

# MaineDOT Low-No Grant Application

## **Attachment I**

### **Pricing Information**



**Greater Portland METRO**

**2024 Low-No Program  
Grant Proposal**

**NEW FLYER OF AMERICA**

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## **Tab 1, Letter of Commitment**

### **New Flyer Response:**

Included in this section is our Letter of Commitment to Greater Portland METRO.



NEW FLYER OF AMERICA

April 17, 2024

Glenn Fenton - Chief Transportation Officer  
Greater Portland Transit District | METRO  
114 Valley Street  
Portland, ME 04102  
Office: 207.517.3029  
Email: [gfenton@gpmetro.org](mailto:gfenton@gpmetro.org)

**Re: New Flyer Partnership Commitment with for the 2024 FTA Low or No Emission (“Low-No”) Competitive Grant Program**

Dear Glenn Fenton:

This year, the Federal Transit Administration (“FTA”) [announced \\$1.49 billion in transit funding](#) – including \$1.1 billion for the [Low or No Emission](#) (“Low-No”) program and \$390 million for the [Buses and Bus Facilities](#) (“BBF”) program – to modernize America’s transportation infrastructure, create and maintain good-paying jobs, promote a more robust transit manufacturing industry and combat climate change through building out clean energy fleets.

On behalf of New Flyer of America Inc. (“New Flyer”), a subsidiary of NFI Group Inc. (“NFI”), I am pleased to provide our commitment as a partner in the deployment of zero-emission buses, charging infrastructure, connected technology, and workforce development (together “mobility solutions”) with Greater Portland METRO in Greater Portland, Maine, utilizing FTA funds for the 2024 Low-No Competitive Grant Program.

As the FTA stated, they will give priority consideration to project proposals that address healthy contracting with the use of advance or progress payments, show intent to reduce customizations, include a workforce development plan, encompass a fleet transition plan to zero emissions, address climate change and sustainability, and create new opportunities. We can help you do that and we understand the desire for Greater Portland METRO to mitigate climate change, modernize fleets and facilities, and ultimately build more livable communities through inclusive and sustainable transit.

New Flyer’s mobility solutions – including zero-emission [battery-electric](#) and [fuel cell-electric](#) buses, low-emission hybrid-electric and compressed natural gas (“CNG”) buses, [NFI Connect™](#) over-the-air analytics technology, full suite support via [NFI Infrastructure Solutions™](#), and workforce development through our [Vehicle Innovation Center](#) (or “VIC”) and the [New Flyer Institute](#) – harness the potential to best position Greater Portland METRO in deploying sustainable, efficient, connected mobility while delivering workforce development to enable the new mobility era. Together, we can fulfil FTA priorities by leveraging investments that:

- Renew transit systems
- Reduce greenhouse gas emissions from public transportation
- Advance racial equity
- Maintain and create good-paying jobs with a free and fair choice to join a union
- Connect our communities
- Strengthen the supply chain and financial health and stability of the North American bus manufacturing industry

Throughout this letter, we will provide detail on the following to help illustrate our ability to meet your rigorous standards and expectations of a competitive program partner:

- Our comprehensive mobility solutions

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- Our people, practices, and priorities
- Our qualifications and proven performance
- Program scope of work (including pricing)

First, allow us to share some background on our team, company, and parent organization.

## **About NFI Group**

### **Full-Suite Mobility Solutions**

New Flyer is a wholly owned subsidiary of NFI. Leveraging 450 years of combined experience and with over 8,500 team members in ten countries, NFI is a global leader in the electrification of mass mobility under the brands New Flyer® (heavy-duty transit buses), MCI® (motor coaches), Alexander Dennis (single and double-deck buses), Plaxton (motor coaches), ARBOC® (low-floor cutaway and medium-duty buses), and NFI Parts™. With zero-emission buses and coaches, infrastructure, and technology, NFI meets today's urban demands for scalable smart mobility solutions. Together, NFI is enabling more livable cities through connected, clean, and sustainable transportation.

NFI currently offers the widest range of sustainable drive systems available, including zero-emission electric (trolley, battery, and fuel cell), natural gas, electric hybrid, and clean diesel. In total, NFI supports its installed base of over 100,000 buses and coaches around the world.

NFI's common shares are traded on the Toronto Stock Exchange ("TSX") under the symbol NFI and its convertible unsecured debentures trade on the TSX under the symbol NFI.DB. News and information is available at [www.nfigroup.com](http://www.nfigroup.com), [www.newflyer.com](http://www.newflyer.com), [www.mcicoach.com](http://www.mcicoach.com), [www.nfi.parts](http://www.nfi.parts), [www.alexander-dennis.com](http://www.alexander-dennis.com), [www.arbocsv.com](http://www.arbocsv.com), and [www.carfaircomposites.com](http://www.carfaircomposites.com).

### **Environmental, Social, and Governance Practices**

NFI's internal driver is "A better product, better workplace, and better world" – signaling its focus on sustainability for all stakeholders, while taking care of its customers, team, communities, and environment.

We embed ESG into the fabric of our day-to-day operations, our long-term planning, and our relationship with the communities in which we work and live. Throughout 2023, we maintained our focus on employee health and safety, capital allocation, and financial stability. We also made great strides in our sustainability journey, including engagement with our stakeholders on the issues most relevant to them.

While our products and services (be they battery-electric, fuel cell-electric, clean-diesel, or hybrid-electric) have tremendous environmental benefit, the work we do also has a positive social impact on our people and our communities.

To enable this, NFI maintains numerous policies and initiatives, which can be found at [nfigroup.com/ESG](http://nfigroup.com/ESG), that include but are not limited to:

- Annual Diversity Reporting
- Board Diversity Policy
- Code of Conduct and Ethics Policy
- Discrimination and Harassment Policies
- Environment, Health, and Safety Policy
- Equal Opportunity Employer Policy

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- Human Rights Statement
- Interactive Diversity and Inclusion Training
- Leadership Diversity Policies
- Local partnerships (to build a more diverse and inclusive workforce)
- Occupational Health and Safety Policy
- Supplier Code of Conduct

NFI reports annually on ESG. To view the most recent report (covering 2022 results) [click here](#), and to visit NFI's ESG hub, visit [nfigroup.com/ESG](https://nfigroup.com/ESG).

## **About New Flyer**

### **North America's EV Leader**

New Flyer has been leading innovation in mobility for over 90 years, and today supports growing North American cities with scalable, clean, and sustainable mobility solutions which include buses, technology, [infrastructure](#), and workforce development.

With over 50 years of experience manufacturing zero-emission buses, New Flyer is North America's heavy-duty transit bus leader and offers the most advanced product line under the Xcelsior® and Xcelsior CHARGE® brands. New Flyer is proud to offer North American transit agencies more options than any other OEM, including bus length, styling options, propulsions, and technology, while also offering all four types of electric buses: battery-electric (zero-emission), fuel cell-electric (zero-emission), trolley-electric (zero-emission), and diesel-electric hybrid.

Today, New Flyer supports over 35,000 heavy-duty transit buses (New Flyer, NABI, and Orion) currently in service, of which 8,600 are powered by electric motors and battery propulsion and 1,900 are zero-emission. We also offer infrastructure development through NFI Infrastructure Solutions™, a service dedicated to providing safe, sustainable, and reliable charging and mobility solutions.

New Flyer also offers education through the NFI [Vehicle Innovation Center](#) ("VIC"), the first and only innovation lab of its kind dedicated to advancing bus and coach technology and providing workforce development. Since opening late 2017, the VIC has hosted over 400 interactive events, welcoming 9,000 industry professionals for workforce development, EV, and infrastructure training. Further information is available at [www.newflyer.com/VIC](https://www.newflyer.com/VIC).

New Flyer operates in combination with Motor Coach Industries Inc. ("MCI"), North America's motor coach leader. Together, New Flyer and MCI are North America's largest bus and coach manufacturer. For more information, visit [newflyer.com](https://newflyer.com).

### **Manufacturing, Safety, and Innovation**

New Flyer has a long history of advanced innovations, with mobility solutions that have delivered cleaner, safer, smarter, and more efficient mobility to communities across North America. In doing so, New Flyer has invested heavily in North American jobs, manufacturing, technology, and infrastructure, and helped evolve public transit to better move millions of passengers every day. You can [see our history of innovation here](#).

New Flyer's manufacturing is supported by four major manufacturing facilities located in Anniston, Alabama; Crookston and St. Cloud, Minnesota; and Winnipeg, Manitoba. All four facilities are capable of manufacturing zero-emission, battery-electric buses, allowing scalable manufacturing support alongside increasing demand and adoption of zero-emission buses.

