

# Regional Interoperable Communications Plan RICP Round 2, Phase 2, 3 & 4

May 2011

Bell

Coryell

Hamilton

Lampasas

Milam

Mills

San Saba

Central Texas  
Council of  
Governments



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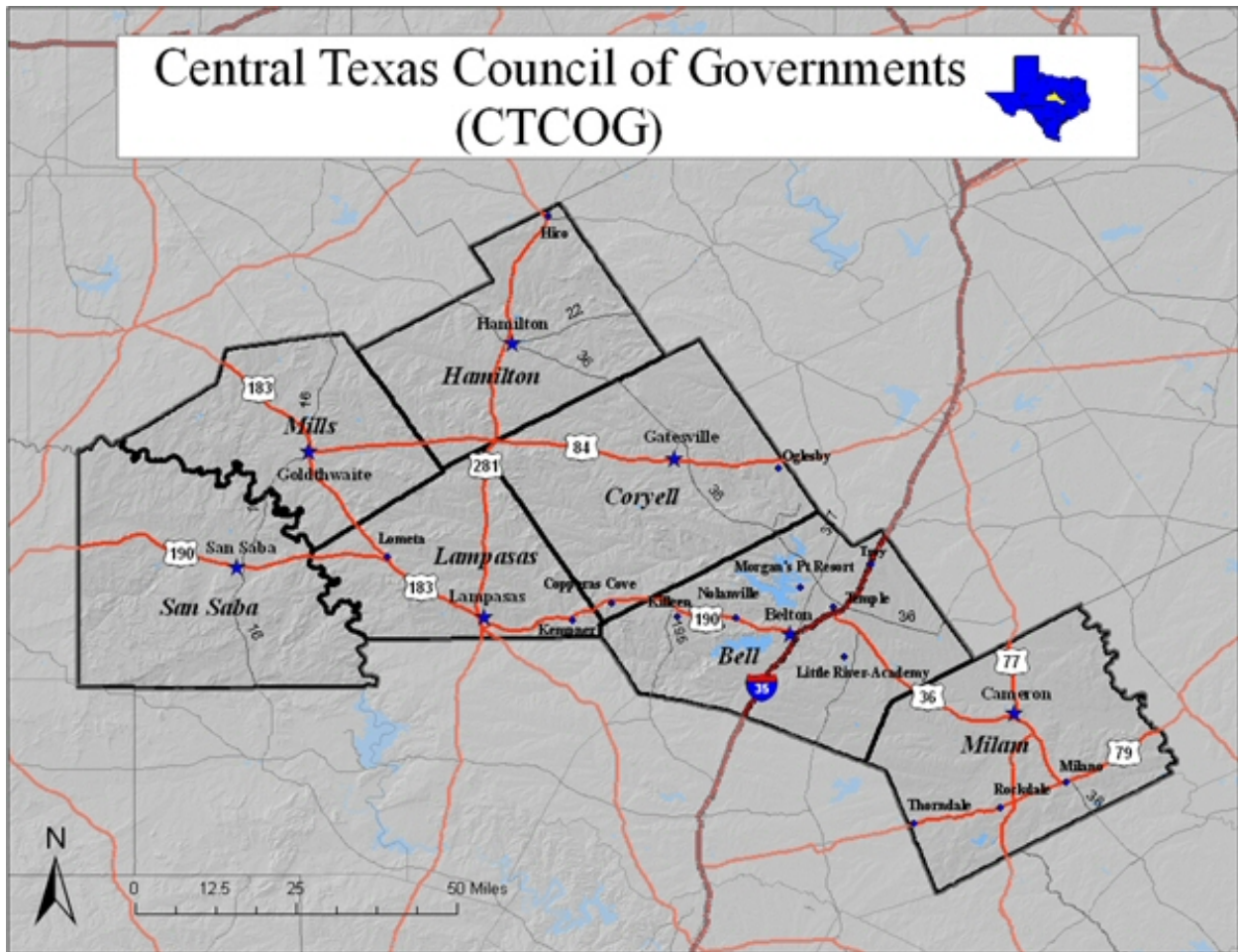
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# Section 1 Introduction/ Executive Summary

The purpose of this effort is to review the work done thus far by the Central Texas Council of Governments (CTCOG) and participating agencies and to provide recommendations for continuing the work in a manner that will bring the Region to Level 2 (gateway) interoperability using P25 technology by 2015, in accordance with the Texas Statewide Communications Interoperability Plan (TSCIP).



**Figure 1 - CTCOG Counties**

The CTCOG and participating agencies have collectively developed a plan to get from the current configurations to Level 2 (gateway) interoperability through the use of a common channel plan and the use of console patching, equipment gateways, and mobile command vehicles.

## 1.1 Point of Contact

The primary point of contact (POC) for copies of or questions regarding this Report is:

### REGIONAL COORDINATOR (PRIMARY):

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Title:	Emergency Planner
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## 1.2 Findings Summary

CTCOG completed an interoperability improvement study in 2004 and since that time has completed many of the recommended steps to improve interoperability communications. Today, via mutual aid channels and dispatch console system patching capability, the region has Level 2 (gateway) VHF and 800 MHz interoperability.

For example, police officers from the City of Temple now have the ability to utilize their day-to-day 800 MHz radios in another county within the CTCOG in case of an emergency or event, assuming the specific location has both VHF and 800 MHz coverage. The dispatcher can easily set up a patch between an 800 MHz interoperability channel and a channel such as a Sheriff's Office primary VHF channel, allowing both agencies to talk to one another. No radio swapping necessary items for operational and technical considerations and limitations include:

### Operational

- Operational procedures need to be in place and understood by all participants
- The operators must have the training for the use of interoperable channels
- Dispatchers must monitor the call channels and have the training to set up a patch
- More channels will be needed to set up TAC channels and still have the capability to monitor the call channels

### Technical

- The capacity of the existing channels can easily be exceeded as additional users arrive to the area

- Subscriber equipment must be programmed with the State and National Interoperability Channels

### **Agency Concerns**

- Improvement of operational communications should be primary to interoperable communications
- Use of a primary radio channel by outside agencies could cause congestion and should be avoided
- Not all dispatch centers have the capacity to monitor additional channels
- Some agencies requested the ability to communicate with their respective dispatch centers while traveling throughout the region
- It was also requested to have the ability to communicate with assisting agencies while on route to the event so that real-time event information can be relayed as needed

These items are looked at and addressed with the conceptual design for regional shared systems.

## **1.3 Recommendation Summary**

In accordance with the National Emergency Communications Plan (NECP), the Texas Statewide Communications Interoperability Plan (SCIP), and the needs and requirements of the CTCOG agencies, a high level technical solution for the CTCOG has been engineered and presented in Section 6 of this document.

The State of Texas envisions interoperability that is provided by linking interoperable regional radio systems together to make a statewide system-of-systems. This link will be established at a network level known as the Inter RF Sub-system Interface (ISSI) which was successfully demonstrated in Texas by connecting a Motorola P25 system owned by the City of Dallas with a Harris P25 system owned by the D/FW Airport. The overall test was successful, thus proving the system-of-systems concept.<sup>1</sup>

The final recommended radio system will have the ability to utilize an ISSI to other regional radio systems, thus satisfying the State requirement while also addressing the operational, technical and agency concerns listed above.

There were three technical areas (current radio system and infrastructure, subscriber/user equipment and technology options), were reviewed for this report in consideration of upgrading existing equipment initially to P25 conventional and then as a second phase to develop a region-wide radio system.

1. A high level look was made of the operational radio system communication towers and equipment shelters by a physical inspection completed by RCC. An estimate of tower and shelter upgrades is detailed in Section 7.

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<sup>1</sup> Radio Resource, Mission Critical Communications, P25 Progress in Texas, Cynthia Wenzel Cole, October 2010

2. County infrastructure radio equipment and user subscriber equipment was inventoried and the budgetary price to upgrade the equipment both infrastructure and subscriber equipment for P25 operation is included in Section 7.
3. The recommendation includes bringing the CTCOG to P25 by the year 2015 (Phase 1) and a preliminary look at implementing a region-wide P25 standards-based trunked radio system in the VHF and/or 700 MHz bands (Phase 2). The trunked system will connect directly to the P25 Network Switch Center (NSC) located in the City of Belton.

In accordance with the direction the CTCOG is progressing and the state plan for a system-of-systems; the conceptual plan and build out was broken into the two phases discussed above. The budgetary numbers for both phases are provided:

The proposed Phase 1 budgetary cost is:     **\$15,823,300**    

The proposed Phase 2 budgetary cost is:     **\$3,266,500**    

A detail of the overall costs and a phased implementation is provided in Section 7. A summary of the upgrade follows:

### **Phase 1**

- A. Upgrade existing VHF infrastructure to P25 and replace portable and mobile subscriber equipment with P25 equipment. Note this needs to be completed by January 2013 to comply with FCC narrowbanding requirements for the VHF band.
- B. Replace the existing Gatesville (Coryell County) 1973 vintage communication tower. This tower is in poor condition and it does not provide the coverage required at the current height.
- C. Install a Phase II 700 MHz P25 trunked system for Coryell County (on the new Gatesville tower). This includes microwave connectivity with Copperas Cove and the Bell County P25 systems.
- D. Add a P25 VHF channel to the Copperas Cove tower, to improve portable radio coverage for the Lampasas County southeast area, a highly traveled area on highway 190 between the cities of Lampasas and Copperas Cove.
- E. Add a P25 VHF channel and a 700 MHz site to a new site location near Evant and the intersections of Highways 84 and 281, which will improve coverage in a four county area.
- F. Build a communication tower in Milam County that will improve overall county coverage and provide a means to consolidate dispatch centers.
- G. Coordinate interoperability improvements with Fort Hood, which has a federal government UHF band EDACS radio system that has been upgraded to the P25 standard.

### **Phase 2**

- A. Design and build a microwave network that will connect the primary communications sites to the Bell County Communications system.
- B. Install a 3 channel 700 MHz P25 trunked radio system at each of the primary communications sites linked to the P25 Network Switch in Belton for a true standards based region-wide shared radio system that can be linked via ISSI to a State system-of-systems.

While not priced or examined in detail it may also be possible to add a VHF P25 trunked radio system at the primary communications sites linked to the same NSC in Belton and the redundant NSC in Copperas Cove.

The above lists are the steps identified to improve interoperability in the CTCOG, but not necessarily in the order of implementation. The migration and implementation plan are detailed in Section 7 of this report. In general the plan is to complete Phase 1 by 2015 and Phase 2 after that. All implementation is contingent on funding.



## Section 2

# Project Overview

### 2.1 Project Overview

This Report was developed by RCC under the authority of the CTCOG. RCC was contracted to the CTCOG to assist in evaluating existing interoperable communications in the region.

Representatives from the following public safety and public service disciplines were consulted during the development of this document:

- Police
- Fire
- Dispatcher
- County Sheriff's Office
- Communications Personnel
- Emergency Management Personnel

The region has completed equipment upgrades that have improved interoperability for the entire region. The respective counties' technology upgrades bring the region technology close to a Level 2 (gateway) with Bell County being at a Level 4 (shared proprietary system) on the Statewide Interoperability Maturity Model (Figure 2).

### 2.2 Texas SCIP Overview

The Texas SCIP Version 1.5, dated August 2010, outlines the State's road map to communications interoperability. CTCOG is one of 24 state planning regions, and the State communication plan calls for each planning region to develop a P25 standards-based, regional shared system. Each regional shared system will be connected for a statewide "system of systems".

**The following excerpt from the TSCIP clearly states the direction the State is taking with regards to public safety communications.**

#### TEXAS VISION STATEMENT

*By the end of 2015, provide all public safety and critical infrastructure responders at all levels of government – including local, county, special districts, tribal, state and Federal – with the*

*highest level of real-time direct interoperable voice and data radio communications utilizing Standards-Based Systems.<sup>2</sup>*

The TSICP further elaborates that Project 25 is the Standard for voice public safety agency communications.

Radio interoperability is more than just technology and equipment, as SAFECOM has repeatedly described the interoperability requirements of the five major areas; Governance, Standard Operating Procedures, Technology, Training & Exercises and Usage. Also, a major consideration for interoperability is how the technology will be available and enacted. All aspects of interoperability are very important and must be looked at in an overall regional plan. However, this report is focused on the technology and equipment areas of voice interoperability.

The TSCIP clearly indicates that regional radio systems shall be developed that are standards-based and shared. The intent of the State direction is to have statewide multi-agency interoperable voice radio communications. The State is currently completing tests on connecting disparate P25 regional radio systems at a network level to complete the vision of a system-of-systems approach. All indications are that the tests have been successful.

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<sup>2</sup> Texas Statewide Communications Interoperability Plan, Version 1.5, August 2010



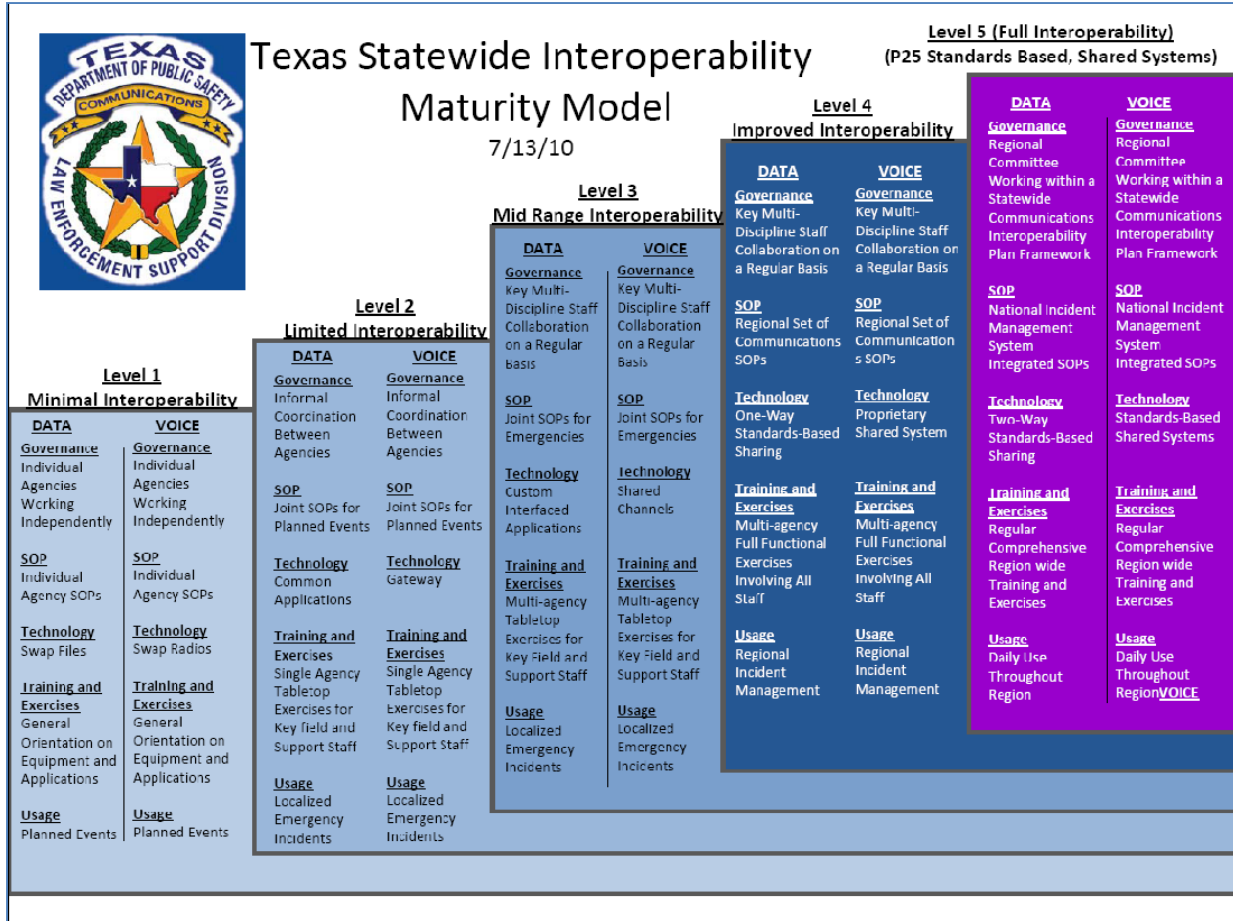


Figure 2 - Texas Statewide Interoperability Maturity Model

## 2.3 Specific Project Objectives

The primary objective of the CTCOG is to improve real time, on-demand voice radio communications for all public safety agencies in the region, and those agencies that may need to come to the region during an emergency or routine event.

The goals for this project are to:

1. Evaluate the existing interoperable communications.
2. Make recommendations to improve the level of interoperable communications.
3. Develop a road map and budget to implement the interoperability improvement recommendations.



## Section 3

# Methodology

### 3.1 Project Methodology Overview

As part of RICP Round 2 update, RCC performed the following tasks:

- Participated in meetings with CTCOG and agencies representing each of the counties.
- Visited the dispatch centers and radio towers for each county.
- Worked with agencies in each county to gather information for the DPS online survey tool.
- Identified potential unmet needs based on operational inputs and concerns.
- Identified and analyzed various technologies that can potentially form the basic elements for improved interoperability.
- Make recommendations of solutions for improved interoperability.
- Present the findings and recommendations in this report.

The county system descriptions in the next section show an overview of current radio systems and interoperability in order to answer the following basic questions:

- Does the current radio system work with regards to capacity and coverage? An agency must have an operable radio system for their day-to-day communications.
- Do the dispatch centers and subscriber equipment have the capability to transmit and receive on the Texas and National Interoperability channels?
- What is the current technology and capability of the interoperability equipment?

### 3.2 Project Scope of Work

As part of RICP Round 2 update, RCC performed the following tasks:

#### Task 1—Project Initiation & Orientation

The purpose of Task 1 is to initiate the project and conduct a project kickoff and orientation meeting with CTCOG and other relevant participants to discuss the project schedule, identify the types of information that will be requested from the participants, and to establish appropriate lines of communication between the participating agencies, CTCOG, and RCC. RCC will conduct and participate in the project kickoff meeting.

The following activities are included in Task 1:

- On-site project kickoff and orientation meeting
- Review of project scope and schedule
- Develop a project communication plan

- Review the work plan

## **Task 2—Determine Information Needed for the RICP**

The purpose of Task 2 will be to determine what additional information is needed to update the RICP document. RCC will begin Task 2 by meeting with representatives from the State of Texas in Austin to determine and confirm what additions are needed to complete the CTCOG RICP. RCC and CTCOG staff will then work together to jointly review all sections of the existing RICP template to discuss what changes or additions are needed. A matrix of information required, by category, will be developed so that such information can be assigned to the individuals responsible for information gathering and it can be tracked and stored for processing and incorporation into the RICP.

RCC will review the CASM database as a starting point for gathering the information as identified in Tasks 3 through 5.

The Task 2 work effort will begin immediately following the project kickoff meeting. RCC suggests that the CTCOG staff for this task be comprised of a small working group to better facilitate task completion.

### **Task 2 Deliverables:**

- *List of pertinent agencies and contact information for those that will be involved in the update process*

## **Task 3 – Gather Information to Update Volume I of the RICP**

RCC will work with the CTCOG staff to gather information needed to provide further detail for the Governance & Regional Interoperable Migration Plan section of the RICP. Development of a 7-county Governance Plan is a complex effort beyond the scope and timeline of this project. Consequently, this work plan does not include developing a new Governance Plan for the 7-county region. During this task, CTCOG is to provide RCC with a copy of the current Governance Plan for the region. RCC will work with the CTCOG team to gather updates to the existing Governance Plan for incorporation into the RICP. In the event that there is currently no Governance Plan, RCC can re-scope the project to include that effort if needed at additional cost.

RCC will also research and collect updated information for other radio systems used by Public Safety and Local Government agencies in the CTCOG territory. In addition to Public Safety and Local Governments, RCC will obtain radio system information from utilities such as the Lower Colorado River Authority and Federal Government agencies that may have a need to interoperate in the CTCOG area during an emergency event.

## **Task 4—Gather Information to Update Volume II of the RICP**

### **Regional Standard Operating Procedures**

RCC will work with CTCOG staff to gather information needed to update the Standard Operational Procedures (SOP) section of the RICP. This information will typically include fleet maps, channel names, radio programming guidelines, policies and procedures, rules of use, system problem identification and resolution, channel monitoring, gateway operation, caches of radios for events, mobile communication units, service level agreements, and agency rights.

### **Training/Exercises Plan**

RCC will work with CTCOG staff to gather information needed to update the Training and Exercise section of the RICP. The information needed for this area will include identifying plans for future local and regional training and exercise plans, lessons learned from previous training events, and identification of needed training as it relates to interoperable communications.

### **Texas Statewide Interoperability Channel Plan (TSICP)**

RCC will collect information on the current status of the CTCOG TSICP MOU and the use or planned use of interoperability channels

### **Task 5 – Conduct Needs/Requirements Assessment for Regional System**

RCC will conduct a Needs / Requirements Assessment for two-way (voice) radio in the 7-county area. This task will entail conducting on-site user agency interviews, communication site visits and dispatch center visits in all seven counties. Information will be gathered to include the following:

- Current plans in place to upgrade or replace existing radio systems
- Existing communications facilities (towers, shelters, backhaul, etc.)
- Radio equipment at dispatch centers
- Existing radio systems
- CTCOG Radio System Coverage Requirements

### **Task 6—Incorporate Updates into the RICP Document**

RCC will incorporate the collected information from Tasks 3 and 4 using the provided template to develop the updated Draft RICP with Volumes I and II. RCC will work with CTCOG staff to obtain additional information that may be needed and to prepare an updated Draft RICP.

The Draft RICP will be provided to the CTCOG staff for review.

#### ***Task 6 Deliverable:***

- *Work with CTCOG staff to input information into the RICP Online Web Tool*

### **Task 7—Develop Seven County Conceptual System Design Document**

RCC will take the information collected in Task 5 and develop a Conceptual System Design Document that will become an attachment of the RICP. This document will include the following:

- Summary of communications needs and requirements
- A conceptual 7 county standards-based system infrastructure configuration with radio coverage analyses and high-level system diagrams
- Dispatching considerations
- Wide-area system technology
- P25 technology considerations

The document will also include the following:

- An overview of the system architecture
- Radio coverage requirements
- Radio coverage analyses (coverage maps)
- Conceptual distribution of repeater sites, leveraging existing facilities whenever possible
- Comments regarding system capacity
- Budgetary cost estimates on a per-county basis

The Draft Conceptual Design document will be provided as a stand-alone document that will be an appendix to the RICP. It will be developed concurrently with the RICP Volumes I and II updates in complete coordination with CTCOG.

The CTCOG staff will have an opportunity to review the draft version of the document. After a review period, RCC will coordinate a review meeting with CTCOG at CTCOG’s office to examine and discuss each updated section of the Draft RICP including the Conceptual System Design document.

**Task 7 Deliverable:**

- *Provide an electronic copy of the Draft Conceptual System Design to be added as an appendix to the RICP*
- *Conduct and participate in a single workgroup meeting for the Draft RICP review*

**Task 8—Incorporate Suggested Changes into the RICP**

Following the workgroup session, RCC will update the RICP and the Conceptual System Design Document. CTCOG can then submit the completed RICP to the State.

**3.3 Dispatch Centers Visited**

Not every agency in the CTCOG involved with public safety and first response was interviewed during the development of this document, but RCC interviewed a wide range of agencies and disciplines. RCC believes it obtained a very good understanding of the unique area requirements. The following table shows the dispatch centers that were surveyed during the development of this document.

County	Dispatch Center	PSAP
Bell	Bell County Communications	Yes
Coryell	Coryell County Sheriff Office	No
Coryell	Copperas Cove City Department	Yes
Coryell	Gatesville Police Department	Yes

County	Dispatch Center	PSAP
Hamilton	Hamilton County Sheriff Office	Yes
Lampasas	Lampasas Police Department	Yes
Lampasas	Lampasas Fire Department	No
Lampasas	Lampasas County Sheriff Office	Yes
Milam	Milam County Law Enforcement Center	No
Milam	Cameron Police Department	Yes
Milam	Rockdale Police Department	Yes
Mills	Mills County Sheriff Office	Yes
San Saba	San Saba County Sheriff Office	Yes

Table 1 – Dispatch Centers

### 3.4 Communication Sites Visited

RCC also visited primary communication sites in each of the counties to get a high level understanding of the county radio system infrastructure and general site conditions. The following table shows the communication sites that were surveyed during the development of this document and the primary sites evaluated for the conceptual design.

County	Communication Site	Lat	Lat	Tower	ASR
Bell	BCC Main	31-02-44.0N	097-28-40.0W	115.8m	1059912
Bell	VA Tower	31-04-41.6N	097-20-34.0W	132.6m	1212890
Bell	Harker Heights	31-04-17.3N	097-38-29.9W	30.5m	N/A
Bell	Eagle Nest	30-59-09.0N	097-37-57.0W	152.1m	1025503
Coryell	Old Osage Road	31-26-31.0N	097-42-17.0W	85m	1051182
Coryell	Hughes Mountain	31-06-42.6N	097-56-10.1W	76.2m	1261844
Hamilton	Hamilton County	31-42-55.0N	098-08-07.0W	79m	1050999
Lampasas	Lampasas	31-08-22.1N	098-18-59.2W	55m	N/A
Milam	McLerran Hill	30-48-35.7N	096-55-42.9W	67.7m	1223611

County	Communication Site	Lat	Lat	Tower	ASR
Milam	Ledbetter Park	30-50-34.1N	096-59-2.9W	73m	N/A
Milam	KRXT	30-38-32.9N	097-02-14.6W	81m	N/A
Mills	Mills County	31-27-21.0N	098-33-19.0W	125m	1052072
San Saba	San Saba South	31-11-01.0N	098-42-44.0W	121.9m	1047746
San Saba	San Saba East	31-09-52.0N	098-37-39.0W	93.9m	1052070

**Table 2 – Communication Sites**



**Section  
4****Regional Overview**

The purpose of this section is to identify the types of radio systems in use throughout CTCOG. Radio systems are described in the categories of the operating radio frequency band and the technology employed. Operational aspects of the systems are discussed as well.

Understanding the extent and capability of current radio systems is an important factor when exploring communications interoperability. Common systems lend themselves to relatively seamless interoperability solutions, while systems utilizing different technology or radio frequency bands pose a more difficult problem to solve.

Typical of a region that has both urban and rural areas, there is a mix of two-way radio systems utilized in the CTCOG, with the more heavily populated areas of Bell and Coryell Counties utilizing 800 MHz trunked radio systems, while the surrounding counties use conventional radio systems in the VHF band.

The CTCOG counties have separate and unique radio and dispatch systems for each individual county. There is currently no connectivity between the counties. Any type of connectivity would have to involve installing a back haul system of microwave (preferable), satellite, or fiber optic network, or purchasing bandwidth via commercial leased circuits.

From a system architecture perspective, most of the counties utilize one or more conventional VHF repeaters housed in a centrally located communication site to provide countywide coverage. These systems are all based upon wideband analog VHF technology, but the radio repeaters can be upgraded for transition to narrowband technology as mandated by the FCC and P25 operation. Radio coverage to mobile radio units is generally acceptable, except for the outer edges of the service area and in locations that are shadowed by local terrain features. Radio coverage for handheld (portable) radio units is usually effective only in the near vicinity of the radio tower.

Interoperability is traditionally accomplished by programming each county's frequencies into the neighboring counties' radios. This has worked well for daily usage and small events, but does not align with the State's plan for interoperability and communications in an emergency event that would require multi-agency assistance.

The region has employed mutual aid repeaters that include Texas interoperability channels in the VHF and 800 MHz bands. The interoperability channels are licensed by the State for public safety use as described below.

**Designated interoperability (shared) channels** – The State of Texas has licensed frequencies for Mutual Aid channels, listed in the Texas Statewide Interoperability Channel Plan (TSICP), for all agencies providing public safety services in the state.

Use of the interoperability channels shall be prioritized:

1. Emergency or urgent operation involving imminent danger to life or property
2. Disaster or extreme emergency operation requiring extensive interoperability and inter-agency communications
3. Special event, generally of a pre-planned nature
4. Joint training exercises
5. Inter-agency and en-route communications in accordance with local and regional policies and procedures<sup>3</sup>

The counties are using the interoperability channels within the guidelines established by the State.

The following table provides high-level information regarding the interoperable capabilities of the various dispatch centers. The interoperable channels for all counties are supported by multi-channel radios where the dispatcher has the ability to change the channel as required. This table does not indicate what is actively being monitored:

County	Dispatch Center	Mutual Aid Capabilities				
		State VHF	Nat VHF	Nat UHF	Nat 700	Nat 800
Bell	Bell County Communications	Yes	No	No	No	Yes
Coryell	Coryell County Sheriff Office	Yes	No	No	No	No
Coryell	Copperas Cove City Department	Yes	Yes	No	No	Yes
Coryell	Gatesville Police Department	Yes	No	No	No	Yes
Hamilton	Hamilton County Sheriff Office	Yes	No	No	No	Yes
Lampasas	Lampasas Police Department	Yes	No	No	No	Yes
Lampasas	Lampasas County Sheriff Office	Yes	No	No	No	Yes
Milam	Milam County LEC	Yes	No	No	No	Yes
Milam	Cameron Police Department	No	No	No	No	Yes
Milam	Rockdale Police Department	Yes	No	No	No	No
Mills	Mills County Sheriff Office	Yes	No	No	No	Yes
San Saba	San Saba County Sheriff Office	Yes	No	No	No	Yes

**Table 3 – Dispatch Center Interoperable Capabilities**

<sup>3</sup> Texas Statewide Communications Interoperability Plan, Version 1.5, August 2010

State VHF = Wideband VHF Mutual Aid Channels (TX Law 2, available until January 1, 2013)

Nat VHF/UHF/700/800 = National Mutual Aid Narrowband Channels (VCALL10, UCALL40, 8CALL90, etc., analog modulation until January 1, 2015,)



# Section 5 Capabilities & Requirements

## 5.1 Bell County

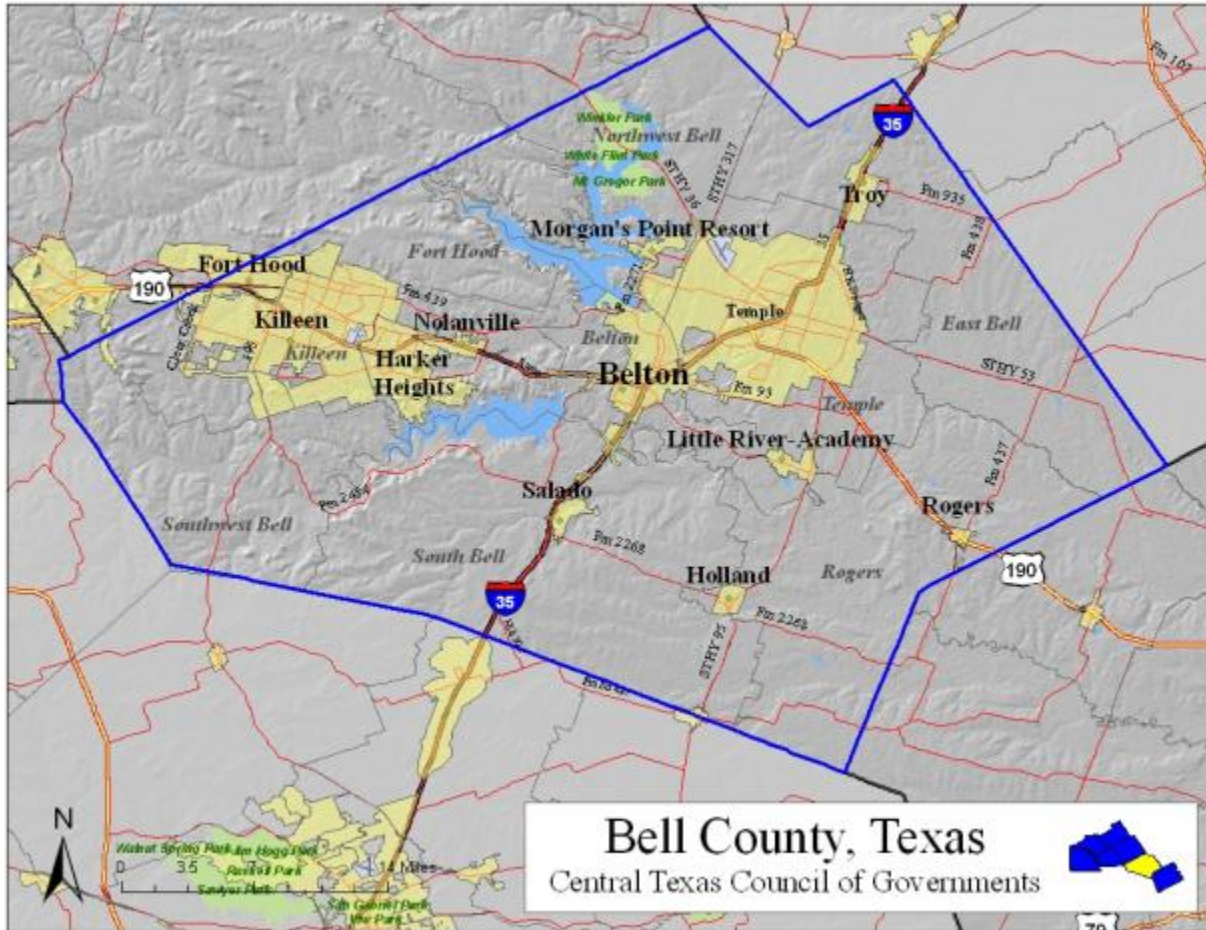


Figure 3 – Bell County Map

**Bell County Communications (BCC)****Agencies**

- Air One
- Bartlett Fire Department
- Bartlett Police Department
- Bell County Communications
- Bell County Emergency Management
- Bell County Fire Marshal
- Bell County Organized Crime Unit
- Bell County Sheriff Office
- Belton Emergency Services
- Belton Fire Department
- Belton Police Department
- Central Bell County Fire & Rescue
- Central Texas College Police Department
- Central Texas Ems
- Community Services & Corrections Dept
- Copperas Cove Fire Department
- County Attorneys Office
- Crisis Intervention Stress Management
- Department Of Public Safety
- District Attorney
- Fort Hood
- Harker Heights Fire Department
- Harker Heights Fire Department
- Harker Heights Police Department
- Holland Police Department Tx0141100
- Killeen Independent School District
- Killeen Police Department
- Little River Academy Police Department
- Little River Fire Department
- Moffit Fire Department
- Morgan's Point Fire Department
- Morgan's Point Resort Police Department
- Nolanville Police Department
- Pct 1 Constables
- Pct 4 Constable's Office
- Pct 2 Constables
- Pct 3 Constables
- Rogers Fire Department
- Rogers Police Department
- Salado Police Department
- Salado Volunteer Fire Department
- Scott & White
- Southwest Bell County Fire Department
- Stillhouse Volunteer Fire Department
- Temple College DPS
- Temple Fire Department
- Temple Police Department
- Texas Alcohol Com
- Texas Parks And Wildlife
- Troy Fire Department

- Holland Volunteer Fire Department
- Killeen Emergency Services
- Killeen Fire Department
- Troy Police Department
- University Of Mary Hardin-Baylor P.D.
- Us Army Corps Of Engineers

### **Current Communication Systems and Interoperability Requirements**

The operational Bell County Communication (BCC) system is an Enhanced Digital Access Communication System (EDACS) 800 MHz trunked four-site simulcast, 19 channel system implemented nearly 15 years ago. The system services all public safety agencies within Bell County and as noted above it also includes both state and federal agencies in the area. The four-site simulcast system blankets the county providing very good mobile, portable and in-building coverage. The county-wide shared radio system provides excellent interoperability for agencies on the system. Nearby Copperas Cove also has an EDACS 800 MHz system so subscriber equipment can operate on both systems. The BCC Main communication site has VHF and 800 MHz mutual aid channels for dispatch patching for agencies needing to operate in Bell County on VHF or 800 MHz users not on the EDACS. The other counties in the CTCOG region have VHF conventional radio system, but they have mostly implemented 800 MHz mutual aid channels to facilitate interoperability with Bell County and other 800 MHz users. While the current EDACS system fulfills the coverage and capacity requirements of the county it is getting near the end of its expected lifecycle.

In response to the aging system, BCC has started a system upgrade that will allow a graceful migration of current radio users to a new system, that is in line with the system-of-system vision and it will improve interoperability for the I35 corridor between Austin and Waco. As noted in the following drawing, BCC has installed a network switch, Project 25 Network Switching Center (P25NSC) and a 4 channel P25 700 MHz trunked radio site. The EDACS and P25 systems are connected via an IP Gateway, which allows full interoperability between the two systems. Future plans include expanding the 700 MHz to a four-site simulcast and eventually upgrading existing channels to a P25 standards based trunked system. The dispatch center console system will be replaced with the Harris C3 Maestro(IP) radio console systems and subscriber equipment will be replaced with dual band, dual mode 700/800 MHz, P25/EDACS radios as funding allows.

The upgrade plan also includes adding connectivity to Copperas Cove for network switch access and a roadmap to upgrade that site to P25, and to add connectivity and a 700 MHz site in Gatesville and in the Evant area. This will allow full interoperability, reliable coverage and roaming in Coryell and Bell Counties.

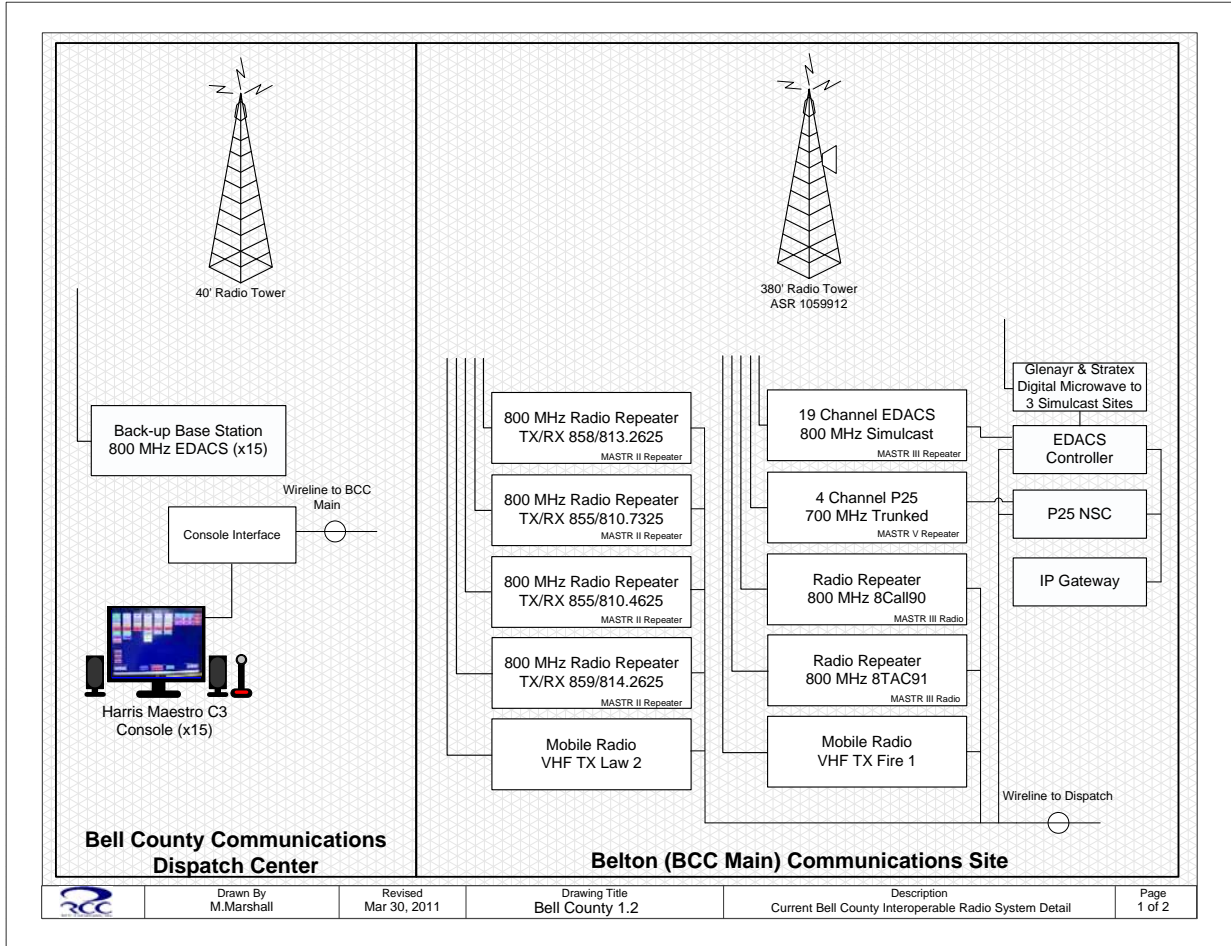


Figure 4 – Bell County - Radio System Detail (1)



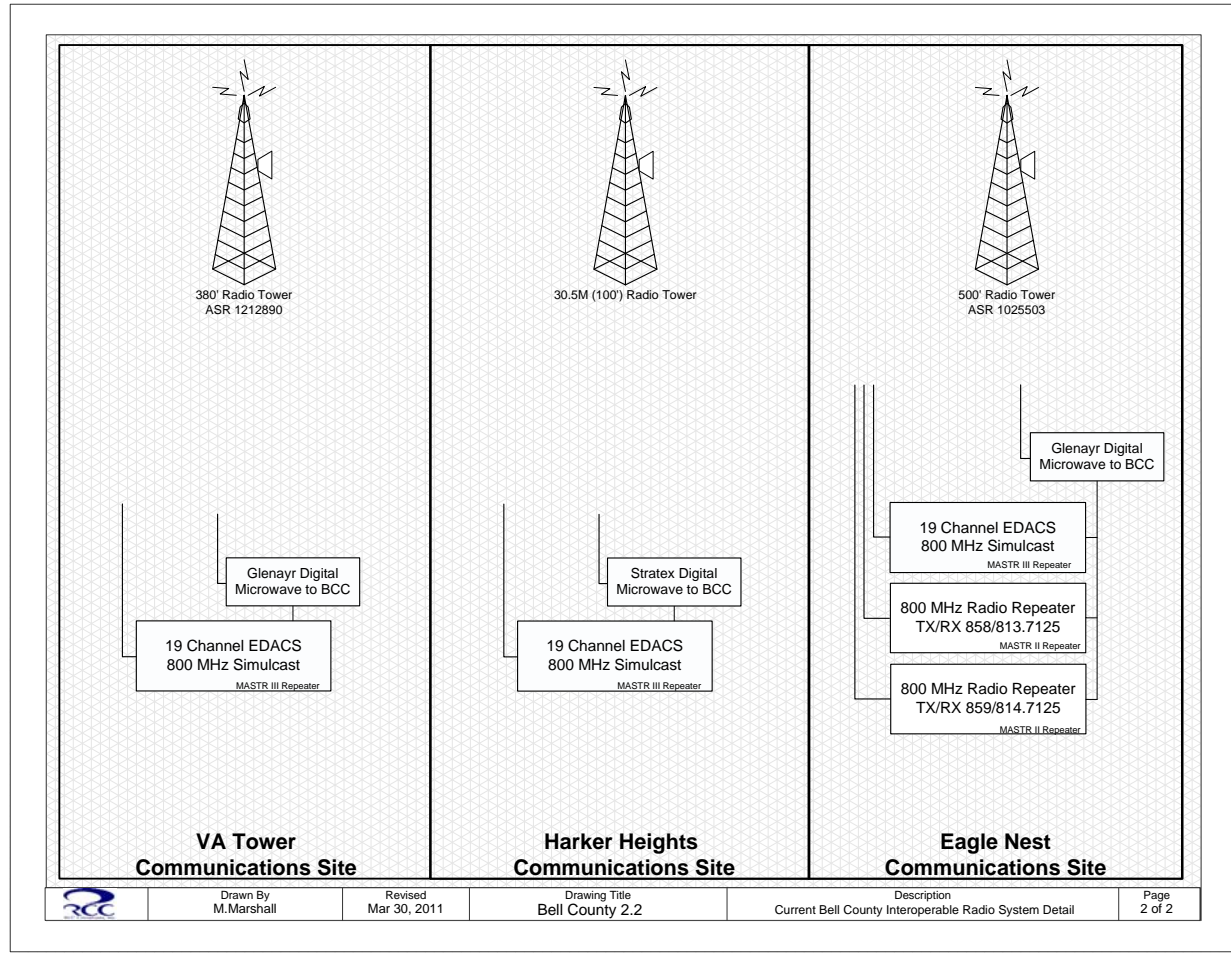


Figure 5 – Bell County - Radio System Detail (2)

**Current Dispatch and Recommendations**

All public safety agencies in Bell County are dispatched by the Bell County Communication Dispatch Center in Belton. The system is by far the largest in the region with 15 full Harris C3 Maestro radio dispatch console positions. The facility was designed for power and radio resource backup contingencies. The facility is connected via wireline to the BCC Main communication site, which is on the same grounds. The dispatch center has a backup generator that is separate from the communication site backup generator and it is load tested weekly. Each dispatch position has a backup base station radio to use if the BCC Main communication site has a failure or there is a loss of connectivity between the two sites or there is a console system failure.

While there is a small chance of a catastrophic failure, Bell County may consider implementing a geographically diverse backup dispatch center. Copperas Cove may be a possible location as connectivity between the sites is part of the upgrade plan. Copperas Cove is already being considered for a location for a backup NSC making it a prime candidate for a backup dispatch location.

### Regional Mobile Command Unit

The Harker Heights Command Van Vehicle is available for emergency and planned event use for the CTCOG Region primary and statewide secondary. The mobile command unit also has a portable radio system in an enclosed trailer - equipped with mobile base units for VHF and 800 radio systems unit comes complete with two types of power capabilities - (1) battery power from vehicle used to tow trailer (2)the units comes complete with stand alone generator. The unit comes complete with a three arm antenna assembly unit approximately 15 meters in height, comes with three antennas - 800Mhz Omni, 800 MHz 6db directional gain antenna, 800 MHz 11db directional antenna as well as the VHF 3db directional antenna, VHF 9db directional antenna. The transportable Interoperability radio enclosures consist of two units - (1) Control, radio and power supply and (2) Duplexer. Inside repeater is the antenna interface panel, DTMC Hand MIC, NCS Radio Controller, Harris M7300 700/800 MHz P25 Radios and the Samlex 12 volt power supply - The units is self contained and ready for use. Additionally, there is a cache of 6 each VHF portable radios and 6 each 800 MHz portable radios.



**Harker Heights Mobile Command Unit**

### Current Subscriber Equipment and Requirements



See detailed subscriber list in Section 8.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	1819	800 MHz	1358	91	552
Portable (Handheld)	2207	800 MHz	1047	110	1270
Base Station		800 MHz	0	0	0
Total:					1822

**Table 4 – Bell County – Subscriber Equipment Inventory**

### Current Coverage/Capacity and Requirements

The following coverage maps show current system RF coverage for mobile radios (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 kHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.

The following 3 Bell County current system coverage maps show:

1. EDACS 800 MHz trunked, four-site simulcast
2. P25 700 MHz trunked, single site (BCC Main)
3. VHF conventional single site mutual aid (BCC Main)

As noted earlier that primary communications is an EDACS 800 MHz trunked, four-site simulcast, 19 channel radio system. The location of the sites reportedly provides good portable coverage in the main urban areas and good mobile coverage throughout the county. There are no reported capacity issues with the 19 channel system



Figure 6 – Bell County - 800 MHz EDACS Radio System Coverage (Mobile Talk-Back)

While the previous map shows mobile radio for the EDACS, the following map shows the current build-out of the county 700 MHz P25 site. The P25 700 MHz site is currently located at one location, but the plan is to expand it to the same sites as the EDACS. There are also 800 MHz mutual aid channels at this same site. The coverage footprints for the 700/800 MHz channels are virtually the same. The 700 MHz P25 map is a good indicator of the coverage area available for 700/800 MHz interoperability.

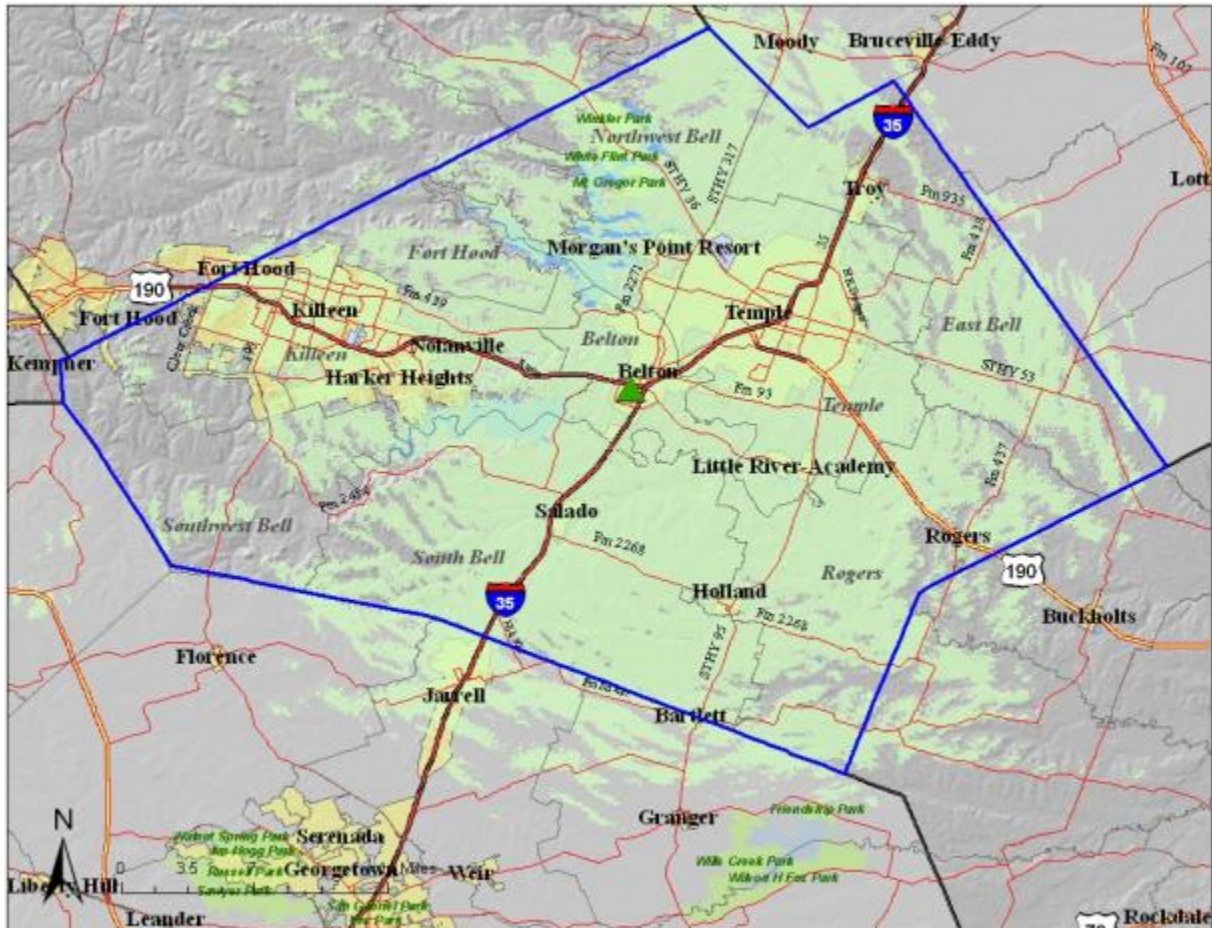
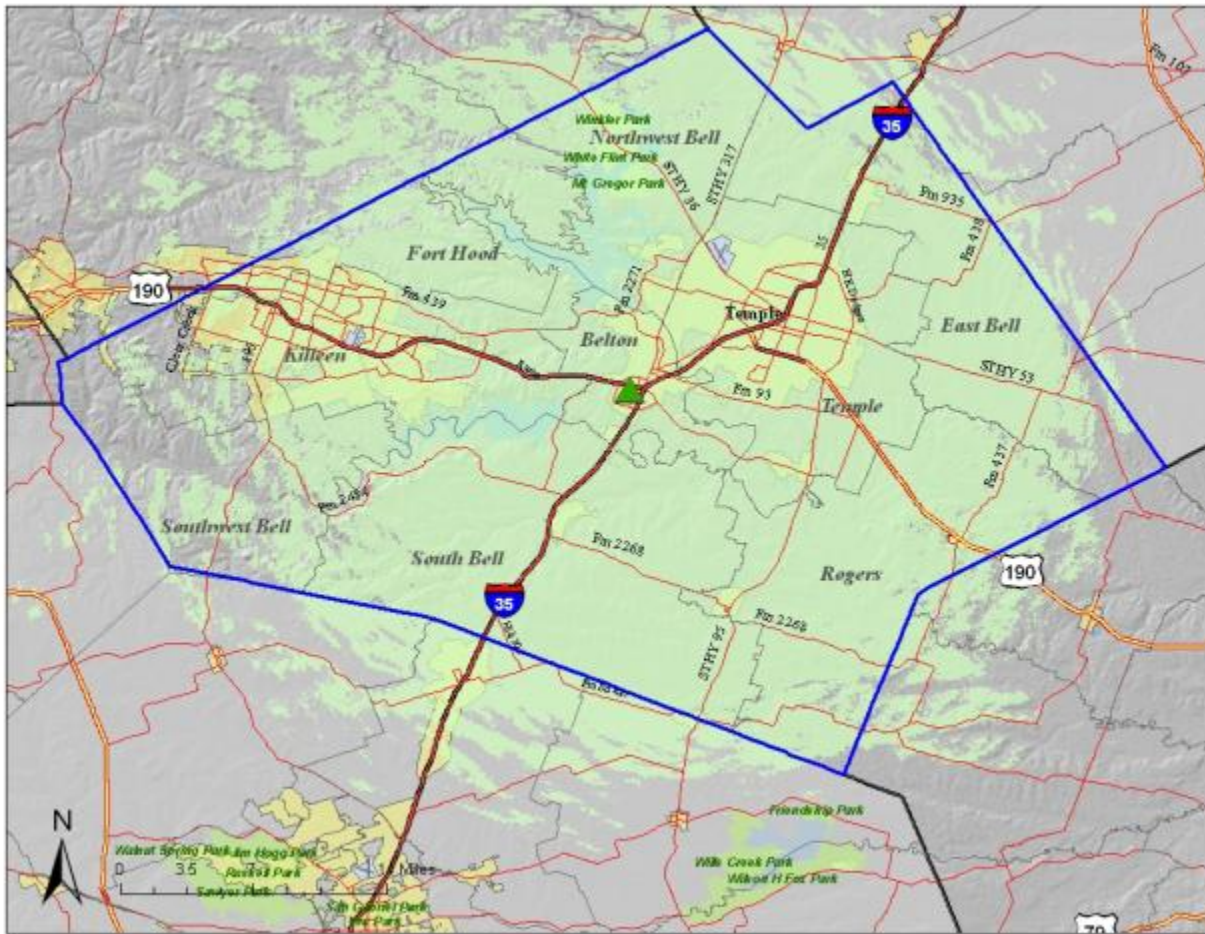


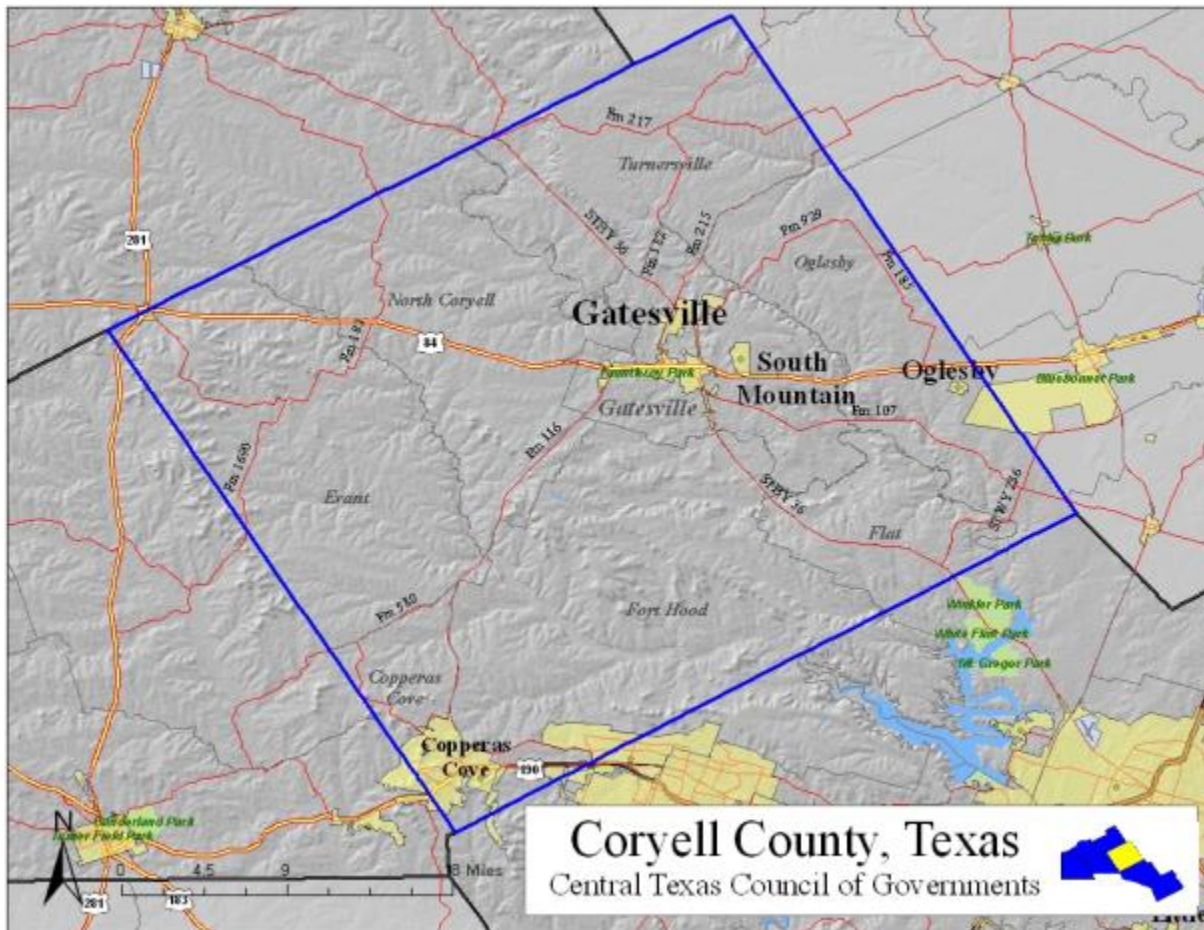
Figure 7 – Bell Co – BCC Main - 700 MHz Radio System Coverage (Mobile Talk-Back)

The third map shows the mobile radio coverage for the VHF mutual aid channels located at the BCC Main. A user traveling into Bell County will have near county-wide mobile coverage for interoperability use with the EDACS and/or 800 MHz mutual aid and/or 700 MHz P25.



