

TRA22-01 - Supply and Delivery of School Buses - Quote Form - Bus Unit Price: Type A2 Electric

		Dynamic Specialty Vehicles	
		Submission 1	
Line Item	Bus Description	Unit Price	
	Type A2 Over 6350kg GVW Chassis. All units and components must meet Federal and Provincial regulations and requirements and current D250 standards.	\$ 276,155.0000	
1	Type A2 (MFSAB) Over 6350kg GVW Chassis. All units and components must meet Federal and Provincial regulations and requirements and current D250 standards.	\$ 274,070.0000	
2			

TRA22-01 - Supply and Delivery of School Buses - Quote Form - Option Pricing: Type A2 Electric

		Dynamic Specialty Vehicles		
		Submission 1		
Line Item	Optional Pricing	Charge Type	Unit Price	Additional Information
1	Price per additional row of seating positions ranging from 24 - 29 passenger	Additional	\$ 840.0000	Base Type A bus is based on 24 passengers. Up to 29 passenger capacity on G5 Electric.
2	Power and Range upgrade -Price for each additional 25km range per charge	Not Available		
3	Recommended Level 2 charging system for your bus	Additional	\$ 2,799.0000	SCH100 EV Charger made by Clipper Creek. Price is hardware only. Installation and electrical infrastructure extra. Options: Juice Bar Siemens ABB and NUVVE Smart Charger
4	One (1) additional spare tire mounted	Additional	\$ 420.0000	Includes Spare Tire Transport Packaging. * OEM spare tire subject to change.
5	Current Gatekeeper digital video system supplied and installed with two (2) cameras	Additional	\$ 2,100.0000	SD Card Recorder with 2 interior cameras.
6	Current Seon digital video system supplied and installed with two (2) cameras	Additional	\$ 2,270.0000	4 Camera DVR with hard drive with 2 interior cameras.
7	Pre-wiring for 2-way radios thru noise suppression switch - power and antenna	Additional	\$ 90.0000	Please provide preferred radio location. 2-way radio & antenna installation available upon request.
8	Driver's compartment storage overhead	Additional	\$ 465.0000	Available in the G5 Series. Maximum allowable weight: 5lbs.
9	Installed Zonar current GPS unit with EVIR and handheld device with all accessories. Please quote on the hand held devices available	Additional	\$ 820.0000	Samsung tablet or Connect Kit extra if required. Does not include device activation from Zonar. Includes hardware surcharge.
10	Zonar current GPS device installed	Additional	\$ 615.0000	Does not include device activation from Zonar. Includes hardware surcharge.
11	Driver's clipboard storage - assessable from drivers seat	Additional	\$ 50.0000	Included
12	Traction control through ABS	No Charge		
13	Limited Slip Rear Axle	Not Available		
14	Acoustic ceiling panels throughout	Additional	\$ 1,970.0000	This option is not necessary as the G5 Electric is extremely quiet.
15	Winter front and bug screen	Additional	\$ 330.0000	
16	Interior - Exterior intercom	Additional	\$ 680.0000	Includes radio upgrade and external speakers
17	Emergency hatch roof vent with exhaust fan	Additional	\$ 975.0000	
18	Luggage racks (interior) - and seat belt equipped seats for 24 passenger or greater MFSAB activity bus only.	Additional	\$ 8,725.0000	Price includes luggage (parcel) racks and CE 3PT seat belts for 24 passenger.
19	Integrated child seat - specify options available	Additional	\$ 405.0000	30" seat has one ICS position - add 405 per seat 39" seat has two ICS positions - add 720 per seat
20	Wheelchair lift - specify OEM in attached info. Supply and install wheelchair lift with one chair position across from lift inclusive of tie down system.	Additional	\$ 9,800.0000	Base model includes Braun Century 34X54 Ricon S5005-F1020100A option available. add 555
21	Track seating per wheelchair space	Additional	\$ 2,700.0000	
22	Drivers side running board	Additional	\$ 305.0000	For E450 for G5 Electric
23	OPTION # 18 CLARIFICATION: MFSAB PRICE IS FOR 24 CE WHITE FAMILY SEAT (HIGH BACK BUCKET WITH 3 POINT SEATBELT) VS. BENCH SEATS ON 177" WB GM 4500 GAS CHASSIS; PARCEL RACKS INCLUDED.	Additional	\$ 8,725.0000	Price includes luggage (parcel) racks and CE 3PT seat belts for 24 passenger.
24	Stop Arm Camera	Additional	\$ 1,000.0000	Stop arm camera prices are based on recorder able to accommodate extra cameras. DVR may need to be upgraded as more camera inputs maybe are required. Price reflects License Plate Recognition cameras or 2 camera Stop Arm system.
25	Pedestrian Detection System	Additional	\$ 2,450.0000	Mobileye Collision Avoidance System.

