



**DAWSON COUNTY GOVERNMENT
REQUEST FOR PROPOSALS
FOR
DAWSON COUNTY PUBLIC SAFETY RADIO
COMMUNICATIONS SYSTEM UPGRADE**

SUBMISSIONS ARE DUE AT THE ADDRESS SHOWN BELOW NO LATER THAN

APRIL 27, 2023, AT 10:30AM, EST

**DAWSON COUNTY BOARD OF COMMISSIONERS
ATTENTION: PURCHASING MANAGER
25 JUSTICE WAY, SUITE 2223
DAWSONVILLE, GA 30534**

RFP # 415-22

THE RESPONSIBILITY FOR SUBMITTING A RESPONSE TO THIS RFP ON OR BEFORE THE STATED DATE AND TIME WILL BE SOLELY AND STRICTLY THE RESPONSIBILITY OF THE OFFEROR.

ISSUE DATE: DECEMBER 27, 2023

DAWSON COUNTY BOARD OF COMMISSIONERS

DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM UPGRADE

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DAWSON COUNTY, GEORGIA

Purchasing Department

25 Justice Way, Suite 2223

Dawsonville, Georgia 30534

Phone: 706-344-3500 x.42223; Email: mhawk@dawsoncounty.org

DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM UPGRADE

INVITATION

This is an invitation to submit a proposal to Dawson County for the provision of a public safety radio communications system to support mission-critical communications, indicated herein. Details are listed under Section II. Sealed bids will be received by the office of the Purchasing Manager at 25 Justice Way, Suite #2223, Dawsonville, GA 30454.

Instructions for preparation and submission of a bid/proposal are contained in this packet. Electronic packets may be found at <https://vrapp.vendorregistry.com/Bids/View/BidsList?BuyerId=1bac094c-9726-497e-943b-141544ec4bd4>. Submissions must be typed or printed in ink. Prices submitted as a result of this invitation must include the Vendor Price Proposal Form and be returned in a sealed envelope or container marked, as Sealed Bid with the applicable Proposal Name and Proposal Number on the outside. The offer may not be considered unless so received. Proposals must be submitted no later than 10:30 a.m., April 27, 2023. Tentative award date is set for June 15, 2023.

There will be an optional pre-proposal conference at 9:00 a.m., on January 11, 2023, beginning at the Amicalola Falls Radio Tower, located at 418 Amicalola Falls Lodge Drive, Dawsonville, GA 30534. We will visit each site, if time permits. Attendees must advise the Purchasing Manager no later than January 9, 2023 via email (only) how many company members will be in attendance. No late notifications or attendance of the meeting will be accepted. All questions/comments that may arise from this invitation must be submitted in writing and emailed to the Purchasing Manager at mhawk@dawsoncounty.org no later than January 18, 2023, at 1:00 p.m. All questions and answers will be posted to the County website and the Georgia Procurement Registry no later than January 25, 2023, at 1:00 p.m. Answers to question submitted that materially change the conditions and specifications of this invitation will be promulgated to the County website and the Georgia Procurement Registry. Any discussions or documents will be considered non-binding unless incorporated and publicized in an addendum.

Dawson County provides equal opportunity for all businesses and does not discriminate against any person or business because of race, color, religion, sex, national origin and handicap or veteran status. This policy ensures all segments of the business community have access to supplying the goods and services need by Dawson County. Dawson County does not guarantee a minimum/maximum value for this contract.

Sincerely,

Melissa Hawk

Melissa Hawk, Purchasing Manager

**DAWSON COUNTY, GEORGIA
REQUEST FOR PROPOSALS
FOR**

DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM UPGRADE

SECTION I – GENERAL OVERVIEW

A. INFORMATION TO PROPOSERS

1. BID SUBMISSION

The Proposers shall package and seal its submittal so that they will not be damaged in mailing. Technical and Cost/Fee Proposals are to be packaged and sealed **separately**. **One (1) original and five (5) copies of the technical proposal and one (1) original price proposal** must be received by, **APRIL 27, 2023, AT 10:30AM, EASTERN STANDARD TIME**. One (1) soft copy* of the complete **Technical Response** must be included in the package. One (1) soft copy* of the complete **Price Response** must be sealed separately with the hard copy price proposal. Technical and price proposals must be submitted in a **separate** sealed envelope stating on the outside, the proposer's name, address, the solicitation number **#415-22 Construction Services - Comprehensive Security System upgrade for Dawson County**. If the price is referenced in the technical proposal, the submission must be disqualified and will not be evaluated. Remember not to include any pricing in the Technical Response. The complete submittal (price and technical) must contain the proposer's name, address and the solicitation number **#415-22 Construction Services - Comprehensive Security System Upgrade for Dawson County** be delivered to:

Dawson County Board of Commissioners
Attention: Purchasing Manager
25 Justice Way, Suite 2223
Dawsonville, GA 30534

Soft Copy is defined (for this RFP) as various types of media such as a disc or flash drive. Vendors shall not email copies of the information. If a Proposer emails soft copies of the Technical or Price response, said Proposer will be immediately disqualified from this RFP process. Soft copies will be retained on file with the hard copy response.

Hand Delivery

Hand delivered copies may be brought to the above address between the hours of 8:00AM and 5:00PM EST, Monday through Friday, excluding Holidays. For a complete listing of Holidays, please visit www.dawsoncounty.org. If a sealed bid is delivered after 10:25 a.m., on the day of the opening, deliver the package to the Purchasing Manager, in the County Administration Training Room, Suite #2204. No submission will be accepted after 10:30 a.m., on the date listed within the bid submission section, at which time all company names of offers received will be publicly read aloud.

GPS Location

Some GPS systems cannot locate the above-named address. Proposers may search the following address if trying to visit the Dawson County Government Center: 25 Tucker Avenue, Dawsonville, GA 30534. Tucker Avenue is located on the East side of the Government Center. Upon arrival, please continue one block West on Shoal Creek Road to Justice Way. Parking for the Government Center is available off of Justice Way. Proposers should verify address is in Dawson County and not a surrounding community.

Coordinates: 34°25'23.08"N 34°25'23.08N 84°07'12.05

Proposers are responsible for informing any commercial delivery service, if used, of all delivery requirements and for ensuring that the required address information appears on the outer wrapper or envelope used by such service. NOTE: *Many express mail and delivery services do not guarantee overnight by noon to Dawson County.*

The Submittal must be signed by a company officer who is legally authorized to enter into a contractual relationship in the name of the proposer.

3. CONTACT PERSON

Proposers are encouraged to contact **Melissa Hawk, Purchasing Manager via email mhawk@dawsoncounty.org** to clarify any part of the RFP requirements. All questions that arise prior to the DEADLINE FOR QUESTIONS due date shall be directed to the contact person in writing via facsimile or email. Any unauthorized contact shall not be used as a basis for responding to this RFP and also may result in the disqualification of the proposer's submittal.

Proposers may not contact any elected official or other county employee to discuss the bid process or bid opportunities except: 1) through the Purchasing Manager named herein, or 2) as provided by existing work agreement(s). This policy shall be strictly enforced and the County reserves the right to reject the submittal of any proposer violating this provision.

4. ADDITIONAL INFORMATION/ADDENDA

Dawson County will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the due date posted on the county's website under the bid information. Proposers should not rely on any representations, statements or explanations other than those made in this RFP or in any addendum to this RFP. Where there appears to be a conflict between the RFP and any addenda issued, the last addendum issued will prevail. Proposers are advised to check the website for addenda before submitting their proposals.

Proposers must acknowledge any issued addenda by including Attachment B-Addenda Acknowledgement with the submittal. Proposals which fail to acknowledge the proposer's receipt of any addendum will result in the rejection of the offer if the addendum contains information which substantively changes the Owner's requirements

5. LATE SUBMITTAL AND LATE MODIFICATIONS

Submittals received after the due date and time will not be considered. Modifications received after the due date will not be considered. Dawson County Government assumes no responsibility for the premature opening of a proposal not properly addressed and identified, and/or delivered to the proper designation.

6. REJECTION OF PROPOSALS/CANCELLATION

Dawson County Government reserves the right to reject any and all submittals and reserves the right to waive any irregularities or informalities in any submittal or in the submittal procedure, when to do so would be to the advantage of Dawson County. Dawson County reserves the right to cancel this RFP at any time.

7. MIMINUM RFP ACCEPTANCE PERIOD

Submittals shall be valid and may not be withdrawn for a period of 90 days from the date specified for receipt of submittals.

8. NON-COLLUSION AFFIDAVIT

By submitting a response to this RFP, the proposer represents and warrants that such proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person not therein named and that the proposer has not directly or indirectly induced or solicited any other proposer to put in a sham proposal, or any other person, firm or corporation to refrain from submitting and that the proposer has not in any manner sought by collusion to secure to that proposer any advantage over any other proposer.

By submitting a proposal, the proposer represents and warrants that no official or employee of Dawson County Government has, in any manner, an interest, directly or indirectly in the proposal or in the contract which may be made under it, or in any expected profits to arise there from.

9. COST INCURRED BY PROPOSERS

All expenses involved with the preparation and submission of the RFP to the Dawson County Board of Commissioners, or any work performed in connection therewith is the responsibility of the proposer(s).

10. RFP OPENING

Only the names of the firms responding to this RFP will be read aloud publicly due to the fact that the proposals will be subject to an evaluation review for accurate qualifications. A list of names of firms responding to the RFP may be obtained from the county's website www.dawsoncounty.org, after the RFP due date and time stated herein. A copy of the final evaluation tabulation to the RFP will be posted to the website after the RFP has been awarded, along with the awarded Contractor's name and date of award.

11. OPEN RECORDS

Proposers are reminded that under Georgia law, all opened documents fall under the open records act and are subject to inspection by the public. Proposers are reminded that documents and information in the possession of Dawson County will be treated as confidential/proprietary information only to the extent permitted by the Georgia Open Records Act, and will be exempt from disclosure to a third party only to the extent permitted by the Georgia Open Records Act. Should you believe that your Proposal

contains any trade secrets you must include an affidavit, at time of proposal submission that states that specific portions of the proposal contain trade secrets as defined by Georgia law (Article 27 of Chapter 1 of Title 10 of the Official Code of Georgia). Furthermore, the affidavit must be detailed, citing specifically (citing paragraphs, articles, provisions, pages, etc.) the portions of the proposal containing any trade secrets. Accordingly, proprietary information and/or data cannot be withheld from public inspection.

12. TAXES

Dawson County Government is tax exempt. No sales tax will be charged on any products or services. Dawson County cannot exempt any other person/proposer from applicable sales taxes that may be required of them in relations to this project. Selected proposer will be provided with Dawson County's Sales and Use Tax Certificate of Exemption number upon request.

13. PROPOSER INFORMATION

All submissions shall include a completed proposer information form, current copy of business license and current W-9. Failure to provide this information could result in the disqualification of the proposer from submitting a proposal.

14. INSURANCE

Selected proposer will be required to provide Dawson County with a Certificate of Insurance for liability and workman's compensation insurance before work can begin on this County project and be effective for the duration of the work as described in the Contract Documents, including authorized change orders, plus any period of guarantee as required in the general warranty.

General liability insurance should be at least one million dollars (\$1,000,000) combined single limit per occurrence. Automobile insurance should be at least five hundred thousand dollars (\$500,000) combined single limit per accident for bodily injury or property damage; Workman's Compensation insurance should be as required by the State of Georgia; and Professional Liability insurance should be at least one million dollars (\$1,000,000).

The insurance certificate **must name** Dawson County Government its officers, employees and agents as an **additional insured** for the contracted project and the proper endorsements must accompany the certificate of insurance.

15. BONDS

If required, under SECTION II – SCOPE OF WORK of this document any combination of the following bonds may be requested by Dawson County. A five percent (5%) bid bond, a one hundred percent (100%) payment bond, and a one hundred percent (100%) performance bond. All bonds would be payable to Dawson County Board of Commissioners. Failure to submit appropriate bonding will result in automatic rejection of bid. Bonding company must be authorized to do business in Georgia by the Georgia Insurance Commission, listed in the Department of Treasury's publication of companies holding certificates of authority as acceptable surety on Federal bonds and as acceptable reinsuring companies, and have an A.M. Best rating.

16. ANTI-DISCRIMINATION

Dawson County, in accordance with Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all proposers that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 23 will be afforded full opportunity to submit proposals in response to this Request for Proposal and will not be discriminated against on the grounds of race, color, national origin, sex, handicap/disability in consideration of an award.

By submitting their proposals, all proposals certify to Dawson County that they will conform to the provisions of the Federal Civil Rights Act of 1964.

In every contract of over \$10,000 the provisions in Sections 1 and 2 below apply:

1. During the performance of this contract, the CONTRACTOR agrees as follows:
 - a. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the CONTRACTOR. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - b. The CONTRACTOR, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, will state that such CONTRACTOR is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
2. The CONTRACTOR will include the provisions of Section 1 above in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each Sub-contractor or proposer.

Proposers may request this Request for Proposal in another language by contacting Purchasing Manager Melissa Hawk at p) 706-344-3501, f) 706-531-2728 or via email at mhawk@dawsoncounty.org. All bid submissions must be returned in English.

17. GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT

Proposers submitting a qualification package in response to this RFP must provide the following information in the package to indicate compliance with the Georgia Security and Immigration Compliance Act. The form is provided for completion.

- A. A statement that indicates the CONTRACTOR will conduct itself in compliance with O.C.G.A. §13-10-91 and Rule 300-10-.02 in the execution of the contract.

- B. By completing the affidavit that is provided with this solicitation, the proposer is attesting to the following:
- a. The affiant has registered with and is authorized to use the federal work authorization program;
 - b. The user identification number and date of authorization for the affiant;
 - c. The affiant is using and will continue to use the federal work authorization program throughout the contract period;
 - d. Any employee, CONTRACTOR, or Sub-contractor of such CONTRACTOR or Sub-contractor shall also be required to satisfy the requirements set forth in this paragraph; and
 - e. Upon contracting with a new Sub-contractor, a CONTRACTOR or Sub-contractor shall notify Dawson County and shall deliver a completed Sub-contractor Affidavit to Dawson County within five (5) working days of entering into a contract or agreement of hire with the Sub-contractor before the new Sub-contractor begins any work.
- C. Failure to provide the completed and notarized affidavit with the CONTRACTOR's proposal will result in immediate disqualification as required by the Georgia Security and Immigration Compliance Act.

SECTION II – GENERAL CONDITIONS

A. PURPOSE

Dawson County Purchasing Department is soliciting **sealed** proposals from qualified individuals/firms who specialize in providing a turn-key public safety radio communications system to support mission-critical communications. Individuals/firms must provide all equipment, materials and labor to complete the scope of work. Details are listed herein. The County does not guarantee a minimum/maximum value for this contract.

B. CONTRACT PERIOD

The term of a contract awarded as a result of this RFP shall be from award until final acceptance of project by the County, which is to be seven hundred thirty (730) calendar days from the issuance of the Notice to Proceed letter.

The contract shall terminate absolutely and without further obligation at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under this contract. The County does not guarantee a minimum value for this contract.

If, at any time, the County determines it is in its best interest to discontinue use of these services the County reserves the right to cancel this Agreement by giving thirty (30) days advance written notice.

C. BACKGROUND

The Dawson County sits in northeast Georgia and covers 214 square miles and 49 linear miles of lake shore. The 2020 census reported 25,277 residents live within Dawson County. Separated by four (4) voting and school districts Dawson County's population is centralized near the GA Hwy 400 corridor and thins out from the area.

Dawson County currently is utilizing a VHF land mobile radio (LMR) system. The system contains 2-channel simulcast analog conventional radio system containing three VHF remote radio communications sites and a dispatch center. Leased circuits provide backhaul connectivity between the primary control site and the two remote radio sites. These two channels provide the Sheriff's Office and Fire/Emergency Medical Services (EMS) users with a single channel each.

Recognizing the need to replace or upgrade the VHF system, the County worked with stakeholders to identify the needs and requirements for a system upgrade that would meet the County's needs for the next 10-15 years. The County intends to purchase and implement an integrated public safety wireless communication system that will provide first responders real-time operable and interoperable voice and low-speed data services for all users that support day-to-day, mutual aid, and task force operations. The integrated public safety wireless communication system shall consist of:

1. Six-channel, Project 25 (P25) trunking, Phase 2, 700 MHz simulcast radio system.
2. VHF analog overlay interoperability and paging channel.
3. Microwave backhaul and/or optical fiber network providing connectivity between the main dispatch, control, and radio sites.
4. Four-operator position dispatch console system, including backup RF control stations and logging recorder system.
5. Network Management System (NMS) capable of monitoring and controlling provided system and associated subsystems.
6. Subscriber radios (portable, mobile, and control station radios).
7. Site Upgrades, including, but not limited to, equipment shelters, radio towers and DC power systems.
8. Upgrade the County detention center's VHF bi-directional amplifier/distributed antenna system (BDA/DAS) to provide 700 MHz P25 coverage within the detention center.

The County is in the process of building of a new 9-1-1/Emergency Operations Center (EOC) which will also contain a new Dispatch Center/Public Safety Answering Point (PSAP). In the event the new P25 system is procured and implemented prior to the completion of the new 9-1-1/EOC building, the Contractor shall be responsible for relocating the new dispatch center equipment to the new EOC building upon its completion. There will be a separate line item for this work.

The microwave and/or optical fiber network shall be designed to include the dispatch center/PSAP at the new 9-1-1/EOC location. The current dispatch center location shall be provided with a temporary backhaul solution to remain in place until the new dispatch center/PSAP equipment is relocated to the new 9-1-1/EOC location.

D. PROJECT GOALS

The goal of this project is to ensure the implementation of a cost-effective, highly- reliable public safety radio system that meets the County's needs. The project shall provide:

1. A replacement radio system including infrastructure equipment and software that complies with the current version of the Association of Public-Safety Communications Officials (APCO) Project 25 (P25) suite of standards.
2. Radio system users with an increased level of coverage that supplies 95% of the geographical boundaries of the service area with portable on the street coverage and increased in-building coverage.
3. Stakeholders with periodic updates and review cycles and ample opportunity to provide input/feedback throughout the project.
4. A stable, reliable infrastructure radio system.
5. The flexibility to take advantage of future technologies, including mixed- mode operation (analog conventional, P25 Phase 1 and Phase 2).
6. A solution that leverages existing communications infrastructure (sites/facilities) to the greatest extent possible.
7. Enhanced interoperability with local, regional, State, and Federal first responder agencies.
8. Reserve capacity for use during major catastrophic events.

E. **SCOPE OF WORK**

Functional Specifications (Attachment "A", beginning on page 152) describes the general, functional, and operational requirements of the Dawson County, Georgia (County) public safety land mobile radio (LMR) system (System). While not a design, these specifications provide requirements for system architecture, performance and support, as well as system implementation, testing and acceptance of the new system. Proposers shall submit a comprehensive proposed design that describes the general, functional and operational capabilities of the proposed system as per the requirements specified in Attachment "A".

"OPTION" or "OPTIONAL" items contained within the Functional Specifications section refer to features, services and/or equipment which the County may or may not purchase or items whose quantities are not determined yet. Proposer shall respond to and provide pricing for all OPTIONAL features, services, and equipment.

Proposals shall be clear and concise with sufficient detail for the County to verify compliance and to properly evaluate the offeror's capabilities to provide the required goods and services.

Proposers are to submit samples, literature, graphic aids and other materials in Tab F or Tab F-1 to help describe how the Proposer will accomplish the specified work.

Project Overview

1. The Contractor shall furnish all equipment, materials, labor, transportation, and storage facilities, which are necessary to complete the specified work, and required for a fully functional system meeting all requirements of this functional specification document.

2. The Contractor shall design, install, and test all required equipment and parts.
3. All equipment, antennas, parts and accessories shall be new.
4. The Contractor shall be responsible for providing the following project components:
 - a. Project management
 - b. Frequency search, coordination, and FCC licensing
 - c. Site and radio path surveys
 - d. Engineering and system design
 - e. Tower structural analyses
 - f. Detailed drawings, design, permitting, and environmental submittals
 - g. System installation and construction management
 - h. Acceptance testing
 - i. Software installation and equipment programming
 - j. Training
 - k. Hardware and software warranty and maintenance, including spares and parts support.
5. The existing County land mobile radio (LMR) and backhaul systems shall support operations during the implementation and testing of the new systems.
6. The Contractor shall plan, coordinate, and conduct all work with minimal interruption of service to the existing mission critical systems. All required outages shall be scheduled in advance with the County.
7. All outages or system resource reduction from current system operations require a detailed plan of action with contingencies identified and approved by the County prior to execution.
8. The LMR and microwave backhaul systems shall be fault tolerant and contain no single point of failure that would disrupt communications.
9. Critical hardware shall use devices such as redundant hot standby cards, and power supplies to prevent any single points of failure.

Notice of Award

The CONTRACTOR agrees that in the case of failure on his part to execute the said contract and the bonds within fifteen (15) consecutive calendar days of receipt of a written Notice of Award from the County, the check or bid bond accompanying this bid, and the monies payable thereon shall be paid into the funds off the Owner as liquidated damages for such failure, otherwise, the check or bid bond accompanying this proposal shall be returned to the undersigned.

Notice to Proceed

The CONTRACTOR shall begin work as agreed upon and specified on the Notice to Proceed from the County and shall meet the agreed upon benchmarks throughout the project.

Weather days

All weather days are to be approved in writing by the Public Works Director and/or the County Manager.

Retainage

The CONTRACTOR shall be paid for work performed based upon satisfactory inspections and completion of the agreed upon draw schedule. CONTRACTOR's fee will be paid on a Net 30 basis less 10% retainage.

Liquidated Damages

The County and the CONTRACTOR recognize that time is of the essence with this project. The County and the CONTRACTOR also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by the County if the work is not completed within the agreed upon time. Accordingly, instead of requiring any such proof, the County and the CONTRACTOR will agree that as liquidated damages for delay (but not as a penalty), the CONTRACTOR shall pay to the County **One Thousand and 00/100 (\$1,000.00) Dollars** for each and every calendar day that expires after agreed upon date of completion.

When the County reasonably believes that completion will be **inexcusably** delayed, the County shall be entitled, but not required, to withhold from any amounts otherwise due the CONTRACTOR an amount then believed by the County to be adequate to recover liquidated damages applicable to such delays. If and when the CONTRACTOR overcomes the delay in achieving completion, or any part there, for which the County has withheld payment, the County shall promptly release to the CONTRACTOR those funds withheld, but no longer applicable, as liquidated damages. Please be advised that these funds will only be collected when no other remedy can be agreed upon by both parties.

Invoicing

1. Dawson County is Net 30. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment less than 30 days, however.
2. Proposers shall invoice quarterly, by location, including a detailed list of services provided and only after work has been performed (in arrears).

3. All invoices will be paid in the year in which services are provided.
4. Proposer to provide contact information for dedicated team member to provide billing inquiries. More information is included in the Statement of Qualifications portion of this RFP.
5. Invoices should be sent via mail or email to:

Accounts Payable
25 Justice Way, 2220
Dawsonville, GA 30534
cmcmillon@dawsoncounty.org

Pricing

1. Submissions must be returned on the Proposer's Price Proposal Form as provided within this RFP. All forms shall be submitted as directed and included in Tab L.
2. The proposed system shall be complete and operate as described without the need for any additional hardware or software. Should the system not perform as proposed, the Contractor shall make any upgrades or additions necessary for the system operate as proposed at no additional cost to the County.
3. Proposer shall not include any features to which the system is capable of but would require additional features or hardware for these features to operate. Any features contained or described in the Proposer's Price shall be considered an offering by the Proposer and the cost for these features shall be included in the pricing.
4. Proposer shall submit a compliant Base Proposal for alternate proposal(s) to be submitted and evaluated.
5. If a Proposer has a technical solution that meets the functional requirements but not all other requirements in this RFP, the Proposer may offer more than one alternate proposal if each proposal fully addresses the intent of the requirements set forth in this RFP.
6. If submitting an alternate, use the form provided clearly labeling as alternate. Make additional copies as needed. Failure to comply may result in disqualification.

Administration

The project will be administered by the Dawson County Board of Commissioners with the Public Works Director being the main point of contact for all questions related to scope of work issues during the term of the contract. Any contract issues will be directed to the Dawson County Purchasing Manager during the term of the contract.

Permits and Licensing

1. Proof of Licensing: CONTRACTOR shall submit proof of professional license, insurance and business license at time of submittal as it relates to the Scope of Work defined herein. The business license will be the current license your business operates, if you are out of county, this will not be a Dawson County business license.

2. The successful proposer must hold a valid Business License at time of proposal and a copy must be filed with the Purchasing Manager at time of proposal. If awarded to an out-of-county proposer, that proposer must register their business license with the Dawson County Planning and Development Department within 10 days of award. Fees may apply and are not a part of this agreement. *Note: Only the successful proposer needs to register with Dawson County Planning and Development Department. As of January 1, 2017, there is no longer a registration fee.*

F. QUALIFICATIONS - DIRECTIONS FOR SUBMITTING RESPONSE

This section identifies all information which must be submitted in each proposal. The County is not interested in elaborate submissions.

Tab A - Company Background and Structure

The Proposer will provide a general history and description of its company including, but not limited to, the number of years in business and number of employees. Include the legal form of the business organization, the state in which incorporated (if corporation), the types of business ventures in which the organization is involved, and the office location that will be the point of contact during the term of any resulting contract.

The proposal must provide the following:

- Proposer's mission and history.
- Length of time the Proposer has been providing public safety radio system design/installation to local governments.
- Demonstrate the Proposer's experience working with projects equal to this scope of work of this RFP.
- Description of the Proposer's organization, financial resources, staffing levels, and any other evidence of its ability to successfully complete the project.
- The proposer must certify that there are no circumstances, which will cause a conflict of interest in performing the services required.
- Statement listing any and all differences between your proposal and the work specified in the RFP.
- The proposer must demonstrate it is duly authorized to conduct business in the State of Georgia.
- Proposer shall provide an organizational chart showing the Proposer organization and the relationship of the proposed services with other organizational divisions, programs, and sections. Indicate the lines of organizational management, authority, and responsibility.

Tab B - Company Experience

The proposer shall submit at least five (5), but no more than eight (8), projects as examples of the CONTRACTOR's past experience in performing and managing land mobile radio (LMR) communications projects comparable in scope and complexity to the scope of work. The case studies shall describe projects completed within the past ten (10) years, for which the CONTRACTOR served as the prime construction CONTRACTOR, in the fabrication, assembly and installation of systems of greater or equal magnitude and quality as that being specified herein. This experience relates to the office performing the work and not the company on a national basis. Examples showing public-sector projects

are preferable. Examples representing comparable LMR systems for public safety experience are required.

Projects of similar scope and complexity may include any of the following:

- Projects of similar size or cost
- State/Local Government facilities projects
- Design-Build Projects
- Any combination of the above

The examples must concisely set forth the basic background information for the projects offered as comparable (dates and location and the cost and scope of the work). The examples must describe the effectiveness of the cited projects, and the methodology used to measure such effectiveness (on-time delivery, successful completion of project, effective management of costs). The examples shall demonstrate why the cited projects are comparable to the Project in cost, size and complexity or delivery method. Where applicable, the examples shall demonstrate the CONTRACTOR's experience working with the Sub-contractors and/or Consultants required to be named, as described in the scope of work. Each example must identify the name and address of the contracting entity and the name, title and telephone number of a contact person associated with the contracting entity that is familiar with and able to comment on the CONTRACTOR's performance on each project. Please include the following and limit to two pages:

1. Proposer role on the project (i.e., integrator, prime contractor, subcontractor, and equipment installer)
2. Project description
3. Number of radio sites and base stations/repeaters
4. Regional population base (i.e., city, county, state, etc.)

Tab C - Identification of all Contracted Personnel

The Awarded CONTRACTOR's employees shall wear proper identification for all employees working in the County on the contract. At a minimum, photo identification badges will be required for each person along with employee's personal data and the awarded CONTRACTOR's name. Such identification must be clearly displayed on the outside clothing of all the awarded CONTRACTOR's employees during field work and readily visible at all times when working on the Dawson County project. Vehicles used by the awarded CONTRACTOR shall be clearly marked to identify the company and the nature of their business. Please state how this will be met during the project.

The awarded CONTRACTOR must employ certified personnel capable of maintaining the system and providing reasonable service time.

Tab D - Qualifications of Key Team Members

Identify and include qualifications of key staff who would be assigned to work on the scope within this RFP. Include an organizational chart that depicts how the staff would be structured to perform details herein. Proposers must have qualified and trained staff to successfully complete the contract requirements. At a minimum, the organizational chart shall identify the responsibilities, structure, and lines of authority between and among the

CONTRACTOR, the Design Consultant and any Sub-contractor entities required to be named. The Proposer shall take appropriate and meaningful disciplinary measures against those who violate the terms of this provision.

The information shall be brief and include the following:

- Identification and qualifications of all persons to be assigned to the County project site and team organization; and the assignments of responsibilities and level of experience by site position, include job descriptions for each team member. Include a staffing chart.
- Identification and qualifications of any key team members and any subcontract consultants, including resumes of individual or the firm, as applicable. Resumes shall include the name and address of the contracting entity that is familiar with the work of each team member.
- The County requires that the assigned engineer has at least ten (10) years of practical experience fulfilling the scope of work of the same size project. The project engineer will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project manager has at least five (5) years of practical experience involving project management of the same size project. The project manager will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project superintendent has at least five (5) years of practical experience in a construction superintendent role of the same size project. The project superintendent will be assigned to Dawson County for the duration of the project.
- The County requires that the assigned project safety coordinator has at least four (4) years of practical construction experience. The safety coordinator must have completed a 30-hour OSHA Construction Industry Outreach Training Program and OSHA scaffold training.
- The County requires that the assigned project quality assurance/quality control coordinator/inspector has at least four (4) years of experience in a similar role.
- All personnel assigned to the project will be subject to the approval of the County and will be removed from this project by the CONTRACTOR upon written recommendation of the County's contract contact. Additionally, the CONTRACTOR shall notify the County's contract contact in writing of all changes in supervision or key personnel. The notice shall include the reason for the change and provide a plan for immediate replacement.
- Attach the following Georgia Licenses within this tab held by CONTRACTOR or sub-contractor:
 - Georgia Utility Contractor's License
 - Georgia Registered Engineer License
 - Georgia General Contractor's License
 - All other licenses that the Proposer wishes to submit

Tab E – Compliance Matrix

Proposer shall demonstrate compliance with the requirements in Attachment "A" - Functional Specifications by completing the Compliance Matrix spreadsheet and include within this section.

Proposer shall mark an "X" in the appropriate column for each line of the Compliance Matrix. Proposers are not required to address rows of the matrix marked with "N/A," as these rows do not require a statement of compliance. Compliance statements are limited to the following three choices:

1. **COMPLY** - the proposed system/equipment meets the specified requirement, or the Proposer acknowledges the statement in the specifications.
2. **COMPLY WITH CLARIFICATION** - the proposed system/equipment does not meet the exact stated requirement; however, meets a substantial portion of or meets the intent of the requirement. Proposer shall provide a detailed explanation when using this statement.
3. **EXCEPTION** - the proposed system/equipment does not meet the specified requirement. Proposer shall provide a detailed explanation when using this statement.

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Compliance Matrix					
Section #	Description	Comply	Comply with Clarification	Exception	Clarification
Project 25 Public Safety Radio Communications System - Functional Specification					
Section 1	Functional Specifications				
1.1	Current System				
1.2	Future System				
1.3	Project Scope				
1.4	Standards and Guidelines				
1.5	Network Security Requirements				
1.6	Governing Codes and Conflicts				
Section 2	Project 25 (P25) Trunked Radio System				
2.1	P25 Requirements				
2.2	System Capacity				
2.3	P25 System Equipment				
2.3.1	System Control Equipment				
2.3.2	Network Management System (NMS)				
2.3.2.1	Network Management Terminal (NMT)				
2.3.3	Simulcast Equipment				
2.3.4	Receiver Voting Equipment				
2.3.5	Encryption				
2.3.6	Radio Frequency (RF) Site Equipment				
2.3.6.1	Repeaters/Base Stations				
2.3.6.2	Antenna Systems				
2.3.6.3	Interoperability Gateways and Stations				
2.3.6.4	DC Power Requirements				
2.3.7	Dispatch Console System				
2.3.7.1	General Requirements				
2.3.7.2	Dispatch Console System Operator Equipment Requirements				
2.3.7.3	Dispatch Console System Configuration Requirements				
2.3.7.4	Dispatch Console System Headset Requirements				
2.3.7.5	Backup Solution				
2.3.8	Logging Recorder System				

2.4	VHF Analog Paging/Interoperability System				
2.4.1	Control Equipment				
2.4.2	Simulcast Equipment				
2.4.3	Receiver Voting Equipment				
2.4.4	Repeaters/Base Stations				
2.4.5	Antenna Systems				
2.5	Detention Center BDA/DAS				
2.6	Radio Coverage				
2.6.1	Coverage Requirements				
2.6.2	Coverage Maps				
2.7	Site Selection				
2.8	Subscriber Radio Equipment				
2.8.1	General Requirements				
2.8.2	Portable Subscriber Units				
2.8.3	Portable Subscribers - Models to be Proposed				
2.8.3.1	Portable Subscriber Radio - Law Enforcement Model				
2.8.3.2	Portable Subscriber Radio - Fire Service Model				
2.8.3.3	Portable Subscriber Radio - Public Service Model				
2.8.4	Mobile Subscriber Requirements				
2.8.5	Mobile Subscribers - Models to be Proposed				
2.8.5.1	Mobile Subscriber Radio - Law Enforcement Model				
2.8.5.2	Mobile Subscriber Radio - Fire Service Model				
2.8.5.3	Mobile Subscriber Radio - Public Service Model				
2.8.5.4	Mobile Subscriber Radio - Control Station Option				
2.8.6	Subscriber Radios - Multiband OPTIONS				
2.8.7	Subscriber Radios - Programming Equipment				
2.8.8	Subscriber Radios - Catalog				
2.9	Optional Components				
2.9.1	Over-The-Air-Rekeying (OTAR)				
2.9.2	Smartphone/Broadband Device Integration				
2.9.3	Unit Location (GPS) Interface				
2.9.4	Vehicular Extender				
2.9.5	Inter-RF Subsystem Interface				
Section 3	Microwave Backhaul System				
3.1	General Requirements				
3.2	System Performance Requirements				
3.3	Microwave Backhaul Equipment				
3.3.1	Microwave Radios				

3.3.2	Microwave Radio Antennas				
Section 4	Site Development				
4.1	Existing Site Improvements				
4.2	Self-Supporting Tower				
4.2.1	General				
4.2.2	Design Criteria				
4.2.3	Waveguide Support				
4.2.4	Waveguide Bridge				
4.2.5	Climbing Equipment				
4.2.6	Lighting System & Control				
4.3	Equipment Shelter				
4.3.1	General				
4.3.2	Shelter Size				
4.3.3	Shelter Design and Construction Requirements				
4.3.4	Exterior Finish				
4.3.5	Bullet Resistance				
4.3.6	Fire Rating				
4.3.7	Insulation and Interior Finish				
4.3.8	Exterior Door				
4.3.9	Power Distribution				
4.3.10	Lighting				
4.3.11	HVAC				
4.3.12	Site Alarms				
4.3.13	Grounding				
4.3.14	Entry Ports				
4.3.15	Cable Ladder				
4.3.16	Telco Board				
4.3.17	Accessories				
4.3.18	Drawings				
4.3.19	Generator Plug				
4.4	Site Generator				
4.4.1	General				
4.4.2	Power and Electric Requirements				
4.4.3	Enclosure				
4.4.4	Muffler Type				
4.4.5	Control Panel				
4.4.6	Miscellaneous				
4.4.7	Automatic Transfer Switch (ATS)				
Section 5	System Implementation, Test and Acceptance				

5.1	Project Management				
5.1.1	Project Staffing				
5.1.2	Scheduling				
5.1.3	Project Meetings				
5.1.4	QA/QC Plan				
5.1.5	Project Punch List				
5.2	Frequency Coordination and Licensing				
5.2.1	Intermodulation Interference				
5.3	Site Surveys				
5.4	Microwave Path Design				
5.5	MPLS Traffic Engineering and Router Configuration				
5.6	Detailed Design				
5.7	Staging				
5.8	Shipping and Warehousing				
5.9	Tower Installation				
5.9.1	General				
5.9.2	Erection				
5.9.3	Grounding				
5.10	System Installation				
5.11	Acceptance Testing				
5.11.1	LMR Acceptance Testing				
5.11.2	Microwave Backhaul Acceptance Testing				
5.11.2.1	Antenna System Test				
5.11.2.2	Microwave Radio Path Tests				
5.11.2.3	Packet Internet Payload Performance				
5.11.3	Coverage Testing				
5.12	Training				
5.12.1	Training Programs				
5.12.2	Training Materials				
5.13	System Cutover				
5.13.1	Cutover Plan				
5.13.2	Cutover Execution				
5.14	30-Day Operational Verification Period				
5.15	Decommissioning, Removal, and Disposal of Legacy Equipment				
5.16	As-Built Documentation				
5.17	Final System Acceptance				

Section 6	Warranty, Maintenance, and Support				
6.1	Warranty				
6.2	Parts Availability				
6.3	Spare Equipment				
6.4	Lifecycle Support				
Appendix A	Critical Buildings Requiring Coverage				
Appendix B	Site List – Existing County Sites and Candidate Sites				

-END OF THE COMPLIANCE MATRIX-

Tab F - Approach to Scope of Work

Referencing the Scope of Work in Section D, provide a detailed approach to fulfill the requirements of this RFP. At a minimum, proposals must address:

- A description of the individual/firm's organizational approach to the project.
- This portion of the Proposal shall state how the CONTRACTOR/firm proposes to achieve the required outcomes through goals, objectives, policies and programs. It shall also indicate how the final projects will be organized, formatted and presented.
- A description of the individual/firm's understanding of the scope and challenges of the project; The CONTRACTOR's approach to selection of materials and systems, including how such selections impact project cost, project delivery dates, and other matters.
- The approach shall also illustrate (through examples of relevant experiences in similar projects) how the CONTRACTOR/firm will successfully maintain an effective line of communication throughout the process.
- Address all tasks in the scope of work, providing detailed information on all work tasks required to complete the project within the performance period. Include a statement of understanding of work involved, particularly regarding the level of effort required for any portion of the Plan and its update.
- Purchasing Plan for project materials, including identification of long-lead items.
- Workforce plan for the project by phases, identifying the trades, types or percentages of work to be performed by the CONTRACTOR/firm's own forces as compared to the trades, types or percentages work to be subcontracted to others.
- Identification of Site logistics concerns and discussion of plan for site organization and maintenance of site;
- Approach to management of construction team to include Sub-contractors and sub-consultants.
- Summary description of quality control and assurance program.
- Identification of code compliance concerns, special inspection issues, and plan for interaction with code officials.
- Summary description of start-up and testing program for systems and equipment.
- Identification of safety concerns and summary description of plan for site safety and efforts to reduce workplace injuries.
- Identification of security concerns and summary description of plan for site security.
- Plan for achieving timely project close out.
- The individual/firm shall submit a detailed bar-chart schedule for completion of the project, showing all design phases, the securing of the Dawson County staff's approvals of plans, as well as tracking major construction activities and milestones including substantial completion, final completion and project closeout. The bar chart schedule shall be accompanied by a written narrative indicating the individual/firm's approach and methodology for executing the Project within the milestone dates provided. The narrative shall address topics relevant to the performance and completion of the project that may include, without limitation, the following: identification of schedule concerns and constraints (e.g., completion of preliminary and final design, permitting issues, labor and material availability,

winter weather conditions) and plan for completion of the project in accordance with the County's proposed date for contract completion. Include discussion of plan for maintaining schedule and providing regular schedule updates.

- The Proposer must also include the following within this section and clearly marked as below:

Tab F-1 - Proposed Design

Proposer shall submit a comprehensive Proposed Design that contains the following:

- A. System Description – detailed description of the proposed system, including equipment, software, design, and implementation services to be provided for the following:
 1. 700 MHz P25 trunked radio system, including radio coverage and frequency plans
 2. Dispatch console system including fire station alerting and logging recorder systems
 3. VHF analog paging/interoperability system
 4. Detention Center BDA/DAS solution
 5. Network Management System (NMS)
 6. Site infrastructure/improvements
 7. Additional subsystems & optional Items:
 - a. Over-the-Air-Rekeying (OTAR)
 - b. Optional Smartphone/Broadband device integration
 - c. Until Location (GPS) Interface and CAD integration
 - d. Vehicular Extender (Vehicular Repeaters)
- B. Microwave Backhaul System – detailed description of the proposed microwave backhaul system, including equipment, software, design, and implementation services provided for a complete microwave backhaul system
- C. Microwave Path Analyses - microwave path profiles and path availability calculations for all microwave links showing that they meet the specified requirements
- D. Drawings - block diagrams, equipment layouts and equipment lists for the proposed system
- E. Standards and Guidelines - a list of standards or guidelines that cannot be met and an explanation as to why they cannot
- F. Radio Coverage
 1. Maps - talk-in and talk-out coverage maps for mobile and on-street portable radios
 2. A list and description of the coverage models and parameters used to produce the predicted radio coverage results
 3. Link budget analysis
- G. If the proposal includes a site(s) currently in use by the County, the proposal shall detail any required site modifications. The County will provide all existing documentation for these sites. Proposer shall collect all missing information during site surveys.
- H. If the proposal includes sites owned by others, the proposal shall include letters from the site owner(s) that state:
 1. The owner is willing to lease space at the site to the County, including the lease rate offered.

2. Space is available on the tower at the required heights, and space is also available for equipment in an existing room, or space is available for a shelter to be placed within the secured site area.
- I. Federal Communications Commission (FCC) Licensing
 1. A description of the frequency coordination and FCC licensing procedures that the Proposer will follow to comply with the spectrum and licensing requirements
 2. Evidence that the design meets tower height restrictions, as well as output and Effective Radiated Power (ERP) levels permitted by the Regional Planning Committee and FCC rules and regulations
 3. A description of the procedures that the Proposer will follow to meet the interference mitigation requirements and FCC Maximum Permissible Exposure (MPE) standards
 - J. Portable Subscriber Units
 1. Proposals shall include at least three models ("tiers") of portable subscriber units for the following user groups:
 - a. Law Enforcement
 - b. Fire and Rescue Personnel
 - c. Public Service Departments
 2. Proposals shall describe any special portable features or functions specifically designed to assist the user groups to which the portables are proposed.
 3. All portable subscriber units shall include:
 - a. Radio
 - b. Standard Battery
 - c. Remote Speaker Microphone
 - d. Radio antenna
 - K. Mobile Subscriber Units
 1. Proposals shall include at least three models ("tiers") of mobile radios for the following user groups:
 - a. Law Enforcement
 - b. Fire and Rescue Personnel
 - c. Public Service Departments
 2. Proposals shall describe any special mobile features or functions specifically designed to assist the user groups to which the mobiles are proposed.
 - L. Training
 1. Proposer shall describe all operational and technical training programs they intend to provide. The descriptions shall include the following:
 - a. A list of all subjects with a description of each
 - b. Class material to be provided by the Selected Vendor
 - c. Number of classes
 - d. Class duration
 - e. Need for recurring training
 - f. Class size

Tab G - References

Proposers must submit at least five (5) references for persons that the individual/firm will assign, to include all sub-contractors, to complete the Scope of Work listed herein. Ideally, references should be government entities within Georgia should be included. The following information for each reference shall be listed:

- Name of government entity
- Address
- Contact person with title
- Phone number of contact person
- Email (highly recommended and preferred method)
- Dates of service
- Range of services

Tab H - Financial Stability

Provide financial information that would allow proposal evaluators to ascertain the financial stability of the Proposer.

- If a public company, include a recap of the most recent audited financial report.
- If a private company, provide a recap of the most recent internal financial statement and a letter, on the financial institution's letterhead, stating financial stability.

Tab I - Business Litigation

Disclose any involvement by the individual/firm or any officer or principle in any material business litigation within the last five (5) years. The disclosure will include an explanation, as well as the current status and/or disposition of the case.

Tab J – Project Management/Implementation and Migration Plan

Proposers are to submit plans defining the necessary process and procedure which if fully implemented shall/will accomplish all Public Safety staff objectives.

