

(Published in The Okeene Record the weeks of May 21, 2018 and May 28, 2018)

BID NOTICE

The Board of Blaine County Commissioners will accept sealed bids to buy the following:

Bid specifications for Fire/EMS Digital Radio System Upgrade for Blaine County:

- Upgrade or install new four (4) DMR digital repeater sites;
- design, install, and configure new RF control point;
- integrate new control point to existing dispatch system;
- battery backup for all systems;
- subscriber radio reprogramming;

Additional specifications are available in the Blaine County Clerk's Office.

Sealed bids are to be presented to the Blaine County Clerk's Office, PO Box 138 Watonga, OK 73772 by June 11, 2018 @ 9:30 a.m. for opening. Bid MUST HAVE: "Bid Opening, Bid # 18-19 Closing June 11, 2018 @ 9:30 AM-BCEM Radio System Upgrade" on the outside of the envelope.

Bids **MUST** be submitted on forms provided by the County Clerk's office, including statements of non-collusion and non-conviction and statement of terms, signed and notarized.

No bond or letter of credit is required by the board for this bid. All vendors with accepted bids that include labor **MUST** supply the County Clerk proof of Workers Compensation Insurance or an "Affidavit of Exempt Status under the Workers' Compensation Act".

The Board of County Commissioners reserves the right to accept or reject any and all bids. The Board reserves the right to accept the lowest, best bid, based on price, materials and workmanship and all specifications provided.

Blaine County does not discriminate on the basis of religion, sex, age, national origin, political affiliation, mental or physical disability in admission to, access to, or operations of its programs, services or activities. Blaine County does not discriminate on the basis of disability in its hiring or employment practices.

FOR THE BOARD OF COMMISSIONER



RAYMOND SCHEFFLER, CHAIRMAN

BLAINE County, Oklahoma

COUNTY PURCHASING OFFICE

BLAINE County Court House

WATONGA, Oklahoma

Phone Number +1 (580) 623-5890

Invitation to Bid

PLEASE REVIEW TERMS AND CONDITIONS ON REVERSE SIDE
RELATING TO SUBMISSION OF THIS BID.
Notarized Affidavit completions and signature required on reverse side.

Date Issued 05/21/2018

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BID NUMBER

18-19

BID CLOSING DATE AND HOUR

06-11-2018 @ 9:45 AM

REQUIRED DELIVERY DATE

AS SOON AS POSSIBLE

(Days after award of Purchase Order)

Date of Delivery

TERMS

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ITEM	QUANTITY	UNIT OF ISSUE	DESCRIPTION	UNIT PRICE	TOTAL
			<p>BLAINE COUNTY COMMISSIONERS WILL BE ACCEPTING BIDS FOR THE FOLLOWING ITEMS TO BE OPENED JUNE 11, 2018:</p> <p>Upgrade or install new four (4) DMR digital repeater sites; design, install, and configure new RF control point; integrate new control point to existing dispatch system; battery backup for all systems; subscriber radio reprogramming; (see bid specs for specifics)</p> <p>Please be sure to complete, sign and notarize and RETURN the AFFIDAVIT on the second page of this form.</p> <p>BID MUST HAVE "BID #18-19 CLOSING JUNE 11, 2018 @ 9:30 AM-BCEM Radio System Upgrade" ON THE OUTSIDE OF THE ENVELOPE</p> <p>Return all bids to:</p> <p>Blaine County Clerk P.O. Box 138 212 North Weigle Watonga, Ok 73772</p> <p>PLEASE NOTE DATES AND TIME FOR CLOSING AND OPENING BIDS</p>		

TERMS and CONDITIONS

1. Sealed bids will be opened in the Commissioner's Conference Room, BLAINE
County Courthouse, WATONGA _____, Oklahoma, at the time and date shown on the
invitation to bid form.
2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) with bid number and
closing date written on the outside of the envelope.
3. Unit prices will be guaranteed correct by the bidder.
4. Firm prices will be F.O.B. destination.
5. Purchases by BLAINE _____ County, Oklahoma, are not subject to state or federal taxes.
6. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.
7. Oklahoma laws require each bidder submitting a bid to a county for goods or services to furnish a notarized sworn statement
of non-collusion. A form is supplied below.
8. Bids will be firm until _____ (Date)

AFFIDAVIT: I, the undersigned, of lawful age, being first duly sworn on oath say the he (she) is the agent authorized by the bidder to submit the above bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any state official or employee as to quantity; quality or price in the prospective contract or any other terms of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract; that the bidder/contractor has not paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma (or other entity) any money or other thing of value, either directly or indirectly in the procuring of the award of a contract pursuant to this bid.

Subscribed and sworn before this _____ day
of _____, 20 _____ (SEAL)

Firm: _____

My commission expires _____ Signed by: _____
(Manual Signature of Undersigned)

Address: _____ Phone: _____

NOTARY PUBLIC (CLERK OR JUDGE) _____ Zip: _____

In accordance with 62 O.S. § 310.9

NOTE: Other terms and conditions can be added at the discretion of the county officers.



