

# CONVENTIONAL SCHOOL BUS SPECIFICATIONS, 72 PASSENGER

The bus is to be a 2019 model or newer as described in these specifications. Minimum specifications are listed below. Bidders specifications must meet or exceed minimum specifications. All bus specifications shall meet or exceed those specifications as set forth by the Ohio Department of Public Safety, Federal Department of Transportation and the Ohio Department of Education, minimum construction standards.

## CHASSIS SPECIFICATIONS

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| Air Compressor    | 18.7 CFM capacity at 2400 RPM, water cooled-gear driven. Clean inlet air obtained from charge air at engine intake. Air tank capacity 4260 cu. in.  |  |
| Alternator        | 12 volt, 240 amps minimum   |  |
| Axles             | Front 12,000 lbs. capacity, full power steering. Petroleum lubed bearings.<br>Rear 21,000 lbs. capacity, single speed, oil slinger.   |  |
| Battery           | Three Group 31, 12v, 2100 CCA, deep cycle. Mounted in a box with slide out tray.  |  |
| Brakes, service   | Dual full air, 16.5x5 front and 16.5x7 rear."S" cam, Non-asbestos extended wear lining. Automatic slack adjusters. Bendix AD9 air dryer. Dust shields.  |  |
| Brakes, emergency | 30 sq. in. spring brake system with treadle valve control. Separate valve for parking with EZ-Grip cover.   |  |
| Controls          | Adjustable high idle switch. Electronic cruise control. Key-type starter and stop switch. Dash mounted transmission shifter. Tilt/Telescopic steering wheel. Rheostat dash dimmer on headlight switch.  |  |
| Engine            | Diesel, inline 6 cylinder, turbo charged, 200 HP @ 2400 RPM, 2017 emissions<br>Engine block heater.<br>Heated fuel/water separator.<br>Automatic air intake pre-heater to assist cold starting<br>Fan clutch, electrically controlled<br>15 Gallon DEF tank located to the rear of the step well with a locking door. |  |
| Engine hood       | Tilt hood, with low effort assist (15 lb maximum). Silver grill and headlight bezels.   |  |
| Exhaust           | Tail pipe, side exhaust, left, stainless steel  |  |
| Fuel tank         | Aluminized steel, 100 gallon capacity located behind rear axle between frame rails.<br>Spring loaded locking fuel door and sending unit access plate required.  |  |
| Instruments       | Speedometer<br>Odometer<br>Voltmeter<br>Fuel level gauge<br>Ammeter<br>Tachometer<br>Digital clock, dash mounted<br>Resettable trip odometer<br>Engine warning system high water temp/low oil pressure  | Water temperature gauge<br>Dual air pressure gauges<br>Oil pressure gauge<br>Low air pressure warning light and buzzer<br>Low coolant warning light and buzzer<br>Hour meter<br>Headlights "left on" warning chime<br>Transmission temperature gauge |

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| Lights       | Daytime running lights. Turn signals top fender mounted.  |
| Manuals      | Complete maintenance manual and a list of all of the parts used in the bus with part numbers shall be provided.                       |
| Suspension   | Front: Parabolic springs 10,000 lbs. Rear: Air ride 21,000 lbs. capacity. Shock absorbers, front and rear, double action piston type. |
| Transmission | Allison automatic, model 2500 PTS with Transynd fluid.  |
| Tires        | 11R 22.5, 14 ply radial tubeless tires.   |
| Tow hooks    | Two front and rear, frame mounted.  |
| Vision       | Direct forward line of sight to the road surface over the engine hood not to exceed 12.5 feet.  |
| Warranty     | Minimum required, Chassis 2 years 24,000 miles, Engine 5 years 100,000 miles, Transmission 5 years unlimited mileage.                 |
| Wheels       | 10 Stud disc type, hub-piloted, 22.5 x 8.25.  |
| Wheelbase    | Maximum of 273", curb turning radius not to exceed 35.3 feet.   |
| Wiring       | Color and number coded wiring.  |

## **BODY SPECIFICATIONS**

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| Air intake          | Mounted on right front below windshield level. Manual control for fresh air.   |
| Arm rest            | Driver's arm rest to left of driver on rear portion of switch panel.   |
| Battery compartment | Enclosed compartment with sliding tray. Tray to be held in place with a retaining pin. Door hinged at the side with a recessed handle.   |
| Bumpers             | Front and rear, plate steel, one piece, die-formed. Frame mounted, front and rear at least 12" in height. Front bumper to include a plate with a white reflective background for placement of State ID number.   |
| Construction        | <p>Floor 14 gauge galvanized steel sections joined with grade 8 bolts and welds. Where floor sections meet a "Main" floor member is formed with the addition of a 3/16th thick steel angle 2"x1.5". These angles are used to attach the body to the frame rails. Auxiliary cross members are 14 gauge hat shaped located on 9" centers</p> <p>Roof bows 14 gauge die formed, hat shaped one piece continuous floor line to floor line. Welding and/ or splicing roof bows is not acceptable. Bows must not extend below the floor line. 20 gauge side panels from the windows down. All panels inside and out to be riveted.</p> |