Tab J-1 - The Management Plan shall be comprehensive and tailored to this project/broken down by zone and site that contains but, not limited to, the following:

- A. Project scope
- B. Work Breakdown Structure (WBS)
- C. List of deliverables
- D. Project schedule with a detailed Gantt Chart containing the following tasks:
 1. Site surveys
 2. Microwave path surveys and analyses
 3. Detailed design review
 4. Equipment manufacturing
 5. Factory acceptance
 6. Civil Work
 7. Equipment delivery
 8. System installation (per site, phase, and/or subsystem)
 9. System configuration
 10. System optimization

11. Radio coverage and acceptance testing
 12. Training
 13. System cutover
 14. System documentation, development, and delivery
 15. System Acceptance
- E. A Quality Assurance/Quality Control (QA/QC) plan
 - F. A risk management strategy describing how the Proposer intends to monitor and control the installation and deployment of the proposed system and mitigate risks to ensure that the system meets the design specifications and delivery requirements.
 - G. A responsibility matrix that describes the County and Select Vendor's responsibilities.
 - H. A change order plan that describes how the Proposer will address requested/suggested changes initiated by the County and/or Selected Vendor.
 - I. Methodology for maintaining a real-time punch list, accessible by the County and the Selected Vendor.

Tab J-2 - The System Implementation/Migration Plan shall be comprehensive and tailored to this project/broken down by zone and site that contains but, not limited to, the following:

- A. Preliminary cutover plan
- B. Description of the Proposer system staging plan, including the proposed location
- C. Draft of the Staging Acceptance Test Plan (SATP) to be used for this system
- D. Proposed Coverage Acceptance Test Plan (CATP) tailored for the proposed County system with basic testing procedures and methods the Proposer intends to follow, including:
 1. Sufficient detail for the County to understand the procedure
 2. The equipment that will be used, including user radios and test equipment
 3. A description of the methodology that will be used for talk-in and talk-out measurements
- E. Description of the Proposer plan for ensuring that all equipment will have the latest software/firmware revision before Final Acceptance Testing begins
- F. Draft of the Final Acceptance Test Plan (FATP) to be used for the system
- G. Description of the proposed 30-Day Operational burn-in period
- H. Description of the Proposer methodology for gaining County approval on all of the activities and documents required for System Acceptance.
- I. Description of the procedure that will be used for conducting and documenting Final Acceptance

Tab K – Warranty/Maintenance/Support Information

Proposer shall provide proposed warranty, maintenance and support package for the proposed system, subsystems and subscriber equipment that contains:

- A. A description of the system, subsystem, and equipment warranty and a copy of all applicable standard support agreements (e.g., warranty, maintenance, and software licensing)

- B. An explanation of how the Proposer intends to provide on-site support 24 hours/day, 7 days/week, 365 days/year for the first 3 years following System Acceptance and their 24-hour call center capabilities, maintenance, and support plans after the initial 3 years
- C. Identification of the Proposer qualified service organization(s) that will provide warranty service and repair
- D. A description of how the Proposer will meet the following warranty requirements:
1. Service and repair to be performed 24 hours/day, 7 days/week, 365 days/year
 2. The ability for the County to perform any maintenance and/or repairs required during the warranty period without voiding or affecting the Selected Vendor's warranty
 3. System to track equipment needing factory or depot repairs
 4. Hardware repair and replacement
 5. Software and firmware upgrades and back up
- E. A description of the procedures that will be used to handle system level failures and defects during the warranty period
- F. A description of the hardware repair and replacement services, including details on authorized depot centers, and software and firmware upgrade support to be provided during the warranty period
- G. A list of recommended initial spare parts and equipment, including, but not limited to:
1. All Field Replaceable Units (FRUs)
 2. All infrastructure components having no FRUs, but that can cause a critical failure (e.g., antenna systems, other non-modular components), including all third-party equipment items
 3. Power supplies
 4. Test, measurement, calibration, and repair kits
- H. A description of the Proposer plan to provide system lifecycle support to the County for the life of the contract, including:
1. Spare parts and equipment
 2. Technical support services
 3. Design and engineering services
- I. Description of the Proposer OPTIONAL post-warranty service tier(s) available for system support
- J. Description of the Proposer OPTIONAL post-warranty services available for software support and upgrades to the system
- K. Description of the Proposer OPTIONAL extended warranty available for all supplied equipment for up to an additional 7 years, in one 1-year increments and bundles

Proposers are to submit a copy of all standard support agreements (warranty, maintenance, software licensing requiring the County's signature within this section.

Tab L - Required Solicitation Forms

Proposers are to complete and attach all forms listed on the Proposer's Checklist and include in Tab L. This direction **excludes** the Price Proposal Form. Price shall not be

included in any of the Technical submittal. This will be cause for disqualification and considered non-responsive bid.

Financial Proposal

Proposers are to use the Proposer’s Price Proposal Form provided within this RFP. All costs to the Dawson County Government must be included on the Price Proposal Form that the individual/firm will incur to complete all tasks associated for the design and construction management for the enclosed scope of work. **Price shall not be included in any of the Technical submittal. This will be cause for disqualification and considered a non-responsive bid. This form must be sealed separate from the technical proposal and list the company name, address, RFP# and name on the outside of the envelope.**

Proposers are to submit a proposed fee schedule and contract discount (if any) for the hardware, software and services following the warranty period. Proposers shall support the proposed fee schedule for a minimum of seven (7) years beyond the initial warranty period.

The warranty costs will not be weighted nor included within the cost scoring for this RFP.

PROPOSED PAYMENT MILESTONES – Include in the Price Proposal Response	
Proposer shall provide the proposed payment milestones to deliver proposed solution. Please remember that this contract will execute 10% retainage with each Pay Application.	
Infrastructure	Payment Milestone Amount or Percentage (and basis)
Subscribers	Payment Milestone Amount or Percentage (and basis)

Tab M – Additional Information

Proposers are to detail within this section any additional information that is not covered in other sections that will assist the County to understand the proposed system and/or verify compliance with the requirements of this RFP.

Proposers are to supply detailed equipment specifications sheets within this section to describe all equipment proposed in their RFP response.

G. EVALUATION PROCESS

Proposals will be reviewed by the Review Committee for quality and completeness. These proposals will then be scored in each of the following categories using the maximum point values listed in the below.

Proposals will be reviewed and evaluated by the review committee to determine whether the Proposer has met the criteria described in this RFP.

Company Background and Structure	10
Experience and Qualifications of Dedicated Staff	22
Project Understanding of/Compliance of/Approach to Scope of Work	23
References	10
Management/Implementation/Migration Plan	10
Price Proposal	25
TOTAL POINTS	100

Presentations

The top-ranking individual/firms *may* be invited to conduct oral interviews. If required, these presentations will be scheduled in advance and limited in time. Presentations will be conducted in Dawson County at a location to be determined. Independent scores compiled, during this phase of the evaluation by the RFP evaluators, will supersede the technical scores previously published for the Proposers selected to make an oral presentation.

Dawson County shall be the sole judge of the provider’s ability to meet the requirements set forth. Their decision in determining responsible and responsive provider(s) will be final. Dawson County reserves the right to act in its best interest in this determinations process, to waive all technicalities, and to select the most responsible and responsive provider.

G. PROCEDURES AND MISCELLANEOUS ITEMS

1. All questions shall be submitted in writing via email and directed to the Dawson County Purchasing Manager. All answers shall be communicated in the form of an addendum and posted on the County’s website under the bid information; all individuals/firms responding to this RFP should check the website before responding to this RFP.
2. All Proposers to this RFP shall indemnify and hold harmless the Dawson County Board of Commissioners, and any of their officers and employees from all suits and claims alleged to be a result of this RFP. The issuance of this RFP constitutes only an

invitation to present a proposal. The Dawson County Board of Commissioners reserves the right to determine, at its sole discretion, whether any aspect of a Proposer's submittal meets the criteria in this RFP. The Dawson County Board of Commissioners also reserves the right to seek clarifications, to negotiate with any proposer submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule. In the event that this RFP is withdrawn or the project canceled for any reason, the Dawson County Board of Commissioners shall have no liability to any Proposer for any costs or expenses incurred in connection with this RFP or otherwise.

3. The RFP is subject to the provisions of the Dawson County Purchasing Policy and any revisions thereto, which are hereby incorporated into this RFP in their entirety except as amended or superseded herein.
4. Failure to submit all the mandatory forms from this RFP package shall be just cause for the rejection of the qualification package. However, Dawson County reserves the right to decide, on a case-by-case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.
5. In case of failure to deliver goods in accordance with the contract terms and conditions, Dawson County, after due oral or written notice, may procure substitute goods or services from other sources and hold the CONTRACTOR responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which Dawson County may have.
6. By submitting a proposal, the proposer is certifying that they are not currently debarred from bidding on contracts by any entity of the State of Georgia, nor are they an agent of any person or entity that is currently debarred from submitting proposals on contracts by any entity of the State of Georgia.
7. Any contract resulting from this RFP shall be governed in all respects by the laws of the State of Georgia and any litigation with respect thereto shall be brought in the courts of the State of Georgia. Then CONTRACTOR shall comply with applicable federal, state, and local laws and regulations.
8. It is understood and agreed between the parties herein that Dawson County shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

H. BONDS

Bid Bond – **5%**

Payment Bond – **100%**

Performance Bond – **100%**

I. FINAL SELECTION

Following review of all qualified proposals, selection of a suitable proposer, and preliminary contract negotiations, a recommendation will be made to the Dawson County Board of Commissioners by the project representative. Following Commission approval,

the County will complete the Contract Documents to the awarded CONTRACTOR for execution.

The Dawson County Board of Commissioners reserves the right to accept the response that is determined to be in the best interest of the County. The County reserves the right to reject any and or all proposals.

Every proposer submitting a proposal must complete the forms showing compliance with the **GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT OCGA §13-10-90**. The forms are provided with this RFP package.

SECTION III – GENERAL TERMS

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- | | |
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| 03. Permits and Regulations | 04. Verbal Agreements |
| 05. Not Applicable for this RFP Contract | 06. General Warranty and Guarantee |
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| 92. Laws of Georgia | 93. Quantity Variance Reserve |
| 94. Discrepancies between General Conditions | 95. Salvaged Material & Equipment and
Technical Specifications |

01 - Definitions

Where used in the project manual, the following words and terms shall have the meanings indicated. The meanings shall be applicable to the singular, plural, masculine and feminine of the words and terms.

Acceptance

Formal action of the Owner in determining that the CONTRACTOR/construction crew's work has been completed in accordance with the contract and in notifying the CONTRACTOR in writing of the acceptability of the work.

Act of God

A cataclysmic phenomenon of nature, such as a hurricane, earthquake, or abnormal flood. Rain, wind, high water, or other natural phenomenon which might reasonably have been anticipated from historical records of the general locality of the work shall not be construed as acts of God.

Addenda

Supplemental written specifications or drawings issued prior to execution of the contract which modify or interpret the project by addition, deletion, clarification or corrections.

Bid

Offer of a bidder submitted on the prescribed form setting forth the price or prices of the work to be performed.

Bidder

Individual, partnership, corporation, or a combination thereof, including joint ventures, offering a bid to perform the work.

Contract

The writings and drawings embodying the legally binding obligations between the Owner and the CONTRACTOR for completion of the work; Contract Documents attached to the Contract and made a part thereof as provided herein.

Contract Documents

The Contract, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award), the Notice to Proceed, the Bonds, these General Conditions, the Special Conditions, the Specifications and Drawings, together with all Written Amendments, Change Orders, Work Change directives, Field Orders, and Drawing submittals.

Contract Drawings

The drawings which show the scope, extent, and character of the work to be furnished and performed by the CONTRACTOR and which have been prepared and reviewed by the Engineer/Architect/Owner and are referred to in the Contract Documents.

Contract Price

Amount payable to the CONTRACTOR under the terms and conditions of the contract.

Based on the price given on the bidding schedule, with adjustments made in accordance with the contract. The base amount given in the bidding schedule shall be either a lump sum bid or the summation of the unit price proposals multiplied by the estimated quantities set forth in the proposal form.

Contract Time

Number of calendar days stated in the contract for the completion of the work or portions thereof.

Contractor/CONTRACTOR

The individual, partnership, corporation, or combination thereof, including joint ventures that enter into the contract with the Owner for the performance of the work. The term covers Sub-contractors, equipment and material suppliers, and their employees.

Contractor/Construction Crew/CONTRACTOR's Plant and Equipment

Equipment, material, supplies, and all other items, except labor, brought onto the site by the Contractor/Construction Crew/CONTRACTOR to carry out the work, but not to be incorporated in the work. The Owner will make available to the Contractor/Construction Crew/CONTRACTOR, for his plant, equipment and storage, only the area indicated on the Site Plan within the limits of the work. The Contractor/Construction Crew/CONTRACTOR shall confine his operations to his allotted areas to avoid interference with the Building's normal and continued operation. The CONTRACTOR's and Sub-contractor's personnel shall not be permitted to park their cars on Owner's property except in the area designated for construction. The General CONTRACTOR shall see that this restriction is enforced.

Contract Technical Representative

The day-to-day County Representative designated by the Owner.

County
Owner.

Day
Calendar day.

Defective

An adjective which when modifying the word "work" refers to work, including but not limited to the furnishing of materials, that is unsatisfactory, faulty, deficient or performed in a non-workmanlike manner, in that it does not conform to or meet the requirements of the contract, any inspection, reference standard, test or approval referred to in the contract, or has been damaged prior to a recommendation of final payment.

Direct

Action of the Owner by which the CONTRACTOR, to include Design Team and construction crew, is ordered to perform or refrain from performing work under the contract.

Directive

Written documentation of the actions of the Engineer/Architect or the Owner in directing the construction crew.

Engineer/Architect

Whenever the word "Engineer/Architect" and/or "Architect" is used in the contract, it shall be understood as referring to the Engineer/Architect of the CONTRACTOR working closely with the Owner, or such other Engineer/Architect supervisor, or inspector as may be authorized by the Owner to act in any particular area of the contract or an employee of the Owner.

Equipment

Mechanical, electrical, instrumentation, or other device with one or more moving parts, or devices requiring an electrical, pneumatic, electronic, or hydraulic connection.

Furnish

To deliver to the job site or other specified location any item, equipment, or material.

Herein

Refers to information presented in the project manual.

Holidays

Legal holidays designated by the Owner.

Install

Placing, erecting, or constructing complete in place any item, equipment, or material.

May

Refers to permissive actions.

Owner

Commissioner of Roads and Revenue Dawson County, Dawson County Board of Commissioners, Dawsonville, Georgia.

Person

The term, person, includes firms, companies, corporations, partnerships, and joint ventures.

Project

The undertaking to be performed under the provisions of the contract.

Project Manual

Those Contract Documents prepared for bidding and as amended by addenda.

Provide

Furnish and install, complete in place.

Punch List

List of incomplete items of work which are not in conformance with the contract. The list will be prepared by the Engineer/Architect and the Owner when the construction crew (1) notifies the Engineer/Architect in writing that the work has been completed in accordance with the contract and (2) requests in writing that the Owner accept the work.

Shall

Refers to actions by either the CONTRACTOR or the Owner and means the CONTRACTOR or Owner has entered into a covenant with the other party to do or perform the action.

Shown

Refers to information presented on the drawings, with or without reference to the drawings.

Specifications

That part of the Contract Documents consisting of written descriptions of the technical features of materials, equipment, construction system, standards, and workmanship. Titles of sections and paragraphs in these Contract Documents are introduced merely for convenience and shall not be taken as a complete segregation of the various unites of materials and labor.

Specify

Refers to information described, shown, noted or presented in any manner in any part of the contract.

Submittals

The information which is specified for submission to the Owner in accordance with this document.

Substantial Completion

Sufficient completion of the project or the portion thereof to permit utilization of the project, or portion thereof for its intended purpose. Substantial completion requires not only that the work be sufficiently completed to permit utilization, but that the Owner can effectively utilize the substantially completed work. Determination of substantial completion is solely at the discretion of the Owner. Substantial completion does not mean complete in accordance with the contract nor shall substantial completion of all or any part of the project entitle the CONTRACTOR to acceptance under the contract.

Substantial Completion Date

Date shown on the certificate of Substantial Completion.

Will

Refers to actions entered into by the CONTRACTOR or the Owner as a covenant with the other party to do or to perform the action.

Work

The labor, materials, equipment, supplies, services and other items necessary for the execution, completion and fulfillment of the contract.

02 - Royalties and Patents

The CONTRACTOR shall pay all royalties and license fees and assume all costs incident to the use in the performance of the work or the incorporation in the work of any invention, design, process, product, or device which is the subject of the patent rights or copyrights held by others. He shall defend all suits or claims for infringement of any patent rights and shall hold harmless the Owner, its officers, employees, and agents from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Owner and properly installed by the CONTRACTOR pursuant to the manufacturer's specifications.

03 - Permits and Regulations

The CONTRACTOR shall obtain and pay for all construction permits, licenses, and easements of a temporary nature necessary for the prosecution of the work. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the work. The CONTRACTOR shall pay all charges of utility owners for connections to the work, and Owner shall pay all charges of such utility owners for capital costs related thereto.

The CONTRACTOR shall comply with all County, State, and Federal laws, statutes, ordinances, rules and regulations applicable to furnishing and performance of the work.

04 - Verbal Agreements

No verbal agreement or conversation with any officer, agent, or employee of the Owner either before or after execution of this Contract shall affect or modify any of the terms of obligations contained in any of the documents comprising said Contract.

05 – Lands of Work

The Owner shall provide, as indicated on the drawings and not later than the date when needed by the Contractor, the Lands upon which the work under this Contract is to be done, rights-of-way for access to same, and such other lands which are designated on the drawing for the use of the Contractor. Any delay in the furnishing of these Lands by the Owner shall be deemed proper cause for an equitable adjustment in both Contract Price and time of completion.

The Contractor shall provide at his own expense and without liability to the owner any additional land and access thereto that may be required for temporary construction facilities, or for storage of materials.

06 - General Warranty and Guarantee Against Defective Work

The CONTRACTOR/construction crew shall warrant and guarantee the work required under this Contract for a period of one year from the date of Final Acceptance. The CONTRACTOR/construction crew warrants and guarantees to Owner, that materials and equipment furnished under the Contract shall be of good quality and new unless otherwise required or permitted by the Contract Documents, that all work will be in accordance with the Contract Documents, and that all work will be of good quality, free from faults and defects. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner or the Engineer/Architect, the construction crew shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

The CONTRACTOR/construction crew's obligation to perform and complete the work in a workmanlike manner, free from faults and defects and in accordance with the Contract Documents shall be absolute. The CONTRACTOR shall remedy, at his own expense, and without additional cost to the Owner, all defects arising from either workmanship or materials, as determined by the Owner, or Owner's representative. The obligations of the CONTRACTOR under this Paragraph shall not include normal wear and tear under normal usage.

07 - Bonds

The CONTRACTOR shall furnish payment and performance bonds with good and sufficient surety or sureties acceptable to the Owner for the protection of persons furnishing materials or labor in connection with the performance of the work. The penal sum of such payment and performance bond will be 100% of the contract price. The bonds required hereunder will be dated as of the same date as the contract and will be furnished to the Owner at the time the contract is executed. These bonds shall be issued from a company licensed to do business in Georgia and shall be signed or counter signed by a Georgia resident agent, and shall have proper Power of Attorney evidencing the authority of the individual signing the bond. Included with the Bonds shall be a signed Affidavit on the form provided herewith.

Out of state CONTRACTORS shall post a bond with the State Tax Commissioner for each tax year during construction of the project to guarantee payment of taxes on the work of this Contract.

08 - CONTRACTOR's Insurance

A. Liability

The CONTRACTOR shall maintain such insurance as will protect him from claims under workmen's compensation acts and from any other claims for damages to property, and for personal injury, including death, which may arise from operations under this contract, whether such operations be by himself or by any sub-contractor or anyone directly or indirectly employed by either of them.

Certificates of Insurance indicating that the successful proper has obtain such coverage, shall be filed with the Owner prior to the commencement by the successful proposer of the services. Such certificates shall be in form and substance reasonably acceptable to the Owner, shall indicate that, except in respect to workers compensation insurance coverage and professional errors and omissions, Owner is an additional insured with respect to such coverage, and shall indicate that such coverage is primary and not contributory with any similar insurance purchased by the Owner. The certificates shall contain a provision that the insurer will endeavor, if allowed by the policy, to provide Owner with thirty (30) calendar day notice of nonrenewal, cancellation, or termination of the coverage. If the successful proposer receives a nonrenewal, cancellation, or termination notice from an insurance carrier affording coverage required herein, the successful proposer agrees to notify Owner by fax within two (2) business days with a copy of the nonrenewal, cancellation, or termination notice, or written specifications as to which coverage is no longer in compliance. Failure to comply with any of the provisions relating to insurance coverage herein shall be deemed a material breach if not cured. Certificates of such insurance shall be filed with the Owner. The CONTRACTOR shall be responsible for providing adequate limits of insurance when working within property owned by railroads, as established by such railroad company.

B. Indemnity

To the fullest extent permitted by laws, statutes, rules and regulations, the CONTRACTOR shall indemnify and hold harmless the County and the Officers, Directors, Employees, Agents, and other Consultants of each and any of them from and against claims, costs, damages, losses, and expenses, including but not limited to all fees and charges of Engineer/Architects, architects, attorneys and other professionals and all court costs, arising out of or resulting from performance of the work, but only to the extent caused in whole or in part by negligent, reckless, willful and wanton, or wrongful acts or omissions of the CONTRACTOR, its Officers, Directors, Employees, Agents, and anyone directly, or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, cost, damage, loss, or expense is caused in part by a party indemnified hereunder, except that no party shall indemnify any other party or person for their own sole negligence.

Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Paragraph.

Comprehensive General Liability -The successful Bidder shall exercise proper precaution at all times for the protection of persons and property. He shall carry approved insurance from

insurance companies authorized to do business in Georgia and having an A.M. Best's rating of B+ or better with the following minimums:

***The limits of insurance are as follows:**

- a) General Liability Insurance of at least One Million (1,000,000) Dollars (Combined Single Limit per occurrence) and Two Million (2,000,000) Dollars aggregate;
- b) Automobile Insurance of at least Five Hundred Thousand (500,000) Dollars (Combined Single Limit per accident for bodily injury or property damage); and
- c) Workers' Compensation Insurance as will protect potential bidder or offerer from Workers' Compensation Acts.

09 – Liens

Neither the final payment nor any part of the retained percentage shall become due until the CONTRACTOR shall deliver to the Owner a complete release of all claims or liens arising out of this Contract and an affidavit that so far as he has knowledge or information the release and receipts include all the labor and materials for which a lien or claim could be filed; but the CONTRACTOR may, if any Sub-contractor refuses to furnish a release or receipt in full, furnish an additional bond satisfactory to the Owner, to indemnify the Owner against any claim or lien (in cases where such payment is not already guaranteed by Surety Bond). If any claim or lien remains unsatisfied after all payments are made, the CONTRACTOR shall refund to the Owner all monies that the latter may be compelled to pay on discharging such a lien, including all costs and a reasonable attorney's fee.

10 - Assignment

The Owner shall have the right to reject the assignment or sub-letting of any portion of the Contract by the CONTRACTOR. Assigning or sub-letting the Contract shall not relieve the CONTRACTOR or his surety from any Contract obligations.

11 - Joint Venture Contractor

In the event the CONTRACTOR is a joint venture of two or more contractors, the grants, covenants, provisos and claims, rights, power, privileges and liabilities of the contract shall be construed and held to be several as well as joint. Any notice, order, direct request, or any communication required to be or that may be given by the Owner to the CONTRACTOR under this contract, shall be well and sufficiently given to all persons being the CONTRACTOR if given to any one or more of such persons. Any notice, request, or other communication given by any one of such persons to the Owner under this Contract shall also be given to the Owner and shall be deemed to have been given by and shall bind all persons being the CONTRACTOR.

12 - Successors' Obligations

The grants, covenants, provisos and claims, rights, powers, privileges and liabilities obtained in the Contract Documents shall be read and held as made by and with, and granted to an imposed upon, the CONTRACTOR and the Owner and their respective heir, executors, administrations, successors and assigns.

13 - Business License

CONTRACTORs and Sub-contractors shall have a current Occupation Tax Certificate, and shall furnish certificate and license numbers prior to entering into a contract with the Owner.

14 - Obligations and Liability of the CONTRACTOR

The CONTRACTOR shall do all the work and furnish all the materials, tools, and appliances, except as herein otherwise specified, and everything necessary for properly performing and completing the work required by the Contract, in the manner and within the time specified. He shall complete the entire work to the satisfaction of the Owner, and in accordance with the Specifications and Plans herein mentioned, at the prices herein agreed upon and fixed therefore.

All the work labor and materials to be done and furnished under this Contract shall be done and furnished strictly pursuant to, and in conformity with, the Contract Documents, and the directions of the Engineer/Architect as given from time to time during the progress of the work, under the terms of this contract.

All loss or damage arising out of the performance or nature of the work, or any damage to the work itself to be done under this contract or from any unforeseen obstruction or difficulties which may be encountered in the prosecution of the same, or from the action of the elements or from any cause or causes whatsoever, until the same shall have been finally accepted, shall be sustained and paid for by the CONTRACTOR.

The CONTRACTOR shall coordinate his operations with those of any other CONTRACTORs who may be employed on other work of the Owner and shall avoid interference therewith and cooperate in the arrangements for storage of materials.

The CONTRACTOR shall conduct his work so as to interfere as little as possible with private business and public travel. He shall, at his own expense, wherever necessary, or required, maintain fences, furnish watchmen, maintain lights, and take such other precautions as may be necessary to protect life and property.

The CONTRACTOR shall take all responsibility for the work done under this Contract, for the protection of the work, and for preventing injuries to persons, and damage to property and utilities on or about the work.

He shall in no way be relieved of his responsibility by any rights of the Owner, its officers, employees and agents to give permission or issue orders relating to any part of the work, or by any such permission given or orders issued, or by failure of the Owner, its officers, employees and agents to give such permission or issue such orders. The CONTRACTOR shall bear all losses resulting to him or to the Owner, its officers, employees and agents on account of the amount or character of the work, or because of the nature of the land in or on which the work is done is different from what was estimated or expected, or on account of the weather elements or other causes. The CONTRACTOR shall assume the defense of all claims arising out of injury or damage to persons, corporations, or property, whether said claims arise out of negligence or not, or whether said claims are for unavoidable damage or not, and from all claims relating to labor and materials furnished for the work and from all expenses incurred in defending or settling such claims, including reasonable attorney's fees.

The CONTRACTOR shall so conduct his operations as not to damage existing structures or work installed either by him or by other CONTRACTORs. In case of any such damage resulting from

his own operations, he shall repair and make good as new the damaged portions at his own expense.

The CONTRACTOR warrants that he is familiar with the codes applicable to the work and that he has the skill, knowledge, competence, organization, and plant to execute the work promptly and efficiently in compliance with the requirements of the Contract Documents. The CONTRACTOR having the obligation to keep a competent superintendent on the work during its progress, to employ only skilled mechanics, and to enforce strict discipline and good order among his employees, the CONTRACTOR, himself is responsible for seeing that the work is installed in accordance with the Contract Documents.

Failure or omission on the part of the Owner, representative of the Owner, agents of the Owner, Project Representative, clerk-of-the-works, employed by the Owner either to discover or to bring to the attention of the CONTRACTOR any deviation from, omission from, or non-compliance with the Contract Documents shall not be set up by the CONTRACTOR as a defense of failure to his part to install the work in accordance with the Contract Documents or for any other neglect to fulfill requirements of the Contract; nor shall the presence of any one, or all, or any of the foregoing at the site of the fact that any one, or all, or any of the foregoing may have examined the work or any part of it be set up as a defense by the CONTRACTOR against a claim for failure on his part to install the work in accordance with the Contract Documents or for any neglect to fulfill requirements of the contract. No requirement of this contract may be altered or waived except in pursuance of a written order of the Owner and in strict accordance with the provisions of the contract for changes in the work.

15 – Responsibilities of the CONTRACTOR

A. Sub-contractors, Manufacturers, and Suppliers

The CONTRACTOR shall be responsible for the adequacy, efficiency, and sufficiency of Sub-contractors, manufacturers, suppliers and their employees.

B. CONTRACTOR's Employees

The CONTRACTOR shall be responsible for the adequacy, efficiency, and sufficiency of his employees. Workers shall have sufficient knowledge, skill, and experience to perform properly the work assigned to them.

C. Payment for Labor and Materials

The CONTRACTOR shall pay and require his Sub-contractors to pay any and all accounts for labor including Workers Compensation premiums, State Unemployment and Federal Social Security payments, and other wage and salary deductions required by law. The CONTRACTOR also shall pay and cause his Sub-contractors to pay any and all accounts for services, equipment, and materials used by him and his Sub-contractors during the performance of work under this contract. Such accounts shall be paid as they become due and payable. If requested by the Owner, the CONTRACTOR shall furnish proof of payment of such accounts to the Owner.

D. Attention to Work

The CONTRACTOR, acting through his representative, shall give personal attention to and shall manage the work so that it shall be prosecuted faithfully. When his representative is not

personally present at the project site, his designated alternate shall be available and shall have the authority to act on the contract.

E. Employee Safety

The CONTRACTOR alone shall be responsible for the safety of his and his Sub-contractor's employees. The CONTRACTOR shall maintain the project site and perform the work in a manner which meets the Owner's responsibility under statutory and common law for the provision of a safe place to work.

F. Public Safety and Convenience

The CONTRACTOR shall conduct his work so as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the Owner. Fire hydrants on or adjacent to the work shall be accessible to firefighting equipment. Temporary provisions shall be made by the CONTRACTOR to insure the use of sidewalks, private and public driveways, and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

G. Cooperation with the Construction Inspector

The CONTRACTOR, when requested, shall assist the Construction Inspector in obtaining access to work which is to be inspected. The CONTRACTOR shall provide the Construction Inspector with information requested in connection with the inspection of the work.

16 - Compliance with Laws

The CONTRACTOR shall keep himself fully informed of all existing and future State and Federal Laws, all regulations of the various departments or agencies of the State of Georgia, and local ordinances and regulations in any manner affecting those engaged or employed in the work, or the materials used in the work, or in any way affecting the conduct of the work and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered, in the Plans, Drawings, Specifications, or Contract for this work in relation to any such law, ordinance, regulations, order, or decree, he shall forthwith report the same to the Engineer/Architect and Owner in writing.

He shall at all times himself observe and comply with, and cause all his agents and employees to observe and comply with, all such existing and future laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner, its officers, employees and agents against any claim or liability arising from or based upon violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees or any Sub-contractor.

17 - Plans, Specifications, and Design

The Design-Build CONTRACTOR shall furnish plans and specifications which represent the requirements of the work as far as practical to be performed under the Contract to the Owner. All such drawings and instructions shall be consistent with the Contract Documents. Plans and specifications which represent the work to be done shall be furnished prior to the time of entering into the Contract. The Owner may, during the life of the Contract issue additional instructions, by means of drawings or otherwise, necessary to illustrate change in the work.

18 - Drawings Furnished

Unless otherwise provided in the Contract Documents, the Design-Build CONTRACTOR will furnish to the Owner, free of charge, up to six (6) hard copy and 1 electronic copy of the drawings and specifications necessary for the execution of the work.

19 - Ownership of Drawings

All drawings, specifications and copies thereof furnished to the Owner may be reused on other work. All models are the property of the Owner.

20 - Reference Standards

Reference to the Standards of any technical society, organization or association or to codes of local or state authorities, shall mean the latest standard, code, specifications, or tentative standard adopted and published at the date of taking proposals, unless specifically stated otherwise.

21 – Division of Specifications and Drawings

Specifications and drawings are to be divided into groups for the convenience of the Owner. These divisions are not for the purpose of apportioning work or responsibility for work among Sub-contractors, suppliers, and manufacturers.

22 - Order of Completion

Before starting work and within ten (10) days of issuance of the Notice of Award with the work, the CONTRACTOR shall submit to the Owner, a schedule which shall show the order in which the CONTRACTOR proposes to carry on the work, indicating the starting and completion dates and locations of the various stages of the work. The schedule shall be in a bar graph form suitable for periodic updating to show actual work completed.

Monthly progress reports shall be delivered with the pay estimate to the Owner showing the progress of the past month's construction in relation to the approved work schedule.

No payments will be made to the CONTRACTOR until the construction schedule has been submitted by the CONTRACTOR and approved by the Owner.

If the progress report does not agree with the approved work schedule, the CONTRACTOR shall deliver in writing an explanation with the report. Upon request from the Owner, the CONTRACTOR shall submit a revised schedule for approval.

If the CONTRACTOR sub-contracts the construction portion of the scope of work of this RFP, the CONTRACTOR's Engineer/Architect will work with the Owner to review, revise and interrupt, if needed, the progress report(s) and work schedule.

23 - Materials, Appliances & Employees

Unless otherwise stipulated, the CONTRACTOR shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, supervision, and other facilities necessary for the execution and completion of the work. Unless otherwise specified, all materials incorporated in the permanent work shall be new. The CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of materials in accordance with section 49 below.

The construction crew/CONTRACTOR shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him. If at any time before the commencement or during the progress of work, tools, equipment and supervision appear to the Engineer/Architect and/or Owner to be insufficient, inefficient or inappropriate to secure the quality of work required or the proper rate of progress, the Engineer/Architect and/or Owner may order the construction crew to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant or equipment, as the case may be, and the CONTRACTOR shall conform to such order; but the failure of the Engineer/Architect to demand such increase of efficiency, number, or improvements shall not relieve the construction crew/CONTRACTOR of his obligation to secure the quality of work and the rate of progress necessary to complete the work within the time required by this contract to the satisfaction of the Owner.

24 - Survey Information

The Owner will establish reference bench marks and base line identified on the drawings. From the information provided, the CONTRACTOR shall develop and make such additional surveys as are needed for construction, such as control lines, slope stakes, batter boards, and stakes for pipe locations and other working points, lines, and elevations. Survey work shall be performed under the supervision of a licensed land surveyor or registered civil Engineer/Architect. CONTRACTOR shall reestablish reference bench marks and survey control monuments destroyed by his operations at no cost to the Owner.

25 - Project Completion

If the specifications, the Engineer/Architect's or Owner's instructions, laws, ordinances, or any public authority require any work to be specifically tested or approved, the construction crew shall give the Engineer/Architect/Owner notice of its readiness for inspection. Such notice shall be a minimum of two (2) working days. Inspections by the Owner shall be promptly made and where practicable at the source of supply.

An inspection will be made by the Engineer/Architect/Owner and a determination will be made as to whether or not the work is in fact complete. Acceptance will not be given nor final payment released until all "punch list" items are complete and as-built drawings have been approved.

"Punch list" shall not be considered all-inclusive and therefore; each requested final inspection may generate additional "punch list" items as the construction crew/CONTRACTOR is responsible for completion of all work described in the Contract Documents.

The final walk-through and "punch list" will be conducted by the Owner prior to acceptance of the project at completion.

26 - Inspection and Testing of Materials

Before acceptance of the whole or any part of the work, it shall be subject to tests to determine that the accomplished work is in accordance with the plans and/or specifications. The CONTRACTOR shall be required to maintain all work in a first-class condition for a 30-day operating period after the same has been completed as a whole and the Engineer/Architect has notified the CONTRACTOR in writing that the work has been finished to his satisfaction. The retained percentage as provided herein will not be due or payable to the CONTRACTOR until after

the 30-day operating period has expired.

For all projects involving professionally designed structures falling under the "Special Inspections" requirements of the Georgia State Minimum Standard Building Code (2006 or most recent edition International Building Code) the County shall be responsible for and pay for all required "special testing" unless otherwise specified herein.

The CONTRACTOR shall be responsible for and pay for all testing in accordance with the project plans and specifications.

Tests for infiltration, line and grade of sewer, hydrostatic and leakage tests on force mains shall be made by the CONTRACTOR in the presence of the Engineer/Architect. No portion of the work will be accepted for partial or final payment until tests prove it has been satisfactorily completed. All such tests shall be documented, signed by the person conducting the tests and reviewed by the Engineer/Architect and approved by the Owner prior to payment.

27 - Substantial Completion

At such time as the CONTRACTOR has completed the work and prior to requesting a final inspection, the CONTRACTOR shall make written request for an inspection for substantial completion. Such request shall be made no less than seven (7) calendar days prior to the requested date of inspection. An inspection will be made by the Engineer/Architect and the Owner and a determination will be made as to whether or not the work is in fact substantially complete and a "punch list" will be developed. "Punch Lists" containing numerous items or items which may affect the intended use of the work will be considered cause to delay issuance of a document of Substantial Completion. Operation and Maintenance manuals shall be submitted and approved prior to issuance of any document of Substantial Completion.

28 - Rights of Various Interests

Wherever work, being done by the Owner's forces or by other CONTRACTORS, is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Owner, to secure the completion of the various portions of the work in general harmony.

29 - Separate Contracts

The Owner reserves the right to let other Contracts in connection with this work. The CONTRACTOR shall afford other CONTRACTOR's reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

30 - Sub-contractors

The CONTRACTOR shall notify the Owner in writing of the names and addresses of all proposed Sub-contractors for the work at the Preconstruction Meeting. Sub-contractors, or their sub-contractos, will not be recognized as having a direct relationship with the Owner. The persons engaged in the work, including employees of Sub-contractors and suppliers, will be considered employees of the CONTRACTOR and their work shall be subject to the provisions of the contract. References in the Contract Documents to actions required of Sub-contractors, manufacturers, suppliers, or any person, other than the CONTRACTOR, the Owner, the Engineer/Architect or the

Construction Inspector, shall be interpreted as requiring that the CONTRACTOR shall require such Sub-contractor, manufacturer, supplier or person to perform the specified action.

A Sub-contractor for any part of the work must have experience on similar work and, if required, furnish the Owner with a list of projects and the Engineer/Architects who are familiar with their competence.

31 - Access

The CONTRACTOR shall maintain access to the property owners adjacent to the Project covered by the Contract. The Architect/Engineer/Owner will have full access to the project site at all times.

32 - Construction Schedule and Procedures

The CONTRACTOR shall submit and continually update a time schedule for the work and a sequence of operations.

Before starting any work, and from time to time during its progress, as the Owner may request, the CONTRACTOR shall outline to the Owner the methods he plans to use in doing the work, and the various steps he intends to take. Failure of the Owner to reject the methods or steps proposed by the CONTRACTOR shall not relieve the CONTRACTOR of his responsibility for the correct and timely performance of the work.

This outline will be made part of the Contract Documents delivered to the Owner.

33 - Project Management

The CONTRACTOR shall schedule and coordinate the work of the CONTRACTOR and all Sub-contractors and others involved to maintain the accepted progress schedule. His duties shall also include the planning of the work, the scheduling of ordering and delivery of materials, and checking and control of all work under this contract. Before ordering materials or doing work which is dependent upon coordination with site conditions, the CONTRACTOR shall verify all dimensions, elevations, grades, and utilities at the site and shall be responsible for the correctness of same. No consideration will be given any claim based on difference between the actual dimensions and those indicated on the drawings. Any discrepancies between the drawings and/or the specifications and the existing conditions shall be referred to the Architect/Owner for decision before any work affected thereby is begun.

The CONTRACTOR shall be responsible for complete supervision and control of his Sub-contractors as though they were his own forces. Notice to the CONTRACTOR shall be considered notice to all affected Sub-contractors.

34 - Entry

The right of access to the work wherever it is in preparation or progress shall be extended to the Owner and representatives of appropriate regulatory agencies. The CONTRACTOR shall provide facilities for such access and inspection.

35 - Preservation and Restoration

The CONTRACTOR shall use every precaution to prevent damage or destruction of buildings, poles and shrubbery. The CONTRACTOR shall provide an approved consultant whose responsib-

ilities shall be to provide direct supervision of all removal and relocation of all shrubbery, hedges, plants and bushes shown to be relocated and plants not shown for relocation but requiring relocation due to the lay out of the sidewalk. He shall protect and carefully preserve from disturbance and damage all survey land monuments and property markers until an authorized agent has witnessed or otherwise referenced their location and such monuments and markers shall be properly and accurately restored at no cost to the Owner.

When direct or indirect damage or injury is done to public or private property by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before the damage was done, by repairing or otherwise restoring, or he shall make good such damage in an acceptable manner. All restoration by the CONTRACTOR shall be accomplished as soon as construction in the disturbed area is complete.

Throughout the performance of the work, the CONTRACTOR shall construct and adequately maintain suitable and safe crossings over the trenches and such detours as are necessary to care for public and private traffic. The material excavated from trenches shall be deposited in such manner as shall give as little inconvenience as possible to the traveling public, to adjoining property owners, to other CONTRACTORS (if any) or to the Owner.

Prior to commencing work on private property, the CONTRACTOR shall contact the Owner and/or occupant two (2) days in advance of the time work will commence.

The CONTRACTOR shall keep the premises, rights-of-way and adjacent property free from accumulations of waste materials, rubbish and other debris resulting from the work; and every day as the work areas as well as all tools, construction equipment and machinery and surplus materials; and shall leave the site clean. Any variations from this must be obtained in writing by the Owner. Trash burning on site will not be permitted. Prior to approval of a request for partial payment, the CONTRACTOR shall ensure that the work areas are cleaned up where construction has been performed during the period for which payment is requested.

When the work involves the laying of utility lines across grassed areas, streets, sidewalks and other paved areas; it shall be the responsibility of the CONTRACTOR to restore such areas to their original sound condition using construction techniques and materials which are the same as existing. In the case of planted areas, CONTRACTOR shall maintain the restoration work until positive growth has evidenced.

In a case of dispute, the Owner may remove the rubbish and surplus materials or perform restoration work and charge the cost to the CONTRACTOR.

36 - Completion of "Punch List" Items

Prior to completion of the project, the CONTRACTOR shall request an inspection and any deficiencies found at that time will be noted on a "Punch List". The development of a "Punch List" shall not delay or terminate the accumulation or assessment of liquidated damages as established in Section 86 below.

37 - Authority of CONTRACTOR CONTRACTOR's Representative

The CONTRACTOR shall notify the Owner in writing of the name of the person who will act as the CONTRACTOR's representative and shall have the authority to act in matters relating to this contract. This person shall have authority to carry out the provisions of the contract and to supply materials, equipment, tools and labor without delay for the performance of the work.

Construction Procedures

The CONTRACTOR shall supervise and direct the work. He has the authority to determine the means, methods, techniques, sequences and procedures of construction, except in those instances where the Owner, to define the quality of an item of work, specifies in the contract, a means, method, technique, sequence or procedure for the construction of that item of work.

38 - Authority of Engineer/Architect

Engineer/Architect will be the initial interpreter of the requirements of the Contract Documents in conjunction with the Owner to the construction crew and shall review the work for acceptability of the work thereunder. Neither the Engineer/Architect's authority or responsibility under the Contract Documents nor any decision made by Engineer/Architect in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility of Engineer/Architect shall give rise to any duty owed by Engineer/Architect to CONTRACTOR, any Sub-contractor, any Supplier any other person or organization, or to any surety for employee or agent of any of them.

39 - Owner-CONTRACTOR Coordination

Service of Notice

Notice, order, direction, request or other communication given by the Owner to the CONTRACTOR shall be deemed to be well and sufficiently given to the CONTRACTOR if left at any office used by the CONTRACTOR or delivered to any of his office, clerks or employees or posted at the site of any work or mailed to any post office addressed to the CONTRACTOR at the address given in the contract document or mailed to the CONTRACTOR's last known place of business. If mailed by first-class mail, any form of communication shall be deemed to have been given to and received by the CONTRACTOR two days after the day of mailing. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the CONTRACTOR, be delivered to the County Technical Representative.

Suggestions to CONTRACTOR

Plan or method of work suggested by the Owner to the CONTRACTOR but not specified or required, if adopted or followed by the CONTRACTOR in whole or in part, shall be used at the risk and responsibility of the CONTRACTOR.

The Owner assume no responsibility therefore and in no way will be held liable for any defects in the work which may result from or be caused by the use of such plan or method of work.

Cooperation

The CONTRACTOR agrees to permit entry to the site of the work by the Owner or other CONTRACTORs performing work on behalf of the Owner. The CONTRACTOR shall afford the Owner, other Sub-contractors and their employees, reasonable facilities and cooperation and shall arrange his work and dispose of his materials in such a manner as to not interfere with the activities of the Owner or of others upon the site of the work. The CONTRACTOR shall promptly make good any injury or damage that may be sustained by other

CONTRACTORS or employees of the Owner at his hands. The CONTRACTOR shall join his work to that of others and perform his work in proper sequence in relation to that of others.

If requested by the CONTRACTOR, the Owner shall arrange meetings with other CONTRACTORS performing work on behalf of the Owner to plan coordination of construction activities. The Owner shall keep the CONTRACTOR informed of the planned activities of other CONTRACTORS.

Differences or conflicts arising between the CONTRACTOR and others employed by the Owner or between the CONTRACTOR and the works of the Owner with regard to their work, shall be submitted to the Owner for his review of the matter. If the work of the CONTRACTOR is affected or delayed because of any act or omission of other CONTRACTORS or of the Owner, the CONTRACTOR may submit for the Owner's consideration, a documented request for a change order.

