A customer fuse accessory box shall be installed for installation of accessories such as cameras, radios, etc. One leg shall be battery powered and one leg ignition powered and one ground. NO EXCEPTION

9. Service Panels are to be located as follows:
 - a. Over the window line each side for inspection of wiring, dome lights, internal speakers, etc.
EXCEPTION: _____
 - b. In front driver heater console below driver's window providing access to electrical panel.
EXCEPTION: _____
 - c. In the floor an access plate shall be provided for inspecting the fuel tank-sending unit.
EXCEPTION: _____

10. Fuel Tank Capacity: 100 U.S. gallons minimum. Fuel fill shall be on right side and be accessible through an outside door with positive keyed alike latch (#545). NO EXCEPTION

11. Bus ignitions shall be keyed alike. NO EXCEPTION

12. Easy-tilt hood: Bus hood shall have opened and closing efforts of 15 lbs. or less with an easy tilt, three-piece fiberglass hood with replaceable grill. Provide 4" LED engine

compartment light with an on/off switch that is activated with parking lights and includes a limit switch that allows light to come on when hood is raised.

EXCEPTION: _____

13. Headlights: A replaceable halogen bulb that can be replaced without the use of tools. Daytime Running Lights: Headlight operation is to be controlled by the ignition switch.

EXCEPTION: _____

14. Brakes: Front shoe size 16.5 X 5 Rear shoe size 16.5 X 7. Linings to be Meritor Q Plus extended service or approved equal. Brake system shall include electronic stability program with automatic traction control and Collision Mitigation System including but not limited to Adaptive Cruise Control with Collision Mitigation and Stationary Vehicle Braking, Stationary Object Alert, Lane Departure Warning, Overspeed Alert and Action. CMS to include front radar and camera, driver display, lane departure warning switch and speakers. Automatic front and rear slack adjusters required. Bus shall be equipped with a parking brake interlock that prevents the parking brake from being released until the ignition switch is in the "ON" position and the service brake pedal is applied. NO EXCEPTION

15. Air Compressor: 18.7 CFM minimum. Compressor air supply source must pass through the engine air intake system.

EXCEPTION: _____

12. Air Dryer: Bendix AD-IP with heater or approved equal. Automatic Drain Valve: Bendix DV-2 with heater or approved equal. NO EXCEPTION

13. Tires and Wheels: Provide six (6) 11R/22.5 LR-G steer tires mounted on 2 hand hole disc type wheels; 10-stud hub piloted, flanged nut, metric mount, 8.25 DC rims, with steel hubs. Provide rubber mud flaps for front and for rear wheels. Provide oil lubricated front wheel bearings. EXCEPTION

14. Instrumentation: Engine oil pressure, water temperature, fuel, tachometer and voltmeter and DEF fluid level. Odometer display includes miles, trip miles, engine hours, trip hours and fault code readout. Warning system includes low oil pressure, high engine coolant temperature (visual and audible).

EXCEPTION: _____

15. Electronic Diagnostics System: For improved maintenance performance, serviceability and reduced downtime, the bus shall be equipped with an on-board diagnostic display which displays fault codes in the gauge cluster without any handheld or computer devices attached to the vehicle.

EXCEPTION: _____

16. Tow Hooks: Provide front and rear tow hooks. NO EXCEPTION

BUS BODY Specifications

17. Exterior body paint shall be polyurethane and to be school bus yellow. Roof paint shall be polyurethane and to be white. All wheels, the front and rear bumpers, all rub rails, upper lettering beltline, warning lamp background and lamp hoods shall be painted black.
EXCEPTION: _____
18. Body Keys: (#545) these include battery box, fuel fill, electrical access, tool compartment and driver storage compartment doors. DEF door shall be keyed with (#751). NO EXCEPTION
19. Front entrance door shall be of an air power service design. It shall be outward opening, pin style hinged, ball bearing actuated and suspended from the top of the doorframe. Stainless steel handrails shall be mounted forward and aft of the entrance door.
EXCEPTION: _____
20. For ease of service and longer life the rear emergency door shall be constructed with hinges that include grease fittings.
EXCEPTION: _____
21. The bus shall be furnished with a minimum of four (4) continuous rub rails.
EXCEPTION: _____
22. The bus headroom shall be 77" minimum measured at the aisle center. For reduced interior noise levels, the interior headliner panels shall be perforated the full-length of the bus body. Lower interior side lining (below window level) shall be clear coated embossed steel. Exterior upper side sheets and lower side skirts shall be 20-gauge steel minimum. Provide an exterior toolbox located curb side forward of the rear wheels. Box shall be approximately 13" X 15" X 25" with positive keyed alike latch (#545). The bus shall be provided with an enclosed driver storage compartment above the driver window. Box shall be approximately 39" X 10" X 10" with two (2) positive keyed alike latches (#545) and safety padding.
EXCEPTION: _____
23. Bus shall be provided with 2 roof escape hatches, Specialty Low Profile or prior approved equal and 2 emergency exit window per side.
EXCEPTION: _____
24. Exterior rear-view mirrors shall be black, with motorized head, heated, non-detent. Rosco Open-View only. Exterior cross view mirrors, Rosco Mini Hawk-Eye only. NO EXCEPTION.

