

Date: May 24, 2017

To: Board of Directors

From: Neil McFarlane *Neil McFarlane*

Subject: RESOLUTION 17-05-48 OF THE TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON (TRIMET) AUTHORIZING A MODIFICATION TO THE CONTRACT WITH MODERN RAILWAY SYSTEMS, INC. TO IMPLEMENT POSITIVE TRAIN CONTROL FOR THE WEST SIDE EXPRESS (WES) COMMUTER RAIL LINE

1. Purpose of Item

The purpose of this item is to request that the TriMet Board of Directors (Board) authorize the General Manager to execute a modification to the contract with Modern Railway Systems, Inc. (MRS) for design, furnish, and installation services to implement Positive Train Control (PTC) on TriMet's Westside Express Commuter Rail Line (WES).

2. Type of Agenda Item

- Initial Contract
- Contract Modification
- Other _____

3. Reason for Board Action

Board authorization is required because the proposed modification increases the contract amount beyond the amount previously authorized by the Board.

4. Type of Action

- Resolution
- Ordinance 1st Reading
- Ordinance 2nd Reading
- Other _____

5. Background

In January 2014, the Board approved Resolution 14-01-02, authorizing a Contract with MRS for design, furnish, and installation services in the amount of \$235,435 for pre-implementation services. Subsequently, at its July 2014 meeting, the Board approved Resolution 14-07-38, authorizing a modification to the Contract with MRS to add implementation services in the amount of \$8,359,997 plus a change order allowance of \$850,000. The work performed by MRS under this Contract is necessary in order to meet federally mandated rail safety requirements.

In 2008, Congress passed the Rail Safety Improvement Act, requiring that PTC equipment be installed on most of the United States railroad network by the end of 2015. In 2015, the Positive Train Control Enforcement and Implementation Act extended the deadline to the end of 2018, and potentially to the end of 2020, assuming certain conditions were met.

TriMet's WES system is subject to the federal requirements because WES operates on the Portland and Western Railroad (P&W), which must comply with all Federal Railroad Administration (FRA) safety regulations.

The purpose of PTC regulations are to require implementation of a train control system that prevents accidents caused by human error, such as train-to-train collisions, over speed derailments, incursions into work zones, or movement of a train through a switch that is in an improper position. These safety features are ensured by integrating signal, communication, vehicle, and back-office systems that monitor and control train movements.

MRS is responsible for implementing TriMet's FRA-approved PTC technology. To date, MRS has designed, made all necessary installations, and fully tested the system. TriMet and P&W are now jointly petitioning the FRA to enter a revenue service demonstration, which will demonstrate the capability of the installed system in a revenue service environment. While dependent on FRA review times, it is the goal of TriMet and P&W to have the FRA fully certify the system by the end of 2017, a full year in advance of the regulatory deadline.

The PTC technology that TriMet, P&W, and other railroads are using was approved by the FRA in 2013 via a "type approval permit," which contained certain conditions that were not well defined. In 2016, FRA updated the conditional approval to clarify the extent of the additional requirements, and also add a condition that the additional requirements be completed by the end of 2018. Because these additional requirements were not anticipated at the beginning of this process, they were not included in MRS's original scope of work.

This resolution would authorize the modification of the MRS contract to add the work necessary to comply with these additional permit conditions. The first condition, referred to as Single Point of Failure, allows more systematic control over train control failure events where, currently, the train operator has the ability to bypass the PTC system. The second condition, referred to as Roadway Worker Console, provides the field supervisor more control of vehicle access into active work zones. Both conditions provide an added level of safety over and above the current technology by reducing the likelihood of human error, but both have substantial additional costs.

TriMet and MRS have negotiated a total cost of \$3,500,000 for the design, furnish, installation, testing, and provision of these additional conditions. This cost compares favorably with TriMet's estimate of \$4,304,000. Further, TriMet has applied for a Federal Transit Administration grant to offset approximately 75 percent of the cost of this additional work. Grant findings are expected by June 30, 2017.

This Resolution would authorize a total contract amount of \$12,585,090, as follows:

Pre-implementation and Implementation Phase (authorized by Resolution 14-07-38)	\$8,595,432
Change Order Allowance (authorized by Resolution 14-07-38)	\$850,000
Cost Savings from Change Order Nos. 1-6	(\$360,342)
Proposed Contract Modification (Change Order No. 7)	\$3,500,000
Total Contract Amount	\$12,585,090

6. Procurement Process

The contract was originally procured through a competitive Request for Proposal process.

7. Diversity

Due to the specialized nature of this work, the vast majority of it is being performed by specialty design subcontractors. Therefore, Disadvantaged Business Enterprise (DBE) opportunities are very limited. During the implementation and revenue service testing phases, some flagging work will be required. MRS intends to subcontract all flagging work to a DBE firm.

8. Financial/Budget Impact

TriMet is hopeful that up to 75 percent of the cost of the additional work may be paid for by an FTA grant. Nonetheless, independent of the grant, TriMet's budget for PTC implementation has been increased to accommodate this additional FRA-mandated work, and the amount of the modification is included in the capital budget for FY2017-19.

9. Impact if Not Approved

This work is mandated by the FRA and must be completed so that TriMet is in compliance with the Rail Safety Improvement Act. TriMet could re-procure the work on the additional permit conditions, but that option is highly unlikely to result in any cost savings due to schedule issues and market conditions.

RESOLUTION 17-05-48

RESOLUTION OF THE TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON (TRIMET) AUTHORIZING A MODIFICATION TO THE CONTRACT WITH MODERN RAILWAY SYSTEMS, INC. TO IMPLEMENT POSITIVE TRAIN CONTROL FOR THE WEST SIDE EXPRESS (WES) COMMUTER RAIL LINE

WHEREAS, TriMet has authority under ORS 267.200 to enter into a contract modification with Modern Railway Systems, Inc. for positive train control for the Westside Express Commuter Rail Line (Modification); and

WHEREAS, the total amount of the Modification shall exceed the amount originally authorized by the Board; and

WHEREAS, the TriMet Board of Directors (Board), by Resolution dated November 25, 2009, adopted a Statement of Policies requiring the Board to approve goods and services contracts obligating TriMet to pay in excess of \$500,000;

NOW, THEREFORE, BE IT RESOLVED:

1. That the Modification shall be in conformance with applicable laws.
2. That the General Manager or his designee is authorized to execute the Modification.

Dated: May 24, 2017

Presiding Officer

Attest:

Recording Secretary

Approved as to Legal Sufficiency:



Legal Department