40 – Interpretation of Specifications and Drawings

Not applicable to this RFP Contract. General

The specifications and drawings are intended to be explanatory of each other. Work specified on the drawings and not in the specifications, or vice versa, shall be executed as if specified in both.

Request for Clarification

In the event the work to be done or matters relative thereto are not sufficiently detailed or explained in the contract documents, the Contractor shall apply to the Engineer/Architect for further explanations as may be necessary and shall conform thereto so far as may be consistent with the terms of the contract. In the event of doubt or question arising respecting the true meaning of the specifications or drawings, reference shall be made to the Engineer/Architect for his decision.

41 - Discrepancies in Specifications and Drawings

Errors and Omissions

If the CONTRACTOR, in the course of the work, becomes aware of any claimed errors or omissions in the contract documents or in the Owner's field of work, he shall immediately inform the Owner in writing. The Owner, with assistance of the Engineer/Architect, shall promptly review the matter and if he finds an error or omission has been made; he shall determine the corrective actions and advise the CONTRACTOR accordingly.

If the corrective work associated with an error or omission increases or decreases the amount of work called for in the contract, the Owner shall issue an appropriate change order. After discovery of an error or omission by the CONTRACTOR, related work performed by the CONTRACTOR shall be done at his risk unless authorized, in writing, by the Owner.

Conflicting Provisions

In cases of conflict between the specifications and drawings, the specifications shall govern. Figure dimensions on drawings shall govern over scale dimensions and detail drawings shall govern over general drawings. In the event an item of work is described differently in two or more locations on the drawings and in the specifications, the CONTRACTOR shall request a clarification from the Engineer/Architect. For any event where the CONTRACTOR claims any ambiguities or

discrepancies within the specifications, the CONTRACTOR may assume that the higher, greater and most stringent specification or standard applies.

42 - Material, Equipment and Workmanship

Unless otherwise specifically stated in the Contract Documents, the CONTRACTOR shall provide and pay for material, labor, tools, equipment, water, light, power, transportation, supervision, and temporary construction of any nature, and other services and facilities of any nature, whatsoever necessary, to execute, complete and deliver the work within the specified time. Material and equipment shall be new, free of defects and of the quality specified. Equipment offered shall be current modifications which have been in successful regular operation under comparable conditions. Construction work shall be executed in conformity with the standard practice of the trade. The CONTRACTOR is ultimately responsible for all work of all employees and sub-contractors and will warrant all work for this project.

43 – Demonstration of Compliance with Contract Requirements Inspection

To demonstrate his compliance with the contract requirements, the CONTRACTOR shall assist the Owner in the performance of inspection work.

The CONTRACTOR shall grant the Owner access to the work and to the site of the work, and to the places where work is being prepared, or whence materials, equipment or machinery are being obtained for the work. The CONTRACTOR shall provide information requested by the Owner in connection with inspection work.

If the Contract Documents, laws, ordinances, or any public regulatory authority requires parts of the work to be specially inspected, tested or approved, the CONTRACTOR shall give the Owner adequate prior written notice of the availability of the subject work for examination.

If parts of the work are covered in contravention of the Owner's directive, the cost of exposing the work for inspection and closing shall be borne by the CONTRACTOR regardless of whether or not the work is found to be in compliance with the contract.

If any work is covered in the absence of the Owner's directive to the contrary, the CONTRACTOR shall, if directed by the Owner, uncover, expose or otherwise make available for inspection, portions of covered work.

If it is found that such work is defective, the CONTRACTOR shall bear the expense of uncovering and reconstructing. If the work is found to be in compliance with the contract, the CONTRACTOR will be allowed an increase in the contract price, or an extension in the contract time, or both via a change order. The Owner reserves the right to require additional documentation from the CONTRACTOR as necessary to determine compliance with the Contract Documents.

Certification

In cases where compliance of materials or equipment to contract requirements is not readily determinable through inspection and tests, the Owner shall request that the CONTRACTOR provide properly authenticated documents, certificates or other satisfactory proof of compliance. These documents, certifications and proofs shall include performance characteristics, materials of construction and the physical or chemical characteristics of materials.

Inspection at Point of Manufacturing

If inspection and testing of materials or equipment in the vicinity of the work by the Owner is not practical, the specifications may require that such inspection and testing or witnessing of tests take place at the point of manufacture. In this case and in the event the remote inspection and testing is not specified and is requested by the Owner, the required travel, subsistence, and labor expenses shall be paid by the Owner. If the CONTRACTOR request the Owner to inspect and test material or equipment at the point of manufacture, then the additional costs to the Owner for travel, subsistence, and labor expenses shall be paid by the CONTRACTOR.

44 - Project Meetings

Project meetings will be held on site as often as deemed necessary by the Owner throughout the construction period. Meetings will normally be held monthly. CONTRACTOR's representatives shall attend. The purpose of the meetings will be to discuss schedule, progress, coordination, submittals and job-related problems.

45 - Overtime and Shift Work

Overtime and shift work may be established as a regular procedure by the Contractor with reasonable notice and written permission of the Owner. No work other than overtime and shift work established as a regular procedure shall be performed between the hours of 6:00 p.m. and 7:00 a.m. nor on Sundays or holidays except such work as is necessary for the proper care and protection of the work already performed or in case of an emergency.

Contractor agrees to pay the Owner's costs of overtime inspection except those occurring as a result of overtime and shift work established as a regular procedure. Overtime inspection shall include inspection required during holidays and weekends, and between the hours of 6:00 p.m. and 7:00 a.m. on weekdays. Costs of overtime inspection will cover Engineer/Architecting, inspection, general supervision and overhead expenses which are directly chargeable to the overtime work. Contractor agrees that Owner shall deduct such charges from payments due the Contractor.

46 - Construction Schedule

Scope

This section specifies reports and schedules for planning and monitoring the progress of the work.

The construction schedule shall reflect the Contract Time stated in the Request for Proposal.

Daily Reports

The Contractor shall prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Architect and/or Owner at weekly intervals. The Contract shall maintain a complete set of reports at the job site, to include, work activities and progress; list of subcontractors at the site; general weather conditions and temperatures; meetings and significant decisions; stoppages, delays, shortages and losses; orders and requests of governing authorities; change orders received, implemented; status of change orders, shop drawings and other factors affecting completion; services connected, disconnected; equipment or system tests and start-up; problems or decisions required. Schedule of Non-Compliant Work shall be updated daily and submitted at monthly intervals.

Description

The CONTRACTOR shall provide a graphic construction schedule (bar chart) indicating various subdivisions of the work with a reasonable breakdown for each task to include the days in duration and the dates of commencing and finishing each task to the Owner.

Submittal Procedures

Within fifteen (15) days after Notice of Award of the Bid, the Contractor shall submit to the Engineer/Architect a Job Progress Chart in triplicate indicating graphically the estimated date of starting and the length of time required to complete the various items of work to be done under this contract, together with the amount of money involved in each item. The complete schedule shall include everything required in the execution of the contract and the total figure shall equal the contract price. The schedule shall show the anticipated payments for each month. Up-to-date schedules shall be submitted each month.

Within fourteen (14) calendar days after receipt of the submittal, the Engineer/Architect shall review the submitted schedule and return two copies with comments to the Contractor. If the Engineer/Architect finds that the submitted schedule does not comply with specified requirements, the corrective revisions will be noted on the submittal copy returned to the Contractor.

Schedule Revisions

Revisions to the accepted construction schedule may be made only with the written approval of the CONTRACTOR and Owner. A change affecting the contract value of any activity, the completion time and sequencing shall be made in accordance with applicable provisions of Number 82, Change in Work.

Project Status Update

Project status, review and update shall be provided with each pay request and at least monthly as specified in Number 79, Contract Time.

47 - Quality

Where the contract requires that materials or equipment be provided or that construction work be performed, and detailed specifications of such materials, equipment or construction work are not set forth, the CONTRACTOR shall perform the work using materials and equipment of the best grade in quality and workmanship obtainable in the market from firms of established good reputations, and shall follow standard practices in the performance of construction work. The work performed shall be in conformity and harmony with the intent to secure the standard of construction and equipment of work as a whole and in part. The CONTRACTOR is ultimately responsible for all work of all employees and sub-contractors and will warrant all work for this project.

48 - Material and Equipment Specified By Name

Although the plans and specifications may make reference to particular manufacturers and model numbers for various products, such reference is made only to establish function and quality of such products. If it is desired to use materials or equipment of trade names or of manufacturer's names which are different from those mentioned in the Contract Documents, applicable for the approval of the use of the specified materials or the specified items of equipment as manufactured by firms other than those named in the Contract Documents must reach the hands of the **Purchasing Manager** by the

date established for the questions and answers period for this IFB through the Request for Substitutions document located on the last page this RFP. The burden of proving equivalent of a proposed substitute to an item designated by trade name or by manufacturer's name in the Contract Documents rests on the party submitting the request for approval. The Contractor warrants that if substitutions are found to have no exceptions, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the contract price or contract time.

49 – Submittal Procedure

General

The CONTRACTOR shall submit descriptive information which will enable the Owner to determine whether the CONTRACTOR's proposed materials, equipment, or methods of work are in general conformance to the design concept and in compliance with the drawings and specifications.

CONTRACTOR's Responsibilities

The CONTRACTOR shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment, or method of work shall be as described in the submittal. The CONTRACTOR shall verify in writing that all features of all products conform to the requirements of the specifications and drawings. Submittal documents shall be clearly edited to indicate only those items, models, or series of material or equipment which are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated.

The CONTRACTOR shall insure that there is no conflict with other submittals and shall notify the Owner in each case where his submittal may affect the work of another CONTRACTOR or the Owner. The CONTRACTOR shall insure coordination of submittals among the related crafts and Sub-contractors.

Transmittal Procedure

General

Before each submittal, the CONTRACTOR shall have determined and verified all field measurements, quantities, dimensions, specified performance criteria, installations requirements, materials, catalog numbers and similar information with respect thereto; all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the work; and all information relative to the CONTRACTOR's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers and specification section and paragraph.

Each submittal will bear a stamp or specific written indication that the CONTRACTOR's obligations under the Contract Documents with respect to the CONTRACTOR's review and approval of that submittal.

Deviation from the Contract

If the CONTRACTOR proposes to provide material, equipment, or method of work which deviates from the project manual, the CONTRACTOR shall give the Owner specific written notice of such deviations or variations that the submittal may have from the requirements of the Contract

Documents, such notice to be in a written communication separate from the submittal; and, in addition, the CONTRACTOR shall cause a specific notation to be made on each shop drawing and sample submitted to the Owner.

50 - Requests for Substitution

The Owner will consider offers for substitution only from the Contractor and will not acknowledge or consider such offers from suppliers, distributors, manufacturers, or subcontractors. The Contractor's offers of substitution shall be made in writing to the Purchasing Agent and shall include sufficient data to enable the Owner to assess the acceptability of the material or equipment for the particular application and requirements.

51 - Manufacturer's Directions

Manufactured articles, material and equipment shall be applied, installed, connected, erected, adjusted, tested, operated and maintained as recommended by the manufacturer, unless otherwise specified. Manufacturer's installation instructions and procedures shall be provided prior to installation of the manufactured articles, material and equipment.

52 - Product Data

Data, which shall include manufacturer's catalog cuts, standard color charts, wiring diagrams, rough-in diagrams, test results, performance characteristics, certifications, maintenance instructions, installation instructions and other information to establish compliance with the specifications; required by the Owner for inspecting, testing, operating or maintaining parts of the work shall be provided by the Contractor.

Unless otherwise specified, such information shall consist of six (6) copies and shall be provided at the time the referenced material or equipment is delivered to the job site. The data shall include such items as shop drawings, erection drawings, reinforcing steel schedules, testing and adjusting instructions, operations manuals, maintenance procedures, parts lists and record drawings. When applicable, information and data to be provided shall be identified by the specified equipment number. Extraneous material on the pages or drawings provided shall be crossed out, and the equipment or material to be supplied shall be clearly marked. Such information is to be provided as part of the work under this contract and its acceptability determined under normal material submittal procedures. The certificate of substantial completion shall not be issued for any portion of the work for which complete product data has not been submitted and approved.

The product data will indicate special utility and electrical characteristics, utility connection requirements and location of utility outlets for service for functional equipment and appliances.

53 - Operation and Maintenance Information

Six (6) complete sets of operation and maintenance information shall be provided for all mechanical and electrical equipment to include the following before final inspection. A draft copy of all information will be submitted fifteen (15) days prior to final inspection. The draft will be reviewed by the Owner and returned with comments, if any. Such operating and maintenance information shall consist of the name and address of the manufacturer, the nearest representative of the nearest supplier of the manufacturer's equipment and parts. The Contractor is to provide submittals to the Owner that are required by governing authorities, including occupancy permit, operating certificates and inspections as follows:

Building inspection, Fire Marshall, plumbing inspection, HVAC inspection, health inspection and electrical inspection.

Part 1: Directory which lists names, addresses and telephone numbers of Contractor, Subcontractors and major equipment suppliers.

Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses and telephone numbers of Subcontractors and supplies. In addition, the following items of information shall be provided where applicable:

Lubrication Information: This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.

Control Diagrams: Diagrams shall show internal and connection wiring.

Start-up Procedures: These instructions consist of the equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

Operating Procedures: These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

Preventive Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.

Overhaul Instructions: These instructions consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.

Parts List: This list consists of the generic title and identification number of each component part of the equipment.

Spare Parts List: This list consists of the manufacturer's recommendations of numbers of parts which should be stored by the Owner and any special storage precautions which may be required. The Contractor shall provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections. The Contractor shall deliver to project site and place in location as directed and obtain a receipt prior to final payment.

Additional Data: This consists of extra information needed by the Owner for operation and maintenance as it becomes apparent during instruction.

Make changeover to permanent locks and transmit keys to Owner.

Part 3: Project documents and certificates, including the following: shop drawings and product data; air and water balance reports; certificates and photocopies of warranties and bonds.

Original warranties as required by the Contract Documents and as supplied by the manufacturer.

54 - Record Drawings

Record drawings refer to those documents maintained and annotated by the CONTRACTOR during construction and are defined as (1) a neatly and legibly marked set of contract drawings showing the final location and elevations, as appropriate and referenced to the bench marks shown on the plans, for all piping, manholes, equipment, electrical conduits, outlet boxes, cables and electrical wiring diagrams; (2) additional documents such as schedules, lists, drawings, and electrical and instrumentation diagrams included in the specifications; (3) CONTRACTOR layout and installation drawings; and (4) general and specific notes and detailed, dimensioned sketches regarding interferences, high water tables, poor soil conditions, relocation of existing utilities or other information pertaining to unusual or unexpected construction techniques, installations or conditions.

Unless otherwise specified, record drawings shall be full size and maintained in a clean, dry, and legible condition. Record documents shall be subject to periodic review by the Owner. Record documents shall not be used for construction purposes and shall be available for review by the Owner during normal working hours at the job site. Prior to final inspection, all record drawings shall be submitted to the Owner.

All utilities installed under this contract shall be shown on the drawings and located by sequential stations. Record drawings shall commence with the same station as the construction drawings. The following items shall be stationed on all utility record drawings: piping, valves, fittings, service lateral connection to the main, manholes, points of tie-in, fire hydrants and post hydrants. Also, the centerline of each paved street of which the utility crosses shall be given a station.

Where sanitary sewers or sanitary sewer services have been stubbed out for future use, the invert elevation of the capped or plugged end shall be given to the nearest 0.1 feet.

The drawings shall be marked to show the relative location of utilities to surface improvements. (i.e. show utilities on correct side of curb, trees, other utilities, etc.)

Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed. Failure to maintain current record drawings shall be cause for delay of request for payment. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:

Additions - Red Deletions -

Green Comments - Blue

Dimensions - Graphite*

*Legibly mark to record actual depths, horizontal and vertical location of underground utilities, cables, and appurtenances referenced to permanent surface improvements.

Record Drawing Disc(s): In addition to the "record drawings" a DXF Disc(s) (Export File from Auto Cad) showing all "record drawings" shall be prepared and submitted.

The professional Engineer/Architect or Licensed Surveyor preparing the disc(s) shall certify to the County that "all information contained on the disk(s) is accurate and correct".

During progress of this work, the construction crew/CONTRACTOR shall furnish and keep on file at all times a complete and separate set of black line prints on which shall be clearly, neatly and accurately noted promptly as work progresses all changes, revisions and addition to the work, and wherever work was installed otherwise than as shown on the contract drawings.

As the work progresses, record on one set of Drawings all changes and deviations from the Contract Drawings. Record also the exact final locations of sewer, water and gas lines by off-set distances to surface improvements, such as buildings or curbs. Upon completion, have these Drawings and records checked by the Architect/Owner and deliver them to the Authority for incorporation in the Tracings.

At completion of work, the construction crew/CONTRACTOR shall furnish a second set of black line prints, which he shall mark up with as-built features exactly duplicating the original marked set. The construction crew/CONTRACTOR shall then deliver both sets of marked prints to the Architect/Owner.

55 - Protection of the Public and Property

The CONTRACTOR shall provide and maintain all necessary watchmen, barricades, lights, fencing, flagmen and warning signs and take all necessary precautions for the protection of the public safety and/or as required by law. Such facilities shall be maintained throughout the life of this contract.

56 – Protection of the Owner’s Property

The CONTRACTOR shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Owner's property from injury or loss arising in connection with this Contract. The CONTRACTOR shall adequately protect adjacent private and public property, as provided by Law and Contract Documents.

Before parking any heavy equipment on property of the Owner, the CONTRACTOR must request and receive permission from the Owner.

57 - Maintenance of Traffic and Sequence of Operation

General - The following requirements will apply:

The work shall be arranged and conducted so that it can be performed with the least interference to all vehicular and pedestrian traffic.

Two-way traffic must be maintained on all public roads and streets, except that during periods of off-peak use, one-way traffic, properly controlled by flagmen, will be permitted at the discretion of the Engineer/Architect. Each time that there is to be a change in the number of lanes open to traffic, this shall be reviewed by the Engineer/Architect and approved by the Owner.

The Owner may approve detours around construction when one lane traffic open is impossible.

Trenches shall be opened for only the amount of pipe that can be laid in one (1) calendar day. Trenches shall be backfilled and compacted as soon as the pipe is laid, if applicable. Where access to parking lots is to be denied, the CONTRACTOR shall advise

each property owner one (1) calendar day in advance of the time the parking lot(s) will be inaccessible.

As a minimum, all signage shall be accomplished in accordance with the current revision of the Federal Manual of Uniform Traffic Control Devices latest edition, and Supplements, for design, dimensions, materials, colors, use and placement; state and local laws, rules and regulations apply.

Materials Required

Portable Advance Warning Sign - These signs shall conform to the requirements of Manual on Uniform Traffic Control Devices latest edition, and the Supplements, for design, dimensions, materials, colors use and placement.

Fluorescent orange traffic cones, 24” high.

Placement and Erection

The advance warning signs shall be placed ahead of construction in accordance with the Construction Section of Manual on Uniform Traffic Control Devices, current edition.

Traffic cones shall delineate the full length of the lane closure, including transitions, if applicable.

In order to provide the greatest possible convenience to the public, the CONTRACTOR shall remove all lane closure markings and devices immediately when closure work is completed or temporarily suspended for any length of time, if applicable.

Safety

The CONTRACTOR performing the work shall be responsible for the erection and maintenance of all traffic control devices during construction.

At the end of work each day, the CONTRACTOR shall remove all equipment, tools, and any other hazards in the traveled portion of the roadway.

Enforcement

In the event that compliance with these measures is not achieved, the Owner may shut-down all operations being performed. The Owner shall also withhold any payments due, until the above requirements have been met. At any time during the course of the work, the Owner may at their discretion and by whatever means necessary, correct any situation that they may deem hazardous to the health and welfare of the public. Work, performed by the Owner or by any entity enlisted by the Owner, to correct situations of public hazard shall be deducted from monies due the CONTRACTOR.

Compensation

There will be no separate pay item for maintenance of traffic or for coordination of the Sequence of Operations.

58 - Lot Corners

In the course of the construction work, it may be necessary to disturb and remove the established lot or property corners of some of the properties. The Contractor shall be required to record all property corners and replace them after the construction is completed.

All lot or property corners removed as described above, or all lot or property corners destroyed by the Contractor's operations shall be replaced at the expense of the Contractor by a Land Surveyor registered in the State of Georgia. The Contractor shall provide certification from the Land Surveyor for all reset property corners.

59 – Existing Utilities

All known utility facilities are shown schematically on the plans and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown on the plans will not relieve the CONTRACTOR of his responsibility under this requirement. The CONTRACTOR shall be responsible for the cost of repairs to any damaged underground facilities; even when such facilities are not shown on the plans. The CONTRACTOR shall contact all utility companies prior to beginning work and request an accurate location of their respective utilities. "Existing Utility Facilities" shall mean any utility that exists on the project in its original, relocated or newly installed position.

In accordance with Ga. Code Title 25, Section 9, "Georgia Utility Facility Protection Act" (as amended) the CONTRACTOR shall call, by law, the Utility Location and Coordination Council in Atlanta at 1-800-282-7411 and shall request that all owners of utilities, including gas companies, electric companies, telephone companies, cable television companies and governmental units, prior to starting any excavation of the project locate and mark their respective facilities.

All CONTRACTORs' operations shall be conducted as to interfere as little as possible with utility service. Any proposed interruption by the CONTRACTOR must be approved in advance by the respective utility's owner. The existence and location of underground utilities will be investigated and verified in the field by the CONTRACTOR before starting work. The location of all known interferences based on the best information available has been shown on the drawings, but this information may not be complete or accurate.

Water lines and gas lines and appurtenances and sewer lines uncovered by the CONTRACTOR shall be protected and kept in service by the CONTRACTOR and the CONTRACTOR shall notify the respective utility's owner that the line has been or will be uncovered. The CONTRACTOR shall use adequate braces and slings or other appropriate methods to keep the lines in service, and any repairs made necessary by his operation shall be made at the CONTRACTOR's expense. Extreme caution shall be exercised when equipment is being moved or work is being performed under and around existing utility facilities, especially gas.

The CONTRACTOR shall familiarize himself with and comply with the provisions of O.C.G.A. Section 25-9-1 et. seq. If any public or private utility lines, pipes, facilities, or structures are damaged or broken by the operations of the CONTRACTOR as a result of being disturbed, exposed or unsupported, the CONTRACTOR shall be responsible for the complete and prompt restoration of the same and shall indemnify and hold the Owner, its officers, employees and agents harmless from any claims or causes or action for damage and for any liability which may arise therefrom.

The CONTRACTOR is responsible for coordinating with the respective utility's owner any relocation, adjustment, holding or replacement of utility facilities.

Power poles, telephone poles, gas lines, and other utility facilities to be relocated shall be moved by the responsible utility owner. The relocation, holding or replacement of any existing facilities shall be considered consequential to the work and any cost associated therewith shall be borne by the Contract and no expense shall accrue to the Owner.

The CONTRACTOR shall not disconnect, cut, cut into, or otherwise interrupt any existing utility service, electrical, water, gas, sewerage or any other work, pipe or conduit which connects to or serves the existing building installations or facilities from either maned or on-site sources except as follows:

The CONTRACTOR shall notify the Owner and the local utility company in writing three (3) calendar days in advance of the necessity of interruption of any utility service as defined hereinbefore. The notice shall state the date, the time of day and the estimated duration of the proposed interruption.

The CONTRACTOR will notify the Owner of approval or disapproval of the proposed interruption and the restrictive conditions connected therewith. The CONTRACTOR is solely responsible to coordinate with and notify the Local Utility Company. The CONTRACTOR shall not cause any interruption without the approval of the Owner or Utility.

60 - Equal Employment Opportunity

There shall be no discrimination against any employee who is employed in the work covered by this Agreement, or against any applicant for such employment because of race, color, religion, sex or national origin. This provision shall include, but is not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates or pay or their forms of compensation, and selection for training, including apprenticeship.

61 - Material Delivery, Handling, and Storage

The CONTRACTOR shall schedule and sequence the delivery of material and equipment such that installation can be accomplished in a timely manner. The CONTRACTOR shall thoroughly examine all material and equipment upon delivery and shall not accept delivery of defective or damaged material or equipment.

Nylon slings and chokers shall be used for lifting all material and equipment. Chains, cables, wire rope, or other such items that may cause change to factory applied coatings shall not be used for handling of material or equipment.

Material and equipment shall be stored as compactly and neatly as practicable at points convenient for the CONTRACTOR and which do not damage the work or interfere with or are otherwise hazardous to traffic. Material and equipment shall be stored so as to facilitate inspection and to insure preservation of their quality and fitness for use. All material and equipment shall be stored on wooden skids or platforms such as not to be in direct contact with the ground.

All mechanical and electrical equipment shall be stored and covered in a manner such as to completely be protected from dust and moisture. Prior to the delivery of any materials or equipment the CONTRACTOR shall submit, for the Owner's review, a plan showing all designated storage and assembly areas. Should the CONTRACTOR choose to store material or equipment or use for assembly property which is not owned by the Owner or the CONTRACTOR, a letter of

permission signed by the legal owner of the property shall be obtained by the CONTRACTOR and submitted to the Owner a minimum of 24 hours prior to delivery. All material and equipment stored at any facility other than the site shall be tagged with the Owners name and the project number.

62 - Maintenance During Construction

The CONTRACTOR shall maintain the work from the beginning of construction operations until final acceptance of the Project. This maintenance shall constitute continuous and effective work prosecuted day by day with adequate equipment and forces to the end that the roadway or structures are kept in satisfactory condition at all times, including satisfactory signing or marking as appropriate and control of traffic where required by use of traffic control devices as required by the State of Georgia, where applicable.

Upon completion of the work, the CONTRACTOR shall remove all construction signs and barricades before final acceptance of the project.

63 - Emergencies

In an emergency affecting the safety of life or of the work or of adjoining property, the CONTRACTOR is, without special instructions or authorization from the Owner, hereby permitted to act at his discretion to prevent such threatening loss, damage or injury. He shall also act, without appeal, if so authorized or instructed by the Owner. The CONTRACTOR shall supply the Engineer/Architect and the Owner with two (2) emergency phone numbers for contact 24 hours per day in the event of an emergency. After attempting contact with the CONTRACTOR via the emergency phone numbers, the CONTRACTOR cannot be reached or should he fail to respond, the Owner may remedy the situation by whatever means as may be necessary and deduct the cost for same from any monies due the CONTRACTOR.

64 - Compensation

Any compensation claimed by the CONTRACTOR due to emergency work shall be subject to reviewed approved by the Owner if payment is to be made by the Owner.

65 - Safety and Health Regulations

The CONTRACTOR shall comply with the Department of Labor, Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970, as amended. The CONTRACTOR also shall comply with the provisions of the High-Voltage Safety Act of the State of Georgia, O.C.G.A. Section 46-3-30 et. seq., and all federal, state, and local codes, regulations, and standards.

66 - Accidents

The CONTRACTOR shall provide at the site such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work. The CONTRACTOR shall report in writing to the Owner all accidents whatsoever arising out of, or in connection with, the performance of the work, whether on or adjacent to the site, which causes death, personal injury, or property damages, giving full details and statement of witnesses. In addition, if death or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the CONTRACTOR and any sub-contractor an account of any

accident, the CONTRACTOR shall promptly report the facts to the Owner, giving full details in writing of the claim.

The CONTRACTOR shall provide his Superintendent and Foreman who are on the site of the work, the name of hospital and phone number and the name and phone number of the doctor he proposes to use in case of accident.

67 - Load Limits

The CONTRACTOR shall be governed by the local load limit requirements of the Georgia Standard Specifications on State, County or City maintained roadways. The CONTRACTOR shall be responsible for his damage to existing streets and roads.

68 – Sanitary Provisions

The CONTRACTOR shall provide temporary sanitary facilities for the use of the workmen during the progress of the work. The sanitary facilities shall conform to the requirements of the Federal Occupational Safety and Health Administration. All facilities shall be removed at the completion of the Contract.

69 - Construction Buildings

Should the CONTRACTOR desire, he may erect structures for housing tools, machinery and supplies; structures will be permitted only at places approved by the Owner. Their surroundings shall be maintained at all times in a sanitary and satisfactory manner. On or before the completion of the work, all such structures shall be removed, together with all rubbish and trash, and the site shall be restored to its original condition at the expense of the CONTRACTOR. Structures will not be permitted for the housing of men.

70 - Cleaning Up

The CONTRACTOR shall, as directed by the Owner, remove at his own expense from the Owner's property and from all public and private property all temporary structures, rubbish and waste materials resulting from his operations. Clean-up shall be concurrent with the work. Where complete restoration is not reasonable until testing or inspection is complete, the CONTRACTOR shall, at minimum, remove all debris and trash and perform grading such that the area is left neat and without depressions that may hold water. The sufficiency of temporary clean-up shall be at the discretion of the Engineer/Architect and the Owner.

71 - Electrical Energy

The CONTRACTOR shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light required for the proper completion of this contract during its entire progress. The CONTRACTOR shall provide all temporary wiring, switches, connections and meters.

There shall be sufficient artificial light, by means of electricity, so that all work may be done in a workmanlike manner when there is not sufficient daylight.

The CONTRACTOR shall remove all temporary electrical service and appurtenances prior to final acceptance by the Owner. Where permanent electrical service is required, the CONTRACTOR shall request, in writing, an inspection of the electrical components of the work. Such request for inspection shall be given a minimum of 48 hours in advance. At such time as

the electrical components of the work have been inspected and approved, the CONTRACTOR shall request from the Owner, in writing, an electrical service. Such request for electrical service shall be given a minimum of ten (10) days in advance.

72 - Water Supply

The CONTRACTOR shall provide all water required to successfully perform the work. All water provided by the CONTRACTOR which is not potable shall be clearly marked as such.

All water from fire hydrants, post hydrants, or otherwise from the existing distribution system under local control, shall be metered with a meter supplied by any local public body or authority responsible for the system and shall be obtained only with written authorization of the Owner. The CONTRACTOR shall remove all temporary water service and appurtenances prior to final acceptance by the Owner.

73 - Environmental Impact

The CONTRACTOR shall conduct his operations so as to minimize, to the greatest extent possible, adverse environmental impact.

Noise

All equipment and machinery shall be provided with exhaust mufflers maintained in good working order so as to reduce operating noise to minimum levels. In addition, operation of equipment and machinery shall be limited to daylight hours, with no Saturday or Sunday work, except with the permission of the Owner, based on critical need for the operation. The work shall be arranged, scheduled and organized in such a manner and method so as to cause the minimum of interference with the conduct of the adjacent City and County operation. No loud radios, use of drugs, or profanity on project sites. Workman shall be restricted from all buildings other than those in which work is being done. No unmuffled internal combustion engines, pneumatic devices nor pressure relief valves will be permitted.

Dust/Smoke

All equipment movements shall be accompanied by a minimum of dust. Traveled surfaces and earthwork shall be maintained in a moist condition to avoid the generation of dust or the airborne movement of particulate matter under all prevailing atmospheric conditions. Dust causing operations shall be controlled by sprinkling or aspiration.

Burning or refuse or rubbish on or near the site will not be permitted.

Traffic

Trucks carrying spoil, fill, concrete or other materials shall be routed over roads which will result in the least effect on traffic and nuisance to the public. All material shall be loaded in a manner which will preclude the loss of any portion of the load in transit, including covering, if necessary.

Siltation and Erosion

The CONTRACTOR shall perform his work to minimize siltation and erosion during construction. All points of concentrated runoff from rainfall shall be visually monitored to determine that no eroded material leaves the construction site. Measures shall be taken promptly to eliminate siltation and erosion, including the installation of dams, detention

basins, silt fencing, and other retaining devices. The CONTRACTOR shall conduct operations and maintain the work in such condition that adequate drainage shall be in effect at all times.

Use of Chemicals

All chemicals used during construction or furnished for project operation whether herbicide, pesticide, disinfectant, polymer, reactant or other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

74 - Progress Payments

The parties hereto expressly agree that the provisions of the Georgia Prompt Pay Act, O.C.G.A. Section 13-11-1 et. seq., shall not apply to this Contract and is superseded by the terms and conditions of the Contract.

Not later than the fifth day of every month the Contractor shall prepare and submit a Request for Periodic Payment, along with an Affidavit of payment of claims, covering the total quantities under each item of work that has been completed from the start of the job up to and including the last day of the preceding month, and the value of the work so completed determined in accordance with the schedule of values for such items together with such supporting evidence as may be required by the Engineer/Architect; however, the Owner reserves the right to request additional information from the Contractor.

Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.

Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

Identification: Include the following Project identification on the schedule of values:

Project name and location.
Name of Architect.
Architect's Project number.
Contractor's name and address.
Date of submittal.

Arrange schedule of values consistent with format of AIA Document G703.

Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:

Related Specification Section or Division.
Description of the Work.

Name of subcontractor.
Name of manufacturer or fabricator.
Name of supplier.
Change Orders (numbers) that affect value.
Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
Labor.
Materials.
Equipment.

Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent (5%) of the Contract Sum.

Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

Differentiate between items stored on-site and items stored off-site.

Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate Owner payments or deposits, if any, and balance to be paid by Contractor.

Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.

Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.

Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent (5%) of the Contract Sum and subcontract amount.

Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

This estimate may also include an allowance for the cost of such materials and equipment required in the permanent work as has been delivered to the site or stored in an approved location and suitably protected but not as yet incorporated in the work. Under no circumstances shall any material or equipment, for which payment has been made by the owner to the Contractor, be sold, returned to the supplier or otherwise moved from storage except for incorporation into the work as covered in this contract without written authorization from the Owner. Payments shall be made for materials stored off- site only if said materials are stored in an independent bonded warehouse and if all costs of storage, insurance, loading and transfer for such materials is paid for by the Contractor. The Contractor shall submit to the Owner bills of lading and bonds with any request for such payment.

Not later than the 30th day after submitting an accepted, approved and correct estimate along with all required documentation (as per these contract documents) as detailed in the above paragraph, the Owner shall, after deducting previous payments made, pay to the Contractor 90% of the amount of the estimate as approved by the Owner, as long as the gross value of completed work is less than 50% of the total Contract amount, or if the Contractor is not maintaining his construction schedule to

the satisfaction of the Owner, the Owner shall retain 10% of the gross value of the completed work as indicated by the current approved estimate.

After the gross value of completed work becomes equal to 50% of the total Contract amount within a time period satisfactory to the Owner, then the Owner will continue to retain the 10% of the first 50% of the work but will not require any additional retainage; provided, however, that if work is unsatisfactory or falls behind schedule, retention may be resumed at the previous level after notification to the Contractor. Amounts unpaid at the end of the 30 days after the billing date shown on each invoice shall bear interest at the rate of one percent (1%) per month not to exceed three months (3%).

The Contractor shall also submit with each Request for Periodic Payment a progress report on a form approved by the Engineer/Architect at or before the pre-construction conference. Failure to submit a progress report shall be grounds for the Owner to withhold payment. To expedite the approval of requests for partial payment, the Contractor shall submit with his request the following information:

A copy of the Progress Schedule marked to indicate the work actually accomplished.

An itemized list of materials stored for which payment is being claimed. This list shall be accompanied by the suppliers' invoices indicating the materials costs. Payment for materials stored shall be subject to the same retainage provisions as for work completed.

An outline of time lost because of an event giving rise to a request for an extension of contract time.

The Owner has a right to hold a payment to a contractor who has not included an updated progress report with his pay request.

Retention of contractual payments and the creation of escrow accounts for contracts for the installation, improvement, maintenance or repair of water or sewer facilities shall be in accordance with the Georgia Retainage Law, Section 13-10-20, Article 2, as found in O.C.G.A.

Before final payment is due, the Contractor shall submit evidence satisfactory to the Engineer/Architect and Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid, except that in case of disputed indebtedness or liens, the Contractor may submit in lieu of evidence of payment an additional Surety Bond satisfactory to the Owner guaranteeing payment of all such disputed amounts when adjudicated.

Special Payment Provision: For contractor where payment bonds have been waived, all Requests for Periodic payment forms submitted by the Contractor shall be accompanied by payment affidavits from each subcontractor/supplier for the services/materials claimed before payment will be released by the owner. Application for final payment shall also be accompanied by a lien waiver from each (sub)contractor/supplier who furnished labor or materials for the job.

Under this paragraph, failure to supply said documentation, any additional requested information, partial releases, waiver of liens, and evidence of payment of all current accounts

will be considered grounds for withholding partial payments, and failure to supply a release and unconditional lien waivers for said Surety Bond for the entire job, on completion, will be grounds for withholding final payment.

75 - Measurement and Payment

Measurement and payment shall be made for the units or lump sum contract prices shown on the Bid Schedule. Direct payment shall only be made for those items of work specifically listed in the proposal and the cost of other work must be included in the contract price for the applicable item to which it relates.

Within ten (10) days of issuance of the Notice of Award, on lump sum contracts, the CONTRACTOR shall provide, for review and approval, a schedule of values for the various subdivisions of the work.

76 - Use of Completed Portions

The Owner may, at any time during progress of the work, after written notice to the CONTRACTOR, take over and place in service any completed portions of the work which are ready for service, although the entire work of the Contract is not fully completed, and notwithstanding the time for completion of the entire work or such portions which may not be expired. In such case, the Engineer/Architect with the Owner's occurrence may issue documents of Substantial Completion for such portions of the work; but such taking possession thereof shall not be deemed an acceptance of any other portions of the work, nor of any uncompleted portions, nor of any work not completed in accordance with the Contract Documents.

77 - Payments Withheld Prior to Final Acceptance

During the execution of the work certain portions of the work may be directly or indirectly placed in service. However, "beneficial use" shall not be claimed by the CONTRACTOR as a means to force acceptance or completion. It shall be the responsibility of the CONTRACTOR to request, in writing to the Owner, an inspection to determine acceptance on all or any portion of the work.

It shall be the responsibility of the CONTRACTOR to consider the amount of time any particular portion of this job may be used prior to Final Acceptance and bid the job accordingly.

78 - Payments Withheld Prior to Final Acceptance

The Owner may withhold or, an account of subsequently discovered evidence, nullify the whole or part of any certificate of payments to such extent as may be necessary to protect himself from loss on account of:

Defective work not remedied.

Claims filed or reasonable evidence indicating proposed public filling of claims by other parties against the CONTRACTOR.

Failure of the CONTRACTOR to make payments properly to Sub-CONTRACTORS or for material or labor.

Damage to another Contactor.

When the above grounds are removed or the CONTRACTOR provides a Surety Bond, satisfactory to the Owner, which will protect the Owner in the amount withheld, payment shall be made for amounts withheld because of them.

Nothing in this paragraph shall negate, abridge or alter other grounds for withholding or delaying payment to the CONTRACTOR as stated in the contract.

79 - Contract Time

General

Time shall be of the essence of the contract. The CONTRACTOR shall promptly start the work after the date of the notice to proceed and shall prosecute the work so that portions of the project shall be complete within the times specified in Section 46. During periods when weather or other conditions are unfavorable for construction, the CONTRACTOR shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work, where acceptable quality or efficiency will be affected by unfavorable conditions, shall be constructed while those conditions exist. It is expressly understood and agreed by and between the CONTRACTOR and the Owner that the contract time for completion of the work described herein is a reasonable time taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

Construction Schedule

The CONTRACTOR shall provide a construction schedule and reports as specified in Section 46 for scheduling and coordinating the work within the contract time. Contract time extensions shall be incorporated into updated schedules, reflecting their effect at the time of occurrence. Failure of the CONTRACTOR to comply with these requirements for submittal of the construction schedule and reports shall be cause for delay in review of progress payments by the Owner.

Construction Progress

The CONTRACTOR shall furnish such manpower, materials, facilities and equipment as may be necessary to insure the prosecution and completion of the work in accordance with the accepted schedule. If work falls fourteen (14) days or more behind the accepted construction schedule, the CONTRACTOR agrees that he will take some or all of the following actions to return the project to the accepted schedule. These actions may include the following:

Increase manpower in quantities and crafts.

Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of equipment, or any combination of the foregoing.

Reschedule activities.

If requested by the Owner, the CONTRACTOR shall prepare a proposed schedule revision demonstrating a plan to make up the lag in progress and insure completion of the work within the contract time. Upon receipt of an acceptable proposed schedule, the revision to the construction schedule shall be made in accordance with Paragraph 22. All actions to return the project to the acceptable schedule are at the CONTRACTOR's expense.

The CONTRACTOR shall pay all costs incurred by the Owner which result from the CONTRACTOR's action to return the project to its accepted schedule. The CONTRACTOR agrees that the Owner shall deduct such charges from payments due the CONTRACTOR. It is further understood and agreed that none of the services performed by the Engineer/Architect in monitoring, reviewing and reporting project status and progress shall relieve the CONTRACTOR of responsibility for planning and managing construction work in conformance with the construction schedule.

Delays

When the CONTRACTOR foresees a delay in the prosecution of the work and, in any event, immediately upon the occurrence of a delay which the CONTRACTOR regards as unavoidable, he shall notify the Owner in writing of the probability of the occurrence of such a delay, the extent of the delay and its possible cause. The CONTRACTOR shall take immediate steps to prevent, if possible the occurrence or continuance of the delay.

If this cannot be done, the Owner shall determine how long the delay shall continue and to what extent the prosecution and complete of the work are being delayed thereby. He shall also determine whether the delay is to be considered avoidable or unavoidable and shall notify the CONTRACTOR of his determination. The CONTRACTOR agrees that no claim shall be made for delays which are not called to the attention of the Owner at the time of their occurrence.

Avoidable delays in the prosecution of the work shall include delays which could have been avoided by the exercise of care, prudence, foresight and diligence on the part of the CONTRACTOR or his Sub-contractors. Avoidable delays include:

Delays which may in themselves be unavoidable but which affect only a portion of the work and do not necessarily prevent or delay the prosecution of neither other parts of the work nor the completion of the whole work within the contract time.

Time associated with the reasonable interference of other CONTRACTORs employed by the Owner which do not necessarily prevent the completion of the whole work within the contract time.

Unavoidable delays in the prosecution or completion of the work shall include delays which result from causes beyond the control of the CONTRACTOR and which could not have been avoided by the exercise of care, prudence, foresight and diligence on the part of the CONTRACTOR or his Sub-contractors.

Delays caused by acts of God, fire, unusual storms, floods, tidal waves, earthquakes, strikes, labor disputes and freight embargoes shall be considered as unavoidable delays insofar as they prevent the CONTRACTOR from proceeding with at least 75 percent of the normal labor and equipment force for at least 5 hours per day toward completion current controlling items on the accepted construction schedule.

Should abnormal conditions prevent the work from beginning at the usual starting time, or prevent the CONTRACTOR from proceeding with 75 percent of the normal labor and equipment force for a period of at least 5 hours per day, and the crew is dismissed as a result thereof, he will not be charged for the working day whether or not conditions change so that the major portion of the day could be considered suitable for work on the controlling item.

Extension of Time

In case the work is not completed in the time specified, including extensions of time as may have been granted for unavoidable delays, the CONTRACTOR will be assessed liquidated damages, as specified in Section 86 below.

The Owner may grant an extension of time for avoidable delay if he deems it in his best interest. If the Owner grants an extension of time for avoidable delay, the CONTRACTOR agrees to pay the liquidated damages.

Unavoidable Delays: For delays which the CONTRACTOR considers to be unavoidable, he shall submit to the Engineer/Architect complete information demonstrating the effect of the delay on the controlling operation in his construction schedule. The submission shall be made within thirty (30) calendar days of the occurrence which is claimed to be responsible for the unavoidable day.

The Owner shall review the CONTRACTOR's submission and determine the number of days unavoidable and the effect of such unavoidable delay on controlling operations of the work. If the Owner agrees to grant an extension of time to the extent that unavoidable delays affect controlling operations in the construction schedule, during such extension of time, neither extra compensation or Engineer/Architecting inspection and administration nor damages for delay will be charged by the CONTRACTOR to the Owner.

It is understood and agreed by the CONTRACTOR and Owner that time extensions due to unavoidable delays will be granted only if such unavoidable delay involve controlling operations which would prevent completion of the whole work within the specified contract time. It is understood and agreed by the CONTRACTOR and Owner that during such extension of time, no extra compensation shall be paid to the CONTRACTOR.

Damage for Delays: For the period of time that any portion of the work remains unfinished after the time fixed for completion in the Contract Documents, as modified by extensions of time granted by the Owner, it is understood and agreed by the CONTRACTOR and the Owner that the CONTRACTOR shall pay the Owner the liquidated damages, specified in Section 86 below.

81 - Differing Site Conditions

The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the Owner in writing of (1) subsurface or latent physical conditions differing materially from those indicated in the contract or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract.