Blaine County, Oklahoma – Emergency
Management
P.O. Box 138
Watonga, OK 73772
580-623-8566

Invitation To Bid “Fire/EMS Digital Radio System Upgrade”

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Item 1: Bid time table

- *ITB Publicly Open: May 21, 2018*
- *Date and time of mandatory pre-bid meeting with vendors: May 30, 2018*
- *Deadline for vendor questions to Blaine Co.EM: June 4, 2018*
- *Deadline for Blaine Co. EM responses to vendor questions: June 5, 2018*
- *Bid Due Date : June 11, 2018 at 9:30 AM*
- *Bids must be received by Monday June 11, 2018 at 9:30 AM in a sealed envelope and labeled on the outside as follows:*

"Bid #18-19 Closing date June 11, 2018 @ 9:30 AM – BCEM Radio System Upgrade".

Item 2: General Notice to all Bidders

- A. To qualify as a bidder on this project, vendors must have an R-56 certified (grounding) employee or sub-contractor who will be responsible for all grounding work performed.
- B. The written requirements contained in this ITB shall not be changed or superseded except by written addendum from Blaine County Emergency Management (Hereinafter: "BCEM"). Failure to comply on your bid submission with the written requirements for this ITB may result in disqualification of the submission.
- C. Your bid submittal must be signed by a company officer who is legally authorized to enter a contractual relationship in the name of the vendor.
- D. EXCEPTIONS: All exceptions taken by vendors must be listed on a separate sheet entitled "SPECIFICATION EXCEPTIONS". Each exception must be clearly documented and explained and attached to the bid.
- E. Question/Answers: Questions not asked onsite shall be submitted in writing via email to blainecountyem@gmail.com or via mail to the above address. Blaine County Emergency Management will issue responses to inquiries and any corrections or amendments it deems necessary in written addenda issued prior to the "Deadline for Blaine Co. EM responses to vendor questions" - outlined in Item 1 above. These addenda will include the question if applicable and will be sent to all known potential bid respondents until the first bid has been submitted. Once the first bid is submitted, no further questions are allowed.
- F. Late bids will not be accepted. Modifications after the bid deadline will not be accepted.
- G. Blaine County reserves the right to reject any or all bids, to waive technicalities, irregularities, or informalities in any bid or in the bid procedure, when to do so would be to the advantage of the County. Blaine County also reserves the right to withdraw or cancel this bid at any time. Blaine County reserves the right to award contracts in the highest and best interest of Blaine County, Oklahoma.
- H. MINIMUM BID ACCEPTANCE PERIOD: Bids shall be valid and may not be withdrawn for a period of 60 days from the date specified as "Bid Due Date".
- I. By submitting a bid, the vendor represents and warrants that no official or employee of Blaine County has, in any manner, an interest, directly or indirectly, in the bid or in the contract which may be made under it, or in any expected profits to arise there from.
- J. COST INCURRED BY VENDORS: All expenses involved with the preparation and submission of the bid to Blaine County Emergency Management, or any work performed in connection therewith is the responsibility of the vendor or vendor subcontractors (where applicable).
- K. SUBCONTRACTORS: The vendor must provide a list of all subcontractors to be used for equipment and services associated with this ITB. (Example: tower climbers; electrical contractors) BCEM will only process claims and invoices to the vendor awarded a contract resulting from this ITB. Payments to subcontractors, and all insurance and liability shall be the responsibility of the prime vendor.
- L. BID OPENING: Bids will be opened and read aloud publicly.

- M. TAXES: Blaine County Emergency Management is not taxable. A Use Tax Certificate of Exemption can be provided to the selected vendor if necessary.
- N. All Vendors shall also complete and submit with their bid:
- 1) W-9
 - 2) Proof of General Liability Insurance (Certificate)
 - 3) Affidavit for Payments in Excess of \$25,000.00
 - 4) Employee R-56 Grounding Certification document
- O. FACTORY WARRANTY AND INITIAL WARRANTY BY VENDOR: The system as installed and accepted must be covered for all parts and labor for an initial period of 90 days after system acceptance. A response time of 4 hours or less is required 24/7 for service calls to correct conditions that impede the ability of either dispatch facility to perform emergency communications functions. The length of the manufacturer's factory warranty shall be stated by the vendor, but must be at least one year. If different components provided come with different periods of factory warranty, the vendor will describe them in the bid documents. BCEM understands that factory warranty is depot maintenance, and the vendor's labor to remove/reinstall and transport the equipment may be a billable expense.
- P. The language in this ITB is to be incorporated in any resulting contract. All requirements in the ITB shall not be altered or superseded by the Vendor's bid or contract language and shall stand as contract requirements.
- Q. Any resulting contract may be renewed for 2 additional fiscal years, if approved by the commissioners for that fiscal year in question.

Item 3: Mandatory pre-bid meeting

A mandatory pre-proposal conference and site visit will be held on **Wednesday, May 30, 2018 at 1:00 p.m. at the District #3 building located at 521 E. 7th Street, Watonga, OK 73772.** Attendance at the pre-proposal conference is required for all vendors who desire to submit a bid. Submission of a proposal for the radio system shall be conclusive evidence that the bidder has investigated and is familiar with the site(s) of work, and operating environment.

Item 4: Summary description

Blaine County Emergency Management is leading an initiative in Blaine County to improve communications and dispatch capabilities for all Blaine County Fire and EMS first responders. Blaine County first responders served by this system include Canton Fire/EMS, Okeene Fire/EMS, Watonga Fire/EMS, Eagle City Fire, Hitchcock Fire, Greenfield Fire, Geary Fire/EMS, the Blaine County Sheriff's Office, and other fire/EMS agencies Blaine County.

