

ADDITIONAL SERVICES PROPOSAL

LCRA and Brown County, TX

CUSTOMER: Brown County Texas
200 S. Broadway
Brownwood, TX 76801

This Additional Services Proposal, as further described in the Scope of Work attached hereto, is issued under and subject to that certain Interlocal Cooperation Agreement for Mobile Radio Services and Equipment between the Parties listed above (the "Interlocal Agreement"). This Additional Services Proposal, as further described in the Scope of Work attached, is further subject to the Terms and Conditions attached hereto.

In the event of any conflict or inconsistency between the terms and provisions of this Additional Services Proposal and Scope of Work description and the terms and provisions of the Interlocal Agreement, with respect to the Project(s) identified below only, the terms and provisions of this Additional Services Proposal and Scope of Work description shall control.

PROJECT: Brown County 700 MHz System, Two Tower Sites and 285 Radios

DATE SUBMITTED: 09/16/2020

ADDITIONAL SERVICES: The project is further described in the Scope of Work: Project and Services Description and Exhibit A and Exhibit B attached hereto.

SCHEDULE:

Begins: Brown County, Texas and LCRA will set a mutually agreeable start of work following execution of this Additional Services Proposal and as further described in the Scope of Work attached hereto.

Completion: This Project will end when all services contemplated hereunder have been successfully completed, or this Additional Services Proposal has been terminated.

PRICE:

Total Cost: See Exhibit A

Billing Method: Notwithstanding anything to the contrary in the Interlocal Agreement or this Additional Services Proposal, Brown County will be invoiced on the following terms for this Project: 25% of the total Project price at execution of this Additional Services Proposal, 25% of the total Project price upon site equipment being delivered to LCRA for staging, 40% of the total Project price once equipment has been installed, and the final 10% of the total Project price upon Acceptance. "Acceptance" shall mean thirty (30) calendar days without any major interruption in radio service after installation of the Project equipment and facilities described herein has been completed.

Brown County, TX

By: 
By:

Title:

Date:

Lower Colorado River Authority

By:
By: Kristen Senechal

Title: Exec. VP Trans Transmission Exec. Management

Date:

October 5, 2020 (Exhibit #4)

SCOPE OF WORK
PROJECT AND SERVICES DESCRIPTION

Brown County seeks to improve radio coverage and regional interoperability with the addition of P25 700 MHz radio transmission equipment installed at two existing towers, one designated DPS/May and the second site being designated as Brown Sub, in the cooperation with the City of Brownwood, seeks to further improve regional interoperability. Brown County will also be purchasing 285 P25 radios.

ADDITIONAL SERVICES:

Overview: LCRA will install a P25 700 MHz system that will provide for mobile and portable radio coverage as based on industry standard TSB-88 parameters and designed to meet USER's anticipated needs. The County of Brown system relies on an integrated system which includes certain other facilities that are being built by the City of Brownwood for regional interoperability.

Performance of Coverage: the system design criteria will take into consideration the following coverage performance specifications:

- **Public Safety Grade, Deliver Audio Quality ("DAQ") Level of 3.4** – TSB 88 defines a range of acceptable coverage performance base according to a standardized DAQ scale ranging from 1 to 5 with level 1 being the worst, and 5 being the best. Public Safety grade P25 Systems are typically designed to deliver a DAQ 3.4 (Speech understandable with repetition only rarely required. Some Noise/Distortion.)
- **Channel Performance Criteria ("CPC") based upon TSB-88** – TSB-88 defines a CPC as a measured signal level and bit error rate (BER) which can be expected to allow a radio to have a certain DAQ level. Per TSB-88, the designed P25 system will deliver a DAQ 3.4 with a signal level of -110 dBm and a 2.2% or better BER.
- **Mobile Coverage in 95% of the USER's region** – Guaranteed signal level of -110 dBm or better, with less than 2.2% BER, in 95% of the USER's region.
- **Portable on Street, with Antenna at Hip Level, Coverage in 95% of the USER's region** – Guaranteed signal level of -102 dBm or better, with less than 2.2% BER, in 95% of the CUSTOMER district boundary. Note: The additional 8 db of loss needs to be allowed for to account for typical losses associated with portable radios at hip level.

Actual system performance will meet or exceed these minimum design criteria.

