



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

May 20, 2014

Prepared by:



"Unleashing the Power of Technology"

**Federal
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Purpose and Scope

Federal Engineering (**FE**) has been retained by the City 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 that are being addressed.

The purpose of this report is to provide an overview of the status and progress of the City of Portland Land Mobile Radio (LMR) Project for the period April 1, 2014, through April 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 month covered by this report along with comments to assist the reader in understanding the status reported. The details associated with each indicator are provided 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 of work is evolving due to alternate arrangements associated 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 is imminent for design modifications that have occurred during the detailed design review (DDR)
Quality	●	Portland's Replacement Project is moving ahead to ensure Portland replaces equipment in a timely manner.
Issues/Concerns	●	The City is actively resolving 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* and is comprised of project-related issues, concerns, and risks of which the Executive Steering Committee (ESC) should be aware. Some items require resolution by the City whereas others are and are offered to the Committee for information only.

FE is actively engaged with the City's project management team to address these items and where appropriate will offer 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, thereby positioning the City to re-apply for permits with a more optimistic outcome from Gresham Planning.
Schedule	Review of a draft project schedule with BTS Comms, PSSRP and Motorola has taken place during recent DDR sessions. The BTS Comms activities and associated schedule will be developed in conjunction with the Motorola project schedule.
Radio Tower Antenna and Cabling Space	The lack of physical space on the towers and cable runs could impact 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 is imminent for design modifications that have occurred during DDR
DDR Completion	DDR slowed by Walters Hill and other design modifications.
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 the coverage is unchanged, secure the “final” coverage guarantee in writing.</p>	
High	Schedule	<p>The February draft schedule was 565 days with an original end date of November 2015. The most recent schedule shows 645 days with an end date of March 2016.</p> <p>FE recommends the City and Vendor closely review the proposed final schedule to assess which items have contributed to the delay and work to see if the early schedule slippage can be corrected.</p> <p>Going forward, the City must carefully consider their resource availability and commitment dates. A failure to deliver on-time will create an opportunity for the vendor to request a change order for re-mobilization.</p>	





Priority	Risk or Issue	Recommended Action	Closed
High	Radio Tower Antenna and Cabling Space	<p>The City has made significant progress with the tasks to be completed to minimize the risk associated with determining which radio antenna facilities are considered “locked down” in the design.</p> <p><i>FE</i> recommends the City proceed in accordance with industry best-practices by rapidly completing structural analyses for the radio antenna facilities that are not yet completed.</p>	
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>	





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>FE recommends City suggestions for design modifications be fully 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>	
Medium	DDR Change Order	<p>FE 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>	
Medium	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>	
Medium	Field Coverage Analysis	<p>FE 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>	
Low	Stakeholder Briefings	<p>FE 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</p>	





FE will continue 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*:

- Analyzed April DDR documentation provided by the City
- Reviewed and assessed the risks, assumptions, issues, and dependencies (RAID) with the radio project which are currently documented by the City
- 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 and 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
05-12-2014	SR:LMR: 201405121	City of Portland Independent Project Management Quality Assurance Status Report

