



School District 158 Bid 2018-7

Conventional School Bus Specifications

Wheelchair Passenger

CHASSIS OPTIONS

MODEL	<p>2018-2019 New or "One Year Old" Model Body and Chassis</p> <p>Flat floor chassis- no wheelwells</p> <p>54 passenger capacity. Up to 7 wheelchair placements - see floor plan</p> <p>MINIMUM seat spacing of 28" 78" MINIMUM interior headroom</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
AIR CLEANER	<p>Heavy duty type</p> <p>Firewall mounted with disposable element and integrated air intake hood plenum. Filter minder located on the filter.</p>	<hr/> <hr/>
ALTERNATOR	<p>Minimum of 325 amp for AC</p>	<hr/>
AXLE FRONT	<p>8,000 lbs. maximum for smooth ride</p> <p>Wheel seals- oil lubricated front wheel bearings</p>	<hr/> <hr/>
AXLE REAR	<p>17,500 lbs. maximum for smooth ride</p>	<hr/>
BATTERY	<p>Three (3) 12 volt maintenance free – 2850 CCA</p>	<hr/>
BATTERY DISCONNECT	<p>Metal battery disconnect switch mounted <u>in</u> <u>battery box</u>. Disconnects the chassis and body electrical from the batteries to preserve battery life</p>	<hr/>



BRAKES

Meritor/Wabco HydroMax hydraulic brake system with anti-lock brakes
Hydraulics with 4 channel ABS and Diagnostics operation for brake wear imbalance and event recording
Electronic traction control- **Safety Item**
Driver foot operated parking brake with easy to reach release lever
Parking brake pedal to include a "gas strut" for smooth operation with slow return on release, eliminating the ratcheting when setting or quick snap release
Safety Item. Ignition key must be in the "ON" position to release parking brake to prevent bus rollaway
Safety Item. Service brake pedal must be "depressed" to release parking brake to prevent bus rollaway
Safety Item. Warning alarm will sound if the driver forgets to set the parking brake before turning vehicle "off"

COOLING SYSTEM

Aluminum heavy-duty radiator with Visible coolant level check

ELECTRICAL

Chassis circuit breakers to me manual-reset with trip indicators in lieu of fuses
Low oil pressure/high water temperature warning light and alarm
Speedometer with odometer, trip odometer, tachometer, hourmeter, oil pressure, water temperature, voltmeter and fuel
DEF fuel gauge mounted in the instrument cluster
Transmission temperature gauge
Ammeter
Low coolant warning light and buzzer on the dash
Low fuel warning light and buzzer on the dash
Low DEF warning light and buzzer on the dash



Electronic cruise control with minimum activation speed set at 35mph and a maximum of 65mph

Electronic hand operated throttle on the dash

Dual electric horns

Halogen headlights with day-time running lights

Daytime running lights to be activated when transmission is shifted into gear. Lights to be "off" when the transmission is in neutral or park position

Headlamp warning buzzer when lights left "on" when ignition is "off"

High beam controlled by steering column mounted stalk

All ignition switches to be keyed alike

ENGINE

Cummins B6.7 electronic in-line 6 cylinder turbo charged diesel engine, meeting new EPA standards for 2017

Engine to be **250HP horsepower minimum**

-specify horsepower

HP

Engine torque to be a **minimum of 660 ft. lbs.** -specify torque

Torque

Five (5) year 100,000 mile engine warranty

Water-in-fuel warning light and buzzer on the drivers dash

Fuel water separator with thermostatic fuel temperature controlled electric heater, filter/change indicator light, and fuel in water sensor on the dash
 750 Watt engine block heater minimum. Weather type cover with rubber insulated seal mounted in the center of the front bumper for easy access

