

**Board Report**

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
JANUARY 16, 2020****SUBJECT: P2000 LIGHT RAIL VEHICLE (LRV) POWERED AXLE ASSEMBLY OVERHAUL****ACTION: CONTRACT AWARD****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to award a 60-month, Indefinite Delivery/Indefinite Quantity (IDIQ) Contract No. MA53169000 to Pamco Machine Works, the lowest responsive and responsible bidder, for the overhaul of P2000 Light Rail Vehicle (LRV) Powered Axle Assembly Overhaul. This award is a not-to-exceed amount of \$3,132,902 subject to resolution of protest(s), if any.

ISSUE

This procurement is for the acquisition of Powered Axle Assembly overhaul services as described by the Original Equipment Manufacturer (OEM) established maintenance guidelines. This project encompasses overhaul of fifty-two (52) LRVs in addition to (10) spare Powered Axle assemblies or 228 axle assemblies in total. Completion of this overhaul ensures the P2000 fleet remains in a constant State of Good Repair (SGR) while safeguarding passenger safety, vehicle performance and equipment longevity.

DISCUSSION

The P2000 Light Rail Vehicle (LRV) fleet is in its eighteenth (18) year of revenue operation with the highest mileage car at 1.75 million miles and a cumulative fleet mileage of 45 million miles. To ensure continued passenger safety and equipment reliability the Powered Axle Assembly overhaul is recommended by the OEM at a time base interval of 4 years. The Powered Axle Assembly consists of heavy-duty mechanical components including axle sets, wheels, traction gear units, brake disc, ground rings and journal bearings assemblies. Wear and tear of these component are predictable, necessitating periodic overhauls accomplished by a vendor with specialized equipment and mechanical expertise.

The P2000 Powered Axle Overhaul is in its 2nd overhaul cycle since and is (1 of 5) systems currently under a component overhaul program. This overhaul is defined by the OEM as a standard maintenance activity to be completed every 4 years. Other systems include Coupler, Friction Brake & Air Compressor, Auxiliary Inverter (completed), and GTO Driver Board Overhaul (completed).

Metro's Transit Asset Management and Operations staff conducted a condition assessment of the

P2000 fleet in the fall of 2016. The P2000 fleet's overall State of Good Repair (SGR) rating is 2.45 out of 5.0 for an overall adequate rating. This represents an asset that has reached its mid-life and has some moderately defective or deteriorated components. The condition assessment suggested that by performing the recommended OEM mid-life (Modernization) overhauls, currently accomplished under a separate project, overhauling or replacing in-kind the Propulsion equipment, Heating Ventilation & Cooling (HVAC) equipment, Traction Motors, and Auxiliary Power equipment, the vehicles would then be expected to reach the intended design life of 30-years based on statistical condition decay models.

Rail Fleet Services (RFS) Engineering developed an equipment overhaul specification for the Powered Truck Assembly overhaul based upon the OEM recommendations and with RFS maintenance experience. The contractor will perform overhaul services in accordance with a defined schedule and with Metro's technical specifications requirements.

Metro's Diversity & Economic Opportunity Department (DEOD) did not establish a goal for this procurement based on the lack of subcontractor opportunities.

DETERMINATION OF SAFETY IMPACT

Safety is of the utmost importance to Metro and, therefore, it is imperative to maintain the P2000 fleet without deferred maintenance and in a constant state of good repair. The Powered Axle Assembly overhaul will be accomplished in conjunction with the Modernization overhaul program thereby ensuring the fleet is overhauled in accordance with regulatory standards, according to the defined schedule and technical specifications requirements, and within Metro's internal standards, policies and procedures. This procurement is part of the on-going LRV preventive maintenance program.

FINANCIAL IMPACT

Funding in the amount of \$100,000 for this procurement is included in the FY20 budget under account 50316, Professional and Technical Services, Cost Center 3940, Executive Director, Rail Maintenance, Project 300055, Gold Line Operations.

Since this is a multi-year contract, the cost center Manager, Project Manager, and Sr. Executive Officer will ensure that the balance of funds are budgeted in future fiscal years.

IMPACT TO BUDGET

The current source of funds for this action are Fares, Prop A, Measure R, Measure M, State SB1, STA, Cap and Trade, and Federal formula grants. Using these funding sources will maximize allowable project funding allocations given approved provisions and guidelines.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports the following Metro Strategic Plan Goal 2, Deliver outstanding trip experience for all users of the transportation system.

ALTERNATIVES CONSIDERED

Deferral of this program is not recommended as the Powered Axle Assembly is an integral component of the vehicle systems that if not properly maintained could result in equipment failures, service delays, risk to passenger safety, with negative impact to vehicle available and reliability.

NEXT STEPS

Overhaul of the P2000 LRV Powered Axle Assembly overhaul will continue in accordance with Rail Fleet Services' scheduled requirements. If approved, the project is scheduled to commence in February 2020.

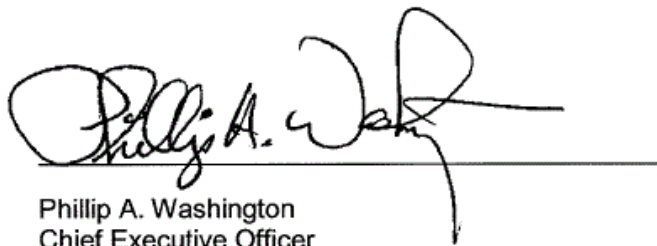
ATTACHMENTS

Attachment A - Procurement Summary

Attachment B - DEOD Summary

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