All current Blaine County radio systems operate in analog mode. Repeater coverage is inadequate to provide reliable communication and the dispatch systems and processes are in need of improvement. Digital Mobile Radio (DMR) is an open standard defined by the European Telecommunications Standards Institute and widely used in commercial products in the U.S. DMR equipment is manufactured by several major radio vendors and is interoperable in conventional digital voice operations. Several of the fire departments to be served by this system in Blaine County already have DMR-capable radios to be used on the new system. A Motorola "MOTOTRBO" DMR system is in use by the Weatherford 9-1-1 Public Safety Answering Point (PSAP). The Weatherford Police Department has entered into an agreement with Blaine County and the South Western Oklahoma Development Authority (SWODA), in conjunction with the Southwest Oklahoma Regional 911 Association, to provide certain E911 and public safety dispatch services. Equipment to be procured via this ITB will allow the Weatherford PSAP to provide state of the art, secure IP optical fiber network based dispatch console capabilities for new DMR base stations and repeaters located in Blaine County, using VHF frequencies already licensed and in use. Additionally, redundant radio console access will be provided at the Blaine County Sheriff's Office dispatch facility. The project objectives are to:

- Improve radio audio clarity for public safety responders.
- Increase the coverage area where the radio systems are usable.
- Update radio tower sites and repeater installations.
- Integrate a new RF control point in Watonga with updated dispatch consoles at the Weatherford PSAP and at the Blaine County Sheriff's office in Watonga.

Item 5: Scope of Work

General Requirements - The bidder shall provide line item pricing for the equipment and installation services described in the following sections. The project requirements include:

- A. Upgrade or install new – four (4) DMR digital repeater sites as described in this document. An additional site already has DMR repeater equipment, and must be reprogrammed to DMR.
- B. Design, install, and configure a new RF control point at a recently built 160ft tower site in Watonga.
- C. Integrate this new control point to existing dispatch systems at Weatherford and Watonga via IP, either by using the existing MIP5000 consoles or upgrading to the vendor's recommended IP console solution and provide functionalities to BCEM's satisfaction and to the satisfaction of Weatherford Police Department and the Blaine County Sheriff's Office.
- D. All radio traffic is to be recorded with long term storage and IRR feature at each console as part of the equipment proposed. (Storage capacity to be stated in the vendor's bid documents). The recordings shall be accessible via IP to credentialed individuals only. In addition, local console system audio must be made available for existing logging systems at Weatherford PD and the Blaine County Sheriff's Office.
- E. All equipment is to be provided with battery backup (each site will have a backup generator)
- F. Subscriber radio reprogramming: The successful vendor will be required to reprogram DMR radios used by agencies in the county (Motorola, Kenwood, Hytera). This will be limited to no more than 225 hand-held radios and 225 mobile radios. The BCEM project manager will work with the vendor to schedule this programming to be accomplished one time at no more than 7 locations, unless more locations and/or site visits are mutually agreed to by the vendor and the BCEM project manager. Subscriber radio purchases will be the responsibility of each Fire or EMS entity and those purchases are not part of this scope of work.
- G. Prior to installation of all radio repeaters and control stations, the vendor must conduct bench tests with a service monitor and make alignments and corrections necessary to ensure that the radios are operating within industry and factory standards. Before acceptance, the vendor will certify in writing to the BCEM project manager that this procedure has been performed for every radio provided.
- H. The vendor will configure consoles/software provided and correct all RF, audio, functionality issues - if evident - to the satisfaction of the designated BCEM project manager.
- I. Interface to the existing "eDispatches" voice notification system for all paging notices to responder smartphones.
- J. Include pricing for all Equipment / Hardware / Technical Services / Labor / Installation / System Configuration / Programming /etc. in your proposal.
- K. Provide estimated time to complete the project After Receipt of Order (ARO).

Item 6: Locations / FCC Licenses

- A. Repeater sites that will be upgraded to digital repeaters:
 - a) Canton - existing water tower – WQAV385
 - b) Enlink Gas Plant aka: "Greenfield" – WQYN442
 - c) Okeene – new water tower - WPPC645
 - d) Geary – existing water tower - WQRZ536
- B. Repeater or base station site requiring installation or reprogramming to digital:
 - a) Pioneer Y-Site - WQRZ536 (reprogramming)
 - b) RF Control Point for Dispatch System - Blaine County Emergency Management 521 E. 7th Street, Watonga, OK 73772
- C. Dispatch Centers:
 - a) Weatherford PD - 201 SW Main St, Weatherford, OK 73096
 - b) Blaine County Sheriff's Office - 212 N Weigle Ave, Watonga, OK 73772

Both dispatch centers will be connected via IP to the new RF Control Point. This will be accomplished via dedicated, leased IP circuits. This leased connectivity will be coordinated and provided by Blaine County EM and bidders will not be responsible for providing them nor be responsible for their functionality.

D. FCC Licensing:

All FCC licensing work has either already been completed or is in process. FCC work will not be part of the scope of this project or the bidder's responsibility.