**Figure 8 – Bell County – BCC Main - VHF Radio System Coverage (Mobile Talk-Back)**

## 5.2 Coryell County



**Figure 9 – Coryell County Map**

### Agencies

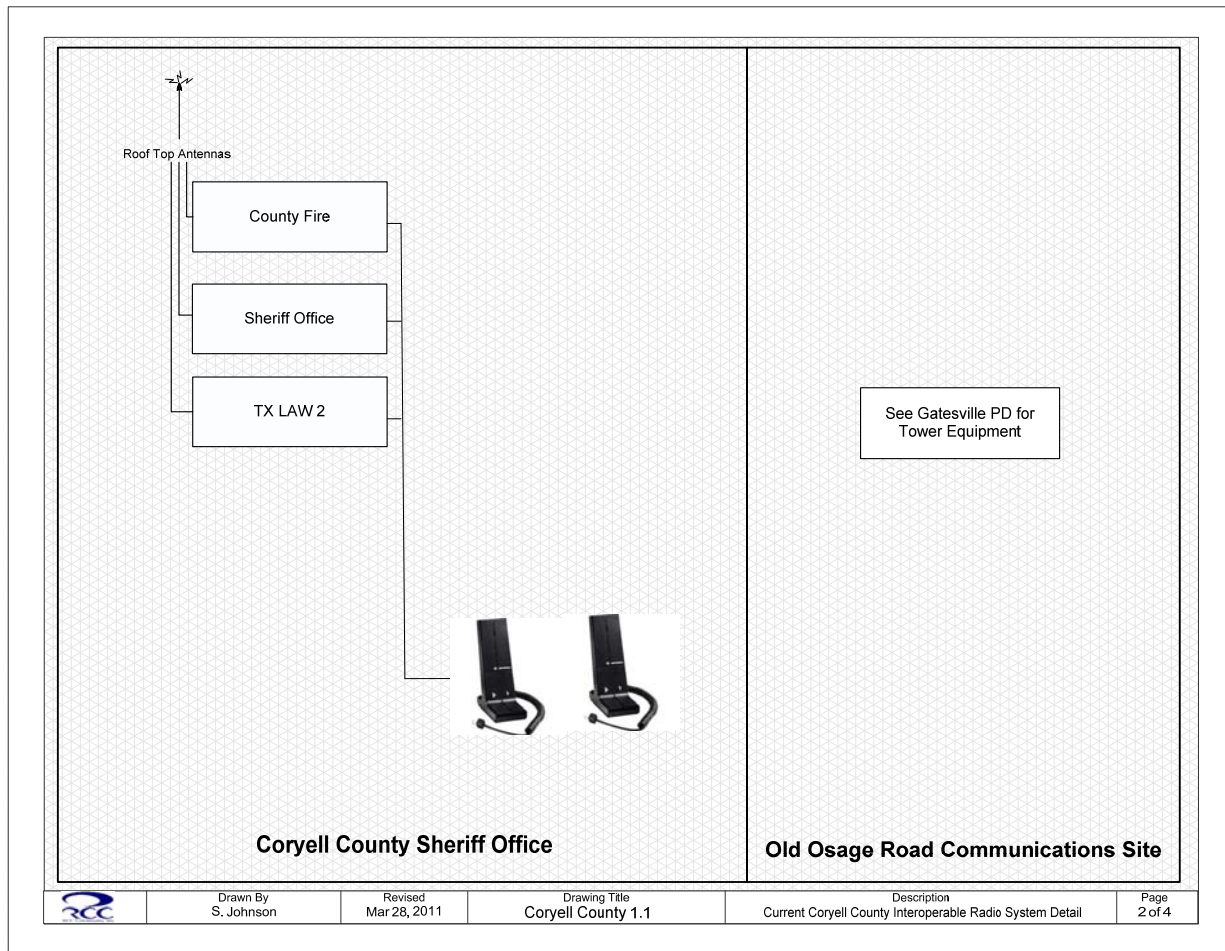
Most agencies in Coryell County operate in the VHF band, and include:

- Sheriff Office
- Gatesville Police Department
- Gatesville Fire Department
- Coryell City/Osage VFD
- Turnersville Volunteer Fire Department
- Evant Volunteer Fire Department
- Mound Volunteer Fire Department
- Oglesby Volunteer Fire Department
- Grove Volunteer Fire Department
- Levita Volunteer Fire Department
- Flat Volunteer Fire Department
- Jonesboro Volunteer Fire Department
- Coryell County Emergency Medical Service.

The exception to this is the City of Copperas Cove, and all Copperas Cove City agencies, including Copperas Cove Police Department, Copperas Cove Fire Department, and Copperas Cove Emergency Medical Service, which operate in the 800 MHz band.

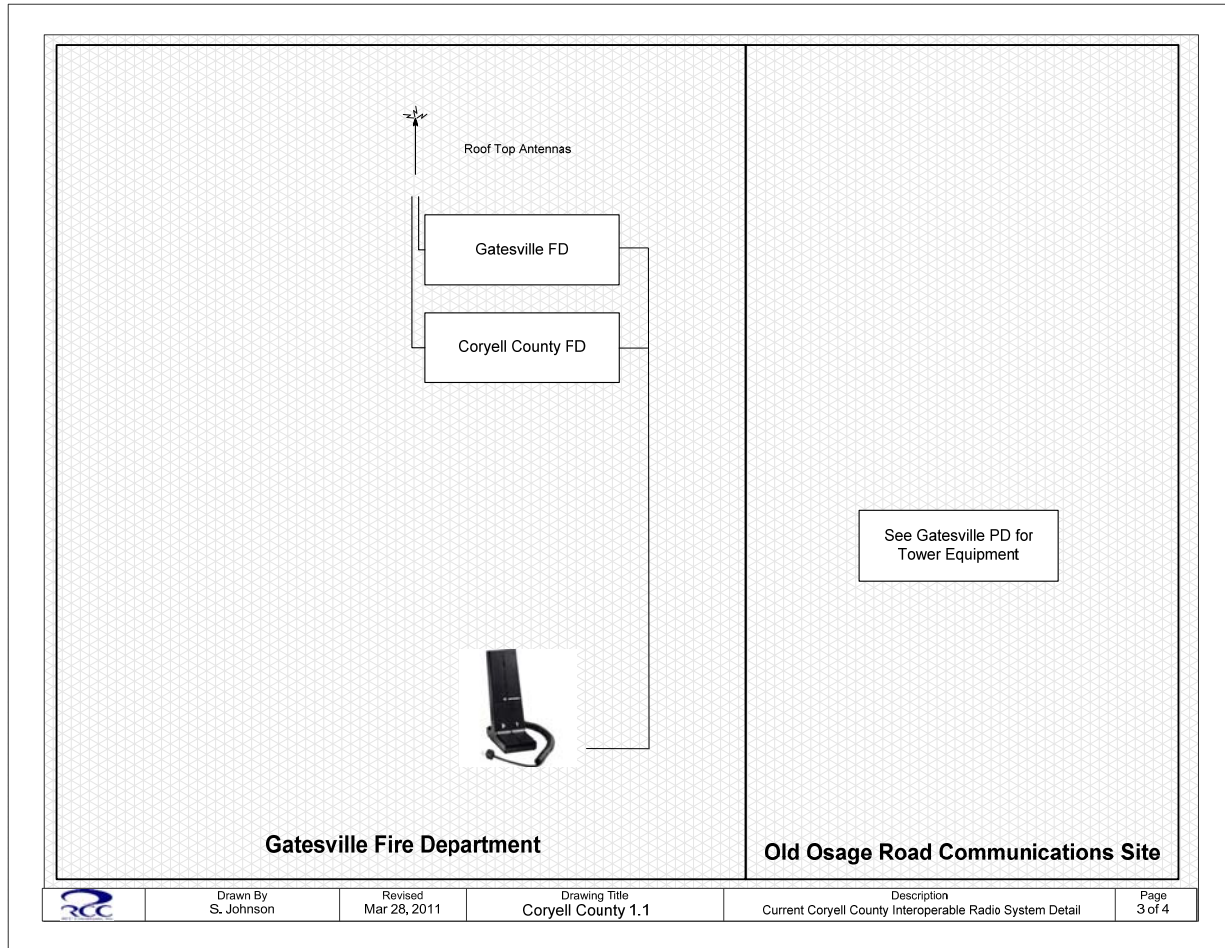
**Current Communication Systems and Interoperability Requirements**

The VHF users are primarily dispatched out of the PSAP in the Gatesville Police Department, and 800 MHz users out of the Copperas Cove Police Department PSAP. The Harris VHF mobile repeater radios and MASTR III repeaters are capable of being upgraded to P25 operations. The VHF system uses conventional radio technology, and the 800 MHz system is a 5 channel trunked single site EDACS system. An 800 MHz NPSPAC calling and tactical channel for VHF/800 MHz is available for interoperability. The block diagrams below show the resources available in the Dispatch Centers and at the towers. There is a need to merge the Coryell County and Copperas Cove radio systems, to enable better interoperability between these groups.

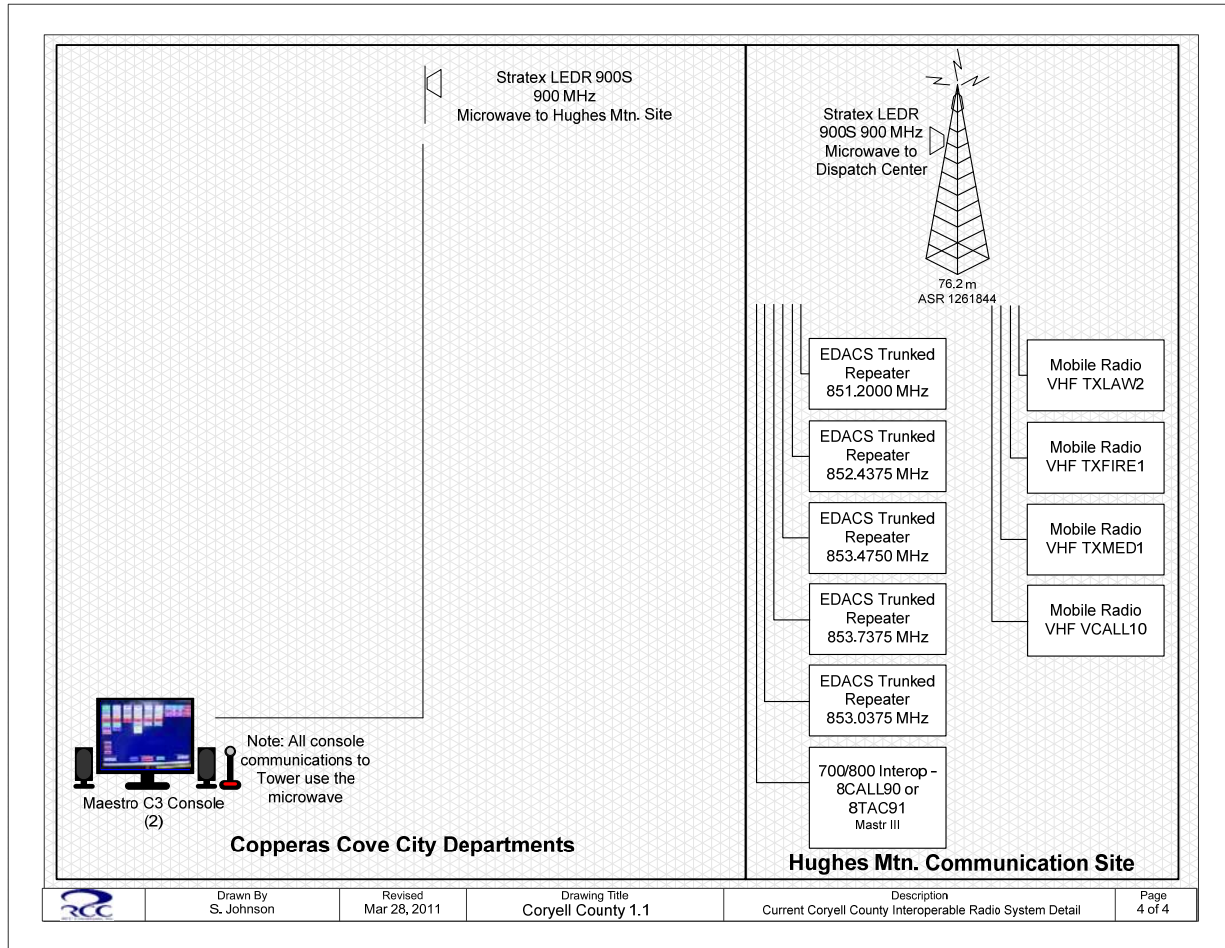


**Figure 10 – Coryell Co SO - Radio System Detail**





**Figure 11 – Gatesville FD - Radio System Detail**



**Figure 12 – Copperas Cove - Radio System Detail**

Another consideration for interoperability is Fort Hood Army Post, which occupies a large portion of Coryell County and a lesser part of Bell County. Fort Hood recently implemented a 4 site Harris P25 trunked radio system using the federal 380-400 MHz (UHF) band. It is recommended Fort Hood consider adding VHF and 800 MHz interoperability resources to their sites and dispatch facilities, to enable patching these channels with their UHF system as needed.

**Current Dispatch & Recommendations**

Dispatching is done from 4 locations, the Gatesville Police Department PSAP, the Copperas Cove PSAP, as well as the Coryell County Sheriff Office and Gatesville Fire Department. However, primary dispatch for the Gatesville Fire Department is performed from the Gatesville Police Department PSAP. The Gatesville Police Department PSAP has 2 Director IP Consoles, the Copperas Cove PSAP uses 2 Maestro C3 Consoles, the Coryell County Sheriff Office has 2 desktop microphones, and Gatesville Fire Department has a single desktop microphone. Redundant dispatch equipment is needed for the 2 PSAPs located in the Copperas Cove and Gatesville Police Department dispatch centers. The dispatch centers are not located near each other, which provides redundancy, and each PSAP should be configured to back up the other in the event one of the facilities is not operable. Copperas Cove dispatches all City organizations,

including the Police, Fire, and Emergency Medical Service organizations, and the other dispatch centers dispatch their respective organizations.

### **Consolidated Dispatch**

The proposed system includes network connectivity between Gatesville and Copperas Cove, which may make it possible to consolidate these dispatch centers. Through the implementation of a centralized dispatch facility, interoperability can generally be accomplished for a large geographical area since the concept implies that all agencies served by the facility are operating on the same radio system and infrastructure. The implementation of a "Centralized Dispatch" facility, also frequently known as a "Consolidated Dispatch Center" is a major undertaking involving three complicated areas of effort. The three areas, which must be developed and or designed prior to implementation of the new dispatch center, are as follows:

- **Communications Systems and Associated Software & Hardware** - Typically, these include radio dispatch systems, CAD/RMS Systems, and Enhanced 9-1-1 systems. In today's world, one of the latter two must include a mapping component, based on a GIS system, to accommodate Wireless 9-1-1 call location. Other systems, which may be included are, Mobile Data and Automatic Vehicle Location.
- **Management and Oversight of the Operations** - The management structure and reporting structure of the facility management must be developed. While determining the number and type of personnel required to manage day-to-day operations may be relatively easy to define, the reporting structure of the facility management may be more difficult. Some select group of individuals must be responsible for oversight of the center. The question becomes, who are they and how many "votes" do they have in final decisions. The makeup of such groups varies greatly. They may be either elected or appointed officials and the number of votes each has can depend on the size of the jurisdiction they represent, the amount of funding contributed to the facility and systems, or other contributing factors. These individuals are also normally responsible for developing and monitoring the center's operating Policies and Procedures (P's & P's).
- **Staffing and Operating Issues** - The issues on how staffing will be approached can be a point of contention, especially in light of the "I don't want to give up control of my personnel" considerations and since the decisions made will affect people's livelihoods. Beyond the questions about day-to-day staffing – all sworn personnel, all civilian personnel, or a mixture of both, job status must be accommodated. This includes issues such as seniority, pensions, and health and life insurance, to name a few. The selection of the physical location of the center is another key element that will impact how personnel will react to the concept of a new consolidated dispatch center. Given that the operators and dispatchers will very possibly be charged with greater responsibilities, since the service area under their charge has expanded considerably, a rigorous re-training program will very likely be required.

In terms of time span, the detailed design and acquisition of the communications systems to be operated by the center may actually be the least controversial item and take the least amount of time. Development of a plan for oversight of the center, developing P's & P's agreeable to all, and overcoming the political and staffing issues surrounding consolidation of a number of agencies under one roof are normally the most difficult areas to resolve, since one is dealing with people and personalities rather than hardware.

From a day-to-day operational aspect, the application of consolidated dispatch may be more conducive to Fire/EMS activities, than law enforcement activities because of the environment of automatic aid and mutual aid agreements that currently exists. But in any case, when interoperability scenarios are considered, a consolidated dispatch center can be a very positive force.

Without question, the efforts to commission a centralized dispatch function will require a concentrated effort by all those involved, but the outcome can be very favorable.

RCC recommends that the CTCOG review consolidating dispatch centers, but consolidation was not thoroughly examined in this scope of work and it may not be feasible for this county.

Also, a backup dispatch center is highly recommended. Normally, this is accomplished with a neighboring county, in the event the Coryell County dispatch center becomes unavailable. Coryell County would likely perform similar backup functionality for the neighboring county.

### **Current Subscriber Equipment and Requirements**

See detailed subscriber list in Appendix A.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	126	VHF	55	6	77
Portable (Handheld)	161	VHF	54	8	115
Base Station	11	VHF	10	1	2
Total:					194

**Table 5 – Coryell County – Subscriber Equipment Inventory**

### **Current Coverage/Capacity and Requirements**

VHF mobile coverage in Coryell County is lacking in the west, north, and east corners of Coryell County. The 800 MHz coverage for Copperas Cove meets the needs within the city limits. The north and east corners are not a high priority for coverage improvement, but vehicular repeaters should be considered for these areas, and to improve portable coverage throughout Coryell County. The west corner includes the town of Evant and the intersection of Highways 84 and 281, which is in Hamilton County. Because Lampasas County also reported coverage problems in this area, building a new site that could serve all 3 counties is a higher priority from a coverage improvement perspective.

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not

include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.

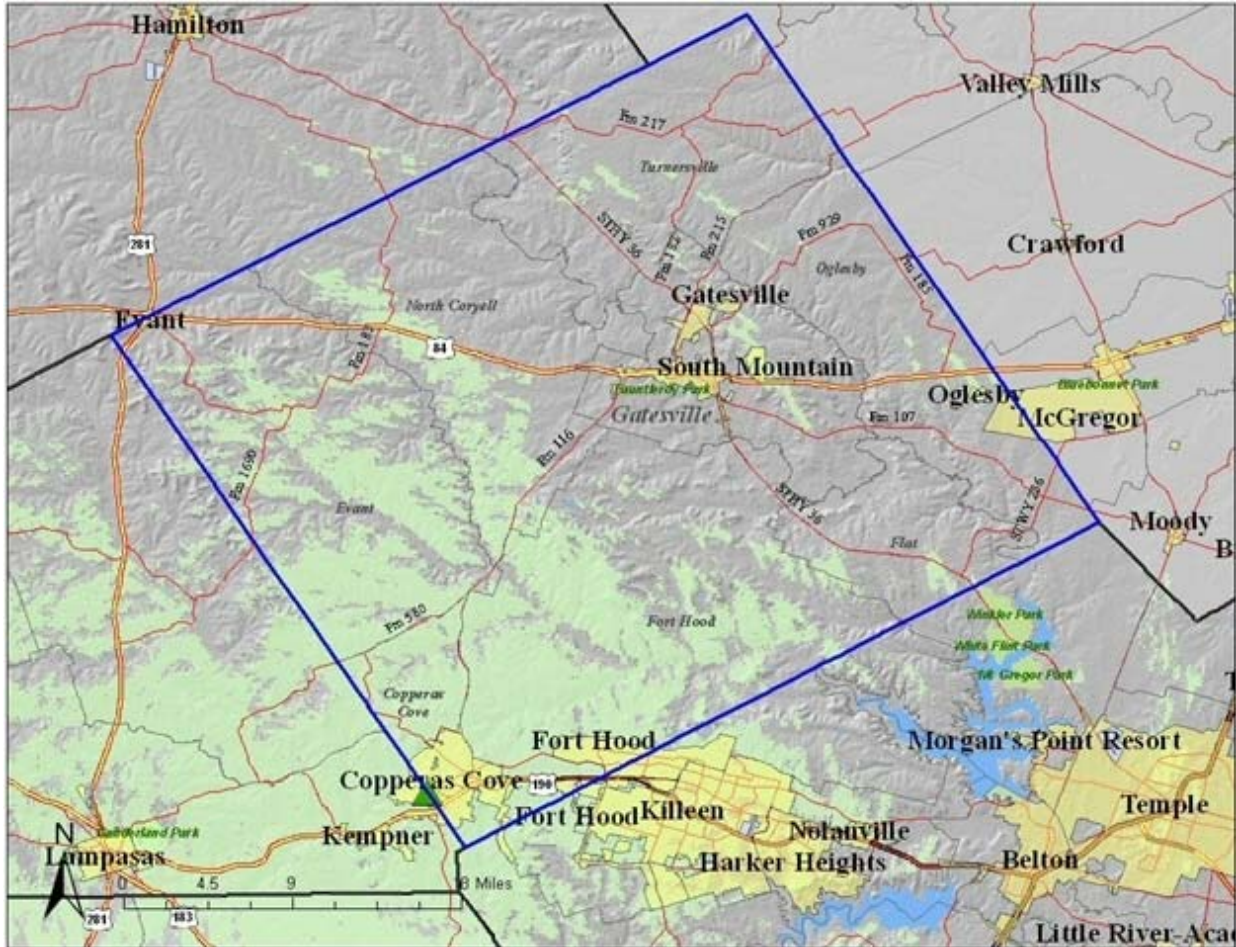


Figure 13 – Hughes Mountain Radio System Coverage (Mobile Talk-Back)

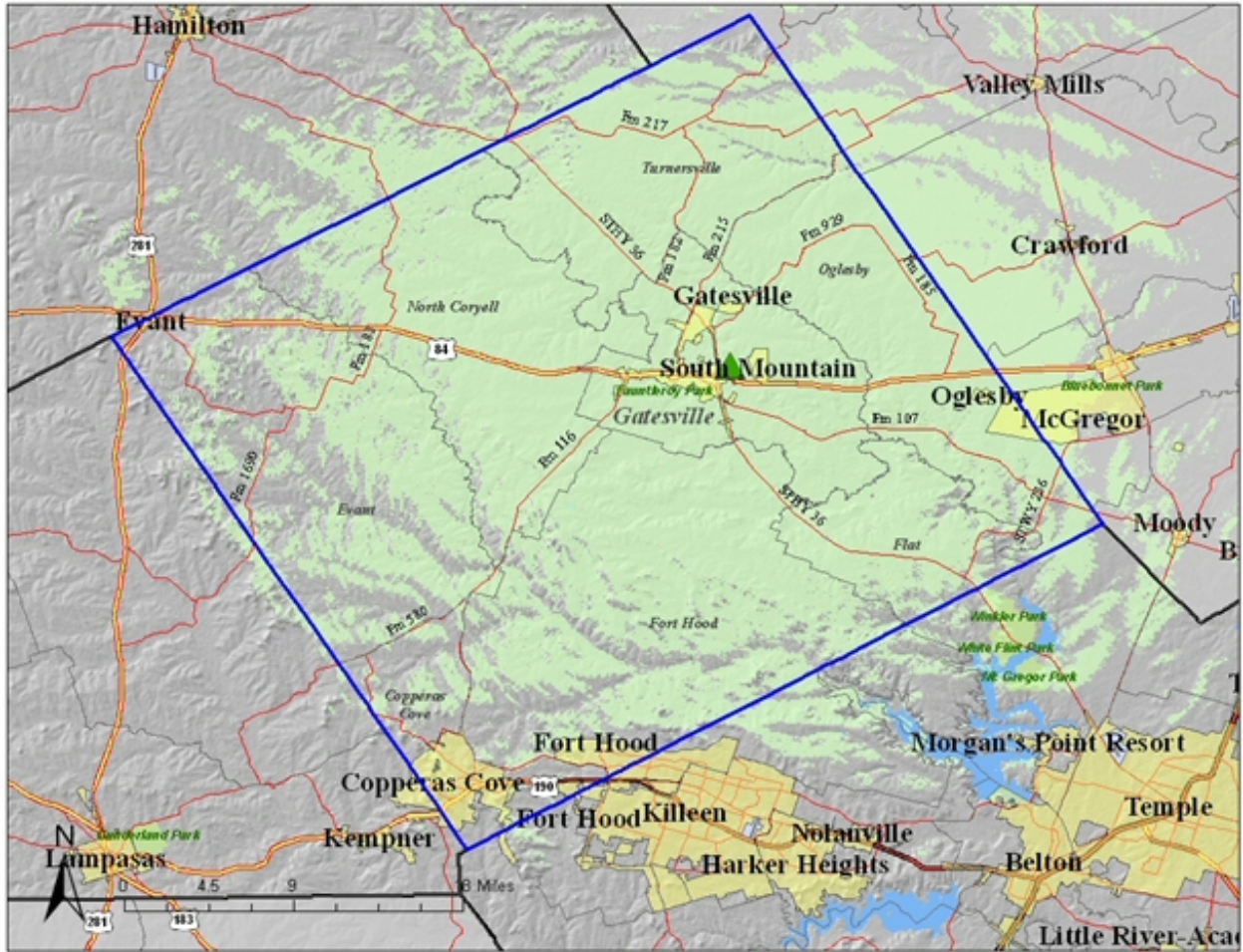


Figure 14 – Old Osage Radio System Coverage (Mobile Talk-Back)

## 5.3 Hamilton County

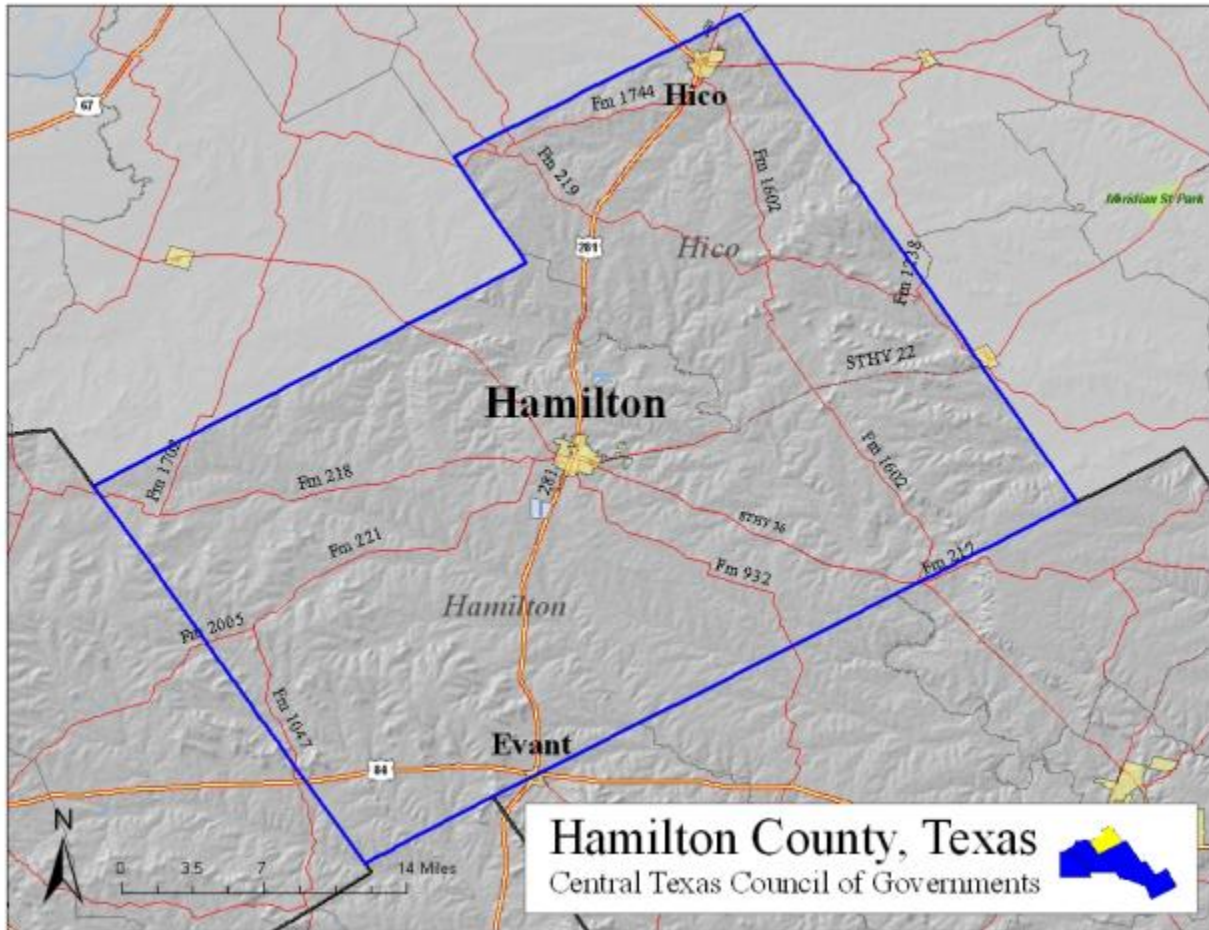


Figure 15 – Hamilton County Map

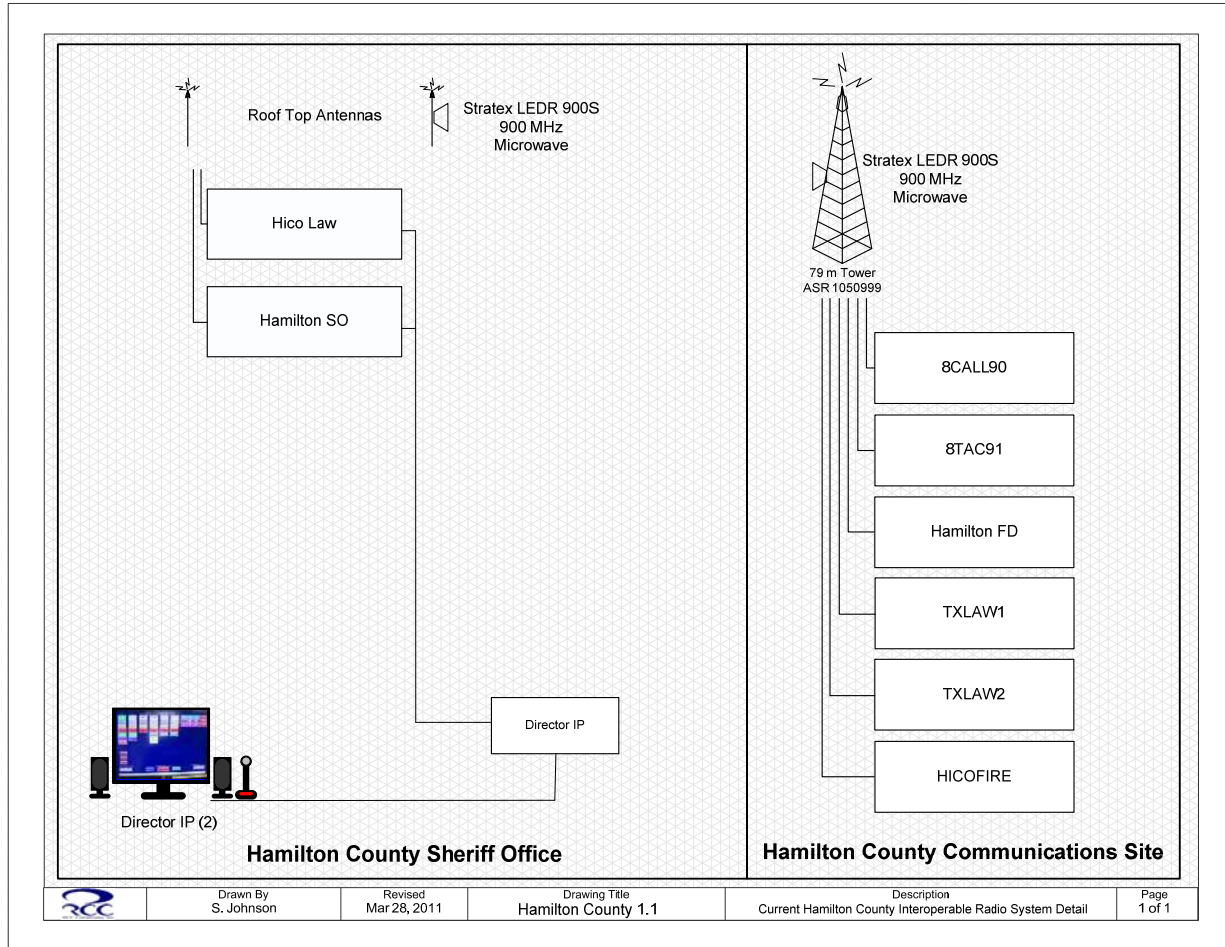
### Agencies

All agencies in Hamilton County operate in the VHF band, and include:

- City of Hico
- Hamilton County Sheriff Office
- Hamilton County Emergency Management Coordinator
- Carlton Volunteer Fire Department
- Hico Volunteer Fire Department

**Current Communication Systems and Interoperability Requirements**

All radio users are dispatched out of the PSAP in the Hamilton County Sheriff Office. The Harris VHF mobile repeater radios and MASTR III repeaters are capable of being upgraded to P25 operations, using conventional radio technology. An 800 MHz NPSPAC calling and tactical channel for VHF/800 MHz is available for interoperability. The block diagram below shows the resources available in the Dispatch Center and at the tower. As all users within Hamilton County, as well as the neighboring Central Texas Council of Governments counties of Mills, Lampasas, and Coryell use the VHF band, interoperability is not a major issue for Hamilton County.



**Figure 16 – Hamilton Co SO - Radio System Detail**

**Current Dispatch and Recommendations**

Dispatching is done from 1 location, the Hamilton County Sheriff Office PSAP. The Hamilton County Sheriff Office PSAP has 2 Director IP Consoles. Redundant dispatch equipment is needed for the Hamilton County dispatch center to ensure a reliable backup PSAP/dispatch is in place in the event the Hamilton Sheriff Office becomes unavailable. It is suggested Lampasas or Mills County provide this reciprocal function with Hamilton County, and Hamilton County can be the backup for the selected county.



The DWC/Harris Director-IP is a VoIP radio console position that can integrate disparate radios allowing a dispatch operator to utilize or patch the radios regardless of frequency band or make/model. Multiple console positions can be tied together via a LAN network.

**Current Subscriber Equipment and Requirements**

See detailed subscriber list in Section 8.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	21	VHF	21	1	1
Portable (Handheld)	16	VHF	16	1	1
Base Station	2	VHF	0	0	2
Total:					4

Hico City not included in count

**Table 6 – Hamilton County – Subscriber Equipment Inventory**



**Hamilton County Radio with Power Supply & Battery**



**Hamilton County Sheriff's Office Dispatch Director IP Interface**

### Current Coverage/Capacity and Requirements

Hamilton County reported adequate coverage, particularly mobile radio coverage. However, a new site recommended for the western portion of Coryell County/northern portion of Lampasas County will enhance coverage in southern Hamilton County, particularly at the Highway 84/281 intersection, which is in Hamilton County. Vehicular repeaters should be considered for improving portable coverage throughout Hamilton County.

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.

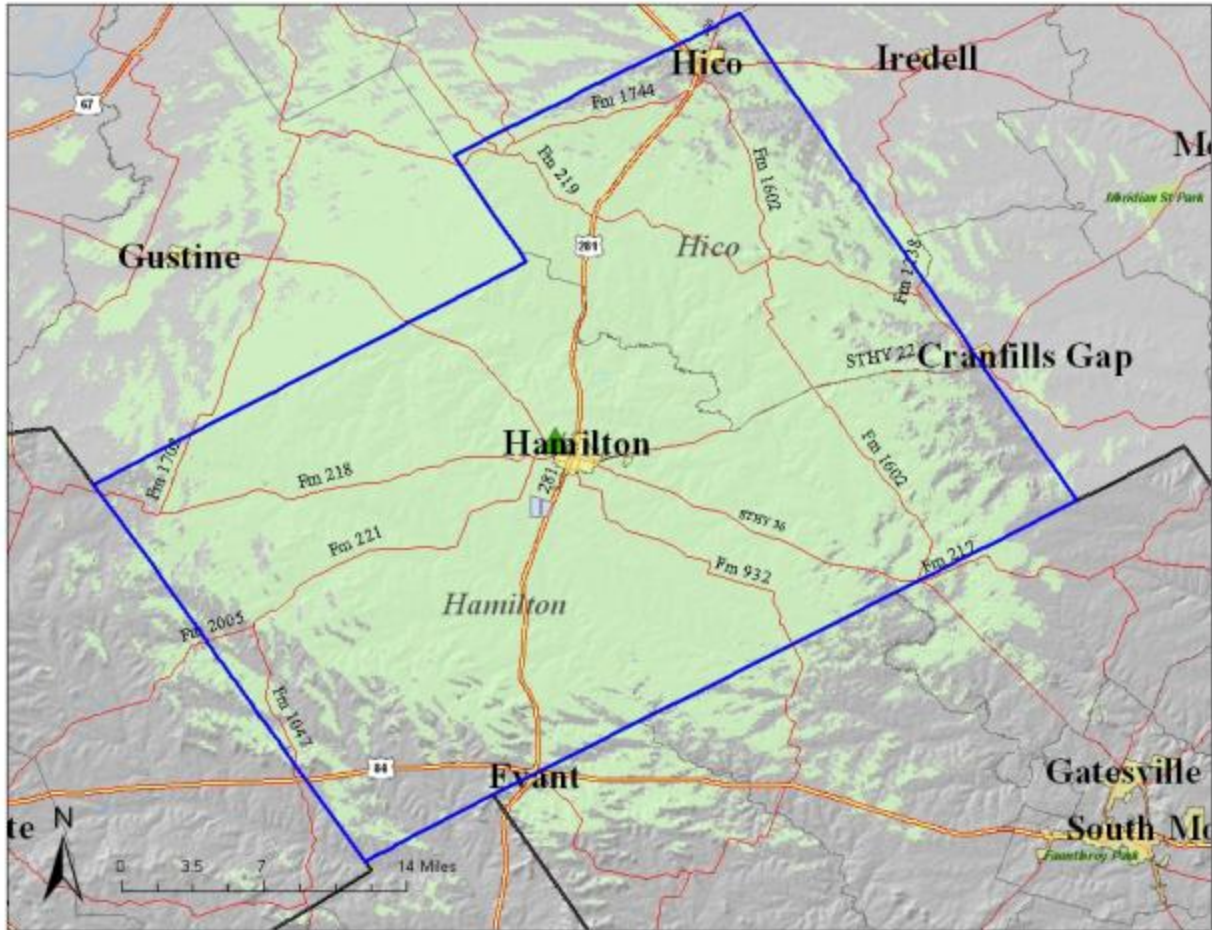
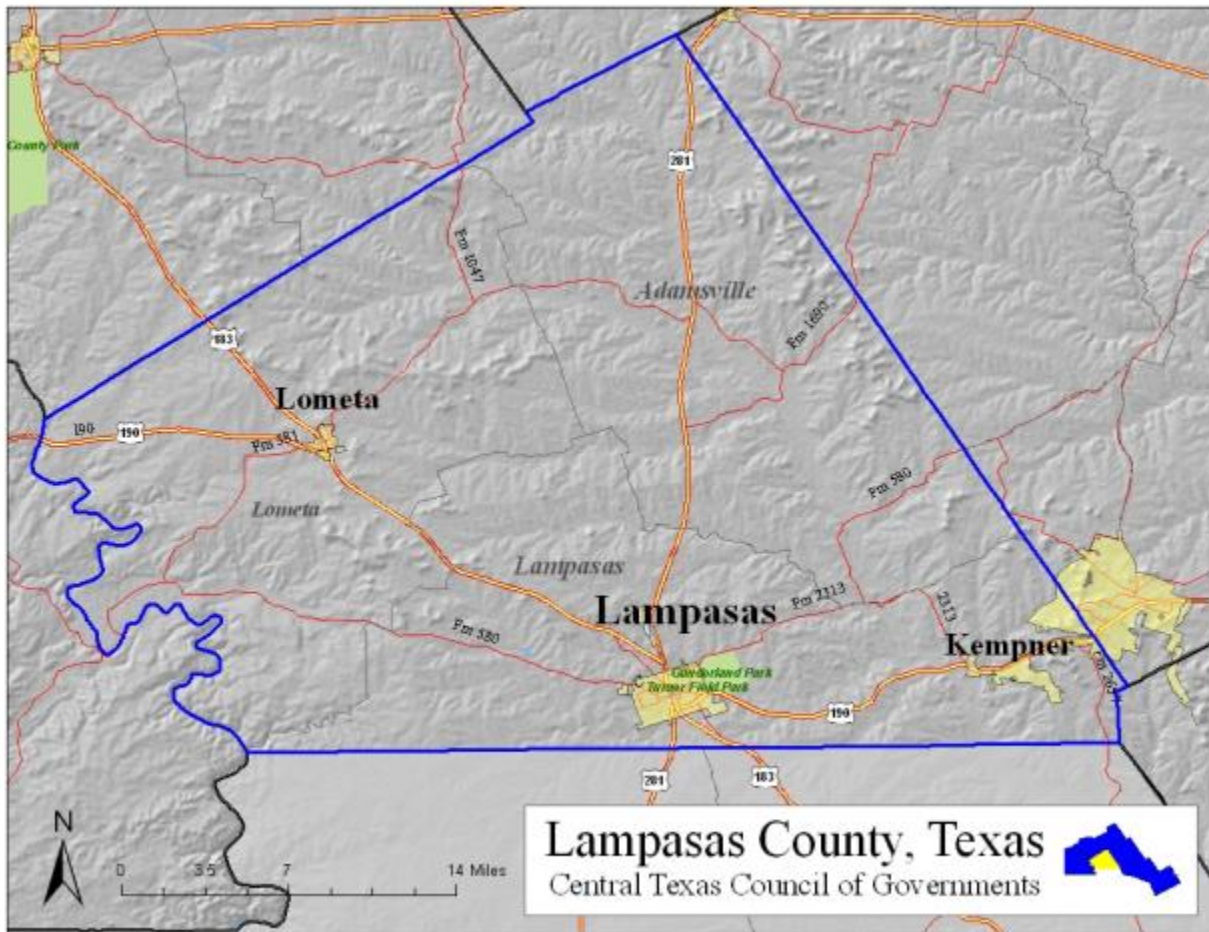


Figure 17 – Hamilton County Radio System Coverage (Mobile Talk-Back)

## 5.4 Lampasas County



**Figure 18 – Lampasas County Map**

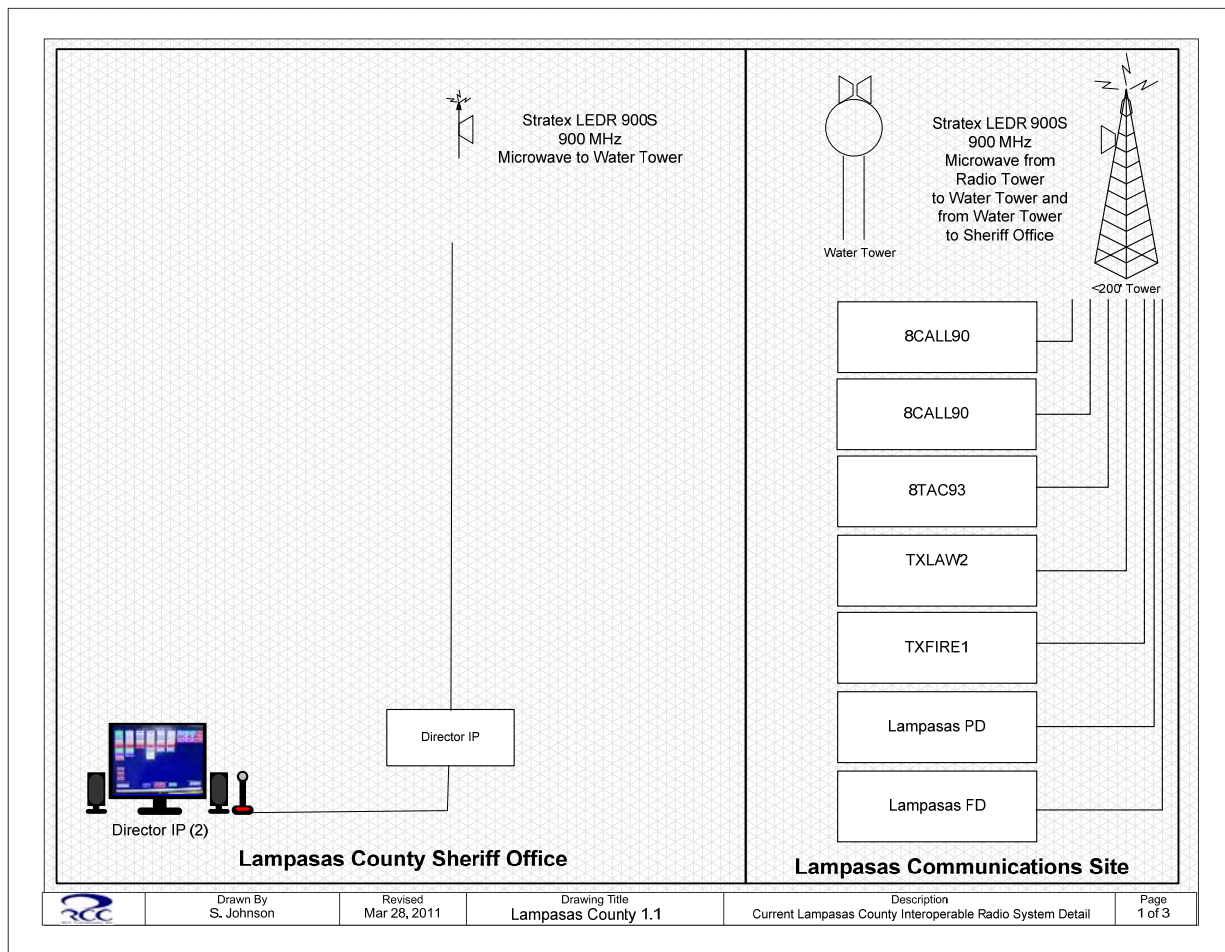
### Agencies

All agencies in Lampasas County operate in the VHF band, and include:

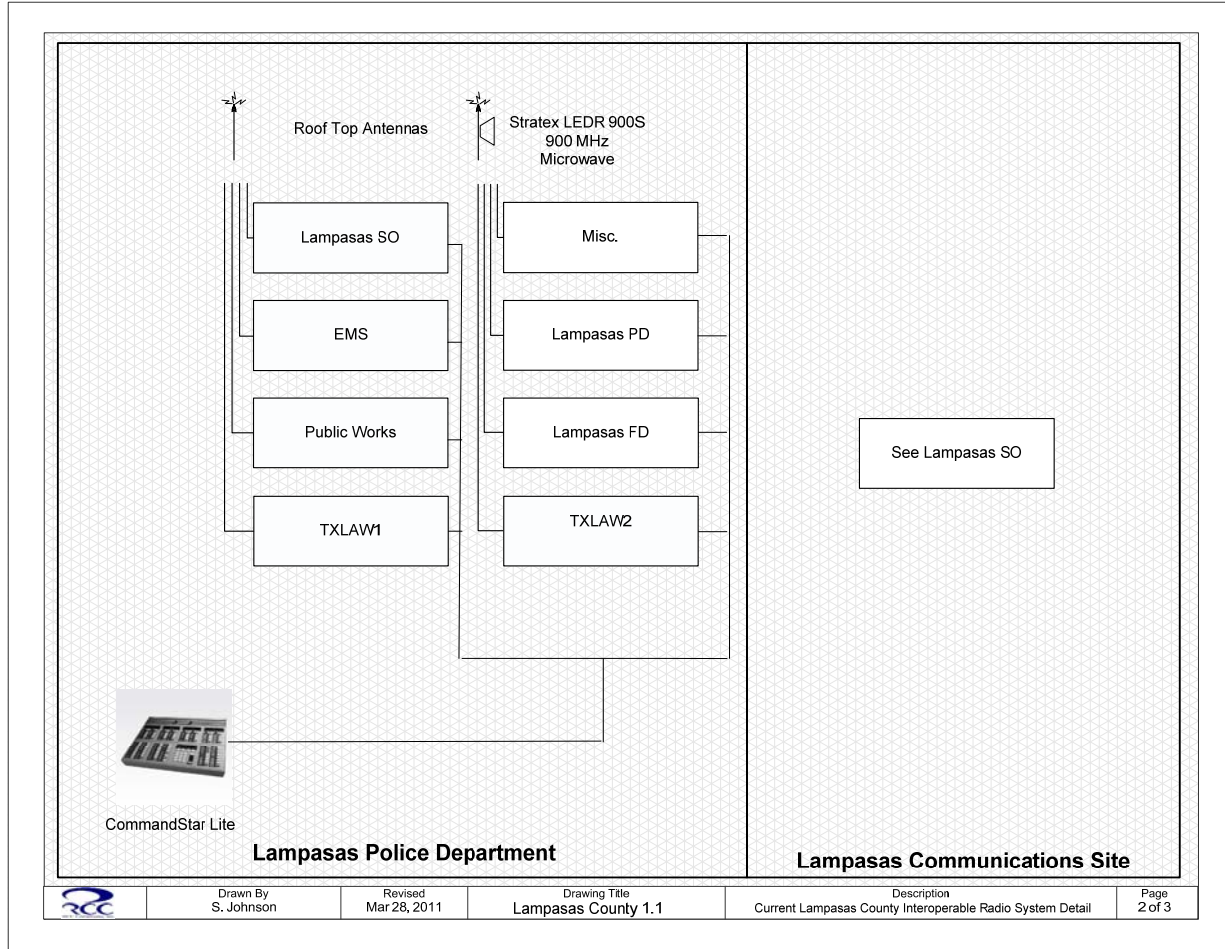
- Lampasas County Emergency Medical Service
- Lampasas County Sheriff Office
- City of Lampasas Police Department
- City of Lampasas Fire Department
- Lampasas County Emergency Management Coordinator

**Current Communication Systems and Interoperability Requirements**

Radio users are dispatched out of the PSAP in the Lampasas County Sheriff Office or the City of Lampasas. The Harris VHF mobile repeater radios and MASTR III repeaters are capable of being upgraded to P25 operations, using conventional radio technology. An 800 MHz NPSPAC calling and tactical channel for VHF/800 MHz is available for interoperability. The microwave link on the water tower between the Lampasas County Sheriff Dispatch Center and the radio site is reported to be unreliable, as the microwave dishes often go out of physical alignment during windy conditions. Visual inspection from the ground indicates additional bracing should remedy this issue. The block diagrams below show the resources available in the Dispatch Center and at the tower. As all users within Lampasas County, as well as the neighboring Central Texas Council of Governments counties of San Saba, Mills, Hamilton, and Coryell use the VHF band (with the exception of Copperas Cove, which uses the 800 MHz band), interoperability is not a major issue for Lampasas County.



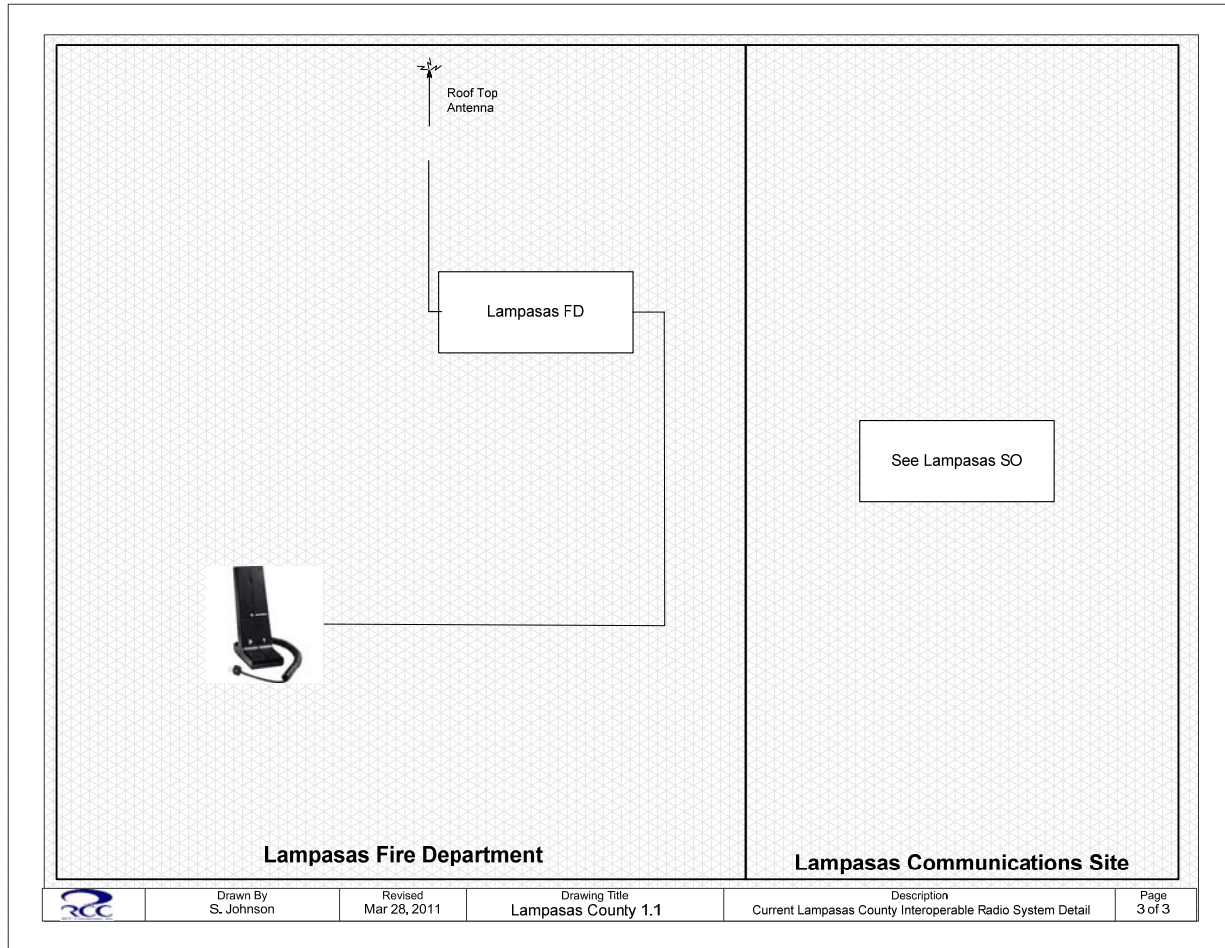
**Figure 19 – Lampasas Co SO - Radio System Detail**



**Figure 20 – Lampasas PD - Radio System Detail**



**Lampasas P.D. CommandSTAR Lite Dispatch Console**



**Figure 21 – Lampasas FD - Radio System Detail**

**Current Dispatch and Recommendations**

Dispatching is done from 3 locations, the City of Lampasas Police Department PSAP, the Lampasas County Sheriff Office PSAP, and the Lampasas Fire Department. The Lampasas Police Department PSAP has CommandSTAR Lite console and uses Motorola Radius M1225 radios, which are not capable of P25 operations. The Lampasas County Sheriff Office has 2 IP Director Consoles, and the City of Lampasas Fire Department has a single desktop microphone with a control station. Redundant dispatch equipment is needed, and the Lampasas County Sheriff Office and City of Lampasas Police Departments are located within a few hundred feet of each other, and a major event, such as a fire or tornado, could easily make both facilities inoperable. It is suggested San Saba, Mills, Hamilton, or Coryell County provide this reciprocal function with the Lampasas County Sheriff Office PSAP (Lampasas County Sheriff Office has the City of Lampasas Police Department , and Lampasas County can be the backup for the selected county).



**Lampasas Water Tower Microwave Link**

**Current Subscriber Equipment and Requirements**

See detailed subscriber list in Section 8.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	88	VHF	67	4	25
Portable (Handheld)	60	VHF	58	3	5
Base Station	13	VHF	6	1	8
Total:					38

**Table 7 – Lampasas County – Subscriber Equipment Inventory**

**Current Coverage/Capacity and Requirements**

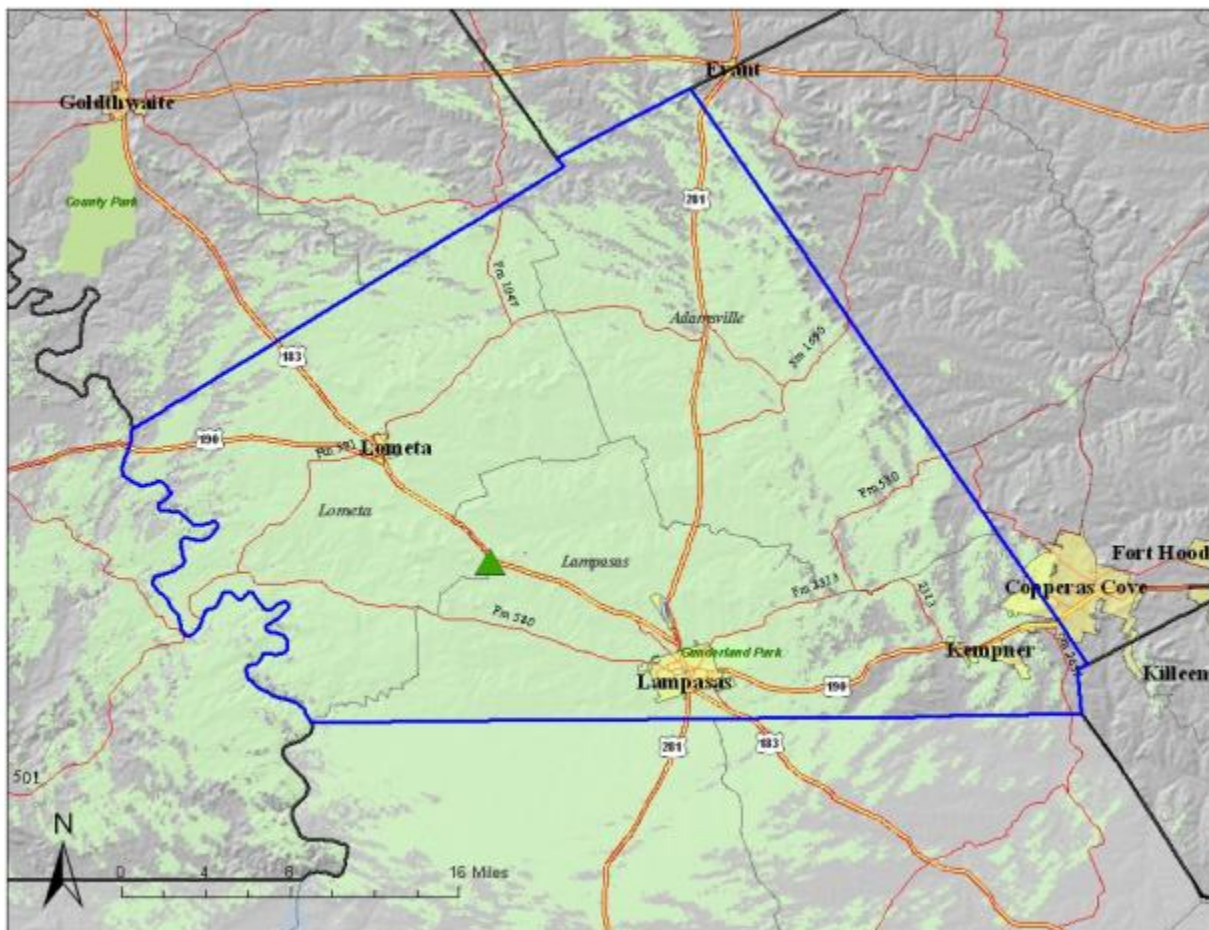
Mobile coverage in Lampasas County is lacking in the southwest and north extremes of Lampasas County. Portable coverage is lacking in the southeast corner of Lampasas County. The southwest corner is not a high priority for coverage improvement, as it is not very populated nor does it have a major transportation route. Vehicular repeaters should be considered for this area, and to improve portable coverage throughout Lampasas County. However, the southeast corner is near the city of Copperas Cove and Highway 190, which is very busy with traffic from Copperas Cove, the City of Lampasas, and Fort Hood. For this reason, it is recommended a VHF channel be added at the Copperas Cove tower. Regarding the north corner of Lampasas



County, Coryell County also reported lack of coverage in this area, which is the western corner of Coryell County and includes the town of Evant, and the intersection of Highways 84/281 in Hamilton County; building a new site that could serve all 3 counties is a higher priority from a coverage improvement perspective.

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.