Regional Coverage Analysis

LCRA will review the USER's region in order to evaluate the required radio coverage. LCRA will perform an extensive coverage analysis by modeling several different scenarios using actual equipment specifications and the 3 site locations. The analysis, along with system design tools that are compatible with TSB-88 and uses the Okumura-Hata-Davidson model for propagation loss, the United States Geological Survey (USGS) Digital Elevation Model (DEM) for terrain elevation data, and the USGS National Land Cover Data (NLCD) database for environmental data, will predict the installed system performance and coverage for a public safety grade DAQ of 3.4. The system design will be based on the 3 site locations and the integration of the City of Brownwood projects. Any changes to site locations or configurations could result in changes to predicted coverage. The radio coverage area described in this Additional Services Proposal, detailed Scope of Work and Exhibit B, are contingent on the City of Brownwood, entering into an Interlocal Cooperation Agreement with LCRA to build out 1 additional tower site and such site actually being constructed and becoming operational (the "City of Brownwood Projects").

Specific Additional Services: LCRA will supply all services, labor, and materials necessary to complete the successful development of such facilities as described above. LCRA shall sell the equipment listed on Exhibit A of this Scope of Work to Brown County. LCRA will install and test the functionality of all equipment. The site equipment will provide the Brown County access to LCRA's trunked radio network and all the features detailed in the Interlocal Agreement and its attachments. Upon (i) the final installation of site equipment listed on Exhibit A of the Scope of Work at the DPS tower and the Brown Sub Tower and (ii) final payment to LCRA as set forth in the Additional Services Proposal above, ownership of these assets will transfer to the Brown County. Ownership in the 285 various models of radios listed on Exhibit A of the Scope of Work, which

were selected for use by each of Brown County's department heads, will also transfer to Brown County upon final payment to LCRA as set forth in the Additional Services Proposal above.

Project Schedule: LCRA plans to perform the Additional Services set out in this Scope of Work according to the following schedule. Dates are based on current known lead times of equipment procurement, construction durations, and final testing and commissioning durations, among other factors. These dates are tentative and are subject to change due to changes in equipment availability, coordination and planning with the City of Brownwood, any changes in scope to the Project or the City of Brownwood Projects or other events beyond the control of LCRA.

October 5, 2020 – Order of long-lead equipment;
November 9, 2020 – Order remaining equipment;
January 18, 2021– Receipt and staging of equipment;
February 1, 2021– Construction Start;
March 26, 2021 – Major Construction complete;
April 5, 2021– Console installation, testing and commissioning starts;
May 3, 2021 – Mobile and Portable radio commissioning;
May 14, 2021 – USER Acceptance Testing;
May 28, 2021 – System Operational.

SCOPE OF WORK
TERMS AND CONDITIONS

This Scope of Work is subject to the following terms and conditions:

1. LCRA shall perform the services as described in the attached Scope of Work.
2. LCRA will perform the work for a firm, fixed fee amount over several months, but in no case shall the aggregate invoicing be for more than the fixed fee amount. All monetary payments under this Scope of Work shall be due and payable within thirty (30) days after receipt of invoice. If payment is not timely made, interest shall accrue on the unpaid balance at the lesser of the maximum lawful rate, or one percent per month, from the due date until paid.
3. Changes in the Scope of Work may be made only by a written change order signed by representatives of Customer and LCRA. Verbal change orders shall not be given nor accepted, except in case of an emergency which endangers people or property and such order shall be followed up with a written confirmation as soon as practicable.
4. The term of this Scope of Work shall be the duration of the work. The Scope of Work may be terminated, for cause only due to a material breach by the non-terminating party, upon thirty (30) days prior written notice to the breaching party. When the Scope of Work is terminated by either party, the Customer shall pay for services rendered under this Scope of Work up to the date of termination.
5. There are no third party beneficiaries to this Scope of Work and the provisions of this Scope of Work shall not create any legal or equitable right, remedy or claim enforceable by any person, firm, or organization other than the parties and their permitted successors and permitted assigns.
6. Limited Warranty.
 - (a) LCRA shall perform all services in accordance with acceptable industry practice, in a good and workmanlike manner, and in accordance with installation instructions and requirements of any applicable equipment manufacturer and supplier. During a period of thirty (30) days after acceptance of the work by Customer, LCRA shall correct any work not conforming to the foregoing warranties by reperforming the services.
 - (b) LCRA shall assign to Customer, as the end-user, any applicable equipment or supply warranties provided by LCRA's vendors. All warranty documentation shall be furnished to the Customer.
 - (c) THE WARRANTIES CONTAINED IN THIS SECTION 6 ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND CUSTOMER'S REMEDIES ARE LIMITED TO LCRA'S OBLIGATIONS AS EXPRESSLY STATED IN THIS SECTION 6.
7. **THE TOTAL LIABILITY OF LCRA ARISING OUT OF THIS SCOPE OF WORK AND THE WORK PERFORMED HEREUNDER WILL NOT EXCEED AN AMOUNT EQUAL TO THE FEES PAID TO LCRA UNDER THE ADDITIONAL SERVICES PROPOSAL AND THIS SCOPE OF WORK, AND LCRA WILL NOT BE LIABLE FOR INDIRECT, PUNITIVE, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS. IN NO EVENT SHALL ANY OFFICER, DIRECTOR, EMPLOYEE OR AFFILIATE (OR AFFILIATE'S OFFICER, DIRECTOR OR EMPLOYEE) OF LCRA BE LIABLE TO CUSTOMER UNDER THE ADDITIONAL SERVICES PROPOSAL AND THIS SCOPE OF WORK, AND CUSTOMER'S SOLE RECOURSE UNDER THE ADDITIONAL SERVICES PROPOSAL AND THIS SCOPE OF WORK SHALL BE AGAINST LCRA AND NOT AGAINST SUCH OTHER PERSONS. THE LIMITATIONS ON LIABILITY AND REMEDIES IN THIS PARAGRAPH WILL APPLY REGARDLESS OF WHETHER THE LIABILITY OR CAUSE OF ACTION ARISES IN CONTRACT, WARRANTY, INDEMNITY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE. NOTHING IN THIS SCOPE OF WORK SHALL BE CONSTRUED TO WAIVE LCRA'S GOVERNMENTAL IMMUNITY.**
8. The Additional Services Proposal, this Scope of Work and the Interlocal Agreement together represents and contains the entire agreement and understanding between the parties with respect to the subject matter hereof and supersedes any and all prior or contemporaneous oral and/or written agreements and understandings. No representations, warranty, condition, understanding or agreement of any kind with respect to the subject matter of this Scope of Work shall be relied upon by the parties unless incorporated into this Scope of Work. This Scope of Work may not be amended or modified