82 - Changes in Work

The Owner, without invalidating the Contract, may order additions to or deductions from the work. The CONTRACTOR shall proceed with the work, as changed and the value of any such extra work or change shall be determined as provided in the Agreement, and the contract sum adjusted accordingly. Any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. Except in an emergency endangering life and property, no extra work or change shall be made unless in pursuance of a written order approved by the Owner, and no claim for an addition to the Contract Sum shall be valid unless the additional work was so ordered.

83 - Force Account and Extra Work

If the Engineer/Architect orders, in writing, the performance of any work not covered by the plans or included in the specifications, and for which no unit price or lump sum basis can be agreed upon, then such extra work shall be done on a Cost-Plus-Percentage basis of payment as follows:

Reasonable allowance for overhead and profit combined to be included in the total cost to the Owner shall be based on the following schedule:

For the Contractor, for any work performed by the Contractor's own forces, an amount not to exceed fifteen percent (15%) of the cost.

For the Contractor, for any work performed by the Contractor's Subcontractor, seven and one-half percent (7-1/2%) of the amount due the Subcontractor. The Owner will not recognize subcontractors of subcontractors. To facilitate checking of quotations for extras or credits, however, all proposals shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized in the manner prescribed above. The burden of proof of cost rests upon the Contractor. Where major cost items are subcontracts, they shall be itemized also. All changes require written approval prior to commencing work.

The term "Cost" shall cover all payroll charges for persons employed and supervision required under the specific Order, together with all workmen's compensation, Social Security, pension and retirement allowances and social insurance, or other regular payroll charges on same; the cost of all material and supplies required of either temporary or permanent character; rental of all power-driven equipment at the current Associated Equipment Distributors (AED) rate; and any other costs incurred by the Contractor as a direct result of executing the Order, if approved by the Engineer/Architect and the Owner.

Except in an emergency endangering life and property, no extra work or change shall be made unless in pursuance of a written order, and no claim for an addition to the Contract Sum shall be valid unless the additional work was so ordered. The cost of the work shall be submitted to the Engineer/Architect along with the monthly pay request.

84 - Claims for Extra Cost

If the Contractor claims that any instructions by drawings or otherwise issued after the date of the Contract involved extra cost under the Contract, he shall give the Engineer/Architect written notice thereof within twenty (20) calendar days after the receipt of such instructions, and in any event before proceeding to execute the work, except in an emergency endangering life or property, and the procedure shall then be as provided for changes in the work. No such claim shall be valid unless so made. Otherwise, it will be assumed that the instructions or changes incur no additional cost.

Extra work not included the Scope of Work but, authorized after the date of the contract cannot be classified as coming under any of the contract units may be done at mutually agreed upon unit price or on a lump sum basis, or under the provision of Section 83 above.

Extra costs that result from delays, which cause an interruption in the orderly progress of work, as described in Section 79 above, will be considered under the following conditions:
No claim will be considered for delays less than five (5) hours in duration.

No claim will be considered in cases where the Contractor is able, without undue hardship, to shift his work crew to other productive work on the same project in the same general work area.

The claim for extra cost due to delay shall be computed on a cost plus percentage basis as specified in Section 83 above.

Unavoidable delays caused by weather as defined in Section 79 above, shall be cause for extensions of time. However, damage to the Contractor caused by weather or an Act of God shall not be cause for additional compensation or monetary adjustment.

85 - Correction of Work Before Final Payment

The CONTRACTOR shall promptly remove from the premises all material condemned by the Owner, or as determined by the Owner as failing to meet Contract requirements, whether incorporated in the work or not, and the CONTRACTOR shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Owner and shall bear the expense of making all work of other CONTRACTORS destroyed or damaged by such removal or replacement.

If the CONTRACTOR does not remove such condemned work and materials as promptly as possible, after written notice, the Owner may remove them and store the material at the expense of the CONTRACTOR.

86 - Liquidated Damages

The Owner will suffer financial loss if the work is not complete on the date set forth in the Contract Documents, including extension granted thereto. Failure to complete the work within the number of days stipulated in the Contract shall entitle the Owner to retain from compensation otherwise due to be paid to the CONTRACTOR, or for the Owner to be paid directly by the CONTRACTOR the sum of **One Thousand Dollars (\$1,000)** as fixed and agreed to as liquidated damages for each calendar day of delay until the work is complete. The CONTRACTOR, and his Surety, shall be liable for and shall pay to the Owner any sum due and owing to the Owner as liquidated damages.

It is agreed by and between the parties hereto that the aforesaid sum has been established, not as a penalty but as liquidated damages and that it is reasonable and acceptable, as the County provides services necessary for the health and welfare of the public and due to the impracticability and extreme difficulty of fixing and ascertaining the actual damages sustained in such an event.

87 - Suspension or Abandonment of Work

Suspension of Work

The Owner may at any time, for any reason, suspend the work, or any part thereof by giving three (3) days written notice to the CONTRACTOR. The work shall be resumed by the

CONTRACTOR within ten (10) days after the date fixed in the written notice from the Owner to the CONTRACTOR.

If the project is suspended by the Owner during any given phase for more than 60 consecutive days, the CONTRACTOR shall be compensated for services performed prior to notice of such suspension. When the project is resumed, the CONTRACTOR's compensation shall be equitably adjusted to provide for actual expenses incurred in the interruption and resumption of the CONTRACTOR's services, excluding overhead and profit.

Said expenses must be documented and submitted to the Owner for review and upon approval by the Owner for reasonable expenses will be reimbursed to the CONTRACTOR. The CONTRACTOR shall mitigate any expenses incurred during the suspension period.

Nothing in this Subparagraph, above, shall prevent the Owner from immediate suspension of the CONTRACTOR's work when the health or welfare of the public is at risk in the opinion of the Owner.

Abandonment of Work

This Contract may be terminated by the Owner upon seven (7) days written notice to the CONTRACTOR in the event that the project is permanently abandoned. If the project is abandoned by the Owner for more than 90 consecutive days, the CONTRACTOR may terminate this Contract upon not less than seven (7) days written notice to the Owner.

88 - Termination of Contract

Termination for Convenience of Owner

The Owner may, at will, upon written notice to the CONTRACTOR, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work for the convenience of the Owner.

The CONTRACTOR in calculating his termination application for payment, shall develop his outstanding costs in accordance with Section 83, including those materials in transit and non-cancellable with the appropriate percentage markups; Sub-contractors shall follow same procedures. All costs must be substantiated by adequate back-up documentation. The termination will not affect any rights or remedies of the Owner against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due to the CONTRACTOR by the Owner will not release the CONTRACTOR from liability.

Default Termination

The Owner may, if in the Owner's sole judgment and upon written notice to the CONTRACTOR, terminate (without prejudice to any right or remedy of Owner) the whole or any portion of the Work required by the Contract Documents in any one of the following circumstances:

If the CONTRACTOR refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will ensure the Substantial Completion of the Work within the Contract time:

The CONTRACTOR is in material default in carrying out any provisions of this Contract for a cause within its control;

If the CONTRACTOR files a voluntary petition in bankruptcy or a petition seeking or acquiescing in any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief for itself under any present or future federal, state or other statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors;

If a trustee, receiver or liquidator, is appointed for the CONTRACTOR or for all or any substantial part of the property of the CONTRACTOR; or if the CONTRACTOR makes a general assignment for the benefit of creditors or admits in writing its inability to pay its debts generally as they become due;

If the CONTRACTOR has filed against it a petition in bankruptcy under any present or future federal or state statute, law or regulation relating to bankruptcy, insolvency or other relief for debtors and the same is not discharged on or before forty-five (45) days after the date of the filing thereof; or if the CONTRACTOR is adjudged a bankrupt;

If the CONTRACTOR is adjudged a bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency;

If the CONTRACTOR fails to supply a sufficient number of properly skilled workmen or suitable materials or equipment;

If the CONTRACTOR fails to make prompt payment to Sub-contractors for materials or labor, unless CONTRACTOR otherwise provides Owner satisfactory evidence that payment is not legally due;

If the CONTRACTOR persistently disregards laws, ordinances, rules, or regulations or order of any public authority having jurisdiction;

If the CONTRACTOR substantially violates any provision of the Contract Documents;

or

If, after the CONTRACTOR has been terminated for default pursuant to paragraph two (2), it is determined that none of the circumstances set forth paragraph two (2) exist, then such termination shall be considered a termination of convenience pursuant to paragraph one (1). If the Owner terminates this agreement for any of reasons enumerated in paragraph two (2), then the Owner may take possession of the site and of all documents, materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR and may finish the work by whatever method the Owner may deem expedient. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the work is finished.

Allowable Termination Costs

If the Owner terminates the whole or any portion of the Work pursuant to Paragraph "A" then the Owner shall only be liable to CONTRACTOR for those costs reimbursable to CONTRACTOR in accordance with Paragraph "D", plus the cost of settling and paying claims arising out of the termination of Work under subcontracts or orders, pursuant to Paragraph "D", which are properly chargeable to the terminated portion of the Contract (exclusive of

amounts paid or payable on account of completed items of equipment delivered or services furnished by Sub-contractors or proposers prior to the effective date of the Notice of Termination), which amounts shall be included in the costs payable under Subparagraph "B.1", above, and the reasonable costs of settlement, including accounting, legal, clerical and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract, together with reasonable storage, transportation and other costs incurred in connection with the protection of disposition of property allocable to this contract.

Provided, however, that if there is evidence that the CONTRACTOR would have sustained a loss on the entire Contract had it been completed, no profit shall be included or allowed hereunder and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss.

The total sum to be paid to the CONTRACTOR under this Paragraph "C" shall not exceed the Contract sum as reduced by the amount of payments otherwise paid, by the Contract price of Work not terminated and as otherwise permitted by this Contract.

Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the CONTRACTOR, as provided in this paragraph, the fair value as reviewed by the Engineer/Architect, determined by the Owner, of property which is destroyed lost, stolen or damaged so as to become undeliverable to the Owner.

General Termination Provisions

After receipt of a Notice of Termination from the Owner, pursuant to paragraph one (1) or two (2), and except as otherwise directed by the Owner, the CONTRACTOR shall:

Stop Work under the Contract on the date and to the extent specified in the Notice of Termination;

Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;

Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;

Assign to the Owner in the manner, at the times and to the extent directed by the Owner, all of the right, title and interest of the CONTRACTOR under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its sole discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification shall be final for all the purposes of this clause;

Transfer title and deliver to the entity or entities designed by the Owner, in the manner, at the times and to the extent, if any, directed by the Owner, and to the extent specifically produced or specifically acquired by the CONTRACTOR for the performance of such portion of the work as had been terminated;

The fabricated or un-fabricated parts, work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed work, supplies and or other material produced as part of, or acquired connection with, the performance of the work terminated by the Notice of Termination, and the completed or partially completed plans, drawings, information and other property related to the work;

Use his best efforts to sell, in the manner, at the times, to the extent and at the price or prices directed or authorized by the Owner, and property of the types referred to in paragraph four (4);

Shall not be required to extend credit to any buyer, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner;

And provided further that the Proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Owner to the CONTRACTOR under this contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Owner may direct;

Complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and

Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract, which is in the possession of the CONTRACTOR and in which the Owner has or may acquire an interest.

The CONTRACTOR shall, from the effective Date of Termination until the expiration of three years after Final Settlement under this contract, preserve and make available to the Owner, at all reasonable times at the office of the CONTRACTOR, but without direct charge to the Owner, all its books, records, documents, and other evidence bearing on the costs and expenses of the CONTRACTOR under this Contract and relating to the Work terminated hereunder, or, to the extent approved by the Engineer/Architect, photographs, microphotographs or other authentic reproductions thereof. In arriving at any amount due the CONTRACTOR pursuant to paragraph three (3) there shall be deducted:

All unliquidated advance or other payments on account theretofore made to the CONTRACTOR applicable to the terminated portion of this Contract;

Any claim which the Owner may have against the CONTRACTOR;

Such claim as the Owner may advise and the Owner determines to be necessary to protect the Owner against loss because of outstanding or potential liens or claims; and the agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold, pursuant to the provisions of paragraph four (4); and not otherwise recovered by or credited to the Owner.

CONTRACTOR shall refund to the Owner any amounts paid by the Owner to the CONTRACTOR in excess of costs reimbursable under paragraph three (3).

The Owner, at its option and CONTRACTOR's expense, may have costs reimbursable under paragraph three (3) audited and certified by an independent certified public accountant selected by the Owner.

89 - CONTRACTOR's Right to Stop Work or Terminate Contract

If the work should be stopped under an order of any court for a period of three (3) months, through no fault of the CONTRACTOR or of anyone employed by him, then the CONTRACTOR may, upon seven (7) days written notice to the Owner, stop work or terminate this Contract and recover from the Owner payment for all work executed, plus any loss sustained upon any plant or materials excluding overhead, profit and damages.

90 – Disputes Resolution

All claims, disputes and other matters in question between the CONTRACTOR and the Owner arising out of, or relating to, this contract or the breach therefore, shall be tried before a jury trial, unless otherwise stipulated between the parties. Any legal proceeding arising out of, or relating to, this agreement shall include, by consolidation, joinder or joint filing, any additional person or entity to the final resolution of the matter in controversy.

The CONTRACTOR hereby further agrees that, should any Sub-contractor or supplier to the CONTRACTOR file a claim concerning any dispute or controversy, which involves the allegations of any acts, errors or omissions of the CONTRACTOR, then the CONTRACTOR shall indemnify and hold harmless the Owner, its employees, agents, and representatives, its employees, agents, and representatives from any and all costs incurred to include legal costs and attorney's fees and payment of any judgment against the Owner.

Should the Owner utilize an attorney to enforce any of the provisions hereof, to protect its interest in any matter arising under this Contract, or to collect damages for breach of this Contract, the CONTRACTOR agrees to pay the Owner all reasonable costs, charges, expenses and attorneys' fees expended or incurred therein.

Any disputes arising under the terms and conditions of this Contract shall not be subject to mediation or arbitration.

The CONTRACTOR irrevocably consents that any legal action or proceeding against it under, arising out of or in a manner relating to the Contract shall be brought in any court in Dawson County, Georgia. CONTRACTOR designates the Secretary of the State of Georgia as its agent for service of process, provided no such agent located in Georgia is on file with the said Secretary. CONTRACTOR, by the execution and delivery of this Contract, expressly and irrevocably assents to and submits to the personal jurisdiction of any court in Dawson County, and irrevocably waives any claim or defense in any said action or proceeding based on any alleged lack of jurisdiction, improper venue or forum non conveniens or any similar basis.

91 - Removal of Equipment

In the case of termination of this Contract before completion for any cause whatever the CONTRACTOR, if notified to do so by the Owner, shall promptly remove any part or all of his equipment from the property of the Owner, failing which the Owner shall have the right to remove such equipment at the expense of the CONTRACTOR.

92 - Laws of Georgia

This Contract shall be governed by the Laws of the State of Georgia.

If any provision hereof shall be held or deemed to be or shall, in fact, be inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions or in all jurisdictions, or in all cases because it conflicts with any other provision or provisions hereof or any constitution or statute or rule of public policy, or for any other reason, such circumstances shall not have the effect of rendering the remaining provision of this Contract invalid, inoperative or unenforceable.

93 – Quantity Variance Reserve

This line item shall be strictly reserved for work as required by the Owner under Section 82 above and Section 83 above without the adjustment of the contract sum, and shall not otherwise be interpreted for any other use and shall not contain any of the CONTRACTOR's work, or cost, known or unknown, at the time of bidding.

Prior to final acceptance of the work, a summary change order shall be developed and the contract sum shall be reduced by the total amount of the quantity variance reserve not used by the Owner.

94 - Discrepancy Between General Conditions and Technical Specifications

Should there be a discrepancy between the General Conditions and Technical Specifications, the Technical Specifications shall govern.

95 – Ownership of Salvaged Material and Equipment

Dawson County shall have the right to retain ownership of any salvaged material or equipment. The CONTRACTOR shall notify the owner prior to the disposal of any salvageable material.

-End of This Section-



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
VENDOR'S CHECKLIST**

Company Name: _____

Please indicate you have completed the following documentation; and submit them in the following order. **This Page is to be submitted with your Proposal.**

- Vendor's Checklist
- Vendor's Information Form
- Vendor's Price Proposal Form
- Vendor's Qualifications as detailed in Section II, D
- References as listed under Section II, D
- Execution of Proposal Form
- Addenda Acknowledgement Form and Any Addenda Issued
- Proposer's Certification and Non-Collusion Affidavit
- Drug-Free Workplace Affidavit
- Georgia's Security and Immigration Compliance Act Affidavit
 - Contractor Affidavit
 - Subcontractor Affidavit (if applicable)
- Local Small Business Initiative Affidavit (if applicable)
- Proof of Insurance/Certificate of Insurance – Requirements listed on Page 7
- Completed W9
- Copy of Valid Business License
- Copy of Professional licenses (if applicable)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S INFORMATION FORM**

1. Legal Business Name _____
2. Street Address _____
3. City, State & Zip _____
4. Type of Business: _____ State of Registration: _____
(Association, Corporation, Partnership, Limited Liability Company, etc.)
5. Name & Title of Authorized Signer: _____
6. Primary Contact _____
7. Phone _____ Fax _____
8. E-mail _____
9. Company Website _____
10. Has your company ever been debarred from doing business with any federal, state or local agency? Yes _____ No _____ If Yes, please state the agency name, dates and reason for debarment.

ATTACH COPY OF BUSINESS LICENSE AND A COMPLETED W-9 FORM
THIS PAGE MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #1 – TOTAL SUMMARY OF PRICE – PAGE 1**

COMPANY NAME: _____

**THE PRICING BELOW IS TO BE A SUMMARY OF ALL MANDATORY COSTS
SUBMITTED ON THE SUBSEQUENT PROPOSER'S PRICE FORMS.**

RADIO SYSTEM PRICE	
System Equipment (Price Form #2) – Combine All Site's Pricing for One Total	Discounted Price
System Control Equipment, Software, and Licensing	
Network Management Equipment, Software, and Licensing	
Simulcast & Voting Equipment, Software, and Licensing	
Radio Frequency (RF) Site Equipment, Software, and Licensing	
Dispatch Equipment	
VHF Analog Paging/Interoperability System	
Detention Center BDA/DAS Solution	
Microwave Backhaul System	
Other Equipment, Software, and Licensing	
Spare Equipment	
TOTAL EQUIPMENT PRICE	
System Services (Price Form #3)	
System Installation Services	
System Engineering Services	
Project Management	
System Training	
Warranty Services	
Other - Specify	
TOTAL SERVICES PRICE	
Civil Development (Price Form #4) – Combine All Site's Pricing for One Total	
Existing Site Improvements	
Greenfield Site Equipment	
Greenfield Site Implementation Services	
Other Civil Equipment or Services	
TOTAL CIVIL DEVELOPMENT PRICE	
SYSTEM DISCOUNTS	
Discount, If Applicable	
Trade-in Value, If Applicable	
SYSTEM EQUIPMENT, SERVICES AND CIVIL DEVELOPMENT TOTAL	

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #1 – TOAL SUMMARY OF PRICE- PAGE 2**

COMPANY NAME: _____

SUBSCRIBER DEVICES PRICE SUMMARY	
Subscriber Equipment (Price Form #5)	Discounted Price
Portable Radios	
Mobile Radios & Control Stations	
Others	
TOTAL SUBSCRIBER DEVICES PRICE	
SUBSCRIBER DEVICES DISCOUNTED PROPOSAL TOTAL	
TOTAL PROPOSAL PRICE	

ALTERNATE:

DESCRIPTION	LUMP SUM COST
Relocating New Console Dispatch Center Equipment to New Site from Current Site	

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
 PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 1**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

SITE BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
System Control Equipment, Software, and Licensing - Add description as required for each item						
(Enter on Total Summary of Price Form) SUBTOTAL						
Network Management Equipment, Software, and Licensing						
(Enter on Total Summary of Price Form) SUBTOTAL						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 2**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

SITE BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Simulcast & Voting Equipment, Software, and Licensing						
(Enter on Total Summary of Price Form) SUBTOTAL						
Radio Frequency (RF) Site Equipment, Software and Licensing						
(Enter on Total Summary of Price Form) SUBTOTAL						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 3**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

SITE BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Dispatch Equipment						
Console System Hardware						
Console System Software & Licensing						
Backup Solution						
Networking Equipment						
Logging Recorder System						
Other (<i>add as necessary</i>)						
(Enter on Total Summary of Price Form) SUBTOTAL						
VHF Analog Paging/Interoperability System						
Control Equipment (if required)						
Simulcast Equipment						
Receiver voting equipment						
Repeater/base station equipment						
Antenna systems						
(Enter on Total Summary of Price Form) SUBTOTAL						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 4**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

SITE BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Detention Center BDA/DAS Solution						
(Enter on Total Summary of Price Form) SUBTOTAL						
Microwave Backhaul System						
(Enter on Total Summary of Price Form) SUBTOTAL						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 5**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

SITE BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Other Equipment, Software, and Licensing						
(Enter on Total Summary of Price Form) SUBTOTAL						
Spare Equipment						
(Enter on Total Summary of Price Form) SUBTOTAL						
TOTAL EQUIPMENT PRICE						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #2 – SYSTEM EQUIPMENT PRICE – PAGE 6**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #3 – SYSTEM SERVICES PRICE – PAGE 1**

COMPANY NAME: _____

Description	Services Prices
System Installation Services	
Installation (including all equipment, antenna systems, old equipment removal, etc.)	
Other - specify	
Other - specify	
System Equipment Services Subtotal	
System Engineering Services	
System/Network Engineering (including coverage analysis and testing, documentation, system acceptance testing, etc.)	
Staging	
FCC License Preparation	
Frequency Coordination	
Other - specify	
Other - specify	
System Engineering Subtotal	
Project Management	
Project Management	
Other - specify	
Other - specify	
Project Management Subtotal	
System Training	
P25 Portable device training (train the trainer)	
P25 Mobile device training (train the trainer)	
Console Administrator Training	
Console Operator Training	
System Management Training	
Other - specify	
Other - specify	
System Training Subtotal	
Warranty Services	
<i>List Warranty Services separately (e.g. on-site response, depot repair, tech support, etc.)</i>	
Warranty Services Subtotal	
Other - Specify	
Other - specify	
Other - specify	
TOTAL SERVICES	\$

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #3 – SYSTEM SERVICES PRICE – PAGE 2**

COMPANY NAME: _____

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #4 – CIVIL/SITE DEVELOPMENT PRICE – PAGE 1**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

CIVIL DEVELOPMENT BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Existing Site Improvements - New Equipment and Services - e.g., Structural Analysis, grounding, etc.						
Tower						
Shelter						
Generator						
Others						
(Enter on Total Summary of Price Form) SUBTOTAL						
Greenfield Site Equipment						
Towers						
Shelters						
Generators						
others						
(Enter on Total Summary of Price Form) SUBTOTAL						
Greenfield Site Implementation Services						
A&E services						
Site Development services						
Tower installation services						
Shelter installation services						
Generator services						
others						
(Enter on Total Summary of Price Form) SUBTOTAL						

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #4 – CIVIL/SITE DEVELOPMENT PRICE- PAGE 2**

INSTRUCTIONS TO PROPOSER: DUPLICATE THIS FORM TO SUBMIT PRICING FOR SYSTEM EQUIPMENT FOR EACH SITE. ENSURE TO LIST THE SITE NAME AND LOCATION OF EACH SITE.

COMPANY NAME: _____

CIVIL DEVELOPMENT BREAKOUT PRICING FORM						
SITE NAME						
SITE DESCRIPTION/LOCATION						
SUBSYSTEM CATEGORY	Equipment Totals	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Other Civil Equipment or Services						
(Enter on Total Summary of Price Form) SUBTOTAL						
TOTAL EQUIPMENT PRICE						

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 1**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

PORTABLE RADIOS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Law Enforcement Model - 7/800 - P25 Trunking (Supporting Phase 1-TDMA and Phase 2-TDMA operation) P25 Conventional Operation w/battery, belt clip, antenna and single unit charger		123			
P25 Phase 1 (FDMA) operation		123			
P25 Phase 2 (TDMA) operation		123			
AES Encryption		123			
Multiple Encryption Keys (Multiple AES keys)		123			
GPS/AVL Services		123			
Speaker Mic		123			
Spare Battery		123			
Optional Wi-Fi/LTE programming operation		1			
Fire Service Model (Extended Environmental Specifications) - 7/800 - P25 Trunking (Supporting Phase 1-TDMA and Phase 2-TDMA operation) P25 Conventional Operation w/battery, belt clip, antenna and single unit (desk) charger		50			
Chargers with installation		50			
P25 Phase 1 (FDMA) operation		50			
P25 Phase 2 (TDMA) operation		50			
AES Encryption		50			
Multiple Encryption Keys (Multiple AES keys)		50			
GPS/AVL Services		50			
Highly visible color options		50			

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 2**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

PORTABLE RADIOS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Larger and easier to access knobs and controls		50			
Extended noise reduction		50			
Fire Service Speaker Mic		50			
Spare Battery		50			
Optional Wi-Fi/LTE programming operation		1			
Public Service Model - 7/800 - P25 Trunking (Supporting Phase 1-TDMA Operation) P25 Conventional Operation w/battery, belt clip, antenna and single unit charger		20			
P25 Phase 1 (FDMA) operation		20			
P25 Phase 2 (TDMA) operation		20			
GPS/AVL Services		20			
Speaker Mic		20			
Spare Battery		20			
Optional Wi-Fi/LTE programming operation		1			
Programming Software and cables (If different radio models require different software provide 3 each)		3			
PORTABLE RADIO TOTAL					

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 3**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

MOBILE RADIOS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Law Enforcement Model - 7/800 - P25 Trunking (Supporting Phase 1-FDMA & Phase 2 - TDMA) & P25 Conventional Operation, Remote Mount unit, w/external speaker, microphone and mobile antenna		103			
P25 Phase 1 (FDMA) operation		103			
P25 Phase 2 (TDMA) operation		103			
AES Encryption		103			
Multikey Operation		103			
GPS/AVL Services		103			
Installation		103			
Optional Wi-Fi/LTE programming operation		1			
Control Station Option (Mobile Radio, Power Supply and chasis)					
		15			
P25 Phase 1 (FDMA) operation		15			
P25 Phase 2 (TDMA) operation		15			
AES Encryption		15			
Multikey Operation		15			
Control Station Antenna & Coax		15			
Control Station Installation		15			

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 4**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

MOBILE RADIOS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Fire Services Model - 7/800 - P25 Trunking (Phase 1-FDMA & Phase 2 - TDMA) & P25 Conventional Operation, Remote Mount unit, w/external speaker, microphone and mobile antenna, 100-watt, 5 dual head and 40 single head		45			
P25 Phase 1 (FDMA) operation		45			
P25 Phase 2 (TDMA) operation		45			
AES Encryption		45			
Multikey Operation		45			
GPS/AVL Services		45			
Installation		45			
Optional Wi-Fi/LTE programming operation		1			
Control Station Option (Mobile Radio, Power Supply and chassis)		15			
P25 Phase 1 (FDMA) operation		15			
P25 Phase 2 (TDMA) operation		15			
AES Encryption		15			
Multikey Operation		15			
Control Station Antenna & Coax		15			
Control Station Installation		15			

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 5**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

MOBILE RADIOS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Public Services Model - 7/800 - P25 Trunking (Supporting Phase 1-FDMA Operation) & P25 Conventional Operation, Dash Mount unit, microphone and mobile antenna		20			
P25 Phase 1 (FDMA) operation		20			
GPS/AVL Services		20			
Installation		20			
Optional Wi-Fi/LTE programming operation		1			
Control Station Option (Mobile Radio, Power Supply and chasis)		15			
P25 Phase 1 (FDMA) operation		15			
Control Station Antenna & Coax		15			
Control Station Installation		15			
Programming Software and cables (If different radio models require different software provide 3 each)		3			
MOBILE RADIO TOTAL					

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #5 – SUBSCRIBER EQUIPMENT/SERVICES – PAGE 6**

COMPANY NAME: _____

SUBSCRIBER EQUIPMENT AND SERVICES PRICING FORM

This form is for user radio equipment that may be procured as part of the contract and/or future purchase(s).

OTHERS

Item	Unit Price	Qty	Extended Price	Discount %	Discounted Price
Key Fill Device		1			
Portable Fill Cables		1			
Mobile Fill Cables		1			
Console Fill Cables		1			
OTHERS TOTAL					
SUBSCRIBERS GRAND TOTAL					

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #6 – OPTIONAL LIFECYCLE SUPPORT (POST-WARRANTY) – PAGE 1**

COMPANY NAME: _____

OPTIONAL LIFECYCLE SUPPORT (Post-Warranty)

This form is for OPTIONAL Lifecycle Support services that may or may not choose to purchase in conjunction with the Base Proposal system. IT IS NOT OPTIONAL FOR THE PROPOSER -- ALL PRICES MUST BE INCLUDED.

Add title of each proposed service that extends warranty services out to a total period of 10 years (Warranty @ 3 years + Lifecycle Support @ 7 years = 10 Years

YEAR 4 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 4 Lifecycle Support Services Subtotal	

YEAR 5 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 5 Lifecycle Support Services Subtotal	

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #6 – OPTIONAL LIFECYCLE SUPPORT (POST-WARRANTY) – PAGE 2**

COMPANY NAME: _____

This form is for OPTIONAL Lifecycle Support services that may or may not choose to purchase in conjunction with the Base Proposal system. IT IS NOT OPTIONAL FOR THE PROPOSER -- ALL PRICES MUST BE INCLUDED.

Add title of each proposed service that extends warranty services out to a total period of 10 years (Warranty @ 3 years + Lifecycle Support @ 7 years = 10 Years

YEAR 6 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 6 Lifecycle Support Services Subtotal	

YEAR 7 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 7 Lifecycle Support Services Subtotal	

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #6 – OPTIONAL LIFECYCLE SUPPORT (POST-WARRANTY) – PAGE 3**

COMPANY NAME: _____

OPTIONAL LIFECYCLE SUPPORT (Post-Warranty)

This form is for OPTIONAL Lifecycle Support services that may or may not choose to purchase in conjunction with the Base Proposal system. IT IS NOT OPTIONAL FOR THE PROPOSER -- ALL PRICES MUST BE INCLUDED.

Add title of each proposed service that extends warranty services out to a total period of 10 years (Warranty @ 3 years + Lifecycle Support @ 7 years = 10 Years

YEAR 8 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 8 Lifecycle Support Services Subtotal	

YEAR 9 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 9 Lifecycle Support Services Subtotal	

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #6 – OPTIONAL LIFECYCLE SUPPORT (POST-WARRANTY) – PAGE 4**

COMPANY NAME: _____

OPTIONAL LIFECYCLE SUPPORT (Post-Warranty)

This form is for OPTIONAL Lifecycle Support services that may or may not choose to purchase in conjunction with the Base Proposal system. IT IS NOT OPTIONAL FOR THE PROPOSER -- ALL PRICES MUST BE INCLUDED.

Add title of each proposed service that extends warranty services out to a total period of 10 years (Warranty @ 3 years + Lifecycle Support @ 7 years = 10 Years

YEAR 10 LIFECYCLE SUPPORT SERVICES

Description	Services Price
<i>List each service separately (e.g. on-site response, tech support, depot, etc.)</i>	
Year 10 Lifecycle Support Services Subtotal	
LIFECYCLE SUPPORT SERVICES GRAND TOTAL	

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #7 – SYSTEM OPTIONAL ITEMS – PAGE 1**

COMPANY NAME: _____

SYSTEM OPTIONAL ITEMS

These items and services may be considered for purchase by the County

OPTIONAL OVER THE AIR REKEYING (OTAR)

Include any items required for an Over the Air Rekeying (OTAR) solution. This may include any required hardware, software, license and services required to provide solution. List each item separately and include associated pricing

Description	List Price	Fixed Discount % Off of List Price	Discounted Price
Total			

OPTIONAL SMARTPHONE/BROADBAND DEVICE INTEGRATION

Include any items required for Smartphone/Broadband device integration solution. This may include any required hardware, software, license and services required to provide solution. List each item separately and include associated pricing

Description	List Price	Fixed Discount % Off of List Price	Discounted Price
Total			

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #7 – SYSTEM OPTIONAL ITEMS – PAGE 2**

COMPANY NAME: _____

SYSTEM OPTIONAL ITEMS

These items and services may be considered for purchase by the County

OPTIONAL UNIT LOCATION (GPS) INTERFACE

Include any items required for unit location (GPS) interface. This may include any required hardware, software, license and services required to provide solution. List each item separately and include associated pricing

Description	List Price	Fixed Discount % Off of List Price	Discounted Price
hardware/software/licensing			
GPS Terminal in Dispatch Center			
Integration with CAD			
Other			
Total			

OPTIONAL VEHICULAR EXTENDER

Include pricing for vehicular extenders below.

Description	List Price	Fixed Discount % Off of List Price	Discounted Price
P25 Vehicular Extender			
Installation services			
Training (Train-the-trainer single session)			
Other			
Total			

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #7 – SYSTEM OPTIONAL ITEMS – PAGE 3**

COMPANY NAME: _____

SYSTEM OPTIONAL ITEMS

These items and services may be considered for purchase by the County

OPTIONAL SUBSCRIBER DEVICES

Include pricing for the subscriber devices listed below.

Description	List Price	Fixed Discount % Off of List Price	Discounted Price
P25 Multiband Portable Radio			
P25 Phase 1 and Phase 2 operation			
AES Encryption			
Multikey Operation			
Over the Air Rekey (OTAR)			
GPS/AVL Services			
Charger			
Spare Battery			
Other			
P25 Multiband Portable Radio Total			
P25 Multiband Mobile Radio			
P25 Phase 1 and Phase 2 operation			
AES Encryption			
Multikey Operation			
Over the Air Rekey (OTAR)			
GPS/AVL Services			
Ext Spkr, Mic, antenna			
Installation			
Other			
P25 Multiband Mobile Radio Total			

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S PRICE PROPOSAL FORM #7 – SYSTEM OPTIONAL ITEMS – PAGE 4**

COMPANY NAME: _____

- All costs incurred by the Proposer must be included in the Price of Project for the total scope of work as listed in this RFP.
- Proposer to provide all materials, labor and equipment needed to complete the Scope of Work.
- Non attendance of the pre-proposal meeting nor acknowledgement of any Addenda does not alter the effectiveness of the pricing submitted.

Authorized Signature

Title

Print Name

Date

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BID BOND
(Turn this form in with the bond)

STATE OF GEORGIA
COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENT, that we, _____

_____, as Principal, and

_____, as Surety, are held and firmly

bound unto Dawson County, Georgia in the sum of _____

Dollars(\$_____) lawful money of the United states, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assign, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the County a Proposal for:

RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM

NOW THEREFORE, the conditions of this obligation are such that if the Bid be accepted, the Principal shall, within fifteen days (15) days after receipt of conformed Contract Documents, execute a contract in accordance with the Bid upon the terms, conditions and prices set forth therein, and in the form and manner required by the County and executed a sufficient and satisfactory Performance Bond and Payment bond payable to the County, each in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to the County, then this obligation shall be void; otherwise, it shall be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all to the foregoing requirements within the time specified above, immediately pay to the aforesaid County, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

This bond is given pursuant to and in accordance with the provisions of Section 23-1705 et seq of the Code of Georgia, as amended by the Act approved February 27, 1956, and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted and these are hereby made a part hereof to the same extent as if set out herein in full.



IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 20_____.

PRINCIPAL: _____

Signed and sealed in the presence of:

By: _____

Title: _____
(Seal)

1. _____

2. _____

SURETY: _____

Signed and sealed in the presence of:

By: _____

Title: _____
(Seal)

1. _____

2. _____

THIS DOCUMENT MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PRICE PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S REFERENCE FORM**

All references must be from customers for whom your company has completed work similar to the specifications of this bid. Attach additional page if necessary.

References for: _____
(Company Name)

1. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

2. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

3. Company _____
Street Address _____
City, State & Zip _____
Contact Person Name _____ Title _____
Phone _____ FAX _____ Email _____
Describe Scope of Work and dates of project/service: _____

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
EXECUTION OF PROPOSAL**

DATE: _____

The potential CONTRACTOR certifies the following by placing an "X" in all blank spaces:

- ___ That this proposal was signed by an authorized representative of the firm.
- ___ That the potential CONTRACTOR has determined the cost and availability of all materials and supplies associated with performing the services outlined herein.
- ___ That all labor costs associated with this project have been determined, including all direct and indirect costs.
- ___ That the potential CONTRACTOR agrees to the conditions as set forth in this Request for Proposal with no exceptions.

Therefore, in compliance with the foregoing **Request for Proposal**, and subject to all terms and conditions thereof, the undersigned offers and agrees, if this proposal is accepted within sixty (60) days from the date of the opening, to furnish the services for the prices quoted within the timeframe required.

Business Name

Authorized Signature

Date

Typed Name & Title

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
DRUG FREE WORKPLACE**

I hereby certify that I am a principle and duly authorized representative of:

Whose address is:

And it is also that:

1. The provisions of Section § 50.24.1 through § 50.24.6 of the Official Code of Georgia Annotated, relating to the "Drug Free Workplace Act" have been complied with in full; and,
2. A drug free workplace will be provided for the CONTRACTOR'S employees during the performance of the contract; and,
3. Each Sub-contractor hired by the CONTRACTOR shall be required to ensure that the Sub-contractor's employees are provided a drug free workplace. The CONTRACTOR shall secure from that Sub-contractor the following written certification: "As part of the subcontracting agreement with

_____;

_____ certifies to the CONTRACTOR that a drug free workplace will be provided for the Sub-contractor's employees during the performance of this contract pursuant to paragraph (7) of subsection (b) of the Official Code of Georgia Annotated Section § 50.24.3"; and,

4. It is certified that the undersigned will not engage in unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

Date

Signature

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
ADDENDA ACKNOWLEDGEMENT**

The proposer has examined and carefully studied the Request for Proposal and the following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. _____

Addendum No _____

Addendum No. _____

Addendum No. _____

Authorized Representative (Signature)

Date

Authorized Representative/Title
(Print or Type)

Proposers must acknowledge any issued addenda. Proposals which fail to acknowledge the proposer's receipt of any addendum will result in the rejection of the offer if the addendum contained information which substantively changes the Owner's requirements.

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**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
PROPOSER'S CERTIFICATION AND STATEMENT OF NON-COLLUSION**

I _____ certify that this proposal is made without prior understanding, agreement or connection with any corporation, firm or person submitting a proposal for the same services and is in all respects fair and without collusion or fraud. I understand that collusive bidding is a violation of state and Federal law and can result in fines, prison sentences and civil damages awards.

I certify that this proposal has been prepared independently and the price submitted will not be disclosed to another person.

I certify that there has been no contact or communication by the proposer or the proposer's associates with any County staff, or elected officials since the date this solicitation #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM was issued except: 1) through the Purchasing Department, 2) at the Pre-Proposal Conference (if applicable) or 3) as provided by existing work agreement(s). **The County reserves the right to reject the proposal submitted by any proposer violating this provision.**

I agree to abide by all conditions of this proposal and certify that I am authorized to sign this proposal.

COMPANY NAME: _____

Authorized Representative (Signature)

Date

Authorized Representative/Title
(Print or Type)

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Georgia Security & Immigration Compliance (GSIC) Act Affidavit

As per the Georgia Senate Bill 529 and Senate Bill 447, the Georgia Department of Labor has promulgated new rules for the implementation of Section 2. O.C.G.A. §13-10-91 and Chapter 300-10-01-.02 state that no Georgia Public Employer shall enter into a contract for *the physical performance of services within the State of Georgia* unless the CONTRACTOR registers and participates in a federal work authorization program to verify the work eligibility information of all of its new employees.

The Employment Eligibility Verification “E-Verify” site operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security is the electronic federal work authorization program to be utilized for these purposes.

The website is <https://e-verify.uscis.gov/enroll/>

By executing the attached CONTRACTOR Affidavit, CONTRACTOR verifies its compliance with O.C.G.A. §13-10-91 stating affirmatively that the individual, firm or corporation which is contracting with the Dawson County Board of Commissioners has registered and is participating in this federal work authorization program in accordance with the applicability provisions and deadlines established in this Statute.

CONTRACTOR further agrees that should it employ or contract with any Sub-contractor(s) for the physical performance of services pursuant to the contract with the Dawson County Board of Commissioners, CONTRACTOR will secure from the Sub-contractor(s) verification of compliance with O.C.G.A. §13-10-91 on a Sub-contractor Affidavit and shall provide a copy of each such verification to the Dawson County Board of Commissioners at the time the Sub-contractor(s) is retained to perform such services.

PLEASE COMPLETE THE ATTACHED AFFIDAVIT AND RETURN IT TO:

Melissa Hawk
Dawson County Purchasing Manager
25 Justice Way, Suite 2223
Dawsonville, GA 30534

Fax: (706) 531-2728
Email: mhawk@dawsoncounty.org



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

CONTRACTOR'S Name:	
County Solicitation/ Contract No.:	

CONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned CONTRACTOR verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the CONTRACTOR identified above has registered with and is participating in a federal work authorization program*, in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any Sub-contractor(s) in connection with the physical performance of services pursuant to this contract with the County, CONTRACTOR will secure from such Sub-contractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the attached Sub-contractor Affidavit. CONTRACTOR further agrees to maintain records of such compliance and provide a copy of each such verification to the County at the time the Sub-contractor(s) is retained to perform such service.

EEV / E-Verify Number

BY: Authorized Officer or Agent
(CONTRACTOR Name)

Date

Title of Authorized Officer or Agent of CONTRACTOR

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS
THE _____ DAY OF _____ 20____

[NOTARY SEAL]

Notary Public

My Commission Expires:

*any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

CONTRACTOR's Name:	
County Solicitation/ Contract No.:	

ADDITIONAL INSTRUCTIONS TO CONTRACTOR: Identify all Sub-contractors used to perform under the county contract. In addition, you must attach a signed and notarized affidavit (third page of this form) from each of the Sub-contractors listed below. The CONTRACTOR is responsible for providing a signed and notarized affidavit to the County within five (5) days of the addition of any new Sub-contractor used to perform under the identified County contract.

CONTRACTOR's Name:	
Sub-contractors:	



**IMMIGRATION AND SECURITY FORM
(GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT)**

CONTRACTOR's Name:	
Sub-contractor's (Your) Name:	
County Solicitation/ Contract No.:	

SUB-CONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned Sub-contractor verifies its compliance with O.C.G.A. §13-10-91, stating affirmatively that the Sub-contractor which is engaged in the physical performance of services under a contract with the CONTRACTOR identified above on behalf of the County identified above has registered with and is participating in a federal work authorization program*, in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

EEV / E-Verify Number

BY: Authorized Officer or Agent
(Sub-contractor Name)

Date

Title of Authorized Officer or Agent of CONTRACTOR

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS
THE _____ DAY OF _____ 20__

[NOTARY SEAL]

Notary Public

My Commission Expires:
*any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
EQUAL EMPLOYMENT OPPORTUNITY (EEO) PRACTICE**

EEO Plan: The successful Proposer will develop and implement an EEO policy that, as a minimum, will recruit, hire, train, and promote, at all levels, without regard to race, color, religion, national origin, sex, or age, except where sex or age is a bona fide occupational qualification.

EEO For Veterans/Handicapped: The successful Proposer will also provide equal employment opportunities for qualified disabled veterans, handicapped persons and veterans of the Vietnam Era.

EEO For Successful Proposer Programs: The successful Proposer, will ensure equal employment opportunity applies to all terms and conditions of employment, personnel actions, and successful Proposer-sponsored programs. Every effort shall be made to ensure that employment decisions, programs and personnel actions are non-discriminatory. That these decisions are administered on the basis of an evaluation of an employee's eligibility, performance, ability, skill and experience.

EEO Acquisitions: The successful Proposer will develop and implement a policy that will give equal opportunity to the purchase of various goods and services from small businesses and minority-owned businesses.

Does the Proposer have the above EEO policy in place?	Y	N

If the answer to the above is no, will the Proposer have such a policy in place prior to commencing work on this project?	Y	N

Statement of Assurance: The Proposer herein assures the County that it is in compliance with Title VI & VII of the 1964 Civil Rights Act, as amended, in that it does not on the grounds of race, color, national origin, sex, age, handicap, or veteran status, discriminate in any form or manner against employees or employers or applicants for employment and is in full compliance A.D.A.

Firm's Name

Authorized Signature

Date

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



**RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM
LEGAL AND CHARACTER QUALIFICATIONS**

Convictions: Has the Proposer (including parent corporation, if applicable) or any principal ever been convicted in a criminal proceeding (felonies or misdemeanors) in which any of the following offenses were charged?

