CITY OF FORT LAUDERDALE

RFP No.: 549
RFP Title: P25 Radio Communication System Refresh-Replacement - Rebid
COMPETITIVE NEGOTATIONS TERM SHEET

Date: 04/24/26

A term sheet is a summary of the negotiations containing the agreed upon key terms of an agreement. It serves as a template, references key points, and essentially lays the foundation for ensuring the pertinent aspects of the business transaction to avoid any misunderstanding and make it clear of the intent of both parties.

#	Key Term Description	Cite to Section/Clause of Solicitation, Proposal or Draft Agreement	Explanation/ Agreed upon Term	MSI Response
1.	1. **Invoices / Payment**	**Section 2.7 of proposal page 25** **Section 2.7:** The following payment schedule SHALL apply: 1. 10% at Contract execution. 2. 10% at agreed, approved, and delivery of design 3. 10% at successful completion of factory acceptance testing. 4. 10% on delivery of inventory by the City or their designee of radio infrastructure equipment and accessories (non-subscriber radio related) to the City's designated location(s). 5. 10% on Installation of Radio System Equipment a. Site Improvement b. Microwave backhaul c. Motorola Infrastructure Equipment 6. 5% upon receipt of Documentation and completion of applicable training. 7. 45% upon Final Acceptance	Required. The City is holding to the above payment schedule.	Motorola agrees to the City's payment terms. (Resolved)
2.	**Warranty / Ongoing Maintenance and Support**	**Section 3.1.5.1**: Fort Lauderdale requires, at a minimum, a three-year (36-month) comprehensive warranty (maintenance and support) on all infrastructure and end-user equipment required by the new P25 radio system. **A.** The Warranty term will commence upon Final System Acceptance. **B.** Ongoing Maintenance and Support will commence upon expiration of the initial three-year comprehensive warranty period and will continue in conjunction with the remainder of the first five (5)-year term and renewable with the remaining three (3) five (5)-year terms	The City wants COMPREHENSIVE for initial 5-years and with the three (3) five (5)-year term renewals MSI: Comprehensive for full terms agreed	Motorola has included a 5 Year Warranty and three, five-year term renewals as part of our original RFP response. Text error (pg. 49) of 4-year to be updated to 5 years. (Resolved)
3.	**Project Timeline**	**Section 3.1.8.1**: The Project's anticipated time frame for completion is no greater than eighteen (18) months from a formal Notice to Proceed.	The City is holding to 18 months. Other things can be done along the way. FCC approval built into 18 months.	Motorola agrees to a 21-month schedule from NTP and update text on pg. 50 section 3.1.8.1 to Comply with no further comments. The 18-month schedule has been modified to

			MSI Agreed	21 months due to the addition of a raised shelter at the Utilities site at no additional cost to the City. (Resolved)
4.	**Parts Availability**	**Section 3.1.10.1:** All proposed radio equipment, antennas, and associated repair parts shall remain commercially available for a minimum of fifteen (15) years following the date of Final Acceptance.	CITY: Parts MUST be available with or without service agreement. MSI Agreed	Motorola agrees to this requirement and update our response on page 52 section 3.1.10.1 to Comply with no further comment. (Resolved)
5.	**Acceptance Testing Process**	**Section 3.1.14.2:.** These procedures shall test and verify the performance of the hardware/software features; coverage performance on the existing system; reliability and interoperability with neighboring jurisdictions. **A.** A field certification completed prior to deployment run on the same equipment expected to be used for preventative maintenance during the warranty and maintenance periods of the contract. **B. The field certification shall include 100% of radios included in the proposal response. This includes an auto test and auto tune.** **1.** Vendor shall provide documentation on each radio upon completion of field certification.	CITY: NOT AN OPTION to charge additional. Test radios should include one currently used by the customer (APX 6000). We want this done 3-4 months prior to going live. If already done by the City, then we will want a Credit. MSI coming back should be okay	Motorola will Auto Tune and Auto Test the radios required for CATP at no additional charge to the City. Page 56, Section 3.1.14.2 will be updated to Comply with no further comment. (Resolved)
6.	**Roaming**	**Section 3.2.3.6:** **A.** The Vendor's solution shall support future seamless agency user roaming across jurisdictional boundaries via ISSI connections. **B.** Functionally, a field radio user who initiates and is in communication with telecommunicators or others on a specific talkgroup within a specific P25 radio system must remain affiliated with those parties while driving across the coverage footprint of ISSI-linked P25 systems. **C.** This roaming feature must operate automatically without the need for field users to physically change systems/talk-groups while traversing across tower site/system coverage zones. **D.** The Vendor shall describe radio user roaming functionality within its proposal. This description shall include an explanation of the process used by user radios to determine when to transition onto the next system, in conjunction with an explanation of radio availability while this ongoing adjacent-system availability determination is underway. Next systems are	Agreed Traditional on-prem method seamless ISSI 8000 Need language from MSI to confirm ISSI 8000 through end of life.	Incremental/Preference – Motorola has provided traditional on prem ISSI 8000 instead of Critical Connect at no additional cost to the City. (Resolved) MSI confirms that there is no end of life announced for ISSI 8000 and we will support it through the length of the contract. (Resolved)

		defined as the same manufacturer P25 cores with similar or different software/ hardware revisions to other manufacturers P25 cores. **E.** The need for a radio user to manually transition between tower site/system coverage zones within a Vendor's proposed network configuration is unacceptable. A manual approach shall be down-graded during the proposal evaluation.		
7.	**System Configuration**	**Section 3.3.2.2:** The system must be designed and deployed to utilize both P25 Phase 1 FDMA & P25 Phase 2 TDMA modulation formats.	CITY: Make sure all channels do FDMA and TDMA and DDM (Dynamic Assigned). City would like to end up with at least 16 channels to support anticipated 25% growth.	Incremental/Preference – Based on negotiations discussion on 4/10, The City will pay an additional $566,212 for an additional Chassis and 2 additional channels as requested by the City. Motorola will include 2 channels at no additional cost to the City and this will bring the proposed solution to a 14-channel design. (Resolved)
8.	**Dynamic Talkgroup Assignment**	**Section 3.3.2.9:** Physical plant modifications to newly-proposed tower sites, rental sites, existing Customer-owned sites, or the dispatch center(s) as necessary to accommodate the Vendor's proposed system configuration shall be the responsibility of the Contractor and must be clearly identified and factored into the Vendor's Cost Proposal. **Section 3.3.2.10:** The Vendor's failure to disclose physical plant modifications (and cost) is contrary to the Customer's turnkey project requirement and shall result in an unfavorable grade of the Vendor's proposal or non-compliant rating if not separately listed; all physical plant modifications and costs will be at the cost of the Contractor without a change order. **Section 3.3.2.21:** The microwave backhaul layer shall be designed and configured as a monitored, hot-standby, loop-protected ring (or rings) interconnecting all radio tower sites, simulcast control points, dispatch centers, and network controller locations.	CITY: Not an option. New HVAC and grounding up to speed as part of proposal at no additional cost. Make sure detailed SOW for each site includes work noted at no extra cost. Simulcast not to go through FXE. Alternative routing needed at no additional cost to the City. CITY: Not going through dispatch	Motorola has confirmed that cost is included for Electrical upgrades for newly proposed equipment. A detailed list of known/ unknowns will be reviewed during DDR. (Resolved) Incremental/Preference – New Microwave design selected by the City (Resolved)
9.	**System Planning and Capacity**	**3.3.3.8:** The Vendor must provide a contingency plan, should the initial frequency plan not be available for implementation.	CITY: Assigning radio license to Broward County is not an option. Hard NO. MSI Agreed	The City does not have to assign the radio licenses to Broward. All frequencies will be licensed to the City of Fort Lauderdale. (Resolved)

10.	**Typical Infrastructure Site Deployment**	**3.4.3:** A typical P25 radio infrastructure site equipment shelter shall contain, minimally, the following major equipment groupings: **3.4.3.1:** 700/800MHz P25 Phase 1/Phase 2 Base Stations	MSI Feature – Reduced feature set when Roaming between Zones or System. CITY requires MSI to make this happen without CriticalConnect MSI Agreed	Incremental/Preference – Motorola will provide seamless roaming with traditional ISSI 8000. (Resolved)
11.	**Regional Interoperability**	**3.4.10.1:** In preparation for such regional interoperability, the Customer requires the capabilities outlined in 3.4.11, 3.4.12 and, 3.4.13	MSI agreed without CriticalConnect- Seamless roaming is key	Incremental/Preference – Motorola will provide seamless roaming with traditional ISSI 8000. (Resolved)
12.	**ISSI Gateway**	**3.4.11.2:** Further, the Vendor shall describe each operational feature that is supported by its proposed ISSI technology.	Same as above. MSI agreed	Motorola has provided traditional on prem ISSI 8000 instead of Critical Connect at no additional cost to the City. (Resolved)
13.	**Broadband Gateway Solution**	**3.4.13** **3.4.13.1** The ubiquitous use of commercial broadband Smartphone devices presents new opportunities for providing P25 radio access to those entities having the need for communications with The Customer's user agencies **3.4.13.2** Vendor shall provide:	MSI to make this happen without CriticalConnect City wants unlimited licensing for Broadband Gateways. Unlimited Smart Connect hosted on the core. Number of Wave users? City Provided	Incremental/Preference – Motorola has included 100 WAVE users per the RFP specification and quoted additional 3000 licenses under the Optional Pricing Tab in attachment 2. (Resolved)
14.	**Fixed Microwave Equipment Requirements**	**3.11.5:** A Microwave Alarm System shall be provided by the Vendor to monitor microwave site functions and to provide alarm status of abnormal operational parameters of equipment associated with the microwave system. Microwave major alarms shall be integrated within the radio alarm packaged supplied by the Vendor.	CITY wants Aviat Microwave thrown in instead of Nokea/Infinity proposed, detailed reporting. MSI willing to offer Aviat and will get back on the alarm.	Incremental/Preference – New Microwave design selected by the City (Resolved) The RFP requirement says "Microwave major alarms shall be integrated within the radio alarm packaged supplied by the Vendor." thus Motorola included them in the UEM. Additionally, Motorola has included a microwave alarm system at no additional cost to the City. (Resolved)
15.	**Coverage Parameters**	**3.13.2**	CITY acknowledges MSI's assertion and agrees to test	Incremental/Preference –

		3.13.2.1 The Vendor must consider the following operating parameters in the development of their coverage guarantee: **E.** All Loss factors for portable loss factors and testing will be clearly identified in contractor's response.	**APX 6000** as part of the coverage acceptance plan. MSI agrees and will update	Motorola has updated the CATP table to reflect the City's existing radio configuration of APX 6000 radios with a ¼ wave antenna. Attached as Exhibit A. (Resolved)
16.	**Noise Floor & Interface**	**3.13.1 Noise Floor & Interference** **3.13.1.1** It is the intent and requirement that the system shall be designed such that the indicated coverage goals and requirements herein be met irrespective of external noise and interference. **A.** It is essential that the Contractor undertake whatever measurements, surveys, and studies as necessary such that the state of the noise and interference environment is quantified prior to the system's final design. **B.** The final system design shall make such allowances as necessary, including but not limited to reduced repeater site effective sensitivity (predictions) in the presence of noise and interference (as measured) to achieve the Customer's required degree of coverage. **3.13.1.2** The Contractor shall not be permitted to excuse a failure of any portion of the coverage test due to external noise or interference, with one exception: **A.** If the Contractor can show, with certified measurement data, that the noise and/or interference environment has substantially changed between the initial pre-design measurements/surveys and the time of the performance of the coverage acceptance test. **B.** If such findings can be demonstrated, then the coverage requirement for the affected portion of the coverage test may be conditionally accepted by the Customer as an exception. **3.13.1.3** As part of its proposal development, the Contractor shall undertake a best-faith effort to investigate the existence of abnormal noise/interference levels, if any, and shall incorporate those findings within its coverage map submittals for the proposed system. **3.13.1.4** These measurements shall be conducted between the hours of 8 a.m. – 5 p.m. Monday through Friday. **3.13.1.5** Off hours and holiday periods will not be acceptable periods for measurements.		Motorola has included Noise Floor testing as part of our original RFP response, and we will do baseline testing. Page 138 of our response has preliminary reports, however, a detailed test will be conducted in Post Sale. We can use the following Firms for this (No Additional Cost to the City) 3.45.1.1 EWA 3.45.1.2 The Spectrum Firm 3.45.1.3 Commdex (Resolved)

		3.13.1.6 Ultimate final acceptance of the affected portion of the completed system may be given only if the Customer is shown sufficient information to demonstrate that any observed degradation is beyond the reasonable, Industry-recognized control of the Contractor. **3.13.1.7** If, however, coverage degradation to the system is found to be within the Contractor's control, then whatever additions, modifications, or costs incurred to resolve the coverage deficiency shall be borne solely by the Vendor.		
17.	**Intermodulation Study Requirement**	**3.14** **3.14.1** The Vendor shall ensure that the proposed System will be within the accepted limits of Industry-accepted engineering practice, free of interference or degradation due to intermodulation (IM) noise/sideband products.	MSI IM to be all inclusive. Agreed. MSI to comply. Additional language to be removed.	Motorola will conduct a detailed IM study for all documented frequencies at each site. As part of the IM study, Motorola will provide a detailed report. Any IM issues caused by another system or source outside the scope of this project would have to be resolved by the City of Fort Lauderdale. Motorola will work with the City to determine resolutions. (Resolved)
18.	**Radio System Coverage Acceptance Criteria**	**3.18** **3.18.13** The Customer reserves the right to reject any instrumentation or procedures. **3.18.16** Should The Customer reject any portion of the test, the Contractor shall correct the errors and omissions as defined by the Customer at no additional cost.	MSI MUST provide a fully complying CATP test. MSI agrees. **MSI to Add language to CATP**… APX 6000 & loss factors and building loss factors.	Incremental/Preference – Motorola has updated the CATP table to reflect the City's existing radio configuration of APX 6000 radios with a ¼ wave antenna. Attached as Exhibit A. (Resolved)
19.	**Audio Quality Test Process**	**3.19** **3.19.7.2** A successful test measurement shall be one which requires no repetition, and as defined in Figure 1 to understand the spoken phrase and with a DAQ-3.4.	MSI MUST provide a fully complying CATP test MSI Agreed.	Incremental/Preference – Motorola has updated the CATP table to reflect the City's existing radio configuration of APX 6000 radios with a ¼ wave antenna. Attached as Exhibit A. (Resolved)

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20.	**Shelter Configuration Details**	**3.27** **3.27.1.3** A roof shield shall be provided and installed by the Contractor, above the equipment shelter and of sufficient size to adequately protect the shelter and personnel from falling materials via the nearby radio site's tower.	MSI to provide at no additional cost. Ice not likely but shelter protection from falling material is required. MSI agreed to updating language to comply	Motorola will include 2 roof shields for the Utilities & The State of Florida sites at no additional cost to the City. Agreed to remove the additional language from Page 177 of the proposal. (Resolved)
21.	**APCO P25 Related Specifications**	**3.42.3** **3.42.3.9** Radio operating information shall be contained in an electrically erasable memory device. Unit will be fully programmable from a laptop/desktop computer, via the accessory receptacle.	**CITY: MSI to provide Over the Air Programming over a P25 Channel at no additional cost.** Table this one. We took this to be Included as part of the cost.	As per spec "3.4.14.1.F - F. The System shall be configured and include both Over-the-Air-Programming (OTAP) and Over-the-Air-Rekeying (OTAR) of user radio equipment as an option. Both of these configurations must include the server to accommodate this functionality." This was requested as an option. Motorola has included this pricing in attachment 2 under "Other Optional Pricing". Motorola has provided a further discounted offer of $155,426 for KMF (Resolved)
22.	**Programming and Key Loading**	**3.42.4** **3.42.4.3** Radio operating information shall be contained in an electrically erasable memory device.	Table this one. We took this to be Included as part of the cost. Did MSI include cost to cover current subscribers and addl. cost for any added subscribers? Internal discussion to determine next steps.	As per spec "3.4.14.1.F - F. The System shall be configured and include both Over-the-Air-Programming (OTAP) and Over-the-Air-Rekeying (OTAR) of user radio equipment as an option. Both of these configurations must include the server to accommodate this functionality." This was requested as an option. Motorola has included this pricing in attachment 2 under "Other Optional Pricing" Motorola has provided a further discounted offer of $114,979 for IMW. (Resolved)
23.	**Phased Implementation**	**Section 3.44 pf proposal page 260**	MSI MUST provide a detailed plan as part of Customer Design Review (CDR).	Motorola agrees and will provide a detailed plan as part of the CDR. (Resolved)

			MSI agrees	
24.	**Warranty and Maintenance Guidelines** **Warranty**	**Section 3.45 pf proposal page 275** **3.45.1 Warranty** **3.45.1.4** Equipment Warranty **A.** The following conditions shall apply for equipment Warranty: **1.** The Vendor will provide post-warranty maintenance and services comparable to the same services proposed for the warranty period. **a.** All warranty and post-warranty services will be clearly identified and provided in a matrix. *Attach Warranty and Post-Warranty Matrix **b.** All warranty and post-warranty services shall be comprehensive and must cover the entire system, including but not limited to Vendor provided OEM and all third-party equipment. **1)** These services will be priced individually for customer information. **c.** The Customer can optionally remove any post-warranty services as determined by the Customer's need to provide in-house or subcontract any of these respective services. **2.** The Vendor shall warranty all provided network equipment furnished as part of the Contract and associated radio infrastructure, related user equipment and software for not less than three years, after the date of Final System Acceptance. **d.** This includes, but is not limited to, the P25 Trunking, Microwave, and Mutual-Aid portions of the Contract. **3.** The System Warranty period will commence at the time of Final System Acceptance, and the Contractor shall provide all labor and parts for maintenance and repair, including preventative maintenance, of all system equipment provided in the proposed network. **4.** All costs for the three-year warranty services will be absorbed by the Contractor. **5.** Replacement parts must be of new or current manufacture and meet or exceed the specifications of the original supplied equipment (OEM). **6.** Post-warranty replacement parts service for emergency infrastructure equipment repair, not available locally, shall be shipped out on the first available flight. Any parts required for non-		

		emergency repair that are not available locally should be shipped out for next day delivery. **7.** The Contractor shall have factory-trained technicians and system engineers available by telephone 24x7x365. **e.** The technicians or system engineers must respond by telephone within thirty (30) minutes of observed or reported service outage and be on-site, in response to a reported service outage, within two (2) hours. **f.** Contractor shall be required to provide a list of certified factory-trained technicians performing maintenance on the system including all sub systems and equipment. **g.** The Vendor should provide documentation that supports the current certifications of factory-trained technicians. **1)** The Vendor is responsible for keeping all credentials and certifications required to maintain the system current and up to date. **8.** Service providers responding to emergency service outages must provide continuous non-stop support until the problem is resolved. **9.** Non-critical service requests response will be within one (1) working day. **10.** When a critical system failure occurs, more stringent requirements shall be met by the Contractor. **a.** A critical system failure is defined as a significant reduction in the ability to communicate. **b.** Examples of such failures are: **1)** Site off the air, **2)** Dispatch console failure at a location with no backup console available, **3)** Primary and Secondary Network Controller failure such as the system does not have the ability to operate on trunked calls, **4)** Site link failure due to network equipment, **5)** Or 50% or more failed base/repeaters at a radio site. **6)** Radio system not simulcasting. **11.** In the event of a critical system failure, Contractor will notify The Customer of the failure. **12.** Critical failures shall have service restored within six (6) hours or less from notification to the Contractor, via The Customer notifying the Contractor, or monitored software notification.		

