

**RESOLUTION NO. 5184**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOLEDAD  
AUTHORIZING THE CITY OF SOLEDAD TO AMEND AN  
INTERAGENCY MEMORANDUM OF AGREEMENT WITH MONTEREY  
COUNTY FOR THE NEXT GENERATION  
RADIO SYSTEM JOINT GOVERNANCE AND FINANCING**

**WHEREAS**, federal law requires equipment changes and mandates standards used in public safety communications and emergency 9-1-1 dispatch systems (the Next Generation Radio System or NGEN system); and

**WHEREAS**, the County of Monterey (County) and various city, state and district government entities located in Monterey County entered into an agreement (the MOA) on May 12, 2009, to provide for the governance and financing of the NGEN system; and

**WHEREAS**, the MOA provides that the shared infrastructure of the NGEN system is to be maintained by Monterey County in accordance with approved policies and maintenance agreements between the Emergency Communications Users Advisory Council (ECUAC); and

**WHEREAS**, paragraph 10 of the MOA provides for amendment of its terms upon signatures of three-fourths of the participating NGEN agencies; and

**WHEREAS**, the County and the participating NGEN agencies wish to amend the MOA in order to specify the obligations of the County and to specify the obligations of the participating NGEN agencies regarding the operation and maintenance of the NGEN system;

**NOW, THEREFORE, BE IT HEREBY RESOLVED**, County and the participating NGEN agencies agree as follows:

1. The following language is added to paragraph 2.A of the MOA:

*The County will maintain and operate the shared infrastructure of the NGEN system in accordance with the terms of the Operations & Maintenance Agreement (O & M Agreement), attached hereto as Exhibit D.*

*In order to facilitate operation and maintenance of the NGEN system, County and the participating NGEN agencies agree that the Emergency Communications Users Advisory Council (ECUAC) provided for by paragraph 1 of the MOA, on behalf of the participating NGEN agencies, shall have the following authority and shall perform these specified actions:*

The ECUAC shall have authority to bind participating NGEN agencies to the annual adjustment of operations and maintenance costs provided for in Appendix 2 to the O & M Agreement; and

The ECUAC shall provide notice to the participating NGEN agencies of its annual review of the O & M Agreement within thirty (30) days of conducting that review, provided, however, that any failure by ECUAC to provide this notice shall not relieve any participating NGEN agency of its contractual obligation to pay its proportional share of costs, as provided by the O & M Agreement, nor shall failure by the ECUAC to provide this notice affect its authority to contractually bind participating NGEN agencies to the annual adjustment of costs.

**PASSED AND ADOPTED** by the City Council of the City of Soledad at a regular meeting duly held on the 1st day of June, 2016, by the following vote:

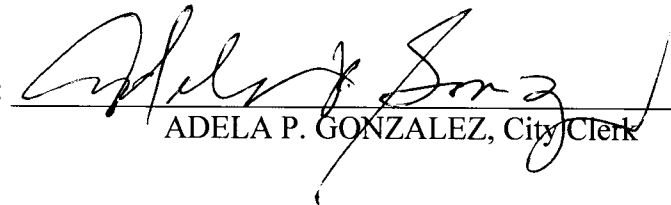
**AYES**, and in favor thereof, Councilmembers: Christopher K. Bourke, Mayor Pro Tem Alejandro Chavez, Richard J. Perez, Patricia D. Stephens, and Mayor Fred J. Ledesma

NOES, Councilmembers: None

ABSTAIN, Councilmembers: None

ABSENT, Councilmembers: None

  
\_\_\_\_\_  
FRED J. LEDESMA, Mayor

ATTEST:   
\_\_\_\_\_  
ADELA P. GONZALEZ, City Clerk

**MEMORANDUM OF AGREEMENT**  
**NEXT GENERATION RADIO SYSTEM JOINT**  
**GOVERNANCE AND FINANCING**

**Operations & Maintenance Agreement**  
**(Exhibit D)**

# Table of Contents

Next Generation Radio System Operation and Maintenance .....	4
1 Appendices.....	4
2 Services.....	4
3 Payments.....	4
4 Term.....	5
5 Notices .....	5
6 The Emergency Communications Users Advisory Council .....	5
Appendix 1 to Exhibit D – Scope of Work.....	6
1. Introduction.....	6
2. NGEN System Description.....	6
2.1 NGEN Digital System .....	6
2.2 NGEN Analog Overlay System.....	7
3. Service Level Requirements .....	7
3.1 Work Hours .....	7
3.2 Service Response Requirements.....	7
4. Description of Labor Only Maintenance Services.....	9
4.1 Overview .....	9
4.2 ITD Technician Standby.....	10
4.3 Communications Backhaul Maintenance (Microwave and UHF) .....	10
4.4 Radio System Administration.....	10
5. Recurring Services .....	10
5.1 Overview .....	10
5.2 Third-Party Vendor Recurring Services .....	11
5.3 ITD Recurring Services .....	11
6. Exclusions from Operation and Maintenance Services .....	12
6.1 Overview .....	12
6.2 Interference and Required Changes due to Regulatory Requirements.....	12
6.3 Terminal Equipment.....	12
6.4 Specialized Equipment .....	13
6.5 Site Fee (Exclusions).....	13
6.6 Security Analysis and Management .....	13
6.7 Restoration of Services due to Occurrences Not in Control of Any Party or Entity ..	13
Appendix 2 to Exhibit D – Rate Schedule and Cost.....	15
<i>Table 1- NGEN Systems Operation &amp; Maintenance Rates*</i> .....	15
<i>Table 2 - Time and Materials (T&amp;M) Service Rates*</i> .....	16
Appendix 3 to Exhibit D – NGEN System Sites .....	17
<i>Table 1- NGEN System Sites</i> .....	18
Appendix 4 to Exhibit D – Phases of Operation & Maintenance .....	19
1. Overview .....	19
1.1 Phases of NGEN O&M .....	19
2. Interim NGEN O&M System Sites.....	19
2.1 Interim O&M inclusions.....	19
<i>Table 1 - Interim NGEN O&amp;M System Sites</i> .....	20
3. NGEN Sustained O&M System Sites.....	21
3.1 Full Sustained O&M Inclusion:.....	21

<i>Table 2 - Sustained O&amp;M System Sites</i> .....	21
Appendix 5 to Exhibit D - Operation and Maintenance Procedures .....	22
1. General .....	22
2. Roles and Responsibilities .....	22
2.1 Emergency Communications User Advisory Council and Agencies .....	22
2.2 ITD NGEN Operations & Maintenance Support Team .....	22
<i>Figure 1- NGEN Technical Working Group</i> .....	29
3. Processes .....	29
3.1 Overview of NGEN System Operations and Maintenance Procedures .....	29
3.2 Incident Management .....	29
3.3 Billing .....	30
3.4 Asset Management .....	30
3.5 Change and Configuration Management .....	30
3.6 Metric Reporting .....	31
Appendix 6 to Exhibit D – Glossary of Terms .....	32

## **NEXT GENERATION RADIO SYSTEM OPERATION AND MAINTENANCE**

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THIS OPERATIONS & MAINTENANCE AGREEMENT (“O & M Agreement”) is entered into by and between the County of Monterey and the cities and government districts (participating NGEN agencies) that are party to the Memorandum of Agreement re Next Generation Radio System Joint Governance and Financing (MOA).

The purpose of this O & M Agreement is to set forth all parties’ obligations in connection with operation and maintenance of the NGEN System.

