SUBJECT: DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM

BID #: SC-0325-21 **OPEN DATE: 2021-03-03**

GENERAL GOVERNMENT AWARDS COMMITTEE

KIND AND BASIS OF CONTRACT: SUPPLY CONTRACT – PERIOD OF SERVICE WILL BE THREE (3) YEARS FROM THE DATE OF CONTRACT EXECUTION, WITH TWO (2) ONE (1) YEAR RENEWAL OPTIONS

AGENCY: INFORMATION TECHNOLOGIES DIVISION

BASIS OF AWARD: ALL OR NONE TO THE LOWEST RESPONSIVE, RESPONSIBLE BIDDER

NUMBER OF BIDS INVITED: 39 **NUMBER RECEIVED:** 6 **OTHER:** 1

SUMMARY OF BIDS AND RECOMMENDED ACTIONS:
Recommend approval of award to the lowest responsive, responsible bidder Miller Electric Company in the amount of $707,105.33 for DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM. Period of service will be three (3) years from the date of contract execution, with two (2) one (1) year renewal options.

Funding for this award to be encumbered by account number 53106.113002.564271.010094. and 53106.113002.565091.010094, to be executed by formal contract through the Office of General Counsel.

Attachments: Recommendation Memo, Bid Tabulation Sheets, Terms and Conditions, Specifications

ANALYST: _____ RUBEN OLA

RESPECTFULLY SUBMITTED: _____ GREGORY PEASE, CHIEF PROCUREMENT DIVISION

CONCURRENCE BY: Kenneth Lathrop, Chief of Information Technologies Division/CIO

(ALL AWARD ACTIONS SUBJECT TO LAWFULLY APPROPRIATED FUNDS)
ACTION OF GGAC COMMITTEE ON RECOMMENDATIONS ABOVE

MEMBERS APPROVING _____ MEMBERS DISAPPROVING _____ DATE: _____

_____ _____ OTHER: _____

_____ _____

_____ _____

ACTION OF AWARDING AUTHORITY DATE _____

APPROVED _____ DISAPPROVED _____

OTHER _____

SIGNATURE OF AUTHENTICATION _____

INFORMATION TECHNOLOGIES DIVISION

CITY OF JACKSONVILLE

DATE: March 10, 2021

TO: Greg Pease, Chief of Procurement Division

THRU: Kenneth E. Lathrop, Chief of Information Technologies / CIO

Kenneth E. Lathrop — Digitally signed by Kenneth E Lathrop Date 2021 03 11 13 19 56 -05'00'

FROM: Thomas Ossi, Technology Contract and Records Manager

THOMAS OSSI — Digitally signed by THOMAS OSSI Date 2021 03 10 17 13 24 -05'00'

SUBJECT: **SC-0325-21 Duval County Courthouse and Ed Ball Building Distributed Antenna System - Award Recommendation Memo**

The Information Technologies Division (ITD) submitted an Invitation to Bid (ITB) to the Procurement Division for solicitation of Duval County Courthouse and Ed Ball Building Distributed Antenna System Bid # SC-0325-21. The Procurement Division received six (6) supplier responses and one (1) no bids with an open date of March 3, 2021. The Procurement Division forwarded the bid tabulation sheet and the bid responses for ITD to review.

ITD Management recommends awarding the bid to the lowest responsive, responsible bidder Miller Electric Company, for $707,105.33. The initial term of the agreement will commence upon execution of the Contract and will continue for a period of three (3) years after the system is fully implemented and accepted by the City of Jacksonville (COJ). COJ will have the option, in its sole discretion, to renew with two (2) one (1) year renewal options.

Upon award approval, a request for a formal contract will be made through the Office of General Counsel.

SUPPLIER	BID PROPOSAL AMOUNT
Miller Electric Company	**$707,105.33**
Mann Wireless, LTD.	$849,594.30
Longent, a Division of Mobile Communications of America, Inc.	$855,600.99
Source 1 Solutions, Inc.	$865,068.79
USA Venueserv, Inc.	$887,165.02
Symphony Technology Solutions	$1,103,263.00

FUNDING SOURCES: 53106.113002.564271.010094, 53106.113002.565091.010094

Your favorable consideration of ITD's request is appreciated.

Tracy Geake — Digitally signed by Tracy Geake Date 2021.03 11 08 59 34 -05'00'

Attachment: Bid Tab Sheet
Miller Electric Bid Response

CC: Kim Laidler, Radio Communications Manager
Robert Gray, Enterprise Technology Infrastructure Manager
Gary Steffens, Senior Enterprise Architect
Elizabeth Brown, IT Operations Manager
Alexander Ciprian, IT Contract Administrator
Pieter Jansen, Senior Project Manager

BID TABULATION SHEET

TITLE:	DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM
BID NO.:	SC-0325-21
OPEN DATE:	March 3, 2021
PURCHASING ANALYST:	RUBEN OLA

BID ANNOUNCER: R. BARNETT, BID RECORDER:. J. HERNANDEZ

No. Invited: (39) No. Received (6) No Bids: (1)