		Y	N
a	Fraud		
b	Embezzlement		
c	Tax Evasion		
d	Bribery		
e	Extortion		
f	Jury Tampering		
g	Anti-Trust Violations		
h	Obstruction of justice (or any other misconduct affecting public or judicial officers'		
i	False/misleading advertising		
j	Perjury		
k	Conspiracy to commit any of the foregoing offenses		

Civil Proceedings: Has the Proposer or any principal ever been a party, or is now a party, to civil proceeding in which it was held liable for any of the following?

		Y	N
a	Unfair/anti-competitive business practices		
b	Consumer fraud/misrepresentation		
c	Violations of securities laws (state and federal)		
d	False/misleading advertising		
e	Violation of local government ordinance		

License Revocation:

		Y	N
	Has the proposer or any principal ever had a business license revoked, suspended, or the renewal thereof denied, or is a party to such a proceeding that may result in same?		

Responses: If "yes" is the response to any of the foregoing, provide Information such as date, court, sentence, fine, location, and all other specifics for each "yes" response.

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Principals: The full names and addresses of persons or parties interested in the foregoing bid, as principals, are as follows:

NAME

ADDRESS

References: The Bidder lists below work he has done of similar nature as this solicitation, as references that will afford the County opportunity to judge as to experience, skill, business standing, and financial ability.

**CONTACT
PERSON**

TITLE

**PHONE
NUMBER/EMAIL**

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR PROPOSAL



Dawson County Board of Commissioners
“VOLUNTARY” Title VI Statistical Data Form

Used For Government Monitoring Purposes

Dawson County Board of Commissioners is committed to broad-based competition on all proposals. We are gathering the following information for recordkeeping in compliance with federal regulations. All information will be considered strictly private and confidential and will be used for Title VI of the Civil Rights Act of 1964 purposes only. Your responses are strictly voluntary and will help in developing and monitoring nondiscrimination enforcement programs. This form is not part of the bid document and has no emphasis on decision of award, if you prefer not to reply that is acceptable. **Failure to complete this form will not affect your chances of award.** Your cooperation is appreciated.

Instruction for submission: DO NOT INCLUDE WITH BID PROPOSAL. Form should be submitted separately in a non-identifying envelope addressed to the Dawson County Purchasing Department, 25 Justice Way, Suite 2223, Dawsonville, GA 30534. Please write in bid name and number for project tracking purposes.

BID NAME & BID #415-22 DESIGN-BUILD SERVICES FOR THE VETERANS MEMORIAL PARK POOL HOUSE

Please place an “X” on the line that apply

Owner Gender: Male Female
Owner Race/Ethnicity: White/Caucasian Hispanic or Latino
 Black or African American American Indian or Alaska Native
 Native Hawaiian or Asian
 Other Pacific Islander Two or More Races

Disability: Any person who (1) has a physical or mental impairment that substantially limits one or more major life activities (2) has a record of such impairment; or (3) is regarded as having such impairment.

Yes No

Minority Owned Business: Yes No

Disadvantaged Business Enterprise (DBE) Company? Yes No

Number of Employees: _____

Staff Race/Ethnicity Make-up: White/Caucasian Hispanic or Latino
 Black or African American American Indian or Alaska Native
 Native Hawaiian or Asian
 Other Pacific Islander Two or More Races

Dawson County Government is committed to serve the public efficiently, preserve our heritage, safeguard the environment, protect citizens and improve the quality of life.



Dawson County Board of Commissioners

Local Small Business Initiative

Purpose & Scope:

Giving preference to local suppliers, even if it means spending a little more, can actually benefit a county's finances. Dollars spent locally generate additional economic activity even beyond the value of the initial contract as the local supplier in turn sources goods and services locally. Each additional dollar that circulates locally boosts economic activity, employment, and ultimately tax revenue. A study in Arizona found that using local independent suppliers for state contracts results in three times the economic benefit of bids fulfilled through national chains.

Local Small Business Initiative (LSBI) is a Dawson County program designed to promote opportunities to Local Small Businesses located in Dawson County.

The **LSBI** program is designed to return as much taxpayer money to the local economy, in a relatively short time span, as possible while at the same time foster inclusiveness with the County's procurement activities and a goal to provide more opportunities for Dawson County businesses.

Definition of Local Small Business:

- Local Small Business shall mean a business which has its principal office located in and having a street address within Dawson County for at least six months immediately prior to the issuance of the quote/bid/proposal. Post Office boxes (to include mailing/shipping center addresses) are not eligible and shall not be used for the purpose of establishing a physical address.
- Must hold a valid business license required by the County and have no outstanding or unresolved fees, fines or penalties due to Dawson County.
- Not have more than twenty-five (25) employees, and of which at least 33% of those employees have their primary residence in Dawson County, or, if the business has no employees, the business shall be at least fifty-one (51%) percent owned by one or more persons whose primary residence in Dawson County.
- Have a banking relationship with a bank located in Dawson County.
- Average annual gross receipts of five million dollars (\$5,000,000.00) or less over the previous three years.
- Must certify under oath to the above criteria upon submission for any bid, solicitation, or proposal to Dawson County.

The LSBI Policy will not be applicable for the following types of purchases, bids, or solicitations:

- Goods or services provided under a cooperative purchasing agreement or inter-local agreement;
- Purchases or contracts which are funded in whole or part by a governmental entity and the laws, regulations, or policies governing such funding prohibit application of preference;



- Purchases made or contracts let under emergency or non-competitive situations or for legal services;
- Projects over \$100,000.00.

Affidavit:

The County will accept an affidavit that a business meets the County's standards to be considered a Local Small Business. The County, in its sole discretion, may request additional information from the business to support its claim of being a Local Small Business. The Purchasing Department will be required to review the affidavit and request additional information as necessary to ensure the LSBI criteria are satisfied. The County will notify a business of acceptance of LSBI certification.

How Incentive Works:

Under any applicable solicitation or bid, vendors desiring to receive local preference under the LSBI Policy will be required to affirmatively demonstrate via affidavit that they satisfy all pertinent requirements. Any vendor who fails to submit the required affidavit shall be automatically excluded from LSBI consideration. Vendors shall submit the affidavit with each solicitation or bid proposal. The affidavit contemplated under this Policy is valid only for the submitted solicitation or bid, and must be reaffirmed and resubmitted for each subsequent solicitation of bid.

For any solicitation that is under \$100,000.00 the Local Small Business (as demonstrated via affidavit) that submits a responsive, responsible price, a local preference credit of 3%.

Waiver:

The application of local preference to a particular purchase, contract, bid, solicitation or category of contracts may be waived by the Dawson County Board of County Commissioners in its sole discretion. The promulgation of this Policy is not intended nor should it be construed as created a right or property interest in local preference or in the local preference credit.



**DAWSON COUNTY BOARD OF COMMISSIONERS
LOCAL SMALL BUSINESS
AFFIDAVIT OF ELIGIBILITY**

Complete form and submit with your bid. Incomplete forms may be rejected.

1. Legal Name of Firm _____
2. Mailing Address: _____ Physical Address (if different) _____

3. Year business was established in Dawson County: _____
4. Business License Number issued by Dawson County: _____
5. Number of Employees: _____
6. Average annual gross receipts for past three years: _____
7. Business Type (circle one): Corporation, Partnership, Sole Proprietorship
8. Does your business have more than one location in Dawson County? Yes No
If yes, specify the location(s): _____
Is your businesses' principal base of operations in Dawson County? Yes No
Does your business have any locations outside Dawson County? Yes No
9. If yes, please specify the location(s): _____

CERTIFICATION: I hereby certify under penalty of perjury that the information which I have provided on this form is true and correct, that I am authorized to sign on behalf of the business set out above, and if requested by the County will provide, within 10 days of notice, the necessary documents to substantiate the information on this form.

Attest: _____

Sworn to and subscribed before me this

_____ day of _____, 20____

Notary Public

Commission Expires: _____

(SEAL)

Authorized Signature

Print Name

Title

CONTRACT NUMBER: 415-22

SAMPLE AGREEMENT BETWEEN OWNER AND CONTRACTOR

RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM

This Agreement is made by and between Dawson County, a political subdivision of the State of Georgia, entered into on _____, 2018, (hereinafter referred to as the "Owner") and _____, (hereinafter referred to as the "Contractor") under seal for all work called for in the Dawson County **Request for Proposals #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM** for furnishing materials, labor, and equipment necessary for job description as listed in the specifications and proposed by the Contractor.

In consideration of the mutual promises, covenants, and payment set forth herein and for other good and valuable consideration, the County and Consultant agree to perform in accord with the terms of this Agreement.

ARTICLE 1

THE CONTRACT AND THE CONTRACT DOCUMENTS

1.1 The Contract

1.1.1 The Contract between the Owner and the Contractor, consists of the Contract Documents and shall be effective on the date this Agreement is executed by the last party to execute it. If any items in the Contract conflict with the law of the State of Georgia law, law of the State of Georgia shall prevail.

1.2 The Contract Documents

1.2.1 The Contract Documents consist of this Document, the Request for Proposal **#415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM** Xand all addenda, the Contractor's Bid Schedule, all Change Orders and Field Orders issued hereafter, and any other amendments executed by the parties hereafter. Documents not enumerated in this paragraph are not Contract Documents and do not form part of this Contract.

1.3 Entire Agreement

1.3.1 This Contract, together with the Contractor's payment bond for the Project, constitutes the entire and exclusive agreement between the Owner and the Contractor with reference to the Project. Specifically, but without limitation, this Contract supersedes all prior written or oral communications, representations and negotiations, if any, between the Owner and Contractor.

1.4 No Privity with Others

1.4.1 Nothing contained in this Contract shall create, or be interpreted to create, privity or any other contractual agreement between the Owner and any person or entity other than the Contractor.

1.5 Intent and Interpretation

1.5.1 The intent of this Contract is to require complete, correct and timely execution of the Work. Any work that may be required implied or inferred by the Contract Documents, or any one or more of them, as necessary to produce the intended result shall be provided by the Contractor for the Contract Price.

1.5.2 This Contract is intended to be an integral whole and shall be interpreted as internally consistent. What is required by any one Contract Document shall be considered as required by the Contract.

1.6 Ownership of Contract Documents

1.6.1 The Contract Documents, and each of them, shall remain the property of the Owner. The Contractor shall have the right to keep one record set of the Contract Documents upon completion of the Project; provided, however, that in no event shall Contractor use, or permit to be used, any or all of such Contract Documents on other projects without the Owner's prior written authorization.

1.7 Unobligated Funds

1.7.1 This Agreement shall terminate absolutely and without further obligation at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under this Agreement.

ARTICLE II

CONTRACT DEFINITIONS

The following terms shall have the following meanings whether in the singular or in the plural:

- 2.1 Agreement Execution.** The Agreement Execution means the date both parties execute this Agreement.
- 2.2 Contract.** The word contract has the identical meaning as the word Agreement.
- 2.3 Contract Documents.** The contract documents consist of this Agreement between the County and the Consultant, the request for proposals, addenda issued before the execution of this Agreement, the Consultant's statement of proposal and required response forms, change orders and modifications issued after execution of this Agreement, a written amendment to this Agreement signed by both parties, and a supplemental Agreement in the form of change work order signed by both parties.
- 2.4 Contract Price.** The contract price means the total monies, adjusted in accordance with any provision set forth herein, payable to the Consultant pursuant to a change work order or a supplemental Agreement.
- 2.5 Contract Time.** The contract time means the period of time stated herein for completion of work.
- 2.6 Cost of Work.** The cost of work means the fixed price or estimated cost necessary to perform the work described in the scope of services or any change work order.
- 2.7 County.** The County means Dawson County, Georgia, a political subdivision of the State of Georgia.
- 2.8 Deliverables.** Deliverables means all reports, drawings, plans, designs, and other documents prepared by the Consultant identified in the scope of services as deliverable to the County.
- 2.9 Drawings.** The drawings, if any, shall be the graphic and pictorial portions of the contract documents whether completed or partially completed.
- 2.10 Liaison.** Liaison means the representative of the County who shall act as a liaison between the County and the Consultant for all matters pertaining to this Agreement including review of Consultant's plans and work.
- 2.11 Multi-year Contract.** Multi-year contract means a contract for the purchase of supplies or services for more than one (1), but not more than five (5), fiscal years. A multi-year contract may provide that performance under the contract during the second and subsequent years of the contract is contingent upon the appropriation of funds, and (if it does so provide) may provide for a cancellation payment to be made to the Consultant if appropriations are not made.
- 2.12 Project.** Project means a task or set of tasks assigned pursuant to the Scope of Work and/or a Change Work Order.
- 2.13 Specifications.** Specifications mean the written technical provisions including all appendices thereto, both general and specific, which form part of the contract documents.
- 2.14 Sub-consultant.** A sub-consultant means any person, firm, partnership, joint venture, company, corporation or entity with an Agreement with the Consultant or Consultant's sub-consultants to provide part of the work required by a change work order.
- 2.15 Change Work Order.** A Change Work Order shall mean a written order to the Consultant executed by the County, issued after execution of this Contract, authorizing and directing a change in the work or an adjustment in the Contract Price or the Contract Time. The Contract Price and the Contract Time may be changed only by Change Order.
- 2.16 Work.** The work means any and all obligations, duties and responsibilities, including furnishing equipment, consulting, design, labor, and any other service or thing necessary to the successful completion of the project assigned to or undertaken by the Consultant under this Agreement or change work order.
- 2.17 Term of Agreement.** Term of Agreement means a fixed duration that the contract will be in effect. The signing parties are obligated to adhere to the terms and conditions within the contract until the expiration, or end date, of the contract or if the contract is terminated as specified herein.

ARTICLE III THE WORK

3.1 Scope of Services

3.1.1 The Contractor shall perform all of the Work required, implied or reasonably inferable from this Contract, all in accordance with plans, specifications, amendments to the IFB document, and drawings of the Project and in accordance with the bid and specifications as outlined in Invitation for Bid #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM.

3.1.2 The term "Work" shall mean whatever is done by or required of the Contractor to perform and complete its duties under this Contract, including the following: construction of the whole or a designated portion of the Project; furnishing of any required bonds and insurance; provision of required certifications and documentation of associated testing results; provision or furnishing of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, permits and licenses required of the Contractor, fuel, heat, light, cooling and all other utilities as required by this Contract. The work to be performed by the Contractor is generally described in Exhibit "A":

ARTICLE IV CONTRACT TIME

4.1 Time and Liquidated Damages

4.1.1 The Contractor shall complete the turn-key project within a 120-calendar day period after notice to proceed.

4.1.2 The Contractor shall pay the Owner the sum of one thousand dollars (\$1,000.00) per day for each and every calendar day of delay not excused by Section 86 as defined in the IFB documents in achieving completion beyond the time set forth herein for completion of the work. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the Owner, estimated at or before the time of executing this Contract. When the Owner reasonably believes that completion will be inexcusably delayed, the Owner shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the Owner to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving completion, or any part there, for which the Owner has withheld payment, the Owner shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages.

4.2 Substantial Completion

4.2.1. "Substantial Completion" shall mean that state in the progression of the Work when the Work is sufficiently complete in accordance with this Contract that the Owner can enjoy beneficial use or occupancy of the work and can utilize the work for its intended purpose.

4.3 Time is of the Essence

4.3.1 All limitations of time set forth in the Contract Documents are of the essence of this Contract.

ARTICLE V CONTRACT PRICE

5.1 The Contract Price

5.1.1 The Owner shall pay, and the Contractor shall accept, as full and complete payment for all of the work required in the Bid Documents, the fixed sum as set forth in Exhibit "B" for furnishing materials, labor, and equipment necessary for the completion of Project #415-22 **DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM UPGRADE**. The sum set forth in this Paragraph 4.1.1 shall constitute the Contract Price which shall not be modified except by Change Order as provided in this Contract. Actual quantities used for the subject work will be verified and paid using unit pricing as detailed in Request for Proposal Document, unless stipulated as "lump sum".

5.1.2 The Contractor agrees that the Contractor shall not be compensated for customary overhead items that are not referenced within "Exhibit B". The parties agree that the Owner shall review and approve any proposed billing rate adjustments of the Contractor before any such billing rate adjustments shall be implemented.

ARTICLE VI PAYMENT OF THE CONTRACTOR

6.1 Payment Procedure

6.1.1 Based upon the Contractor's applications and certificates for payment issued to the Owner, Owner shall make progress payments to the Contractor to be applied toward the Contract Price.

6.1.2 On or before the tenth day of each month after commencement of the work, the Contractor shall submit an Application for Payment for the period ending the last day of the prior month to the Owner in such form and manner, and with such supporting data and content, as the Owner may reasonably require. Therein, the Contractor may request payment for ninety percent (90%) of that portion of the Contract Price properly allocable to Contract requirements properly provided, i.e., labor, materials and equipment properly incorporated in the work plus ninety percent (90%) of that portion of the Contract Price properly allocable to materials or equipment incorporated in the work, less the total amount of previous payments received from the Owner for such labor, materials, and equipment. Such Application for Payment shall be signed by the Contractor and shall constitute the Contractor's representation that the work has been properly performed in full accordance with this Contract. When Owner determines amounts requested to be properly owing to the Contractor, the Owner shall make partial payments on account of the Contract Price to the Contractor on a day to be determined each month in which application for payment is made.

6.1.3 The Contractor warrants that upon submittal of an Application for Payment, all work for which payments have been received from the Owner shall be free and clear of liens, claims, security interest or other encumbrances in favor of the Contractor or any other person or entity whatsoever. The Contractor shall promptly pay each Subcontractor out of the amount paid to the Contractor on account of such Subcontractor's work, the amount to which such Subcontractor is entitled. In the event the Owner becomes informed that the Contractor has not paid a Subcontractor as herein provided, the Owner shall have the right, but not the duty, to issue future checks in payment to the Contractor of amounts otherwise due hereunder naming the Contractor and such Subcontractor as joint payees.

6.1.4 No progress payment, nor any use or occupancy of the Project by the Owner, shall be interpreted to constitute an acceptance of any work not in compliance with this Contract.

6.2 Withheld Payment

6.2.1 The Owner may decline to make payment, may withhold funds, and, if necessary, may demand the return of some or all of the amounts previously paid to the Contractor to protect the Owner from loss because of:

- (a) Defective work not remedied by the Contractor;
- (b) Claims of third parties against the Owner;
- (c) Failure by the Contractor to pay Subcontractors or others in a prompt and proper fashion;
- (d) Evidence that the balance of the work cannot be completed in accordance with the Contract for the unpaid balance of the Contract Price;
- (e) Evidence that the work will not be completed in the time required for substantial or final completion;
- (f) Persistent failure to carry out the work in accordance with the Contract; or
- (g) Damage to the Owner or a third party to whom the Owner is, or may be, liable

6.3 Completion and Final Payment

6.3.1 When all of the work is finally complete and the Contractor is ready for a final inspection, Contractor shall notify the Owner in writing. Thereupon, the Owner will make final inspection of the work and, if the work is complete in compliance with this Contract and this Contract has been fully performed, then the Contractor will promptly issue a final Application for Payment certifying to the Owner that the Project is complete and the Contractor is entitled to the remainder of the unpaid Contract Price, less any amount withheld pursuant to this Contract. Contractor will return Exhibit "C" of the contract to the Purchasing Manager at 25 Justice Way, Suite 2223, Dawsonville, Georgia 30534 at time of final Application for Payment.

6.3.2 The Contractor shall not be entitled to final payment unless and until the Contractor submits to the Purchasing Department an affidavit that all payrolls, invoices for materials and equipment, and other liabilities

connected with the work for which the Owner or the Owner's property might be responsible, have been fully paid or otherwise satisfied; releases and waivers of lien from all Subcontractors of the Contractor and of any and all other parties required by the Project Manager or the Owner; and consent of the Surety to final payment. If any third party fails or refuses to provide a release of claim or waiver of lien as required by the Owner, the Contractor shall furnish a bond satisfactory to the Owner to discharge any such lien or indemnify the Owner from liability.

6.3.3 The Owner shall make final payment of all sums due the Contractor within thirty (30) days of the Project Manager's execution of a final Certificate for Payment.

6.3.4 Acceptance of final payment shall constitute a waiver of all claims against the Owner by the Contractor except for those claims previously made in writing against the Owner by the Contractor, pending at the time of final payment, and identified in writing by the contractor as unsettled at the time of its request for final payment, as attested to in Exhibit "C" of the contract.

6.3.5 Payment shall be made at the unit rates as set out in the Pricing Schedule submitted by the Contractor for the Work for the quantities actually installed into the Work except as follows:

- (a) There are no exceptions.

ARTICLE VII THE OWNER

7.1 Information, Services and Things Required From Owner

7.1.1 The Owner shall furnish to the Contractor, at the time of executing this Contract, any and all written and tangible material in its possession that are necessary to facilitate the completion of this project in a timely manner, if any.

7.1.2 Excluding permits and fees normally the responsibility of the Contractor, the Owner shall obtain all approvals, easements, and the like required for construction.

7.1.3 The Owner shall furnish the Contractor, free of charge, three copies of the Contract Documents for execution of the Work.

7.2 Right to Stop Work

7.2.1 If the Contractor fails or refuses to perform the work in accordance with this Contract, the Owner may order the Contractor to stop the work, or any described portion thereof, until the cause for stoppage has been corrected, no longer exists, or the Owner orders that work be resumed. In such event, the Contractor shall immediately obey such order. The stop work order referenced herein must be in writing and must specify in detail the alleged failure of the Contractor in accordance with the contract documents.

7.3 Owner's Right to Perform Work

7.3.1 If the Contractor's work is stopped by the Owner under Paragraph 7.2 and the Contractor fails within seven (7) days of such stoppage to provide adequate assurance to the Owner that the cause of such stoppage will be eliminated or corrected, then the Owner may, without prejudice to any other rights or remedies the Owner may have against the Contractor, proceed to carry out the subject work. In such a situation, an appropriate Change Order shall be issued deducting from the Contract Price the cost of correcting the subject deficiencies, plus compensation for the Project Manager's additional services and expenses necessitated thereby, if any. If the unpaid portion of the Contract Price is insufficient to cover the amount due the Owner, then the Contractor shall pay the difference to the Owner.

ARTICLE VIII THE CONTRACTOR

8.1 The Contractor shall perform the work strictly in accordance with this Contract.

8.2 The Contractor shall supervise and direct the work using the Contractor's best skill, effort and attention. The Contractor shall be responsible to the Owner for any and all acts or omissions of the Contractor, its employees, subcontractors, and others engaged in the work on behalf of the Contractor.

8.3 Warranty

8.3.1 The Contractor warrants to the Owner that all labor furnished to progress the work under this Contract will be competent to perform the tasks undertaken, that the product of such labor will yield only first-class results, that materials and equipment furnished will be of good quality and new unless otherwise permitted by this Contract, and that the work will be of good quality, free from faults and defects and in strict

conformance with this Contract. All work not conforming to these requirements may be considered defective. This project shall have a one (1) year warranty on workmanship, equipment and software.

8.4 The Contractor shall obtain and pay for all permits, fees and licenses necessary and ordinary for the work. The Contractor shall comply with all lawful requirements applicable to the work and shall give and maintain any and all notices required by applicable law pertaining to the work.

8.5 Supervision

8.5.1 The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Absent written instruction from the Contractor to the contrary, the superintendent shall be deemed the Contractor's authorized representative at the site and shall be authorized to receive and accept any and all communications from the Owner.

8.6 Cleaning the Site and the Project

8.6.1 The Contractor shall keep the site reasonably clean during performance of the work as stipulated in the IFB document. Upon final completion of the work, the Contractor shall clean the site and the Project and remove all waste, together with all of the Contractor's property.

8.7 Access to Work

8.7.1 The Owner and the Project Manager shall have access to the work at all times from commencement of the work through final completion. The Contractor shall take whatever steps necessary to provide access when requested.

8.8 Indemnity

8.8.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner from and against liability, claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from performance of the work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable.

8.8.2 In claims against any person or entity indemnified under this Paragraph 8.8 by an employee of the Contractor, a Subcontractor, any one directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph 8.8 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

**ARTICLE IV
CONTRACT ADMINISTRATION**

9.1 Administration

9.1.1 The Dawson County Project Manager shall be the Owner's representative from the effective date of this Contract until final payment has been made for work site operations. Any and all change orders must be submitted through the Dawson County Project Manager to the County Manager. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

9.1.2. The Owner and the Contractor shall communicate with each other in the first instance through the Project Manager for all site work.

9.1.3 The Owner's Representative shall be the initial interpreter of the requirements of the drawings and specifications and the judge of the performance by the Contractor.

9.1.4 The Owner's Representative shall have authority to reject work that is defective or does not conform to the requirements of this Contract.

9.1.5 The Owner's Representative will review the Contractor's Applications for Payment and will certify those amounts then due the Contractor as provided in this Contract.

9.1.6 The Owner's Representative, shall, upon request from the Contractor, conduct inspections to determine the date of final completion, will receive records, written warranties and related documents required

by this contract and will issue a final Certificate for Payment upon compliance with the requirements of this Contract.

9.2 Claims by the Contractor

9.2.1 All Contractor claims shall be initiated by written notice and claim to the Owner attention the Purchasing Department. Such written notice and claim must be furnished within seven (7) days after occurrence of the event or the first appearance of the condition giving rise to the claim.

9.2.2 Pending final resolution of any claim of the Contractor, the Contractor shall diligently proceed with performance of this Contract and the Owner shall continue to make payments to the Contractor in accordance with this Contract. The resolution of any claim under this paragraph 9.3 shall be reflected by a Change Order executed by the Owner and the Contractor.

9.2.3 *Claims for Concealed and Unknown Condition* - If concealed and unknown conditions are encountered in the performance of the Work (a) below the surface of the ground or (b) in an existing structure be at variance with the conditions indicated by this Contract or if unknown conditions of an unusual nature differing materially from those ordinarily encountered in the area and generally recognized as inherent in the Work of the character provided for in this contract be encountered, then the Contract Price shall be equitably adjusted by Change Order upon the written notice and claim by either party made within seven days after the first observance of the condition. As a condition precedent to the Owner having any liability to the Contractor for concealed or unknown conditions, the Contractor must give the Owner written notice of, and an opportunity to observe, the condition prior to disturbing it. The failure by the Contractor to make the written notice and claim as provided in this Subparagraph shall constitute a waiver by the Contractor of any claim arising out of or relating to such concealed or unknown condition.

9.2.4 Claims for Additional Costs

9.2.4.1 If the Contractor wishes to make a claim for an increase in the Contract Price, then as a condition precedent to any liability of the Owner, the Contractor shall give the Owner written notice of such claim within seven days after the occurrence of the event or the first appearance of the condition giving rise to such claim. Such notice shall be given by the Contractor before proceeding to execute any additional or changed Work. The failure by the Contractor to give such notice and to give such notice prior to executing the Work shall constitute a waiver of any claim for additional compensation.

9.2.4.2 In connection with any claim by the Contractor against the Owner for compensation in excess of the Contract Price, any liability of the Owner for the Contractor's costs shall be strictly limited to direct costs incurred by the Contractor and shall in no event include indirect costs or consequential damages of the Contractor. The Owner shall not be liable to the Contractor for claims of third parties, including Subcontractors, unless and until liability of the Owner has been established in a court of competent jurisdiction.

9.2.5 Claims for Additional Time

9.2.5.1 If the Contractor is delayed in progressing any task, which at the time of delay is then critical or which during the delay becomes critical, as the sole result of any act or neglect to act by the Owner or someone acting on the Owner's behalf or by changes ordered in the work, unusual delay in transportation, unusually adverse weather conditions not reasonably anticipated, fire or any causes beyond the Contractor's control, then the date for achieving completion of the work shall be extended upon the written notice and claim of the Contractor to the Owner's Representative for such reasonable time as the Owner's representative may determine. Any notice and claim for an extension of time by the Contractor shall be made not more than fifteen (15) days after the occurrence of the event or the first appearance of the condition giving rise to the claim and shall set forth in detail the Contractor's basis for requiring additional time in which to complete the Project.

9.2.6 Claims for Weather Delays

9.2.6.1 Claims for weather delays shall not be considered unless work is not feasible for more than one-half of a day due to weather conditions. Claims for weather delays shall not be considered for Sundays unless the Contractor consistently works on Sundays prior to the claim. Weather Days are to be turned in within four weeks of the occurrence.

ARTICLE X CHANGES IN THE WORK

10.1 Changes Permitted

10.1.1 Changes in the work within the general scope of this Contract consisting of additions, deletions, revisions, or any combination thereof may be ordered without invalidating this Contract by Change Order. Change Orders are to be processed through the Dawson County Project Manager with the County Manager's signature required as authorization. All Change Orders must be processed by the County Purchasing Manager on the issued Project Purchase Order for record.

10.1.2 Changes in the work shall be performed under applicable provisions of this Contract and the Contractor shall proceed promptly with such changes.

10.2 Change Order Defined

10.2.1 Change Order shall mean a written order to the Contractor executed by the Owner, issued after execution of this Contract, authorizing and directing a change in the work or an adjustment in the Contract Price or the Contract Time. The Contract Price and the Contract Time may be changed only by Change Order. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

10.3 Changes in the Contract Price

10.3.1 Any change in the Contract Price resulting from a Change Order shall be determined as follows: (a) by mutual agreement between the Owner and the Contractor as evidenced by (1) the change in the Contract Price being set forth in the Change Order, (2) such change in the contract Price, together with any conditions or requirements related thereto, being initialed by both parties and (3) the Contractor's execution of the Change Order, or (b) if no mutual agreement occurs between the Owner and the Contractor, then as provided in Subparagraph 10.3.2 below. Acceptance of the change order will be reflected on the project purchase order issued by the Purchasing Manager.

10.3.2 If no mutual agreement occurs between the Owner and the contractor as contemplated in Subparagraph 10.3.1 above, the change in the Contract Price, if any, shall then be determined by the Owner on the basis of the reasonable expenditures or savings of performing, deleting or revising the work attributable to the change, including, in the case of an increase or decrease in the Contract Price, a reasonable allowance for direct job site overhead and profit. In such case, the Contractor shall present, in such form and with such content as the Owner requires, an itemized accounting of such expenditures or savings, plus appropriate supporting data for inclusion in a Change Order.

10.3.3 If unit prices are provided in the Contract and if the quantities contemplated are so changed in a proposed Change Order that application of such unit prices to the quantities of Work proposed will cause substantial inequity to the Owner or to the Contractor, then the applicable unit prices shall be equitably adjusted.

10.4 Notice to Surety; Consent

10.4.1 The Contractor shall notify and obtain the consent and approval of the Contractor's surety with reference to all Change Orders if such notice, consent and approval are required by the Contractor's surety or by law. The Contractor's execution of the Change Order shall constitute the Contractor's warranty to the Owner that the surety has been notified of and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

ARTICLE XI

CONTRACT TERMINATION

11.1 Termination by the Contractor

11.1.1 If the work is stopped for a period of ninety (90) days by an order of any court or other public authority or as a result of an act of the Government, through no fault of the Contractor or any person or entity working directly or indirectly for the Contractor, the Contractor may, upon ten (10) days' written notice to the Owner, terminate performance under this contract and recover from the Owner payment for the actual reasonable expenditures of the Contractor for all work executed.

11.1.2 If the Owner shall persistently or repeatedly fail to perform any material obligation to the Contractor for a period of thirty (30) days after receiving written notice from the Contractor of its intent to terminate hereunder, then the Contractor may terminate performance under this Contract by written notice to the Owner. In such event, the Contractor shall be entitled to recover from the Owner as though the Owner had terminated the Contractor's performance under this Contract for convenience pursuant to Subparagraph 11.2.1.

11.2 Termination by the Owner

11.2.1 *for Convenience*

11.2.1.1 The Owner may for any reason whatsoever terminate performance under this Contract by the contractor for convenience. The Owner shall give written notice of such termination to the Contractor specifying when termination becomes effective.

11.2.1.2 The Contractor shall incur no further obligations in connection with the work and the Contractor shall stop work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The Owner may direct the Contractor to assign the Contractor's right, title and interest under terminated orders or subcontracts to the Owner or its designee.

11.2.1.3 The Contractor shall transfer title and deliver to the Owner such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has.

11.2.1.4

The Contractor shall submit a termination claim to the Owner specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the Owner. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, then the Owner shall pay the Contractor an amount derived in accordance with subparagraph (b) below.

- (a) The Owner and the Contractor may agree to the compensation, if any, due to the Contractor hereunder.
- (b) Absent agreement of the amount due to the contractor, the Owner shall pay the Contractor the following amounts:
 - i. Contract prices for labor, materials, equipment and other services accepted under this Contract;
 - ii. Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included, and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;
 - iii. Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph 11.2.1.2 of this Paragraph. These costs shall not include amounts paid in accordance with other provisions hereof;
 - iv. The total sum to be paid the Contractor under this Subparagraph 11.2.1 shall not exceed the total Contract Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

11.2.2 *for Cause*

11.2.2.1 If the Contractor persistently or repeatedly refuses or fails to prosecute the work in a timely manner, supply enough properly skilled workers, supervisory personnel or proper equipment or materials, or it fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a material provision of this Contract, then the Owner may by written notice to the Contractor, without prejudice to any other right or remedy, terminate the employment of the contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the work by whatever methods it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished.

11.2.2.2 If the unpaid balance of the Contract Price exceeds the cost of finishing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, then the Contractor shall pay the difference to the Owner. This obligation for payment shall survive the termination of the Contract.

11.2.2.3 In the event the employment of the Contractor is terminated by the Owner for cause pursuant to subparagraph 11.2.2 and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Subparagraph 11.2.1 and the provisions of Subparagraph 11.2.1 shall apply.

ARTICLE XII INSURANCE

12.1 Contractor's Insurance Requirements

12.1.1 The Contractor shall maintain in full force and effect at all times during the Contract period Comprehensive General Liability and Automobile Insurance in an amount equal to One Million (\$1,000,000.00) Dollars.

12.1.2 The Contractor shall provide to the Owner Certificates of Insurance naming the Owner as additional insured party under the policy or policies of all Insurance as required by Paragraphs 12.1.1 and 12.1.4.

12.1.3 The insurance policy or policies as aforesaid shall provide that thirty (30) days written notice be given to the Owner prior to cancellation thereof.

12.1.4 The Consultant shall maintain in full force and effect at all times during the Contract period Workers' Compensation Insurance as provided by Georgia law in such form as to protect Contractor and the County with the County being named as an additional insured for any claims for damages or bodily injury, including death and damage to property that may arise from acts or omissions of Contractor under this Contract.

12.1.5 Contractor agrees to protect, defend, indemnify and hold harmless the County, the County's commissioners, agents and employees from and against any liability, damage, claim, including attorney fees and expenses of litigation, suit, lien, and judgment for injuries to or death of any person or damage to property or other rights of any person caused by the Contractor, the Contractor's employees, servants, agents or subcontractors. The Contractor's obligation to protect, defend, indemnify, and hold harmless extends to any claim for the alleged infringement of any patent, trademark, copyright, or any actual or alleged unfair competition, disparagement of product or service, or other business tort or any actual or alleged violation of trade regulations arising out of the performance of Contractor's duties in accord with this Contract, as well as any other claim. The Contractor shall maintain worker's compensation and comprehensive general liability insurance in such form as to protect Contractor and the County with the County being named as an additional insured for any claims for damages or bodily injury, including death and damage to property that may arise from acts or omissions of Contractor under this Contract.

ARTICLE XIII MISCELLANEOUS

13.1 Governing Law

13.1.1 This Agreement is to be governed by the law of the State of Georgia and venue for any dispute shall be Dawson County, Georgia

13.2 Successors and Assigns

13.2.1 The Owner and Contractor bind themselves, their successors, assigns and legal representatives to the other party hereto and to successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in this Contract. The Contractor shall not assign this Contract without written consent of the Owner.

13.3 Surety Bonds

13.3.1 The Contractor shall furnish separate payment and performance bonds, Exhibits "D" and "E", to the Owner. Each bond shall set forth a penal sum in an amount not less than the contract Price. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Price is adjusted by Change Order executed by the Contractor, the penal sum of both the payment bond and the performance bond shall be deemed

increased by like amount. The payment and performance bonds furnished by the Contractor shall be in form suitable to the Owner and shall be executed by a surety, or sureties, reasonably suitable to the Owner.

13.4 Severability

13.4.1 The parties agree that each of the provisions included in this Agreement is separate, distinct and severable from the other and remaining provisions of this Agreement, and that the invalidity of any provision shall not affect the validity of any other provision of this Agreement.

13.5 Merger

13.5.1 The parties agree that the terms of this Agreement, include the entire Agreement between the parties and that no other representation either oral or written may be used to contradict the terms of this Agreement. If there is any conflict between the terms of the contract documents, the latter shall prevail and take precedence.

13.6 Confidential Information

13.6.1 While performing services for the Owner, the Contractor shall not disclose any confidential business information that may become known to the Contractor. Personnel acting on behalf of the Contractor shall be instructed to not remove any of the Owner's documents or materials and to not disclose any confidential information to any persons other than Owner personnel, unless written authorization from the Owner is provided.

13.6.2 All documents and materials prepared pursuant to the IFB and this Contract shall be the property of Dawson County. The Owner shall have the unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data, maps, or other materials prepared in accord with the terms of this Contract and Agreement.

13.7 Litigation and Arbitration

13.7.1 The Owner and the Contractor agree to resolve through negotiation, mediation or arbitration any disputes between the parties arising out of or relating to this Contract and Agreement. If the parties do not resolve the dispute through negotiation and do not agree to mediation, then arbitration shall be the exclusive and final method of resolving any disputes related to this agreement. Arbitration proceedings shall be in accord with O.C.G.A. § 9-9-1, the Georgia Arbitration Code. Venue for any litigation arising for arbitration shall be the Superior Court of Dawson County, Georgia. A demand for arbitration shall be made within a reasonable term after the claim, dispute or other matter in question occurs but, not later than one-hundred eighty (180) days after such claim, dispute or other matter.

13.8 Condition Precedent – Litigation

13.8.1 This Contract shall be governed by the Laws of the State of Georgia. The Consultant hereby agrees that as a condition precedent to the filing of any legal action against the Owner arising out of or related to this Agreement, the Consultant shall first provide the Owner thirty (30) days' written notice of its intent to file such action. Such notice shall include an identification of the anticipated parties to the action and a description of all anticipated claims and causes of action to be asserted.

13.9 Term of Agreement

13.9.1 The term of a Contract awarded as a result of the IFB shall be from the time the Proposal is awarded until delivery and acceptance of the work solicited by Dawson County.

13.10 Multi-year Contract

13.10.1 This Contract and Agreement shall not be eligible for a multi-year contract term.

13.10.2 This Contract shall terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the County under the terms of this Contract or any renewal.

13.11 Notices

13.11.1 Any notice to be given in accord with the terms hereof may be affected either by personal delivery, by registered or certified mail, postage prepaid with return receipt requested, or by recognized

overnight delivery service. This Agreement and any documents relating to it may be executed and transmitted to the parties listed below by electronic mail, which electronic mail shall be deemed to be, and utilized in all respects as, an original, wet-inked manually executed document when both parties have executed their part in blue ink. Notice shall be delivered as follows:

Owner:

Consultant:

Dawson County Board of Commissioner

Attn: Melissa Hawk

Attn:

25 Justice Way, Suite 2223

Dawsonville, GA 30534

Phone: 706-344-3500 x.42223

Email: mhawk@dawsoncounty.org

-Signature Page to Follow-

IN WITNESS WHEREOF, the Undersigned have set their hands and seals on the day and date appearing below the signatures of their authorized representatives.

**OWNER:
DAWSON COUNTY, GEORGIA**

CONTRACTOR:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Attest:

Attest:

By: _____

By: _____

Name: _____

Name: _____

Title: County Clerk

Title: _____

EXHIBIT "A"
SCOPE OF WORK

Recognizing the need to replace or upgrade the VHF system, the County worked with stakeholders to identify the needs and requirements for a system upgrade that would meet the County's needs for the next 10-15 years. The County intends to purchase and implement an integrated public safety wireless communication system that will provide first responders real-time operable and interoperable voice and low-speed data services for all users that support day-to-day, mutual aid, and task force operations. The integrated public safety wireless communication system shall consist of:

9. Six-channel, Project 25 (P25) trunking, Phase 2, 700 MHz simulcast radio system.
10. VHF analog overlay interoperability and paging channel.
11. Microwave backhaul and/or optical fiber network providing connectivity between the main dispatch, control, and radio sites.
12. Four-operator position dispatch console system, including backup RF control stations and logging recorder system.
13. Network Management System (NMS) capable of monitoring and controlling provided system and associated subsystems.
14. Subscriber radios (portable, mobile, and control station radios).
15. Site Upgrades, including, but not limited to, equipment shelters, radio towers and DC power systems.
16. Upgrade the County detention center's VHF bi-directional amplifier/distributed antenna system (BDA/DAS) to provide 700 MHz P25 coverage within the detention center.

The County is in the process of building of a new 9-1-1/Emergency Operations Center (EOC) which will also contain a new Dispatch Center/Public Safety Answering Point (PSAP). In the event the new P25 system is procured and implemented prior to the completion of the new 9-1-1/EOC building, the Contractor shall be responsible for relocating the new dispatch center equipment to the new EOC building upon its completion. There will be a separate line item for this work.

The microwave and/or optical fiber network shall be designed to include the dispatch center/PSAP at the new 9-1-1/EOC location. The current dispatch center location shall be provided with a temporary backhaul solution to remain in place until the new dispatch center/PSAP equipment is relocated to the new 9-1-1/EOC location.

H. PROJECT GOALS

The goal of this project is to ensure the implementation of a cost-effective, highly- reliable public safety radio system that meets the County's needs. The project shall provide:

9. A replacement radio system including infrastructure equipment and software that complies with the current version of the Association of Public-Safety Communications Officials (APCO) Project 25 (P25) suite of standards.
10. Radio system users with an increased level of coverage that supplies 95% of the geographical boundaries of the service area with portable on the street coverage and increased in-building coverage.

11. Stakeholders with periodic updates and review cycles and ample opportunity to provide input/feedback throughout the project.
12. A stable, reliable infrastructure radio system.
13. The flexibility to take advantage of future technologies, including mixed- mode operation (analog conventional, P25 Phase 1 and Phase 2).
14. A solution that leverages existing communications infrastructure (sites/facilities) to the greatest extent possible.
15. Enhanced interoperability with local, regional, State, and Federal first responder agencies.
16. Reserve capacity for use during major catastrophic events.

I. SCOPE OF WORK

Functional Specifications (Attachment A, beginning on page 152) describes the general, functional, and operational requirements of the Dawson County, Georgia (County) public safety land mobile radio (LMR) system (System). While not a design, these specifications provide requirements for system architecture, performance and support, as well as system implementation, testing and acceptance of the new system. Proposers shall submit a comprehensive proposed design that describes the general, functional and operational

"OPTION" or "OPTIONAL" items contained within the Functional Specifications section refer to features, services and/or equipment which the County may or may not purchase or items whose quantities are not determined yet. Proposer shall respond to and provide pricing for all OPTIONAL features, services, and equipment.

Proposals shall be clear and concise with sufficient detail for the County to verify compliance and to properly evaluate the offeror's capabilities to provide the required goods and services.

Proposers are to submit samples, literature, graphic aids and other materials in Tab F or Tab F-1 to help describe how the Proposer will accomplish the specified work.

Project Overview

10. The Contractor shall furnish all equipment, materials, labor, transportation, and storage facilities, which are necessary to complete the specified work, and required for a fully functional system meeting all requirements of this functional specification document.
11. The Contractor shall design, install, and test all required equipment and parts.
12. All equipment, antennas, parts and accessories shall be new.
13. The Contractor shall be responsible for providing the following project components:
 - a. Project management

- b. Frequency search, coordination, and FCC licensing
 - c. Site and radio path surveys
 - d. Engineering and system design
 - e. Tower structural analyses
 - f. Detailed drawings, design, permitting, and environmental submittals
 - g. System installation and construction management
 - h. Acceptance testing
 - i. Software installation and equipment programming
 - j. Training
 - k. Hardware and software warranty and maintenance, including spares and parts support.
14. The existing County land mobile radio (LMR) and backhaul systems shall support operations during the implementation and testing of the new systems.
15. The Contractor shall plan, coordinate, and conduct all work with minimal interruption of service to the existing mission critical systems. All required outages shall be scheduled in advance with the County.
16. All outages or system resource reduction from current system operations require a detailed plan of action with contingencies identified and approved by the County prior to execution.
17. The LMR and microwave backhaul systems shall be fault tolerant and contain no single point of failure that would disrupt communications.
18. Critical hardware shall use devices such as redundant hot standby cards, and power supplies to prevent any single points of failure.

