



**MOTOROLA SOLUTIONS**

Proposal

**DuPage County, Illinois**

# **AES Encryption Project Phase 2**

## **DuPage County ETSB**

March 27, 2026

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PS-000176501

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March 27, 2026

Ms. Linda Zerwin  
Executive Director  
DuPage County ETSB  
420 N. County Farm Road  
Wheaton, IL 60187

RE: DuPage County ETSB Phase 2 Encryption Plan

Dear Ms. Zerwin:

Motorola Solutions, Inc. ("Motorola Solutions") is pleased to have the opportunity to provide the DuPage County ETSB with quality communications products and services.

Motorola Solutions' proposal includes Managed Services for Phase 1 of the DuPage County ETSB Encryption Project. These services will define and scope the final implementation plan for DuPage County's encryption project.

The services described in this proposal shall be provided under the terms and conditions stated in the state of Illinois/STARCOM21 contracts CMT2028589/P-82865. The DuPage County ETSB may accept this proposal by issuing a purchase order that specifically references the aforementioned contract. Alternatively, Motorola will be pleased to address any concerns that the DuPage ETSB may have regarding this proposal. The pricing in this proposal shall remain valid for 60 days from the date of the cover letter. Any questions can be directed to your Motorola Account Executive, Chris Chisnell, at (847) 489-9379.

We thank you for the opportunity to furnish the DuPage County ETSB with our products and services. Our goal is to provide you with the best products and services available in the communications industry.

Sincerely,

Dominick Storelli  
Illinois Sales Manager  
Motorola Solutions, Inc.

# AES Encryption Project Phase 2

## Objective

This DuPage County AES Encryption Project Phase 2 is to convert the system to a 256-bit Advanced Encryption Standard (AES-256). This AES symmetric encryption algorithm is widely recognized for its robustness and efficiency in safeguarding sensitive land mobile radio voice communications. To better assess the magnitude of this project, the effort is broken into phases. This proposal covers Phase 2 of the project. It covers the execution of the final Encryption Deployment Plan created in Phase 1.

Below is the outline of major tasks, divided into hierarchical levels, for Phase 2.:

## Statement of Work

This section, known as the Statement of Work (SOW), describes the deliverables to be furnished to the DuPage County ETSB, and the tasks to be performed by Motorola Solutions and DuPage County ETSB to implement the Motorola Solutions Phase 2 solution.

Specifically, this SOW provides:

- A summary tasks to be completed within the project.
- A list of the deliverables associated with the project.
- A description of the responsibilities for both Motorola Solutions and Douglas County ETSB.

This SOW is a working document that may be revised as needed to incorporate any changes associated with contract negotiations, Contract Design Review (CDR), and any change orders that may occur during the execution of the project

### Task 1 – Prior to going live Tasks and Responsibilities

#### Motorola Solutions Responsibilities

- Create a fleetmap detailing the changes for each agency to be shared before the change. Get approval from ETSB and the key agency leads for the planned codeplug changes.

- Create codeplugs containing both the current and new secure channel programming for each agency.
- Push an updated codeplug, containing both the current and new secure programming to each agency.

### **Motorola Solutions System Manager in Conjunction with DuPage County ETSB Responsibilities**

- Obtain list of talkgroups to be encrypted with the new AES256 encryption plan from ETSB.
- Confirm with ETSB the list of agencies this change will be sent to, ensuring none are overlooked including any Fire radios.

## **Task 2 – Key Management Facility (KMF) Pre-Work Tasks and Responsibilities**

### **Motorola Solutions Responsibilities**

- KMF is to be modified to contain all the consoles OPs in the DuPage County dispatch centers with the appropriate RSI information that will be entered into each of the OP consoles Key Password Vault Manager to facilitate the process of rekeying the console from the KMF in the core.
- Obtain the Universal Key Encryption Key (UKEK) from the KMF This information is required to allow encrypted exchanges between each console OPs and the KMF.
- Obtain the OTEK Keystore Password.

## **Task 3 – Build New Keyfile Gen Encryption File for Console Ops Tasks and Responsibilities**

### **Motorola Solutions Responsibilities**

- Change CKR1 to CKR 2401 for all keys. This is an encrypted file generated by the SDI team that contains the original key information for each console OP to set up the secure rekeying of the consoles by the KMF..
- Assign all new AES256 encryption keys in the KeyfileGen application to generate new Encryption Key File to be used in all console Ops.

## **Task 4 – Modify Console OPs for Secure, Over The Ethernet Keying (OTEK) Tasks and Responsibilities**

### **Motorola Solutions Responsibilities**

- Install new key file into consoles, modify Key password Vault Manager for OTEK operations in each console position and test for proper operation. Each position will have the following process completed to get the upgrade done:
  - Take the unit out of service. Obtain the proper authentication and current configuration used to be able return the unit back to service after upgrade is complete.

- Log out of the application and the windows account. Log back into windows with a domain administrator account information.
- Copy new key file to appropriate location on hard drive.
- Run the Key Password Vault Manager application and enter all the required information on the "Software OEK Configuration" tab to allow operation with the KMF that will be used to update encryption key information. Also update KeyFile information on the "KeyFile Generator KeyFile Passphrases" tab of the application by selecting the new .7z file and entering the proper Passphrase for the new file.
- Log out of the domain administrator account and log back on as the user that was noted in the above step. Log back into the dispatch application with the same user credentials and select the configuration noted in the above step. After the application is fully running, test for proper operation and release it back to the customer for normal use. Assign all new AES256 encryption keys in the Keyfile Gen application to generate new Encryption Key File to be used in all console Ops.