### **IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:**

#### **1 Appendices**

The following appendices are attached hereto and incorporated by reference herein:

- A. Appendix 1 to Exhibit D - Scope of Work
- B. Appendix 2 to Exhibit D - Rate Schedule and Cost
- C. Appendix 3 to Exhibit D - NGEN System Sites
- D. Appendix 4 to Exhibit D - Phases of Operations & Maintenance
- E. Appendix 5 to Exhibit D - Operations and Maintenance Procedures Implementation
- F. Appendix 6 to Exhibit D - Glossary of Terms

#### **2 Services**

Specific details of the services to be provided by the County of Monterey, through its Information Technology Department (ITD), are set forth in the Scope of Work, attached as “Appendix 1 to Exhibit D.” Rate Schedule and Cost for the services to be provided by ITD are set forth herein and in Appendix 2 to Exhibit D.

#### **3 Payments**

ITD shall invoice the Monterey County Emergency Communications Department (ECD) for NGEN operations and maintenance services provided to participating NGEN agencies on a monthly basis throughout the County fiscal year. ECD in turn, shall bill the participating NGEN agencies on the same schedule and with the same advance notice as ECD provides when it bills the NGEN agencies for other, non-NGEN services. Any adjustments in the invoice cost will be based on a mutually agreed-upon increase or decrease in the actual cost of providing services or upon adjustments made to the NGEN system. ITD will provide quarterly expenditure reports to ECD, for ECD’s transmittal to the participating NGEN agencies, within 30 days after the close of each quarter.

#### **4 Term**

The initial term of this Agreement shall commence on July 1, 2016 and shall extend through, and including, June 30, 2019.

#### **5 Notices**

All notices under this AGREEMENT shall be in writing and shall be deemed to have been duly given upon being delivered personally, by email, or upon receipt if mailed by certified mail, return receipt requested. Notices shall be sent to the representatives named below or any subsequent representative for who notice was provided pursuant to this section.

In the case of Monterey County, to both:

Monterey County Information Technology Department  
Dianah Neff, Director  
1590 Moffett Street  
Salinas, CA 93905

and

Monterey County Emergency Communication Department  
William E. Harry, Director  
1322 Natividad Road  
Salinas, CA 93906

In the case of the participating NGEN Agencies to:  
Chair, Emergency Communications Users Advisory Committee  
C/o Monterey County Emergency Communication Department  
1322 Natividad Road  
Salinas, CA 93906

#### **6 The Emergency Communications Users Advisory Council**

All references to the Emergency Communications Users Advisory Council (ECUAC), provided for by Paragraph 1 of the MOA, shall include such other bodies which may succeed or replace the ECUAC. All obligations and authority invested in the ECUAC by this O & M Agreement and by the MOA shall pass without need for further amendment or execution of additional documents to such other bodies which may succeed or replace the ECUAC.

## APPENDIX 1 TO EXHIBIT D – SCOPE OF WORK

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### 1. Introduction

Monterey County operates a consolidated, integrated public safety dispatch center, operated and managed by the Monterey County Emergency Communication Department in Salinas, which supports approximately 40 public safety agencies. The Next Generation Radio System project is a collaborative effort involving 28 public agencies within the County, including all of its incorporated cities and a number of special districts. The Next Generation Radio System hereinafter called "NGEN System," replaces the existing public safety and local government voice and data radio networks. The completed NGEN System will provide enhanced coverage and reliable and secure interoperable communications for all user agencies within the County. The NGEN System will be operated and maintained by Monterey County, through its Information Technology Department (ITD), for the benefit of the agency users receiving NGEN System public safety radio dispatch and associated services.

This Scope of Work outlines the operations and maintenance ("O&M") services required for the NGEN System during interim and sustained periods. It defines the roles and responsibilities for the administration and maintenance of the NGEN System. The Scope of Work will govern the maintenance of system equipment, as defined within, to the level of performance indicated, effective July 1, 2016. This Scope of Work applies to ITD and any vendors or sub-contractors engaged to fulfill the requirements defined within.

The services detailed in this Scope of Work are provided by the ITD NGEN Support team in support of the NGEN System. Execution of the services will be by qualified personnel who have original equipment manufacturer (OEM) technical training and the necessary equipment to deliver required system infrastructure services.

### 2. NGEN System Description

#### 2.1 NGEN Digital System

A) VHF P25 trunked multi-sites will be at:

- Bryant Canyon
- Lewis Road Landfill
- King City Ag.

B) VHF P25 trunked simulcast sites will be at:

- 911 Center
- Marina Coast Water
- Laguna Seca
- Peñon Peak
- Pebble Beach Corporate Yard

C) 700 MHz P25 trunked multisite system will be at Williams Hill

D) 700 MHz P25 trunked simulcast sites will be at:

- La Mesa Housing
- 911 Center
- Mount Toro (Upper)

## 2.2 NGEN Analog Overlay System

This system, operated and maintained by Monterey County ITD, uses conventional VHF radio technology and provides fire and law enforcement agencies with extended communications for the purposes of voice paging, greater countywide coverage, and interoperability. The system is also referred to as the "Analog Overlay" system.

## 3. Service Level Requirements

### 3.1 Work Hours

Normal service hours are 8:00 A.M. to 5:00 P.M. Pacific Standard Time, Monday through Friday, excluding County holidays. Work performed outside of normal working hours shall be defined as emergency services.

### 3.2 Service Response Requirements

In the event of NGEN System malfunctions, ITD shall respond to calls for service based on the urgency and impact of the loss of service. Priority categories are based upon the outage / incident's impact (high, medium, or low) and the outage/incident's urgency (high, medium, or low). Response times and notification procedures for each Priority category are listed below:

#### **Priority 1 (Critical):** System / Site "Down"

Defined as: Total loss of communications or functionality of at least one (1) fixed tower site, one (1) network switching center, or the failure of a complete dispatch center; or complete loss of a critical application or server that impacts the ability of an agency to function with no work around or alternative service available.

**Response:** 24x7. Initial technician call back: 30 minutes. Onsite response (if needed) within 2 hours

**Notifications:** ITD NGEN Support team, ITD Radio Manager, ITD Infrastructure Division Manager, and Monterey County Emergency Communications Center ("MCECC") Shift Supervisor

**Update:** Hourly or as scheduled with Agency Contact

#### **Priority 2 (High):** System / Site "Impaired"

Defined as: Failed equipment that is continuously impacting site channel capacity or wide-area communications, but is otherwise available for voice communication at a degraded level.

**Response:** 24x7. Initial technician call back: 2 hours. Onsite response (if needed) within 4 hours

**Notifications:** ITD NGEN support team, ITD Radio Manager, and MCECC Shift Supervisor

**Update:** Hourly or as scheduled with Agency Contact

**Priority 3 (Elevated):** System / Site "Minor Impact"

Defined as: Intermittent system problems that have been identified and are being actively monitored; minor problems that do not affect day-to-day user operations; loss of non-critical application or service; partial loss of service to a location. Work around is feasible or loss of service for a short period of time is acceptable based on assessment by the user agency and the MCECC Shift Supervisor. ITD shall coordinate with the MCECC Shift Supervisor during normal business hours to determine operational requirements and schedule services as necessary.

**Response:** Prime hours, (Monday – Friday, 8:00 AM - 5:00 PM) within 8 hours;

**Notifications:** ITD NGEN support team, ITD Radio Manager, and MCECC Shift Supervisor

**Update:** Daily

**Priority 4 (Standard):** System / Site "Preventative Maintenance (PM)"

Defined as: Requests for routine maintenance service of the NGEN system and database updates. Scheduled preventative maintenance (PM) shall be coordinated by the ITD Radio Shop.