E. Agencies/Frequencies Involved:

The following radio channels and DMR slots are involved in this project:

	AGENCY	M RX	M TX	TWR SITE	DMR SLOT
a)	Watonga Fire/EMS and Blaine Co. Fire/EMS agencies, including Eagle City Fire	158.7750	154.7700	Y Site	1
b)	Canton Fire/EMS and Longdale Fire/EMS	158.1350	153.8000	Canton	1
c)	Okeene Fire/EMS and Hitchcock Fire/EMS	159.0225	154.0925	Okeene	1
d)	Geary Fire/EMS	158.7975	155.5425	Geary	1
e)	Greenfield Fire/EMS	151.4825	155.7000	Greenfield/EnLink	1
f)	Blaine County Sheriff's Office	<u>All the above sites/repeaters</u>			2
g)	VHF Interoperability Radio	various	various	BCEM RF Ctrl Site	N/A

Item 7: Site Equipment Requirements

For each site listed below, provide line item pricing for each item of equipment, or for the equivalent equipment brand/model being proposed. The vendor shall provide propagation maps for the final radio and antenna configuration at each repeater site, showing: Portable talk in, Mobile talk in, Mobile receive, and Portable receive.

A. Canton Site:

Canton has an inoperable repeater at the water tower just west of town. A wall mounted DDB Outdoor box is in poor condition and must be removed and replaced with a DDB OD-50DDX (or better) with 2 sets of rack rails and fan kit mounted in top with temp controller. The wall mount kit from DDB must be used to wall mount the enclosure properly. Replace DB222 antenna and coax. (Tower climbing service will be required). Provide new repeater and duplexer. The site has no grounding presently and requires all grounding added to bring the sight as close as practical to the R-56 standard. Canton FD is responsible for providing a site generator; battery backup capacity requirement is short-term.

Canton site		
QTY	PART NUMBER	DESCRIPTION
1	AAR10JCGANQ1AN	REPEATER VHF (MOT) OR BETTER
1	HKLN4456	REPEATER DMM UPGRADE LIC
1	Q2220	SINCLAIR DUPLEXER VHF OR BETTER
1	PMKN4167	BATTERY BACKUP CBL - REPEATER
1	AGM-55	BATTERY, ABSORBED GLASS MAT - 55AH
1	OD-5DDX	50" CABINET WITH FAN KIT, 2 SETS RACK RAILS AND WALL MNT KIT (DDB)
1	391305	CHEMICAL GROUND ROD - HOR.
1	LP-BTR-NFF	LIGHTENING ARRESTOR - FLG MOUNT - NF TO NF
15	RG400	COAX CABLE - DOUBLE SHIELDED - REPEATER TO DUPLEXER
5	36421	NM CONNECTOR
1	99931	BNC M CONNECTOR
1	DB222	ANTENNA VHF 2 ELEMENT
1	L4TNM-PSA	NM CONNECTOR
1	L4TNF-PSA	NF CONNECTOR
2	SG12-12B2U	GROUND KIT
220	LDF4-50	1/2" COAX
1	WLDCBRX141.5191KB	GND BAR - RACK - HORIZONTAL
1	39978	SURGE PROTECTION - AC WITH GND (ISOBAR12ULTRA)
1	MG41227-K	GROUND BAR WITH INSULATORS AND BRACKET
20	588	5/8 GROUND ROD
200	2T	SOLID COPPER
1	MISC	CAD WELDING MATERIALS AND MISC HARDWARE
1	TOWER WORK	TOWER WORK
1	TECH SERVICE	TECH SERVICE
1	MOBILIZATION	ANY SHIPPING AND TRANSPORTATION COSTS
1	OTHER	ANY OTHER EQUIPMENT, MATERIAL OR SERVICES NEEDED TO FULLFILL BID REQUIREMENTS

B. Okeene Site:

Okeene recently built a new water tower. This is a 135-foot-tall standpipe. An antenna mount was installed on it when it was built. A building was also constructed with power, HVAC and a wood pole to string a messenger cable from the building to the water tower ladder. The awarded bidder must provide a 42" indoor cabinet with ground bus in it. Install new repeater / duplexer in the cabinet. Install a new 1/2" LDF coax (200ft), new DB224 antenna, and provide all grounding work and ground materials for site. Install one chemical ground rod with test well. Grounding is to be done as closely as reasonably possible to R-56 standards. (NO halo inside building is required). Install a ring around the building with 6 ground rods and ring the water tower with ground rods every 6-10 feet. Place a ground bus bar at the bottom of the climbing ladder and connect to ground grid with #2 solid wire. (Tower climbing service will be required). Hang 1/2" coax to climbing ladder with 14 gauge solid copper wire ties and cleanly install. Ground coax shield via mechanical clamp to top of ladder and to bus bar at bottom of ladder. Provide and install a messenger cable (about 50ft) to run coax from building to water tower ladder, and secure the 1/2" coax to it with same solid copper wire ties. Provide and install coax entry on building with boot assembly. Provide and install ground bus bars inside and outside of coax entry and connect to grounding system.