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Our Operational Excellence (or “OpEx”) practice dates back to 2008. Our focus then – and still today – is on safe, clean, and efficient working environments for all employees while delivering exceptional first-time quality and defined processes. In addition, we use lean manufacturing and 5S techniques to ensure our team has the best tools and stations to successfully complete a task, and we reiterate a “Quality at the Source” approach. To enable continued training and execution around this, we provide engineering drawings and shop floor instructions in the work cell to supplement the training employees receive through the NFI Learning Institute.

New Flyer is proud to be the first bus manufacturer to achieve all three certifications for its manufacturing processes: ISO 9001 (quality management), ISO 14001 (environmental management), and ISO 45001 (occupational health and safety management). More specifically, our ISO 14001:2015 certified Environmental Management certification ensures that we manufacture dependable products using the most environmentally responsible techniques available.

## Our People

The New Flyer and MCI team is over 4,500 people strong across North America and well positioned to support your needs. We employ both unionized and non-unionized workforces, with approximately 55% of the North American direct employees proudly represented by trade unions (spanning seven unique collective bargaining agreements). We work hard to maintain progressive relationships with all of the unions that represent our employees and believe in treating people well and providing a safe, enjoyable, and inclusive work environment.

## Diversity and Workforce Development

New Flyer continues to invest in making our team stronger, more inclusive, and more diverse across all of our facilities. We use our [Community Benefits Framework](#) (or “CBF”), [launched by New Flyer in 2020](#), to augment workforce outreach, development, recruitment, training, and retention to strengthen our mission to grow a diverse workforce. The CBF is a mechanism for accountability focused on building diversity and inclusion and expanding on existing workforce development models. It directs and supports local initiatives that benefit people and communities, and enhances the hiring of underserved individuals.

Workforce development remains a key pillar in our business and we continue to advance action across our communities each day. Our [Anniston Workforce Development Program](#) (or “AWDP”), launched in 2020 under the CBF, is a comprehensive program that strengthens local community outreach and recruitment capacity and commits to placing groups of people not traditionally employed in the manufacturing industry. It includes:

- Workforce development program, including training and development, skill gap assessments, wage and benefit commitments, fulfillment of diversity and hiring objectives, and pre-apprenticeship and apprenticeship programs
- The launch of an [employee engagement committee](#)
- Execution of partnerships and alliances with community-based organizations (“CBOs”) with defined goals and measurement processes
- Continued procurement commitment to Disadvantaged Business Enterprises (“DBEs”)
- Ongoing support of new initiatives, including an annual New Flyer bursary ([Accelerate Anniston](#))
- Provision of social (such as housing or childcare) and educational supports
- Advocacy for continued industry support and funding of workforce development
- Rigorous reporting of metrics and workplace practices
- Ongoing monitoring of compliance, governance, and oversight

We have long advocated for workforce development and greater diversity at an industry level. This is why, in 2022, New Flyer joined the [American Public Transportation Association \(APTA\) Racial Equity Commitment Program](#) as a founding signatory, committed to furthering racial equity in the transportation industry. This

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partnership helped to build our Two-Year Diversity, Equity and Inclusion Strategic Framework, which is centered on making diversity, equity and inclusion an explicit strategic priority for our organization.

In addition, New Flyer enjoys strong partnerships and ongoing dialogue with outstanding industry organizations like Latinos in Transit (“LIT”) and the Conference of Minority Transportation Officials (“COMTO”) – the latter of which New Flyer has been a member of for more than 15 years.

## Technical Training and Innovation

### *Internal Team Training and Workforce Development*

Each year, we invest millions in training and workforce development for our team, with over 200,000 hours of classroom and on-the-job training completed through the NFI Learning Institute in 2022 alone.

In 2022 the NFI Learning Institute focused on enhancing our manufacturing orientation to include job mentorship and formalized on-the-job training. This has reduced the time to become proficient on the job and has increased confidence for our new team members. We have also continued to focus on professional development and technical training that supports changes in technology, specialized tooling, and safety requirements; and on the development of eLearning programs that support the required soft, technical, lean, and safety-related skills needed by our teams.

Late 2021, New Flyer also announced the [launch of its Electrical Technician Training Program](#) (or “ETTP”) to provide high-demand electrical skills as industry EV adoption surges. The ETTP was launched with the support of the Communication Workers of America (“CWA”) union through a memorandum of understanding, and was developed by leveraging MCI coach training content. First introduced in New Flyer’s St. Cloud, Minnesota facility, the program is intended to carry across all major North American NFI facilities in the near future.

Shortly after the ETTP launched, the MCI Academy (operated through NFI subsidiary [MCI](#)) received its fifth consecutive [ATMC National Excellence in Training Award](#).

### *External Customer (Transit Agency) Training and Workforce Development*

The New Flyer Institute is New Flyer’s proprietary learning center which provides world-class training and workforce development to our customers. It is designed to:

- Introduce the New Flyer vehicle to our customers
- Help properties operate and maintain the vehicle to its fullest potential throughout the life of the vehicle
- Provide vehicle operation and safety features familiarization courses to the operator trainers
- Deliver training on maintenance procedures, troubleshooting and safety information

We will work closely with you to design and deliver training to improve existing skill sets and train in new skill sets such as electrification and digitization as industry electric vehicle adoption surges.

Our [Vehicle Innovation Center](#) (or “VIC”) is North America’s first and only innovation lab dedicated to advancing bus and coach technology.

- Built and opened in 2017, the VIC provides critically needed workforce development to industry leaders, often facilitating reskilling, upskilling, and knowledge sharing on EVs and infrastructure.
- The VIC is located in Anniston, Alabama on the New Flyer manufacturing campus. You can [take a virtual tour of the Anniston facility here](#) and [tour the VIC here](#).

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- Ultimately, the VIC is providing workforce development that is a critical enabler of zero-emission bus adoption at scale in America. To date, the VIC has welcomed over 9,000 people over 400 events.

### **Infrastructure and Charging Support**

We understand the complexity of transitioning fleets to battery-electric, and our goal is to simplify the process. [NFI Infrastructure Solutions™](#) is a full-suite service providing safe and reliable project management for smart mobility projects. To date, NFI Infrastructure Solutions™ has installed more than 425 EV chargers.

With a team of experts and engineers harnessing more than 100 years of combined experience, NFI Infrastructure Solutions™ guides zero-emission infrastructure projects from start to finish. This includes design, budgeting, planning, installation, commissioning, UL certification, procurement development, determination of wayside or depot charging needs, energy grid management, and more.

Sustainable transportation is our future, and alongside partners like Siemens, ABB, ChargePoint, Burns and McDonnell, Heliox, and Black and Veatch, The Mobility House, and Rhombus, our infrastructure team is here to help make it a reality. Learn more at [nfigroup.com/IS](http://nfigroup.com/IS), watch the [video here](#), or view our [charger catalog here](#).

### **Connected Technology and Analytics**

[NFI Connect™](#) is an exclusive, advanced telematics solution that gives you real-time oversight of your entire fleet, improving bus uptime and safety, and lowering costs. This over-the-air analytics technology comes standard on every New Flyer zero-emission bus – and includes [Connect 360®](#) reporting (a customizable performance dashboard).

NFI Connect™ offers the following benefits for your zero-emission fleet:

- Flexible deployment: it is easy to deploy, compatible with multiple vehicle platforms and requires minimal IT infrastructure.
- Performance improvements: NFI Connect™ insights show opportunities for training strategies, with reports that illustrate data for improved driver performance.
- Cyber secure: it is protected and monitored by state-of-the-art cyber security technology.
- Always up to date: our vehicles have the latest software versions with secure over-the-air updates.

With NFI Connect™ you can have greater oversight of your whole operation, ultimately improving bus uptime and lowering costs, without requiring more work. Learn more at [nfigroup.com/connect](http://nfigroup.com/connect).

### **Scope of Work**

Below are details spanning our mobility solutions that best position Greater Portland METRO to deploy and fulfill its zero-emission transition plan through the Low-No and/or BBF competitive programs.

#### **1) Vehicles**

The FTA will provide priority consideration to applicants that identify their intent to use a procurement method that reduces vehicle customization, by either: identifying an intent for a joint procurement with at least three total transit agencies using a common specification; or committing to using a standard vehicle model.

**New Flyer has developed a Technical Best Practices Scoring method to determine the level of standardization for this proposal and attached a certification statement outlining the level of customization for this proposal.**

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Adhering to this direction, New Flyer has priced these vehicles off the Commonwealth of Virginia (COV) contract with a technical configuration per Greater Portland's SR2762 for 35-foot diesel buses.

