USD 261 Service Center

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B.J. Knudson
Executive Director of Operations

TO: Haysville Board of Education

FR: B.J. Knudson, Executive Director of Operations

DA: April 11, 2018

RE: Request to seek bids for an activity bus.

History/Relevance: The transportation department has three aging activity buses we frequently send on trips. These 3 buses have the Campus Colts logo on them. We have received a grant that will pay a between $37,000 and $48,000 toward the replacement of an activity bus.

What: We are asking for approval to seek bids for a new activity bus.

Why: We are needing to seek bids now so we can meet the deadline for the grant.

Where: Transportation Department

When: We would like to send out bid information on April 17th and have bids back for the board meeting in May.

Who: The development of this project included the Assistant Superintendent for Business and Finance, Executive Director of Operations as well as the Director of Transportation.

How Much: The cost for seeking bids is zero dollars. The cost of the project is estimated at $185,000.

If you have any questions, please do not hesitate to contact me.

bjk

Specifications for a 2019 Rear Engine Blue Bird Activity Bus Body/Chassis

1. Vehicle shall be new, 2019 year model transit design.
2. **CHASSIS AND BODY ARE TO BE DESIGNED, ENGINEERED, AND BUILT IN U.S.A. BY ONE MANUFACTURER AS ONE COMPLETE AND INTEGRATED VEHICLE.**
3. Vehicle capacity to be 42 passenger minimum.
4. Wheelbase will be 273 inches maximum.
5. Turning radius at curb not to exceed 33.2
6. Minimum body length to be 40.6 feet.

CHASSIS REQUIREMENTS

1. AIR CLEANER (Combustion)

Must be dry type with easily changeable element. An appropriate restriction indicator monitoring air flow from the cleaner to the engine intake is required. Must contain a moisture/particle ejector **– NO EXCEPTIONS.**

2. AIR INTAKE (Combustion)

The combustion air source for the engine must be located right side, rear, above window center line.

3. ALTERNATOR

Must be 320 Amp Leece Neville, high-output. **NO EXCEPTIONS.**

4. AXLES / SUSPENSION

Front

Must be Hendrickson steer axle w/fabricated box beam assembly, 14,600 lbs. capacity, Rated at 14,600 Lbs. Oil lubed wheel bearings. Hubcaps with window seal included. Must have 40-degree wheel turn angle **– NO EXCEPTIONS.**

Rear

Must be Meritor, 23,000 lbs. capacity single speed with 5.29 to 1 ratio. Oil lubed bearings.

SHOCK ABSORBERS

Front and Rear

Heavy duty dual acting shocks (1 per side)

SPRINGS

Front

Hendrickson “Airtek” front air-suspension

Rear

Hendrickson “Comfort-Air” rear air-suspension

5. BATTERIES

Three group 31, 12V batteries, 2100 CCA (combined). 2/0 gauge battery cables are included.

6. BRAKING SYSTEM

Service

Air drum brakes, 16.5x 6 front and 16.5x 8.62 rear - 30/30 brake chambers, ABS anti-lock. Bendix AD-9 air dryer. Meritor automatic slack adjusters. Dustshields front and rear. Total capacity of wet tanks 5800 cu. in. Heated drain reservoir.

Air compressor: Bendix 13.2 CFM capacity @1250 rpm, compressor gear driven. Uses filtered and turbo charged clean engine air.

Emergency/Parking

30 sq. in. spring brake system with treadle valve modulation. Instrument panel mounted valve provided for parking.

7. BUMPERS

a. Smooth front bumper must be one-piece 1/4" thick steel plate. Front bumper must include step holes for cleaning windshield.
b. Rear bumper to be 12" after forming and have 14" wraparound at corners Rear bumper must be one piece 3/16" thick steel plate.
c. Front and rear bumpers must be die-formed, 12" high, after forming, with 90° flanges, top and bottom.

8. CONTROLS

a. Electronic fast idle
b. Key type starter
c. Column mounted headlight dimmer
d. Hazard switch on steering wheel
e. Self canceling turn signal with indicator lights
f. Rheostat dimmer for driver instrument illumination
g. Dash mounted transmission shifter
h. Backlit rocker switches for all accessories must be mounted for easy access at driver's left below window.
i. Engine Compartment - Remote engine start switch, starter button, compartment light switch.