		13. Original Equipment Manufacturers (OEM) shall have a fully qualified, staffed, and equipped service facility positioned and capable of meeting this RFP's response time criteria during the warranty and maintenance agreement periods. **a.** Any subcontractors used during the warranty and post-warranty maintenance period must be pre-approved by the Customer. **B.** The Vendor will supply as part of the technical response, a list or services and preventative maintenance to be provided during the warranty period as well as a schedule at which these services will occur. **C. The Contractor must make available replacement parts for all Contractor-manufactured components of the digital radio infrastructure for 15 years following Final System Acceptance.** **D.** In the event any required part becomes unavailable during the specified fifteen (15) year period, the Contractor may provide a repaired or upgraded component, provided that: **1.** The replacement maintains full functionality and interoperability with the existing system; and **2.** The replacement cost does not exceed the cost of the original part had it remained commercially available. **E.** The Contractor must identify lifecycle and parts availability of all OEM and third-party equipment proposed. **F.** Post-warranty replacement parts service for emergency infrastructure equipment repair, not available locally, shall be shipped out on the first available flight. **G.** Any parts required for non-emergency repair that are not available locally should be shipped out for next day delivery. **H.** Contractor must guarantee the system's operating software, inclusive of user equipment software, for a one-year period following Final System Acceptance. **I.** The Contractor shall provide all system software updates, at no additional cost, for the entire period under which The Customer has committed for Contractor-provided post-warranty maintenance services.	MSI agrees and will update language.	Motorola agrees with no further comment. (Resolved)

		J. Contractor shall resolve all known software defects or "bugs" to system software during warranty and post-warranty period via patch, or system software updates. **K.** Prior to Final System Acceptance, System shall be updated to the latest system software release that is approved for shipping and generally available.		
25.	**Remedies**	**Section 3.45.2 pf proposal page 279** **3.45.2.1 In the event of default on the response time to reported service outages, the Vendor agrees to pay The Customer the following penalties for response remedies:** **A.** Contractor shall pay $250 for each occasion that it fails to meet the response time obligation for a reported infrastructure service outage. **B.** Contractor shall pay $500 per twenty-four-hour period in which a failed infrastructure site is not restored to operational status. **C.** Should any specific equipment item (such as a repeater station, station circuit board, power amplifier, etc.) be submitted for repair three times during the warranty or post-warranty term, Contractor will replace that equipment item with a new item at no cost to the Customer and warranty the replacement for one additional year from the time of accepted replacement.	CITY: Not acceptable. This is required. MSI to get back.	Motorola agrees with no further comment. (Resolved)
26.	**Maintenance**	**3.45.3** **3.45.3.1** During the initial warranty period, the Contractor shall be responsible for: **A.** Annual Preventative maintenance of all proposed System equipment and any supplied equipment; **B.** Repair maintenance of infrastructure equipment, inclusive of antenna systems;	MSI to review and provide definition of antenna system.	Antenna system is defined as anything after the combiner and or multi coupler to the antenna. TTA's are also included. (Resolved)
27.	**Spare Parts Support**	**3.45.5** **3.45.5.1** Contractor must provide and maintain a stock of spare parts, as determined necessary by the Contractor, to maintain all components of the System's infrastructure for the warranty period. These spare parts shall be located either at selected System radio infrastructure sites or at the Contractor's local maintenance service facility. A list of these spare parts determined to be necessary by the Contractor shall be provided to the Customer.	MSI to provide detailed parts list. More spares will come from MSI if needed. If City has a device out of service due to unavailability of replacement parts for more than 36 hours then MSI will have to increase	Motorola has included a detailed spare parts list as Exhibit B. These spares were included as part of our original RFP response. Motorola agrees to remove the Additional language from page 283, section 3.45.5.1

			the number of spares at NO COST to the City.	If at any time during the warranty period a critical spare is unavailable due to the recommended spares count being found insufficient to support the system level agreement requirements Motorola will supply that spare to the City at no additional cost. (Resolved)
28.	**Site Modification Costs**	**3.45.8** **3.45.8.1** For equipment to be installed at the Customer-owned sites which have requirements for site preparatory work involving architectural, mechanical, electrical, civil or structural construction modifications, a description and cost of the modifications required must be provided by the Vendor for each individually named site. **3.45.8.2** Vendors who fail to identify sites subject to this requirement shall, at their own expense and without entitlement to a change order, perform all necessary modifications to achieve compliance with this specification. **3.45.8.3** For newly-added sites, the price provided by the Vendor shall include services typical and customary for the development and commissioning of a new system site, exclusive of access roadway development. **A.** **A.** The Customer will provide site access roadways if the property is the Customer-owned.	CITY: Not an option. Required. Part of physical plant. No additional costs to the City. MSI to provide updated language to provide what is known to be included in the costs and provide potential unknown issues and costs. Discuss with City. Contingency to be line itemed with associated pricing below bottom line. Allowance – known unknowns identified	As part of Motorola's updated offer, Motorola will include a new raised shelter/generator at the Utilities site at no additional cost to the City, on the land provided by the City. This will add an additional 3 months to the implementation schedule from 18 to 21 months. (Resolved)
29.	**Lifecycle Cost**	**3.45.9** **3.45.9.1** The Customer reserves the right to perform a lifecycle analysis on the proposed system to determine the best price value. **A.** A critical part of such research involves knowledge of the overall lifecycle of the various OEM and 3rd Party elements making up a Vendor's System solution. **B.** From general availability to manufacture discontinue and all phases in between, the production age of the proposed system affects the ability to source spare parts, software upgrade, and support services. **C.** Lifecycle analysis is a critical factor in determining the operational life of the proposed P25 technology and supporting products. **3.45.9.2** Vendors shall disclose key lifecycle dates of the proposed system, including subscribers, P25 System software,	CITY: Not an option. Required. MSI to provide life cycle roadmap. City NOT signing an NDA. MSI to get back with us.	Motorola agrees to this requirement and no NDA would be required for lifecycle roadmap. Motorola will work with the City to plan annual lifecycle meetings. (Resolved)

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<tr><td></td><td></td><td>infrastructure, network elements, and 3rd Party supporting equipment. Include general availability (GA) release dates to manufacture discontinue (MD) dates along with important OEM hardware and software support dates for standard, extended and out-of-support milestone dates. Please detail how software support dates/phases affect service availability and pricing.
3.45.9.3 Vendors shall disclose as part of their Cost Proposal when System was first released for sale to the Public.
3.45.9.4 Vendors shall also provide a life-cycle roadmap, referenced by year and so depict when any third-party equipment is likely to be discontinued and when parts/software support will cease to be available.</td><td></td><td></td></tr>
<tr><td>30.</td><td>Implementation Approach
- Final Acceptance and
Warranty Support</td><td>Section 1.2.1.1.3 of proposal Page 431 – 446

<table>
<tr><th>Tasks</th><th>MSI</th><th>CoFL</th></tr>
<tr><td colspan="3">PROJECT INITIATION
Contract Finalization and Team Creation</td></tr>
<tr><td>Execute contract and distribute contract documents.</td><td>X</td><td>X</td></tr>
<tr><td>Furnish a performance bond in the full amount of the contract price as security for the faithful performance of Motorola Solutions' contractual obligations.</td><td>X</td><td></td></tr>
<tr><td>Purchase the required performance bond.</td><td>X</td><td></td></tr>
<tr><td>Furnish a payment bond.</td><td>X</td><td></td></tr>
<tr><td>Furnish a bid bond.</td><td>X</td><td></td></tr>
<tr><td>Assign a Project Manager as a single point of contact.</td><td>X</td><td>X</td></tr>
<tr><td>Assign resources.</td><td>X</td><td>X</td></tr>
<tr><td>Schedule project kickoff meeting.</td><td>X</td><td>X</td></tr>
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Deliverable: Signed contract, defined project team, and scheduled project kickoff meeting.

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<tr><td>Project Administration</td></tr>
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Ensure that project team members attend all meetings relevant to their role on the project.	X	X		
Set up the project in the Motorola Solutions information system.	X			
Record and distribute project status meeting minutes.	X			
Maintain responsibility for third-party services contracted by Motorola Solutions.	X			
Complete assigned project tasks according to the project schedule.	X	X		
Submit project milestone completion documents.	X			
Upon completion of tasks, approve project milestone completion documents within 7 to 10 business days.		X		
Conduct all project work Monday thru Friday, 8 a.m. to 5:00 p.m. local time with the exception of Motorola Solutions' and the Customer's holidays.	X			

Deliverable: Completed and approved project milestones throughout the project.

Project Kickoff				
Introduce team, review roles, and decision authority.	X	X		
Present project scope and objectives.	X			
Review SOW responsibilities and project schedule.	X	X		
Schedule Design Review.	X	X		

Deliverable: Completed project kickoff and scheduled Design Review.

Design Review				
Review the Fort Lauderdale's operational requirements.	X	X		

		Present the system design and operational requirements for the solution.	X			
		Present installation plan.	X			
		Present preliminary cutover plan and methods to document final cutover process.	X			
		Present configuration and details of sites required by system design.	X			
		Mutually Validate that Customer sites can accommodate proposed equipment.	X	X		
		Provide all approvals required to add the proposed equipment at the proposed sites		X		
		Review safety, security, and site access procedures.	X			
		Present equipment layout plans and system design drawings.	X			
		Provide backhaul performance specifications and demarcation points.	X			
		Provide heat load and power requirements for new equipment.	X			
		Provide information on existing system interfaces (if any).	X	X	**CITY: Dual responsibility, and need to be identified in DDR process.**	Motorola agrees on dual responsibility - (Resolved)
		Provide frequency and radio information for each site.	X	X	**CITY: Same comment**	Motorola agrees on dual responsibility - (Resolved)
		Assume liability and responsibility for providing all information necessary for complete installation.	X	X	**CITY: Same comment**	Motorola agrees on dual responsibility- (Resolved)
		Assume responsibility for issues outside of Motorola Solutions' control.		X		
		Complete the required forms required for frequency coordination and licensing.	X			
		Ensure that frequency availability and licensing meet project requirements, and pay licensing and frequency coordination fees.	X			
		Get any waivers and/or letter of concurrences required based on the	X	X	**CITY: Dual responsibility**	Motorola agrees on dual responsibility (Resolved)

		proposed design contours for approval from FRIPS/FCC for licensing.				
		Mutually agree and define City of **Naperville**'s requirement threshold for purposes of initiating Motorola ASTRO 25 system staging.	**X**	**X**	**CITY: Correct City of Fort Lauderdale**	Delete "Naperville's" and replace with "Fort Lauderdale's" (Resolved)
		City of Fort Lauderdale provides Notice To Proceed (NTP) for project schedule to initiate.		**X**		
		Review and update design documents, including System Description, Statement of Work, Project Schedule, and Acceptance Test Plan, based on Design Review agreements.	**X**			
		Provide minimum acceptable performance specifications for customer provided hardware, software, LAN, WAN and internet connectivity.	**X**			
		Execute Change Order in accordance with all material changes to the Contract resulting from the Design Review (if any).	**X**			
		Deliverable: Finalized design documentation based upon "frozen" design, along with any relevant Change Order documentation.				
		SITE PREPARATION AND DEVELOPMENT				
		Site Access				
		Provide site owners/managers with written notice to provide entry to sites identified in the project design documentation.		**X**		
		Maintain access roads in order to provide clear and stable entry to sites for heavy-duty construction vehicles, cement trucks and cranes. Ensure that sufficient space is available at the site for these vehicles to maneuver under their own power, without assistance from other equipment.		**X**		

Deliverable: Access, permitting, and licensing necessary to install system equipment at each site.

General Facility Improvements (for existing sites)		
Provide adequate HVAC, grounding, lighting, cable routing, and surge protection based upon Motorola Solutions' Standards and Guidelines for Communication Sites (R56) for the existing (3) sites.	**X**	**~~X~~**
Ensure the resolution of environmental and hazardous material issues at each site including, but not limited to, asbestos, structural integrity (tower, rooftop, water tank, etc.), and other building risks.		**X**
Ensure that electrical service will accommodate installation of system equipment, including isolation transformers, circuit breakers, surge protectors, and cabling for the (3) existing sites.	**X**	**~~X~~**
Provide obstruction-free area for the cable run between the demarcation point and system equipment.	**X**	**~~X~~**
Provide structure penetrations (wall or roof) for transmission equipment (e.g., antenna coaxial cables, waveguide for microwave radios, control station antennas etc.).	**X**	**~~X~~**
Supply interior building cable trays, raceways, conduits, and wire supports.	**X**	**X**

MSI should have identified this and provided solutions and cost.
MSI responsibility not the City. Cost to MSI.

Valid for dispatch, but not valid for the sites. There should be no customer improvements for these sites. MSI to break this out between sites and dispatch centers.

CITY: Same comment

CITY: Same comment

CITY: Same comment

Playa Del Sol Site: MSI will connect to the Meter Center on the floor below the equipment room. If the run required to reach the Meter Center exceeds 100 feet, MSI will complete the connection at no additional charge. Motorola has included an electrical study by an A&E firm to determine if the existing electrical service can accommodate the proposed equipment installation.

Points of Americas Site: MSI will run a feeder circuit to the Main Panel without a length limitation; However, this doesn't include any core drilling or the associated conduit.
This work is not included for the dispatch sites.
(Resolved)

Playa Del Sol Site: MSI will connect to the Meter Center on the floor below the equipment room. If the run required to reach the Meter Center exceeds 100 feet, MSI will complete the connection at no additional charge. Motorola has included an electrical study by an A&E firm to determine if the existing electrical service can accommodate the proposed equipment installation.

Points of Americas Site: MSI will run a feeder circuit to the Main Panel without a length limitation; However, this doesn't include any core drilling or the associated conduit.
(Resolved)

		Pay for usage costs of power and generator fueling, both during the construction and installation effort, and on an ongoing basis.		X	**CITY: Same comment**	Motorola can take this responsibility for the (3) RF sites but City's responsibility for dispatch sites. (Resolved)
		Provide one-time mobilization of construction crews.	X			Motorola can take this responsibility for the (3) RF sites but City's responsibility for dispatch sites. (Resolved)
		Correct any R56 deficiencies.	X	~~X~~		Motorola can take this responsibility for the (3) RF sites but City's responsibility for dispatch sites. (Resolved)
		Transport removed site equipment to a location designated by Customer and within Customer's jurisdiction.	X			All Motorola Supplied equipment will be installed as per R56 standards (Resolved)
		Deliverable: Sites meet physical requirements for equipment installation.				
		SYSTEM INSTALLATION **Equipment Order and Manufacturing**				
		Create equipment order and reconcile to contract.	X			
		Manufacture Motorola Solutions-provided equipment necessary for the system based on equipment order.	X			
		Procure non-Motorola Solutions equipment necessary for the system.	X			
		Deliverable: Equipment procured and ready for shipment.				
		System Staging (<customer witnessed or NOT customer witnessed>)				
		Ship all equipment needed for staging to Motorola Solutions' factory for staging.	X			

		Provide information on existing system interfaces, room layouts, or other information necessary for the assembly to meet field conditions.	**X**	**X**	**CITY: Dual responsibility and needs to be identified in DDR process.**	Motorola agrees to dual responsibility (Resolved)
		Set up and rack the solution equipment on a site-by-site basis, as it will be configured in the field at each of the sites.	**X**			
		Cut and label the cables with to/from information to specify interconnection for field installation and future servicing needs.	**X**			
		Complete the cabling/connecting of the subsystems to each other ("connectorization" of the subsystems).	**X**			
		Assemble required subsystems to assure system functionality.	**X**			
		Power up, load application parameters, program, and test all staged equipment.	**X**			
		Confirm system configuration and software compatibility with the existing system.	**X**			
		Inventory the equipment with serial numbers and installation references.	**X**			
		Review and approve proposed Factory Acceptance Test Plan.		**X**		
		Pay for travel, lodging, meals, and all incidental expenses for Customer personnel and representatives to witness the Factory Acceptance Testing for up to 5 personnel.	**X**			
		Perform factory functional acceptance tests of system features	**X**			
		Conduct site and system level testing.	**X**			

Perform system **burn-in 24 hours a day** during staging to isolate and capture any defects.	X	
Pack and ship the racked equipment to the field to finalize staging of equipment.	X	

Deliverable: System staged and ready for shipment.