- The procurement and deployment of three (3) zero-emission 35-foot, heavy-duty New Flyer Xcelsior CHARGE NG™ Battery-Electric transit buses with a 435 kWh Energy Storage System (ESS).
- The proposed vehicles will be configured per SR2762 as noted above with the necessary changes to move from a diesel to a battery-electric propulsion system.
- These zero-emission Xcelsior CHARGE NG™ buses meet all federal requirements, including Buy America, at the time of delivery.
- Any charging equipment provided by New Flyer will be non-proprietary and fully interoperable with other transit buses and EVs, using industry standard ("OppCharge") charging protocols.

### Pricing

- New Flyer's 35-Foot Xcelsior CHARGE NG™: **\$1,169,395/Bus (435 kWh ESS)**
- Bus price includes warranty, VIC virtual education session, and publications.
- Please refer to the Workforce Development section below, for details on VIC education session included within this proposal.
- Notes on pricing:
  - The price may not include nor reflect all customer-specific features.
  - Changes to vehicle configuration are subject to pricing changes.
  - All prices are stated in \$USD and valid if buses are manufactured in 2026.

### Tooling and Diagnostics

- Please refer to the attached document, our recommended Tooling and Equipment list, to best maintain and support the proposed Xcelsior CHARGE NG™ transit buses.
- Tooling cost is not included in bus price.
- Recommended tooling and diagnostics list is provided for budgetary purposes. Final tooling and diagnostics list will be provided when a final vehicle configuration is decided upon.

## 2) Payment Terms

The FTA will provide priority consideration to applicants that incorporate advance payments and/or progress payments into the contract. Adhering to this direction, New Flyer's proposal is based on the following payment terms:

### Progress Payment Terms

- **Payment terms are 75% at the time of battery or engine install and 25% at acceptance with net 30 terms, with receipt of title to the rolling stock provided as security.**
- **These terms meet the FTA eligibility criteria for your Low-No and BBF application.**

## 3) Full-Suite Infrastructure and Charging Solutions

[NFI Infrastructure Solutions™](#) is a full suite service providing safe and reliable project management for smart mobility projects.

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New Flyer's Infrastructure proposal is forthcoming. Pricing will depend on our degree of involvement in your infrastructure process (for example: design, budgeting, planning, installation, commissioning, UL certification, procurement development, determination of wayside or depot charging needs, energy grid management). As such, tailored quotes will be provided when we can determine project scope. You can view our [charger catalog here](#).

#### 4) Workforce Development & Training

##### **New Flyer Institute**

- Technical training department capable of conducting in-person training, hands-on training on customer vehicles, and at customer sites for maximum accuracy and convenience.
- Training will be customized and appropriate for electrical engineers, battery/powertrain assembly technicians, electric powertrain maintenance, bus operators and safety personnel.
- Please refer to the Training section for additional recommended training for the proposed bus (cost not included in bus price). A recommended training list is provided for budgetary purposes. A final training list will be provided when a final bus configuration is confirmed.

##### **Learning Management System (LMS)**

- Online platform that offers more generic, comprehensive training to complement classroom and on-the-job learning.
- Can reinforce skills and expand knowledge of a broad range of topics with full-time flexibility.
- Is available free of charge with purchase of training package through the New Flyer Institute.

##### **Vehicle Innovation Center (VIC)**

- A unique internal institute dedicated to the future of transit mobility technology and designed to educate transit agency decision-makers.
- Through the [Vehicle Innovation Center](#), and as part of our partnership, New Flyer will provide a customized, no-cost virtual experience for up to 50 members of your leadership team lasting a half day on technology topics of interest and designed to enhance your zero-emissions transition planning.

#### 5) Connected Technology

- [NFI Connect™](#) is a standard inclusion on all NFI electric buses and coaches. [NFI Connect™](#) is an exclusive, advanced telematics solution that gives you real-time oversight of your entire fleet, improving bus uptime and safety, and lowering costs.
- The EVs you purchase come with NFI Connect™ over-the-air analytics, at no cost for the first two years. This includes [Connect 360™](#) reporting (a customizable performance dashboard).

#### **Conclusion**

New Flyer is committed to developing smart and sustainable mobility solutions, and working with all stakeholders to successfully deploy zero-emission solutions across North America including buses, technology, workforce development, and infrastructure.

**The deadline to submit is 11:59pmET on Thursday, April 25, 2024 – and we are here to help every step of the way.**



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Together, we can build more livable communities through clean, efficient, and safe mobility, while supporting more equitable access to sustainable transit, reducing the harmful impacts of climate change, and helping to strengthen the financial health and stability of the bus manufacturing industry. New Flyer is here to serve as Greater Portland METRO's partner in scalable zero-emission deployment.

Sincerely,

**NEW FLYER OF AMERICA INC.**

Luciana Marques

Technical Sales Manager, New Flyer Inc.

Ph: 431.278.8653

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cc: Carmine Fiore – Regional Sales Manager  
Adrian Graca – Business Segment Director

## **Tab 2, Technical Best Practices Score and Classification**

### **New Flyer Response:**

Included in this section is New Flyer's letter to Greater Portland METRO regarding Technical Best Practices Score and Classification.

**Agency Name: GREATER PORTLAND TRANSIT DISTRICT (PORTLAND, ME)**

**Model: XE35**

**Quantity: 3**

**Technical Best Practices Score and Classification:**

New Flyer is unable to determine a score for this project as we have not built the required configuration for this Greater Portland. New Flyer is willing to partner based on a commitment to achieve a Technical Best Practice score between 89 to 100, which reflects a highly configurable bus with minimal variation/excess customization.

**2) Highly Configurable, minimal variation:**

- Minimal customization,
- High Utilization of options that are common in the industry,
- areas of variation are expected and necessary to ensure the Agency can meet their unique operational constraints.
- Configuration will present benefits in price, manufacturability, quality, and in service reliability and parts availability.
- No minimum order quantity required.

**Encouraging Standardization while reducing excessive customization's**

To support efforts around standardization in the North American Transit industry, New Flyer has developed a Configuration Assessment Tool that allows us to assign a Technical Best Practice score to each us configuration.

Through development of a comprehensive list of preferred and available production options we can measure use of common, high use configurations as well as unique, specific customizations. Preferred and available production options are preconfigured options that can be selected to ensure Agencies can meet their unique operating requirements. Selection of these options typically results in:

1. Better Manufacturability translating to higher build in station, higher labor efficiency, and lower labor hours, therefore reducing cost and increasing quality.
2. Increased Supply chain reliability and resilience as it minimizes extensive small batch production.
3. Optimized quantity discounts and avoidance of minimum buy premiums which may reduce overall costs.
4. Improve aftermarket lowering parts availability which may improve vehicle down time and increase service reliability.

Where specific custom options are present, they can be reviewed against the preferred and available production options to explore alternatives and determine if an Agency can make alterations through the configuration process to optimize the bus and realize the advantages of selecting from preferred and available production options.

The scoring system measures the Agencies technical configuration against a bus comprised only of preferred production options. The Technical Best Practice score is calculated as follows:

$$\text{SCORE} = 100\% - (\% \text{ of Available Production Options} \times .5) - (\% \text{ of Specific Customer Options} \times 2)$$

The score results in the technical configuration being classified in one of 4 classifications based on Agency and Order size to account for unique differences in operations, duty cycle, geography, order sizes etc.

- 2) **Optimal Configuration:**
  - Minimal customization,
  - High Utilization of options that are common in the industry,
  - Variation has been significantly reduced.
  - Configuration will present benefits in price, manufacturability, quality, and in service reliability and parts availability.
  - No minimum order quantity required.
- 3) **Highly Configurable, minimal variation:**
  - Minimal customization,
  - High Utilization of options that are common in the industry,
  - areas of variation are expected and necessary to ensure the Agency can meet their unique operational constraints.
  - Configuration will present benefits in price, manufacturability, quality, and in service reliability and parts availability.
  - No minimum order quantity required.
- 4) **Medium Configurable, some variation:**
  - Some customizations present
  - Medium utilization of options that are common in the industry,
  - Opportunities for a more configurable approach are present.
  - Configuration is consistent across the Agencies New Flyer fleet which may present benefits around in service reliability and parts availability within the Agencies warehouses.
  - A minimum order quantity of 50 buses or,
  - commitment from the Agency to reduce their specific custom options and pursue more available options to move to the Highly Configurable Category
- 5) **Minimum Configurable, significant variation:**
  - High number of customizations present
  - Low utilization of options that are common in the industry.
  - Opportunities for a more configurable approach are present.
  - The technical configuration includes the desired attributes as communicated by the Agency may result in synergies and benefits for the Agency for their internal training, service, maintenance, and parts warehousing practices.
  - A minimum order quantity of 100 buses is required to move forward with this level of customization.