Okeene site		
QTY	PART NUMBER	DESCRIPTION
1	AAR10JCGANQ1AN	REPEATER VHF (MOT) OR BETTER
1	Q2220	SINCLAIR DUPLEXER VHF OR BETTER
1	PMKN4167	BATTERY BACKUP CBL - REPEATER
1	AGM-55	BATTERY, ABSORBED GLASS MAT - 55AH (Built In)
1	DB224A	ANTENNA VHF 4 ELEMENT
1	391305	CHEMICAL GROUND ROD - HOR.
1	LP-BTR-NFF	(or equivalent) LIGHTENING ARRESTOR - FLG MOUNT - NF TO NF
1	L4TNM-PSA	NM CONNECTOR
1	L4TNF-PSA	NF CONNECTOR
15	RG400	COAX CABLE - DOUBLE SHIELDED - REPEATER TO DUPLEXER
5	36421	NM CONNECTOR
1	99931	BNC M CONNECTOR
2	SG12-12B2U	GROUND KIT
200	LDF4-50	1/2" COAX
1	54332	CABINET 42" INDOOR
1	WLDCBRX141.5191KB	GND BAR - RACK - HORIZONTAL
1	39978	SURGE PROTECTION - AC WITH GND (ISOBAR12ULTRA)
3	MG41227-K	GROUND BAR WITH INSULATORS AND BRACKET
20	588	5/8 GROUND ROD
200	2T	SOLID COPPER
1	E574	ENTRY PANEL
1	BA12	BOOT ASSEMBLY WITH 1/2" ENTRY HOLE - QTY 1
1	SEAL	DUCT SEAL OR SILICONE FOR ENTRY
1	MISC	CAD WELDING MATERIALS AND MISC HARDWARE
1	TOWER WORK	TOWER WORK
1	TECH SERVICE	TECH SERVICE
1	MOBILIZATION	ANY SHIPPING AND TRANSPORTATION COSTS
1	MESSENGER	MESSENGER CABLE FROM TOP OF POLE TO WATER TOWER LADDER (APPROX 50FT DISTANCE)
1	OTHER	ANY OTHER EQUIPMENT, MATERIAL OR SERVICES NEEDED TO FULLFILL BID REQUIREMENTS

C. Geary Site:

The Geary site antenna is a DB224 on the water tower in Geary. There's a building on the grounds with an Icom repeater and Telewave duplexer. Reuse the duplexer and rack and replace the repeater. The coax and antenna is to be re-used and it tested good about a year ago. Provide two cinder blocks to get the rack off the floor (gets wet sometimes). Some minimal grounding already exists at this site. Install a ground bar inside and outside of the coax entry location and ground the coax shield at building entry, add a new lightning arrestor inside and ground to inside bar. Add a new chemical ground rod and connect all to existing grounding at site. Add 30ft of ice bridge to carry the coax over to the water tower.

Geary Site		
QTY	PART NUMBER	DESCRIPTION
1	AAR10JCGANQ1AN	REPEATER VHF (MOT) OR BETTER
1	HKLN4456	REPEATER DMM UPGRADE LIC
1	AGM-55	BATTERY, ABSORBED GLASS MAT - 55AH
1	391305	CHEMICAL GROUND ROD - HOR.
1	LP-BTR-NFF	LIGHTENING ARRESTOR - FLG MOUNT - NF TO NF
15	RG400	COAX CABLE - DOUBLE SHIELDED - REPEATER TO DUPLEXER
5	36421	NM CONNECTOR
1	99931	BNC M CONNECTOR
1	L4TNM-PSA	NM CONNECTOR
1	SG12-12B2U	GROUND KIT
2	BLOCK	CINDER BLOCK
1	WLDCBRX141.5191KB	GND BAR - RACK - HORIZONTAL
1	39978	SURGE PROTECTION - AC WITH GND (ISOBAR12ULTRA)
2	MG41227-K	GROUND BAR WITH INSULATORS AND BRACKET
20	2T	SOLID COPPER
1	E574	ENTRY PANEL
1	BA12	BOOT ASSEMBLY WITH 1/2" ENTRY HOLE - QTY 1
1	SEAL	DUCT SEAL OR SILICONE FOR ENTRY
1	MISC	CAD WELDING MATERIALS AND MISC HARDWARE
3	IB12D-Z	ICE BRIDGE 12" X12' Z TRAPEZE - BURIAL
1	TECH SERVICE	TECH SERVICE
1	MOBILIZATION	ANY SHIPPING AND TRANSPORTATION COSTS
1	OTHER	ANY OTHER EQUIPMENT, MATERIAL OR SERVICES NEEDED TO FULLFILL BID REQUIREMENTS

D. Enlink Gas Compressor (Greenfield) Site:

The Enlink Midstream site is about 7-8 miles west of Greenfield, OK with a building and 125ft tower. They are donating space inside the building and an open mount on the tower top for a new repeater in SW Blaine County. Wall mount the new repeater and duplexer by adding a sheet of plywood to the wall on East wall existing Unistrut. Provide a BA12 entry boot assembly to existing open hole on coax entry panel. An APC Symmetry UPS is currently in place and BCEM has permission to plug into it for power. The plug is on top of the rack in which the UPS is located. Provide a new antenna and 1/2" coax and ground it top and bottom. Connect to existing grounding system, including ground bus bars on tower bottom and at entry. Tower has a snap-in ladder.