**Figure 22 – Lampasas County Radio System Coverage (Mobile Talk-Back)**

## Consolidated Dispatch

Lampasas County has two PSAP dispatch centers, which are just a short distance away from each other in the City of Lampasas. Through the implementation of a centralized dispatch facility, interoperability can generally be accomplished for a large geographical area since the concept implies that all agencies served by the facility are operating on the same radio system and infrastructure. The implementation of a "Centralized Dispatch" facility, also frequently known as a "Consolidated Dispatch Center" is a major undertaking involving three complicated areas of effort. The three areas, which must be developed and or designed prior to implementation of the new dispatch center, are as follows:

- **Communications Systems and Associated Software & Hardware** - Typically, these include radio dispatch systems, CAD/RMS Systems, and Enhanced 9-1-1 systems. In today's world, one of the latter two must include a mapping component, based on a GIS system, to accommodate Wireless 9-1-1 call location. Other systems, which may be included are, Mobile Data and Automatic Vehicle Location.
- **Management and Oversight of the Operations** - The management structure and reporting structure of the facility management must be developed. While determining the number and type of personnel required to manage day-to-day operations may be relatively easy to define, the reporting structure of the facility management may be more difficult. Some select group of individuals must be responsible for oversight of the center. The question becomes, who are they and how many "votes" do they have in final decisions. The makeup of such groups varies greatly. They may be either elected or appointed officials and the number of votes each has can depend on the size of the jurisdiction they represent, the amount of funding contributed to the facility and systems, or other contributing factors. These individuals are also normally responsible for developing and monitoring the center's operating Policies and Procedures (P's & P's).
- **Staffing and Operating Issues** - The issues on how staffing will be approached can be a point of contention, especially in light of the "I don't want to give up control of my personnel" considerations and since the decisions made will affect people's livelihoods. Beyond the questions about day-to-day staffing – all sworn personnel, all civilian personnel, or a mixture of both, job status must be accommodated. This includes issues such as seniority, pensions, and health and life insurance, to name a few. The selection of the physical location of the center is another key element that will impact how personnel will react to the concept of a new consolidated dispatch center. Given that the operators and dispatchers will very possibly be charged with greater responsibilities, since the service area under their charge has expanded considerably, a rigorous re-training program will very likely be required.

In terms of time span, the detailed design and acquisition of the communications systems to be operated by the center may actually be the least controversial item and take the least amount of time. Development of a plan for oversight of the center, developing P's & P's agreeable to all, and overcoming the political and staffing issues surrounding consolidation of a number of agencies under one roof are normally the most difficult areas to resolve, since one is dealing with people and personalities rather than hardware.

From a day-to-day operational aspect, the application of consolidated dispatch may be more conducive to Fire/EMS activities, than law enforcement activities because of the environment of automatic aid and mutual aid agreements that currently exists. But in any case, when

interoperability scenarios are considered, a consolidated dispatch center can be a very positive force.

Without question, the efforts to commission a centralized dispatch function will require a concentrated effort by all those involved, but the outcome can be very favorable.

RCC recommends that the CTCOG review consolidating dispatch centers, but consolidation was not thoroughly examined in this scope of work and it may not be feasible for this county.

## 5.5 Milam County

Milam County lies just east of Bell County and it is the eastern most county of the region. There are three dispatch centers, two of which are PSAPs, and there associated radio systems and public safety user agencies.

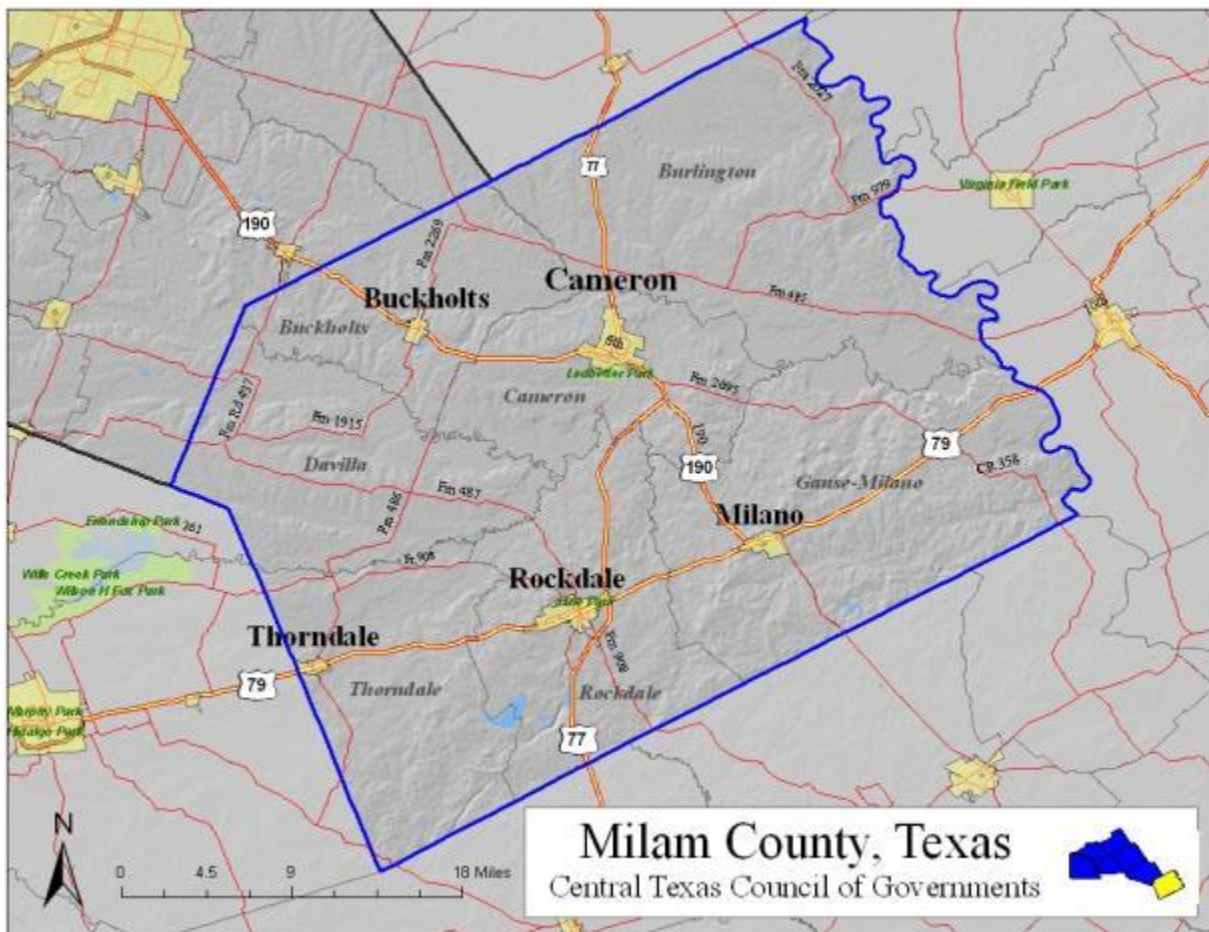


Figure 23 – Milam County Map

### 5.5.1 Milam County Law Enforcement Center

#### Agencies

All agencies in dispatched by the Milam County Law Enforcement Center (MCLEC) operate in the VHF band, and include:

- Milam County Sheriff's Department
- Milam County Constable's Office
- County EMS
- County Fire Departments

#### Current Communication Systems and Interoperability Requirements

The Milam County Sheriff's Office repeater is a Harris MASTR III located at McLerran Hill, which is a 450' leased tower space located just south of Cameron off of Highway 290. The primary repeater and other resources located at McLerran Hill are accessible to the dispatch center via microwave connectivity. The McLerran Hill is a leased site that appears to be full with the County, State, amateur and commercial radio systems. There are very little if any expansion capabilities. The site does have a backup generator on site.

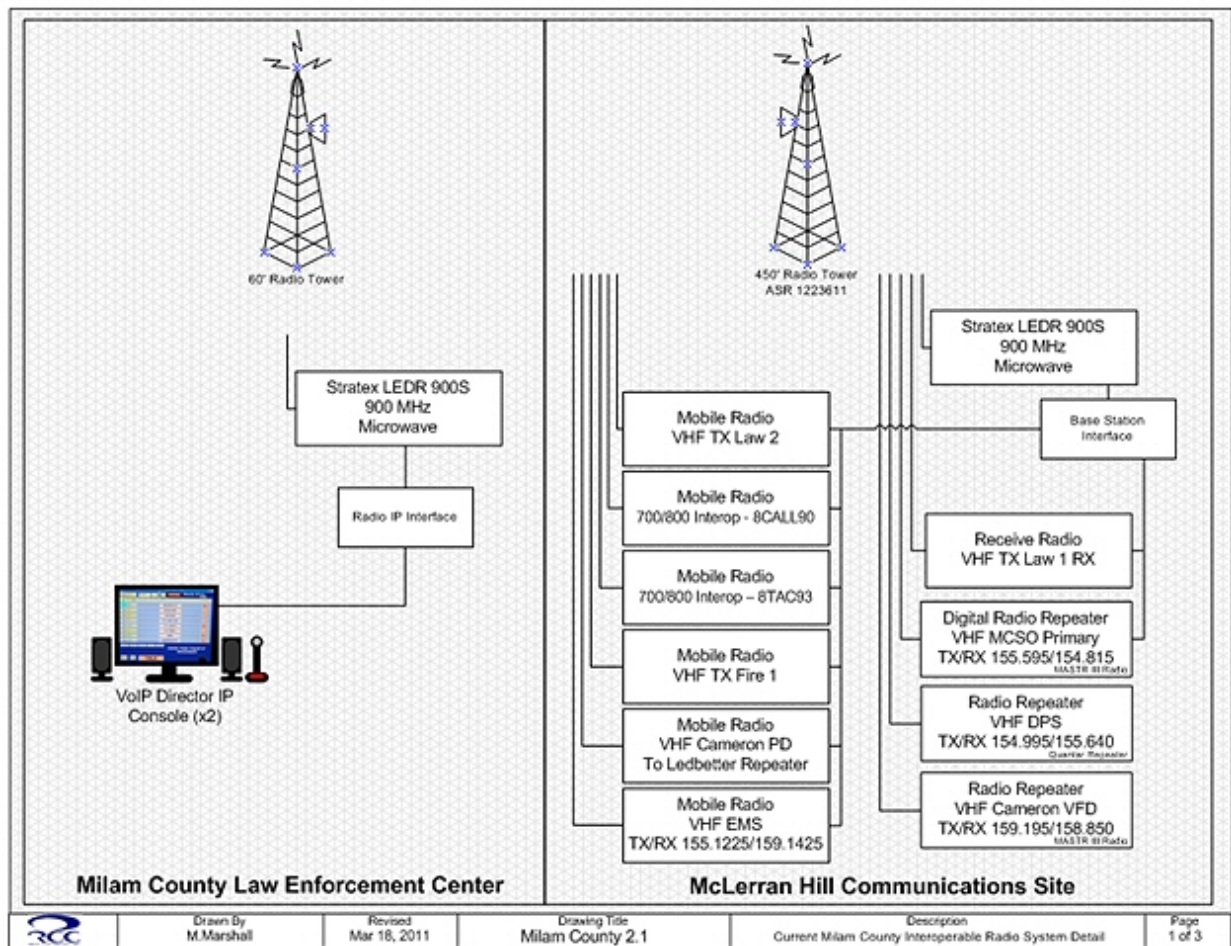


Figure 24 – Milam County SO - Radio System Detail

### **Current Dispatch Facilities**

The dispatch center at the Milam County Law Enforcement Center (MCLEC) consists of two DWC/Harris Director-IP radio dispatch positions. The Director IP dispatch position is connected to radio resources located at McLerran Hill. There is a short tower located at the LEC, but the radios utilized for dispatch are located at the communication site which provides fairly good county-wide coverage.

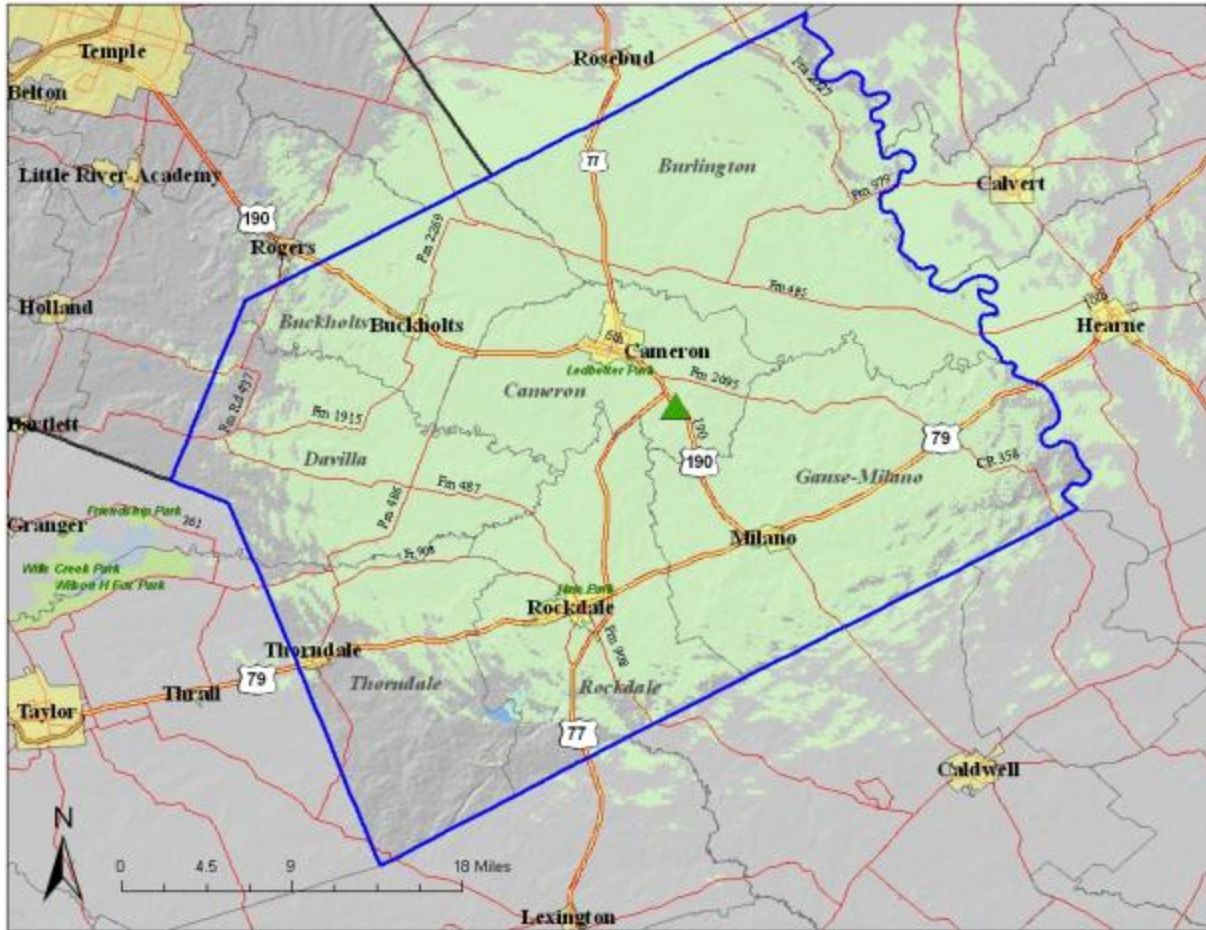
The DWC/Harris Director-IP is a VoIP radio console position that can integrate disparate radios allowing a dispatch operator to utilize or patch the radios regardless of frequency band or make/model. Multiple console positions can be tied together via a LAN network. Connectivity for the radio resources at McLerran Hill and the dispatch center are via 900 MHz unlicensed microwave.

It is recommended that some radio resources be installed at the dispatch center to be utilized for backup communications in the event that there is a failure at the McLerran Hill site or in the connectivity between the locations.

### **Current Coverage/Capacity and Requirements**

It is reported that the current radio system provides fairly decent mobile coverage throughout the county. There are reported areas of poor coverage in the corners of the county and in the Thorndale area. This is verified by the provided current system RF coverage map for mobile radio. The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.



**Figure 25 – Milam County SO – McLerran Hill - Radio System Coverage (Mobile Talk-Back)**

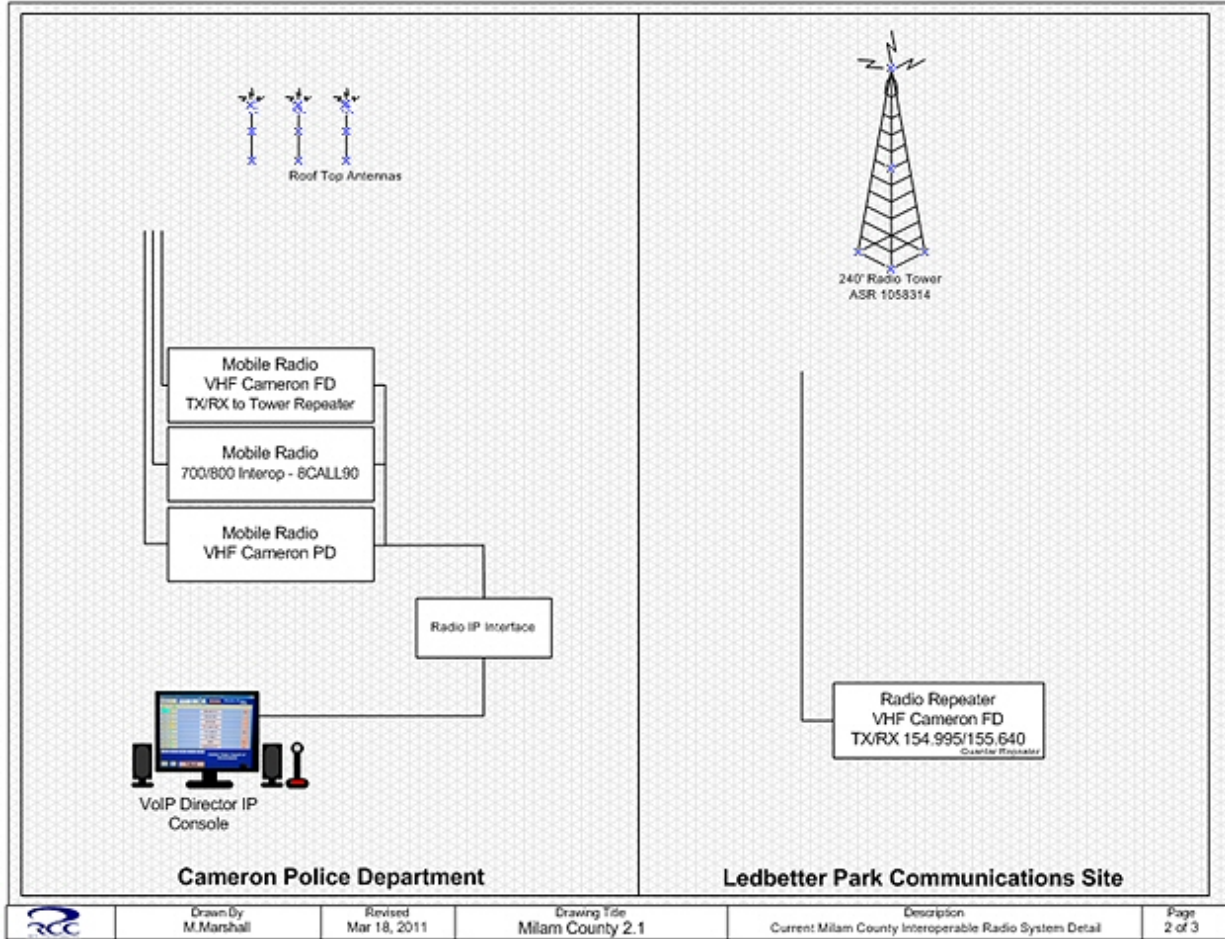
**5.5.2 Cameron Police Department**

**Agencies**

- Cameron Police Department
- Cameron Fire Department

**Current Communication Systems and Interoperability Requirements**

The Cameron Police and Fire repeater is a Motorola Quantar located at the city owned Ledbetter Park communication site. The site includes a 240' tower built in 1972 and it is located just in the City of Cameron. It is the only radio resource located at the Ledbetter Site. It does not have telephone or microwave connectivity. The site does have a backup generator on site.



**Figure 26 – Cameron - Radio System Detail**

**Current Dispatch Facilities**

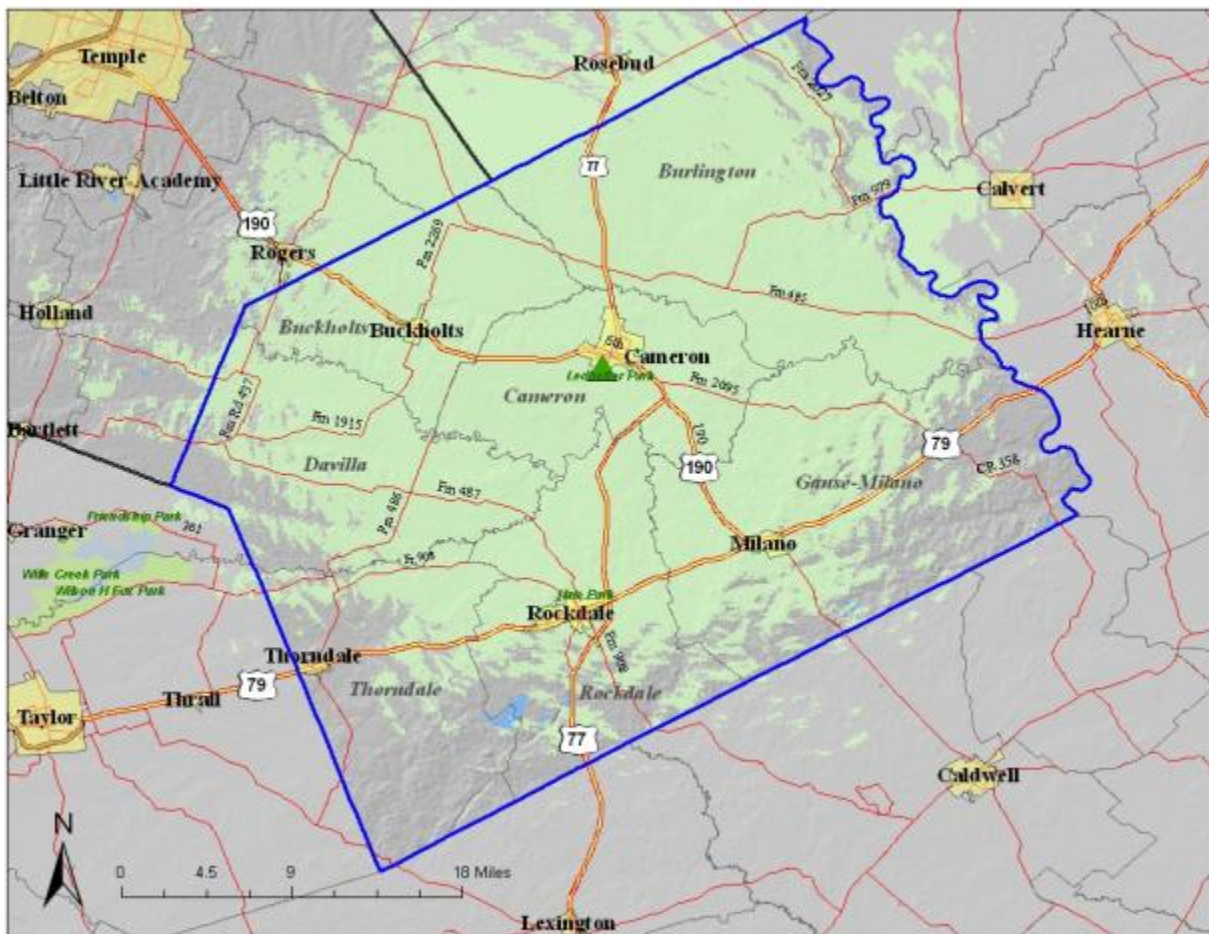
The Cameron Police Department is a PSAP that provides dispatching services for the City of Cameron. The center utilizes a single dispatch console system with mobile radio resources at the dispatch center that access the repeater at Ledbetter Park via RF transmission. Antennas for the radios at the dispatch center are mounted on the roof of the building.

The DWC/Harris Director-IP is a VoIP radio console position that can integrate disparate radios allowing a dispatch operator to utilize or patch the radios regardless of frequency band or make/model. Multiple console positions can be tied together via a LAN network.

### Current Coverage/Capacity and Requirements

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.



**Figure 27 – Cameron Police Department - Radio System Coverage (Mobile Talk-Back)**



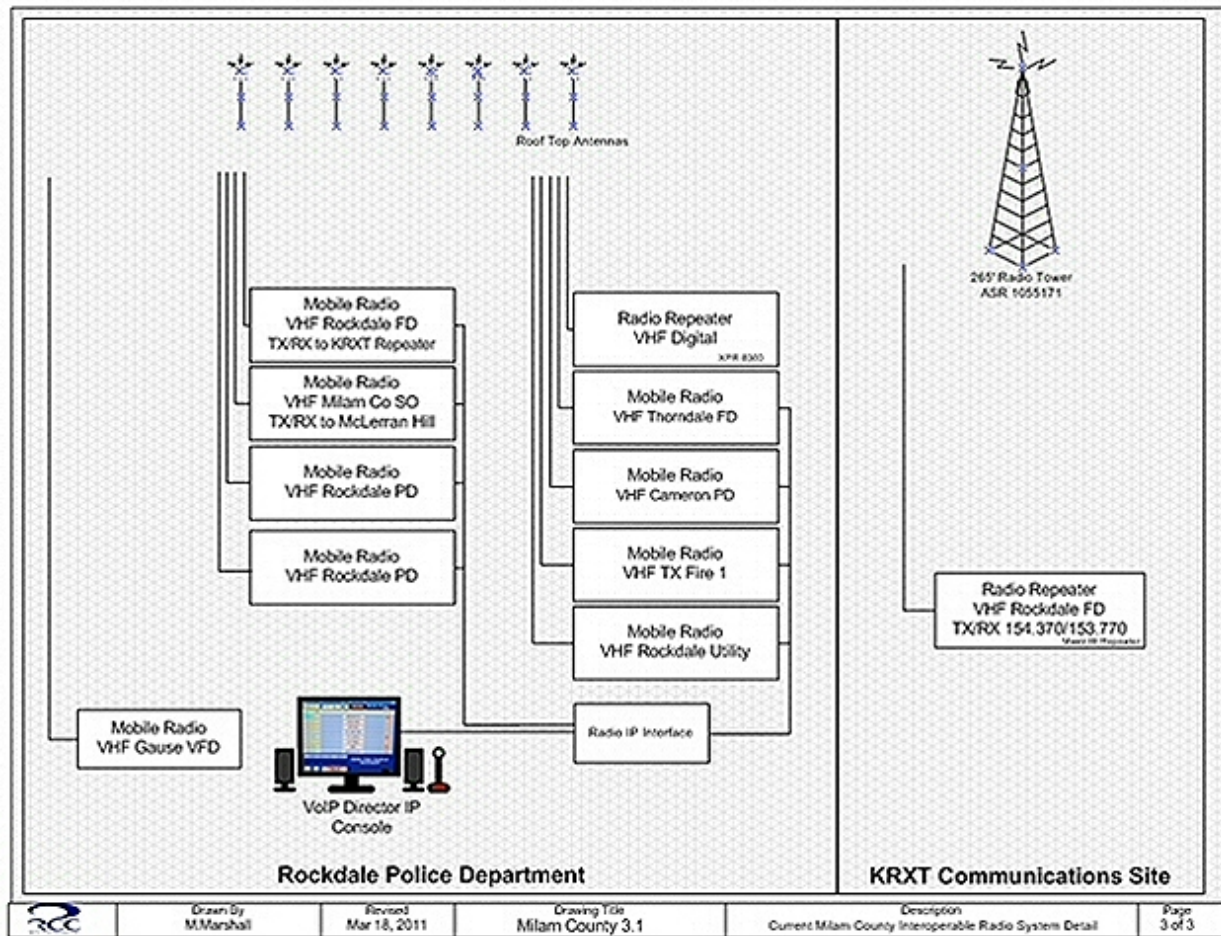
### 5.5.3 Rockdale Police Department

#### Agencies

- Rockdale Police Department
- Rockdale Fire Department
- Thorndale FD
- Rockdale Utilities
- Gause FD

#### Current Communication Systems and Interoperability Requirements

The majority of the radio resources utilized by the Rockdale Police Department are located at the police department facility in Rockdale. The antennas are located on the roof of the building or a short tower on the building, which will provide radio coverage to the Rockdale city area. There is VHF mutual aid channels available, but they are limited in coverage as well. There is RF transmission access to a repeater at a nearby broadcast tower that provides wider area coverage. This site is not optimum and should probably not be considered for expansion. There is inherent interference with broadcast stations due to the high levels of RF power output. The repeater system at the site is not housed at a public safety standard communication facility.



**Figure 28 – Rockdale PD - Radio System Detail****Current Dispatch Facilities**

The Rockdale Police Department is also PSAP that provides dispatching services for the City of Rockdale. The center utilizes a single dispatch console system with mobile radio resources at the dispatch center that access the repeater at Ledbetter Park via RF transmission. Antennas for the radios at the dispatch center are mounted on the roof of the building.

The DWC/Harris Director-IP is a VoIP radio console position that can integrate disparate radios allowing a dispatch operator to utilize or patch the radios regardless of frequency band or make/model. Multiple console positions can be tied together via a LAN network.

**Current Coverage/Capacity and Requirements**

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.

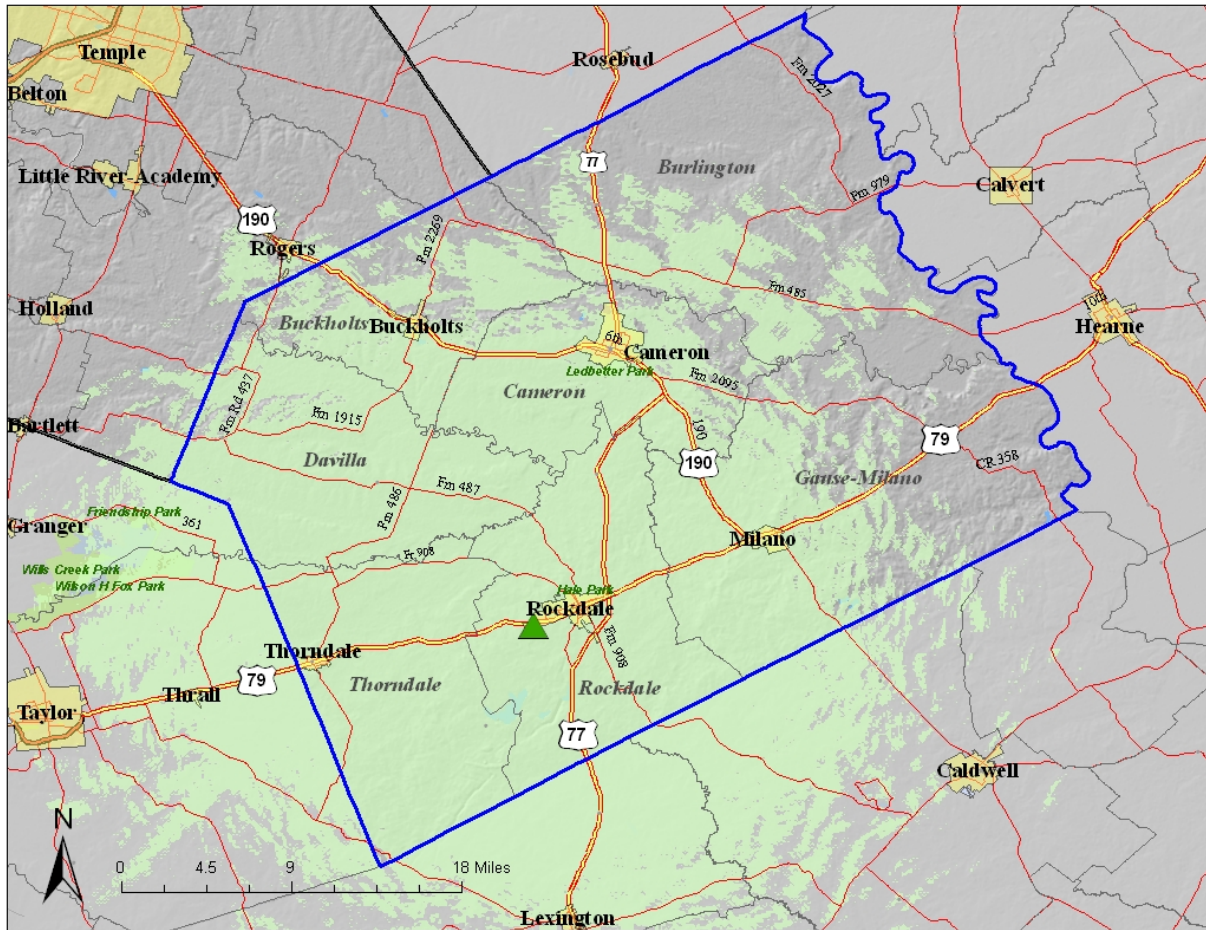


Figure 29 – Rockdale Police Department - Radio System Coverage (Mobile Talk-Back)

### Current Subscriber Equipment and Requirements

The following subscriber equipment radio count is an accumulation for all agencies within Milam County.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	118	VHF	47	6	77
Portable (Handheld)	209	VHF	64	10	155
Base Station		VHF	0	2	2
Total:					234

**Table 8 – Milam County Sheriff's Department – Subscriber Equipment Inventory**

### Consolidated Dispatch

Milam County has three dispatch centers, two of which are just a short distance away from each other in Cameron. Through the implementation of a centralized dispatch facility, interoperability can generally be accomplished for a large geographical area since the concept implies that all agencies served by the facility are operating on the same radio system and infrastructure. The implementation of a "Centralized Dispatch" facility, also frequently known as a "Consolidated Dispatch Center" is a major undertaking involving three complicated areas of effort. The three areas, which must be developed and or designed prior to implementation of the new dispatch center, are as follows:

- **Communications Systems and Associated Software & Hardware** - Typically, these include radio dispatch systems, CAD/RMS Systems, and Enhanced 9-1-1 systems. In today's world, one of the latter two must include a mapping component, based on a GIS system, to accommodate Wireless 9-1-1 call location. Other systems, which may be included are, Mobile Data and Automatic Vehicle Location.
- **Management and Oversight of the Operations** - The management structure and reporting structure of the facility management must be developed. While determining the number and type of personnel required to manage day-to-day operations may be relatively easy to define, the reporting structure of the facility management may be more difficult. Some select group of individuals must be responsible for oversight of the center. The question becomes, who are they and how many "votes" do they have in final decisions. The makeup of such groups varies greatly. They may be either elected or appointed officials and the number of votes each has can depend on the size of the jurisdiction they represent, the amount of funding contributed to the facility and systems, or other contributing factors. These individuals are also normally responsible for developing and monitoring the center's operating Policies and Procedures (P's & P's).

- **Staffing and Operating Issues** - The issues on how staffing will be approached can be a point of contention, especially in light of the "I don't want to give up control of my personnel" considerations and since the decisions made will affect people's livelihoods. Beyond the questions about day-to-day staffing – all sworn personnel, all civilian personnel, or a mixture of both, job status must be accommodated. This includes issues such as seniority, pensions, and health and life insurance, to name a few. The selection of the physical location of the center is another key element that will impact how personnel will react to the concept of a new consolidated dispatch center. Given that the operators and dispatchers will very possibly be charged with greater responsibilities, since the service area under their charge has expanded considerably, a rigorous re-training program will very likely be required.

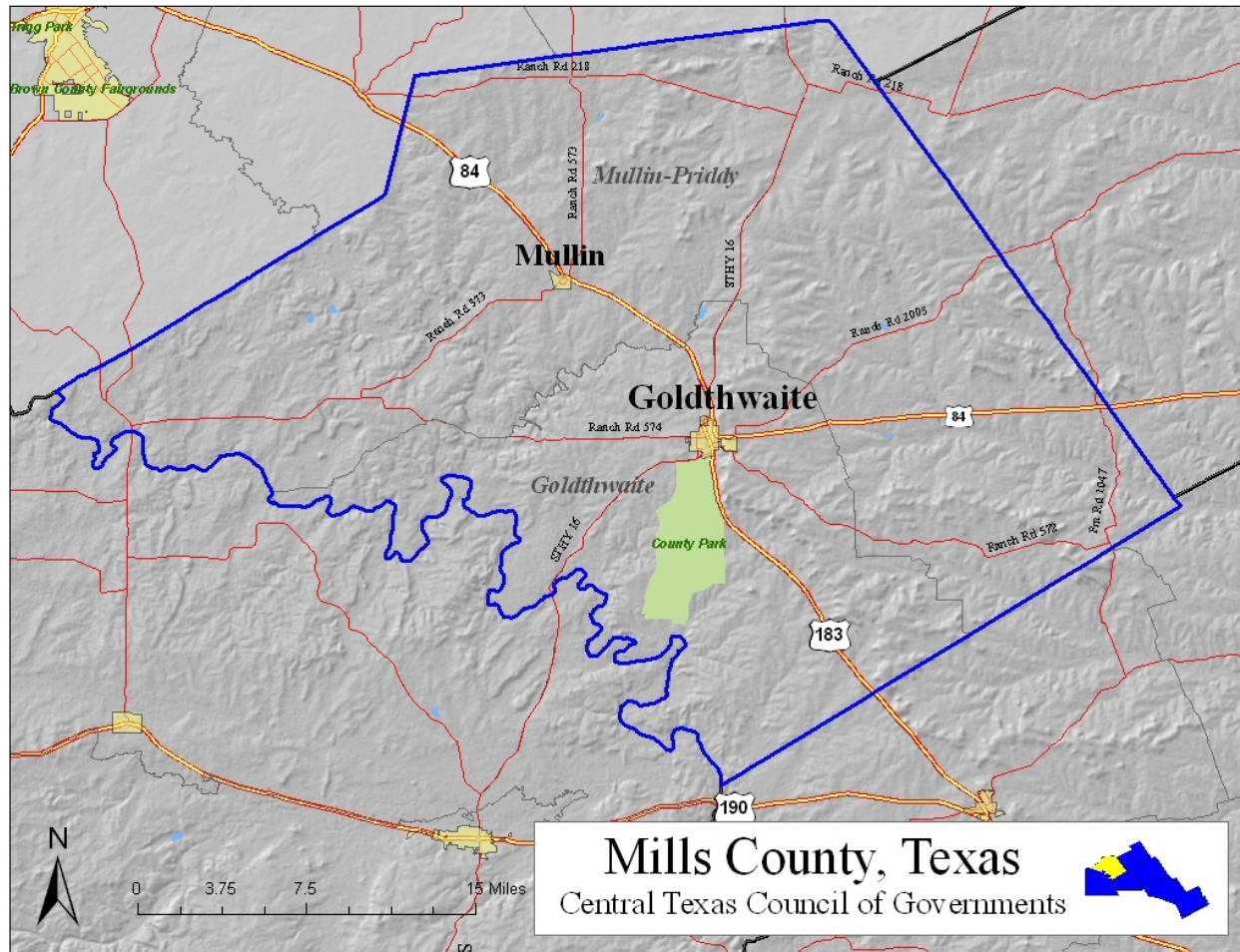
In terms of time span, the detailed design and acquisition of the communications systems to be operated by the center may actually be the least controversial item and take the least amount of time. Development of a plan for oversight of the center, developing P's & P's agreeable to all, and overcoming the political and staffing issues surrounding consolidation of a number of agencies under one roof are normally the most difficult areas to resolve, since one is dealing with people and personalities rather than hardware.

From a day-to-day operational aspect, the application of consolidated dispatch may be more conducive to Fire/EMS activities, than law enforcement activities because of the environment of automatic aid and mutual aid agreements that currently exists. But in any case, when interoperability scenarios are considered, a consolidated dispatch center can be a very positive force.

Without question, the efforts to commission a centralized dispatch function will require a concentrated effort by all those involved, but the outcome can be very favorable.

RCC recommends that the CTCOG review consolidating dispatch centers, but consolidation was not thoroughly examined in this scope of work and it may not be feasible for this county.

## 5.6 Mills County



**Figure 30 – Mills County Map**

### Agencies

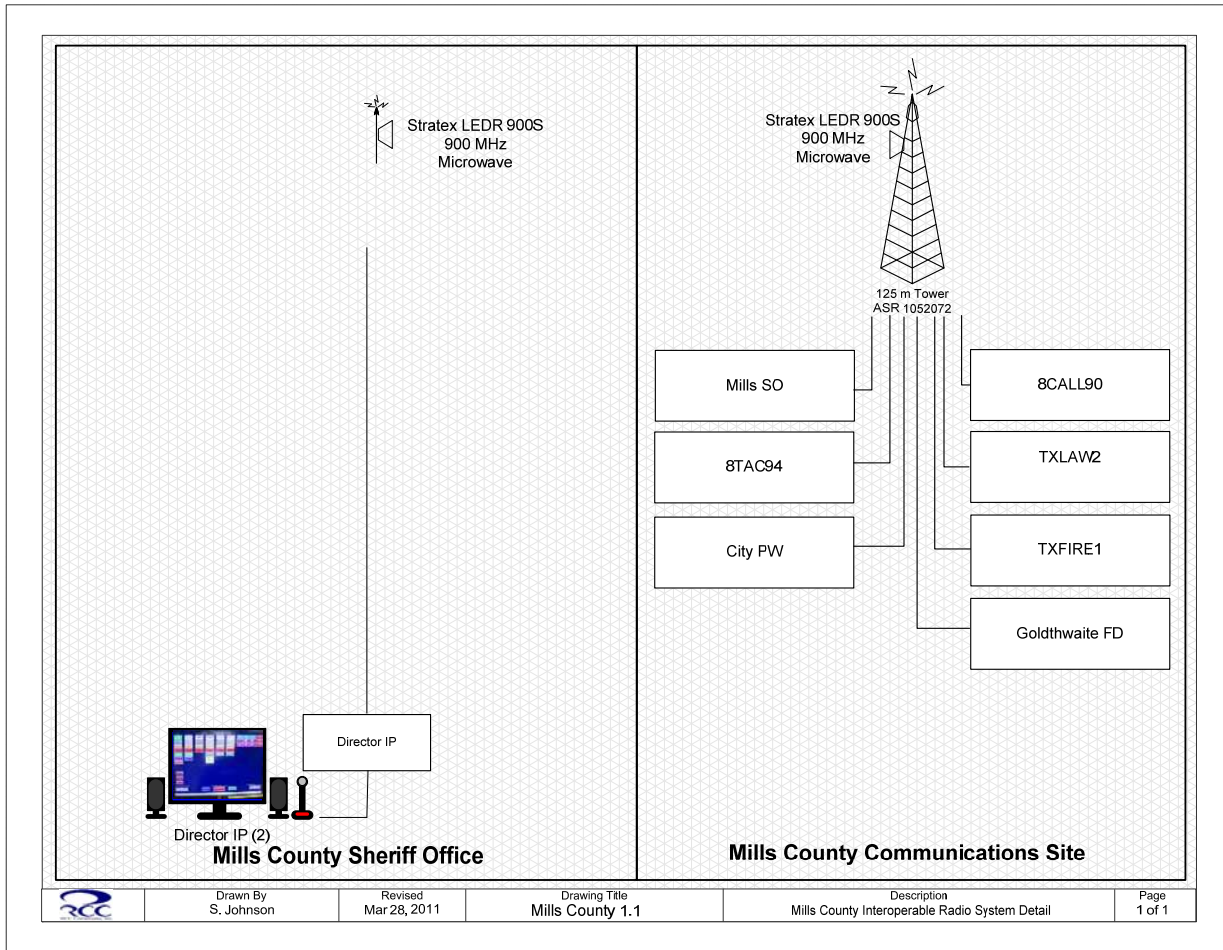
All agencies in Mills County operate in the VHF band, and include:

- The City of Goldthwaite
- Mills County Emergency Medical Service
- Mills County Emergency Management Coordinator
- Mills County Sheriff Office
- Goldthwaite Volunteer Fire Department
- Goldthwaite Public Works
- Mullin Volunteer Fire Department
- Priddy Volunteer Fire Department
- Star Volunteer Fire Department

### Current Communication Systems and Interoperability Requirements

All radio users are dispatched out of the PSAP in the Mills County Sheriff Office. The Harris VHF mobile repeater radios and MASTR III repeaters are capable of being upgraded to P25 operations, using conventional radio technology. An 800 MHz NPSPAC calling and tactical channel for VHF/800 MHz is available for interoperability. The block diagram below shows the

resources available in the Dispatch Center and at the tower. As all users within Mills County, as well as the neighboring Central Texas Council of Governments counties of Hamilton, Lampasas, and San Saba use the VHF band, interoperability is not a major issue for Mills County.



**Figure 31 – Mills County SO - Radio System Detail**

**Current Dispatch and Recommendations**

Dispatching is done from 1 location, the Mills County Sheriff Office PSAP. The Mills County Sheriff Office PSAP has 2 Director IP Consoles. Redundant dispatch equipment is needed for the Mills County dispatch center to ensure a reliable backup PSAP/dispatch is in place in the event the Mills Sheriff Office becomes unavailable. It is suggested Lampasas, San Saba, or Hamilton County provide this reciprocal function with Mills County, and Mills County can be the backup for the selected county.

**Current Subscriber Equipment and Requirements**

See detailed subscriber list in Section 8.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	41	VHF	41	2	2
Portable (Handheld)	28	VHF	28	1	1
Base Station	6	VHF	6	0	0
Total:					4

**Table 9 – Mills County – Subscriber Equipment Inventory**

**Current Coverage/Capacity and Requirements**

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.



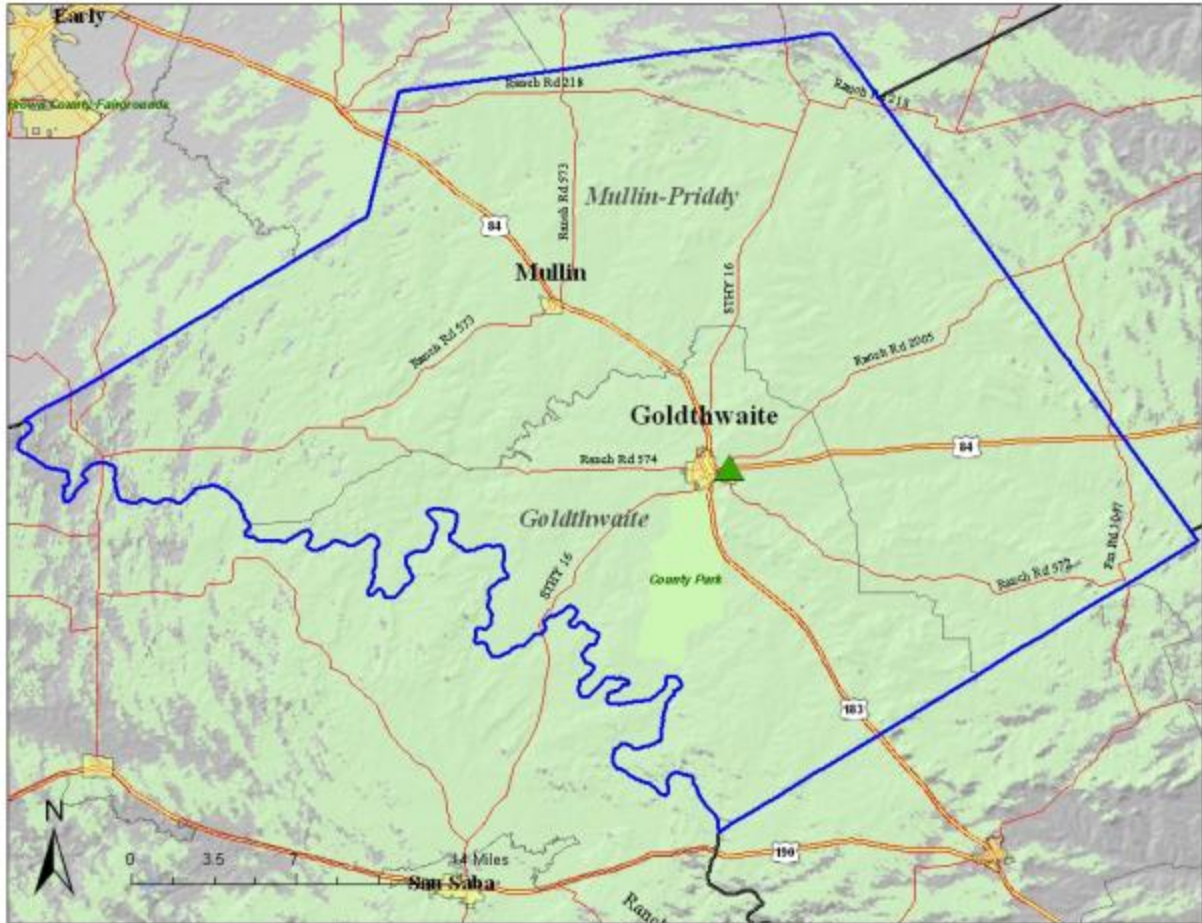


Figure 32 – Mills County - Radio System Coverage (Mobile Talk-Back)



**Mills County Backup Power Generator**



**Mills County Coax, Ice Shield, & Grounding**

## 5.7 San Saba County

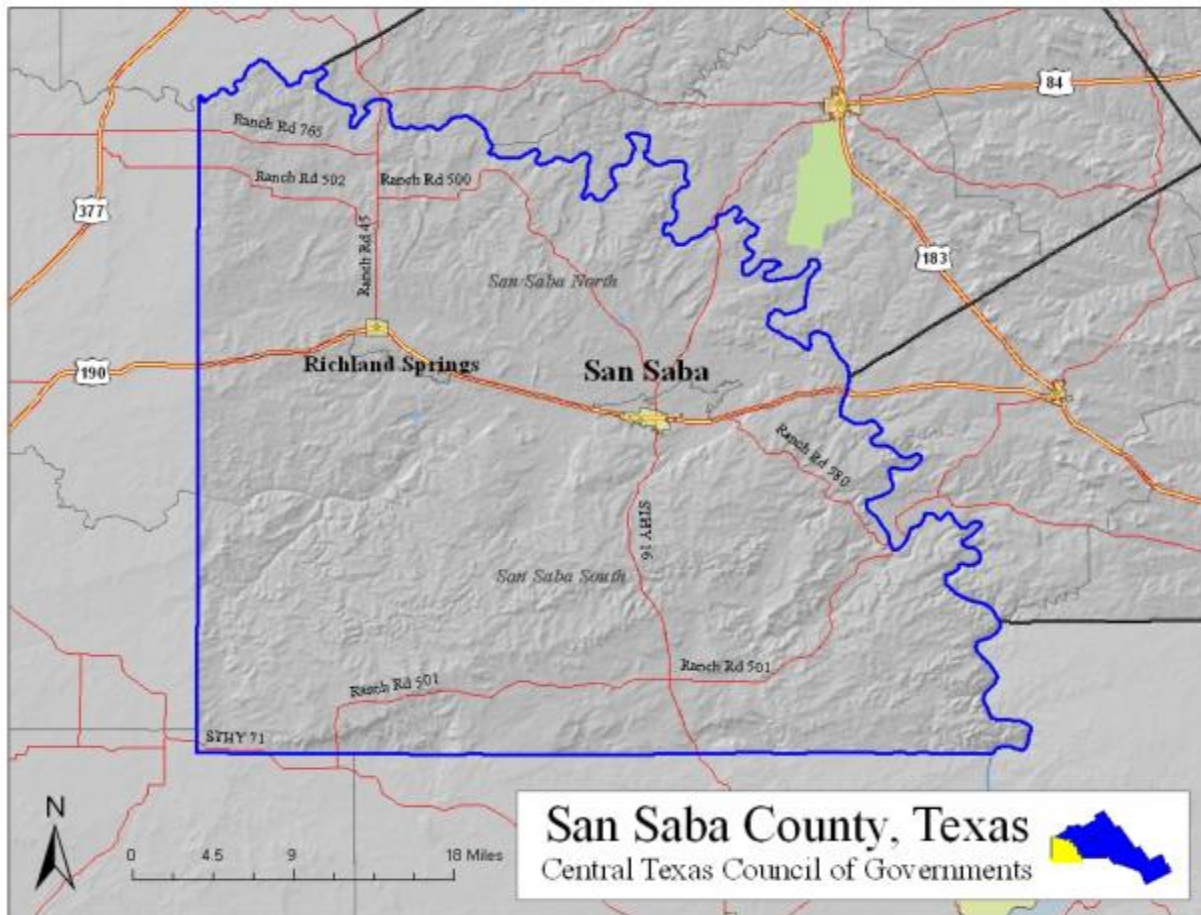


Figure 33 – San Saba County Map

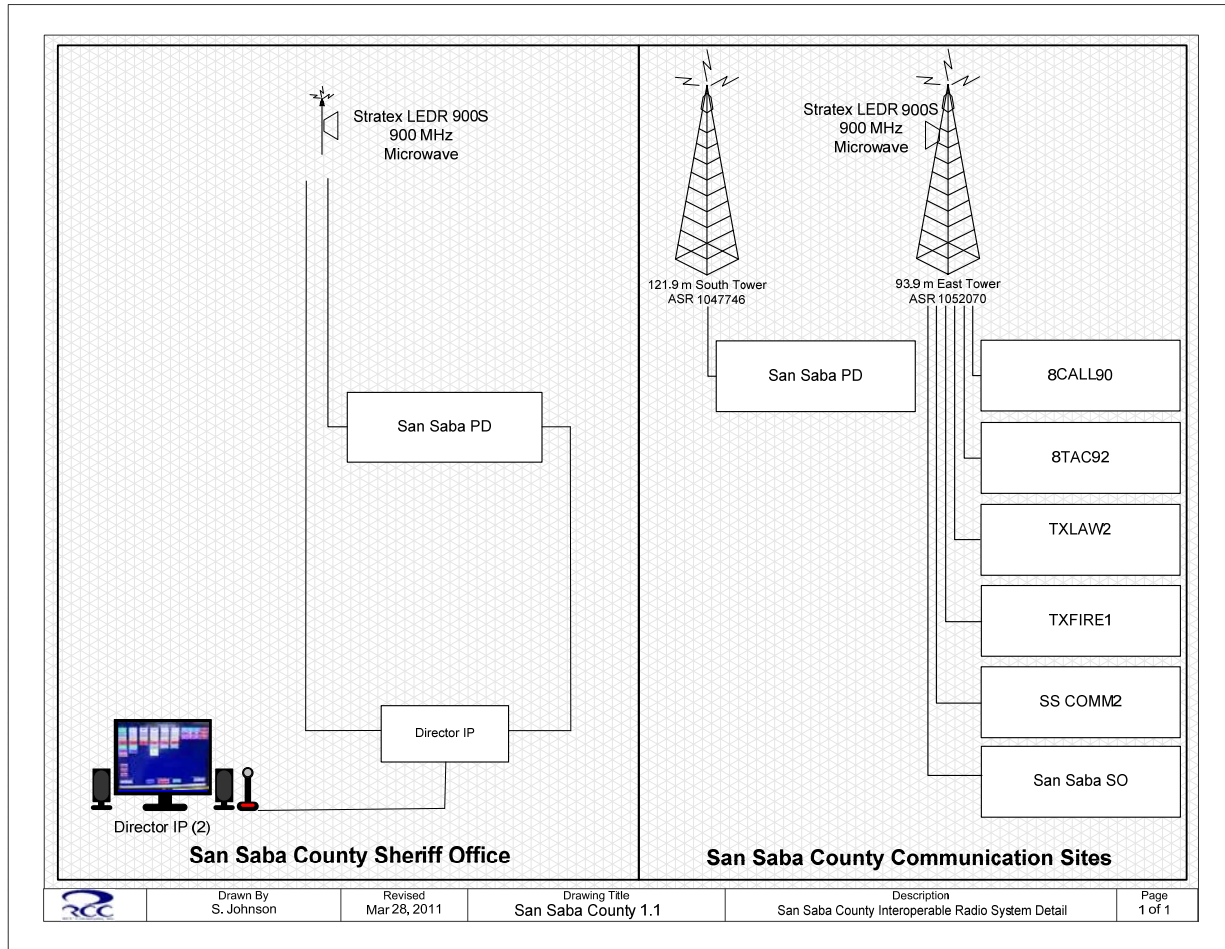
### Agencies

All agencies in San Saba County operate in the VHF band, and include:

- San Saba County Sheriff Office
- City of San Saba Police Department
- San Saba Volunteer Fire Department
- Elm Grove Volunteer Fire Department
- Richland Springs Volunteer Fire Department
- Cherokee Volunteer Fire Department
- San Saba County Emergency Management Coordinator

**Current Communication Systems and Interoperability Requirements**

All radio users are dispatched out of the PSAP in the San Saba County Sheriff Office. The Harris VHF mobile repeater radios and MASTR III repeaters are capable of being upgraded to P25 operations, using conventional radio technology. An 800 MHz NPSPAC calling and tactical channel for VHF/800 MHz is available for interoperability. The block diagram below shows the resources available in the Dispatch Center and at the tower. As all users within San Saba County, as well as the neighboring Central Texas Council of Governments counties of Lampasas and Mills use the VHF band, interoperability is not a major issue for San Saba County.



**Figure 34 – San Saba Co SO - Radio System Detail**

**Current Dispatch and Recommendations**

Dispatching is done from 1 location, the San Saba County Sheriff Office PSAP. The San Saba County Sheriff Office PSAP has 2 Director IP Consoles. Redundant dispatch equipment is needed for the San Saba County dispatch center to ensure a reliable backup PSAP/dispatch is in place in the event the San Saba Sheriff Office becomes unavailable. It is suggested Lampasas or Mills County provide this reciprocal function with San Saba County, and San Saba County can be the backup for the selected county.

The DWC/Harris Director-IP is a VoIP radio console position that can integrate disparate radios allowing a dispatch operator to utilize or patch the radios regardless of frequency band or make/model. Multiple console positions can be tied together via a LAN network.



**San Saba Dispatch Position**

**Current Subscriber Equipment and Requirements**

See detailed subscriber list in Section 8.

Category	Qty	Band	P25 Capable	Expected Growth 5%	Total Required P25 by 2015
Mobile (Vehicle Mt)	51	VHF	10	3	44
Portable (Handheld)	56	VHF	30	3	29
Base Station	5	VHF	0	0	5
Total:					78

**Table 10 – San Saba County – Subscriber Equipment Inventory**

**Current Coverage/Capacity and Requirements**

Mobile coverage in San Saba County is lacking in the southwest, southeast, and northwest corners of San Saba County. None of these areas are a high priority for coverage improvement, as they are not very populated nor do they have major transportation routes. Vehicular

repeaters should be considered for these areas, and to improve portable coverage throughout San Saba County.

The following coverage maps show mobile (vehicle based) (talkback) coverage. Parameters used were for digital radios with 12.5 KHz bandwidth, Digital Audio Quality (DAQ) of 3.4 and 95% area reliability. Section 8 provides a brief description of radio coverage map parameters. The coverage maps are computer-generated using the RCC ComSite Design® (CSD) software tool. The coverage map is for high-level reference only. The scope of the project does not include completing detailed system coverage projections, so some assumptions of antenna types and heights were made.

In general, radios may work reasonably well beyond the areas indicated by coverage maps. However, audio quality and reliability will be lower than the parameters used to generate the coverage maps. The following computer-generated coverage prediction shows where there is a high reliability of excellent coverage with very good audio quality.



