

**MARIN EMERGENCY RADIO AUTHORITY**

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**DATE:** September 12, 2018  
**TO:** MERA Next Generation Project Oversight Committee  
**FROM:** Ernest Klock, Operations Officer  
**SUBJECT:** AGENDA ITEM E: NextGen Project Motorola Contract Change Order 6  
Sonoma Mountain, Site Readiness, Equipment Spares

This Contract Change Order number six (CCO#6) covers nine items associated with the design of the Next Gen System and provides for spare components not specified in the Motorola contract. The cost of CCO#6 after discounts is \$687,675.95, which does not include taxes on equipment at 9% for San Rafael estimated at \$24,000 for a total cost of \$711,675.95. A detailed description of the services, equipment, and associated costs are included in the attached CCO#6 for the MERA Next Generation Radio System (Nextgen System). Appendices A through C provide supporting documentation including post-warranty services (System Upgrade Agreement II - SUAII) scope and cost. Decisions on these items should be made prior to completing the NextGen System design, or additional costs may be incurred. All of the foregoing items were presented to the Operations Working group at the September 5, 2018 meeting and the members present indicated support for the recommendation to proceed with the CCO.

**Item 1 - Sonoma Mountain Site - \$182,000**

Addition of equipment, design, and SUAII services is proposed for the Sonoma Mountain site such that Microwave connectivity may be provided for the NextGen System.

The NextGen System RFP provided an array of sites to consider for proposers. Motorola submitted a proposal for a microwave path from Tomales to OTA that was based on simulations as physical path surveys are not conducted for proposals unless required. Later, during detailed design, physical path surveys revealed that the OTA path was blocked by terrain and Sonoma Mountain is the most cost-effective solution. Additionally, the system network design has already been presented and approved through the Regional Planning Committee FCC licensing process which included the Sonoma Mountain link, and so time and expense would need to be spent to make a change from the Sonoma Mountain solution. Per Motorola contract section 5.14.4.1, final microwave design is contingent on physical path surveys and MERA is obligated to fund these items.

**Item 2 - UEM and Zone Watch licenses - \$40,000**

Addition of one UEM and one Zone Watch license is proposed as only one UEM and one Zone Watch license was required by the RFP and included in the Motorola contract. The additional licenses will allow for monitoring of the NextGen System at two locations simultaneously, which will facilitate maintenance and this item is recommended.

**Item 3 - Site-Ready Services and Equipment - \$406,000**

Addition of Site-Ready services and equipment is proposed in order to prepare for installation of NextGen System components in existing equipment enclosures.

During the RFP phase, preliminary site walks were conducted by County Staff and the Motorola proposal team. These site walks were not of sufficient length to determine the nature and extent of work to relocate T-band equipment and make room for NextGen equipment as this level of effort is not typical for a proposal. The RFP did not require detailed site studies for the proposal (such as preparation of floor plans in Appendix B) and so pricing was not included. While section 6 of the Motorola Contract does indicate generally that the existing T-band system will remain untouched while the NextGen System is installed, Table 5-15 of the Motorola Contract places “Site-Readiness” as a MERA responsibility and clearly delineates responsibility in several sections. County Radio Communication staff does not have the expertise to perform this work and so the scope of work in Appendix B for Site Readiness is recommended.

**Item 4- Redundant Voice Logging Equipment - \$157,000**

Addition of redundant voice logging equipment (NICE) is proposed as only one voice logger with no backup was included in the Motorola contract. Voice logging is used to capture voice communications and often used to support emergency personnel in operations and after action reporting so redundancy provides backup. Due to the need for redundant voice logging to ensure data is available, this item is recommended.

**Item 5 - Jail BDA Backup Power - \$10,000**

Addition of battery backup for the County Jail BDA system is proposed as no battery backup was either required in the RFP nor provided for in the Motorola Contract. The jail BDA system is supported by an emergency generator, but the battery backup maintains functionality of the BDA system in the event of generator failure. Due to the need for battery backup to ensure operation of the Jail BDA system, this item is recommended.

**Item 6 - Dispatch Console Speakers - \$21,000**

Addition of two additional dispatch console speakers is proposed per the table on page 7 of CCO#6. The Motorola Contract included two speakers for each dispatch position, where existing dispatch positions may have as many as three or four. While two speakers may be sufficient, it is recommended to proceed with this item so that the various MERA agencies may choose additional speakers if needed.

**Item 7 - Upgrade Pagers to Time Division Multiple Access (TDMA) - \$30,000**

The upgrade to TDMA mode of the 150 Unication pagers purchased as part of the contract is proposed to ease channel use of pager devices for the NextGen System. Frequency division multiple access (FDMA) was originally proposed as a replacement because TDMA for the specified pagers did not exist at the time of proposal. However, FDMA would occupy double the channels needed - leading to radio traffic concerns. This item is recommended because the channel use concern is remedied if TDMA is used.

**Item 8 - NAS Backup Server - \$1,500**

Addition of one NAS Backup Server is proposed as no radio system backup capability was included in the original contract. While “This CCO does not capture the cost of turn up, configuring, and

installation of the spares”, the scope of work for this item is anticipated to be a minor cost (1-2 hours of technician time) and so the addition of one NAS Backup Server is recommended.

**Item 9 - Spare VMS Server - \$26,000**

Addition of one VMS Server is proposed to be used as a “pre-configured” spare in the event that the main VMS Server fails and a quick replacement is needed. Keeping this spare at hand will minimize downtime for the NextGen System in the event of failure of this component. While “This CCO does not capture the cost of turn up, configuring, and installation of the spares”, the scope of work for this item is anticipated to be a minor cost (1-2 hours of technician time) and so the addition of one VMS Server is recommended.

**Summary**

If approved, CCO#6 will provide added redundancy and security for the NextGen System. This CCO scope includes all equipment, services, design, warranty and post-warranty services (SUAI) necessary to implement the items described for a total cost of \$687,675.95 after discounts. Decision and/or addition of some of these items (Sonoma Mountain) at a later date could expose MERA to additional costs as the design is approaching 50% and now is a good time to change directions.

Attachment: Motorola Contract Change Order #6 with Appendices