### **Tab 3, Bus Publications**

#### **New Flyer Response:**

Publications are part of the bus price. A final publications deliverable will be provided when a final bus configuration is decided upon.

## **Tab 4, Bus Training**

### **New Flyer Response:**

Included in this section are details regarding our training proposal package. Training is not included in the bus price.

Please note, the recommended training list provided is provided for budgetary purposes only. A final training list will be provided when a final bus configuration is decided upon.

New Flyer Supplied Training					
DESCRIPTION	RECOMMENDED MAXIMUM NUMBER OF STUDENTS PER CLASS	QTY HRS.	TOTAL SELLING PRICE AT BID	REQUIREMENT	BILLABLE: Y/N
Operator Orientation (Train-the-Trainer)	6	4	\$986.85	Recommended	Y
Maintenance Orientation	15	4	\$986.85	Recommended	Y
First Responder Orientation	25	4	\$986.85	Recommended	Y
Preventive Maintenance Inspection	10	4	\$986.85	Recommended	Y
Multiplex System	10	32	\$7,894.80	Recommended	Y
Entrance & Exit Doors	10	4	\$986.85	Recommended	Y
Wheelchair Ramp	10	4	\$986.85	Recommended	Y
Brake Systems and Axles	10	16	\$3,947.40	Recommended	Y
Air System and ABS	10	8	\$1,973.70	Recommended	Y
Suspension and Steering	10	8	\$1,973.70	Recommended	Y
Coolant Loop Fill Procedure	10	4	\$986.85	Recommended	Y
Towing	10	4	\$986.85	Recommended	Y
Body and Structure	10	4	\$986.85	Recommended	Y
Propulsion & ESS Familiarization/HV Safety	6	32	\$7,894.80	Recommended	Y
Propulsion & ESS System Troubleshooting	10	16	\$3,947.40	Recommended	Y
OEM/Subcontractor Supplied Training					
DESCRIPTION	RECOMMENDED MAXIMUM NUMBER OF STUDENTS PER CLASS	QTY HRS.	TOTAL SELLING PRICE AT BID	REQUIREMENT	BILLABLE: Y/N
HVAC Maintenance	8	8	\$4,860.00	Recommended	Y
Fire Suppression	10	8	\$5,400.00	Recommended	Y
Destination Sign	10	6	\$4,860.00	Recommended	Y
Siemens Propulsion Troubleshooting	8	24	\$17,820.00	Recommended	Y
ESS Troubleshooting	8	16	\$9,720.00	Recommended	Y

## **Tab 5, Bus Tooling and Diagnostics**

### **New Flyer Response:**

Included in this section are details regarding our Tooling and Diagnostics recommended list of items.

Tooling and Diagnostics are not included in the bus price.

Please note, the recommended tooling and diagnostics list is provided for budgetary purposes only. A final Tooling and Diagnostics list will be provided when a final bus configuration is decided upon.

COMMENTS	DESCRIPTION	QUOTED PART #	BID QTY	UNIT SELLING PRICE [USD]	EXTENDED SELLING PRICE [USD]	REQUIREMENT	BILLABLE: Y/N
	<b>Diagnostic Equipment</b>						
for use with all diagnostic software	Panasonic FZ55 Toughbook Laptop	6502351	1	\$3,313.66	\$3,313.66	Recommended	Y
<a href="#">Product Drivers - NEXIQ.com</a>	Nexiq USB Link™ 3 - WIFI/Bluetooth Edition	6494933	1	\$1,181.98	\$1,181.98	Recommended	Y
Requires annual renewal	Wabco ABS Software (1st yr subscription)	6334596	1	\$432.62	\$432.62	Recommended	Y
	Software - Wabco ABS 1-yr Renewal	6495817	1	\$432.62	\$432.62	Recommended	Y
Software included in kit	Intelligaire III Diagnostic Software & Cables	6393934	1	\$2,456.96	\$2,456.96	Recommended	Y
<a href="#">EMP - Drivers &amp; Downloads (emp-corp.com)</a>	EMP Software	NPN	1	\$0.00	\$0.00	Recommended	Y
Software included in kit	Valeo Diagnostic Software & Cables	6396448	1	\$622.19	\$622.19	Recommended	Y
	Valeo Adapter - Diagnostic	6492163	1	\$109.65	\$109.65	Recommended	Y
<a href="mailto:support.na@luminator.com">support.na@luminator.com</a>	Luminator MIE Software	NPN	1	\$0.00	\$0.00	Recommended	Y
<a href="http://divapps.parker.com/divapps/igan/VanscoVMM5.h">http://divapps.parker.com/divapps/igan/VanscoVMM5.h</a>	Vansco Software	NPN	1	\$0.00	\$0.00	Recommended	Y
<a href="http://divapps.parker.com/divapps/igan/VanscoDLA.htm">http://divapps.parker.com/divapps/igan/VanscoDLA.htm</a>	Vansco 1210 Chooser	NPN	1	\$0.00	\$0.00	Recommended	Y
<a href="#">PVSG Software (parker.com)</a>	PVSG Software	NPN	1	\$0.00	\$0.00	Recommended	Y
	Cable - PVSG Interface	6487019	1	\$56.74	\$56.74	Recommended	Y
	Cable - Transtech VR Interface	6488984	1	\$321.60	\$321.60	Recommended	Y
<a href="https://promo.parker.com/promotionsite/parker-smart-s">https://promo.parker.com/promotionsite/parker-smart-s</a>	Smarrider Software	NPN	1	\$0.00	\$0.00	Recommended	Y
<a href="mailto:agoetzelmann@Wabtec.com">agoetzelmann@Wabtec.com</a>	Vapor VETC2 Software	NPN	1	\$0.00	\$0.00	Recommended	Y
	Siemens PCAN Interface Harness	711447	2	\$162.23	\$324.47	Recommended	Y
	USB CAN Adapter - Siemens Interface	6402046	1	\$448.07	\$448.07	Recommended	Y
	UDS Software - Vector Indigo	6487897	1	\$3,677.28	\$3,677.28	Recommended	Y
Requires annual renewal	Annual Maintenance - Vector Indigo	6487898	1	\$661.29	\$661.29	Recommended	Y
	Vector Keyman USB Dongle	6487899	1	\$154.51	\$154.51	Recommended	Y
	Indigo Interface - Vector VN1630 Log	6491163	1	\$2,830.58	\$2,830.58	Recommended	Y
(qty of 2 per 1 VN1630)	CANPiggy 1057GCap - Vector	6491232	2	\$299.74	\$599.49	Recommended	Y
(qty of 2 per 1 VN1630)	CANcable 2Y - Vector Indigo	6412000	2	\$61.80	\$123.61	Recommended	Y
<a href="mailto:darryl_desjarlais@newflyer.com">darryl_desjarlais@newflyer.com</a>	ESS Service Tool Software	NPN	1	\$0.00	\$0.00	Recommended	Y
	ESS Interface Cable - Batteries	704950	1	\$216.31	\$216.31	Recommended	Y
<a href="#">Troubleshooting &amp; Diagnostics - Modine</a>	Modine BTMS Software	NPN	1	\$0.00	\$0.00	Recommended	Y
<a href="mailto:darryl_desjarlais@newflyer.com">darryl_desjarlais@newflyer.com</a>	Danfoss Software - Berendsen Pwr Strg	NPN	1	\$0.00	\$0.00	Recommended	Y
	Cables Kit - Berendsen Pwr Strg	6490120	1	\$396.39	\$396.39	Recommended	Y
Software included in kit	Amerex SafetyNet Software & Interface	6355551	1	\$716.91	\$716.91	Recommended	Y
	<b>Special Tools &amp; PPE</b>						
	Kit - Lift Tow Universal	6396565	1	\$321.79	\$321.79	Recommended	Y
	Kit - Lift Tow Receivers	6396567	1	\$1,939.15	\$1,939.15	Recommended	Y
	Xcelsior Flat Tow adapter (2 pcs. Per set)	6395097	1	\$3,744.29	\$3,744.29	Recommended	Y
	Assy - Frame Flat Towing	902990	1	\$6,349.79	\$6,349.79	Recommended	Y
	Jacking Adapters	434434	1	\$1,142.77	\$1,142.77	Recommended	Y
	Tool - Sway Bar Bushing Removal	566804	1	\$460.91	\$460.91	Recommended	Y
	Repair Kit - Disc Brakes & Calipers	6408310	1	\$4,700.74	\$4,700.74	Recommended	Y
	Torque Multiplier	6314711	1	\$2,636.86	\$2,636.86	Recommended	Y
	Hub Repair Kit - MAN VOK-07 Frt Axle	6408311	1	\$9,473.69	\$9,473.69	Recommended	Y
	Optional Hub Removal Hydraulic Tool Kit - MAN VOK-07	6458834	1	\$6,040.35	\$6,040.35	Recommended	Y
	King Pin Press Kit - MAN VOK-07 Frt Axle	6494532	1	\$21,388.09	\$21,388.09	Recommended	Y
	Hub Repair Kit - MAN HY1350 RR Axle	6408306	1	\$6,214.42	\$6,214.42	Recommended	Y
	ABS Sensor R&R Kit - MAN HY1350 RR Axle	6408307	1	\$1,115.68	\$1,115.68	Recommended	Y
	Pinion Seal Repair Kit - MAN HY1350 RR Axle	6444302	1	\$3,046.36	\$3,046.36	Recommended	Y
	Differential Repair Kit - MAN HY1350 RR Axle	6444303	1	\$9,774.72	\$9,774.72	Recommended	Y
	Optional Tool Kit - MAN HY1350 RR Axle	6444304	1	\$41,032.96	\$41,032.96	Recommended	Y
	Adj Tool - Strg Gear Box Press Relief	6465265	1	\$334.20	\$334.20	Recommended	Y
	Depth Punch - Strg Gear Box Press Relief	6465266	1	\$185.67	\$185.67	Recommended	Y
	Flow Meter Tester - Strg Gear Box	140809	1	\$1,386.91	\$1,386.91	Recommended	Y
	Puller Tool - Pitman Arm	6394270	1	\$510.57	\$510.57	Recommended	Y
	TK A/C Tool Kit - TE15 R407c	6472762	1	\$30,414.97	\$30,414.97	Recommended	Y

