

**POST PROJECT EVALUATION
FOR AN
EXEMPTION FROM COMPETITIVE BID**

Project Name: P25 Compliant 800 MHz Trunked Radio System Project
Exemption Approval: Council Meeting, March 10, 2014
Contractor: Motorola Solutions Inc.

PROJECT DESCRIPTION

A trunked radio system is a specialized repeater system with one or more towers and multiple frequencies, which allows efficient, channelized, semi-private conversations between multiple groups of users. This project consisted of replacing the City's existing 800 MHz Motorola SmartNet® Trunked Simulcast radio system, which was no longer supported by the manufacturer, with a new Association of Public Safety Communications Officials Project 25 (P25) compliant 800 MHz trunked system, providing service to City of Salem Fire, Police, Public Works, and City of Keizer Police Departments. The scope of the project included design and implementation of the new radio network system, acquisition of new portable, mobile and dispatch radios, and provision of all other equipment, services, and improvements necessary to support the new system.

INTRODUCTION AND BACKGROUND

Typically, equipment and services procurement would fall within the purview of Chapter 2 (Procurement Process for Goods and Services, Personal Services, And Professional Services) of the City of Salem Public Contracting Rules (PCR). However, the equipment vendors utilize various construction trades to perform other work as part of the installation of the equipment. This other work can be considered part of a public improvement as set forth in the City PCR. As such, the award of the procurement of the equipment and services could fall within PCR Chapters 8 and 9 (Procurement Procedures and Source Selection Methods for Public Improvements) and be required to be competitively bid, with award to the lowest, responsive bidder.

The replacement of a live public safety radio system is an extremely complex endeavor. Prior to embarking on the project, staff researched other agencies who had attempted to implement P25 compliant projects and found that past attempts were fraught with difficulties ranging from bid protests, schedule and budget overruns, and problems with or failure to deliver a functional system. Due to these complexities, the critical nature of the project, and the need to consider factors other than price in vendor selection, City staff recommended an exemption from competitive bidding. Specific authorization was requested to use a formal competitive request for proposal (RFP) process for select procurement packages within the project. Ultimately, the City selected Motorola Solutions Inc. via the RFP process for procurement of the radio network system and new radio units. Other project elements were procured utilizing traditional public improvement competitive bidding processes, cooperative purchasing through state contracts, or change orders to Motorola's contract.

On March 10, 2014, City Council acting in its capacity as the local contact review board, approved staff's recommendation by adopting findings in support of an exemption from the competitive bidding process and authorized the use of the RFP process.

Oregon Revised Statute (ORS) 279C.355 and Public Contracting Rules (PCR) 9.7 require a final evaluation of the public improvement project upon its completion. The evaluation must include the following:

1. Financial information consisting of cost estimates, the Guaranteed Maximum Price (GMP), contract changes, and the actual cost.
2. A narrative description of successes and failures during the design, engineering, and construction of the project.
3. An objective assessment of the use of the alternative contacting process as compared to the findings required by ORS 279C.355.

FINANCIAL INFORMATION

The funding source identified for the project was \$10 million in revenue from radio system user fees with additional funding to be provided as required from debt issuance serviced by future revenue. The original estimate for the total program budget was approximately \$17.5 to \$18.5 Million. The program budget was revised to \$15 Million in the spring of 2014. The final total project costs are as follows.

Description	Amount
Motorola Capital Improvements and Equipment Delivery Cost	\$7.5 Million
Motorola Multi-year services, maintenance support, remote updates, and equipment upgrades	\$4.3 Million
Site Improvements, tower improvements, AC/DC power improvements, equipment shelters, engineering, City project management, inspection, testing, and permit fees	\$3.8 Million
Total	\$ 15.6 Million

Due to the length of time required to deliver the capital improvements, additional radio system revenue could be allocated to the project and no borrowing was required. The multi-year service costs are being paid to Motorola on an annual basis for nine years after completion of the project warranty period and are funded from the radio system operational budget.

There was no GMP for Motorola's contract. The contract amount was set based on the proposal submitted and subsequent negotiations with Motorola after their selection. The original contract amount, including detailed design of the radio system replacement, was \$8,868,460. The original contract scope consisted of both capital improvements and limited ongoing services consisting of support, upgrades, onsite maintenance, and remote security. As the project progressed, it became clear that a more robust package of ongoing services covering a period of nine years post-warranty was affordable and best met the City's ongoing operational needs. Although initially planned for a separate

RFP process, it was also determined that voice logging and recording equipment was best acquired through Motorola to ensure compatibility with the new radio system. Other changes arose through final design of the system and identification of additional functionality desired for the new system. The final contract amount was \$11,807,069. A complete list of changes for the project follows:

Motorola Contract	Original Contract	\$	8,686,460
Change Order No. 1	Change Subscriber Upgrade Package from 2 years to 10 years added R56 installation of grounding work to R56 Standard	\$	1,550,076
Change Order No. 2	Add NICE voice logging equipment (\$260,000) and modify Maintenance and Software upgrade services to include voice logging equipment (\$495,000), mobile radio exchange (\$0).	\$	755,000
Change Order No. 3	Change Order to account for numerous additions and deletions of system equipment and services resulting from the final Detailed Design Review process and final report.	\$	13,906
Change Order No.4	Added Encryption to Fire Department Radios	\$	282,734
Change Order No. 5	Encryption Software Credit (-\$64,520), Subscription services for Aware Mapping application for police radios (Subscription \$117,792, installation and configuration of equipment \$36,553)	\$	89,825
Change Order No. 6	Final project debit and credit change order for smaller miscellaneous items	\$	(148)
Change Order No. 7	Administrative requirement to transfer ongoing services portion of contract from Public Works Capital Budget to Fire Department Operations Budget. May 10, 2021	\$	-
Change Order No. 8	Added monthly quarterly remote security update services and "on call" 24/7 on-site technical support for repairs and maintenance.	\$	429,216
Total	Total Final Motorola Contract Amount	\$	11,807,069

