



**Massachusetts Bay  
Transportation Authority**

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## **MBTA New Bus Procurement**

**Program Update & New Contract No. V51PS02**

***December 10, 2018***



## Background

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### **MBTA's current bus fleet:**

- Current fleet size – 1024 buses
- Average fleet age – 8 years
- MBTA bus service life is typically 12-15 years
- Propulsion technologies include CNG, diesel, hybrid, and electric trolley

**MBTA bus fleet is expected to expand over the next 25 years and include new propulsion technologies**





## Future Bus Programs

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### In accordance with:

- Integrated Fleet and Facilities Plan
- Focus 40
- Better Bus Program including network redesign



### A multi-year, multi-task Vehicle Engineering Professional Services contract is required to support:

- 194 New Flyer Hybrid Procurement (Board approval 10/1/2018)
- Electric Bus prototype program
- Specification Development and Procurement Support for future 40-foot bus fleets
- Future replacement of Silver Line buses



## Bus Industry Overview

**Trending towards advanced extended range hybrid and battery electric buses to reduce environment impacts and improve customer experience.**

- Multiple bus manufacturers capable of producing various propulsion types
- Reduced maintenance and operating costs
- Improved reliability and passenger amenities
- Electric bus infrastructure upgrades required





## New Award – Program Support

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**Vehicle Engineering is requesting the award of Contract No. V51PS02 – Engineering and Program Management Services for the procurement of new fleet buses.**

- 10-year contract from Notice to Proceed (NTP)
- Aligned with the Authority’s Integrated Fleet and Facilities Plan (IFFP)
- Contract organized by individual tasks for each new bus procurement
- Existing Contract No. V50PS01 for new bus procurement support is nearing completion





## Contract Selection

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- Three (3) qualified engineering firm proposals were considered
- Selection committee unanimously selected Jacobs Engineering Group Inc. as the most qualified candidate based on industry experience and technical capabilities
- Jacobs has developed and maintained a strong relationship with the MBTA through previous bus procurement contracts over the last two decades
- Jacobs maintains a broad and deep team of technical, management, and procurement experts with intimate knowledge of the MBTA's needs and processes





## Major Program Elements

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- Bus Procurement Strategy
  - Replace existing aging bus fleet with available Options (194 Hybrid Buses)
  - Evaluate new technologies and determine propulsion types based on fleet needs
- 60-foot Bus Program
  - Continued testing of battery and extended range hybrid buses
  - Specification development support for the next fleet of 60-foot buses
  - Engineering, project management, and delivery support for 60-foot buses
- 40-foot Battery Electric Bus (BEB) Program
  - Industry review and purchasing alternatives
  - Specification development support for 40-foot BEBs
  - Engineering, project management, and delivery support for 40-foot BEBs



## Engineering Contract Services Breakdown and Budget

Task Support Envisioned	Independent Cost Estimate	Contract Percentage
194 forty-foot diesel electric hybrid buses <b>(Proposed Task 1)</b>	\$1.79M	15%
Up to 35 forty-foot battery electric buses (BEBs)	\$2.27M	19%
Up to 460 forty-foot buses of mixed propulsion design	\$5.48M	44%
Silver Line sixty-foot buses (propulsion type TBD)	\$2.69M	22%
<b>Total Budget</b>	<b>\$12.25M</b>	<b>100%</b>