

City of Portland

Public Safety Systems Revitalization Program

Radio Replacement Project



Periodic QA Evaluation Report

For October 2013

Deliverable: Radio.C.12

V2.1 Final Version

11/14/2013

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Periodic QA Evaluation Report

For October 2013

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Version	Date	Comments
V1.0	11/6/2013	Initial Version for PSSRP Review.
V1.1	11/13/2013	Incorporate PSSRP POM Feedback.
V2.0	11/13/2013	Final Version.
V2.1	11/14/2013	Explain changes from “high-confidence schedule.”

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Executive Summary

Executive Steering Committee Watch List

This section identifies potential issues that the ESC should be watching closely. The “watch list” documents program related concerns that have come to CAI’s attention but have not yet been completely assessed. As of this report, the following are on the watch list:

1. The planned microwave tower at Walter’s Hill to cover Gresham and East county, with a loop back to BOEC.

Status: The Gresham Mayor and a number of Gresham residents are concerned about the tower height to replace the existing 40’ telephone pole. It is likely that the tower construction meets the land use requirements established by the City of Gresham. The tower replacement is a BTS project (not PSSRP).

The Radio project’s conceptual design included a microwave tower location on Walters Hill. The design and schedule may vary depending on the resolution of the Walters Hill antenna issue.. Alternatives may be risky, expensive, and delay the Radio project. PSSRP is actively addressing this significant risk.

BTS filed an application for a land use permit on August 13 to construct a 140’ tower.

PSSRP engaged an engineering consultant to look into alternative sites and coverage predictions.

Gresham has indicated they are seeking a consultant to identify and assess alternatives and technical solutions that would allow the Walters Hill antenna to remain below the tree line.

At the end of the 30-day land use permit application period, Gresham advised the city that the application was deemed incomplete. BTS is reviewing the notification and plans to address the deficiencies.



PSSRP will ask Motorola to offer alternatives to the higher tower at Walter’s Hill. They will also ask Motorola to establish a ‘drop dead date’ after which the project will need to adopt one of the alternative solutions.

- 2 Subscriber Units purchase from Motorola. The project considered an offer from Motorola to purchase the subscriber units.

PSSRP recommended moving forward with purchasing the subscriber units as offered by Motorola. This Motorola offer was at a large discount. A notice of intent to purchase the subscriber units was issued on September 19. Two protests were received; 1) EF Johnson, and 2) RELM. The City rescinded the notice and will be issuing a competitive solicitation process as a result of receiving these protests.



PSSRP is developing the specifications for the competitive bid.
PSSRP expects to release the bid by early December 2013.

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Project Status and Progress

The PSSRP Radio Replacement Project is to replace the current City of Portland Public Safety radio communications system with a modern all digital P25 Phase I compliant system.

This is the 12th monthly Radio Replacement Project Periodic QA Evaluation Report intended to assess the health of the project and provide independent observations (positive or negative) and recommendations for avoiding and/or responding to any future negative impacts.

The Radio Replacement Project is in two major phases:

1. Phase I - Infrastructure. The project is in this phase. This Periodic QA Evaluation Report focuses on this phase.
2. Phase II - Subscriber Units. PSSRP plans to release a competitive bid in 2013.

Overall Project QA Status

Contract negotiations with Motorola, the successful vendor, started in June 2013. To help develop the contract, PSSRP has recent contract samples from other Motorola clients. The Radio team also went on a site visit to Spokane. Contract negotiations lasted through August 2013.

The Bureau of Technology Services (BTS) completed the street-level coverage analysis. This data is necessary for the contract negotiations and will be used as a baseline against which to compare the new system.

Motorola completed its tower site visits. This survey will determine the readiness of each tower to receive the new equipment. Any needed improvements to a tower will be the city's responsibility. Motorola has not indicated when they will provide the resulting reports for each site.

NEW

The City Council unanimously approved the contract at the 10/9/13 City Council Meeting.

The City and Motorola signed the contract 11/12/13. PSSRP sent Motorola the official "Notice to Proceed."

The project kickoff is at Fire Station 1 on 11/14/13.

NEW

The three previous Periodic QA Evaluations for the Radio project included statements that the project would have a "high confidence schedule" available at the project kickoff. Those references have been changed in this report. The project will have a "high confidence schedule" after the Detailed Design Review (DDR) is complete (in January or February 2014).

All Quality Focal Points (QFP) are rated **Stable**.

The Overall Health rating is also **Stable**, indicating that the project is well run and requires no immediate intervention.