**Response:** Equipment will be inspected and repaired or sent to depot repair as required within 3 business days or receipt of equipment.

**Notifications:** ITD NGEN support team, ITD Radio Manager, and/or Emergency Communications Shift Supervisor as required.

**Update:** As required based on input from the affected user agency.

**Priority 5 (Planning):** System / Site "Upgrades"

Defined as: Requests for NGEN system upgrades which shall be planned, scheduled, and coordinated by the ITD Radio Shop and in coordination with the ECUAC.

**Response:** Coordinated and approved upgrades to the NGEN Systems shall be implemented to ensure optimization of the System functionality and operational features.

**Notifications:** ITD NGEN support team, ITD Radio Manager, and/or Emergency Communications Shift Supervisor as required.

**Update:** As required based on input from the affected user agency.

## **4. Description of Labor Only Maintenance Services**

### **4.1 Overview**

On an annual basis, an OEM certified ITD technician shall perform operational tests and alignments on the NGEN System equipment to optimize and ensure the equipment meets OEM specifications.

#### **4.1.1 Systems Maintenance Services**

ITD shall repair, maintain, and service all NGEN Systems at sites listed in Appendix 2 to Exhibit D, attached hereto, and per exclusions as defined in Section 6 herein.

ITD shall perform preventative maintenance inspections and tests as recommended by the OEM and required by applicable FCC regulations; as a minimum, these inspections and tests will be performed annually for NGEN Systems at sites listed in Appendix 3 to Exhibit D. ITD shall coordinate activities with the site owner and impacted agencies (as needed).

Management, administrative and engineering tasks are included in the scope of labor only maintenance services.

Restoration services or maintenance actions resulting from technician negligence or substandard maintenance practices are included in the scope of labor only maintenance services.

#### **4.1.2 System Monitoring**

ITD shall monitor the NGEN System on a 24x7x365 basis through system management capabilities including, but not limited to; microwave backhaul monitoring software, radio site monitoring (e.g. generator status, RF component status, power production, environmental status, etc.), and network status (utilization, link status, security, etc.)

#### **4.1.3 Network-based Data Backup**

ITD shall provide labor to operate and maintain the NGEN System network-based data backup solution. Backup tasks will be performed on an established schedule provided by ITD to the ECUAC, and will be retained in accordance with ITD data storage policy.

#### **4.1.4 Software Maintenance**

ITD will provide labor to install and test software upgrades, whether for corrective or NGEN system enhancement purposes.

#### **4.1.5 NGEN System Equipment Depot Repair and Shipping**

Administrative processing and shipping of NGEN system equipment shall be included in labor only maintenance services. This does not include Terminal Equipment.

#### **4.2 ITD Technician Standby**

ITD shall ensure at least one technician is scheduled for after-hours maintenance services.

#### **4.3 Communications Backhaul Maintenance (Microwave and UHF)**

ITD shall provide preventative maintenance to the NGEN communications backhaul system, which includes microwave and UHF links, on an annual basis.

#### **4.4 Radio System Administration**

ITD will provide radio system administration services which include:

- Maintaining all FCC radio frequency licenses used by the NGEN system to be consistent with federal regulations and use of the frequencies by the system. This service does not include acquiring new frequencies or sites.
- Managing all databases and logistical data associated with the P25<sup>IP</sup> trunking radio system including: Radio identification database and the Unified Administration System database;
- Maintaining the fleet map and talk group identification.
- Working with NGEN system user agencies' delegated administrators, and providing system database management support on elements including: Subscriber IDs, talk group IDs, and associated parameters.
- Maintaining system AES encrypted secure codes and serving as the encryption key management controller for over the air rekeying.

### **5. Recurring Services**

#### **5.1 Overview**

Operations and Maintenance of the NGEN System, in addition to Labor Only Maintenance services (defined in Section 4, herein), will require additional recurring payments for these services. Charges for these recurring services, described below, will be included in the monthly

ITD invoice to ECD. ITD will administer any third-party vendor contracts required to maintain the NGEN system and will invoice ECD for the costs of additional, recurring services. ECD shall, in turn, invoice participating NGEN agencies for operations and maintenance costs incurred pursuant to this O & M Agreement and for additional costs of services provided by ECD in connection with 9-1-1 services. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

## **5.2 Third-Party Vendor Recurring Services**

Dedicated internet, AT&T Switched Ethernet fiber backhaul connectivity, and OEM Support Services (Aviat, Harris Corp, Cisco and other software required as a result of recent changes to the NGEN System) shall be invoiced by ITD to ECD on a monthly basis and paid by ITD to the respective vendors. ECD shall, in turn, invoice participating NGEN agencies for third-party vendor recurring services. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

## **5.3 ITD Recurring Services**

Additional recurring costs to support the NGEN System shall be included in the annual NGEN budget by ITD and shall be invoiced by ITD to ECD on a monthly basis. ECD shall, in turn, invoice participating NGEN agencies for additional recurring services. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

### **5.3.1 NGEN System Replenishment of Spare Parts**

ITD shall be responsible for tracking and administration to maintain an adequate stock of spare parts, system-critical modules, and test equipment that may be needed to provide services pursuant to this Agreement. ITD will recommend to ECD sparing quantities based on industry practice and vendor recommendations. ECD shall review and approve ITD sparing recommendations annually. In the event sparing inventories are depleted, or need to be adjusted, ITD shall request funding from ECD in order to replenish stock. ECD shall, in turn, invoice participating NGEN agencies for replenishment of spare parts. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

### **5.3.2 ITD Emergency/After-Hours Support**

Costs for emergency/after-hours support will be invoiced as they occur and will be based on Time and Materials Service Rates, as specified in Appendix 2 to Exhibit D.

### **5.3.3 ITD Site Fee (Inclusions)**

The following minor site-related maintenance actions are included in the ITD Site Fee set forth in Appendix 2 to Exhibit D, Table 1, Section B which includes:

- Towers: Annual maintenance inspections
- Tower lighting systems: Annual maintenance inspections
- Antenna systems and components: Annual maintenance inspections
- Shelters: Annual shelter preventative maintenance inspections (e.g. lighting systems, light bulb replacement, HVAC filter replacement, electrical and grounding inspections)
- Fencing: Annual fencing maintenance inspections to ensure site integrity and security
- Roads and surfacing: Annual road inspections
- Generators: Scheduled generator maintenance, fuel checks, generator runs
- Site: Annual site inspections, landscaping or weed abatement to ensure compliance with fire prevention code

#### **5.3.4 ITD Microwave Fee**

ITD shall provide NGEN backhaul services using established Monterey County infrastructure in order to minimize operational costs. These services shall be billed at the standard per circuit rate as published in the ITD Service Catalog.

## **6. Exclusions from Operation and Maintenance Services**

### **6.1 Overview**

Any system maintenance actions that are not within the scope of this Agreement shall be evaluated and agreed upon by ECUAC and ITD prior to implementation, and memorialized in writing. Agreed-upon maintenance will be performed at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2.

### **6.2 Interference and Required Changes due to Regulatory Requirements**

Interference or disruption of service caused by operation of other radio systems, by natural phenomena, by motor ignition, or other sources may be minimized by the addition of corrective devices adapted for particular locations and installations. As requested and pre-approved by MCECC Shift Supervisor, ITD shall investigate interference complaints at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2 to this Agreement.

