

**MARIN EMERGENCY RADIO AUTHORITY**

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**DATE:** October 24, 2018

**TO:** MERA Governing Board

**FROM:** Ernest Klock, Operations Officer

**SUBJECT:** AGENDA ITEM C-6: NextGen Project Motorola Contract Change Order 9  
Equipment Spares – RECOMMENDED

Recommended Action: Authorize DPW to approve Motorola Contract Change Order 9 in the amount of \$214,174.70 for the inclusion of equipment spares into the MERA Next Gen System project.

This Contract Change Order number nine (CCO#9) covers seven 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#9 after discounts is \$214,174.70, which includes taxes on equipment estimated at 9% for San Rafael. A detailed description of the services, equipment, and associated costs are included in the attached CCO#9 for the MERA Next Generation Radio System (Nextgen System). Appendices B and C provide supporting documentation including equipment descriptions and services provided. 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. These items were also presented to the September 12, 2018 joint meeting of the Next Gen Project Oversight Committee and Finance Committee. These items were further discussed at the September 26, 2018 Governing Board meeting. While these items are discretionary, addition of these items to the project will improve system functionality and reliability.

**Item 1 - UEM and Zone Watch licenses - \$13,274**

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 2- Redundant Voice Logging Equipment - \$134,293**

Addition of redundant voice logging equipment (NICE) for radio traffic 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 and facilitates maintenance during system updates. Due to the need for redundant voice logging to ensure data is available, this item is recommended.

**Item 3 - Jail Repeater BDA Backup Power - \$7,419**

Addition of battery backup for the County Jail repeater 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 line power and an emergency generator. The battery backup maintains functionality of the

BDA system in the event of power loss, including generator failure. Due to the need for battery backup to ensure operation of the Jail BDA system, this item is recommended.

**Item 4 - Dispatch Console Speakers - \$17,113**

Addition of two additional dispatch console speakers is proposed. 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 5 - Upgrade Pagers to Time Division Multiple Access (TDMA) - \$23,435**

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 6 - NAS Backup Server - \$970**

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 7 - Spare VMS Server - \$17,671**

The VMS Server system is comprised of one primary server and one backup server. Addition of one VMS Server is proposed to be used as a “pre-configured” spare in the event that one of the main VMS servers fails and a quick replacement is needed. It can take several days to build, configure, and ship a replacement VMS server, so having a spare minimizes downtime. 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#9 will provide added redundancy and security for the NextGen System. This CCO scope includes all equipment, services, and design necessary to implement the items described for a total cost of \$214,174.70 after discounts. Decision and/or addition of these items 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 #9 with Appendices

**Change Order No.** 09

**Date:** 09/17/18

**Project Name:** MERA Next Generation Radio System

**Customer Name:** Marin County

**Customer Project Mgr:** Ernest Klock

**The purpose of this Change Order is to:**

Capture the following changes:

1. Item #8 - Addition of one extra UEM and Zone Watch license
2. Item #20 and #21 - Addition of redundancy to the NICE radio logging recorder
3. Item #23 - Addition of 12-hour battery back-up to the jail BDA system
4. Item #26 - Addition of two MCC7500 dispatch console speakers (except EOF)
5. Item #29 - Addition of TDMA feature to 150 Unication G4 Pagers
6. Item #32 - Addition of NAS backup server for the radio system
7. Item #36 - Addition of a spare VMS server

**Contract #** 31701399

**Contract Date:** 03/07/17

In accordance with the terms and conditions of the contract identified above between Marin County and Motorola Solutions, Inc., the following changes are approved:

**Contract Price Adjustments**

Original Contract Value:	\$ 34,337,451.06
Previous Change Order amounts for Change Order numbers <input type="text" value="0"/> through <input type="text" value="8"/>	\$ 5,878,841.74
This Change Order:	\$ 214,174.70
Existing Contract Credit:	\$ 0.00
Net Contract Impact of this Change Order:	\$ 214,174.70
New Contract Value:	\$ 40,430,467.50

**Completion Date Adjustments**

Original Completion Date:	3/27/2019
Current Completion Date prior to this Change Order:	3/27/2019
New Completion Date:	3/27/2019

**Changes in Equipment:** *(additions, deletions or modifications)* **Include attachments if needed**

Please refer to the attached equipment list

**Changes in Services:** *(additions, deletions or modifications)* **Include attachments if needed**

Please refer to the attached Scope of Work (SOW) document

**Schedule Changes:** *(describe change or N/A)*

The project schedule will be finalized upon CDR approvals and is contingent upon CEQA and site construction timelines