**San Saba Microwave, Radio, Battery Equipment Rack**

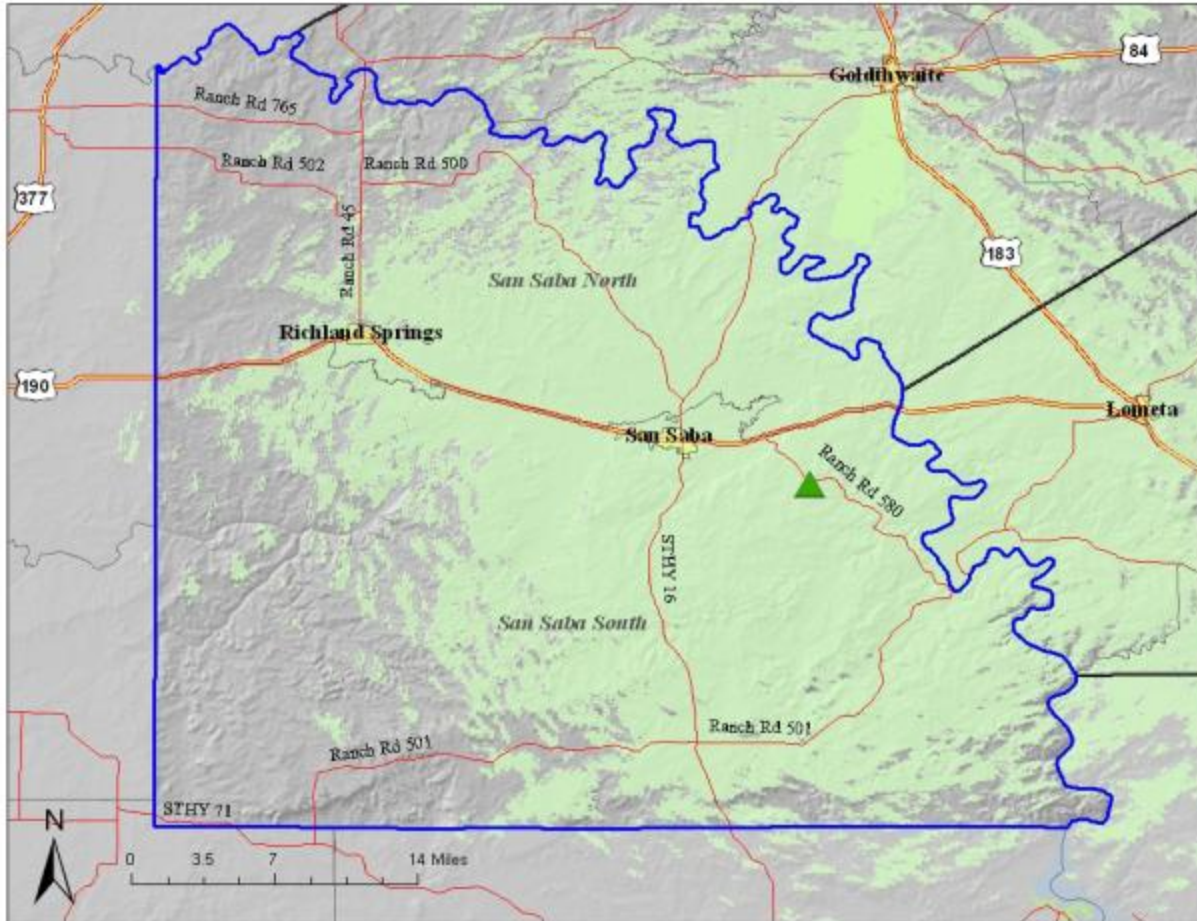


Figure 35 – San Saba East - Radio System Coverage (Mobile Talk-Back)

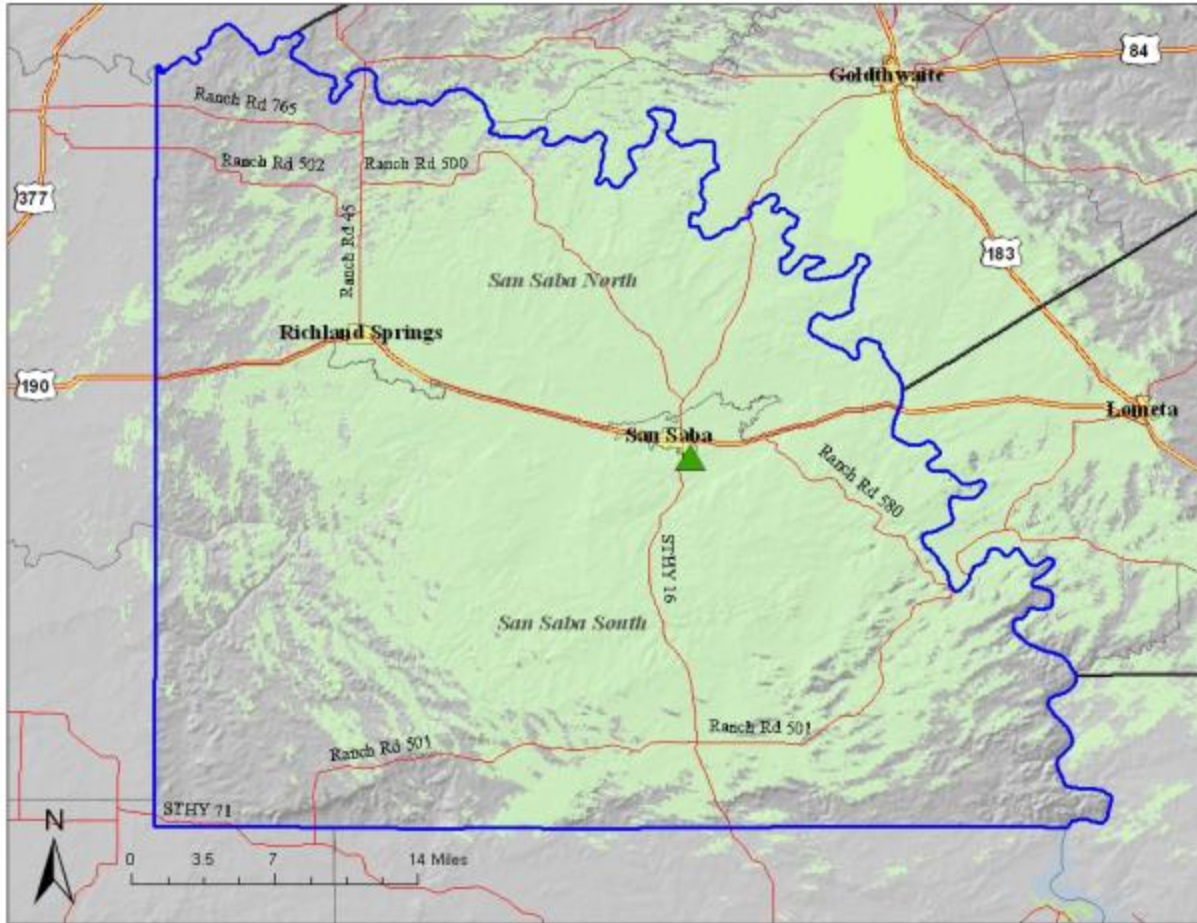


Figure 36 – San Saba South - Radio System Coverage (Mobile Talk-Back)



## Section

**6****Future System Design****6.1 Phase I – CTCOG-wide Upgrade to P25**

The main conceptual design is to continue implementing the existing RICP plan, which includes upgrading the existing Bell County 4 site 800 MHz EDACS trunked system to a 700 MHz trunked P25 system at the same 4 locations (Note the Bell County 700 MHz Phase I system currently being implemented is required to be upgraded to Phase II by December 2016 by FCC rule), adding a redundant switch in Copperas Cove, and transitioning Copperas Cove to a P25 800 MHz system. The existing VHF and 800 MHz MASTR III and Quantar repeaters can be upgraded to P25, and all new portable and mobile P25 radios operate in both the 700 and 800 MHz bands. The existing RICP plan also envisions transitioning all VHF radio users to P25, and the following detailed steps will support that goal.

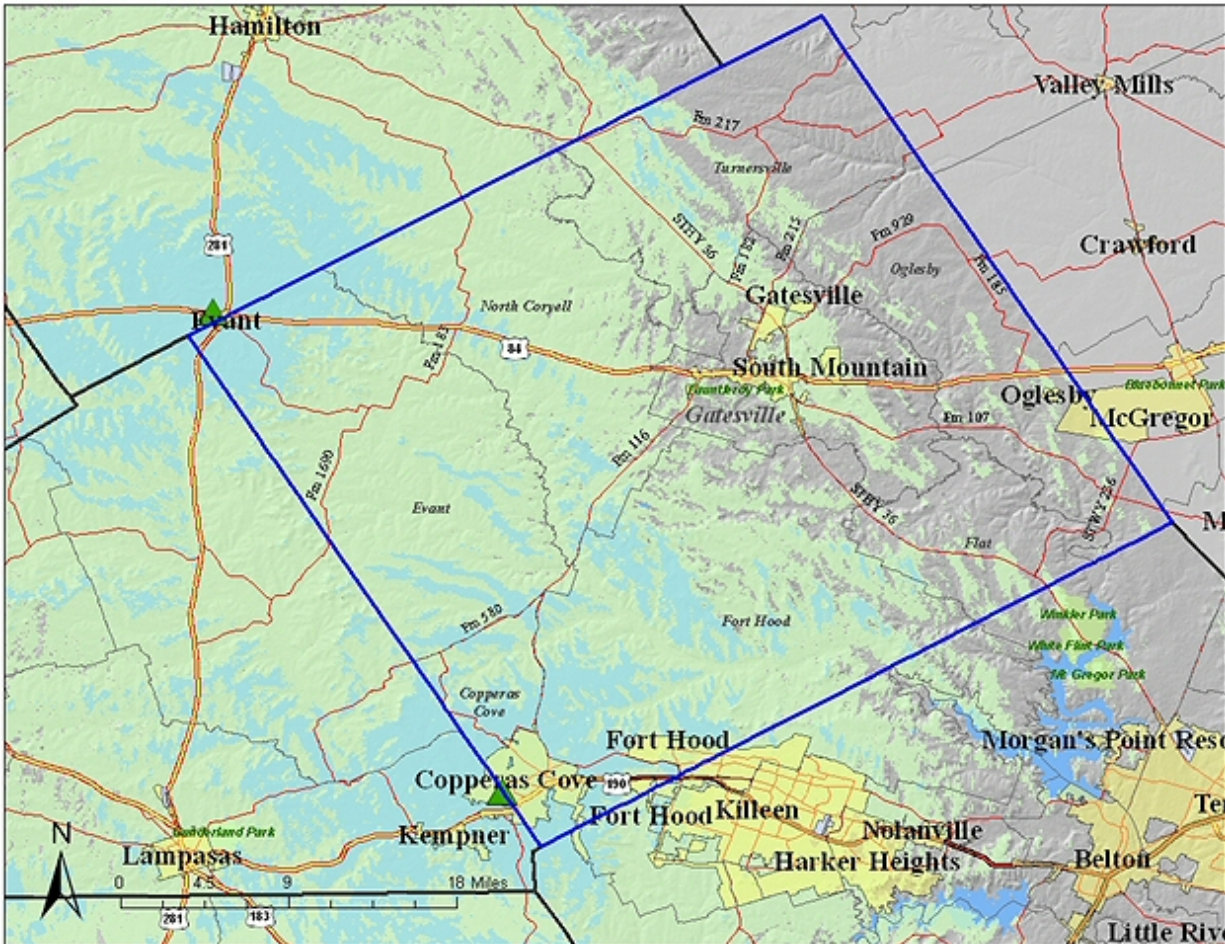
**6.1.1 Conventional VHF Upgrades to P25**

A high priority for the CTCOG is to upgrade existing VHF infrastructure to P25 and replace portable and mobile subscriber equipment with P25 equipment. The existing VHF repeaters for primary public safety operations are upgradeable for P25 operations. The plan includes upgrading to P25 conventional repeaters and upgrading or replacing all subscriber equipment to P25 capable radios.

In addition to Federal mandates to be narrowbanded by 2013 and the State plan to have all radio equipment upgraded to a P25 standards based system by 2015, there were some operational issues identified that hinder daily operations and by extension emergency operations. In particular, there were 2 major VHF coverage issues noted.

Specifically Lampasas County requires portable coverage in the Kempner and Copperas Cove urban areas. The following coverage map shows portable on the belt (blue) and mobile coverage (green) for a VHF channel located at the existing Hughes Mountain communication site. Hughes Mountain is the Copperas Cove 800 MHz EDACS site. Site sharing agreements and frequency coordination will be required prior to finalizing this design.

The second issue is an area where Hamilton, Lampasas and Coryell Counties intersect along with Highways 84 and 281 at the City of Evant. RCC found a commercial communication tower in the area, whose location and height was utilized for coverage studies. This site is right at the highway intersection and it provides very good coverage for that area. Again, site sharing agreements and frequency coordination will be required prior to finalizing this design. The region may choose to build a tower as opposed to lease space.



**Figure 37 – VHF Proposed - Radio System Coverage (Mobile & Portable Talk-Back)**

### 6.1.2 Replace the Gatesville Tower

Replace the existing Gatesville (Coryell County) 1973 vintage communication tower. This tower is in poor condition and it does not provide the coverage required at the current height.

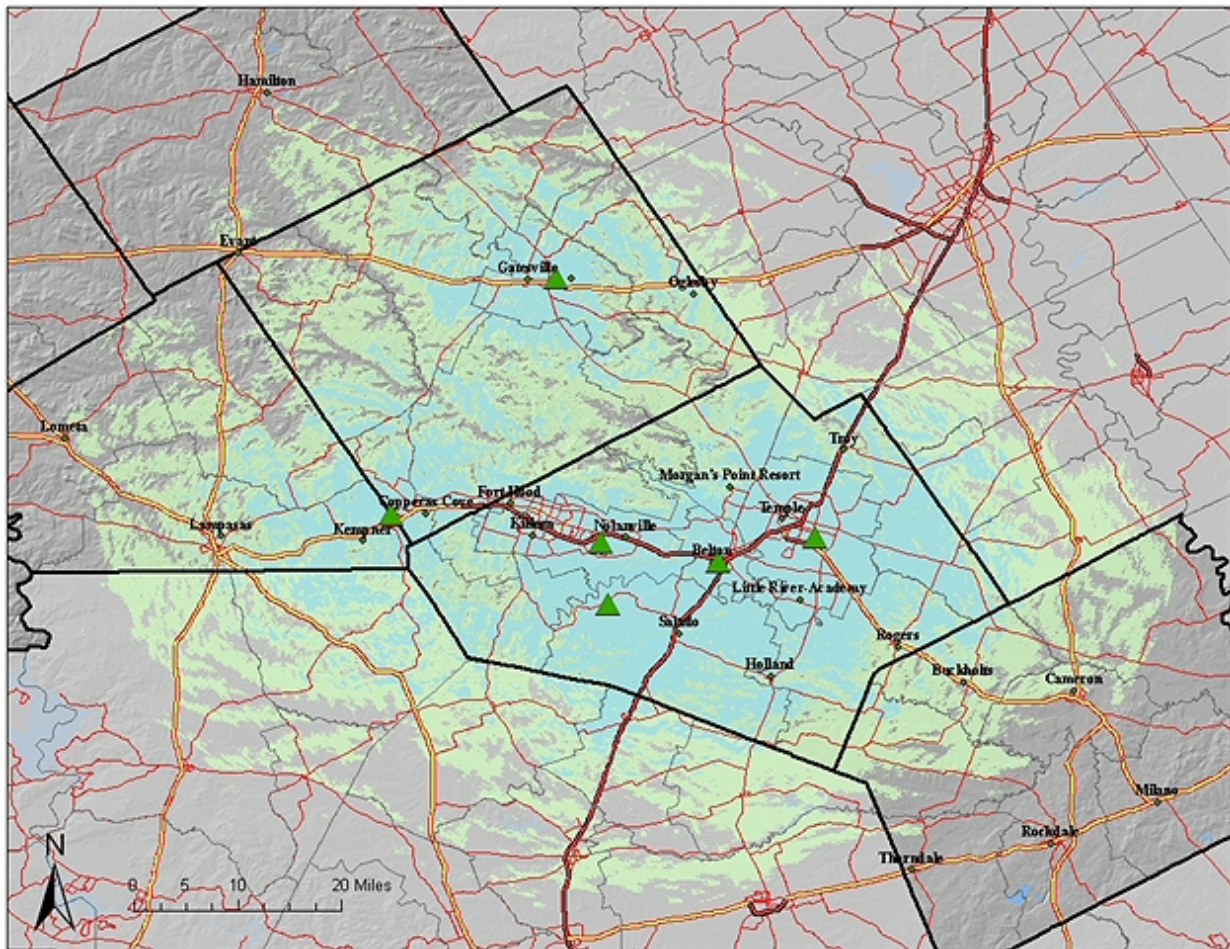
A frequency search was completed for this site and the results indicate a tower at this location at 137m (450') will work considering the FCC licensing parameters for frequency coordination. During a high level review of the site it appeared that the existing tower probably cannot structurally be raised the amount needed for the required coverage improvement. The recommendation is to build a new 137m 450' tower at the same location as the existing tower.

### 6.1.3 700/800 MHz P25 Trunked System

Bell County has completed the installation of a NSC and a single site, 4 channel 700 MHz site at the BCC Main Tower in Belton, which provides 700 MHz interoperability along the I35 corridor. The RICP plan includes completing the build out of a 4 channel, 4 site, 700 MHz simulcast system that mirrors the current EDACS system. This system should provide comparable coverage as the EDACS system. Additionally the Bell County EDACS systems will undergo a migration to change a number of EDACS channels to P25. The Copperas Cove EDACS system will also be upgraded to a P25 system that will initially be connected to the NSC at the BCC Main site, but the RICP plan includes adding a redundant NSC in Copperas Cove.

To improve real time county-wide interoperable communications there is a proposed addition of a 700 MHz trunked radio site to be installed at the new Gatesville tower in Coryell County and connected to the Copperas Cove/Bell County P25 switch.

This will provide a Level 5, standards-based, P25 shared radio system that will cover the Coryell and Bell County areas. The price estimate includes implementing a 700 MHz site in the Evant area. This has not been displayed in the coverage map below. The blue color indicates portable coverage and the green indicates mobile coverage.



**Figure 38 – P25 Proposed - Radio System Coverage (Mobile & Portable Talk-Back)**

#### 6.1.4 Milam County Upgrades

Build a communication tower in Milam County that will improve overall county coverage and provide a means to consolidate dispatch centers.

Coverage maps were run at the Ledbetter Park location at 500' instead of the current 240'. The mobile radio coverage greatly improved the overall county coverage. Portable coverage for specific cities and in-buildings should be examined and addressed case-by-case. The Ledbetter Park is a city owned location that has line-of-site access to all the three dispatch sites in Milam County, which may make it feasible to consolidate dispatch centers or set up dispatch centers as redundant backups. Expenses for existing leased tower sites may be eliminated with a move to a county/city owned site. Any new site would be designed and built to public safety

24/7 operation building standards for lightning protection, backup power systems and theft control systems.

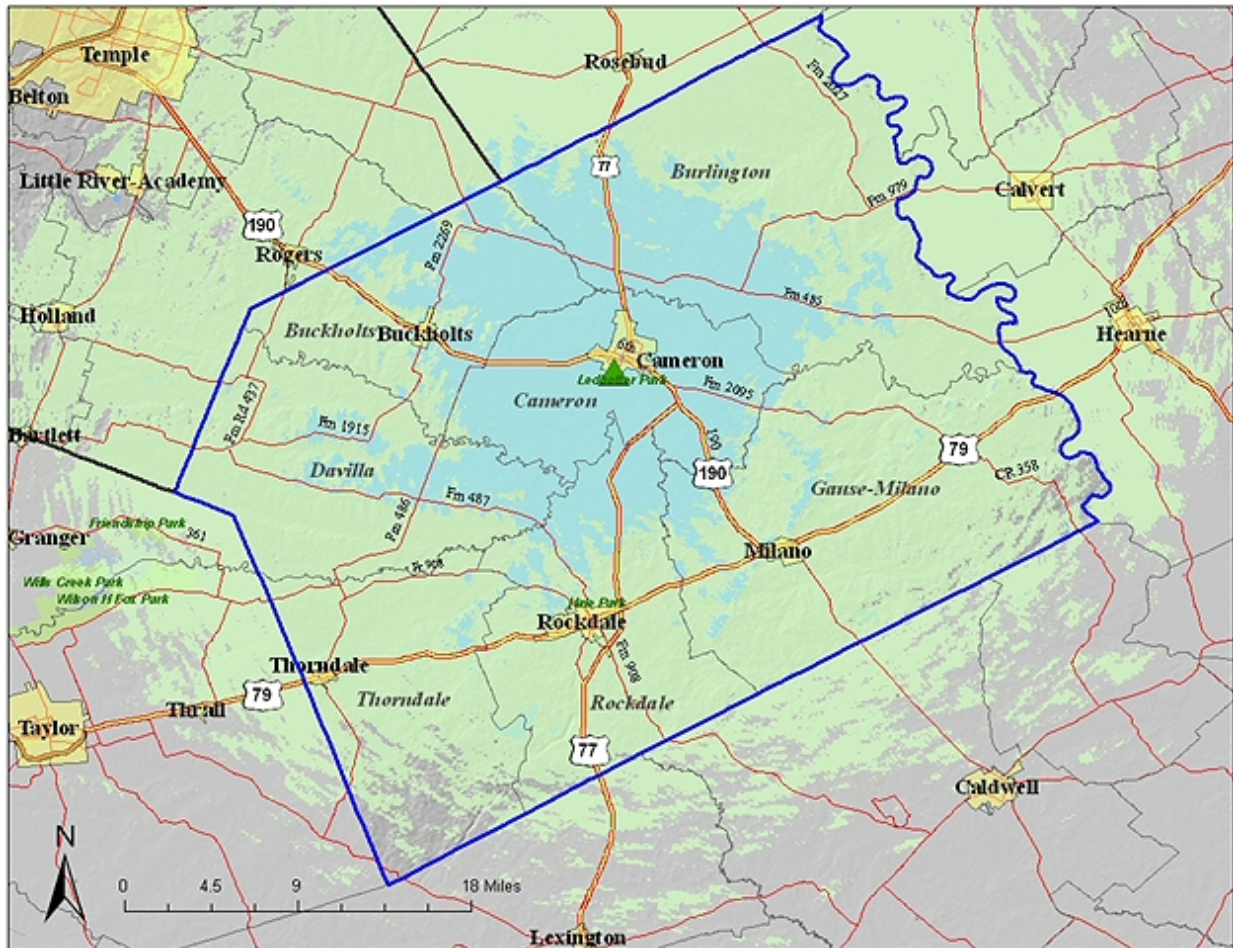


Figure 39 – VHF P25 Proposed - Radio System Coverage (Mobile & Portable Talk-Back)



**Ledbetter Park**

### **6.1.5 Fort Hood Coordination**

Coordinate interoperability improvements with Fort Hood, which has a federal government UHF band P25 radio system. Interoperability for the VHF and especially the 700/800 MHz bands is desirable within the Fort Hood area. The interoperability channels could be under the full control of Fort Hood to activate/deactivate/patch as needed.

Communications and emergency management coordination with civilian authorities was an identified failure in the 2009 shooting on Fort Hood. The After Action Report clearly states that "CONUS military installations and their surrounding civilian communities are increasingly

interdependent”<sup>4</sup> The report goes on to say that interoperability and coordination need to be formally established with current Mutual Aid Agreements.

## 6.2 Phase 2 – CTCOG-Wide P25 Regional Trunked System

The conceptual design is based on the State vision to implement P25 shared regional radio

The conceptual design is based on the State vision to implement P25 shared regional radio systems in VHF and/or 700 MHz that can be connected to develop a system-of-systems.

Benefits of a region-wide system may include:

- Improved radio coverage from overlapping sites
- Maintaining communications while roaming throughout the region

Disadvantages to a region-wide system include:

- Costs of designing and building a microwave network that will connect the primary communications sites to the Bell County Communications system
- The cost of maintaining and replacing higher cost trunked radios is well beyond many agencies financial capabilities, particularly volunteer fire departments, so the long-term funding plan must be determined

### 6.2.1 Region Wide Backhaul/Network Connectivity

An essential element in developing a region wide system is the method of connectivity between each site and the core network switch. In the absence of available terrestrial communications infrastructure, satellite connectivity may be a viable option.

Networked systems depend upon some form of connectivity to support their interconnection. Some are circuit based, while others make use of packet data technology such as Voice over Internet Protocol (VoIP). Many system suppliers strongly recommend private or dedicated methods of connectivity instead of shared interconnection methods, such as the Internet. When considering a network solution, an important aspect is the survivability of the circuits that provide the connectivity. Certain events can compromise these services, unless alternate routing or some other form of redundancy is employed.

#### Satellite Communications

Commercial satellites can provide a critical component in a backhaul system that is relatively easy to deploy.

Commercial satellites provide critical voice and data services to millions of consumers on a daily basis, including public safety and military communities. Of equal importance is the redundancy that commercial satellites provide to the nation’s communications assets. This redundancy extends to the wireless and wireline terrestrial infrastructure. In times of disaster and

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<sup>4</sup> Protecting the Force: Lessons from Fort Hood, DoD Independent Review Related to Fort Hood, dated January 2010

emergency, often the only reliable, and many times the only available, communications networks are satellite-based.

Commercial satellite networks are ideally independent of the regional infrastructure, however it must be recognized that all satellite networks rely on an earth segment which might be compromised in a national or global incident. Satellites can provide immediate voice and data connectivity when the critical infrastructure of the public switched telephone network is damaged. They can provide gateway services for land-mobile radio systems, voice (VoIP), data and video Wi-Fi and local cellular phone service, connecting these services directly to the Internet and unaffected portions of the PSTN.

Satellite services can generally be classified into two groups: Fixed Satellite Services (FSS) and Mobile Satellite Services (MSS). This report explores FSS.

Satellite communications for fixed applications is in widespread use in remote areas for both commercial and public safety users. However, like other communications systems, orbiting satellites and their corresponding terrestrial infrastructure are not immune to threats. For example, satellites face unique space-based vulnerabilities due to solar flares and meteor showers. In addition, one has to be cognizant of operational limitations which include:

- Shared bandwidth satellite services may become congested during a major event, possibly resulting in access delays, disruption, or complete blockage.
- The inherent latency of satellite communications can hinder the use of some data applications.

### **FSS-Based VSAT Solutions**

A Very Small Aperture Terminal (VSAT) is a two-way satellite ground station with a dish antenna that is smaller than 3 meters. Most VSAT antennas range from 75 cm to 1.2 m. Data rates typically range from 56 kbit/s up to 4 Mbit/s. VSATs access satellites in geosynchronous orbit to relay data from small remote earth stations (terminals) to other terminals (in mesh configurations) or master earth station "hubs" (in star configurations).

VSATs are most commonly used to transmit narrowband data (point of sale transactions such as credit card, polling or RFID data; or SCADA), or broadband data (for the provision of Satellite Internet access to remote locations, VoIP or video). VSATs are also widely used by governmental users for both routine and emergency communications. VSATs are also available in highly transportable configurations for field deployment to provide backhaul in support of incident communications.

Services available over VSAT systems include:

- Point-to-point and point-to-multipoint connectivity
- E-mail
- VoIP telephony
- File transfer
- Video teleconferencing
- Internet and Intranet access with virtual private network (VPN) and web browsing

### **Commercial Terrestrial Connectivity**

Commercial terrestrial connectivity is the service provided by “the phone company”. The State of Texas, Division of Information Resources (DIR) has contracts in place for service and price guarantees. The Texas Agency Network (Tex-AN) provides communications technology needs for state agencies as well as city and county agencies statewide. Circuits can be ordered directly through Tex-AN.

In the pricing section of this report is an estimate of what costs may be involved. There are many variables. Some of the sites in the 19 counties may already have telephone services to the equipment shelter, which means these sites will only require a setup fee and monthly service contract. Other sites will have to be evaluated on an individual basis to determine the availability and feasibility of providing telephone services to a particular location.

### **Microwave Connectivity**

Microwave is an RF system that shoots a signal line-of-site (LOS) directly from one site to another. Microwave is a means of wirelessly replacing copper or fiber optic telephone lines. There are different types of microwave systems available for public safety systems, and there are many considerations for determining the proper type of system for the application, such as bandwidth requirements, distance between sites, FCC licensing and costs.

- 1) The bandwidth requirements for the proposed system are relatively small, less than one T-1 per site.
- 2) The distances between the sites are fairly long. The lower frequency bandwidth microwave systems in the 6 GHz or lower range are better suited for long distance LOS, particularly during inclement weather.
- 3) There is a selection of microwave equipment that are in the 5.8 GHz unlicensed band that may be sufficient for the distance and the low bandwidth requirements, but this band is prone to interference since it is open for public applications such as home wireless telephone systems. Better options are in the 4.9 GHz and 700 MHz licensed public safety frequency ranges.
- 4) The systems reviewed for this project were microwave systems that fit into the first three criteria for a licensed public safety system suitable for long distance LOS with minimal bandwidth requirements. The nature of these choices provided the best cost range for the required application.

There are fairly substantial costs associated with installing a microwave system, and some costs associated with the maintenance and operations of a system. These costs may be offset with the cost savings due to not having monthly recurring fees as is necessary for commercial terrestrial or satellite applications. There will be recurring costs for counties that are leasing tower space from a commercial provider.



**Backhaul Connectivity Summary**

The following chart shows a comparison of the backhaul connectivity.

Solution	Pros	Cons
Commercial Satellite	<ul style="list-style-type: none"> <li>• Reliable</li> <li>• Relatively easy to install</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly recurring fees</li> <li>• Possible weather related outages</li> <li>• Not public safety priority</li> <li>• Upfront equipment purchase required</li> <li>• Maintenance and up-keep will require additional expenditures</li> </ul>
Commercial Terrestrial	<ul style="list-style-type: none"> <li>• Reliable</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly recurring fees</li> <li>• May require a connection fee</li> <li>• May not be available at all sites</li> <li>• Not public safety priority</li> </ul>
Microwave	<ul style="list-style-type: none"> <li>• Reliable</li> <li>• Owned and maintained by public safety for public safety</li> </ul>	<ul style="list-style-type: none"> <li>• Initial cost can be substantial</li> <li>• Maintenance and up-keep will require additional expenditures</li> </ul>

**Table 11 – Backhaul Connectivity Summary**

**6.2.2 VHF / 700MHz Region Wide Trunked System**

Install a 3 channel VHF and/or 700 MHz P25 trunked radio system at each of the primary communications sites linked to the P25 Network Switches in Belton and Copperas Cove. This will provide a true, standards based region-wide shared radio system that can be linked via ISSI to a State system-of-systems.

As discussed earlier in this document, the State has chosen the P25 Standards based radio system to develop a statewide system-of-system. P25 radio systems come basically in two varieties; the P25 trunked radio system and the P25 conventional radio system. Each of these type systems are available in the VHF and 700 MHz frequency bands discussed above as well as UHF and 800 MHz bands. P25 systems use the Common Air Interface (CAI). This is the type of signal transmitted by P25 user radios that are compatible with all other P25 compliant user radios, regardless of the manufacturer. It should be noted a VHF radio will not work in a different band, such as 700/800 MHz coverage areas. However, multi-band radios are available.

The difference comes in the infrastructure used to repeat the transmission. A P25 conventional system is not unlike the individual radio repeaters used by each of the counties. It is a single

channel that uses digital Network Access Codes (NAC) codes for repeater access instead of the analog Continuous Tone Coded Squelch System (CTCSS) or Digital-Coded Squelch (DCS) codes.

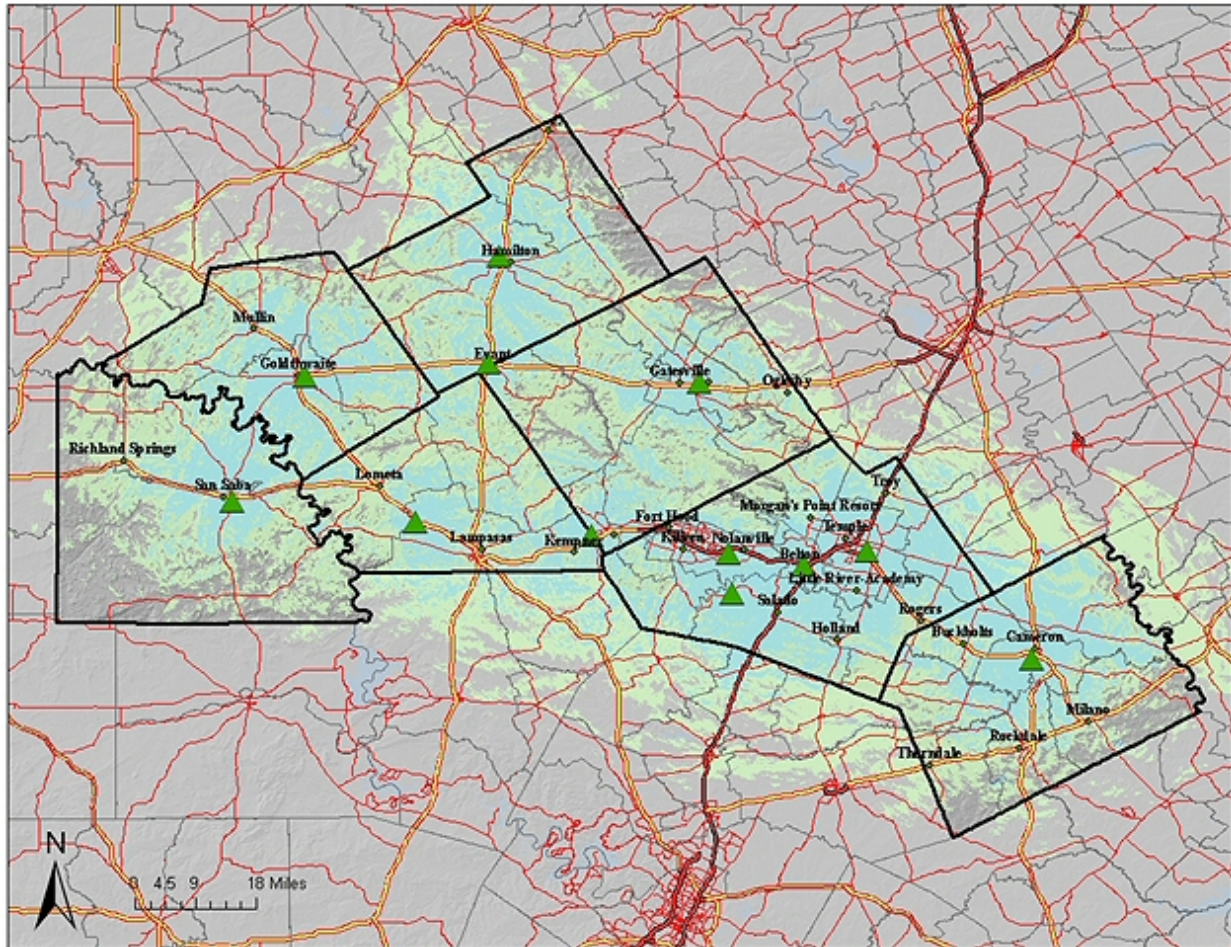
The P25 trunked system has a site controller that receives a talkgroup from the P25 trunked user radio, verifies that the talkgroup is active, notifies all other users with the same talkgroup and activates that channel for voice activity. The definition of trunked means there are multiple channels, and when one channel has been activated for voice communications, the next user that keys up on an approved talkgroup gets “trunked” to the next available channel. This generally means there are multiple channels at a site tied together in a single network.

P25 trunked systems are generally tied to a larger network, or RF Sub-System (RFSS), that may include multiple sites with trunked systems, dispatch console systems and/or conventional radio system through a gateway. An RFSS is manufacturer proprietary.

Multiple RFSS's of differing manufacturers can be connected via an ISSI. This is the heart of the system-of-system approach.

There are several features available in P25 trunked systems that are not available with P25 conventional systems, but the biggest benefit is the ability to seamlessly roam from site-to-site. A P25 conventional system is basically the same as the individual repeaters currently in the counties. With a conventional system P25 or other a user will have to change the channel to the neighbor's frequency for communications with that neighbor. Communications with their own county and dispatch center are lost as soon as they are out of their coverage area. With a P25 trunked system, the user radio automatically transfers to the site with the strongest signal. When the P25 trunked user radio transmits, all users with the same talkgroup will be able to communicate. Only repeaters with associated users (on the same talkgroup) will be activated. For instance, there are six users on talkgroup “1” in County “A” communicating together. County A repeater is active, but not repeaters in other counties. When one of the users drives to County B and keys up on talkgroup 1, the repeaters in counties A and B activate and all users on talkgroup 1 can continue communicate.

Roaming capabilities actually improve coverage as it can take advantage of the neighboring county communication sites.



**Figure 40 – VHF P25 Proposed - Radio System Coverage (Mobile & Portable Talk-Back)**

The above listed coverage map shows the worst case scenario for mobile (light green) and portable (light blue). That said, there are some notable areas that appear to need additional coverage. In San Saba County in the west part of the region there are significant areas that lack coverage. The Lower Colorado River Authority (LCRA) has or plans to have a 700 MHz P25 site in the Richland Springs area in San Saba County and the Lometa area in Lampasas County.

In the east part of the region, southeast Milam County, there appears to be loss of coverage south of Highway 79. This area butts up to Brazos Valley COG, which plans to build a 700 MHz P25 radio system.

Implementing a 700 MHz system can potentially increase the level of interoperability within the region and beyond.

### 6.3 Summary

The next section of the report will focus on a phased installation and migration plan, and budgetary numbers the steps detailed in this section and as follows:

**Phase 1**

- A. Upgrade existing VHF infrastructure to P25 and replace portable and mobile subscriber equipment with P25 equipment.
- B. Replace the existing Gatesville (Coryell County) 1973 vintage communication tower.
- C. Install a Phase II 700 MHz P25 trunked system for Coryell County with connectivity to Copperas Cove and the Bell County P25 systems.
- D. Add a P25 VHF channel to the Copperas Cove tower for increased Lampasas County coverage.
- E. Add a P25 VHF channel and a 700 MHz site to a new site location near Evant and the intersections of Highways 84 and 281.
- F. Build a communication tower in Milam County.
- G. Coordinate interoperability improvements with Fort Hood.

**Phase 2**

- A. Design and build connectivity network for the region.
- B. Install a shared region-wide VHF and/or 700 MHz P25 standards-based, trunked radio system.

The above lists are the steps identified to improve interoperability in the CTCOG, but not necessarily in the order of implementation.

**Section  
7**

# Migration Plan & Budget Gap

As mentioned in the previous section, the CTCOG has developed a 2 Phase plan to upgrade to region-wide P25 compliance by 2015 in Phase 1 and then a second phase to implement a region-wide shared P25 trunked radio system. This section highlights the requirements, conceptual design cost estimates and budget gaps for both phases in each of the counties.

## 7.1 Conceptual Design / Gaps / Risk

### 7.1.1 Bell County Communications

#### Phase 1: Conceptual Plan

Bell County will implement a 4-site simulcast, P25, 700/800 MHz trunked radio system connected to the NSC at the Belton Site and a redundant NSC in Copperas Cove in Coryell County. The conceptual design allows for a methodical migration from the existing EDACS to a P25 platform and at the same time provides interoperability with agencies utilizing 700 MHz P25 radios.

#### Phase 1: Requirement Gaps

- Upgrade the 700 MHz site in Belton to a simulcast 3 channel prime site
- Install 700 MHz 3 channel simulcast sites at the VA Hospital, Harker Heights, and Eagle Nest (Shaffer) communication sites in Bell County
- Install a microwave link to the Copperas Cove site for redundant NSC connectivity and to tie the Copperas Cove site for shared operation
- Upgrade the current EDACS 800 MHz system to P25
- Replace the current radio dispatch console system with an IP console system for full feature compatibility with the P25 system
- Replace non-P25 compliant radios with 700/800 MHz P25 capable radios

#### Phase 1: Risks

- There is currently a shortfall in funding to complete the conceptual plan to achieve P25 capabilities by 2015.
- The EDACS radio system provides good coverage and capacity and built-in redundancy, but at fifteen years old, it is near the end of its life expectancy. The system was designed with equipment redundancy, backup power and backup operational plans, but a system failure due to the age and possible lack of repair parts could have major public safety ramifications. The Phase 1 plan to update the system to P25, add a redundant switch in Copperas Cove and install new IP console systems will help mitigate this risk.

## **Phase 2: Conceptual Plan**

The Phase 2 plan is to develop a region-wide P25 shared trunked radio system in the 700 MHz and/or VHF frequency bands. The Coryell and Bell County system will be the backbone for this shared system. At the completion of the Phase 1 plan, Bell County will have completed an upgrade to P25, connected to redundant switch and increase coverage capabilities to include Coryell County. The additional infrastructure for Bell County will include connectivity for the remaining region and possibly a VHF trunked site at the Belton site.

## **Phase 2: Requirements**

- Connect the entire region to the NSC's in Belton and Copperas Cove via microwave or commercially available connectivity.
- Install a VHF trunked site at the Belton site.

## **Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

### **7.1.2 Coryell County**

#### **Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for Coryell County will provide a shared 700/800 MHz P25 system with Bell County. The plan includes installing an NSC in Copperas Cove and connectivity to the system in Bell County via microwave or commercial means. This will provide redundancy to the 700/800 MHz P25 systems in both Bell and Coryell Counties. The plan also includes updating the 800 MHz EDACS system in Copperas Cove to a P25 system and implementing 700 MHz sites in Gatesville and near Evant for a shared P25 radio system that will provide coverage for Bell and Coryell Counties. The City of Evant is located in Hamilton and Coryell Counties. For the purposes of this report, infrastructure improvements in the Evant area will be listed and budgeted for Coryell County.

#### **Phase 1: Requirement Gaps**

- Install a microwave link to the Bell County Belton site for redundant NSC connectivity
- Upgrade the current EDACS 800 MHz system to P25
- Replace the current radio dispatch console system with an IP console system for full feature compatibility with the P25 system
- Replace non-P25 compliant radios and VHF radios with 700/800 MHz P25 capable radios
- Install new tower in Gatesville
- Install new tower near Evant
- Install microwave or commercial connectivity to the Gatesville and Evant towers

- Install a trunked P25 700 MHz site at the new tower site in Gatesville
- Install a trunked P25 700 MHz site at the new tower site near Evant
- Install a P25 VHF conventional repeater at the new tower site near Evant

### **Phase 1: Risks**

- There is currently a shortfall in funding to complete the conceptual plan to achieve P25 capabilities by 2015
- There are areas of Coryell County that do not have sufficient radio coverage for day-to-day operations that could become a public safety issue during an event

### **Phase 2: Conceptual Plan**

The Phase 2 plan is to develop a region-wide P25 shared trunked radio system in the 700 MHz and/or VHF frequency bands. The Coryell and Bell County system will be the backbone for this shared system. At the completion of the Phase 1 plan, Coryell County will have completed an upgrade to a P25, trunked 700/800 MHz radio system connected to Bell County. The additional infrastructure for Coryell County will include connectivity for the remaining region and possibly VHF trunked sites at Copperas Cove, Gatesville and Evant.

### **Phase 2: Requirement Gaps**

- Connect the entire region to the NSC's in Belton and Copperas Cove via microwave or commercially available connectivity
- Install VHF trunked sites at the Copperas Cove, Gatesville and Evant communications sites

### **Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

## **7.1.3 Hamilton County**

### **Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for Hamilton County is to upgrade existing VHF conventional repeaters to VHF P25 conventional operation. RF coverage will be improved with the addition of a VHF repeater at the new Evant area tower. The budgetary price for the Evant repeater and tower are included on the Coryell County cost estimate.

### **Phase 1: Requirement Gaps**

- Upgrade MASTR III and other repeaters for P25 operation
- Reprogram P25 capable radios for the P25 channels including the proposed VHF repeater at the Evant area site
- Replace non-P25 compliant radios with P25 capable radios

### **Phase 1: Risks**

There is a slight risk that radios will not get reprogrammed in time to meet the FCC narrowband mandate of December 31, 2012.

### **Phase 2: Conceptual Plan**

Design and implement a region-wide P25 shared trunked 700 MHz and/or VHF radio system that will provide seamless coverage throughout the region and will be capable of ISSI connectivity to the State system-of-systems for statewide interoperability.

### **Phase 2: Requirement Gaps**

- Connect the Hamilton County Communications Site to the Bell and Coryell Counties system via microwave or commercially available connectivity
- Install a three channel 700 MHz trunked site at the Hamilton County communications site
- Install a three channel VHF trunked site at the Hamilton County communications site
- Purchase 700/800 MHz P25 capable subscriber user radios for use on the regional system or upgrade existing radios to P25 trunked radios or purchase VHF P25 trunked radios. For the purposes of this report the replacement of VHF with 700 MHz portable and mobile radios will be utilized and budgeted.

### **Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

## **7.1.4 Lampasas County**

### **Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for Lampasas County is to upgrade existing VHF conventional repeaters to VHF P25 conventional operation and to improve RF coverage in the Kempner area by adding a P25, VHF conventional repeater at the Copperas Cove site in Coryell County. RF coverage will also be improved with the addition of a VHF repeater at the new Evant area tower. The budgetary price for the Evant repeater and tower are included on the Coryell County cost estimate.

### **Phase 1: Requirement Gaps**

- Upgrade MASTR III and other repeaters for P25 operation
- Install a P25 VHF conventional repeater at the Copperas Cove site
- Reprogram P25 capable radios for the P25 channels including the proposed VHF repeaters at Copperas Cove and the Evant area site
- Replace non-P25 compliant radios with P25 capable radios



**Phase 1: Risks**

There is a slight risk that radios will not get reprogrammed in time to meet the FCC narrowband mandate of December 31, 2012.

**Phase 2: Conceptual Plan**

Design and implement a region-wide P25 shared trunked 700 MHz and/or VHF radio system that will provide seamless coverage throughout the region and will be capable of ISSI connectivity to the State system-of-systems for statewide interoperability.

**Phase 2: Requirement Gaps**

- Connect the Lampasas Communications Site to the Bell and Coryell Counties system via microwave or commercially available connectivity
- Install a three channel 700 MHz trunked sites at the Lampasas Communications Site
- Install a three channel VHF trunked sites at the Lampasas Communications Site and the Copperas Cove Communication Site
- Purchase 700/800 MHz P25 capable subscriber user radios for use on the regional system or upgrade existing radios to P25 trunked radios or purchase VHF P25 trunked radios. For the purposes of this report the replacement of VHF with 700 MHz portable and mobile radios will be utilized and budgeted.

**Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

**7.1.5 Milam County****Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for Milam County is to upgrade existing VHF conventional repeaters to VHF P25 conventional operation and consolidate three communication sites to a single site.

**Phase 1: Requirement Gaps**

- Upgrade MASTR III and other repeaters for P25 operation
- Install new tower in Cameron at Ledbetter Park
- Reprogram P25 capable radios for the P25 channels
- Replace non-P25 compliant radios with P25 capable radios

**Phase 1: Risks**

There is a slight risk that radios will not get reprogrammed in time to meet the FCC narrowband mandate of December 31, 2012.

Utilizing a single tower for county communications can affect more agencies if there is a catastrophic failure at that tower. This can be mitigated by maintaining some of the

communications resources at the Cameron and Rockdale Police Departments and adding a backup resource at the Milam County Law Enforcement Center.

### **Phase 2: Conceptual Plan**

Design and implement a region-wide P25 shared trunked 700 MHz and/or VHF radio system that will provide seamless coverage throughout the region and will be capable of ISSI connectivity to the State system-of-systems for statewide interoperability.

### **Phase 2: Requirement Gaps**

- Connect the Milam County Ledbetter Park Communications Site to the Bell and Coryell Counties system via microwave or commercially available connectivity
- Install a six channel 700 MHz trunked site at the Milam County Ledbetter Park Communications Site
- Install a six channel VHF trunked site at the Milam County Ledbetter Park Communications Site
- Purchase 700/800 MHz P25 capable subscriber user radios for use on the regional system or upgrade existing radios to P25 trunked radios or purchase VHF P25 trunked radios. For the purposes of this report the replacement of VHF with 700 MHz portable and mobile radios will be utilized and budgeted.

### **Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

## **7.1.6 Mills County**

### **Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for Mills County is to upgrade existing VHF conventional repeaters to VHF P25 conventional operation. RF coverage for the county is substantially provided via a single tower site near Goldthwaite.

### **Phase 1: Requirement Gaps**

- Upgrade MASTR III and other repeaters for P25 operation
- Reprogram P25 capable radios for the P25 channels
- Replace non-P25 compliant radios with P25 capable radios

### **Phase 1: Risks**

There is a slight risk that radios will not get reprogrammed in time to meet the FCC narrowband mandate of December 31, 2012.

### **Phase 2: Conceptual Plan**

Design and implement a region-wide P25 shared trunked 700 MHz and/or VHF radio system that will provide seamless coverage throughout the region and will be capable of ISSI connectivity to the State system-of-systems for statewide interoperability.

**Phase 2: Requirement Gaps**

- Connect the Mills County Communications Site to the Bell and Coryell Counties system via microwave or commercially available connectivity
- Install a three channel 700 MHz trunked site at the Mills County Communications Site
- Install a three channel VHF trunked site at the Mills County Communications Site
- Purchase 700/800 MHz P25 capable subscriber user radios for use on the regional system or upgrade existing radios to P25 trunked radios or purchase VHF P25 trunked radios. For the purposes of this report the replacement of VHF with 700 MHz portable and mobile radios will be utilized and budgeted.

**Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

**7.1.7 San Saba County****Phase 1: Conceptual Plan**

The Phase 1 conceptual plan for San Saba County is to upgrade existing VHF conventional repeaters to VHF P25 conventional operation. RF coverage for the county is provided via a two communication tower sites near the City of San Saba.

**Phase 1: Requirement Gaps**

- Upgrade MASTR III and other repeaters for P25 operation
- Reprogram P25 capable radios for the P25 channels
- Replace non-P25 compliant radios with P25 capable radios

**Phase 1: Risks**

- There is a slight risk that radios will not get reprogrammed in time to meet the FCC narrowband mandate of December 31, 2012.
- The two communication sites are located more in the eastern part of the county and there are some known coverage issues in the northwest and southwest areas of the county. This may be an issue for day-to-day operations and even more so during an event.

**Phase 2: Conceptual Plan**

Design and implement a region-wide P25 shared trunked 700 MHz and/or VHF radio system that will provide seamless coverage throughout the region and will be capable of ISSI connectivity to the State system-of-systems for statewide interoperability.

**Phase 2: Requirement Gaps**

- Connect the San Saba County South Tower Communications Site to the Bell and Coryell Counties system via microwave or commercially available connectivity

- Install a three channel 700 MHz trunked sites at the San Saba County South Tower Communications Site
- Install a three channel VHF trunked sites at the San Saba County South Tower Communications Site
- Purchase 700/800 MHz P25 capable subscriber user radios for use on the regional system or upgrade existing radios to P25 trunked radios or purchase VHF P25 trunked radios. For the purposes of this report the replacement of VHF with 700 MHz portable and mobile radios will be utilized and budgeted.

### **Phase 2: Risks**

There is no funding identified for the Phase 2 conceptual design that will improve interoperability for the region and the state.

## **7.2 Phased Migration Plan**

CTCOG has worked closely with Dailey-Wells Communications, Inc. (DWC) to develop a migration plan to upgrade the 800 MHz EDACS systems in Bell and Coryell Counties to P25 operations. The plan as listed in the CTCOG RICP was designed to minimize impact on existing operations and to extend funding on these large projects into multiple years, a coordinated phase installation and integration approach will be taken. This phased migration program will continue until all jurisdictions within the Region are P25 Compliant, bearing in mind that the speed at which compliance is attained is dependent upon availability of funding sources. In addition, all expenditures in the proposed phased migration plan will be fully utilized and not be dependent on future funding from phase to phase.

This migration plan was utilized and expanded upon to include all upgrades for P25 compliance and upgrades to improve operational and interoperable communications and narrowbanding as identified in the requirements gathering phase of this project.

The priorities for the Phase 1 conceptual plan are:

1. Install a 3 Channel, 4 Site, 700 MHz P25 simulcast trunked radio system in Bell County.
2. Install new towers and 700 MHz P25 sites in Coryell County with leased line connectivity to the NSC in Bell County.
3. Upgrade the Bell County console system
4. Complete the narrowbanding compliance by upgrading all VHF infrastructure and subscriber user equipment to P25 by December 31, 2012.
5. Improve radio coverage in Lampasas and Hamilton Counties by installing VHF P25 conventional repeaters at the Evant area site and the Copperas Cove site
6. Upgrade the Bell County 800 MHz EDACS channels to P25 channels
7. Install a new tower in Milam County to improve coverage and consolidate communications off of leased tower sites
8. Install a microwave system to connect the 700/800 MHz sites in Coryell County with the 700/800 MHz system in Bell County.


9. Upgrade the Copperas Cove 800 MHz EDACS system to a P25 site with an NSC connected to the Bell County system and the Evant and Gatesville sites shared P25 system.

### **7.2.1 Phase 1 – P25 Compliant by 2015**

#### **2011**

The primary focus for this year is to further enhance P25 compliant interoperable and operable communications throughout Bell County and begin upgrading the VHF systems to P25 operations, which will start to bring the region into narrowbanding compliance by the FCC December 31, 2012 mandate. This will encompass the following requirements:

- Project 25, 700 MHz Simulcast 3 Channel Prime Site - This will add a new 3 Channel P25 Simulcast Prime site at the existing Belton tower and 3 new simulcast channels at the VA Hospital, Harker Heights, and Eagle Nest (Shaffer) tower sites.
- Project 25 Simulcast 3 Channel Upgrades - This will add upgrades to 3 existing EDACS channels to P25 Simulcast at the existing Belton tower, VA Hospital, Harker Heights, and Eagle Nest (Shaffer) tower sites.
- P25 User Radio/Console Migration - Each migration phase will include a quantity of 700/800 MHz, P25 equipped user radios where all CTCOG radios will be P25 compliant by 2015.
- VHF P25/Narrowbanding Infrastructure Upgrades – Begin identifying, updating FCC licenses, upgrading and programming repeaters for P25 operation.
- VHF P25/Narrowbanding Subscriber User Radios – Begin to identify, upgrade and program subscriber equipment (user radios) for P25 operation or replace radios that are not P25 capable
- New Communication Tower Sites – Begin the process for site selection, FCC licensing and vendor selection for the Gatesville and Evant tower sites

<b>P25 System Equipment Pricing Estimator - 2011</b>			
<b>P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)</b>	<b>QTY</b>	<b>Price</b>	<b>Ext Price</b>
<b>P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)</b>	0	\$1,300,000	\$0
<b>P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)</b>	0	\$3,900,000	\$0
<b>P25 Trunking Simulcast Cell Controller Site</b> Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	1	\$455,000	\$455,000
<b>P25 Trunking Simulcast Comparators (per 6 channels)</b>	1	\$162,000	\$162,000
<b>P25 Trunking Simulcast Remote Site - 6 Channel Site</b> Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	3	\$442,000	\$1,326,000
<b>P25 Trunking Simulcast Remote Site - 12 Channel Site</b> Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
<b>P25 Trunking Multicast Remote Site - 3 Channel Site</b> Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$195,000	\$0
<b>P25 Trunking Multicast Remote Site - 6 Channel Site</b> Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
<b>P25 Trunking Multicast Remote Site - 12 Channel Site</b> Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
<b>P25 Single Channel Trunking Remote Site - 1 Channel Site</b> (caution: there are feature tradeoffs when applying this technology) Includes Remote Multicast Controller, LAN/WAN, Repeater, Antenna System.	0	\$80,000	\$0
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	0	\$52,000	\$0
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	0	\$58,000	\$0
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	0	\$26,000	\$0
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	0	\$40,000	\$0
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	0	\$140,000	\$0
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	0	\$30,000	\$0
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	0	\$70,000	\$0
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	0	\$400,000	\$0
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	0	\$2,500	\$0
<b>Total:</b>			<b>\$1,943,000</b>

## P25 Subscriber Equipment Pricing Estimator - 2011




Subscribers (includes Installation and Programming)			
P25 Conventional Mobile Radio	0	\$2,500	\$0
P25 Trunking Mobile Radio (Bell County)	110	\$3,800	\$418,000
P25 Conventional Portable Radio with Accessories	0	\$2,100	\$0
P25 Trunking Portable Radio with Accessories (Bell County)	254	\$3,400	\$863,600
P25 Conventional Control Station with Antenna System	0	\$4,500	\$0
P25 Trunking Control Station with Antenna System	0	\$6,000	\$0
Add: Multiband to any Above Radio	0	\$800	\$0
Add: AES Encryption to any Above Radio	0	\$500	\$0
Add: P25 Phase II Software to any Above Trunked Radio	0	\$300	\$0
<b>Total:</b>			<b>\$1,281,600</b>

### 2012

The primary focus is to further enhance P25, 700 MHz shared communications system for Bell County and Coryell Counties and complete upgrading the VHF systems to P25 operations, which will bring the region into narrowbanding compliance by the FCC December 31, 2012 mandate. This will encompass the following requirements:

- P25 User Radio/Console Migration - Each migration phase will include a quantity of 700/800 MHz, P25 equipped user radios where all CTCOG radios will be P25 compliant by 2015. The cost estimate for this year includes replacement radios to migrate the Coryell Counties to the new 700 MHz sites in Gatesville and Evant area.
- New Communications Tower Site - Replace the Gatesville tower site with a new 152m, 500' guyed tower.
- New Communications Tower Site – Install a new communications tower site with a new 152m, 500' guyed tower in the Evant area
- 700 MHz P25 Upgrade - Install 700 MHz, 3 channel, P25 trunked sites at the Gatesville and Evant communication sites utilizing leased circuits for connectivity to the Bell Communications NSC at the Belton Site
- VHF P25/Narrowbanding Infrastructure Upgrades – Complete upgrades and programming of VHF repeaters for P25 operation.
- VHF P25/Narrowbanding Subscriber User Radios – Complete updates and programming of subscriber equipment (user radios) for P25 operation or replace radios that are not P25 capable.