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Overall Project Health

Overall Rating: **Stable**

The overall health of the project is based on the three main factors described in the table below:

Health Factor	Rating	Comments
Schedule	Stable	The project is proceeding according to expectations. The Motorola contract was signed 11/12/13. A final schedule will be available after a Detailed Design Review (DDR), expected in January or February 2014.
Budget	Stable	The project has a budget and contingency. Most expenditures will be planned shortly after contract negotiations. CAI and PSSRP will review the budget and payment plan after contract signature.
Scope	Stable	The project scope is clearly defined in the RFP and the Project Charter.

Quality Focal Points Rated **Alert**

NONE - No Quality Focal Points are impacting the project at this time.

Quality Focal Points Rated **Attention**

NONE - No Quality Focal Points need attention at this time.

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Quality Focal Point Summary Chart¹

Quality Focal Point	Impact	Prior as of: 9/9/13	Prior as of: 10/9/13	Current as of: 11/6/13	Next Month ²
1. Meeting Milestones	High	Stable	Stable	Stable	↔
Planning					↔
2. Requirements Management	High	Stable	Stable	Stable	
3. Project Schedule	High	Stable	Stable	Stable	
4. Communications	High	Stable	Stable	Stable	
5. Risk and Issue Management	High	Stable	Stable	Stable	
6. Radio System Acquisition	High	Stable	Stable	Stable	
7. Tech Transition	High	NR ³	NR	NR	
Monitoring and Control					↔
8. Project Organization and Leadership	High	Stable	Stable	Stable	
9. Project Resources	High	Stable	Stable	Stable	
10. Project/Quality Management and Reporting	Medium	NR	NR	NR	
11. Budget Planning and Tracking	Medium	Stable	Stable	Stable	
12. Scope and Change Control	High	NR	NR	NR	
13. Radio System Architecture	High	NR	Stable	Stable	
14. Radio System Acquisition Management	High	Stable	Stable	Stable	
15. Project Library and Configuration Management	Medium	Stable	Stable	Stable	
Delivery					↔
16. System Design Process	High	Stable	Stable	Stable	
17. Testing (Non-Functional)	High	NR	NR	NR	
18. User Acceptance Process	High	NR	NR	NR	
19. Training	High	NR	NR	NR	
20. Implementation & Integration Process	High	NR	NR	NR	

¹ The Quality Focal Point ratings are explained on the next page.

² The Next Month arrows are explained on the next page.

³ "NR" indicates Not Rated for this report.

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Definition of QFP Ratings:

Stable

- The Quality Focal Point is stable and not currently impacting the project.

CAI may include a **Suggestion** in a QFP rated as **Stable**. CAI rated the QFP as stable because it is not impacting the project at this time. The suggested action is a preventive measure to keep the QFP stable.

Attention

- The Quality Focal Point needs some improvement so it won't impact the project.

CAI includes a **Recommendation** for every QFP rated **Attention**. The recommended action is a corrective measure to improve the QFP so it won't impact the project.

Alert

- The Quality Focal Point is impacting the project and needs immediate attention.

CAI includes a **Recommendation** for every QFP rated **Alert**. The recommended action is a corrective measure to improve the QFP that is currently impacting the project.

Definition of Next Month Indicators:

The next month indicators signify expected changes in the QFP ratings.



- This Quality Focal Point (or group of QFPs) is expected to have the same rating in next month's Periodic QA Evaluation.



- Risk is decreasing on the Quality Focal Point. It may be upgraded to **Stable** in next month's evaluation.



- Risk is decreasing on the Quality Focal Point. It may be upgraded to **Attention** in next month's evaluation.



- Risk is increasing on the Quality Focal Point. It may be downgraded to **Attention** in next month's evaluation.



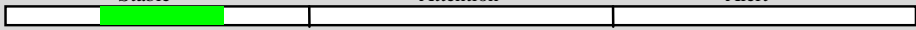
- Risk is increasing on the Quality Focal Point. It may be downgraded to **Alert** in next month's evaluation.