Equipment Shipment and Storage		
Provide a secure, temperature-controlled location for solution equipment to be warehoused for up to 8 months.	X	
Pack and ship solution equipment to the identified, or site locations.	X	
Receive solution equipment.	X	
Inventory solution equipment.	X	

Deliverable: Solution equipment received and ready for installation

General Installation		
Deliver solution equipment to installation location.	X	
Coordinate receipt of and inventory solution equipment with designated contact.	X	
Install all proposed fixed equipment as outlined in the System Description based upon the agreed-upon floor plans, connecting audio, control, and radio transmission cables to connect equipment to the power panels or receptacles, and audio/control line connection points. Installation performed in accordance with R56 standards and state/local codes.	X	

		Install all proposed fixed equipment as outlined in the System Description based upon the agreed-upon floor plans, connecting audio, control, and radio transmission cables to connect equipment to the power panels or receptacles, and audio/control line connection points. Installation performed in accordance with R56 standards and state/local codes.	X			
		Provide connectivity test results to confirm specification compliance before equipment installation. • Layer 3 MPLS equipment is recommended for all links. • Provide 24-hour test compliance, per Motorola specification.	X			
		• Provide IT contact representative for backhaul-related requirements				
		Provide system interconnections that are not specifically outlined in the system design, including dedicated phone circuits, microwave links, or other types of connectivity. For Eg: information on the MW link between the 2 dispatch locations.	**X**	**X**	**CITY: Dual responsibility and need to be identified in DDR process.**	Motorola agrees to dual responsibility to identify the System interconnections. (Resolved)
		Install and terminate all network cables between site routers and network demarcation points, including microwave, leased lines, and Ethernet.	X			
		Provide, Install and terminate all cabling between MC-Edge and punch blocks installed on the wall or in the rack. Perform wiring for the Aux I/O controls such as Doors, Gates, Environmental alarm closures, etc. to the control punchblock.	X			

		Connect existing, pre-wired auxiliary input/outputs to the proposed Motorola MC Edge input/output box, as needed. NOTE: The customer will provide wiring to allow for the connection in the dispatch room. NOTE: If any new wiring for input/outputs is needed at the dispatch site an additional quote can be provided.	**X**	**~~X~~**	**CITY: Alarms were identified in RFP. MSI responsibility to wire to all alarms at the tower sites at no additional costs.** **Dispatch not included.**	All applicable RFP identified alarms will be ported from the SDM to MC-Edge for all RF sites (Unresolved)
		Ensure that Type 1 and Type 2 AC suppression is installed to protect installed equipment.	**X**	**~~X~~**	**CITY: Same comment. MSI responsibility**	Motorola agrees to move to Motorola Responsibility. (Resolved)
		Connect installed equipment to the provided ground system within 15 feet.	**X**			
		Label Motorola-supplied equipment, racks, and cables.	**X**			
		Perform preliminary audit of installed equipment to ensure compliance with requirements and R56 standards.	**X**			
		Note any required changes to the installation for inclusion in the "as-built" system documentation.	**X**			
		Ensure that the State of Florida Tower is constructed on time to prevent any schedule delays.		**X**		
		Remove, transport, and dispose of old equipment.	**X**			
		Deliverable: Equipment installed.				
		Site Link Assessment				
		Verify site link performance, prior to the interconnection of the solution equipment to the link equipment. Site links will be tested once.	**X**			
		Provide information on customer public Internet connection for evaluation purposes.		**X**		
		Evaluate customer's network from an IT perspective.	**X**			

Deliverable: Site Link Assessment completed and findings are presented to the Customer.

Antenna and Transmission Line Installation		
Install antennas, including supplying and installing new side arm mounts. Unless otherwise noted, standard antenna mounts are included.	X	
Install tower top amplifiers.	X	
Install transmission lines required for the system.	X	
Provide structure penetrations for transmission equipment (e.g. antennas & microwave line.).	X	
Install microwave waveguide and lines, as applicable.	X	
Perform sweep tests on transmission lines.	X	
Provide and install attachment hardware for supporting transmission lines on antenna support structure.	X	
Supply and install ground buss bar at the bottom of each antenna support structure.	X	~~X~~

Deliverable: Antenna and Transmission Line installed.

ASTRO 25 Core and Remote Site Installation and Configuration		
Install fixed equipment contained in the equipment list and system description.	X	
Provide backhaul connectivity and associated equipment for all sites to meet latency, jitter and capacity requirements.	X	
Configure ASTRO 25 system to support the new RF sites.	X	

MSI responsibility
MSI to get back with City

Motorola agrees to move to Motorola Responsibility.
(Resolved)

		Provide a list of subscriber IDs for loading into the Zone Controller.		X		
		Load subscriber IDs in the Zone Controller.	X			
		Provide required radio ID and alias information to enable alias database setup for interface to consoles.	X	X	CITY: Shared responsibility. MSI to provide radio IDs for City validation.	Motorola agrees to move this to shared Responsibility. Motorola will provide the radio ID's and the City will validate. (Resolved)
		Integrate the RF sites into the system to ensure proper operation.	X			
		Deliverable: ASTRO 25 core and remote site equipment installation completed.				
		Console Installation and Configuration				
		Provide console furniture and make room for new console installation.		X		
		Identify circuits for connection to console and a demarcation point located within 25 feet of the console interface.	X	X	**CITY: Motorola responsibility. To be identified in DDR after City facilitates visit to dispatch site.**	Motorola has not walked the dispatch sites and can identify this during DDR for the City. (Resolved)
		Connect console to circuit demarcation points.	X			
		Install the dispatch backroom rack(s) equipment with network equipment,	X			
		site controller, etc., as applicable.				
		Install CommandCentral Hub and all associated console equipment at each position.	X			
		Install peripheral console equipment in accordance with R56 standards and state/local codes.	X			
		Develop templates for console programming.	X			

		Perform console programming and configuration.	X			
		Ensure there is enough space, power, and grounding available to install the proposed Console and Control station equipment as applicable.	X	X	**CITY: Motorola responsibility. To be identified in DDR after City facilitates visit to dispatch site.**	Motorola has not walked the dispatch sites and can identify this during DDR for the City. Motorola can validate after the site walks. (Resolved)
		Deliverable: Console equipment installation completed.				
		Control Station Installation and Configuration				
		Provide the locations of control stations and desk sets at each site.		X		
		Survey mounting locations and develop control station installation plan.	X			
		Provide adequate space, grounding, and power for the control station installation.		X		
		Properly ground the cabling, which will be run to the outdoor antenna location using the least obtrusive method.	X			
		Provide an elevated antenna mounting location, and adequate feed-line routing and support.		X		
		Provide and install standard antenna mounts.	X			
		Install line (not greater than 100 feet in length) and antenna system (connectors, coax grounding kit, antenna and surge protection).	X			
		Install RF local control stations identified in the equipment list.	X			

		Provide existing control station codeplugs or provide a list of channels (and associated parameters) to program the proposed control stations.	**X**	**X**	**CITY: Dual responsibility. Part of fleetmap.**	Motorola agrees to dual responsibility. (Resolved)
		Perform control station programming.	**X**			
		Provide existing, installed/programmed control stations/consolettes (up to 14) with existing antenna and line and cabling to the backroom which can interface to the Motorola gateway in the backroom equipment rack.		**X**		
		Deliverable: Control station equipment installation completed.				
		Microwave Installation				
		Conduct path surveys for all microwave paths.	**X**			
		Review path surveys with City of Naperville and update the project	**X**			
		documentation as mutually agreed if a change is determined necessary				
		Deliverable: Microwave Equipment installation completed and ready for optimization.				
		3RD PARTY SOW (Copy paste from 3rd Party SOW)				
		Review and approve revised project documentation and costs, if changes are determined to be necessary.	**X**			
		Provide microwave frequency coordination. If the necessary spectrum for the proposed microwave solution cannot be coordinated by Motorola, then Motorola will advise City of Naperville what alternatives have been determined are available to City of **Naperville**.	**X**		**CITY: City of Fort Lauderdale**	Text error: Update to Fort Lauderdale. (Resolved)
		Install microwave and MPLS contracted elements as described in General Installation.	**X**			

		Submittal of license requests to the FCC.	X		
		Logging Recorder Installation and Configuration			
		Provide logging recorder equipment and all associated services, including removal, re-location/installation and configuration, and the Motorola API, SDK, as needed.	X		
		For the 3rd Party Logging Equipment - Work with their logging vendor to interface to the AIS using the API to meet their logging requirements and any other information logged in addition to the audio.	X		
		Provide the interface to the logging equipment.	X		
		Provide a routable IP network path from the Motorola Solutions' dispatch site LAN to the County's enterprise network and logging recorder.		X	
		Provide the Archiving Information Server, serving as the interface between the proposed ASTRO 25 radio system and the recorder.	X		
		Verify the flow of clear and encrypted audio to the logging recorder as a precursor to functional acceptance testing.	X	X	
		Deliverable: Logging equipment installation and configuration completed.			
		Critical Connect System Installation and Configuration			
		Install proposed Critical Connect solution equipment in allocated rack space.	X		
		Validate servers and network are ready for software load.	X		
		Install software for Critical Connect Management, Media, Proxy, and WRG Server.	X		

		Install and configure TLS Certificates.		X	Sub-section updated by MSI for traditional ISSI.	Updated Statement of Work has been provided for ISSI 8000 in Exhibit H.
		Install up to five of each of the Critical Connect client applications and train the customer how to install the remaining.	X			
		Configure up to ten Critical Connect Users and Critical Connect Profiles and train the customer how to configure the remaining.	X			
		Configure Critical Connect Communication Groups.	X			
		Configure Critical Connect Interfaces for radio gateways.	X			
		Provide knowledge transfer to end user.	X			
		Deliverable: Critical Connect system installed and configured.				
		Develop Console and User Radio Fleetmap (If Purchased as part of base system)				Since subscriber purchase would be a part of the RFP, this table stays as is. (Resolved)
		Mutually review and determine modifications to existing fleetmap.	X	X		
		Review fleetmapping requirements with Customer, including user ID and talkgroup structures.	X			
		Designate user group representatives for the user groups, to make timely decisions on their behalf.		X		
		Provide advisory input during fleetmap development.	X			
		Develop templates (Up to 10).	X			
		Participate in a meeting to finalize any changes among user groups.	X	X		
		Review and approve fleetmap templates.		X		
		Program the approved templates into a radio-programming template tool.	X			

Program sample radios with approved templates and deliver for evaluation by Customer.	X			
Program approved templates into console.	X			
Evaluate sample radios and provide feedback.		X		
Approve templates.		X		

Deliverable: Fleetmap plan completed and approved by Customer.

Mobile Radio Installation and Programming (If Purchased as part of base system)				
Develop and approve prototypes for each type of mobile installation.	X			
Test features and functionalities of the mobile templates.	X			
Program the mobile radios identified in the equipment list in accordance with the programming templates, client software, and fleetmap. A “one-time only” programming is included in the project pricing.	X			
Provide at least (4) vehicles for installations according to the project/installation schedule.		X		
Perform RF alignment and Install all the mobiles in the vehicles, as identified in the equipment list, and according to the installation schedule. ▪ Dash mount - Qty {{X}} ▪ Remote mount - Qty {{Y}} ▪ Vehicle Type A - Qty {{Z}} ▪ Vehicle Type B - Qty {{W}}	X			

		Permanently mount the antennas on each vehicle according to the approved prototype, appropriate for the vehicle type. Install the antennas close to the same location as the existing antennas, where practical, in vehicles that already have antennas installed. If applicable, plug the old antenna hole with an appropriate rubber plug.	X		
		Install the antennas on the roof, where practical, on the new antenna installations. If a mobile antenna cannot be installed on the roof, determine an alternative location.	X	X	
		Remove the existing mobiles from the vehicle at the time of installation of the new radios	X		
		Prior to subscriber flash upgrade, perform all appropriate preventative maintenance on the subscriber radios, including calibration and tuning to ensure the radios are operating within manufacturer's specifications.	X		
		Include radio flashing process.	X		
		Deliverable: Mobile radios installed and accepted			
		Portable Radio Programming and Distribution (If Purchased as part of base system)			
		Pass all features and functionalities of the portable radio template.	X		
		Define where the programming or flashing will be done. If it is done at the shop then the customer delivers the Portable Radios per the agreed-upon schedule.		X	
		Program test portable radios with each template version and activate them on the system.	X		

		Program the portable radios identified in the equipment list in accordance with the programming templates, client software, and fleetmap. Radio Management for 2 years as been included to aid with this at no additional cost.	X		
		Deliver portable radios to authorized Customer personnel and inventory upon receipt.	X		
		Acknowledge receipt of portable radios and accessories and verify proper operation of a sampling of delivered portable radios.		X	
		Distribute portable radios to end users.	X	X	
		Deliverable: Portable radios accepted and distributed.			
		Install Radio Management Software			
		Motorola Solutions will be responsible for the installation of Radio Management Software.	X		
		Provide customer specification of hardware, software and network requirements for installation.	X		
		Provide IT network requirements as outlined by Motorola Solutions.		X	
		Provide hardware, software and network requirements needed for Radio Management per specifications from Task Motorola Solutions.		X	
		Deliverable: Fixed Network Equipment installation completed and ready for optimization.			
		Internet Bandwidth Assessment			
		Assess the customer Internet and access. Document Internet access information	X		

		Firewall Protection Evaluation and Compatibility requirements assessment.	X		CITY: MSI must test what the City identified. Dual responsibility.	Motorola agrees to Dual responsibility. (Resolved)
		Perform site testing or evaluations.	X	X	CITY: Same comment **MSI Agrees to share.**	Motorola agrees to Dual responsibility. (Resolved)
		Provide information on customer public Internet connection for evaluation purposes.	X	X		
		Deliverable: Internet Bandwidth Assessment is assessed, and findings are presented to the Customer.				
		SYSTEM OPTIMIZATION AND TESTING				
		R56 Site Audit				
		Perform R56 site-installation quality-audits, verifying proper physical installation and operational configurations.	X			
		Create site evaluation report to verify site meets or exceeds requirements, as defined in Motorola Solutions' R56 Standards and Guidelines for Communication Sites.	X			
		Deliverable: R56 Standards and Guidelines for Communication Sites audits completed successfully.				
		Electromagnetic Interference (EMI) Analysis				
		Perform EMI analysis for the Motorola Solutions-supplied equipment. Note: Motorola Solutions is only responsible for interference caused by Motorola Solutions-provided transmitters to the Motorola Solutions-provided receivers. Should the proposed equipment experience interference, Motorola Solutions can be contracted to investigate the source and recommend solutions to mitigate the issue.	X			
		Resolve any interference caused by equipment not supplied by Motorola Solutions.		X	CITY: If interference declared, then MSI must prove. MSI responsible for all integrated equipment in their design.	Motorola is responsible for all integrated equipment provided as part of this proposal. However, any interference caused by
		Deliverable: EMI analysis completed.				

		Solution Optimization		
		Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.	X	
		Verify that all audio and data levels are at factory settings.	X	
		Verify communication interfaces between devices for proper operation.	X	
		Ensure that functionality meets manufacturers' specifications and complies with the final configuration established during design review or system staging.	X	
		Reconfigure and reoptimize 3rd party equipment that is not part of the Motorola Solutions scope of work.	X	X
		Deliverable: Completion of System Optimization.		
		Functional Acceptance Testing		
		Verify the operational functionality and features of the solution supplied by Motorola Solutions, as contracted.	X	
		Witness the functional testing.		X
		Document all issues that arise during the acceptance tests.	X	
		If any major task for the system as contractually described fails during the Customer acceptance testing or beneficial use, repeat that particular task after Motorola Solutions determines that corrective action has been taken.	X	
			MSI to update language: Resolve any interference caused by equipment not supplied by Motorola Solutions outside the scope of this contract.	equipment not provided as part of this proposal will not be the responsibility of Motorola. (Resolved)
			MSI to add row. MSI and City to identify 3rd party equipment not part of scope of this contract. **Dual shared responsibility**	Motorola will work with the City to identify 3rd party equipment (during DDR) not part of the scope of this contract as a shared responsibility and it would be the responsibility of the City to reconfigure & reoptimize that equipment. (Resolved)

Resolve any minor task failures before Final System Acceptance.	X	
Document the results of the acceptance tests and present for review.	X	
Review and approve final acceptance test results.		X
If any major task as contractually described fails, repeat that particular task after Motorola Solutions determines that corrective action has been taken.	X	
Document all issues that arise during the acceptance tests.	X	
Document the results of the acceptance tests and present to the Customer for review.	X	
Resolve any minor task failures before Final System Acceptance.	X	

Deliverable: Completion of functional testing and approval by Customer.

