



**New Orleans Regional Transit  
Authority**

**Proposal for:**

**Four (4)  
40' Battery-Electric Buses**

**Infrastructure and Chargers**

**NEW FLYER OF AMERICA**

**New Flyer 40' Battery-Electric Transit Bus, Infrastructure and Chargers Proposal**

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**New Orleans Regional Transit Authority**  
Proposal for 40' Battery-Electric Transit Bus, Infrastructure and Chargers

**Tab 1, Letter of Transmittal**

**Solicitation Requirements:**

*Letter of Transmittal*

**New Flyer Response:**

Please refer to the attached Letter of Transmittal for your review.



Christopher H. Cook, Associate DBIA  
Sr. Project Manager, Infrastructure  
New Orleans Regional Transit Authority  
2817 Canal St.  
New Orleans, LA 70119

January 31, 2023

Subject: **Quotation for Heavy-Duty Low Floor Battery-Electric Transit Buses**

Dear Mr. Cook,

New Flyer of America is pleased to submit a price quotation for the production of four (4) 40' Battery-Electric transit buses. The proposed buses will be technically configured per SR2560 with the change to the propulsion system to make it a 40' Low Floor, Battery-Electric bus. Specifications are attached.

#### **VEHICLE PRICING**

The price for one (1) 40' Battery-Electric transit bus – is **\$ 1,114,900 USD**

Optional Item:

- Overhead charging rails **\$ 32,787 USD**

Please refer to Tab 2 for the bus technical summary.

#### **INFRASTRUCTURE AND CHARGER PRICING**

Price for the infrastructure package with the installation, Construction, Engineering and Commissioning of Turnkey for 2 Heliox 180kw Charger with 6 dispensers – is **\$ 1,129,895 USD**

Optional Item:

- Turnkey Option for 1 On-route Heliox 380 kW charger **\$ 1,132,982 USD**

Price for complete scope: **\$2,262,877 USD**

Please refer to Tab 3 for the infrastructure and chargers proposal.

We want to take this opportunity to highlight key elements of our proposal.

**Warranty:** New Flyer exceeds industry standard warranties in many areas such as 5 years / 300,000 miles warranty for axles (Standard warranty is 2 years) and our multiplex warranty is 3 years/150,000 miles (Standard competitor warranty is 1 year/50,000 miles). Please refer to Tab 4 of our proposal for additional details regarding our Warranty package.

**Training:** New Flyer Training is an organization within the New Flyer Customer Services group – a division of New Flyer Industries. As a part of the leading manufacturer of heavy-duty transit buses in the United States and Canada, we have access to top design, engineering, propulsion technology, and electrical systems professionals. This enables us to offer the service and expertise to maximize the lifetime value of your fleet. Training is not included in the base bus price. Please refer to Tab 5 of our proposal for additional details regarding our Training package.

**Tooling and Diagnostics:** Tooling and Diagnostics items are not included in the base bus price. Please refer to Tab 6 of our proposal for additional details regarding our Tooling and Diagnostics package.

**Publications:** Our New Flyer Publications professionals combine extensive, hands-on technical experience with exceptional writing, illustrating, and publishing skills to create the industry's benchmark in maintenance manuals. Supplying accurate information in a timely manner assists the customer in the performance of proper bus maintenance, which in turn, adds to the overall reliability and lifetime value of each New Flyer bus on the road. Please refer to Tab 7 of our proposal for additional details regarding our publications package.

**Delivery Proposal:** New Flyer is proposing a complete delivery of four (4) buses 365 days from notice to proceed. A detailed delivery schedule will be provided at a later date.

**Payment Terms:** Following the terms and conditions of New Flyer's contract with the State of Washington our proposed payment terms are as follows:

- Payment terms are Net 30 days from acceptance

This is a very important project to us as it allows us the opportunity to continue to build on the strong relationship we have enjoyed with New Orleans Regional Transit Authority. It also affords us the opportunity to deliver to you, once again, some of the most advanced vehicles available in North America. We thank you for your continued interest in New Flyer products and look forward to working with you in the near future.

This offer is valid until May 1, 2023. Please indicate your acceptance by confirming via email to New Flyer, attention Adrian Graca, email: [Adrian\\_Graca@newflyer.com](mailto:Adrian_Graca@newflyer.com).

Sincerely,



Luciana Marques  
Technical Sales Manager, New Flyer Inc.  
P: 431.278.8653  
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CC: Adrian Graca – Business Segment Director  
Chris Dabbs – Regional Sales Manager  
Mark Fisher – Director, National Sales

**Tab 2, Bus Technical Summary**

**Solicitation Requirements:**

N/A

**New Flyer Response:**

Please see the attached New Flyer Technical Summary for the proposed bus.

Option	Description	Tech Summary Description	Comments
100-00	COACH LENGTH	Xcelsior - 40' coach.	
100-03	STRUCTURAL MATERIAL	(B),Carbon steel/ferritic sst.	
100-05	EPA/ENGINE MODEL YEAR	2022	
100-09	DOCKET 90 SPEC	(A),For interior of coach (as per spec).	
100-0K	SIEMENS GENERATION	(B),ELFA 3.	
201-01	FRONT BUMPER	(S),Romeo Rim, three piece, front bumper.	
201-03	FRONT TOWING PROVISIONS	(B),Basic set-up, incorporated in front chassis. Tow adapters are required.	
201-05	REAR BUMPER	(B),Romeo Rim, three piece, rear bumper with anti-ride feature.	
203-01	FRONT AXLE	(B),M.A.N. VOK-07-F, GAWR 15,873 lbs. With disc brakes. Hub mount, Knorr cylinders, Ferodo lining with low copper (<5%) brake pads.	
203-02	SECUREMENT OF BRAKE LININGS	(S),Bonded.	
203-05	ELECTRONIC BRAKE STROKE MONITOR	(A),MGM E-stroke system.	
203-06	SHOCK ABSORBERS	(S),Koni.	
203-07	FRONT STABILIZER BAR	(B),SR specific application is approved by NF Engineering.	
203-0A	FRT AXLE AND WHEEL SPLASH APRONS	(B),Basic, full width, fore of axles and wheels.	
203-0B	RADIUS ROD BUSHINGS	(B),Windowed	
204-01	REAR AXLE	(B),M.A.N. 5.67:1. Model HY-1350-F. GAWR 28,660 lbs. With disc brakes, hub mount, Knorr cylinder, Ferodo lining with low copper (<5%) brake pads.	
204-03	REAR AXLE GEAR OIL	(B),Synthetic.	
204-09	REAR AXLE DRAIN PLUGS	(B),Magnetic external hex head.	
204-0A	REAR AXLE MUD FLAP	(B),One aft of rear axle. (Requirement is determined by local climate, ice build-up, high ambient temperature.)	
204-0C	REAR WHEEL MUD FLAP	(B),One aft of each rear wheel.	
205-01	TIRE SUPPLIER	(B),NFIL supplied tires	
205-06	WHEELS	(B),Alcoa 22.5" x 8.25" aluminum. Buffed (LVL One) finish.	
205-0J	STEERING AXLE TIRES	(B),305/70R/22.5, Goodyear G652 (68 mph).	
205-0M	REAR AXLE TIRES	(B),305/70R/22.5, Goodyear G652 (68 mph).	
209-01	POWER STEERING PUMP	(B),Berendsen electric power steering pump. Mounted at the front streetside.	
209-02	POWER STEERING HOSES	(B),NFIL (Manuli) Equator 2	
209-03	POWER STEERING DIAGNOSTIC FTGS	(B),At steering box.	
209-05	POWER STEERING RESERVOIR	(S),Required.	
209-06	POWER STEERING LOW LEVEL FLUID INDICATOR	(A),Required at instrument panel.	
209-08	POWER STEERING DRAIN PLUG	(B),Magnetic plug.	
209-09	POWER STEERING UNIT	(S),Sheppard M110, power assisted, frame mounted.	
209-0A	POWER STEERING SYSTEM FLUID	(B),Dexron III, mineral based.	
209-0B	POWER STEERING SENSOR	(B),Hydraulic level sensor required.	
219-01	FUEL/PROPULSION SYSTEM	Siemens E-Drive.	
219-05	AIR COMPRESSOR	(B),Direct coupled air compressor powered by electric motor.	
219-06	AIR COMPRESSOR HIGH VOLTAGE INTERLOCK SWITCH	(B),Not Required, Junction box provided with tamperproof hardware.	
219-0D	ROAD SPEED	(B),Top road speed is governed. Set at 65 MPH (105 KPH).	
219-0M	TRANSMISSION/HYBRID DRIVE/TRACTION MOTOR	(B),SIEMENS PEM 1DB2016 FT traction motor, 230 KW.	
219-0N	REGENERATIVE BRAKING	(S),0-10% driver controlled with accelerator pedal, 30% with accelerator pedal release, remaining 70% blended with brake application reaching 100% by 15psi.	
219-0P	TRANSMISSION SHIFTING	(S),Foot on brake enables shift when in neutral.	
231-0F	COOLANT FLUID/ANTIFREEZE	(B),50/50 pre-mixed distilled water with ethylene glycol with anti-corrosion additive and bittering agent. Pink fluid.	

Option	Description	Tech Summary Description	Comments
246-01	AIR COMPRESSOR DISCHARGE LINE	(S),Teflon 2807 SST braided hose.	
246-02	BASIC AIR TANKS	(A),Combo Tank 1 (Wet Tank + Primary Brake Tank), Combo Tank 2 (Front Axle Kneeling Tank + Accessory Air Tank), Combo Tank 3(Secondary Brake Tank + Emergency Brake Release Tank).	
246-04	AIR TANK DRAIN VALVES	(B),Manual 1/4 turn valve.	
246-06	WET TANK DRAIN VALVE	(B),Manual 1/4 turn valve.	
246-09	RIDE HEIGHT SENSORS	(B),SmartRider electronic leveling system on front axle and Barksdale mechanical leveling valves on center/rear axles.	
246-0A	RIDE HEIGHT SETTINGS,NORMAL	(B),Front ride height is 4.0" axle to bump stop.	
246-0E	DOOR INTERLOCK	(B),Applied to entrance and exit doors. Foot on brake to release interlock, applied via multiplex system programming.	
246-0G	DRIVER'S PARK BRAKE ALARM	(B),If the Master Run switch is in the OFF or PARK positions, the kneeling alarm is triggered to alert the driver that the park brake is not set.	
246-0H	PARK BRAKE PRESSURE SETTING	(S),40 psi auto-apply park brake valve. 60 psi pressure switch for park brake light activation.	
246-0K	AIR DRYER	(A),High performance Graham White Sludgebreaker QBA15NX5 with 24v heater, 12/24v purge control and dryer boost protection. With coalescing filter.	
246-0M	AIR DRYER LOCATION	(B),Under the rear step.	
246-0T	AIR SYSTEM OIL SEPARATOR	(B),Single Haldex oil/water separator, with 12V auto drain.	
246-0U	PARK BRAKE ACTUATION	(B),Pull To Apply.	
246-0V	PARK/EMERG BRAKE LOCATION	(S),On side console panel.	
246-13	FRONT TOW CONNECTOR	(B),Male 1/4" NPT fitting with Series 20/30 coupler fitting, with tag.	
246-14	FRONT AIR CONNECTOR ARRANGEMENT	(B),Located below the bumper, streetside.	
246-15	FRONT AIR CHARGE CONNECTOR	(B),Male 1/4" NPT fitting with Series 20/30 coupler fitting, with tag.	
246-17	REAR AIR CHARGE CONNECTOR TYPE	(B),Male 1/4" NPT fitting with Series 20/30 coupler fitting, with tag.	
246-1B	FLEXIBLE AIR LINES	(S),Synflex colour coded. Green: rear service brakes and supplies. Red: front service brakes. Brown: parking brake. Black: accessories and brake hose. Yellow: compressor and governor. Blue: suspension.	
246-1E	ABS	(S),Wabco.	
246-1J	FRONT CHARGE AIR ROUTING	(B),Direct charge to wet tank.	
246-1K	REAR CHARGE AIR ROUTING	(B),Direct to air dryer, connected after air dryer.	
246-27	AIR SYSTEM TRANSDUCER FAULT DETECTION	(B),Transducer Fault Detection - Transducer voltage falls to 0V if transducer failure occurs.	
260-01	BATTERY MANAGEMENT	(B),Transtech regulator w/Low Voltage Disconnect, temperature and current sensors to optimize battery life.	
260-02	BATTERY VOLTAGE REGULATOR	(B),Transtech REG24C	
260-03	BATTERY VOLTAGE REGULATOR LOCATION	(B),Mounted on MCU/TCU panel.	
260-04	BATTERY TYPE / MFR	(B),Two Odyssey group 31 Absorbed Glass Mat (AGM) maintenance free batteries. 1150 CCA. Top posts: 3/8" positive, 3/8" negative.	
260-05	BATTERY CABLES	(S),Red heat shrink on 24 volt positive cable end and light blue heat shrink on 12 volt positive cable end.	
260-09	BATTERY TRAY	(S),Slide out battery acid resistant polyethylene enclosure with SST sub frame, SST bearings and rubber isolation mounts. Located aft of the curbside rear wheelhouse. Note: battery access door opens to the side.	
260-0C	POSITIVE BATTERY DISCONNECT SW	(B),Required with quick access through flip-open door. Uses a micro-switch for engine shutdown.	
260-0E	BATTERY VOLTAGE EQUALIZER	(B),Vanner 100 amp.	
260-0F	JUMP START MANUFACTURER/TYPE	(A),ANDERSON SB350 GREY	
260-0G	JUMP START LOCATION	(A),Mounted on low voltage battery tray.	
260-0K	ENERGY STORAGE SYSTEM BTRY SUPPLIER/TYPE	(B),XALT Energy,High Energy,Gen 3B.	
260-0M	ENERGY STORAGE SYSTEM CAPACITY	(B),520 kWh total.	



Option	Description	Tech Summary Description	Comments
260-0T	ESS FIRE DETECTORS	(S),Integrated in ALL ESS HV Battery enclosures.	
260-11	MOTOR/INVERTER RADIATOR & RESERVOIR	(B),Two fan roof mounted EMP radiator with propulsion compartment mounted SST Reservoir with sight glass & low level coolant sensor.	
260-12	MOTOR/INVERTER COOLING PUMP	(S),Rotron.	
260-14	ESS COOLING RESERVOIR	(S),SST tank located at curbside, above rear shelf. Includes coolant sight glass.	
260-15	ROOF FAIRING / SKIRTS ENCLOSURE	(S),Fairing with full length skirts for XE.	
260-17	PLUG-IN BATTERY CHARGING	(B),Single receptacle mounted at curbside of propulsion compartment.	
260-1B	BATTERY VOLTAGE EQUALIZER QUANTITY	(B),One	
260-1C	BATTERY CHARGING PROGRAM	(B),Basic auto charging	
260-1M	FUSEBOX HIGH VOLTAGE INTERLOCK SWITCH	(B),Required without stand-alone HVIL indicator lamp.	
269-01	P.A. AMPLIFIER MFR / TYPE	(A),Included with AVA or AVL system.	
269-0C	GOOSENECK MICROPHONE	(B),REI, approximately 30" long from base to end of microphone. Black neck and head.	
269-0D	GOOSENECK MICROPHONE LOCATION	(B),Inverted, clipped to the A-pillar. Microphone clip is 15.26" from bottom of destination sign closeout panel.	
269-0E	GOOSENECK MICROPHONE SWITCH	(B),Built into microphone.	
269-0G	INTERIOR SPEAKER MFR	(B),TCB	
269-0H	PRIMARY INTERIOR SPEAKERS	(B),Six: four to light panels, two above rear bench.	
269-0K	EXTERIOR SPEAKERS, LOCATION	(B),At basic location above entrance.	
269-0M	EXTERIOR SPEAKER MFR	(B),Shekonic	
269-0Z	PRIMARY PA SYSTEM	(B),Gooseneck mic with built-in switch	
269-13	EXTERIOR SPEAKER QUANTITY	(B),One	
269-1E	EXTERIOR SPEAKER COIL	(B),Single coil.	
273-01	HEADLIGHTS	(S),NFIL Xcelisior LED low beam and high beam headlights.	
273-02	DAY RUN HEADLIGHTS	(B),Required.	
273-03	FRONT TURN SIGNALS	(S),NFIL amber LED. Integrated with headlight assembly.	
273-06	TAIL LIGHT ARRANGEMENT	(B),Amber, red (stop/tail), red (stop/tail), white.	
273-07	TAIL LIGHTS	(B),4" Dialight LED, grommet mounted.	
273-08	CENTER STOP / DECELERATION LIGHT SIZE	(B),18" X 1 " Dialight	
273-09	WHITE BACK-UP LIGHT	(B),4" Dialight LED, grommet mounted.	
273-0A	STOP LIGHTS ON WITH RTRDR/REGEN BRAKE	(B),Required.	
273-0B	STOP LIGHTS ON WITH PARK BRAKE OR INTERLOCK	(S),When park brake or interlock are engaged.	
273-0E	CENTER STOP / DECELERATION LIGHTS QTY	(A),Two	
273-0F	CENTER STOP / DECELERATION LIGHTS LOCATION	(B),At lower edge of HVAC door.	
273-0H	SIDE TURN SIGNALS,TYPE / QTY PER SIDE	(A),4 amber Dialight LED Lamps, 12 volt.	
273-0J	SIDE TURN SIGNAL FUNCTIONALITY	(B),Single intensity, Dialight LED lamps.	
273-0K	SD TURN SGNL GUARD BRKT, MATERIAL/CTG	(B),Aluminum, painted per paint scheme.	
273-0M	CURBSIDE TURN SIGNALS LOCATION	(A),Lamps are fore and aft of the wheelhouses.	
273-0N	STREETSIDE TURN SIGNALS LOCATION	(A),Lamps are fore and aft of all wheelhouses.	