P25 System Equipment Pricing Estimator - 2012			
P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)	QTY	Price	Ext Price
P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)	0	\$1,300,000	\$0
P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)	0	\$3,900,000	\$0
P25 Trunking Simulcast Cell Controller Site Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	0	\$455,000	\$0
P25 Trunking Simulcast Comparators (per 6 channels)	0	\$162,000	\$0
P25 Trunking Simulcast Remote Site - 6 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	0	\$442,000	\$0
P25 Trunking Simulcast Remote Site - 12 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
P25 Trunking Multicast Remote Site - 3 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	2	\$195,000	\$390,000
P25 Trunking Multicast Remote Site - 6 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
P25 Trunking Multicast Remote Site - 12 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
P25 Single Channel Trunking Remote Site - 1 Channel Site (caution: there are feature tradeoffs when applying this technology) Includes Remote Multicast Controller, LAN/WAN, Repeater, Antenna System.	0	\$80,000	\$0
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	0	\$52,000	\$0
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	0	\$58,000	\$0
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	0	\$26,000	\$0
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	0	\$40,000	\$0
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	0	\$140,000	\$0
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	2	\$30,000	\$60,000
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	2	\$70,000	\$140,000
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	2	\$400,000	\$800,000
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	0	\$2,500	\$0
<b>Total:</b>			<b>\$1,390,000</b>



## P25 Subscriber Equipment Pricing Estimator - 2012





Subscribers (includes Installation and Programming)			
P25 Conventional Mobile Radio (VHF Users)	163	\$2,500	\$407,500
P25 Trunking Mobile Radio (Coryell County)	144	\$3,800	\$547,200
P25 Conventional Portable Radio with Accessories (VHF Users)	190	\$2,100	\$399,000
P25 Trunking Portable Radio with Accessories (Coryell County)	169	\$3,400	\$574,600
P25 Conventional Control Station with Antenna System	0	\$4,500	\$0
P25 Trunking Control Station with Antenna System	0	\$6,000	\$0
Add: Multiband to any Above Radio	0	\$800	\$0
Add: AES Encryption to any Above Radio	0	\$500	\$0
Add: P25 Phase II Software to any Above Trunked Radio	0	\$300	\$0
<b>Total:</b>			<b>\$1,928,300</b>

### 2013

The primary focus is to further enhance P25 compliant interoperable communications throughout CTCOG and improve radio operability for the region. This will encompass the following requirements:

- Project 25 Dispatch Console Upgrade - This will upgrade fifteen (15) existing dispatch consoles to the P25 C3IP models
- Project 25 Simulcast 8 Channel Upgrades - This will upgrade 8 existing EDACS channels to P25 Simulcast at the existing Belton tower, VA Hospital, Harker Heights, and Eagle Nest (Shaffer) tower sites.
- P25 User Radio/Console Migration - Each migration phase will include a quantity of 700/800 MHz, P25 equipped user radios where all CTCOG radios will be P25 compliant by 2015
- VHF Coverage Upgrades – License and install a VHF, P25 conventional repeater at the Gatesville and Evant communication sites for improved coverage in those areas


P25 System Equipment Pricing Estimator - 2013			
P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)	QTY	Price	Ext Price
P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)	0	\$1,300,000	\$0
P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)	0	\$3,900,000	\$0
P25 Trunking Simulcast Cell Controller Site Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	0	\$455,000	\$0
P25 Trunking Simulcast Comparators (per 6 channels)	0	\$162,000	\$0
P25 Trunking Simulcast Remote Site - 6 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	0	\$442,000	\$0
P25 Trunking Simulcast Remote Site - 12 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
P25 Trunking Multicast Remote Site - 3 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$195,000	\$0
P25 Trunking Multicast Remote Site - 6 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
P25 Trunking Multicast Remote Site - 12 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
P25 repeater upgrade	8	\$10,000	\$80,000
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	15	\$52,000	\$780,000
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	0	\$58,000	\$0
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	0	\$26,000	\$0
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	2	\$40,000	\$80,000
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	0	\$140,000	\$0
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	0	\$30,000	\$0
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	0	\$70,000	\$0
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	0	\$400,000	\$0
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	0	\$2,500	\$0
<b>Total:</b>			<b>\$940,000</b>


<b>P25 Subscriber Equipment Pricing Estimator - 2013</b>			
<b>Subscribers (includes Installation and Programming)</b>			
P25 Conventional Mobile Radio	0	\$2,500	\$0
P25 Trunking Mobile Radio (Bell County)	220	\$3,800	\$836,000
P25 Conventional Portable Radio with Accessories	0	\$2,100	\$0
P25 Trunking Portable Radio with Accessories (Bell County)	308	\$3,400	\$1,047,200
P25 Conventional Control Station with Antenna System	0	\$4,500	\$0
P25 Trunking Control Station with Antenna System	0	\$6,000	\$0
Add: Multiband to any Above Radio	0	\$800	\$0
Add: AES Encryption to any Above Radio	0	\$500	\$0
Add: P25 Phase II Software to any Above Trunked Radio	0	\$300	\$0
<b>Total:</b>			<b>\$1,883,200</b>

## **2014**

The primary focus is to further enhance P25 compliant interoperable communications throughout Bell County. This will encompass the following requirements:

- Project 25 Simulcast 8 Channel Upgrades - This will upgrade 8 existing EDACS channels to P25 Simulcast at the existing Belton tower, VA Hospital, Harker Heights, and Eagle Nest (Shaffer) tower sites.
- P25 User Radio/Console Migration - Each migration phase will include a quantity of 700/800 MHz, P25 equipped user radios where all CTCOG radios will be P25 compliant by 2015
- New Communications Tower Site – Install a new communications tower site in Ledbetter Park in Milam County with a new 152m, 500' guyed tower and move existing radio resources from the leased sites at McLerran Hill and KRXT.
- Microwave Connectivity – Implement a microwave system that will connect the Bell County P25 system with the Copperas Cove, Gatesville and Evant communication sites in Coryell County

P25 System Equipment Pricing Estimator - 2014			
P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)	QTY	Price	Ext Price
P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)	0	\$1,300,000	\$0
P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)	0	\$3,900,000	\$0
P25 Trunking Simulcast Cell Controller Site Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	0	\$455,000	\$0
P25 Trunking Simulcast Comparators (per 6 channels)	0	\$162,000	\$0
P25 Trunking Simulcast Remote Site - 6 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	0	\$442,000	\$0
P25 Trunking Simulcast Remote Site - 12 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
P25 Trunking Multicast Remote Site - 3 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$195,000	\$0
P25 Trunking Multicast Remote Site - 6 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
P25 Trunking Multicast Remote Site - 12 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
P25 repeater upgrade	8	\$10,000	\$80,000
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	0	\$52,000	\$0
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	0	\$58,000	\$0
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	0	\$26,000	\$0
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	0	\$40,000	\$0
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	3	\$140,000	\$420,000
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	1	\$30,000	\$30,000
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	1	\$70,000	\$70,000
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	1	\$400,000	\$400,000
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	0	\$2,500	\$0
<b>Total:</b>			<b>\$1,000,000</b>


<b>P25 Subscriber Equipment Pricing Estimator - 2014</b>			
<b>Subscribers (includes Installation and Programming)</b>			
P25 Conventional Mobile Radio	0	\$2,500	\$0
P25 Trunking Mobile Radio (Bell County and Copperas Cove)	210	\$3,800	\$798,000
P25 Conventional Portable Radio with Accessories	0	\$2,100	\$0
P25 Trunking Portable Radio with Accessories (Bell County and Copperas Cove)	354	\$3,400	\$1,203,600
P25 Conventional Control Station with Antenna System	0	\$4,500	\$0
P25 Trunking Control Station with Antenna System	0	\$6,000	\$0
Add: Multiband to any Above Radio	0	\$800	\$0
Add: AES Encryption to any Above Radio	0	\$500	\$0
Add: P25 Phase II Software to any Above Trunked Radio	0	\$300	\$0
<b>Total:</b>			<b>\$2,001,600</b>


## **2015**


The primary focus is to further enhance P25 compliant interoperable communications throughout Coryell County. This will encompass the following requirements:

- Project 25 Backup NSC - This will be tied to the Bell County P25 NSC and will provide geographically separated NSC redundancy.
- Project 25 Dispatch Console Upgrade - This will upgrade two (2) existing dispatch consoles to the P25 C3IP models.
- Project 25, 5 Channel Upgrade - This will upgrade 5 existing EDACS channels to P25 at the Copperas Cove water tank site.
- P25 User Radio/Console Migration - Each migration phase will include a quantity of 700/800 MHz, P25 equipped user radios where all CTCOG radios will be P25 compliant by 2015

This replacement program will continue until all jurisdictions within the Region are P25 Compliant, bearing in mind that the speed at which compliance is attained is dependent upon availability of funding sources.

P25 System Equipment Pricing Estimator - 2015			
P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)	QTY	Price	Ext Price
P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)	1	\$1,300,000	\$1,300,000
P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)	0	\$3,900,000	\$0
P25 Trunking Simulcast Cell Controller Site Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	0	\$455,000	\$0
P25 Trunking Simulcast Comparators (per 6 channels)	0	\$162,000	\$0
P25 Trunking Simulcast Remote Site - 6 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	0	\$442,000	\$0
P25 Trunking Simulcast Remote Site - 12 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
P25 Trunking Multicast Remote Site - 3 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$195,000	\$0
P25 Trunking Multicast Remote Site - 6 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
P25 Trunking Multicast Remote Site - 12 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
P25 repeater upgrade	5	\$10,000	\$50,000
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	2	\$52,000	\$104,000
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	0	\$58,000	\$0
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	0	\$26,000	\$0
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	0	\$40,000	\$0
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	0	\$140,000	\$0
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	0	\$30,000	\$0
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	0	\$70,000	\$0
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	0	\$400,000	\$0
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	0	\$2,500	\$0
<b>Total:</b>			<b>\$1,454,000</b>

P25 Subscriber Equipment Pricing Estimator - 2015			
<b>RCC CONSULTANTS, INC. - PROPRIETARY &amp; CONFIDENTIAL</b>			
Subscribers (includes Installation and Programming)	QTY	Price	Ext Price
P25 Conventional Mobile Radio	0	\$2,500	\$0
P25 Trunking Mobile Radio (Bell County and Copperas Cove)	210	\$3,800	\$798,000
P25 Conventional Portable Radio with Accessories	0	\$2,100	\$0


<b>P25 Subscriber Equipment Pricing Estimator - 2015</b>			
<b>Subscribers (includes Installation and Programming)</b>			
P25 Conventional Mobile Radio	0	\$2,500	\$0
P25 Trunking Mobile Radio (Bell County and Copperas Cove)	210	\$3,800	\$798,000
P25 Conventional Portable Radio with Accessories	0	\$2,100	\$0
P25 Trunking Portable Radio with Accessories (Bell County and Copperas Cove)	354	\$3,400	\$1,203,600
P25 Conventional Control Station with Antenna System	0	\$4,500	\$0
P25 Trunking Control Station with Antenna System	0	\$6,000	\$0
Add: Multiband to any Above Radio	0	\$800	\$0
Add: AES Encryption to any Above Radio	0	\$500	\$0
Add: P25 Phase II Software to any Above Trunked Radio	0	\$300	\$0
<b>Total:</b>			<b>\$2,001,600</b>

**7.2.2 Phase 2 – Region-wide P25 shared radio system**

This migration plan will provide a shared region-wide standards-based, P25 trunked radio system that could be a part of the State system-of-system vision. .

The priorities for the Phase 2 conceptual plan are:

1. Design and implement a connectivity plan for the region communication sites. Microwave is utilized for the cost estimate.
2. Complete FCC licensing and Install a 700 MHz site at the region communication sites tied to the Bell and Coryell County radio system. 3 channel sites are utilized for the cost estimate.
3. Complete FCC licensing and Install a 700 MHz site at the region communication sites tied to the Bell and Coryell County radio system. 3 channel sites are utilized for the cost estimate.
4. Replace the current console positions in the five counties getting trunked radio systems with new dispatch console equipment.

P25 System Equipment Pricing Estimator			
P25 Trunking Equipment - Pricing applies to both P25 Phase I and Phase II (# channels = # talkpaths)	QTY	Price	Ext Price
P25 Trunking System Controller Site (up to 5 Sites, a Simulcast Subsystem counts as 1)	0	\$1,300,000	\$0
P25 Trunking System Controller Site (up to 25 Sites, a Simulcast Subsystem counts as 1)	0	\$3,900,000	\$0
P25 Trunking Simulcast Cell Controller Site Includes Redundant Simulcast Controllers, Frequency Standard, LAN/WAN.	0	\$455,000	\$0
P25 Trunking Simulcast Comparators (per 6 channels)	0	\$162,000	\$0
P25 Trunking Simulcast Remote Site - 6 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters,	0	\$442,000	\$0
P25 Trunking Simulcast Remote Site - 12 Channel Site Includes Remote Simulcast Controller, Frequency Standard, LAN/WAN, Repeaters, Antenna Systems.	0	\$680,000	\$0
P25 Trunking Multicast Remote Site - 3 Channel Site (VHF and 700 MHz) Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	10	\$195,000	\$1,950,000
P25 Trunking Multicast Remote Site - 6 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$285,000	\$0
P25 Trunking Multicast Remote Site - 12 Channel Site Includes Remote Multicast Controller, LAN/WAN, Repeaters, Antenna Systems.	0	\$442,000	\$0
P25 Single Channel Trunking Remote Site - 1 Channel Site (caution: there are feature tradeoffs when applying this technology) Includes Remote Multicast Controller, LAN/WAN, Repeater, Antenna System.	0	\$80,000	\$0
<b>Dispatch Equipment</b>			
Trunking Dispatch Console Position IP-Based	8	\$52,000	\$416,000
Trunking Dispatch Console IP-Based LAN, WAN Equipment (per 10 Consoles)	1	\$58,000	\$58,000
Conventional Channel Interface (10 Channels, applies to IP-Based Console)	5	\$26,000	\$130,000
Dispatch Console Position Control Station Based (select Control Stations in Subscribers)	0	\$39,000	\$0
Digital Logging Recorder	0	\$190,000	\$0
<b>P25 Conventional Equipment</b>			
P25 Conventional Repeater with Antenna System	0	\$40,000	\$0
P25 Conventional Simulcast Site	0	\$50,000	\$0
P25 Conventional Simulcast Comparator Site Components	0	\$100,000	\$0
Interoperability Gateway (3 networks)	0	\$25,000	\$0
Interoperability Gateway (6 networks)	0	\$50,000	\$0
<b>Site Link Equipment</b>			
Microwave Equipment - Non-Redundant (per hop)	5	\$140,000	\$700,000
Microwave Equipment - Redundant (per hop)	0	\$190,000	\$0
Low Tier Microwave (per hop)	0	\$50,000	\$0
<b>Site Equipment (includes all Site Related Services, Grounding)</b>			
UPS 10KVA	0	\$20,000	\$0
UPS 20KVA	0	\$30,000	\$0
UPS 30KVA	0	\$40,000	\$0
Generator 35 kW	0	\$30,000	\$0
Generator 70 kW	0	\$45,000	\$0
Generator 100 kW	0	\$60,000	\$0
Shelter 10 x 14	0	\$70,000	\$0
Shelter 12 x 30	0	\$125,000	\$0
Shelter 12 x36	0	\$140,000	\$0
Tower 500' Guyed	0	\$400,000	\$0
Tower 300' Self-Supporting	0	\$345,000	\$0
Tower 200' Self-Supporting	0	\$225,000	\$0
Monopole 100'	0	\$75,000	\$0
Tower Structural Analysis	5	\$2,500	\$12,500
<b>Total:</b>			<b>\$3,266,500</b>



## 7.3 Budgetary Costs


The following budget indicates the funds approved by the CTCOG Executive Council, which includes the necessary funds to complete narrowbanding by the FCC mandate of December 31, 2012. In 2009 and 2010 the CTCOG budgeted and spent \$2,412,606 for a P25 and interoperability upgrades.

The proposed costs spreadsheets include the funds as identified in the previous migration plan and gaps analysis.

### 7.3.1 Phase 1 – P25 Compliant by 2015

	Phase 1 Estimated Budget	Phase 1 Approved Budget	Budget Shortfall
2011	\$3,224,600	\$1,500,000	\$1,724,600
2012	\$3,318,300	\$1,000,000	\$2,318,300
2013	\$2,823,200	\$1,000,000	\$1,823,200
2014	\$3,001,600	\$1,000,000	\$2,001,600
2015	\$3,455,600	\$1,000,000	\$2,455,600
<b>Total:</b>	<b>\$15,823,300</b>	<b>\$5,500,000</b>	<b>\$10,323,300</b>

### Estimated recurring costs

P25 Ongoing and Miscellaneous Pricing Estimator			
			
<b>Ongoing Costs</b>			
Maintenance Contract (2.5% of System Price Estimate Per Year / 12 Months)	5	\$3,029	\$15,146
Tower Leases (\$4,000 / Month)	0	\$4,000	\$0
Leased T1 Line (\$1,000 / Month)	0	\$1,000	\$0
Personnel (\$12,500 / Month, \$150,000 / Year)	1	\$12,500	\$12,500
<b>Other Costs</b>			
Consulting Fees	0	Pricing for this item should be determined at a later date.	
<b>Total:</b>			<b>\$27,646</b>

**7.3.2 Phase 2 – Region-wide P25 shared radio system**

	Phase 2 Estimated Budget	Phase 2 Approved Budget	Budget Shortfall
<b>Total:</b>	<b>\$3,266,500</b>	<b>\$0</b>	<b>\$3,266,500</b>

**Estimated recurring costs**

P25 Ongoing and Miscellaneous Pricing Estimator			
<b>Ongoing Costs</b>			
Maintenance Contract (2.5% of System Price Estimate Per Year / 12 Months)	1	\$6,805	\$567
Tower Leases (\$4,000 / Month)	0	\$4,000	\$0
Leased T1 Line (\$1,000 / Month)	0	\$1,000	\$0
Personnel (\$12,500 / Month, \$150,000 / Year)	1	\$12,500	\$12,500
<b>Other Costs</b>			
Consulting Fees	0	Pricing for this item should be determined at a later date.	
<b>Total:</b>			<b>\$13,067</b>

**Section**  
**8**

**Exhibits**

**8.1 Surveys**

**Survey – Bell County Communications**

1.0 Points of Contact	
1.1 Agency Name:	Bell County Communications
1.2 Discipline: (Law Enforcement, Fire, EMS)	Communications
1.3 Area of Operation: (City, County #sq Miles)	Bell County (1088 sq miles)
1.4 Survey Respondant - Point of Contact	
Name:	Kenneth Brogdon
Title:	IT Director
Agency/Organization:	Bell County Communications
Email Address:	kbrogdon@bcc911.com
Physical Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Mailing Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
County:	Bell
Office Phone:	254-933-5591
Cell Phone:	
24/7 Phone:	
Fax Number:	254-933-5937
1.5 Agency Head - Point of Contact	
Name:	Kenneth Brogdon
Title:	IT Director
Agency/Organization:	Bell County Communications
Email Address:	kbrogdon@bcc911.com
Physical Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Mailing Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
County:	Bell
Office Phone:	254-933-5591
Cell Phone:	
24/7 Phone:	
Fax Number:	254-933-5937

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	Yes
System Name:	Bell County 800 MHz
System Users (Agencies) Type / Name:	EMS Air One Fire Bartlett Fire Department LE Bartlett Police Department

### 2.2 System Owner - Point of Contact

Name:	Kenneth Brogdon
Title:	IT Director
Agency Name/Organization:	Bell County Communications
Email:	kbrogdon@bcc911.com
Physical Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Mailing Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Office Phone:	254-933-5591
Cell Phone:	
24/7 Phone:	
Fax:	254-933-5937

<b>2.0 Infrastructure</b>	
<b>2.3 System Manager - Point of Contact</b>	
Name:	Kenneth Brogdon
Title:	IT Director
Agency Name/Organization:	Bell County Communications
Email:	kbrogdon@bcc911.com
Physical Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Mailing Address, City, ZIP:	708 W. Avenue O, Belton, TX 76513
Office Phone:	254-933-5591
Cell Phone:	
24/7 Phone:	
Fax:	254-933-5937
<b>2.4 System Maintenance Provider - Point of Contact</b>	
Name:	Dailey Wells Communications, Inc.
Title:	
Agency Name/Organization:	Dailey Wells Communications, Inc.
Email:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	
<b>2.5 Fixed Site Radio Equipment Information</b>	
<p>Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...</p> <p>2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.</p>	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

<b>2.0 Infrastructure</b>	
<b>2.6 Fixed Site Radio Equipment</b>	
Site Name	Belton (BCC Main)
Equipment Type	EDACS (19 channels)
Manufacturer	Harris
Model	Mastr III
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Proprietary digital
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	Microwave
<b> </b>	
Site Name	Belton (BCC Main)
Equipment Type	P25 (4 channels)
Manufacturer	Harris
Model	Mastr V
Frequency	700 MHz
Modulation (analog, P25, proprietary digital, mixed)	P25
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	Microwave
<b> </b>	
Site Name	Belton (BCC Main)
Equipment Type	Base station (4 channels)
Manufacturer	Harris
Model	Mastr II
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Analog
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	4 wire
<b> </b>	
Site Name	Belton (BCC Main)
Equipment Type	Base station (2 channels)
Manufacturer	Harris
Model	Mastr III
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Analog
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	4 wire
<b> </b>	
Site Name	Belton (BCC Main)
Equipment Type	Mobile radio
Manufacturer	Harris
Model	M7100
Frequency	VHF
Modulation (analog, P25, proprietary digital, mixed)	Mixed
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	4 wire

2.0 Infrastructure	
Site Name	Temple, VA
Equipment Type	EDACS (19 channels)
Manufacturer	Harris
Model	Mastr III
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Proprietary digital
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	Microwave
Site Name	Shafer Youngsport (Eagle Nest)
Equipment Type	EDACS (19 channels)
Manufacturer	Harris
Model	Mastr III
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Proprietary digital
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	Microwave
Site Name	Harker Heights
Equipment Type	EDACS (19 channels)
Manufacturer	Harris
Model	Mastr III
Frequency	800 MHz
Modulation (analog, P25, proprietary digital, mixed)	Proprietary digital
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	Microwave
2.7 Site Location Information	
A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and	
2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Bell County 800 MHz
2.8 Site Information	
Site Name	Belton (BCC Main)
Antenna Site Reg. (ASR#)	1059912
Tower Height	110
Address	706 West Avenue O, Belton, TX
Tower Owner	Bell County
County	Bell
Tower Age	1999
Available for Expanded Use?	N/A
Owned or Leased?	N/A



<b>2.0 Infrastructure</b>	
Site Name	Temple VA
Antenna Site Reg. (ASR#)	1212890
Tower Height	132
Address	1901 S. First Street, Temple, TX
Tower Owner	Bell County
County	Bell
Tower Age	1999
Available for Expanded Use?	N/A
Owned or Leased?	N/A
<b>2.0 Infrastructure</b>	
Site Name	Youngsport (Eagle Nest)
Antenna Site Reg. (ASR#)	1025503
Tower Height	146
Address	12167 Eagles Nest Rd Salado, Tx
Tower Owner	Bell County
County	Bell
Tower Age	1997
Available for Expanded Use?	N/A
Owned or Leased?	N/A
<b>2.0 Infrastructure</b>	
Site Name	Harker Heights
Antenna Site Reg. (ASR#)	N/A
Tower Height	30.5
Address	1230 Cedar Oaks, Harker Heights, TX
Tower Owner	Bell County
County	Bell
Tower Age	N/A
Available for Expanded Use?	No
Owned or Leased?	N/A
<b>2.9 System Managers</b>	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following	
Regional System: (Yes or No)	Yes
Date system was installed:	2,000
Has your system been converted to narrowband operation: (Yes or No)	Yes
Has your FCC license been modified for narrowband emissions: (Yes or No)	Yes

<b>2.0 Infrastructure</b>	
2.10 User Agency Information	
<b>SEE NEXT 2 PAGES FOR INFORMATION (55 LISTINGS)</b>	
Agency Name	
Agency Category	
Point of Contact	
POC: 24/7 Phone	
POC: Email	
2.11 System Connectivity	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
2.12 Dispatch Console Radio Equipment	
This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.	
Manufacturer:	Harris
Model:	C3 Maestro
Number of positions:	14
2.13 What dispatch console radio equipment do you need?	
IP console equipment for upgrade to P25	

2.10 User Agency Information

Agency Name	Agency Category	Point of Contact	POC: 24/7 Phone	POC: Email
Air One	EMS			
Bartlett Fire Department	Fire			
Bartlett Police Department	Police			
Bell County Communications	Other			
Bell County Emergency Management	EMS			
Bell County Fire Marshal	Fire			
Bell County Organized Crime Unit	Police			
Bell County Sheriff's Office	Police			
Belton Emergency Services	EMS			
Belton Fire Department	Fire			
Belton Police Department	Police			
Central Bell County Fire & Rescue	Fire			
Central Texas College P.D.	Police			
Central Texas EMS	EMS			
Community Services & Corrections Dept.	Police			
Copperas Cove Fire Department	Fire			
County Attorney's Office	Other			
Crisis Intervention Stress Management	EMS			
Department of Public Safety	Police			
District Attorney	Other			
Fort Hood	Other			
Harker Heights Fire Department	Fire			
Harker Heights Police Department	Police			
Holland Police Department	Police			
Holland Volunteer Fire Department	Fire			
Killeen Emergency Services	EMS			
Killeen Fire Department	Fire			
Killeen Independent School District	Other			
Killeen Police Department	Police			
Little River Academy Police Department	Police			
Little River Fire Department	Fire			
Moffit Fire Department	Fire			
Morgan's Point Fire Department	Fire			
Morgan's Point Resort Police Department	Police			
Nolanville Police Department	Police			
Precinct 1 Constables	Police			
Precinct 4 Constable's Office	Police			
Precinct 2 Constables	Police			
Precinct 3 Constables	Police			
Rogers Fire Department	Fire			
Rogers Police Department	Police			
Salado Police Department	Police			
Salado Volunteer Fire Department	Fire			
Scott & White	EMS			

**2.10 User Agency Information**

<b>Agency Name</b>	<b>Agency Category</b>	<b>Point of Contact</b>	<b>POC: 24/7 Phone</b>	<b>POC: Email</b>
Southwest Bell County Fire Department	Fire			
Stillhouse Volunteer Fire Department	Fire			
Temple College Department of Public Safety	Police			
Temple Fire Department	Fire			
Temple Police Department	Police			
Texas Alcohol Corn	Other			
Texas Parks & Wildlife	Other			
Troy Fire Department	Fire			
Troy Police Department	Police			
University of Mary Hardin - Baylor Police Department	Police			
US Army Corp of Engineers	Other			

### 3.0 Subscriber Units

#### 3.1 Subscriber Inventory

Owner Agency	<b>See table following Section 3 (15 entries).</b>
Category	
Manufacturer	
Model	
Quantity	
Narrowbanded	
P25 compliant or capable	

#### 3.2 What are your Subscriber Unit needs?

Mobiles:	461 mobiles to replace non P25 capable radios
Portables:	1160 portables to replace non P25 capable radios
Other:	N/A

#### 3.3 How many are Not Narrowband capable?

0
---

#### 3.4 How many require re-tune for narrowband?

0
---

#### 3.5 Channels programmed into radios

Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	

#### 3.6 Interoperability channels in radios

Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	

3.7 Channel/talk group information	
Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

3.1 Subscriber Inventory

Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
Bell County Communications	Mobile	Harris	Orion	70	Yes	No
Bell County Communications	Mobile	Harris	725M	10	Yes	No
Bell County Communications	Mobile	Harris	500M	381	Yes	No
Bell County Communications	Mobile	Harris	M7100	71	Yes	Yes
Bell County Communications	Mobile	Harris	M7200	2	Yes	Yes
Bell County Communications	Mobile	Harris	M7300	1285	Yes	Yes
Bell County Communications	Portable	Harris	MRK	12	Yes	No
Bell County Communications	Portable	Harris	700P	7	Yes	No
Bell County Communications	Portable	Harris	P7200	158	Yes	Yes
Bell County Communications	Portable	Harris	P7300	35	Yes	Yes
Bell County Communications	Portable	Harris	P5400	37	Yes	Yes
Bell County Communications	Portable	Harris	P5100	373	Yes	Yes
Bell County Communications	Portable	Harris	P7100	444	Yes	Yes
Bell County Communications	Portable	Harris	LPE 200	1079	Yes	No
Bell County Communications	Portable	Harris	LPE 50	62	Yes	No

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	Harris
Model:	C3 Maestro
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Belton, TX
Address where gateway is stored:	
Service Area where gateway is available to be deployed:	Bell County

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

##### 4.4 Other Capabilities?

--



5.0 System Coverage and Capacity	
5.1 Approximate Coverage	
Mobile Coverage: %	95
Portable Coverage: %	75
In-Building Coverage: %	50
5.2 How many more transmitter locations?	
	3
5.3 How many channels?	
	4

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to tie all agencies in all counties to the P25 network switch in Belton (and connected to a yet to be determined backup switch), for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

- 1) There is inadequate mobile, portable and in-building coverage in the county.
- 2) There is insufficient channel capacity for day-to-day operations and emergency and planned event operations and interoperability.
- 3) There are no redundant/backup facilities for radio operations and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

- 1) Increased mobile, portable and in-building coverage in the county.
- 2) Add additional channels to increase radio capacity for day-to-day operations and emergency and planned event operations and interoperability.
- 3) Design redundant/backup facilities for radio operations and dispatch operations so that if there is a failure at a site or building, public safety communications will not be affected.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

Goals of obtaining a P25 regional radio system by 2015 can be realized with funding.

**7.0 Budget and Funding Gap Information**

**7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?**

Yes or No?	Yes
------------	-----

**7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010**

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	
Amount	
Year	
Purpose	

**7.3 Expected funding by source through the end of 2015**

Funding Source	
Amount	
Year	
Planned Purpose	



## Survey – Copperas Cove

<b>1.0 Points of Contact</b>	
1.1 Agency Name:	Copperas Cove, City of
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law enforcement, Fire, EMS
1.3 Area of Operation: (City, County #sq Miles)	9.4 sq miles centered in Copperas Cove, City of
<b>1.4 Survey Respondant - Point of Contact</b>	
Name:	Gary D. Young
Title:	Deputy Fire Chief
Agency/Organization:	Copperas Cove, City of
Email Address:	gyoung@ci.copperas-cove.tx.us
Physical Address, City, ZIP:	507 S. Main Street, Copperas Cove, TX 76522
Mailing Address, City, ZIP:	507 S. Main Street, Copperas Cove, TX 76522
County:	Coryell
Office Phone:	254-547-4221
Cell Phone:	254-535-4826
24/7 Phone:	254-547-8222
Fax Number:	
<b>1.5 Agency Head - Point of Contact</b>	
Name:	Gary D. Young
Title:	Deputy Fire Chief
Agency/Organization:	Copperas Cove, City of
Email Address:	gyoung@ci.copperas-cove.tx.us
Physical Address, City, ZIP:	507 S. Main Street, Copperas Cove, TX 76522
Mailing Address, City, ZIP:	507 S. Main Street, Copperas Cove, TX 76522
County:	Coryell
Office Phone:	254-547-4221
Cell Phone:	254-535-4826
24/7 Phone:	254-547-8222
Fax Number:	

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console  
Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by  
2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and

System Owned: (Yes or No)	Yes
System Name:	Copperas Cove Trunked 800 MHz Radio System
System Users (Agencies) Type / Name:	Copperas Cove Police, Fire, & EMS

### 2.2 System Owner - Point of Contact

Name:	Gary D. Young
Title:	Deputy Fire Chief
Agency Name/Organization:	Copperas Cove, City of
Email:	gyoung@ci.copperas-cove.tx.us
Physical Address, City, ZIP:	507 S. Main St., Copperas Cove, TX 76522
Mailing Address, City, ZIP:	507 S. Main St., Copperas Cove, TX 76522
Office Phone:	254-547-4221
Cell Phone:	254-535-4826
24/7 Phone:	254-547-8222

### 2.3 System Manager - Point of Contact

Name:	Gary D. Young
Title:	Deputy Fire Chief
Agency Name/Organization:	Copperas Cove, City of
Email:	gyoung@ci.copperas-cove.tx.us
Physical Address, City, ZIP:	507 S. Main St., Copperas Cove, TX 76522
Mailing Address, City, ZIP:	507 S. Main St., Copperas Cove, TX 76522
Office Phone:	254-547-4221
Cell Phone:	254-535-4826
24/7 Phone:	254-547-8222
Fax:	

**2.0 Infrastructure**

**2.4 System Maintenance Provider - Point of Contact**

Name:	
Title:	
Agency Name/Organization:	Dailey-Wells Communications
Email:	
Physical Address, City, ZIP:	3440 E. Houston St. San Antonio, TX 78219
Mailing Address, City, ZIP:	3440 E. Houston St. San Antonio, TX 78219
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702

**2.5 Fixed Site Radio Equipment Information**

Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...

2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency

Entered into CASM: (Yes or No)	
Is the data current and up to date?	
Name in CASM:	

**2.6 Fixed Site Radio Equipment**

See table following Section 2... 10 entries.

**2.7 Site Location Information**

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it

Entered into CASM: (Yes or No)	
Is the data current and up to date?	
Name in CASM:	



2.0 Infrastructure	
2.8 Site Information	
Site Name	Copperas Cove
Antenna Site Reg. (ASR#)	1261844
Tower Height	76.2
Address	2104 Freedom Ln
Tower Owner	Copperas Cove
County	Coryell
Tower Age	2008
Available for Expanded Use?	Yes
Owned or Leased?	Owned
2.9 System Managers	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the	
Regional System: (Yes/No)	No
Date system was installed:	
Has your system been converted to narrowband operation: (Yes/No)	
Has your FCC license been modified for narrowband emissions: (Y/N)	
2.10 User Agency Information	
Agency Name	
Agency Category	
Point of Contact	
POC: 24/7 Phone	
POC: Email	
2.11 System Connectivity	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes

## 2.0 Infrastructure

### 2.12 Dispatch Console Radio Equipment

This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.

Manufacturer:	Harris
Model:	C3 Maestro
Number of positions:	2

### 2.13 What dispatch console radio equipment do you need?

Need to more dispatch consoles, as well as at least 2 redundant location dispatch consoles.

2.6 Fixed Site Radio Equipment

Site Name	Equipment Type	Manufacturer	Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
Copperas Cove	Trunked Repeater	Harris	Mastr III	851.2000		
Copperas Cove	Trunked Repeater	Harris	Mastr III	852.4375		
Copperas Cove	Trunked Repeater	Harris	Mastr III	853.4750		
Copperas Cove	Trunked Repeater	Harris	Mastr III	853.7375		
Copperas Cove	Trunked Repeater	Harris	Mastr III	853.0375		
Copperas Cove	Conventional Repeater	Harris	Mastr III	851.0125		
Copperas Cove	Control Station	Harris	Orion	155.7525		
Copperas Cove	Control Station	Harris	Orion	155.3700		
Copperas Cove	Control Station	Harris	Orion	154.2800		
Copperas Cove	Control Station	Harris	Orion	155.3400		

3.0 Subscriber Units	
3.1 Subscriber Inventory	
See table following Section 3... 7 entries.	
3.2 What are your Subscriber Unit needs?	
Mobiles:	The Orions are not P25 capable, unsure of quantity of mobiles, but it is less than 71.
Portables:	Portables are P25 capable but not compliant.
Other:	Need to have P25 for all infrastructure and mobiles/portables.
3.3 How many are Not Narrowband capable?	
N/A for Copperas Cove (800 MHz) radios.	
3.4 How many require re-tune for narrowband?	
All 9 Coryell County VHF units are operating in narrowband mode.	
3.5 Channels programmed into radios	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.6 Interoperability channels in radios	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.7 Channel/talk group information	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

**3.1 Subscriber Inventory**

<b>Owner Agency</b>	<b>Category</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Qty</b>	<b>Narrow-banded?</b>	<b>P25 Compliant or Capable?</b>
Copperas Cove, City of	Mobile	Harris	500M	44		No
Copperas Cove, City of	Mobile	Harris	Orion/M7300	73		No
Copperas Cove, City of	Portable	Harris	Jaguar 700Pi	219		No
Copperas Cove, City of	Control Station	Harris	Orion	16		No
Copperas Cove, City of	Control Station	Harris	Orion	4		No
Coryell County	Portable	Harris	P5450	8		No
Coryell County	Mobile	Harris	M7100	1		No

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	Harris
Model:	C3
Number of simultaneous nets:	10
Number of active ports:	
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	2104 A Freedom Ln
Address where gateway is stored:	415 S. Main St.
Service Area where gateway is available to be deployed:	Entire 800 MHz Copperas Cove coverage area

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

##### 4.4 Other Capabilities?

Copperas Cove has a cache of 10 portable 800 MHz trunked radios, model Jaguar 700Pi, with interoperability frequencies programmed.

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	100
Portable Coverage: %	95
In-Building Coverage: %	90

5.2 How many more transmitter locations?	None
--	------

5.3 How many channels?	None
------------------------	------

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

Ultimately upgrade all radio equipment to P25 on VHF and 800 MHz operations.

### 6.2 List and describe the three most critical shortcomings of your present radio system

- 1) None of the current 800 MHz radio equipment is P25 capable.
- 2) No VHF Control Stations are P25.
- 3) Only 2 mobile and 2 portable VHF radios are P25.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

- 1) P25 Conventional capability for all City of Copperas Cove owned radio equipment.
- 2) P25 trunking capability for all City of Copperas Cove owned radio equipment.
- 3) High speed data capability for all users.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 at the earliest, because of lack of funding.



**7.0 Budget and Funding Gap Information**

**7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?**

Yes or No?	Yes
------------	-----

**7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010**

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	
Amount	
Year	
Purpose	

**7.3 Expected funding by source through the end of 2015**

Funding Source	
Amount	
Year	
Planned Purpose	



## Survey – Coryell County

1.0 Points of Contact	
1.1 Agency Name:	Coryell County
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, Fire, EMS
1.3 Area of Operation: (City, County #sq Miles)	1,057 sq miles of the county of Coryell
1.4 Survey Respondant - Point of Contact	
Name:	Judge John Firth
Title:	Emergency Management Coordinator
Agency/Organization:	Coryell County
Email Address:	county_judge@coryellcounty.org
Physical Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Mailing Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
County:	Coryell
Office Phone:	254-865-5911 ext. 2222
Cell Phone:	254-415-2258
24/7 Phone:	254-415-2258
Fax Number:	254-865-2040
1.5 Agency Head - Point of Contact	
Name:	Judge John Firth
Title:	Emergency Management Coordinator
Agency/Organization:	Coryell County
Email Address:	county_judge@coryellcounty.org
Physical Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Mailing Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
County:	Coryell
Office Phone:	254-865-5911 ext. 2222
Cell Phone:	254-415-2258
24/7 Phone:	254-415-2258
Fax Number:	254-865-2040

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	Yes
System Name:	Coryell County
System Users (Agencies) Type / Name:	EMS Coryell County EMC, LE Coryell County Sheriff, LE Gatesville Police, FD Gatesville Fire, VFD Coryell City Fire, VFD Evant Fire, VFD Flat Fire, VFD Grove Fire, VFD Jonesboro Fire, VFD Mound Fire, VFD Oglesby Fire, VFD Levita Fire, VFD Turnersville Fire

### 2.2 System Owner - Point of Contact

Name:	Judge John Firth
Title:	Emergency Management Coordinator
Agency Name/Organization:	Coryell County
Email:	county_judge@coryellcounty.org
Physical Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Mailing Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Office Phone:	254-865-5911 ext. 2222
Cell Phone:	254-415-2258

24/7 Phone:	254-415-2258
Fax:	254-865-2040
<b>2.3 System Manager - Point of Contact</b>	
Name:	Judge John Firth
Title:	Emergency Management Coordinator
Agency Name/Organization:	Coryell County
Email:	county_judge@coryellcounty.org
Physical Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Mailing Address, City, ZIP:	620 E. Main St., Gatesville, Texas 76528
Office Phone:	254-865-5911 ext. 2222
Cell Phone:	254-415-2258
24/7 Phone:	254-415-2258
Fax:	254-865-2040
<b>2.4 System Maintenance Provider - Point of Contact</b>	
Name:	Dailey-Wells Communications, Inc.
Title:	
Agency Name/Organization:	Dailey-Wells Communications, Inc.
Email:	
Physical Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Mailing Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6592
<b>2.5 Fixed Site Radio Equipment Information</b>	
Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...	
2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes

Name in CASM:	Coryell County
<b>2.6 Fixed Site Radio Equipment</b>	
See table at the end of Section 2... 5 entries.	
<b>2.7 Site Location Information</b>	
A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio equipment, such as repeaters and base stations. Radio sites can be towers, water tanks, building tops, etc.	
2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Coryell County sheriff's office, Gatesville Police Department
<b>2.8 Site Information</b>	
Site Name	Gatesville - Coryell County
Antenna Site Reg. (ASR#)	1051182
Tower Height	85
Address	N SIDE US 84 2.37 KM E of Gatesville
Tower Owner	Coryell County
County	Coryell
Tower Age	1973
Available for Expanded Use?	No
Owned or Leased?	Owned
<b>2.9 System Managers</b>	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in question 2.10. If no, proceed to 2.11 System Connectivity	
Regional System: (Yes/No)	No
Date system was installed:	
Has your system been converted to narrowband operation: (Yes/No)	

Has your FCC license been modified for narrowband emissions: (Yes/No)	
<b>2.10 User Agency Information</b>	
Agency Name	Coryell County SO
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.10 User Agency Information</b>	
Agency Name	Coryell County EMS
Agency Category	EMS
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.10 User Agency Information</b>	
Agency Name	Gatesville PD
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.11 System Connectivity</b>	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
<b>2.12 Dispatch Console Radio Equipment</b>	
This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.	
Manufacturer:	DWC/Harris
Model:	Director IP
Number of positions:	2
<b>2.13 What dispatch console radio equipment do you need?</b>	
Dispatch console at redundant location.	



2.6 Fixed Site Radio Equipment

Site Name	Equipment Type	Manufacturer	Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
Coryell County	Base	Harris	Mastr III	155.6850	All of the above	MW
Coryell City/Osage VFD	Base	Motorola	GM300			
Turnersville VFD	Base	Maxon	SM4150			
Coryell County	Base			155.3700		MW
Coryell County				153.9500		MW

### 3.0 Subscriber Units

#### 3.1 Subscriber Inventory

See table at the end of Section 3... 82 entries.

#### 3.2 What are your Subscriber Unit needs?

Mobiles:	76 - P25 Compliant units with narrowbanding
Portables:	122 - P25 Compliant units with narrowbanding
Other:	

3.3 How many are Not Narrowband capable? 198

3.4 How many require re-tune for narrowband? 121

#### 3.5 Channels programmed into radios

Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	

#### 3.6 Interoperability channels in radios

Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	

#### 3.7 Channel/talk group information

Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

3.1 Subscriber Inventory

Owner Agency	Category	Manufacturer	Model	Qty	Narrowbanded?	P25 Compliant or Capable?
Coryell Cty Sheriff's Office	Mobile	Kenwood		4	No	No
Coryell Cty Sheriff's Office	Mobile	Maxon		3	No	No
Gatesville P.D.	Mobile	Motorola	Spectra	1	No	No
Gatesville P.D.	Mobile	Motorola	M1225	6	No	No
Gatesville P.D.	Mobile	Motorola	CDM1250	6	No	No
Gatesville P.D.	Mobile	Midland		1	No	No
Gatesville P.D.	Mobile	Kenwood	TK-7160	1	No	No
Gatesville VFD	Mobile	Kenwood	TK-790	4	No	No
Coryell City/Osage VFD	Mobile	Motorola	GM300	1	No	No
Coryell City/Osage VFD	Mobile	Icom	ICF-5061	1	No	No
Coryell City/Osage VFD	Mobile	Icom	IC-E-24	1	No	No
Coryell City/Osage VFD	Mobile	EF Johnson	242-7610	1	No	No
Coryell City/Osage VFD	Mobile	Vertex	VX3200V	4	No	No
Coryell City/Osage VFD	Mobile	Kenwood	TK-762	2	No	No
Evant VFD	Mobile	Motorola	MaxTrack 300	3	No	No
Evant VFD	Mobile	Kenwood	TK762 HG	2	No	No
Evant VFD	Mobile	Kenwood	TK760	1	No	No
Mound VFD	Mobile	Harris	M7100	2	No	No
Oglesby VFD	Mobile	Harris	M7100	2	No	No
Oglesby VFD	Mobile	Kenwood	TK 705D	3	No	No
Oglesby VFD	Mobile	Kenwood	TK-790	1	No	No
Oglesby VFD	Mobile	Kenwood	TK-760G	1	No	No
Oglesby VFD	Mobile	Motorola Spectra	T83GXA7HA9AK	1	No	No
Oglesby VFD	Mobile	Amratrac	150	1	No	No
Turnersville VFD	Mobile	Fugitsu		2	No	No
Turnersville VFD	Mobile	Maxon	SM4150	3	No	No
The Grove VFD	Mobile	Motorola	CM200	1	No	No
Levita VFD	Mobile	Kenwood	TK 705D	3	No	No
Levita VFD	Mobile	Motorola	GM300	1	No	No
Levita VFD	Mobile	Maxon	5M4150M	1	No	No
Flat VFD	Mobile	Kenwood		2	No	No
Flat VFD	Mobile	Motorola	Radius 120	1	No	No

Owner Agency	Category	Manufacturer	Model	Qty	Narrowbanded?	P25 Compliant or Capable?
Flat VFD	Mobile	Kenwood	TK 760H	1	No	No
Jonesboro VFD	Mobile	Midland	ML 3215	2	No	No
Jonesboro VFD	Mobile	Maxon	SM 4150M	1	No	No
Coryell Cty Sheriff's Office	Mobile	Harris	M5300	1	No	Yes
Coryell Cty Sheriff's Office	Mobile	Harris	M7100	21	No	Yes
Coryell Cty Sheriff's Office	Mobile	Motorola		6	No	Yes
Gatesville VFD	Mobile	Harris	M7100	9	No	Yes
Gatesville VFD	Mobile	Motorola	XTL5000	2	No	Yes
Coryell City/Osage VFD	Mobile	Harris	M7100	3	No	Yes
Evant VFD	Mobile	Harris	M7100	2	No	Yes
Oglesby VFD	Mobile	Kenwood	TK 760G	3	No	Yes
Turnersville VFD	Mobile	Harris	M7100	2	No	Yes
The Grove VFD	Mobile	Harris	M7100	2	No	Yes
Flat VFD	Mobile	Harris	M7100	2	No	Yes
Jonesboro VFD	Mobile	Harris	M7100	2	No	Yes
Coryell Cty Sheriff's Office	Portable	Kenwood		3	No	No
Coryell Cty Sheriff's Office	Portable	Kenwood	TK-272G	5	No	No
Coryell Cty Sheriff's Office	Portable	Kenwood	TK-2160	22	No	No
Coryell Cty Sheriff's Office	Portable	Kenwood	TK-2170	7	No	No
Coryell Cty Sheriff's Office	Portable	Kenwood	TK-230	1	No	No
Coryell Cty Sheriff's Office	Portable	Kenwood	TK-250G	1	No	No
Coryell City/Osage VFD	Portable	Icom		1	No	No
Coryell City/Osage VFD	Portable	Vertex	VX354ADOB5	7	No	No
Coryell City/Osage VFD	Portable	Maxon		1	No	No
Evant VFD	Portable	Motorola	HT600	1	No	No
Evant VFD	Portable	Icom	ICF11	4	No	No
Evant VFD	Portable	Kenwood	TK-270	2	No	No
Evant VFD	Portable	Kenwood	TK-270G 1	2	No	No
Evant VFD	Portable	Kenwood	TK-272G 1	1	No	No
Evant VFD	Portable	Kenwood	TI-2170 K	2	No	No
Oglesby VFD	Portable	Motorola	MT 2000	10	No	No
Oglesby VFD	Portable	Motorola	Astro HO4KDH9PW7AN	4	No	No
Turnersville VFD	Portable	Motorola	CT450	5	No	No

Owner Agency	Category	Manufacturer	Model	Qty	Narrowbanded?	P25 Compliant or Capable?
The Grove VFD	Portable	Icom	F11	4	No	No
Levita VFD	Portable	Motorola	PR400	6	No	No
Levita VFD	Portable	RELM	RTV516A	1	No	No
Levita VFD	Portable	Infinity	P 1000	1	No	No
Levita VFD	Portable	Motorola	P 1000	1	No	No
Levita VFD	Portable	Maxon	SF 2000	1	No	No
Levita VFD	Portable	Icom	IGF11	1	No	No
Flat VFD	Portable	Motorola	HT750	2	No	No
Flat VFD	Portable	Motorola		1	No	No
Flat VFD	Portable	Icom	ICF11	1	No	No
Jonesboro VFD	Portable	RELM	RPV599+	9	No	No
Coryell Cty Sheriff's Office	Portable	Harris	P5450	5	No	Yes
Coryell Cty Sheriff's Office	Portable	Motorola		6	No	Yes
Gatesville P.D.	Portable	Motorola	XTS1500	15	No	Yes
Gatesville VFD	Portable	Motorola	XTS2500	1	No	Yes
Gatesville VFD	Portable	Motorola	XTS1500	21	No	Yes
Mound VFD	Portable	RELM	RPV599A+	6	No	Yes

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	Harris
Model:	DWC Director IP
Number of simultaneous nets:	2
Number of active ports:	10
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Gatesville Police Department
Address where gateway is stored:	200 N. 8th St, Gatesville
Service Area where gateway is available to be deployed:	county-wide

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

4.4 Other Capabilities?

--

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	70
Portable Coverage: %	40
In-Building Coverage: %	20

5.2 How many more transmitter locations?	3
--	---

5.3 How many channels?	6
------------------------	---

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

- 1) There is inadequate mobile, portable, and in-building communication coverage across the county.
- 2) There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

- 1) Increased mobile, portable, and in-building communication coverage across the county.
- 2) Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.



**7.0 Budget and Funding Gap Information**

**7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?**

Yes or No?	
------------	--

**7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010**

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	
Amount	
Year	
Purpose	

**7.3 Expected funding by source through the end of 2015**

Funding Source	
Amount	
Year	
Planned Purpose	





<b>1.0 Points of Contact</b>	
1.1 Agency Name:	Central Texas Council of Governments
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, EMS, Fire
1.3 Area of Operation: (City, County #sq mi.)	All 6,605 Sq. Miles of the Central Texas Council of Governments are which include all of the counties - Bell, Coryell, Hamilton, Lampasas, Milam, Mills and San Saba Counties.
<b>1.4 Survey Respondant - Point of Contact</b>	
Name:	Michael Collins
Title:	Emergency Preparedness Planner
Agency/Organization:	Central Texas Council of Governments
Email Address:	michael.collins@ctcog.org
Physical Address, City, ZIP:	2180 North Main St., Belton, Texas 76513
Mailing Address, City, ZIP:	P. O. Box 729, Belton, Texas 76513
County:	Bell
Office Phone:	254-770-2367
Cell Phone:	254-493-1884
24/7 Phone:	254-493-1884
Fax Number:	254-770-2360
<b>1.5 Agency Head - Point of Contact</b>	
Name:	Michael Collins
Title:	Emergency Preparedness Planner
Agency/Organization:	Central Texas Council of Governments
Email Address:	michael.collins@ctcog.org
Physical Address, City, ZIP:	2180 North Main St., Belton, Texas 76513
Mailing Address, City, ZIP:	P. O. Box 729, Belton, Texas 76513
County:	Bell
Office Phone:	254-770-2367
Cell Phone:	254-493-1884
24/7 Phone:	254-493-1884
Fax Number:	254-770-2360

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	Yes
System Name:	Central Texas Council of Governments - MACC
System Users (Agencies) Type / Name:	Bell County, Coryell County, Hamilton County, and Lampasas County

### 2.2 System Owner - Point of Contact

Name:	Michael Collins
Title:	Emergency Preparedness Planner
Agency Name/Organization:	Central Texas Council of Governments
Email:	michael.collins@ctcog.org
Physical Address, City, ZIP:	2180 North Main St., Belton, Texas 76513

Mailing Address, City, ZIP:	P. O. Box 729, Belton, Texas 76513
Office Phone:	254-770-2367
Cell Phone:	254-493-1884
24/7 Phone:	254-493-1884
Fax:	254-770-2360

### 2.3 System Manager - Point of Contact

Name:	Michael Collins
Title:	Emergency Preparedness Planner
Agency Name/Organization:	Central Texas Council of Governments
Email:	michael.collins@ctcog.org
Physical Address, City, ZIP:	2180 North Main St., Belton, Texas 76513
Mailing Address, City, ZIP:	P. O. Box 729, Belton, Texas 76513
Office Phone:	254-770-2367
Cell Phone:	254-493-1884
24/7 Phone:	254-493-1884
Fax:	254-770-2360

### 2.4 System Maintenance Provider - Point of Contact

Name:	Dailey Wells Communications Inc.
Title:	
Agency Name/Organization:	Dailey Wells Communications Inc.
Email:	
Physical Address, City, ZIP:	3440 E. Houston Street, San Antonio, Texas 78219
Mailing Address, City, ZIP:	3440 E. Houston Street, San Antonio, Texas 78219
Office Phone:	210-893-6546
Cell Phone:	
24/7 Phone:	
Fax:	210-893-6702

### 2.5 Fixed Site Radio Equipment Information

Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...

2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.

Entered into CASM: (Yes or No)	No
Is the data current and up to date?	No
Name in CASM:	

### 2.6 Fixed Site Radio Equipment

Site Name	CTCOG - part of the Bell County Communications Center
Equipment Type	M7100 Control Base station
Manufacturer	Harris/Macom
Model	M7100 Base Control station
Frequency	
Modulation (analog, P25, proprietary digital, mixed)	all of the above
Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)	MW

### 2.7 Site Location Information

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio equipment, such as repeaters and base stations. Radio sites can be towers, water tanks, building tops, etc.

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.

Entered into CASM: (Yes or No)	No
Is the data current and up to date?	
Name in CASM:	

2.8 Site Information	
Site Name	
Antenna Site Reg. (ASR#)	
Tower Height	
Address	
Tower Owner	
County	
Tower Age	
Available for Expanded Use?	
Owned or Leased?	
2.9 System Managers	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in question 2.10. If no, proceed to 2.11 System Connectivity	
Regional System: (Yes or No)	No
Date system was installed:	
Has your system been converted to narrowband operation: (Yes or No)	
Has your FCC license been modified for narrowband emissions: (Yes or No)	
2.10 User Agency Information	
Agency Name	Bell County Communications Ctr
Agency Category	Other
Point of Contact	Kenneth Brogdon
POC: 24/7 Phone	
POC: Email	
2.11 System Connectivity	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes



2.12 Dispatch Console Radio Equipment

This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.

Manufacturer:	Harris-Macom
Model:	Fixed M7100 Console
Number of positions:	

2.13 What dispatch console radio equipment do you need?

--

3.0 Subscriber Units	
3.1 Subscriber Inventory	
Owner Agency	Central Texas Council of Governments
Category	Portable
Manufacturer	Harris
Model	P5450
Quantity	2
Narrowbanded	No
P25 compliant or capable	Yes
Owner Agency	Central Texas Council of Governments
Category	Portable
Manufacturer	Harris
Model	P7150
Quantity	2
Narrowbanded	No
P25 compliant or capable	Yes
3.2 What are your Subscriber Unit needs?	
Mobiles:	
Portables:	
Other:	
3.3 How many are Not Narrowband capable?	
3.4 How many require re-tune for narrowband?	
4 - Portables	
3.5 Channels programmed into radios	
Is your data entered in CASM?	No
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.6 Interoperability channels in radios	
Is your data entered in CASM?	No
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	

Agency operated Base Station	
3.7 Channel/talk group information	
Is your data entered in CASM?	No
Is the data current and up to date?	
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

## 4.0 Additional Agency Capabilities

### 4.1 Gateway Equipment Information

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Mobile
Location of gateway:	Mobile Command Vehicle
Address where gateway is stored:	401 Indian Trail, Harker Heights, Texas 76548
Service Area where gateway is available to be deployed:	Entire CTCOG Area - outside CTCOG by request.

4.2 Mobile Communications Platform (Yes or No) Yes

### 4.3 Mobile Communications Platform Point of Contact

Name:	Glen Gallenstein
Title:	Assistant Fire Chief
POC Type:	Operational
Agency/Organization:	Harker Heights Fire Department
Email Address:	<b>jcollier@ci.harker-heights.tx.us</b> or <b>ggallenstein@ci.harker-heights.tx.us</b>
Physical Address, City, ZIP:	401 Indian Trail, Harker Heights, Texas 76541
Mailing Address, City, ZIP:	401 Indian Trail, Harker Heights, Texas 76541
County:	Bell
Office Phone:	254-699-2688
Cell Phone:	254-449-1560
24/7 Phone:	254-699-2688
Fax Number:	254-699-7693

### 4.4 Other Capabilities?

Mobile command vehicle also has a pull behind Radio system on wheels with the dispatch and mobile radio equipment - equipped with stand alone system or able to work with system as a portable repeater for use in the hill terrain in the various counties. The System on Wheel (SOW) can be deployed as a separate unit or in conjunction with the mobile command center van.

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	90
Portable Coverage: %	80
In-Building Coverage: %	25

5.2 How many more transmitter locations?	2
--	---

5.3 How many channels?	2
------------------------	---

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The M7100 control station is a backup part of the Bell County system in which we have the MACC if needed - we currently have two M7100 control base station units - (1) VHF system and (1) 800 Mhz System - these radios are tied to Bell County as a backup for them as well.

### 6.2 List and describe the three most critical shortcomings of your present radio system

Could utilize taller antenna if we were going to be a true stand alone radio system.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

More Coverage; more radios for the radio cache for anyone needing for events.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 if Homeland Security Grant is still funded

**7.0 Budget and Funding Gap Information**

**7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?**

Yes or No?	Yes
------------	-----

**7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010**

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	
Amount	
Year	
Purpose	

**7.3 Expected funding by source through the end of 2015**

Funding Source	
Amount	
Year	
Planned Purpose	





## Survey – Hamilton County

1.0 Points of Contact	
1.1 Agency Name:	Hamilton County
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, Fire, EMS
1.3 Area of Operation: (City, County #sq Miles)	836 Sq. Miles of Hamilton County
1.4 Survey Respondant - Point of Contact	
Name:	James Thompson
Title:	Emergency Management Coordinator
Agency/Organization:	Hamilton County
Email Address:	ottie333@gmail.com
Physical Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Mailing Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
County:	Hamilton
Office Phone:	254-386-5442
Cell Phone:	254-784-3222
24/7 Phone:	254--784-3222
Fax Number:	
1.5 Agency Head - Point of Contact	
Name:	James Thompson
Title:	Emergency Management Coordinator
Agency/Organization:	Hamilton County
Email Address:	ottie333@gmail.com
Physical Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Mailing Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
County:	Hamilton
Office Phone:	254-386-5442
Cell Phone:	254-784-3222
24/7 Phone:	254--784-3222
Fax Number:	

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	Yes
System Name:	Hamilton County
System Users (Agencies) Type / Name:	

### 2.2 System Owner - Point of Contact

Name:	James Thompson
Title:	Emergency Management Coordinator
Agency Name/Organization:	Hamilton County
Email:	ottie333@gmail.com
Physical Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Mailing Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Office Phone:	254-386-5442
Cell Phone:	254-784-3222
24/7 Phone:	254--784-3222
Fax:	

2.3 System Manager - Point of Contact	
Name:	James Thompson
Title:	Emergency Management Coordinator
Agency Name/Organization:	Hamilton County
Email:	ottie333@gmail.com
Physical Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Mailing Address, City, ZIP:	400 North Brown, Hamilton, Texas 76531
Office Phone:	254-386-5442
Cell Phone:	254-784-3222
24/7 Phone:	254--784-3222
Fax:	
2.4 System Maintenance Provider - Point of Contact	
Name:	
Title:	N/A
Agency Name/Organization:	Dailey Wells Communications
Email:	
Physical Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Mailing Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702
2.5 Fixed Site Radio Equipment Information	
Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...	
2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Hamilton County Sheriff's Office

## 2.6 Fixed Site Radio Equipment

See table following Section 2... 9 entries.

## 2.7 Site Location Information

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio equipment, such

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Hamilton County Sheriff's Office

## 2.8 Site Information

Site Name	Hamilton County
Antenna Site Reg. (ASR#)	1050999
Tower Height	79
Address	.72 km E of State Hwy 36; 1.6 km NE of Courthouse
Tower Owner	Hamilton County
County	Hamilton
Tower Age	1993?
Available for Expanded Use?	No
Owned or Leased?	Owned

Site Name	Hico, City of
Antenna Site Reg. (ASR#)	N/A
Tower Height	16
Address	1110 N. Magnolia, Hamilton County Rd., #42
Tower Owner	Hico, City of
County	Hamilton
Tower Age	
Available for Expanded Use?	No
Owned or Leased?	Owned

Site Name	Hico, City of
Antenna Site Reg. (ASR#)	N/A
Tower Height	3
Address	400 Blk Chestnut St
Tower Owner	Hico, City of
County	Hamilton
Tower Age	
Available for Expanded Use?	No
Owned or Leased?	Owned

### 2.9 System Managers

Note: Only System Managers should complete the following section

2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in question 2.10. If no, proceed to 2.11 System Connectivity

Regional System: (Yes or No)	No
Date system was installed:	2005
Has your system been converted to narrowband operation: (Yes or No)	Yes
Has your FCC license been modified for narrowband emissions: (Yes or No)	No

### 2.10 User Agency Information

Agency Name	Hamilton Sheriff Office
Agency Category	Other
Point of Contact	
POC: 24/7 Phone	
POC: Email	

### 2.11 System Connectivity

System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.

Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
--	-----

2.12 Dispatch Console Radio Equipment

This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.

Manufacturer:	Harris
Model:	Director IP
Number of positions:	2

2.13 What dispatch console radio equipment do you need?

Dispatch console at a redundant location.