30-Day Burn-in Testing		
Turn on the complete system, and monitor for the entire test duration.	X	
Categorize failures as major and minor, based upon agreed definitions.	X	
If a major failure occurs, correct the problem and re-start the test.	X	
If a minor failure occurs, correct the problem, and continue the 30-day burn-in.	X	
Complete the 30-day burn-in test successfully and prepare the required reports.	X	
Review and approve the results of the test. Execute the 30-day burn-in test progress milestone.	X	X

Deliverable: Completion of 30-Day Burn-in testing and approval by Customer.

Coverage Acceptance Testing		
Determine the required number of test vehicles for simultaneous testing of multiple service areas.	X	X
Perform coverage testing according to the Coverage Acceptance Test Plan (CATP), Submit test reports within the agreed period.	X	
For any area that fails, take corrective action.	X	
Retest any areas for which corrective action has been taken.	X	
Document all issues that arise during the coverage testing.	X	
Submit final test reports, according to the agreed period.	X	
Provide the required number of test vehicles, drivers, and resources to witness the coverage testing.	X	
Review and approve test results.		X

Deliverable: Completion of coverage testing and approval by Customer.

Training		
Finalize schedule for training coursework.	X	
Provide a training facility.		X
Ensure that the training participants fulfill course prerequisites.		X
Conduct the training classes outlined in the Training Plan.		
Attend proposed training classes.		X

Deliverable: Training coursework completed.

		Cutover		
		Finalize Cutover Plan. — X — X	CITY: What is the acceptable time duration between last radio calibration and, cut-over? MSI to tell City how far out from activation day.	Acceptable time is approximately 1-2 months prior to cutover. (Resolved)
		Calibrate and tune existing mobile and portable radios to ensure good working order. — X	CITY: Dual responsibility.	Motorola agrees to dual responsibility. (Resolved)
		Provide Motorola Solutions with user radio information for input into the system database and activation, as required. — X — X		
		Provide programming of user radios and related services (i.e. template building, re-tuning, testing and installations), as needed, during cutover period. — X		
		Conduct a cutover meeting with relevant personnel to address both how to mitigate technical and communication problem impacts to the users during cutover and during the general operation of the system. — X		
		Notify the personnel affected by the cutover of the date and time planned for the cutover. — X — X		
		Provide ongoing communication with users regarding the project and schedule. — X — X		
		Cutover users and ensure that user radios are operating on the system. — X — X		
		Resolve punch list items, documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance. — X		
		Assist Motorola Solutions with resolution of identified punch list items by providing support, such as access to the sites, equipment and system, and approval of the resolved punch list items. — X		
		Deliverable: Migration to new system completed, and punch list items resolved.		

Transition to Warranty		
Review the items necessary for transitioning the project to warranty support and service.	X	
Motorola Solutions to provide services during year 3 warranty which align with the proposed services.	X	
Provide a Customer Support Plan detailing the warranty support associated with the contract equipment.	X	
Participate in the Transition Service/Project Transition Certificate (PTC) process.		X

Deliverable: Service information delivered and approved by Customer

Finalize Documentation and System Acceptance		
Provide manufacturer's installation material, part list and other related material to Customer upon project completion.	X	
Provide an electronic as-built system manual on CD or other Customer preferred electronic media. The documentation will include the following: ▪ Site Block Diagrams. ▪ Site Floor Plans. ▪ Site Equipment Rack Configurations. ▪ Antenna Network Drawings for RF Sites (where applicable). ▪ ATP Test Checklists. ▪ Functional Acceptance Test Plan Test Sheets and Results. ▪ Equipment Inventory List. ▪ Console Programming Template (where applicable). ▪ Maintenance Manuals (where applicable). ▪ Technical Service Manuals (where applicable). ▪ Drawings will be delivered in Adobe PDF format.	X	
Receive and approve documentation.		X
Execute Final Project Acceptance.	X	X

		Deliverable: All required documents are provided and approved. Final Project Acceptance. NOTE: Final Project Acceptance shall be deemed successful when the ATP tests pass. The Customer and Motorola Solutions mark the event by signing and dating the Final System Acceptance milestone certificate.		
31.	**Assumptions**	**Section 1.4 of proposal page 447** The following assumptions remain in need of review and verification as of the submission of this proposal. These assumptions affect the scope of responsibilities to ensure ancillary systems and facilities are fully prepared to support the solution contained in this proposal. Motorola will work with the customer to determine the validity of these assumptions and determine the increased scope for which Motorola and/or the customer is responsible. Should the customer prefer Motorola to assume responsibility for the increased scope, Motorola will prepare and submit to the customer a revised proposal or change order reflecting the revised scope, cost, and project implementation. **1)** Union Labor is not required. **2)** Prevailing Wages are not required. **3) All existing sites or equipment locations will have sufficient space available for the system described as required/specified by R56.** **4) All existing sites or equipment locations will have adequate electrical power in the proper phase and voltage, and site grounding to support the requirements of the system described.** **○ Electrician services are not included.** **5)** All existing towers will have adequate space and size to support the antenna network requirements of the system described. **○ Any tower stress analysis or tower upgrade requirements are the responsibility of the Customer.** **6) Any site/location upgrades or modifications are the responsibility of the Customer**.	**CITY: MSI assumptions on 3, 4, 5, 6, 8, 11, 12 - Are not a valid. Conditions should have been ascertained at the time of inspection. All work to be completed at no additional cost.** **MSI to get back to City on above items.**	Motorola to delete (3) for RF sites. (Resolved) (4) Same Comment as point #30 (Resolved) (5) Motorola has included a tower structural analysis as part of our offer. Any tower upgrades or remediation required as identified in the structural analysis will be taken care of by the City. (Resolved) (6) Tower modifications or existing electrical upgrades are not applicable and will be determined by the PE (Resolved) (8) Any equipment not provided as part of the scope of this proposal is not MSI responsibility.

		7) All Communication Sites can be accessed with a 4-wheel drive vehicle. Anything beyond the use of a 4-wheel drive vehicle will require a change order to capture the additional cost. **8) Interfacing to 3rd party equipment or applications is not a part of this proposal.** 9) Approved local, State, or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the Customer. **10) Any required system interconnections not specifically outlined here will be provided by the Customer. This may include dedicated phone circuits, microwave links, or other types of connectivity.** **11) Portable and mobiles used for coverage survey or testing will be provided by Customer.** **12) The system Radio coverage is design based on N50 radios with ¼ wave antennas.** **13) Motorola Solutions is not responsible for interference caused or received by the Motorola Solutions-provided equipment except for interference that is directly caused by the Motorola Solutions-provided transmitter(s) to the Motorola Solutions-provided receiver(s). Should the Customer's system experience interference, Motorola Solutions can be contracted to investigate the source and recommend solutions to mitigate the issue.** 14) All sites are assumed to be land-accessible and no special transportation such as helicopter and the like is required to gain site access.	**MSI should be identified in the DDR.** **MSI to get back with City.** Not acceptable. MSI is responsible for all integrated equipment purchased in this proposal. MSI to provide at no additional cost. MSI to provide updated language and get back with City.	(Resolved) (10) Motorola will identify any required system interconnections not specifically outlined here will be identified in DDR. This may include dedicated phone circuits, microwave links, or other types of connectivity. (Resolved) (11) Motorola deletes 11 (Resolved) (12) Radio coverage is designed based on Fort Lauderdale's existing radio configuration (Resolved) (13) Motorola is responsible for all integrated equipment provided as part of this proposal. However, any Interference caused by equipment not provided as part of this proposal will not be the responsibility of Motorola. (Resolved)
32.	**Preliminary Project Schedule**	**Section 1.3 of proposal page 448** Motorola's preliminary schedule indicates total project implementation to be approximately 18 months pending supply chain availability at the time of purchase. This preliminary schedule is included for informational purposes only and assumes that all responsibilities as defined above are completed, as required. If site improvements or site approvals are needed these must be completed prior to equipment shipping to the field.	Not acceptable. **1)** MSI to take the supply chain component out of this. MSI TO REMOVE **2)** Schedule to be updated within 2 weeks of contract execution. **3)** MSI to do the improvements and City to get condo approvals. MSI to get back on 2 and 3.	(1) Motorola agrees to take the supply chain component out of this. (Resolved) (2) Motorola agrees to this requirement (Resolved) (3) Motorola confirmed that electrical upgrades are included for the RF sites and anything discovered for the Dispatch Sites during DDR would have to come from Contingency Fund from the City. (Resolved)
33.	**Civil Statement of Work Utilities Site**	**Section 1.5 of proposal page 452** **RFP Section 3.1.4.5 Information about Service and Support**		

	Development at Utilities Site	**Civil Statement of Work** **2.1 Utilities Site** **2.1.1 Development at Utilities Site** **Motorola Responsibilities:** ***Site Engineering*** **1)** **Conduct flood plain analysis of the site location.** **2)** Prepare site construction drawings, showing the layout of various new and existing site components. **3)** Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.). **4)** Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location. **5)** Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed antenna system. If the tower structure fails the analysis, the cost of any site relocation or modifications to the tower required to support the antenna system will be the responsibility of Fort Lauderdale. NOTE: This task does not include mapping, structural measurement survey, materials testing, geotechnical investigation, and/or other field investigation to acquire the data. If applicable, these tasks will be noted separately in the SOW. **6)** Preparation, submission and tracking of application for local permit fees (electrical, building etc.) and procurement of information necessary for filing.	Not acceptable. **MSI to provide current flood plain analysis.** Any flood zone mitigation costs shall be borne by vendor.	As part of Motorola's updated offer, Motorola will include a new raised shelter/generator at the Utilities site at no additional cost to the City, on the land provided by the City. This will add an additional 3 months to the implementation schedule (Resolved).
34.	**State Site** **Development at State Site** ***Customer Responsibilities:***	**Section 2.4 MSI proposal page 457** **Site Scope Summary** **1)** Engineering services for site drawings and regulatory approvals – Included. **2)** Site acquisition services – Not included. **3)** Zoning Services – Not included. **4)** New power run – 100 feet, Electrical service type – Underground, 400-amp - 120/240- volt, single-phase. **5)** New shelter size – 12-foot x 30-foot. **6)** New generator size – 50 kW, Type – Indoor.		

		Motorola Responsibilities: *Site Engineering* **1)** Prepare site construction drawings showing the layout of various new and existing site components. **2)** Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.). **3)** Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location. **4)** Prepare record drawings of the site showing the as-built information. **5)** Conduct flood plain analysis of the site location. **6)** Conduct utility investigation and coordinate with local utility company for power hook up. **7)** Perform a boundary and topographic survey for the property on which the communication site is located or will be located. **8)** Perform construction staking around the site to establish reference points for proposed construction. **9)** Prepare, submit and track application for local permit fees (electrical, building etc.), prepare filings and procure information necessary for filing permitting. Perform geotechnical testing at the shelter foundation location. *Site Preparation* **1)** Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work. **2)** Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs. **3)** Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the disturbed area in site compound 3-foot path around it (not to exceed 840 square feet). *Site Components Installation* **1)** Construct 1 reinforced concrete foundation necessary for a 12' x 30' shelter. **2)** Construct 1 raised platform up to six foot above grade or as directed by final flood certification and or local building ordinances as well as Tusa spec.		

		3) Supply and install 1 concrete shelter of size 12' x 30' x 9' Prefab Building. **4)** Supply and install 1 standby power generator (50 kW) located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains. **5)** Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility. **6)** Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 100 cable feet of the shelter. **7)** Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards. **8)** Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Fort Lauderdale. **9)** Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 20 linear feet). *Antenna Installations* **1)** Install 3 antenna(s) for the RF system. **2)** Install 3 stiff arms for antennas. **3)** Supply and install 3 heavy duty mount(s) for antennas. **4)** Supply and install 3 6-foot side arm(s) for antenna mounts. **5)** Install 1 tower top amplifier(s). **6)** Install up to 210 linear feet of 1/2-inch transmission line. **7)** Install up to 210 linear feet of 7/8-inch transmission line. **8)** Install up to 560 linear feet of 1-1/4-inch transmission line. **9)** Perform sweep tests on transmission lines. *Miscellaneous Work* **1)** Electrical Upgrades and DC integrations **Customer Responsibilities:** **1)** Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.		

		2) As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation **3)** As required, provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering. **4)** Provide a right of entry letter from the site owner for Motorola to conduct field investigations. **5)** Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment. **Assumptions:** **1)** All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.). **2)** All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by the Customer or site owner. **3)** All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room. **4)** Site will have adequate electrical service. Utility transformer, transformer upgrades, line, or pole extensions have not been included. **5)** Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal. **6)** Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer. **7) A maximum of 30 days will be required for obtaining approved building permits from time of submission.** **8)** No access road or staging area improvements are required for the heavy construction equipment which could include concrete trucks, drill rigs, semi tractors and trailers, and crane.	MSI responsibility. No addl. cost to the City MSI to get back. 7) MSI will bear the responsibility of any ramifications as a result of faulty permits. **MSI to get back.**	Motorola agrees to delete this statement. (Resolved) (7) A maximum of 30 days will be required to obtain approved building permits from the date of submission. If a building permit application is submitted, accepted for technical plan review, and assigned a process number, it will not be considered faulty. Fort Lauderdale (FTL) must provide a process number or reject the application with feedback within 3 business days after submission. If an application is rejected, the 30-day clock pauses until Motorola resubmits the corrected application. Motorola must resubmit the corrected building permit

		9) If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety. **Customer Responsibilities:** **1)** Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola. **2) As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708** **3) As required, provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.** **4)** Provide a right of entry letter from the site owner for Motorola to conduct field investigations. **5)** Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment. **6)** Confirm that the existing generator where applicable, is sufficient to support the new equipment and ancillary equipment loads. **7) If required, remove or relocate any existing facilities, equipment, and utilities to create space for new site facilities and equipment.** **8)** If required, provide any physical improvements (walls, roofing, flooring, painting, etc.) necessary to house the equipment in the existing room. **9)** All sites except State Tower site, Supply required standby generator power to support the additional proposed equipment. This power source shall be adequate to back up all radio equipment, future equipment growth, and ancillary equipment such as, but not limited to, interior lighting, tower lighting and HVAC. **10) Utilities Site, Supply any required UPS Power to support the additional proposed equipment. This uninterruptible power source shall be adequate to back-up all radio equipment as well as future equipment growth.**	**2) MSI responsibility** **3) MSI If available provide property deed or lease.** **MSI to get back.** **7) MSI to Identify in DDR - Agrees** **10) MSI to Identify in DDR – Agrees** **11) MSI to Identify in DDR - Agrees**	application within 5 business days; failure to do so will restart the 30-day approval clock upon resubmission. (Resolved) (2) Same Comment as point #30 (Resolved) (3) Motorola would require the property deed or lease to apply for the required permits. (Resolved) (7) Motorola agrees to identify in DDR. (Resolved) Point (11) Is not applicable, and Motorola agrees to delete this as Motorola is putting in a DC system (Resolved) Motorola will do all the work mentioned in points 10, 12 at no additional cost to the City. (Resolved)

		11) Supply dedicated 20 Amp simplex A. C. outlets at for each major piece of proposed equipment within six (6) feet of the equipment location wired to individual breakers in distribution panels. **12) Utilities Site, Provide support and entry facilities for the cables (cable ladder/chaseway, entry ports, etc.) between the proposed equipment locations.** **13)** Secure power connection to the room, associated permitting, and installation of a meter and disconnect within 50 feet of the proposed shelter location. **Assumptions:** **1)** All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.). **2)** All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by the Customer or site owner. **3)** All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room. **4) Site will have adequate electrical service. Utility transformer, transformer upgrades, line, or pole extensions have not been included**. **5)** Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal. **6)** Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer. **7) A maximum of 30 days will be required for obtaining approved building permits from time of submission.** **8)** No access road or staging area improvements are required for the heavy construction equipment which could include concrete trucks, drill rigs, semi tractors and trailers, and crane. **9)** If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.	**12) MSI to Identify in DDR - Agrees** **4) MSI to do Engineering Study** **MSI to get back.** **7) MSI will bear the responsibility of any ramifications as a result of faulty permits.** **MSI to get back.** **10) MSI responsibility. Sites already walked.** **MSI to get back.**	(4) Motorola has included an electrical study by an A&E firm to determine if the existing electrical service can accommodate the proposed equipment installation. Same Comment as point #30 (Resolved) (7) A maximum of 30 days will be required to obtain approved building permits from the date of submission. If a building permit application is submitted, accepted for technical plan review, and assigned a process number, it will not be considered faulty. Fort Lauderdale (FTL) must provide a process number or reject the application with feedback within 3 business days after submission. If an application is rejected, the 30-day clock pauses until Motorola resubmits the corrected application. Motorola must resubmit the corrected building permit application within 5

		10) Alarming at existing sites will be limited to new component installations and will have to be discussed and agreed to on a site-by-site basis. **11) The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola's R56 standards.** **12)** Utilities Site, The existing utility service and backup power facilities (UPS, generators) have sufficient extra capacity to support the proposed new equipment load. **13)** A clear obstruction-free access exists from the antenna location to the equipment room. **14) Utilities Site, The Customer does not desire upgrade of the existing site to meet Motorola's R56 standards.** **15)** The floor can support the proposed new loading. Physical or structural improvements to the existing room will not be required.	**11) MSI responsibility. Sites already walked. MSI to get back.** **14) MSI responsibility. Sites already walked. MSI where did this come from?**	business days; failure to do so will restart the 30-day approval clock upon resubmission. (Resolved) (10) All applicable RFP identified alarms will be ported from the SDM to MC-Edge for all RF sites (Resolved) Motorola agrees to delete point (11) (Resolved) Text error from Motorola. Motorola agrees to delete (14) (Resolved)
35.	**2200 Executive Airport Way** **Development at 2200 Executive Airport Way**	**Section 2.5 of proposal page 461** **Site Scope Summary** **1)** Engineering services for site drawings and regulatory approvals – Included. **2)** Site acquisition services – Not included. **3)** Zoning Services – Not included. **4)** New fenced compound/expansion size – 30-foot x 30-foot. **5)** Clearing type – Light. **6)** New tower to be used for antennas – 80-foot monopole tower. **7)** New tower foundation size – 20 cubic yard, Type – Drilled Pier. **Motorola Responsibilities:** *Site Engineering* **1)** Prepare site construction drawings showing the layout of various new and existing site components. **2)** Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.). **3)** Perform a site and topographic survey for the property on which the communication site is located or will be located. **4)** Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.		

