Scope of Work

Washington Metropolitan Area Transit Authority

Project Title:

Running Rails (39’) and (78')

PRN ID: CTRST17025

SOW ICE ID: SOW0000433

0.0 SCOPE

0.1 Scope of Work

0.1.1 The Washington Metropolitan Area Transit Authority requires the purchase of new Running Rail for use in system-wide track rehabilitation. These specifications provide for the manufacturing, testing, inspection, packaging, and delivery of 39-foot and 78-foot sections of in line, head hardened 115RE steel running rail.

1.0 APPLICABLE DOCUMENTS

1.1 References

1.1.1 Work will be performed in accordance with the following applicable Codes, Regulations, Reference Standards and Specifications:

a) American Society for Testing & Materials (ASTM) and ISO 9001, AREMA Manual of Railway Engineering, and AREMA Portfolio of Special Trackwork Plans (herein collectively referred to as AREMA or AREMA requirements).

b) ASTM E10 Standard Method of Brinell Hardness for Metallic Materials

c) ASTM A578 Ultrasonic Testing

2.0 TECHNICAL SPECIFICATIONS

2.1 Vendor's Responsibility

2.1.1 All materials and equipment required for this procurement will be the responsibility of the Vendor.

2.1.2 The work specified in this Section consists of manufacturing, testing, inspection, packaging, and shipping of Running Rail.

2.1.3 Furnish Running Rail in accordance with the specifications in this contract package.

2.2 Materials

2.2.1 Running Rail:

a) Rail Section and Weight will be new 115 RE rail section, and will be in conformance with AREMA Recommended Rail Sections, 115 RE Rail Section and Specifications for Steel Rails, 2009 except as specified in Section 3.3.

b) 39-Foot and 78-foot In Line Head Hardened Rail

1) Rail Section and Weight will be new 115 RE rail section, and will be in conformance with AREMA Recommended Rail Sections, 115 RE Rail Section and Specifications for Steel Rails, 2005 except as specified in Section 3.3 of this RFP.

2) 39-foot rail will be suitable for installation into existing running rail using Thermite or Flash-Butt method.

3) 78-foot rail will be suitable for joining into continuous welded strings using electric Flash-Butt welding.

4) The steel will be cast by a continuous casting process, or by other methods approved by WMATA.

2.3 General Specifications

2.3.1 Selection of Rail:

a) All rails to be head hardened will be No. 1 rails. A certified mill test report will be submitted listing the following data: heat number, chemical analysis, Brinell hardness of the heat, and macroetch.

2.3.2 In-Line Hardening

a) The rails selected for In-Line Head Hardening will be cooled to the temperature specified for entry into the head hardening machine. After entry into the head hardening machine, the rails will be subjected to balanced water sprays which will provide uniform side-to-side cooling of the sides of the head and web of the rail in a controlled manner to achieve the required hardness and metallurgical structure. The rails will be subsequently cooled under controlled conditions to achieve a fine pearlite microstructure.

2.3.3 Hardness Tests, In-Line Hardening

a) The hardness of the In-Line hardened rail, when tested in accordance with these specifications will be within the following ranges:

Top of Head:	352-388* BHN	Center of Head:	341- 388*BHN
Side of Head:	352-388* BHN	Center of Web:	295-320 BHN
Center of Base:	300-325 BHN	Tip of Flange:	295-320 BHN

b) Brinell hardness determination will be made on one equivalent sample from the same heat as the rails being treated, and will be 6 to 10 inches in length. The tests will be made on the rail head. The surface of the rail at the point selected for measurement will be properly prepared to permit accurate determination of hardness. Before making the impression all decarburized metal will be removed from the selected point. If all the rails or samples tested meet the specified hardness, the rails represented will be accepted subject to the other requirements of these specifications. The results of the Brinell hardness tests will be furnished by the manufacturer on the mill certificate.

* May be exceeded. Refer to Rail Hardness Specifications per Section 2.1.4.2 of the current AREMA Manual for Railway Engineering.

2.3.4 115 RE 39-Foot Running Rail:

a) Running rail will be delivered in 39-foot sections, with the two inner holes (furthest from the rail end) pre-drilled in one side, and the opposite end remaining blank.