9. COOLING SYSTEM

a. Charge air and cross-flow radiator in tandem located on left side at rear of vehicle.
b. A 26" dia. nylon cooling fan with nine blades is hydraulically driven and thermostatically modulated by sensors in both coolant jacket and engine charge air intake. Valeo Engine cooling system.
c. Black rubber coolant hose with constant torque clamps to hold seals in place.
d. Transmission fluid cooled by 2100 BTU/Min. heat exchanger mounted external to radiator
e. Cool-Gard Coolant to provide anti-freeze protection to -34°F.

10. DRIVE LINE

Must be SPL 100 Series with protective guard around shaft with lubed for life components.

11. ENGINE

Cummins ISL-17 series-300 HP; 860 lbs torque. Must include a 1000W, minimum, internal engine block heater.

12. EXHAUST

3.5" O.D. 2-Ply stainless steel with catalytic converter, bellow flex style piping from engine turbo-charge to in line muffler. Stainless steel muffler. 4" O.D. 16 gauge aluminized steel tailpipe, exits through bumper, curb side. Wide band exhaust clamps used at all joints.

13. FLOOR, DRIVER AREA

Must be raised 2", minimum, above floor, with .62" plywood with .19" ribbed rubber floor cover.

14. FRAME

Main Frame - Dual "C" channels, 9.63" high with 3" flanges made of .25 thick, 50,000 PSI steel, Section Modulus = 10.1 in. cu.

Insert Dual "C" channels, 9 1/6" web with 2 3/4" flanges made of .25 thick, 50,000 PSI steel, Section Modulus = 9.5 in. cu.

Sub-Frame - Dual "C" channels, 50,000 psi steel, the sub-frame rails are turned with flanges outward and lowered 6" below main frame to best accommodate engine and related components.

Sub-frame rails are 65" long and overlap main rail and insert 24" where joining is reinforced with dual 3"x3', ,1/4" thick angle iron.

All permanent fixtures on frame are to be attached with hi-tensile strength "Huck-Spin" fasteners with swaged lock nuts. – **NO EXCEPTIONS**

Tapered rails are not acceptable – any deviation from this specification will result in the rejection of your bid.

15. FUEL SYSTEM

Must be 100 gallon capacity, minimum, aluminized steel, safety tank mounted between frame rails. Includes a sender inspection plate and right hand fill opening with spring loaded, locking door.

Primary fuel filter/water separator must be Racor 490R30, rated @ 90 GPH, 30 Micron filter.

Fuel pump must be mounted on engine.

16. HORN

Electrical dual with non-glare horn button emblem. Under floor mounted air horn.

17. INSTRUMENTS

a. Electronic speedometer/odometer with seven digits, with trip odometer
b. Fuel level gauge
c. Voltmeter
d. Ammeter
e. Oil Pressure gauge
f. Low coolant warning light
g. Tachometer with built in hour meter
h. Dash mounted digital clock
i. Coolant temperature gauge
j. Cruise Control

k. Dual air pressure gauge w/bar-coded indicators.
l. High temp./low oil pressure engine warning buzzer.
m. Transmission temperature gauge.

18. STEERING

Must be full power TRW THP-60 integral unit with 18.2 to 1 ratio, with gear driven hydraulic pump. Tilt telescoping steering column with 18" diameter, two-spoke, padded steering wheel. Automatic adjustable foot pedals must be included.

19. TIRES

Michelin tubeless radial tires 11R-22.5 with H ply rating hi-way tread front and rear.

20. TOW HOOKS

Two front and two rear, tow hooks must be frame mounted.

21. TRANSMISSION

Allison 3000 PTS automatic transmission, 6 Forward speeds, overdrive and reverse.

22. WHEELS

Hub-pilot, steel 8.25x22.5, 10 stud Disc, single front, dual rear. Oil lubed front wheel bearings. Wheels are to be polished aluminum.

BODY REQUIREMENTS

1. ACCESS PANELS

Interior

A 18"x22" access panel between the davenport seats is provided for engine service. The panel is removable from inside the body.

Exterior

Electrical Terminal: 27.5" x 21.75 hinged door located exterior below driver's windows for access to body electrical junction, terminals and circuit breakers. Door must have retainer to hold in open position.