2.6 Fixed Site Radio Equipment

Site Name	Equipment Type	Manufacturer	Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
Hamilton Sheriff's Office	Director IP	Harris/Macom				
Hamilton County				158.8200		
Hamilton County				155.5950		
Hamilton County				851.0125		
Hamilton County				851.5125		
Hamilton County				154.9500		
Hamilton County				155.3700		
Hico, City of				158.9250		
Hico, City of				158.8500		



3.0 Subscriber Units	
3.1 Subscriber Inventory	
See table following Section 3... 8 entries.	
3.2 What are your Subscriber Unit needs?	
Mobiles:	
Portables:	
Other:	
3.3 How many are Not Narrowband capable?	
3.4 How many require re-tune for narrowband?	
3.5 Channels programmed into radios	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.6 Interoperability channels in radios	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.7 Channel/talk group information	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

3.1 Subscriber Inventory

<b>Owner Agency</b>	<b>Category</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Qty</b>	<b>Narrow-banded?</b>	<b>P25 Compliant or Capable?</b>
Hamilton County Sheriff Office	Mobile	Harris/Macom	M7100	15		Yes
Hamilton County Sheriff Office	Portable	Harris/Macom	P7150	15		Yes
Hamilton VFD	Mobile	Harris/Macom	M7100	4		Yes
Hamilton VFD	Portable	Harris/Macom	P7150	1		Yes
Carlton VFD	Mobile	Harris/Macom	M7100	2		Yes
Carlton VFD	Portable		P7150			Yes
Hico City VFD	Mobile		M7100			Yes
Hico City VFD	Portable		P7150			Yes

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	
Model:	
Number of simultaneous nets:	
Number of active ports:	
Gateway Type: (Mobile or Fixed)	
Location of gateway:	
Address where gateway is stored:	
Service Area where gateway is available to be deployed:	

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

##### 4.4 Other Capabilities?

--

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	90
Portable Coverage: %	80
In-Building Coverage: %	50

5.2 How many more transmitter locations?	0
--	---

5.3 How many channels?	2
------------------------	---

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

- 1) There is inadequate mobile, portable, and in-building communication coverage across the county.
- 2) There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.
- 3) There are no redundant/backup facilities for radio and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

1. Increased mobile, portable, and in-building communication coverage across the county.
2. Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.
3. Design redundant/backup facilities for radio and dispatch operations to insure public safety communications will not be affected in the case of main site failure.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.

## 7.0 Budget and Funding Gap Information

### 7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?

Yes or No? Yes

### 7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	None
Amount	
Year	
Purpose	

### 7.3 Expected funding by source through the end of 2015

Funding Source	Homeland Security - SHSP
Amount	
Year	
Planned Purpose	

## Survey – Lampasas County

<b>1.0 Points of Contact</b>	
1.1 Agency Name:	Lampasas County
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, Fire, EMS
1.3 Area of Operation: (City, County #sq Miles)	714 Sq. Miles of Lampasas County
1.4 Survey Respondant - Point of Contact	
Name:	Angela Rainwater
Title:	Emergency Management Coordinator
Agency/Organization:	Lampasas County
Email Address:	munangela@hotmail.com
Physical Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
Mailing Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
County:	Lampasas
Office Phone:	512-556-4177
Cell Phone:	512-734-1824
24/7 Phone:	512-734-1824
Fax Number:	512-556-4637
1.5 Agency Head - Point of Contact	
Name:	Angela Rainwater
Title:	Emergency Management Coordinator
Agency/Organization:	Lampasas County
Email Address:	munangela@hotmail.com
Physical Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
Mailing Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
County:	Lampasas
Office Phone:	512-556-4177
Cell Phone:	512-734-1824
24/7 Phone:	512-734-1824
Fax Number:	512-556-4637



## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	
System Name:	
System Users (Agencies) Type / Name:	

### 2.2 System Owner - Point of Contact

Name:	Angela Rainwater
Title:	Emergency Management Coordinator
Agency Name/Organization:	Lampasas County
Email:	munangela@hotmail.com
Physical Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
Mailing Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550

Office Phone:	512-556-4177
Cell Phone:	512-734-1824
24/7 Phone:	512-734-1824
Fax:	512-556-4637
<b>2.3 System Manager - Point of Contact</b>	
Name:	Angela Rainwater
Title:	Emergency Management Coordinator
Agency Name/Organization:	Lampasas County
Email:	munangela@hotmail.com
Physical Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
Mailing Address, City, ZIP:	407 South Pecan St., Lampasas, Texas 76550
Office Phone:	512-556-4177
Cell Phone:	512-734-1824
24/7 Phone:	512-734-1824
Fax:	512-556-4637
<b>2.4 System Maintenance Provider - Point of Contact</b>	
Name:	Dailey-Wells Communications, Inc.
Title:	
Agency Name/Organization:	Dailey-Wells Communications, Inc.
Email:	
Physical Address, City, ZIP:	3440 E. Houston St. San Antonio, Texas 78219-3814
Mailing Address, City, ZIP:	3440 E. Houston St. San Antonio, Texas 78219-3814
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702

### 2.5 Fixed Site Radio Equipment Information

Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...

2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

### 2.6 Fixed Site Radio Equipment

See table following Section 2... 7 entries.

### 2.7 Site Location Information

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

### 2.8 Site Information

Site Name	Lampasas County
Antenna Site Reg. (ASR#)	N/A
Tower Height	<200 ft
Address	9 mi. NW of town on US 183 at CR 51
Tower Owner	
County	Lampasas
Tower Age	No
Available for Expanded Use?	No
Owned or Leased?	

Site Name	Lampasas Police Department
Antenna Site Reg. (ASR#)	N/A
Tower Height	<200 ft
Address	301 E. 4th Street
Tower Owner	Lampasas, City of
County	Lampasas
Tower Age	No
Available for Expanded Use?	No
Owned or Leased?	Owned

**2.9 System Managers**

Note: Only System Managers should complete the following section

2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in question 2.10. If no, proceed to 2.11 System Connectivity

Regional System: (Yes or No)	No
Date system was installed:	2005
Has your system been converted to narrowband operation: (Yes or No)	No
Has your FCC license been modified for narrowband emissions: (Yes or No)	

**2.10 User Agency Information**

Agency Name	Lampasas County SO
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	

Agency Name	Lampasas PD
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	

Agency Name	Lampasas County EMS
Agency Category	EMS
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.11 System Connectivity</b>	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
<b>2.12 Dispatch Console Radio Equipment</b>	
This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.	
Manufacturer:	DWC/Harris
Model:	Director IP
Number of positions:	2
<b>2.13 What dispatch console radio equipment do you need?</b>	
Additional console at redundant location.	

2.6 Fixed Site Radio Equipment

Site Name	Equipment		Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
	Type	Manufacturer				
Lampasas County	Repeater	Harris	Jaguar	851.0125		MW
Lampasas County	Repeater	Harris	Jaguar	852.5125		MW
Lampasas County	Repeater	Harris	Jaguar	155.3700		MW
Lampasas County	Repeater	Harris	Jaguar	154.2800		MW
Lampasas County	Repeater	Harris	Jaguar	155.5650		MW
Lampasas P.D.	Repeater	Harris	Jaguar	155.6700		MW
Lampasas F.D.	Repeater	Harris	Jaguar	154.3250		MW

### 3.0 Subscriber Units

#### 3.1 Subscriber Inventory

See table on following page... 24 entries.

#### 3.2 What are your Subscriber Unit needs?

Mobiles:	20 - P25 Compliant units with narrowbanding
Portables:	2 - P25 Compliant units with narrowbanding
Other:	

#### 3.3 How many are Not Narrowband capable?

#### 3.4 How many require re-tune for narrowband?

#### 3.5 Channels programmed into radios

Is your data entered in CASM?

Is the data current and up to date?

Channel Name

TX Frequency

RX Frequency

CTCSS/NAC

Location on Radio

Agency operated Base Station

#### 3.6 Interoperability channels in radios

Is your data entered in CASM?

Is the data current and up to date?

Channel Name

TX Frequency

RX Frequency

CTCSS/NAC

Location on Radio

Agency operated Base Station

#### 3.7 Channel/talk group information

Is your data entered in CASM?

Is the data current and up to date?

Channel Name/Talk Group Name

Talk Group ID

TX Frequency

RX Frequency

Site Name/ \*System Name

CTCSS/NAC

Description

3.1 Subscriber Inventory						
Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
Lampasas County EMC	Portable	Harris	P5450	1	No	Yes
Lampasas County EMC	Portable	Harris	P7150	6	No	Yes
Lampasas County Sheriff	Mobile	Harris	M7100	27	No	Yes
Lampasas County Sheriff	Portable	Harris	P5450	20	No	Yes
Lampasas P.D.	Mobile	Harris	M7100	22	No	Yes
Lampasas P.D.	Portable	Harris	P5450	19	No	Yes
Lampasas F.D.	Mobile	Harris	M7100	12	No	Yes
Lampasas F.D.	Portable	Harris	P7150	9	No	Yes
Kempner P.D.	Mobile	Harris	M7100	1	No	Yes
Kempner P.D.	Mobile	Motorola		2	No	No
Kempner P.D.	Portable	Motorola	PR400	2	No	No
Kempner VFD	Mobile	Kenwood	TK705D	7	No	No
Kempner VFD	Mobile	Harris	M7100	1	No	Yes
Kempner VFD	Portable	Harris	P5450	1	No	Yes
Lometa P.D.	Mobile	Harris	M7100	2	No	Yes
Lometa P.D.	Mobile	Maxon	SM4150M	2	No	No
Lometa P.D.	Portable	Harris	P5450	1	No	Yes
Lometa VFD	Mobile	Harris	M7100	1	No	Yes
Lometa VFD	Mobile	Maxon	SM4140M	4	No	No
Lometa VFD	Mobile	Maxon	SM4150M	1	No	No
Lometa VFD	Mobile	Motorola	Maxtrac	1	No	No
Adamsville VFD	Mobile	Harris	M7100	1	No	Yes
Adamsville VFD	Mobile	Maxon	SM4150M	4	No	No
Adamsville VFD	Portable	Harris	P5450	1	No	Yes



**4.0 Additional Agency Capabilities**

**4.1 Gateway Equipment Information**

Manufacturer:	Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Lampasas County SO
Address where gateway is stored:	410 East 4th Street, Lampasas
Service Area where gateway is available to be deployed:	County-wide

4.2 Mobile Communications Platform (Yes or No)	No
--	----

**4.3 Mobile Communications Platform Point of Contact**

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

**4.4 Other Capabilities?**

--

5.0 System Coverage and Capacity	
5.1 Approximate Coverage	
Mobile Coverage: %	80
Portable Coverage: %	60
In-Building Coverage: %	40
5.2 How many more transmitter locations?	
	3
5.3 How many channels?	
	6

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

- 1) There is inadequate mobile, portable, and in-building communication coverage across the county.
- 2) There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.
- 3) There are no redundant/backup facilities for radio and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

1. Increased mobile, portable, and in-building communication coverage across the county.
2. Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.
3. Design redundant/backup facilities for radio and dispatch operations to insure public safety communications will not be affected in the case of main site failure.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.

**7.0 Budget and Funding Gap Information**

**7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?**

Yes or No?	Yes
------------	-----

**7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010**

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	None
Amount	
Year	
Purpose	

**7.3 Expected funding by source through the end of 2015**

Funding Source	Homeland Security - SHSP
Amount	
Year	
Planned Purpose	

## Survey – Milam County

1.0 Points of Contact	
1.1 Agency Name:	Milam County
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, Fire, EMS
1.3 Area of Operation: (City, County #sq Miles)	1,022 Sq. Miles of Milam County
1.4 Survey Respondant - Point of Contact	
Name:	Susan Reinders
Title:	Homeland Security/Emergency Management Coordinator
Agency/Organization:	Milam County
Email Address:	sreinders@milamcounty.net
Physical Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Mailing Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
County:	
Office Phone:	254-697-7060
Cell Phone:	254-258-8975
24/7 Phone:	254-258-8975
Fax Number:	
1.5 Agency Head - Point of Contact	
Name:	Susan Reinders
Title:	Homeland Security/Emergency Management Coordinator
Agency/Organization:	Milam County
Email Address:	sreinders@milamcounty.net
Physical Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Mailing Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
County:	
Office Phone:	254-697-7060
Cell Phone:	254-258-8975
24/7 Phone:	254-258-8975
Fax Number:	

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	Yes
System Name:	
System Users (Agencies) Type / Name:	<b>See below.</b>

### 2.2 System Owner - Point of Contact

Name:	Susan Reinders
Title:	Homeland Security/Emergency Management Coordinator
Agency Name/Organization:	Milam County
Email:	sreinders@milamcounty.net
Physical Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Mailing Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Office Phone:	254-697-7060

Cell Phone:	254-258-8975
24/7 Phone:	254-258-8975
Fax:	

**2.3 System Manager - Point of Contact**

Name:	Susan Reinders
Title:	Homeland Security/Emergency Management Coordinator
Agency Name/Organization:	Milam County
Email:	sreinders@milamcounty.net
Physical Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Mailing Address, City, ZIP:	102 South Fannin Ave, Suite 2, Cameron, TX 76520-4216
Office Phone:	254-697-7060
Cell Phone:	254-258-8975
24/7 Phone:	254-258-8975
Fax:	

**2.4 System Maintenance Provider - Point of Contact**

Name:	Dailey-Wells Communications, Inc (DWC)
Title:	
Agency Name/Organization:	Dailey-Wells Communications, Inc (DWC)
Email:	
Physical Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Mailing Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702

**2.5 Fixed Site Radio Equipment Information**

Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...



2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

#### 2.6 Fixed Site Radio Equipment

See table following Section 2... 14 entries.

#### 2.7 Site Location Information

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio equipment, such

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

#### 2.8 Site Information

See table following Section 2... 6 entries.

### 2.9 System Managers

Note: Only System Managers should complete the following section

2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in question 2.10. If no, proceed to 2.11 System Connectivity

Regional System: (Yes or No)	No
Date system was installed:	2005
Has your system been converted to narrowband operation: (Yes or No)	No
Has your FCC license been modified for narrowband emissions: (Yes or No)	No

### 2.10 User Agency Information

Agency Name	
Agency Category	
Point of Contact	
POC: 24/7 Phone	
POC: Email	

### 2.11 System Connectivity

System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.

Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
--	-----

### 2.12 Dispatch Console Radio Equipment

This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.

Manufacturer:	DWC/Harris
Model:	Director IP
Number of positions:	6

### 2.13 What dispatch console radio equipment do you need?

Need duplicate equipment at the dispatch centers for dispatch back up.

System Users (Agencies) Type / Name:
Fire - Buckholts VFD
Fire - Burlington VFD
Fire - Cameron Fire Department
LE - Cameron PD
Fire - Gause VFD
LE - Milam County Constable's Office - Precinct 1
LE - Milam County Constable's Office - Precinct 2
LE - Milam County Constable's Office - Precinct 3
LE - Milam County Constable's Office - Precinct 4
LE - Milam County Sheriff's Department
Fire - Milam County VFD
Fire - Milano VFD
Fire - Minerva VFD
LE - Rockdale PD
Fire - Rockdale VFD
LE - Thorndale PD
Fire - Thorndale VFD

2.6 Fixed Site Radio Equipment

Site Name	Equipment Type	Manufacturer	Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
140 W. Cameron St, Rockdale PD	Base Station(6)	Harris	M7100	VHF	Mixed	
140 W. Cameron St, Rockdale PD	Repeater	Motorola	XPR8300	VHF	TDMA	
140 W. Cameron St, Rockdale PD	Base station	ICOM		VHF		
Cameron (McLarren Hill)	Repeater	Motorola	Quantar	VHF	Mixed	
Cameron (McLarren Hill)	Repeater	Harris	Mastr III	VHF	Analog	MW
Cameron (McLarren Hill)	Repeater	Kenwood	TKR-750	VHF		
Cameron (McLarren Hill)	Base Station(2)	Harris	M7100	800	Mixed	MW
Cameron (McLarren Hill)	Base Station(4)	Harris	M7100	VHF	Mixed	MW
Cameron (McLarren Hill)	Microwave	MDS	LEDR900	900 MHz		MW
Ledbetter Park	Repeater	Motorola	Quantar	VHF	Mixed	
KRXT	Repeater	Harris	Mastr III	VHF	Analog	
140 W. Cameron St, Rockdale PD	Dispatch Console/Gateway (2)	DWC/Harris	Director IP			
Cameron PD	Dispatch Console/Gateway (2)	DWC/Harris	Director IP			
Milam Co LEC	Dispatch Console/Gateway (2)	DWC/Harris	Director IP			MW

2.8 Site Information

Site Name	Antenna Site Reg. (ASR#)	Tower Height	Address	Tower Owner	County	Tower Age	Available for Expanded Use?	Owned or Leased?
Ledbetter Park	1055171	81	College Ave. between Henderson & Park Rd. in Ledbetter Park, Cameron, TX	City of Cameron	Milam	1972	Yes	Owned
Rockdale PD		11	140 W. Cameron St., Rockdale, TX	City of Rockdale	Milam		No	Owned
Cameron (McLarren Hill)	1223611	60.6	3111 S. FM 381, 4.8 km S., Cameron, TX	Milam Co Sheriff's Dept	Milam	2006		Owned
KRXT	1055171	81	5 mi. W. 200 mi. S. of 179, Rockdale, TX	Centex Broadcasting	Milam	1988		Leased
Milam Co LEC		18	Jefferson Ave, Cameron, TX	Milam Co	Milam		Yes	Owned
Cameron PD		9	308 S Houston, Cameron, TX	City of Cameron	Milam			
Rockdale PD		18	140 West Cameron Ave, Rockdale, TX	City of Rockdale	Milam		No	Owned

### 3.0 Subscriber Units

#### 3.1 Subscriber Inventory

See table following Section 3... 76 entries.

#### 3.2 What are your Subscriber Unit needs?

Mobiles:	72
Portables:	145
Other:	

3.3 How many are Not Narrowband capable? 84

3.4 How many require re-tune for narrowband? 244

#### 3.5 Channels programmed into radios

Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes

Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	Zone
Agency operated Base Station	

#### 3.6 Interoperability channels in radios

Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes

Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	

#### 3.7 Channel/talk group information

Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes

Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

### 3.1 Subscriber Inventory

Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
Buckholts P.D.	Portable	Radius		1	No	No
Buckholts P.D.	Mobile	Midland		1	No	No
Buckholts VFD	Mobile	Harris	M7100	1	Yes	Yes
Buckholts VFD	Mobile	Kenwood		4	No	No
Buckholts VFD	Portable	Harris	P5450	3	Yes	Yes
Buckholts VFD	Portable	ICOM	IC-F11	7	Yes	No
Buckholts VFD	Portable	Kenwood	TK-2160	2	Yes	No
Buckholts VFD	Mobile	Harris	M7100	1	Yes	Yes
Buckholts VFD	Mobile	ICOM	IC-F121	1	Yes	No
Buckholts VFD	Mobile	Motorola	Maratrac	1	No	No
Buckholts VFD	Portable	Harris	P5450	3	Yes	Yes
Buckholts VFD	Portable	ICOM	IC-F11	1	Yes	No
Cameron F.D.	Mobile	Harris	M7100	3	Yes	Yes
Cameron F.D.	Mobile	Kenwood		8	No	No
Cameron F.D.	Mobile	Radius	SM120	8	Yes	No
Cameron F.D.	Mobile	Radius	CM300	1	Yes	No
Cameron F.D.	Portable	Harris	P5450	6	Yes	Yes
Cameron F.D.	Portable	ICOM	IC-F11	12	Yes	No
Cameron F.D.	Portable	ICOM	IC-F14	15	Yes	No
Cameron F.D.	Portable	ICOM		15	No	No
Cameron P.D.	Mobile	Kenwood	TK-790	6	No	No
Cameron P.D.	Mobile	Motorola	CM300	2	Yes	No
Cameron P.D.	Portable	Kenwood	TK-290	6	Yes	No
Cameron P.D.	Portable	Motorola	HT 1250	1	Yes	No
Cameron P.D.	Portable	Motorola	PR400	2	Yes	No
Gause VFD	Mobile	Harris	M7100	1	Yes	Yes
Gause VFD	Mobile	ICOM		1	No	No
Gause VFD	Mobile	Motorola		1	No	No
Gause VFD	Portable	Harris	P5450	4	Yes	Yes
Gause VFD	Portable	ICOM		4	No	No
Gause VFD	Portable	Motorola	HT750	12	Yes	No
Milam Cty Constable's Office - Precinct 1	Mobile	Harris	M7100	1	Yes	Yes
Milam Cty Constable's Office - Precinct 2	Mobile	Harris	M7100	1	Yes	Yes
Milam Cty Constable's Office - Precinct 3	Mobile	Harris	M7100	1	Yes	Yes
Milam Cty Constable's Office - Precinct 4	Mobile	Harris	M7100	1	Yes	Yes
Milam County Sheriff's Department	Mobile	Harris	M7100	21	Yes	Yes
Milam County Sheriff's Department	Portable	Harris	P7150	23	Yes	Yes
Milano VFD	Mobile	Harris	M7100	5	Yes	Yes

### 3.1 Subscriber Inventory

Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
Milano VFD	Mobile	ICOM		2	No	No
Milano VFD	Mobile	Kenwood		2	No	No
Milano VFD	Mobile	Maxon		1	No	No
Milano VFD	Mobile	Motorola	GM300	2	Yes	No
Milano VFD	Portable	Harris	P5450	7	Yes	Yes
Milano VFD	Portable	ICOM	F3021S	4	Yes	No
Milano VFD	Portable	ICOM	IC-F33GP	9	Yes	No
Milano VFD	Portable	ICOM	IC-F50	5	Yes	No
Milano VFD	Portable	ICOM		1	No	No
Minerva VFD	Mobile	Harris	M7100	1	Yes	Yes
Minerva VFD	Mobile	Kenwood		2	No	No
Minerva VFD	Mobile	Maxon		5	No	No
Minerva VFD	Mobile	Motorola		1	No	No
Minerva VFD	Portable	Harris	P5450	2	Yes	Yes
Minerva VFD	Portable	Maxon		3	No	No
Minerva VFD	Portable	Motorola		2	No	No
Minerva VFD	Portable	RELM		7	No	No
Rockdale P.D.	Mobile	Kenwood	TK-790	2	No	No
Rockdale P.D.	Mobile	Kenwood	CDM-1250	5	Yes	No
Rockdale P.D.	Portable	Maxon	SP-140V2	3	Yes	No
Rockdale P.D.	Portable	Motorola	CP-200	8	Yes	No
Rockdale VFD	Mobile	Harris	M7100	6	Yes	Yes
Rockdale VFD	Mobile	Kenwood		7	No	No
Rockdale VFD	Mobile	Kenwood		1	No	No
Rockdale VFD	Portable	Harris	P5450	5	Yes	Yes
Rockdale VFD	Portable	Harris	P7150	2	Yes	Yes
Thorndale P.D.	Mobile	Harris	M7100	1	Yes	Yes
Thorndale P.D.	Mobile	Kenwood		2	No	No
Thorndale P.D.	Portable	Harris	P7150	4	Yes	Yes
Thorndale VFD	Mobile	Harris	M7100	3	Yes	Yes
Thorndale VFD	Mobile	Kenwood	TK-730	1	No	No
Thorndale VFD	Mobile	Motorola	CM300	2	Yes	No
Thorndale VFD	Mobile	Motorola	M1225	2	Yes	No
Thorndale VFD	Portable	Harris	P5450	5	Yes	Yes
Thorndale VFD	Portable	ICOM	IC-F14	2	Yes	No
Thorndale VFD	Portable	Kenwood	TK-2170	6	Yes	No
Thorndale VFD	Portable	Motorola	ST20	15	Yes	No
Thorndale VFD	Portable	Vertex	VX180	2	No	No



#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Milam Co SO
Address where gateway is stored:	Cameron
Service Area where gateway is available to be deployed:	Milam County

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Rockdale P.D.
Address where gateway is stored:	Rockdale
Service Area where gateway is available to be deployed:	Milam County

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Cameron P.D.
Address where gateway is stored:	Cameron
Service Area where gateway is available to be deployed:	Milam County

4.2 Mobile Communications Platform (Yes or No)	No
--	----

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	85
Portable Coverage: %	50
In-Building Coverage: %	10

5.2 How many more transmitter locations?	1
--	---

5.3 How many channels?	2
------------------------	---

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

1. There is inadequate mobile, portable, and in-building communication coverage across the county.
2. There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.
3. There are no redundant/backup facilities for radio and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

1. Increased mobile, portable, and in-building communication coverage across the county.
2. Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.
3. Design redundant/backup facilities for radio and dispatch operations to insure public safety communications will not be affected in the case of main site failure.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.

## 7.0 Budget and Funding Gap Information

### 7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?

Yes or No? Yes

### 7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	None
Amount	
Year	
Purpose	

### 7.3 Expected funding by source through the end of 2015

Funding Source	Homeland Security - SHSP
Amount	
Year	
Planned Purpose	

## Survey – Mills County

**1.0 Points of Contact**

1.1 Agency Name:	Mills County
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1.2 Discipline: (Law Enforcement, Fire, EMS)	government, emergency medical services, law enforcement, fire,
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1.3 Area of Operation: (City, County #sq Miles)	750 Sq. Miles of Mills County
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**1.4 Survey Respondant - Point of Contact**

Name:	Dori Blesh
Title:	Emergency Management Coordinator
Agency/Organization:	Mills County
Email Address:	dori.blesh@co.mills.tx.us
Physical Address, City, ZIP:	1011 4th Street, Goldthwaite, TX 76844
Mailing Address, City, ZIP:	P.O. Box 483, Goldthwaite, TX 76844
County:	Mills
Office Phone:	325-648-2748
Cell Phone:	325-451-0061
24/7 Phone:	325-451-0061
Fax Number:	325-648-2806

**1.5 Agency Head - Point of Contact**

Name:	Dori Blesh
Title:	Emergency Management Coordinator
Agency/Organization:	Mills County
Email Address:	dori.blesh@co.mills.tx.us
Physical Address, City, ZIP:	1011 4th Street, Goldthwaite, TX 76844
Mailing Address, City, ZIP:	P.O. Box 483, Goldthwaite, TX 76844
County:	Mills
Office Phone:	325-648-2748
Cell Phone:	325-451-0061
24/7 Phone:	325-451-0061
Fax Number:	325-648-2806

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed

System Owned: (Yes or No)	
System Name:	
System Users (Agencies) Type / Name:	

### 2.2 System Owner - Point of Contact

Name:	Dori Blesh
Title:	Emergency Management Coordinator
Agency Name/Organization:	Mills County
Email:	dori.blesh@co.mills.tx.us
Physical Address, City, ZIP:	1011 4th Street, Goldthwaite, TX 76844
Mailing Address, City, ZIP:	P.O. Box 483, Goldthwaite, TX 76844
Office Phone:	325-648-2748
Cell Phone:	325-451-0061
24/7 Phone:	325-451-0061
Fax:	325-648-2806

### 2.3 System Manager - Point of Contact

Name:	Dori Blesh
Title:	Emergency Management Coordinator
Agency Name/Organization:	Mills County
Email:	dori.blesh@co.mills.tx.us
Physical Address, City, ZIP:	1011 4th Street, Goldthwaite, TX 76844
Mailing Address, City, ZIP:	P.O. Box 483, Goldthwaite, TX 76844
Office Phone:	325-648-2748
Cell Phone:	325-451-0061
24/7 Phone:	325-451-0061
Fax:	325-648-2806

2.4 System Maintenance Provider - Point of Contact	
Name:	Dailey-Wells Communications, Inc.
Title:	
Agency Name/Organization:	Dailey-Wells Communications, Inc.
Email:	
Physical Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Mailing Address, City, ZIP:	3440 E. Houston St., San Antonio, TX, 78219-3814
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702
2.5 Fixed Site Radio Equipment Information	
Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...	
2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Mills County Sheriff's Office
2.6 Fixed Site Radio Equipment	
See table following Section 2.	
2.7 Site Location Information	
A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the radio equipment, such	
2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in	
Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	Mills County Sheriff's Office



2.8 Site Information	
Site Name	Mills County
Antenna Site Reg. (ASR#)	1052072
Tower Height	125
Address	Hwy 84, 1 mile east of Goldthwaite
Tower Owner	Central Texas Telephone Cooperative, Inc.
County	Mills
Tower Age	1993
Available for Expanded Use?	No
Owned or Leased?	Leased

2.9 System Managers	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and complete the table in	
Regional System: (Yes or No)	No
Date system was installed:	
Has your system been converted to narrowband operation: (Yes or No)	
Has your FCC license been modified for narrowband emissions: (Yes or No)	

2.10 User Agency Information	
Agency Name	Mills County SO
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	
Agency Name	Goldthwaite VFD
Agency Category	Fire
Point of Contact	
POC: 24/7 Phone	
POC: Email	

Agency Name	Goldthwaite PW
Agency Category	Other
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.11 System Connectivity</b>	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
<b>2.12 Dispatch Console Radio Equipment</b>	
This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.	
Manufacturer:	Harris
Model:	Director IP
Number of positions:	2
<b>2.13 What dispatch console radio equipment do you need?</b>	
Dispatch console at a redundant location.	

**2.6 Fixed Site Radio Equipment**

<b>Site Name</b>	<b>Equipment Type</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Frequency</b>	<b>Modulation (analog, P25, proprietary digital, mixed)</b>	<b>Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)</b>
Mills County	Repeater	Harris	Jaguar	155.7900		MW
Mills County	Repeater	Harris	Jaguar	851.0125		MW
Mills County	Repeater	Harris	Jaguar	853.0125		MW
Mills County	Repeater	Harris	Jaguar	155.3700		MW
Mills County	Base	Harris	Jaguar	154.2800		MW
Mills County	Repeater	Harris	Jaguar	154.4450		MW

<b>3.0 Subscriber Units</b>	
<b>3.1 Subscriber Inventory</b>	
See table following Section 3.	
<b>3.2 What are your Subscriber Unit needs?</b>	
Mobiles:	5 - P25 Compliant units with narrowbanding
Portables:	15 - P25 Compliant units with narrowbanding
Other:	
<b>3.3 How many are Not Narrowband capable?</b>	
	None
<b>3.4 How many require re-tune for narrowband?</b>	
	70
<b>3.5 Channels programmed into radios</b>	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
<b>3.6 Interoperability channels in radios</b>	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
<b>3.7 Channel/talk group information</b>	
Is your data entered in CASM?	
Is the data current and up to date?	
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

3.1 Subscriber Inventory						
Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
Mills County EMC	Portable	Harris	P5450	4	No	Yes
Mills County EMC	Mobile	Harris	P7100	4	No	Yes
Mills County EMC	Portable	Harris	P5450	2	No	Yes
Mills County EMC	Portable	Harris	P7150	1	No	Yes
Mills County Sheriff	Mobile	Harris	M7100	8	No	Yes
Mills County Sheriff	Portable	Harris	P7150	7	No	Yes
Goldthwaite, City of	Mobile	Harris	M7100	11	No	Yes
Goldthwaite, City of	Portable	Harris	P5450	3	No	Yes
Goldthwaite VFD	Mobile	Harris	M7100	7	No	Yes
Goldthwaite VFD	Portable	Harris	P5450	1	No	Yes
Mullin VFD	Mobile	Harris	M7100	5	No	Yes
Mullin VFD	Portable	Harris	P5450	2	No	Yes
Mullin VFD	Portable	Harris	P7150	3	No	Yes
Priddy VFD	Mobile	Harris	M7100	4	No	Yes
Priddy VFD	Portable	Harris	P5450	2	No	Yes
Star VFD	Mobile	Harris	M7100	2	No	Yes
Star VFD	Portable	Harris	P5450	1	No	Yes
Star VFD	Portable	Harris	P7150	2	No	Yes

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	Mills County SO
Address where gateway is stored:	1007 5th Street, Goldthwaite
Service Area where gateway is available to be deployed:	County-wide

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

##### 4.4 Other Capabilities?

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5.0 System Coverage and Capacity	
5.1 Approximate Coverage	
Mobile Coverage: %	95
Portable Coverage: %	75
In-Building Coverage: %	30
5.2 How many more transmitter locations?	
	0
5.3 How many channels?	
	2

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

1. There is inadequate mobile, portable, and in-building communication coverage across the county.
2. There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.
3. There are no redundant/backup facilities for radio and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

1. Increased mobile, portable, and in-building communication coverage across the county.
2. Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.
3. Design redundant/backup facilities for radio and dispatch operations to insure public safety communications will not be affected in the case of main site failure.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

No

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.



## 7.0 Budget and Funding Gap Information

### 7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?

Yes or No? Yes

### 7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	None
Amount	
Year	
Purpose	

### 7.3 Expected funding by source through the end of 2015

Funding Source	Homeland Security - SHSP
Amount	
Year	
Planned Purpose	



## **Survey – San Saba County**

1.0 Points of Contact	
1.1 Agency Name:	San Saba County
1.2 Discipline: (Law Enforcement, Fire, EMS)	Law Enforcement, Fire, EMS.
1.3 Area of Operation: (City, County #sq Miles)	1,138 Sq. Miles of San Saba County
1.4 Survey Respondant - Point of Contact	
Name:	Marsha Hardy
Title:	Emergency Management Coordinator
Agency/Organization:	San Saba County
Email Address:	emergencymgmt@co.san-saba.tx.us
Physical Address, City, ZIP:	500 E. Wallace#209, San Saba, Texas 76877
Mailing Address, City, ZIP:	500 E. Wallace # 209 , San Saba, Texas 76877
County:	San Saba
Office Phone:	325-372-5600
Cell Phone:	325-372-6484
24/7 Phone:	325-372-8570
Fax Number:	325-372-6484
1.5 Agency Head - Point of Contact	
Name:	Marsha Hardy
Title:	Emergency Management Coordinator
Agency/Organization:	San Saba County
Email Address:	emergencymgmt@co.san-saba.tx.us
Physical Address, City, ZIP:	500 E. Wallace#209, San Saba, Texas 76877
Mailing Address, City, ZIP:	500 E. Wallace # 209 , San Saba, Texas 76877
County:	San Saba
Office Phone:	325-372-5600
Cell Phone:	325-372-6484
24/7 Phone:	325-372-8570
Fax Number:	325-372-6484

## 2.0 Infrastructure

Radio Infrastructure refers to radio repeater systems, trunked systems, tower sites, microwave links, P25 switch, and dispatch console radios; i.e. equipment that is fixed at a site and not carried by first responders or installed in a vehicle.

Note: This section may require technical assistance to complete accurately. Please request assistance from the survey administrator for clarification of terms or intent.

### 2.1 RF (Radio) System Administration

For the purposes of data collection this survey uses the word "system" with a specific meaning. The entire communications system used by an agency can be thought of as a collection of "systems" that are interconnected and work together. We will examine each "system" individually. For example, an agency may have a large 800 MHz trunked radio system, a VHF tone and voice paging base station, and a dispatch console. In this example the survey requests that you identify 3 "systems". By breaking down communications into component systems, we can better identify the overall structure of the utilized communications to analyze interoperability and provide a basis for gap analysis. At the end of the data entry for the systems section of the survey there will be the option to enter additional systems.

2.1 Decision Question: Does your agency own any Infrastructure equipment? If not, select No in the next question then click Continue and proceed to the next section.

System Owned: (Yes or No)	
System Name:	
System Users (Agencies) Type / Name:	

### 2.2 System Owner - Point of Contact

Name:	Marsha Hardy
Title:	Emergency Management Coordinator
Agency Name/Organization:	San Saba County
Email:	emergencymgmt@co.san-saba.tx.us
Physical Address, City, ZIP:	500 E. Wallace#209, San Saba, Texas 76877
Mailing Address, City, ZIP:	500 E. Wallace # 209 , San Saba, Texas 76877

Office Phone:	325-372-5600
Cell Phone:	325-372-6484
24/7 Phone:	325-372-8570
Fax:	325-372-6484

### 2.3 System Manager - Point of Contact

Name:	Marsha Hardy
Title:	Emergency Management Coordinator
Agency Name/Organization:	San Saba County
Email:	emergencymgmt@co.san-saba.tx.us
Physical Address, City, ZIP:	500 E. Wallace#209, San Saba, Texas 76877
Mailing Address, City, ZIP:	500 E. Wallace # 209 , San Saba, Texas 76877
Office Phone:	325-372-5600
Cell Phone:	325-372-6484
24/7 Phone:	325-372-8570
Fax:	325-372-6484

### 2.4 System Maintenance Provider - Point of Contact

Name:	Dailey Wells Communications Inc.
Title:	
Agency Name/Organization:	Dailey Wells Communications Inc.
Email:	
Physical Address, City, ZIP:	3440 E. Houston Street, San Antonio, Texas 78219
Mailing Address, City, ZIP:	3440 E. Houston Street, San Antonio, Texas 78219
Office Phone:	210-893-6500
Cell Phone:	
24/7 Phone:	210-893-6500
Fax:	210-893-6702

### 2.5 Fixed Site Radio Equipment Information

Pertinent Equipment Types include: repeaters, simplex base stations, combiners, duplexers, multi-couplers, zone controllers, antennas...

2.5 Decision Question: Is agency fixed site radio equipment entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.7. If not, select No in the next question then proceed to question 2.6.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

### 2.6 Fixed Site Radio Equipment

See table following Section 2.

### 2.7 Site Location Information

A radio site is a location where the radio infrastructure is located. It usually consists of a shelter, tower and antennas for the

2.7 Decision Question: Is your site information entered into CASM? If yes, select Yes in the next question, enter the agency name as it shows in CASM then proceed to question 2.9. If not, select No in the next question then proceed to question 2.8.

Entered into CASM: (Yes or No)	Yes
Is the data current and up to date?	Yes
Name in CASM:	

### 2.8 Site Information

Site Name	South San Saba Tower Site
Antenna Site Reg. (ASR#)	1047746
Tower Height	121.9
Address	South Edge of San Saba
Tower Owner	CTC Telephone
County	San Saba
Tower Age	1972
Available for Expanded Use?	No
Owned or Leased?	Leased

Site Name	East San Saba Tower Site
Antenna Site Reg. (ASR#)	1052070
Tower Height	93.9
Address	FM 580, approximately 2 mi. off Highway 190, 6 mi. ESE of San Saba.
Tower Owner	CTC Telephone
County	San Saba
Tower Age	1993
Available for Expanded Use?	No
Owned or Leased?	Leased
<b>2.9 System Managers</b>	
Note: Only System Managers should complete the following section	
2.9 Decision Question: Are you the manager of a large regional system? If yes, please answer the following questions and	
Regional System: (Yes or No)	No
Date system was installed:	2005
Has your system been converted to narrowband operation: (Yes or No)	No
Has your FCC license been modified for narrowband emissions: (Yes or No)	No
<b>2.10 User Agency Information</b>	
Agency Name	San Saba County SO
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.10 User Agency Information</b>	
Agency Name	San Saba PD
Agency Category	Police
Point of Contact	
POC: 24/7 Phone	
POC: Email	



Agency Name	Cherokee VFD
Agency Category	Fire
Point of Contact	
POC: 24/7 Phone	
POC: Email	
<b>2.11 System Connectivity</b>	
System connectivity is the method used to link remote sites together. This is commonly called a 'link' or a 'path'.	
Do you need connectivity systems for either a primary or redundant path: (yes or No)	Yes
<b>2.12 Dispatch Console Radio Equipment</b>	
This includes the actual radio equipment used by the consoles; this does not include voice recorders, etc.	
Manufacturer:	DWC/Harris
Model:	Director IP
Number of positions:	2
<b>2.13 What dispatch console radio equipment do you need?</b>	
Yes - for a redundant location.	

2.6 Fixed Site Radio Equipment

Site Name	Equipment Type	Manufacturer	Model	Frequency	Modulation (analog, P25, proprietary digital, mixed)	Connectivity Used (MW, leased 4 wire, leased T1, RF, etc.)
San Saba Sheriff's Office	Dispatch - Consoles	DWC/Harris	Director IP		All of the above.	MW
South San Saba Tower	Repeater			155.8575		MW
East San Saba Tower	Repeater	Harris	Mastr III	155.7000		MW
East San Saba Tower	Repeater	Harris	Mastr III	155.6700		MW
East San Saba Tower	Repeater	Harris	Mastr III	851.0125		MW
East San Saba Tower	Repeater	Harris	Mastr III	852.0125		MW
East San Saba Tower	Repeater	Harris	Mastr III	155.3700		MW
East San Saba Tower	Repeater	Harris	Mastr III	155.9400		MW
East San Saba Tower	Repeater	Harris	Mastr III	158.8350		MW

3.0 Subscriber Units	
3.1 Subscriber Inventory	
See table following Section 3.	
3.2 What are your Subscriber Unit needs?	
Mobiles:	41 -P25 Compliant units with narrowbanding
Portables:	33- P25 Compliant units with narrowbanding
Other:	
3.3 How many are Not Narrowband capable?	
	114
3.4 How many require re-tune for narrowband?	
	30 portable and 10 mobiles
3.5 Channels programmed into radios	
Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.6 Interoperability channels in radios	
Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name	
TX Frequency	
RX Frequency	
CTCSS/NAC	
Location on Radio	
Agency operated Base Station	
3.7 Channel/talk group information	
Is your data entered in CASM?	Yes
Is the data current and up to date?	Yes
Channel Name/Talk Group Name	
Talk Group ID	
TX Frequency	
RX Frequency	
Site Name/ *System Name	
CTCSS/NAC	
Description	

3.1 Subscriber Inventory						
Owner Agency	Category	Manufacturer	Model	Qty	Narrow-banded?	P25 Compliant or Capable?
San Saba VFD	Mobile	Motorola	CM300	10	Yes	No
San Saba VFD	Mobile	Relm		2	No	No
Elm Grove VFD	Mobile	Vertex	VX-3200V	12	Yes	No
Richland Springs VFD	Mobile	Relm		7	No	No
Cherokee VFD	Mobile	Motorola	GM300	10	Yes	No
San Saba Sheriff	Mobile	Harris	M7100IP	5	Yes	Yes
San Saba Police	Mobile	Harris	M7100IP	5	Yes	Yes
San Saba VFD	Portable	Motorola	PR400	6	Yes	No
Richland Springs VFD	Portable	Relm	RPV699A	10	No	No
Cherokee VFD	Portable	Relm	RPV599A	10	No	No
San Saba Sheriff	Portable	Harris	P5450	17	Yes	Yes
San Saba Police	Portable	Harris	P7100IP	7	Yes	Yes
San Saba Police	Portable	Harris	P5400	6	Yes	Yes

#### 4.0 Additional Agency Capabilities

##### 4.1 Gateway Equipment Information

Manufacturer:	DWC/Harris
Model:	Director IP
Number of simultaneous nets:	2
Number of active ports:	8
Gateway Type: (Mobile or Fixed)	Fixed
Location of gateway:	San Saba Sheriff Office
Address where gateway is stored:	500 E. Wallace, San Saba, Texas
Service Area where gateway is available to be deployed:	County Wide

4.2 Mobile Communications Platform (Yes or No) No

##### 4.3 Mobile Communications Platform Point of Contact

Name:	
Title:	
POC Type:	
Agency/Organization:	
Email Address:	
Physical Address, City, ZIP:	
Mailing Address, City, ZIP:	
County:	
Office Phone:	
Cell Phone:	
24/7 Phone:	
Fax Number:	

##### 4.4 Other Capabilities?

--

## 5.0 System Coverage and Capacity

### 5.1 Approximate Coverage

Mobile Coverage: %	80
Portable Coverage: %	40
In-Building Coverage: %	20

5.2 How many more transmitter locations?	3
--	---

5.3 How many channels?	6
------------------------	---

## 6.0 Future Needs

### 6.1 List and describe any future plans for the radio system

The plan of CTCOG is to connect all agencies within the region to the P25 network switch in Belton (and connected to a yet to be determined backup switch) for a region-wide shared P25 communication system. The network switch will have an ISSI connection to the State-wide system-of-systems design.

### 6.2 List and describe the three most critical shortcomings of your present radio system

1. There is inadequate mobile, portable, and in-building communication coverage across the county.
2. There is insufficient channel capacity for day-to-day, emergency, and planned event operations and interoperability.
3. There are no redundant/backup facilities for radio and dispatch operations.

### 6.3 Describe three aspects of radio system you would like to see improved over the next ten years

1. Increased mobile, portable, and in-building communication coverage across the county.
2. Add channels to increase radio capacity for day-to-day, emergency, and planned event operations and interoperability.
3. Design redundant/backup facilities for radio and dispatch operations to insure public safety communications will not be affected in the case of main site failure.

### 6.4 Do you expect to meet your communications goals by 2015? If not, when?

Yes or No?

2

If not, when?

2020 or later, goals of obtaining a P25 regional radio system will be realized with additional funding.

## 7.0 Budget and Funding Gap Information

### 7.1 Is the agency NIMS Compliant/Grant Eligible for Homeland Security Grants?

Yes or No? Yes

### 7.2 Funding spent at the agency level from all sources\* beginning in FY2006 through FY2010

Example: Local fire department receives Assistance to Firefighter Grant award for \$X for FYxx; City of XYZ received \$2M/year for subscriber equipment purchases; etc.

\*COGs do not need to document funds allocated through the DPS-SAA office because this information is already available in-house.

Funding Source	None
Amount	
Year	
Purpose	

### 7.3 Expected funding by source through the end of 2015

Funding Source	Homeland Security - SHSP
Amount	
Year	
Planned Purpose	



## 8.2 RF Coverage Definition

Adequate radio coverage is perhaps the most important aspect of designing a radio communication system. RCC considers a number of key factors which drive the voice system radio coverage design. General public safety radio system coverage requirements are considered to be “95% reliable radio operations with a Delivered Audio Quality (DAQ) of 3.4.”

There are many factors that must be considered when analyzing or specifying radio coverage performance. At a minimum, these items include the following:

- **Type of radio communications coverage needed**—Mobile (in vehicle) radio coverage, portable coverage at street level, portable coverage within residential structures, portable radio coverage within heavier buildings, and portable coverage in underground areas or other hard to cover areas.
- **Defined Coverage Area**—Defined service area boundaries that clearly identify the area in which coverage is needed.
- **Delivered Audio Quality**—Minimum level of delivered audio quality expected from the system.
- **Coverage Reliability**—Defined coverage reliability factors that identify the probability of successfully communicating over the radio system without having an excessive number of retries to get the message through.
- **Use of Portable Radio**—Portable radios are usually operated at head level, shoulder level in a bunker pocket, or on the belt at hip level.

For the purposes of providing an indication of the levels of RF coverage by the existing voice radio system and other system alternatives, RCC utilized its wireless system design tool set, ComSite Design® (CSD), to conduct the radio coverage analyses provided in this report.

CSD allows RCC engineers to analyze and model the level or amount of radio coverage that can be expected from various radio system configurations. CSD utilizes system parameters such as tower location, tower height, antenna systems, transmitter power, terrain throughout the service area, a land-use database that accounts for environmental signal losses for suburban, urban and dense urban environments, as well as other factors to calculate predicted radio coverage.

### Types of RF Coverage

To help the reader better understand the radio system coverage maps included in this document, RCC has provided a description of the different levels or types of coverage provided by the system.

**Mobile Coverage** - Mobile radio coverage is the type of coverage provided when using vehicular (car/truck) radios. These radios are more powerful than smaller hand held portable radios. Typically, mobile radios have about ten times the transmitter power of hand held radios and they also have a much better antenna which is mounted on the exterior of the vehicle. Consequently, mobile radios provide substantially better coverage or “communications range”.

**Portable Coverage** - Due to the reduced “range” of hand held radios, portable radio coverage is more difficult to provide. Coverage in buildings is tougher to provide than coverage outdoors on the street because the building structure blocks some of the radio’s signal. Heavier buildings exhibit more signal loss than smaller buildings. The amount of loss is measured or quantified using a term called the decibel (dB). A higher building loss has a greater reduction in the radio’s ability to communicate within the facility. For the purposes of this report there are typically three levels of portable coverage discussed, which are described as follows:

**Portable Coverage Outdoors On-Street (no building loss):** Assumes the radio user is outdoors with a relatively average environment. Typical vegetation and local terrain are accounted for. This category does not normally include the use of a portable radio inside a vehicle.

**10 dB In-Building Coverage (up to 10 dB of building loss):** Examples of buildings in this category may include convenience stores, gas stations, fast-food restaurants, small single-story homes/businesses, and other establishments with numerous windows or extensive glass exteriors.

**20 dB In-Building Coverage (10 dB – 20 dB of building loss):** Examples of buildings in this category include light to medium construction buildings such as medium size businesses with windows, small to medium size schools, etc. It may include some heavy buildings with numerous exterior windows that allow radio signals into the building.

### **Delivered Audio Quality**

The two-way radio industry uses Delivered Audio Quality (DAQ) in specifying audio or sound quality to be provided by a two-way radio system. DAQ helps identify the expected level of sound quality as well as identifying whether or not radio message “retries” are to be allowed. Retries are essentially additional attempts to get the spoken message through the radio system successfully.

DAQ guidelines were published in 1999 by the Telecommunications Industry Association (TIA) in a document known as “**TSB88 Wireless Communications Systems – Performance in Noise and Interference Limited Situations, Recommended Methods for Technology Independent Modeling, Simulation and Verification**”. In RCC’s opinion, the DAQ guidelines still fall short of specifying specific levels of message retries considered acceptable to the system user, however, the DAQ process is a significant improvement over the older guidelines. That said, to tighten up system specifications, RCC normally defines the retry parameters as part of the system acceptance testing requirements.

Like other factors in the specification of radio coverage, the specification of a particular DAQ level has a direct impact on the number of tower sites needed within the system to provide that capability. Table 6-1 provides the various DAQ levels and their associated definitions.

Delivered Audio Quality	Subjective Performance Description
DAQ 5.0	Speech easily understood.
DAQ 4.5	Speech easily understood. Infrequent Noise/Distortion.
DAQ 4.0	Speech easily understood. Occasional Noise/Distortion.
DAQ 3.4	Speech understandable with repetition only rarely required. Some Noise/Distortion.
DAQ 3.0	Speech understandable with slight effort. Occasional repetition required due to Noise/Distortion.
DAQ 2.0	Understandable with considerable effort. Frequent repetition due to Noise/Distortion.
DAQ 1.0	Unusable, speech present but unreadable.

#### **Delivered Audio Quality Scale Definitions**

For this conceptual system design, the radio coverage DAQ benchmark has been set at DAQ 3.4. This represents a reasonable compromise between system performance and system cost. It means that having to repeat a message over the radio to get it through the system should be “only rarely required”.

DAQ 3.4 is generally recognized as a minimum level of audio quality for public Safety radio communications. Increasing the Delivered Audio Quality level translates into additional system cost as more tower sites are usually needed to increase signal levels. DAQ 3.4 represents a good balance between system performance and system cost.

#### **Coverage Reliability**

Another important radio system design parameter is coverage reliability. There are several issues and variables involved in specifying coverage reliability but in general it refers to the likelihood of being able to get your message through the radio system to the intended recipient successfully. Like DAQ, higher levels of coverage reliability provide better system performance and also increase the cost of the radio infrastructure. Radio system design involves balancing the need for high quality communications with the ability to fund development and implementation of the system. For critical communications a coverage reliability factor of at least 95% is typically specified because it represents a good balance between performance and system cost. Increasing reliability above 95% can dramatically increase the cost of the radio infrastructure. For this conceptual system design, RCC has utilized an area coverage reliability factor of 95%.

### 8.3 Glossary

ITEM	DEFINITION
APCO P-25	Association of Public Safety Communications Officials Project 25
Audio Bridge	Connects four-wire audio from disparate radio systems to provide interoperability.
BGAN	Broadband Global Area Network
BLM	Bureau of Land Management
CAD	Computer Aided Dispatch
CAI	Common Air Interface
CAM	Communication Assets Mapping
CASM	Communication Assets Survey and Mapping
CAS	Communication Assets Survey
CB	Citizen Band
CDMA	Code-Division Multiple Access
CERT	Community Emergency Response Team
COML	Communications Unit Leader
COMT	Incident Communications Technician
Console Patching	Ability to connect channels via dispatch consoles
CTCSS	Continuous Tone Coded Squelch System
DAQ	Digital Audio Quality
DCS	Digital-Coded Squelch
DPS	Department of Public Safety
DSC	Digital Selective Calling
DWC	Dailey-Wells Communications
DTMF	Dual Tone Multi-Frequency

ITEM	DEFINITION
EMS	Emergency Management System
EMS	Emergency Medical Services
EOC	Emergency Operation Center
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FSS	Fixed Satellite Service
GIS	Geographic Information System
GPS	Global Positioning System
GSM	Global System for Mobile Communications
HF	High Frequency
IC	Incident Command
ICALL	Calling Channel for ITAC
ICC	Interoperability Command Coordinator
ICP	Incident Command Post
ICS	Incident Command System
ICTAP	Interoperable Communications Technical Assistance Program
IECGP	Interoperable Emergency Communications Grant Program
ID	Identification
Inter-agency	Located or occurring between two or more agencies
Interoperable	Ability of a system to use the parts or equipment of another system
IM	Information Management
IP	Internet Protocol
ISSI	Inter RF Sub-system Interface
ITAC	Conventional mutual aid channel 800 Mhz

ITEM	DEFINITION
ITU	International Telecommunications Union
LAN	Local Area Network
LOS	Line-of-Site
MCC	Mobile Communication Center
MCU	Mobile Communications Unit
MCV	Mobile Command Vehicle
MEOC	Mobile Emergency Operations Center
MHz	Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz.
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
Mutual Aid	Personnel, equipment, or services provided to another jurisdiction
NAC	Network Access Code
Nat	National
NECP	National Emergency Communications Plan
NENA	National Emergency Number Association
NIFG	National Interoperability Frequency Guide
NIFOG	National Interoperability Field Operations Guide
NIMS	National Incident Management System
NPSPAC	National Public Safety Planning Advisory Committee
NPSTC	National Public Safety Telecommunications Council
NSC	Network Switching Center
POC	Point of Contact
PSIC	Public Safety Interoperable Communications
PF	Public Facilities

ITEM	DEFINITION
PTT	Push to Talk
PSIC	Public Safety Interoperable Communications
PSTN	Public Switch Telephone Network
RICP	Regional Interoperable Communications Plan
RoIP	Radio over Internet Protocol
RACES	Radio Amateur Civil Emergency Service
RF	Radio Frequency
RFP	Request for Proposal
RMS	Records Management System
RX	Receive
SCIP	Statewide Communications Interoperable Plan
SOP	Standard Operating Procedures
SPAWAR	Space and Naval Warfare
SWIC	Statewide Interoperability Coordinator
TAC	Tactical
Talkgroup	Term usually used with trunked radio systems. A talkgroup is a predefined list of radios/users assigned a unique ID which allows them to communicate with each other over the trunked radio system.
TCP	Transmission Control Protocol
TDMA	Time Division Multiple Access
Tex-AN	Texas Agency Network
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
TSA	Transportation Security Agency
TSCIP	Texas Statewide Communications Interoperable Plan
TX	Transmit

ITEM	DEFINITION
UHF	Ultra High Frequency – Range of 300 to 3,000 MHz. For public safety LMR, usually refers to two bands. 380 to 460 MHz (low) and 460 to 512 MHz (high).
UPS	Power System
VDC	Volts DC
VDOC	Voice and Data on Control
VHF	Very High Frequency – For public safety LMR, usually refers to VHF High Band with a range of 136 to 164 MHz. VHF Low Band has a frequency range below 100 MHz.
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
VSAT	Very Small Aperture Terminal
WCTCOG	West Central Texas Council of Governments
WAN	Wide Area Network



## **8.4 FCC Licenses**

### **8.4.1 Bell County Licenses**

### **8.4.1 Bell County Licenses**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: BELL, COUNTY OF

ATTN: DALTON CROSS  
BELL, COUNTY OF  
708 W. AVE O  
BELTON, TX 76513

<b>Call Sign</b> WQHS400	<b>File Number</b> 0004409038
<b>Radio Service</b> YE - PubSafty/SpecEmer/PubSaftyNtlPlan,806-817/851 -862MHz,Trunked	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671841

<b>Grant Date</b> 10-05-2010	<b>Effective Date</b> 10-05-2010	<b>Expiration Date</b> 04-03-2011	<b>Print Date</b> 10-06-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 1230 Ceader Oaks  
**City:** Harker Heights      **County:** BELL      **State:** TX  
**Lat (NAD83):** 31-04-17.3 N    **Long (NAD83):** 097-38-29.9 W    **ASR No.:**    **Ground Elev:** 272.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000855.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000856.46250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000856.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000856.73750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000857.23750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000857.46250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: BELL, COUNTY OF

Call Sign: WQHS400

File Number: 0004409038

Print Date: 10-06-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000857.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000858.73750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.23750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.73750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.76250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000860.23750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000860.46250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000860.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000860.76250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.46250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000858.23750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000858.46250000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000858.48750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000856.08750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000857.08750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000858.03750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	
1	1	000859.03750000	FB2C	1		20K0F9W	100.000	600.000	30.5	67.5	

**Licensee Name:** BELL, COUNTY OF

**Call Sign:** WQHS400

**File Number:** 0004409038

**Print Date:** 10-06-2010

**Control Points**

**Control Pt. No. 1**

**Address:** 708 W. Ave O

**City:** Belton **County:** BELL **State:** TX **Telephone Number:** (210)933-5500

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**Associated Call Signs**

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**Waivers/Conditions:**

Special Temporary Authority is authorized on a secondary non-interference basis.

This Special Temporary Authorization may be terminated at the Bureau's discretion, without a hearing, if conditions warrant. Under no circumstances may the facility(ies) authorized herein become a hazard to air navigation or violate the terms of an international agreement or treaty. If an application for permanent authority is on file with the Commission, this action is taken without prejudice to that application. Post and/or retain a copy of this authorization as required by the Commission's Rules.