ITEM	DESCRIPTION	QUANTITY	SOURCE 1 SOLUTIONS, INC. AMOUNT	MANN WIRELESS, LTD. AMOUNT	SYMPHONY TECHNOLOGY SOLUTIONS AMOUNT	MILLER ELECTRIC COMPANY AMOUNT
1	GROUP ONE: Project Pricing Including (3) Three Years Warranty, Maintenance and Monitoring Summary	1 LOT	$ 865,068.79	$ 849,594.30	$ 1,103,263.00	$ 707,105.33
2	GROUP TWO: Maintenance, Monitoring, and Warranty Services (OPTION YEAR FOUR (4)	1 LOT	$ 31,184.02	$ 15,000.00	$ 52,584.00	$ 22,425.00
	GROUP TWO: Maintenance, Monitoring, and Warranty Services (OPTION YEAR FIVE (5)	1 LOT	$ 31,184.02	$ 15,000.00	$ 52,584.00	$ 22,425.00
3	GROUP THREE: Trade-In Credit of Legacy ION-B DAS	1 LOT			$ 9,500.00	
	TERMS:			0% 30 DAYS		0% 30 DAYS
	DELIVERY (Business Days):		15 DAYS	60 DAYS	30 DAYS	
	BUSINESS/CORPORATE REFERENCES:		✓	✓	✓	✓
	CONFLICT OF INTEREST:		✓	✓	✓	✓
	ADDENDUM(S)(1)			✓	✓	✓
	NOTES:					

TERMS AND CONDITIONS
DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM

1. SCOPE

The Information Technologies Division of the City of Jacksonville, Florida, is currently accepting bids:

A. For equipment and services to perform a turnkey solution to upgrade the Duval County Courthouse existing coverage of carrier cellular signals including 5G, and Public Safety radio signals.

B. For equipment and services to perform a turnkey solution in the Edward Ball Building for coverage of carrier cellular signals including 5G, and Public Safety radio signals.

These services are to be performed as outlined in the bid documents provided. The purpose of this bid invitation is to obtain information about your firm and its ability to provide these item(s)/ service(s) and to obtain pricing commitments for **DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM**.

In addition to the below **Section 4 - Minimum Requirements,** the **Specifications** section includes Bills of Materials and a detailed Scope of Work.

2. AWARD

Award will be **ALL OR NONE** to the lowest responsive, responsible bidder for **Group One** of the Bid Proposal Form, who meets or exceeds the bid requirements. Pricing commitments for Group Two and Three are required, but will not be considered to determine the lowest bid and, furthermore, will be exercised at the sole discretion of the City Of Jacksonville. Bidders must bid on all items to be considered for award. ALL awards are subject to the availability of funds.

As per Section 126.114 of the City of Jacksonville Ordinance Code, preference will be given to a responsive and responsible vendor offering American manufactured, assembled, or produced goods, and who is within 5% of the lowest responsive and responsible bidder. To receive this preference, the bidder must complete the attached Buy American Preference Compliance Certificate and attach supporting documentation and/or evidence attesting that at least 51% offered in the bid response is manufactured, assembled or produced in the United States.

a. Bidder is not required to submit for the Buy American Preference. Bidders may quote items less than 51% American made but will not be eligible for the preference.

b. Restrictions and exemptions may apply. Please refer to Section 126.114 for specifics.

3. TERM OF AGREEMENT

The initial term of agreement will commence upon execution of the Contract and will continue for a period of three (3) years after the system is fully implemented and accepted by the City of Jacksonville. The City of Jacksonville will have the option, in its sole discretion, to renew with two (2) one (1) year renewal options.

4. PRE-BID MEETING (MANDATORY)

Pre-Bid Meeting and Walk-Through on February 11, 2021, at 9:30 AM. All bidders are to meet on the Steps of the Duval County Courthouse located at 501 West Adams St., Jacksonville, FL 32202. The Walk-Through will be followed by a Questions and Answers session at the Ed Ball building 214 N.

Hogan St., Jacksonville, FL 32202, 4th Floor Training Room.

5. MINIMUM REQUIREMENTS

Bidders should submit or comply with the following requirements; failure to submit any of these requirements may be grounds for rejection:

a. Bidder must maintain all applicable Federal, State, and Local Licenses which are required to perform services outlined herein.
b. Minimum of (3) three years prior experience in servicing and maintaining the types of equipment specified in the ITB. Vendor must provide satisfactory evidence with the bid response of their experience, qualifications.
c. The bidder shall have JMA TEKO certifications to install, support, and provide the technical services to the equipment.
d. Bidder must submit a minimum of two (2) and a maximum of four (4) references, including a contact person, phone number, and address for work performed within the last three (3) years at commercial, government, educational, and/or institutional complexes for contracts of comparable size. The vendor must submit a brief product description of DAS system installations for clients. The client shall have been serviced for a minimum of (1) one year. Provide reference information in the following format, as referenced in Exhibit A.

6. STATE CONTRACTS

The City reserves the right to utilize contracts established by the State of Florida and or other governmental agencies for item(s)/service(s) covered under this bid. The city reserves the right to cancel this contract in whole or in part for such item(s)/service(s).

7. QUANTITIES

Quantities indicated reflect the estimated quantities to be purchased throughout the contract period and are subject to fluctuation in accordance with actual requirements. The City reserves the right to add or delete items, or increase the volume of services required, or not to make any purchase against this bid if it so deems necessary at any time during the contract period.