If, due to the action of any duly authorized regulatory authority (e.g. FCC, State of California, site owner, etc.), changes to NGEN equipment becomes necessary, the associated costs shall be negotiated between ITD and ECD and will be included on ITD's monthly invoice to ECD. ECD shall, in turn, invoice participating NGEN agencies for the cost of equipment changes necessary to mitigate interference and equipment changes required by regulatory authorities.

### **6.3 Terminal Equipment**

Services for terminal equipment including troubleshooting, programming, and administrative processing for warranty repair, etc., will be performed at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2.

#### **6.4 Specialized Equipment**

ITD shall provide transportation in the form of conventional, four-wheel drive vehicles to perform maintenance and operations services. Maintenance of the system requiring specialized equipment (i.e. rental of man-lift, all-terrain, etc. type vehicles) will be performed and invoiced at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2, plus specialized equipment rental costs.

#### **6.5 Site Fee (Exclusions)**

In addition to the exclusions specified in Section 6.1 to 6.4, above, the following major site-related maintenance actions shall be billed at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2:

- Towers: Replacement of tower sections, tower reinforcement, or work requiring engineering analysis or structural/construction permit
- Tower lighting systems: Replacement or upgrade of tower lighting components or systems
- Antenna systems and components: Replacement of antenna component/system (e.g. microwave dishes, radio antennas, microwave waveguides, coaxial cabling, tower top amplifiers)
- Shelters: Repair or replacement of shelter or shelter infrastructure (including lighting fixtures, HVAC systems and fire suppression systems, or those systems requiring structural/construction permit)
- Fencing: Repair, replacement, or expansion of site fencing
- Roads and surfacing: Road grading, repair or improvements based on environmental or weather related impact necessary to ensure accessibility and personnel safety
- Generators: Repairs or replacement of generators, generator fuel tanks, electrical connectivity, or generator foundation/pad
- Site: Maintenance of site electrical components (whether underground or overhead), expendables (e.g. batteries, UPS conditioning equipment, DC rectifier components)
- FCC License purchase and engineering

#### **6.6 Security Analysis and Management**

ITD shall provide security analysis, scanning, and consultation regarding the posture, vulnerabilities, and operational risks of the NGEN System at the Time and Material Service Rates specified in Appendix 2 to Exhibit D, Table 2.

#### **6.7 Restoration of Services due to Occurrences Not in Control of Any Party or Entity**

Restoration of NGEN services and equipment due to damage caused by acts of God, earthquakes, war, acts of terrorism, fires, severe weather, floods, strikes, embargoes, or work performed on NGEN equipment by third parties not authorized by ITD to perform such work, will be performed at the Time and Materials Service Rates specified in Appendix 2 to Exhibit D, Table 2. Although budget estimates for ITD emergency/after-hour support are set forth in Table

1, Section B, Annual Recurring Costs, the parties acknowledge that services required to address such events are unpredictable and will vary from year to year.

## APPENDIX 2 TO EXHIBIT D – RATE SCHEDULE AND COST

In consideration of the services provided by ITD in Appendix 1 to Exhibit D, the participating NGEN agencies shall pay ECD based on the following rate schedule and cost budget.

**Table 1- NGEN Systems Operation & Maintenance Rates\***

Service Category	NGEN System Interim O&M	NGEN System Sustained O&M
<b>Section "A" Annual Labor Only Maintenance Services Cost</b>		
NGEN Systems Maintenance Services to Include:		
O&M for NGEN Systems listed in Exhibit "C" <sup>1</sup>	\$ 222,853.00	\$ 385,377.00
System monitoring <sup>1</sup>		
Network based data-backup <sup>1</sup>		
Software maintenance <sup>1</sup>		
Equipment depot repair and shipping <sup>1</sup>		
ITD technician standby <sup>1</sup>	\$ 16,922.00	\$ 16,922.00
Communication backhaul maintenance (microwave & UHF) <sup>1</sup>	\$ 33,000.00	\$ 51,000.00
Radio system administration <sup>1</sup>	\$ 65,000.00	\$ 65,000.00
<b>Section "A" Subtotal:</b>	<b>\$ 337,775.00</b>	<b>\$ 518,299.00</b>
<b>Section "B" Annual Recurring Costs</b>		
Dedicated Internet <sup>3</sup>	\$ 3,236.00	\$ 3,236.00
AT&T ASE Fiber (CalNET3 Pricing for ECD,LRLF,PBCY) <sup>3</sup>	\$ 12,300.00	\$ 12,300.00
System Monitoring Support Fees (24x7x365) <sup>3</sup>	\$ 60,000.00	\$ 60,000.00
Uni-Trends Network based tapeless data backup <sup>3</sup>	\$ 6,000.00	\$ 6,000.00
Aviat TAC Support <sup>3</sup>	\$ 6,525.00	\$ 6,525.00
Harris SUMS FX Software Support <sup>3,6</sup>	\$ 109,000.00	\$ 109,000.00
Harris TAC Priority Support (Analog & Digital) <sup>3</sup>	\$ 28,449.00	\$ 28,449.00
Cisco SmartNet/Alcatel <sup>3,5</sup>	\$ 4,000.00	\$ 4,000.00
Server Maintenance Support <sup>3</sup>	\$ 5,000.00	\$ 5,000.00
Harris Online Training	\$ 10,125.00	\$ 10,125.00
Amendment #3 Software Support	\$ 50,000.00	\$ 50,000.00
NGEN System replenishment of spare parts <sup>3,4</sup>	\$ 30,000.00	\$ 50,000.00
ITD emergency/after-hour support (T&M) <sup>1</sup>	\$ 30,000.00	\$ 50,400.00
ITD Site Fee (includes share of lease cost, utilities, site pm) <sup>1,2,3</sup>	\$ 240,057.01	\$ 240,057.01
ITD Microwave Fee (Non-NGEN circuit utilization) <sup>1,2</sup>	\$ 1,033.28	\$ 1,033.28
<b>Section "B" Subtotal:</b>	<b>\$ 595,725.29</b>	<b>\$ 636,125.29</b>
<b>Grand Total (Section "A" + Section "B"):</b>	<b>\$ 933,500.29</b>	<b>\$1,154,424.29</b>

**Table 2 - Time and Materials (T&M) Service Rates\***

FY 16-17 Technician Hourly Rate (Normal business hours)	\$ 120.00
FY 16-17 Technician Hourly Rate (After normal business hours)	\$ 180.00
Terminal Equipment Services	Price quoted on a per occurrence Time & Materials basis

\* Cost projections and rates are based on Fiscal Year 2016-17. Applicable rates are subject to change on an annual basis and shall be reviewed annually. Rate changes are based on current market vendor rates, Monterey County labor rate adjustments, and/or site fee adjustments which include (annual lease rate escalators, utility cost increases, maintenance cost increases, and/or labor rate increases).

- <sup>1</sup> - Based on Fiscal Year 16-17 ITD labor rates
- <sup>2</sup> - Based on Fiscal Year 16-17 forecast
- <sup>3</sup> - Based on vendor quotes for service
- <sup>4</sup> - Based on 15% failure rate of equipment capital cost
- <sup>5</sup> - Based on Alcatel MPLS devices at 5 simulcast sites (original ring design)
- <sup>6</sup> - SUMS FX subscription \$0 year one (warranty) and \$109k for years 2 thru 5

## APPENDIX 3 TO EXHIBIT D – NGEN SYSTEM SITES

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The telecommunications equipment sites which support the operation of the NGEN system are categorized based on two factors: 1) the agency responsible for the procurement and construction of the site (including purchase of radio equipment located at the site) and 2) the agency having fiscal responsibility for operation and maintenance of the equipment at the site. Sites are defined as:



- Category 1 Site: NGEN system(s) is (are) constructed/installed and maintained through NGEN program funding.
- Category 2 Site: NGEN system(s) is (are) constructed/installed using NGEN program funding, and is (are) maintained through funding by a specific agency. The specific agencies responsible for operations and maintenance costs are identified in this table.
- Category 3 Site: NGEN system(s) is (are) constructed/installed and maintained through funding by a specific agency. The specific agency responsible for operations and maintenance costs are identified in this table.