-End of Exhibit A-

EXHIBIT "B"
PROJECT PRICE PROPOSAL FORM

-End of Exhibit "B"-

EXHIBIT "C"

AFFIDAVIT OF PAYMENT OF CLAIMS

(SUBMIT TO THE PURCHASING MANAGER AT TME OF FINAL INVOICE)

_____ this _____ day of _____,

20_____ appeared before me _____, a Notary

Public, in and for _____, and being by me first duly

sworn states that all subcontractors and suppliers of labor and materials have been paid all sums

due them to date for work performed or material furnished in the performance of the contract

between:

Dawson County Board of Commissioners and _____(Contractor),

last signed _____, 20__ for the Dawson County Public Safety Radio Communications System

Upgrade.

BY: _____

TITLE: _____

DATE: _____

(Seal)

Subscribed and sworn to before the _____ day

of _____, _____

My commission expires on the _____ day

of _____, _____

NOTARY PUBLIC

(Notary Seal)

EXHIBIT "D"
PAYMENT BOND

STATE OF GEORGIA
COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (herein after known as "Contractor"), and we _____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto Dawson County, Georgia for the use and benefit of those entitled thereto in the sum of **and _____/100 Dollars** (_____) for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION BOND IS THIS:

WHEREAS, the County has engaged the said Contractor for the sum of _____ **and _____/100 Dollars** (_____) for the **RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM**, as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Contractor and all subcontractors to whom any portion of the work provided for in said Contract is sublet and all assignees of said Contract and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, products, services, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or addition to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimants in suits on this bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this bond is subject to the following conditions and limitations:

a) Any person, firm or corporation that has furnished labor, products, or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right of action against the Contractor and Surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said Contract is to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for his or their use and benefit against said Contractor and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

b) The Principal and Surety hereby designate and appoint _____ as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.

c) In no event shall the Surety be liable for a greater sum than the penalty of this bond or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Sections 36-10-1 et seq and 36-91-50 et seq and all the provisions of the law referring to this character of bond as set forth in said

-Payment Bond to Follow-

EXHIBIT "E"
PERFORMANCE BOND

STATE OF GEORGIA
COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (herein after known as "Contractor"), and we _____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto Dawson County, Georgia for the use and benefit of those entitled thereto in the sum of **and _____/100 Dollars** (_____) for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION BOND IS THIS:

WHEREAS, the County has engaged the said Contractor for the sum of _____ **and _____/100 Dollars** (_____) for the **RFP #415-22 DAWSON COUNTY PUBLIC SAFETY RADIO COMMUNICATIONS SYSTEM**, as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, if a said Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of said Contractor to do so, and shall fully reimburse and repay the said Owner such default, and shall guarantee all products and workmanship against defects for a period of one year, then this obligation or bond shall be null and void, otherwise, it shall remain in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of the said Agreement or Contract or in the work to be performed thereunder, or the Specifications accompanying the same shall in any way affect the obligations under this obligation or bond, and notice is hereby waived of any such change extension of time, alteration or addition to the terms of the Agreement or Contract or to the work or to the Specifications.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Sections 36-10-1 et seq and 36-91-50 et seq and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

-Performance Bond to Follow-

-Certificate of Insurance to Follow-

ATTACHMENT “A
FUNCTIONAL SPECIFICATIONS
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1. Directions to Contractor

1.1 Project Scope

- A. The Contractor shall furnish all equipment, materials, labor, transportation, and storage facilities, which are necessary to complete the specified work, and required for a fully functional system meeting all requirements of this functional specification document.
- B. The Contractor shall design, install, and test all required equipment and parts.
- C. All equipment, antennas, parts and accessories shall be new.
- D. The Contractor shall be responsible for providing the following project components:
 - 1. Project management
 - 2. Frequency search, coordination, and FCC licensing
 - 3. Site and radio path surveys
 - 4. Engineering and system design
 - 5. Tower structural analyses
 - 6. Detailed drawings, design, permitting, and environmental submittals
 - 7. System installation and construction management
 - 8. Acceptance testing
 - 9. Software installation and equipment programming
 - 10. Training
 - 11. Hardware and software warranty and maintenance, including spares and parts support.
- E. The existing County land mobile radio (LMR) and backhaul systems shall support operations during the implementation and testing of the new systems.
- F. The Contractor shall plan, coordinate, and conduct all work with minimal interruption of service to the existing mission critical systems. All required outages shall be scheduled in advance with the County.

- G. All outages or system resource reduction from current system operations require a detailed plan of action with contingencies identified and approved by the County prior to execution.
- H. The LMR and microwave backhaul systems shall be fault tolerant and contain no single point of failure that would disrupt communications.
- I. Critical hardware shall use devices such as redundant hot standby cards, and power supplies to prevent any single points of failure.

1.2 Standards and Guidelines

- A. The Contractor shall comply with the latest revisions of the applicable portions of the following standards, rules, regulations, and industry guidelines (presented here in alphabetical order; not reflective of priority):
 - 1. American National Standards Institute (ANSI)
 - 2. American Society of Testing Materials (ASTM)
 - 3. Federal Aviation Administration (FAA)
 - 4. Federal Communications Commission (FCC)
 - 5. Institute of Electrical and Electronics Engineers (IEEE)
 - 6. International Building Code (IBC)
 - 7. National Electrical Code (NEC) (NFPA-70)
 - 8. National Electrical Manufacturer's Association (NEMA)
 - 9. National Fire Protection Association (NFPA) 1221
 - 10. Telecommunications Distribution Methods Manual (TDMM)
 - 11. Telecommunications Industry Associations (TIA)
 - 12. Underwriters Laboratories, Inc. (UL)
- B. The Contractor shall comply with the latest revision of industry best practices for cable installation and management in equipment racks and/or cabinets and within equipment rooms and/or shelters, as outlined in the following standards:
 - 1. ANSI/TIA-942 - Telecommunications Infrastructure Standard for Data Centers

2. ANSI/BICSI N1-2019 - Installation Practices for Telecommunications and ICT Cabling and Related Cabling Infrastructure
 3. ANSI/NFPA 70 - the National Electrical Code® (NEC®), Article 392 Cable Trays
 4. IEEE 802.3ba-2010 - IEEE Standard for Information technology-- Local and metropolitan area networks-- Specific requirements-- Part 3: CSMA/CD Access Method and Physical Layer Specifications Amendment 4: Media Access Control Parameters, Physical Layers, and Management Parameters for 40 Gb/s and 100 Gb/s Operation
 5. ISO/IEC 14763-2:2019 - Information technology — Implementation and operation of customer premises cabling — Part 2: Planning and installation
 6. UL 60950-1 - Information Technology Equipment - Safety - Part 1: General Requirements
 7. UL 62275 - Cable Management Systems - Cable Ties for Electrical Installations
 8. UL 2024 - Cable Routing Assemblies and Communications Raceways
- C. At a minimum, the Contractor shall comply with industry best practices for system installation, grounding, bonding, and transient voltage surge suppression (TVSS), as outlined in at least one the following standards:
1. ANSI/TIA-607-D Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
 2. Harris Site Grounding and Lightning Protection Guidelines (AE/LZT - 123 4618/1 - latest revision)
 3. MIL-STD-188-124B - *Grounding, Bonding, and Shielding for Common Long Haul/Tactical Communications Systems Including Ground Based Communications-Electronics Facilities and Equipment*
 4. Motorola R56 - *Standards and Guidelines for Communication Sites* (latest revision)
 5. Other contractor / industry standard - the Contractor shall provide to the County for review and approval.

1.3 Network Security Requirements

A. The Contractor shall comply with the latest revision of following security standards and industry guidelines, provided here in no weighted order or priority:

1. FIPS PUB 140-2; “Security Requirements for Cryptographic Modules”
2. ISO/IEC 27000:2018; “Information Technology – Security Techniques – Information Security Management Systems – Overview and Vocabulary”
3. ISO/IEC 27001:2013; “Information Technology – Security Techniques – Information Security Management Systems – Requirements”
4. ISO/IEC 27002:2013; “Information Technology – Security Techniques – Code of Practice for Information Security Controls”
5. ISO/IEC 27005:2018; “Information Technology – Security Techniques – Information Security Risk Management”
6. ISO/IEC 27010:2015; “Information Technology – Security Techniques – Information Security Management for Inter-Sector and Inter-Organizational Communications”
7. ISO/IEC 27031:2011; “Information Technology – Security Techniques – Guidelines for Information and Communication Technology Readiness for Business Continuity”
8. ISO/IEC 27032:2012; “Information Technology – Security Techniques – Guidelines for Cybersecurity”
9. ISO/IEC 27033-1:2015; “Information Technology – Security Techniques - Network Security”
10. ISO/IEC 27035-1:2016; “Information Technology - Information Security Incident Management – Part 1: Principles of Incident Management”
11. ISO/IEC 27035-2:2016; “Information Technology - Information Security Incident Management – Part 2: Guidelines to Plan and Prepare for Incident Response”
12. ISO/IEC 27035-3:2020; “Information Technology - Information Security Incident Management – Part 3: Guidelines for ICT Incident Response Operations”

13. ISO/IEC 27039:2015; “Information Technology – Security Techniques - Selection, Deployment, and Operations of Intrusion Detection and Prevention Systems (IDPS)”
 14. ISO FCAPS; “Fault management, Configuration management, Accounting management, Performance management, Security management”
 15. ITIL Version 3; “Service Design, Section 4.6 Information Security Management”
- B. Routing and switching equipment shall employ Open Systems Interconnection (OSI) model Layer 2 and Layer 3 security best practices to minimize different types of attacks on the data link layer and to filter network traffic on the network layer.
- C. The Contractor shall work with the County to supply, install, and configure virtual private network (VPN) hardware and software using two-factor authentication for access to allow multiple levels of remote secure access of system RF and control infrastructure equipment.
- D. The system shall utilize secure protocols for network management, configuration, alarms and events.
- E. The Contractor shall supply, install, and configure firewall protection system(s) and intrusion detection system(s).
- F. The Contractor shall supply, install, and configure anti-virus and anti-malware software on all supplied servers and workstations. Anti-virus and anti-malware software shall include all definition updates during the warranty period.
- G. The Contractor shall provide operating system patches for all supplied commercial off the shelf products during the warranty period. The system patches provided shall be no more than one version and/or 8 weeks older than the Software OEM releases.
- H. The System backhaul links shall support payload encryption.
1. At a minimum, payload encryption shall be fully compatible with AES and comply with FIPS-197.
 2. The AES algorithm shall support 128-bit or 256-bit symmetric keys, via a randomly generated encryption combination.
- I. The System shall be designed for secure management of the radios and other required equipment by the NMS.

- J. The System shall be compliant with the International Telecommunications Union's (ITU) ITU-T x.805 Security Architecture.
- K. Network devices shall support the following security dimensions:
 - 1. Access control
 - 2. Authentication
 - 3. Non-repudiation
 - 4. Data confidentiality
 - 5. Communication security
 - 6. Data integrity
 - 7. Availability
 - 8. Privacy
- L. Any network port or device interface that is not used at the time of system implementation shall be software configured to be disabled. A list of all disabled ports; by site, equipment designation, and port designation shall be delivered as part of the System documentation package.
- M. The County will supply the Contractor with IP addressing information.

1.4 Governing Codes and Conflicts

- A. If the requirements of this RFP differ with those of the governing codes and regulations, then the more stringent of the two shall apply.
- B. If the requirements of this RFP conflict with those of the governing codes and regulations, the Contractor is responsible for identifying the conflict and resolving to the satisfaction of the County.

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2. Project 25 (P25) Trunked Radio System

2.1 P25 Requirements

- A. The radio system shall comply with applicable TIA-102 (P25) standards as published at the time of proposal. If revised or new TIA-102 standards are published after the proposal date that affects the designated system components, the Contractor shall work with the County to determine an agreeable solution to be compliant with the revised or new standards.
- B. The system shall be built as a P25 Phase 2 system but shall support a combination of P25 Phase 1 and Phase 2 subscriber units.
- C. All infrastructure equipment shall be equipped and implemented to dynamically support P25 Phase 1 and Phase 2 operation at the site, repeater, channel, talkpath, and talkgroup levels.
- D. The system shall provide a P25 technology solution capable of operating with all P25 Compliance Assessment Program (CAP) compliant radios.

2.2 System Capacity

- A. The County anticipates the system shall contain six channels. Respondents shall provide Grade of Service (GoS) calculations validating the number of channels required to maintain a GoS less than or equal to 1%
- B. The system capacity shall assume all subscriber units using the P25 Phase 1 mode only.
- C. The Contractor shall disclose all assumptions and calculations to the County for validation.
- D. The County estimates that 400 local subscriber units will be placed into service on the system. The County anticipates a 2% per year subscriber unit growth over the next 10 years.
- E. The County estimates that up to 2,000 units may use proposed system for interoperability with local subscriber units.
- F. Respondent shall provide the number of radio subsystems, channels, sites, radios, and talkgroups that the radio and dispatch console system is equipped to support, as proposed, including software licenses as applicable.

- G. Respondent shall provide the maximum number of radio subsystems, channels, sites, radios, and talkgroups that their radio and dispatch console system can accommodate with the addition of hardware and/or software (i.e., the maximum possible expansion).
- H. The Contractor shall include the necessary radio system hardware and software (including licenses) to support the projected daily and interoperable subscriber unit, including 2% annual unit growth. License costs for different breakpoint quantities of subscriber units are highly preferred.

2.3 P25 System Equipment

2.3.1 System Control Equipment

- A. The System shall meet or exceed the following System control requirements:
 - 1. System control equipment may utilize centralized or distributed architecture.
 - 2. System control equipment shall be fault tolerant with no single point of failure.
 - 3. System control equipment shall have localized high availability so that failure of a single System control component does not reduce System functionality.
- B. If centralized architecture is proposed, Contractor shall offer OPTIONAL System control equipment with redundant components located at geographically separate locations.
- C. If centralized architecture is proposed, Contractor shall offer OPTIONAL cloud-based System control equipment as the backup or secondary control location.
- D. The system control equipment shall serve as the control for all subsystems of the P25 network.
- E. The system control's redundant equipment shall provide all operations and functions independent of the other.
- F. Geographically diverse system control equipment is not required but, if proposed, shall meet the following requirements:
 - 1. Activation of geographically diverse system control equipment shall not require human intervention to operate in the event of a failure.

2. Activation of geographically diverse system control equipment shall not result in any reduction of services or functions of the system control equipment.

2.3.2 Network Management System (NMS)

- A. The Contractor shall use a single NMS for all equipment (i.e. P25, microwave backhaul, site environmental alarms, etc.).
- B. The NMS shall be a hierarchical system, capable of incorporating multiple management systems into a high-level management system that provides a single point to manage multiple subsystems.
- C. The NMS shall monitor real time and ensure proper equipment configuration, operation, and integration of existing systems.
- D. The NMS shall monitor and allow remote configuration changes to the following subsystems at a minimum:
 1. P25 radio system
 2. Dispatch console system
 3. Logging recorder system
 4. Backhaul system(s)
 5. Conventional radio system(s)
 6. Site alarms (environmental)
 7. Any other proposed subsystem
- E. The NMS shall display system status and alarm conditions.
- F. The NMS shall support Simple Network Management Protocol (SNMP) allowing interfaces with higher-level network management systems.
- G. The NMS shall provide Simple Mail Transfer Protocol (SMTP) and Short Message Service (SMS) support to allow for email and text notification of system issues and alarms.
- H. Key functional elements of the NMS are:
 1. Remotely interrogate equipment

2. Configure components remotely
 3. Routinely backup remote equipment configuration
 4. Remotely restore equipment configuration
 5. Push updates to remote equipment
 6. Manage encryption capabilities
 7. Generate real-time system statistical reports including failure, usage and performance reports
 8. Local administration database
 9. Real-time airtime usage
 10. Real-time monitoring of network element status
 11. Hierarchical updates on error condition
 12. Real-time status of network usage
 13. Real-time alarm management
 14. Simple Network Management Protocol (SNMP) support allowing interfaces with higher-level network management systems
 15. Simple Mail Transfer Protocol (SMTP) and Short Message Service (SMS) support to allow for email and text notification of system issues and alarms
- I. The NMS shall provide management of user equipment and system configuration regarding user management. Areas of management include, but are not limited to:
1. Talkgroup population
 2. User access privileges
 3. Security assignments
 4. Failure reports
 5. Usage reports
 6. Performance reports
 7. Other Contractor-recommended reports

- J. The NMS shall include storage to support no less than 18-months retention of all system data and reporting, without the need for removable or external archiving equipment.
- K. The Contractor shall furnish all hardware and software to monitor, at a minimum, 20 conditions/points at each site (system control, simulcast/voting, dispatch, microwave backhaul and RF sites). At a minimum, the following alarms shall be monitored:
 - 1. Door open/close
 - 2. Temperature high/low
 - 3. Power failure (AC and DC)
 - 4. DC Plant failure
 - 5. Generator run and trouble
 - 6. Tower lights
 - 7. Smoke alarm

2.3.2.1 Network Management Terminal (NMT)

- A. The Contractor shall furnish one NMT's for the P25, microwave backhaul and IP network equipment to be located at the dispatch center
- B. The NMT shall include:
 - 1. Computer
 - 2. Display
 - 3. Keyboard, mouse, interfaces
 - 4. Networking equipment
- C. The NMT shall provide administrative and user profiles that set permissions for each set of user credentials.
- D. A NMT shall be provided within the dispatch center located at 19 Tucker Ave., Dawsonville, Georgia.

2.3.3 Simulcast Equipment

- A. The system shall include redundant simulcast control equipment located at geographically separated sites or distributed across the network.
- B. The system shall include all necessary simulcast components and signal processing elements required to optimize voice quality in coverage overlap areas.
- C. Non-captured overlap areas with delay spreads in excess of those required to meet the DAQ objective shall be minimized inside the service area.
- D. Simulcast systems shall operate without the need for manual optimization and system/subsystem alignment.

2.3.4 Receiver Voting Equipment

- A. Receiver voting equipment shall monitor all receivers in the simulcast cell and select the best signal for processing and rebroadcast through the network.
- B. Receiver voting equipment shall continue to operate in the event of failure of, or lost connectivity with other control elements.
- C. Receiver voting shall include redundant control equipment located at geographically separated sites or distributed across the network.

2.3.5 Encryption

- A. The system shall be enabled for encrypted operation on all system channels and available to all system talkgroups.
- B. The system, including dispatch consoles and subscriber devices shall support P25 Standard AES-256 encryption.

2.3.6 Radio Frequency (RF) Site Equipment

2.3.6.1 Repeaters/Base Stations

- A. Repeaters/base stations shall:
 - 1. Comply with appropriate Part 90 of the FCC Rules and Regulations.
 - 2. Be FCC type accepted for the appropriate frequency band and type of service.
 - 3. Comply with appropriate TIA 102 and similar standards.

4. Be solid state in design and function and must operate in the temperature range of -20°F - 140°F without degradation.
5. Consist of modular components or field replaceable units allowing for in the field repairs whenever possible.
6. Use linear power amplifiers.

2.3.6.2 Antenna Systems

A. Antenna systems shall:

1. Provide the required guaranteed coverage.
2. Match the antenna design used for all coverage modeling.
3. Meet applicable FCC rules and regulations.

B. If the system design includes the use of tower top amplifiers (TTAs), the amplifiers shall be equipped with dual amplifiers, and a by-pass mode of operation. TTAs shall be installed with test lines.

C. Antennas shall be selected to perform in and endure the anticipated environmental conditions.

1. High elevation mountain, desert, and/or salt air locations shall be considered.
2. Low passive intermodulation (PIM) antennas shall be used to the greatest extent possible.

D. Transmission line type and length shall be appropriate given the radio band, to provide the required coverage. Lightning protection and grounding devices shall be used as per the appropriate industry standard(s) and manufacturer requirements.

E. Combining equipment shall be used to minimize the number of transmit and receive antennas to the greatest extent possible.

2.3.6.3 Interoperability Gateways and Stations

A. Each RF Site shall be equipped with an interoperability gateway device supporting up to eight base station/control station devices.

- B. A multiband console/control station shall be provided and installed at each RF Site to allow for interoperable communications in VHF, UHF and the 7/800 MHz bands. This station shall be controlled via the dispatch consoles and be programmed with multiple interoperability frequencies.

2.3.6.4 DC Power Requirements

- A. The proposal shall include new DC power systems for all sites where new equipment is being proposed.
- B. The DC power system shall be designed to meet the specific load requirements for all system equipment at each site and include enough capacity for an additional future load of 25% of the equipment furnished under this contract.
- C. The DC power system shall provide the following alarms to the NMS alarm system:
 - 1. Rectifier failure
 - 2. AC power failure
 - 3. Low current
 - 4. Battery low voltage
 - 5. DC breaker
- D. The DC power system shall perform as specified herein when housed with or adjacent to other radio transmitters operating in accordance with FCC regulations.
- E. All load current shall pass through a single main distribution breaker prior to sub-panel breaker/fuses and individual load breaker/fuses. An individual assigned breaker/fuse shall be employed for each specific communication device powered.
- F. The power supply/charger shall meet the following requirements:
 - 1. Input Voltage: single phase, 120 VAC +/- 10%
 - 2. Frequency: 60 Hz +/- 5%
 - 3. Output Voltage Range: -42 to -56 VDC (positive ground)
 - 4. Float Voltage: 50.9 - 54.0 VDC
 - 5. Equalize Voltage: 54.2 - 57.6 VDC
 - 6. DC Output Voltage Regulation: +/- 1/2% from no load to full load

7. Output Current: As calculated to support load requirements
 - a. Minimum 12 amps
 - b. Full recharge of batteries shall be accomplished within eight hours
8. Output noise shall not degrade the performance of LMR and microwave radio equipment in the vicinity of the power supply/charger
9. AC to DC conversion efficiency shall not be less than 75%
10. Shall include equalize circuitry and controls for periodic manual equalization of batteries as needed
11. Shall be 19-inch or 23-inch rack mountable
12. Shall be equipped with an input power AC circuit breaker, output power DC circuit breaker, DC current meter and DC voltage meter
13. Shall be initially configured for independent operation, however, shall be capable of operating in parallel with another power supply/charger in the future, without damage to either unit
14. Shall provide separate adjustable voltages for floating and equalizing of the batteries, with the voltages initially adjusted to accommodate the batteries provided
15. Shall include short circuit current protection and high voltage shutdown circuitry
16. Each alarm shall include a Form “C” contact for connection to an external alarm, and the alarm status shall be displayed on the front panel of the power supply/charger

G. The 48-volt batteries shall:

1. Be designed for float connection in support of continuous steady current loads with battery discharge only during loss of charger/power-supply output
2. Be sized to support full load operation during an AC power failure for a minimum of two (2) hours
3. Include support trays for installation inside the communication cabinets
4. Include all cell interconnect bus pieces and hardware

5. Be sealed, lead acid batteries requiring no maintenance
6. Have a minimum service life of 10 years, defined as the time in which the battery capacity drops below 80% of the original capacity

H. Other DC Power System Components:

1. Load distribution/disconnect panels shall:
 - a. Include individual 100A circuit breakers for protecting and/or disconnecting each charger/battery bank from the load
 - b. Include a front panel LED display indicating whether a breaker has been tripped
 - c. Include a Form “C” relay for connection to an external alarm panel. The relay shall be activated if any breaker trips or is shut off
 - d. Be 19-inch rack mountable
2. Circuit breaker panels shall:
 - a. Include circuit breakers, appropriately sized for disconnecting the individual loads
 - b. Be 19-inch rack mountable
 - c. Include a minimum of five spare circuit breakers, with a minimum current rating equal to the circuit breaker for the installed load
3. The negative and positive bus bars shall:
 - a. Be 19-inch rack mountable
 - b. Be equipped with standoffs that will electrically isolate it from the mounting rack inside the cabinet
 - c. Be solid copper, sized to handle the required current capacity
4. DC power cables shall be of appropriate size to handle the load current requirements, as specified

2.3.7 Dispatch Console System

2.3.7.1 General Requirements

- A. The dispatch console system shall support dispatch operations for the current dispatch center.
- B. The current dispatch center is located at: 19 Tucker Ave., Dawsonville, Georgia
- C. The new 9-1-1/EOC building will be located at: 860 SR-53, Dawsonville, Georgia. Upon completion of this new location the Contractor shall relocate the dispatch console system to the new 9-1-1/EOC building.
- D. The dispatch console system shall be equipped with four operator positions.
- E. As an OPTION, the dispatch console system shall include six deployable dispatch consoles for an EOC / backup PSAP site.
- F. The dispatch console system shall be configured with each console position to provide control of:
 - 1. Radio system talkgroups
 - 2. Paging
 - 3. Fire station alerting
 - 4. Emergency alarms and calls
 - 5. Patching between telephone lines, talkgroups, and conventional stations
 - 6. Retaining any existing functionality
- G. The dispatch console system shall be capable of:
 - 1. P25 Phase 1 call processing
 - 2. P25 Phase 2 call processing
 - 3. P25 group and individual addressing modes
 - 4. At least one unique identity assigned to an operator position
 - 5. An operator position shall support the capability to affiliate with at least one valid talkgroup

6. An operator position shall have the capability to affiliate with multiple valid talkgroups simultaneously

H. The dispatch console system shall meet the following requirements:

1. The dispatch console system shall allow patching among any combination of:
 - a. Telephone line
 - b. Non-trunked channel resources in the System
 - c. Analog channels
2. Current patching capabilities shall be maintained through migration
3. The System shall have the ability to enable or disable the repeat function of any conventional repeaters equipped to do so
4. The System shall allow the selection of the desired transmit frequency or mode on each conventional base station or repeater capable of operating on multiple frequencies or modes
5. The console system shall allow the selection of multiple talkgroups and/or multiple conventional channels or any combination of these resources
6. The console system shall provide the ability to hear subscriber units while dispatch operators transmit
7. The dispatch console system shall support dispatch and control of any analog or conventional systems that will continue to operate in the County
8. The dispatch console system shall meet all P25 standards including Console Sub-System Interfaces (CSSI). Any CSSI-compliant console product shall interface with the radio system and support P25 mandatory features.
9. The dispatch console system shall support processing of supplementary data messaging to and from subscriber radio units (e.g., text and status indication).
10. The dispatch console system shall support dispatch consoles directly connected to the trunked radio network via the backhaul/interconnection network.
11. Direct-connect dispatch consoles shall use IP connectivity for all voice, data, control, and parallel console status information.

- I. Contractor shall provide a backup RF control station for each dispatch console that maintains dispatch operations in the event of a dispatch system failure and/or backhaul network failure. The backup RF control stations shall:
 - 1. Not be dependent on the primary dispatch console system for operations.
 - 2. Allow users to change channels/talkgroups at dispatch positions without affecting other dispatch positions.
 - 3. Be capable of operation in trunking and conventional modes.
 - 4. Have the capability of initiating a private radio call.
 - 5. Be capable of operating with a 6-wire headset and with a conventional speaker and microphone.
 - 6. New control station antenna system shall be provided where new control stations are to be installed.
- J. The dispatch console system must not contain any single point of failure which would disable more than a single operator position or channel resource.
- K. The dispatch console system shall support Fire Station alerting (individual and groups) via two-tone and voice paging via the analog VHF paging/interoperability channel.
- L. The Contractor shall supply all necessary hardware, software and licensing needed for system control equipment to support the dispatch consoles.

2.3.7.2 Dispatch Console System Operator Equipment Requirements

- A. The dispatch console system operator equipment shall meet or exceed the following requirements:
 - 1. All dispatch console equipment supplied shall operate 24 hours per day, 7 days per week, 365 days per year (24/7/365).
 - 2. The operator positions shall be proposed with a display monitor 20" or larger LCD/LED with resolution of 1920 x 1080 or better.
 - 3. Console shall be capable of displaying all dispatching functions on a single display unit.
 - 4. Console shall allow authorized personnel to determine which functions are available at each operator position.

5. Console shall provide an individual unit ID and text alias readout for calling units and a stacking display to reflect at least the last ten unit calls for the visible channels/talkgroups.
6. Console dispatch position keyboard interface shall be compatible with standard PC USB 2.0 keyboards.
7. Console dispatch position shall be provided with a standard 101-key PC keyboard and a standard mouse/pointer device.
8. Operators shall be able to perform console functions by positioning a screen pointer (cursor) over the appropriate icon and pressing the mouse button or by touching the monitor screen.
9. Custom mice, trackballs, and accessories may be proposed.
10. Each operator position shall have a high-quality gooseneck microphone.
11. Each operator position shall have a heavy-duty footswitch to allow operators to key the selected channel hands free.
12. All computers supplied shall be based on current production processors running a currently supported operating system. The County reserve the right to specify or supply the computer platform(s) in accordance with the County standards. All computers shall be certified for the latest version of operating system available at the time of acceptance.
13. The failure of one or more console positions should have no effect on the remaining console positions.
14. Equipment shall enable operators to acoustically cross-mute channels to eliminate acoustic feedback between operators.
15. Console positions shall respond appropriately to the activation of an emergency alarm by subscriber units.
 - a. Dispatch console system operator positions shall provide an audible alert, provide a visual alert of an emergency activation, and display unit ID of calling unit.
 - b. Dispatch console system operator positions shall have the ability to acknowledge the emergency alarm.
 - c. The unit ID and alias for an unacknowledged emergency alarm shall not scroll from the unit ID display.

16. Console positions shall decrypt and encrypt secure voice communications.
 - a. A distinctive icon shall signify encrypted channels.
 - b. Multiple encryption algorithms and keys shall be supported.
 - c. Console positions shall be provisioned to support multiple AES256 encryption keys.
 - d. Provisioning to support a minimum of eight unique AES256 encryption keys shall be provided
17. Each operator position shall have the ability to utilize both a headset (wired and/or wireless) and a stationary gooseneck type microphone for transmitting audio.
18. Each operator position shall support a single headset capable of both telephone and radio use.
19. The dispatch console system shall provide an instant recall recording capability for each operator position.
 - a. Instant recall recording shall provide an interface to provide connection to the console operators' microphone audio, the selected radio channel receiver audio and telephone audio.
 - b. Playback shall be available on the operator position.
20. Conventional resources (e.g., repeaters, base stations, and control stations) capable of operating on multiple frequencies and/or modes shall be reconfigurable to select the desired transmit frequency / mode (select channel).
21. An audio level meter shall be provided showing the level of transmitted voice.
22. The audio level meter shall also indicate the level of receive audio present on the selected channel/talkgroup.
23. Operator positions shall have the ability to independently set each channel/talkgroup's volume level. Minimum audio levels should be capable of being set to avoid missed calls.
24. Operator positions shall have the ability to mute or un-mute audio from unselected channels/talkgroups. The operator's monitor shall indicate muted audio status.

25. Selected audio and unselected audio shall be presented from separate speakers.
26. Operator positions shall have the ability to select multiple channels/talkgroups for broadcast to several channels/talkgroups at once.
27. Operator positions shall have the ability to process analog, P25 Phase 1 and Phase 2 calls both encrypted and clear.
28. Operator positions shall have the ability to patch two or more conventional resource channels and/or trunking talkgroups so that users may communicate directly.
29. Operator positions shall be equipped such that a minimum of eight simultaneous patches shall be available.

2.3.7.3 Dispatch Console System Configuration Requirements

- A. The dispatch console system shall support new features and screen configurations through software programming and not reconfiguration of hardware.
- B. The dispatch console system shall support the capability to program, store, retrieve, and edit multiple, custom operator screens and configurations for each operator position.
- C. Operator positions display configurations and alias database shall be stored locally, at each position, or on a centrally located server.

2.3.7.4 Dispatch Console System Headset Requirements

- A. Two headset jacks, configurable for 4-wire or 6-wire, shall be provided for each dispatch operator position and it shall allow the operator to hear select audio via a headset and allow the operator to respond via a microphone attached to the headset.
 1. The headset jack box will also have a volume knob to control the received radio volume.
 2. A headset plug inserted into the jack shall automatically disconnect the console's microphone and mute the console's select speakers.
- B. One wired headset shall be provided for each dispatch operator position and it shall allow the operator to hear select audio via a headset and allow the operator to respond via a microphone attached to the headset.

- C. The headsets shall be integrated with telephony and radio allowing dispatchers to communicate via telephony or radio from a single headset.

2.3.7.5 Backup Solution

- A. The dispatch console system shall be provided with a backup solution that provides the following:
 - 1. Continuity of dispatch operations in the event of a dispatch system, individual position, or multiple position failure.
 - 2. Not be dependent on the primary dispatch console system for operations.
 - 3. Allow users to change channels/talkgroups at dispatch positions without affecting other dispatch positions.
 - 4. Be capable of operation in trunking and conventional modes.
 - 5. Support fire station alerting.
 - 6. Have the capability of initiating a private radio call and call alert.
 - 7. Be capable of operating with a headset and with a conventional speaker and microphone.

2.3.7.6 Logging Recorder System

- A. The County currently uses an Eventide NexLog 740 logging recorder. Although Eventide discontinued manufacturing this model at the end of 2021, the County desires to continue to use it through the end of its manufacturer-supported lifecycle, which is estimated to be 5-years after its discontinuance.
- B. The County also desires to continue working with a local recording reseller and therefore does not seek a new logging recorder as part of this procurement.
- C. The County's current local reseller will be responsible for interfacing the new system with the existing logging recorder.
- D. The Contractor shall be responsible for coordinating with the current local reseller to resolve any integration or other issues associated with making the County's current logging recorder functional with the new radio system.

2.4 VHF Analog Paging/Interoperability System

- A. The VHF analog paging/interoperability system shall provide a single VHF simulcast channel capable of two-tone and voice paging and repeated simulcast audio talk-in and talk-out services.
- B. The VHF analog paging/interoperability system is expected to replace the current VHF paging channel allowing for individual station alerting equipment to be reused.
- C. The proposal shall clearly state the guaranteed portable coverage provided from the VHF analog paging/interoperability channel.

2.4.1 Control Equipment

- A. The VHF analog paging/interoperability channel shall be integrated with the P25 system control equipment to allow for management, monitoring, and console operation.

2.4.2 Simulcast Equipment

- A. The paging/interoperability channel shall include redundant simulcast control equipment located at geographically separated sites or distributed across the network.
- B. The system shall include all necessary simulcast components and signal processing elements required to optimize voice quality in coverage overlap areas.
- C. Non-captured overlap areas with delay spreads in excess of those required to meet the DAQ objective shall be minimized inside the service area.
- D. Simulcast systems shall operate without the need for manual optimization and system/subsystem alignment.

2.4.3 Receiver Voting Equipment

- A. Receiver voting equipment shall monitor all receivers in the simulcast cell and select the best signal for processing and rebroadcast through the network.
- B. Receiver voting equipment shall continue to operate in the event of failure of, or lost connectivity with other control elements.
- C. Receiver voting shall include redundant control equipment located at geographically separated sites or distributed across the network.

2.4.4 Repeaters/Base Stations

A. Repeaters/base stations shall:

1. Comply with appropriate Part 90 of the FCC Rules and Regulations.
2. Be FCC type accepted for the appropriate frequency band and type of service.
3. Be solid state in design and function and must operate in the temperature range of -20°F - 140°F without degradation.
4. Consist of modular components or field replaceable units allowing for in the field repairs whenever possible.
5. Use linear power amplifiers.

2.4.5 Antenna Systems

A. Antenna systems shall:

1. Provide the required guaranteed coverage.
2. Match the antenna design used for all coverage modeling.
3. Meet applicable FCC rules and regulations.
4. Antennas shall be selected to perform in and endure the anticipated environmental conditions.
5. High elevation mountain, desert, and/or salt air locations shall be considered.
6. Low passive intermodulation (PIM) antennas shall be used to the greatest extent possible.
7. Transmission line type and length shall be appropriate for the VHF band, to provide the required coverage. Lightning protection and grounding devices shall be used as per the appropriate industry standard(s) and manufacturer requirements.
8. Duplexer equipment shall be used to allow for a single transmit and receive antenna.

2.5 Detention Center BDA/DAS

- A. The Dawson County Detention Center is currently equipped with a VHF BDA/DAS providing coverage within the facility
- B. Respondents shall propose the replacement of active components with components capable of migrating the existing VHF BDA/DAS to operate in the 700 MHz band supporting the new P25 system.
- C. The County will provide BDA/DAS information to the Respondents after the pre-proposal conference.

2.6 Radio Coverage

2.6.1 Coverage Requirements

- A. The radio system design shall serve the geographical boundaries of the County.
- B. “Shape” (.SHP) files are available for importing the service area boundary(s) into a modeling program.
- C. DAQ as defined in this document applies to both inbound and outbound communications. Table 1 lists DAQ values and definitions.

Table 1 – DAQ Values and Definitions

DAQ	SUBJECTIVE PERFORMANCE DESCRIPTION
1	Unusable, Speech Present, but unreadable
2	Understandable with considerable effort. Frequent repetition due to noise/distortion
3	Speech understandable with slight effort. Occasional repetition required due to noise/distortion
3.4	Speech understandable with repetition only rarely required. Some noise/distortion
4	Speech easily understood. Occasional noise/distortion
4.5	Speech easily understood. Infrequent noise/distortion
5	Speech easily understood

- D. The system shall provide talk-in and talk-out radio coverage that meets or exceeds the requirements specified in Table 2 for each coverage zone for mobile and on-

street portable (worn in a belt case on hip per latest version of TSB-88.1 Table D 4), with 95% reliability and a DAQ of 3.4 or better.

Table 2 – Geographic Area Coverage Percentage

System	Coverage Zone	Geographic Area Coverage Percentage
P25 Simulcast	County Boundary	95

- E. The Proposal shall include the vendor’s guarantee of talk-in and talk-out coverage provided by the proposed VHF analog paging/interoperability overlay channel. This guarantee shall include mobile, and on-street portable (worn in a belt case on hip per latest version of TSB-88.1 Table D 4) at a DAQ of 3.0 or better.
- F. Coverage design, implementation, and testing for the system shall adhere to Telecommunications Systems Bulletin (TSB) TSB 88.3 - Wireless Communications Systems Performance in Noise and Interference-Limited Situations Part 3: Recommended Methods for Technology Independent Performance Verification, current version.
- G. Base station radio output power and Effective Radiated Power (ERP) levels and antenna height and gain shall be the maximum as permitted by FCC rules and regulations, unless system engineering determines that a lower height or ERP is sufficient (such as for tower top amplifiers (TTAs) or to minimize simulcast interference).
- H. Coverage guarantees shall apply to both P25 Phase 1 and Phase 2 modes for the P25 system and analog operation for the VHF paging/interoperability channel.
- I. As an OPTION, Respondents may propose Bi-Directional Amplifiers/Distributed Antenna Systems (BDA/DAS) equipment to provide coverage within the critical buildings listed in Appendix A. The costs associated with the BDA/DAS equipment shall be clearly identified in the price pages.

2.6.2 Coverage Maps

- A. The Contractor shall submit talk-in and talk-out coverage prediction maps for the System. Coverage maps shall be provided for each of the following transmission paths, using antenna configurations described in Section 2.6.1:
1. Mobile Radio Talk-in (composite and individual sites)
 2. Mobile Radio Talk-out (composite and individual sites)

3. Portable Radio Talk-in, on-street (composite and individual sites)
 4. Portable Radio Talk-out, on-street (composite and individual sites)
 5. Portable Radio Talk-in, in-building (composite with 15dB building loss)
 6. Portable Radio Talk-out, in-building (composite with 15dB building loss)
- B. All maps shall clearly delineate the difference between areas predicted to be equal to or greater than DAQ 3.4 equivalent coverage and areas that do not meet coverage requirements.
- C. For all mapping configurations described above, Contractor shall provide “composite” coverage maps, which represent the effective coverage of all simulcast cells and/or multicast sites. In addition, Contractor shall provide individual simulcast cell coverage maps. These individual simulcast cell maps shall display any areas of predicted time-delay interference (TDI) that are not eliminated through the use of antenna design and/or launch delays.
- D. Coverage maps shall be based on the type and tier of subscriber equipment provided by the Contractor, utilizing the same type of antennas being provided with the required subscriber radios.
- E. The Contractor shall describe the RF propagation model (including version number, if applicable) used to provide coverage predictions.
- F. The Selected shall describe the terrain and clutter dataset resolution used to perform coverage predictions. At a minimum, these datasets should have a resolution of 30 meters.
- G. The coverage maps shall be provided in a scale such that all areas with less than 95% reliability are easily spotted during the review of such maps.
- H. The Selected shall include coverage statistics that clearly delineate the predicted coverage percentages for all required transmission paths (i.e., portable on-street talk-in), for all service areas as described in Section 1.2.3.1.
- I. Coverage maps shall be provided in the following formats:
1. In PDF file format with an image resolution greater than 600 dpi when printed at 11”x17” on a flash drive
 2. In a computer file format that may be imported into the County’s ESRI ArcGIS system.

3. In a computer file format that may be imported into Google Earth Pro (e.g., KML, KMZ).
- J. All maps shall include map layers suitable for the County's reference (e.g., topographic map, roads, rivers, etc.).

2.7 Site Selection

- A. The system shall utilize the sites necessary to provide the desired coverage.
- B. The Contractor shall use existing sites to the greatest extent possible. The County prefers the following priority for site selection:
 1. County owned sites
 2. Existing sites the County currently leases
 3. Existing sites owned by other government agencies
 4. Existing privately held communications sites
 5. Greenfield sites utilizing County owned property
 6. Greenfield sites
- C. Appendix B provides a list of County-owned sites as well as potential sites for use. The Contractor shall consider these sites but is not obligated to use them in their design. The Contractor shall verify all information provided.
- D. If the Contractor selects non-County owned site(s), the Contractor shall conduct due diligence and provide letters from the site owner(s) to the County Real Property that state:
 1. The owner is willing to lease space at the site to the County
 2. Site owner is willing to provide last known structural review of the site as well as any proposed improvements by other entities at the time of the request
 3. Space is available on the tower at the Contractor defined heights, and space is also available for equipment in an existing room, or space is available for a shelter to be placed within the secured site area.
 4. If the Contractor identifies a greenfield option in the proposed system design, the Contractor must provide "documentary evidence" that they have

communicated with the landowner and that a potential lease agreement is a possibility to pursue.

2.8 Subscriber Radio Equipment

2.8.1 General Requirements

- A. Subscriber units shall have been successfully tested to operate on the radio systems of at least three different manufacturers through the P25 CAP process.
- B. All subscriber units shall include the following minimum capabilities:
 - 1. Shall be P25 CAP certified to support P25 Phase 1 & Phase 2 digital trunked operations on 7/800 MHz private land mobile radio channels.
 - 2. Shall be capable of placing and receiving analog 7/800 MHz conventional mode calls.
 - 3. Shall be capable of placing and receiving 7/800 MHz P25 conventional and trunking mode calls.
 - 4. The subscriber unit software shall be flash programmable for adding future software/firmware enhancements and features.
 - 5. All subscriber units shall be FCC Type Accepted
- C. All subscriber units shall support scanning of both trunked talkgroups and conventional channels (within one group) including: scan groups of 16, priority scan, and scan selection shall be retained during power-off/on (power-on default shall be the last operator selection).
- D. All subscriber units shall allow users to configure or alter scan operations including the definition of a scan list.
- E. Minimum three-year warranty period covering repairs, pickup, and shipping charges to and from the repair depot

2.8.2 Portable Subscriber Units

- A. All portable subscriber devices shall provide the following capabilities:
 - 1. Push-to-talk switch
 - 2. On-Off/Volume knob, mounted on top

3. Minimum of two soft keys
 4. Minimum of 3 navigation keys
 5. Emergency button, mounted on top with easy access
 6. Top-mounted switches allowing use of "banks" of channels/talkgroups, each bank consisting of a minimum of 16 channels/talkgroups
 7. Front display with two lines of text (minimum 12 characters per line) and status icons for battery status and in-range/RSSi indicator
 8. Top display with single line of text (minimum 8 characters)
 9. Display shall be readable in all conditions from direct sunlight to total darkness
 10. Internal GPS unit capable of transmitting unit's GPS location information via the P25 radio system.
- B. All portable subscriber radios shall be equipped with a flexible, covered antenna (readily removable utilizing a screw-in connector). Antennas proposed shall be utilized in coverage maps as well as coverage guarantees.
- C. All portable subscriber radios shall be equipped with standard-capacity batteries that, when starting with a full charge, allow operations for 12hours at a duty cycle of 5% transmit, 5% receive, and 90% idle.
- D. Portable subscriber radios shall be OPTIONALLY equipped with high-capacity batteries that, when starting with a full charge, allow operations for 16 hours at a duty cycle of 5% transmit, 5% receive, and 90% idle.
- E. Batteries shall connect securely to portable subscriber radios and shall not require the use of tools to attach or remove.
- F. All portable subscriber devices shall be equipped with chargers that operate from 110 VAC sources, support rapid charge of batteries (complete charge in 1 to 2 hours) and support both standard and high-capacity batteries with or without radios connected to battery.
- G. Internal speaker/ microphone shall include:
1. Connection of an external speaker/microphone that mutes the internal speaker/ microphone
 2. Connection of an external earpiece that mutes the internal speaker

H. Universal or individual connectors with the following features:

1. Microphone and earpiece connections must be capable of supporting the following types of microphone/earpiece devices (including types used in surveillance):

- a. External speaker/ microphone
- b. Earpiece
- c. Programming interface

I. All Portable subscriber radios shall meet or exceed the following environmental specifications per MIL-STD-810E (or equivalent items in 810 F):

1. Operating Temperature: -30 C to +60 C

- a. Low Pressure Operation: 500.3 Procedure II
- b. High Temperature, Storage / Operation: 501.3 Procedure I / II
- c. Low Temperature, Storage / Operation: 502.3 Procedure I / II
- d. Temperature Shock: 503.3 Procedure I
- e. Solar Radiation: 505.3 Procedure I
- f. Humidity: 507.3 Procedure II
- g. Dust, Blowing: 510.3 Procedure I
- h. Vibration: 514.4 Procedure I
- i. Shock, Functional: 516.4 Procedure I
- j. Rain, Blowing / Dripping Water (for metal case): 506.3 Procedure I / II
- k. Salt Fog (for metal case): 509.3 Procedure I

2.8.3 Portable Subscribers - Models to be Proposed

A. Respondents shall propose, describe and price at least three "tiers" of portable radios to include:

1. Law Enforcement Portable

2. Fire Service Portable
3. Public Service Portable

- B. Respondents shall provide information detailing the differences between the proposed portable subscriber models and how each model's features and functions are beneficial to the three user groups (Law Enforcement, Fire Service and Public Service)
- C. In addition to these three tiers, Respondents are encouraged to propose additional models that meet the minimum requirements of this functional specification.