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Quality Focal Points

1	<h3>Milestones</h3> <p>Project milestones are being met on schedule. The Milestone QFP assesses the scheduled completion of interim and major project milestones and their impact on overall project completion.</p> <p>Risk Level <div style="display: flex; justify-content: space-between; width: 100%; font-size: 8px;"> Stable Attention Alert </div> <div style="width: 100%; height: 10px; background-color: white; position: relative;"> <div style="width: 25%; background-color: green; position: absolute; left: 0;"></div> </div> </p>
1.1	<p>Are project milestones being met so far? Finding: Yes –The project announced that Motorola received the award. The announcement was 5/22/13, nine days ahead of schedule. Contract negotiations began on 6/12/13, on schedule. The negotiations continued through August 2013. Legal counsel and the City Procurement Services will then review the contract. PSSRP received unanimous approval for the contract from City Council in 10/9/13. The final contract was signed 11/12/13.</p>
1.2	<p>Is there sufficient time (with appropriate slack) to complete the project before the committed completion date? Finding: TBD – The project developed a preliminary schedule during negotiations. That schedule will be available at the kickoff. A final schedule will be available after the Detailed Design Review to be completed in January/February 2014.</p>
2	<h3>Requirements Management</h3> <p>The Requirements Management process is appropriate and thorough.</p> <p>Risk Level <div style="display: flex; justify-content: space-between; width: 100%; font-size: 8px;"> Stable Attention Alert </div> <div style="width: 100%; height: 10px; background-color: white; position: relative;"> <div style="width: 25%; background-color: green; position: absolute; left: 0;"></div> </div> </p>
2.1	<p>Are the System and Business Requirements understood and confirmed? Finding: Yes –The requirements are clearly articulated in the RFP, “Functional Requirements” chapter. The Radio Project Charter contains high-level project objectives.</p>
2.2	<p>Are requirements traceable to design? Finding: Yes – The requirements are traceable to the Conceptual Design provided by the project consultants, Federal Engineering. The City accepted the requirements and conceptual design. The RFP contained requirements for the proposal. When the SOW and system design are developed they will be compared to the RFP to maintain traceability.</p>
2.3	<p>Are requirement change impacts understood and documented Finding: TBD</p>
2.4	<p>Are test conditions defined to validate requirements compliance? Finding: TBD</p>

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5	<p>Risk and Issue Management</p> <p>Project risks are identified and appropriately managed. The Risk Management QFP provides an assessment of the risk identification, mitigation strategy and contingency planning for high probability and/or high impact risks. It also assesses the continuing validity of high impact assumptions.</p> <p style="text-align: center;"> Stable Attention Alert </p> <p>Risk Level </p>
5.1	<p>Are project risks and issues identified and categorized as to likelihood and impact? Finding: Yes – Risks are a significant part of the regular status reporting. Other risks are identified and analyzed.</p> <p>Critical risks, such as contract negotiations timeline and Walter’s Hill tower are analyzed and responses planned. Those risks have not been in the status reports.</p>
5.2	<p>Are appropriate risk and issue mitigation strategies in place with appropriate monitoring measures? Finding: Partially – The regular status reporting includes “Actions Completed/Planned.” As the project progresses through the procurement phase, the decision making and issue resolution processes will be tested. Other critical risks should be included in a Risk Management process. (see Suggestion)</p>
5.3	<p>For high probability or high impact risks, are contingency plans developed in case the risk mitigation strategy fails? Finding: Partially – The regular status reporting on risks and includes “Actions Completed/Planned.” This column describes contingencies for high impact risks.</p> <p>Some other critical risks are identified and analyzed. Documentation is not available defining strategy, responses, and contingencies.</p>
5.4	<p>Are ongoing risk identification, assessment and management processes in place and operating effectively? Finding: Yes – The regular status reporting includes risks.</p>
5.5	<p>Have project assumptions been verified & appropriate monitoring measures been put in place to ensure failed assumptions do not become risks? Finding: TBD – An initial set of Project Constraints and Assumptions is in the project Charter. Project assumptions will be documented as the project develops a detailed RMP.</p>
<p>Suggestion: The project should develop a Risk Management Plan to formally describe risk capture, response planning, mitigation strategies and monitoring measures. The project schedule should include RM tasks.</p> <p>The RMP should be completed within a month after the vendor and the City sign the contract.</p>	

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7	<p>Technical Transition</p> <p>The Technical Transition is adequately planned.</p> <p style="text-align: center;"> Stable Attention Alert </p> <p>Risk Level <input style="width: 100%; height: 15px;" type="text"/> NOT APPLICABLE AT THIS TIME</p>
7.1	<p>Has the Technical Transition Plan been defined? Finding: TBD – A Technical Transition Plan will not be available until after the radio vendor and the City sign a contract.</p>
7.2	<p>Has the Technical Transition Plan been reviewed and approved? Finding:</p>
7.3	<p>Has the Radio vendor’s Radio System architecture been assessed relative to the City’s current Radio System architecture? Finding:</p>