Option	Description	Tech Summary Description	Comments
273-0P	KNEELING/RAMP LIGHT AT ENTRANCE	(S),2.5" Dialight LED.	
273-0T	MARKER / CLEARANCE LIGHTS	(B),Dialight LED without guard all around.	
273-0V	REFLECTORS	(B),Self-adhesive decals installed at NFIL basic positions.	
273-0W	REAR LICENCE PLATE LIGHT	(B),Smartrend LED.	
273-10	TIMED SHUT-OFF,ENTR AREA LIGHTS	(B),The program is set to shut the lights off when the door closes.	
273-12	TIMED SHUT-OFF,EXIT AREA LIGHTS	(S),The program is set to shut the lights off five seconds after the door closes.	
273-1F	CENTER STOP / DECELERATION LIGHTS COLOR	(B),Red	
273-1G	CURBSIDE CORNERING LIGHTS	(A),One curbside lamp located behind front axle.	
273-1J	STREETSIDE CORNERING LIGHT	(A),One streetside lamp located behind front axle.	
273-1R	MARKER / CLEARANCE LIGHTS FUNCTIONALITY	(B),New Flyer standard marker/clearance light functionality to meet applicable FMVSS/CMVSS regulations.	
273-23	MARKER LIGHTS LOCATION	(B),New Flyer standard marker light locations to meet applicable FMVSS/CMVSS regulations.	
273-25	EXTERIOR LIGHTS	(B) Day Run, Night Run, and Night Park modes illuminate the tail lamps, marker/clearance lamps, and license plate lamp. Mandatory for Canadian customers.	
273-26	CENTER STOP/DECELERATION LIGHT FUNCTIONALITY	(B),Basic stop functionality.	
273-27	CENTER STOP/DECELERATION LIGHT VOLTAGE	(B),12 Volts	
277-02	INTERIOR PASSENGER LIGHTING	(B),NFIL LED, 24 VDC.	
277-04	INTERIOR LED LIGHT FUNCTIONALITY	(B),First bank of lights (at 0% pre-set) on each side turn on when entrance door is opened and off when door is closed.	
277-07	EXIT BASEPLATE / ELEC PNL ACCESS	(B),At each exit door, NFIL set-up, through removable ad frame.	
277-0B	TINTED LED PASSENGER LIGHT COVERS	(B),White for all lights.	
277-0C	FAREBOX LIGHT	(B),One fixed LED light.	
277-0F	DRIVER'S LIGHT	(B),One sealed 2.5" white high output Smartrend LED light.	
277-0K	SDS SERVICE LIGHT	(B),One LED lamp, provided at upper front of SDS enclosure.	
277-0M	SDS SERVICE LIGHT SWITCH CONTROL	(B),With switch.	
277-0N	PROPULSION COMPARTMENT LIGHTS	(S),Two LED lights.	
277-0V	REAR DECK STEP LIGHT	(B),LED.	
277-0W	INTERIOR DOOR HEADER LIGHTS, ANTI-GLARE SHIELD COLOR	(B),LED strip light (approx 18" long) provided above doors. With black anti-glare shield.	
277-0Y	INTERIOR DOOR HEADER LIGHTS/ QUANTITY (ENTRANCE)	(B),Single strip.	
277-11	INTERIOR DOOR HEADER LIGHTS/ QUANTITY (EXIT)	(B),Single strip.	
277-13	EXIT AND ENTR MECH BOX SERVICE LIGHTS	(A),Smartrend LED with switch, at basic locations.	
277-14	EXIT AND ENTR MECH BOX SERVICE LIGHTS QUANTITY	(A),1 at entrance, 1 at each exit door.	
277-18	SIDE CONSOLE COMPT SERVICE LIGHT	(A),Smartrend LED light.	
277-19	SIDE CONSOLE COMPT SERVICE LIGHT WITH SWITCH	(A),Switch mounted with lamp assembly.	
277-1A	REAR PLC AND FUSEBOX SERVICE LIGHTS	(S),Provided, LED.	
277-29	SIDE CONSOLE COMPT SERVICE LIGHT MOUNTING LOCATION	(B),Front Structure	

Option	Description	Tech Summary Description	Comments
277-2B	CURBSIDE FORWARD HVAC DUCT ORIENTATION ON LIGHT PANEL	(B), Duct fixed pointed towards the aisle.	
280-01	PASSENGER SIGNAL CHIMES	(B),One basic electronic chime above driver. Chime has single tone which sounds once for regular activation, twice for wheelchair positions.	
280-03	PASSENGER SIGNAL PULLCORDS	(B),Yellow cords are required.	
280-07	HORIZONTAL PASSENGER SIGNAL PULLCORDS	(B),Set at NFIL designated basic height. All decks.	
280-09	LWR DECK VERT PULLCORDS	(B),Four: at the first and second street and curbside pillars forward of the face of the upper deck.	
280-0D	SECUREMENT OF VERTICAL PULLCORDS	(B),Looped or clamped to the horizontal depending on the location.	
280-0T	PASSENGER SIGNAL TYPE AT WHEELCHAIR POSITIONS	(B),Basic touchtape.	
280-0V	PUSH BUTTON SIGNAL AT EXIT	(B),Mounted facing aisle on stanchion fore of exit, low profile recessed button.	
280-18	EXIT/ENTRANCE DOOR CHIME	(B),Not required.	
284-01	ELECTRONIC CONTROL SYSTEM	(S),Vansco.	
284-02	SYSTEM VOLTAGE	(S),24 VDC primary, 12 VDC secondary.	
284-03	SWITCHES	(S),Water resistant.	
284-04	SPARE INPUT/OUTPUT PORTS FOR MULTIPLEX SYSTEM MODULES	(S),Minimum 10% input and 10% output, per electrical panel location.	
284-06	HAZARD WARNING LIGHTS	(B),Front, side and rear lights flash for hazard warning.	
284-0B	SDS ELECTRICAL PANEL ORIENTATION	(B),Facing streetside.	
284-0D	SDS ELECTRICAL PANEL LOCATION	(B),Mounted on backside of SDS rack.	
284-0F	ENTRANCE DOOR CONTROLLER	(B),Basic with 5 position settings.	
286-01	INSTRUMENT PANEL	(B),LCD touch display screen. Acrylic material with luminescent lighting, with Vansco Instrument Panel Cluster module.	
286-02	SHIFT SELECTOR LOCATION	(S),Located on instrument panel.	
286-03	EXTERIOR LAMP TEST	(B),Simultaneously depress both turn signals.	
286-04	SPEEDOMETER	(A),part of Vansco instrument panel cluster. Set to display miles. With odometer (the display can be toggled to engine hours, show Trip1 and Trip 2 disabled).	
286-05	AUDIBLE SOUND FOR TURN SIGNALS/HAZARDS	(B),Using click sound for turn signal and for hazard warning.	
286-0C	REGENERATIVE BRAKE DISABLE SWITCH LOCATION	(B),In sawtooth panel above driver.	
286-0D	SILENT ALARM	(A),required.	
286-0F	SILENT ALARM SW LOCATION	(A),At side console.	
286-0P	DIAGNOSTICS PLUG LOCATIONS	(B),Two diagnostic plugs under the front dash (left side of the steering column), at forward face of the SDS barrier (above driver) and on rear panel.	
289-01	SECUREMENT OF HARNESES	(B),Hellerman tyton clamps, with Panduit releasable cable ties.	
296-01	WIRING DECAL,REAR PLC AND FUSEBOX	(S),Provided, laminated.	
296-02	WIRING DECAL,SIDE CONSOLE	(B),Laminated, shipped loose.	
296-07	SIDE CONSOLE DOOR DECAL LANGUAGE	(B),English	
298-01	WATER TEST DURATION	(B),10 minutes.	
298-02	WATER TEST DURATION A/C	(B),Water Test with A/C on	
304-01	EXTERIOR PAINT TYPE	(S),Axalta Imron Elite high solids polyurethane.	
304-06	HIGH VOLTAGE SAFETY DECALS	(S),Required.	
304-07	CORROSION PROTECTION	(B),grit blasted frame, moisture cure zinc-rich primer (applied for 12 year warranty protection), anti-chip undercoating, corrosion preventive coating sprayed inside frame tubes up to roof line.	

Option	Description	Tech Summary Description	Comments
304-09	EXTERIOR LOGOS,NFIL	(B),NFI logos and Xcelsior logos in standard locations.	
304-0A	EXT DECALS,CUSTOMER SPECIFIC	(A),Required. Customer to provide the Engineering paint group with specific requirements.	
304-0E	PASSENGER COMPARTMENT DECAL LANGUAGE	(A),English / Spanish. Passenger compartment decals are the decals within the area of the coach designed for the seating of passengers and that are intended primarily for passenger viewing.	
304-0F	INTERIOR FLEET NUMBER DECALS	(B),Required.	
304-0G	MAINTENANCE DECAL LANGUAGE	(E),English and Spanish. Maintenance decals are the decals that will be referenced primarily when performing maintenance on the coach.	
304-0H	KNEELING / RAMP DECALS	(B),NFIL basic ramp & kneeling decal (red on white) and an arrow decal (red and black) provided near the kneeling / ramp deployment lights.	
304-0J	AIR TANK DECALS	(B),NFIL basic.	
304-0M	EXT FLEET NUMBERS,NON-ROOF	(B),Required (reflective).	
304-0N	EXTERIOR FLEET NUMBERS,ROOF	(A),Required (reflective).	
306-02	FIRE EXTINGUISHERS	(B),5 lb ABC class. With gauge, hose and mounting bracket. UL compliant for US customers.	
306-03	FIRE EXTINGUISHER LOCATION	(A),Inside the curbside equipment box.	
306-05	SAFETY TRIANGLE LOCATION	(B),Behind the driver.	
306-0C	MASK DISPENSER	(B),Not required.	
350-01	DRIVER'S PEDALS, POSITION / TYPE	(B),Pedals not adjustable fore/aft. Brake pedal angle set at 45 degrees from pedal to floor. Throttle pedal angle set at 45 degrees from pedal to floor.	
350-04	BRAKE VALVES	(S),E6.	
350-07	TURN SIGNAL SWITCHES	(B),Basic switches, floor mounted.	
350-08	DIMMER SWITCH	(B),Foot switch located beside side console panel.	
350-0D	HAZARD WARNING LIGHT SW LOCATION	(A),On side console with additional foot switch plate, left of driver's control plate.	
350-0G	STEERING COLUMN	(B),Douglas Autotech with tilt and telescopic features.	
350-0H	STEERING WHEEL	(B),2 spoke, 18" diameter hard padded.	
350-0M	DUAL HORN	(B),Provided with splash shield.	
400-01	JACKING / LIFTING PADS	(B),4" diameter round pads at front and rear chassis.	
420-02	EXTERIOR SIDE PANELS	(S),Fiberglass.	
420-03	REAR RF MOUNTED AIR SCOOP	(B),Stainless Steel, unpainted (no coating).	
420-04	STREETSIDE PROPULSION COMPT DOOR	(B),Solid door, for cabin heater access. Includes drive motor coolant sight glass access door.	
420-05	CURB & STREET SIDE ENG COMPARTMENT, SIDE CONSOLE ACCESS DOORS, STRUTS	(B),Supported by gas struts.	
420-06	CURB & STREET ENG COMPARTMENT, BATTERY DOORS, LATCHES	(B),Quarter turn chrome plated 5/16" square key latches. Also, used for the separate battery access door.	
420-07	CURBSIDE PROPULSION COMPARTMENT DOOR	(B),Solid door which includes battery disconnect switch access door (using gas strut) and an access door for battery charging system plug.	
420-09	DEFROSTER ACCESS DOOR LATCHES	(B),4 quarter turn chrome plated 5/16" square key latches.	
420-0B	BATTERY COMPARTMENT DOOR	(B),Solid door located aft of the curb side rear wheel, separate from the engine/propulsion compartment.	
420-0F	SIDE CONSOLE DOOR LATCHES	(B),Quarter turn chrome plated 5/16" square key quad latches.	
420-0G	PROPULSION DOOR	(B),Solid door with built-in handle.	
420-0H	PROPULSION DOOR STRUTS	(B),Two, the streetside strut has a locking mechanism.	
420-0J	PROPULSION DOOR LATCHES	(B),Quarter turn chrome plated 5/16" square key quad latches.	
420-0M	REAR LICENSE PLATE RETENTION	(B),Centered with bottom retainer and two upper inserts.	
420-0P	RAIN GUTTER	(S),0.44" cross section bonded.	
420-0R	ROOF HATCH INSTRUCTION LANGUAGE	(A),English / Spanish.	
420-15	ROOF HATCH SIZE,REAR	(B),24" X 24"	

Option	Description	Tech Summary Description	Comments
420-16	ROOF HATCH TYPE,REAR	(B),Basic hatch/vent.	
420-17	ROOF HATCH VENDOR,REAR	(B),Transpec Worldwide.	
420-1B	WIPERS	(B),Comotech motors 24 volt electric with Smartrend wet arm wipers. Intermittent.	
420-1E	WINDSHIELD WASHER BOTTLE	(B),5 US gallon with electric powered pump mounted using 4 weld nuts.	
420-1F	WINDSHIELD WASHER FILL LOCATION	(S),Accessed via a flip-out door built into the exterior side console access door.	
420-1G	LOWER DRIVER'S VENT	(B),Provided.	
420-1H	FENDERS	(B),Molded polyurethane.	
420-1M	EXTERIOR UPPER REAR	(B),Louvered style fiberglass door for rear HVAC.	
420-1N	EXT UPPER REAR DOOR STRUTS	(B),Two, non-locking.	
420-1P	EXT UPPER REAR DOOR,LATCHES	(B),Quarter turn chrome plate 5/16" square key latches.	
420-1T	FRONT LICENSE PLATE LOCATION	(B),On center of defroster door.	
420-1U	FRONT LICENSE PLATE RETENTION	(B),Four inserts.	
420-24	WIPERS, MOTOR ARM LENGTH	(B),34" long arm	
420-25	WIPERS, WIPER BLADE LENGTH	(B),26" long blade	
420-26	WIPERS, SPRAY STREAMS PER ARM	(B),2 streams per arm	
420-2A	CABIN COOLANT FILL DOOR	(B),Basic hinged door.	
420-2B	DRIP EDGE FOR REAR CROWN PANEL/HVAC DOOR	(B),Drip Edge along the bottom edge of the Rear Crown Panel/HVAC door to divert water entering the engine/propulsion compartment.	
420-2D	UPPER CORNER PILLAR DOOR LATCHES	(B),Quarter turn chrome plate 5/16" square key latches.	
421-01	INSULATION,SIDEWALL AND ROOF	(S),Polyisocyanurate foam. meets Docket 90 spec.	
421-03	PROPULSION COMPARTMENT INSULATION	(S),Noise reduction acoustical foam, retained by perforated aluminum panels.	
422-02	CEILING PANELS AFT OF FRONT WHEELHOUSE INCLUDING REAR PLC	(B),Antique white plastic, SST trim.	
422-03	CEILING / HVAC COVER PANELS ABOVE FRONT WHEELHOUSES	(B),Antique White fiberglass.	
422-04	HVAC RETURN AIR GRILLE DOOR LOCK	(A),3 quad latches.	
422-05	ENTRANCE / DRIVER'S AREA PANELS COLOUR	(B),black. Includes dash, dest sign c/out, ent. mech. box, driver's o/head panels. and if used, ent. floor heat duct, frt. RH harness cover is black powder coated alum.	
422-06	DRIVER'S CEILING PANEL MATERIAL	(B),Melamine.	
422-07	INTERIOR PIER PANEL MATERIAL	(B),Thermoplastic.	
422-08	PIER PANEL COLOUR	(B),Antique white	
422-0A	INTERIOR LOWER SIDEWALL MATERIAL	(B),Melamine	
422-0C	INTERIOR SIDEWALL MELAMINE	(B),Charcoal Grey Gloss.	
422-0D	INTERIOR PROPULSION COMPARTMENT ACCESS PANEL	(B),There is a single hinged panel under the rear seat.	
422-0E	INTERIOR UPPER REAR PANEL	(A),Bulkhead panel covered with melamine material. With return air grille for RR mount HVAC system.	
422-0G	MELAMINE UPPER REAR INTERIOR PANEL	(A),Charcoal grey gloss.	
422-0H	TRIM,CARPET/MELAMINE UPPER REAR INTERIOR PANEL	(B),Painted steel to match panel.	
422-0K	CURB AND STREET SIDE REAR BULKHEAD ACCESS PANELS	(A),Melamine covered DB plywood.	