		5) Prepare record drawings of the site showing the as-built information. **6)** Perform construction staking around the site to establish reference points for proposed construction. **7)** Perform NEPA Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 CFR Chapter 1, subsection 1.1307 that may potentially be impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals, or work. Regional Environmental Review (RER) report submittals if required by FEMA have not been included. Perform Cultural **8)** Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction activity. **9) Conduct up to 40-foot-deep soil boring test at tower location and prepare geotechnical report of soil conditions at the location of monopole tower foundation.** **10)** Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction. **11)** Check tower erection for plumbness, linearity and alignment after installation. **12)** Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the "Site Plans" and document any deviations or violations. **13)** Prepare, submit and track application for local permit fees (electrical, building etc.), prepare FAA filings and procure information necessary for filing. *Site Preparation* **1)** Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work. **2)** Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.	**9) Line will be deleted. MSI to provide redesign drawings, diagrams, and updates for City preview.**	(9) Motorola agrees to delete this since the Monopole Tower is not a part of the updated response. (Resolved)

		3) Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (4900 square feet). **4)** Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 2500 square feet). **5)** Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 1296 square feet). **6)** Provide silt fence around the compound to control soil erosion (not to exceed 120 linear feet). **7)** Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 120 linear feet). **8)** Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice. *Site Components Installation* **1)** Supply and install a perimeter grounding system around the tower The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards. **2)** Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 20 linear feet). *Tower Work* **1)** Construct drilled pier type tower foundations including excavation, rebar and concrete (not to exceed 20 cubic yards). **2)** Erect new 80-foot monopole tower. **3)** Supply and install grounding for the towerbase for monopole or guyed towers *Miscellaneous Work* **1)** Defrag Tank and slurry removals **2)** Spoils removal and hauling to an approved dump location.		

		3) Crane and Rigging to set Mono Pole **Customer Responsibilities:** **1)** Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola. **2)** **As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708** **3)** As required, provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering. **4)** Provide a right of entry letter from the site owner for Motorola to conduct field investigations. **5)** Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment. **6)** **Conduct all the testing and documentation (balloon tests, photo simulations, zoning application, expert testimony, zoning drawings etc.) required for the zoning the proposed new tower sites.** **7)** Provide additional temporary space for staging of the construction equipment during the construction of new site facilities (tower, shelter, generator, fuel tank etc.). **8)** If required, remove or relocate any existing facilities, equipment, and utilities to create space for new site facilities and equipment. **9)** **Supply dedicated 20 Amp simplex A. C. outlets at for each major piece of proposed equipment within six (6) feet of the equipment location wired to individual breakers in distribution panels.** **10)** **Provide support and entry facilities for the cables (cable ladder/chaseway, entry ports, etc.) between the proposed equipment locations.** **Assumptions:** **1)** All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).	MSI responsibility. MSI to get back. **6) Not applicable. MSI agrees** **9) Determine during DDR –** **10) Determine during DDR –** **MSI to provide revised verbiage.**	(2) Same Comment as point #30 (Resolved) (6) Motorola agrees to delete this since the Monopole Tower is not a part of the updated response. (Resolved) (9) Motorola agrees to determine during DDR. (Resolved) (10) Motorola has not walked the dispatch sites and will identify during DDR. (Resolved)

		2) Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal. **3)** Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer. **4) A maximum of 30 days will be required for obtaining approved building permits from time of submission.** **5)** No access road or staging area improvements are required for the heavy construction equipment which could include concrete trucks, drill rigs, semi tractors and trailers, and crane. **6)** If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety. **7)** In absence of geotechnical reports, foundations and subsurface conditions for tower design are based on Presumptive Sand soil parameters, as defined by EIA-222-H. **8)** Also, rock coring, piling, extensive dewatering of foundations, permanent casings or hazardous material removal has not been included. **9)** The new tower location will pass the FAA hazard study, zoning, FCC and environmental permitting. **10) The restoration of the site surroundings by fertilizing, seeding and strawing the disturbed areas will be adequate.** **11) Tower and foundation sizing is based on the tower loading requirements as a result of the RF Antenna System design and the Microwave Antenna System design (i.e. – dish sizes and locations obtained from paper path studies). If after physical path studies, the dish sizes and locations change, then Motorola will then review the impact to tower structure and foundations and revise applicable costs.** **12)** If as a result of NEPA studies, any jurisdictional authority should determine that a proposed communications facility "may have a significant environmental impact", the environmental impact studies or field testing and evaluation related to such determination have not been included.	**4) MSI will bear the responsibility of any ramifications as a result of faulty permits** **MSI to get back** **10) Revised language to be provided by MSI.**	(4) A maximum of 30 days will be required to obtain approved building permits from the date of submission. If a building permit application is submitted, accepted for technical plan review, and assigned a process number, it will not be considered faulty. Fort Lauderdale (FTL) must provide a process number or reject the application with feedback within 3 business days after submission. If an application is rejected, the 30-day clock pauses until Motorola resubmits the corrected application. Motorola must resubmit the corrected building permit application within 5 business days; failure to do so will restart the 30-day approval clock upon resubmission. (Resolved) Motorola agrees to delete points 7,8,9,10, 11,12-18 as no new Monopole tower Is being provided. (Resolved)

		13) The site location can be finalized, and lease agreement can be reached with the property owner within 60 calendar days after the start of the site acquisition effort. **14)** A waiver to zoning requirements like setbacks, tower height limitations, etc. can be obtained. **15)** **The soil resistivity at the site is sufficient to achieve resistance of ten (10) ohms or less.** **16)** Communications site grounding will be designed and installed per Motorola's Standards and Guidelines for Communications Sites (R56). **17)** Underground utilities are not present in the construction area, and as such no relocation will be required. **18)** AM tuning of towers has not been included in this proposal. **19)** **A clear obstruction-free access exists from the antenna location to the equipment room.**	**Revisit after discussion of redesign.** **To be determined at DDR – MSI agrees**	(19) Motorola agrees to determine during DDR. (Resolved)
36.	**PDHQ Site** **Development of PDHQ Site**	**Section 2.6 of proposal page 465** **Site Scope Summary** **1)** Engineering services for site drawings and regulatory approvals – Included. **2)** Site acquisition services – Not included. **3)** Zoning Services – Not included. **Motorola Responsibilities:** *Site Engineering* **1)** Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.). **2)** Prepare record drawings of the site showing the as-built information. **3)** **Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus**	If not needed then a potential credit. MSI to provide pricing associated with this. MSI to get back	Motorola agrees to delete this point. (Resolved). Motorola has priced a limited NEPA for a cost of $250.

		require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction. **4)** Provide a structural engineering analysis for antenna support structure, if necessary, to support the proposed the proposed equipment loads. **5)** Design antenna support platform to support proposed dishes. **6)** Preparation, submission and tracking of application for local permit fees (electrical, building etc.) and procurement of information necessary for filing. *Site Components Installation* **1)** Supply and install 1 cable support system from the antenna to the entry port (up to 40linear feet). *Antenna and Transmission Line Installation* **1)** Supply and install 1 rooftop antenna mount(s) to support proposed antennas. **Customer Responsibilities:** **1)** Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola. **2)** As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708 **3)** As required, provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering. **4)** Provide a right of entry letter from the site owner for Motorola to conduct field investigations. **5)** Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment. **6)** If required, provide any physical improvements (walls, roofing, flooring, painting, etc.) necessary to house the equipment in the existing room.		(7) Motorola agrees to identify in DDR.

		7) Provide support and entry facilities for the cables (cable ladder/chaseway, entry ports, etc.) between the proposed equipment locations. **Assumptions:** **1)** All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.). **2)** Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal. **3)** Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer. **4)** A maximum of 30 days will be required for obtaining approved building permits from time of submission. **5)** No access road or staging area improvements are required for the heavy construction equipment which could include concrete trucks, drill rigs, semi tractors and trailers, and crane. **6)** If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety. **7)** A clear obstruction-free access exists from the antenna location to the equipment room.	**Determine during DDR – MSI agrees**	(Resolved)
37.	**Inclusions** **Limitations and Exclusions**	**Section 2.3 of proposal page 480** **Limitations and Exclusions** The following activities are outside the scope of the Network Monitoring service: **1) Motorola Solutions will not monitor any elements outside of the Customer's ASTRO 25 network, or monitor infrastructure provided by a third party, unless specifically stated. Monitored elements must be within the ASTRO 25 radio network and capable of sending alerts to the Unified Event Manager (UEM).** **2)** Additional support charges above contracted service agreement fees may apply if Motorola Solutions determines that system faults were caused by the Customer making changes to critical system parameters without written agreement from Motorola Solutions.	**MSI to clarify**	(1) Motorola has included a list of Monitored elements as part of Exhibit C (Resolved)

		3) Monitoring of network transport, such as WAN ports, WAN cloud, and redundant paths, unless provided by supplemental service outside this standard scope. **4)** Elements deployed outside of ASTRO RNI (e.g., ASTRO CEN sites) are excluded from the service. **5)** Emergency on-site visits required to resolve technical issues that cannot be resolved by working remotely with the Customer's technical resource. **6)** System installations, upgrades, and expansions. **7)** Customer training. **8)** Hardware repair and/or replacement. **9)** Network security services. **10)** Information Assurance.		
38.	**Motorola Solutions Owned and Supplied Equipment**	**Section 2.5 of proposal page 483** **Equipment Type** — **Location Installed** **Firewall/Router** — **Master Site** **Service Delivery Management** — **Server Master Site for each Zone**	**MSI to add DSR to equipment list; make more clearly defined.** **MSI to update.**	Motorola agrees to include DSR to this list. (Resolved)
39.	**Monitored Elements**	**Section 2.6 of proposal page 483** **Table: Monitored Elements**	**MSI to monitor all integrated elements.** **MSI to go through list and get back with City.**	All monitored elements are attached as Exhibit C. All applicable RFP identified environmental alarms will be ported from the SDM to MC-Edge for all RF sites (Resolved)
40.	**Remote Technical Support Statement of Work**	**Section 3.3 of proposal page 488** **Limitations and Exclusions** The following activities are outside the scope of the Remote Technical Support service: **1)** Emergency on-site visits required to resolve technical issues that cannot be resolved by the CMSO working remotely with the Customer's technical resource. Customer training. **2) System installations, upgrades, and expansions.** **3)** Hardware repair and/or exchange. **4)** Network security services. **5)** Remote Technical Support for network transport equipment or third-party products not sold by Motorola Solutions. **6) Any maintenance and/or remediation required as a result of a virus or unwanted cyber intrusion.**	**2) CITY: At no addl. Cost MSI to clean up language.** **6) MSI responsible for Cyber Security and must be approved by the City.**	Motorola agrees to (2) at no additional cost to the City (Resolved) Motorola has included a description of our optional Cyber Offering in Exhibit D (Resolved)

		Customer Responsibilities **1)** Prior to contract start date, provide Motorola Solutions with predefined information necessary to complete Customer Support Plan (CSP). **2)** Submit timely changes in any information supplied in the CSP to the Customer Support Manager (CSM). **3)** Contact the CMSO Service Desk to engage the Remote Technical Support service when needed, providing the necessary information for proper entitlement services. This information includes, but is not limited to, the name of contact, name of Customer, system ID number, site(s) in question, and a brief description of the problem that contains pertinent information for initial issue classification. **4) Maintain suitably trained technical resources familiar with the operation of the Customer's** **5)** system to provide field maintenance and technical maintenance services for the system. **6)** Supply suitably skilled and trained on-site presence when requested. **7)** Validate issue resolution in a timely manner prior to close of the incident. **8)** Acknowledge that incidents will be addressed in accordance with Priority Level Definitions and Response Times. **9)** Cooperate with Motorola Solutions, and perform all acts that are reasonable or necessary to enable Motorola Solutions to provide Remote Technical Support. In the event that Motorola Solutions agrees in writing to provide supplemental Remote Technical **10)** Support to third-party elements provided by the Customer, the Customer agrees to obtain all third-party consents or licenses required to enable Motorola Solutions to provide the service.	**MSI to provide addl. information on their Cyber Security** **MSI to omit language - Agreed**	(4) Motorola agrees to remove the language. (Resolved)
41.	**Inclusions**	**Section 5.4 of proposal page 497** **Limitations and Exclusions** The following items are excluded from this service: **1)** The contract pricing provided does not take into account prevailing wage requirements. Should prevailing wage regulations be applicable to this project, the pricing shall be subject to change to reflect compliance with those regulations. **2) All Motorola Solutions infrastructure components beyond the post-cancellation support period.**		Motorola agrees to remove points 2, 3, 4, 7, 8 (Resolved)

		3) All third-party infrastructure components beyond the post-cancellation support period. 4) All broadband infrastructure components beyond the post-cancellation support period. 5) Physically damaged infrastructure components. 6) Third-party equipment not shipped by Motorola Solutions. 7) Consumable items including, but not limited to, batteries, connectors, cables, toner or ink cartridges, tower lighting, laptop computers, monitors, keyboards, and mouse. 8) Video retrieval from digital in-car video equipment. 9) RF infrastructure and backhaul components, including but not limited to, antennas, transmission lines, antenna dehydrators, microwave, line boosters, amplifiers (such as tower top amplifiers and bi-directional amplifiers), logging recorders, data talker wireless transmitters, short haul modems, combiners, multicouplers, duplexers, shelters, shelter HVAC, generators, UPSs, and test equipment. 10) Racks, furniture, and cabinets. 11) Tower and tower mounted equipment. 12) Non-standard configurations, customer-modified infrastructure, and certain third party infrastructure. 13) Firmware or software upgrades.	2) CITY: Plan for what's integrated and the future term(s) of the contract. 3) CITY: Same comment 4) CITY: Same comment 5) CITY: Same comment 6) CITY: Same comment 7) CITY: Same comment 8) CITY: Same comment 9) CITY: Same comment MSI to get back with response	Points 5, 6 are not included. (Resolved) 5) This point refers to vandalism. 6) Third-party equipment not part of this proposal (9) RF infrastructure, backhaul components, logging recorder, MW is covered based on the services that the City decides to contract for. (Resolved)
42.	Annual Preventive Maintenance Statement of Work	Section 7.3 of proposal page 507 Customer Responsibilities 1) Provide preferred schedule for Annual Preventative Maintenance to Motorola Solutions. 2) Authorize and acknowledge any scheduled system downtime. 3) Maintain periodic backup of databases, software applications, and firmware. 4) Establish and maintain a suitable environment (heat, light, and power) for the equipment location as described in equipment specifications, and provide Motorola Solutions full, free, and safe access to the equipment so that Motorola 5) Submit timely changes in any information supplied in the CSP to the Customer Support Manager (CSM). 6) Provide site escorts, if required, in a timely manner.	1) MSI to provide schedule and City to approve. – Agrees 3) MSI responsibility not the City. MSI to get back with City.	(1) Motorola will provide a schedule, and the City can approve prior to transitioning the project To Warranty. (Resolved) (3) Motorola agrees to remove point (3) from Customer responsibility (Resolved)