Right Front: 19" x 15 1/2" hinged door to permit access to heater air intake screen, air restriction indicator and wiper motor.

Left Front: 19" x 15 1/2" hinged door to permit access to windshield washer reservoir, power steering reservoir and wiper motor.

All access panels must include keyed, locked latches.

2. AIR INTAKE

Heater intake must be on right front below the windshield level is electrically controlled. Manual driver fresh air vent must be located on the left side by the driver’s feet.

3. COMPARTMENTS

Battery

Enclosed sliding tray 23 1/2" x 15 1/2" with locking hinged door.

Engine

Top hinged, aluminum perforated door with gas lift assist cylinders 85" x 41" installed at rear providing access to engine for service.

Glove Box

An 11” x 6 1/2” door above windshield on right side with door and latch must be provided for driver storage.

4. CONSTRUCTION

a. **ALL RIVETED BODY CONSTRUCTION. THIS UNIT MUST MEET 2003 FMVSS JOINT STRENGTH REQUIREMENTS.**

b. Rubber isolators to be located between body and chassis in front cowl area and rear body tie-down area – any deviation from this specification will result in the rejection of your bid.

c. Body sheet metal must be fastened with buck rivets on exterior and pull rivets on interior side and ceiling panels. Roof sheets must also be riveted to each and every roof bow. Roof sheets riveted only where seamed are not acceptable to our district. SHEET METAL SCREWS NOT ACCEPTABLE – **any deviation from this specification will result in the rejection of your bid.**

d. Roof sheets must lay vertical (window top to window top) and be **one-piece**, double lapped and secured with two rows of rivets for maximum strength. Formed rain visors, embossed in roof panels are REQUIRED by the district – **any deviation from this specification will result in the rejection of your bid.**

e. One-piece, 14 gauge hat-shaped roof bows, without welds, from floor overhead to floor on other side must be used. Bows must not extend past floor on either side of bus – **any deviation from this specification will result in rejection of your bid.**

f. A minimum of (4) protective 16-gauge steel rub rails, including snow rail on bottom must be used. Bumper rub rail installed below rear emergency door, immediately above the rear bumper. These rails must be RIVETED to structural bows and side panels with buck rivets. **Sheet metal screws NOT acceptable**.

g. Zinc coated body panels (roof, inner sides, headlining)

h. All body parts must be thoroughly rust-proofed after fabrication and before assembly.

i. Body must be fully undercoated before mounting to the chassis

j. **Outside side panels must be constructed of 16-gauge smooth steel**. Side panels must extend from below the side windows to a distance of 16 1/4" below the floor (16 1/4" skirt).

k. A removable 18-gauge steel front upper inner panel must be installed to allow access to the front roof cap area. A removable 20-gauge steel rear upper inner panel must be installed to allow access to the rear roof cap area. Removable composite wire moldings, right and left must be installed to allow access to body wiring harnesses. Textured aluminized fully hemmed steel inside side panels.

l. A steel kick panel must also be installed in driver’s area side walls.

5. DEFROSTER

Sufficient defroster warm air outlets/snorkels must be provided to keep windshield and driver's window, free of fog, snow, and ice.

6. DOORS

Emergency

To be located left side, including upper tempered green tinted safety glass. A 5" fire-block upholstered header pad with a telescopic prop support attached to the top inside of the emergency door to hold it open at approx. 95°is to be included. A Slide-bolt security latch with an audible alarm must also be included to warn the driver if the lock is activated after the engine is running.

Entrance

Entrance door must be ball bearing suspended, outward opening, two-panel door and seal against outside edge of lower step when door is shut. Door installation with air-powered controls for opening and closing the door. Doors are to be activated a by means of an air cylinder with an electrically controlled valve assembly over the door and a rocker-type switch, RH mounted accessible to the driver. Door must be laminated green tinted glass. A 4" fire-block upholstered header pad over the interior of the entrance door along with a stainless steel assist rail at the rear of the stepwell. Keyed lock mechanism which includes a deadbolt from the door panel to the header above the entrance door.

7. ELECTRICAL (accessory)

Power Socket Accessory with Cap must be provided.