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|                  | Rain visors over side windows to be embossed in roof panels to reduce seams.<br>Rub rails, four applied rails located as follows, one below windows, one at passenger level, one near floor line, and one at the bottom of the skirt.   |
| Door, entrance   | Air operated outward opening. Grab rails located on both sides.   |
| Door, emergency  | A rear emergency door is required 52.5"x 37.7". Dual 6" hinges with grease fittings.  |
| Floor            | 5/8" treated plywood installed over steel floor.<br>Interior wheel housing to be protected with a one piece molded cover.   |
| Glove boxes      | One located on the right side of dash 6"x 6"x 20" and a second compartment located to the left of the driver 6"x 7"x 7".  |
| Headroom         | Maximum of 77 inch headroom at the aisle measured over the plywood floor.   |
| Heaters          | All heaters are required to have cleanable filters.<br>90,000 BTU left front heater, with defroster for entrance door and windshield.<br>Heater cut off valves to be ball type 1/4 turn shutoff.<br><br>50,000 BTU right front with two speed fan.<br><br>50,000 BTU rear heater located behind rear wheelhouse and mounted off of the floor with a two speed fan.<br><br>Two 6" auxiliary fans located above the windshield to assist with defrosting. |
| Insulation       | Fiberglass insulation R value of 5.77 located in the ceiling and side walls with additional insulation in driver's area. All ceiling panels to be perforated to reduce engine noise (full length acoustic headliner).   |
| Interior         | Interior to be astro white. Seat frames and heaters to be black.  |
| Lights           | Warning light system meeting current state specifications and hooded to improve visibility. Seven inch back-up lights, low profile strobe light, Led stop arm and LED clearance lights.   |
| Mirrors          | Interior, rearview 6"x 30", sun visor 6"x 30" Plexiglas. All exterior mirrors heated.   |
| Paint            | Exterior, heat cured polyurethane. White roof. Rub rails painted black full width of the rails, low gloss yellow hood and grill to be painted silver.   |
| Radio            | AM/FM/CD/USB/MP3/PA with eight speakers, speakers located in the ceiling.   |
| Reflective tape  | Install 3M reflective vinyl as follows: under "School Bus" front and rear a 2" wide strip at floor level full length both sides, outline rear of bus and emergency exits.   |
| Roof hatches     | Two, evenly spaced Safe Fleet   |
| Rust proofing    | Body parts thoroughly rust proofed after fabrication and before assembly.   |
| Safety equipment | All required State specifications mounted in a compartment above the windshield.  |
| Seat, driver's   | Air suspension, hi-back, cloth upholstery with a foam cushion and back, entire seat adjustable without tools. Adjustable driver's shoulder belt required.   |

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| Seat, passenger    | Cushions to have plywood bottoms. 39" wide seats, 12" aisle at cushion level, 14" at the top of the seats. Seat frames constructed with square steel tubing and "C" channels with a metal filler panel in the seat back for added strength. First two rows are to have seat belt ready frames. Minimum body length 33' 3". |
| Step well          | Stainless steel three step bolted not welded, non-skid, rubber covered steps.  |
| Switch panel       | All accessory switches: heaters, warning lights, etc. must be mounted on a separate panel located just below the driver's window or on the right side dash area placed within easy reach of the driver. Must have a cutoff switch for interior noise. (aka railroad/quiet switch).   |
| Undercoating       | Premium corrosion protection underbody T-wax or equivalent.  |
| Windshield         | Four piece flat shaded safety plate. Assist handles installed above the windshield and fold-up step each side on right and left cowls to facilitate cleaning windshield.   |
| Windows            | To be tinted side windows 28%, entrance door 70%, and driver's window 70%.   |
| Wipers             | Dual electric, bottom mounted, wet arm, intermittent operation.  |
| Wiring             | Color coded in molding above side windows. Body wiring protected by circuit breakers. Locking outside wiring access door 27"x 16" located just below the driver's window. Two spare wires running to the rear of the bus for future use.   |
| Optional equipment |  |

NOTE: All companies are encouraged to bid but any exceptions taken to these specifications or alternates provided must be listed on the bid form or on a separate sheet attached to the bid form. If a list is not submitted with the bid it will be required that the bus delivered meet all of the requested specifications. A build sheet or equipment list does not meet this requirement, exceptions must be listed separate and marked as exceptions.