You are advised that this STA is issued without prejudice to any subsequent channel assignment that may be made in connection with reconfiguration of the 800 MHz band pursuant to Report & Order, FCC 04-168, released August 6, 2004 & Supplemental Order, FCC 04-294, released December 22, 2004. Further, grant of this STA does not establish precedence for the requested channels when the 800 MHz band is reconfigured -- you may be required to file an application for modification of license to specify frequencies other than those covered by this STA.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: BELL COUNTY OF

ATTN: DIRECTOR OF COMMUNICATIONS  
BELL COUNTY OF  
708 W AVENUE O  
BELTON, TX 76513

<b>Call Sign</b> WPML266	<b>File Number</b> 0004165722
<b>Radio Service</b> YE - PubSafty/SpecEmer/PubSaftyNtlPlan,806-817/851 -862MHz,Trunked	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671841

<b>Grant Date</b> 02-17-2004	<b>Effective Date</b> 04-09-2010	<b>Expiration Date</b> 09-01-2013	<b>Print Date</b> 04-10-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: WEST AVENUE  
City: BELTON County: BELL State: TX  
Lat (NAD83): 31-02-44.0 N Long (NAD83): 097-28-40.0 W ASR No.: 1059912 Ground Elev: 201.8
- Loc. 2** Address: 1901 S FIRST ST  
City: TEMPLE County: BELL State: TX  
Lat (NAD83): 31-04-41.6 N Long (NAD83): 097-20-34.0 W ASR No.: 1212890 Ground Elev: 207.3
- Loc. 3** Address: EAGLE NEST RD  
City: YOUNGSTOWN County: BELL State: TX  
Lat (NAD83): 30-59-09.0 N Long (NAD83): 097-37-57.0 W ASR No.: 1025503 Ground Elev: 279.9
- Loc. 4** Area of operation  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX
- Loc. 5** Area of operation  
Operating within a 113.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000855.48750000	FB2C	1		14K0F9W	100.000	250.000	116.0	130.0	09-01-2003

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: BELL COUNTY OF

Call Sign: WPML266

File Number: 0004165722

Print Date: 04-10-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000856.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000856.48750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000856.73750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000857.23750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000857.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000857.48750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000858.23750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000858.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000858.48750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000858.73750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000859.23750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000859.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000859.48750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000859.73750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000859.76250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000860.23750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000860.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000860.48750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000860.76250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	09-01-2003
1	1	000855.46250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	01-09-2006

Licensee Name: BELL COUNTY OF

Call Sign: WPML266

File Number: 0004165722

Print Date: 04-10-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000855.73750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	01-09-2006
1	1	000858.26250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	01-09-2006
1	1	000859.26250000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	01-09-2006
1	1	000857.08750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	04-09-2011
1	1	000856.08750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	04-09-2011
1	1	000858.03750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	04-09-2011
1	1	000859.03750000	FB2C	1		16K0F9W	100.000	250.000	116.0	130.0	04-09-2011
2	1	000855.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000856.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000856.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000856.73750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000857.23750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000857.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000857.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000858.23750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000858.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000858.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000858.73750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000859.23750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000859.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003



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Print Date: 04-10-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000859.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000859.73750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000859.76250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000860.23750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000860.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000860.48750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000860.76250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	09-01-2003
2	1	000855.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	01-09-2006
2	1	000855.73750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	01-09-2006
2	1	000858.26250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	01-09-2006
2	1	000859.26250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	01-09-2006
2	1	000855.46250000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	01-09-2006
2	1	000855.73750000	FB2C	1		16K0F9W	100.000	602.000	114.0	140.0	01-09-2006
2	1	000856.08750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	04-09-2011
2	1	000857.08750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	04-09-2011
2	1	000858.03750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	04-09-2011
2	1	000859.03750000	FB2C	1		16K0F9W	100.000	354.000	114.0	140.0	04-09-2011
3	1	000855.48750000	FB2C	1		14K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000856.46250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000856.48750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003

Licensee Name: BELL COUNTY OF

Call Sign: WPML266

File Number: 0004165722

Print Date: 04-10-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000856.73750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000857.23750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000857.46250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000857.48750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000858.23750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000858.46250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000858.48750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000858.73750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000859.23750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000859.46250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000859.48750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000859.73750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000859.76250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000860.23750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000860.46250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000860.48750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000860.76250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	09-01-2003
3	1	000855.73750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	01-09-2006
3	1	000858.26250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	01-09-2006
3	1	000858.71250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	01-09-2006

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Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000859.71250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	01-09-2006
3	1	000859.26250000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	01-09-2006
3	1	000856.08750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	04-09-2011
3	1	000857.08750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	04-09-2011
3	1	000858.03750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	04-09-2011
3	1	000859.03750000	FB2C	1		16K0F9W	100.000	602.000	152.0	202.0	04-09-2011
4	1	000810.48750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000811.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000811.48750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000811.73750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000812.23750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000812.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000812.48750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.23750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.48750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.73750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.23750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.48750000	FX1	74		16K0F9W	35.000	50.000			

Licensee Name: BELL COUNTY OF

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Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
4	1	000814.73750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.76250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000815.23750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000815.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000815.48750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000815.76250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000810.46250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000810.73750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000811.71250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.26250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.71250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.71250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.26250000	FX1	74		16K0F9W	35.000	50.000			
4	1	000811.08750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000812.08750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000813.03750000	FX1	74		16K0F9W	35.000	50.000			
4	1	000814.03750000	FX1	74		16K0F9W	35.000	50.000			
5	1	000810.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000811.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000811.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006

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Print Date: 04-10-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
5	1	000811.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000812.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000812.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000812.48750000	MO	2602		14K0F9W 16K0F9W	35.000	50.000			01-09-2006
5	1	000813.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000813.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000813.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000813.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.76250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000815.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000815.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000815.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000815.76250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000855.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000856.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000856.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006

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Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
5	1	000856.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000857.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000857.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000857.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000858.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000858.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000858.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000858.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.76250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000860.23750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000860.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000860.48750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000860.76250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000855.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000855.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000856.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006

Licensee Name: BELL COUNTY OF

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Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
5	1	000855.26250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000858.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000859.26250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000810.46250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000810.73750000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000811.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000813.26250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000813.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.71250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000814.26250000	MO	2602		16K0F9W	35.000	50.000			01-09-2006
5	1	000811.08750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000812.08750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000813.03750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000814.03750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000856.08750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000857.08750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000858.03750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011
5	1	000859.03750000	MO	2602		16K0F9W	35.000	50.000			04-09-2011

**Licensee Name:** BELL COUNTY OF

**Call Sign:** WPML266

**File Number:** 0004165722

**Print Date:** 04-10-2010

**Control Points**

**Control Pt. No. 1**

**Address:** 708 W AVENUE O

**City:** BELTON **County:** BELL **State:** TX **Telephone Number:** (254)933-5500

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy



**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: BELL COUNTY OF

ATTN: STEVE CASEY  
BELL COUNTY OF  
708 WEST AVE O  
BELTON, TX 76513

<b>Call Sign</b> WNWD264	<b>File Number</b> 0001425510
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671841

<b>Grant Date</b> 10-03-2001	<b>Effective Date</b> 08-22-2003	<b>Expiration Date</b> 11-19-2011	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 7.8 MI @ 153.8 DEG FROM AIRPORT  
City: KILLEEN County: BELL State: TX  
Lat (NAD83): 30-59-12.7 N Long (NAD83): 097-37-48.0 W ASR No.: Ground Elev: 280.0
- Loc. 2** Address: 500 FT N OF PLEASANT VIEW CEMETARY  
City: TROY County: BELL State: TX  
Lat (NAD83): 31-11-20.6 N Long (NAD83): 097-19-05.0 W ASR No.: Ground Elev: 238.0
- Loc. 3** Address: COR OF KNOB HILL RD & REEDS LK RD  
City: ROGERS County: BELL State: TX  
Lat (NAD83): 30-56-55.7 N Long (NAD83): 097-16-13.0 W ASR No.: N/A Ground Elev: 201.0
- Loc. 4** Address: 203 S PENELOPE ST  
City: BELTON County: BELL State: TX  
Lat (NAD83): 31-03-16.6 N Long (NAD83): 097-27-44.0 W ASR No.: N/A Ground Elev: 157.0
- Loc. 5** Address: 2 N MAIN ST  
City: TEMPLE County: BELL State: TX  
Lat (NAD83): 31-05-45.6 N Long (NAD83): 097-20-30.0 W ASR No.: N/A Ground Elev: 219.0
- Loc. 6** Address: 301 N 28TH ST  
City: KILLEEN County: BELL State: TX  
Lat (NAD83): 31-06-42.6 N Long (NAD83): 097-43-07.1 W ASR No.: N/A Ground Elev: 244.0
- Loc. 7** Area of operation  
Operating within a 32.0 km radius around fixed location 4

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: BELL COUNTY OF

Call Sign: WNWD264

File Number: 0001425510

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000033.92000000	FB	1	250	20K0F3E	100.000	100.000	113.0	162.0	
1	1	000460.52500000	FB2	1	250	20K0F3E	100.000	295.000	113.0	162.0	
2	1	000033.92000000	FB	1	250	20K0F3E	100.000	100.000	76.0	115.0	
2	1	000460.52500000	FB2	1	250	20K0F3E	100.000	382.000	76.0	115.0	
3	1	000033.92000000	FB	1	250	20K0F3E	100.000	100.000	34.0	90.0	
3	1	000460.52500000	FB2	1	250	20K0F3E	100.000	500.000	34.0	90.0	
4	1	000460.52500000	FB	1	250	20K0F3E	50.000	50.000	11.0	-21.0	
4	1	000465.52500000	FX1	1		20K0F3E	50.000	50.000	11.0	-21.0	
5	1	000460.52500000	FB	1	250	20K0F3E	50.000	50.000	39.0	77.0	
5	1	000465.52500000	FX1	1		20K0F3E	50.000	50.000	39.0	77.0	
6	1	000460.52500000	FB	1	250	20K0F3E	50.000	50.000	30.0	16.0	
6	1	000465.52500000	FX1	1		20K0F3E	50.000	50.000	30.0	16.0	
7	1	000033.92000000	MO	20		20K0F3E	110.000	110.000			
7	1	000154.28000000	MO	35		20K0F3E	110.000	110.000			
7	1	000460.52500000	MO	250		20K0F3E	50.000	50.000			
7	1	000465.52500000	MO	250		20K0F3E	50.000	50.000			
7	1	000465.57500000	MO	250		20K0F3E	50.000	50.000			

**Licensee Name:** BELL COUNTY OF

**Call Sign:** WNWD264

**File Number:** 0001425510

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 110 W CENTRAL AVE

**City:** BELTON **County:** **State:** TX **Telephone Number:** (817)939-3521

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**Associated Call Signs**

WPJW343

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**Waivers/Conditions:**

NONE

Reference Copy

**REFERENCE COPY**

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: BELL COUNTY OF

ATTN: STEVE CASEY  
BELL COUNTY OF  
708 WEST AVE O  
BELTON, TX 76513

<b>Call Sign</b> WPJW343	<b>File Number</b> 0001425513
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671841

<b>Grant Date</b> 10-03-2001	<b>Effective Date</b> 08-22-2003	<b>Expiration Date</b> 11-19-2011	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 111 W CENTRAL AVE  
City: BELTON County: BELL State: TX  
Lat (NAD83): 31-03-20.6 N Long (NAD83): 097-27-52.0 W ASR No.: N/A Ground Elev: 157.0
- Loc. 2** Address: FM 2271 .6 MI N OF FM 2305  
City: BELTON County: BELL State: TX  
Lat (NAD83): 31-08-12.6 N Long (NAD83): 097-27-36.0 W ASR No.: N/A Ground Elev: 206.0
- Loc. 3** Address: 140 W CLARK ST  
City: BARTLETT County: BELL State: TX  
Lat (NAD83): 30-47-45.7 N Long (NAD83): 097-24-47.0 W ASR No.: N/A Ground Elev: 182.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000460.52500000	FB	1	250	20K0F3E	50.000	50.000	30.0	-2.0	
1	1	000465.52500000	FX1	1		20K0F3E	50.000	50.000	30.0	-2.0	
2	1	000460.52500000	FB2	1	250	20K0F3E	50.000	50.000	44.0	49.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** BELL COUNTY OF

**Call Sign:** WPJW343

**File Number:** 0001425513

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000460.52500000	FB2	1	250	20K0F3E	50.000	50.000	15.0	23.0	

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**Control Points**

**Control Pt. No. 1**

**Address:** 110 W CENTRAL AVE

**City:** BELTON **County:** **State:** TX **Telephone Number:** (817)939-3521

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**Associated Call Signs**

WNWD264

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**Waivers/Conditions:**

NONE

## 8.4.2 Coryell County Licenses

**REFERENCE COPY**

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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: GATESVILLE, CITY OF

ATTN: ROGER MUMBY  
GATESVILLE, CITY OF  
110 N 8TH ST  
GATESVILLE, TX 76528-1457

<b>Call Sign</b> WQKS354	<b>File Number</b>
<b>Radio Service</b> IG - Industrial/Business Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669936

<b>Grant Date</b> 08-31-2009	<b>Effective Date</b> 08-31-2009	<b>Expiration Date</b> 08-31-2019	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: HWY 36, 4.5 MI SE ON FM 184, OWL CREEK RD  
City: FLAT County: CORYELL State: TX  
Lat (NAD83): 31-14-19.6 N Long (NAD83): 097-33-05.1 W ASR No.: Ground Elev: 210.0
- Loc. 2** Address: INTERSECTION OF BRANDY LANE AND MEMORIAL DR  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-26-11.2 N Long (NAD83): 097-46-46.3 W ASR No.: Ground Elev: 268.2
- Loc. 3** Area of operation  
Operating within a 32.0 km radius around fixed location 1
- Loc. 4** Area of operation  
Operating within a 32.0 km radius around fixed location 2

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline
1	1	000452.3000000	FXO	1		11K2F1D	5.000	75.000	56.4	41.0	08-31-2010
2	1	000452.3000000	FXO	1		11K2F1D	5.000	75.000	36.9	26.0	08-31-2010

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** GATESVILLE, CITY OF

**Call Sign:** WQKS354

**File Number:**

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000452.30000000	FXOT	20		11K2F1D	5.000	75.000			
4	1	000452.30000000	FXOT	20		11K2F1D	5.000	75.000			

**Control Points**

**Control Pt. No. 1**

**Address:** 110 N 8TH ST

**City:** GATESVILLE **County:** CORYELL **State:** TX **Telephone Number:** (254)865-8951

**Associated Call Signs**

**Waivers/Conditions:**

Antenna structures for land, base and fixed stations authorized for operation at temporary unspecified locations may be erected without specific prior approval of the Commission where such antenna structures do not exceed a height of 60.96 meters (200 feet) above ground level; provided that the overall height of such antennas more than 6.10 meters (20 feet) above ground, including their supporting structures (whether natural formation or man-made), do not exceed any of the slope ratios set forth in Section 17.7(b). Any antenna to be erected in excess of the foregoing limitations requires prior Commission approval. Licensees seeking such approval should file application for modification of license. In addition, notification to the Federal Aviation Administration is required whenever the antenna will exceed 60.96 meters (200 feet) above the ground and whenever notification is otherwise required by Section 17.7 of the Commission's Rules. Such notification should be given by filing FAA Form 7460-1, Notice of Proposed Construction or Alteration, in duplicate, with the nearest office of the Federal Aviation Administration, which form is available from that office.



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

ATTN: GARY YOUNG, COPPERAS COVE F.D.  
COPPERAS COVE, CITY OF  
415 S. MAIN ST.  
COPPERAS COVE, TX 76522

<b>Call Sign</b> WQAH913	<b>File Number</b> 0004559092
<b>Radio Service</b> YE - PubSafty/SpecEmer/PubSaftyNtlPlan,806-817/851 -862MHz,Trunked	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 06-03-2004	<b>Effective Date</b> 01-05-2011	<b>Expiration Date</b> 06-03-2014	<b>Print Date</b> 01-05-2011
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** 2104A FREEDOM LANE  
**City:** COPPERAS COVE    **County:** CORYELL    **State:** TX  
**Lat (NAD83):** 31-06-42.6 N    **Long (NAD83):** 097-56-10.1 W    **ASR No.:** 1226206    **Ground Elev:** 386.5
- Loc. 3 Area of operation**  
Operating within a 40.0 km radius around fixed location 1
- Loc. 4 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX
- Loc. 5 Address:** 2104A FREEDOM LANE  
**City:** COPPERAS COVE    **County:** CORYELL    **State:** TX  
**Lat (NAD83):** 31-06-42.6 N    **Long (NAD83):** 097-56-10.1 W    **ASR No.:** 1261844    **Ground Elev:** 386.5
- Loc. 6 Area of operation**  
Operating within a 32.0 km radius around fixed location 5

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000866.01250000	FB2	1		16K0F3E	100.000	35.000	38.1	124.0	06-03-2009

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WQAH913

File Number: 0004559092

Print Date: 01-05-2011

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000866.51250000	FB2	1		16K0F3E	100.000	35.000	38.1	124.0	06-03-2009
1	1	000867.01250000	FB2	1		16K0F3E	100.000	407.000	38.1	124.0	06-03-2009
1	1	000867.51250000	FB2	1		16K0F3E	100.000	407.000	38.1	124.0	06-03-2009
1	1	000868.01250000	FB2	1		16K0F3E	100.000	407.000	38.1	124.0	06-03-2009
3	1	000822.51250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000866.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000866.51250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000867.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000867.51250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000868.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000823.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000821.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000821.51250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000822.01250000	MO	495		16K0F3E	35.000	35.000			06-03-2009
3	1	000806.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000806.20000000	MO	495		16K0F9W	35.000	35.000			03-24-2010
3	1	000806.51250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000807.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000807.43750000	MO	495		16K0F9W	35.000	35.000			03-24-2010
3	1	000807.51250000	MO	495		16K0F3E	35.000	35.000			03-24-2010

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WQAH913

File Number: 0004559092

Print Date: 01-05-2011

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000808.03750000	MO	495		16K0F9W	35.000	35.000			03-24-2010
3	1	000808.47500000	MO	495		16K0F9W	35.000	35.000			03-24-2010
3	1	000808.73750000	MO	495		16K0F9W	35.000	35.000			03-24-2010
3	1	000851.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000851.51250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000852.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000852.51250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000853.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
3	1	000808.01250000	MO	495		16K0F3E	35.000	35.000			03-24-2010
4	1	000821.51250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000822.01250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000822.51250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000821.01250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000823.01250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000806.01250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000806.20000000	FX1	5		16K0F9W	35.000	35.000			
4	1	000806.51250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000807.01250000	FX1	5		16K0F3E	35.000	35.000			
4	1	000807.43750000	FX1	5		16K0F9W	35.000	35.000			
4	1	000807.51250000	FX1	5		16K0F3E	35.000	35.000			

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WQAH913

File Number: 0004559092

Print Date: 01-05-2011

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
4	1	000808.03750000	FX1	5		16K0F9W	35.000	35.000			
4	1	000808.47500000	FX1	5		16K0F9W	35.000	35.000			
4	1	000808.73750000	FX1	5		16K0F9W	35.000	35.000			
4	1	000808.01250000	FX1	5		16K0F3E	35.000	35.000			
5	1	000851.01250000	FB	1		16K0F3E	100.000	355.000	80.8	160.0	11-03-2010
5	1	000851.20000000	FB	1		16K0F9W	100.000	355.000	80.8	160.0	11-03-2010
5	1	000851.51250000	FB	1		16K0F3E	100.000	355.000	80.8	160.0	11-03-2010
5	1	000852.01250000	FB	1		16K0F3E	100.000	355.000	80.8	160.0	11-03-2010
5	1	000852.43750000	FB	1		16K0F9W	100.000	355.000	80.8	160.0	11-03-2010
5	1	000852.51250000	FB	1		16K0F3E	100.000	355.000	80.8	160.0	11-03-2010
5	1	000853.01250000	FB	1		16K0F3E	100.000	355.000	80.8	160.0	11-03-2010
5	1	000853.03750000	FB	1		16K0F9W	100.000	355.000	80.8	160.0	11-03-2010
5	1	000853.47500000	FB	1		16K0F9W	100.000	355.000	80.8	160.0	11-03-2010
5	1	000853.73750000	FB	1		16K0F9W	100.000	355.000	80.8	160.0	11-03-2010
6	1	000806.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000806.20000000	MO	495		16K0F9W	35.000	35.000			11-03-2010
6	1	000806.51250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000807.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000807.43750000	MO	495		16K0F9W	35.000	35.000			11-03-2010
6	1	000807.51250000	MO	495		16K0F3E	35.000	35.000			11-03-2010

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WQAH913

File Number: 0004559092

Print Date: 01-05-2011

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
6	1	000808.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000808.03750000	MO	495		16K0F9W	35.000	35.000			11-03-2010
6	1	000808.47500000	MO	495		16K0F9W	35.000	35.000			11-03-2010
6	1	000808.73750000	MO	495		16K0F9W	35.000	35.000			11-03-2010
6	1	000851.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000851.51250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000852.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000852.51250000	MO	495		16K0F3E	35.000	35.000			11-03-2010
6	1	000853.01250000	MO	495		16K0F3E	35.000	35.000			11-03-2010

**Control Points**

**Control Pt. No. 1**

Address: 302 E. Ave E

City: COPPERAS COVE County: CORYELL State: TX Telephone Number: (254)547-4272

**Associated Call Signs**

**Waivers/Conditions:**

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

ATTN: CITY MANAGER/PUBLIC WORKS SCADA SYS  
COPPERAS COVE, CITY OF  
507 S. MAIN ST  
PO BOX 1449  
COPPERAS COVE, TX 76522

<b>Call Sign</b> WPTN895	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 11-13-2001	<b>Effective Date</b> 07-27-2009	<b>Expiration Date</b> 11-13-2011	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 1117 NORTHERN DANCER  
 City: COPPERAS COVE County: CORYELL State: TX  
 Lat (NAD83): 31-06-10.6 N Long (NAD83): 097-53-24.1 W ASR No.: 1226173 Ground Elev: 371.9
- Loc. 2** Address: 1304 B BOWEN  
 City: COPPERAS COVE County: CORYELL State: TX  
 Lat (NAD83): 31-06-28.6 N Long (NAD83): 097-53-06.1 W ASR No.: 1226170 Ground Elev: 367.2
- Loc. 3** Address: 2300 EAST HWY 190  
 City: COPPERAS COVE County: CORYELL State: TX  
 Lat (NAD83): 31-07-17.6 N Long (NAD83): 097-51-02.1 W ASR No.: 1226169 Ground Elev: 304.8
- Loc. 4** Address: 100 FORT HOOD ST  
 City: KILLEEN County: BELL State: TX  
 Lat (NAD83): 31-07-26.6 N Long (NAD83): 097-44-49.1 W ASR No.: 1226232 Ground Elev: 255.4
- Loc. 5** Address: 104 SOUTH FORT HOOD ST  
 City: KILLEEN County: BELL State: TX  
 Lat (NAD83): 31-07-20.9 N Long (NAD83): 097-44-47.1 W ASR No.: Ground Elev: 259.0
- Loc. 6** Address: 2801 EAST HWY 190  
 City: COPPERAS COVE County: CORYELL State: TX  
 Lat (NAD83): 31-07-19.5 N Long (NAD83): 097-52-14.5 W ASR No.: Ground Elev: 312.0

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WPTN895

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	38.1	118.5	11-13-2002
2	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	87.2	11-13-2002
3	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	30.7	11-13-2002
4	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	-1.4	11-13-2002
5	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	2.4	08-02-2003
6	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	29.1	05-21-2009

**Control Points**

**Control Pt. No. 1**

Address: 1601 N 1ST ST

City: COPPERAS COVE County: CORYELL State: TX Telephone Number: (254)547-4221

**Associated Call Signs**

**Waivers/Conditions:**

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

ATTN: CITY MANAGER  
COPPERAS COVE, CITY OF  
507 S MAIN ST  
PO BOX 1449  
COPPERAS COVE, TX 76522

<b>Call Sign</b> WPTN564	<b>File Number</b> 0002776112
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 11-07-2001	<b>Effective Date</b> 10-06-2006	<b>Expiration Date</b> 11-07-2011	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 914 TANK ST  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-07-19.6 N Long (NAD83): 097-55-12.1 W ASR No.: 1226229 Ground Elev: 375.5
- Loc. 2** Address: 2201 TERRACE DRIVE  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-06-55.6 N Long (NAD83): 097-55-20.1 W ASR No.: 1226207 Ground Elev: 359.7
- Loc. 3** Address: 2104A FREEDOM LANE  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-06-42.6 N Long (NAD83): 097-56-10.1 W ASR No.: 1226206 Ground Elev: 386.5
- Loc. 4** Address: INT OF MARILYN ST AND GERI ST  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-08-00.6 N Long (NAD83): 097-54-20.1 W ASR No.: 1226990 Ground Elev: 375.2
- Loc. 5** Address: 1420 GOLF COURSE ROAD  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-07-32.6 N Long (NAD83): 097-52-52.1 W ASR No.: 1226237 Ground Elev: 315.5
- Loc. 6** Address: 410 ROBERTSON RD  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-07-01.6 N Long (NAD83): 097-53-49.1 W ASR No.: 1226236 Ground Elev: 358.1

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WPTN564

File Number: 0002776112

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	84.5	11-07-2002
2	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	68.5	11-07-2002
3	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	38.1	123.5	11-07-2002
4	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	87.5	11-07-2002
5	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	35.8	11-07-2002
6	1	000173.20375000	FXO	1		6K00F2D	10.000	25.000	10.7	76.9	11-07-2002

**Control Points**

**Control Pt. No. 1**

Address: 1601 N 1ST ST

City: COPPERAS COVE County: CORYELL State: TX Telephone Number: (254)547-4221

**Associated Call Signs**

**Waivers/Conditions:**

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: GATESVILLE, CITY OF

ATTN: JOHN EUBANKS  
GATESVILLE, CITY OF  
10 N 8TH ST  
GATESVILLE, TX 76528

<b>Call Sign</b> WNSU244	<b>File Number</b> 0002130218
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669936

<b>Grant Date</b> 04-20-2005	<b>Effective Date</b> 04-20-2005	<b>Expiration Date</b> 07-12-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: HWY 36 & FM 929  
 City: GATESVILLE County: CORYELL State: TX  
 Lat (NAD83): 31-28-26.6 N Long (NAD83): 097-43-15.1 W ASR No.: Ground Elev: 269.0
- Loc. 2** Address: FROM HWY 36W FM 929 2.4 MI NE  
 City: GATESVILLE County: CORYELL State: TX  
 Lat (NAD83): 31-29-26.6 N Long (NAD83): 097-42-31.1 W ASR No.: Ground Elev: 324.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000452.3000000	FXO	1		15K0F2D	20.000	55.000	55.0		
2	1	000452.3000000	FXO	1		15K0F2D	20.000	50.000	29.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** GATESVILLE, CITY OF

**Call Sign:** WNSU244

**File Number:** 0002130218

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 110 N 8TH ST

**City:** GATESVILLE **County:** **State:** TX **Telephone Number:** (817)865-2226

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Preferred Copy

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

ATTN: FIRE DEPT GARY YOUNG  
COPPERAS COVE, CITY OF  
507 S MAIN ST  
COPPERAS COVE, TX 76522

<b>Call Sign</b> WNMN311	<b>File Number</b> 0004559075
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 08-21-2003	<b>Effective Date</b> 01-05-2011	<b>Expiration Date</b> 11-04-2013	<b>Print Date</b> 01-05-2011
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 2104A FREEDOM LANE  
**City:** COPPERAS COVE    **County:** CORYELL    **State:** TX  
**Lat (NAD83):** 31-06-42.6 N    **Long (NAD83):** 097-56-10.1 W    **ASR No.:** 1261844    **Ground Elev:** 386.5

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline
1	1	000155.37000000	FB	1	35	20K0F3E	100.000	172.000	80.8	160.0	
1	1	000155.47500000	FB	1		20K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000154.28000000	FB	1		20K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000154.26500000	FB	1		20K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000154.29500000	FB	1		20K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000155.34000000	FB	1		20K0F3E	100.000	172.000	80.8	160.0	06-18-2010

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: WNMN311

File Number: 0004559075

Print Date: 01-05-2011

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.75250000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000151.13750000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000154.45250000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000158.73750000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000159.47250000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010
1	1	000155.48250000	FB	1		11K0F3E	100.000	172.000	80.8	160.0	06-18-2010

**Control Points**

**Control Pt. No. 1**

Address: 302 E. Ave E

City: COPPERAS COVE County: CORYELL State: TX Telephone Number: (254)547-4272

**Associated Call Signs**

WPYI930, WQBC290

**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: GATESVILLE, CITY OF

ATTN: JOHN EUBANKS  
GATESVILLE, CITY OF  
10 N 8TH ST  
GATESVILLE, TX 76528

<b>Call Sign</b> WNLR617	<b>File Number</b> 0002130217
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669936

<b>Grant Date</b> 04-20-2005	<b>Effective Date</b> 04-20-2005	<b>Expiration Date</b> 07-12-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: HWY 184 4.5 MI SE  
City: FLAT County: CORYELL State: TX  
Lat (NAD83): 31-14-19.6 N Long (NAD83): 097-33-05.1 W ASR No.: Ground Elev: 210.0
- Loc. 2** Address: HWY 182 4 MI NW  
City: TURNERSVILLE County: CORYELL State: TX  
Lat (NAD83): 31-37-30.6 N Long (NAD83): 097-47-45.1 W ASR No.: Ground Elev: 360.0
- Loc. 3** Address: 182 1/4 MI E OF HWY 36  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-33-50.6 N Long (NAD83): 097-48-38.1 W ASR No.: Ground Elev: 290.0
- Loc. 4** Address: HWY 84 1 MI E  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-25-49.6 N Long (NAD83): 097-40-17.1 W ASR No.: Ground Elev: 309.0
- Loc. 5** Address: HWY 184 1 MI SE  
City: FLAT County: CORYELL State: TX  
Lat (NAD83): 31-16-56.6 N Long (NAD83): 097-37-29.1 W ASR No.: Ground Elev: 309.0
- Loc. 6** Address: N END OF LAKE BELTON 8 MI S  
City: GROVE County: CORYELL State: TX  
Lat (NAD83): 31-09-44.6 N Long (NAD83): 097-30-24.0 W ASR No.: Ground Elev: 181.0

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: GATESVILLE, CITY OF

Call Sign: WNLR617

File Number: 0002130217

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000452.30000000	FXO	1		15K0F2D	20.000	40.000	61.0		
2	1	000452.30000000	FXO	1		15K0F2D	20.000	63.000	6.0		
3	1	000452.30000000	FXO	1		15K0F2D	20.000	63.000	6.0		
4	1	000452.30000000	FXO	1		15K0F2D	20.000	63.000	6.0		
5	1	000452.30000000	FXO	1		15K0F2D	20.000	63.000	6.0		
6	1	000452.30000000	FXO	1		15K0F2D	20.000	63.000	28.0		

**Control Points**

**Control Pt. No. 1**

Address: CITY HALL 110 N 8 ST

City: GATESVILLE County: State: TX Telephone Number: (817)986-8281

**Associated Call Signs**

**Waivers/Conditions:**

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CORYELL, COUNTY OF

ATTN: COUNTY JUDGE OFFICE  
CORYELL, COUNTY OF  
620 E MAIN ST  
GATESVILLE, TX 76528

<b>Call Sign</b> WNKV718	<b>File Number</b> 0004447336
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 31PWAP30022098	

FCC Registration Number (FRN): 0007960123

<b>Grant Date</b> 11-19-2002	<b>Effective Date</b> 12-21-2010	<b>Expiration Date</b> 02-05-2013	<b>Print Date</b> 12-22-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: .75 MI NNE NATL GUARD ARMORY  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-26-30.6 N Long (NAD83): 097-42-17.1 W ASR No.: Ground Elev: 293.0
- Loc. 2** Address: 110 N 8TH ST  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-26-07.6 N Long (NAD83): 097-44-34.1 W ASR No.: Ground Elev: 250.0
- Loc. 3** Address: HWY 36 3 MI S GATESVILLE  
City: FORT GATES County: CORYELL State: TX  
Lat (NAD83): 31-23-57.6 N Long (NAD83): 097-42-31.1 W ASR No.: Ground Elev: 238.0
- Loc. 4** Address: 508 LEON ST  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-25-59.6 N Long (NAD83): 097-45-03.1 W ASR No.: Ground Elev: 244.0
- Loc. 5** Address: LIVE OAK DR FIRE STATION  
City: EVANT County: CORYELL State: TX  
Lat (NAD83): 31-28-14.6 N Long (NAD83): 098-07-10.1 W ASR No.: Ground Elev: 335.0
- Loc. 6** Area of operation  
Countywide: CORYELL, TX

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Licensee Name: CORYELL, COUNTY OF

Call Sign: WNKV718

File Number: 0004447336

Print Date: 12-22-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000153.95000000	FB2	1	45	11K2F2E 11K2F3E 20K0F3E	110.000	82.000	61.0	0.0	
2	1	000154.43000000	FX1	1		11K2F2E 11K2F3E 20K0F3E	25.000	18.000	12.0	0.0	
3	1	000154.43000000	FX1	1		11K2F2E 11K2F3E 20K0F3E	25.000	40.000	9.0	0.0	
4	1	000154.43000000	FX1	1		11K2F2E 11K2F3E 20K0F3E	25.000	12.000	12.0	0.0	
5	1	000154.13000000	FB	1	45	11K2F2E 11K2F3E 20K0F3E	25.000	30.000	9.0	0.0	
5	1	000154.43000000	FX1	1		11K2F2E 11K2F3E 20K0F3E	25.000	30.000	9.0	0.0	
6	1	000153.95000000	MO	90		11K2F2E 11K2F3E 20K0F3E	25.000	46.000			
6	1	000154.13000000	MO	90		11K2F2E 11K2F3E 20K0F3E	25.000	46.000			
6	1	000154.28000000	MO	90		11K2F2E 11K2F3E 20K0F3E	25.000	46.000			
6	1	000154.43000000	MO	90		11K2F2E 11K2F3E 20K0F3E	25.000	46.000			

**Licensee Name:** CORYELL, COUNTY OF

**Call Sign:** WNKV718

**File Number:** 0004447336

**Print Date:** 12-22-2010

**Control Points**

**Control Pt. No. 1**

**Address:** 508 LEON ST

**City:** GATESVILLE **County:** **State:** TX **Telephone Number:** (817)865-7201

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**Associated Call Signs**

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**Waivers/Conditions:**

Authorization on a secondary basis.

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

(154.280)

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

COPPERAS COVE, CITY OF  
PO DRAWER 1449  
COPPERAS COVE, TX 76522

<b>Call Sign</b> WNIR644	<b>File Number</b> 0000821506
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 03-23-2002	<b>Effective Date</b> 03-23-2002	<b>Expiration Date</b> 04-30-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: TAYLOR MOUNTAIN STRG TANK NEAR MAIN AVE & BABB ST  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-07-16.6 N Long (NAD83): 097-55-11.1 W ASR No.: Ground Elev: 372.0
- Loc. 2** Address: COR OF S MAIN & ROBERTSON AVE  
City: COPPERAS COVE County: CORYELL State: TX  
Lat (NAD83): 31-07-08.6 N Long (NAD83): 097-54-11.1 W ASR No.: Ground Elev: 335.0
- Loc. 3** Area of operation  
Operating within a 32.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000158.76000000	FB2	1		20K0F3E	30.000	70.000	15.0		
2	1	000156.00000000	FB	1		20K0F3E	30.000	60.000	21.0		
2	1	000158.76000000	FB	1		20K0F3E	30.000	60.000	21.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** COPPERAS COVE, CITY OF

**Call Sign:** WNIR644

**File Number:** 0000821506

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000156.00000000	MO	60		20K0F3E	30.000	30.000			
3	1	000158.76000000	MO	60		20K0F3E	30.000	30.000			

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**Control Points**

**Control Pt. No. 1**

**Address:** COR OF S MAIN & ROBERTSON AVE

**City:** COPPERAS COVE **County:** **State:** TX **Telephone Number:** (817)547-4221

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**Associated Call Signs**

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**Waivers/Conditions:**

Authorization on a secondary basis.

(156.000 FB)

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CORYELL, COUNTY OF

ATTN: LINDA ADCOCK  
CORYELL, COUNTY OF  
510 E LEON ST  
GATESVILLE, TX 76528

<b>Call Sign</b> KVJ752	<b>File Number</b> 0004323105
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0005780127

<b>Grant Date</b> 01-09-2002	<b>Effective Date</b> 09-27-2010	<b>Expiration Date</b> 11-19-2011	<b>Print Date</b> 09-28-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1** Address: N SIDE US 84 1.48 MI E  
City: GATESVILLE County: CORYELL State: TX  
Lat (NAD83): 31-26-30.6 N Long (NAD83): 097-42-17.1 W ASR No.: Ground Elev: 293.0

**Loc. 2** Area of operation  
Other: VIC: CORYELL COUNTY TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.37000000	FB2	1		11K2F3E 20K0F3E	350.000		91.0		
1	1	000155.68500000	FB2	1		11K2F3E 20K0F3E	350.000		91.0		
2	1	000154.80000000	MO	10		11K2F3E 20K0F3E	130.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CORYELL, COUNTY OF

Call Sign: KVVJ752

File Number: 0004323105

Print Date: 09-28-2010

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000154.95000000	MO	10		11K2F3E 20K0F3E	130.000				

**Control Points**

**Control Pt. No. 1**

Address: SHERIFFS DEPT

City: GATESVILLE County: State: TX Telephone Number: (817)865-7201

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: KVVJ751

File Number: 0002206304

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000155.37000000	FB	1		20K0F3E	50.000	50.000	15.0	0.0	
3	1	000155.41500000	FB	1		20K0F3E	50.000	50.000	15.0	0.0	
3	1	000156.15000000	FX1	1		20K0F3E	25.000	50.000	15.0	0.0	
4	1	000154.80000000	MO	111		20K0F3E	100.000				
4	1	000154.95000000	MO	111		20K0F3E	100.000				
4	1	000155.41500000	MO	111		20K0F3E	100.000				
4	1	000156.15000000	MO	111		20K0F3E	100.000				

Control Points

Control Pt. No. 1

Address: 209 E AVE E

City: COPPERAS COVE County: State: TX Telephone Number: (254)547-8222

Associated Call Signs

Waivers/Conditions:

NONE

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Federal Communications Commission
Public Safety and Homeland Security Bureau

RADIO STATION AUTHORIZATION

LICENSEE: GATESVILLE, CITY OF

ATTN: NATHAN GOHLKE
GATESVILLE, CITY OF
200 N 8TH STREET
GATESVILLE, TX 76528

Table with 2 columns: Call Sign (KLZ531), File Number, Radio Service (PW - Public Safety Pool, Conventional), Regulatory Status (PMRS), Frequency Coordination Number.

FCC Registration Number (FRN): 0001669936

Table with 4 columns: Grant Date (08-23-2003), Effective Date (11-15-2010), Expiration Date (09-14-2013), Print Date.

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1 Address: 200 N 8TH ST, City: GATESVILLE, County: CORYELL, State: TX, Lat (NAD83): 31-26-06.6 N, Long (NAD83): 097-44-54.1 W, ASR No.: , Ground Elev: 247.0
Loc. 2 Address: N SIDE US 84 2.37 KM E, City: GATESVILLE, County: CORYELL, State: TX, Lat (NAD83): 31-26-31.0 N, Long (NAD83): 097-42-17.0 W, ASR No.: 1051182, Ground Elev: 293.0
Loc. 3 Area of operation: Operating within a 24.0 km radius around fixed location 1
Loc. 4 Area of operation: Countywide: CORYELL, TX
Loc. 5 Area of operation: Land Mobile Control Station meeting the 6.1 Meter Rule: TX

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Licensee Name: GATESVILLE, CITY OF

Call Sign: KLZ531

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.96500000	FBS	1	42	11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	210.000	43.0	16.8	
1	1	000154.99500000	FB	1	42	11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	210.000	43.0	16.8	
1	1	000155.82000000	FB	1	42	11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	210.000	43.0	16.8	
2	1	000154.96500000	FB2	1	42	11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	140.000	85.0	104.4	
2	1	000154.99500000	FB2	1		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E 9K25F1E	100.000	200.000	85.0	104.4	09-05-2003
2	2	000154.28000000	FB	1		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	52.000	91.0	102.0	12-30-2006
2	2	000155.37000000	FB	1		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	200.000	91.0	102.0	12-30-2006

Licensee Name: GATESVILLE, CITY OF

Call Sign: KLZ531

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	2	000155.08500000	FB2	1	36	11K0F3E 16K0F3E 8K10F1D 8K10F1E	110.000	44.000	91.0	102.0	11-15-2011
3	1	000154.96500000	MO	32		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	100.000			
3	1	000154.99500000	MO	22		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E 9K25F1E	100.000	200.000			
3	1	000155.82000000	MO	22		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	100.000			
3	1	000154.95000000	MO	44		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	100.000	200.000			12-30-2006
3	1	000154.28000000	MO	22		11K0F3E 16K0F3E 20K0F3E 8K10F1D 8K10F1E	45.000	50.000			12-30-2006
3	1	000154.80000000	MO	22		11K0F3E 16K0F3E 8K10F1D 8K10F1E	110.000	110.000			11-15-2011
3	1	000158.79000000	MO	22		11K0F3E 16K0F3E 8K10F1D 8K10F1E	110.000	110.000			11-15-2011

Licensee Name: GATESVILLE, CITY OF

Call Sign: KLZ531

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000158.97000000	MO	100		11K0F3E 16K0F3E 8K10F1D 8K10F1E	100.000	100.000			11-15-2011
3	1	000155.63250000	MO	100		11K0F3E 8K10F1D 8K10F1E	100.000	100.000			11-15-2011
4	1	000154.11500000	MO	20		11K0F3E 16K0F3E 8K10F1D 8K10F1E	110.000	110.000			11-15-2011
5	1	000158.97000000	FX1	1		11K0F3E 16K0F3E 8K10F1D 8K10F1E	45.000	50.000			

**Control Points**

**Control Pt. No. 1**

Address: 200 N 8TH STREET

City: GATESVILLE County: CORYELL State: TX Telephone Number: (254)865-8951

**Control Pt. No. 2**

Address: 110 N 8TH STREET

City: GATESVILLE County: CORYELL State: TX Telephone Number: (817)865-6416

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

The issuance of this system license resulted in the cancellation of KR5676 and WNCB957.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

COPPERAS COVE, CITY OF  
202 S 4TH ST  
COPPERAS COVE, TX 76522

<b>Call Sign</b> KVJ751	<b>File Number</b> 0002206304
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 06-18-2005	<b>Effective Date</b> 06-18-2005	<b>Expiration Date</b> 08-13-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**

Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 2 Address: OGLETREE PASS ST ON HUGHES MOUNTAIN**

**City: COPPERAS COVE County: CORYELL State: TX**

**Lat (NAD83): 31-06-42.6 N Long (NAD83): 097-56-11.1 W ASR No.: Ground Elev: 387.0**

**Loc. 3 Address: 209 E AVE E**

**City: COPPERAS COVE County: CORYELL State: TX**

**Lat (NAD83): 31-07-24.6 N Long (NAD83): 097-54-12.1 W ASR No.: Ground Elev: 335.0**

**Loc. 4 Area of operation**

Operating within a 40.0 km radius around fixed location 2

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp (meters)	Ant. AAT (meters)	Construct Deadline Date
1	1	000154.8000000	FX1	1		20K0F3E	100.000				
2	1	000155.4150000	FB2	1		20K0F3E	40.000	60.000	35.0	0.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

### **8.4.3 Hamilton County Licenses**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HAMILTON GENERAL HOSPITAL

HAMILTON GENERAL HOSPITAL  
400 N BROWN ST  
HAMILTON, TX 76531

<b>Call Sign</b> WYF458	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0005889357

<b>Grant Date</b> 12-18-2001	<b>Effective Date</b> 02-01-2002	<b>Expiration Date</b> 01-30-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 400 N BROWN  
**City:** HAMILTON    **County:** HAMILTON    **State:** TX  
**Lat (NAD83):** 31-42-58.6 N    **Long (NAD83):** 098-07-55.1 W    **ASR No.:**    **Ground Elev:** 376.0

**Loc. 2 Area of operation**  
 Operating within a 48.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.34000000	FB	1		20K0F3E	100.000	75.000	61.0		
1	1	000163.25000000	FB	1	10	20K0F3E	100.000	75.000	61.0		
2	1	000155.34000000	MO	8		20K0F3E	100.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** HAMILTON GENERAL HOSPITAL

**Call Sign:** WYF458

**File Number:**

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 400 N BROWN

**City:** HAMILTON **County:** **State:** TX **Telephone Number:** (254)386-3151

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy

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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HICO INDEPENDENT SCHOOL DISTRICT

ATTN: NEIL WADE  
HICO INDEPENDENT SCHOOL DISTRICT  
PO BOX 218  
HICO, TX 76457-0218

<b>Call Sign</b> WQJQ879	<b>File Number</b>
<b>Radio Service</b> IG - Industrial/Business Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0004249314

<b>Grant Date</b> 11-28-2008	<b>Effective Date</b> 11-28-2008	<b>Expiration Date</b> 11-28-2018	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** 614 N Kirk St  
**City:** Hico **County:** HAMILTON **State:** TX  
**Lat (NAD83):** 31-59-12.7 N **Long (NAD83):** 098-02-00.5 W **ASR No.:** **Ground Elev:** 329.0
- Loc. 2 Area of operation**  
Operating within a 16.0 km radius around fixed location 1
- Loc. 4 Area of operation**  
Operating within a 16.0 km radius around 31-59-12.7 N, 098-02-00.5 W,  
Hico, HAMILTON county, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000463.3750000	FB2	1		11K2F3E	40.000	40.000	14.0	-2.1	11-28-2009
2	1	000463.3750000	MO	22		11K2F3E	45.000	45.000			11-28-2009
2	1	000468.3750000	MO	22		11K2F3E	45.000	45.000			11-28-2009

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Licensee Name: HICO INDEPENDENT SCHOOL DISTRICT

Call Sign: WQJQ879

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
4	1	000466.35000000	MO	22		11K2F3E	45.000	45.000			11-28-2009
4	1	000461.22500000	MO	22		11K2F3E	45.000	45.000			11-28-2009
4	1	000461.35000000	MO	22		11K2F3E	45.000	45.000			11-28-2009
4	1	000466.22500000	MO	22		11K2F3E	45.000	45.000			11-28-2009

Control Points

Control Pt. No. 1

Address: 614 N Kirk St

City: Hico County: HAMILTON State: TX Telephone Number: (254)796-2182

Associated Call Signs

Waivers/Conditions:

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HICO, CITY OF

ATTN: ANITA MUELLER  
HICO, CITY OF  
118 W FIRST ST  
PO BOX P.O. BOX 533  
HICO, TX 76457

<b>Call Sign</b> WQDH920	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669423

<b>Grant Date</b> 08-31-2005	<b>Effective Date</b> 08-31-2005	<b>Expiration Date</b> 08-31-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 400 Blk Chestnut St  
City: Hico County: HAMILTON State: TX  
Lat (NAD83): 31-59-06.0 N Long (NAD83): 098-01-14.0 W ASR No.: Ground Elev: 329.0
- Loc. 2** Area of operation  
Operating within a 40.0 km radius around fixed location 1
- Loc. 3** Address: 120 W First St  
City: Hico County: HAMILTON State: TX  
Lat (NAD83): 31-58-54.0 N Long (NAD83): 098-01-53.0 W ASR No.: Ground Elev: 306.0
- Loc. 4** Area of operation  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.04000000	FB	1		20K0F3E	50.000	90.000	21.0	9.1	08-31-2006
1	1	000158.85000000	FB2C	1		20K0F3E	50.000	90.000	21.0	9.1	08-31-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: HICO, CITY OF

Call Sign: WQDH920

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000154.04000000	MO	15		20K0F3E	50.000	100.000			08-31-2006
2	1	000154.95000000	MO	15		20K0F3E	50.000	100.000			08-31-2006
2	1	000155.07000000	MO	15		20K0F3E	50.000	100.000			08-31-2006
2	1	000158.85000000	MO	15		20K0F3E	50.000	100.000			08-31-2006
3	1	000154.04000000	FX1	1		20K0F3E	25.000	50.000	15.0	-23.3	08-31-2006
3	1	000155.07000000	FX1	1		20K0F3E	25.000	50.000	15.0	-23.3	08-31-2006
4	1	000154.04000000	FX1	2		20K0F3E	25.000	50.000			
4	1	000155.07000000	FX1	2		20K0F3E	25.000	50.000			

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**Control Points**

**Control Pt. No. 1**

Address: 120 W First St

City: Hico County: HAMILTON State: TX Telephone Number: (254)796-4620

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HICO, CITY OF

ATTN: ANITA T MUELLER  
HICO, CITY OF  
120 W FIRST ST  
PO BOX 533  
HICO, TX 76457

<b>Call Sign</b> WPIC579	<b>File Number</b> 0002176597
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669423

<b>Grant Date</b> 06-09-2005	<b>Effective Date</b> 06-09-2005	<b>Expiration Date</b> 08-18-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1**    **Address:** 120 W FIRST ST  
           **City:** HICO      **County:** HAMILTON      **State:** TX  
           **Lat (NAD83):** 31-58-54.5 N    **Long (NAD83):** 098-01-54.1 W    **ASR No.:** N/A    **Ground Elev:** 306.0
- Loc. 2**    **Address:** 101 UTILITY ST  
           **City:** HICO      **County:** HAMILTON      **State:** TX  
           **Lat (NAD83):** 31-58-40.5 N    **Long (NAD83):** 098-01-43.1 W    **ASR No.:** N/A    **Ground Elev:** 306.0
- Loc. 3**    **Area of operation**  
           Operating within a 40.0 km radius around fixed location 1
- Loc. 4**    **Address:** 1110 N. MAGNOLIA, HAMILTON COUNTY RD. NO. 242  
           **City:** HICO      **County:** HAMILTON      **State:** TX  
           **Lat (NAD83):** 31-59-50.9 N    **Long (NAD83):** 098-00-55.4 W    **ASR No.:**    **Ground Elev:** 338.0
- Loc. 5**    **Area of operation**  
           Operating within a 24.0 km radius around fixed location 4
- Loc. 6**    **Area of operation**  
           Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: HICO, CITY OF

Call Sign: WPIC579

File Number: 0002176597

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000158.92500000	FB	1	40	20K0F3E	45.000	113.000	15.0	0.0	
2	1	000158.92500000	FB	1	40	20K0F3E	50.000	150.000	16.0	0.0	
3	1	000158.92500000	MO	20		20K0F3E	45.000				
4	1	000158.92500000	FB2	1	40	20K0F3E	50.000	100.000	20.0	16.3	05-23-2004
5	1	000158.92500000	MO	25		20K0F3E	50.000	50.000			05-23-2004
5	1	000150.79000000	MO	25		20K0F3E	50.000	50.000			05-23-2004
6	1	000150.79000000	FX1	1		20K0F3E	50.000	50.000			

**Control Points**

**Control Pt. No. 1**

Address: 120 W. FIRST ST.

City: HICO County: HAMILTON State: TX Telephone Number: (254)796-4620

**Associated Call Signs**

**Waivers/Conditions:**

158.925 FB and FB2 are authorized on a secondary basis in accord with Rule 90.173(h).

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HAMILTON, CITY OF

ATTN: NATHAN DAVIS  
HAMILTON, CITY OF  
200 E MAIN ST  
HAMILTON, TX 76531

<b>Call Sign</b> WPEX620	<b>File Number</b> 0001991762
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669563

<b>Grant Date</b> 01-04-2005	<b>Effective Date</b> 01-04-2005	<b>Expiration Date</b> 03-21-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** .2 MI SW HWY 36 & 281  
**City:** HAMILTON    **County:** HAMILTON    **State:** TX  
**Lat (NAD83):** 31-42-07.6 N    **Long (NAD83):** 098-07-36.1 W    **ASR No.:** N/A    **Ground Elev:** 360.0
- Loc. 2 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX
- Loc. 3 Area of operation**  
Operating within a 24.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.98500000	FB2	1		20K0F3E	25.000	25.000	40.0		
2	1	000153.98000000	FX1	1		20K0F3E	10.000				
3	1	000153.98000000	MO	15		20K0F3E	35.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: HAMILTON, CITY OF

Call Sign: WPEX620

File Number: 0001991762

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000155.98500000	MO	15		20K0F3E	35.000				

**Control Points**

**Control Pt. No. 1**

Address: 200 E MAIN ST

City: HAMILTON County: HAMILTON State: TX Telephone Number: (254)386-8116

**Associated Call Signs**

**Waivers/Conditions:**

Authorization on a secondary basis.

(FB2)

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HAMILTON, COUNTY OF

ATTN: EMERGENCY MGMT  
HAMILTON, COUNTY OF  
RT 2 BOX 7M  
HAMILTON, TX 76531

<b>Call Sign</b> WPBN693	<b>File Number</b> 0001092208
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669548

<b>Grant Date</b> 11-16-2002	<b>Effective Date</b> 11-16-2002	<b>Expiration Date</b> 01-19-2013	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**

Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 2 Address:** .45 MI E OF ST HWY 36 1 MI NE OF COURTHOUSE

**City:** HAMILTON **County:** HAMILTON **State:** TX

**Lat (NAD83):** 31-42-54.6 N **Long (NAD83):** 098-08-07.1 W **ASR No.:** **Ground Elev:** 387.0

**Loc. 3 Area of operation**

Countywide: HAMILTON, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.8350000	FX1	1		20K0F3E	25.000				
2	1	000158.8200000	FB2	1	100	20K0F3E	110.000	145.000	73.0		
3	1	000155.8350000	MO	100		20K0F3E	45.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



**Licensee Name:** HAMILTON, COUNTY OF

**Call Sign:** WPBN693

**File Number:** 0001092208

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000158.82000000	MO	100		20K0F3E	45.000				

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**Control Points**

**Control Pt. No. 1**

**Address:** HAMILTON CTY SHERIFFS DEPT HWY 281 S

**City:** HAMILTON **County:** **State:** TX **Telephone Number:** (817)386-8128

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HAMILTON, CITY OF

ATTN: CITY SECRETARY  
HAMILTON, CITY OF  
200 E MAIN ST  
HAMILTON, TX 76531

<b>Call Sign</b> WNQS591	<b>File Number</b> 0002246525
<b>Radio Service</b> IG - Industrial/Business Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669563

<b>Grant Date</b> 04-14-2004	<b>Effective Date</b> 07-21-2005	<b>Expiration Date</b> 06-08-2014	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: E HWY 22 & COUNTRY RD 300  
City: HAMILTON County: HAMILTON State: TX  
Lat (NAD83): 31-42-17.6 N Long (NAD83): 098-05-08.1 W ASR No.: N/A Ground Elev: 325.0
- Loc. 2** Address: INT BOULDEN & HWY 36  
City: HAMILTON County: HAMILTON State: TX  
Lat (NAD83): 31-42-07.6 N Long (NAD83): 098-06-46.1 W ASR No.: N/A Ground Elev: 378.0
- Loc. 3** Address: W HWY 36 & COUNTRY RD 609  
City: GENTRYS MILL County: HAMILTON State: TX  
Lat (NAD83): 31-47-11.5 N Long (NAD83): 098-12-45.1 W ASR No.: N/A Ground Elev: 326.0
- Loc. 4** Address: PROCTOR LAKE 350 FT S OF SPILLWAY  
City: RPOCTOR County: COMANCHE State: TX  
Lat (NAD83): 31-58-03.5 N Long (NAD83): 098-29-10.2 W ASR No.: N/A Ground Elev: 360.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp (meters)	Ant. AAT (meters)	Construct Deadline Date
1	1	000451.4750000	FXO	1		5K60F2D	20.000	115.000	55.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: HAMILTON, CITY OF

Call Sign: WNQS591

File Number: 0002246525

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000451.47500000	FXO	1		5K60F2D	10.000	35.000	6.0		
3	1	000451.47500000	FXO	1		5K60F2D	20.000	135.000	37.0		
4	1	000451.47500000	FXO	1		5K60F2D	20.000	115.000	55.0		

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**Control Points**

**Control Pt. No. 1**

Address: HWY 22 & COUNTRY RD 300

City: HAMILTON County: State: TX Telephone Number: (817)386-8116

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: HAMILTON, COUNTY OF

ATTN: SHERIFF JOHNNY SLOUGH  
HAMILTON, COUNTY OF  
RT 2 BOX 7M  
HAMILTON, TX 76531

<b>Call Sign</b> KVJ788	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001669548

<b>Grant Date</b> 02-12-2002	<b>Effective Date</b> 09-27-2005	<b>Expiration Date</b> 02-14-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: .9 MI S OF ST 36 S OF COURTHOUSE  
City: HAMILTON County: HAMILTON State: TX  
Lat (NAD83): 31-41-42.6 N Long (NAD83): 098-08-01.1 W ASR No.: Ground Elev: 372.0
- Loc. 2** Address: .45 MI E STATE HWY 36 1 MI NE OF COURTHOUSE  
City: HAMILTON County: HAMILTON State: TX  
Lat (NAD83): 31-42-55.0 N Long (NAD83): 098-08-07.0 W ASR No.: 1050999 Ground Elev: 387.0
- Loc. 3** Area of operation  
Other: VIC:HAMILTON TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.3700000	FB	1		20K0F3E	110.000	125.000	37.0		
2	1	000155.5950000	FB2	1		20K0F3E 9K25F1E	110.000	450.000	85.0	121.4	
2	2	000154.2800000	FB	1		20K0F3E	110.000	200.000	82.0	115.0	09-27-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: HAMILTON, COUNTY OF

Call Sign: KVVJ788

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	2	000155.37000000	FB	1		20K0F3E	110.000	350.000	82.0	115.0	09-27-2006
3	1	000154.95000000	MO	20		20K0F3E	110.000				
3	1	000155.07000000	MO	20		20K0F3E 9K25F1E	110.000	220.000			
3	1	000155.59500000	MO	20		20K0F3E 9K25F1E	110.000	220.000			
3	1	000154.28000000	MO	20		20K0F3E	110.000	110.000			09-27-2006

Control Points

Control Pt. No. 1

Address: SHERIFFS DEPT US HWY 281 S

City: HAMILTON County: HAMILTON State: TX Telephone Number: (254)386-8128

Associated Call Signs

Waivers/Conditions:

NONE

#### **8.4.4 Lampasas County Licenses**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LAMPASAS, CITY OF

ATTN: POLICE CHIEF  
LAMPASAS, CITY OF  
301 EAST 4TH STREET  
LAMPASAS, TX 76550

<b>Call Sign</b> WQDH530	<b>File Number</b> 0002473014
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 31PWAP36020211	

**FCC Registration Number (FRN):** 0012805214

<b>Grant Date</b> 08-29-2005	<b>Effective Date</b> 02-10-2006	<b>Expiration Date</b> 08-29-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** 301 EAST 4TH STREET  
**City:** LAMPASAS    **County:** LAMPASAS    **State:** TX  
**Lat (NAD83):** 31-03-52.9 N    **Long (NAD83):** 098-10-47.5 W    **ASR No.:**    **Ground Elev:** 315.0
- Loc. 2 Area of operation**  
Operating within a 15.0 km radius around fixed location 1
- Loc. 3 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.67000000	FB2	1		20K0F3E	100.000	150.000	20.0	-24.2	08-29-2006
2	1	000153.96500000	MO	60		20K0F3E	100.000	100.000			08-29-2006
2	1	000155.67000000	MO	60		20K0F3E	100.000	100.000			08-29-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** LAMPASAS, CITY OF

**Call Sign:** WQDH530

**File Number:** 0002473014

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000153.96500000	FX1	1		20K0F3E	25.000	25.000			

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**Control Points**

**Control Pt. No. 1**

**Address:** 301 EAST 4TH STREET

**City:** LAMPASAS **County:** LAMPASAS **State:** TX **Telephone Number:** (512)556-3644

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LOMETA VOLUNTEER FIRE DEPARTMENT

ATTN: CHIEF ROBERT ODOM  
LOMETA VOLUNTEER FIRE DEPARTMENT  
PO BOX 246  
LOMETA, TX 76853

<b>Call Sign</b> WQDA249	<b>File Number</b> 0004093589
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0011119559

<b>Grant Date</b> 07-06-2005	<b>Effective Date</b> 01-16-2010	<b>Expiration Date</b> 07-06-2015	<b>Print Date</b> 01-16-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 320 MAIN ST  
**City:** LOMETA **County:** LAMPASAS **State:** TX  
**Lat (NAD83):** 31-13-01.6 N **Long (NAD83):** 098-23-25.1 W **ASR No.:** **Ground Elev:** 451.0

**Loc. 2 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.22000000	FB	1		20K0F3E	100.000	300.000	18.0	52.3	07-06-2006
1	1	000154.28000000	FB	1		20K0F3E	100.000	300.000	18.0	52.3	07-06-2006
2	1	000154.22000000	MO	15		20K0F3E	45.000	45.000			07-06-2006
2	1	000154.28000000	MO	10		20K0F3E	45.000	45.000			07-06-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** LOMETA VOLUNTEER FIRE DEPARTMENT

**Call Sign:** WQDA249

**File Number:** 0004093589

**Print Date:** 01-16-2010

**Control Points**

**Control Pt. No. 2**

**Address:** 106 E SON SABA

**City:** LOMETA **County:** LAMPASAS **State:** TX **Telephone Number:** (512)752-3333

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**Associated Call Signs**

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**Waivers/Conditions:**

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LOMETA, CITY OF

ATTN: PAT IVEY  
LOMETA, CITY OF  
PO BOX 280  
LOMETA, TX 76853

<b>Call Sign</b> WPFK468	<b>File Number</b> 0001784031
<b>Radio Service</b> IG - Industrial/Business Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001668110