Option	Description	Tech Summary Description	Comments
422-0M	HRNS/AIR LINE COVERS AT UPPER DECK	(B),Painted flat black.	
422-0N	FRT DEST SIGN DOOR LATCHES	(B),Short wing quad latches.	
422-0P	DRIVER'S OVERHEAD PANEL	(S),With locker.	
422-0R	DRIVER'S LOCKER LATCH	(B),Short wing quad latch.	
422-0T	DRIVER'S COAT HOOK AND STRAP	(B),Located on the forward face of the harness cover behind the driver.	
422-0U	SECURE DIAGNOSTIC STATION	(B),Above street side front wheelhouse. Incorporates driver's barrier. With four Take One pockets. Quantity of trays as per customer and / or as per electronic equipment within compartment.	
422-0V	SDS ENCLOSURE COLOUR	(B),Flat Black.	
422-0W	SDS ENCLOSURE DOOR LATCHES	(B),5/16" square key quad latch.	
422-13	FRONT SUNVISOR / ROLLERBLINDS	(B),Black rollerblind. Scissor type with 20" travel and 44" wide	
422-14	SIDE SUNVISOR/ROLLERBLIND	(B),Black rollerblind. Scissor type with 20" travel.	
422-15	SQUARE KEY T-HANDLE	(B),Located at lower left of driver.	
422-16	ENTRANCE MECHANISM BOX DOOR LATCH	(B),Two short wing quad latches.	
422-1B	C/S,S/S REAR BULKHEAD ACCESS PANELS, OPENING METHOD	(B),Removable access panels.	
422-1R	FRONT DASH, ACCESS PANEL LATCH	(B),Quarter turn, black powder coated 5/16" square key quad latches.	
422-1W	INTERIOR UPPER REAR PANEL, TRIM OPTIONS	(B),Flat Trim Design	
422-21	INTERIOR UPPER REAR PANEL, OPENING METHOD	(A),Hinged at top, held open with gas struts.	
422-22	INTERIOR UPPER REAR PANEL, LATCHES	(B),5/16" square key quad latch.	
422-23	INTERIOR REAR PLC ENCLOSURE, LATCHES	(B),5/16" square key quad latch.	
450-02	FLOORING	(B),Lower deck uses pressure treated NT ACQ plywood. Upper deck uses composite for step and floor to the rear wheelhouses and NT DB ACQ plywood to the rear.	
450-03	DRIVESHAFT / TRANSMISSION / DRIVE MOTOR ACCESS PANELS	(B),Two panels set in the floor, one to access the driveshaft and the other to access the drive motor.	
450-04	DRIVESHAFT/TRANSMISSION ACCESS PANELS TRIM	(A),Stainless steel ring.	
450-06	ALTRO FLOOR COVERING	(A),Sparkler TFFG2702F (2.7 mm / 0.11" thick) for aisle and under seats.	
450-0A	STEP TO UPPER DECK	(B),Yellow anti-slip coating is applied to the edges and vertical faces of the step.	
450-0B	FRONT AXLE STANDEE LINE	(B),One yellow flooring safety line provided fore of the hump at the front axle.	
450-0C	ENTRANCE NOSING	(B),Nosing is 2" wide yellow anti-skid applied to the ramp.	
450-0D	EXIT NOSING	(B),2.5" yellow nosing for Altro / Tarabus flooring.	
450-0F	REAR SEAT RISER COVERING MATERIAL	(B),Same material and colour as used for the flooring.	
450-0J	DRIVER'S PLATFORM FLOORING	(A),Sparkler TFFG2702F (2.7 mm / 0.11" thick)	
450-0K	DRIVER'S PLATFORM TRIM	(B),SST.	
450-0M	OUTER WHEELHOUSES	(B),SST front and rear.	
450-0N	INTERIOR FRONT W/HOUSE (LUGG RACK) COLOURS	(B),Matte black, painted stipple. An LED aisle light is provided on the streetside. Also, SST scuff guards are provided.	
450-0T	TRIM UPPER DECK	(B),Aluminum.	
450-0U	FLOOR DRAIN LOCATION	(A),One, located aft of front wheelhouse curbside.	
450-0V	FLOOR DRAIN MATERIAL	(B),Cast brass grid strainer (chromed).	

Option	Description	Tech Summary Description	Comments
450-13	INTERIOR FRONT W/HOUSE (LUGG RACK), SCUFF GUARDS	(B),Standard height scuff guard	
450-14	EXIT DOOR, WHEELHOUSE AND UPPER DECK TRIM, MATERIAL	(B),Aluminum Trim	
460-01	WINDSHIELDS	(B),72% light transmittance green laminated. With blue shade band for street and curb sides.	
460-02	WINDSHIELD PROTECTIVE FILM	(B),Required for coach delivery beyond a 500 mile radius of final assembly.	
460-04	PASS / DRVR'S WINDOWS MANUFACTURER	(A),Arow Global flush mounted.	
460-05	FLUSH PASSENGER WINDOWS	(A),Bottom is fixed, top tip-in.	
460-07	SDS WINDOW	(B),Full fixed picture window supported by gas strut. Glazing matches passenger window, fully masked on interior side.	
460-08	FLUSH WINDOW GLAZING	(A),Grey, 44% light transmittance, tempered.	
460-0A	FLUSH WINDOW LOCKS	(A),Locking set-screw.	
460-0C	WINDOW FRAME COLOUR	(B),All window frames are black anodized.	
460-0D	WINDOW EMERGENCY EGRESS	(B),Minimum quantity based on FMVSS requirements, local, state/provincial, federal regulations or customer spec whichever is greater.	
460-0E	SIDE DESTINATION SIGN WINDOWS	(B),Curbside. Fixed clear top and fixed bottom. Bottom matches passenger window glazing. (review 470 for side sign details).	
460-0G	WINDOW GLAZING REPLACEMENT	(A),Basic replacement.	
460-0J	PASS WINDOW THICKNESS	(B),6 mm	
460-0K	DRIVER'S WINDOW,FLUSH	(A),With single sliding sash (forward), with exterior and interior handles. Non-egress.	
460-0P	DRIVER'S WINDOW GLAZING	(A),Tempered with minimum 70% light transmittance.	
470-01	DESTINATION SIGNS MFR	(A),Hanover, LED display system, ERIC++	
470-02	DEST SIGN CONTROL UNIT LOCATION	(B),Under driver's overhead panel, at forward position of sawtooth panel.	
470-06	HANOVER FRT.DEST.SIGNS	(A),Amber LED, 17 x 160 pixels.	
470-07	FRONT DESTINATION SIGN GLASS	(A),Heated and laminated.	
470-0A	CURB SIDE DESTINATION SIGN LOCATION	(A),At the second window, aft of the entrance door.	
470-0D	HANOVER CURBSIDE DEST.SIGNS	(A),Amber LED, 15 X 112	
470-0H	REAR ROUTE SIGN,LOCATION	(B),At the lower center of the rear HVAC door. For CNG and XE coaches.	
470-0M	HANOVER REAR ROUTE SIGNS	(A),White LED, 15 X 48.	
470-0P	AVA / AVL SYSTEM	(A),Clever Devices (IVN) system.	
470-10	AVA/AVL LED SIGN LOCATION	(A),Required on the HVAC overhead enclosure at front.	
470-16	NEW FLYER CONNECT-DIAGNOSTIC & MONITORING SYSTEM	(B),Diagnostic & Monitoring - required without driver maneuver awareness system (DMAS).	
470-20	NF CONNECT SUBSCRIPTION TERM	(A), 2 years.	
480-02	EXTERIOR MIRROR MANUFACTURER	(B),Hadley.	
480-03	EXTERIOR SS MIRROR GLASS STYLE	(B),2/1 (upper portion is flat, lower portion is convex).	
480-04	EXTERIOR SS MIRROR GLASS SIZE	(B),8" x 15"	
480-06	EXTERIOR SS MIRROR POWER OPTIONS	(B),Manual adjustment.	
480-08	EXTERIOR SS MIRROR ARM FUNCTIONALITY	(B),Pull back. Mirror arm is manually returned to its previously set position after deflection.	
480-09	STREET SIDE MIRROR MOUNT	(B),Low mount.	
480-0E	EXTERIOR CS MIRROR GLASS STYLE	(B),2/1 (upper portion is flat, lower portion is convex)	

Option	Description	Tech Summary Description	Comments
480-0F	EXTERIOR CS MIRROR GLASS SIZE	(B),8" x 15"	
480-0H	CURB SIDE MIRROR POWER OPTIONS	(B),Dual remote control. (The upper and lower portions are remote controlled.)	
480-0K	EXTERIOR CS MIRROR ARM FUNCTIONALITY	(B),Pull back. Mirror arm is manually returned to its previously set position after deflection.	
480-13	DRIVER'S REAR VIEW MIRROR	(B),8" x 15", black, convex.	
480-14	SPOT MIRROR	(B),6" diameter flat mirror with short arm, located at curbside front.	
480-15	EXIT DOOR MIRROR	(B),convex, 12" diameter, mounted on curved modesty panel stanchion.	
480-26	STREET/ CURB SIDE MIRROR ARM MATERIAL	(B),Carbon steel	
490-01	ENT DOOR DRIVE SYS	(B),Pneumatic	
490-02	ENTRANCE DOOR	(B),Vapor slide glide.	
490-03	ENTR DOOR LIMIT SWITCH SET-UP	(B),Micro-switch (mechanical).	
490-04	ENTRANCE EMERGENCY RELEASE VALVE	(B),Within mech box.	
490-05	ENTRANCE DOOR MAGNETIC DUMP VALVE	(B),Required, located at baseplate.	
490-07	ENTR/EXIT FRANG.COVER,LANGUAGE	(A),English and Spanish.	
490-09	ENTRANCE DOOR COLOUR, INTERIOR	(S),Black	
490-0B	ENTRANCE DOOR HANDLES	(B),Yellow powder coated.	
490-0K	ENTRANCE DOOR GLAZING	(B),Full length single piece, 72% green.	
490-0V	ENTR/EXIT FRANG.COVER	(S),Perforated cover	
490-0W	ENT AND EXIT DOORS, INTERIOR AND EXTERIOR PANEL COLOR	(B),Black Powder Coat	
491-01	EXIT DOOR DRIVE SYS	(B),Pneumatic	
491-02	EXIT DOOR	(B),One rear curbside exit door. Medium Ameriview Vapor Slide Glide, 34.8" between panels.	
491-03	SLIDE GLIDE EXIT LIMIT SWITCH	(B),Micro-switch (mechanical).	
491-04	EXIT DOOR CONTROL	(A),Vapor Class Acoustic Sensing System. Activates door opening and detects obstruction on closing.	
491-06	CLASS SYSTEM VOICE ANNUNCIATION	(A),Female voice. English instructions programmed as per customer requirement.	
491-0D	EXIT DOOR SENSITIVE EDGE	(B),Pnumatic sensitive vertical edge sensor provided at all exit doors.	
491-0H	EXIT FRANGIBLE COVER SECUREMENT	(B),Magnetic latch.	
491-0M	EXIT DOOR ASSIST HANDLES	(B),Yellow powdercoated, UPA-3 Aluminum	
491-0P	EXIT DOOR GREEN LIGHT	(B),LED green light indicates that the exit door is set to open.	
491-0T	EXIT DOOR ALARM	(B),Buzzer and red 'rear door open' indicator at the instrument panel activated when the sensitive edge is triggered.	
491-0U	EXIT DOOR GLASS SIZE	(B),Full length.	
491-0V	EXIT DOOR GLAZING	(B),6 mm	
491-12	EXIT DOOR GREEN LIGHT MOUNTING ORIENTATION	(B),Exit door green light mounted horizontally on baseplate	
526-01	40' PASSENGER SEAT QUANTITY	(B),40	
526-04	PASSENGER SEAT MANUFACTURER	(B),American Seating	
526-07	AMERICAN SEATING SEATS	(A),Insight-Prime+ seat, two color selection without an insert. Details as per customer spec.	
526-08	AMERICAN SEATING D90 SPEC	(A),Required. (Note: some fabric colours might not be available in D90, review with Engineering).	
526-09	REAR BENCH SEAT	(B),1-3-1 hinged seat.	
526-0A	PASSENGER SEAT MOUNTING	(B),Cantilever.	
526-0B	SEAT MOUNTED GRABRAIL	(B),Composite resin.	



Option	Description	Tech Summary Description	Comments
526-0C	FIRST SEAT,CURBSIDE UPPER REAR	(B),Forward facing.	
526-0D	FIRST SEAT,STREETSIDE UPPER REAR	(B),Forward facing.	
526-0F	PASSENGER SEATING BARRIER	(A),Integrated with restraint system.	
526-0G	SEAT POSITION,FORWARD OF REAR EXIT	(B),Forward facing.	
526-0R	USSC DRIVER'S SEAT MODEL	(A),9110 ALX3. Has 3 point seat belt. Has air suspension and lumbar.	
526-0W	DRIVER'S SEAT COVER	(B),All vinyl.	
526-0Y	DRIVER'S SEAT BELT	(B),Lap and shoulder belt with retractor on left hand side.	
526-10	DRIVER'S SEAT BELT COLOR	(A),Orange	
526-13	DRIVER'S SEAT,DOCKET 90 SPEC	(A),Required.	
526-14	DRIVER'S SEAT BASE RISER MATERIAL	(A),SST.	
526-17	DRIVER'S SEAT HEADREST	(B),Required, vinyl headrest	
526-18	WHEELCHAIR POSITIONS, QUANTITY	(B),Two. At basic locations, one aft of the curbside and one aft of the streetside front wheelhouses.	
526-19	CS WHEELCHAIR RESTRAINT SYSTEM	(A),Q'POD forward facing barrier with integrated wheelchair restraint.	
526-1A	SS WHEELCHAIR RESTRAINT SYSTEM	(A),Q'POD forward facing barrier with integrated wheelchair restraint.	
526-1D	SHOULDER HARNESS,W/CHR RESTRAINTS	(A),Integrated with Q-Pod restraint system.	
526-1F	STANCHION / GRABRAIL STYLE	(B),Curved style vertical stanchions. Using cast SST fittings for vertical and horizontal stanchions.	
526-1G	OVERHEAD HORIZONTAL GRABRAILS	(B),SST.	
526-1H	OVERHEAD GRABRAIL HANDHOLD STRAPS	(A),Yellow PVC straps, secured to horizontal stanchions, locations as per customer spec.	
526-1J	OVERHEAD GRABRAIL HANDHOLD STRAPS,QUANTITY	(A),Six	
526-1K	COLOR - STANCHIONS AT EXITS & RR RISER STEP	(B),Yellow SST.	
526-1N	VERT AFT OF S/S FRT W/HOUSE	(B),To match colour of vertical seat stanchions (see Option 526-1T).	
526-1P	VERT FORE OF C/S FRT W/HOUSE	(B),Yellow SST.	
526-1R	VERT AFT OF C/S FRT W/HOUSE	(B),To match colour of vertical seat stanchions (see option 526-1T).	
526-1T	VERTICAL STANCHIONS AT SEATS - COLOR	(B),SST.	
526-22	FRONT CURBSIDE LUGGAGE RACK	(B),Horizontal tube wraps around aft, aisle and fore sides.	
526-23	FAREBOX GRABRAIL STYLE	(A),SST wrap around stanchion and basic dash stanchion.	
526-26	MODESTY PANEL MELAMINE COLOR	(B),Charcoal Grey Gloss	
526-27	C/SIDE FORE UPR DECK MOD PNL, GAP	(B),Approximately 2" diagonally.	
526-29	BARRIER AT STREET SIDE REAR RISER	(B),Modesty panel (material and color per 526-25/526-26).	
526-2J	DRIVER'S DOOR	(A),One piece, full height Arow Global driver's door with extended sliding glass top.	
526-2M	BARRIER FWD OF EXIT(S)	(A),Upper panel, 0.5" clear polycarbonate, basic width. Also, lower melamine panel (material and colour per option 526-25/526-26).	
526-2T	EMERGENCY INSTRUCTIONS	(A),English / Spanish	
526-32	DRIVER'S SEAT, FORE/AFT SEAT TRAVEL	(B),The fore / aft seat travel is 9.45".	
526-35	DRIVER'S DOOR PANEL MATERIAL	(A),5/16" AS2 Tempered glass	

Option	Description	Tech Summary Description	Comments
526-37	FRONT CURBSIDE LUGGAGE RACK COLOR	(B),SST	
526-3B	FAREBOX GRABRAIL COLOR	(B),Yellow	
526-3V	SEAT FWD OF REAR BENCH SEAT	(B),Forward facing.	
549-02	HVAC UNIT 1	(B),Thermo King TE15 rear A/C unit.	
549-04	HVAC UNIT MOTOR TYPE	(S),Brushless motor for primary heating & cooling system.	
549-05	REFRIGERANT	(B),R-407C freon.	
549-06	HVAC AIR INTAKE	(B),Recirculated air only.	
549-07	HVAC RETURN AIR FILTER	(A),TK electrostatic (reusable) filter.	
549-0C	HVAC SYSTEM VALVES	(S),Brass ball valves with basic handles.	
549-0D	A/C AND HEATER LINE CLAMPS	(B),Ideal.	
549-0E	A/C COMPRESSOR	(S),Electric driven compressors integrated into the main HVAC unit.	
549-0J	HVAC ELECTRONICS	(B),Thermo King Intelligaire 3, valid for A/C or heater units. With limited diagnostic capabilities.	
549-0K	HVAC CONTROL PANELS	(B),Thermo King, installed at the HVAC unit.	
549-0N	A/C PRESSURE READINGS	(B),Obtained via the Thermo King Intelligaire 3 control panel.	
549-0Y	HVAC BOOSTER FAN	(B),MCC overhead fan with brushless motor. For non-60' CNG coaches.	
549-15	HVAC FAN SPEED SWITCH	(B),Not required.	
549-16	BOOSTER PUMP	(B),Rotron	
549-1A	DEFROSTER	(B),MCC 3 speed brushless SPAL blower, plastic end-caps, electrically controlled damper with on/off interlock.	
549-1E	AUXILIARY/CABIN HEATER	(B),Valeo Thermo DC 200 (20 kw) @ 690V electric heater.	
580-01	FRONT WHEELCHAIR RAMP	(B),NFIL ramp at front door. 32" wide, with 1:7 slope.	
580-02	FRONT RAMP CONTROL	(B),Ramp switch at driver's instrument panel.	
580-08	WHEELCHAIR RAMP,SURFACE	(B),Covered with Full Metal Jacket anti-skid treatment. The leading edge is yellow FMJ, the side flanges are painted yellow.	
580-0G	KNEELING/RAMP DEPLOYMENT WARNING BEEPER	(B),IP68-rated beeper, medium loud fast beep.	
580-0H	FRONT KNEELING/RAMP DEPLOYMENT WARNING BEEPER LOCATION	(B),Curbside under front mask.	
600-05	BACK-UP ALARM	(B),Basic alarm located on curbside.	
600-06	BACK-UP ALARM SOUND LEVEL	(B),107 dBA.	
600-0C	INTERIOR FAN(S),MANUFACTURER	(A),Bergstrom, 12 volt.	
600-0E	DASH FANS,QTY AND LOCATION	(A),One fan, 3.5" right of center	
600-0J	SDS TRAY QUANTITY	(A),Two trays total.	
600-0M	FAREBOX PEDESTAL	(B),Stainless Steel Material. Length = 26.56"; Front fore length = 12.36"; Width = 13.96"; Height = 6"	
600-0N	FAREBOX	(A),41" Genfare FastFare.	
600-0P	FAREBOX,SUPPLIED BY	(A),Supplied and installed by NFIL.	
600-0R	FAREBOX POSITION / HOLES	(A),Located in NFIL preferred position whether installed by NFIL or by customer.	
600-1D	CURBSIDE FRONT EQUIPMENT BOX	(A),Standard box.	
600-26	RADIO,COMMUNICATION SYSTEM	(A),Provisions for system. Installation of antenna (s), cabling and ground plates, as per customer spec.	
600-2G	VIDEO SURVEILLANCE SYSTEM	(A),Interior and exterior cameras.	
600-2H	VIDEO SURVEILLANCE SYSTEM,MFR	(A),SafeFleet (Seon system).	
600-31	FIRE SUPPRESSION	(A),Amerex Modular System.	
600-32	FIRE SUPPRESSION BOTTLE LOCATION	(B),Located behind streetside rear corner pillar door.	
600-33	FIRE DETECTION SENSORS	(A),Amerex fire detection sensors - two at streetside and two at curbside of engine compartment.	