8. FENDERS

Front and Rear fenders, black rubber

9. FLOOR

a. 3/16" thick ribbed blue rubber in aisles and at entrance aisle area. Aluminum aisle trim over joint in floor covering, full length of body
b. 1/8" Smooth blue rubber. Cove molding at wall is to be galvanized steel.
c. Front and rear molded black smooth rubber wheelhousing. Galvanized steel wheelhouse trim.
d. 5/8" treated plywood sub floor, attached with screws.

10. HEADROOM

Full 77", over floor covering and 5/8" plywood sub floor, measured at center aisle.

11. HEATER/DEFROSTER

a. 90K BTU front system with continuous defroster duct under windshield and driver window.
b. 6" fan mounted to wire molding, located in the upper left, above driver's window.

   6" fan mounted to windshield header, center of body.
c. 12K BTU driver heater at left under driver seat, single speed fan
d. 50K BTU, floor mounted, mid-ship minimum**.** Dual fans with separate 2-speed motors (must have washable filters)
e. Two (2) 50K BTU, rear floor mounted minimum, One (1) LH and one (1) RH. Dual fans with separate 2-speed motors (must have washable filters)

f. Heater water booster pump must also be installed
g. Dual ball type heater cut-off valves must be provided to isolate heater system from engine / radiator.
h. Manual ball type water flow control valve on heater next to driver must be provided, for temperature control.
i. Goodyear Hi-Miler heater hose with constant torque clamps at all joints. Includes all heater hoses and hose clamps within the body heater system.
j. Electrically controlled water regulating valve.

12. INSULATION

The roof front and rear (including corners & roof bows) are to be insulated with polyester insulation. Sides are insolated with 1 1/2"" thick high density mineral wool. **Fiberglass insulation in sidewalls will result in rejection of your bid.**

Sound deadening and vibration reducing material shall be sprayed on unexposed surface of interior and exterior roof panels.

Perforated acoustic headlining panels spanning the entire length of the bus.

13. LETTERING

a. Graphics for this unit must include a full-wrap of the bus with the exception of the roof above the windows. Windows must be wrapped with a perforated material.

14. LIGHTS

a. Back-Up **LED** - two 4" clear right and left rear.
b. Clearance **LED** - two amber front and two red rear single. Switch to operate clearance, cluster and side marker lights**.**
c. Cluster **LED** - three amber front and three red rear with shields.
d. Daytime Running - Head lamps, tail, license plate, parking, clearance & marker lights activated when engine is running.
e. Directional **LED** - two 7" front amber with directional arrow. Two 7" amber lights with directional arrow mounted on rear.
f. Side Directional **LED**– Amber sealed shock mounted, side directional mounted at front belt line area.
g. **LED** dome - Two rows equally spaced at center over aisle, two switches, left and right with a separate switch for the rearmost 2 lights. Driver's dome light to be activated with separate switch.
h. Headlights – two rectangular, Halogen single-sealed beam.
i. **LED** side Marker - Amber right and left intermediate side marker lights.
j. Interior and exterior **LED** stepwell light to operate with ID lights when entrance door is open.
k. Stop and Tail **LED** - Two combination lights, 4" right and left rear license panel in combination with 7" stop and tail lights with clear red lens.
l. Engine comp.- Two red lights, activated with the hazard lights, visible when door is open.
m. White flashing roof strobe mounted approx. 4' from rear.

15. MIRRORS – REMOTE/SELF-DEFROSTING

Exterior

Mirror Lite High Definition™ Cross View mirror system.. The crossview mirror system must have a 10.8" x 12.5" elliptical mirror with tinted upper portion to reduce glare. The mirror mounting posts must be attached to the front cowls.

Rearview

Mirror Lite “Viewmaster” non-detent rearview mirror system. The Rearview mirror must have 7.75” x 10” of flat mirror lens tray on the upper portion, and 7.75” x 7.75” mirror of lens tray on the lower portion. LH bracket must contain a grab handle-type arm for viewing mirror through the driver’s window. Both the LH and RH brackets must be non-breakaway overhead-type arm for viewing mirrors through the windshield.

Interior

10" x 30” with clear safety glass with padded edges.

16. MUD FLAPS

Required front and rear mud flaps

17. PAINT

Exterior

Unit is to be painted fleet white. Graphics to be determined by district upon purchase of the unit and must include a $2,500.00 credit. OEM, heat cured, polyurethane.