Enlink (Greenfield Site)		
QTY	PART NUMBER	DESCRIPTION
1	AAR10JCGANQ1AN	REPEATER VHF (MOT) OR BETTER
1	PMLE5031	REPEATER WALL MOUNT
1	HKLN4456	REPEATER DMM UPGRADE LIC
1	Q2220	SINCLAIR DUPLEXER VHF OR BETTER
1	LP-BTR-NFF	LIGHTENING ARRESTOR - FLG MOUNT - NF TO NF
20	RG400	COAX CABLE - DOUBLE SHIELDED - REPEATER TO DUPLEXER
5	36421	NM CONNECTOR
1	99931	BNC M CONNECTOR
2	SG12-12B2U	GROUND KIT
1	DB224A	ANTENNA VHF 4 ELEMENT
3	L4TNM-PSA	NM CONNECTOR
1	L4TNF-PSA	NF CONNECTOR
250	LDF4-50	1/2" COAX
5	12SS-A	1/2" LDF SNAP IN HANGERS (10 PER BAG)
50	6G	#6 STRANDED GREEN WIRE
1	BA12	BOOT ASSEMBLY WITH 1/2" ENTRY HOLE - QTY 1
1	SEAL	DUCT SEAL OR SILICONE FOR ENTRY
1	TOWER	TOWER WORK
1	MISC	CAD WELDING MATERIALS AND MISC HARDWARE
1	TECH SERVICE	TECH SERVICE
1	MOBILIZATION	ANY SHIPPING AND TRANSPORTATION COSTS
1	OTHER	ANY OTHER EQUIPMENT, MATERIAL OR SERVICES NEEDED TO FULLFILL BID REQUIREMENTS

E. Main RF Control Site with Gateway/interface to Consoles:

A new room with HVAC has being placed inside the county commissioner's barn adjacent to the new 160ft tower at 521 E. 7th Street, Watonga, OK. This will be the location for the new RF control site for dispatch functions. Antennas and coaxes with lightning arresters have been installed and run inside this new room. Bidders will be responsible for the base station radio equipment at this site and for combiner systems necessary to connect to the antenna systems. Eight RF lines and antennas have been installed, with 5 designated for use in this project. Two DBSpectra omni-directional antennas are placed at the top of the tower for use with the combiner and the DMR radios. Another DBSpectra antenna is for direct connection to the backup/interop radio listed below. Two 5 DB gain Telewave yagi antennas are positioned for the Okeene DMR control station radios.

BCEM will provide a) an equipment room with AC power on backup generator, b) HVAC system, c) carrier provided, fiber optic based point-to-point IP connection to Blaine County SO and Weatherford PD and d) an Internet connection for e- Dispatches connectivity. No repeaters will be at this site and all DMR dispatch RF will be emitted from this site to Canton, Okeene, Geary, Greenfield and Watonga Y-site repeaters. Bidders must provide a 16ch DB Spectra hybrid control station combiner (or equivalent) and sufficient number of control radios with gateway system for the console solution being proposed for Weatherford PD and BCSO Dispatch in Watonga. Console access must include gateway/interface capability for

- The five fire/EMS channels,
 - The five channels for the Blaine County Sheriff's Office channel (slot 2 on all repeaters),
 - A dedicated audio path for the eDispatches unit, and
 - A backup control station radio transceiver configured for talk-around simplex on the Blaine County Fire/EMS repeater output frequency/slot, and state VHF interoperability channels such as OK FIRE1.
- BCEM will handle licensing and provide a specific list of channels. This radio will use console channel steering features, and console patching to the DMR based channels will be available via the consoles.

After installation, for this RF Control Site, the vendor shall provide 4 propagation maps as above, except based on use of the DBSPECTRA antenna at the top of the tower, using the OK FIRE1 frequency at the radio's highest expected power output to the antenna, not using a combiner.

RF Control Site - Located at BCEM building, 521 E. 7th Street, Watonga, OK		
QTY	PART NUMBER	DESCRIPTION
1		DMR Control Station Radio for Canton Site (Fire/EMS)
1		DMR Control Station Radio for Okeene Site (Fire/EMS)
1		DMR Control Station Radio for Geary Site (Fire/EMS)
1		DMR Control Station Radio for Greenfield Site (Fire/EMS)
1		DMR Control Station Radio for Watonga Y Site (Fire/EMS)
1		DMR Control Station Radio for Canton Site (Blaine Co. SO – slot 2)
1		DMR Control Station Radio for Okeene Site (Blaine Co. SO – slot 2)
1		DMR Control Station Radio for Geary Site (Blaine Co. SO – slot 2)
1		DMR Control Station Radio for Greenfield Site (Blaine Co. SO – slot 2)
1		DMR Control Station Radio for Watonga Y Site (Blaine Co. SO – slot 2)
1		DMR Control Station Radio for VHF Interoperability and simplex backup functions. This radio will bypass combiner equipment and use a DBSpectra antenna.
1		Audio Interface for Console dispatch path to eDispatches equipment
		Power supplies and distribution for all base station and control equipment
1		Uninterruptable Power Supply (or other DC battery unit) with 20 minutes of battery capacity
		Hybrid Control Combiner required for vendor's solution
		Disclose shipping and transportation costs
		Technical/Installation costs
		Attachments to existing grounding system
		Equipment to provide VPN access for secure remote maintenance/testing. Internet access will be provided by BCEM, and is not included in this bid requirement.
		Other equipment required for functionality required.