Option	Description	Tech Summary Description	Comments
600-34	FIRE SUPPRESSION BOTTLE	(B),Amerex System with 25 lb dry chemical agent tank without inline blowout adapter.	
600-35	FIRE SUPPRESSION BOTTLE ACCESS DOOR	(B),Required without sight window.	
600-36	FIRE SUPPRESSION DISPLAY PANEL LOCATION	(B),Under driver's overhead panel at middle position of sawtooth panel.	
600-3V	BICYCLE RACK MANUFACTURER/MODEL	(A),Sportworks, DL2-NP (narrow profile), front mounted.	
600-3W	BICYCLE RACK MOUNTING	(A),Bolted slide-in standoff	
600-3Y	BICYCLE RACK REMOVAL	(A),Bolted rack.	
600-3Z	BICYCLE RK MATL/COLOR	(A),SST, satin anti glare finish.	
600-40	BIKE RACK DEPLOY INDICATOR LIGHT	(A),Required.	
600-42	BICYCLE RACK INSTRUCTIONS	(A),English / Spanish	
600-4D	VIDEO/INFOTAINMENT SYSTEM	(A),Clever devices.	
600-4E	VIDEO/INFOTAINMENT DISPLAY QTY	(A),One	
600-4M	POWER INVERTER LOCATION	(A),Mounted on tray inside the SDS enclosure.	
600-5A	AUTOMATIC PASSENGER COUNTER SYSTEM	(A),Full system.	
600-5B	AUTOMATIC PASSENGER COUNTER	(A),Hella APS-R (provided by Clever Devices)	
600-5H	POWER INVERTER	(A),700W, 24VDC	
600-6F	FAREBOX PEDESTAL TREATMENT	(B),Black full metal jacket	
600-6H	FAREBOX ORIENTATION	(A),Facing rear of bus	
600-6V	CURBSIDE FRONT EQUIPMENT BOX. LOCK/LATCH TYPE	(A),Paddle Latch, no lock	
600-7H	CURBSIDE FRONT EQUIPMENT BOX, WHEEL CHOCK DIVIDER	(A),Right 1/3, 9.69" wide.	
600-7N	CURBSIDE FRONT EQUIPMENT BOX. HINGE ORIENTATION	(B),Parallel to CS window	
600-87	BIKE RACK DEPLOYMENT SWITCH	(A),Required.	

**Tab 3, Infrastructure and Chargers Proposal**

**Solicitation Requirements:**

*Infrastructure and Chargers Proposal*

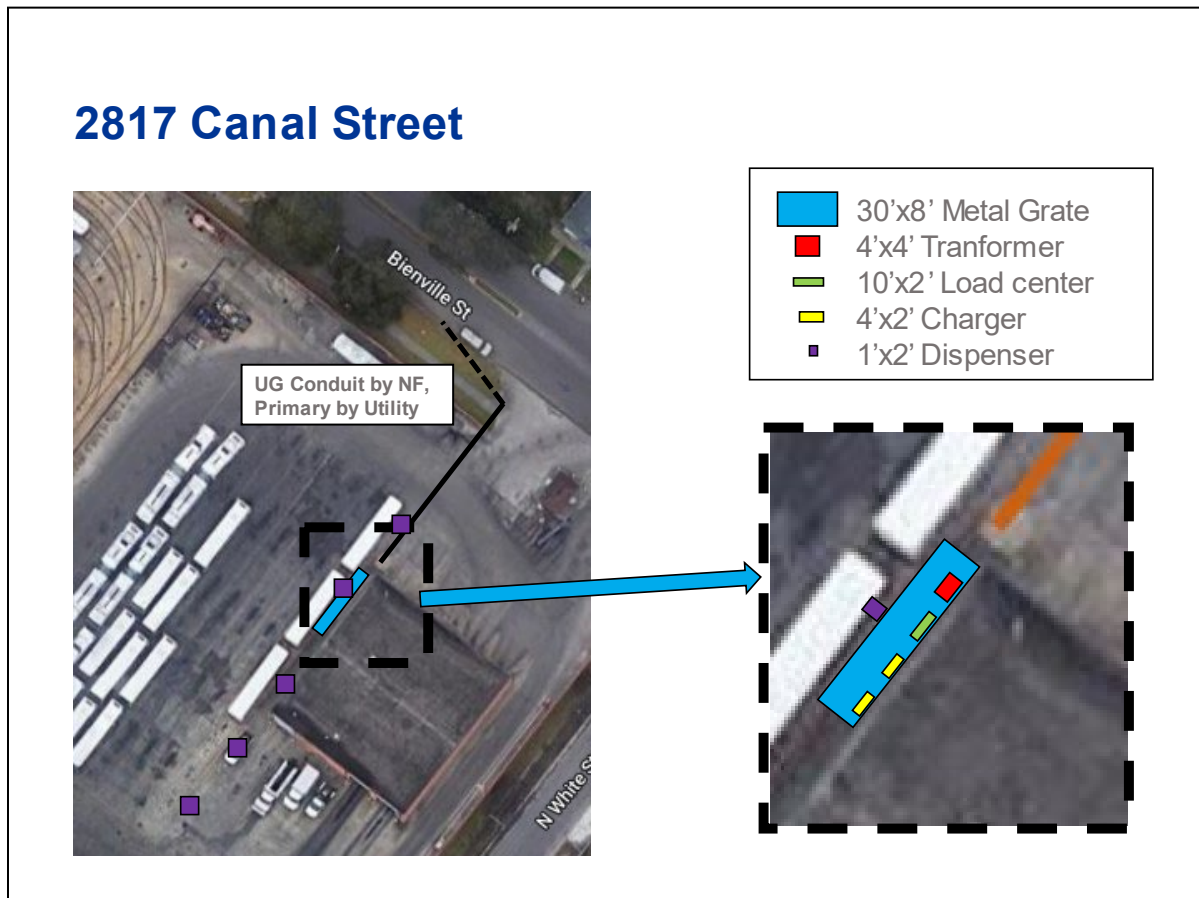
**New Flyer Response:**

Please refer to the below Infrastructure and Chargers Proposal for your consideration.

## New Orleans RTA Infrastructure and Charging Equipment

New Flyer of America Inc. is pleased to submit this project and costing from New Flyer Infrastructure Solutions™ (NFIS). This proposal includes a turn-key proposal for electric vehicle charging infrastructure at the RTA facility at 2817 Canal Street in New Orleans, Louisiana to accommodate depot electric bus charging equipment and modifications along Lake Forest Road near the intersection with Read Blvd to accommodate on-route electric bus charging equipment.

### Conceptual Plan – 2817 Canal Street Plug-in Chargers





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## **Project Scope – Plug-in Chargers**

The detailed project scope includes the following elements. The scope is based on assumed distances between the equipment and standard site conditions. If distances or site conditions differ from assumptions, a change order or credit will be necessary.

### Project Management:

- Management and documentation of engineering coordination meetings
- Management and documentation of construction coordination meetings
- Project Controls: Schedule and change order cost control
- Utility Coordination

### Depot Chargers

- New Flyer Infrastructure Solutions Consulting and Commissioning 2 Heliox 180kW Plug-in Chargers and 6 Dispensers (1 charger to 3 dispenser arrangement)
- 2 years Standard Heliox Warranty on chargers
- 1 year Charge Management System ChargePilot by Mobility House for 6 dispensers.
- Freight to site
- Dispensers include a 7m CCS-1 Cable
- BAA Compliant
- Parallel charging capabilities
- Charge Management System, Hardware, Software
- 1 year Charge Management System ChargePilot by Mobility House

### Engineering: Plans signed by a Professional Engineer certified in the State of Louisiana

- Electrical: 30%, 90%, construction/permit and as-built drawings
- Civil: 30%, 90%, construction/permit and as-built drawings
- Structural: 30%, 90%, construction/permit and as-built drawings

#### Electrical

- New electrical service from the overhead utility infrastructure along Bienville Street for depot charging equipment. Coordinate with local utility and design service equipment and distribution.
- Installation of (2) 180-kW Heliox chargers with (6) dispensers at the depot. Chargers will be elevated and located outdoors on the west side of the existing building on site.
- Power and control conduit and wiring for distribution associated with the new chargers and dispensers at the depot. Power and control wiring to dispensers shall allow for dynamic charging capabilities from the Heliox chargers with individual runs to each dispenser.
- Provide coordination study and circuit breaker settings for electrical service equipment at both new electrical services.

#### Civil

- Pavement Marking Design
- Pavement Design
- Erosion Control Plans

#### Structural

- Elevated equipment pads for (2) depot chargers and associated electrical distribution equipment.
- Elevated steel/grated platform with stairs and guardrails for access to depot charging equipment



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and associated electrical distribution equipment. Structure is assumed to be approximately three feet above grade and provide sufficient electrical clearances for operation and maintenance of equipment.

- Protective bollard layout for (6) dispenser locations at the depot for protection from bus traffic.

#### Permitting:

- Obtaining all required permits and inspections

#### Charging Equipment Installation:

- Unload and place all equipment.
- Terminate all wire connections.

#### Construction:

- Utility Service
  - Conduit for utility to property line
  - Utility to provide and install primary wiring to transformer
  - Ductbank not included
- Switchgear/Electrical Equipment
  - Switchgear to accommodate new load
- Install 12 bollards to protect dispensers
- Elevated steel/grated platform with stairs and guardrails for access to depot charging equipment and associated electrical distribution equipment. Structure is assumed to be approximately three feet above grade and provide sufficient electrical clearances for operation and maintenance of equipment.
- Charging Equipment
  - Charger conduit, wiring, installation, and terminations:
    - Primary conduit – 120' 3"
    - AC Conduit and Wiring - Transformer to switchgear (assumed 10') and switchgear to charger (assumed 25')
    - DC Conduit and Wiring – Approx. 240' for Charger to dispensers
    - Comms Conduit and Wiring – Approx. 240' distance from charger to dispensers
  - Installation, testing and commissioning.
  - 6 Dispensers will be mounted along bus parking lane
- Parking Lot Pavement Construction
  - Cutting and patching for the installation of service conduits. Ductbank (if required) is not included.



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## Conceptual Plan – Read and Lake Forest Blvds On-route Charger



### Project Scope – On-Route Charger

The detailed project scope includes the following elements. Scope is based on assumed distances between equipment and standard site conditions. If distances or site conditions differ from assumptions, a change order or credit will be necessary.

#### Project Management:

- Management and documentation of engineering coordination meetings
- Management and documentation of construction coordination meetings
- Project Controls: Schedule and change order cost control
- Utility Coordination

#### On-Route Charger

- New Flyer Infrastructure Solutions Consulting and Commissioning
- 1 Heliox 360 kW Overhead Opportunity Charger
- 1 Opportunity Charger Mast and Pantograph





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- Freight to site
- 1 year Charge Management System ChargePilot by Mobility House for 1 Pantograph dispenser
- BAA Compliant

Charge Management System, Hardware, Software

- 1 year Charge Management System ChargePilot by Mobility House

Engineering: Plans signed by a Professional Engineer certified in the State of South Carolina.

- Electrical: 30%, 90%, construction/permit and as-built drawings for 16 chargers
- Civil: 30%, 90%, construction/permit and as-built drawings for 16 chargers
- Structural: 30%, 90%, construction/permit and as-built drawings for 16 chargers

#### Electrical

- Coordinate with local utility and design service equipment and distribution.
- Modifications to roadway lighting to accommodate the cut-away for on-route charging.
- New electrical service from the overhead utility infrastructure along Read Boulevard for on-route charging equipment. Coordinate with local utility and design service equipment and distribution.
- Power and control conduit and wiring for distribution associated with the new charger and overhead pantograph pole for on-route charging.
- Provide coordination study and circuit breaker settings for electrical service equipment

#### Civil

Civil plans will design a bus cut-away along the south side of Lake Forest Road just east of Read Blvd to accommodate on-route electric bus charging equipment. The Civil plans include modifications to the roadway, drainage, and sidewalks for the cut-away. The civil plans will include:

- Horizontal Design
- Vertical Design
- Closed System Drainage Design
- Pavement Marking Design
- Signing Plans
- Pavement Design
- Right of Way Plans
- Cross Sections
- Utility location plans
- Erosion Control Plans
- Construction Quantities

#### Structural

- Protective bollard layout for (6) locations
- Equipment pad for (1) on-route charger and associated electrical distribution equipment.
- Foundation for on-route overhead pantograph pole structure.

Permitting:

- Obtaining all required permits and inspections

Charging Equipment Installation:

- Unload and place all equipment.
- Terminate all wire connections.



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**Construction:**

- Utility Service
  - Transformer and primary wiring by Utility.
- Switchgear/Electrical Equipment
  - New switchgear to accommodate 360 kW Charger
- Install 6 bollards to protect all new equipment
- Structural footing for 1 overhead pole/mast mounted pantograph.
- Charging Equipment Installation
  - Charger conduit, wiring, installation, and terminations:
    - 100 lineal feet of Landscape trenching, backfill, and restoration
    - AC Conduit and Wiring - Transformer to switchgear (assumed 20') and switchgear to charger (assumed 20')
    - DC Conduit and Wiring – 70' distance from Charger to dispensers
    - Communications Conduit and Wiring – 70' distance from charger to dispensers
  - Concrete equipment pads, installation, testing and commissioning.
  - 1 Pole/mast mounted Pantograph will be erected on footing.
- Modifications to the roadway, drainage, and sidewalks for the cut-away

**Pricing**

See Pricing Schedule for all pricing, with the following conditions:

- Prices are valid for 90 days for equipment to be delivered and installed no later than Q1 2024. 5% APR cost adjustment per year shall apply for later deliveries.
- Listed prices are before sales taxes. Sales tax exemption certificate to be provided with the PO, if available.
- Payment due date is based on standard 30 days from date of invoicing. Invoicing assumptions include:
  - Charging Equipment: 75% upon delivery to site, 25% upon acceptance.
  - Project Management, Engineering, Construction, Installation: Monthly as completed.

**Estimated Project Schedule**

- An approximate project duration schedule is shown below based on 2023 contract, engineering, and construction.
- Note: Project schedule will be confirmed once the contract is awarded and project details are finalized.

<b>Estimated Duration</b>	<b>Activity</b>
Start	RFP submission
2 Months	Provide New Flyer with contract and Notice-to-Proceed
3 Months	Order Charging Equipment, Infrastructure Engineering/Design Reviews, Utility Coordination
4 Months	Permitting, Advance approval of long lead items
4 Months	Infrastructure Construction and Charger Installation
1 Month	Charger Commissioning
<b>14 Months</b>	<b>Total</b>



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## **Proposal Assumptions**

New Flyer's Turn-Key Project approach is based on the following assumptions:

- a. NFIS will coordinate with Manufacturer for all charger related specs, technical coordination, scheduling, testing and acceptance of charger and functionality.
- b. Sites visits are included in the proposal (project site coordination, engineering, construction phases, and equipment commissioning)
- c. Exclusions to installation:
  - i) Any repaving or parking lot modifications, beyond those related to this work.
  - ii) Design modifications to existing or future service entrances, electrical systems, building features.
  - iii) Removal and remediation of Soil contamination
  - iv) Boulder removal
  - v) Increased demolition/soil disposal due to adverse soil conditions
  - vi) Removal of underground structures / debris
  - vii) CEQA costs and coordination
  - viii) Site lighting and security camera systems
  - ix) Site beautification requirements
  - x) Utility power quality issues
  - xi) Liquidated damages currently not priced
  - xii) Bonding currently not priced
- d. NFIS will be onsite with manufacturer for Charger Commissioning including:
  - i) Management of manufacturer power-on and start-up
  - i) Commissioning and integration of NF buses with chargers
  - ii) Agency will allow commissioning team to collect and analyze charge data produced by charge management system.
- e. Mobility House ChargePilot charging and energy management system is included for 1 year. Pricing for packages up to 5 years is available upon request. Note: After year 1 is complete, customer can extend the annual subscription to Change Management system directly with the Mobility House. Annual cost for Software License is \$1,440 per dispenser and \$900 per site for Cellular Connectivity.
- f. New Flyer is aware of the outbreak of Coronavirus (commonly known as COVID-19) or any mutation of such virus which is impacting or may impact normal business and supply chain. New Flyer hereby reserves the right to amend the delivery date/schedule set out in this proposal.