	Amerex Discharge Hose Blowout Adapter	052132	1	\$187.26	\$187.26	Recommended	Y
	Amerex Fire Alarm/Simulator Module	6484731	1	\$383.49	\$383.49	Recommended	Y
	Kit - Pressure Test Tool	6493641	1	\$1,890.04	\$1,890.04	Recommended	Y
	Head Wrench, Dessicant Canister	6485513	1	\$292.42	\$292.42	Recommended	Y
	Kit - ESS Coolant Pressure Tester	6486719	1	\$1,452.40	\$1,452.40	Recommended	Y
	Kit - ESS Coolant Pressure Fill	6411553	1	\$7,950.40	\$7,950.40	Recommended	Y
	Assy, Lift Beam ESS Rack	6485763	1	\$5,329.49	\$5,329.49	Recommended	Y
	Boom, Forklift Adapter	6485514	1	\$3,890.68	\$3,890.68	Recommended	Y
	Lifting Adapter Assy - Siemens PEM	6481413	1	\$987.25	\$987.25	Recommended	Y
	Key, Cam Latch #4 (ESS Triangle Key)	6476226	1	\$4.74	\$4.74	Recommended	Y
HV Tools	Plug - MSD Blank	869751	6	\$75.71	\$454.25	Recommended	Y
HV Tools	Cap - 12 PK Bus Bar Protective Cvr	6483658	1	\$386.18	\$386.18	Recommended	Y
HV Tools	Clamp Meter - 1000A Fluke 376	6487900	1	\$1,172.48	\$1,172.48	Recommended	Y
HV Tools	Fluke 2 in 1 Multimeter - 1587FC	6400746	1	\$1,784.72	\$1,784.72	Recommended	Y
HV Tools	Conductivity Meter	6489997	1	\$776.40	\$776.40	Recommended	Y
HV Tools	modular test lead kit	6473267	1	\$338.37	\$338.37	Recommended	Y
HV Tools	test probe flat blade	6473268	1	\$45.46	\$45.46	Recommended	Y
HV Tools	test probe back probe	6473269	1	\$43.28	\$43.28	Recommended	Y
HV Tools	Wiha Insulated Master Electrician's tool kit	6473445	1	\$4,867.56	\$4,867.56	Recommended	Y
HV Tools	wiha 1/4 in ratchet set insulated SAE	6473447	1	\$708.94	\$708.94	Recommended	Y
HV Tools	wiha 1/4 in ratchet set insulated Metric	6473448	1	\$709.34	\$709.34	Recommended	Y
HV Tools	16 PC 3/8 drive socket set	6473449	1	\$521.89	\$521.89	Recommended	Y
HV Tools	3/8 Extension set	6473450	1	\$78.64	\$78.64	Recommended	Y
HV Tools	3/8 Extension set	6473451	1	\$111.29	\$111.29	Recommended	Y
HV Tools	wiha open end wrench insulated metric	6473452	1	\$688.99	\$688.99	Recommended	Y
HV Tools	wiha open end wrench insulated sae	6473453	1	\$856.09	\$856.09	Recommended	Y
HV Tools	Wiha insulated Serrated Tweezers Straight	6473454	1	\$64.09	\$64.09	Recommended	Y
HV Tools	Wiha insulated Serrated Tweezers Angled	6473455	1	\$89.27	\$89.27	Recommended	Y
HV Tools	Insulated Torque Wrench 1/4"	6473456	1	\$1,000.58	\$1,000.58	Recommended	Y
HV Tools	Insulated Torque Wrench 3/8"	6472024	1	\$1,041.69	\$1,041.69	Recommended	Y
HV Tools	Insulated Torque Wrench 1/2"	6473457	1	\$1,146.63	\$1,146.63	Recommended	Y
HV Tools	torque screwdriver set	6473458	1	\$510.45	\$510.45	Recommended	Y
HV Tools	insulated crimper 30 - 6 Awg 7"	6473459	1	\$58.37	\$58.37	Recommended	Y
HV Tools	wire striper 6 - 3/8 overall 20 to 10	6473460	1	\$52.65	\$52.65	Recommended	Y
HV Tools	insulated water pump pliers v-jaw	6473461	1	\$113.45	\$113.45	Recommended	Y
HV Tools	insolated hex key set 10pc metric	6473462	1	\$298.71	\$298.71	Recommended	Y
HV Tools	Long SAE Natural insulated hex key set 12 pc	6473463	1	\$384.55	\$384.55	Recommended	Y
HV Tools	bit driver	6473464	1	\$120.17	\$120.17	Recommended	Y
HV Tools	Stubby Bit Driver	6473465	1	\$42.35	\$42.35	Recommended	Y
HV Tools	Wiha Insulated "bitFlip" Set	6472034	1	\$74.39	\$74.39	Recommended	Y
HV Tools	Mini Screw Driver set	6473466	1	\$132.86	\$132.86	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC Small	6471958	1	\$860.24	\$860.24	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC Medium	6473412	1	\$915.69	\$915.69	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC Large	6473413	1	\$915.69	\$915.69	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC XL	6473414	1	\$911.41	\$911.41	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC 2XL	6471962	1	\$961.47	\$961.47	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC 3XL	6471963	1	\$1,032.28	\$1,032.28	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC 4XL	6471964	1	\$1,118.29	\$1,118.29	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 2PC 5XL	6471965	1	\$1,204.32	\$1,204.32	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC Small	6471966	1	\$683.71	\$683.71	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC Medium	6473415	1	\$683.71	\$683.71	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC Large	6473416	1	\$683.71	\$683.71	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC XL	6473417	1	\$683.71	\$683.71	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC 2XL	6473418	1	\$972.35	\$972.35	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC 3XL	6471971	1	\$1,079.16	\$1,079.16	Recommended	Y
PPE	ARC Flash Protection Clothing Kit - 1PC 4XL	6471972	1	\$1,107.12	\$1,107.12	Recommended	Y