except by a writing executed both by an authorized representative of LCRA and by an authorized representative of the Customer.



**Exhibit A,
Table A DPS/May Tower Site**

Hardware		\$507,996
5 Channel P25 PII Site Equipment	\$331,912	
New 100 AMP service and conduit from pole to shelter	\$ 4,500	
Harris FXHW and FXSW	\$ 12,587	
Eaton 8kVA UPS (Includes Bypass)	\$ 14,300	
Antennas, Combiner, Multicoupler, TTA, Coax, Connectors	\$ 37,100	
Transport MW, One 3 ft. microwave to Round Mtn. site.	\$ 32,355	
Site Prep, new Generator and pad upgrade air-conditioning	\$ 75,202	
Engineering / Licensing		\$55,284
Channel Frequency licensing (new 700MHz Site) :	\$17,038	
Engineering:	\$38,246	
Labor / Installation		\$62,613
Total*:		\$626,893

* Please note that the foregoing is a fixed price agreement.

Exhibit A
Table B

Site Services and Equipment Costs	Brown Microwave	Price
		\$288,643
Hardware		
4 Channel P25 PII Site Equipment	\$219,288	
Eaton 8kVA UPS (Includes Bypass)		
Antennas, Combiner, Multi-coupler, TTA, Coax, Connectors	\$ 32,000	
Transport MW, One 6 ft. microwave to Round Mtn. site.	\$10,355	
Site Prep: New Generator and pad	\$27,000	
Engineering: 700 MHz Channel Frequency Licensing	\$32,281	\$32,281
Labor / Installation	\$28,324	\$28,324
Total		\$349,248



Exhibit A
Table C

Mobile and Portable Radios with Programming and Installation	
Radios: (285 Radios with Programming and Installation) Unity Mobiles – 700/800/VHF Qty.35 XL-200 Portables – VHF/700/800 Qty.139 XG-75M Mobile 700/800 P25 Phase II, with OTAP, Scan Qty.4 XG-75P Portable, 700/800, P25, Phase II, Scan Qty.34 XG-25M Mobile 700/800 P25 Phase II, Scan, OTAP Qty.62 XG-25P Portable, 700/800, P25, Phase II, Scan Qty. 10 XG-15P Portable, 700/800, P25, Phase II, Scan Qty. 1 Mobiles include installation with new cabling and antennas Total of radios \$1,149,877, with installation, and programming: \$1,198,017	\$1,198,017
Less Credit for required purchase of 2-700MHz Sites and 285 Radios as listed	-\$100,000
Total Investment:	\$1,098,017