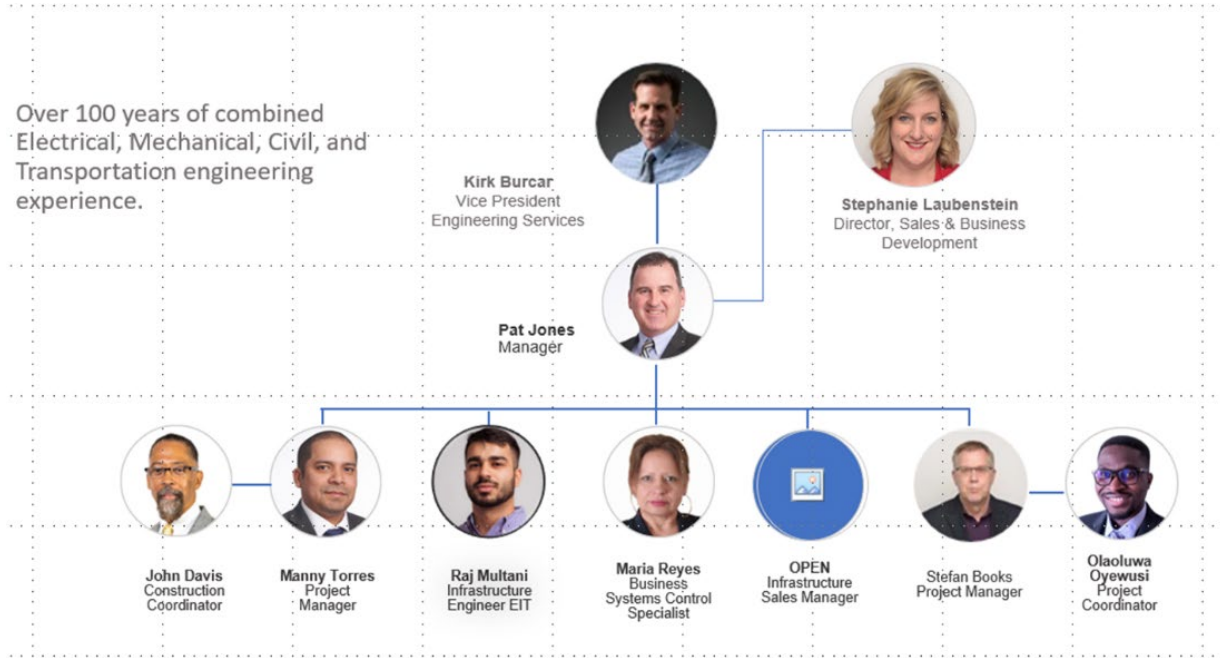
## **New Flyer Infrastructure Solutions**

New Flyer Infrastructure Solutions™ (launched early 2019) is a full-suite service, with a team of subject matter experts and engineers that guide zero-emission infrastructure projects through the process. The New Flyer Infrastructure Solutions™ team's sole purpose is to support and carry out electric bus mobility projects including: planning, engineering, construction, commissioning, and procurement, as well as



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determination of wayside or depot charging needs. The Infrastructure Solutions™ team has a combined experience of over 100 years of Electrical, Mechanical, Civil and Transportation experience.





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## New Flyer – Locations of Charger Projects

Customer	PLUG-IN	OVERHEAD	Vendor
ACADEMY BUS LLC	5	0	Siemens
ABQ Airport	0	0	Heliox
ALAMEDA COUNTY TRANSIT DISTRICT	7	0	CP
ANTELOPE VALLEY TRANSIT AGENCY (AVTA)	12	0	Heliox
BJCTA - BIRMINGHAM	1	0	Siemens
CAPITAL METRO – AUSTIN	4	0	Siemens
BLACKSBURG TRANSIT	2	0	Siemens
CAPITAL DISTRICT TRANSIT AUTHORITY	4	0	Siemens
CHICAGO TRANSIT AUTHORITY	2	1	Siemens
Charlotte Douglas Airport	2	0	ABB
COTA	6	0	ABB
CTDOT	21	0	ABB
Culver City	1	0	ABB
DASH – ALEXANDRIA, VA	3	0	ABB
FORT WORTH TRANSPORTATION AUTHORITY	2	1	ABB
GVTA / TRANSLINK	1	2	S/ABB/CP
KING COUNTY METRO	1	0	Siemens
KNOXVILLE AREA TRANSIT	6	0	Heliox
LINCOLN - STARTRAN	5	0	Siemens
LA COUNTY METROPOLITAN TRANSIT AUTHORITY	10	8	ABB/Siemens
LAKETRAN	1	6	ABB
LANE TRANSIT (EUGENE)	11	0	ABB
LONG BEACH	12	0	Heliox
MARYLAND DOT	3	0	Heliox
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY	4	0	ABB
METRO TRANSIT (MINNEAPOLIS)	8	2	Siemens
MOUNTAIN RIDES	4	0	ABB



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NEW FLYER INDUSTRIES	10	5	ABB/S'mns/Heliox
NEW YORK CITY TRANSIT AUTHORITY	16	2	Siemens
NICE	8	0	ABB
OKLAHOMA	1	0	ABB
OMAHA	2	0	ABB
OMNITRANS	4	0	ABB
PIONEER VALLEY (PVTA)	4	0	ABB
PORT AUTHORITY OF ALLEGHENY COUNTY	2	0	Siemens
RHODE ISLAND PUBLIC TRANSIT AGENCY	5	0	Heliox
ROARING FORK TRANSPORTATION AUTHORITY	4	0	ABB
ROCHESTER PUBLIC TRANSIT (MN)	3	0	Heliox
ROCHESTER TRANSIT AUTHORITY (NY)	5	0	BTC
ROYAL COACH TOURS	3	0	Chargepoint
SAN DIEGO TRANSIT COMMISSION	12	0	CP
SAN FRANCISCO MTA	1	0	CP
SOCIETE DE TRANSPORT (MONTREAL)	1	2	ABB
SOCIETE DE TRANSPORT (DE LAVAL)	10	1	ABB
ST. LOUIS METRO TRANSIT	20	3	ABB
TORONTO TRANSIT COMMISSION	26	0	ABB
TRI-MET	4	1	ABB
UNIVERSITY OF UTAH	2	0	ABB
UTAH TRANSIT AUTHORITY	2	2	ABB
VICTOR VALLEY TRANSIT AUTHORITY (VVTA)	7	0	CP
WMATA	1	0	Siemens
YORK REGION	4	1	Siemens/ABB
ZION	4		Rhombus
<b>Total</b>	<b>296</b>	<b>37</b>	



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## Infrastructure Solutions™ Team Members



### MANNY TORRES

*Lead Project Manager / Client Liaison*

As the project manager and main point-of-contact, Manny will lead our multidisciplinary team to deliver an efficient and highly functional project, while providing communication early and often through the entire process. Manny has led multiple projects with similar scope and scale.

#### Education

- BS, Electrical Engineering
- MS, Industrial Engineering

#### Project Experience

- BJCTA
- CTDOT
- SDMTA
- Capital Metro
- York
- DASH
- AVTA



### PATRICK JONES, PE

*Project Advisor*

Pat leads Infrastructure Solutions in support of New Flyer's charging equipment and infrastructure deployment for zero-emission buses. Pat joined New Flyer after accumulating nearly 20 years of experience leading Metro Transit (Minneapolis, MN) in capital programs management as the Assistant Director of Engineering and Facilities. Pat led a team of up to 35 project and construction managers in the areas of Bus and Rail Facilities, Infrastructure, and Sustainability. Prior to Metro Transit, Pat was a professional engineer in the architectural/engineering field.

#### Education

- BS, Electrical Engineering

#### Project Experience

- LA Metro
- CTA
- Metro Transit (St. Louis)
- Metro Transit (Minneapolis)
- Trinity



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## JOHN DAVIS

*Construction Coordinator*

John is the Construction Coordinator within New Flyer Infrastructure Solutions™ team. John brings more than 40 years of technical experience to the team and is focused on infrastructure construction, system integration, and commissioning of chargers. John's experience helps ensure a smooth transition from the completion of construction to revenue service for your new fleet.

### Education

- BS, Electrical Engineering

### Project Experience

- CTA
- Lincoln
- MBTA
- TTC
- UTA
- TriMet
- Metro Transit (Minneapolis)
- Metro Transit (St. Louis)
- PVTA



## OLAOLUWA OYEWUSI, PMP

*Project Coordinator*

Olaoluwa brings skills from the utility industry working for the Northern State Power Company (Xcel Energy) in both Minnesota and Wisconsin with nearly 5 years of experience. With his technical capabilities and capital project management, Olaoluwa has easily transitioned into his project coordination role with the New Flyer Infrastructure Solutions Group. He has led and managed multiple customer projects such as LakeTran Public Transit (Painesville OH), Lane Transit District (Eugene OR), and Rochester Public Transit (Rochester, MN). Olaoluwa diligently works through the commissioning phase, making sure chargers are functional before handing operations over to the customer. Olaoluwa has been with New Flyer for 2-1/2 years.

### Education

- BS, Electrical Engineering
- AS, Engineering

### Project Experience

- Lane Transit
- LakeTran
- Omaha
- Trinity
- Rochester Public Transit (MN)





## RAJ MULTANI, EIT

*Lead Infrastructure Engineer, EIT*

Raj has been with New Flyer for 4 years. Prior to this role, Raj was Charger Specialist and worked with buses and different charger manufacturers to increase charger reliability. He is responsible for future inter-operability testing of new chargers and new charger software.

### Education

- BS, Electrical Engineering
- Advanced Diploma in Electronics – Industrial Automation

### Project Experience

- St. Louis
- San Diego
- NYMTA
- Montreal

## Project Management

Project success hinges on the project team's ability to build, maintain and manage relationships with stakeholders. We will support with project messaging, developing effective outreach and engage stakeholders within your team. We use proven strategies, to engage project stakeholders early, often and throughout planning, design and implementation.

Our approach is focused and proactive so that teams address stakeholder input as it is received and create positive experiences while reducing the demand on your public relations staff.

### Single point of contact Leadership

It is important to find a team who will understand New Orleans RTA's requirements and execute them right, the first time. From pre-planning to post-construction, we have the right resources to make a project successful. Carefully aligning your Scope of Work alongside the skills of our professionals, the experience of the team presented will design and build New Orleans RTA's charging stations in a seamless, timely and cost-effective fashion. Specifically, the team can support New Orleans RTA's program with its collective experience executing nation-wide design-build program management, multi-site permitting and utility coordination. As projects progress, skill sets and levels of effort change and it is our job to ensure the resources needed for your project are always maintained.

The program management team will consist of a combination of core competences to serve this project in a manner it deserves.

### Risk Management

Effective risk management is essential for the success of any project. The ability to identify and address risk is vital to controlling costs and maintaining project schedules. Our risk management concepts are based on an analytical approach that allows for early identification of areas of high concern and their potential cost and schedule impacts.



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## Project Team

The New Flyer team will include the following subcontractors and suppliers – Heliox (Charging Equipment), The Mobility House (Charge Management System), Kimley Horn (Engineering), and construction will be procured once engineering is complete.

# Kimley-Horn and Associates, Inc

## Firm Overview

Kimley-Horn is one of the nation's premier planning and design consulting firms. We have been providing a wide variety of services for municipal clients since our founding 55 years ago. Kimley-Horn staff is focused on client service, delivering outcomes you can depend on—projects that can be successfully developed, permitted, and built on time and within budget. With 100+ offices nationwide and more than 6,700 employees, Kimley-Horn offers a wide range of professionals who can provide solutions for a variety of your transit needs. This year, Engineering News-Record ranked Kimley-Horn #10 of the top 500 U.S. design firms.

Established by transportation planning and traffic operations specialists, Kimley-Horn is a leading consultant in the planning and design of transit systems. Our services include bus planning, development, and design; bus rapid transit (BRT), light rail transit (LRT), heavy rail, commuter rail, intercity passenger rail, and high-speed rail; alternatives analysis/major investment studies; route planning and station development; strategic planning; program management; asset management; facilities and operations planning; and travel demand estimation. Kimley-Horn's service areas also include commercial and residential land development (including transit-oriented development [TOD]), intelligent transportation systems (ITS), automated/connected vehicles, shared and micromobility, environmental sciences, water resources, structural engineering, surveying, and landscape architecture.

Kimley-Horn's transit specialists work with clients through all phases of a project, from the early planning stages through final design and construction administration and have provided these services for transit and transportation agencies of all sizes across the country.



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### Professional Credentials

Bachelor of Science,  
Electrical Engineering,  
Milwaukee School of  
Engineering

Professional Engineer in  
Minnesota, Georgia,  
Florida, Iowa, Arkansas,  
Alabama, California, New  
York, Louisiana, Missouri,  
Massachusetts, North  
Carolina, South Carolina

## Jeremy Coonan, P.E., LEED BD+C *Electrical Engineer*

Jeremy has 19 years of electrical engineering experience including projects focused on military and industrial facilities, federal, state, and local government facilities, water and wastewater treatment facilities, power generation and distribution systems, and higher education campuses. His design experience includes medium and low-voltage facility power distribution and generation systems, interior and exterior lighting and control systems, fire detection and alarm systems, communication systems, building access and security systems, process control systems, and SCADA systems. Jeremy has performed all phases of engineering services including project management, preparing feasibility studies and condition assessments, preparing design and construction estimates, preparing construction drawings and specifications, providing construction administration services, and electrical distribution system modeling, analysis, and future planning.

### PROJECT EXPERIENCE

*Jeremy completed this work prior to joining Kimley-Horn:*

**East Metro/Nicollet Garages Preliminary Engineering for Electric Bus Chargers, Metro Transit, Multiple Locations, MN** – Project manager and electrical engineer responsible for development of preliminary design documents for installation of DC electric vehicle supply equipment (EVSE). Project included preliminary layout and planning for ten 150-180 kW EVSE within two existing transit facilities. Preliminary layout included EVSE and dispenser layouts, electrical service transformer and switchboards to serve the EVSE, and future expansion of services for up to 40 EVSE at each location.

**Electric Bus Infrastructure Start-Up and Commissioning, Metro Transit, Minneapolis, MN** – Project manager and electrical engineer responsible for providing start-up, testing, inspection, and commissioning services for eight 150 kW depot electric bus chargers and two 300 kW on-route overhead pantograph electric bus chargers. Project included additional testing and commissioning services for the eight 150 kW depot chargers after replacement of the equipment under warranty by the manufacturer due to preliminary equipment failures.

**Rochester Public Transit Bus Charging Stations, New Flyer, Rochester, MN** – Project manager and electrical engineer responsible for development of construction documents and construction administration for the installation of new charging equipment for depot charging of battery electric transit buses. Project included the installation of a new 480-volt electrical service, three 180-kW charging cabinets, nine overhead mounted dispensers, and associated charge management infrastructure within an existing bus garage.

**Trinity Metro Overhead Charging Station, New Flyer, Fort Worth, TX** – Project manager and electrical engineer responsible for development of construction documents and construction administration for the installation of new charging equipment for on-route charging of battery electric transit buses. Project included the installation of a new 480-volt electrical service, 450-kW charging cabinet and overhead pantograph charger, and modifications to the existing site access.



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Blake Clamp, P.E.  
*Civil Engineer*

### Professional Credentials

Bachelor of Science, Civil Engineering, University of South Carolina

Professional Engineer in South Carolina, North Carolina, Florida, Pennsylvania, Missouri, Alabama

Blake is a structural engineer with 11 years of experience in the areas of structural engineering and parking consulting. His responsibilities include project management, engineering analysis and design of new facilities, condition assessment and restoration of existing facilities, field investigations, and report preparation. Blake has been involved with conceptual planning and design for parking structures, development of technical specifications, permitting, construction, and failure analysis of all aspects of building systems. His design projects have encompassed structures of reinforced concrete, precast/prestressed concrete, post-tensioned concrete, structural steel, and structural aluminum. Blake's software experience includes Revit, ADAPTT PT, RAM Structural Systems, RAM Concept, RAM Elements, ETABS, STAAD, and MATHCAD.

### PROJECT EXPERIENCE

**Blue Line Light Rail Transit Extension, Metro Transit, Hennepin County, MN** – Project Engineer. Kimley-Horn is leading the preliminary engineering, final design, and construction phase services for this 13-mile light rail transit corridor. This project builds off of the alternatives analysis and draft environmental impact statement, which Kimley-Horn also contributed to. As the prime consultant, Kimley-Horn is leading overall project management, civil engineering, traffic engineering, and architectural design. Additionally, the firm is supporting structural engineering, LRT track design, freight rail coordination, public involvement, new starts, value engineering, and constructibility.