8. DELIVERY

Information Technologies Radio Service Center, (Attn: ITD Senior Project Manager) 1020 Superior Street, Jacksonville, Florida 32254. A packing list shall accompany all shipments, which shall indicate, at a minimum, the following: purchase order number, item number and description, date shipment, quantity ordered and shipped, unit prices, and unit of measure. Inside DELIVERY ONLY and if on pallets must be broken down for delivery.

9. ESCALATION/DE-ESCALATION

All pricing submitted shall remain firm for the initial term period. Upon renewal (if applicable), a supplier may submit in writing a request for price escalation/de-escalation for the percentage of change as listed in the Consumer Pricing Index (CPI) and/or documentation notifying of an industry wide increase. The City reserves the right to decline any price increase request.

10. PRICES

All unit prices shall include freight, delivery, and handling charges to the delivery location as outlined in the bid documents.

11. PICK UP AND RETURNS

The City reserves the rights to return an order in whole or in part if the merchandise is not in compliance with the bid specifications. The City or its agencies will determine compliance with bid specifications. Pick up and returns will be made at the Radio Service Center located at 1020 Superior Street, Jacksonville, Florida 32254, within 48 hours of notification at no charge to the City or its agencies.

12. COMPLIANCE WITH SPECIFICATIONS

The bidder, by affixing their signature to the bid form submitted, agrees to provide item(s)/service(s) in accordance with the bid documents provided. Bid only a single offering for each bid item. Multiple offerings, alternates (unless stated) and or stipulations may be cause for bid rejection. Bid only on forms provided herein unless otherwise stated. Bid submissions shall be in ink or typewritten. All corrections must be initialed.

13. INVOICING

Invoices will be issued once supplies/services are delivered and/or rendered to the City of Jacksonville or its agencies. At a minimum, invoices must include: purchase order number or contract number, item number and description, date of shipment, quantity ordered and shipped, unit prices, unit of measure, and extended totals. Payment terms are Net 30 days. All original invoices shall be submitted through the City of Jacksonville 1Cloud procurement system or to: City of Jacksonville, General Accounting Division, 117 West Duval Street, Suite 375, Jacksonville, Florida 32202.

The City of Jacksonville shall pay the awarded supplier 100% upon Completion and Acceptance of the installation of the DUVAL COUNTY COURTHOUSE AND ED BALL BUILDING DISTRIBUTED ANTENNA SYSTEM.

14. INSURANCE/INDEMNIFICATION

Each supplier shall maintain, for the entire term of this bid, current insurance coverage as stated in the bid documents. All insurance certificates shall list the City of Jacksonville as an additional insured. Bid number should be listed on certificate. The awarded bidder is required to submit their insurance certificate within ten (10) days after notice of award.

15. REPORTING

The City may request, during the term of this bid, reports including but not limited to; usage, pricing, and delivery. Suppliers will be required to provide reports requested in hard copy and electronic format as required.

16. SUPPLIER ACCESSIBILITY

The City or its representative must be able to contact, during normal business hours, by telephone or email any supplier providing goods or services to the City or its agencies. Any supplier accessibility requirements outlined in the specifications supersede this section.

SPECIFICATIONS

Duval County Courthouse and Ed Ball Building Distributed Antenna System

1. OTHER SPECIFICATION REQUIREMENTS

Bidders will certify, in writing, in their bid response, their understanding and acceptance of each specification, requirement, and condition of this Invitation to Bid (ITB). Bidders must respond to each numbered paragraph and subparagraph included in Sections 2 through 10. Bidder responses must include the information requested and must include sufficient written information to indicate the vendor's ability to meet the requirements. Any exceptions must be noted.

a. Bidder must be certified to work on JMA Wireless Teko systems and must provide a certificate with this proposal.
b. Bidder's engineer responsible for commissioning system must have FCC General Radio Operators License.
c. Bidder must have substantial experience deploying & optimizing Two-Way Radio Systems and Emergency Responder Radio Coverage Systems within buildings.
d. Bidder must be able to Monitor and Maintain the JMA Wireless DAS using C Squared SitePortal monitoring platform.
e. Bidder must have terminating Tools for JMA Wireless UXP connectors.
f. Bidder must have the ability to perform line sweeps and PIM tests on coaxial lines using test equipment from Anritsu, Rhode & Schwarz, Kaelus, Viavi, or equivalent.
g. Bidder must have the personnel and equipment to fusion splice Single-Mode Fiber.
h. Bidder must have the equipment to sweep fiber links with an OTDR with the launch and receive cables.
i. Bidder must have a fiberscope to inspect fiber connections prior to insertion.
j. Bidder must be able to clean fiber connections properly.
k. Bidder must have the ability to benchmark test the Commercial DAS using a platform such as Solutelia Wind and handsets for Verizon, AT&T, and T-Mobile.
l. Bidder must have the ability to benchmark test the Downlink signal of the P25 Radio system using a scanning receiver such as that from PCTel.
m. Bidder must be able to generate a 20 Grid plot on the iBwave floorplan and record RSSI measurements and DAQ scores for the P25 Radio System.
n. Bidder must operate a Network Operations Center with 24/7 capability for Monitoring of the DAS systems.
o. All work shall comply with documentation included in this ITB supplied by the City of Jacksonville Fire Marshal office with Florida Fire Prevention Code NFPA guidelines. Documents included are:

1. Two Way Radio Survey Requirements, Exhibit B
2. BDA Survey and Installation Requirements, Exhibit C
3. BDA Submittal Requirements, Exhibit D

p. During the warranty period, the successful vendor will be responsible for continuing education and training of their technicians for the equipment types specified in this ITB at no additional cost to the City of Jacksonville.