PPE	ARC Flash Protection Clothing Kit - 1PC 5XL	6471973	1	\$1,081.49	\$1,081.49	Recommended	Y
PPE	Balaclava Head Cover one size fits all	6473440	1	\$61.12	\$61.12	Recommended	Y
PPE	Hard Hat and Face Shield one size fits all	6368561	1	\$409.91	\$409.91	Recommended	Y
PPE	Fall Saftey Harness 425LBS	6473270	1	\$232.41	\$232.41	Recommended	Y
PPE	Black electrical glove kit, Size 7	6471976	1	\$162.22	\$162.22	Recommended	Y
PPE	Black electrical glove kit, Size 8	6473420	1	\$170.34	\$170.34	Recommended	Y
PPE	Black electrical glove kit, Size 8.5	6471978	1	\$155.48	\$155.48	Recommended	Y
PPE	Black electrical glove kit, size 9	6471979	1	\$157.61	\$157.61	Recommended	Y
PPE	Black electrical glove kit, Size 9.5	6473421	1	\$155.48	\$155.48	Recommended	Y
PPE	Black electrical glove kit, size 10	6473422	1	\$153.30	\$153.30	Recommended	Y
PPE	Black electrical glove kit, Size 10.5	6473423	1	\$218.72	\$218.72	Recommended	Y
PPE	Black electrical glove kit, size 11	6473424	1	\$162.22	\$162.22	Recommended	Y
PPE	Black electrical glove kit, size 12'	6473425	1	\$155.48	\$155.48	Recommended	Y
PPE	HV Blanket 3' x 3'	6473431	1	\$406.76	\$406.76	Recommended	Y
PPE	Blanket Clamp 9-1/2" L, 5" Opening	6473432	1	\$35.72	\$35.72	Recommended	Y
PPE	Glove Dust 0.5oz	6473433	1	\$14.25	\$14.25	Recommended	Y
PPE	Rescue Hook 6FT	6400745	1	\$631.36	\$631.36	Recommended	Y
PPE	Defibrillator Adult	6473177	1	\$2,739.82	\$2,739.82	Recommended	Y
PPE	Brady Personal Lockout Pouch Kit	6473441	1	\$139.26	\$139.26	Recommended	Y
PPE	Steel Lock Hasp with Tab	6473442	1	\$17.86	\$17.86	Recommended	Y
PPE	American lock A1106RED	6473443	1	\$25.88	\$25.88	Recommended	Y
PPE	Lock Out Tag (pk of 25)	6473444	1	\$32.08	\$32.08	Recommended	Y
PPE	Hv Warning sign	6473436	1	\$20.77	\$20.77	Recommended	Y
PPE	Arc Flash Warning sign	6473437	1	\$14.88	\$14.88	Recommended	Y
PPE	steering wheel covers	6473439	1	\$79.79	\$79.79	Recommended	Y
PPE	Cart - Safety Barricade System (up to 75ft)	6491772	1	\$1,482.48	\$1,482.48	Recommended	Y

## **Tab 6, Bus Warranty**

### **New Flyer Response:**

Warranty is part of the bus price. A final warranty deliverable will be provided when a final bus configuration is decided upon.



MAJOR COMPONENT DESCRIPTION	BASE AND EXTENDED WARRANTY			COMMENTS
	PROVIDER	YEARS	MILES	
Base Bus Warranty	New Flyer of America	2	100,000	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 bolted or riveted to the structure, such as, exterior panels, interior panels, roof, ceiling, and driver's barrier.
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. The corrosion 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 de-icers such as Magnesium Chloride or equivalents, unless New Flyer approved preventative measures are taken.
Propulsion System (Traction System, Controllers/Inverters and Gear Box)	Siemens/New Flyer of America	6	300,000	First 5 years covered by Siemens and the 6th year covered by New Flyer. All warranty claims to be submitted to New Flyer.
Batteries (Energy Storage System)	ESS Supplier / 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% of BOL total energy capacity at year 6 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 when the ESS is maintained in the manner described in the New Flyer Service Manuals.</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	2	100,000	Friction Material Excluded
Destination Signs	Luminator	6	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	2	100,000	
Electrical System	Parker	3	150,000	Excluding maintenance items & items that are not covered by the OEM's warranty
LED Headlights	J.W.Speaker	6	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document.



NEW FLYER OF AMERICA

- Confidential -				
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.
Towing	New Flyer of America	2	100,000	
Air Dryer	Haldex	2	200,000	
Charge Air Cooler	EMP	3	150,000	
Fire Suppression System	Amerex	3	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document.
Power Steering	New Flyer of America	2	100,000	
Radiator Fan Drive	EMP	3	150,000	
Hydraulic Systems	New Flyer of America	2	100,000	
Alternator (DC to DC Converter)	Vanner	3	150,000	Some limitations and exclusions may apply - Please see manufacturer's warranty document.
New Flyer Connect System	New Flyer of America	3	Unlimited	Warranty covers system and subscription for 3 years.
Paint	Axalta	5	Unlimited	Some limitations and exclusions may apply - Please see manufacturer's warranty document.

For Warranty Use Only

**Tab 7, Xcelsior CHARGE NG™ Brochure**

**New Flyer Response:**

Included in this section is a brochure of the proposed Xcelsior CHARGE NG™ Bus.



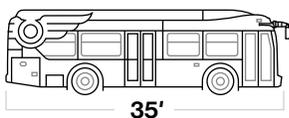
# xcelstor *CHARGE NG*<sup>™</sup>

Our next generation, battery-electric,  
zero-emission bus.



Xcelstor CHARGE NG<sup>™</sup> is New Flyer's next generation battery-electric, zero-emission bus. It is lighter, simpler, has longer range with better energy recovery and is smart city capable – making it the most advanced electric bus on the market.

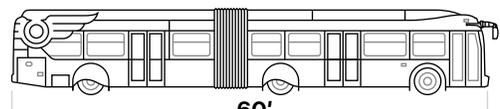
### Available in 3 Lengths



35'



40'



60'

## Three distinct technology advancements to deliver a high-performance bus.



### High-Energy Batteries

Next generation high-energy batteries.



### Battery Packaging

Advanced protective battery packaging designed for easy installation and streamlined maintenance.

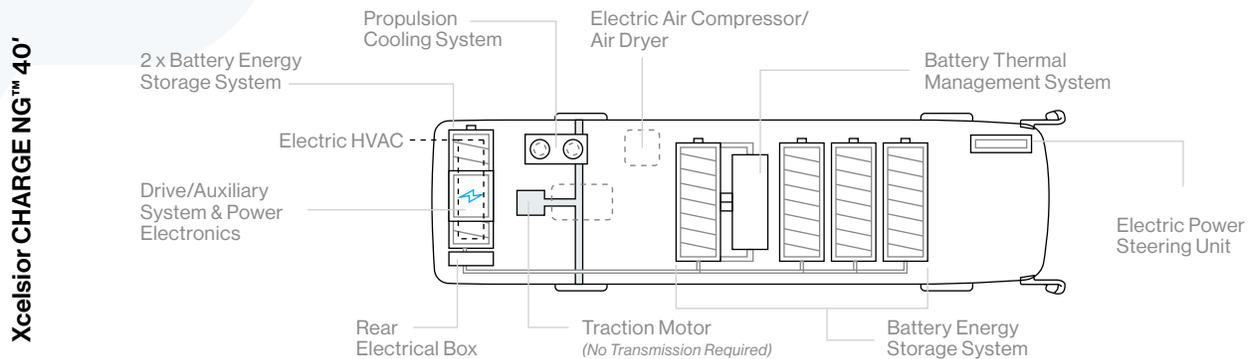


### Traction Propulsion System

A new lightweight electric traction propulsion system with up to 90% energy recovery.

## How it works.

The Xcelsior CHARGE NG™ uses an electric motor powered by energy stored in rechargeable batteries.



## Technology advancements.

### 1 More efficient and streamlined battery enclosure.



A standardized waterproof battery enclosure is mounted on the rooftop and in the propulsion compartment using a "plug and play" approach, lending simplicity and efficiency in design, install, maintenance and manufacturing.

Rooftop application uses a modular approach with a simplified mounting system comprised of two rails running the length of the bus.

The same standardized battery enclosure is also mounted in the propulsion compartment on a rack. With this approach, the same battery enclosure can be mounted in any position on the bus.

#### Simpler

- ✓ One simple and standardized approach for better quality, consistency, and accuracy.
- ✓ If a battery needs to be replaced, the module can be removed and replaced with a new/backup module. The module needing troubleshooting can be serviced in the shop while the bus with the new/backup module onboard returns to service.
- ✓ With every battery having the same enclosure, service manuals are the same for every single bus model and length.
- ✓ Service parts are reduced by 90% going from 250 to less than 50 parts.

#### Waterproof

- ✓ With an ingress protection rating of IP67, the battery enclosure is 100% waterproof if submerged in water, which greatly reduces the likelihood of water leaking into the battery enclosure.
- ✓ With an ingress protection rating of IP69 for dust, high temperatures, and high-pressure washing, there is 100% protection from intrusion of dust or water particles. This is ideal for demanding operating conditions, and situations where sanitization and rigorous cleaning is undertaken.

#### More Efficient

- ✓ Modules are better insulated resulting in better management of battery temperature for optimal performance.

#### Easier to Service

- ✓ The casings are built using a reinforced composite fiber that is non-conductive.
- ✓ Service technicians can simply and safely plug in or unplug the battery module with less exposure to high-voltage electricity.

#### Lighter

- ✓ The standardized battery enclosure is lighter in weight, increasing the maximum passenger capacity on the bus by 4 additional standees.

## 2 High-grade Siemens traction system.

ELFA 3 is Siemens' next generation traction system that introduces a more efficient design with compact inverters and embedded drive controllers.