**Southwest Light Rail Transit, Metro Transit, Hennepin County, MN** – Project Engineer. As a subconsultant, Kimley-Horn is providing civil engineering services to assist the Metropolitan Council in the engineering and design of the METRO Green Line Extension (Southwest LRT), an approximately 15.8-mile transitway operating from downtown Minneapolis through the southwestern communities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie. The project involves the creation of 16 planned stations, 21 traction power substations (TPSS), an operations and maintenance facility (OMF), 28 bridges, and more than 70 retaining walls.

**Bull Street Development Parking Structures, Columbia, SC** – Kimley-Horn was selected as the lead design consultant for two parking structures at the Bull Street Development in Columbia, SC. The firm provided civil, parking functional, structural, MEP/FP, and traffic services for both parking structures. Blake served as the project manager on this project.

**Town of Mount Pleasant Parking Study, Mount Pleasant, SC** – Serving as project analyst. Kimley-Horn is providing a parking study for the Town of Mount Pleasant. Our team took parking counts on a three-mile corridor in Mount Pleasant in order to capture typical parking demand for both peak daytime and peak evening time periods. This data was compiled and inventoried to be inserted into ArcGIS for use in Kimley-Horn's proprietary program Park+. Park+ enables us to analyze parking demand for future increase in traffic volume due to future development in order to ensure sufficient parking is available for all future scenarios. This model will allow the Town to properly plan for the future as the Town grows and parking demand increases.



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# Heliox - Technical Specifications

# heliox

## FLEX 180 kW CE/UL 3 x 60 kW

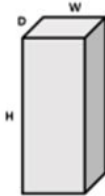


Charge any CCS compatible EV with up to 180 kW in flexible configurations. Performing at industry's highest efficiency of up to 95.5%. A fast and high-efficiency solution for a single vehicle, or a 3-vehicle fleet at 60 kW simultaneously. By adding the internal power router option, the FLEX 180 kW can dynamically reconfigure between 60/120/180 kW per charging connector dependent on EV requests and availability.

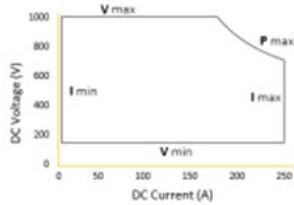
Modular product design provides optimal system redundancy and allows for upgrading the charging power to 360 kW with parallel products. The FLEX 180 kW only requires front access and minimum clearance area through optimized thermal management easing serviceability. The charging system can be composed using CCS and automated connection devices, thereby securing vehicle manufacturer compatibility.

### Dimensions

H: 2300 mm  
W: 800 mm  
D: 800 mm



### Power Curve



## Specifications



General	Charger
Charging standard	IEC61851-1/2/3 / SAE J1772 / SAE J3105
Communication standard	IEC61851-24 / DIN70121 / ISO15118-1/2/3 ed1 (incl. V2ICP/VDV261 support)
Compliance and safety	CE / IEC61851-21-2 / UL 2202 / UL 2231
Output DC voltage range	150 - 1000 V
Rated DC output power	Single output: 180 kW Triple outputs: 60 kW each
Maximum DC output current	Single output: 250 A Triple outputs: 83 A each
Input connections, Frequency	3P + PE (G) / 3P + N + PE, 47-63 Hz
Full load / idle input power	205 kVA / 100 VA
According to certification	CE UL
Input line-line voltage range	400 V AC +/- 10% 480 V AC +6/-13%
Input max. AC phase current	300 A, no inrush 283 A, no inrush
Power factor above 50 % rated	> 0.98
Peak efficiency	95.5%
Dielectric withstand	3000 V
Network cellular back office	4G modem, LAN OCPP 1.6j/2.0, ChargeSight
Temperature range	-30 to 45 °C -22 to 113 °F derating may apply
Operational noise level	<60 dB(A) @ 1 m
System weight	600 kg 1323 lb
Protection	IP54 / IK10 NEMA 3R
Environment operating	ISO 12944: C4 H, optional C5 H

Specifications subject to change without notice



95.5% Efficiency

Highest up time

Back office systems



Zero Emissions

Support services

Industry's quietest

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Atlanta (GA), USA  
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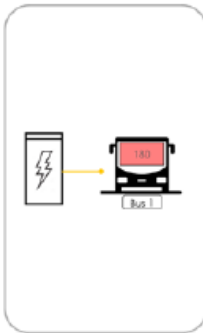


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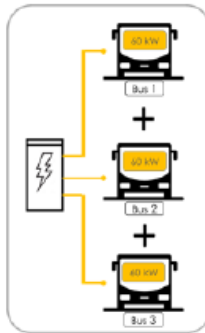
## Heliox FLEX™ Charging System

Heliox offers the versatile Flex Charging system. Below is an overview of the charging configurations possible. The Flex 180 kW charger provides 4 different charging options to provide maximum charging flexibility to the fleet operator.

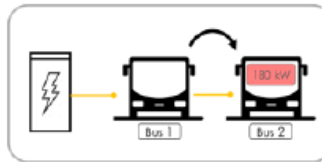
**Static Charging**  
1 outlet  
1x 180 kW



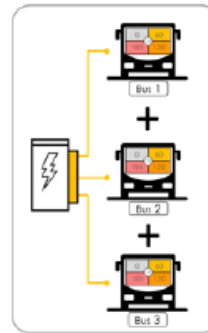
**Static Charging**  
3 outlets  
simultaneously  
3x 60 kW



**Static Charging**  
2 outlets sequentially  
1x 180 kW



**Dynamic Charging**  
3 outlets  
simultaneously  
3x 0/60/120/180 kW



Static Charging (1 x 180 kW) for those charging situations where a single vehicle requires a rapid opportunity charge. In this case the dispenser cable is attached directly to the charger cabinet and the cabinet has to be installed at the charging location.

Static Parallel Charging (3 x 60 kW) is for standard depot charging where the vehicles have typically and overnight charge window. This configuration delivers the charge through three Charge Columns. The charge columns can be located up to 300 ft from the charger cabinet thus providing the fleet operator with flexibility in locating the charging location.

Static Sequential Charging (2 x 180 kW) sequentially. Delivering the charge through charge columns this configuration provides high powered rapid charging to two vehicles per charger.

Dynamic Charging.(multiple charge configurations). The unique power router in this configuration allows maximum flexibility of charger configuration where 60 kW, 120 kW and 180 kW can be delivered out of each of the three dispensers as required by the fleet operator.

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# Flex 360 kW

Versatility. Flexibility. Reliability.

The Heliox Flex 360 kW is a fast and efficient solution for a single vehicle, or a dual vehicle fleet. Boasting one of the industry's highest component efficiency ratings the Flex 360 will always have your fleet ready to go.

Designed and manufactured in the EU - small footprint, high durability, built to last 15+ years

Charge any CCS compatible EV in flexible configurations up to 360 kW

Equipped with a separate remote DC Outlet, the Flex 360 kW can charge an EV with up to 500 A DC

Design for reference only. Design and product specifications are subject to change without notice.



1

of 2



heliox



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# Flex 360 kW



**Versatile:** Charge a single vehicle at 360 kW, or dual vehicle fleet 2x 180 kW simultaneously.



**Reliable:** Industry highest component reliability and system redundancy keeps your fleets' battery charged at all times. The charger is designed according to the IEC 61851 standard and is available in different configurations.

**95.5% Efficiency**

## General

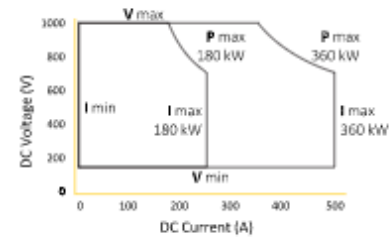
Charging standard	IEC61851-1/2/3
Communication standard	IEC61851-24 / DIN70121 / ISO15118-1/2/3 ed1 (V2ICP/VDV261 support)
Compliance and safety	CE / IEC61851-21-2
Power factor above 50 % rated	> 0.98
Peak efficiency	95.5%
Dielectric withstand	3000 V
Network cellular	4G modem, LAN
Back office	OCPP 1.6/2.0, Chargesight
Temperature range	- 30 to 45 °C derating may apply
Operational noise level	<60 dB(A) @ 1 m
System weight	1200 kg
Protection	IP54 / IK10
Environment operating	ISO 12944: C4 H
Dimensions	H: 2300 mm, W: 1600 mm, D: 800 mm

## Interfaces



## Input

Input connections, Frequency	3P + PE (G) / 3P + N + PE, 47-63 Hz
Full load / idle input power	400 kVA / 200 VA
Input line-line voltage range	400 V AC +/- 10%
Input max. AC phase current	593 A, no inrush



## Output

Output DC voltage range	150 - 1000 V
Rated DC output power	Single output: 360 kW Dual outputs: 180 kW each in parallel OR 360 kW sequential
Maximum DC output current	Single output: 500 A Dual outputs: 250 A each

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## Charge Management System

ChargePoint Charge Management System by Mobility House is provided in this proposal.

ChargePilot, an Open Charge Point Protocol (OCPP) compliant system, charges electric vehicle fleets intelligently, reliably and cost efficiently. With just one system, fleet managers can centrally monitor and manage all chargers, dynamically schedule charging across vehicles and chargers to reduce overall power demand, manage loads and keep track of fleet's energy consumption while charging. ChargePilot is modular and grows with your needs, providing the flexibility to design and plan for future growth. ChargePilot optimizes the use of available power, charging and energy infrastructure. ChargePilot processes different real-time parameters such as total available power, building load, electricity rates, vehicle battery State-of-Charge (SoC), and EV schedules, in order to optimize when and how much to charge each vehicle. The goal is to smooth out expensive peak loads ("peak shaving") and take advantage of low-cost charging windows, which significantly reduces electricity (e-fueling) expenditures. ChargePilot controls the charging cycle to manage the use of power from the utility grid for reduction of peak demand charges and general fleet charging management.

Figure 3 – Load Management using ChargePilot

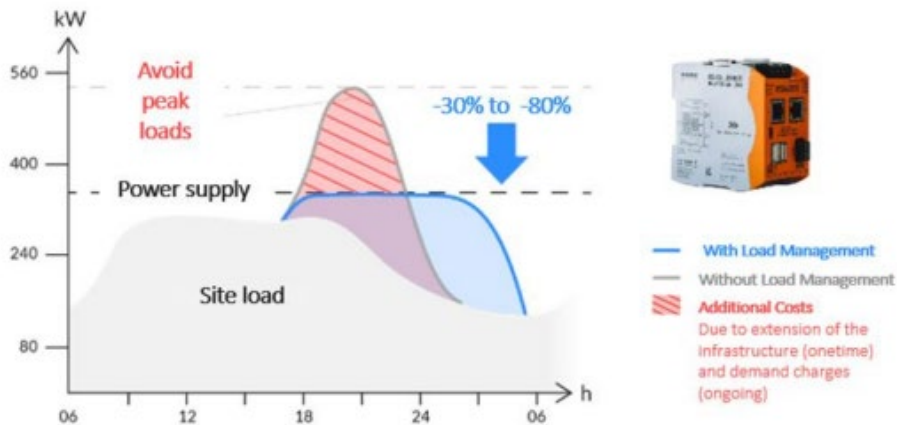
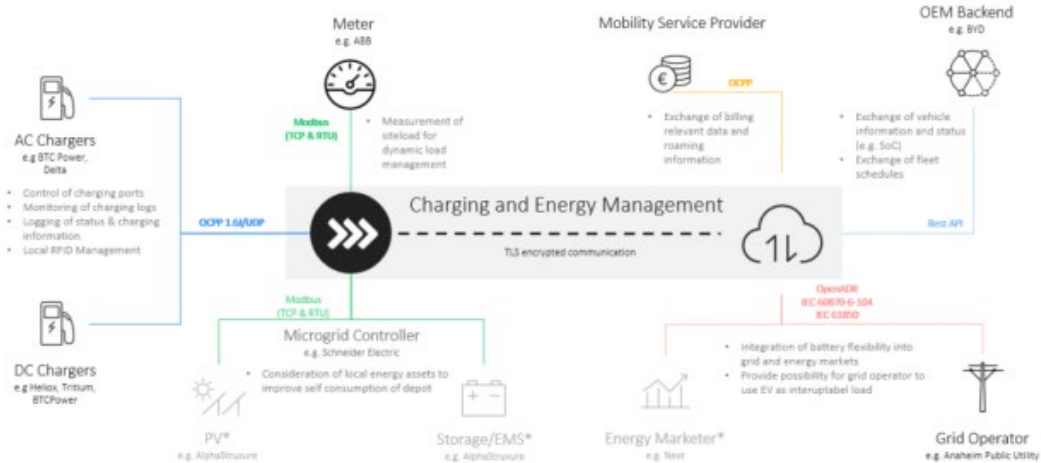


Figure below shows Charge Pilot's open system approach and different interfaces that enable the integration of several 3rd party systems such as chargers, onboard vehicle telematics systems, fleet management systems, microgrid controllers or distributed energy resources (DERs)

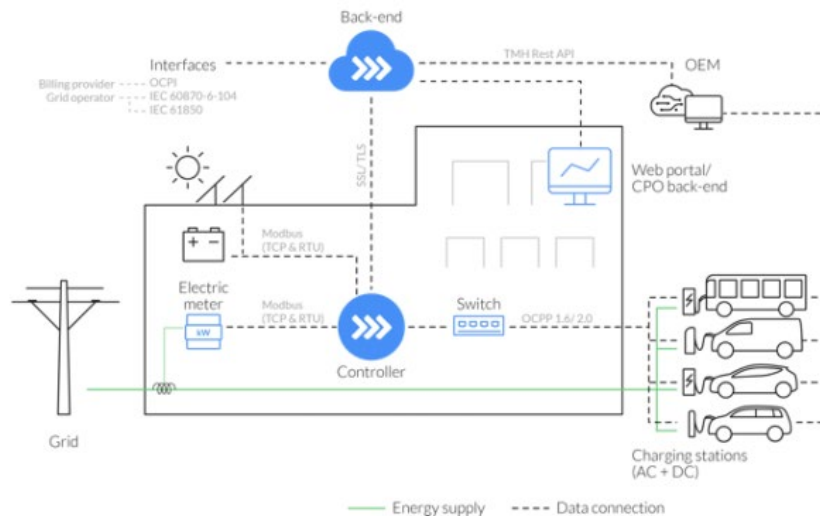
## ChargePilot offers interfaces to various services and devices for an optimized management of energy and mobility



ChargePilot communicates with chargers such as the Heliox 180 Flex via the OCPP 1.6J or 2.0 communication protocol. ChargePilot communicates with onboard vehicle telematics systems such as New Flyer Connect via the system’s open APIs. In the future, the integration with New Flyer Connect will be even more comprehensive via OCPP Proxy.

In order to ensure the highest level of reliability, the ChargePilot system architecture applies both local and cloud intelligence. All chargers are physically connected to an onsite controller using Ethernet and by thus fulfilling the low voltage requirement to reduce the simultaneous factor behind the fuse. The controller communicates with the charging stations using open-source communication protocol, OCPP and ensures that charging processes can be controlled even if there are network or internet connectivity issues. The following figure provides an overview of the architecture.

Figure 5 – ChargePilot System Architecture





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## Charging Management Module

ChargePilot is available in a number of configurations. For transit, we recommend Fleet Charging and Energy Management module, in order to optimize charging around vehicle schedules, vehicle state of charge and electricity costs.

Fleet Charging and Energy Management includes:

- Remote monitoring of operational status and power distribution, data collection, and error handling, incl. remote start and shutoff;
- Remote charge management, user management and analytics via the web-based user interface;
- Optimization of charging considering available power or utility tariff (scheduling charging during off-peak hours), as well as vehicle schedules and vehicle energy demand;
- Allows for the input of EV schedules manually or via a 3rd -party fleet management systems. With this module:

i. Electric buses can be charged using a first-in-first-charged (FIFC) method wherein the vehicle which arrives and plugs in first get charged first.

or

ii. Electric buses are charged based on their schedule information (arrival time and departure time), as well as on the basis of the vehicle's energy demand (SoC requirement). iii. Charge ports can also be prioritized to provide full power to a specific vehicle that might have an urgent charging need.

This module scales easily as the fleet grows and enables accurate control over the power drawn from the grid to minimize capital cost of electricity service upgrades as more charging ports are added. The controller installed on-site during implementation is capable of controlling over 70 charging ports without any upgrades.

The ChargePilot main dashboard shows the following information across sites:

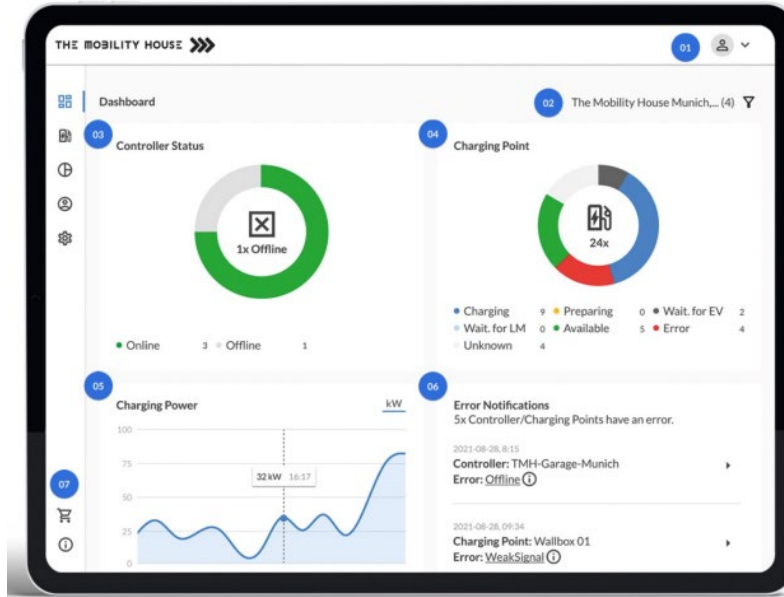
- Available chargers (total, available, in-use, waiting, in-error chargers);
- Grid limit;
- Fleet load (and site load) in near real-time.