Upon completion of the final System Acceptance Test Plan (ATP), ITD will provide a comprehensive site equipment list to the ECUAC. The individual components and equipment that are included in this baseline inventory will collectively function and operate together to form the NGEN system.

**Table 1- NGEN System Sites**

Site Location	Digital VHF IP Simulcast	700 MHz IP Simulcast	Digital VHF Multicast	700 MHz Multicast	Analog Law	Analog Fire	Analog Fire Paging	Analog Interop
911 ECD	Primary SR10A.1 NSC A							
	7 Chnl DCP	8 Chnl DCP						
Admin Building					SNV-12	SNV-12	SNV-12	SNV-12
Anderson Peak					1 Chnl I			
Bryant Canyon			4 Chnl		Voting Rx1	Voting Rx4		
DMDC	Microwave Relay							
Fremont Peak					1 Chnl	1 Chnl	1 Chnl	1 Chnl
Huck Hill					1 Chnl	1 Chnl	1 Chnl	1 Chnl
ITD (Moffett)	Secondary SR10A.1 NSC B							
King City Tower			4 Chnl		1 Chnl	1 Chnl		
Laguna Seca	7 Chnl DCP					Voting Rx		
La Mesa		8 Chnl						
Laurel Yard <sup>6</sup>					Voting Rx			
Lewis Road Landfill			5 Chnl					
Lewis Rd (Snodgrass)					1 Chnl	1 Chnl		
Marina Coast Water (MCW)	7 Chnl							
Mount Toro		8 Chnl DCP			1 Chnl	1 Chnl	1 Chnl	1 Chnl
Pebble Beach Corp. Yard (PBCY)	7 Chnl							
Peñon Peak	7 Chnl				Voting Rx	1 Chnl	1 Chnl	
Point Sur					1 Chnl	1 Chnl	1 Chnl	
Post Ranch					1 Chnl	1 Chnl	1 Chnl	
Roberts Knoll					1 Chnl	1 Chnl		1 Chnl
Table Mountain					1 Chnl			
Watsonville PD					Voting Rx			
Williams Hill				4 Chnl	1 Chnl	1 Chnl	1 Chnl	

**LEGEND:**

	NGEN Systems
	Not part of O&M Agreement- Agency Specific Responsibility

## APPENDIX 4 TO EXHIBIT D – PHASES OF OPERATION & MAINTENANCE

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### 1. Overview

#### 1.1 Phases of NGEN O&M

Due to the scope and complexity of the NGEN project, implementation and operationalization will occur in phases. As a result and where implemented, this Agreement may apply to an interim construct of the NGEN system, or to a fully constructed NGEN system.

##### 1.1.1 Interim NGEN O&M

Interim O&M is defined as the milestone declaration by the NGEN project team that the 700 MHz system (in Multicast configuration) at Mount Toro, ECD, and La Mesa and Analog Overlay systems (Law, Fire, and Interop) are ready and capable to support real-time, on-demand and secure public safety communications.

##### 1.1.2 Sustained NGEN O&M

Sustained O&M is defined as the milestone declaration by the NGEN project team that the entire NGEN System is ready and capable of supporting public safety communications.

### 2. Interim NGEN O&M System Sites


#### 2.1 Interim O&M inclusions

Table 1 (below) indicates which sites and systems are included within the scope of Interim O&M.

*Table 1 - Interim NGEN O&M System Sites*

Site Location	VHF Simulcast	700 MHz Multicast	VHF Multicast	700 MHz Multicast	Analog Law	Analog Fire	Analog Fire Paging	Analog Interop
911 ECD	Primary SR10A.1 NSC A							
	7 Chnl DCP	7 Chnl						
Admin Building					SNV-12	SNV-12	SNV-12	SNV-12
Anderson Peak					1 Chnl			
Bryant Canyon			4 Chnl		Rx Only	Rx Only		
DMDC	Microwave Relay							
Fremont Peak					1 Chnl	1 Chnl	1 Chnl	1 Chnl
Huck Hill					1 Chnl	1 Chnl	1 Chnl	1 Chnl
ITD (Moffett)	Secondary SR10A.1 NSC B							
King City Twr			4 Chnl		1 Chnl	1 Chnl		
Laguna Seca	7 Chnl DCP					Rx Only		
La Mesa		3 Chnl						
Laurel Yard					Rx Only			
Lewis Landfill			5 Chnl					
Lewis (Snod)					1 Chnl	1 Chnl		
MCW	7 Chnl							
Mount Toro		7 Chnl			1 Chnl	1 Chnl	1 Chnl	1 Chnl
PBCY	7 Chnl							
Peñon Peak	7 Chnl				Rx Only	1 Chnl	1 Chnl	
Point Sur					1 Chnl	1 Chnl	1 Chnl	
Post Ranch					1 Chnl	1 Chnl	1 Chnl	
Roberts Knoll					1 Chnl	1 Chnl		1 Chnl
Table Mountain					1 Chnl			
Watsonville PD					Rx Only			
Williams Hill				4 Chnl	1 Chnl	1 Chnl	1 Chnl	

**LEGEND:**

<p>NGEN Systems covered under Interim O&amp;M</p> <p> Not part of O&amp;M Agreement - Agency Specific Responsibility</p>
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### 3. NGEN Sustained O&M System Sites

#### 3.1 Full Sustained O&M Inclusion:

Table 2 (below) indicates which sites and systems are included within the scope of Sustained O&M.

*Table 2 - Sustained O&M System Sites*

Site Location	VHF Simulcast	700 MHz Simulcast	VHF Multicast	700 MHz Multicast	Analog Law	Analog Fire	Analog Fire Paging	Analog Interop
911 ECD	Primary SR10A.1 NSC A							
	7 Chnl DCP	8 Chnl DCP						
Admin Building					SNV-12	SNV-12	SNV-12	SNV-12
Anderson Peak					1 Chnl I			
Bryant Canyon			4 Chnl		Rx Only	Rx Only		
DMDC	Microwave Relay							
Fremont Peak					1 Chnl	1 Chnl	1 Chnl	1 Chnl
Huck Hill					1 Chnl	1 Chnl	1 Chnl	1 Chnl
ITD (Moffett)	Secondary SR10A.1 NSC B							
King City Twr			4 Chnl		1 Chnl	1 Chnl		
Laguna Seca	7 Chnl DCP					Rx Only		
La Mesa		8 Chnl DCP						
Laurel Yard <sup>6</sup>					Rx Only			
Lewis Landfill			5 Chnl					
Lewis (Snod) <sup>6</sup>					1 Chnl	1 Chnl		
MCW	7 Chnl							
Mount Toro		8 Chnl DCP			1 Chnl	1 Chnl	1 Chnl	1 Chnl
PBCY	7 Chnl							
Peñon Peak	7 Chnl				Rx Only	1 Chnl	1 Chnl	
Point Sur					1 Chnl	1 Chnl	1 Chnl	
Post Ranch					1 Chnl	1 Chnl	1 Chnl	
Roberts Knoll					1 Chnl	1 Chnl		1 Chnl
Table Mountain <sup>5</sup>					1 Chnl			
Watsonville PD <sup>6</sup>					Rx Only			
Williams Hill				4 Chnl	1 Chnl	1 Chnl	1 Chnl	