25. Front heater to be 90,000 BTU. It must be able to deliver 90,000 BTU while the defroster is working at maximum capacity. There shall be an 84,500 BTU minimum heater aft of the wheel well on the street side of the bus and 84,500 BTU minimum heater forward of the wheel well on the curb side of the bus. Provide a booster pump for rear heaters. Bus shall be provided with a 6" 2-speed drivers defog fan mounted street side above windshield. There shall be separate switches and motors for each heater and the driver's defog fan. NO EXCEPTION
26. There shall be an air operated crossing control gate, Specialty or approved equal. This gate must be a yellow plastic type gate with an interrupt switch to allow driver to deactivate the control arm when necessary.
EXCEPTION: _____
27. The windshield wiper system shall include two bottom mounted, wet arm wipers working in overlapping opposing motion for maximum wiper coverage. Wiper control shall be a 5-speed automotive type integrated into the turn signal column.
EXCEPTION: _____
28. There shall be the following electronic devices/equipment: Eight light sequential warning system. Four (4) dual lamp hoods painted black for 8 light warning system. Air operated stop arm, double sided with high intensity background and LED strobe lights. Rear roof mounted strobe light. Back up warning alarm, of 112 dba. Bus shall be provided with an electronic post trip child inspection system which reminds driver to check the rear of the bus prior to exiting the bus. Exterior Light Check Feature preferred, to facilitate a pre-trip exterior light check, the bus shall be equipped with a dash mounted button that activates all exterior bus lights thereby allowing the driver to perform an unassisted inspection of all exterior lights. All exterior and interior lighting shall be LED type. Provide a 4" LED light mounted in the lower side skirt aft of the entrance door, it shall be wired to illuminate with step well light. Provide a driver's dome light installed under the driver's storage compartment; it shall have a switch separate from the dome lights. Provide eight (8) LED dome lights mounted in the light bar. Bus shall be provided with a light system monitor in drivers' area that is capable of monitoring up to 16 exterior lamps.
EXCEPTION: _____
29. Split sash passenger side windows and rear windows shall be tinted safety glass mounted in heavy-duty aluminum frames. Window frames shall be black. Window bow caps shall be painted black. Tint shall be a minimum of 50% light transmission.
NO EXCEPTION.
30. Seat and barrier material shall be fire retardant type. Seat upholstery shall have a two-year warranty. Seat foam shall have a 4-year warranty. Seat configuration on street side: (11) 39" high back seats and (1) 26" high back seat. Seat configuration on curb side: (12) 39" high back seats. For increased comfort, the driver's seat shall be a six-way

adjustable high back design and shall be equipped with a three-point shoulder harness, a right-hand arm rest, cloth insert and adjustable lumbar support. Seat shall be air suspension type.

EXCEPTION: _____

30. Bus sub floor shall be 5/8", 5-ply exterior grade plywood. Plywood shall be attached with countersunk screws. Nails will not be acceptable. NO EXCEPTION.

31. The bus shall be provided with AM/FM/USB Input/Auxiliary Input radio, including antenna and cable with PA system and eight (8) light bar mounted interior speakers.

EXCEPTION: _____

32. The bus shall be lettered and numbered as follows: "GULF SHORES CITY SCHOOLS" (YELLOW) on each side. Numbers shall be sequential on both sides, the right rear below the brake / taillight and on the front bumper (WHITE). NO EXCEPTION

33. All retro reflective tape shall be 3M High Intensity Fluorescent Diamond Grade Yellow. NO EXCEPTION. Locations to include:

- a. ILO of reflective "SCHOOL BUS" SIGNS front and rear, bus(es) shall be provided with LED illuminated, exterior bulkhead mounted front and rear destination signs, with 8" letters "SCHOOL BUS".
- b. 2" stripe down each side
- c. Around perimeter of the rear end of the bus
- d. Around the perimeter of the rear emergency door
- e. Around the perimeter of roof hatch
- f. Around the perimeter of all kick out windows

34. Each bus shall be equipped with a Seon TH6-5 Cross View video system, to include TH- 6, 6 Channel HD DVR with 500GB Hard Drive and five (5) Seon HD3U HD ultra-wide interior cameras. Each bus will also have a Seon front windshield camera. Provide panic and diagnostic button to indicate incident or to verify system is functioning and GPS module. Provide software kit to include vMax View Software, handheld mouse and HDD-DOCK3 USB Docking Station. TO MATCH EXISTING SYSTEM. NO EXCEPTION.

35. The bus shall be air-conditioned. Total system BTU shall be 126,000 and consist of the following components:

- Compressors: Dual.
- Condensers: OEM standard to produce 126,000 BTU required
- Evaporators: One (1) front bulkhead in-wall, one (1) rear bulkhead in-wall and one (1) dash unit shall be rated at approximately 26,000 BTU cooling and 35,000 BTU heat. It shall have two (2) dash mounted air vents and one (1) step well vent. Flush

mounted ABS front and rear covers shall be provided with four (4) air vents and two (2) front-mount filters for easy service.

The air conditioning system is controlled by rocker type switches located on the driver's switch panel. Separate switches shall control on/off function and speed (high/medium/low) for the front, rear, and dash mounted evaporators.