

**Attachment C –  
Specifications  
RFx 3000024147**

*(Revised per Addendum dated (02/04/2025))*

**Scope of Work:**

The Contractor shall provide all labor and materials to install a new UHF radio system for the Eastern Louisiana Mental Health System (ELMHS).

**Project Locations:**

**Location 1:**

ELMHS Bienville Building  
4502 HWY 951  
Jackson, LA 70748

**Location 2:**

ASSA Building  
5226 HWY 10  
Jackson, LA 70748

**Specifications:**

The Contractor shall install the repeater antenna approximately 200 feet atop a water tower located at **Location 1**.

Two base stations shall be installed at the Bienville Building at **Location 1** and the ASSA Building at **Location 2**, each featuring antennas mounted on towers or poles approximately 75 feet from the respective base stations by the Contractor.

Regarding the installation of the second base station at **Location 2** for our UHF radio system. This base station shall be located approximately 5 miles from **Location 1** and shall include a Bidirectional Digital Amplifier (BDA) to enhance signal strength.

The antenna for the BDA shall be mounted approximately 75 feet away, with six indoor antennas installed throughout the ASSA building at **Location 2**, each positioned between 50 to 100 feet from the BDA.

This project shall also incorporate 500 portable radios, all programmed to communicate with the repeater.

**Key details of the installation include:**

1. **Antenna Specifications:** The antenna shall be mounted securely at the top of the water tower, positioned to optimize performance and coverage.
2. **Safety Protocols:** The Contractor shall follow strict safety guidelines and utilize appropriate personal protective equipment (PPE) during the installation process.

3. **Testing and Commissioning:** Once the installation is complete, thorough testing shall be conducted by the Contractor to ensure optimal functionality of the antenna.

**Personal Protective Equipment (PPE):** The Contractor shall ensure that all personnel are equipped with appropriate PPE, including helmets, harnesses, gloves, and safety glasses.

**Climbing Gear:** The Contractor shall utilize certified climbing gear, including harnesses, ropes, and lanyards that meet industry standards.

**Training:** Only trained and qualified personnel shall perform the climbing tasks. The Contractor shall ensure that all installers have completed safety training relevant to tower climbing.

**Weather Conditions:** Climbing operations should be postponed in inclement weather or unsafe conditions. A thorough assessment of weather forecasts shall be conducted by the Contractor before commencing work.

**Emergency Procedures:** The Contractor shall familiarize all workers with emergency procedures, including communication protocols and rescue plans in case of an incident.

### **Installation of antennas on the roofs of Bienville and ASSA buildings.**

#### **Installation Details:**

1. **Antenna Specifications:**
  - The Contractor shall securely mount the antenna on the roof, positioned to maximize signal coverage and performance.
2. **Preparation:**
  - Prior to installation, a site assessment shall be conducted by the Contractor to ensure compliance with safety regulations and structural integrity.
3. **Safety Protocols:**
  - All personnel involved shall adhere to strict safety measures, including the use of personal protective equipment (PPE) and compliance with safety guidelines during the installation process.
4. **Post-Installation Testing:**
  - Following the installation, comprehensive testing shall be conducted by the Contractor to ensure the antenna functions effectively and meets our performance standards.

**Installation of a repeater, duplexer, and backup battery**

**Installation Details:**

**1. Repeater Installation:**

- The repeater shall be installed by the Contractor at the base of the water tower, ensuring optimal coverage and signal strength for our communication network.

**2. Duplexer Setup:**

- A duplexer shall be integrated with the repeater by the Contractor to allow simultaneous transmission and reception, enhancing overall efficiency.

**3. Backup Battery Installation:**

- A backup battery shall be installed by the Contractor to ensure uninterrupted operation of the repeater during power outages. This shall include secure mounting and proper connections to maintain reliability.

**4. Equipment Specifications:**

- All equipment shall meet industry standards and be suitable for operational requirements.

**5. Testing and Commissioning:**

- After installation, comprehensive testing shall be conducted by the Contractor to ensure that all components function effectively and meet performance expectations.

**Mobile Radio/Base Station/Antenna**

Two base station radios shall be installed by the Contractor. These radios must meet the following requirements:

**1. Connectivity Requirements:** The radios shall support the following connectivity options:

- Analog and Digital Conventional
- MPT and XPT Trunking
- DMR Tier II and Tier III Trunking
- IP Multi-Site Connect
- DMR Simulcast Systems

**2. Power Output:** Each radio must provide a minimum of 45 watts to ensure effective communication range and clarity.

**3. Installation:** Radios shall be installed in a desktop dock with a power supply for reliable operation.

4. **Channel Capacity:** The radios should support a minimum channel capacity of 1,024 channels (approximately 512 Analog and 512 Digital) to accommodate diverse communication needs.
5. **Zone Capacity:** The radios must support a minimum of 64 zones, with approximately 256 channels per zone, allowing for efficient channel management.
6. **Durability Standards:** The radios must meet an IP54 rating for dust and water resistance and comply with MIL-STD-810G standards for ruggedness in challenging environments.
7. **Encryption:** Optional advanced end-to-end digital encryption (128/256-bit) compliant with DMRA standards should be available.
8. **Warranty:** Each radio must come with a minimum comprehensive three-year warranty, providing assurance of quality and support.