**Pricing Changes:** *(describe change or N/A)*

Please refer to the attached pricing summary sheet  
 Please note that taxes are estimated at 9% but the final number will be determined based on where the equipment will be shipped

**Customer Responsibilities:** *(describe change or N/A)*

Please refer to the attached Scope of Work (SOW) document

**Payment Schedule for this Change Order:**  
*(describe new payment terms applicable to this change order)*

The Payment milestone plan for this Change Order is the following:

1. 20% of the Change Order Price upon completion of project's Customer Design Review (CDR)
2. 45% of the Change Order Price upon shipment of equipment
3. 25% of the Change Order Price upon completion of installation (site by site)
4. 10% of the Change Order Price upon final system acceptance

**If Subscribers are purchased, 100% of the Subscriber Contract Price will be invoiced upon shipment (as shipped).**

Motorola may make partial shipments of Equipment and will request payment upon shipment of such Equipment. In addition, Motorola will invoice for installations completed on a site-by-site basis or when professional services are completed, when applicable. The value of the Equipment shipped/services performed will be determined by the value of the shipped/services performed as a percentage of the total milestone value. Unless otherwise specified, contract discounts are based upon all items proposed and overall System package. For invoicing purposes only, discounts will be applied proportionately to the FNE and Subscriber Equipment values to total Contract Price. Overdue invoices will bear simple interest at the maximum allowable rate.

**For Lifecycle Support Plan and Subscription Based Services:  
Motorola will invoice Customer annually in advance of each year of the plan. The annual warranty and post-warranty services costs quoted in this Change Order (Appendix D of the attachment) is in addition to the original contract's annual costs of tech support and infrastructure replacement, SUA II, and Nokia's Maintenance and Upgrade Program for the MPR 9500 system.**

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

<b>Motorola Solutions, Inc.</b>	<b>Customer</b>
By: _____	By: _____
Printed Name: KENT MARTIN	Printed Name: _____
Title: Regional Services Manager	Title: _____
Date: September 17, 2018	Date: _____
Reviewed by: Kourosh Mostashari	Date: September 17, 2018
_____ Motorola Solutions Project Manager	_____

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# CHANGE ORDER #9 ATTACHMENT

SEPTEMBER 17, 2018



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# CHANGE ORDER #9 ATTACHMENT

The following changes have been captured in Change Order #9:

1. Item #8 - Addition of one extra UEM and Zone Watch license.
2. Item #20 and #21 - Addition of redundancy to the NICE radio logging recorder.
3. Item #23 - Addition of 12-hour battery back-up to the jail BDA system.
4. Item #26 – Addition of two MCC7500 dispatch console speakers (except EOF)
5. Item #29 - Addition of TDMA feature to 150 Unication G4 Pagers.
6. Item #32 - Addition of NAS backup server for the radio system.
7. Item #36 - Addition of a spare VMS server.