2.8.3.1 Portable Subscriber Radio – Law Enforcement Model

- A. In addition to the general requirements for portable subscriber devices, the Law Enforcement model shall include the following capabilities:
1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 2. AES Encryption
 3. Support multiple AES encryption keys (multiple keys)
 4. GPS location services
 5. Surveillance mode allowing for covert operation (lights dimmed, tones muted, etc.)
- B. The Law Enforcement subscriber devices shall be provided with a remote speaker-microphone (heavy-duty, palm-type with push-to-talk switch, emergency button and self-retracting coil cord)
- C. As an OPTION, law enforcement models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.3.2 Portable Subscriber Radio – Fire Service Model

- A. In addition to the general requirements for portable subscriber devices, the Fire Service model shall include the following capabilities:
1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 2. AES Encryption
 3. Ability to support multiple AES encryption keys (multiple keys)

4. GPS location services
 5. Extended environmental specifications
 6. Larger and easier to access knobs and controls.
 7. Highly visible color(s)
 8. Noise reduction technology for fire service environments
- B. The Fire Service subscriber devices shall be provided with a remote speaker-microphone designed for Fire Service operation including the following:
1. Extended environmental specifications
 2. Larger and easier to access knobs and controls.
 3. Highly visible color(s)
 4. Emergency button
- C. As an OPTION, fire service models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.3.3 Portable Subscriber Radio – Public Service Model

- A. In addition to the general requirements listed for portable subscriber devices, the Public Service model shall include the following capabilities:
1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 2. GPS location services
 3. The Public Service subscriber devices may be proposed with a single 8-character (minimum) display.
 4. The Public Service subscriber devices shall be provided with a remote speaker-microphone (standard-duty, palm-type with push-to-talk switch, emergency button and self-retracting coil cord)
 5. As an OPTION, public service models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.4 Mobile Subscriber Units

A. The Mobile subscriber radios shall be constructed with the following distinct components:

1. A chassis configured for mounting in the trunk of a vehicle or other similar compartment.
2. A control head configured for mounting in the dash in the front of a vehicle or, remote mounting (e.g., trunk) with a cable length of 17 feet minimum and a round-type cable with single protective outer sheath enclosing all other conductors.
3. Options for multiple control heads controlling a single RF unit
4. A microphone with a self-retracting coil cord that shall be 4 feet long (minimum) when extended
5. An internal speaker of at least 5W or an external speaker
6. Installation brackets and interface cables for all above components

B. The mobile subscriber radios shall provide the following minimum capabilities for user controls and displays:

1. Push-to-talk switch on microphone
2. On-Off button
3. Volume knob
4. Rotary knob for mode or zone selection, each bank consisting of 16 channels/talkgroups
5. Minimum five soft keys
6. Emergency button
7. External speaker
8. Display with two lines of text (minimum 12 characters per line) plus one line of icons and one line of menus.
9. Display shall be readable in all conditions from direct sunlight to total darkness.

C. All mobile subscriber radios shall meet or exceed the following environmental specifications per MIL-STD-810E (or equivalent items in 810 F):

1. Operating Temperature: -30 c to +60 C
2. Low Pressure Operation: 500.3 Procedure II
3. High Temperature, Storage / Operation: 501.3 Procedure I / II
4. Low Temperature, Storage / Operation: 502.3 Procedure I / II
5. Temperature Shock: 503.3 Procedure I
6. Solar Radiation: 505.3 Procedure I
7. Humidity: 507.3 Procedure II
8. Dust, Blowing: 510.3 Procedure I
9. Vibration: 514.4 Procedure I
10. Shock, Functional: 516.4 Procedure I
11. Rain, Blowing / Dripping Water (for metal case): 506.3 Procedure I / II
12. Salt Fog (for metal case): 509.3 Procedure I

D. The Contractor shall be responsible for programming and installation of mobile subscribers. Installations shall include the following:

1. Installation of new antennas and lines, power cords and any control cables required for a complete working unit.
2. Maintaining and providing to the County a log containing serial numbers, vehicle number, date of installation, forward and reflected power readings, and radio ID numbers.
3. Removal and retention of legacy units and associated wiring in a secure location until turned over to the County or retained by the Contractor in the event a trade-in is offered.

E. The Contractor shall maintain and provide to the County an inventory of all legacy units removed from service.

2.8.5 Mobile Subscribers - Models to be Proposed

- A. Respondents shall propose, describe and price at least three "tiers" of mobile radios to include:
 - 1. Law Enforcement Mobile
 - 2. Fire Service Mobile
 - 3. Public Service Mobile
- B. Respondents shall provide information detailing the differences between the proposed mobile subscriber models and how each model's features and functions are beneficial to the three user groups (Law Enforcement, Fire Service and Public Service)
- C. Respondents shall bid a minimum of these three models ("tiers") of mobile radios; however, they are encouraged to propose more than three so long as they meet or exceed the following requirements.

2.8.5.1 Mobile Subscriber Radio – Law Enforcement Model

- A. In addition to the requirements listed for all subscriber devices, the Law Enforcement model shall include the following capabilities:
 - 1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 - 2. AES Encryption
 - 3. Ability to support multiple AES encryption keys (multiple keys)
 - 4. GPS location services
 - 5. As an OPTION, law enforcement models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.5.2 Mobile Subscriber Radio – Fire Service Model

- A. In addition to the requirements listed for all subscriber devices, the Fire Service model shall include the following capabilities:
 - 1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 - 2. AES Encryption
 - 3. Ability to support multiple AES encryption keys (multiple keys)

4. GPS location services
5. Extended environmental specifications
6. As an OPTION, fire service models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.5.3 Mobile Subscriber Radio – Public Service-Model

- A. In addition to the requirements listed for all subscriber devices, the Public Service model shall include the following capabilities:
 1. FDMA/P25 Phase 1 and TDMA/P25 Phase 2 trunking operation
 2. GPS location services
 3. The Public Service mobile subscriber radios may be proposed as dash mounted units.
 4. As an OPTION, public service models shall be capable of being programmed over Wi-Fi and LTE systems

2.8.5.4 Mobile Subscriber Radio – Control Station Option

- A. A Control Station option shall be available allowing for use within a building or fixed location. The control station option shall provide the following:
 1. The control station shall be configured/equipped as a single unit containing the radio chassis and a DC power supply.
 2. The control station shall be provided with an outdoor permanently mounted antenna, associated coaxial cables and grounding.
 3. As an option a console style stations may be proposed.

2.8.6 Subscriber Radios - Multiband OPTIONS

- A. Respondents shall also provide pricing for all-band and portables and mobiles. All-band devices shall operate in the VHF, UHF, and 7/800 MHz bands and support P25 Phase1 and Phase 2 (FDMA and TDMA) trunking.

2.8.7 Subscriber Radios - Programming Equipment

- A. The Contractor shall also include three (3) full sets of programming equipment to support the proposed subscriber radios. This includes programming cables and programming software. Respondents shall provide the PC requirements.

2.8.8 Subscriber Radios – Catalog

- A. Respondents shall provide a subscriber equipment catalog detailing list pricing for all proposed subscriber equipment and the various software and hardware options available for each subscriber device.

2.9 Optional Components

- A. As an OPTION, Respondents shall provide proposed solutions for the system components included within this Section.

2.9.1 Over-The-Air-Rekeying (OTAR)

- A. The system shall be provided with the appropriate hardware, software and licenses for subscriber devices to “rekey” encryption keys “over the air”.
- B. The proposal shall detail the specifications of the OTAR feature to include but not be limited to OTAR operation, key capacities and hardware/software/licenses required to support the OTAR feature.
- C. The Network Management Terminal shall be provided with the appropriate software and licenses to provide the OTAR service.

2.9.2 Smartphone/Broadband Device Integration

- A. The smartphone/broadband device integration solution (SPBBI system) shall integrate voice and data communications between County P25 radio system users and County users with broadband devices and/or smartphone applications.
- B. The SPBBI system shall provide Push-to-Talk (PTT) communications operating over private and public Wi-Fi networks, 3G/4G carrier networks, and FirstNet’s 4G LTE network.
- C. The SPBBI system must support both carrier integrated PTT over cellular (PTToC) operations and over the top PTTToC operation on carrier networks as well as private and public Wi-Fi networks.

- D. The SPBBI system shall support management of the following features and functions:
1. Quality of Service
 2. PTT Call Priority
 3. Preemption
- E. The SPBBI system server hardware shall be implemented using high-reliability internally redundant processor platforms.
- F. The SPBBI system may operate in a virtualized environment, providing the hardware providing that environment meets this requirement.
- G. As an OPTION, the SPBBI system may use separate redundant servers.
- H. The SPBBI system shall support reporting and display of location information for broadband and smartphone user devices.
- I. The SPBBI system shall provide an interface to an audio recording and retention (logging recorder) system, meeting the legal and operational requirements of County
- J. The SPBBI system shall employ compliant open standards for encryption and authentication, subject to applicable County policy.
- K. The SPBBI system shall include the necessary hardware, software, and licensing to provide TIA-102.BACA (P25 ISSI) network-level communications and the following P25 supplemental services:
1. Group calls
 2. Individual calls
 3. Emergency calls
 4. Call alert
 5. Radio check
 6. Radio detach
 7. Radio inhibit/uninhibit
 8. Radio unit monitor

9. Short message

10. Status query

- L. The SPBBI system shall provide end-to-end, 256-bit AES encryption from P25 system users to smartphone and broadband devices as well as to P25 system dispatchers without transcoding.
- M. The SPBBI system shall support a minimum of 10 simultaneous P25 group calls.
- N. The SPBBI system shall support Android™, Windows®, and iOS™ mobile platforms.
- O. The SPBBI system shall support Android™, Windows®, and iOS™ tablet and/or desktop platforms.
- P. The SPBBI system shall support managed group and PTT communications utilizing commercially available smartphones

2.9.3 Unit Location (GPS) Interface

- A. The system shall include any gateway, server and terminal equipment required to enable unit locations services based upon GPS location transferred over the trunked system using the P25 Tier 2 GPS standard.
- B. The Proposer shall define the full feature set provided by the proposed/provided interface.
- C. The system shall support units reporting location once every 5 minutes.
- D. The system shall be fully compatible with applicable P25 GPS/Location standards.
- E. This interface shall provide access to all location data generated by the user units equipped and activated with GPS receivers.
- F. The P25 GPS/Location information shall be provided on CAD workstations as well as a provided dedicated terminal located in the dispatch center.
- G. The P25 GPS/Location terminal shall provide location information, audible and visual alerts upon subscriber units activating emergency alarms.
- H. This interface shall allow the execution of commands related to the collection of location information:
 - 1. Requesting a location update

2. Establishing location poll rates
3. Adjusting location poll rates
4. Selecting units for "fast-polling"
5. Disabling location polling and updates
6. Proposers shall detail how the proposed GPS unit location solution will support public safety personnel.
7. The existing CAD system information is as follows:
 - a. Manufacturer: Colossus, Incorporated (Caliber Public Safety)
 - b. Model: Caliber CAD NG
 - c. Software Version: 10.21.3.128

2.9.4 Vehicular Extender

- A. Vehicular Extender shall be of high quality and provides high reliability in severe environments.
- B. Vehicular Extender Equipment shall comply with applicable requirements of Part 90 and Part 15 of the FCC Rules and Regulations, as well as appropriate TIA/EIA and similar standards and shall be FCC type accepted in accordance with FCC Part 90 rules and regulations for the specific application.
- C. The Vehicular Extender shall interface to a P25 Phase 2 Trunked mobile unit, providing connection to radio frequency (or pair) separate from the network, allowing voice traffic to be exchanged between the P25 Phase 2 Trunked network and subscriber radio units in the vicinity of the Vehicular Extender.
- D. The Vehicular Extender shall operate on the 700/800 MHz public safety radio bands.
- E. The Vehicular Extender shall operate in the following modes:
 1. On simplex channels in conventional mode
 2. On duplex channels in conventional mode
 3. On both simplex and duplex channels in conventional mode
 4. In analog conventional mode

5. In P25 conventional mode
 6. Selectable for both analog and P25 mode.
- F. The Vehicular Extender shall provide a minimum of 2 Watts RF output.
- G. The Vehicular Extender shall have receive sensitivity appropriate for balanced operation with a portable radio of similar power
- H. The Vehicular Extender shall be provided as a fully functional package with antenna, mounting, all interface cables and ancillary equipment required
- I. The Vehicular Extender shall be provided with all programming software and cables equipment required to program from a standard PC or laptop.

2.9.5 Inter-RF Subsystem Interface

- A. As an OPTION, the System shall include all new hardware and software to support one Inter-RF-SubSystem Interface (ISSI) connection to another P25 radio system with the capacity for 20 concurrent conversations.
- B. The following features shall be supported between the new system and the ISSI interconnected system:
1. Automatic (hands-free) roaming to both systems
 2. Confirmed group call
 3. Unconfirmed group call
 4. Announcement group call
 5. Emergency group call
 6. Individual Call
 7. Priority call (with and without preemption)
 8. AES encryption
 9. Call alert
 10. Emergency alarm
 11. Emergency clear
 12. Unit ID

- C. The ISSI equipment shall allow a talkgroup from another P25 system that is interconnected to the County's system via ISSI to be patched via a console-initiated patch to a talkgroup on Paducah/McCracken system.

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3. Microwave Backhaul System

This Section describes the general, functional, and operational requirements of the desired microwave radio backhaul system for system architecture and performance including redundancy, capacity, and path availability.

3.1 General Requirements

- A. The microwave backhaul system shall be configured using a ring topology to provide route diversity and minimize single-points-of-failure.
- B. The Contractor shall be solely responsible for the new microwave backhaul system performing as specified in this RFP and to be compliant with all new or modified FCC radio station licenses.
- C. All microwave links within a ring shall be configured for loop protection.
- D. All component models shall have been fully tested in the field, having a proven service history of over 3 years in public safety radio systems.
- E. The microwave backhaul system shall utilize MPLS technology.
- F. Manufacturers that supply components for the system must have a proven and known supply chain to serve the County for the lifecycle of the network.
- G. Software and firmware updates must be thoroughly regression tested prior to release and implementation. Software updates must include release information identifying the changes made, either to repair a problem or enhancements made.

3.2 System Performance Requirements

- A. Microwave links shall be designed for a minimum two-way end-to-end annual availability of 99.999% at a bit error rate (BER) of 10^{-6} , at a minimum capacity of 150 Mbps. Proposers to detail potential cost savings by choosing to implement capacity that supports only the P25 radio system and associated solutions.
- B. All microwave channels shall be licensed for a minimum of 30 MHz bandwidth.
- C. Microwave radios shall deliver two-frequency, full-duplex operation. Space diversity configurations are acceptable, if necessary, to meet path availability requirements.
- D. Contractor shall specify frame loss, packet latency, and jitter performance of the microwave backhaul network and ensure that such performance will meet the requirements for the proposed System.

3.3 Microwave Backhaul Equipment

3.3.1 Microwave Radios

A. All microwave radios shall:

1. Be 19" rack mountable.
2. Be type accepted for licensing under Part 101 of the FCC Rules and Regulations.
3. Utilize all-indoor architecture.
4. Support built-in error detection and correction.
5. Be equipped for Adaptive Coding and Modulation (ACM) with a range of modulations from QPSK to 256QAM or higher, to allow the radios to automatically adjust the modulation during path fading to prevent total loss of communications. Switching between modulation rates shall be error-free for all traffic.
6. Be equipped for -48 VDC operation and have redundant power supply cards.
7. Have a minimum mean time between failure (MTBF) of 20 years.
8. Provide sufficient transmit output power to meet the requirements of each link and comply with frequency coordination limitations and applicable FCC rules.

3.3.2 Microwave Radio Antennas

A. Microwave radio antennas shall:

1. Be compatible with the radio frequency bands used and conform to applicable FCC requirements.
2. Be solid, parabolic, Category A antennas with radomes in accordance with FCC Part 101.115. Shielded antennas shall be used as required by frequency coordination.
3. Be of size and type to meet the specified path availability requirements.
4. Be equipped with two azimuth/stabilization rods for 8-foot diameter antennas or larger and one for 6-foot diameter antennas, tying the antenna rim to the

tower steel (not tower cross members). Azimuth/stabilization rods are not required for 4-foot diameter and smaller antennas.

5. Be protected from falling ice through use of ice shields.

B. Microwave antenna systems shall utilize:

1. Mounting hardware designed specifically for the size and type of antenna mount structure, and the type of antenna used. Make and model numbers for all antenna mount hardware shall be provided to County for approval prior to beginning installation.
2. Pressurized elliptical waveguide for from the antenna to all indoor mount radios. Connectors shall be standard, premium type, and compatible with the antenna.
3. Solid corrugated copper outer conductor coaxial cable for split and all-outdoor mount radio configurations.

C. The Contractor shall furnish a dehydrator/pressurization system at sites with full-indoor microwave radios that is:

1. Capable of maintaining at least 5 pounds per square inch gauge (psig) positive pressure of conditioned air in the elliptical waveguide. Individual pressure gauges with valves on a distribution manifold shall be provided for each transmission line.
2. Manually adjustable without the need for software or removable media.
3. Equipped with a run alarm and high and low-pressure alarms.

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4. Site Development

4.1 Existing Site Improvements

- A. The Contractor shall be responsible for site improvements based on deficiencies discovered through the site surveys.
- B. Refer to Appendix B for available information on existing sites. The Contractor shall verify all data.
- C. The Contractor shall verify that all sites selected for use have sufficient space available for antenna and ancillary equipment to be mounted on the tower/structure.
- D. The Contractor shall perform structural analyses on all existing towers selected for their design. If no current drawings are available, the Contractor shall provide all tower mapping services required for the structural analysis.
- E. Structural analysis shall be performed on existing towers according to the ANSI/TIA-222 standard, latest version applicable at time of structural analysis.
- F. Structural analysis shall include existing and proposed equipment; however, it is the County's intent that the Contractor remove unused system equipment once cutover and acceptance of the new system is completed.
- G. Tower foundation analysis shall also be included in the structural analysis.
- H. Structural analysis reports shall be provided to the County upon completion of study or studies.
- I. In the event a tower and/or foundation fails the structural analysis, the Contractor shall be responsible for providing a tower and/or foundation modification design detailing the modifications required to provide a passing structural analysis.
- J. If an existing commercial tower location is selected, the Contractor shall provide the County with lease costs for tower space and ground space required to support the new LMR systems and microwave backhaul. Additionally, the Contractor shall exercise due diligence to verify availability of the tower elevations proposed and that the tower can support the new equipment.
- K. The Contractor shall identify and propose any additional work necessary to make existing County-owned and non-County-owned sites and infrastructure usable in the new LMR and microwave backhaul systems.

- L. The Contractor shall be responsible for updating all existing sites that are part of the new LMR and microwave backhaul systems to be compliant with their selected grounding and lightning protection standards. The Contractor shall be accountable for updating all deficient site conditions.
- M. The Contractor shall be responsible for completing any documents required by local, state and federal departments including, but not limited to permitting documents and State Historic Preservation Office (SHPO) forms.
- N. The Contractor shall be responsible for any issues related to site selection and will be responsible for resolving any issues related to site permitting or zoning.
- O. Code Compliance:
 - 1. Installation of all electrical equipment, power distribution, lighting assemblies and associated wiring shall comply with the most recent edition of the National Electric Code (NEC) and Occupational Safety and Health Administration (OSHA) regulations.
 - 2. All electrical equipment shall be listed or approved by Underwriters Laboratories (UL).
 - 3. The Contractor shall comply with all applicable local codes as well as industry best practices and guidelines stipulated in Section 1. 1. 1, Standards and Guidelines.
- P. The Contractor shall assume total responsibility for maintaining liability insurance covering the following items:
 - 1. Project design
 - 2. Implementation
 - 3. Licensing
 - 4. Shipping
 - 5. Receiving
 - 6. All site work required
 - 7. Any items required for the Contractor or any required subcontractors
- Q. The Contractor shall coordinate with utility companies for all utility related items, such as electrical service hookups and disconnects.

4.2 Self-Supporting Tower

4.2.1 General

- A. If required, the Contractor shall supply a new self-supporting tower for new and/or existing sites.
- B. The Contractor shall supply and install the necessary hardware to mount the new antenna systems at the proposed sites and heights.
- C. The Contractor may recommend reuse of existing towers based on the site survey findings and structural analysis results. The County shall approve reuse of any existing tower structure.
- D. Should a new tower structure be required at any site in the Contractor's design, it shall comply with the requirements of this section.

4.2.2 Design Criteria

- A. The design shall be based on the minimum wind and ice requirements as specified for Class III structures in TIA -222 Standard current revision.
- B. Each tower and foundation shall be designed for all equipment, appurtenances, ancillary equipment, antenna loading and be designed up to 75% capacity with all proposed equipment installed.
- C. The tower shall be manufactured as a self-supporting lattice or a monopole design.
- D. All structural steel and hardware shall be galvanized after fabrication in accordance with the appropriate standards.
- E. All tower materials shall be hot dip galvanized after fabrication; with a minimum zinc coating of 2 oz. per sq. ft.
- F. Bolts shall be hot dip galvanized according to American Society for Testing and Materials (ASTM) A-325 or the latest version of this standard.
- G. The make, model, serial number, and height of the tower shall be clearly labeled at the base of the tower. Labeling shall be weatherproof and durable such as a stamped metal plate or equivalent.

4.2.3 Waveguide Support

- A. There shall be a ladder type support system associated with the tower to mount the transmission cables.

- B. In the case of a monopole, transmission lines will be routed internally. This support shall comply with tower and cable manufacturer's installation specifications.
- C. The support system shall accommodate cable or waveguide mounting hardware at the proper intervals.
- D. The support shall be equipped with precision punched or drilled holes to allow installation of snap-in type or bolt-in hangers.
- E. The support system shall be sized for at least 25% growth beyond initial system implementation.
- F. The support materials will be of similar construction as other tower materials to appear integral to the structure.
- G. The support shall be designed to meet rigidity specifications similar to the tower.

4.2.4 Waveguide Bridge

- A. The tower shall be equipped with a waveguide bridge with support posts spaced at intervals compliant to the wind loading specifications, but not more than 10 feet apart.
- B. The bridge shall be designed to support all initial antenna transmission lines plus a minimum of 25% growth capacity.
- C. The structure shall comply with the tower wind and ice requirements as specified in TIA -222 Standard current revision.
- D. The Contractor shall furnish and install the waveguide bridge between the tower and equipment shelter.
- E. The following criteria shall govern the design of the waveguide bridge:
 - 1. Structurally sturdy to support live and dead loads
 - 2. Free standing (i.e., not attached to the shelter or tower)
 - 3. Minimum width of 2 feet
 - 4. Length/height as required by the site specifics
 - 5. Bridge/ice shield material shall be fabricated from galvanized bar grating or approved equivalent

6. All components of the waveguide bridge shall be hot-dipped galvanized after fabrication
7. Posts shall have galvanized caps
8. Posts shall be set in concrete foundations.
9. Waveguide bridge shall be adjustable in height to allow interface with shelter waveguide entry ports

4.2.5 Climbing Equipment

- A. The tower shall be equipped with an approved climbing ladder and safety device.
- B. The climbing ladder may be integrated into the structural components of the tower.
- C. There shall be a climbing safety system compliant to original manufacturer's specifications.
- D. The equipment shall comply with TIA-222 current revision.

4.2.6 Lighting System & Control

- A. The Contractor shall furnish and install an obstruction lighting system approved by the FAA and compliant with applicable standards if the tower is over 200' AGL or, if required by the FAA due to proximity of the tower to nearby airport(s).
- B. If required, the lighting system shall include:
 1. Controller
 2. Lamps (LED)
 3. Lightning protection
 4. Mounting hardware
 5. Service cabling and conduit
 6. Conduit drain-breather system
 7. Wiring
 8. Other material required for a complete installation

- C. The lighting system shall be controlled by a 120-volt AC, single phase solid state control unit and power supply.
- D. The control unit shall be installed within a NEMA 3R metal cabinet or a NEMA 4X cabinet. The control unit shall be mounted inside the equipment shelter.
- E. The lights shall be automatically controlled by means of a photoelectric unit. The control unit shall be designed with relays for:
 - 1. ON-OFF status of lights
 - 2. Control unit failure
 - 3. Light failure
- F. The lighting system shall automatically revert to back-up power source upon loss of primary power. The lighting system shall automatically reset upon power restoration of primary power.
- G. The controller shall include a test switch allowing simulation of daytime and nighttime modes.
- H. All tower lighting wiring shall be contained within rigid galvanized conduit, junction boxes, and lighting equipment housings.
- I. Vertical conduit runs shall be adjacent to the tower waveguide supports.
- J. All levels of lighting shall be clearly visible from any direction of approach to the tower.
- K. The photoelectric unit shall be installed in a moisture-proof protective metal or high impact plastic housing.
- L. The photoelectric unit shall be installed on the building in an inconspicuous location and adjusted to attain an unobstructed view of the NNE sky.
- M. The photocell shall be mounted such that it is not affected by artificial light.
- N. Photocell wiring shall be installed entirely within rigid galvanized conduit.
- O. Ice shields shall be installed for all lighting system fixtures except for the top most light.

4.3 Equipment Shelter

4.3.1 General

- A. If required, the Contractor shall supply a new equipment shelter for existing sites.
- B. The Contractor shall supply a new equipment shelter for all new sites.
- C. The Contractor may recommend re-use of existing shelters based on the site survey findings. The County shall approve re-use of any existing shelter.
- D. Should a new equipment shelter be required at any site in the Contractor's design, it shall comply with the requirements of this section.

4.3.2 Shelter Size

- A. The minimum exterior shelter dimensions shall be 12' x 16'. Minimum interior height shall be 9'.

4.3.3 Shelter Design and Construction Requirements

- A. Where possible, the shelter shall be a prefabricated, preassembled concrete shelter.
- B. If any site will not accommodate a prefabricated shelter, the County will consider site assembly and other shelter types.
- C. The Contractor is responsible for all costs, permits and approvals required to transport the shelter to the site and for assembling and constructing the shelter at the site.
- D. In addition to all applicable codes and standards, the Contractor shall design the shelter to meet or exceed the following structure requirements:
 - 1. 200 pounds per square foot distributed floor loading while on foundation
 - 2. 125 pounds per square foot distributed floor loading while lifting
 - 3. 200 pounds per square foot minimum roof load and a concentrated load of at least 500 pounds per square foot
 - 4. Minimum wind requirements as specified in Dawson County, VA zone in TIA 222 Standard current revision
 - 5. Vents and entryways shall be constructed to deter vandalism

6. Vents and entryways shall be constructed to prevent entry of rodents
7. Waterproof

4.3.4 Exterior Finish

- A. The exterior finish of the shelter shall be exposed aggregate.

4.3.5 Bullet Resistance

- A. Shelter walls shall be capable of stopping 30.06 rifle fires per UL 752 requirements.

4.3.6 Fire Rating

- A. Shelter walls must provide a two-hour fire rating.

4.3.7 Insulation and Interior Finish

- A. Walls and ceiling must be insulated to a minimum value of R-11.
- B. Interior walls and ceiling must be sheathed with ½ inch white Nu-Poly® or similar board.
- C. Shelter walls must be reinforced as required to support wall mounted equipment.
- D. Floor will be covered with light colored industrial grade vinyl tile floor covering.

4.3.8 Exterior Door

- A. The shelter shall be equipped with a 42 inch by 84 inch door.
- B. The door shall have a bullet resistance rating that complies with levels 1-4 of UL 752 ballistic standards.
- C. Door, frame and frame components shall be painted or otherwise treated to be rust-proof.
- D. Each door shall as a minimum be equipped with the following hardware and accessories:
 1. A continuous stainless-steel hinge the entire length of the door
 2. Neoprene weather strip
 3. High security locking cylinder latch set

4. Mortised dead bolt
5. Anti-pick plate on strike of door to restrict access to the latch and deadbolt
6. Hydraulic closer
7. An exterior mounted canopy to protect the door entry shall be designed to support a load of 100 pounds per square foot

4.3.9 Power Distribution

A. Power distribution shall include the following:

1. One MOV/SAD only lightning arrester, Type 1.
2. One MOV lightning arrester, Type 2.
3. One (60 Amp) enclosed circuit breaker for safety disconnect of TVSS unit.
4. One (200 Amp), 10,000 AIC, 120/240 VAC, single phase, 60 Hz, 30 space main breaker, snap-in utility power distribution panel, in a NEMA 1 surface mount enclosure.

B. Circuit breakers for all communications system equipment and customer loads as specified.

1. One (200 Amp), 240 VAC, fused, double pole, single throw safety switch.
2. One (200 Amp), 240 VAC, non-fused, double pole, double throw manual transfer switch.
3. One (200 Amp), four-pin, reversed service exterior power receptacle.
4. Six 20 Amp specification grade duplex receptacles.
5. One 20 Amp specification grade exterior ground fault duplex receptacle.
6. Ten 20 Amp ceiling or cable tray mounted NEMA twist-lock receptacles with matching plugs.

C. All wiring shall be installed in surface mounted conduit or NEMA wire ways and be in full compliance with ANSI/NFPA-70 - The National Electric Code, latest version.

4.3.10 Lighting

- A. Equipment shelter lighting shall be energy efficient and generate low heat levels. Acceptable lighting shall be long lasting energy efficient technologies, such as light emitting diodes (LED) or fluorescent.
- B. Equipment shelter lighting shall comply with the U.S. defense standard MIL-STD-461E or most current version for low radio frequency interference (RFI) lighting fixtures.
- C. There shall be sufficient interior lighting to provide a level of 540 Lux (50-foot candles at 1 meter (39.4 inches) above the equipment shelter floor. Refer to TIA-569-B or most current version standard for additional information.
- D. Placement of equipment shelter lighting shall assure illumination in front of and behind tall equipment racks (within aisle ways; not directly above equipment racks).
- E. Light fixtures shall employ earthquake bracing.
- F. Interior lighting control switches shall be located near the non-hinged side of the entrance door to the equipment shelter. One switch shall control a single lighting fixture and the second switch shall control the remaining lighting fixtures. Refer to NFPA, NEC 70-2011 (or latest edition) Article 410 - Luminaries, Lamp Holders, and Lamps for additional information.
- G. Interior emergency backup lighting units shall be installed and activate immediately upon failure of all AC power. The emergency backup lighting shall also be equipped with an illuminated "Exit" sign mounted above the exit door of the equipment shelter indicating exit locations in the equipment shelter during emergency evacuation.
- H. Exterior lighting shall illuminate points-of-exit and entry into the site compound and the equipment shelter and be located to the side of the entrance way and above door level.
- I. Each equipment shelter shall have light-emitting diode (LED) exterior lighting fixtures with cutoff housings that limit the beam top to 35° below horizontal, and protection from falling ice.
- J. Each shelter shall have a combination photoelectric/motion switch that provides for automatic illumination at sunrise or when motion is detected, and extinguishment of the exterior equipment shelter lights at twilight.

- K. Each exterior light equipped with a combination photoelectric/motion switch shall also have a photoelectric /motion bypass switch installed at the same location as the interior lighting control switches.

4.3.11 Heating, ventilation, and Air Conditioning (HVAC)

- A. Heating, ventilation, and air conditioning (HVAC) shall be redundant wall mount air conditioning units, with low ambient and compressor anti-cycle controls, integral 5 kW resistance heat strips and washable dust filters.
- B. Contractor will ensure HVAC is sized correctly with equipment heat loads and include the following features:
 - 1. Redundant lead/lag controls allowing approximately equal operating time on each air conditioning unit
 - 2. Active dehumidification controls that modulate heat and air conditioning operation to control high humidity conditions
 - 3. One exhaust fan system, including motorized intake and exhaust louvers, thermostat, fiberglass hoods, permanent expanded metal dust filter and exhaust insect screen

4.3.12 Site Alarms

- A. Any change in the state of site equipment shall induce an alarmed state.
- B. Equipment monitored shall include, but not be limited to the following:
 - 1. Surge arrestors
 - 2. Transfer switch (normal or bypass state)
 - 3. Power fail
 - 4. HVAC
 - 5. Smoke detector
 - 6. Intrusion detection
 - 7. High temperature
 - 8. Low temperature
 - 9. High humidity

10. UPS/DC Power Plant fail
11. UPS state (normal or bypass)
12. Generator (including, e.g., generator run, low fuel, high temp, and fail)
13. Generator not in auto
14. Propane fuel level low
15. Tower lighting alarms

C. To reduce false alarms, all alarm contacts shall be normally closed when no alarm is present.

4.3.13 *Grounding*

A. Shelter grounding shall be compliant with the Contractors' choice of industry best practices for system installation, grounding, bonding, and transient voltage surge suppression (TVSS), as selected from the list contained within Section 1.3 *Standards and Guidelines* Item C.

4.3.14 *Entry Ports*

A. Cable entry ports shall consist of one – minimum eight-port/waveguide entry panel with 4 inch sleeves and protective blank covers.

4.3.15 *Cable Ladder*

A. The Contractor shall supply and install up to 40 feet of 18-inch-wide cable ladder/tray.

4.3.16 *Telco Board*

A. The Contractor shall supply one 4 foot x 6 foot x $\frac{3}{4}$ inch Telco board.

4.3.17 *Accessories*

A. The Contractor shall provide the following accessories:

1. One portable 10 pound CO2 fire extinguisher
2. One hand-held emergency eye wash station
3. One first aid kit

4. One service manual
5. One smoke detector

4.3.18 Drawings

A. The Contractor shall:

1. Provide two sets of shelter drawings with each shelter.
2. Supply typical foundation drawings based on Presumptive Soil Parameters specified in the TIA -222 Standard current revision.
3. Validate all foundation design parameters and assumptions for the specific site prior to construction.
4. Supply support calculations for recommended building tie down locations.

4.3.19 Generator Plug

- A. The shelter shall include a wall penetration for exterior weatherproof generator plug, to accommodate the use of a mobile generator.
- B. The location of the penetration and the type of exterior generator plug that is to be installed in the penetration will be coordinated with the County prior to manufacture of the shelter.

4.4 Site Generator

4.4.1 General

- A. If required, the Contractor shall supply a new site generator for new and/or existing sites.
- B. The Contractor shall supply and install new generators that comply with the Outdoor-Use Units specifications in UL 2200, latest edition.
- C. The Contractor may recommend reuse of existing generators based on the site survey findings. The County shall approve reuse of any existing site generators.

4.4.2 Power and Electric Requirements

A. Generator specifications include the following:

1. Fuel: Liquid Propane (natural gas or diesel may be provided as an option)

2. Output: 35 kW (minimum, and sized for the proposed system)
3. Phase: Single
4. Voltage: 120/240 VAC
5. Frequency: 60 Hz

4.4.3 Enclosure

- A. The generator enclosure shall be outdoor weather protective and securely attached to a foundation designed to the generator manufacturer's specifications.

4.4.4 Muffler Type

- A. The generator muffler shall be of residential critical grade including flexible exhaust section.

4.4.5 Control Panel

- A. The generator control panel shall be either analog or digital and capable of displaying the following:
 1. Oil Pressure
 2. Coolant temperature
 3. Fuel level (where applicable)
 4. DC battery voltage
 5. Run time hours
 6. Alarm Status
- B. The generator shall be capable of providing, at a minimum, the following alarm status information:
 1. High or low AC voltage
 2. High or low battery voltage
 3. High or low frequency
 4. Low or pre-low oil pressure

5. Low water level
6. Low water temperature
7. High and pre-high engine temperature
8. High, low and critical low fuel levels (where applicable)
9. Over crank
10. Over speed
11. Unit not in "Automatic Mode"

4.4.6 Miscellaneous

- A. Generator will be supplied with block heater, battery charger, and meet NFPA99 and 110 requirements.
- B. Fuel tanks shall be sized to accommodate for a 7-day run time with a minimum size of 500 gallons.
- C. The Contractor shall be responsible for generator installation, test, and first fill of all fuel tanks.
- D. Fuel tanks shall be equipped with monitoring device capable of triggering an alarm contact upon low fuel. Low full threshold shall be programmable.
- E. Fuel tanks shall be securely attached to a poured concrete foundation.

4.4.7 Automatic Transfer Switch (ATS)

- A. The Contractor shall install the ATS in the shelter prior to shelter shipment.
- B. ATS shall include a programmable exerciser capable of automatic starting and shutdown of generator on a weekly basis.
- C. ATS shall have a 200 Amp rating and enclosed in NEMA 1 enclosure.

5. System Implementation, Test and Acceptance

5.1 Project Management

- A. The Contractor shall attend project and construction meetings as deemed necessary by the County prior to and during installation. Additional meetings may be scheduled at the discretion of the County.
- B. If any changes in the overall timeline occur, the Contractor shall update the project schedule for discussion during these project meetings.

5.1.1 Project Staffing

- A. The Contractor shall provide the appropriate project staff based on workload and the level of effort required throughout the implementation/installation process.
- B. The staff identified in the Contractor's proposal shall serve the duration of the project unless the Contractor proposes an alternative plan to the County for consideration and gains approval. The County reserves the right to accept or reject any proposed staffing changes.
- C. The Contractor's project manager shall be:
 - 1. The primary point of contact for the County.
 - 2. Fully responsible for supervising and coordinating the installation and deployment of the communications system, including but not limited to:
 - a. Development and acceptance of the project management plan
 - b. Managing the execution of the project against that plan
 - c. Overseeing the day-to-day project activities, deliverables, and milestone completion
 - d. Coordinating, and facilitating weekly status meetings.
- D. The Contractor's project engineer shall:
 - 1. Have the primary responsibility for managing the system design and ensuring system installation in accordance with the approved system design. Any deviation from the proposed system design shall be subject to project change control procedures and will not be undertaken until approved by the County.

2. Ensure the accurate development of block diagrams, system-level diagrams, and rack diagrams.
3. Supervise the development and execution of:
 - a. Acceptance Test Plan (ATP)
 - b. Coverage Acceptance Test Plan (CATP)
- E. Guide the project team through the processes and procedures necessary to prove that the system performs as specified in the contract. The County shall approve all test plans prior to execution.

5.1.2 Scheduling

- A. The Contractor shall develop and maintain a project schedule including tasks, milestones, start and end dates, task predecessors, and task owners based on an approved WBS.
- B. The schedule shall represent tasks associated with completing work on all items identified in the WBS.
- C. The Contractor shall update the project schedule with actual dates as tasks are completed.
- D. The Contractor shall present all schedule updates to the County during the weekly status meetings.
- E. The schedule shall address the following at a minimum:
 1. Site surveys
 2. Detailed design review
 3. Site preparation
 4. Equipment order and manufacturing
 5. Factory acceptance test
 6. Equipment delivery
 7. System installation
 8. System configuration

9. System optimization
10. Acceptance testing
11. Coverage testing
12. User training
13. System cutover
14. System documentation development and delivery
15. System and equipment warranty

5.1.3 Project Meetings

- A. The Contractor shall schedule a project kickoff meeting prior to the beginning of the project.
- B. The Contractor shall schedule weekly project status meetings following contract award and the initial kickoff meeting.
- C. Weekly status meetings shall continue throughout the duration of the project until the County issues final system acceptance.
- D. The Contractor shall be responsible for facilitating the weekly status meetings.
- E. The Contractor shall prepare and distribute meeting agendas to the County via e-mail on a weekly basis at least 24-hours prior to each scheduled meeting.
- F. Meeting agenda items shall include, as a minimum, the following items:
 1. Schedule review
 2. Status of deliverables
 3. Risk items and planned responses
 4. Proposed changes
 5. Plans for the next period
 6. Action item assignments
- G. Punch list review

- H. The Contractor shall provide written minutes of all meetings no later than five business days after the meeting.

5.1.4 QA/QC Plan

- A. The Contractor shall submit the QA/QC plan for review during preliminary design as described in this section.

1. The QA/QC plan shall address all stages of the project, including, but not limited to:
2. Procurement
3. System design
4. Installation
5. Implementation
6. Testing
7. Cutover

- B. The QA/QC plan shall:

1. Describe the plans and procedures that ensure compliance of the proposed system design with the RFP requirements.
2. Be included in the project management plan developed by the Contractor's project manager.
3. Be an integral part of the project.
4. Include the County personnel as part of the review and approval process for all deliverables and submittals.
5. Address the following project tasks at a minimum:
 - a. Design analysis and verification
 - b. RF coverage analysis and verification
 - c. Design changes and document control
 - d. Material ordering, shipping, receiving, and storage
 - e. Site preparation (if required)

- f. Field installation and inspection
- g. Equipment inventory and tracking
- h. System testing and validation
- i. Software regression testing
- j. Deficiency reporting and correction
- k. Implementation and cutover
- l. Training and certification

5.1.5 Project Punch List

- A. The Contractor shall establish and maintain a punch list, as mutually agreed to with the County. The punch list shall be maintained in real time.
- B. The punch list shall address all open issues including those related to sites, facilities, equipment, and acceptance tests.
- C. The Contractor shall distribute the punch list to the County weekly via e-mail.
- D. The punch list shall include the following at a minimum:
 - 1. Sequential punch list item number
 - 2. Date identified
 - 3. Item description
 - 4. The party responsible for resolution
 - 5. Expected resolution date
 - 6. Resolution date
 - 7. Details about how each punch list item was resolved and tested
 - 8. Notes about the item
- E. If the Contractor receives written permission from the County to transfer the responsibility of an item to another person or group, the Contractor shall add a new entry to the punch list and appropriately note the original entry.

- F. The Contractor shall be responsible for reviewing each punch list item and advising the County of any changes.
- G. The Contractor shall update the status of punch list items during each weekly status meeting.

5.2 Frequency Coordination and Licensing

- A. The County currently operates on VHF and will provide all current licensing information to the Contractor following contract award.
- B. The County anticipates a transition to 700 MHz for the proposed P25 system and retaining the use of VHF for the paging/interoperability overlay channel.
- C. The Contractor shall:
 - 1. Provide all FCC and frequency coordination modifications and applicable forms to the County for review and approval following approval of the preliminary design.
 - 2. Complete all engineering tasks required for channel search/identification, coordination and licensing of all new LMR and microwave channels and the modification of existing licenses, which are required for the new system, including the completion of all forms and submission of license applications to the FCC.
 - 3. Track all applications and filings with the selected frequency coordinator and/or the FCC.
 - 4. Respond to any questions by the selected frequency coordinator and/or the FCC regarding all applications and filings.
 - 5. Correct and resubmit any applications or filings by the selected frequency coordinator and/or the FCC for the modification of licenses or re-licensing of existing channels at no additional cost.
 - 6. Complete Federal Aviation Administration (FAA) forms as necessary.
 - 7. Complete all required FCC construction deadline notifications.
 - 8. Ensure compliance with the FCC's Maximum Permissible Exposure (MPE) requirements.
 - 9. Provide copies of each license to the County.