TRA22-01 - Supply and Delivery of School Buses - Specification - Base Bus Specifications: Body - Type A2 Electric

		Dynamic Specialty Vehicles	
		Submission 1	
Line Item	Body Specifications	Yes/No	Additional Information
1	Driver's Seat - Cloth Covered	Yes	
	MIRRORS Right and left side primary and convex mirrors; be remote adjustable	Yes	Heated remote self defrosting mirrors with timer.
	Exterior convex crossovers self-defrosting mounted on right and left sides of hood		
2	One (1) LED stop arm with strobe lights (red) - electric operated front mounted with wind guard.	Yes	
3	Wet arm windshield wipers intermittent / delay preferred	Yes	OEM supplied
4			
5	Eight (8) light warning system roof mounted white flashing strobe light	Yes	
	Steering - Full Power and Tilt	Yes	OEM supplied
6			

7	School buses must be equipped with heating units and be able to sustain 15.5 degrees C (plus or minus 2 degrees) inside the vehicle when the outside temperature is 0 degrees C ambient. Heaters should not decrease vehicle range by more than one percent. Please describe achievable in vehicle temperature when outside temperature is -30C and provide the expected impact of heating the interior cabin temperature on vehicle range especially when outside temperature conditions are very cold	Yes	
8	73" minimum interior headroom at highest point	Yes	76" headroom at center aisle.
9	Horns - Dual Electric	Yes	OEM dual horn
10	Sun Visor - 6" X 30"	Yes	OEM supplied sun visor can be replaced with sun visor that is 6x30"
11	One (1) roof emergency hatch/vent	Yes	Vent fan option available
12	Min. 97dB Back up alarm	Yes	Back up alarm at 112dB
13	Lights and Instrumentation - Specify Details	Yes	Lights are LED throughout the bus. Instrumentation - DPI (driver performance indicator) SOC indicator (state of charge) transmission gear indicator various warning lights related to the electric drive train.
14	Crossing arm deactivation switch	Yes	
15	Vendors should describe their proposed heating systems including fuel source and flexibility to accommodate different fuel types as requested by local school district. " The use of electric heaters to pre-heat the vehicle cabin is not preferred; however using electric heat to keep the batteries warm is acceptable. Vendors should also describe their proposed system for pre-heating vehicle cabins.	Yes	Fuel fired heaters currently not available. Additional electric heaters to be added for extreme cold climates.
16	INSULATION Body insulation including walls ceiling & roof bows - to be fiberglass or equivalent	Yes	1 1/2" fiberglass insulation (roof walls front cab & roof bows)
17	FLOOR: 5/8" Plywood subfloor secured with screws only (no nails) water-proofed and sealed at joints with silicone sealer including floor to wall seams; floor covering and entry steps	Yes	5 layer floor with sealed rubber floor premium plywood sound deadening resin galvanized steel and rustproof undercoating.
18	Lettering - Ext. Belt line both sides- Purchasers Name (Six Inch)	Yes	Included
19	Bus # two front corners and opposite license plate rear. (Four Inch) Capacity GVW (Purchaser name) on side panel back of entrance door and side panel below driver. (Two Inch)	Yes	Included
20	Vandal Locks - Emergency and Entrance Doors	Yes	
21	Outward opening entrance door w/heavy duty control. Specify Control	Yes	32" entrance door electrically controlled.
22	Driver's and rear dome lights to be on separate switches	Yes	OEM Ford driver's dome light switch separate rear dome lights switch
23	AM/FM CD radio minimum four (4) speakers flush mounted	Yes	OEM supplied radio - AM/FM/BLUETOOTH/USB & PA
24	EMERGENCY EQUIPMENT COMPARTMENT Above windshield with emergency equipment	No	Extinguisher and reflectors mounted to floor seat belt cutter on doghouse first aid kit on bulkhead
25	Body fully undercoated for noise and enhanced rust protection. Please describe what is included and optional levels of protection available including costs	Yes	Sound Deadening Resin (SDR) for noise reduction and enhanced rust protection.Under body is sprayed with Tectyl base solution from behind the driver's compartment to the back of the unit. Front part of chassis can also be sprayed for an additional xxx.
26	Each unit shall be equipped with a Sound Generator that complies with FMVSS and CMVSS 141	Yes	Each unit comes with a sound generator. Will meet CMVSS 141 requirements starting with MY23

TRA22-01 - Supply and Delivery of School Buses - Specification - Base Bus Specifications: Chassis - Type A2 Electric

Line Item	Chassis Specifications	Dynamic Specialty Vehicles	
		Yes/No	Additional Information
1	Chassis make year model.	Yes	2023 Ford E450
2	Propulsion system - vehicle performance include: A sustained speed of 70 kph on a 2.5% grade; and 20 kph on a 20% grade. An ability to accelerate to 20 kilometers per hour (kph) in four seconds; to 40 kph in 10 seconds; 50 kph in 20 seconds and 70 kph in 35 seconds. Expectations are that the school bus shall be cable of a minimum of 160 kilometer range on a single battery charge on route measured with 50% city miles and 50% highway miles. Vehicles should be capable of operating at minus 30 degrees Celsius (-30C) to 35C with limited loss of range (no more than 10% reduction of documented range) in these variable conditions. This range rating must be tested with all normal accessories running in the conditions described including terrain encountered in BC.	Yes	"_Micro Bird G5e is able to meet performance requirements . Electrical heating and A/C will impact driving range by more than 10% as per any vehicle with such a HVAC system.