Extended Life Coolant- -40 degree anti-freeze

Yellow winter front installed

EXHAUST

Exhaust exit through bumper with heated mitigation device

FRAME

Heavy duty 50,000 PSI

FUEL TANK

65 gallon fuel tank minimum between frame rails



	Fuel tank must have heavy duty ICC guard mounted on the outside of the frame rails for additional protection- furnish factory drawing	_____
	Fuel tank sender inspection plate mounted in the floor over fuel tank	_____
	Fuel tank filler door with positive latch	_____
STEERING	Power with an 18" black cushioned tilt steering wheel	_____
SUSPENSION	18,500 lbs. rear suspension	_____
	8,000 lbs. front taper leaf with maintenance free rubber bushings	_____
	Front and rear dual action type shock absorbers	_____
TIRES	245/70R x 19.5 14 ply highway front and all season (mud and snow) rear	_____
TRANSMISSION	Allison Electronic Series 2500PTS, 5 th Generation, <u>6 speed</u> automatic transmission with DOUBLE overdrive	_____
	Allison <u>FuelSense Max</u> transmission shift control parameters with EcoCal and Shift Sensing. <u>Neutral at Stop</u> and Acceleration Rate Management for improved performance and fuel economy	_____
	Allison seven (7) year transmission warranty in lieu of the standard three (3) years	_____
	Trans-Synd fluid for the extended warranty	_____
	Transmission to have a PB (park brake) position	_____
	Bus must be in the (PB) park position to operate the wheelchair lift to prevent accidental release of the park brake when lift is in operation	_____
WHEELS	Tires and wheels to be balanced before delivery	_____
	19.5 x 6.75 (Hub Piloted)	_____
WHEELBASE	236" Wheelbase	_____
MISCELLANEOUS	Two front and two rear tow hooks	_____



ENGINE HOOD Sloped fiberglass hood with splash shields and low effort tilt
Hood to have built-in open and close assist that does NOT require the driver to lift a hold open device to close

SERVICE MANUAL Web based diagnostic tool to include all wiring diagrams, service manuals, service tech bulletins, and repair history. If not available, furnish CD service manuals, wiring diagrams, and technical bulletins

SERVICE LOCATIONS Furnish a list of service locations and distances from Huntley that can work on the chassis, engine, and body

BODY OPTIONS

AIR CONDITIONING 60,000 BTU recessed in-wall air conditioning unit installed in the **FRONT** header with dash mounted controls
60,000 BTU recessed in-wall air conditioning unit installed in the **REAR** header with dash mounted controls
Total BTU's for AC to be 120,000 MINIMUM
Air Conditioning warranty to be a minimum of five (5) years on the evaporators and condenser coils.
The air conditioning company to exchange complete evaporators or coils if leak occurs. Three (3) year minimum on all other parts, components and approved labor. Furnish copy of the warranty in the bid.

BARRIERS Two (2) fully padded barriers, one on each side, mounted in front of the first row of passenger seats
Barrier behind the driver to be track mounted
Barrier after the door to be permanently mounted
Modesty panels between floor and bottom of barriers on the driver's side and passenger side



**BODY
CONSTRUCTION**

Body length to be a 28'2" - specify length

16 gauge smooth exterior roof and side panels

Top of the rub rails to be sealed with caulk

Four (4) guardrails applied to exterior of the body,
 located at: window level, seat cushion level, near floor
 level and at bottom of skirt

12 inch rear bumper

**CERTIFICATE
HOLDER**

Certificate holder 6"x 10" mounted to the front
 header

CROSSING ARM

Electrical operated crossing arm with interrupt switch
 on the dash

DEFROSTER

Full width channel with separate snorkel for driver
 window and entrance door

Two (2) two-speed fans, one overhead center above
 windshield and one to the left of driver

**DOOR-
EMERGENCY**

Located in the center rear of the bus

Stainless steel maintenance free door hinges or
 internal hinges

Glass on top and bottom with door header pad and
 warning buzzer

Positive stop to hold door open when in use

DOOR ENTRANCE

Electrically operated entry door with exterior key to
 open and close the door

Both leafs to open outward with adjustment
 mechanism overhead, behind removable access panel
 a clear opening with a minimum of 36"

specify opening size

Inches

Entrance door to have non-corrosive handle on the
 exterior



Door to have an "in motion interlock" feature so the door cannot be opened while the bus is in motion to reduce potential of accidental opening- **Safety Item-**
No Exceptions

ELECTRICAL

Fully integrated multiplex electrical system for both body and chassis with number and color coded wiring and matched weather proof connectors

Wiring shall be flame retardant and grommets where it passes through metal

All switches to be located on an angled surface for quick and convenient operation

Manual resetting circuit breakers with trip indicators for the body

Ignition controlled body cut off switch

8 lamp warning light system, halogen bulbs

Hoods over the 8 lamp system to reduce glare, background painted black

"Override" system for the electric door to allow driver to open and close the door while "RED" warning lights are still activated

"Noise Suppression Switch" on the dash

Back up alarm

12V cellular phone power outlet

Exterior light "Pre-Check" switch located on the dash which enables one person to complete a check of all exterior lights. This includes backup and brake lights

EMERGENCY EQUIPMENT

Three (3) triangular reflectors mounted in drivers area behind driver's seat off the floor

5 lbs. fire extinguisher mounted in drivers area

Body fluid kit mounted to the front header

Seat belt cutter

First aid kit mounted to the front header

FLOOR & COVERING

Flat floor chassis- no wheelwells



5/8" inch plywood
Gray colored flooring
2" white standee line between barriers
Aluminum aisle moldings

