



**City of Portland
Public Safety Systems Revitalization Program
Radio Replacement Project
May - June 2014
Independent Project Management
Quality Assurance Report**

July 7, 2014

Prepared by:



Federal Engineering, Inc.
10600 Arrowhead Dr, Suite 160
Fairfax, VA 22030
703-359-8200

Document Control Number:
SR: CPERRP: 20140707



Purpose and Scope

The City has retained Federal Engineering (**FE**) to offer an independent opinion on the Public Safety Systems Revitalization Program Radio Replacement Project project's status and potential for success. A key objective of this effort is to identify issues and concerns the City's project managers are not aware of rather than simply restatement of issues already identified for which action is underway.

The purpose of this report is to provide an overview of the status and progress of Portland's Emergency Radio Replacement project for the period May 1, 2014, through June 30, 2014.

The report evaluates the project in the areas of scope, schedule, quality, and risk and recommends preventative and corrective actions where appropriate.

1. Project Dashboard

Table 1 provides a snapshot of key performance indicators for the period covered by this report along with comments to assist the reader in understanding the status reported. **FE** provides the details associated with each indicator in the report.

A green indicator signifies that performance meets or exceeds objectives; yellow identifies that one or more objectives may be impacted unless performance is improved or alternative plans are invoked. The direction of the arrow denotes if the item is stable, improving, or declining; while red indicates that immediate corrective action is required to bring the project back into conformance with the project management plan.





Table 1 - Performance Indicators

Performance Indicator	Status	Comments
Scope	●	The scope continues to evolve as alternate arrangements are finalized with Walters Hill.
Schedule	↔	The project is behind published schedules due to delay in contract signing and subsequent delayed completion of DDR.
Cost	●	A change order was submitted by Motorola for design modifications that occurred during the detailed design review (DDR).
Quality	●	Portland's Replacement Project QA requires minor modification to improve document version control
Issues/Concerns	●	The City continues to actively resolve issues and concerns.
Risks	↔	Modifications to the vendor's design by the City could create increased risk or cost to the City.

2. Executive Steering Committee Watch List

Table 2 represents the *Executive Steering Committee (ESC) Watch List*. It comprises project-related issues, concerns, and risks for Executive Steering Committee (ESC) awareness. Some items require resolution by the City whereas others are for Committee informational purposes.

FE continues to work with the City's project management team to address these items and where appropriate, offers recommendations for corrective action or process improvement to the City





Table 2 – ESC Watch List

Items	Comments
Walters Hill Tower	Gresham staff and the City continue to meet on location and height of the tower. Both organizations are close to resolving the issue and the City expects to resubmit the land use application in July.
Schedule	Review of a draft project schedule with BTS Comms, PSSRP and Motorola has taken place during recent DDR sessions. No change since previous report however, further delay to the DDR completion will cause a schedule slippage .
Radio Tower Antenna and Cabling Space	The lack of physical space on the towers and cable runs could affect the availability of towers to be included in a design configuration.
Fleetmapping	The system will transition from a single cell supporting all users to a split system where talkgroups and users will have to be managed to prevent overloading the reduced channel cells.
Design Modifications	A number of design modifications have been made during the DDR process.
DDR Change Order	A change order was received for design modifications that occurred during DDR
DDR Completion	DDR is nearing completion. Walters Hill siting issues remain
Field Coverage Analysis	Inbuilding coverage data completed and maps are being generated. These maps are intended to represent current coverage as a baseline for comparison.
Stakeholder Briefings	Next briefing is planned to be held following conclusion of DDR





3. Risk Management

This section addresses risk management for the project. Table 3 identifies risk or issues for consideration and recommended corrective actions noted by **FE** during this reporting period.

Table 3 – Risk Considerations and Recommendations

Priority	Risk or Issue	Recommended Action	Closed
High	Walters Hill Tower	<p>Although the tower siting modifications may appear minute, do not assume coverage will not be impacted.</p> <p>FE recommends the City request that Motorola provide the “final” set of coverage maps that will be used for testing. Even if the coverage is unchanged, secure the “final” coverage guarantee in writing.</p> <p>City still negotiating with the City of Gresham and private landowners. Permit filing and negotiation of final microwave pathways are in process</p>	





Priority	Risk or Issue	Recommended Action	Closed
High	DDR Change Order	<p><i>FE</i> recommends the City begin a detailed review of the DDR change-tracking list against the RFP requirements. Changes to the system scope, schedule, and cost as these relate to the RFP and vendor contract must be thoroughly understood by the City.</p> <p>This review may take significant time to complete.</p> <p>June 24, 2014 - Change Order #001 reviewed by <i>FE</i>. Comments provided to PSSRP Project Manager 6/25/2014.</p> <p>City reviewed feedback internally and with Motorola. City will continue to analyze associated equipment list.</p>	