#### **Repeater/Duplexer/Antenna**

The Contractor shall integrate a repeater into the communication system. The repeater must meet the following essential requirements:

1. **Power Output:** The repeater must provide a minimum of 50 watts of output power to ensure strong and reliable signal transmission.
2. **Power Supply:** The repeater must feature an AC/DC auto switch capability, allowing seamless operation across different power sources.
3. **Switching Capabilities:** The repeater must support both analog and digital auto-switching, facilitating smooth transitions between communication modes.
4. **Duty Cycle:** The repeater shall have a 100% duty cycle to ensure continuous operation without overheating or performance degradation.
5. **Compatibility:** The device must support analog and digital conventional modes, as well as DMR Tier II, IP Connect, and XPT Trucking, ensuring versatility in communication options.
6. **Battery Backup:** The repeater should include a gel cell battery backup to provide uninterrupted operation during power outages, ensuring reliability in critical situations.
7. **Warranty:** The repeater must come with a minimum comprehensive three-year warranty, and the duplexer must come with a minimum comprehensive one-year warranty, providing assurance of quality and support.

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**Antenna Installation:** One new antenna shall be securely mounted on the water tower by the Contractor.

**Cable Installation:** A 1/2" Heliac cable shall be installed by the Contractor to connect the antenna to the repeater, ensuring optimal signal transmission.

**Repeater and Duplexer Setup:** The Contractor shall install a rack mount repeater and duplexer, along with a backup battery to ensure reliable operation.

**FCC License**

Installation of the radio system shall require an FCC 10-year license, which shall need to be provided by the Contractor.

**Bidirectional Digital Amplifier/Antenna**

A Bi-Directional Digital Amplifier (BDA) shall be integrated into the communication system by the Contractor. The BDA must meet the following requirements:

1. **Antenna Installation:** The BDA antenna shall be mounted on the roof of the ASSA building **Location 2** by the Contractor, adhering to the established safety guidelines for roof installations to ensure safe access and operation.
2. **Coaxial Cable:** The system shall utilize 50-ohm coaxial cable for optimal signal transmission between the BDA and the antennas.
3. **Indoor Antennas:** A total of six indoor wideband Omni antennas shall be installed by the Contractor, connected to the BDA, to enhance coverage and ensure reliable communication throughout the designated areas.
4. **Installation Hardware:** All necessary hardware for installation, including brackets, mounting equipment, connectors, and grounding materials, shall be provided by the Contractor to ensure a complete and secure setup.
5. **Warranty:** BDA must come with a minimum comprehensive five-year warranty, providing assurance of quality and support.

**Portable Radios**

Along with the antenna installation, the Contractor shall also provide a minimum of 500 portable radios to ELMHS. These radios shall be Hytera HP602-Um or equal.

**Specify Brand/Model of Radio Bidding:** \_\_\_\_\_

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These radios must meet the following essential requirements:

**Power Output:** Each radio shall provide a minimum of 4 watts of output power to ensure effective communication range and clarity.

**Battery:** Each radio shall be equipped with a high-performance Lithium Polymer battery for extended usage and reliability.

**Audio Quality:** The radios must feature an anti-magnetic speaker to prevent interference and ensure clear audio quality in various environments.

**Water Resistance:** A water port speaker is required, providing enhanced durability and performance in wet conditions.

**Ingress Protection Rating:** The radios must meet or exceed the IP68 standard, ensuring complete protection against dust and the ability to withstand submersion in water.

**Military Standard Compliance:** The devices shall meet or exceed MIL-STD-810G standards, guaranteeing their reliability and performance in challenging environments.

**Channel Capacity:** The radios must support a total channel capacity of 1,024 channels (512 Analog and 512 Digital) to accommodate diverse communication needs.