GRAB HANDLES

Two (2) stainless steel assist rails located forward and rear of the stepwell

HEATERS

90,000 BTU driver's heater
50,000 BTU right front stepwell heater
80,000 BTU rear wall mounted heater
Two-quarter turn brass type shut off valves in engine compartment- gate valves not acceptable
Filters for all front, stepwell, and rear heaters
Heater booster pump, located in the engine compartment, with dash mounted switch
All heater hoses to have constant torque hose clamps

INSULATION

Acoustical insulated headliner FULL LENGTH of the bus for noise reduction
1 1/2" thick fire-resistant insulation in headlining, side and rear wall to deaden sound to reduce vibration and provide a thermal barrier

LETTERING

Lettering and numbering
"TO COMMENT ON MY DRIVING" decal
"VIDEO" decals inside and outside

LIGHTS

Two (2) rows of interior dome lights with a minimum of three (3) on each side and the driver's light on a separate switch
Door dome and exterior door light to come on when door is open
Step well light
Two 7" backup lights with clear lens

Three (3) "LED" amber flush mounted lights on front



and three (3) "LED" red cluster lights mounted on rear,
"LED" side marker lights with guards
Two (2) 7" amber rear directionals and two (2) amber
lower fender mounted front turn signals
Two (2) "LED" side directional lights with armored
shields
Roof mounted low profile strobe light with pilot light
on the dash
7" stop lights and 4" tail lights to activate when brake
pedal is depressed- total of 4 stop lights
7" cowl or hood mounted turn signal lights

LOCKS

All entrance door locks to be keyed alike
Exterior cowl mounted key to electrically operate the
entrance door. Key to open/close the door and also
secure the bus
Rear door vandal lock with starter interlock

MIRRORS

6" x 30" interior mirror
6" x 30" interior visor over windshield
All exterior rearview mirrors to be heated
Heated and Remote Powered rearview mirrors
Cross view mirrors to be Roscoe High Definition
Heated cross view mirrors, fender mounted

MUD FLAPS

Front rubber mud flaps and rear to anti-sail flaps

PAINT

Exterior will be National School Bus Yellow with black
trim
Paint will be a baked-on high solids polyurethane
All seat frames shall have a baked-on black powder
coating for scratch resistance

RADIO

Panasonic AM/FM/CLOCK with public address system
with 4 speakers. System to be dash mounted for easy
access

RAILS, SHOULDER

Padded shoulder rails



REFLECTIVE TAPE	3M Diamond Grade yellow reflective markings around emergency roof hatches, kickout windows, down both sides, perimeter of the rear door, rear perimeter of the entire rear end, and "SCHOOL BUS" lettering front and rear- <u>furnish sample of tape in the bid</u>	<hr/>
CHILD DETECTION SYSTEM	Child detection system. Wired to activate when the stop arm is started for the first time, shut off switch in the rear. All interior dome lights to activate for two (2) minutes when bus is turned "off"	<hr/>
ROOF HATCHES	One (1) Transpec roof hatch with buzzer and outside release handles	<hr/>
SAFETY INSPECTION	New safety sticker at time of delivery	<hr/>
SEAT- DRIVER	Drivers seat-National 2000 high back, 7" fore/aft seat adjustment, switch activated 6" height adjuster, <u>GRAY</u> cloth insert and storage pocket on back. Height to be controlled by switch on the side of the seat Driver's seat to have an adjustable armrest on the aisle side Driver seat belt-3 point retractable shoulder belt to be wall mounted, "D Loop" type designed for air seats. 8" track on the wall for height adjustment. <u>Color to be BLAZE ORANGE</u>	<hr/> <hr/> <hr/>
SEATS- PASSENGER	All ten (10) seats on the driver's side to be 39", 4 legged, "track mounted" that can be removed from the inside of the bus Four (4) rows of recessed tracking for seats and WC- No Exceptions First four (4) seats behind the entrance door to be 39" permanently mounted Next four (4) seats behind the permanently mounted seats to be four (4) 39", 4 legged, "track mounted" that can be removed from the inside of the bus	<hr/> <hr/> <hr/> <hr/>



All seats to have three (3) color coded seat lap belts installed

High Back Passenger Seats. All seats must have an **interchangeable seat back module** that allows for future upgrades. Upgrades include 3 point lap/shoulder belt for up to 3 passengers per seat; Integrated Child Seat (ICS) with a 5 point harness and sliding shoulder height adjusters to accommodate significantly taller children. All upgrades to be accomplished without replacing or removing the seat base frame from the floor.