F. Dispatch System:

An IP based dispatch console system shall be deployed at Blaine County Sheriff's Office and Weatherford Police Department and connected via IP to the RF Control Site. These two entities presently have MIP5000 consoles. Weatherford PD has 3 positions with 8 channel seat keys. BCSO has one position with a 4 channel seat key. Bidders are urged to leverage the existing hardware and software to provide the required functionality with a cost-effective solution. Weatherford PD will dispatch all Blaine County Fire and EMS entities and have access to all RF control site resources (in addition to maintaining their present capabilities). Blaine County Sheriff's Office will be the primary dispatch for Blaine County Sheriff's traffic. The Sheriff's office will primarily use slot two (2) of the "Y" site for routine law enforcement and mobile to mobile communications, but there will be radios at the RF Control site for slot two of the other repeaters, and the consoles must have the capability to patch other repeater sites to facilitate mobile to mobile communications among field units that are on slot 2 of other sites. This capability must be provided without the requirement for mobile radios to have proprietary LMR roaming/linking/trunking software or hardware capability. The Sheriff's office will have access to all RF Control Site resources, including eDispatches, to act as a backup dispatch facility for County fire and EMS entities. Vendors must clearly describe the PC/Server components involved in their proposed configurations, specifically where those CPUs and Servers will be located, and what backup and restore capability will be provided. (also note backup and restore requirements in acceptance procedures).

Concept of Operations

The necessity to dispatch multiple Fire/EMS agencies that may use one of five different repeaters for their daily operations poses a challenge for configuring dispatch console functionality. Certain functions will be achieved by pre-programmed console buttons, while others must be achieved by dispatchers trained to perform separate button pushes and tone-out/voice transmit combinations. While vendors may propose console software capable of one-button macros that perform complex, multiple sequential actions, the console capability to perform the following procedure is stated as a minimum requirement. A separate console path to the eDispatches equipment at the RF control site is required. This will provide a method for fire/EMS notification, even under circumstances of radio/repeater failure, and includes the dispatcher's audio being voiced for store and forward by the eDispatches system. Actual broadcast of the initial dispatch will also normally only be transmitted on the Blaine County Fire/EMS channel for all departments. The ability for the console to have the eDispatches path and the BC Fire/EMS channel multi-selected/linked will allow the dispatcher to achieve this in a single action. Each agency will have a unique tone-out code to be sent, and separate buttons for each agency or groups of agencies, programmed on the console screen will allow the dispatcher easy selection and activation to perform the initial tone-out and dispatch. Dispatch and training procedures to be developed may require the dispatcher to make a second radio transmission on the specific channel used by the agency being dispatched. Vendors proposing console button programming capability allowing more complex multi-select combinations, steering, etc., for each agency/group's tone-out button are welcome to describe that capability.

Dispatch Console System Upgrades

Weatherford PD Dispatch Console System Upgrade

QTY	PART NUMBER	DESCRIPTION
		Provide line item pricing for all hardware and software components necessary to meet the requirements of the ITB
		If the proposed hardware or software would require any reconfiguration, changes, or upgrades to Weatherford's existing systems that are not included in the bidder's pricing, these costs must be clearly disclosed in this section of the bid documents.
		Provide description and cost of Instant Recall Recording functionality
		Disclose shipping and transportation costs
		Technical/Installation costs

Blaine County Sheriff's Office Console System Upgrade

QTY	PART NUMBER	DESCRIPTION
		Provide line item pricing for all hardware and software components necessary to meet the requirements of the ITB
		If the proposed hardware or software would require any reconfiguration, changes, or upgrades to the Blaine County Sherrif's existing systems that are not included in the bidder's pricing, these costs must be clearly disclosed in this section of the bid documents.
		Provide description and cost of Instant Recall Recording functionality
		Disclose shipping and transportation costs
		Technical/Installation costs

Item 8: Optional Equipment and Services

The purpose of this IVT Item is to provide pricing for optional equipment and services that BCEM may find necessary during the contract period. Unless BCEM finds some aspect of these costs to be alarmingly prohibitive, or represent a substantial cost savings for future support of the system, the prices included in this section of the vendor's bid will not be considered during BCEM's bid evaluation and contract award recommendation. The inclusion of options B., C., or D. below in the awarded contract will provide BCEM an approved, contractual purchasing mechanism that can be used during the contract period. Inclusion of pricing for optional equipment and services in the contract does not encumber Blaine County fiscal year or capital funds for those purposes. Separate purchase authorizations and fund source identification would be required for each instance, based on standard Blaine County purchasing procedures.

A. Extended Warranty and Maintenance

In addition to the initial warranty and maintenance described in another section, vendors are requested to provide pricing for:

- a) Extended 24 x 7 parts and service maintenance for the remainder of the fiscal year ending June 30, 2019, based on the same response criteria as the initial period.
- b) Extended 24 x 7 parts and service maintenance for the fiscal year ending June 30, 2020, based on the same response criteria as the initial period.
- c) The discounted cost of a), and b), above if paid in advance at the time of system acceptance as described in Item 10, below.

B. Non-Warranty Repairs and Labor

Bidders are requested to provide separate pricing for on-site, per hour labor charges, any service call fee or mileage, and for telephone technical support requested by BCEM. Examples include damage by employees or other accident, moving or reconfiguring portions of the system, and installation of additional workstations. These rates also apply for services when it is determined the labor and support provided for a warranty service call were not covered, due to the nature of the problem found. Billing for a service call under these conditions will only be anticipated when it was logged without proper authorization, or when reasonable diligence was clearly not applied by the supervisor who logged or authorized the call to determine whether the malfunction was within the radio equipment.