**LEGEND:**

	NGEN Systems covered Sustained O&M
	Not part of O&M Agreement - Agency Specific Responsibility

<sup>1</sup> Not part of this O & M Agreement - Monterey County Sheriff responsibility

<sup>2</sup> Not part of this O & M Agreement - North County Fire responsibility

<sup>3</sup> Not part of this O & M Agreement - King City Fire responsibility

<sup>4</sup> Not part of this O & M Agreement - Monterey County Regional Fire District responsibility

<sup>5</sup> Category 2 Site

<sup>6</sup> Category 3 Site

**Note:** Analog Overlay systems' SNV-12 comparators were relocated from 911 Center (ECD) to the Salinas Administration Building to accommodate NGEN Digital system special requirements

# APPENDIX 5 TO EXHIBIT D - OPERATION AND MAINTENANCE PROCEDURES

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## 1. General

This exhibit sets forth specific roles and responsibilities necessary for responsible agencies and personnel to successfully provide Operation and Maintenance support for the Next Generation radio system, including the NGEN digital and Analog Overlay radio systems, backhaul infrastructure, and radio administration activities.

## 2. Roles and Responsibilities

### 2.1 Emergency Communications User Advisory Council and Agencies

The ECUAC, or such governing bodies as may succeed the ECUAC, will define the level of System maintenance and operations services required.

Participating NGEN agencies agree to use compatible and approved subscriber mobile, portable, and data equipment to connect to the NGEN System.

At times the NGEN System may need to be taken out of service to conduct required or emergency maintenance. It is the responsibility of ITD to make reasonable efforts to accommodate system utilization for a scheduled system outage. For scheduled maintenance, ITD will request ECD management approval of the outage at least 72 hours in advance of the time when the outage would occur. In the event of emergencies, ITD may perform maintenance actions that result in system outages with only minimal notification to Emergency Communications Shift Supervisor.

The participating NGEN agencies are responsible for enforcing radio communications and use discipline by the system users within their agency, including all officers, agents, volunteers, etc. The participating NGEN agencies shall ensure their system users comply with approved guidelines, procedures, and protocols governing the operation and use of the NGEN Radio System Infrastructure and subscriber equipment. Such compliance will include ensuring an optimum degree of system availability by training and taking appropriate action with system users to keep radio communications brief, to the point, and free from use for personal business.

### 2.2 ITD NGEN Operations & Maintenance Support Team

ITD is responsible under this Agreement for maintenance and operational support so that the NGEN System meets the standards as designed and tested per the final System Acceptance Test Plan (ATP). ITD shall not provide maintenance and support to rectify any deviations or deficiencies from the final System ATP unless such deviations or deficiencies are the result of substandard equipment maintenance performed by ITD.

The ITD NGEN System Support team consists of:

- ITD Radio Manager
- Tier 2 radio communication support

- Tier 1 radio communication support
- Microwave and Backhaul support
- NGEN Technical Working Group

### **2.2.1 Radio Manager**

The ITD Radio Manager has the authority to make decisions on issues related to the day-to-day operation of the NGEN System, and any urgent or emergency NGEN System operational or repair decisions, as permitted by this and any and all other memoranda of understanding or agreements.

The Radio Manager has direct responsibility for:

- All activities dealing with the operations support for portions of the shared NGEN System infrastructure that have been declared operational and transferred to an O&M responsibility, as approved by ECUAC.
- Coordinating with the ECUAC to manage the operation of System to comply with specified parameters, service levels, and metrics defined in this Agreement.
- Coordinating with the ECUAC to recommend policies, procedures, contracts, organizations and agreements to provide the service levels defined in this Agreement.
- Coordinating/cooperating with the ECUAC on processes and procedures to sustain/improve customer services. Associated processes and procedures include: access to sites; call desk procedures; service call reporting; escalation processes and rules; metrics for measuring user satisfaction and other critical components associated with providing user support; and sustaining and restoring operations to meet user needs.
- Coordinating with participating NGEN agencies to establish metrics and gather data that demonstrate compliance with this Agreement.
- Reporting results and providing feedback on operational issues and metrics to participating NGEN agencies and the ECUAC on a regular basis.

General Responsibilities: The ITD Radio Manager has general responsibility for:

- Annual operations budget development for sustaining and operating the NGEN system.
- Development and implementation of quality control plans.
- Development of quarterly operational and maintenance reports to include, at a minimum, system availability calculations and issues and concerns that require ECUAC input, response, and awareness.

- Directing resources to meet the operational needs of NGEN agencies, as stated in this Agreement, and any other applicable contract statements of work and memoranda of understanding or agreements.
- Management of Service Delivery - This includes ensuring that all service entities utilized are properly trained, documented, and capable of responding to NGEN System service requirements.
- Technical management, operation and oversight of the shared NGEN System infrastructure hardware and software, including ensuring that the NGEN System technology performance meets user operational needs.
- Transition Management - If new sites are added to this O & M Agreement, it will be the responsibility of the ITD Radio Manager to work with the ECUAC to ensure that consistent procedures are implemented for successful service transition. This responsibility includes developing customer support procedures and ensuring that an effective communications plan has been presented to all resources impacted by the transition.
- Tracking Service History - In addition to managing NGEN System inventory by site, the Radio Manager is also responsible for tracking service history. This information will be managed on an ongoing basis and will be used to recommend upgrades.
- Acquiring New Equipment – the ITD Radio Manager will assist users in ordering radio equipment.
- Attendance at NGEN project meetings, as requested, and with designated representatives of NGEN System user groups, to understand new communication needs and to communicate NGEN System information, conduct fleet map work sessions, and address questions, complaints, or clarifications about the NGEN System and other topics.
- Annual preparation, with the collaboration of user personnel, of a survey to determine user satisfaction level with the coverage, features, functions, usability, management and service response for the NGEN System. Responses to the survey will be used to provide recommendations to ECUAC for improvements, changes, upgrades or additions needed for the System. If the user survey indicates that user satisfaction level is inadequate, in the judgment of ECUAC, the ITD Radio Manager will initiate action to identify the areas of concern, develop a corrective action plan, and take necessary steps to resolve unsatisfactory areas that are within ITD's control.
- Presentation, on a quarterly basis, to the ECUAC, system details and information regarding performance, O&M issues, system trouble ticket statistics, and planned or ongoing NGEN system enhancements, modifications or upgrades.

Technology Planning: The ITD Radio Manager has responsibility for developing and implementing plans related to upgrade or enhancement of the NGEN System as follows:

- Work closely with ECUAC to assist in developing a long-term technology plan. The ITD Radio Manager will provide on a scheduled basis (at least annually) a technology review and management presentation. This presentation will review current state of communications, considerations for planned upgrades or changes, and current or future technologies available for consideration.
- Keep abreast of new technology developments, advancements, announcements, standards, and operational best practices in NGEN-related technology.
- Meet periodically with ECUAC and appropriate user groups to discuss and evaluate new technology for applicability to the NGEN System. The ITD Radio Manager will be present during NGEN System equipment testing or product reviews at the designated user facility and facilitate the test plan (if requested), check-off procedures and the sign-off documents.
- Evaluate changing technical and applicable NGEN mission requirements to recommend how the NGEN System can be used more effectively, and will develop a plan, in cooperation with the ECUAC, for the necessary modification of hardware/software of the existing wireless NGEN System equipment.