The user can select a specific site to view in detail and view the following information:

- Electric vehicle State of Charge;
- Charging power per charging port;
- Energy consumption per vehicle;
- Fleet load (and site load) in near real-time.



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- 1) Account Settings and Logout
- 2) Selection of single or multiple sites (example showing multiple sites)
- 3) Current controller status of all selected sites
- 4) Current charging port status of all selected sites
  - **Charging:** The connected EV is charging
  - **Preparing:** Time before start and finish of charging process
  - **Waiting for EV:** EV is not charging because it's either fully charged or not taking any power
  - **Waiting for LM:** EV is waiting for energy management software to (re)start its charging process
  - **Available:** No EV is connected to the charging station
  - **Error:** Error during charging process or at charging station
  - **Unknown:** No information about the charging port available as the controller is offline. Connected EVs will continue their charging process
- 5) Current charge power at all selected sites in kW
- 6) Overview of error notifications for controller and charger at selected site
- 7) Link to webshop for ChargePilot compatible charging stations and FAQ



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Figure below displays chargers' status, vehicle ID connected, charging power, SoC, plug in time and ability to control chargers remote at a single or multiple sites. Displays specific site with 6 chargers.

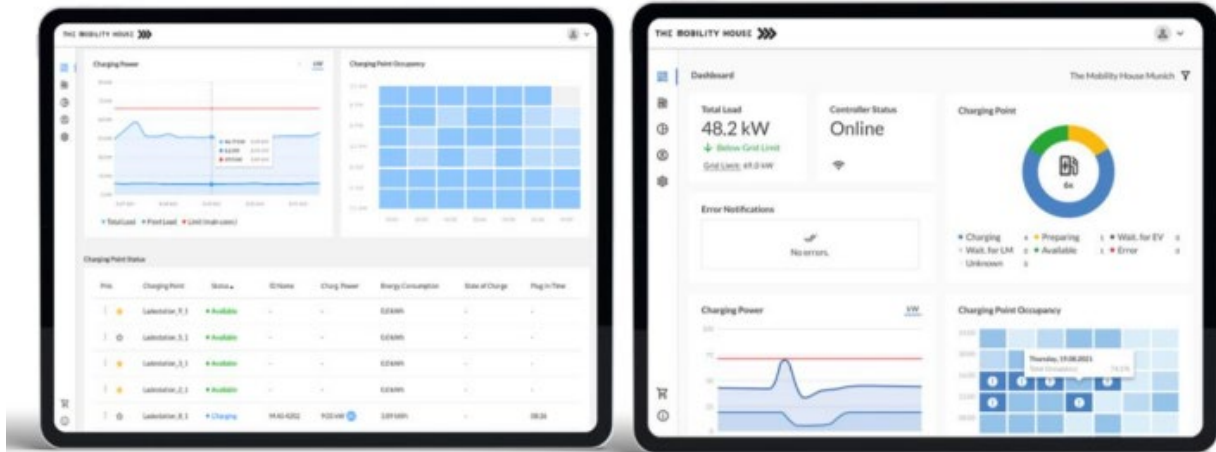
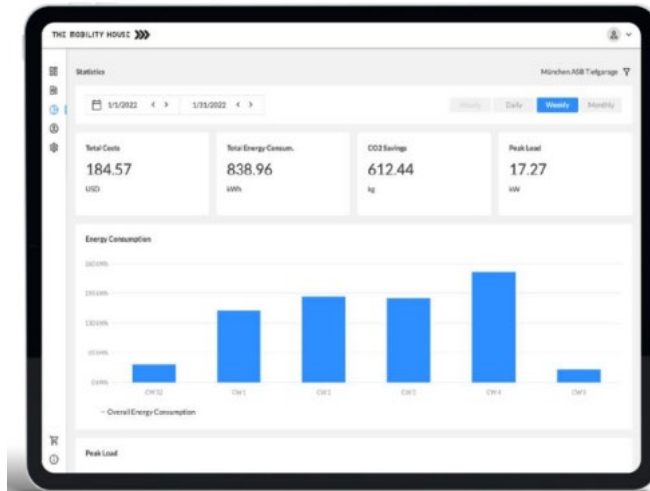


Figure below displays Depot statistics over a selected period with peak load, total power, total cost and CO2 emissions savings



### Data collection and statistics

ChargePilot provides the hours of use per charger as well as the amount of electricity used per charger for a user-defined period. This defined period could align with peak and off-peak pricing periods to understand charger utilization in various periods. It also provides the amount of electricity used and the cost of electricity used per charging session per vehicle for various internal and external reporting purposes. This information can be seen on the ChargePilot dashboard or can be downloaded as a CSV file for analytics and reports.

### Connectivity

The ChargePilot controller connects to the Heliox chargers via Ethernet. Internet connectivity for communication from the controller to the cloud backend can be provided via a 3G/4G/LTE cellular router or by connecting directly to the local Internet Service Provider (ISP).



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## **Start-up, Testing and Commissioning Plan**

New Flyer will oversee all start-up, testing and commissioning of the chargers with New Flyer buses. New Flyer has developed a process that has resulted in the successful commissioning of over 260 chargers across North America.

Each charger will undergo a thorough review of factory wiring by the manufacturer. The checkout will confirm the correct wiring, connections, and overall installation from the power cabinets to the dispenser. Mounting hardware will also be checked for conformance. Once complete, the unit will be powered on and go through extensive commissioning and be updated to the latest software. A report will be provided for each charger.

Once the start-up process is complete, chargers will be tested with buses according to all OEM standards. Bus logic will be monitored as initial connection is established. Once handshaking is complete, the bus will initiate the charge from the charger. Loading will be observed by the commissioning conglomerate of manufacturer and New Flyer teams to ensure a successful charge. Testing will continue on the bus with short and long charging sessions to meet or exceed the charger performance tests.

Upon completion, New Orleans RTA will undergo training on the chargers, the charging process, and basic maintenance.

**New Orleans Regional Transit Authority**  
Proposal for 40' Battery-Electric Transit Bus, Infrastructure and Chargers

**Tab 4, Warranty**

**Solicitation Requirements:**

*Warranty*

**New Flyer Response:**

Please refer to the attached Warranty for the 40' Battery-Electric Transit buses, Heliox Depot, and On-Route chargers, for New Orleans Regional Transit Authority's review.



NEW FLYER®

XE40 (516 kwh GEN 3B)

Built to  
RELY ON.™

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- Confidential -

CONTRACT DELIVERABLES LIST		Warranty
CUSTOMER NAME	New Orleans	
BID NUMBER	22-316	
BUS MODEL	XE40 (516 kwh GEN 3B)	
QUANTITY	4	

MAJOR COMPONENT DESCRIPTION	BASE AND EXTENDED WARRANTY			COMMENTS
	PROVIDER	YEARS	MILEAGE	
Base Bus Warranty	New Flyer of America	1	50,000	Excluding scheduled maintenance items, acts of nature, or normal consumables
Basic Bus Structure	New Flyer of America	3	150,000	Body, and body structure shall consist of the components that are mechanically fastened or adhesively bonded or glued as part of the structure.
Chassis Structure (Integrity)	New Flyer of America	12	500,000	Consists of all components that are welded together to form the main frame (skeleton) and body construction. The structural integrity guarantee covers against a significant loss of structural integrity of the assembly or its functional performance due to non corrosion related failures.
Chassis Structure (Corrosion)	New Flyer of America	12	500,000	Consists of all components that are welded together to form the main frame (skeleton) and body construction, and are warranted against corrosion failure and/or fatigue failure sufficient to cause a Class 1 failure. The corrosion and structural integrity guarantee covers against a significant loss of structural integrity of the assembly or its functional performance, resulting from a pertinent loss of cross-section due to corrosion caused by normal environmental elements but excludes corrosion caused by aggressive road deicers such as Magnesium Chloride or equivalents, unless New Flyer approved preventative measures are taken. The warranty shall be void if the Agency fails to conduct corrosion inspections and scheduled preventive maintenance procedures as specified in the Contractor's maintenance manuals. The Agency shall maintain documentation, auditable by the Contractor, verifying service activities in conformance with the Contractor's maintenance manuals.
Propulsion System (Traction System, Controllers/Inverters and Gear Box)	Siemens	6	300,000	Siemens to cover the warranty for 5 years. New Flyer to cover year 6. All warranty claims to be submitted to New Flyer.
High Voltage Batteries (Energy Storage System GEN 3B)	Xalt Energy / New Flyer of America	6	300,000	<p>"Capacity fade is the relative reduction of the total amount of energy the battery system can store in a single charge for the purpose of powering the bus as compared to capacity at beginning of life (BOL). Capacity fade is warranted to 80% at year 6 or 300,000 miles when;</p> <p>1) capacity measurements are taken from a balanced ESS, and 2) ESS is maintained in the manner described in the New Flyer Service Manual."</p> <p>"The string Battery Management System (BMS) controllers and Power Distribution Unit (PDU) are warranted for proper operation up to year 6 or 300,000 miles when the ESS is maintained in the manner described in the New Flyer Service Manual."</p> <p>All warranty claims to be submitted to New Flyer.</p>
Axle (Front and Rear)	MAN	5	300,000	Excluding maintenance items & items that are not covered by the OEM's warranty. All friction materials are excluded from this limited warranty. Wear and third party items supplied with the axle (e.g. slack adjuster, seals and bearings, shocks, air bellows, radius rods, brake chambers) are not included in the 5 year warranty. Please see manufacturer's warranty document.
A/C	Thermo King	2	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document. All repairs/warranty claims need to be handled through the local authorized repair facility.
Brake System	New Flyer of America	1	50,000	Friction Material Excluded
Destination Signs	Hanover	10	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document. All repairs/warranty claims need to be handled through the local authorized repair facility.
Door Systems	Vapor	3	150,000	Excluding maintenance items & items that are not covered by the OEM's warranty
Air Compressor	New Flyer of America	2	Unlimited	
Wheelchair Ramp	New Flyer of America	1	50,000	
Electrical System	Parker	3	150,000	Excluding maintenance items & items that are not covered by the OEM's warranty





**NEW FLYER**

XE40 (516 kwh GEN 3B)

*Built to*  
**RELY ON.**

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- Confidential -

MAJOR COMPONENT DESCRIPTION	BASE AND EXTENDED WARRANTY			COMMENTS
	PROVIDER	YEARS	MILEAGE	
LED Headlights	J.W.Speaker	6	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document.
Paint	Axalta	5	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document.
Tires	New Flyer of America	2	24,000	New Flyer Industries Limited warrants the tires installed as original equipment on this vehicle only against defects in materials and workmanship which cause the vehicle to fail to comply with applicable U.S. and Canadian greenhouse gas emission limits ("Warrantable Emissions Failures"). This vehicle emissions limited express warranty relating to original equipment tires is valid for two (2) years or 24,000 miles whichever occurs first.



# NEW FLYER<sup>®</sup>

CONTRACT DELIVERABLES LIST		Warranty
CUSTOMER NAME	New Orleans	
BID NUMBER	22-316	
CHARGER TYPE	Depot	
CHARGER SUPPLIER	Heliox	
QUANTITY	2	

MAJOR COMPONENT DESCRIPTION	BASE AND EXTENDED WARRANTY			COMMENTS
	PROVIDER			
		YEARS	HOURS	
Depot Charger	Heliox	2		2-year warranty on parts and labour from date of initial commissioning



# NEW FLYER®

CONTRACT DELIVERABLES LIST		Warranty
CUSTOMER NAME	New Orleans	
BID NUMBER	22-316	
CHARGER TYPE	On-Route	
CHARGER SUPPLIER	Heliox	
QUANTITY	1	

MAJOR COMPONENT DESCRIPTION	BASE AND EXTENDED WARRANTY			COMMENTS
	PROVIDER			
		YEARS	HOURS	
On-Route Charger	Heliox	2		2-year warranty on parts and labour from date of initial commissioning

**New Orleans Regional Transit Authority**  
Proposal for 40' Battery-Electric Transit Bus, Infrastructure and Chargers

**Tab 5, Training**

**Solicitation Requirements:**

*Training*

**New Flyer Response:**

Please refer to the attached training proposal for the 40' Battery-Electric Transit buses, for New Orleans Regional Transit Authority's review. Please note, training is not priced in inside bus price, and can be purchased separately.

CONTRACT DELIVERABLES LIST		CUSTOMER TRAINING	
CUSTOMER NAME	New Orleans		
BID/OPTION/SR NUMBER	22-316		
TECHNICAL SUMMARY	Rev Draft		
BUS MODEL	XE40		
QUANTITY			
PROPULSION SYSTEM	Siemens ELFA 3		
VOLTAGE REGULATOR	Transtech		
ENERGY STORAGE SYSTEM	XALT High Energy Gen 3B		
COOLING SYSTEM	EMP/Modine BTMS		
AXLES	MAN VOK07 Front, HY1350 Rear		
LEVELING/KNEELING	Smartrider Lite		
STEERING	Berendsen Electric		
ABS	Wabco		
AIR CONDITIONING	Thermo King, Intelligaire III, TE15, R407c		
CABIN HEATER	Valeo Thermo Electric		
PLC	Vansco		
DESTINATION SIGNS	Hanover		
DOORS	Vapor w CLASS		
WHEELCHAIR RAMP	NF Standard		
FIRE SUPPRESSION	Amerex Modular		
AVA/AVL	Clever Devices IVN		
APC	HELLA		
VIDEO SURVEILLANCE	SafeFleet		
BRAKE MONITORING	MGM eStroke		

**CURRENCY:  
USD**

**New Flyer Supplied Training**

DESCRIPTION	COMMENTS	QTY HRS.	TOTAL SELLING PRICE AT BID	REQUIREMENT	BILLABLE: Y/N
Operator Orientation		4	\$986.85	Recommended	Y
Maintenance Orientation		4	\$986.85	Recommended	Y
Multiplex System		32	\$7,894.80	Recommended	Y
Entrance & Exit Doors		4	\$986.85	Recommended	Y
Wheelchair Ramp		4	\$986.85	Recommended	Y
Brake Systems and Axles		16	\$3,947.40	Recommended	Y
Air System and ABS		8	\$1,973.70	Recommended	Y
Suspension and Steering		8	\$1,973.70	Recommended	Y
Coolant Loop Fill Procedure		4	\$986.85	Recommended	Y
Towing		4	\$986.85	Recommended	Y

Body and Structure		4	\$986.85	Recommended	Y
Propulsion & ESS Familiarization/HV Safety		32	\$7,894.80	Recommended	Y
Propulsion & ESS System Troubleshooting		16	\$3,947.40	Recommended	Y
<b>Sub Total - New Flyer Training</b>					Y
<b>OEM/Subcontractor Supplied Training</b>					
<b>DESCRIPTION</b>	<b>COMMENTS</b>	<b>QTY HRS.</b>	<b>TOTAL SELLING PRICE AT BID</b>		
HVAC Maintenance		8	\$4,050.00	Recommended	Y
Fire Suppression		8	\$2,700.00	Recommended	Y
Destination Sign		8	\$2,700.00	Recommended	Y
Siemens Propulsion Troubleshooting		24	\$13,770.00	Recommended	Y
XALT ESS Troubleshooting		16	\$9,112.50	Recommended	Y
<b>Sub Total - OEM/Subcontractor Training</b>					
<b>Training Total (priced separate from the bus price)</b>			<b>\$66,872.25</b>		Y

**Tab 6, Tooling and Diagnostics**

**Solicitation Requirements:**

*Tooling and Diagnostics*

**New Flyer Response:**

Please refer to the attached Tooling and Diagnostics list for the 40' Battery-Electric Transit buses, for New Orleans Regional Transit Authority's review. Please note, tooling and diagnostics are not priced in inside bus price and can be purchased separately.