Interior

Astro White, hot sprayed-on baked enamel, except aluminized inner side panels.

18. RADIO

AM/FM/MP3/PA with 8 deluxe speaker system.

19. REFLECTORS

a. Two 3" red mounted on side of body near rear installed with screws.
b. Two 3" red, mounted on rear of body installed with screws.
c. Two 3" amber right and left intermediate side reflectors installed with screws**.**

20. REFLECTIVE TAPE

a. 3M Diamond Grade tape one-inch minimum width strip must surround each emergency exit, 1 3/4” wide rear structure, and 2” wide strip on each side of unit at approximately floor level.

21. SAFETY EQUIPMENT

a. Fire extinguisher – 5lb. Dry with hose
b. 24 unit standard first aid kit
c. Triangular warning devices – floor mounted
d. Body fluid clean up kit
e. Reverse activated back up alarm
f. Roof vent/hatches, two (2), must be installed in body roof, with buzzer to driver’s area.

22. SEATS

a. Driver's

National 2000 high back air suspension, gray, with seven inch fore and aft travel and five inch vertical adjustment. Seat belt must be three-point, floor mounted anti-cinch emergency locking retractor. An adjustable pillar loop providing approximately 7 1/2" vertical adjustment at the shoulder belt top mount must be installed. Driver's armrest must be to the left of driver on rear portion of switch panel. Flip up style armrest mounted aisle side.

b. Upholstery

All Passenger seats must be upholstered in vinyl fire-block material that is gray in color.

c. Passenger seats

Family Freedman Activity seats: 35" width split back/bench design for two (2) passengers; contoured lumbar support.

23. STEPWELL

Straight - 3 step, 24 3/4" depth galvanized steel. Black step treads non-abrasive with white nosing. 3" white rubber wear plate is located at the floor level step of the entrance door. Stepwell design must be designed to National standards 1990.

24. SUN VISOR

Transparent dark green tint 6.5" x 30" smooth edge plastic, located in front of driver.

25. SWITCH PANEL

Mounted on left of driver with rocker-type, illuminated switches for electrical equipment. Brightness of illumination must be controlled by an additional rheostat switch.

26. VENTILATION

Static non-closing type in front roof.

27. WINDOWS

Driver's

Double sliding transit style with security fastener for locking both sashes, tempered-tinted safety glass.

Side

12" split sash, tempered-tinted glass in **black** frame, provides 12" opening when lowered. Push out windows each side, 2RH/2LH, with buzzer to driver's area.

Rear Emergency

Large 24 1/2" x 57.5" push-out, tempered dark tinted window with air spring that holds in open position. Vandal lock system.

28. WINDSHIELD

Two-separate pieces of flat shaded safety plate glass bonded into the structure. Grip handles mounted on both sides with fold-up steps, right and left cowls, to facilitate cleaning of the windshield.

29. WINDSHIELD/WIPERS

Electric, intermittent single switch, wet arm wipers. Bottom mounted with remote control, non-glare arms and blades. Electric windshield washer with hard plastic one-gallon capacity reservoir located under engine hood, washer outlets mounted on wiper arms.

30. WIRING

Colored and continuously number coded in composite molding on top of side windows for access to harness without removing window. Body wiring protected by automatic resetting circuit breakers.

31. AIR CONDITIONING

MCC model PDC-350, 180,000 BTU corner ducted system with reading lights and dual position USB ports at each passenger position. **Condensers are to be roof mounted**.

32. LUGGAGE

Luggage compartments, pass-through, under full width of bus body, forward of rear axle, 122 cu. ft., locking doors and lights.

33. CLOSEABLE PARCEL RACK

Closeable airline style parcel racks running the entire length of the bus on the LH and RH side.

34. DVD/MONITOR SYSTEM

Unit must include a DVD player with 10-11" monitors (5 per side). Sound must be incorporated into existing speaker system for the radio and/or PA.

35. WARRANTY

3 year/unlimited mileage warranty on all Blue Bird componentry and workmanship.

PLEASE NOTE: These specifications represent the minimum specifications acceptable to the district. Any deviation here to must be specifically identified in and described on an attached sheet. Failure to do so will result in the rejection of your bid and/or your product for reason of non-compliance with our invitation.