2.3.5 115 RE 78-Foot Running Rail:

a) Running rail will be delivered in 78-foot sections, with both ends blank.

3.0 INSPECTION AND ACCEPTANCE TESTING

3.1 Submittals

3.1.1 Vendor will provide submittals to WMATA (30) calendar days after the contract award date, no less than (15) calendar days prior to the first delivery date in the schedule to the WMATA Contract Officer's Technical Representative (COTR).

3.1.2 Submit to the COTR a description of the method of transport for approval prior to shipment.

3.1.3 Mill Inspection:

a) Complete all specified tests and inspections at the mill prior to shipment.

b) Submit to the COTR all information required of AREMA Form 401D.

c) Provide free access for the COTR to all fabrication and test facilities where work is being performed for this Contract.

3.1.4 Provide rail test records, including mechanical properties tests, hardness measurements, ultrasonic test records and all other required test documentation, for review during in-plant inspections.

3.2 Documentation:

3.2.1 A mill certificate will be furnished to the COTR containing the following data:

a) The identity of each rail in a charge by heat, ingot and letter.

b) The identity of each equivalent sample by heat.

c) The dates of all phases of heat treatment for each charge.

d) A listing of the accepted and rejected rail in each charge.

3.3 Quality Assurance/Control:

3.3.1 A written Quality Assurance Program will be submitted to WMATA prior to contract award and must be consistent with ISO 9001. (International Organization for Standardization).

3.3.2 Tolerances will meet all AREMA Chapter 4, RAIL, Section 2.1 Specifications for Steel Rails, in all aspects unless modified in writing by WMATA and/or the contract documents and these specifications.

3.4 Packaging:

3.4.1 Handle and load rails to avoid damage. Damaged rails will not be accepted by WMATA.

3.4.2 Load rails head up with the branding on all rails facing in the same direction.

3.4.3 Sort and load rails together according to their markings. Do not intermix rails of different markings in loading. If there are not sufficient rails of one marking for a full

car, smaller groups consisting of tiers of different markings may be loaded onto one car.

3.4.4 Load rails with adequate wood strips between the tiers or rail to prevent damage in transit.

4.0 WARRANTY

4.1 There will be a one-year warranty on all materials and workmanship.

5.0 DELIVERY SCHEDULE

5.1

A. 39-Foot Running Rail

Delivery Milestones After Notice to Proceed (NTP)	FY2018 Base Year Quantity	FY2019 Option Year 1 Quantity	FY2020 Option Year 2 Quantity	FY2021 Option Year 3 Quantity	FY2022 Option Year 4 Quantity
90 days	270	270	270	270	270
120 days	295	295	295	295	295
TOTAL	565	565	565	565	565

B. 78-Foot Running Rail

Delivery Milestones After Notice to Proceed (NTP)	FY2018 Base Year Quantity	FY2019 Option Year 1 Quantity	FY2020 Option Year 2 Quantity	FY2021 Option Year 3 Quantity	FY2022 Option Year 4 Quantity
90 days	20	20	20	20	20
120 days	860	860	860	860	860
TOTAL	880	880	880	880	880

5.2 WMATA staff will inspect Running Rail deliveries upon receipt. The Vendor will replace defective Running Rail within (14) calendar days of rejection notice when they are damaged, or if they do not meet specification. WMATA will not incur any additional cost for replaced Running Rail.

5.3 Running Rail for this contract will be delivered to the following locations:

WMATA Auth Road Material Storage Facility
4305 Auth Place
Suitland, MD 20746

WMATA Industrial Road Material Storage Facility
6851 Industrial Road
Springfield, VA 22151

WMATA Greenbelt Rail Facility
5801 Sunnyside Boulevard
College Park, MD 20740

Alternate locations within the WMATA rail system (DC, MD, VA)

5.4 Hours of delivery will be between 7:00 am and 2:00 pm Monday through Friday, exclusive of legal holidays in the Washington, DC area. The Vendor will notify WMATA of material deliveries (48) hours in advance. The supplier will contact Ms. Kimberly Hammond at (202) 253-4127 for instructions. The contractor will notify WMATA of any discrepancies in deliveries 48 hours in advance.

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