		7) Provide Motorola Solutions with requirements necessary for access to secure facilities. **8)** In the event that Motorola Solutions agrees in writing to provide supplemental Annual Preventive Maintenance to third-party elements provided by Customer, the Customer agrees to obtain any third-party consents or licenses required to enable Motorola Solutions field service technician to access the sites to provide the service.		
43.	**ASTRO 25 Security Update Service Statement of Work**	**Section 8.3 of proposal page 522** **Customer Responsibilities** **1) Provide Motorola Solutions with predefined information necessary to complete a Customer Support Plan (CSP) prior to the Agreement start date.** **2) Provide timely updates on changes of information supplied in the CSP to Motorola Solutions' assigned CSM.** **3) Update Motorola Solutions with any changes in contact information, specifically for authorized users of Motorola Solutions' secure website.** **4) Provide means for accessing Motorola Solutions' secure website to collect the pretested files.** **5) Download and apply only to the Customer's system as applicable, based on the Customer Agreement and the scope of the purchased service. Distribution to any other system or user other than the system/user contemplated by the Customer Agreement is not permitted.** **6) Implement Motorola Technical Notices (MTN) to keep the system current and patchable.** **7) Adhere closely to the Motorola Solutions Centralized Managed Support Operations (CMSO) troubleshooting guidelines provided upon system acquisition. Failure to follow CMSO guidelines may cause the customer and Motorola Solutions unnecessary or overly burdensome remediation efforts. In such cases, Motorola Solutions reserves the right to charge an additional fee for the remediation effort.** **8) Upgrade system to a supported system release when needed to continue service. Contact Motorola Solutions' assigned CSM for the latest supported releases.**	1) CITY: During warranty, MSI to be taking care of this. MSI to provide further clarification... not sure why these are the City's responsibilities. 2) CITY: Same comment 3) CITY: Same comment 4) CITY: Same comment 5) CITY: Same comment 6) CITY: Same comment 7) CITY: Same comment 8) CITY: Same comment CITY: Same comment	Motorola will provide a detailed CSP prior to Warranty Start date for points 1-5. (Resolved) Motorola agrees to remove points 6-11 from customer Responsibility. (Resolved)

		9) For Customers who opt in to receive Transport Network Device Updates (Routers, Firewalls, Switches), the Customer shall: **a)** Provide required information regarding the Customer's planned deployment schedule, including proposed update period. **b)** Coordinate with Motorola Solutions engineers to provide current network configuration files. **c)** Coordinate with Motorola Solutions to upload replacement configuration files (where applicable). **d)** Provide the information necessary for to raise a Change Request to cover the period of the transport network update activity prior to deployment of updates. **e)** Notify Motorola Solutions when updates are completed. **10)** Comply with the terms of applicable license agreements between the Customer and non-Motorola Solutions software copyright owners.	1-5 Work session and sheet provided by MSI to work collaboratively with City. 6-11 MSI Responsibility and they will get back with City	
44.	**ASTRO 25® System Upgrade Agreement Statement of Work** **Inclusions**	**Section 10.3 of proposal page 536** The ASTRO 25 SUA only covers the products that are outlined in this section and does not cover all products. Refer to Section Limitations and Exclusions for examples of exclusions and limitations. The ASTRO 25 SUA covers ASTRO 25 certified software releases for the following products provided they were present at the time of contract execution and provided as part of the ASTRO 25 certified solution:	Explain why MSI is proposing D-Series rather than G-Series. Provide list of G-Series equipment list. MSI to update list. Boilerplate language to be updated.	This was an error and there are no G series stations proposed. All stations are D-series. (Resolved)
45.	**System Upgrade**	**Section 10.6 of proposal page 540** **Motorola Solutions Responsibilities** **1)** Perform system infrastructure upgrade for the system elements outlined in this SOW.	MSI to add: Will take exhaustive measures to ensure minimal disruption is experienced by users, up to and including bring in temporary prime sites and DSR sites. MSI to get back with City. MSI to provide AIS plan.	Motorola will take continuous commercially, reasonable effort with minimal disruption to the users. Motorola will ensure a seamless cutover for the City. (Resolved) No internal information available about AIS (Resolved)
46.	**Sample Acceptance Test Plan**	**Attachment 15 of proposal page 584** **Table 1-2: City of Fort Lauderdale Coverage Acceptance Test Summary – See Sheet**	CITY: City wants an approved CATP. Make sure this document is	Incremental/Preference – Motorola has updated the CATP table to reflect the City's existing radio configuration of APX 6000 radios with a ¼ wave antenna. Attached as Exhibit A.

			updated to reflect MSI coverage guarantees... 20dB, etc. CITY: Schools listed in 25 dB MSI Open up chart – language cut off. MSI to update chart to reflect CoFL Two charts – one with waiver approval and one without Paulding County GA reference	(Resolved)
47.	**Contingency Plan**	**Attachment 16 of proposal page 677** The published Region 9 Regional Planning Committee's Regional Communications Plan already allocates the 26 frequencies listed in Appendix B of the RFP, to the Fort Lauderdale area, and the City already holds FCC licenses for all 26 frequencies. **This proposal only calls for the use of 10 of the 26 available frequencies already allocated to the City.** While the FCC licenses will need to be modified to reflect the new design parameters and the use of TDMA modulation, there appears to be no risk that the proposed frequency plan will not be available for implementation. The coverage goals of the RFP will, however, require a waiver to the Region's rule which sets a 3-mile limit for the 40 dBu Protected Service Area Contour from the jurisdiction of the City/County.	**Increased number of used frequencies.** **Add language: Any channel loading issue mitigation costs to borne by vendor.**	Incremental/Preference – Based on negotiations discussion on 4/10, The City will pay an additional $566,212 for an additional Chassis and 2 additional channels as requested by the City. Motorola will include 2 channels at no additional cost to the City, and this will bring the proposed solution to a 14-channel design. (Resolved)
48.	**Batteries**	**Attachment 17 of proposal page 696** At 10-channel Simulcast Sub-sites, proposed batteries collectively provide the following ampere-hours of capacity from a pair of free-standing battery banks: **1) State of Florida tower site: 4,000 ampere-hours.** **2) Utilities tower site: 2,210 ampere-hours.** **3)** Playa del Sol site: 1,190 ampere-hours. **4)** Point of Americas site: 1,190 ampere-hours.	**MSI: Explain differences in two sites.** **MSI Provide calculations to support this. Include in DDR. - Agrees**	Motorola will provide detailed power calculations as part of the DDR. (Resolved)

CITY OF FORT LAUDERDALE

RFP No.: 549
RFP Title: P25 Radio Communication System Refresh-Replacement - Rebid
COMPETITIVE NEGOTATIONS TERM SHEET

49.	**System Bandwidth**	**Attachment 17 of proposal page 899** It should be noted that the microwave system is a closed network, and any bandwidth used outside of the RNI must be allocated through the customer's CEN. Once these requirements are defined, Motorola will work with the city of Fort Lauderdale to quote the necessary interfaces required to implement additional bandwidth allocations.	**MSI to include open port for additional City bandwidth VLAN if necessary at no addl. cost. Should addl. bandwidth be required from what is proposed addl. cost will go to the City.** **Discuss during DDR**	Motorola will have at least one open port for any additional traffic that the City would want to put on the microwave system up to the proposed MW bandwidth limits. Motorola will identify the Additional bandwidth during DDR. (Resolved)

The person below is authorized to bind the parties to the agreed upon key points and terms cited above to incorporate into an agreement.

City of Fort Lauderdale	Name of Firm: **Motorola Solutions, Inc.**
_____ Signature _____ Print Name _____ Position/Title _____ Date	_____ Signature _____ Print Name _____ Position/Title _____ Date

Exhibit A – Point 15

Below is the updated CATP table guarantees for the APX 6000 ¼ wave antenna configuration.

Attachment 15, Table 1-2 is amended as follows:

Table 1-2: City of Fort Lauderdale Coverage Acceptance Test Summary

User Equipment	Committed Building Loss	Outdoor / In-Building	Defined Test Area & Map Name	Number of Test Tiles	Reliability	CPC	CPC Pass/Fail	Direction(s) of Test
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	20 dB inside City limits, 16 dB in the 1 mile zone outside City limits	Attenuated Drive Test	City + 1 Mile (Map 10)	1374 (0.25 mile tiles)	95%	DAQ-3.4	2.6% BER Inbound	Inbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	20 dB inside City limits, 16 dB in the 1 mile zone outside City limits	Attenuated Drive Test	City + 1 Mile (Map 10)	1374 (0.25 mile tiles)	95%	DAQ-3.4	2.4% BER Outbound	Outbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	8 dB	Attenuated Drive Test	City + 2 Miles (Map 9)	1717 (0.25 mile tiles)	97%	DAQ-3.4	Subjective	Inbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	8 dB	Attenuated Drive Test	City + 2 Miles (Map 9)	1717 (0.25 mile tiles)	97%	DAQ-3.4	Subjective	Outbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	N/A	Outdoor	City + 2 Miles (Map 9)	1717 (0.25 mile tiles)	97%	DAQ-3.4	2.6% BER Inbound	Inbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	N/A	Outdoor	City + 2 Miles (Map 9)	1717 (0.25 mile tiles)	97%	DAQ-3.4	2.4% BER Outbound	Outbound Only
APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	20 dB	In-Building for specific buildings listed in Table 1.4a	Buildings listed in Table 1-4a	N/A	95%	DAQ-3.4	Subjective	Inbound and outbound

APX 6000 Portable with 1/4 wave stubby antenna (NAR6595) in swivel case with remote speaker microphone for transmit and in swivel case with remote speaker microphone for receive	25 dB	In-Building for specific buildings listed in Table 1.4b	Schools listed in Table 1-4b	N/A	95%	DAQ-3.4	Subjective	Inbound and outbound

Note: In each of the first six tests enumerated in Table 1-2, the Defined Test Area shall be evaluated as a single, aggregated service area comprising the City plus its surrounding 1-mile or 2-mile zone, as applicable. In tests where a differentiated building loss has been prescribed for the 1-mile zone, this does not imply a separately evaluated service area.

The table above modifies certain coverage commitments presented in Motorola' s original proposal and therefore supersedes any conflicting coverage commitments described elsewhere in the proposal.

Attachment 15, footnote to Table 1-5 is amended as follows:

Where:

[portable antenna/body loss] = 12.8 dBd. This is the loss of the portable model and antenna combination noted in Table 1-2: City of Fort Lauderdale Coverage Acceptance Test Summary, when worn on the body.

Exhibit B – Point 27 – Spare Part List

QTY	NOMENCLATURE	DESCRIPTION
1	CVN6565A	SPARE CABINET ASTRO 7.9 & BEYOND
1	DLN8006A	FRU: DL380 G10 POWER SUPPLY
1	DLN8007A	FRU: DL380 G10 FAN
1	DLN6942A	1.2 TB HARD DRIVE
1	DLN6971A	FRU: HPE 9.5MM SATA DVD-RW OPTICAL DRIVE
1	DLN7018A	DL 380 G9 ETHERNET CARD
1	DLN8052A	FRE: MSA2060 DAS
1	DLN8053A	FRE: MSA2060 JBOD ENCLOSURE (HC UNC
1	DLN8054A	FRU: BARE CHASSIS, MSA2060 DAS
1	DLN8055A	FRU: POWER SUPPLY, MSA2060 DAS
1	DLN8057A	FRU: JBOD MODULE, MSA2060
1	DLN8056A	FRU: SAS CONTROLLER, MSA2060 DAS
1	DLN8058A	FRU: 600GB HARD DRIVE FOR MSA2060 DAS
1	CKN6975A	CABLE, MINI-SAS HD TO MINI-SAS HD, LENGTH 1 METER , AWG30
1	CLN9053A	TERMINAL SERVER, SLC8000 16 PORT
1	T8493A	ROUTER, EDGE & HUB ROUTER & FIREWALL AC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	T8492A	ROUTER, RADIO SITE ROUTER AND FIREWALL AC

1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	T8910A	FIREWALL, JUNIPER SRX 345 WITH SSD, NON TAA
1	CLN9067A	NETWORK SWITCH, 48-PORT EX4100 NON TAA
1	DQ-TEMP-MICROWAVE1	Microwave Spares Aviat
1	DSMW3HE06791AA	SAR-8 SHELF V2
1	DSMW3HE02784VA	SAR RELEASE 25.X BASIC OS LICENSE
1	DSMW3HE06792EA	FAN MODULE (SAR-8 SHELF V2) EXT TEMP -48VDC
1	DSMW3HE02774AB	CONTROL SWITCH MODULE V2 (CSMV2) 48V
1	DSMW3HE11473BK	PMC CARD W/ 4 GIG-E SFP BUNDLE (1) 3HE02782AA PMC, (4) 3HE00062CB SFP
1	DSMW3HE00062CB	SFP - GIGE BASE-T RJ45 R6/6 DDM -40/85C
1	DSMW3HE00027CA	SFP - GIGE SX - LC ROHS 6/6 DDM -40/85C
1	DSMW3HE05838AA	250W 120/240V AC POWER CONVERTER
1	DSMW3HE05837BA	7705 AC POWER CONVERTER PIGTAIL - O-RING
1	DSSPSPTPS600A01	SMARTPACK S CONTROLER W/A01 PROFILE: 48V UNITY STD CONFIG
1	DS241115105	FLATPACK 2 48/2000 HE RECTIFIER
1	DS275843	INVERTER, 1.5KVA, 120VAC, 48VDC INVERTER MOD
1	_INVSIERRA	Inverter Module Sierra 1000VA
1	DSCBB020E	CIRCUIT BREAKER, 20 AMP, E TRIP
1	DSCBB100E	CIRCUIT BREAKER, 100 AMP, E-TRIP
1	DSCBB025E	CIRCUIT BREAKER, 25 AMP, E TRIP
1	DSTRAK88353M	GPS CLOCK, 10MHZ, RUBIDIUM, 48V INCL ANT AND 50' COAX W/DONGLE ADAPTER

1	SQM01SUM0341A	WAVE SERVER HARDWARE 2022
1	B1951B	DISPATCH DESKTOP MICROPHONE, USB
1	CA03412AA	ADD: USB CABLE, TYPE C TO TYPE C, 4.5M
1	B1952B	DISPATCH DESKTOP SPEAKER, USB
1	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
1	SQM01SUM0342A	CCHUB W/INTERNAL ENCRYPTION HW
1	B1956A	COMMANDCENTRAL HUB, W/CLIENT PC
1	CA03850AA	ADD: WINDOWS OS FOR MCC7500E CONSOLE
1	CA03553AA	ADD: AC LINE CORD, NORTH AMERICA
1	CA03548AA	ADD: TWO CABLES, POWER 24VDC
1	CA04101AA	ADD USB HSM KEY STORAGE
1	CA04101AA-P	ADD USB HSM KEY STORAGE PRICE
1	B1913A	MCC SERIES HEADSET JACK
1	L3226A	COMPUTER MOUSE, CERTIFIED OPTICAL WHEEL MOUSE FOR RSD SERVERS AND WORKSTATIONS
1	L3225A	CERTIFIED KEYBOARD FOR RSD SERVERS AND WORKSTATIONS
1	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH
1	DSEV241B	TECH GLOBAL EVOLUTION SERIES 24INCH WITH TOUCH
1	T8742A	MCAFEE FOR WINDOWS CLIENT, A2019.2 +PLUS
1	T8806A	WINDOWS SUPP. TRANSPARENT, A2022.1
1	T8639A	JUNIPER CONTROL ROOM FIREWALL
1	T8669A	RECOVERY MEDIA, JUNIPER CONTROL ROOM FIREWALL
1	CLN9066A	NETWORK SWITCH, JUNIPER EX4100 24-PORT NON TAA

1	CLN9105A	CABLE FRU, 1 METER JUNIPER DAC CABLE
1	T8492A	ROUTER, RADIO SITE ROUTER AND FIREWALL AC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	T8810A	STANDALONE DSC 8000 CONTROLLER
1	CA04079AA	ADD: ASTRO NEXT SYSTEM RELEASE 2024.X
1	CA03801AA	ADD: DSC 8000 CONVENTIONAL SITE CONTROLLER
1	UA00787AA	ADD: DSC 8000 CONVENTIONAL SITE CONTROLLER SW
1	CA03832AA	ADD: NM--DISPATCH SITE
1	T8811A	DSC AC POWER SUPPLY CHASSIS
1	CA03800AA	ADD: SINGLE POWER SUPPLY FOR DSC
1	CA04066AA	ADD: DSC AC POWER CABLE - US, 6 FT.
1	CA03763AA	ADD: CABINET MOUNTING HARDWARE
1	SQM01SUM0333A	MCG 8000 CONVENTIONAL GATEWAY
1	CA03714AA	ADD: AC POWER
8	CA03717AA	ADD: ACIM INTERFACE
1	B1934A	MCC 7500 VOICE PROCESSOR MODULE FRU
1	F0016A	MC IOT MAIN MODEL
1	VA01945AA	ADD: MC EDGE AS AUX I--O SERVER
1	VA00985AA	ADD: NO PIGGY_ MC-EDGE
1	VA00147AA	ADD: FRONT CABLE COVERS
3	VA00989AA	ADD: MIXED DIGITAL _ 8DO EE 16DI 5-18 V DRY

1	VA00009AA	ADD: AC POWER SUPPLY 12V--120W DC OUT
1	VA01968AA	MC_EDGE DC POWER CABLE 7.5A
1	VA01967AA	INC: MC_EDGE CPU PACKING
1	VA00341AA	INC:MC-EDGE MAIN FILE SYSTEM
1	VA00142AA	INC:EXTREMDB LICENSE
3	VA00049AA	INC: I--O MODULE CABLE COVER
1	VA00974AA	INC: IOT MC-EDGE CPU PACKAGE
1	VA00442AA	INC:MC-EDGE SYSTEM SW FILES
1	VA01383AA	INC: FRONT CABLE COVERS FOR MC EDGE
1	FHN0057A	DIN RAIL STOPPER
1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAIL FOR EIA 19" MOUNT
1	DSB07001619	TRIPP LITE 16 PORT RACK CONSOLE KVM S 19IN RACKMOUNT SWITCH
1	DSB078101USB1	USB SINGLE SRVR INTERFACE UNIT VIRTUAL MEDIA KVM SWITCH HD15 USB RJ4
1	F0016A	MC IOT MAIN MODEL
1	VA01946AA	ADD: MC EDGE AS NFM
1	VA00973AA	ADD: IOT MC-EDGE ENHANCED COMM PLUG-IN BOARD
1	VA00150AA	ADD:12DI--8AI HW ONLY
1	VA00151AA	ADD:0 - 5V DI AI
3	VA00989AA	ADD: MIXED DIGITAL _ 8DO EE 16DI 5-18 V DRY
1	VA00991AA	ADD: DC--DC - [48 >>24] PS W--O HOUSING
1	VA00155AA	ADD:DC POWER CABLE 5A
1	VA01967AA	INC: MC_EDGE CPU PACKING