<b>Grant Date</b> 08-17-2004	<b>Effective Date</b> 08-17-2004	<b>Expiration Date</b> 07-26-2014	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 3500 E OF 183 AND 507  
City: LOMETA County: LAMPASAS State: TX  
Lat (NAD83): 31-12-57.6 N Long (NAD83): 098-22-59.1 W ASR No.: N/A Ground Elev: 483.0
- Loc. 2** Address: INT OF 281 AND 509  
City: LOMETA County: LAMPASAS State: TX  
Lat (NAD83): 31-12-56.6 N Long (NAD83): 098-23-05.1 W ASR No.: N/A Ground Elev: 457.0
- Loc. 3** Address: 3500 NW OF 183 AND HWY 281  
City: LAMPASAS County: LAMPASAS State: TX  
Lat (NAD83): 31-05-24.6 N Long (NAD83): 098-11-49.1 W ASR No.: N/A Ground Elev: 335.0
- Loc. 4** Address: 4500 N OF 183 AND 507  
City: LOMETA County: LAMPASAS State: TX  
Lat (NAD83): 31-13-35.6 N Long (NAD83): 098-23-42.1 W ASR No.: N/A Ground Elev: 495.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000456.5750000	FXO	1		6K00F2D	5.000	20.000	9.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: LOMETA, CITY OF

Call Sign: WPFK468

File Number: 0001784031

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000456.57500000	FXO	1		6K00F2D	5.000	20.000	8.0		
3	1	000456.57500000	FXO	1		6K00F2D	5.000	20.000	9.0		
4	1	000456.57500000	FXO	1		6K00F2D	5.000	20.000	9.0		

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**Control Points**

**Control Pt. No. 1**

Address: CY HALL 107 W MAIN

City: LOMETA County: State: TX Telephone Number: (512)752-3331

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: METROPLEX HOSPITAL

ATTN: RENE HERNANDEZ  
METROPLEX HOSPITAL  
2201 S CLEAR CREEK ROAD  
KILLEEN, TX 76549

<b>Call Sign</b> WPCB414	<b>File Number</b> 0001456304
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001686070

<b>Grant Date</b> 02-11-2003	<b>Effective Date</b> 09-20-2003	<b>Expiration Date</b> 04-14-2013	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**

Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 2 Address:** 9 MI NW ON US183 AT CR 51

**City:** LAMPASAS **County:** LAMPASAS **State:** TX

**Lat (NAD83):** 31-08-45.6 N **Long (NAD83):** 098-19-31.1 W **ASR No.:** **Ground Elev:** 476.0

**Loc. 3 Area of operation**

Operating within a 121.0 km radius around fixed location 2

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000468.15000000	FX1	2		20K0F3E	25.000				
2	1	000463.15000000	FB2	1		20K0F3E	100.000	398.000	59.0	0.0	
3	1	000467.95000000	MO	6		20K0F3E	100.000				
3	1	000467.97500000	MO	6		20K0F3E	100.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: METROPLEX HOSPITAL

Call Sign: WPCB414

File Number: 0001456304

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000468.00000000	MO	6		20K0F3E	100.000				
3	1	000468.02500000	MO	6		20K0F3E	100.000				
3	1	000468.05000000	MO	6		20K0F3E	100.000				
3	1	000468.07500000	MO	6		20K0F3E	100.000				
3	1	000468.10000000	MO	6		20K0F3E	100.000				
3	1	000468.12500000	MO	6		20K0F3E	100.000				
3	1	000468.15000000	MO	6		20K0F3E	100.000				
3	1	000468.17500000	MO	6		20K0F3E	100.000				

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**Control Points**

**Control Pt. No. 1**

Address: 901 S KEY AVE

City: LAMPASAS County: State: TX Telephone Number: (210)491-5906

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: KEMPNER VOLUNTEER FIRE DEPT. INC

ATTN: BERNARD D. BROEKER, JR.  
KEMPNER VOLUNTEER FIRE DEPT. INC  
S PECAN ST  
PO BOX 136  
KEMPNER, TX 76539

<b>Call Sign</b> WNZQ717	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001692193

<b>Grant Date</b> 04-17-2002	<b>Effective Date</b> 04-17-2002	<b>Expiration Date</b> 06-04-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** .5 MI S OF HWY 190 AT FM 2313  
**City:** KEMPNER **County:** LAMPASAS **State:** TX  
**Lat (NAD83):** 31-04-37.6 N **Long (NAD83):** 098-00-07.1 W **ASR No.:** **Ground Elev:** 267.0
- Loc. 2 Area of operation**  
Operating within a 24.0 km radius around fixed location 1
- Loc. 3 Address:** FROM COPPERAS COVE LAMPASAS CTY 6.47 KM BRG 227.1  
**City:** RUARL **County:** LAMPASAS **State:** TX  
**Lat (NAD83):** 31-05-06.0 N **Long (NAD83):** 097-57-08.0 W **ASR No.:** 1051180 **Ground Elev:** 394.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.28000000	FB	1	20	20K0F3E	50.000	130.000	21.0		
1	1	000154.38500000	FB	1	20	20K0F3E	50.000	130.000	21.0		
2	1	000154.28000000	MO	30		20K0F3E	50.000	50.000			

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: KEMPNER VOLUNTEER FIRE DEPT. INC

Call Sign: WNZQ717

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000154.38500000	MO	30		20K0F3E	50.000	50.000			
2	1	000150.77500000	MO	30		20K0F3E	50.000	50.000			03-05-2003
2	1	000154.20500000	MO	30		20K0F3E	50.000	50.000			03-05-2003
3	1	000154.20500000	FB2	1		20K0F3E	25.000	35.000	30.0	124.4	03-05-2003

Control Points

Control Pt. No. 1

Address: 5/10 MI S US HWY 190, ON S PECAN ST

City: KEMPNER County: LAMPASAS State: TX Telephone Number: (512)932-3993

Associated Call Signs

Waivers/Conditions:

(154.280)



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CITY OF LAMPASAS FIRE DEPARTMENT

ATTN: CITY OF LAMPASAS  
CITY OF LAMPASAS FIRE DEPARTMENT  
312 E 3RD STREET  
PO BOX 666  
LAMPASAS, TX 76550

<b>Call Sign</b> WNRO730	<b>File Number</b> 0001613096
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001668441

<b>Grant Date</b> 05-19-2004	<b>Effective Date</b> 05-19-2004	<b>Expiration Date</b> 03-24-2014	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 9 MI NW ON US183 AT CR 51  
City: LAMPASAS County: LAMPASAS State: TX  
Lat (NAD83): 31-08-45.6 N Long (NAD83): 098-19-31.1 W ASR No.: N/A Ground Elev: 476.0
- Loc. 2** Address: COR OF 4TH ST & MAIN ST  
City: LAMPASAS County: LAMPASAS State: TX  
Lat (NAD83): 31-03-49.6 N Long (NAD83): 098-10-49.1 W ASR No.: N/A Ground Elev: 311.0
- Loc. 3** Area of operation  
Countywide: LAMPASAS, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.3250000	FB2	1		20K0F3E	110.000	188.000	47.0		
2	1	000151.2050000	FX1	1		20K0F3E	110.000	375.000	14.0		
2	1	000154.3250000	FBS	1		20K0F3E	110.000	316.000	14.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CITY OF LAMPASAS FIRE DEPARTMENT

Call Sign: WNRO730

File Number: 0001613096

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000151.20500000	MO	45		20K0F3E	110.000				
3	1	000154.28000000	MO	45		20K0F3E	110.000				
3	1	000154.32500000	MO	45		20K0F3E	110.000				

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Control Points

Control Pt. No. 1

Address: 4TH & MAIN ST

City: LAMPASAS County: State: TX Telephone Number: (512)556-3446

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Associated Call Signs

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Waivers/Conditions:

NONE

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**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LAMPASAS INDEPENDENT SCHOOL DISTRICT

ATTN: J D BUTTS  
LAMPASAS INDEPENDENT SCHOOL DISTRICT  
207 W 8TH ST  
LAMPASAS, TX 76550

<b>Call Sign</b> WNLV220	<b>File Number</b> 0004535515
<b>Radio Service</b> IG - Industrial/Business Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 20101215145324	

FCC Registration Number (FRN): 0004542122

<b>Grant Date</b> 07-18-2002	<b>Effective Date</b> 02-07-2011	<b>Expiration Date</b> 09-25-2012	<b>Print Date</b> 02-08-2011
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** .8 KM E GEORGETOWN RD & 1.2 KM S HWY 190  
**City:** LAMPASAS    **County:** LAMPASAS    **State:** TX  
**Lat (NAD83):** 31-03-18.0 N    **Long (NAD83):** 098-09-23.0 W    **ASR No.:** 1050995    **Ground Elev:** 338.0
- Loc. 2 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX
- Loc. 3 Area of operation**  
Operating within a 32.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000463.22500000	FB2C	1		11K2F3E 20K0F3E	100.000	148.000	49.0	31.0	
1	1	000463.37500000	FB2	1		11K2F3E 20K0F3E	40.000	50.000	49.0	31.0	
1	2	000461.35000000	FB2	1		11K2F3E 20K0F3E	100.000	278.000	85.0	64.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: LAMPASAS INDEPENDENT SCHOOL

Call Sign: WNLV220

File Number: 0004535515

Print Date: 02-08-2011

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000466.35000000	FX1	2		11K2F3E 20K0F3E	25.000	25.000			
2	1	000468.22500000	FX1	2		11K2F3E 20K0F3E	25.000	25.000			
2	1	000468.37500000	FX1	2		11K2F3E 20K0F3E	25.000	25.000			
3	1	000461.35000000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000463.22500000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000463.37500000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000466.35000000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000468.22500000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000468.37500000	MO	125		11K2F3E 20K0F3E	40.000	40.000			
3	1	000456.32500000	MO	125		11K2F3E 20K0F3E	40.000	40.000			09-19-2002

**Control Points**

**Control Pt. No. 1**

Address: 207 W 8TH ST

City: LAMPASAS County: LAMPASAS State: TX Telephone Number: (512)556-2035

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: COPPERAS COVE, CITY OF

COPPERAS COVE, CITY OF  
202 S 4TH ST  
COPPERAS COVE, TX 76522

<b>Call Sign</b> KVJ751	<b>File Number</b> 0002206304
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001664630

<b>Grant Date</b> 06-18-2005	<b>Effective Date</b> 06-18-2005	<b>Expiration Date</b> 08-13-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**

Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 2 Address: OGLETREE PASS ST ON HUGHES MOUNTAIN**

**City: COPPERAS COVE County: CORYELL State: TX**

**Lat (NAD83): 31-06-42.6 N Long (NAD83): 097-56-11.1 W ASR No.: Ground Elev: 387.0**

**Loc. 3 Address: 209 E AVE E**

**City: COPPERAS COVE County: CORYELL State: TX**

**Lat (NAD83): 31-07-24.6 N Long (NAD83): 097-54-12.1 W ASR No.: Ground Elev: 335.0**

**Loc. 4 Area of operation**

Operating within a 40.0 km radius around fixed location 2

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.8000000	FX1	1		20K0F3E	100.000				
2	1	000155.4150000	FB2	1		20K0F3E	40.000	60.000	35.0	0.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: COPPERAS COVE, CITY OF

Call Sign: KVVJ751

File Number: 0002206304

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000155.37000000	FB	1		20K0F3E	50.000	50.000	15.0	0.0	
3	1	000155.41500000	FB	1		20K0F3E	50.000	50.000	15.0	0.0	
3	1	000156.15000000	FX1	1		20K0F3E	25.000	50.000	15.0	0.0	
4	1	000154.80000000	MO	111		20K0F3E	100.000				
4	1	000154.95000000	MO	111		20K0F3E	100.000				
4	1	000155.41500000	MO	111		20K0F3E	100.000				
4	1	000156.15000000	MO	111		20K0F3E	100.000				

**Control Points**

**Control Pt. No. 1**

Address: 209 E AVE E

City: COPPERAS COVE County: State: TX Telephone Number: (254)547-8222

**Associated Call Signs**

**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LAMPASAS, COUNTY OF

ATTN: SHERIFFS GORDON MORRIS  
LAMPASAS, COUNTY OF  
410 E 4TH ST  
PO BOX 465  
LAMPASAS, TX 76550

<b>Call Sign</b> KNIE800	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

**FCC Registration Number (FRN):** 0001668417

<b>Grant Date</b> 12-31-2003	<b>Effective Date</b> 01-12-2006	<b>Expiration Date</b> 03-16-2014	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**

Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 2 Address:** 9 MI NW OF TOWN ON US 183 AT CR 51

**City:** LAMPASAS      **County:** LAMPASAS      **State:** TX

**Lat (NAD83):** 31-08-22.1 N    **Long (NAD83):** 098-18-59.2 W    **ASR No.:**    **Ground Elev:** 485.2

**Loc. 4 Area of operation**

Countywide: LAMPASAS, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.89000000	FX1	1		20K0F3E	50.000	50.000			
2	1	000155.37000000	FB	1		20K0F3E	100.000	200.000	43.0	118.9	
2	2	000155.56500000	FB2	1		20K0F3E 9K25F1E	110.000	350.000	52.0	127.9	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: LAMPASAS, COUNTY OF

Call Sign: KNIE800

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	3	000154.28000000	FB	1		20K0F3E	110.000	250.000	55.0	91.0	01-12-2007
<b>Frequency 000154.28000000 Special Condition</b> For intersystem operations only.											
4	1	000154.89000000	MO	30		20K0F3E 9K25F1E	110.000	220.000			
4	1	000154.95000000	MO	30		20K0F3E	100.000	150.000			
4	1	000154.28000000	MO	30		20K0F3E	110.000	110.000			01-12-2007
<b>Frequency 000154.28000000 Special Condition</b> For intersystem operations only.											

**Control Points**

**Control Pt. No. 1**

Address: 410 East 4th Street

City: LAMPASAS County: State: TX Telephone Number: (512)556-8255

**Associated Call Signs**

**Waivers/Conditions:**

NONE



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: LAMPASAS, CITY OF

ATTN: CHIEF TIM ANGERMANN  
LAMPASAS, CITY OF  
301 E 4TH  
LAMPASAS, TX 76550

<b>Call Sign</b> KIU807	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0008375677

<b>Grant Date</b> 02-05-2003	<b>Effective Date</b> 09-11-2009	<b>Expiration Date</b> 02-23-2013	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** 312 E THIRD  
**City:** LAMPASAS    **County:** LAMPASAS    **State:** TX  
**Lat (NAD83):** 31-03-50.6 N    **Long (NAD83):** 098-10-45.1 W    **ASR No.:** N/A    **Ground Elev:** 313.0
- Loc. 2 Area of operation**  
Operating within a 20.0 km radius around fixed location 3
- Loc. 3 Address:** .8 KM E GEORGETOWN RD & 1.2 KM S HWY 190  
**City:** LAMPASAS    **County:** LAMPASAS    **State:** TX  
**Lat (NAD83):** 31-03-18.0 N    **Long (NAD83):** 098-09-23.0 W    **ASR No.:** 1050995    **Ground Elev:** 338.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.02500000	FB	1		20K0F3E	50.000	72.000	12.0		
2	1	000154.02500000	MO	20		20K0F3E	40.000	40.000			
3	1	000154.02500000	FB	1		20K0F3E	50.000	72.000	85.0	70.0	06-25-2010

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** LAMPASAS, CITY OF

**Call Sign:** KIU807

**File Number:**

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 312 E THIRD

**City:** LAMPASAS **County:** LAMPASAS **State:** TX **Telephone Number:** (512)556-3641

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy

### **8.4.5 Milam County Licenses**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: GAUSE VOLUNTEER FIRE DEPT

ATTN: GAUSE VFD  
GAUSE VOLUNTEER FIRE DEPT  
110 E. GAUSE BLVD  
PO BOX P.O. BOX 203  
GAUSE, TX 77857

<b>Call Sign</b> WQDT666	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0013644885

<b>Grant Date</b> 10-27-2005	<b>Effective Date</b> 10-27-2005	<b>Expiration Date</b> 10-27-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** 110 E. GAUSE BLVD.  
**City:** GAUSE     **County:** MILAM     **State:** TX  
**Lat (NAD83):** 30-47-02.3 N   **Long (NAD83):** 096-43-04.0 W   **ASR No.:**   **Ground Elev:** 109.0
- Loc. 2 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000158.79000000	FB2	1		11K2F3E 20K0F3E	50.000	60.800	18.7	28.4	10-27-2006
2	1	000153.96500000	MO	7		11K2F3E 20K0F3E	45.000	54.700			10-27-2006
2	1	000153.96500000	MO	17		11K2F3E 20K0F3E	5.000	5.000			10-27-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** GAUSE VOLUNTEER FIRE DEPT

**Call Sign:** WQDT666

**File Number:**

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** PO BOX 203/ 110 E. GAUSE BLVD

**City:** GAUSE **County:** MILAM **State:** TX **Telephone Number:** (979)280-0890

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy

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Federal Communications Commission
Public Safety and Homeland Security Bureau

RADIO STATION AUTHORIZATION

LICENSEE: TEXAS, STATE OF; TEXAS DEPT. OF TRANSPORTATION

ATTN: PAUL Z. GILBERT
TEXAS, STATE OF; TEXAS DEPT. OF TRANSPORTATION
125 E. 11TH STREET
AUSTIN, TX 78701-2483

Table with 2 columns: Call Sign (WQBD650), File Number, Radio Service (PW - Public Safety Pool, Conventional), Regulatory Status (PMRS), Frequency Coordination Number.

FCC Registration Number (FRN): 0001672310

Table with 4 columns: Grant Date (09-23-2004), Effective Date (12-17-2009), Expiration Date (09-23-2014), Print Date.

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1 Address: US84, 610 M SW OF US75 INT... City: FAIRFIELD County: FREESTONE State: TX... Lat (NAD83): 31-43-23.0 N Long (NAD83): 096-10-17.0 W ASR No.: 1049957 Ground Elev: 141.0
Loc. 2 Area of operation Operating within a 64.4 km radius around fixed location 1
Loc. 3 Address: US79, 0.4 KM E OF US75... City: BUFFALO County: LEON State: TX... Lat (NAD83): 31-28-18.6 N Long (NAD83): 096-02-46.9 W ASR No.: Ground Elev: 108.0
Loc. 4 Area of operation Operating within a 64.4 km radius around fixed location 3
Loc. 5 Address: 0.4 KM SW INT US190 & SH6... City: HEARNE County: ROBERTSON State: TX... Lat (NAD83): 30-53-37.0 N Long (NAD83): 096-36-10.0 W ASR No.: 1051338 Ground Elev: 104.0
Loc. 6 Area of operation Operating within a 64.4 km radius around fixed location 5
Loc. 7 Address: US190 2.6 KM N OF SH36... City: CAMERON County: MILAM State: TX... Lat (NAD83): 30-52-36.7 N Long (NAD83): 096-58-23.9 W ASR No.: 1051339 Ground Elev: 127.0
Loc. 8 Area of operation Operating within a 64.4 km radius around fixed location 7

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: TEXAS, STATE OF; TEXAS DEPT. OF

Call Sign: WQBD650

File Number:

Print Date:

Fixed Location Address or Mobile Area of Operation

Loc. 9 Address: 2157 SH 36 SOUTH  
City: CALDWELL County: BURLESON State: TX  
Lat (NAD83): 30-30-36.3 N Long (NAD83): 096-40-51.7 W ASR No.: 1242881 Ground Elev: 113.7

Loc. 10 Area of operation  
Operating within a 64.0 km radius around fixed location 9

Loc. 11 Area of operation  
Land Mobile Control Station meeting the 6.1 Meter Rule: FREESTONE county, TX

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000151.07000000	FB2	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	80.0	95.3	09-23-2009
2	1	000151.07000000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
2	1	000156.12000000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
3	1	000151.01750000	FB2	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	58.0	56.8	09-23-2009
4	1	000151.01750000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
4	1	000156.12750000	MO	425		11K2F1D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
5	1	000151.03250000	FB2	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	51.8	54.0	09-23-2009

Licensee Name: TEXAS, STATE OF; TEXAS DEPT. OF

Call Sign: WQBD650

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
6	1	000151.03250000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
6	1	000156.11250000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
7	1	000151.01000000	FB	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	32.0	47.5	09-23-2009
7	1	000155.06250000	FB2	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	32.0	47.5	12-17-2010
8	1	000151.01000000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
8	1	000159.00000000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
8	1	000155.06250000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000			12-17-2010
8	1	000159.14250000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000			12-17-2010
9	1	000151.13000000	FB	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	59.4	69.7	09-23-2009



Licensee Name: TEXAS, STATE OF; TEXAS DEPT. OF

Call Sign: WQBD650

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
9	1	000155.73750000	FB2	1		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000	59.4	69.7	12-17-2010
10	1	000159.00750000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
10	1	000151.13000000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	110.000			09-23-2009
10	1	000155.73750000	MO	425		11K2F2D 11K2F3E 8K10F1D 8K10F1E	110.000	250.000			12-17-2010
11	1	000159.14250000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			
11	1	000156.11250000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			
11	1	000156.12750000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			
11	1	000153.79250000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			
11	1	000156.12000000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			

Licensee Name: TEXAS, STATE OF; TEXAS DEPT. OF

Call Sign: WQBD650

File Number:

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
11	1	000159.00750000	FX1	20		11K2F2D 11K2F3E 8K10F1D 8K10F1E	50.000	100.000			

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Control Points

Control Pt. No. 1

Address: 1300 N TEXAS AVE

City: BRYAN County: BRAZOS State: TX Telephone Number: (979)778-9731

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Associated Call Signs

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Waivers/Conditions:

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: ROCKDALE, CITY OF

ATTN: CITY MANAGER  
ROCKDALE, CITY OF  
PO BOX 586  
ROCKDALE, TX 76567

<b>Call Sign</b> WPMC487	<b>File Number</b> 0001307089
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0008928921

<b>Grant Date</b> 08-01-2003	<b>Effective Date</b> 08-01-2003	<b>Expiration Date</b> 05-29-2013	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 140 W CAMERON ST  
City: ROCKDALE County: MILAM State: TX  
Lat (NAD83): 30-39-18.7 N Long (NAD83): 097-00-07.9 W ASR No.: N/A Ground Elev: 142.0
- Loc. 2** Address: HWY 79 W  
City: ROCKDALE County: MILAM State: TX  
Lat (NAD83): 30-38-32.7 N Long (NAD83): 097-02-14.0 W ASR No.: Ground Elev: 162.0
- Loc. 3** Area of operation  
Operating within a 32.0 km radius around fixed location 2

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000458.1750000	FX1	1		20K0F3E	25.000	25.000	6.0	11.0	
1	2	000155.2800000	FBS	1	40	20K0F3E	50.000	104.000	29.0	34.0	
2	1	000453.1750000	FB2	1	40	20K0F3E	20.000	50.000	15.0	42.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: ROCKDALE, CITY OF

Call Sign: WPMC487

File Number: 0001307089

Print Date:

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	2	000155.28000000	FB	1	40	20K0F3E	110.000	184.000	77.0	103.0	
3	1	000155.28000000	MO	30		20K0F3E	45.000	45.000			
3	1	000453.17500000	MO	30		20K0F3E	25.000	25.000			
3	1	000458.17500000	MO	30		20K0F3E	25.000	25.000			

Control Points

Control Pt. No. 1

Address: 140 W CAMERON ST

City: ROCKDALE County: State: TX Telephone Number: (512)446-3436

Associated Call Signs

Waivers/Conditions:

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: THORNDALE, CITY OF

ATTN: THORNDALE VOLUNTEER FIRE DEPARTMENT  
THORNDALE, CITY OF  
PO BOX 308  
THORNDALE, TX 76577

<b>Call Sign</b> WPKL733	<b>File Number</b> 0004389368
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 31PWAP30021966	

FCC Registration Number (FRN): 0001666130

<b>Grant Date</b> 07-08-2002	<b>Effective Date</b> 11-22-2010	<b>Expiration Date</b> 04-07-2012	<b>Print Date</b> 11-23-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** HWY 79 E  
**City:** THORNDALE     **County:** MILAM     **State:** TX  
**Lat (NAD83):** 30-36-33.7 N     **Long (NAD83):** 097-12-54.0 W     **ASR No.:**     **Ground Elev:** 135.0

**Loc. 3 Area of operation**  
Operating within a 32.0 km radius around fixed location 1

**Loc. 4 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000158.83500000	FB2	1	40	11K0F3E 11K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	50.000	93.000	43.0	54.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: THORNDALE, CITY OF

Call Sign: WPKL733

File Number: 0004389368

Print Date: 11-23-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000155.02500000	MO	75		11K0F3E 11K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	50.000	100.000			
4	1	000155.02500000	FX1	3		11K0F3E 11K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	50.000	100.000			

Control Points

Control Pt. No. 1

Address: 105 N MAIN ST

City: THORNDALE County: MILAM State: TX Telephone Number: (512)898-2523

Associated Call Signs

Waivers/Conditions:

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: ROCKDALE, CITY OF

ATTN: UTILITIES DEPT CITY MANAGER  
ROCKDALE, CITY OF  
PO BOX 586  
ROCKDALE, TX 76567

<b>Call Sign</b> WPIC811	<b>File Number</b> 0004320715
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001667047

<b>Grant Date</b> 07-02-2005	<b>Effective Date</b> 07-14-2010	<b>Expiration Date</b> 08-22-2015	<b>Print Date</b> 07-14-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 140 W CAMERON ST  
**City:** ROCKDALE **County:** MILAM **State:** TX  
**Lat (NAD83):** 30-39-19.7 N **Long (NAD83):** 097-00-07.9 W **ASR No.:** N/A **Ground Elev:** 142.0

**Loc. 2 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000159.12000000	FB	1		20K0F3E	50.000	74.000	15.0	0.0	
2	1	000159.12000000	MO	15		20K0F3E	50.000	50.000			

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** ROCKDALE, CITY OF

**Call Sign:** WPIC811

**File Number:** 0004320715

**Print Date:** 07-14-2010

**Control Points**

**Control Pt. No. 1**

**Address:** CITY OFFICES 140 W CAMERON ST

**City:** ROCKDALE **County:** MILAM **State:** TX **Telephone Number:** (512)446-2511

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: ROCKDALE, CITY OF

ATTN: FIRE DEPT CITY MANAGER  
ROCKDALE, CITY OF  
PO BOX 586  
ROCKDALE, TX 76567

<b>Call Sign</b> WPHP675	<b>File Number</b> 0004320714
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001667047

<b>Grant Date</b> 03-25-2005	<b>Effective Date</b> 07-14-2010	<b>Expiration Date</b> 06-20-2015	<b>Print Date</b> 07-14-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: HWY 79 W  
City: ROCKDALE County: MILAM State: TX  
Lat (NAD83): 30-38-32.7 N Long (NAD83): 097-02-14.0 W ASR No.: Ground Elev: 162.0  
Location 1 Special Condition  
ANTENNA TO USE 8 DEGREES DOWNTILT TO THE EAST.
- Loc. 2** Address: 140 W CAMERON ST  
City: ROCKDALE County: MILAM State: TX  
Lat (NAD83): 30-39-18.7 N Long (NAD83): 097-00-07.9 W ASR No.: N/A Ground Elev: 142.0
- Loc. 3** Address: CORNER OF BELL AND WILCOX ST  
City: ROCKDALE County: MILAM State: TX  
Lat (NAD83): 30-39-14.7 N Long (NAD83): 097-00-24.9 W ASR No.: N/A Ground Elev: 137.0
- Loc. 4** Area of operation  
Countywide: MILAM, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp (meters)	Ant. AAT (meters)	Construct Deadline Date
1	1	000154.3700000	FB2	1	45	20K0F3E	110.000	144.000	77.0		

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: ROCKDALE, CITY OF

Call Sign: WPHP675

File Number: 0004320714

Print Date: 07-14-2010

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000153.77000000	FX1	1		20K0F3E	10.000	20.000	30.0		
2	1	000154.37000000	FB	1	45	20K0F3E	10.000	20.000	30.0		
3	1	000153.77000000	FX1	1		20K0F3E	25.000	50.000	6.0		
3	1	000154.37000000	FB	1	45	20K0F3E	25.000	50.000	6.0		
4	1	000153.77000000	MO	40		20K0F3E	50.000	50.000			
4	1	000153.83000000	MO	40		20K0F3E	50.000	50.000			
4	1	000154.28000000	MO	40		20K0F3E	50.000	50.000			
4	1	000154.37000000	MO	40		20K0F3E	50.000	50.000			

**Control Points**

**Control Pt. No. 2**

Address: 140 W Cameron Ave

City: Rockdale County: MILAM State: TX Telephone Number: (512)446-3436

**Associated Call Signs**

**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CAMERON, CITY OF

ATTN: CITY MANAGER  
CAMERON, CITY OF  
PO BOX 833  
CAMERON, TX 76520

<b>Call Sign</b> WPGU678	<b>File Number</b> 0004000151
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 091007001091	

FCC Registration Number (FRN): 0001671338

<b>Grant Date</b> 01-07-2005	<b>Effective Date</b> 10-20-2009	<b>Expiration Date</b> 03-23-2015	<b>Print Date</b> 10-21-2009
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 1200 E GILLIS ST  
City: CAMERON County: MILAM State: TX  
Lat (NAD83): 30-50-43.7 N Long (NAD83): 096-58-10.9 W ASR No.: N/A Ground Elev: 104.0
- Loc. 2** Address: 308 SOUTH HOUSTON ST  
City: CAMERON County: MILAM State: TX  
Lat (NAD83): 30-50-54.7 N Long (NAD83): 096-58-41.9 W ASR No.: N/A Ground Elev: 122.0
- Loc. 3** Area of operation  
Operating within a 16.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000173.31250000	FXO	1		5K60F9W	1.000	8.300	6.0		
2	1	000153.86000000	FB	1		20K0F3E	45.000	55.300	15.0		
3	1	000153.86000000	MO	9		20K0F3E	45.000	45.000			

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** CAMERON, CITY OF

**Call Sign:** WPGU678

**File Number:** 0004000151

**Print Date:** 10-21-2009

**Control Points**

**Control Pt. No. 1**

**Address:** 308 SOUTH HOUSTON ST

**City:** CAMERON **County:** MILAM **State:** TX **Telephone Number:** (817)697-6646

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**Associated Call Signs**

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**Waivers/Conditions:**

Authorization on a secondary basis.

(153.860 FB)

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: THORNDALE, CITY OF

THORNDALE, CITY OF  
PO BOX 308  
THORNDALE, TX 76577

<b>Call Sign</b> WPDZ652	<b>File Number</b> 0004382690
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 31PWAP30021965	

FCC Registration Number (FRN): 0001666130

<b>Grant Date</b> 10-16-2003	<b>Effective Date</b> 11-12-2010	<b>Expiration Date</b> 01-03-2014	<b>Print Date</b> 11-13-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 105 N MAIN ST  
**City:** THORNDALE **County:** MILAM **State:** TX  
**Lat (NAD83):** 30-36-49.7 N **Long (NAD83):** 097-12-21.0 W **ASR No.:** **Ground Elev:** 138.0

**Loc. 2 Area of operation**  
Operating within a 32.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.9850000	FB	1		11K0F3E 11K2F7D 14K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	25.000	40.000	12.0	11.0	

**Frequency 000155.9850000 Special Condition**  
Authorization on a secondary basis.

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: THORNDALE, CITY OF

Call Sign: WPDZ652

File Number: 0004382690

Print Date: 11-13-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000155.98500000	MO	25		11K0F3E 11K2F7D 14K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	25.000	50.000			
2	1	000155.98500000	MO3	2		11K0F3E 11K2F7D 14K2F7D 14K4F1D 20K0F3E 7K20F1D 8K10F1D 8K10F1E	50.000	50.000			11-12-2011

Control Points

Control Pt. No. 1

Address: 105 N MAIN ST

City: THORNDALE County: State: TX Telephone Number: (512)898-2523

Associated Call Signs

Waivers/Conditions:

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: THORNDALE, CITY OF

THORNDALE, CITY OF  
PO BOX 308  
THORNDALE, TX 76577

<b>Call Sign</b> WNMY609	<b>File Number</b> 0004369738
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 31PWAP30021966	

FCC Registration Number (FRN): 0001666130

<b>Grant Date</b> 10-16-2003	<b>Effective Date</b> 11-03-2010	<b>Expiration Date</b> 11-04-2013	<b>Print Date</b> 11-04-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 105 N MAIN ST  
**City:** THORNDALE     **County:** MILAM     **State:** TX  
**Lat (NAD83):** 30-37-02.7 N   **Long (NAD83):** 097-12-02.0 W   **ASR No.:**   **Ground Elev:** 138.0

**Loc. 2 Area of operation**  
Operating within a 32.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.22000000	FB	1		11K0F3E 11K2F7D 14K4F1D 16K0F3E 20K0F3E 7K20F1D 8K10F1D 8K10F1E	100.000	175.000	9.0	8.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: THORNDALE, CITY OF

Call Sign: WNMV609

File Number: 0004369738

Print Date: 11-04-2010

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000154.22000000	MO	30		11K0F3E 11K2F7D 14K4F1D 16K0F3E 20K0F3E 7K20F1D 8K10F1D 8K10F1E	110.000	110.000			

**Control Points**

**Control Pt. No. 1**

Address: 105 N MAIN

City: THORNDALE County: State: TX Telephone Number: (512)898-2523

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: MILAM, COUNTY OF

ATTN: MILAM COUNTY SHERIFFS OFFICE  
MILAM, COUNTY OF  
512 NORTH JEFFERSON  
CAMERON, TX 76520

<b>Call Sign</b> WNKU881	<b>File Number</b> 0003945573
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671312

<b>Grant Date</b> 11-07-2002	<b>Effective Date</b> 05-18-2006	<b>Expiration Date</b> 02-02-2013	<b>Print Date</b> 08-25-2009
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 3111 S FM381 4.8KM S  
City: CAMERON County: MILAM State: TX  
Lat (NAD83): 30-48-35.7 N Long (NAD83): 096-55-42.9 W ASR No.: 1223611 Ground Elev: 146.0
- Loc. 3** Area of operation  
Countywide: TX
- Loc. 4** Address: 512 NORTH JEFFERSON  
City: CAMERON County: MILAM State: TX  
Lat (NAD83): 30-51-18.5 N Long (NAD83): 096-58-49.0 W ASR No.: Ground Elev: 121.9

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000156.1500000	FB	1	2	11K3F3E 20K0F3E 5K76G1E 8K10F1D 8K10F1E	110.000	240.000	51.0	67.7	

**Frequency 000156.1500000 Special Condition**  
Authorization on a secondary basis.

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: MILAM, COUNTY OF

Call Sign: WNKU881

File Number: 0003945573

Print Date: 08-25-2009

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	2	000154.11500000	FB2	1		11K3F3E 5K76G1E 8K10F1D 8K10F1E	125.000	220.000	45.0	67.7	05-18-2007
3	1	000156.15000000	MO	50		11K3F3E 20K0F3E 5K76G1E 8K10F1D 8K10F1E	110.000	220.000			
3	1	000155.91750000	MO	50		11K3F3E 5K76G1E 8K10F1D 8K10F1E	110.000	220.000			05-18-2007
3	1	000154.11500000	MO	50		11K3F3E 5K76G1E 8K10F1D 8K10F1E	110.000	220.000			05-18-2007
4	1	000156.15000000	FB	1		11K3F3E 20K0F3E 5K76G1E 8K10F1D 8K10F1E	100.000	253.000	24.4	39.1	05-18-2007

**Frequency 000156.15000000 Special Condition**  
Authorization on a secondary basis.

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**Control Points**

**Control Pt. No. 1**

**Address:** 512 NORTH JEFFERSON

**City:** CAMERON **County:** MILAM **State:** TX **Telephone Number:** (254)697-7033

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: MILAM, COUNTY OF

ATTN: SHERIFF CHARLIE WEST  
MILAM, COUNTY OF  
512 JEFFERSON  
CAMERON, TX 76520

<b>Call Sign</b> KVJ791	<b>File Number</b> 0003945572
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001671312

<b>Grant Date</b> 11-07-2002	<b>Effective Date</b> 05-05-2006	<b>Expiration Date</b> 01-12-2013	<b>Print Date</b> 08-25-2009
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Area of operation**  
Countywide: TX

**Loc. 2 Address:** 3111 S. FM381 4.8KM SOUTH OF  
**City:** CAMERON      **County:** MILAM      **State:** TX  
**Lat (NAD83):** 30-48-35.7 N    **Long (NAD83):** 096-55-42.9 W    **ASR No.:** 1223611    **Ground Elev:** 146.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.81500000	MO	20		11K3F3E 20K0F3E 9K25F1E	100.000	110.000			
1	1	000154.95000000	MO	20		11K3F3E 20K0F3E	100.000	150.000			
1	1	000154.28000000	MO	20		11K3F3E 20K0F3E	100.000	110.000			01-11-2007

**Frequency 000154.28000000 Special Condition**  
To be used for intersystem operations only.

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: MILAM, COUNTY OF

Call Sign: KVVJ791

File Number: 0003945572

Print Date: 08-25-2009

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.34000000	MO	20		20K0F3E	100.000	110.000			01-11-2007
2	1	000155.37000000	FB	1		11K3F3E 20K0F3E	100.000	200.000	51.0	113.2	
2	1	000155.59500000	FB2	1		11K3F3E 20K0F3E 9K25F1E	110.000	325.000	51.0	113.2	
2	1	000155.59500000	FB2	1		11K3F3E 20K0F3E	110.000	325.000	51.0	113.2	
2	2	000154.28000000	FB	1		11K3F3E 20K0F3E	100.000	110.000	49.0	83.0	01-11-2007

**Frequency 000154.28000000 Special Condition**  
To be used for intersystem operations only.

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**Control Points**

**Control Pt. No. 2**

**Address:** 512 NORTH JEFFERSON

**City:** CAMERON **County:** MILAM **State:** TX **Telephone Number:** (254)697-7033

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

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Federal Communications Commission
Public Safety and Homeland Security Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CAMERON, CITY OF

ATTN: FIRE AND EMS RADIO
CAMERON, CITY OF
100 S. HOUSTON
PO BOX 833
CAMERON, TX 76520

Table with 2 columns: Call Sign (KNNL840), File Number (0004322896), Radio Service (PW - Public Safety Pool, Conventional), Regulatory Status (PMRS), Frequency Coordination Number.

FCC Registration Number (FRN): 0001671338

Table with 4 columns: Grant Date (01-14-2004), Effective Date (09-28-2010), Expiration Date (04-07-2014), Print Date (09-29-2010).

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1 Address: 3111 S FM381 4.8KM S, City: CAMERON, County: MILAM, State: TX, Lat (NAD83): 30-48-35.7 N, Long (NAD83): 096-55-42.9 W, ASR No.: 1223611, Ground Elev: 146.0
Loc. 2 Area of operation: Land Mobile Control Station meeting the 6.1 Meter Rule: TX
Loc. 3 Area of operation: Operating within a 40.0 km radius around 30-50-33.7 N, 096-59-02.9 W, CAMERON, MILAM county, TX
Loc. 4 Area of operation: Operating within a 40.0 km radius around fixed location 1

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CAMERON, CITY OF

Call Sign: KNNL840

File Number: 0004322896

Print Date: 09-29-2010

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000159.19500000	FB2	1	50	11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	100.000	178.000	57.3	85.8	
2	1	000158.85000000	FX1	1		11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	30.000	30.000			
3	1	000154.78500000	MO	28		11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	50.000	50.000			10-26-2006
3	1	000154.78500000	MO	45		11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	5.000	5.000			10-26-2006
4	1	000158.85000000	MO	60		11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	50.000	50.000			10-17-2009
4	1	000159.19500000	MO	60		11K2F1D 11K2F2D 11K2F3E 20K0F1D 20K0F2D 20K0F3E	50.000	50.000			10-17-2009

**Licensee Name:** CAMERON, CITY OF

**Call Sign:** KNNL840

**File Number:** 0004322896

**Print Date:** 09-29-2010

**Control Points**

**Control Pt. No. 1**

**Address:** 100 S HOUSTON

**City:** CAMERON **County:** MILAM **State:** TX **Telephone Number:** (254)697-6646

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**Associated Call Signs**

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**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: ROCKDALE, CITY OF

ATTN: POLICE DEPT CITY MANAGER  
ROCKDALE, CITY OF  
140 W. CAMERON AVE.  
PO BOX 586  
ROCKDALE, TX 76567

<b>Call Sign</b> KNHA823	<b>File Number</b> 0004323041
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001667047

<b>Grant Date</b> 03-25-2005	<b>Effective Date</b> 09-27-2010	<b>Expiration Date</b> 06-14-2015	<b>Print Date</b> 09-28-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 140 W CAMERON ST  
**City:** ROCKDALE **County:** MILAM **State:** TX  
**Lat (NAD83):** 30-39-19.7 N **Long (NAD83):** 097-00-07.9 W **ASR No.:** N/A **Ground Elev:** 142.0

**Loc. 2 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.8150000	FX1	1		11K2F3E 20K0F3E	50.000	50.000	12.0		
1	2	000154.0250000	FB2C	1	10	11K2F3E 20K0F3E	50.000	50.000	30.0		
1	2	000155.3700000	FB	1	10	11K2F3E 20K0F3E	50.000	74.000	30.0		
2	1	000154.0250000	MO	25		11K2F3E 20K0F3E	35.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



Licensee Name: ROCKDALE, CITY OF

Call Sign: KNHA823

File Number: 0004323041

Print Date: 09-28-2010

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000154.81500000	MO	25		11K2F3E 20K0F3E	50.000				
2	1	000154.95000000	MO	25		11K2F3E 20K0F3E	50.000				
2	1	000154.96500000	MO	25		11K2F3E 20K0F3E	35.000				

**Control Points**

**Control Pt. No. 1**

Address: POLICE STATION 140 W CAMERON ST

City: ROCKDALE County: State: TX Telephone Number: (512)446-2511

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: TEXAS, STATE OF (DPS)

ATTN: PUBLIC SAFETY COMMUNICATIONS BUREAU  
TEXAS, STATE OF (DPS)  
5805 N. LAMAR  
PO BOX 4087  
AUSTIN, TX 78773-0259

<b>Call Sign</b> KNFX222	<b>File Number</b> 0004452336
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001672419

<b>Grant Date</b> 11-16-2010	<b>Effective Date</b> 11-16-2010	<b>Expiration Date</b> 02-11-2021	<b>Print Date</b> 11-16-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 3111 S FM381 4.8 KM S  
**City:** CAMERON      **County:** MILAM      **State:** TX  
**Lat (NAD83):** 30-48-35.7 N    **Long (NAD83):** 096-55-43.0 W    **ASR No.:** 1223611    **Ground Elev:** 146.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000159.09000000	FB2	1		20K0F1E 20K0F3E	110.000	365.000	12.0		
1	1	000159.21000000	FB2	1		20K0F3E	110.000	365.000	12.0		
1	1	000159.21000000	FB2	1		11K2F3E 20K0F3E 20K1F1E 5K76G1E 8K10F1D 8K10F1E	75.000	150.000	12.0		11-01-2002

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: TEXAS, STATE OF (DPS)

Call Sign: KNFX222

File Number: 0004452336

Print Date: 11-16-2010

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000159.21750000	FB2	1		11K2F3E 5K76G1E 8K10F1D 8K10F1E	75.000	150.000	12.0		11-01-2002

**Control Points**

**Control Pt. No. 1**

Address: 1003 N EARL RUDDER FREEWAY

City: BRYAN County: BRAZOS State: TX Telephone Number: (979)776-3104

**Associated Call Signs**

KA2686

**Waivers/Conditions:**

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

### **8.4.6 Mills County Licenses**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: GOLDTHWAITE, CITY OF

ATTN: BOBBY ROUNDTREE  
GOLDTHWAITE, CITY OF  
1218 FISHER ST  
PO BOX P.O. BOX 450  
GOLDTHWAITE, TX 76844

<b>Call Sign</b> WQCG939	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001654516

<b>Grant Date</b> 03-02-2005	<b>Effective Date</b> 03-02-2005	<b>Expiration Date</b> 03-02-2015	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 1218 FISCHER STREET  
**City:** GOLDTHWAITE    **County:** MILLS    **State:** TX  
**Lat (NAD83):** 31-27-14.6 N    **Long (NAD83):** 098-34-13.2 W    **ASR No.:**    **Ground Elev:** 478.0

**Loc. 2 Area of operation**  
Operating within a 20.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.61750000	FB	1		11K0F3E	110.000	250.000	14.0	45.9	03-02-2006
2	1	000155.61750000	MO	25		11K0F3E	100.000	100.000			03-02-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** GOLDTHWAITE, CITY OF

**Call Sign:** WQCG939

**File Number:**

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 1218 FISCHER ST

**City:** GOLDTHWAITE **County:** MILLS **State:** TX **Telephone Number:** (325)648-3186

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: MILLS, COUNTY OF

ATTN: FIRE CHIEF DAVID SCHWARTZ  
MILLS, COUNTY OF  
PO BOX 38  
GOLDTHWAITE, TX 76844

<b>Call Sign</b> WPLE444	<b>File Number</b> 0000741719
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0006209548

<b>Grant Date</b> 01-23-2002	<b>Effective Date</b> 01-23-2002	<b>Expiration Date</b> 03-18-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** ON US 84 .25 MI W OF US 84 & FM 575  
**City:** GOLDTHWAITE    **County:** MILLS    **State:** TX  
**Lat (NAD83):** 31-27-21.6 N    **Long (NAD83):** 098-33-20.2 W    **ASR No.:**    **Ground Elev:** 524.0

**Loc. 2 Area of operation**  
Land Mobile Control Station meeting the 6.1 Meter Rule: TX

**Loc. 3 Area of operation**  
Operating within a 32.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.4450000	FB2	1		20K0F3E	50.000	65.000	91.0	168.0	
2	1	000153.8300000	FX1	1		20K0F3E	10.000				
3	1	000153.8300000	MO	20		20K0F3E	45.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** MILLS, COUNTY OF

**Call Sign:** WPLE444

**File Number:** 0000741719

**Print Date:**

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000154.44500000	MO	20		20K0F3E	45.000				

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**Control Points**

**Control Pt. No. 1**

**Address:** 1218 2ND ST

**City:** GOLDTHWAITE **County:** **State:** TX **Telephone Number:** (915)648-3313

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE



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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: MILLS, COUNTY OF

ATTN: SHERIFFS DOUG STOREY  
MILLS, COUNTY OF  
1007 5TH STREET  
GOLDTHWAITE, TX 76844

<b>Call Sign</b> KVJ792	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0001733799

<b>Grant Date</b> 06-05-2003	<b>Effective Date</b> 09-27-2005	<b>Expiration Date</b> 05-26-2013	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: 1007 5TH ST  
City: GOLDTHWAITE County: MILLS State: TX  
Lat (NAD83): 31-26-55.6 N Long (NAD83): 098-33-27.2 W ASR No.: N/A Ground Elev: 482.0
- Loc. 2** Address: HWY 84, 1 MILE EAST  
City: GOLDTHWAITE County: MILLS State: TX  
Lat (NAD83): 31-27-21.0 N Long (NAD83): 098-33-19.0 W ASR No.: 1052072 Ground Elev: 524.3
- Loc. 3** Area of operation  
Countywide: MILLS, TX

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.37000000	FB	1	10	20K0F3E	100.000	120.000	15.0		
2	1	000155.79000000	FB2	1	10	20K0F3E 9K25F1E	110.000	325.000	91.0	166.6	
2	2	000154.28000000	FB	1		20K0F3E	110.000	100.000	125.0	195.0	09-27-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: MILLS, COUNTY OF

Call Sign: KVVJ792

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000154.74000000	MO	21		20K0F3E 9K25F1E	125.000	250.000			
3	1	000154.95000000	MO	21		20K0F3E	100.000	100.000			
3	1	000154.28000000	MO	21		20K0F3E	125.000	110.000			09-27-2006

**Control Points**

**Control Pt. No. 1**

Address: 1007 5TH ST

City: GOLDTHWAITE County: MILLS State: TX Telephone Number: (325)648-2245

**Associated Call Signs**

**Waivers/Conditions:**

NONE

### **8.4.7 San Saba County Licenses**

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: SAN SABA, COUNTY OF

ATTN: COUNTY JUDGE  
SAN SABA, COUNTY OF  
500 E. WALLACE #111  
SAN SABA, TX 76877

<b>Call Sign</b> WQEV991	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0014793459

<b>Grant Date</b> 05-01-2006	<b>Effective Date</b> 05-01-2006	<b>Expiration Date</b> 05-01-2016	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** FM 580, APPROXIMATELY 2 MILES OFF HIGHWAY 190/ 6 MILES ESE OF  
**City:** SAN SABA      **County:** SAN SABA      **State:** TX  
**Lat (NAD83):** 31-09-52.0 N    **Long (NAD83):** 098-37-39.0 W    **ASR No.:** 1052070    **Ground Elev:** 452.6
- Loc. 2 Area of operation**  
 Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000158.8350000	FB2	1	100	11K2F3E	100.000	260.000	80.0	131.1	05-01-2007
2	1	000153.9125000	MO	100		11K2F3E	100.000	150.000			05-01-2007

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** SAN SABA, COUNTY OF

**Call Sign:** WQEV991

**File Number:**

**Print Date:**

**Control Points**

**Control Pt. No. 1**

**Address:** 500 E. WALLACE #111

**City:** SAN SABA **County:** SAN SABA **State:** TX **Telephone Number:** (325)372-8570

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**Associated Call Signs**

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**Waivers/Conditions:**

NONE

Reference Copy

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: RICHLAND SPRINGS VOLUNTEER FIRE DEPT.

ATTN: FIRE CHIEF  
RICHLAND SPRINGS VOLUNTEER FIRE DEPT.  
PO BOX 181  
RICHLAND SPRINGS, TX 76871

<b>Call Sign</b> WPKE650	<b>File Number</b>
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0006235733

<b>Grant Date</b> 01-25-2002	<b>Effective Date</b> 11-19-2003	<b>Expiration Date</b> 02-01-2012	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** E MAIN ST  
**City:** RICHLAND SPRINGS    **County:** SAN SABA    **State:** TX  
**Lat (NAD83):** 31-15-53.6 N    **Long (NAD83):** 098-56-35.2 W    **ASR No.:**    **Ground Elev:** 426.0
- Loc. 2 Area of operation**  
Operating within a 24.0 km radius around fixed location 1
- Loc. 3 Address:** HWY 45 & FIRE STATION ROAD  
**City:** RICHLAND SPRINGS    **County:** SAN SABA    **State:** TX  
**Lat (NAD83):** 31-16-17.8 N    **Long (NAD83):** 098-56-42.3 W    **ASR No.:**    **Ground Elev:** 426.8
- Loc. 4 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.19000000	FB	1		20K0F3E	20.000	50.000	10.0	3.0	
2	1	000154.19000000	MO	30		20K0F3E	25.000	25.000			

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: RICHLAND SPRINGS VOLUNTEER FIRE

Call Sign: WPKE650

File Number:

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000158.92500000	FB2	1		20K0F3E	25.000	100.000	18.0	13.1	11-19-2004
4	1	000158.92500000	MO	20		20K0F3E	25.000	25.000			11-19-2004
4	1	000153.80000000	MO	20		20K0F3E	25.000	25.000			11-19-2004

**Control Points**

**Control Pt. No. 2**

Address: FM 45 & FIRE STATION RD.

City: RICHLAND SPRINGS County: SAN SABA State: TX Telephone Number: (325)452-2268

**Control Pt. No. 1**

Address: E MAIN ST

City: RICHLAND SPRINGS County: SAN SABA State: TX Telephone Number: (325)452-3409

**Associated Call Signs**

**Waivers/Conditions:**

NONE

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: SAN SABA, CITY OF

ATTN: CITY MANAGER-STAN WEIK  
SAN SABA, CITY OF  
303 S CLEAR ST  
SAN SABA, TX 76877

<b>Call Sign</b> WNVQ512	<b>File Number</b> 0004516246
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0004541868

<b>Grant Date</b> 12-01-2010	<b>Effective Date</b> 12-01-2010	<b>Expiration Date</b> 02-27-2021	<b>Print Date</b> 12-01-2010
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

**Loc. 1 Address:** 303 S CLEAR ST  
**City:** SAN SABA     **County:** SAN SABA     **State:** TX  
**Lat (NAD83):** 31-11-43.6 N   **Long (NAD83):** 098-42-59.2 W   **ASR No.:**   **Ground Elev:** 368.0

**Loc. 2 Area of operation**  
Operating within a 40.0 km radius around fixed location 1

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000155.10000000	FB	1		20K0F3E	50.000	38.000	13.0		
2	1	000155.10000000	MO	13		20K0F3E	25.000				

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



**Licensee Name:** SAN SABA, CITY OF

**Call Sign:** WNVQ512

**File Number:** 0004516246

**Print Date:** 12-01-2010

**Control Points**

**Control Pt. No. 1**

**Address:** 303 S CLEAR ST

**City:** SAN SABA    **County:** SAN SABA    **State:** TX    **Telephone Number:** (325)372-5144

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**Associated Call Signs**

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**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: SAN SABA, CITY OF

SAN SABA, CITY OF  
PO BOX 788  
SAN SABA, TX 76877-0788

<b>Call Sign</b> WNGG255	<b>File Number</b> 0004585001
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0004541868

<b>Grant Date</b> 02-04-2011	<b>Effective Date</b> 02-04-2011	<b>Expiration Date</b> 04-11-2021	<b>Print Date</b> 02-05-2011
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1** Address: COR STORY & LOOKOUT ST  
City: SAN SABA County: SAN SABA State: TX  
Lat (NAD83): 31-11-36.6 N Long (NAD83): 098-42-48.2 W ASR No.: Ground Elev: 393.0
- Loc. 2** Address: WEAVER ST 600 S FROM CHURCH ST  
City: SAN SABA County: SAN SABA State: TX  
Lat (NAD83): 31-11-28.6 N Long (NAD83): 098-44-17.2 W ASR No.: Ground Elev: 392.0
- Loc. 3** Address: EDGEWOOD ST 2000 S FROM HARRIS ST  
City: SAN SABA County: SAN SABA State: TX  
Lat (NAD83): 31-11-13.6 N Long (NAD83): 098-44-31.2 W ASR No.: Ground Elev: 415.0

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta.Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.45625000	FXO	1		5K60F9W	5.000	25.000	6.0	0.0	
2	1	000154.45625000	FXO	1		5K60F9W	5.000	25.000	6.0	0.0	

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

**Licensee Name:** SAN SABA, CITY OF

**Call Sign:** WNGG255

**File Number:** 0004585001

**Print Date:** 02-05-2011

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000154.45625000	FXO	1		5K60F9W	5.000	25.000	6.0	0.0	

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**Control Points**

**Control Pt. No. 2**

**Address:** 302 E WALLACE

**City:** SAN SABA    **County:** SAN SABA    **State:** TX    **Telephone Number:** (325)372-5144

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**Associated Call Signs**

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**Waivers/Conditions:**

Authorization on a secondary basis.

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: CHEROKEE VOLUNTEER FIRE DEPT INC

ATTN: BYARS WALTERS CHIEF  
 CHEROKEE VOLUNTEER FIRE DEPT INC  
 PO BOX 293  
 CHEROKEE, TX 76832

<b>Call Sign</b> WNFG742	<b>File Number</b> 0002450949
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b> 20060109114701	

FCC Registration Number (FRN): 0001684331

<b>Grant Date</b> 08-18-2001	<b>Effective Date</b> 01-25-2006	<b>Expiration Date</b> 08-26-2011	<b>Print Date</b>
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Address:** HWY 16  
**City:** CHEROKEE      **County:** SAN SABA      **State:** TX  
**Lat (NAD83):** 30-58-55.6 N    **Long (NAD83):** 098-42-28.1 W    **ASR No.:**    **Ground Elev:** 456.0
- Loc. 2 Area of operation**  
 Operating within a 32.0 km radius around fixed location 1
- Loc. 3 Address:** FM 580, APPROXIMATELY 2 MILES OFF HIGHWAY 190/ 6 MILES ESE OF  
**City:** SAN SABA      **County:** SAN SABA      **State:** TX  
**Lat (NAD83):** 31-09-52.0 N    **Long (NAD83):** 098-37-39.0 W    **ASR No.:** 1052070    **Ground Elev:** 452.6
- Loc. 4 Area of operation**  
 Operating within a 24.0 km radius around fixed location 3

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.40000000	FB	1		20K0F3E	25.000	100.000	34.0	24.7	
2	1	000154.40000000	MO	30		20K0F3E	25.000	25.000			

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CHEROKEE VOLUNTEER FIRE DEPT INC

Call Sign: WNFG742

File Number: 0002450949

Print Date:

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
3	1	000155.94000000	FB2	1		20K0F2D 20K0F3E	25.000	28.000	91.4	138.3	12-02-2005
4	1	000155.94000000	MO	100		20K0F2D 20K0F3E	25.000	25.000			12-02-2005
4	1	000150.80500000	MO	100		20K0F2D 20K0F3E	25.000	25.000			12-02-2005

**Control Points**

**Control Pt. No. 1**

Address: HWY 16

City: CHEROKEE County: SAN SABA State: TX Telephone Number: (325)622-4681

**Associated Call Signs**

**Waivers/Conditions:**

NONE

**REFERENCE COPY**

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**Federal Communications Commission  
Public Safety and Homeland Security Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: SAN SABA, COUNTY OF

ATTN: SHERIFF  
SAN SABA, COUNTY OF  
104 S WATER  
SAN SABA, TX 76877

<b>Call Sign</b> KNAL540	<b>File Number</b> 0004593108
<b>Radio Service</b> PW - Public Safety Pool, Conventional	
<b>Regulatory Status</b> PMRS	
<b>Frequency Coordination Number</b>	

FCC Registration Number (FRN): 0004541850

<b>Grant Date</b> 01-31-2011	<b>Effective Date</b> 01-31-2011	<b>Expiration Date</b> 02-04-2021	<b>Print Date</b> 02-01-2011
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**STATION TECHNICAL SPECIFICATIONS**

**Fixed Location Address or Mobile Area of Operation**

- Loc. 1 Area of operation**  
Countywide: SAN SABA, TX
- Loc. 2 Address:** .87 MI SE OF COURTHOUSE ON FM 1031  
**City:** SAN SABA    **County:** SAN SABA    **State:** TX  
**Lat (NAD83):** 31-11-00.6 N    **Long (NAD83):** 098-42-31.2 W    **ASR No.:**    **Ground Elev:** 402.0
- Loc. 3 Address:** FM580, APPROXIMATELY 2 MILES OFF HIGHWAY 190/6 MIL  
**City:** SAN SABA    **County:** SAN SABA    **State:** TX  
**Lat (NAD83):** 31-09-52.0 N    **Long (NAD83):** 098-37-39.0 W    **ASR No.:** 1052070    **Ground Elev:** 452.6

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000154.84500000	MO	11		20K0F3E 9K25F1E	125.000	250.000			
1	1	000154.95000000	MO	11		20K0F3E	100.000	200.000			
1	1	000154.28000000	MO	11		20K0F3E	125.000	110.000			10-20-2006

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: SAN SABA, COUNTY OF

Call Sign: KNAL540

File Number: 0004593108

Print Date: 02-01-2011

**Antennas**

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000155.37000000	FB	1		20K0F3E	100.000	250.000	82.0		
2	1	000155.70000000	FB	1		20K0F3E	325.000	800.000	82.0		
3	1	000154.28000000	FB	1		20K0F3E	110.000	100.000	93.9	140.0	10-20-2006
3	1	000154.95000000	FB	1		20K0F3E	110.000	325.000	93.9	140.0	10-20-2006
<b>Frequency 000154.95000000 Special Condition</b> Authorization on a secondary basis.											
3	1	000155.37000000	FB	1		20K0F3E	110.000	325.000	93.9	140.0	10-20-2006
3	1	000155.70000000	FB2	1		20K0F3E 9K25F1E	110.000	325.000	93.9	140.0	10-20-2006

**Control Points**

**Control Pt. No. 1**

Address: 104 S WATER

City: SAN SABA County: SAN SABA State: TX Telephone Number: (325)372-5551

**Associated Call Signs**

**Waivers/Conditions:**

Beginning January 1, 2013, this station must operate on channels with a bandwidth of 12.5 kHz or less, or with equivalent efficiency, regardless of the emission bandwidths set forth on this license. See Section 90.209(b)(5) of the Commission's Rules. Note, however, that the narrowbanding requirement does not apply to specific channels designated in Rule 90.20 or 90.35 for paging only.