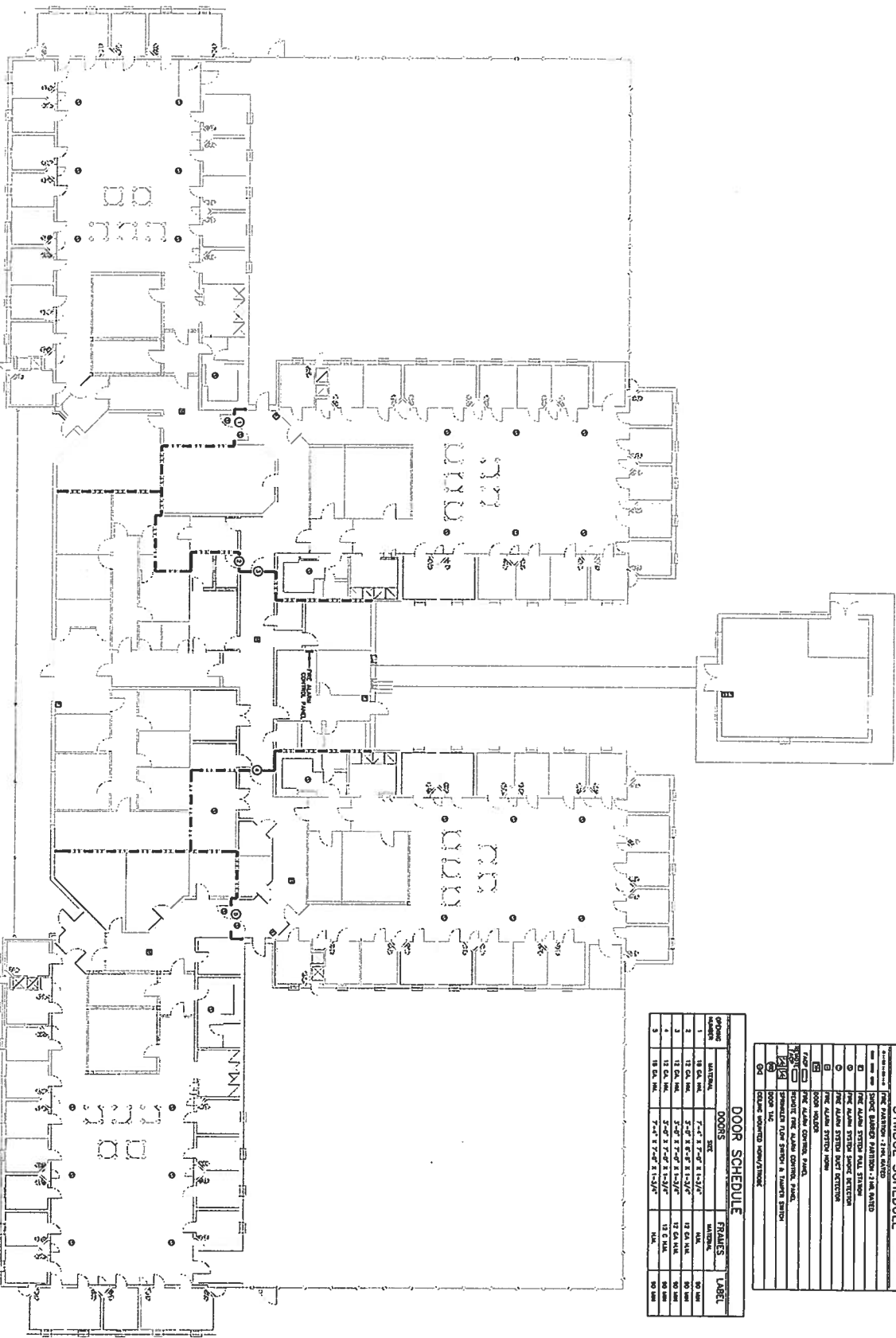
**Zone Capacity:** The radios must support 64 zones, with 256 channels per zone, allowing for efficient channel management.

**Connectivity Requirements:** The radios must support the following connectivity options:

- Analog and Digital Conventional
- MPT and XPT Trunking
- DMR Tier II and Tier III Trunking
- IP Multi-Site Connect
- DMR Simulcast Systems
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**Encryption:** The radios must support digital end-to-end and over-the-air encryption for voice and data transmitted on digital channels, ensuring secure communications.

**Warranty:** Each radio must come with a comprehensive three-year warranty, providing assurance of quality and support.



ADMISSIONS SPECIAL  
SECURITY AREA - 1st FLOOR PLAN  
SCALE: 3/16" = 1'-0"

**SYMBOL SCHEDULE**

|   |                                       |
|---|---------------------------------------|
| □ | Fire Alarm Control Panel              |
| □ | Fire Alarm Control Panel - 1st Floor  |
| □ | Fire Alarm Control Panel - 2nd Floor  |
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| □ | Fire Alarm Control Panel - 50th Floor |

**DOOR SCHEDULE**

| DOOR NUMBER | TYPE        | FRAMES      | LABEL  |
|-------------|-------------|-------------|--------|
| 1           | 18 GA. MET. | 18 GA. MET. | 80 100 |
| 2           | 17 GA. MET. | 17 GA. MET. | 80 100 |
| 3           | 16 GA. MET. | 16 GA. MET. | 80 100 |
| 4           | 15 GA. MET. | 15 GA. MET. | 80 100 |
| 5           | 14 GA. MET. | 14 GA. MET. | 80 100 |

**LS-10**  
1 of 15

SHARPE

DATE: 2-24-12  
PROJECT NO.: 11-07

DESIGNED BY: SNA  
CHECKED BY: DTC

**LIFE SAFETY PLAN**  
ADMISSIONS SPECIAL SECURITY AREA

EASTERN LOUISIANA MENTAL HEALTH SYSTEM  
JACKSON, LOUISIANA

LIFE SAFETY CODE DRAWINGS  
FOR VARIOUS BUILDINGS

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| No. | Date       | Description            |
|-----|------------|------------------------|
| 1   | 05-15-2017 | EDITED SYMBOL SCHEDULE |