

CITY OF MESQUITE PROJECT PLAN

SECTION 1 Overarching Description of Project Plan:

The overall goal of this project is to begin the implementation of ESInet and NG9-1-1 in our current Vesta system. The allocated funding will cover a majority of the first-year implementation and software costs. Currently, the City of Mesquite is in Stage 1 – Initiation (Technical Assessment and Readiness Completed & Final Pricing and Cost Model Completed) of NG9-1-1 implementation. We are not currently connected to an ESInet.

SECTION 2 Overarching Project Plan—Detailed Subprojects

Implementing ESInet and NG911

Subproject 1: Network – Funds to cover the monthly recurring costs associated with implementing and maintaining the City’s ESInet capabilities. The allocated funding will support 18 months of ESInet subscription costs. This is a critical component of the NG911 infrastructure and reliable IP-based network for emergency communications. It enables advanced capabilities such as enhanced call routing, multimedia communications and integration with geospatial data for precise location-based call handling.

- a. Total Subproject Cost: **\$47,320.20 (1 Year & 6 Months Subscription)**
- b. Total Included Internal Direct Costs (if any): NONE
- c. Total Included Indirect Costs (if any): NONE

Line Items 1-5

Subproject 2: 9-1-1 Call Routing and Location – Funds are allocated to remediate road centerlines and address points to align with NENA standards and NGCS geometry and attribution expectations, ensuring compliance with NG911 GIS onboarding requirements for both Mesquite and Sunnyvale. This includes validating and standardizing GIS datasets, correcting geometry and attribution errors, and standardizing naming conventions to meet NENA NG911 Data Model standards. The project also involves reviewing and reconciling PSAP, provisioning, emergency service, and municipal boundaries to eliminate overlaps and gaps for seamless routing, conducting automated and manual quality control processes to resolve errors, and preparing GIS data for integration into NG911 Core Services.

Additionally, a framework for ongoing GIS data updates and synchronization with local addressing authorities will be developed to maintain NG911 readiness, alongside providing training and onboarding support to GIS and ECC staff in both jurisdictions to ensure continued compliance with NG911 standards and readiness for future updates.

- a. Total Subproject Cost: **\$11,158.00 (Non-Recurring One-Time Cost)**
- b. Total Included Internal Direct Costs (if any): NONE
- c. Total Included Indirect Costs (if any): NONE

Line Item 9

Subproject 3: Next Generation 9-1-1 Core Services (NGCS) – Funds to cover the monthly subscription costs for implementing and maintaining essential services required to receive and process 9-1-1 calls on the ESInet. The allocated funding will support 16 months of NG911 Core Services subscription costs. These services include PSAP population-based charges, call routing based on population, and connectivity for secondary and backup PSAPs. This funding ensures the secure delivery of 9-1-1 calls and associated data to the appropriate PSAP based on population density and geographic location. It also provides redundancy to maintain uninterrupted service through secondary and backup PSAPs.

Additionally, it ensures alignment with NG911 requirements for modernized call handling, routing, and data management via the ESInet. The funding supports a scalable, population-based cost structure that can adapt to changes in population or call volume, ensuring sustainable and reliable service for both Mesquite and Sunnyvale.

a. Total Subproject Cost: **\$289,504.00 (1 Year & 4 Months Subscription)**

b. Total Included Internal Direct Costs (if any): NONE

c. Total Included Indirect Costs (if any): NONE

Line Items 6-8

Subproject 4: PSAP 9-1-1 Call Handling Systems and Applications – Funds to integrate and implement an advanced 9-1-1 call handling system that bridges both legacy and IP-based technologies. This upgrade will enhance the capabilities of the Public Safety Answering Points (PSAPs) by incorporating critical features such as real-time mapping for accurate caller location tracking, Text-to-9-1-1 capabilities to support emergency communication for individuals who cannot make voice calls, multimedia functionality to handle images and video from emergency callers, and comprehensive logging and recording tools to improve quality assurance and compliance with public safety regulations.

The funding will support the addition of a Vesta workstation for the Town of Sunnyvale, ensuring seamless integration with the regional 9-1-1 system and enhancing their emergency response capabilities. Additionally, Activity View will be deployed to provide real-time monitoring of call activity, improving operational awareness and efficiency. The project also includes equipping three additional workstations at Mesquite B with Vesta technology to increase capacity, improve redundancy, and enhance call-taking capabilities.

a. Total Subproject Cost: **\$149,685.91 (One-Time Cost)**

b. Total Included Internal Direct Costs (if any): NONE

c. Total Included Indirect Costs (if any): NONE

Total Cost for Project: \$497,668.11

SECTION 3 Project Plan/Subproject Explanatory Notes

Subproject 1: Network

- Reconfigure the current network for ESInet compatibility.
- Enable advanced capabilities such as enhanced call routing, multimedia integration and real-time geospatial data access.
- Improve resiliency and interoperability between PSAPs.

Total Cost: \$47,320.20 (1 Year & 6 Months Subscription)

Subproject 2: 9-1-1 Call Routing and Location

- Remediate road centerlines and address points to match NGCS requirements.
- Standardize attribute schema and eliminate errors in GIS data for seamless call routing.
- Validate PSAP, emergency service and municipal boundaries to ensure accurate jurisdictional routing.
- Conduct automated and manual quality control process for GIS accuracy.
- Establish an ongoing GIS maintenance framework in house for long-term NG911 compliance.

Total Cost: \$11,158.00 (One Time Cost)

Subproject 3: Next Generation 9-1-1 Core Services (NGCS)

- Cover PSAP population-based charges and support geographic call routing.
- Ensure redundancy and secondary PSAP connectivity for back-up operations.
- Align Mesquite and Sunnyvale PSAPs with NG911 compliance standards for call handling, data integration and service continuity.
- Implement a scalable funding model that adapts to changes in call volume and jurisdictional needs.

Total Cost: \$289,504.00 (1 Year & 4 Months Subscription)

Subproject 4: PSAP 9-1-1 Call Handling Systems and Applications

- Deploy a Vesta workstation for the Town of Sunnyvale to improve call routing and emergency response.
- Implement Activity View, a real-time call monitoring tool for operational oversight.
- Equip three additional workstations at Mesquite B with Vesta for improved redundancy and call-handling capacity.
- Integrate Text-to-911, multimedia (images and video), and logging/recording features for enhanced emergency communication.
- Ensure compliance with NG911 industry standards for modern call handling, response, and data management.
- Provide comprehensive training for PSAP staff on new system functionalities.
- Ensure any prepaid warranty and/or service agreements aligns with our agency's scheduled hardware refresh in 2027 to facilitate a seamless transition.

Total Cost: \$149,685.91 (One-Time Cost)

Miscellaneous Notes

- Successful implementation of ESInet (Subproject 1) is a prerequisite for activating NGCS (Subproject 3).
- GIS remediation (Subproject 2) must be fully completed and validated before NG911 Core Services (NGCS) can function properly.
- Coordination between Mesquite, Sunnyvale, and state-level 9-1-1 authorities is required for compliance and system integration.

Project Timeline by Subproject

Subproject	Start Date	End Date
Subproject 1: ESInet Network Implementation	March 2025	September 2025
Subproject 2: 9-1-1 Call Routing & GIS Services	March 2025	December 2025
Subproject 3: NG911 Core Services (NGCS)	October 2025	June 2026
Subproject 4: PSAP Call Handling Systems & Applications	June 2026	December 2026

Start Date: March 2025 – December 2026