PROJECT SUCCESSES AND FAILURES

Despite the challenges inherent with such a technically complex project, the design and construction of the new radio system was an overall success. The final project met the objectives for replacing the end-of-life existing system and increased the ability of the City's emergency responders to interoperate with each other and those from external agencies. Some specific examples of the project's successes and failures are as follows:

- The overall design, construction, and implementation of the new radio system was a success. The final "product" is fully functioning and performing according to the expectations and objectives of the users without significant issues. This

project was not only extremely complex technically but consisted of many component projects to support the main radio network. Given the complexity and breadth of work performed, the resulting achievement of delivery is a significant success, especially given the history of troubled past attempts by other agencies to deliver P25 compliant radio systems.

- The capital component of the project was delivered with a surplus of approximately \$400,000. The City was also able to add enhancements to the radio system while only exceeding the original estimated program budget by 4-percent. The original February 2014 updated estimate for the program was \$15 million. The total completed cost was \$15.6 million. Debt issuance was not required to fund the project. All project costs to date were funded by cash on hand. The yearly service and support component of the project will be funded from annual WVCC revenue.
- There were no change orders required to correct design errors, system issues, or project oversights. Most change orders were owner initiated and enhanced the functionality and support of the system. A few other minor change orders resulted from development of the project from a concept to final detailed design.
- The overall coverage area of radio reception increased with the new array of tower sites.
- The collaborative effort by many project team members was a huge success. As previously mentioned, a project so complex does not come without challenges. The project delivery team faced many challenges and issues, but contractors, engineers, vendors, consultants, and management worked together professionally, and collaboratively to identify, address, and successfully resolve those issues.
- The only significant problem with the project was that it was finished well beyond the expected completion year of 2016. Most of the issues that contributed to the delay would have occurred regardless of the delivery method. The main issues are as follows:
 - The RFP process proved to be lengthier than originally anticipated due to several legal questions about the contracts submitted by the proposers. In addition, coordinating site visits to interview users of existing systems installed by the proposers, conducting extensive reference checks, and arranging for equipment demonstrations for Salem user feedback took more time than originally scheduled.
 - Securing a site for the south Salem tower took much longer than expected since the City could not come to terms with the selected site property owner. Ultimately the City successfully negotiated terms with Day Wireless to construct a tower which the City could lease for antenna and radio equipment. However, Day Wireless was required to process a land use application for approval of the tower. Further delays were realized

due to an appeal of Marion County's original land use approval. In the end, the appeal was overruled, but it ultimately delayed the process.

- An Intergovernmental Agreement (IGA) with the Department of Corrections was needed to share the use of an existing tower to construct a new radio equipment shelter for the City's system. Completion and approval of the IGA took longer than expected and delayed the start of work on the site.
- The delays in land use and tower site availability required Motorola to pull resources and pause their work until the City had the tower sites secured and completed. This created inefficiencies in remobilizing Motorola resources for final completion of the project.
- Delivery of critical electronic equipment for Microwave Transport, DC Power, and Radio Systems were delayed months due to manufacturing and supply issues.
- There were problems securing technical radio staff resources when needed to complete critical tasks in a timely manner. This was an issue for the City, Motorola, and consultant resources. Additionally, managing and coordinating schedules for numerous contractors and vendors was a challenge for the City.
- Startup and commissioning of the system required significant trouble shooting and resolution of software configuration and update issues.

OBJECTIVE ASSESSMENT OF ALTERNATIVE CONTRACTING PROCESS

ORS 279C.355 requires contracting agencies to submit evaluations for public contracts that have been exempted from the competitive bidding process. In March 2014, Council adopted findings in support of an exemption from the competitive bidding process and authorized the use of a competitive RFP process for procurement and installation of a new P25 compliant trunked radio system.

Alternate contracting processes provide agencies with another tool to respond to the challenging demands of delivering complex projects. In this case, the use of the competitive RFP process allowed the City to consider quality and reliability, along with cost, for the selection of critical equipment necessary for emergency response. The following is provided to meet the requirements of the ORS.

The competitive RFP process did not encourage favoritism or diminish competition for the award of public improvement contracts. The value of the work considered to be a public improvement within the RFP procurement was very small. Proposal evaluation included a factor based on the proposed cost to help ensure competition. The

exemption did not impact opportunities for qualified proposers to submit due to the specialized nature of the procurement. Likely, proposers were tracking the opportunity which was publicly advertised and would have submitted regardless of the procurement process. Other public improvements that were part of the project were procured in compliance with ORS requirements for competitive bidding.

The City realized significant savings by using the competitive RFP process to select the radio system contractor based on a combination of qualifications and cost. Through diligent management of the process, the City avoided bid protests and maximized the opportunity to select the most qualified proposer. By selecting a contractor based on factors in addition to cost, the City reduced the risk of poor performance or delay by an unqualified or inexperienced contractor. There were no additional costs arising from delays or poor performance on the project. Each individual procurement on the project required contractors to utilize appropriate trades to execute their work, which contributed to the proper oversight and management of specialty equipment installment and improvements.

In summary, the exemption for use of a formal competitive RFP process on this project allowed the City to customize the procurement approach for each element of the project to ensure quality and minimize risk with the replacement of critical emergency response infrastructure. With careful management, the project team was able to maintain budget, maximize value and functionality for the end users, and overcome the challenges inherent with such a technically complex project.