

CITY OF PORTLAND**CONTRACT NO. 37218****AMENDMENT NO. 3**

FOR

Prototype Streetcar

This Contract Amendment (Amendment) is between the City of Portland, a municipal corporation of the State of Oregon, by and through its duly authorized representatives ("City") and Oregon Iron Works, Inc. ("Contractor").

1. The Contract expiration date is hereby changed from May 15, 2009, to July 1, 2011.
2. The City and Contractor have agreed to add services to this Contract as referenced in Change Order #2, as attached hereto.
3. Except as expressly amended above, all other terms and conditions of the Contract and subsequent amendments shall remain in full force and unchanged.
4. By signature below, the parties agree to this Amendment, effective upon the date of the last signature below.

OREGON IRON WORKS INC.

BY:

Name_____
Title

Address: 9700 SE Lawnfield Road
Clackamas, OR 97015
Telephone No. 503-653-6300
Fax No 503-653-5870

CITY OF PORTLAND

BY:

Approved as to form:

City Attorney_____
Christine Moody, Chief Procurement Officer

CHANGE ORDER

183779

PROJECT: Portland Streetcar
Streetcar Prototype Procurement
Portland, Oregon

TO: Oregon Iron Works Inc.
9700 SE Lawnfield Road
Clackamas, OR 97015

OWNER: City of Portland
1120 S.W. Fifth Avenue, Suite 800
Portland, Oregon 97204

**PROJECT
MANAGER:** Shiels Obletz Johnsen, Inc.
1140 SW 11th Avenue, Suite 500
Portland, OR 97205

CHANGE ORDER NO.: 2

INITIATION DATE: April 15, 2010

CONTRACT NO.: 37218

CONTRACT DATED: March 7, 2007

THE CONTRACT IS HEREBY CHANGED AS FOLLOWS:

Contractor shall replace the electrical/population system in the Streetcar Prototype vehicle built under this Contract No. 37218 with a system to be developed by Rockwell Automation, an United States manufacturer of electrical and electronic equipment located in Milwaukee, Wisconsin. The intent of the work under this change order is to develop and test a domestically manufactured electrical/propulsion system, to install it on a streetcar vehicle and to demonstrate that the system can be expeditiously and economically installed and operated in safe and reliable revenue service.

The City and TriMet are seeking a federal grant to assist in funding a portion of Contractor's cost in carrying out the work described in this Change Order. On April 16, 2010, the Federal Transit Administration (FTA) announced the award of \$2.4 million in federal research funds to TriMet to support the development of streetcar components that will be made in the USA, of which \$1.2 is for the cost associated with the installation of a US manufactured propulsion system in the Streetcar Prototype vehicle. Payment by the City under this Change Order shall be subject to Congressional appropriation of funds, successful completion of a federal grant agreement between TriMet and FTA and amendment of the City/TriMet IGA to disburse federal grant funds to the City.

A. DESCRIPTION OF WORK:

1. General: Contractor shall design, furnish, install/retrofit, and test the propulsion system, auxiliary power system, car control system, and related hardware and software on the Streetcar Prototype.
2. All work shall be in accordance with the Technical Specifications and shall be subject to the approval of the City.
3. Contractor shall identify and remove all existing hardware to be replaced from the Streetcar Prototype and shall repair any damage to the Streetcar Prototype occurring during the retrofit program to the City's satisfaction. Contractor shall present a complete Retrofit Plan within 30 days of notice to proceed with this work.
4. The floor and cab heater loads shall be added to and powered from the auxiliary inverter, to demonstrate auxiliary power capability and compliance with City/OIW Contract No. 30000696.
5. Contractor shall develop design drawings, schematics, wiring diagrams, material lists, and calculations and submit them to the City for review and approval in accordance with the design review process outlined in the Technical Specifications.
6. The hardware and software to be supplied by Contractor shall include, but is not limited to, the following:
 - Two dual drive propulsion inverters;
 - One dual drive auxiliary inverter with a liquid cooling unit and necessary piping and other appurtenances;
 - One low voltage DC power supply including two high voltage-to-low voltage converters and one 24 Vdc power supply;
 - Appropriate line filters and related circuit hardware to meet the requirements of the Technical Specifications;
 - All necessary mounting and wiring changes; and
 - A PLC control system for monitoring, control, and interface to other car systems as required, replacing the existing CAN bus hardware.
7. Contractor shall provide test plans, conduct tests, and prepare test reports in accordance with the Technical Specification for review and approval by the City. Given the magnitude of the retrofit, all previous testing by OIW shall be considered null and void and shall be repeated unless otherwise exempted by the City.
8. Contractor shall update the Car History Book to reflect the RA retrofit.
9. Contractor shall develop and provide a Safety Hazards Analysis as required by the Technical Specifications; and assist the City in any required safety certification process.
10. Contractor shall provide as-built drawings, manuals, training, and technical support as required by the Technical Specifications.