2. DAS SYSTEM REQUIREMENTS

a. System Coverage Requirements:

i. P25 two-way radio coverage capabilities:

1) 99% coverage is required in areas of "vital importance," which are designated by the local fire department. In other areas, 95% coverage is required.

2) Antenna isolation must be 15 dB higher than the gain of the amplifier.

ii. Cellular coverage capabilities must include 5G, must support all major cellular providers. For CDMA cellular, -85 for 95% of the building. For LTE (VoLTE), -95 for 95% of building. This vendor listing is not all-inclusive.

1) AT&T including FirstNet

2) T-Mobile

3) Verizon

b. The DAS system will include cellular carrier LTE capabilities and accommodate the carrier's growth with LTE and a three (3) year extended warranty to include maintenance and monitoring, starting at system acceptance. Price as optional maintenance and monitoring for years 4 and 5.

c. Vender will coordinate integration and implementation with cellular carriers at no additional cost to the City.

d. The awarded vendor must provide, at minimum, an account manager and a backup that will serve as the points of contact for all business-related matters. Contact information for both dedicated account managers should be included in the ITB submission.

e. Vendor shall provide standard uniforms to assigned staff working in the courthouse to include a minimum of a collared shirt containing the vendor "Corporate Name" on the front.

f. Replacement system must be new JMA/TEKO DAS digital platform that is easily upgradable with parts readily available and have an estimated end of life up to ten (10) years.

g. All equipment must be new, not refurbished, the latest version/model and operating system.

h. Vendor will stock critical parts list as shown in Section 10 Critical Spares BOM, which they will maintain at their site for ongoing maintenance support.

i. The awarded vendor will provide system overview training to the City of Jacksonville personnel.

j. At a minimum, 24 hours of training shall be provided at no additional cost. Dates and times will be selected by City of Jacksonville personnel and will be within the range of Monday – Friday from 8:00 AM to 5:00 PM.

k. All training must be in-person unless otherwise agreed upon by City personnel.

l. Training services cannot be subcontracted to a third party and all trainers must be directly employed by and certified by the awarded vendor unless explicitly agreed upon otherwise by the City.

m. All prospective vendors must attend the Pre-Bid Conference and Walkthrough. Attendance is required for site review and Q & A.

n. All scope of work within the ITB must be completed within 90 calendar days from date of contract execution.

3. DUVAL COUNTY COURTHOUSE SCOPE OF WORK

The awarded vendor will transition the existing DAS from ION-B serving commercial and public safety to a JMA Wireless Teko DAS, with split remotes for Commercial and Public Safety. The Duval County Courthouse is located at **501 E. Adams Street, Jacksonville, Florida 32202**.

a. Work will be performed during normal business hours defined as 8:00 AM to 5:00 PM. The cutover and testing shall be done after normal business hours, generally defined as after 6:00 PM Weekdays or on Weekends.

b. The awarded vendor personnel working on the project will be required to pass a City-provided local background check

c. The existing system is live and must be transitioned in coordination with the facility.

d. The City of Jacksonville will provide single-mode fiber with APC (**LC**) termination to each Courthouse IDF closet. Vendor will be responsible for APC fiber jumpers to new equipment.

e. Bidder is to hang 25 New Teko 5Band AC Powered Remotes in IDF closets.

f. Install 11 New Teko Dual Band Public Safety Remotes

g. Remotes must be grounded.

h. Remotes must be labeled according to JMA TEKO Design.

i. Pull new ½ "coax (approx. 1800') between PS Remotes and hybrid combiners as highlighted in the JMA TEKO Design.

j. All cables must be supported every 5' in J-hooks and installed according to BICSI standards.

k. Any firewall penetrations must be properly sleeved, and the fire stopped.

l. Cables are to be terminated with JMA Wireless UPL connectors.

m. Cables must be RL swept by segment and not show less than 19dB of Return Loss for a sweep of 698-2700MHz.

n. Replace 127 Omni-directional Antennas

o. Replace two (2) directional antennas.

p. Re-terminate ½" coax at Antenna End with 4.3-10 JMA UXP connector

q. Provision and install 4.3-10 Jumper to the antenna where needed.

r. Perform Return Loss Sweeps on all cables that have been re-terminated.

s. All Coax Sweep and Fiber sweep data must be presented in the As-Built Documentation specified in Specifications Section 7.b.iii.

t. Install 6 JMA Teko Chassis in Head End Rack.

u. Ground 6 JMA Teko Chassis in Head End.

v. Install all required Active Chassis Cards and Label.

w. Pull new ¼" Superflex Cables from Carrier Source Radios to the POI Cards in the chassis.

x. Sweep any non-factory-made jumpers installed.

y. Commission the Commercial DAS according to the JMA TEKO Design.

z. Benchmark the coverage for each Carrier with a path below each Antenna in the building.