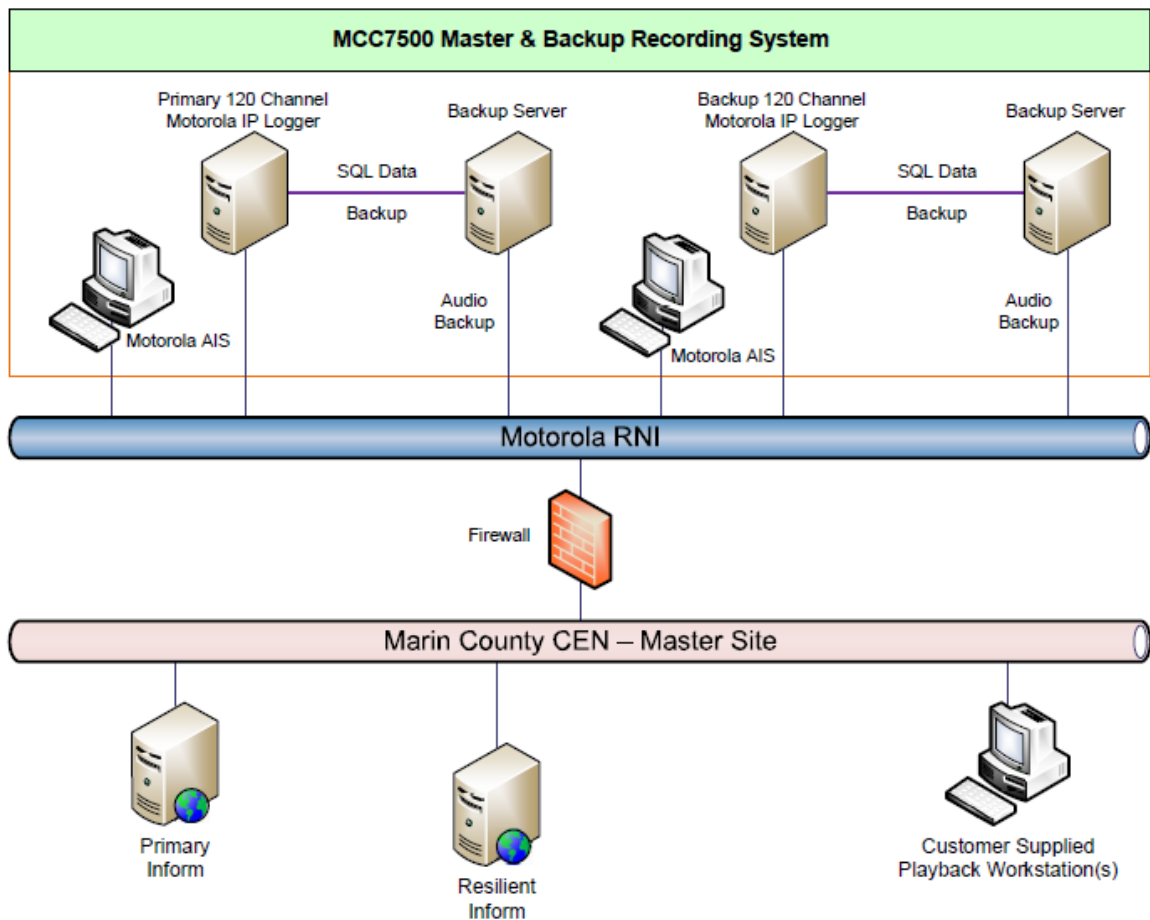
**1. Item #8 - Addition of one extra UEM and Zone Watch license**

One additional UEM and Zone Watch license has been added to the equipment list – Appendix B. This will provide the functionality of monitoring the radio system at two locations simultaneously.

**2. Item #20 and #21 - Addition of redundancy to the NICE radio logging recorder**

The NICE redundant radio logging solution was recommended as an option in Section 5.3-C of the contract. The following lists the components of a complete NICE redundant logging solution:

- Parallel 120 Channel Motorola IP Loggers for V7.17 (qty 2)
- Dual LBS (Logging Backup Servers-(qty2) ; note, Storage Center name was changed to LBS
- Audio Archive function
- SQL Database Backup function
- Dedicated Inform Server on the CEN
- Resilient Inform Server on the CEN



**3. Item #23 - Addition of 12-hour battery back-up to the jail BDA system**

A 12-hour battery backup, including installation services, will be added to the jail BDA system. Equipment list is provided in Appendix B.

**4. Item #26 – Addition of two MCC7500 dispatch console speakers (except EOF)**

Additional MCC7500 dispatch console speakers will be added to the dispatch positions as per the below table:

<b>Dispatch Sites</b>	<b>Speakers Added</b>
Marin Backup Center (2 console positions)	4
Novato PD (3 console positions)	6
San Rafael PD (4 console positions)	8
County Fire - Woodacre (3 console positions)	6
Fairfax PD (1 console position)	2
County Jail (1 console position)	2
Radio Shop (1 console position)	2
EOF (16 console positions)	16
<b>TOTAL</b>	<b>46</b>

**5. Item #29 - Addition of TDMA feature to 150 Unication G4 Pagers**

Quantity of 150 Unication G4 pagers will be upgraded with TDMA functionality.

**6. Item #32 - Addition of NAS backup server for the radio system**

A radio system NAS backup server has been added to the equipment list in Appendix B. This Change Order does not capture the cost of turn up, configuring, or installation of the spares.

**7. Item #36 - Addition of a spare VMS server**

A spare VMS server has been added to the equipment list in Appendix B. This Change Order does not capture the cost of turn up, configuring, or installation of the spares.