1	VA00341AA	INC:MC-EDGE MAIN FILE SYSTEM
1	VA00142AA	INC:EXTREMDB LICENSE
1	VA00974AA	INC: IOT MC-EDGE CPU PACKAGE
1	VA00047AA	INC: 12DI--8AI 0-5V
1	VA00442AA	INC:MC-EDGE SYSTEM SW FILES
1	FHN0057A	DIN RAIL STOPPER
1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAIL FOR EIA 19" MOUNT
1	T8547A	SITE ROUTER & FIREWALL, DC POWER
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	DSNMA01450	N MALE, PLENUM & ULTRA FLEXIBLE FOR 1/4'' CABLE (USE WITH PST014 TOOL)
1	PMUG1018A	GNSS REMOTE RECEIVER ASSY
1	DLN1447A	FRE: DSC 8500 W/ RUBIDIUM
1	PMHN4398AS	FAN ASSEMBLY SERVICE KIT,DSC8000
1	DLN8061A	FRU: DBR MCPA 800 MHZ
1	DLN8065A	FRU: XCVR 7/800 MHZ
1	DLN8032A	FRU: DBR MCPA FAN KIT
1	DLN8042A	FRU: DBR FAN FILTER REPLACEMENT KIT
1	DLN8063A	FRU: SITE RMC 7/800 MHZ
1	DLN8064A	FRU: CABINET RMC 7/800 MHZ
1	DLN8066A	FRU: 2-3 WAY COMBINER 800 MHZ
1	DLN8068A	FRU: 4-6 WAY COMBINER 800 MHZ

1	DLN8070A	FRU: 2-3 WAY SPLITTER 800 MHZ
1	DLN8072A	FRU: 4-6 WAY SPLITTER 800 MHZ
1	DLN8074A	FRU: PRESELECTOR 7/800 MHZ
1	DLN8075A	FRU: POSTFILTER 800 MHZ
1	DLN8077A	SOFTWARE,ON-PREMISES SOFTWARE HUB SW
1	DS440030221	TTA 440, MOTOROLA TOWER TOP UNIT, 794-824 MHZ, 4.3-10 CONNS, AUTOQUAD
1	DS440037633	TTA 440, MOTOROLA CU (ESS), 794-824 MHZ, BYPASS, TEST PORT, 2DC, 4.3-10 TTA CONNECTORS
1	DSDS8A03CS36UN	800 CONTROL STATION ANTENNA. 3 DBD
1	DSDS7C11PPYU6M	764-869 MHZ 11 DB GAIN 8' PANEL LOW-PIM/PIP, OFFSET, 4.3-10 CONNECTOR, 6-DEG DT
1	DSDS7C12P36UM	764-869MHZ ANTENNA, OMNIDIRECTIONAL 11.5 DBD, LOW-PIM/HI-PIP, 4.3-10 FEMALE
1	DSDS7C10P36U3M	764-869 MHZ, SINGLE ANTENNA, OMNIDIRECTIONAL, 10 DB GAIN, LOW-PIM/HI-PIP, 4.3-10 FEMALE, 3 DEG DT
1	DSDS7C08PPVU6M	764-869 MHZ 8 DB GAIN 4' PANEL LOW-PIM/PIP, BI-DIR, 4.3-10 CONNECTOR, 6-DEG DT
1	DSCS74860805SN	HYBRID CONTROL STATION COMBINER, 746-869 MHZ 8 CH.
1	T8555A	EDGE & HUB ROUTER & FIREWALL DC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	DLN8021A	FRU: SRX1500 DC SWAPPABLE POWER SUPPLY
1	CLN9066A	NETWORK SWITCH, JUNIPER EX4100 24-PORT NON TAA
1	CLN9105A	CABLE FRU, 1 METER JUNIPER DAC CABLE
1	DSIX2L1M1DC48IG	SITE EQUIPMENT,PD, HPD GPS DATA LINE, 48VDC, HARD WIRE WITH ISOLATED GROUNDING
1	PMUG1018A	GNSS REMOTE RECEIVER ASSY
1	DLN1445B	FRE: DSC 8000, W/ RUBIDIUM 28-60V

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Exhibit C – Point 37 & 39

1.10 Monitored Elements

This table identifies the elements that can be monitored by the service. The specific quantities of each element to be monitored on the Customer's system will be inventoried in the CHP.

Table 14: Monitored Elements

Monitored Elements		
Active Directory	Enrichment Testing	Probe
Agent	Environmental	Core Switch
AIS	ESX	Radio Interface
AMB	Exit Router	RDM
Application Server	RNI Firewall	RFDS
APX Cloud Application	Core Server	RGU
ATR	Gateway	RNG
AUC	Gateway Router	Site Router
Backup Server	Gateway Unit	RTU
Base Radio	GIS Server	SCOM Server
Call Processor	HSS	Short Data Router
Camera	Install Server	Statistical Server
CBSD	Site Switch	Storage Networking
CCGW	Licensing Service	Consoles
Load Balancer	Load Balancer	TRAK
Client Station	Logging Recorder	Terminal Server
CommandCentral AXS dispatch console	Logging Replay Station	Time Keeper
Controller	UNC	Training App
Conventional	UEM	Training Database
Core Router	MOSCAD Server	Trap Forwarder
Data Processing	Network Address	UCS
Database Server	Network Device	Licensing Server
Data Warehouse Server	NTP	Virtual Machine
Device Configuration Server	AIS	VMS
DNS	Application Server	VPM
Domain Controller	Packet Data Gateway	WSGU
D series Site Controller	Physical Host Environmental	ZDS
eNodeB	Physical Host Power and Network	Zone Controller
Active Directory	Power Distribution Unit	Syslog

Exhibit D – Point 40

Managed Detection and Response for ASTRO 25 Systems

Executive Summary

To address the increasing sophistication of modern cyber threats, organizations must move beyond a "check-the-box" compliance mindset toward a holistic, risk-based cybersecurity approach. For ASTRO 25 systems, this strategy is anchored in the National Institute of Standards and Technology (NIST) Cybersecurity Framework, focusing on the five core functions: Identify, Protect, Detect, Respond, and Recover.

The transition to Managed Detection and Response (MDR), powered by the ActiveEye security platform, represents the next generation of cybersecurity for ASTRO systems. MDR provides substantial advancements over legacy security monitoring, offering 24/7 support from a specialized Security Operations Center (SOC), integrated public safety threat intelligence, and advanced analytics that filter out more than 95% of false alerts. Key service components—including Endpoint Detection and Response (EDR), Network Intrusion Detection (NIDS), and External Vulnerability Scanning—ensure comprehensive coverage across Radio Network Infrastructure (RNI), Customer Enterprise Networks (CEN), and dispatch environments.

Motorola Solutions bases its cybersecurity for ASTRO 25 on three foundational pillars: **Confidentiality, Integrity, and Availability**. This risk-based approach integrates people, processes, and technology throughout the entire product lifecycle—from development and implementation to operational support.

The NIST Framework Alignment

The ASTRO 25 system supports every phase of the NIST Cybersecurity Framework to manage and mitigate risks systematically:

NIST Pillar	MDR for ASTRO Capabilities

Identify (Access Risks)	**External Vulnerability Scanning:** Performs recurring scans of internet-facing assets, such as firewalls and VPNs, to identify critical vulnerabilities and insecure configurations before they can be exploited.
Protect (Develop Safeguards)	**Endpoint Detection and Response (EDR):** Detects and blocks threats to computers and other endpoints in real-time, safeguarding the system against ransomware and advanced threats that traditional antivirus might miss.
Detect (Make Timely Discoveries)	**Continuous Monitoring via ActiveEye:** Uses the ActiveEye SOAR platform to continuously ingest data, filtering out routine traffic to highlight genuine threats. This includes **Network Intrusion Detection (NIDS)** for deep packet inspection and **Host Intrusion Detection (HIDS)** to find potentially malicious activity on Windows and Linux endpoints.
Respond (Take Action)	**24/7 Security Operations Center (SOC):** Provides a team of highly experienced cybersecurity experts who investigate alerts and initiate rapid responses. Analysts can take direct mitigation actions, like deleting malware files from a machine, to limit the blast radius and shorten resolution time.
Recover (Restore Functionality)	**Insights and Process Improvements:** Uses insights, incident reporting, and lessons learned from security events to feed findings and remediations back into the development cycle, helping to improve the organization's overall security posture and prevent future attacks. Coordinate with customer and federal agencies to provide incident reports and documentation of the attack.

Managed Detection and Response (MDR) for ASTRO

MDR for ASTRO is a comprehensive solution designed to surface risks and mitigate imminent threats 24/7. It is delivered via the **ActiveEye** platform, a Security Orchestration, Automation and Response (SOAR) tool.

MDR for ASTRO 25 Architecture

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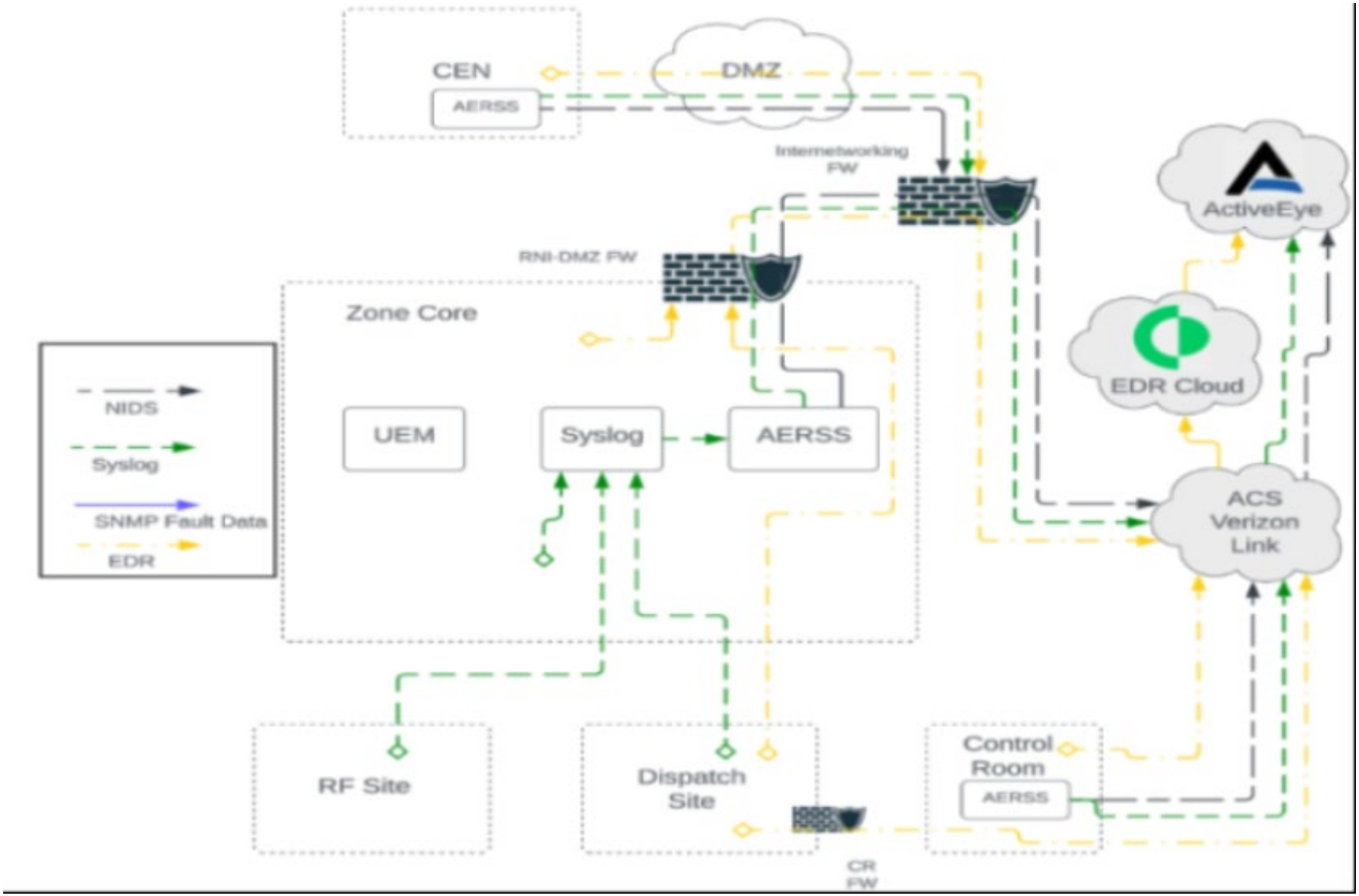

The ActiveEye Security Platform

ActiveEye serves as the central hub for security operations, ingesting data from connected network elements to provide a unified security data platform.

1. **Analytics and Filtering:** Advanced analytics differentiate between threatening and routine traffic, significantly reducing alert fatigue for SOC analysts.
2. **Threat Intelligence:** The platform is continuously updated with data from external sources and the Motorola Solutions network of security sensors, including integration with the Public Safety Threat Alliance.
3. **Co-Managed Portal:** Users have full visibility into alerts and raw data, with the ability to perform ad hoc investigations, threat hunting, and custom reporting.

Core MDR Components

1. **Endpoint Detection and Response (EDR):**
   - Identifies risky anomalous activity that traditional antivirus may miss.
   - Uses machine learning and behavior analytics to block threats in real time.
   - Allows analysts to take direct response actions, such as deleting malware files, to limit "blast radius."
2. **Network Intrusion Detection (NIDS):**
   - Deploys an **ActiveEye Remote Security Sensor (AERSS)** to zone cores and CENs.
   - Utilizes deep packet inspection, signature-based detection, and flow analysis to identify malicious activity within protocols.
3. **Log Analytics**
   - Logs and other security information are collected from applicable servers, workstations, switches, routers, Network Detection, and firewalls
   - Information is forwarded to the ActiveEye platform, which uses advanced analytics to identify signs of security incidents
4. **External Vulnerability Scanning:**
   - Performs recurring scans of internet-facing assets (firewalls, VPNs) to identify insecure configurations.
   - Includes coverage for customers using ASTRO Connectivity Service.

Managed Security Features in MDR for ASTRO

Feature	MDR Capability and Value Proposition
24/7 SOC Support	Specialized Public Safety Security Operations Center (SOC) provides continuous monitoring and expert threat mitigation.
Infrastructure Coverage	Comprehensive protection spanning Radio Network Infrastructure (RNI), Customer Enterprise Networks (CEN), and broader Enterprise IT environments.
Endpoint Protection	Full Endpoint Detection and Response (EDR) utilizing machine learning and behavior analytics to block advanced threats in real time.
Network Detection	Integrated Network Intrusion Detection (NIDS) via the ActiveEye Remote Security Sensor (AERSS), performing deep packet inspection and flow analysis.
Visibility	Full and transparent access for users via the ActiveEye Portal, enabling ad hoc investigations, threat hunting, and custom reporting.
Alert Filtering	Advanced analytics and automation achieve greater than 95% reduction in false alerts, ensuring SOC analysts focus only on confirmed threats.