5.2.1 Intermodulation Interference

- A. The Contractor shall analyze all transmitters at each site for intermodulation interference, considering transmitting equipment from all tenants located at the sites as identified in FCC license information.
- B. If the Contractor identifies an intermodulation problem prior to, during, or following implementation, the Contractor shall resolve the issue without degrading system coverage or performance for a period of up to 12 months after System Acceptance and at no cost to the County.
- C. Transmitters at each site shall meet FCC Maximum Permissible Exposure (MPE) standards (per latest revision of FCC Office of Engineering and Technology (OET) Bulletin 65).
- D. All transmit signals from all tenants located at the site, per FCC licensed information
- E. The Contractor shall mitigate causal and occupational exposure at locations that exceed MPE standards
- F. Fencing, signage, and/or other techniques shall be approved in advance by the County.

5.3 Site Surveys

- A. The Contractor shall participate in a mandatory site survey with the County to confirm actual equipment location within each space prior to the start of the system installation.
- B. Site Surveys shall be scheduled after the Kick-Off meeting and prior to Detailed Design Review.
- C. During the mandatory site survey, the Contractor shall determine and document any changes needed to the detailed design installation drawings. All detailed design drawings and documents requiring changes shall be revised and provided at the Detailed Design Review.
- D. The Contractor shall visit all sites to:
 - 1. Assess site, safety, and access conditions
 - 2. Verify work to be completed, including location of equipment and installation requirements

3. Assess the condition of existing radio shelters, radio towers, power systems, standby power systems, cable and waveguide routing, earthquake bracing, site grounding and lightning protection systems, and all other installation practices, to assure that they adhere to industry standard(s) listed in Section 1.1.1.
 4. Identify existing County equipment that can be reused on the new system
- E. The Contractor shall produce a Grounding Assessment report for each site, based on the standard(s) selected in Section 1.3. The report shall include at a minimum:
1. Cover page with site name, date of survey, survey team member(s), general site description, and selected standard(s) name and revision
 2. Accurate site coordinates (latitude/longitude) using Datum WGS84, preferably near the tower or antenna structure of interest
 3. Photographs (submitted in .jpeg format using the naming convention “site name photo description date.jpg”) of:
 - a. AC utility service grounding
 - b. Site ground ring (tower and shelter)
 - c. Ground rod test well(s)
 - d. Tower grounding (each leg)
 - e. Tower ground bar(s)
 - f. Tower guy wires
 - g. Transmission line grounding kits
 - h. Ice bridge grounding (all sections and legs)
 - i. Exterior ground bar(s)
 - j. Exterior RF entry port grounding
 - k. Interior RF entry port grounding
 - l. Interior halo grounding
 - m. Interior master ground bar(s)
 - n. Secondary ground bar(s)

- o. RF surge suppressor grounding
 - p. Equipment rack grounding
 - q. Cable ladders and trays
 - r. DC power systems
 - s. AC surge suppressors
 - t. Generator grounding
 - u. Fuel tank grounding
 - v. Fence(s) and gate(s)
 - w. Other nearby metal objects
- 4. Clamp-on meter measurements (in ohms) for each component assessed per the selected standard(s)
 - 5. A list of existing grounding equipment that can be reused for the new system
 - 6. A list of issues encountered or identified and proposed solution(s) for each deficiency
 - 7. A statement of the work to be completed for system implementation and the method to complete the work
 - 8. List of site upgrades, including recommended or optional requirements specified in the selected standard(s) for compliance with industry best practices

5.4 Microwave Path Design

- A. The Contractor shall conduct physical path surveys to identify type, location and height of potential path obstructions for verifying path clearance and performing path calculations.
- B. The Contractor shall perform an independent analysis of all radio paths to ensure that all radio paths will meet the path availability requirements.

5.5 MPLS Traffic Engineering and Router Configuration

- A. The Contractor shall:

1. Be responsible for all traffic engineering
2. Coordinate with the County to identify all applications, and to define all bandwidth, priority, QoS and CoS requirements for each application
3. Configure MPLS routers to support all system requirements
4. Develop a traffic management plan to accommodate existing TDM-based circuits and the transition to a system with predominately Ethernet-based circuits

B. MPLS monitoring and management/configuration/changes:

1. Remote Access
2. Firewall
3. Change Management

5.6 Detailed Design

A. The Contractor shall submit the Detailed Design package within 60 days after contract award, which shall include the following:

1. Any updates to previously submitted design information
2. Grounding assessment reports
3. A detailed description of the new LMR and microwave backhaul systems, including the function of all equipment and how they interact to meet the requirements of this RFP.
4. System block diagrams
5. Radio channel/frequency plan(s)
6. Radio coverage maps
7. Bandwidth requirements and calculations
8. IP addressing scheme and plan
9. Microwave path analysis results:
10. Path profiles
11. Path calculations, showing capacity, RSL, fade margin and availability

- B. Recommended antenna mount location and height
- C. Microwave backhaul architecture diagram showing the physical relationship and connectivity between the sites, and the frequency band of each link.
- D. Migration/Cutover plan:
 - 1. A preliminary cutover plan describing how the radio system will be phased over into a fully operational system.
 - 2. The Contractor shall successfully complete all tests and training prior to the actual cutover of systems.
 - 3. The Contractor shall provide the necessary labor to cutover from existing systems to the proposed system.
 - 4. The plan shall include the schedule and procedures associated with the transition of each operational user group. The plan shall specifically address how the existing users will begin using the new system with minimal operational impact.
 - 5. The plan shall provide detailed component or subsystem cutover plans, and specifically delineate between systems that affect and do not affect ongoing operations.
 - 6. The County reserves the right to approve and change the cutover plan as it relates to any or all system components.
- E. Coverage Acceptance Test Plan (CATP), complete with coverage overview, service area definitions and grid structures, talk-in and talk-out test procedures, County and Contractor responsibilities, and sample pass/fail sheet
- F. Sample factory testing documentation for each piece of equipment
- G. System installation, optimization, operation, and maintenance manuals for all equipment
- H. Blank site installation, grounding remediation, and optimization documents to be completed during and after installation and provided with as-built documentation
- I. Tower structural analysis, based on TIA-222 latest revision, showing results of passing or failed tower and/or foundation with existing and proposed antenna(s)
 - 1. Structural analysis for failed tower and/or foundation shall detail the required or recommended modifications for tower and/or foundation remediation

2. Sites without a completed structural analysis, tower mapping, and/or remediation pricing shall not be presented at Detailed Design Review
- J. Complete Detailed Design package for each site, consisting at a minimum the following content:
1. Cover page with site name, site type (control, multicast, simulcast, etc.), simulcast cell name (if applicable), technology (Conventional, P25 Phase 1, P25 Phase 2, etc.), frequency band, number of channels, and other pertinent site data if applicable (region, site ID, etc.), Google Earth site photo, accurate site coordinates, elevation, County name, ownership (land, tower, shelter),
 2. Index page with sheet titles, drawing descriptions, drawing versions, and page numbers
 3. Block diagram(s) showing entire network and any region- or subsystem-specific diagram
 4. Mobile and Portable Talk-in and Talk-out coverage maps
 5. Site plan showing existing and/or proposed site compound, tower(s), and shelter(s), all to scale and orientation
 6. Tower drawings (to scale and different elevations as needed) including tower type and height, number of legs, existing and proposed antenna and coaxial cable loading information, antenna center line heights, and any other equipment mounted on the tower
 7. Transitional and final floor plan drawings, including room layouts with doorways, existing and proposed rack location(s), cable trays, RF entry port(s), power system(s), HVAC unit(s), generator room(s), all to scale with interior and exterior dimensions and measurements of rack(s) to room/shelter walls and/or other surrounding equipment
 8. Equipment rack/cabinet elevation diagrams for radio/backhaul rack(s), combiner rack(s), and any DC power rack(s), with dimensions and rack unit locations
 9. Equipment room/shelter power drawing(s) showing how new equipment connects to AC or DC power systems, as well as backup generator and UPS systems
 10. Detailed electrical loading for AC and/or DC power systems (itemized by equipment types and quantities), as well as UPS and generator sizing and BTUs for HVAC for the entire site

11. Detailed antenna system drawings for proposed base station transmit and receive antennas, TTAs, GPS, and/or microwave dishes, complete with quantities, model numbers, and configuration/interconnection
 12. RF entry port drawing(s) showing existing and/or proposed entry ports, labels for existing and proposed transmission lines (color-coded by size), and quantity and types of lightning protection devices for
 13. Interior and exterior site grounding system drawings
 14. Site-specific frequency and combiner plans
 15. Network equipment interconnection drawings showing router and switch connections, with cables and port numbers labeled and color-coded
 16. Site-specific IP addressing scheme, showing host names, host addresses, subnet mask, equipment use/description, and configuration-specific notes
 17. Patching schedules and termination details for all cabling necessary for a complete record of the installation
 18. Location of demarcation points for any items to be provided by the County
 19. Site-specific bill of materials for all new equipment to be installed at the site
 20. Site remediation summary (with pricing) based on results from Site Survey report, Grounding Assessment report, and Structural Analysis report
- K. Draft Factory Acceptance Test Plan (FATP) outlining a comprehensive series of tests that will demonstrate proof of performance and readiness for shipment.
- L. Draft System Acceptance Test Plan (SATP) outlining a comprehensive series of tests that will demonstrate proof of performance after installation and optimization is complete.
- M. The Final FATP and Final SATP shall be submitted no later than 15 business days before the testing starts and shall be approved no later than five business days before the testing starts.
- N. Any other items as required or requested by the County prior to Detailed Design Review.
- O. All items required for detail design shall be submitted to the County 10 business days prior to the detailed design review meeting.

- P. A detailed design review meeting shall be conducted to allow the Contractor to present the system detailed design for review and approval.
- Q. The detailed design review shall be considered the last step prior to ordering and/or manufacturing of equipment. Upon approval of the detailed design by the County, the Contractor may begin the ordering and manufacturing of system equipment. The County shall not be held liable for any equipment ordered or manufactured prior to approval of the detailed design.

5.7 Staging

- A. Each individual assembly or equipment unit for the LMR and microwave backhaul systems shall undergo factory testing prior to shipment.
- B. The Contractor shall submit standard factory test documentation, documenting the tests performed and indicating successful completion of testing to the County.
- C. Staging shall be scheduled at a time when the sites are ready for equipment to be installed upon delivery from staging.
- D. System staging:
 - 1. The Contractor shall perform system staging and testing on the complete system at a location in the United States.
- E. The intent of the staging tests is to demonstrate to the County that the system is ready for shipment and installation.
- F. The Contractor shall provide all necessary technical personnel, and test equipment to conduct staging tests.
- G. All deviations, anomalies, and test failures shall be resolved at the Contractor's expense.
- H. The Contractor shall use an approved staging Factory Acceptance Test Plan (FATP).
- I. The Contractor shall successfully perform all tests before the County witnesses the official FATP and provide a copy of the test results.
- J. The Contractor shall provide a detailed agenda for the FATP one week before the County is onsite to witness the testing.
- K. The Contractor and the County shall jointly execute and date the FATP following completion of all tests.

- L. All tests in the FATP shall be marked as either pass or fail.
- M. The Contractor shall document all failed components.
- N. The Contractor shall correct and retest all failed components.
- O. The Contractor shall replace at its own expense failed components that are not repairable.
- P. The decision to retest an individual failed FATP tests or the entire plan shall be at the County's discretion.
- Q. The Contractor shall provide the County with the fully executed and complete FATP document.
- R. There shall be no deemed acceptance of the FATP.

5.8 Shipping and Warehousing

- A. The Contractor shall ship and warehouse all equipment and materials at its own expense. The County will not store equipment.
- B. The Contractor shall be responsible for transporting LMR and backhaul equipment to and from the Contractor's warehouse(s) and the County sites.
- C. The Contractor maintains all liability and risk for all equipment until system acceptance.

5.9 Tower Installation

5.9.1 General

- A. The Contractor shall:
 - 1. Furnish all materials, labor, equipment, and mounting hardware to provide a complete functional tower installation.
 - 2. Perform all operations required for the installation.
 - 3. Be responsible for all concrete work and excavation.
- B. All concrete work shall comply with manufacturer's recommendations, including temperature, slump and air content.

- C. Fresh field concrete specimens shall be taken for each concrete pour to allow for testing for weight and strength.
 - 1. One set of field-cured concrete specimens shall be tested for weight.
 - 2. One set of specimens shall be tested for compressive strength with the tests to be taken at 7 days and at 28 days.
 - 3. The results of these tests will be presented to the County.
 - 4. The compressive strength test shall be the average of the two specimens from the same composite sample.
- D. Tower documentation shall include construction, installation, and maintenance drawings.
- E. All drawings shall be approved by a Georgia registered Professional Engineer (PE).

5.9.2 Erection

- A. The foundation shall be allowed to cure for at least 7 days before erecting the tower.
- B. Manufacturer recommended bolts shall be used for all connections in accordance with the installation documentation.
- C. All bolts shall be equipped with self-locking nuts.
- D. Field reaming of coated metal components will be acceptable only upon determining there is no structural damage to the tower.
- E. Field remanufactured holes must be hot stick galvanized as specified and completely filled by the use of a larger diameter bolt.
- F. All bolts placed through slotted holes shall be equipped with flat washers.
- G. Mud, dirt, and other foreign matter shall be removed from the tower sections before erection. Special attention shall be given to cleaning the contact surfaces at joints before they are bolted together.
- H. When portions of the tower are ground assembled, such assembly shall be on rigid surfaces or blocking, which will provide support to prevent distortion of tower steel and damage to surface finish.

- I. All bolts shall be installed in all connections of ground assembled portions of the tower.
- J. Temporary bracing of tower members shall be used to avoid overstressing or distortion.
- K. The structure shall be erected plumb.
- L. The method of assembling and erecting shall be such that no member will be subjected to a load in excess of that for which it was designed.
- M. Extreme care shall be taken to establish and maintain the true geometric shape of the portion of the tower assembled.
- N. All connections must lie flat where bolted together.
- O. No gaps between butt flanges or connections are acceptable after the bolts are tensioned.
- P. Slings or other equipment used for picking up members or portions of the tower shall be of such material or protected in such a way as to not damage the tower section, the finish, or distort or overstress the tower when lifts are made.
- Q. Portions of the tower shall be raised in such a manner that no dragging on the ground or against other hard surfaces occurs.
- R. Damaged tower sections can be used if properly repaired.
 - 1. If a damaged portion cannot be repaired to the satisfaction of the County, it shall be replaced.
- S. For any galvanized surfaces, damaged for any reason, zinc-based solder repair shall be used.
 - 1. Solders in a rod form or a powder may be used.
 - 2. Surfaces must be cleaned using a wire brush or a light grinding action.
 - 3. Surface preparation shall extend into the surrounding undamaged galvanized coating.
 - 4. The thickness of zinc solder repair shall be equivalent to the originally specified hot dip galvanizing process.
 - 5. Repairs shall be performed in accordance with the solder manufacturer's instructions.

6. Only wrenches of proper size, which will not deform the nuts, nor damage the surface finish, are to be used.
 7. Standard ironworkers' 12-inch spud or 12-inch socket wrenches shall be used.
 8. Pipe extenders will not be permitted.
- T. During construction of the tower where required, the obstruction lighting fixtures shall be installed and operated at each required level as each such level is exceeded in height during construction.

5.9.3 Grounding

- A. The tower and all appurtenances shall be installed in accordance with Motorola R56, Harris 4Z/LZT 123 4618/1 R3A or MIL-STD-188-124B.
- B. All equipment mounted on the tower shall be properly bonded/grounded to the tower.
- C. All antenna systems shall be effectively grounded and provide surge protection to all equipment.
- D. All antenna transmission lines shall be properly bonded/grounded to the tower.
 1. At a minimum, transmission lines shall be bonded/grounded at the antenna base, at the base of the tower, and at the exterior ground bar located at the entry to the building.
 2. Additionally, transmission lines shall be bonded/grounded to the tower or cable ladders at intervals recommended by the manufacturer.
 3. Antenna transmission line ground conductors shall be bonded to the tower in compliance with standards.
- E. The site installation should have less than 5 ohms resistance between any connected point on the ground bus and earth ground.
- F. The Contractor shall test ground resistivity using the four-point method.
- G. The Contractor shall supply a ground test report that fully describes the testing method used.

5.10 System Installation

- A. Installation shall consist of a complete tested system to include placement of associated cabling, appropriate system layout, and terminal connections.
- B. The Contractor shall provide associated power supplies and any other hardware, adapters, and/ or connections to deliver a complete operable system to the County.
- C. The Contractor shall participate in a mandatory project site survey with the County to confirm actual equipment location within each space Prior to the start of the system installation.
- D. All detailed design drawings and documents requiring changes shall be revised prior to installation.
- E. The Contractor shall coordinate with others, as appropriate, to confirm that any preparatory work that affects the installation of the base station equipment, such as tower work, coring, bracing, conduit, and electrical, is complete before final inspection.
- F. The Contractor shall provide and pay for all materials necessary for the execution and completion of all work.
- G. Unless otherwise specified, all materials incorporated into the permanent work shall be new and shall meet the requirements of this RFP.
- H. All materials furnished and work completed shall be subject to inspection by the County.
- I. The Contractor shall be responsible for preparing and submitting the necessary applications for site permissions/access to install system equipment at non-County owned sites.
- J. The Contractor shall be responsible for any leases at non-County owned sites for temporary space needed during installation and cutover to the new system.
- K. The Contractor is responsible at all space-limited sites (not just leased sites) for planning, coordinating, supplying temporary shelter or site-on-wheels, moving/installing of existing and new equipment, and decommissioning of old equipment.
- L. Qualified, trained personnel experienced with this type of work, shall perform all installations.

- M. Equipment installation will be compliant with all applicable standards for seismic bracing.
 - 1. Equipment placement in racks or cabinets shall be such that heavier items are lower in the racks while lighter items are higher in the racks to minimize the effect of centrifugal forces and swaying during an earthquake.
 - 2. Bracing of equipment is required during unattended periods of construction.
- N. The Contractor shall not use equipment supplied as spares for installation of the proposed system.
- O. The Contractor shall clean all equipment and devices and repair all damaged finishes.
- P. The Contractor shall leave sites neat and broom swept upon completion of work each day.
- Q. The Contractor shall thoroughly clean all equipment shelter and building floors and remove all scuff marks and abrasions prior to acceptance.
- R. The Contractor shall remove all trash weekly.
- S. Inspection:
 - 1. The County shall conduct an inspection of the installations upon substantial completion.
- T. The County shall document any deficiencies on a single punch list and provide the punch list to the Contractor for resolution.
- U. Final acceptance testing shall not commence until all punch list items are resolved.
- V. The Contractor shall provide the County with all programming cables required for the programming or configuring of any provided piece of equipment.

5.11 Acceptance Testing

- A. Prior to testing, the Contractor shall:
 - 1. Verify and document that all equipment, hardware, and software are upgraded to the latest factory revision. Multiple revision levels among same equipment types are not acceptable.
 - 2. Provide two weeks written notice to the County that the system is ready.

3. Submit test plans for review and approval by the County.
- B. The Contractor shall provide all test equipment and miscellaneous cables, adapters and parts required to perform all testing specified in this RFP. All test equipment shall be calibrated prior to testing.
 - C. The Contractor shall utilize quality instruments in proper condition for all tests. Calibration records for all instruments shall be available at the site during all testing.
 - D. The Contractor shall perform all tests in the presence of County or a County-approved representative.
 - E. The Contractor shall submit all test schedules to the County for approval.

5.11.1 LMR Acceptance Testing

- A. Prior to final acceptance testing, the Contractor shall verify and document upgrades of all equipment, hardware, and software to the latest factory revision.
 1. Multiple revision levels among similar equipment are not acceptable.
 2. Contractor shall provide Paducah/McCracken with 2-weeks written notice that the System is ready for final acceptance testing.
- B. The Contractor shall use the completed and approved System Acceptance Test Procedure (SATP).
- C. The Contractor shall successfully perform all SATP tests before the County witnesses the official SATP.
- D. The Contractor and the County representatives shall jointly execute and date the SATP following completion of all tests.
- E. All tests in the SATP shall be marked as either pass or fail.
- F. The Contractor shall provide all necessary technical personnel and test equipment to conduct SATP tests.
- G. All deviations, anomalies, and test failures shall be resolved at the Contractor's expense.
- H. The Contractor shall document, correct, and retest all failed components.
- I. The Contractor shall replace at its own expense any failed component that is not repairable.

- J. Retest of individual failed SATP tests or the entire plan shall be at the County's discretion.
- K. The Contractor shall provide the County with the fully executed and completed SATP document.
- L. There shall be no deemed acceptance of the SATP.

5.11.2 *Microwave Backhaul Acceptance Testing*

5.11.2.1 *Antenna System Tests*

- A. The Contractor shall conduct return loss (RL) testing on all microwave antenna systems. The antenna system includes the antenna, waveguide and connectors.
- B. The measured return loss of the antenna system shall be 21 dB or greater over the specified frequency range of the antenna. For RL testing the Contractor shall:
 - 1. Perform RL tests after the antenna system has been installed, and prior to antenna alignment
 - 2. Include a copy of the RL trace in the Test Report
 - 3. If the RL of the antenna system is < 21 dB, perform a distance to fault (DTF) measurement to identify fault area(s)
 - 4. Make any repair or replacement required and repeat testing until a 21 dB RL is achieved over the specified frequency range of the antenna

5.11.2.2 *Microwave Radio Path Tests*

The Contractor shall perform the following tests for each radio path.

- A. Transmitter
 - 1. Measure and record the microwave radio transmit power at the center frequency of each radio at each modulation rate and verify it is within the expected tolerance.
- B. Measure and record the output frequency of each radio transmitter and verify it is within the specified limits.
- C. If either the transmit power or frequency are not within expected limits, investigate and correct the issue before beginning the tests described below.
- D. Receive Signal Strength

1. For each radio link, measure the RSL under no-fade conditions and verify that it is within 2 dB of the expected value. If the RSL is not within 2 dB of the expected value, investigate and correct the issue before beginning the remaining tests described below.
- E. Thermal Fade Margin (to confirm that the calculated fade margin matches actual performance)
1. Conduct this test after it has been verified that the expected RSL for normal link operation is present at both ends of the link.
- F. Fade the receiver using an external continuously variable vane attenuator (0 to 60 dB) in series with the receiver.
- G. Apply attenuation using the vane attenuator until the receiver reaches the 10^{-6} and 10^{-3} BER thresholds.
- H. The fade margin is equal to the amount of attenuation that was required to reduce the received signal level to the 10^{-6} and 10^{-3} thresholds. Record both values. The fade margin shall be no less than 2 dB lower than the calculated value.
- I. The Contractor shall remedy the source of degradation if the fade margin does not meet this requirement.
- J. Far-End Transmit Fade Test:
1. Fade the far end transmitter using a continuously variable vane attenuator and record the fade margin at the 10^{-6} and 10^{-3} BER thresholds. Note the difference between these fade margins and those achieved during the Thermal Fade Margin Test.
- K. Results for Thermal Fade and the Far-End Transmit Fade that differ by 3 dB or more may indicate possible interference or presence of dribbling errors emanating from the far end transmitter. If transmit dribbling errors are suspected, reduce the transmit power of the Power Amplifier (or bypass the PA) and repeat Far-End Fade Test. If the difference is 3 dB or more, remedy the source of the degradation and retest.

5.11.2.3 Packet Internet Payload Performance

- A. Long-term Ethernet Test - after successfully completing the Radio Path Tests, perform an RFC 2544 test, with the radio link at nominal RSL.

1. Begin generating Ethernet traffic at 100 Mbps, increasing the data rate until the test set indicates dropped packets, then reduce data rate until no packets are dropped for 10 minutes.
 2. Continue generating Ethernet traffic across the radio path for a minimum of 12 hours and show that there was no packet loss.
- B. If there is packet loss, identify and resolve the issue, and then repeat the test until there is no packet loss.

5.11.3 Coverage Testing

- A. The Contractor shall submit an initial Coverage Acceptance Test Plan (CATP) during the preliminary design stage of the project that will validate the coverage requirements defined in Section 2.6.
- B. The Contractor shall submit the final CATP during the final design stage of the project.
- C. Coverage testing shall commence only after the radio systems are fully optimized, tested and aligned.
- D. Significant changes to any system will require retesting of coverage at Paducah/McCracken's discretion.
- E. The CATP shall be conducted between May and September when trees are in full foliage
- F. The Contractor shall complete radio coverage testing with witnesses from the County, utilizing Bit Error Rate (BER) testing. The Contractor shall submit appropriate documentation confirming lab testing of the Bit Error level for the portable radio, which will yield the equivalent of a DAQ 3.4 audio quality. Likewise, the Contractor shall test the system to that level.
- G. CATP Parameters:
 1. The CATP shall be consistent with the procedures and guidelines outlined in TSB-88 (current version).
 2. Coverage testing shall commence only after the radio system is fully optimized, tested and aligned.
 3. Significant changes to the system will require retesting of coverage at the County discretion.

H. The Contractor shall perform the following types of coverage testing:

1. Automated talk-out and talk-in objective BER drive testing
2. Subjective talk-out and talk-in DAQ testing
3. In-Building talk-out and talk-in DAQ Testing for those buildings contained within Appendix A

I. The BER test results shall be the determining factor for pass/fail of the P25 system coverage. Should the BER testing not pass using the criteria outlined, at the system-wide level, the system will not pass the acceptance testing.

J. Test configurations:

1. Test configurations shall represent typical operating configurations to the greatest extent possible, using portable and mobile radio equipment (including the proper microphones) that will be used with the system. In addition, the proper subscriber antenna location (e.g. roof-mounted, hip-level, etc.) should be simulated during the testing, and the attenuator values required to simulate those locations shall be submitted to the County for their review and approval prior to testing.

K. Automated objective drive testing:

1. The Contractor shall test on-street BER and signal level, using a portable of the same model and configuration as those units proposed as user devices.
2. The Contractor shall test at a statistically significant number of test locations throughout the County (and within the buildings). Methods for determining the minimum number of tiles are provided in TSB-88.
3. The Contractor shall test both talk-out and talk-in BER, and talk-out signal level, as applicable.
4. Testing will be conducted in TDMA mode, and operating in the simulcast mode, as applicable.

L. In-Building DAQ Testing:

1. Small commercial building (single story, open floor plan). Five test locations, one in each corner and one in center.
2. Medium building (small school, light industrial, medical office). Twenty test locations uniformly distributed on the ground floor.

3. Large building (shopping malls, factories, buildings over 5 stories). Multiple test points uniformly distributed on the ground floor.
 4. Appendix A contains a list of Critical Buildings where in-building DAQ testing shall be performed, and results provided
- M. For testing purposes, the County shall be divided into 1/4-mile square test tiles .25-mile x .25-mile.
1. The Contractor may subdivide test tiles if necessary.
 2. The Contractor shall not count inaccessible test tiles as either a pass or fail in the statistical analysis.
 3. Should the coverage test fail, the Contractor shall correct the cause of the failure and re-conduct the coverage test in its entirety.
 4. The Contractor shall measure talk-out and talk-in performance separately for each test tile (i.e. BER shall be measured in both directions in each test tile), and the overall system pass/fail percentages shall be calculated using round trip.
 5. Testing of individual sites for coverage acceptance will not be acceptable, unless explicitly agreed to by the County prior to acceptance testing.
 6. For testing purposes, service areas shall be divided into 1/4-mile square test tiles [0.25-mile x 0.25-mile].
 7. A failure in either direction will be noted as a failure for that test tile.
- N. The Contractor shall provide a standardized test form for testing.
- O. The Contractor shall provide raw data (excel format) immediately following testing.

5.12 Training

5.12.1 Training Programs

- A. The Contractor shall develop and conduct training programs to allow the County personnel to become knowledgeable with the system, subsystems, and individual equipment.
- B. Training shall cover all features, operation, and special care associated with the equipment supplied.

C. The Contractor shall provide:

1. Subscriber device operational training (train the trainer)
2. Console training
3. System management training
4. Subscriber device operational training shall include the following:
 - a. P25 portable unit operation
 - b. P25 mobile unit operation
 - c. 2 sessions containing 12 personnel each

D. Console training shall include the following:

1. P25 IP console administration
2. P25 IP console operation
3. 1 session containing 5 personnel each

E. System management training shall include, but is not limited to:

1. Planning and setting up the system and network
2. Building and implementing system and network profiles and configurations
3. Performing database management functions
4. Monitoring and managing the system's performance
5. Writing and printing system reports.
6. 1 session containing 5 personnel each

F. The Contractor shall:

1. Conduct all training at a location where duplication of system operation will not impact daily operations.
2. Coordinate with the County regarding number of attendees, schedule, and training location.
3. Schedule classes as close to system cutover as possible.

4. Train the County employees or designated individuals.

G. For subscriber operator training, the Contractor shall provide "train-the-trainer" courses to selected County personnel.

5.12.2 Training Materials

A. The Contractor shall provide all instructional material, for all technical and operational training classes for the exact model and series of equipment delivered, including:

1. Printed manuals
2. Audio, video, interactive self-paced personal computer programs
3. Complete equipment operating instructions

B. All instructional material shall be subject to the approval of the County and shall become property of the County.

C. Training materials shall be professionally produced and provided in binders.

1. Loose leaf materials are not permitted.
2. Paper shall be 8 ½ x 11" whenever possible.
3. If larger paper is utilized it must be professionally incorporated into the document.
4. Binders shall be color coded where it will provide an organizational benefit.
5. Illustrations and photographs, where provided, shall be specific to the County installation.
6. Color photos must be provided where detail or clarity is supported by use of color.
7. Black and white photocopying of color materials is unacceptable.
8. The Contractor shall provide fully editable (softcopy) versions of all training materials so that the County trainers can update the course materials.

5.13 System Cutover

5.13.1 Cutover Plan

A. The Contractor shall develop a Cutover Plan for review and approval by the County. The County reserves the right to approve and change the cutover plan as it relates to any or all system components. The Cutover Plan shall be logical and must consider every facet of the existing and new networks. Key objectives of the Cutover Plan are:

1. Ensure that new systems are brought online with minimum interruption to all existing systems and communications.
2. The Contractor shall be responsible for planning and coordinating the implementation of all equipment, subsystems, and the overall system.

B. The Contractor shall:

1. Be responsible for any costs associated with their proposed cutover plan.
2. Program the users' existing and/or new radios
3. Identify the cutover of individual circuits
4. Identify temporary alternate routing of critical circuits
5. Include fallback, recovery, and contingency plans to mitigate the risk of circuit failure during cutover
6. Maintain reliable and stable communications
7. Ensure the timely deployment of a complete and functional network
8. Identify physical and technical constraints that must be considered for successful implementation planning such as site ownership, site access, shelter space, tower loading and availability and electrical load limitations
9. Ensure successful integration with all legacy systems, including a smooth transition from existing operations
10. Clearly defined roles and responsibilities between the Contractor and the County.

C. The Cutover Plan shall demonstrate that it meets the following requirements:

1. Supports the operational requirements of each participating agency including.
 2. Ensures users and technical staff are prepared for the migration to the new network
 3. Mitigates risk
 4. Does not exceed maximum outage times
 5. Considers site access issues, such as sites that are inaccessible during winter months
- D. During detailed design, the Contractor shall deliver a draft Cutover Plan describing how the existing radio systems will be migrated to the new system.
- E. The Cutover Plan shall:
1. Include the schedule and procedures associated with the transition of each operational user group.
 2. Specifically address how the existing users will begin using the new system with minimal operational impact.
 3. Provide detailed component or subsystem cutover plans, and specifically delineate between systems that affect and do not affect ongoing operations.
- F. The County reserves the right to approve and change the Cutover Plan as it relates to any or all system components.

5.13.2 Cutover Execution

- A. After successful completion of all tests and training, the Contractor shall execute the system cutover according to the approved Cutover Plan.
- B. Any modifications to the plan shall be proposed to and approved by the County at least ten business days prior to execution.
- C. The Contractor shall provide 5 business days advance notice for required outages of the existing system during the cutover. All planned outages require approval of the County.
- D. The Contractor shall provide the necessary labor to cutover from existing systems to the new system.

5.14 30-Day Operational Verification Period

- A. The Contractor shall plan a 30- calendar-day operational burn-in period for the entire system.
- B. The conditions of the test shall be determined during Final Design with plans including loading the system as fully as approved by the County.
- C. Technical staff from the County shall monitor the burn-in period.
- D. The Contractor shall demonstrate the integrated operation, reliability, long-term stability, and maintainability of the system during this period.
- E. System must be fully loaded (all users must be fully migrated).
- F. A Critical failure of the system during this test will cause the 30-day burn-in period and warranty to reset and restart from the beginning after completion of the repair. A Critical Failure is defined as follows:
 - 1. Any failure which causes a loss of 15% or more in capacity or coverage in any cell
 - 2. Any failure which causes a loss of the primary system control
 - 3. Any failure which causes a loss of simulcast capability
 - 4. The concurrent failure of two or more repeaters
 - 5. Concurrent failure of two or more switches and/or routers
 - 6. Any system failure that causes the loss of two or more console positions
 - 7. Any failure that renders the logging recorder inoperable or caused the irretrievable loss of recorded audio
 - 8. Failure of the receiver voting system
 - 9. A minor failure will cause the burn-in period to temporarily hold until the issue has been fully resolved to the County satisfaction.
- G. After resolution of the failure, and with County approval, the burn-in period will continue.
- H. Two or more repetitive minor failures of the same functionality with or without the same root cause shall be defined as a major failure.

- I. Two or more repetitive minor failures of the same piece of hardware with or without the same root cause shall be defined as a major failure.
- J. Two or more repetitive minor failures with the same root cause shall be defined as a major failure.
- K. Two or more similar minor failures without the determination of cause will temporarily hold the burn-in test until a cause is found and corrected, or the County is satisfied there is little likelihood of a systemic recurring issue.

5.15 Decommissioning, Removal, and Disposal of Legacy Equipment

- A. The Contractor shall remove existing equipment (e.g., transmitters, consoles, mobiles, cables, and antenna systems) not being reused in the new system or identified for future use by County.
- B. Equipment purchased by the Contractor as Trade-In shall be removed and handled according to the terms of any applicable Trade-in agreement.
- C. The Contractor shall maintain a detailed inventory of all equipment removed, listing the following at a minimum:
 - 1. The owning agency
 - 2. Model numbers
 - 3. Serial numbers
 - 4. Asset numbers
 - 5. Location removed from
 - 6. Location within the warehouse
 - 7. Trade-in or disposition value
- D. The Contractor, at its sole expense, shall warehouse, as necessary, removed equipment prior to disposal.
- E. The Contractor, at its sole expense, shall transport all removed equipment to the County-specified disposal location.

5.16 As-Built Documentation

A. At the completion of each implementation phase, the Contractor shall provide complete as-built documentation as outlined below:

1. Equipment provided
2. Plan and elevation drawings of all equipment including antennas on towers
3. Shelter floor plans
4. Cabling and terminations
5. Block and level diagrams
6. Fleet mapping and programming
7. Setup, configuration, and alignment information, to include commissioning, provisioning, test and turn-up
8. Successfully completed, signed, and dated Coverage and Final Acceptance Test Plans

B. The Contractor shall provide final documentation in printed form:

1. Two bound, hard copy, printed sets
2. Hand modified drawings are not acceptable.
3. Hard copies of all drawings shall be 11" x 17".

C. The Contractor shall provide final documentation in electronic form:

1. All drawings provided in MS-Visio native format
2. All other documentation provided in MS-Word or MS-Excel native format
3. A copy of all drawings and documentation in Adobe Portable Document Format (PDF)

5.17 Final System Acceptance

A. The County shall deem the system ready for final acceptance following successful completion and approval of the following:

1. Final Detailed Design

2. Staging Acceptance Test
3. All contracted installation completed
4. Final inspection and punch list resolution
5. As-built documentation
6. Coverage Acceptance Test
7. Final Acceptance Test
8. Delivery of final documentation
9. Successful completion of (30)-Day Burn-in test
10. Training completed

B. No conditional acceptances will be granted.

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6. Warranty, Maintenance, and Support

- A. The system shall be provided with a 3-year warranty period covering software and firmware upgrade support, spare parts, and all provided equipment.
- B. Should the Contractor be a system integrator, they will provide pricing and discounts per the final contract throughout the term of the final contract.

6.1 Warranty

- A. All equipment provided shall be new and covered by a full manufacturer's warranty for 3 years, commencing with County final acceptance of the system.
- B. System performance, installation, and all hardware, parts, software, and materials (including third-party equipment) shall be warranted for a period of 3 years,
- C. Warranty coverage shall include all related return and delivery fees.
- D. As an option, the Contractor shall provide their top tier of 24 hours a day, 7 days a week, 365 days a year on-site support for annual increments (years 4-10) following expiration of warranty.
- E. The Contractor shall provide a single toll-free telephone number staffed and available 24 hours a day, 7 days a week, 365 days a year, for service requests and warranty claims.
- F. During the warranty period, service and repair shall be performed 24 hours a day, 7 days a week, 365 days a year.
 - 1. There shall be no additional charges for work outside of normal Contractor business hours.
- G. The County shall have the right to perform any maintenance and/or repairs required during the warranty period without voiding or affecting the Contractor's warranty.
- H. If Contractor level support is required, the following repair response time and repair-completed time criteria shall be in effect:
 - 1. The Contractor shall contact the County within 30 minutes of telephone notification for a Critical Service issue.
 - 2. The County defines Critical Service issue as any one or more of the following events that results in a loss of voice traffic on the system:

3. Any failure which causes a loss of 15% or more in capacity or coverage in any cell
 4. Any failure which causes a loss of simulcast capability
 5. Any failure which causes a loss of the primary system control (assuming a primary/secondary architecture)
 6. Any system failure that causes the loss of two or more console positions
 7. Any failure that renders the logging recorder inoperable or causes a loss of recorded audio
 8. The failure of one or more base stations
 9. The failure of one or more switches and/or routers
 10. Failure of the receiver voting system
- I. The Contractor's qualified service representative and the County's representative shall attempt to resolve the Critical Service issue over the phone or via remote network management.
 - J. If the Contractor's qualified service representative and the County's representative cannot resolve the issue remotely or over the phone, then the County shall make the determination regarding the criticality of the service issue.
 - K. If determined to be critical the Contractor shall dispatch a qualified service representative to the site experiencing the service issue.
 - L. The Contractor's qualified service representative shall be physically present at the site that requires service and shall make every effort to resolve the issue within 4 hours from the time the critical service issue was reported..
 - M. The Contractor shall repair all equipment, hardware, and software throughout the implementation, cutover and warranty periods.
 - N. The following procedures shall be followed during the warranty period:
 1. The Contractor shall provide the County with written documentation indicating:
 - a. The cause of the service outage
 - b. The resolution

- c. All post-repair testing procedures to ensure proper operation
2. In the event the Contractor uses County-owned spares to complete a repair, the documentation shall include the model and serial number of both the defective unit and the spare.
3. Hardware:
 - a. For all equipment needing factory or depot repairs, the Contractor shall maintain a comprehensive tracking system to track units to and from the factory/depot.
 - b. Replacement parts shall be new or original repaired parts only.
 - c. Fixed equipment mail-in board repair shall be completed within seven calendar days of receipt.
 - d. Equipment must be returned to the County via second-day shipping, with tracking number provided to the County.
 - e. Serialized units sent in for depot repair must not be exchanged unless specifically authorized by the County.
 - f. The original unit must be repaired and returned unless specifically authorized by the County.
4. Software and Firmware:
 - a. The Contractor shall warrant all software and firmware.
 - b. During the installation, warranty, and extended warranty periods, the Contractor shall provide, at no additional cost, commercially available upgrades of all software and firmware originally sold to the County.
 - c. The frequency and timing of installation of upgrades during this period shall be at the sole discretion of the County based on availability by the Contractor.
 - d. The Contractor shall provide all back-up media and revised software manuals to the County at the time of any software revisions at no cost.

O. Recurring Failures and Manufacturer Defects:

1. Any fixed equipment or fixed equipment module that fails twice during the acceptance test or twice during the first 12 months after System Acceptance shall be indicative of a recurring or systemic failure or defect that warrants further investigation by the Contractor and County.
 2. If the defect is deemed by the County to be systemic after the investigation is completed, the Contractor shall then be responsible for replacing at no additional cost to the County all equipment and/or equipment modules related to the recurring or systemic failure, not only the specific equipment affected.
- P. The Contractor, at no additional cost to the County, shall correct latent design defects or recurring problems relating to software, firmware, hardware, or overall system design, during the warranty period.
- Q. During the warranty period, the Contractor shall correct all system malfunctions due to software at no additional cost to the County.
- R. The Contractor shall update all devices to the latest release level prior to the conclusion of the warranty period.
- S. The Contractor shall update any hardware not supporting the then latest release level to the current hardware make and models supporting the latest release level.

6.2 Parts Availability

- A. The Contractor shall certify that replacement parts for all delivered equipment shall be available for a period of at least 10 years after the last date of production.
- B. In the event the Contractor plans to discontinue manufacture of any product-line or stocking any part required for maintenance in the system, the Contractor shall send written notice to the County 24 months prior to the date of discontinuance to allow for last-time buys and spares replenishment.

6.3 Spare Equipment

- A. The Contractor shall include recommended initial spare parts and equipment to be procured as part of the initial contract.
- B. The Contractor shall supply all spare equipment in new condition.
- C. The initial spare parts and equipment shall include, but is not limited to, the following:
1. All Contractor identified Field Replaceable Units (FRUs)

2. All infrastructure components having no FRUs, but that can cause a critical failure (e.g., antenna systems, other non-modular components), including all third-party equipment items
 3. Power supplies
 4. Required and/or recommended test, measurement, calibration equipment, and repair kits
 5. Recommended diagnostic equipment to support the County maintenance activities
 6. Initial spares for less critical items shall also be enumerated
 7. The spare parts and equipment shall include items that will rapidly and completely restore all critical system functionality with the least amount of effort (e.g., board replacement instead of troubleshooting to component level when a critical unit fails).
- D. The Contractor shall determine the types and quantities of spares based on their proposed system size and design.
- E. The Contractor shall define the primary equipment category each spare kit supports (e.g., transceiver board for a base radio or interface board for a router).

6.4 Lifecycle Support

- A. System(s) shall not be accepted with components or equipment at the end of their respective lifecycles.
- B. Contractor shall provide a roadmap for end-of-life dates on existing and/or proposed products.
- C. A product for which development and/or distribution will be discontinued within the next 5 years shall be considered "end of lifecycle" products.
- D. The County shall have the option to purchase post-warranty service for the system.
- E. The Contractor shall:
1. Provide spare parts and equipment at a discounted rate for the life of the contract.
 2. Provide technical support at a discounted rate for the life of the contract.

3. Provide engineering services at a discounted rate for the life of the contract.
4. Offer OPTIONAL service tier(s) for the system.
5. Provide discounted software support and upgrades for the system.
6. Offer extended warranty for all supplied equipment for up to an additional 7 years in 1-year increments.
7. Provide pricing for all Optional service, hardware and software offerings for post warranty years 4-10.

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Appendix A – Critical Buildings Requiring Coverage

Table A.1 - Critical Buildings Requiring Coverage

Buildings Requiring RF Coverage	
Name of Building	Street Address
Black's Mill Elementary School	1860 Dawson Forest Road, East, Dawsonville, GA 30534
Kilough Elementary School	1063 Kilough Church Road, Dawsonville, GA 30534
Riverview Elementary School	370 Dawson Forest Rd W, Dawsonville, GA 30534
Robinson Elementary School	1150 Perimeter Road, Dawsonville, GA 30534
Dawson County Junior High	109 Allen Street, Dawsonville, GA 30534
Dawson County Middle School	5126 Hwy 9 South, Dawsonville, GA 30534
Dawson County High School	1665 Perimeter Road, Dawsonville, GA 30534
Dawson County LEC/Detention Center	19 Tucker Ave, Dawsonville, GA 30534
Dawson County Government Center	25 Justice Way, Dawsonville, GA 30534

-End of Appendix A-

Appendix B – Site List – Existing County Sites and Candidate Sites

Site Name	Latitude	Longitude	Tower Height (feet)	ASR#	Tower	Shelter	Generator
Amicalola Park	34° 34' 12" N	84° 14' 15" W	100	N/A	Replace	Replace	Replace
J.C. Burt (Water Tank)	34° 24' 33" N	84° 7' 16" W	-	N/A	Reuse	Reuse	Reuse
Etowah	34° 22' 35" N	84° 1' 50" W	120	N/A	Replace	Reuse	Reuse
Old Federal (Forsyth Land)	34° 19' 8" N	84° 14' 20" W	-	N/A	New	New	New
Mollyview Pt (Forsyth)	34° 18' 6." N	84° 2' 9" W	310	1239863	Reuse	Reuse	Reuse
9-1-1 Office	34° 25' 20" N	84° 07' 12" W	-	N/A	N/A	N/A	N/A
9-1-1/EOC Center (Proposed)	34° 25' 19" N	84° 08' 2" W	-	N/A	New	New	New

-End of Appendix B-