

**Board Report**

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**File #:** 2019-0483, **File Type:** Contract**Agenda Number:** 44.

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**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE  
JULY 18, 2019****SUBJECT: GOLD LINE P2550 LIGHT RAIL VEHICLE (LRV) STATIC INVERTER APS/LVPS  
OVERHAUL****ACTION: CONTRACT AWARD****RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to award a 60-month, Indefinite Delivery/Indefinite Quantity (IDIQ) Contract No. MA62488000 to AmeTrade, Inc., DBA AmePower, Inc., for the overhaul of P2550 Light Rail Vehicle Static Inverter Auxiliary Power Supply/Low Voltage Power Supply (APS/LVPS). This award is a not-to-exceed amount of \$2,509,943, subject to resolution of protest(s), if any.

**ISSUE**

In June 2017, the Board of Directors approved the implementation of a P2550 Component Overhaul Program. This procurement is for equipment overhaul services for the P2550 fleet as recommended by the Original Equipment Manufacturer (OEM) established guidelines. Execution of the overhaul will ensure that the fifty (50) rail car fleet remains in a constant State of Good Repair (SGR) while safeguarding passenger safety, vehicle performance and equipment longevity.

**DISCUSSION**

The Ansaldo Breda P2550 Light Rail Vehicle (LRV) fleet is in its 11th year of revenue operations. In order to ensure continued safety and reliability the Static Inverter requires overhaul at the eighth year or the six-hundred thousand (600,000) mileage interval as defined by the OEM. The Static Inverter equipment consists of low and high power electronics that drive the inverter modules, transduce voltages, and convert direct current voltages to power the various vehicle systems. The static inverter equipment consists of capacitors, resistors, relays, and circuit boards that degrade and drift over time. This is an integral component of the vehicle systems that provides regulated power to the vehicle inverter systems; therefore, it is critical to maintain the Static Inverter equipment in a constant state of good repair.

The P2550 Component Overhaul Program consists of a total of nine procurements for the overhaul of the major vehicle systems inclusive of propulsion, pantograph, battery, doors, couplers, high voltage and auxiliary power, friction brakes and truck systems. The power axle assembly, coupler, and friction brake contracts were awarded in December of 2017. Metro is requesting the approval of the Static Inverter APS/LVPS overhaul contract which is the ninth and final component overhaul procurement

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requiring board approval for this project. This procurement is for the equipment overhaul services to complete the overhaul of fifty kits in addition to five spare kits to support the maintenance activities.

Metro's Transit Asset Management and Operations staff conducted a condition assessment of the P2550 fleet in the fall of 2016. The P2550 fleet's overall State of Good Repair (SGR) rating is 3.7 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 assessment suggested that by performing the recommended OEM mid-life overhauls and addressing the design and obsolescence issues on the P2550 fleet, it is expected that the vehicles can reach their intended 30-year life based on statistical condition decay models.

Rail Fleet Services (RFS) Engineering developed an equipment overhaul specification for the Static Inverter APS/LVPS 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.

### **DETERMINATION OF SAFETY IMPACT**

Safety is of the utmost importance to Metro and, therefore, it is imperative to maintain the P2550 fleet. The Static Inverter overhaul supports the complete P2550 overhaul program, 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.

### **FINANCIAL IMPACT**

The approved Life-of-Project (LOP) for CP 214001 - P2550 Fleet Component Overhaul Program is \$35,007,546. Funding of \$357,356 for this contract award is included in the FY20 budget in cost center 3944, Rail Fleet Services Maintenance, line item 50441, Parts - Revenue Vehicle.

Since this is a multi-year Contract, the cost center manager, project manager and Sr. Executive Officer, Rail Fleet Services will ensure that the balance of funds is budgeted in future fiscal years.

#### **Impact to Budget**

The current source of funds for this contract award is Transportation Development Act Article 4 (TDA). Use of this funding source maximizes allowable funding mechanisms given approved funding provisions.

### **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 OEM is out-of-business and parts obsolescence is a significant concern to keep the static inverter operational until such time it will be a candidate for replacement during the midlife Modernization project. The static inverter is a safety critical device

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that, if not properly maintained, could result in equipment failures and events due to loss of vehicle 'house power' to door systems, interior lighting, and battery charging. The static inverter provides control power to all vehicle systems and upon failure, poses a high risk to passenger safety, negative impact to vehicle availability and reliability.

**NEXT STEPS**

Overhaul of the P2550 Light Rail Vehicle Static Inverter APS/LVPS will continue in accordance with Rail Fleet Services' scheduled requirements. If approved, the project is scheduled to commence in October 2019.