CONTRACT DELIVERABLES LIST		DIAGNOSTICS & TOOLS
CUSTOMER NAME	New Orleans	
BID/OPTION/SR NUMBER	22-316	
TECHNICAL SUMMARY	Rev Draft	
BUS MODEL	XE40	
QUANTITY		
PROPULSION SYSTEM	Siemens ELFA 3	
VOLTAGE REGULATOR	Transtech	
ENERGY STORAGE SYSTEM	XALT High Energy Gen 3B	
COOLING SYSTEM	EMP/Modine BTMS	
AXLES	MAN VOK07 Front, HY1350 Rear	
LEVELING/KNEELING	Smartrider Lite	
STEERING	Berendsen Electric	
ABS	Wabco	
AIR CONDITIONING	Thermo King, Intelligaire III, TE15, R407c	
CABIN HEATER	Valeo Thermo Electric	
PLC	Vansco	
DESTINATION SIGNS	Hanover	
DOORS	Vapor w CLASS	
WHEELCHAIR RAMP	NF Standard	
FIRE SUPPRESSION	Amerex Modular	
AVA/AVL	Clever Devices IVN	
APC	HELLA	
VIDEO SURVEILLANCE	SafeFleet	
BRAKE MONITORING	MGM eStroke	

NOTE: TOOL KITS MAY BE SUBJECT TO CHANGE

**\*\* All claims for concealed shortages must be reported within 20 days of shipment date. Shipping damages and / or loss must be noted on the delivering carrier waybill at the time of receipt of shipment. A copy of the carrier waybill and / or carrier inspection report must be submitted with your claim within 5 days of receipt of shipment to New Flyer Customer Service.**

CURRENCY:  
USD

PAGE REFERENCE	COMMENTS	DESCRIPTION	QUOTED PART #	BID QTY	EXTENDED SELLING PRICE	REQUIREMENT	BILLABLE: Y/N
		<b>Diagnostic Equipment</b>					
	for use with all diagnostic software	Panasonic FZ55 Toughbook Laptop	6502351	1	\$3,408.33	Recommended	Y
		Intelligaire III Diagnostic Software & Cables	6393934	1	\$2,249.96	Recommended	Y
	free download from EMP website	EMP Software	NPN	1	\$0.00	Recommended	Y
		Wabco ABS Software (1-year subscription)	6334596	1	\$412.02	Recommended	Y
		Valeo Diagnostic Software & Cables	6396448	1	\$520.79	Recommended	Y
		Adapter - Diagnostic	6492163	1	\$53.41	Recommended	Y
	provided by Hanover at n/c	Hanover HELEN Software	6401762	1	\$0.00	Recommended	Y
		Hanover Keylo Programming Device	6401761	1	\$183.94	Recommended	Y
		Hanover Keylo Programming Base Station	6401760	1	\$257.51	Recommended	Y
	free download from Parker-Vansco website	Vansco Software	NPN	1	\$0.00	Recommended	Y
	free download from Parker-Vansco website	PVSG Software	NPN	1	\$0.00	Recommended	Y
		Cable - PVSG Interface	6487019	1	\$54.03	Recommended	Y
	free download from Parker-Vansco website	Smartrider Software	NPN	1	\$0.00	Recommended	Y
	provided by Vapor at n/c	Vapor Class System Diagnostic Interface Kit	6358421	1	\$89.22	Recommended	Y
		Vapor Class System Software	NPN	1	\$0.00	Recommended	Y
		Siemens PCAN Interface Harness	711447	1	\$101.53	Recommended	Y
		USB CAN Adapter - Siemens Interface	6402046	1	\$397.31	Recommended	Y
	for ELFA 3	UDS Software - Vector Indigo	6487897	1	\$3,400.64	Recommended	Y
	for ELFA 3	Annual Maintenance - Vector Indigo	6487898	1	\$612.14	Recommended	Y
	for ELFA 3	Vector Keyman USB Dongle	6487899	2	\$559.17	Recommended	Y
	for ELFA 3	Indigo Interface - Vector VN1630 Log	6491163	1	\$2,617.80	Recommended	Y
	for ELFA 3 (qty of 2 per 1 VN1630)	CANpiggy 1057GCap - Vector	6491232	2	\$1,106.57	Recommended	Y
	for ELFA 3 (qty of 2 per 1 VN1630)	CANcable 2Y - Vector Indigo	6412000	2	\$217.78	Recommended	Y
	provided by XALT at n/c	XALT Service Tool Software	NPN	1	\$0.00	Recommended	Y
		XALT Interface Cable - Batteries	704950	1	\$206.01	Recommended	Y
		Kit - XALT SPI Tool Universal	6482554	1	\$2,496.26	Recommended	Y
	free download from Modine website	Modine BTMS Software	NPN	1	\$0.00	Recommended	Y
		Plug - MSD Blank	869751	6	\$980.26	Recommended	Y
		Cap - 12 PK Bus Bar Protective Cvr	6483658	1	\$381.28	Recommended	Y
		Key, Cam Latch #4 (ESS Triangle Key)	6476226	1	\$4.29	Recommended	Y
		Nexiq USB Link 2 - WIFI Edition	6465863	1	\$1,133.04	Recommended	Y
	provided by Berendsen at n/c	Danfoss Software - Berendsen Pwr Strg	NPN	1	\$0.00	Recommended	Y
		Cables Kit - Berendsen Pwr Strg	6490120	1	\$351.66	Recommended	Y
		eStroke Diagnostic Kit - J1939	6466350	1	\$1,745.32	Recommended	Y
	optional stand-alone kit (not for PC)	eDT Diagnostic Handheld Kit - MGM eStroke	6412679	1	\$3,394.09	Recommended	Y
		<b>Special Tools &amp; PPE</b>					
		Kit - Lift Tow Universal	6396565	1	\$286.79	Recommended	Y
		Kit - Lift Tow Receivers	6396567	1	\$1,658.50	Recommended	Y
		Xcelsior Flat Tow adapter (2 pcs. Per set)	6395097	1	\$3,164.91	Recommended	Y
		Assy - Frame Flat Towing	902990	1	\$5,871.29	Recommended	Y
		Jacking Adapters	434434	1	\$1,056.66	Recommended	Y
		Tool - Sway Bar Bushing Removal	566804	1	\$426.18	Recommended	Y
		Repair Kit - Disc Brakes & Calipers	6408310	1	\$4,100.41	Recommended	Y
		Torque Multiplier	6314711	1	\$2,208.07	Recommended	Y
		Hub Repair Kit - MAN VOK-07 Frt Axle	6408311	1	\$8,285.23	Recommended	Y
		Optional Hub Removal Hydraulic Tool Kit - MAN VOK-07	6458834	1	\$5,306.00	Recommended	Y
		King Pin Press Kit - MAN VOK-07 Frt Axle	6408312	1	\$14,440.38	Recommended	Y
		Hub Repair Kit - MAN HY1350 RR Axle	6408306	1	\$5,397.31	Recommended	Y
		ABS Sensor R&R Kit - MAN HY1350 RR Axle	6408307	1	\$984.96	Recommended	Y
		Pinion Seal Repair Kit - MAN HY1350 RR Axle	6444302	1	\$2,639.55	Recommended	Y
		Differential Repair Kit - MAN HY1350 RR Axle	6444303	1	\$8,531.35	Recommended	Y
		Optional Tool Kit - MAN HY1350 RR Axle	6444304	1	\$36,038.45	Recommended	Y
		Adj Tool - Strg Gear Box Press Relief	6465265	1	\$309.02	Recommended	Y
		Depth Punch - Strg Gear Box Press Relief	6465266	1	\$185.41	Recommended	Y
		Flow Meter Tester - Strg Gear Box	140809	1	\$1,221.32	Recommended	Y
		Puller Tool - Pitman Arm	6394270	1	\$449.62	Recommended	Y
		TK A/C Tool Kit - TE15 R407c	6472762	1	\$22,626.84	Recommended	Y
		Amerex Discharge Hose Blowout Adapter	052132	1	\$126.48	Recommended	Y
		Amerex Fire Alarm/Simulator Module	6484731	1	\$365.23	Recommended	Y
	For Powerex Scroll Compressor	Grease Gun Kit	6401436	1	\$316.97	Recommended	Y
	Leak Tester for Gen 3 ESS Tub	Kit - Pressure Test Tool	6493641	1	\$1,805.53	Recommended	Y
	For Gen 3 ESS	Head Wrench, Dessiccant Canister	6485513	1	\$270.39	Recommended	Y
	For Gen 3 ESS	Kit - ESS Coolant Pressure Tester	6486719	1	\$1,153.44	Recommended	Y
	For Gen 3 ESS	Kit - ESS Coolant Pressure Fill	6411553	1	\$4,960.31	Recommended	Y
	For Gen 3 ESS Roof Tub Removal	Assy, Lift Beam ESS Rack	6485763	1	\$4,927.86	Recommended	Y
	For Gen 3 ESS Roof Tub Removal	Boom, Forklift Adapter	6485514	1	\$3,556.39	Recommended	Y
		Lifting Adapter Assy - Siemens PEM	6481413	1	\$1,015.46	Recommended	Y
		Lifting Device - XALT XMOD Battery Modules	6476635	1	\$1,765.80	Recommended	Y
	HV Tools	Clamp Meter - 1000A Fluke 376	6487900	1	\$923.08	Recommended	Y
	HV Tools	Fluke 2 in 1 Multimeter - 1587FC	6400746	1	\$1,644.99	Recommended	Y
	HV Tools	Conductivity Meter	6489997	1	\$555.50	Recommended	Y
	HV Tools	modular test lead kit	6473267	1	\$265.86	Recommended	Y
	HV Tools	test probe flat blade	6473268	1	\$39.26	Recommended	Y
	HV Tools	test probe back probe	6473269	1	\$39.78	Recommended	Y
	HV Tools	Wiha Insulated Master Electrician's tool kit	6473445	1	\$5,006.64	Recommended	Y
	HV Tools	wiha 1/4 in ratchet set insulated SAE	6473447	1	\$655.25	Recommended	Y
	HV Tools	wiha 1/4 in ratchet set insulated Metric	6473448	1	\$655.18	Recommended	Y
	HV Tools	16 PC 3/8 drive socket set	6473449	1	\$536.80	Recommended	Y
	HV Tools	3/8 Extension set	6473450	1	\$72.94	Recommended	Y
	HV Tools	3/8 Extension set	6473451	1	\$101.75	Recommended	Y
	HV Tools	wiha open end wrench insulated metric	6473452	1	\$708.67	Recommended	Y
	HV Tools	wiha open end wrench insulated sae	6473453	1	\$880.55	Recommended	Y
	HV Tools	Wiha insulated Serrated Tweezers Straight	6473454	1	\$65.92	Recommended	Y
	HV Tools	Wiha insulated Serrated Tweezers Angled	6473455	1	\$91.83	Recommended	Y



	HV Tools	Insulated Torque Wrench 1/4"	6473456	1	\$906.00	Recommended	Y
	HV Tools	Insulated Torque Wrench 3/8"	6472024	1	\$978.02	Recommended	Y
	HV Tools	Insulated Torque Wrench 1/2"	6473457	1	\$1,038.26	Recommended	Y
	HV Tools	torque screwdriver set	6473458	1	\$525.03	Recommended	Y
	HV Tools	insulated crimper 30 - 6 Awg 7"	6473459	1	\$60.03	Recommended	Y
	HV Tools	wire stripper 6 - 3/8 overall 20 to 10	6473460	1	\$54.15	Recommended	Y
	HV Tools	insulated water pump pliers v-jaw	6473461	1	\$100.28	Recommended	Y
	HV Tools	insolated hex key set 10pc metric	6473462	1	\$307.25	Recommended	Y
	HV Tools	Long SAE Natural insulated hex key set 12 pc	6473463	1	\$395.54	Recommended	Y
	HV Tools	bit driver	6473464	1	\$123.61	Recommended	Y
	HV Tools	Stubby Bit Driver	6473465	1	\$43.55	Recommended	Y
	HV Tools	Wiha Insulated "bitFlip" Set	6472034	1	\$76.52	Recommended	Y
	HV Tools	Mini Screw Driver set	6473466	1	\$130.61	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC Small	6471958	1	\$819.27	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC Medium	6473412	1	\$819.27	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC Large	6473413	1	\$819.27	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC XL	6473414	1	\$819.27	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC 2XL	6471962	1	\$915.69	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC 3XL	6471963	1	\$983.12	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC 4XL	6471964	1	\$1,065.04	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 2PC 5XL	6471965	1	\$1,146.97	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC Small	6471966	1	\$651.16	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC Medium	6473415	1	\$651.16	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC Large	6473416	1	\$651.16	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC XL	6473417	1	\$651.16	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC 2XL	6473418	1	\$874.07	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC 3XL	6471971	1	\$874.07	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC 4XL	6471972	1	\$874.07	Recommended	Y
	PPE	ARC Flash Protection Clothing Kit - 1PC 5XL	6471973	1	\$874.07	Recommended	Y
	PPE	Balaclava Head Cover one size fits all	6473440	1	\$48.49	Recommended	Y
	PPE	Hard Hat and Face Shield one size fits all	6368561	1	\$381.25	Recommended	Y
	PPE	Fall Saftey Harness 425LBS	6473270	1	\$257.12	Recommended	Y
	PPE	Black electrical glove kit, Size 7	6471976	1	\$148.99	Recommended	Y
	PPE	Black electrical glove kit, Size 8	6473420	1	\$148.99	Recommended	Y
	PPE	Black electrical glove kit, Size 8.5	6471978	1	\$148.99	Recommended	Y
	PPE	Black electrical glove kit, size 9	6471979	1	\$148.99	Recommended	Y
	PPE	Black electrical glove kit, size 9.5	6473421	1	\$148.99	Recommended	Y
	PPE	Black electrical glove kit, size 10	6473422	1	\$144.63	Recommended	Y
	PPE	Black electrical glove kit, Size 10.5	6473423	1	\$208.10	Recommended	Y
	PPE	Black electrical glove kit, size 11	6473424	1	\$151.86	Recommended	Y
	PPE	Black electrical glove kit, size 12'	6473425	1	\$144.63	Recommended	Y
	PPE	HV Blanket 3' x 3'	6473431	1	\$495.41	Recommended	Y
	PPE	Blanket Clamp 9-1/2" L, 5" Opening	6473432	1	\$35.02	Recommended	Y
	PPE	Glove Dust 0.5oz	6473433	1	\$90.86	Recommended	Y
	PPE	Rescue Hook 6FT	6400745	1	\$577.87	Recommended	Y
	PPE	Defibrillator Adult	6473177	1	\$2,901.96	Recommended	Y
	PPE	Brady Personal Lockout Pouch Kit	6473441	1	\$132.62	Recommended	Y
	PPE	Steel Lock Hasp with Tab	6473442	1	\$16.40	Recommended	Y
	PPE	American lock A1106RED	6473443	1	\$22.77	Recommended	Y
	PPE	Lock Out Tag (pk of 25)	6473444	1	\$29.47	Recommended	Y
	PPE	Hv Warning sign	6473436	1	\$19.26	Recommended	Y
	PPE	Arc Flash Warning sign	6473437	1	\$14.30	Recommended	Y
	PPE	steering wheel covers	6473439	1	\$72.28	Recommended	Y
	PPE	Cart - Safety Barricade System (up to 75ft)	6491772	1	\$1,711.68	Recommended	Y
					\$0.00		

**New Orleans Regional Transit Authority**  
Proposal for 40' Battery-Electric Transit Bus, Infrastructure and Chargers

**Tab 7, Publications**

**Solicitation Requirements:**

*Publications Proposal*

**New Flyer Response:**

Please refer to the attached Publications for the 40' Battery-Electric Transit buses, for New Orleans Regional Transit Authority's review.

CONTRACT DELIVERABLES SHEET		PUBLICATIONS rev a. December 15, 2022	
PRIMARY CUSTOMER NAME		New Orleans	
PUBLICATIONS CUSTOMER NAME		NORTA - New Orleans	
BID NUMBER		22-316 LoNo	
BUS MODEL		XE40	
QUANTITY		4	

0 NORTA - New Orleans

New Flyer Standard Bus Publications				This is for one XE40 Option Build of 4 Buses Only
DESCRIPTION	QTY	CUSTOMER DELIVERY	UPDATES (years)	COMMENTS
Emergency Responder Guide (8.5x11 laminated paper)	4	With First Bus Delivery	6	Emergency information to be on board each bus
Operator's Guide (8.5x11 3-hole)	10	With First Bus Delivery	6	
Parts Manual	5	Within 15 Business Days After Last Bus Delivery	12	
Service Manual	5	Within 15 Business Days After Last Bus Delivery	6	
Bus System Drawings Manual (11x17 3-hole regular paper includes air, electr, hydraulic, cooling, PLC HVAC layouts and schematics)	5	Within 15 Business Days After Last Bus Delivery	6	
TIV USB	5	Within 15 Business Days After Last Bus Delivery	6	USB Includes all NF Manuals plus all OEM manuals below with ""**

**Sub Total**

OEM Supplier Publications				This is for one XE40 Option Build of 4 Buses Only
DESCRIPTION	QTY	CUSTOMER DELIVERY	UPDATES (years)	COMMENTS
<b>Siemens E-Drive Propulsion System OEM Vendor Manual Set (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
ELFA3 System User Guide (Safety, Installation, Operation, Maintenance, Diagnostics and Parts information documents)	5	"	N/A	*
<b>ESS OEM Vendor Manual Set (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
Xalt Battery System OEM Manual	5	"	N/A	*
<b>Modine BTMS OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
Battery Thermal Management System Service Manual	5	"	N/A	*
<b>Thermo King HVAC OEM Manual Set (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
Unit Operation & Maintenance Manual	5	"	N/A	*
Intelligaire III Controls Diagnostic Manual	5	"	N/A	*
<b>EMP Cooling System OEM Manual Set (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
2 Fan Cooling System Service Manual	5	"	N/A	*
Cooling System Troubleshooting Manual	5	"	N/A	*
<b>WABCO ABS System OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
ABS Maintenance Manual	5	"	N/A	*
<b>MGM Stroke Monitoring System OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
e-Stroke Diagnostic Document	5	"	N/A	*
<b>Clever Devices AVA/AVL/APC System OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
IVN Operations & Maintenance Manual	5	"	N/A	*
<b>Hanover Destination Sign OEM Manual Set (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
Installation and Operation Manual	5	"	N/A	*
<b>Amerex Fire Suppression System OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
System Operation and Maintenance Manual	5	"	N/A	*
Modular Controller Operation and Maintenance Manual	5	"	N/A	*
<b>Multiplexing System OEM Manual (includes only the following)</b>		With First Bus Delivery or Soon After Receiving From OEM Supplier		
Hardware User Guides	5	"	N/A	*
Software User Guides	5	"	N/A	*

**Sub Total**

Other New Flyer Costs				This is for one XE40 Option Build of 4 Buses Only
DESCRIPTION	QTY	CUSTOMER DELIVERY	UPDATES (Years)	COMMENTS
Standard Labour Hours required for NF Bus Manual Set Publishing	400	N/A		Not charged to the customer