B. PAYMENT

Contractor estimates that the cost for replacing the Streetcar Prototype electrical/propulsion system as described in this Change Order, will be \$1.8 million. The City will participate in this cost by paying the Contractor an amount not to exceed \$1.2 million, but not more than 2/3rds of the Contractor's actual documented costs for carrying out the work described in this Change Order. Payments to the Contractor by the City will be only from funds appropriated by Congress and delivered to TriMet and the City through a grant agreement with the FTA.

C. MILESTONE PAYMENT SCHEDULE

The schedule for payments of the New Contract Amount by the City to Contractor shall be revised as follows:

	Approximate Percent of New Contract Amount	Progress Payment Amount	Accumulative Payments
1. Completed Milestones	51.97%	\$2,510,277	\$2,510,277
a. Issuance of the Notice to Proceed			
b. Completion of subcontractor and sub-supplier contracts			
c. Design approval			
d. Approval of car body testing			
e. Assembly and painting of carbody			
f. FAI of key components and systems			
g. Delivery of car to PDX Maintenance Facility			
h. Change Order #1.1 through #1.7			
2. Transfer of car from PDX Maintenance Facility to OIW shop	5.00%	\$241,514	\$2,751,790
3. Approval of revised hazardous materials and safety documents	10.00%	\$483,028	\$3,234,818
4. Removal of Skoda inverters & drives	10.00%	\$483,028	\$3,717,846
5. Start of OIW shop testing of Rockwell systems	8.00%	\$386,422	\$4,104,268
6. Delivery of car from OIW to PDX Maintenance Facility	5.00%	\$241,514	\$4,345,782
7. Completion of testing and final acceptance	10.03%	\$484,495	\$4,830,277
Totals	100.00%	\$4,830,277	

C. TIME IMPACT: The date for delivery of the Streetcar shall be extended to July 1, 2011.

D. ATTACHMENTS: None

Except as provided herein, all terms and conditions of the contract as heretofore modified remain unchanged. The terms and conditions of this Change Order constitute a full accord and satisfaction for all costs, including labor, materials, equipment, direct and indirect costs, overhead, profit, schedule impacts, delays and extended overhead, if any, related to the actions described or referenced herein.

Original Contract Amount	\$ 3,200,000.00
Net Change by Change Orders #1.1 through #1.7	\$ 430,277.00
Contract Amount prior to this Change Order	\$ 3,630,277.00
Contract Amount will be (increased) (decreased) (unchanged) by	\$ 1,200,000.00
New Contract Amount, including this Change Order	\$ 4,830,277.00
Date of delivery of the Streetcar Prototype is changed to	July 1, 2011

APPROVED FOR ISSUANCE:

APPROVED:

Shiels Oblatz Johnsen, Inc. for _____ Date
Portland Streetcar, Inc.

City of Portland – Project Manager _____ Date

APPROVED:

APPROVED:

Oregon Iron Works, Inc. _____ Date

City of Portland - PBOT Director _____ Date

COPIES TO:

☒ PSI 1817.0
☒ Carter MacNichol

☒ Vicky Diede
☒ Gary Cooper