### **2.2.2 Tier 2 Radio Communication Support**

This role will be shared by senior-level Communication Technicians working in the ITD Radio Shop. This support tier will be required to translate system communication needs to technical requirements; to administer, install, maintain, manage, and repair NGEN systems; and to maintain systems' integrity at specified functionality and performance levels, as required. The Tier 2 Radio communication support technicians have direct responsibility for:

- FCC frequency maintenance
- System database management for all member agencies and NGEN System equipment.
- Administration of all system control server systems of the NGEN System.
- Administration of and provision of radio support and administration for County Radio Network systems in multiple sites, including systems interconnected with other public agencies that interact with one another; and recommending and coordinating technological standards for the NGEN System.
- Providing comprehensive system reports of the NGEN System status for the purpose of determining systems loading by site, the technical integrity of each site, and notifying systems network personnel of any sites requiring maintenance based on these diagnostic reports; using NGEN systems databases to develop meaningful reports for presentation to ECD and the ECUAC.

- Consolidated Reporting - consolidating and presenting to users all required reporting data on an agreed-upon basis. This information includes repair service history, performance metrics, benchmarking data, and inventory management.
- Notifying the ITD Radio Manager, or user of any system, about malfunctions that may affect the NGEN System/System regional area.
- Managing the NGEN System database elements, including subscriber IDs, talk group IDs, and the various parameters that relate to their effective operation.
- Providing monthly reports to the ITD Radio Manager on the operation of the NGEN System, NGEN System availability calculations, financial status, and any issues that need ITD Radio Manager or higher review, input or decision.
- Conducting periodic database backups.
- Providing inter-agency coordination and administrative activities.
- Acting as the focal point to collect system performance metrics.

### **2.2.3 Tier 1 Radio Communication Support**

This role will be performed by intermediate-level Communication Technicians working in the ITD Radio Shop. This support tier will be required to execute NGEN System communication needs based on overall direction from Tier 2 and management personnel in order to administer, install, maintain, manage, and repair NGEN systems and maintain NGEN systems' integrity at the specified functionality and performance levels, as required. The Tier 1 Radio communication support will:

- Provide technical and operational support. Tier 1 support will use the ITD Help desk to provide Level 1 support, including creating problem tickets and work orders and assigning responsibility to the appropriate Level 2 Technical Support Team resource, as necessary.
- Use appropriate ITD internal groups to provide Level 2 server, network, and infrastructure support services.
- Monitor the NGEN System's and its components' normal operations.
- Participate in the diagnosis of NGEN System performance problems and the development of corrective action recommendations.
- Provide technical support and operational availability 24 hours/day, 365 days/year, as appropriate for Priority Category Severity Level.

- Respond to requests for technical support in accordance with required response times and performance levels.
- Advise users of procedures that will be used for NGEN System restoration or issue resolution.
- Act as a single focal point for assigned incidents, and manage assigned incidents to resolution.
- Monitor performance of the entire NGEN network for normal operations, particularly the performance of common equipment
- Provide timely information to the ITD Radio Manager and user point of contact on any NGEN system issue that arises, or repair/maintenance issues related to common NGEN equipment.
- Provide 24x7 monitoring of all servers and server appliances that support the NGEN radio network at both NSC locations (ECD and ITD).
- Provide labor to install and test software upgrades, for both corrective and enhancement purposes.
- Assist the ITD Radio Manager with establishing and maintaining a comprehensive and accurate asset management system.

#### **2.2.4 Communications Backhaul Support**

ITD will maintain an NGEN communications backhaul system which includes microwave and UHF backhaul systems, and will provide preventative maintenance for the NGEN communications backhaul system at least once a year, or as required.

On an annual basis, the ITD shall perform operational tests and alignments on the NGEN system backhaul network equipment to optimize and ensure the equipment meets OEM specifications.

#### **2.2.5 NGEN Technical Working Group**

The ITD Radio Manager chairs the NGEN Technical Working Group (Figure 1) and presents the decisions, analysis, and strategic input of the working group to the ECUAC. The Technical Working Group shall assist the ITD Radio Manager with radio system administration services which include, but are not limited to, the tasks listed below. It shall:

- Manage all databases and logistical data associated with the P25 IP trunking radio system including:
  - Unified Administration System database

- Fleet Map Maintenance, including integration with existing County, State and Federal frequency standards and programming
- Maintain, update, assign and control all radio identifications
  
- Work with participating NGEN agencies' delegated administrators, and provide System database management support on elements including: Subscriber IDs, talk group IDs, and similar parameters
  
- Assist the ITD Radio Manager with AES encryption coordination and distribution.
  
- Review system reports prepared by the ITD Radio Manager for the purpose of determining systems loading by site, and the technical integrity and operational capability of each site.
  
- Assist with configuration and testing of subscriber units on the trunked NGEN system
  
- Advise and assist Harris Corporation in matters of infrastructure planning, as needed
  
- Assist with troubleshooting and investigation of NGEN system-related complaints
  
- Assist the ITD Radio Manager with Terminal Equipment issues and provide technical input to Harris Corporation engineers, contractors, and other vendors as needed
  
- Provide technical review of quarterly NGEN system analysis prior to scheduled presentations to the ECUAC.
  