aa. Benchmark the coverage with the required Mapping tools using Phones. Include plots for PUCCH and PUSCH, DL RSRP, DL SINR.

bb. All benchmarking data must be provided in the As-Built Documentation.

cc. Commission the Public Safety Layer.

dd. Benchmark the Public Safety Layer over a 20Grid layout.

ee. The ION-B equipment must be carefully removed, preserved as a usable asset, and moved to a location to be specified by the City of Jacksonville.

ff. Vendor will be responsible for the removal of existing Courthouse solution coverage equipment, including replaced core equipment. All removed equipment to be delivered by the awarded vendor to **Radio Service Center located at: 1020 Superior Street, Jacksonville, Florida 32254**

gg. **Optional: credit amount for the trade-in of removed CommScope ION-B equipment listed in Section 11.**

hh. This scope of work and bill of materials do not contain all the parts or labor required to complete this work. It is required that the successful bidder will provide all required ancillary materials to accomplish the job in a professional and workmanlike manner.

ii. The system must be completely installed, commissioned, tested, and documented. Cable lengths presented are estimates. Actual measurements required are the responsibility of the bidder.

4. ED BALL BUILDING SCOPE OF WORK

Description- The Ed Ball Building will receive a greenfield (new) JMA Wireless Teko DAS built according to the JMA TEKO Design. It will not have a Public Safety Layer. The three remotes in the building will be fed from the head end at Duval County Courthouse directly with three (3) fiber strands. The county will provide the fiber connections to each of the three IDF closets in the Ed Ball Building. The Ed Ball Building is located at **214 N. Hogan Street, Jacksonville, Florida 32202**.

a. Work will be performed during normal business hours defined as 8:00 AM to 5:00 PM. The cutover and testing shall be done after normal business hours, defined generally as after 6:00 PM Weekdays or on Weekends.

b. The City of Jacksonville will provide single-mode fiber with APC (**SC connectivity**) termination to each to the three Ed Ball IDF closets. Vendor will be responsible for APC fiber jumpers to new equipment. City will be providing APC (SC) not (LC) connectivity at Ed Ball.

c. Hang 3 Teko 6-band AC-Powered remotes in the identified IDF closets

d. Ground each of the three (3) remotes.

e. Install approximately 1700' of ½" Plenum Rated Coax

f. Coax is to be supported by J-hooks mounted every 5' and installed according to BICSI standards.

g. All firewall penetrations are to be sleeved, and the fire stopped.

h. All coax is to be swept according to the standards listed above.

i. Install 24 Omnidirectional antennas and connectors

j. Install 21 Splitters/connectors and Tappers

k. Install 2 Sub-racks in the Head End of the Duval County Courthouse.

l. Install all the associated interface and DAS cards for the Teko System.

m. Provision and connect new ¼" Superflex lines from the Carrier Radio Sources to the DAS POI Cards.

n. Commission the Commercial DAS according to the JMA TEKO Design.

o. Benchmark the coverage for each Carrier with a path below each Antenna in the building.

p. Benchmark the coverage with the required Mapping tools using Phones. Include plots for PUCCH and PUSCH, DL RSRP, DL SINR.

q. All benchmarking data must be provided in the As-Built Documentation.

r. This scope of work does not entail all the parts or labor required to complete this work. It is required that the successful bidder will provide all required ancillary materials to accomplish the job in a professional and workmanlike manner.

s. The system must be completely installed, commissioned, tested, and documented.

t. Cable lengths presented are estimates. Actual measurements required are the responsibility of the bidder.

5. OPTIMIZATION AND TESTING

a. Perform Optimization of System upon completion and provide a written detail report of signal strength throughout the courthouse

b. Perform Public Safety Inbuilding Signal Coverage Testing

   i. Must meet specifications and include documentation per Florida Fire Prevention Code NFPA guidelines.

c. Perform Cellular Inbuilding benchmarking per industry standard

d. **Acceptance and Reliability Test**:

   i. The Acceptance Test Plan will include a 10-Day Reliability Test period. During this testing period, which commences at go-live of the system, the system will perform without any errors.

6. MAINTENANCE, MONITORING, AND WARRANTY SERVICES

a. Maintenance

Vendor will maintain the DAS System so that it continues to operate as designed, tested, and accepted in accordance with this ITB. The initial maintenance period will begin upon system acceptance and will continue for three (3) years. The initial maintenance period cost must be included in the total system cost on the Bid Proposal Form. Optional Pricing for years Four and Five must also be included on the Bid Proposal Form. Maintenance services must include routinely scheduled site visits to verify the system is operating as designed, deploying technicians when issues occur, and software and firmware upgrades.

b. Monitoring

Monitoring services are designed to support both the software and hardware components of the System during the warranty period. This monitoring period supplements the warranty as described. The initial monitoring period will begin upon system acceptance and will continue for three (3) years. The initial monitoring period cost must be included in the Bid Proposal Form's total system cost. Optional Pricing for years four and five must also be included in the Bid Proposal Form.

i. Monitoring includes remote monitoring of the system.

ii. The combined services of monitoring consists of rapid detection of events, timely responses, and quick recovery.

iii. On-Site Infrastructure Response will be determined by the pre-defined severity levels and response times defined in the chart below.