### Safer

It's easier and safer to maintain with shorter cable runs and touch-safe high voltage connections.

### Smaller

It's smaller and lighter allowing for increased passenger capacity.

### More Efficient

- ✓ Minimal rack requiring no covers.
- ✓ Shorter cable runs offer decreased risk of issues or faults, improved electromagnetic compatibility (EMC) and greater power efficiency.
- ✓ Delivers up to 90% energy recuperation.
- ✓ Delivers smooth, quiet, emission-free driving (with no engine noise, no idling, and zero local emissions).
- ✓ Better torque accuracy.

## 3 Next generation, high-energy batteries.

The batteries are made of world-class energy storage systems (ESS), engineered for safe, robust, and reliable use in transit.

The battery chemistry is Lithium Nickel Manganese Cobalt (NMC), providing the best balance of energy, power, safety, and life.

### More Energy

- ✓ 13% more energy available.
- ✓ Greater capture of regenerative energy (during braking at top state of charge).

### Extended Range

Range is extended by 13% without compromising quality.



## CONNECT 360™

Connect 360™ is included on every new Xcelsior CHARGE NG™. Learn more at [nfigroup.com/connect](http://nfigroup.com/connect)



**Additional range** capability with improved driver performance.



**Decision-making information** to optimize charging strategies.



**Intelligence** on how to preserve battery energy throughout the day.



**Reduced operating cost** and maximum fleet utilization.

**Connect 360™**, operated by **NFI Connect™**, is a customizable performance dashboard that provides smart analytic reporting to expand insight and intelligence for managing your Xcelsior CHARGE NG™ battery-electric bus.





★  
12-Year comprehensive warranty available on batteries, inverters and electric motors.

Six minutes of rapid recharge time with a 450 kW charger equals 1.5 hours of operation.

Rapid charge configuration fully compliant with OppCharge and charging protocols.

OPRcharge

SAE

## Charging.

New Flyer buses are interoperable with charging equipment that supports all heavy-duty electric vehicles. You can customize your Energy Storage Systems (ESS) and charging solutions so you can develop the right ESS and infrastructure solution for your needs.

Xcelsior CHARGE NG™ is interoperable with charging systems available from:

SIEMENS

ABB

-chargepoint+

helioX

### On-Route Charging

The on-route rapid charger provides the means for the Xcelsior CHARGE NG™ to stay in service 24 hours daily. To charge, the bus stops underneath the charger and the pantograph makes contact with the charge bars.

### Plug-In Charging

Plug-in chargers are available as a supplement or alternative to on-route rapid chargers and can be used for overnight, mid-day and on-route charging. Depot charging for a full charge requires 3.8 hours for a 520 kWh ESS.

**The 40' Xcelsior CHARGE has a range of up to 258 miles (520 kWh)\* on a single charge, but with on-route charging, range is unlimited.**

\* Range per FTA Altoona test protocol - HVAC off.

Length	ESS (kWh)	Range (Miles)
35'	345	182
	435	224
40'	345	178
	435	221
	520	258
60'	520	152
	606	175
	693	198



## Functionality + accessibility.



### Dual-Sided Boarding Option

New Flyer offers an optional three-door configuration for all Xcelsior® 40' and 60' buses that includes a street-side door for bus rapid transit application.



### Kneeling

SmartRider™ enables kneeling to variable heights and minimizes the slope difference between a low-floor ramp and the bus floor.



### Self-Leveling

SmartRider™ ramp achieves a 1:6 slope ratio with a self-leveling feature that can withstand up to 1000lbs.



### Capacity

Industry-leading passenger carrying capacity with up to 88 total (40 seated and 44 standees).

## Infrastructure Solutions™

NFI Infrastructure Solutions™ is a service dedicated to providing safe, reliable, smart and sustainable charging and mobility solutions.

Learn what Infrastructure Solutions can do for you at [nfgroup.com/IS](https://nfgroup.com/IS)

## What our Infrastructure Solutions team provides.

Supports mobility projects from start to finish.

Focuses on energy management optimization.

Provides infrastructure planning and development.

Provides cohesive transition of bus fleets to zero-emission electric technology.

	35'	40'	60'
<b>Measurements</b>			
<b>Length</b>	36' 3" (11.05m) Over bumpers; 35' 5" (10.80m) Over body	41' 0" (12.50m) Over bumpers; 40' 2" (12.24m) Over body	60' 10" (18.54m) Over bumpers; 60' 0" (18.29m) Over body
<b>Width</b>	102" (2.6m)	102" (2.6m)	102" (2.6m)
<b>Roof Height</b>	11' 1" (3.3m) Over charging rails	11' 1" (3.3m) Over charging rails	11' 1" (3.3m) Over charging rails
<b>Step Height</b>	14" (356mm)	14" (356mm)	14" (356mm)
<b>Front Step Height (Kneeled)</b>	10" (254mm)	10" (254mm)	10" (254mm)
<b>Interior Height – Floor to Ceiling</b>	79" (2m) Over front and rear axle; 95" (2.4m) Mid-coach	79" (2m) Over front and rear axle; 95" (2.4m) Mid-coach	79" (2m) Over front and rear axle; 95" (2.4m) Mid-coach
<b>Tire Size</b>	305/70R22.5	305/70R22.5	305/70R22.5
<b>Wheelbase</b>	226.75" (5.8m)	283.75" (7.2m)	229" (5.8m) Front / 293" (7.4m) rear

<b>Propulsion</b>			
<b>Motor</b>	Siemens electric drive system; Standard or optional high gradeability motor	Siemens electric drive system; Standard or optional high gradeability motor	Siemens electric drive system; ZF AVE130 in-wheel motor center drive axle
<b>Rated Power (standard)</b>	160 kW	160 kW	280 kW
<b>Rated Power (high-grade)</b>	209 kW	209 kW	N/A
<b>Rated Torque (standard)</b> (*Based on 1:5.67 ratio axle)	1,400 lb-ft	1,400 lb-ft	1,220 lb-ft
<b>Rated Torque (high-grade)</b>	2,000 lb-ft	2,000 lb-ft	N/A

<b>Passenger Capacity</b>			
*Based on 4-string (35'/40') & 6-string (60') ESS configurations, with ELFA 3 Siemens Traction System			
<b>Seats</b>	Up to 32*	Up to 40*	Up to 61 (with one exit door)*
<b>Standees</b>	Up to 35*	Up to 44*	Up to 62 (with one exit door)*

<b>Accessibility</b>			
<b>Doors</b>	2	2	2 or 3 (option for up to 5 doors)
<b>Wheelchair Accessibility</b>	32" (813mm) Wide, 1:6 slope; Flip out NFIL ramp, front door	32" (813mm) wide, 1:6 slope; Flip out NFIL ramp, front door	32" (813mm) wide, 1:6 slope; Flip out NFIL ramp, front door
<b>Wheelchair Locations</b>	2 - Front location, rear location also available (other options available)	2 - Front location, rear location also available (other options available)	2 - Front location, rear location also available (other options available)

<b>Approach Angle</b>			
<b>Approach/Departure/Breakover Angles</b>	9°/9°/12°	9°/9°/9°	9°/9°/12° (front) 9° (back)

<b>Turning Radius</b>			
(Body, with aluminum wheels; *Varies with wheel type)			
<b>Turning Radius</b>	39' (11.9m)*	43.5' (13.3m)*	42' (12.8m)*

<b>Main Components</b>			
<b>Floor</b>	Marine grade plywood floor; Optional composite floor; Composite rear interior step; Tarabus, Altro	Marine grade plywood floor; Optional composite floor; Composite rear interior step; Tarabus, Altro	Marine grade plywood floor; Optional composite floor; Composite rear interior step; Tarabus, Altro
<b>Electrical System</b>	Parker Vansco	Parker Vansco	Parker Vansco
<b>Propulsion Cooling System</b>	Electric cooling fans	Electric cooling fans	Electric cooling fans
<b>HVAC</b>	Thermo King TE15 (rear)	Thermo King TE15 (rear)	Thermo King RLFE (front) TE15 (rear)
<b>Axles</b>	MAN VOK 07 Front disc brakes; MAN HY-1350 Rear disc brakes; Single reduction axle	MAN VOK 07 Front disc brakes; MAN HY-1350 Rear disc brakes; Single reduction axle	MAN VOK 07 Front disc brakes; ZF AVN 132 Center disc brake; MAN HY-1350 Rear disc brakes; Single reduction axle

<b>Energy Storage System</b>			
<b>Long Range</b> (Rapid charging available)	345 kWh, 435 kWh	345 kWh, 435 kWh, 520 kWh	520 kWh, 605 kWh



# xcelstor *CHARGE NG*™

[newflyer.com/NG](http://newflyer.com/NG)



**VIC** | VEHICLE INNOVATION CENTER

Learn more about this technology at the Vehicle Innovation Center  
[newflyer.com/VIC](http://newflyer.com/VIC)





**NEW FLYER®**



**Greater Portland METRO**

**2024 Buses and Bus Facilities (“BBF”)  
Competitive Grant Program Proposal**



April 18, 2024

Glenn Fenton - Chief Transportation Officer  
 Greater Portland Transit District | METRO  
 114 Valley Street  
 Portland, ME 04102  
 Office: 207.517.3029  
 Email: [gfenton@gpmetro.org](mailto:gfenton@gpmetro.org)

**Subject: New Flyer Partnership Commitment with Greater Portland METRO for the 2024 FTA Buses and Bus Facilities (“BBF”) Competitive Grant Program**

Dear Glenn Fenton,

New Flyer of America Inc. is pleased to submit our Infrastructure Proposal from New Flyer Infrastructure Solutions™ (NFIS) for the 2024 Buses and Bus Facilities (“BBF”) Competitive Grant Program. This proposal includes a description of the work involved along with the pricing. The project is to take place in 2025.