- Other tasks as identified

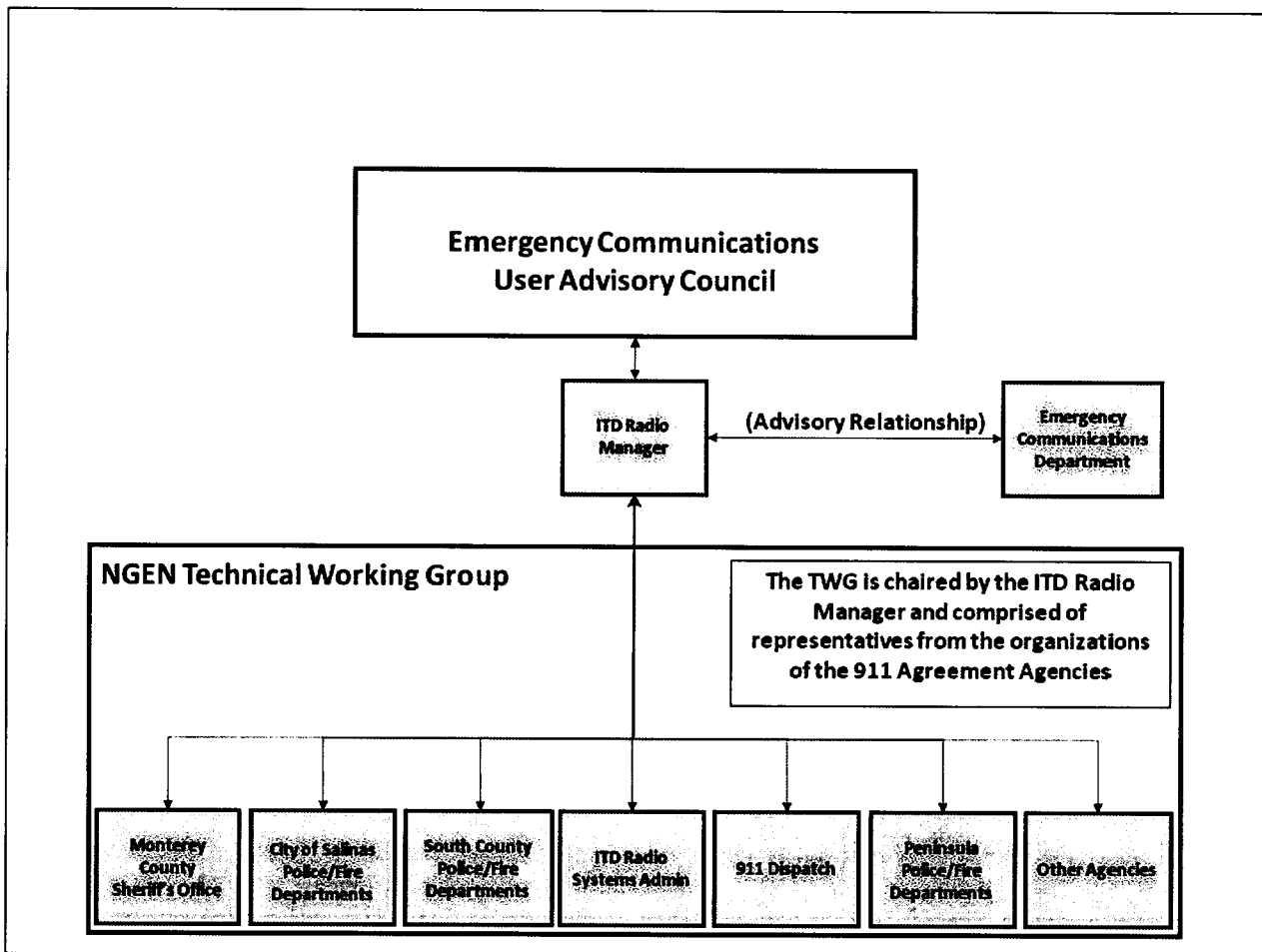


Figure 1- NGEN Technical Working Group

### 3. Processes

#### 3.1 Overview of NGEN System Operations and Maintenance Procedures

NGEN System Operations and Maintenance procedures specify tasks/activities and associated responsibilities as identified below.

#### 3.2 Incident Management

ITD ticketing system “ServiceNow” will be used by all support team levels (where approval and technical access has been granted) to record and track problem reports, inquiries or other types of calls received for support. This provides ITD with the ability to provide metrics with regard to this Agreement. The NGEN System infrastructure support process includes Help Desk Technical Support, call taking/tracking, and dispatch operations.

Participating NGEN agencies and personnel can contact the ITD Help Desk to request service, request information, or inquire on an open case by telephone at 1-831-796-1400 or can send an email ticket to support@co.monterey.ca.us.

### **3.3 Billing**

In accordance with the NGEN Scope of Work (Appendix 1 to Exhibit D), billing of services, including parts and equipment will follow specified billing processes.

For equipment and services that fall within the scope of this Agreement, the billing process will be executed on a monthly basis as agreed upon by ITD and ECD. ECD shall, in turn, invoice participating NGEN agencies for services falling within the scope of this O & M Agreement. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

For equipment and services that are not within the scope of this Agreement (e.g. outside normal service hours, terminal installation, etc.), billing will be handled on a time & material basis charged at the current shop rate for labor. ECD shall, in turn, invoice participating NGEN agencies for equipment and services outside the scope of this O & M Agreement. Such invoicing will take place on the same schedule and with the same advance notice as ECD provides to participating NGEN agencies for non-NGEN services.

ITD billing will leverage the ServiceNow incident management system, which provides management oversight and customer transparency on the current status of all incidents and work orders. For those maintenance activities that are routine or scheduled (microwave/repeater PMs, daily monitoring, etc.), ServiceNow recurring project tasks will be established to ensure time tracking is visible, for overall budgeting purposes.

### **3.4 Asset Management**

The ServiceNow Asset Management system will be utilized to effectively track and manage NGEN System assets that are utilized for operations and support, including active and spare NGEN System equipment.

### **3.5 Change and Configuration Management**

Change and configuration management shall be implemented by ITD, in coordination with Technical Working Group, the ECUAC and participating NGEN agencies, where approval and technical access has been granted to record and track all requests or actions required for support. These actions may include add/delete or change requests regarding the NGEN network, infrastructure, consoles, radio sites, connectivity bandwidth, construction, permitting, liabilities, etc. This provides the ITD NGEN Support team with the ability to provide status with regard to NGEN System changes and configurations for this Agreement.

Participating NGEN agencies that have, or require the use of, encryption or over-the-air-rekey must establish their own internal procedures to ensure any asset changes, such as adding/deleting of radios, are kept current in the appropriate database. Security and overall management of total NGEN System assets requires that all users understand and follow these procedures.

### **3.6 Metric Reporting**

The Radio Manager will report on NGEN system operations and issues on a quarterly basis to the ECUAC. Issues requiring action shall be prioritized and addressed by the ITD Radio Manager, as prioritized and directed by the ECUAC.

The ITD Radio Manager will provide NGEN system performance reports that are based on past and current NGEN operational and system data. Written status reports of ongoing projects or technical solutions shall be submitted to the ECUAC quarterly, or as required. The data will be presented graphically and will focus on NGEN system performance and fault management.

The ITD Radio Manager will provide recommendations to the ECUAC based upon trend analysis to improve availability, reliability, and serviceability of the NGEN system. Reports will be configured to indicate certain pre-designated parameters as directed by the ECUAC to prevent unauthorized access to NGEN System information. The information shall include, but be limited to:

- Baseline metrics to measure the “healthy” operation of the NGEN system (this is predicated on monitoring of the system to obtain the appropriate data)
- NGEN equipment, site, site link, or other failure trends
- Early identification of NGEN system performance degradation
- NGEN service-level performance information

The ITD Radio Manager will also utilize this information to make recommendations to the Technical Working Group and the ECUAC for improving network operations and improving cost-effective, proactive approaches to NGEN system maintenance and support.

## APPENDIX 6 TO EXHIBIT D – GLOSSARY OF TERMS

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**ECUAC: Emergency Communications User Advisory Council, as defined in the “Memorandum of Agreement Re Next Generation Radio System Joint Governance and Financing, paragraph 1:”** provides oversight regarding the dispatch and dispatch-related operations to 28 participating Monterey County, non-County entities, and city agencies.

**NGEN Radio System Infrastructure (also referred to as the NGEN System):** NGEN Network Switching Center components; Interoperability Gateway; Radio frequency site equipment (reference Appendix 3 to Exhibit D, including (VHF, 700 MHz Simulcast and Multicast, and Analog Overlay systems); fixed station equipment and facilities; backhaul systems including microwave, fiber and radio frequency links and supporting equipment; Wide Area Network components including computer servers, software, database and network-based backup systems.

**NSC (Network Switching Center):** The NSC is a critical component of the NGEN System comprising a virtualized core with various virtual machines supporting management, security and core real-time functionality. The NGEN system will comprise two redundant NSC systems; NSC A (primary) will be hosted at the 911 Center; NSC B (secondary) will be hosted at 1590 Moffett St within ITD data center space.

**Radio:** a Project 25 compliant control station, console, mobile or portable radio assigned to the NGEN system that has a unique identification number.

**Talk group:** a unique group of radio users that can communicate with each other.

**Terminal equipment:** defined as vehicular-mounted radios, personal portable radios, vehicular repeaters, portable radio chargers, base stations, and other mobile equipment.

**Member/User Agency/participating NGEN agency:** an agency, person, group, organization or other entity that receives public safety radio dispatch and associated services from Monterey County. The terms user and member are synonymous and interchangeable.