Severity Level	Regular Response Time
Severity 1	Within 1 hour by phone for Technical Support and if needed on-site within 1 hour from the receipt of Notification during normal business hours and 2 hours at all other times. Support is continuous (24x7) until resolved.
Severity 2	Within 2 hours by phone for Technical Support and, if required for fixed infrastructure equipment, on-site within 4 hours from receipt of Notification—Standard Business Day.
Severity 3	Within 2 hours by phone for Technical Support and, if required for fixed infrastructure equipment, on-site within 24 hours from receipt of Notification—Standard Business Day.

c. Warranty

During the Warranty Period, the vendor warrants that under normal use and service the Equipment will be free from material defects in materials and workmanship. Unless otherwise provided, all Equipment and software are to be warranted for (3) three years after Final System Acceptance. The initial warranty period cost must be included in the total system cost in the Bid Proposal Form. Optional Pricing for years Four and Five must also be included on the Bid Proposal Form.

7. PROJECT MANAGEMENT DOCUMENTATION REQUIREMENTS

a. Project Plan to be submitted with the ITB, including the following milestones:

i. Receipt of equipment

ii. Equipment Installation acceptance

iii. Acceptance test plan and testing
iv. Training
v. Go-Live
vi. 10-day reliability testing complete.
vii. Final system acceptance and the start of (3) three years of maintenance, monitoring, and warranty.

b. Other Documentation (PDF or another agreed-upon format) to be provided prior to system acceptance.
   i. Equipment and user manuals
   ii. In building Signal strength coverage report
   iii. As-built drawings with signal levels
   iv. Configuration files

8. REFERENCED DOCUMENTS

Document	Distribution Method	Page
References	Exhibit A	38
Two Way Radio Survey Requirements	Exhibit B	39
BDA Survey and Installation	Exhibit C	44
BDA Plans Submittal Requirements	Exhibit D	53
JMA TEKO Design Documentation for the Ed Ball Building	Digital Distribution will be made available at Mandatory Pre-Bid Conference and Walk-Through	N/A
JMA TEKO Design Documentation for the Duval County Courthouse		
Duval County Courthouse Floor Plans		
Ed Ball Building Floor Plans		
Existing Duval County Courthouse DAS System Documentation		

9. COJ STANDARD PROJECT REQUIREMENTS

a. Vendor will be onsite for go-live activities.

b. Guaranteed workmanship of installation as described in GENERAL CONDITIONS Section 11. GUARANTEE.

c. Provide an itemized bill of material listing components and services, including a critical parts list.

d. Provide maintenance, monitoring, and warranty services for (3) three years from system acceptance date.

10. EQUIPMENT BILLS OF MATERIALS (BOM)

a. Bidder should bid the cost of all the materials in the following (3) three Bills of Materials, in addition to any ancillary materials required to install, commission, test, label, and document the system as presented in the JMA TEKO Design.

b. Bidder should include their cost for the BOM, Installation, Engineering, Project Management, Permitting, and Freight.

c. Bidder should include the cost for listed Critical Spares BOM equipment to be located at the Courthouse.

Duval County Courthouse Bill of Materials (1 of 3)		
Model	**Description**	**QTY**
SUB-PSUN-MU	19" Subrack for the AC PSU Modules for Master Unit, New gen	1
SUB-TRX-PSU5N	19" Subrack for the Optical Modules (with 5 connector VDC, New gen)	5
TAPOI-SMR800-F-4	Active Point of Interface for SMR800 Band - Flexi, 4.3-10	1
TKIT-NF-LP-LP8P	Notch filter kit for co-siting Public Safety 800 with commercial Low Power AMPS850	11
TLPPOI-HB-MSE (US Bands)	Low Power Active POI module for High Band, MIMO, Simplex, With Optional gain stage - 7TE	2
TLPPOI-LB-MSE (US Bands)	Low Power Active POI module for Low Band, MIMO, Simplex, With Optional gain stage - 7TE	2
TPANEL-14TE	Blank panel for Master Unit sub-rack 14TE	4
TPANEL-7TE	Blank panel for Master Unit sub-rack 7TE	10
TPSU/AC	Power Supply Module - Master Unit TPSU AC	3
TPSU/AC-30-1K	Power Supply Module - Master Unit TPSU AC 1KW	2
TRM7E8AE19HAWXAT	Six Band LTE700E, 800-850Plus, 19H, AWS neXt, 33dBm, AC powered, WDM, 4.3-10	25
TRU7FL8PWE/AC-WT	RU Dual Band PS700FULL+LTE/PS800, Enhanced Power, AC,WDM, 4.3-10, RED Enclosure	11
TSC2W-U	Combiner/Splitter Module 2-way, 617-2690MHz	1
TSC4W-U	Combiner/Splitter Module 4-way, 617-2690MHz	7
TSPV-EBB	Supervision module Evo, Backup	2
TESA-UW2-L	Esaplexer SDRU SMR700 extended, AMPS+SMR800, Extended PCS+H block, Extended AWS4, WCS2300	1
TTRU4W-S-M	4-way MU Optical Transmitter/Receiver Module - RF-to-Optical and Optical-to-RF Conversion (380-2690MHz) with UL monitor ports	10
CMAX-D-43-UW-i53	Low PIM Directional In-building Antenna, 617–960 MHz, 1695–2700, 3300-3800 and 4900-6000MHz, 4.3-10 Female, -153 dBc, 5.28 dBd Gain	2
FSJ1-50A	FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket. Suitable for outdoor use only.	143
HL4RPV-50	HL450, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated copper, 1/2 in, off white PVC jacket. Suitable for all indoor spaces.	1800