# APPENDIX B – EQUIPMENT LIST

## Equipment List

System	Site	SysSeg	Item Num	Total Qty	Nomenclature	Description
MASTER SITE	EOF	LIC	3	1	SQM01SUM0273	MASTER SITE CONFIGURATION
LICENSE	EOF	UEM	3a	1	UA00146AA	ADD: UNIFIED EVENT MANAGER (UEM)
LICENSE	EOF	ZONEWATCH	3b	1	UA00141AA	ADD: ZONEWATCH GRID & CTRL
IP LOGGER	EOF	AIS	4	1	B1933	MOTOROLA VOICE PROCESSOR MODULE
IP LOGGER	EOF	AIS	4a	1	CA00288AB	ADD: MCC 7500 ARCHIVING INTERFACE SERVER SOFTWARE LICENSE
IP LOGGER	EOF	AIS	4b	1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
IP LOGGER	EOF	AIS	4c	1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
IP LOGGER	EOF	AIS	4d	1	CA00182AB	ADD: AES ALGORITHM
IP LOGGER	EOF	AIS	4e	1	CA00143AC	ADD: DES-OFB ALGORITHM
IP LOGGER	EOF	AIS	5	1	TT3225	Z2 MINI WORKSTATION 258G 8G NON RET
IP LOGGER	EOF	AIS	6	1	T7885	MCAFEE WINDOWS AV CLIENT
IP LOGGER	EOF	AIS	7	1	BLN1297	VPM POWER SUPPLY MOUNTING KIT
IP LOGGER	EOF	AIS	8	1	T8126	FORTINET FIREWALL APPLIANCE
IP LOGGER	EOF	AIS	9	1	SQM01SUM0205	GGM 8000 GATEWAY
IP LOGGER	EOF	AIS	9a	1	CA01616AA	ADD: AC POWER
IP LOGGER	EOF	AIS	10	1	CLN1856	2620-24 ETHERNET SWITCH
IP LOGGER	EOF	NICE	11	1	DQ NICE UPgrd	NICE Logger Upgrade "Redundant
DSP SPKR	DISPATCH	MCC7500	12	46	B1912	MCC SERIES DESKTOP SPEAKER
TDMA PAGERS	PAGERS	TDMA	14	150	DQPAGERTDMAUPRD	TDMA PAGER UPGRADE
NAS SVR	EOF	NAS	15	1	DSQNAP4BAYW4HDDS	QNAP TS-453A 4-BAY WITH 4 SEAGATE 2TB NAS HDD
VMS SVR	EOF	SPARESCORE	16	1	DLN7009	FRE: DL380 G9 900GB DISK WD2
BATTERY BACKUP	JAIL BDA	BATTERY BACKUP	18	1	6160-110-24-NR	BIRD 12 HOUR BATTERY BACKUP IN NEMA4 ENCLOSURE

# APPENDIX C – PRICING SUMMARY

	Equipment	MERA Equipment Discount	Services	Warranty and Post-Warranty Services	System Discount Applied
2. Item #8 - Additional UEM and Zone Watch licenses (only one extra license)					
UEM License	\$ 20,000.00	\$ 11,088.00	\$ -	\$ -	\$ 5,000.00
ZoneWatch License	\$ 20,000.00	\$ 11,088.00	\$ -	\$ -	\$ 5,000.00
4. Item #20 and 21 - Redundant NICE Radio Logging Recorder and NICE Storage Center	\$ 104,829.00	\$ 96,146.00	\$ 52,143.00	\$ -	\$ 25,000.00
5. Item #23 - 12-hour Battery Jail BDA Backup Power	\$ 10,360.00	\$ 8,806.00	\$ -	\$ -	\$ 2,000.00
6. Item #26 - Two Additional MCC7500 Dispatch Console Speakers (Except EOF)	\$ 20,700.00	\$ 20,700.00	\$ -	\$ -	\$ 5,000.00
7. Item #29 - Upgrade Pagers for TDMA	\$ 30,000.00	\$ 25,500.00	\$ -	\$ -	\$ 4,000.00
8. Item #32 - NAS Backup Server for the Radio System	\$ 1,518.00	\$ 1,290.30	\$ -	\$ -	\$ 400.00
9. Item #36 - Spare VMS Server	\$ 26,166.00	\$ 20,932.80	\$ -	\$ -	\$ 4,719.00
<b>TOTAL</b>	\$ 233,573.00	\$ 195,551.10	\$ 52,143.00	\$ -	\$ 51,119.00
	<b>List Price</b>	<b>After Discount</b>			
<b>Equipment</b>	\$ 233,573.00	\$ 195,551.10			
<b>Services</b>	\$ 52,143.00	\$ 52,143.00			
<b>Warranty and Post-Warranty Services</b>	\$ -	\$ -			
Total		\$ 247,694.10			
	System Discount	\$ 51,119.00			
	Final Price Without Taxes	\$ 196,575.10			
	Estimated Equipment Taxes at 9%	\$ 17,599.60			
	Final Price	\$ 214,174.70			