Upholstery to be gray

SERVICE LOCATIONS

Furnish a list of service locations and distances from Huntley that can work on the chassis, engine, and body

STEPWELL

Three steps covered with Koroseal "Pebble Tread" step treads for all three steps, non-metal backing, with white edge

Entrance steps to be a 36" wide for increase passenger access, the stepwell shall remain its full width with no taper from the bottom step to the top step- **Safety Item**

STOP ARMS

Front stop arm. Safe Fleet (Specialty) Model 6980 electric stop arm. High Intensity, reflectorized, with "LED" STROBING cluster lights, double sided

Rear stop arm. Safe Fleet (Specialty) Model 6980 electric stop arm. High Intensity, reflectorized, with "LED" STROBING cluster lights, double sided

TITLE AND LICENSE

Dealer to cover all original costs for license and title

UNDERCOATING

Driver area and stepwell flooring panels shall be a minimum of 14 gauge material thickness including intermittent sills with a high performance conversion coating that chemically integrates and bonds with the



zinc coating for increased corrosion resistance.

ChemGuard or equal

Entire underbody shall be completely undercoated with water-based undercoating

VENTILATOR

Static non-adjustable exhaust located in low pressure area of front roof

WINDOWS-SIDE

Side and rear windows to be dark tinted- 28% light transmission

Two (2) emergency pushout windows- 1 each side- dark tinted 28%

WINDOWS-REAR

Dark Tinted, 28% light transmission

WINDOW-DRIVER

Driver’s window shall be sliding sash aluminum frame- 70% tinted glass

WINDSHIELD

Windshield shall be tinted safety plate laminated glass with five (5) inch glare resistant band at top and provide an unobstructed view for the driver

WINDSHIELD WIPERS

Heavy duty electric bottom mounted, wet arm type

Steering column mounted wiper switch shall have five intermittent speed and low and high speeds

MISCELLANEOUS

2-WAY RADIO

“Kenwood” two- way radio and antenna installed per District requirements

Pre-wiring for a 2 way radio. Location to be in the exterior electrical access panel. Connections to be for power and grounding using a 20amp fuse protection. Must be labeled 2-way radio. Transfer of existing radios to new buses.

DIGITAL VIDEO SYSTEM

Transfer of existing recorderd and cameras from trade-in buses. Pre-wiring for a video. Location to be in the exterior electrical access panel. Connections to be

for power and grounding using a 20amp fuse protection. Must be labeled video.

One camera installed on the front bulkhead to view towards the back, one mounted over the driver's side window to view driver and stepwell, and mid mount on the driver's side to view the rear seats. DVR to be mounted in overhead storage compartment over the windshield

WARRANTY Furnish complete warranty with the bid

WHEELCHAIR EQUIPMENT

WHEELCHAIR LIFT CAPACITY Lift to meet the new Federal Standards with all warning devices for wheelchair equipped buses
Capacity to be 54 seated with 0 wheelchair placements or up to 12 seated with 7 wheelchair placements

WHEELCHAIR LIFT DOOR Lift door to be mounted in the rear on the entrance door side
Single lift door to be 43" wide x 70" high. Include all required interior and exterior lights and warning buzzers
Lift door to have a slide bolt type lock system without interlock
Lift door to have warning light on the dash when door is opened

WHEELCHAIR LIFT Lift to be Braun model L919FIB Generation 2 ADA, 800lb, with dual handrails and emergency back-up pump
Braun power pack to be mounted on the front side of the lift for easy access

LIFT INTERLOCK SYSTEM Wheelchair Parking Brake Control for Automatic Actuation- when transmission shift is put into the park position, the parking brake applies automatically. Parking brake cannot be released until ignition switch is in the "ON" position and the service

brakes are applied

Transmission must have a “brake interlock system” for wheelchair equipped buses. When the transmission shifter is put into the park position (PB), the parking brake applies automatically. Parking brake cannot be released until ignition switch is in the “ON” position and the service brakes are applied. This prevents the vehicle from moving if the park brake is accidentally released

Bus must be in the (PB) park position to operate the wheelchair lift to prevent accidental release of the park brake when lift is in operation

WHEELCHAIR TIEDOWNS

Five (5) sets of Q’Straint Q8107-A1-L2 “L” track mounted retractable type wheelchair tiedowns
Full length “L” tracks mounted over the driver’s side windows for the shoulder belts and over the two wheelchair locations on the passenger side
Wheelchair positions to have 50” spacing

WHEELCHAIR LIGHTS

Exterior light mounted above the lift door to operate when door is opened
Lift to be equipped with 2 spot lights on the lift platform to operate when door is opened
Interior light mounted over the lift to operate when door is opened

WHEELCHAIR FLOOR TRACKING

Full length “L” tracking on the driver’s side. **Must include 4 rows of tracking for seats and wheelchair placements**
“L” tracking under the four track mounted seats on the passenger side. Must include 4 rows of tracking for seats and wheelchair placements
All tracking must be recessed into the floor