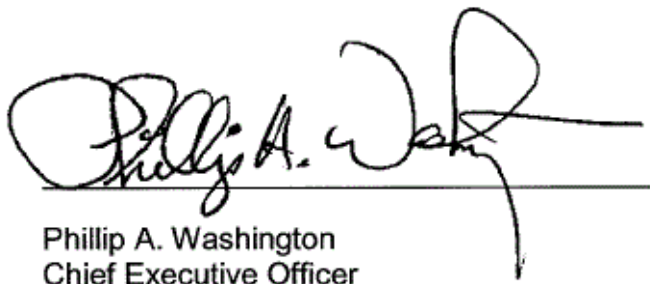
**ATTACHMENTS**

Attachment A - Procurement Summary

Attachment B - DEOD Summary

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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

**GOLD LINE P2550 LIGHT RAIL VEHICLE (LRV) STATIC INVERTER APS/LVPS  
OVERHAUL  
CONTRACT NO. MA62488000**

1.	<b>Contract Number: MA62488000</b>	
2.	<b>Recommended Vendor:</b> AmeTrade, Inc. DBA AmePower	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> 4/19/19	
	<b>B. Advertised/Publicized:</b> 4/19/19	
	<b>C. Pre-Proposal Conference:</b> N/A	
	<b>D. Proposals Due:</b> 6/6/19	
	<b>E. Pre-Qualification Completed:</b> 6/21/19	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> 5/30/19	
	<b>G. Protest Period End Date:</b> 7/23/19	
5.	<b>Solicitations Picked up/Downloaded:</b> 8	<b>Bids/Proposals Received:</b> 3
6.	<b>Contract Administrator:</b> Edmund Gonzales	<b>Telephone Number:</b> 213-418-3073
7.	<b>Project Manager:</b> Bob Spadafora	<b>Telephone Number:</b> 213-922-3144

**A. Procurement Background**

This Board Action is to approve Contract No. MA62488000 issued to perform overhaul services for the Gold Line P2550 Light Rail Vehicle (LRV) Static Inverter APS/LVPS. Board approval of contract awards are subject to resolution of any properly submitted protest.

The Request for Proposal (RFP) was issued in accordance with Metro's Acquisition Policy and the contract type is an Indefinite Delivery, Indefinite Quantity (IDIQ).

Three (3) amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on May 2, 2019 provided revised proposal evaluation criteria and provided details to clarify the technical requirements.
- Amendment No. 2, issued on May 28, 2019 provided a new specification revision.
- Amendment No. 3, issued on June 4, 2019, provided an updated Schedule of Quantities and Prices and requested Best and Final Offers.

A total of three (3) proposals and one (1) alternative proposal were received on May 13, 2019.

## B. Evaluation of Proposals

This procurement was conducted in accordance with, and complies with LACMTA's Acquisition Policy for a competitive RFP using evaluation criteria and weighted factors. Proposals were evaluated by the Source Selection Committee (SSC) based on the following evaluation criteria and weights:

Technical Capability	25%
Proposed Work Scope	30%
Project Management	20%
Price	<u>25%</u>

**Total 100%**

The firms that submitted proposals are listed below in alphabetical order:

1. AmeTrade, Inc. DBA AmePower
2. PSI Repair Services, Inc.
3. Woojin USA, Inc.

Woojin USA, Inc. also submitted an alternative proposal which was reviewed.

The SSC conducted a technical evaluation on each proposal received. The SSC found all three base proposals to be technically responsive and responsible to the RFP's Specification and Statement of Work requirements. The alternate proposal was also deemed responsive and responsible and was evaluated and scored. The following is a summary of the SSC's ranking/scores for this procurement:

	<b>Firm</b>	<b>Average Score</b>	<b>Factor Weight</b>	<b>Weighted Average Score</b>	<b>Rank</b>
	<b>AmePower</b>				
	Technical Capability	94.67	25.00%	23.67	
	Proposed Work Scope	91.11	30.00%	27.33	
	Project Management	93.33	20.00%	18.67	
	Price		25.00%	20.34	
	<b>Total</b>		<b>100.00%</b>	<b>90.01</b>	<b>1</b>
	<b>PSI Repair Services</b>				
	Technical Capability	78.67	25.00%	19.67	
	Proposed Work Scope	76.67	30.00%	23.00	
	Project Management	83.33	20.00%	16.67	
	Price		25.00%	25.00	
	<b>Total</b>		<b>100.00%</b>	<b>84.34</b>	<b>2</b>
	<b>Woojin USA (Primary Proposal)</b>				
	Technical Capability	69.33	25.00%	17.33	
	Proposed Work Scope	77.78	30.00%	23.33	
	Project Management	73.33	20.00%	14.67	
	Price		25.00%	14.75	
	<b>Total</b>		<b>100.00%</b>	<b>70.08</b>	<b>4</b>

	<b>Woojin USA (Alternative Proposal)</b>				
	Technical Capability	75.33	25.00%	18.83	
	Proposed Work Scope	83.33	30.00%	25.00	
	Project Management	85.55	20.00%	17.11	
	Price		25.00%	15.21	
	<b>Total</b>		<b>100.00%</b>	<b>76.15</b>	<b>3</b>

The firm recommended for award, AmePower, Incorporated was found to be in full compliance with the technical and all other RFP requirements, and received the highest ranking.