C. Optional Hardware, Software, and Upgrades

Bidders are requested to provide a pricing plan for non-warranty replacement or additional items associated with the scope of this radio system project. This can be in the form of a statement in this section of the bid that any replacement or additional hardware item will be sold to Blaine County at the list price minus a stated discount (to be listed in the bid.) If the discount from list is different for different product categories (for example coax wire, versus radios and repeaters) then separate statements should be included noting the category and the percent discount from list.

D. Optional Mobile and Portable Radio Programming

Bidders are requested to provide pricing for programming mobile and portable radios for users of the new DMR system, that were not programmed as part of the initial requirements of this ITB. This pricing should include programming at the vendor's shop, as well as pricing for on-site programming (for instance to program several radios for the Geary Fire Department at Geary Fire Station #1).

Item 9: BCEM Responsibilities

- A. Site access at all repeaters, base stations, and dispatch facilities. Responsibility for reasonable security measures at the sites.
- B. Dedicated, carrier class optical fiber IP network connection between the Weatherford Police Department PSAP, Blaine County Sheriff's Office, and the BCEM RF Control Site, 521 E. 7th Street, Watonga. BCEM will provide RJ-45 network connection to the radio equipment rack.
- C. Power – Commercial power and backup generator at each site.
- D. eDispatches notification system.
- E. FCC Licenses for all radio frequencies and sites involved in this project.

Item 10: Acceptance and Payment Schedule

A. Acceptance Procedure

The installed radio system will be considered accepted when BCEM notifies the vendor in writing that the following criteria have been met:

- d) Reliability - The quality and reliability of the system has reached a level of stability such that the new radio system has been installed, tested, cut over to live use, and functioning as the primary source for dispatch and LMR radio functions for 96 consecutive hours without malfunctions; and
- e) Features - The system is providing all features and capabilities per BCEM's ITB, the vendor's bid, and the executed contract; and
- f) Transmission Levels - The quality and level of radio transmissions is consistent with industry standards and published specifications of the system; and
- g) System Coverage - Tests and actual usage of the system indicate that all channels are providing acceptable two-way radio communications within the geographic areas expected, based on RF propagation maps provided by the vendor; and
- h) eDispatches Interface - The interface to BCEM's eDispatches system is receiving all necessary radio paging tones and voice traffic for timely notifications, subject to the functions and limitations of the eDispatches product and connectivity provided outside the scope of the radio vendor's responsibility; and
- i) Hardware and Software Installation – For all hardware provided by the vendor, the installation of all wiring, grounding, and radio equipment has been completed, and is in accordance with industry standards and BCEM's requirements. In addition, all software installation is complete and in production mode, and no part of the system is operating with internal, short term license codes that are for factory testing or demo purposes; and
- j) System Security – All network and application security features are in place to ensure correct access for users as well as system administrators and authorized technical support staff of Weatherford Police Department, BCEM, Blaine County Sheriff's Office, and the vendor; and
- k) Maintenance and Recovery - All of the following tasks and issues are resolved:
 - 1) A current back-up copy of the system configuration database(s) and of programming files (sometimes called "code plugs") for all base station radios, repeaters and controllers has been made for on and off site storage as agreed; and
 - 2) The vendor, along with the BCEM Emergency Manager, and the Weatherford Chief of Police (or his designate) have a clear understanding of the scope of effort that would be required to replace, reload and re-start consoles, base stations and repeater systems after catastrophic failure and data loss; and
 - 3) The vendor has provided example radio programming information (a code plug) needed by other qualified vendors and users to properly program mobile and portable DMR radios to access the system.
 - 4) Secure remote system access for system maintenance by the vendor has been demonstrated; and
- l) Training - The training program related to use of the new radio consoles and systems for selected dispatchers, supervisors, and system administrators has been satisfactorily completed; and
- m) Documentation - System manuals and other documentation is complete and on file on BCEM premises, except for any agreed by the BCEM project manager to be a punch-list item; and
- n) Punch List - All deficiencies noted by the vendor or BCEM have been corrected by the vendor, except for a punch list which BCEM agrees is only comprised of "minor items."

B. Payment Schedule and Criteria

- a) When all hardware is on site, BCEM will pay the vendor upon receipt of an invoice for an amount no more than fifty percent (50%) of the contract purchase and installation cost (not including any optional prepaid, extended warranty costs). This may occur before configuration, testing, and cutover prior to the beginning of the acceptance process outlined in section A., above. The BCEM project manager is authorized to allow an exception for the vendor to retain certain hardware components at the vendor's premise for bench programming and software configuration.
- b) When all the above acceptance criteria have been met, the BCEM project manager will notify the vendor in writing. At this point, the initial 90-day warranty period will begin. Upon receipt of an invoice, BCEM will authorize and process payment for an amount that brings the total paid as of system acceptance to ninety percent (90%) of the agreed purchase and installation cost (not including any optional prepaid, extended warranty costs). In addition, any optional prepaid, extended warranty costs will be invoiced and processed for payment.
- c) The remaining ten percent (10%) of the purchase and installation cost may be invoiced and authorized for payment sixty (60) days thereafter, or when punch list items are complete to BCEM's satisfaction - whichever comes last. BCEM reserves the right to add items to the punch list during the 60 days after system acceptance, if chronic problems occur with the system.