Priority	Risk or Issue	Recommended Action	Closed
High	DDR Completion	<p>FE recommends the City have an independent review of the DDR documentation supplied to date by Motorola's prior to completion of the DDR.</p> <p>May 28, 2014 – City states near completion of the Detailed Design Review which will trigger several important next steps</p> <p>PSSRP Radio Project Management will issue the next status report upon completion of the DDR, and provide a full description of the next steps that this milestone triggers. We will also provide an update on the adjacent activities mentioned above. We anticipate this report will be issued not later than June 13, 2014.</p> <p>May 30, 2014 – FE conducted a review of DDR modifications, additions, changes, and deletions with PSSRP Project Management. During this review, FE provided feedback regarding the capacity, traffic loading, FATP, and CATP documentation.</p> <p>June 24, 2014 – Final equipment list reviewed by FE. Comments provided to PSSRP Project Manager 6/25/2014.</p> <p>City reviewed feedback internally and with Motorola. City will continue to analyze equipment list.</p>	





Priority	Risk or Issue	Recommended Action	Closed
High	Fleetmapping	<p><i>FE</i> recommends a thorough independent review of the Motorola-provided capacity analysis take place with BTS and the PSSRP Radio project management staff prior to signing to completion of DDR.</p> <p><i>FE</i> also recommends subsequent discussions between BTS and stakeholder representatives to ensure their operations are not impacted by any reconfigurations necessary due to a two-cell system.</p> <p>Example: Gresham PD, although their primary operating area is under the East Simulcast cell they will require communication system wide due to the amount of interactions they have with Portland Police.</p> <p>Other users may or may not have the need to operate in the East and West simulcast cells.</p> <p>May 25, 2014, City requested <i>FE</i> review capacity and loading analyses. <i>FE</i> reviewed analyses and discussed content with City during teleconference held May 30, 2014.</p>	May 30, 2014





Priority	Risk or Issue	Recommended Action	Closed
Medium	Design Modifications	<p>The City must understand that modifications to the design could shift the risk of performance from the vendor to the City.</p> <p><i>FE</i> recommends City suggestions for design modifications be vetted internally prior to discussing the changes in open forum with the vendor. Failure to do this slows the project and enhances the vendor’s opportunity for change orders.</p> <p>May 30, 2014 – <i>FE</i> conducted a MACD review with PSSRP Project Management and provided feedback. <i>FE</i> recommended the City avoid reuse of existing antenna network equipment without specific guarantees from the vendor that were equal to new equipment guarantees.</p>	May 30, 2014
Medium	Field Coverage Analysis	<p><i>FE</i> recommends the City identify specific “locations of interest” for testing as it is likely the City’s coverage tool and the vendor’s coverage tool will produce different results. This is common when attempting to compare coverage maps from multiple coverage tools.</p> <p>May 30, 2014, <i>FE</i> discussed this item with PSSRP Project Management. All parties understand the issue.</p> <p>June 5, 2014, City states the base line coverage analysis of the current system is complete. The street-level data has been gathered and analyzed. The 2nd phase to test inside 10 buildings throughout the city that have been identified as “problem areas” for portable radio coverage is also complete.</p>	June 5, 2014





Priority	Risk or Issue	Recommended Action	Closed
Low	Stakeholder Briefings	<i>FE</i> recommends an interim briefing due to the elongated DDR process. This briefing should also be used to inform stakeholders as to the status of the project and anticipated next steps June 5, 2014, City provided Q2 stakeholder briefing memo via email.	June 5, 2014

FE continues working with the necessary parties to implement the aforementioned actions to improve the quality of the project delivery, resolve issues and concerns, and reduce potential risks.

4. Quality Assurance

During this reporting period, *FE*:

- Conducted Modifications, Additions, Changes, and Deletion Review Teleconference on May 30, 2014
- Analyzed DDR documentation provided by the City
 - City of Portland Project Status Update dated May 28, 2014
 - City of Portland Q2 Stakeholder Briefing Memo dated June 5, 2014
 - Motorola Status Report dated June 6, 2014
 - Capacity Analysis dated May 2014
 - Acceptance Test Plans dated May 2014
 - Updated Equipment List dated May 2014
 - Motorola Change Order #001 dated June 3, 2014





- Reviewed and assessed the risks, assumptions, issues, and dependencies (RAID) with the radio project currently documented by the City. To date PSSRP Project Management Team has tracked risks and issues as a component of the monthly radio project status report. **FE** recommends the City move to a robust standalone risk and issue management register.
- Collaborated with the City to develop strategies and recommendations to prevent or mitigate RAID items in order of priority. The focus is upon those items which are estimated to have the highest probability of adversely impacting the successful delivery of the radio project
- Observed the overall project and conveyed concerns and recommendations for corrective action
- Provided guidance to the City as requested for project-related communications between the City and Motorola
- Monitored and assessed project milestones, deliverables, and implementation of hardware and software, and related project activities.
- Advised the City regarding City-maintained project monitor and control items including
 - Scope management
 - Schedule vs. plan
 - Costs vs. plan
 - Change management
 - RAID registers
 - Action Item Register
 - Project Communications





5. Deliverables

FE prepared and provided the deliverables identified in Table 4 during this reporting period.

Table 4 – Deliverables

Date Delivered	Document Control Number	Title/Subject
7-7-2014	SR: CPERRP: 20140707	City of Portland Independent Project Management Quality Assurance Status Report