## **Task 5 – Train Radio Users – Encryption Migration Background Preparation Tasks and Responsibilities**

### **DuPage County ETSB Responsibilities**

- Train radio users on the proper operation of subscribers to correctly and efficiently navigate the controls to the proper location for the clear channels during go-live and the new encrypted channels after go-live is complete. Detailing the changes for each agency to be shared before the change.

### **Motorola Solutions in Conjunction with DuPage County ETSB Responsibilities**

- Test the go Live Process by using a console and subscriber on "test" talkgroups, the cutover (go-live) can be tested to confirm the actual process and timing for the console and subscribers. This test will include talkgroups that are currently clear and using the ADP algorithm that will be transitioning to the AES256 algorithm. Customer to provide console operator position, subscriber and test talkgroups. After testing the console, talkgroups and subscriber will return to normal operating status.

## **Task 6 – Go Live Process – Update Provisioning Manager to Include New Secure Talkgroups Tasks and Responsibilities**

### **DuPage County ETSB Responsibilities in Conjunction with Motorola Solutions PM**

- The subscribers being used by all the agencies that will have the new encryption keys shall change from their primary dispatch channel to the primary local channel that has been preplanned for the go-live process and is listed in the "Encryption Migration" chart.
- When they have moved to the appropriate clear channel, TC to perform roll call to assure on duty personnel are on the proper channel.

- The subscribers will remain on these clear channels for the duration of the console portion of the go-live until the first group of consoles has been changed over to the new configuration.
- When the Motorola team has completed the system work, a restart of the consoles will be required to effect the changes. The predetermined consoles will then be restarted and tested for proper operation on all the newly keyed talkgroups with a subscriber used for testing.
- The customer assigned specific test team to check the proper encryption operation of the modified channels and assure normal communications prior to the main Go-Live.
- Signal the TCs to move subscribers from the temporary local channels back to the normal channels once the system update is complete.
- Have each department check with its respective TCs to ensure proper communication is working.

### Motorola Solutions Responsibilities

- System Upgrade Work in the provisioning manager: The Motorola team will then effect the changes to the radio system's Provisioning Manager by assigning the new Talkgroup/Multigroup Capabilities Profile to the planned talkgroups slated for the encryption upgrade. This will take place transparently to the users on the system as the changes that will be taking place will be on the talkgroups vacated as the users were moved to the clear channel.
- Fallback Operations: If an issue arises requiring the system to return to its pre-go-live condition the following steps must be completed. The subscribers and consoles will have to be reset by changing the Provisioning Manager back to have the original CKR attached to the appropriate access profile, installing a new encryption file into the console and restarting the computer/application, and also the subscribers changed back to the original talkgroups selecting the original channel zone.
- Dispatch Console Work: When an appropriate number of consoles have been restarted and tested, dispatch operations can be switched over to the new encrypted channels.

## Task 7 – Post go live process to Include Update Subscriber Templates and Second Touch Reprogramming to Clean Up Code Plugs Tasks and Responsibilities

### Motorola Solutions Responsibilities

- Any Dispatch center related cleanup for the migration.

### Motorola Solutions System Manager in Conjunction with DuPage County ETSB Responsibilities

- Submit any alias updates, any user select zone changes. Capture any changes to the codeplug prior the Second Touch reprogramming of the subscriber group county wide.
- Be aware of police on local talk groups, including some fire talk groups.
- Subscriber second touch reprogramming: This is required to remove the old channels that either had the old secure information or did not have any secure information originally. This will clean up the subscribers codeplug for the final, permanent operation.

# Pricing Summary

DESCRIPTION	PRICE
Project Manager Labor for Tasks Outlined Above	\$37,863.80
Field Engineer Labor for Tasks Outlined Above	\$37,863.78
State Contract Discount	(\$12,116.41)
<b>Total Solution</b>	<b>\$63,611.17</b>

## Payment Terms: IL Government Prompt Payment Act 50 ILCS 505

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution. If Customer has purchased additional Professional or Subscription services, payment will be in accordance with the applicable addenda. Payment for the System purchase will be in accordance with the following milestones.

### System Purchase (excluding Subscribers, if applicable)

1. **50% of the Contract Price due upon contract execution (due upon effective date);**
2. **50% of the Contract Price due upon installation of equipment; and**

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

Motorola shall make partial shipments of equipment and will request payment upon shipment of such equipment. In addition, Motorola shall 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 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 by state law.

Due to significant market and tariff volatility, as well as fluctuations in the cost of energy and raw materials including, but not limited to, steel, copper, finished wood, and concrete, Motorola Solutions reserves the right to equitably adjust the contract price, completion schedule, and/or contract requirements. Additionally, Motorola Solutions reserves the right to apply a fuel surcharge to quoted freight rates based on the prevailing diesel cost at the time of shipment.

### For Lifecycle Support Plan and Subscription Based Services:

Motorola will invoice Customer annually in advance of each year of the plan

# Contractual Documentation

The products and services described in this proposal shall be provided under the terms and conditions stated in the state of Illinois/STARCOM21 contracts CMT2028589/P-82865.