**Qualifications Summary of Firms within the Competitive Range:**

**AmePower**

AmeTrade, Inc., dba AmePower has experience delivering high power electronic systems. Through discussions with their technical team, Metro’s SSC determined that AmePower has the technical capability to perform the required overhauls and upgrade services. AmePower exhibited extensive rail overhaul experience and technical knowledge.

AmePower possesses the required experience, equipment, personnel, technical and operational resources to provide overhaul or replacement services of the Static Inverter per the technical specification. Additionally they provided a detailed written test plan which demonstrated their in-depth knowledge of the Statement of Work. AmePower also has a past history of successful performance with projects similar to the Static Inverter Overhaul project.

**PSI Repair Services, Inc.**

PSI Repair Services met the technical requirements and appears to have the necessary resources. PSI provided draft test and inspection plan information for the SSC which were acceptable. PSI has performed previous projects for Dallas Area Rapid Transit (DART), Denver RTD, and VTA Santa Clara as well as for Kinkisharyo International LLC. PSI has also performed P2550 inverter repairs for Metro in the past.

**Woojin USA, Inc.**

Woojin USA, Inc. has delivered energy storage systems and auxiliary power supplies to DTP (Denver Transit Partners), MBTA (Massachusetts Bay Transportation Authority), Seattle Sound Transit, SEPTA (Southeastern Pennsylvania Transportation Authority), TriMet (Tri-County Metropolitan Transportation District), and Tren Urbano in Puerto Rico.

### C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, comparison to Metro's ICE, and the technical analysis of proposals, in accordance with RFP requirements.

<b>Proposer Name</b>	<b>Initial Proposal Amount</b>	<b>BAFO Amount</b>	<b>Metro ICE</b>
AmePower, Inc.	\$3,000,620	\$2,509,943	\$2,730,000
PSI	\$2,489,766	\$2,042,420	
Woojin-Primary	\$4,733,877	\$3,461,175	
Woojin-Alternate	\$3,356,078	\$3,356,078	

The price analysis of the initial proposals showed that one proposer did not submit complete pricing for all items requested. To ensure a complete price analysis and to assure that Metro would receive the best value for the contract, a request for Best and Final Offer (BAFO) was issued on June 4, 2019. All three competitors responded with complete price proposals which were used to complete the price analysis. Also, the BAFO request resulted in a cost savings to Metro of \$490,737 over the previous proposal from the recommended contractor, AmePower.

### D. Background on Recommended Contractor

AmePower, Incorporated is a Metro certified SBE. AmePower is located in Miami, Florida and has been in business over 20 years. Amepower is a certified engineering company whose expertise includes: Insulated-Gate Bipolar Transistor (IGBT) to IGBT and Gate Turn-Off (GTO) Thyristor to IGBT technology conversions; overhaul, retrofit and manufacturing services for rolling stock systems including: Complete Converters; Low Voltage Power Supplies (LVPS); Phase Modules; Auxiliary Power Supplies (APS); and Battery Chargers.

AmePower evolved as leading suppliers of power electronics components in the Southeast, to a full Power Electronics solutions provider, primarily focused in the Mass Transportation Industry. AmePower has contracts for rail component overhauls with New York Transit of New York City and ACI Herzog of Puerto Rico. The firm has completed contracts to provide upgrade services with MARC of Maryland and WMATA of Washington, DC in the past 3 years.

AmePower has a current contract with Metro to repair the A650 GTO Phase Modules which will be completed in 2019. AmePower's contract performance with Metro has been satisfactory.

## DEOD SUMMARY

**GOLD LINE P2550 LIGHT RAIL VEHICLE (LRV) STATIC INVERTER APS/LVPS  
OVERHAUL  
CONTRACT NO. MA62488000**

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) did not establish a Small/Disabled Veteran Business Enterprise (SBE/DVBE) goal for this procurement. While DEOD determined there was a lack of available SBE/DVBE certified firms to perform the specialized overhaul design and manufacturing work, staff continues to encourage eligible proposers to seek certification as SBEs. AMETRADE, Inc. responded accordingly, and was SBE certified prior to proposal due date. AMETRADE, Inc. made a 100% SBE commitment as a prime.

	<b>SBE Contractors</b>	<b>SBE % Committed</b>
1.	AMETRADE, Inc. (Prime)	100.00%
<b>Total Commitment</b>		<b>100.00%</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. Project Labor Agreement/Construction Careers Policy is applicable only to construction contracts that have a construction contract value in excess of \$2.5 million.