UPL-4MT-12	4.3-10 compression connector for 1/2 in. plenum rated coaxial cable	130
APL-NM-12	APL N Male Connector for 1/2" Annular	28
iV01OMI136-S4	Surface Mount Omni SISO Antenna, 617-5925 MHz 4.3-10 Female with pigtail, -153 dBc, 4.5 dBd Gain	127
TCC-SMSM-316-50	Coaxial Cable, Sma(M), Sma(M), 316D, length: 50cm	12
TCC-SMSM-316-100	Coaxial Cable, Sma(M), Sma(M), 316D, length: 100cm	12
UXP-4MT-14S	4.3-10 Male Connector for 1/4" Superflexible Cable	1
UXP-NM-14S	UXP N Male Connector for Foam Dielectric Cables 1/4" Superflex	25
Z8A9	Second Sight Systems Standard Aluminum Antenna Poll/Wall Mount- Indoor/Outdoor Aluminum. Silver	2
DN-44FN	Unequal Power Splitter (Tapper), PIM -161 dBc, 3:1 (4.8 dB), 350-5930 MHz, 500W, Type N Connectors, Low PIM	11
DN-54FN	Unequal Power Splitter (Tapper), PIM -161 dBc, 4:1 (6 dB), 350-5930 MHz, 500W, Type N Connectors, Low PIM	3
CXT4MT02A-3-I	3 ft 4.3-10 Male to N type Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	15
CXT4MT02A-6-I	6 ft 4.3-10 Male to N type Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	36
CXTA02A-3-I	3 ft N type Male to N type Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	21
YAZV6C2TC14FX	Burndy Copper Compression Lug, 2 Hole with Inspection Window, Long Barrel, 1/4" Stud, 6AWG Telco Flex, 1" Stud Hole Spacing, Tin Plated	6
3BAL-1001-04 (25 ft)	25 Ft of Green SouthWire TelcoFlex III Central Office Power Cable, 10 AWG, Single Conductor, Class B Strand with Braid, LSZH, 600 Volts	6

Ed Ball Building Bill of Materials (2 of 3)

Model	Description	QTY
TRM7E8AE19HAWXAT	Six Band LTE700E, 800-850Plus, 19H, AWS neXt, 33dBm, AC powered, WDM, 4.3-10	3
TTRU4W-S-M	4-way MU Optical Transmitter/Receiver Module - RF-to-Optical and Optical-to-RF Conversion (380-2690MHz) with UL monitor ports	1
TLPPOI-HB-MSE (US Bands)	Low Power Active POI module for High Band, MIMO, Simplex, With Optional gain stage - 7TE	2
TLPPOI-LB-MSE (US Bands)	Low Power Active POI module for Low Band, MIMO, Simplex, With Optional gain stage - 7TE	2
SUB-TRX-PSU5N	19" Subrack for the Optical Modules (with 5 connector VDC, New gen)	2

TPANEL-14TE	Blank panel for Master Unit sub-rack 14TE	6
TSC4W-U	Combiner/Splitter Module 4-way, 617-2690MHz	4
TESA-UW2-L	Esaplexer SDRU SMR700 extended, AMPS+SMR800, Extended PCS+H block, Extended AWS4, WCS2300	1
iV01OMI136-S4	Surface Mount Omni SISO Antenna, 617-5925 MHz 4.3-10 Female with pigtail, -153 dBc, 4.5 dBd Gain	24
HL4RPV-50	HL4-50, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated copper, 1/2 in, off white PVC jacket. Suitable for all indoor spaces.	1700
TCC-SMSM-316-50	Coaxial Cable, Sma(M), Sma(M), 316D, length: 50cm	6
TCC-SMSM-316-100	Coaxial Cable, Sma(M), Sma(M), 316D, length: 100cm	6
UPL-4MT-12	UPL 4.3-10 Male Torque Connector for Cables 1/2" Annular	82
S2S2-Z2CB-A1-P-AYXX08080-0010M	Corning ClearCurve ZBL Optical Fiber Jumper SC/APC - SC/APC Duplex SMF (Single Mode Fiber), 10 Meter, Plenum, OFNP, Indoor, 2.0mm Jacket, 8.3um, Yellow	3
CXT4MT024M-3-I	3 ft 4.3-10 Male to 4.3-10 Male Jumper. 0.16" Times Microwave TFT402 Plenum Low PIM Cable Assy. Blue	14
DN-54FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 4:1 (6 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	2
DN-84FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 20:1 (13 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	3
S-2-UW-H-43-i6	Ultra Wideband Two-way Low PIM Reactive High Power Splitter, 555–6000 MHz, 4.3-10 Female, -165 dBc, 300W	3
DN-64FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 6:1 (8 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	2
DN-34FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 2:1 (3 dB), 350-5930 MHz, 500W, 4.3-10 Connectors Low PIM	6
DN-94FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 30:1 (15 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	2
DN-74FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 10:1 (10 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	2
DN-44FE	Unequal Power Splitter (Tapper), PIM -161 dBc, 3:1 (4.8 dB), 350-5930 MHz, 500W, 4.3-10 Connectors, Low PIM	1
3BAL-1001-04 (25 ft)	25 Ft of Green SouthWire TelcoFlex III Central Office Power Cable, 10 AWG, Single Conductor, Class B Strand with Braid, LSZH, 600 Volts	2
YAZV6C2TC14FX	Burndy Copper Compression Lug, 2 Hole with Inspection Window, Long Barrel, 1/4" Stud, 6AWG Telco Flex, 1" Stud Hole Spacing, Tin Plated	2
S2S2-Z2CB-A1-P-AYXX08080-0005M	Corning ClearCurve ZBL Optical Fiber Jumper SC/APC - SC/APC Duplex SMF (Single Mode Fiber), 5 Meter, Plenum, OFNP, Indoor, 2.0mm Jacket, 8.3um, Yellow	6