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9	<p>Project Resources</p> <p>The project is appropriately resourced. The Resources Quality Focal Point assesses three resource components: The capacity and skill set of the assigned project staff, supporting tools and facilities, and budget or financial resources.</p> <p>Risk Level <div style="display: inline-block; width: 25%; height: 10px; background-color: green; vertical-align: middle;"></div> Stable Attention Alert </p>
9.1	<p>Is the level of effort planned for each project deliverable at an appropriate activity level; and, is it reasonable? Finding: TBD for the implementation phase. The vendor will do most of the system installation, accompanied by COP staff. Staffing levels will be finalized in a project schedule.</p>
9.2	<p>Are appropriate staff resources (skill set and quantity) available and assigned to complete the project? Finding: TBD for the implementation phase. The PM will meet with BTS Communications and the Radio Shop to review staffing needs and availability to complete the project.</p>
9.3	<p>Are appropriate staff support resources (skill and quantity) available and assigned to provide on-going operations support? Finding: TBD – COP staff will require training to use and support the new system. The staffing levels necessary to support the new system is not yet determined.</p>

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12	<h3 style="margin: 0;">Scope and Change Control</h3> <p>The project scope is appropriately controlled. Scope and Change Control assesses the implementation and adherence to change requests.</p> <p>Risk Level Stable Attention Alert NOT APPLICABLE AT THIS TIME</p>
12.1	Is Scope being adhered to? Note: Changes in scope usually impact budget. Finding:
12.2	Are change requests appropriately identified, escalated, and resolved in a timely manner? Finding:
12.3	Are change requests effectively recognized, analyzed for impact, and approved prior to inclusion in the project scope? Finding:

13	<h3 style="margin: 0;">Radio System Architecture</h3> <p>The project adheres to Radio System architecture standards. Verification that the Project conforms to Radio Architecture standards.</p> <p>Risk Level Stable Attention Alert </p>
13.1	The Project supports the Radio System Architecture Framework? Finding: Yes – There is a Conceptual Design. Motorola’s proposal was selected in part because of its fit into the City’s architecture.
13.2	The project supports the Radio System architecture with respect to geographical coverage, functionality, capacity, and interoperability. Finding: In Progress – the final step to prove the vendors fit with the City requirements will be at the Detailed Design Review expected to be completed in Jan/Feb 2014.

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14	<h3 style="margin: 0;">Radio System Acquisition Management</h3> <p style="margin: 0;">The vendor deliverables meet the Project requirements and standards per the Contract Terms and Conditions.</p> <p style="margin: 0;">Risk Level Stable Attention Alert <div style="position: absolute; left: 20px; top: -10px; width: 100%; height: 10px; background-color: white; border: 1px solid black;"> <div style="position: absolute; left: 20%; width: 20%; height: 100%; background-color: green;"></div> </div> </p>
14.1	Procedures are defined and documented to monitor and track vendor deliverables. Finding: TBD
14.2	Procedures are defined and documented to measure vendor deliverables against project requirements and standards per the contract. Finding: TBD - The project is defining a Testing Plan during contract negotiations. It includes specifics for capacity and coverage. It uses the street level measurements recorded for the current system as a baseline.
14.3	Project staff understands and follows documented procedures regarding vendor deliverables requirements. Finding: TBD for the Implementation phase.

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15	<p>Project Library and Configuration Management</p> <p>The project has an appropriate Project Library in place to support Project Management and a Configuration Management Process in place to support System Delivery.</p> <p>Risk Level <div style="display: inline-block; width: 25%; background-color: green; height: 10px;"></div> <div style="display: inline-block; width: 50%; text-align: center; border-bottom: 1px solid black; margin-left: 10px;"> Stable Attention Alert </div> </p>
15.1	A Secure library has been defined? Finding: Yes – The Radio project uses a hierarchical file system to manage all project related documentation. Access is limited to people with appropriate system accounts.
15.2	Procedures are documented for configuring and maintaining the library? Finding: Yes - Project uses standard IT system administration procedures for configuring and maintaining the file system which holds all project related documentation.
15.3	Procedures are documented for checking items in and out of the library? Finding: No – The project does not have a check-in-and-out process. A standardized document content and management procedures would support version controls.
15.4	There are contractor controls and monitoring in place. Finding: Yes – These are based on IT general contractor system access rules.
15.5	There are procedures for reviewing changes to items in the library? Finding: No – The file system has no procedures for reviewing changes in the library.