	Describe vehicle performance while fully loaded in terms of maximum operating speed grade-ability and acceleration. Please provide documentation of for verifying submitted vehicle performance claims to meet above performance specifications.	Yes	Grade-ability 25% at 20 kph constant speed at GVW (14500 lbs) Restartability: 18% hill start at GVW (14500 lbs)
3	Wheelbase info - up to 170"	Yes	158"
4	5 Wheels - Disc Hub Piloted	Yes	OEM Ford
	Tires - Six (6) - specify OEM supplied	Yes	LT225/75R16E Hankook Subject to change per OEM
6	Vehicles should have the ability to change the powertrain deferential ratio to maximize range performance in mountain routes city routes highway routes or a combination of mountain city and highway routes. Please describe your process for achieving this?	Yes	A 2 speed transmission is used to achieve this. Subject to change per OEM.
7	BATTERY Vendors should describe their proposed energy storage/battery system including the number of battery packs and battery chemistry. " Battery efficiency (kilometers per kWh) " Time (in minutes) to charge batteries from 20% to 100% state of charge on a level 2 charger. " Time (in minutes) to charge batteries from 20% to 80% state of charge on a level 2 charger. " Battery capacity (amps per hour per cell) " Battery storage capacity (kWh) " Total usable battery energy storage capacity (kWh) " Total battery pack C-rate. " Total battery pack E-rate " Battery Cycle Life in number of charge-discharge cycles at a specific depth of discharge (DOD) " Battery thermal management type (describe battery maintenance and operational requirements when vehicle is in use and not in use	Yes	Total capacity is 88 kWh lithium ion (NMC) with nickel magnesium cobalt chemistry. 7 hours to charge from 20% to 100% 5.5 hours to charge from 20% to 80%. Total usable battery energy storage capacity is 85.6 kWh. Battery capacity will be 80% after 2000 cycles. Ex: if 50% is used during the day bringing the battery up to full charge will be considered 1/2 cycle.) When the vehicle is used in extreme heat weather conditions let the battery sit a few hours before charging. Doing so the battery temperature will decrease. When the vehicle has been used intensively (abrupt hills heavy weight etc.) it is preferable to wait a few hours before connecting the battery to the charge port. If the vehicle must be stored for a long period park it preferably in a cool area protected from freezing. To optimize the longevity of the
8	9 Additional power supply feeds available to power end user devices	Yes	
10	Rear tow hooks	Yes	
	On-Board Charging Systems Vendors should describe their preferred charging/discharging systems including EVSE noting that the expectation is that vehicles will be fitted with on board AC (19.2 kW) bidirectional charging/discharging systems that conform to the most recent SAE J1772 standards and/or other relevant standards for V2B bi-directional power flow. The vehicles should also be fitted with DC Level II charge/discharge coupler capable of a sustained maximum of 90kW of power transfer at a maximum of 200 AMPS. The coupler should conform to all current SAE standards. All charging system components shall have CSA certification or provide acceptable documentation. Charging systems shall be capable of operating from -30C to 40C with no more than 10% degradation in performance	Yes	Vehicle is equipped with SAE J1772 DC Level 2 Coupler (CCS Type 1 Charge Receptacle). Vehicle capacity is as follows: SAE J1772 AC Level 2 13.2kW SAE J1772 DC Level 2 50kW max with V2G capability*. *Note : V2G capable but feature not yet implemented to be unlocked at a later date via a software update. Charger to be purchased separately. As long as the EVSE is compliant with SAE J1772 which is widely recognized charge will be possible at a charging speed up to what listed above.
11	Data collection for performance and analytical comparisons must be available on a regular basis for both ASTSBC and the purchaser. Training must be provided	Yes	This function is controlled by an external charger. Not available onboard for driver however available via telemetry. Includes information on kilowatt-hour (kWh) per mile miles per trip average speed energy consumption and total miles. This is accessible by the School District the manufacturer or dealer. Training to be provided by Dynamic Specialty Vehicles personnel.
12	13 Mud Flaps - Front and Rear. Rear with rubber fender skirts	Yes	
	OWNER'S MANUAL AND DIAGNOSTIC SOFTWARE Supply those available for end users.	Yes	Included with purchase.
	15 Supply line setting ticket	Yes	
	Supply Driver Training and Orientation to ASTSBC Trainers to supply training for drivers upon bus delivery.	Yes	Dynamic Specialty Vehicles personnel to provide training and orientation.
16			