Critical Spares BOM (3 of 3)		
Model	**Description**	**QTY**
SUB-TRX-PSU5N	19" Subrack for the Optical Modules (with 5 connector Vdc, New gen)	1
TLPPOI-LB-MSE	Low Power Active POI module for Low Band, MIMO, Simplex, With Optional gain stage - 7TE	1
TLPPOI-HB-MSE	Low Power Active POI module for High Band, MIMO, Simplex, With Optional gain stage - 7TE	1
TAPOI-SMR800-F-4	Teko Active POI for SMR800 band- Flexi, 4.3-10	1
TPSU/AC	Power Supply Unit AC	1
TPSU/AC-30-1K	Power Supply Unit AC 1KW	1
TSPV-EBB	Supervision module Evo, Backup	1
TTRU4W-S-M	Optical Tx/Rx for Master Unit, 1 Tx, 4 Rx, WDM, SC-APC, Ultra-wide Band, with Monitor ports	1
TRM7E8AE19HAWXAT	RU Six Band LTE700E, 800-850Plus, 19H, AWS neXt, 33dBm, AC powered, WDM, 4.3-10	2
TRU7FL8PWE/AC-WT	RU Dual Band PS700FULL+LTE/PS800, Enhanced Power, AC,WDM, 4.3-10, RED Enclosure	1

11. CommScope ION-B Equipment List

The following table includes the existing CommScope ION-B Equipment for optional trade-in. Include the total value of trade-in in Group Three (3) of the Bid Proposal Form.

CommScope ION-B Equipment List (Optional Trade-In)					
Type	**Manufacturer**	**Model**	**Description**	**Inventory#**	**Qty**
Repeater	Andrew	TFBM7/70	[ION-B] - ION BriteCell - Booster for 700 MHz Commercial Band Medium Power & 700 Public Safety LMR - -60 to -36 VAC	N/A	16
Controller	Andrew	TSUN4	[ION-B] - Plug-in Supervision Unit for Andrew's Optical Distribution Systems	N/A	1
Misc.	CommScope	TBP74	[ION-B] ION-B Blank Panel, 4HE	Head End Cards	7
Fiber BDA	CommScope	TFAH-US7B/100 - 14	[ION-B] - ION BriteCell - High Power Remote Unit for Cell700 / LMR800 / Cell850 / LMR900 / AWS / Ext. PCS1900 - Universal Mains 85 to 265 Vac	Remote Units	25
Repeater	CommScope	TFBM7/70-1	[ION-B] - ION BriteCell - Booster for Cellular 700 / LMR 700 Band Medium Power - SISO Applications - Universal Mains 85-265 Vac	Repeaters	9
Fiber BDA Hub	CommScope	TFLN 2504/4	[ION-B] - ION BriteCell - 700-2700 MHz - Master Optical TRX - 4 Optical Links - SC/APC	Head End Cards	7

Splitter	CommScope	TLCN8-W	[ION-B] - Wideband 8-Way RF Splitter/Combiner - Separate Paths - SMA-Female Connector	Head End Cards	2
Filter	CommScope	TPOI 7/17	[ION-B] - ION BriteCell - Dual band RF Point of Interface for Cellular 700 and AWS	Head End Chassis	2
Filter	CommScope	TPOI 80/92/19E	[ION-B] - ION BriteCell - Multiband RF Point of Interface for LMR 800, LMR900, and PCS 1900 Extended	Head End Chassis	1
Filter	CommScope	TPOI 85/17/19E	[ION-B] - ION BriteCell - Multiband RF Point of Interface for Cell 850, AWS, and PCS 1900 Extended	Head End Chassis	2
Filter	CommScope	TPOI-P70/80/92	[ION-B] - ION BriteCell - Passive Multiband Point of Interface - LMR700 / LMR800 / LMR900	Head End Chassis	1
Filter	CommScope	TPOI-P85/17/19E	[ION-B] - ION BriteCell - Passive Multiband Point of Interface - Cell850 / AWS / PCS1900 Ext	Head End Chassis	1
Misc.	CommScope	TPRN34	[ION-B] - ION BriteCell - Negative Supply -72 to -36 Vdc - 12 Slots (1HE x 7TE each)	Head End Chassis	2