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16	<p>System Design Process</p> <p>The system design process is appropriate and thorough.</p> <p>Risk Level </p> <p style="text-align: center; margin-left: 20px;"> Stable Attention Alert </p>
16.1	<p>Are radio system specifications/designs in agreement with the system/business requirements? Finding: TBD – The vendor was selected for its ability to deliver the requirements. Adherence to the requirements will be validated in the DDR.</p>
16.2	<p>Are the radio system specifications reasonable and acceptable? Finding: Yes – The specifications are in accordance with generally accepted industry standards, such as P25 Phase 1 and future Phase 2. The project engaged an engineering firm, Federal Engineering, to validate the specifications.</p>
16.3	<p>Is the current Public Safety Radio system infrastructure (towers, shelters, microwave, power, etc.) able to support the new voice communication Public Safety Radio? Finding: TBD –The vendor and the City conducted site surveys to confirm that the current infrastructure will support the new Radio system. Those visits concluded in August. The PM’s expect Motorola to deliver the results after contract signature. When the results are available, the City will plan any necessary remediations and/or design changes.</p> <p>BTS along with support from PSSRP are actively addressing an issue with Walter’s Hill. The Gresham Mayor and a number of Gresham residents are concerned about the tower height to replace the existing 40’ telephone pole. It is likely that the tower construction meets the land use requirements established by the City of Gresham. The tower replacement is a BTS project (not PSSRP) and they have been working on it for some time. PSSRP briefed the Executive Steering Committee at recent meetings, including 6/19/2013 and 9/18/13.</p> <p>The Radio project’s conceptual design included a microwave tower location on Walters Hill. The design and schedule may vary depending on the resolution of the Walters Hill antenna issue. Alternatives may be risky, expensive, and delay the Radio project.</p>
16.4	<p>Does the radio system architecture allow for full interoperability among Portland and other metro area jurisdictions? Finding: TBD – This will be determined in the DDR (to be complete Jan/ Feb 2014) and verified in testing.</p>

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17	<p>Testing (Non-Functional)</p> <p>The project is appropriately tested. Appropriate functional and performance acceptance testing procedures and plans are in place and meet the operational needs of the system and verify and validate acceptable compliance to requirements.</p> <p style="text-align: center;">Stable Attention Alert</p> <p>Risk Level <input type="text"/> <input type="text"/> <input type="text"/> NOT APPLICABLE AT THIS TIME</p>
17.1	<p>Has a formal Test Management Plan been developed? Finding: TBD –The Motorola proposal includes a formal Testing plan/approach. The test plan will address coverage, capacity and any other requirements from the contract. CAI will review the Test Plan when it is available.</p>
17.2	<p>Is the Plan being followed? Finding:</p>
17.3	<p>Are the end users involved in establishing the functional acceptance testing scope and standards? Finding: TBD</p>
17.4	<p>Are the functional, capacity, and performance acceptance test procedures appropriate and are results monitored and tracked? Finding:</p>
17.5	<p>Do the functional, capacity, and performance specifications match operational needs? Finding:</p>
17.6	<p>Is comprehensive end-to-end functional, capacity, and performance acceptance testing planned and performed for all Radio System components, including supporting infrastructure? Finding:</p>
17.7	<p>Are infrastructure conditions that may affect the radio system being considered, tested and resolved? Finding:</p>
17.8	<p>Was a defect log maintained and effective corrective actions taken? Finding:</p>

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20	<p>Implementation & Integration Process</p> <p>The new system has been successfully moved into the production environment.</p> <p>Risk Level Stable Attention Alert NOT APPLICABLE AT THIS TIME</p>
20.1	The installation specification is complete and reasonable. Finding: TBD – The vendor will install the system. Installation instructions are not likely to be a problem.
20.2	System documentation is complete and acceptable. Finding: TBD
20.3	Is there an appropriate Operations & Maintenance Plan in place to assure the new system is appropriately supported in accordance with (to be?) established Service Level Agreements (SLAs)? Finding: TBD

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Appendix A – CASE Associates Status Report

This section summarizes activities and deliverables completed for the Radio Replacement Project during September 2013.

When applicable, it includes:

- A list of any delayed items
- A description of the problem
- Schedule impact
- A recommended solution

Such items will be carried over to subsequent reports until the problem is resolved.

As of May 2013, this section replaces the “Quality Assurance Status Report.” In prior months this section was delivered as a separate report.

Meetings Attended

City Council Meeting 10/9/13
Meeting with the Project Managers and POM 10/31/13

Documents Reviewed

PSSRP Master Task List for Radio – Remaining tasks to contract signature (paper handout)
COP Radio Status report weeks ending Sept 20 27 Oct 4 11 Final– Project Managers’ Report

Documents Delivered

Radio CAI Periodic QA Evaluation Report for August 2013, deliverable *Radio.C.11*

Documents in Process

Radio CAI Periodic QA Evaluation Report for September 2013, deliverable *Radio.C12*

Delayed Items

Item	Description of problem	Schedule Impact	Recommended Solution
None			

Other Issues/Problems/Concerns

None