**Scope**

This proposal includes a base proposal for 4 ABB dispensers and option for 1 ABB Charger.

Base: 4 ABB Dispensers (Compatible with a HVC-C 150kW charger) and Turn-key Engineering/Construction, including:

- Freight to site
- 1 years Standard Warranty
- Buy America Act Compliant
- Sequential Charging package for 2 existing chargers
- Manual Reel craft cable reel systems (3) for overhead cable retraction
- New Flyer Infrastructure Solutions project coordination, engineering, dispenser installation (4), all overhead conduit and cabling construction, and commissioning.

Option: 1 ABB HVC-C 150kW charger and 1 Dispenser and Installation, including:

- New Flyer Infrastructure Solutions project coordination, charger/dispenser installation (1), and commissioning.
- Freight to site
- 2 years Standard Warranty on equipment
- Buy America Act Compliant
- Charger Metal Support frame
- Sequential Charging package
- Manual Reel craft cable reel systems (1) for overhead cable retraction
- 1 year ABB Connected Services and Operator Pro – Web Tools.

**Pricing**

	<b><u>Item Description</u></b>	<b><u>Price</u></b>
1	Base: 4 ABB Dispensers and Turn-key Engineering/Construction	\$ 434,060
2	Option: 1 ABB HVC-C 150kW charger and 1 Dispenser and Installation	\$ 264,516

See the above table for all pricing, with the following conditions:

- This Low-No Proposal is meant to provide information for budgeting and grant application. A 20% contingency is included in the price estimate. Upon grant award, scope is to be finalized along with any changes to this pricing.
- Prices are valid for 180 days for equipment to be delivered and installed in 2025. A 5% 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: 20% upon order, 65% upon delivery to site, 10% upon commissioning and 5% upon acceptance.
  - New Flyer Engineering, Construction, PM: Monthly as completed.

**Equipment Delivery**

Estimated Equipment delivery lead time is 28-30 weeks after PO receipt.

**Schedule**

A schedule is shown below based on 2025 contract and engineering, and 2025 construction and commissioning. Schedule will be confirmed once the contract is awarded and project details are finalized.

<b><u>Estimated Duration</u></b>	<b><u>Activity</u></b>
Start	Provide New Flyer with contract and Notice-to-Proceed
Month 1	Order Charging Equipment
Months 1-3	Infrastructure Engineering/Design Reviews
Months 2-7	Charger Manufacturing
Month 8	Charger Equipment Delivery
Months 9	Charger Installation
Months 10	Charger Commissioning & Training
<b>10 Months</b>	<b>Total</b>

**Proposal Assumptions**

New Flyer’s project approach is based on the following assumptions:

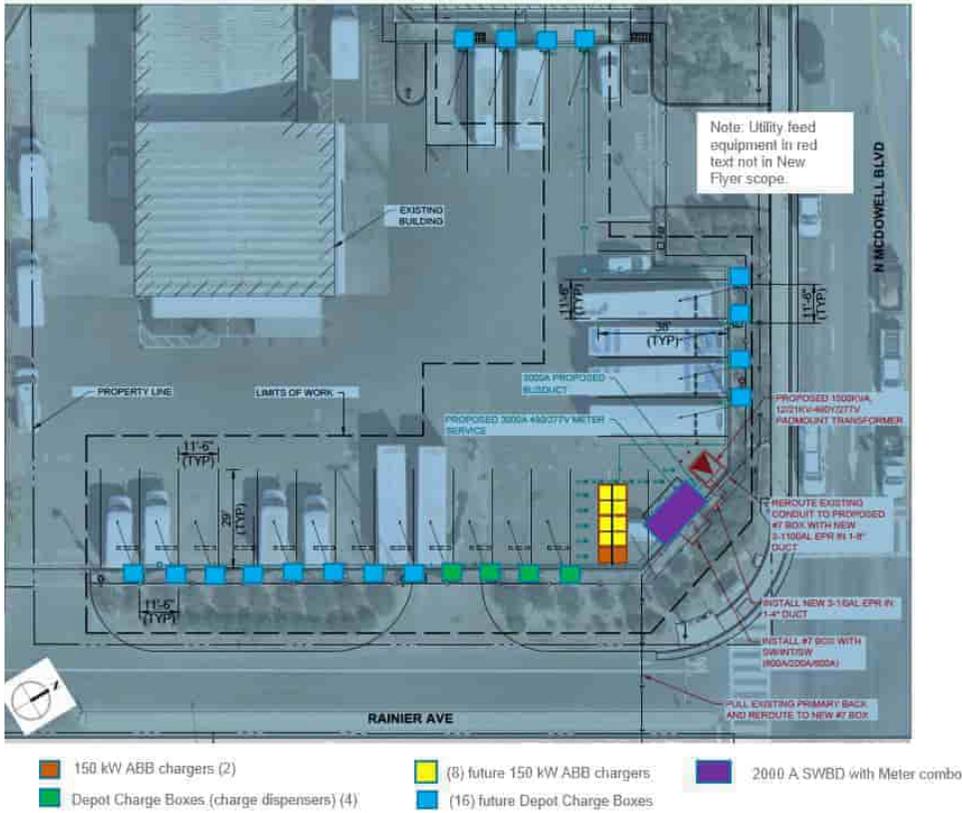
- a. NFIS will coordinate with Manufacturer for all charger related specs, technical coordination, scheduling, testing and acceptance of charger and functionality. Sites visits are included in the proposal (project site coordination, construction phase, and equipment commissioning).
- b. All surveys, plans and geotechnical reports are being provided by others.
- c. Site civil construction is provided by others.
- d. Service transformer, meter, conduit and wire to meter by utility.
- e. Base work includes:
  - Charger to Dispenser Wiring (340 LF) - DC Conduit/Wire for 4 Dispensers (Daisy Chained)
  - Charger to Dispenser Wiring (340 LF) - Communications Conduit/Wire for 4 Dispensers (Daisy chained)
  - 1 dispenser wall mounted and 3 mounted overhead with spring operated cable reel.

- f. Option work includes:
  - Installation only of 1 charger and disconnect switch
  - Concrete pads/bollards, conduit/wire by others
  - Installation only of 1 dispenser mounted overhead with spring operated cable reel.
- g. Exclusions to installation:
  - Any repaving or parking lot modifications
  - Design modifications to existing or future service entrances, electrical systems, building features.
  - Property, ground penetrating radar, or geotechnical survey report
  - Soil contamination
  - Excavation, trenching, backfill, and restoration other than for conduit installation.
- h. NFIS will be onsite with manufacturer for Charger Commissioning including:
  - Management of manufacturer power-on and start-up
  - 1 day per charger commissioning and integration of NF buses with chargers
  - NFIS requests that Greater Portland will allow commissioning team to collect and analyze charge data produced by charge management system.
- i. Existing utility information will be provided by Agency
- j. Agency will take possession and responsibility for the charging equipment, as well as unloading, once delivered to site.
- k. Commercial exclusions:
  - Liquidated damages
  - Bonding
- l. 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.

### **Proposed Charging Solution**

New Flyer is pleased to offer the following solution for Depot chargers (ABB). New Flyer will procure the charging equipment and manage all aspects of commissioning.

**New Flyer Infrastructure Solutions- Conceptual Plan:**



We appreciate the opportunity to submit our proposal and look forward to your positive response.

Sincerely,

**NEW FLYER OF AMERICA INC.**

Luciana Marques

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cc: Carmine Fiore – Regional Sales Manager  
 Adrian Graca – Business Segment Director



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