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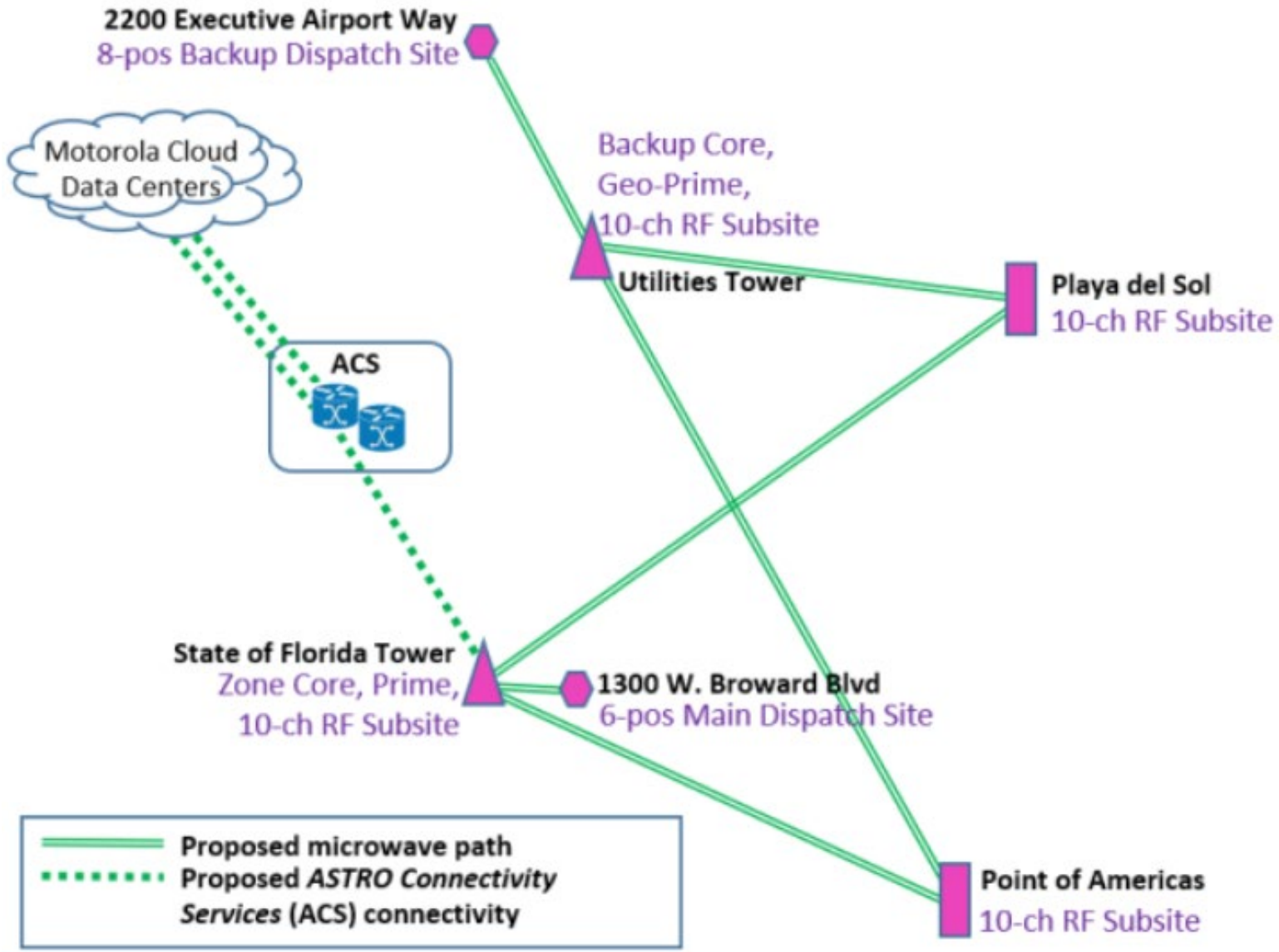
Exhibit E – Point 14

The following diagrams appearing in Attachment 17 of our proposal are updated to show new scope using Aviat Microwave. Motorola has also attached a pdf with all diagrams updated to show the final negotiated scope.



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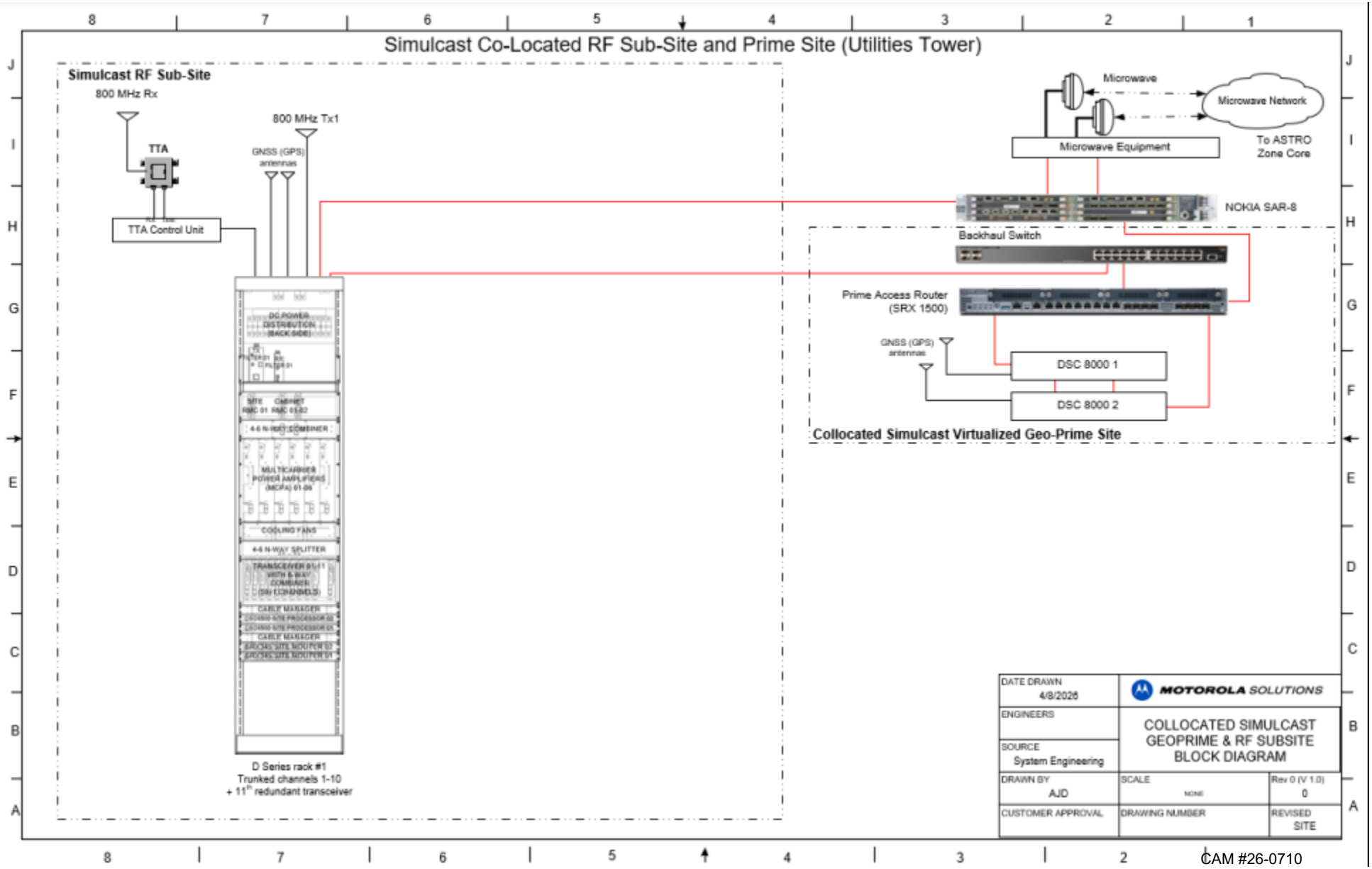

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UTILITIES – SHEET 2 of 2

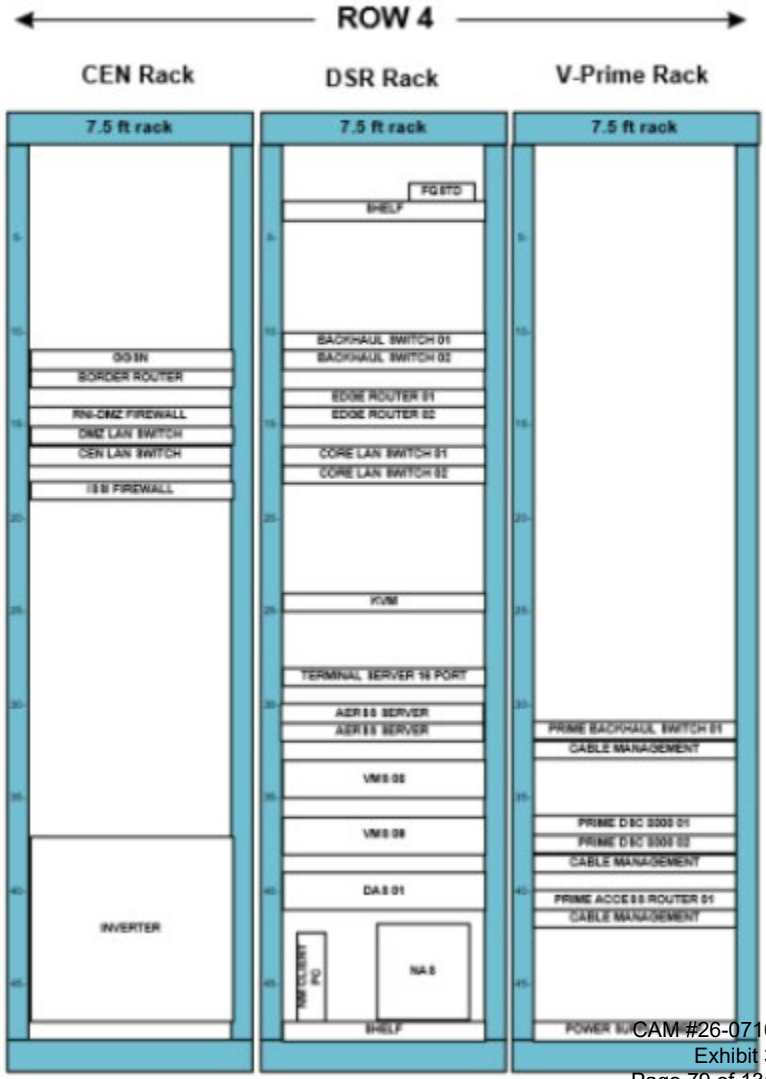


Exhibit F – Price Pages (Excel Sheet)

System Cost Summary - City of Fort Lauderdale P25 System

SYSTEM INFRASTRUCTURE SUMMARY

Description	Total Equipment	Total Services	Total Price - Equipment and Services
Cost Summary - Master Site & Co-Located Remote Sites (City of Fort Lauderdale Core):			
Core Site Equipment and System Services Including Shelter with 6ft Platform - City of Fort Lauderdale Core - State of Florida Tower	$4,880,170	$2,386,280	$7,266,450
DSR Site Equipment and System Services - City of Fort Lauderdale DSR Core - Utilities Tower	$1,331,340	$812,683	$2,144,023
Cost Summary - Antenna Sites:			
Remote Site 3 Equipment and Services - Point of Americas	$647,138	$699,630	$1,346,768
Remote Site 4 Equipment and Services - Playa Del Sol	$646,807	$698,495	$1,345,302
Cost Summary - Dispatch (Primary & Backup)			
Dispatch Equipment and Services - 1300 W Broward Dispatch	$765,823	$384,542	$1,150,365
Dispatch Equipment and Services - 2200 Executive Airport Way	$815,992	$384,542	$1,200,534
Cost Summary - Spare Equipment			
Recommended Spare Equipment	$416,021	-	$416,021
Cost Summary - Other System Items:			
Spectrum Fingerprinting & Noise Floor Testing	-	$62,857	$62,857
Coverage Testing (CATP)	-	$301,257	$301,257
Frequency Licensing (Forms, Licensing, Fees)	-	$72,886	$72,886
Video Site Security (4 Sites)	-	$135,469	$135,469
Subscriber Re-programming for existing Subs	-	$146,683	$146,683
Training	-	$267,382	$267,382
Microwave Services & Site Services: Path and Site Surveys, Engineering, FCC Coordination, Project Management - All Sites	-	$577,437	$577,437
Broadband Connectivity Gateway / Critical Connect Equipment, Services, and Subscription - Years 6-20 ** in the Outyears Section	-		$456,000
ASTRO Connectivity Equipment, Services, and Subscription - Years 6-20 ** in the Outyears Section	-		$240,850
Generator Allowance for Condo Building Sites* - *See note below*	-		$650,000
Total System Infrastructure Cost (before incentives)	**$9,503,290**	**$6,930,143**	**$17,780,283**

City of Fort Lauderdale P25 Contract Incentives:

All infrastructure items as proposed with purchase of SUA and maintenance outyears	-$1,893,477
One time additional discount for **infrastructure items** as proposed	-$1,562,118
One time **customer loyalty** discount with purchase of all infrastructure items as proposed	-$568,043
One time discount for **ASTRO Core** with purchase of all infrastructure items as proposed	-$710,054
One time discount for **Equipment Trade In** with purchase of all infrastructure items as proposed	-$473,328
One time discount for **Enhancing in Building Coverage** with purchase of all infrastructure items as proposed	-$93,822

Total System Infrastructure Cost (after incentives)			**$12,479,441**
Performance / Payment Bond & Freight			$90,559
Total System Infrastructure Cost (Including 5-Year Warranty)			***$12,570,000***
			$11,920,000

Negotiated - Upgrade to a 14 Channel System	$566,212
Negotiated - Add KMF	$155,426
Negotiated - Add IMW	$114,979
Negotiated - Add Text Messaging for 3,000 Subscribers	$405,000
Negotiated - Include Roof Shields (2), Utilities Raised Shelter (1), TDMA/DDM, ISSI 8000, Update MW Vendor (Aviat)	$3,250,405
One Time Negotiations Discount - Include Roof Shields (2), Utilities Raised Shelter (1), TDMA/DDM, ISSI 8000, Update MW Vendor (Aviat)	($3,250,405)
Total System Infrastructure Cost (Including 5-Year Warranty) - Negotiated	***$13,811,617***

REQUIRED OUTYEARS SUMMARY

Description	**Total Price**
Year 1-5 Infrastructure Warranty - All Provided Equipment Including 3rd Party	Included
Critical Connect	
Year 1 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	Included
Year 2 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	Included
Year 3 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	Included
Year 4 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	Included
Year 5 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	Included
Year 6 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$60,241

Year 7 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$60,639
Year 8 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$61,054
Year 9 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$61,485
Year 10 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$61,934
Year 11 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$64,410
Year 12 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$64,896
Year 13 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$65,400
Year 14 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$65,925
Year 15 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$66,471
Year 16 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$69,130
Year 17 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$69,720
Year 18 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$70,335
Year 19 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$70,973
Year 20 Critical Connect Basic Subscription - 3 Unique Connections, 13 Simultaneous Talk Paths, WAVE 100 Licenses	$71,638
ASTRO Connectivity Services - Year 1	Included
ASTRO Connectivity Services - Year 2	Included
ASTRO Connectivity Services - Year 3	Included
ASTRO Connectivity Services - Year 4	Included
ASTRO Connectivity Services - Year 5	Included
ASTRO Connectivity Services - Year 6	$23,936
ASTRO Connectivity Services - Year 7	$23,936
ASTRO Connectivity Services - Year 8	$23,936
ASTRO Connectivity Services - Year 9	$23,936
ASTRO Connectivity Services - Year 10	$23,936
ASTRO Connectivity Services - Year 11	$24,655
ASTRO Connectivity Services - Year 12	$24,655
ASTRO Connectivity Services - Year 13	$24,655
ASTRO Connectivity Services - Year 14	$24,655
ASTRO Connectivity Services - Year 15	$24,655
ASTRO Connectivity Services - Year 16	$25,394
ASTRO Connectivity Services - Year 17	$25,394
ASTRO Connectivity Services - Year 18	$25,394
ASTRO Connectivity Services - Year 19	$25,394
ASTRO Connectivity Services - Year 20	$25,394

Total Services (Years 1-20)			***$1,354,176***

LIFECYCLE SUMMARY	
Year 6 Infrastructure Lifecycle (SUA)	$183,942
Year 7 Infrastructure Lifecycle (SUA)	$191,299
Year 8 Infrastructure Lifecycle (SUA)	$198,951
Year 9 Infrastructure Lifecycle (SUA)	$206,910
Year 10 Infrastructure Lifecycle (SUA)	$215,185
Year 11 Infrastructure Lifecycle (SUA)	$223,793
Year 12 Infrastructure Lifecycle (SUA)	$232,745
Year 13 Infrastructure Lifecycle (SUA)	$242,055
Year 14 Infrastructure Lifecycle (SUA)	$251,737
Year 15 Infrastructure Lifecycle (SUA)	$261,806
Year 16 Infrastructure Lifecycle (SUA)	$272,279
Year 17 Infrastructure Lifecycle (SUA)	$283,170
Year 18 Infrastructure Lifecycle (SUA)	$294,497
Year 19 Infrastructure Lifecycle (SUA)	$306,278
Year 20 Infrastructure Lifecycle (SUA)	$318,529

Total Lifecycle (SUA)			***$3,683,176***

MAINTENANCE SUMMARY	
Year 6 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$598,221
Year 7 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$750,040
Year 8 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$758,817
Year 9 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$684,941
Year 10 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$785,594
Year 11 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$742,763
Year 12 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$772,452
Year 13 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$803,643
Year 14 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$1,025,198
Year 15 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$870,899
Year 16 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$1,334,543
Year 17 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$948,956
Year 18 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$991,079
Year 19 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$1,035,440
Year 20 Maintenance Total - NM, Tech Support, Dispatch, On Site, IR, PM, SUS, RSUS, and Third Party	$1,082,172

Total Maintenance (Years 5-20)			***$13,184,758***
			$18,222,110
Total System Infrastructure Cost with Years 1-20 Maintenance and Lifecycle			**$32,033,727**
Total Subscriber Equipment and Labor (after incentives)			**$ 9,298,183**
Grand Total System: Infrastructure Cost with Years 1-20 Maintenance and Lifecycle, and Subscriber Equipment and Labor			**$ 41,331,910**

** Note: Motorola Solutions has included an allowance of $650,000 for generators at the Condo Sites per the following parameters:*

Motorola Solutions has included an allowance to address the potential necessity of generators at each of the Condo Sites. Motorola Solutions and the City of Fort Lauderdale will work together to determine further generator requirements.

If the actual generator costs exceed the allowance, Motorola Solutions will invoice the additional cost to City of Fort Lauderdale for payment. If the actual generator costs are less than the stated allowance, Motorola Solutions will provide a Technology Credit to the City of Fort Lauderdale"

Future State of Florida Tower- Core/Virtual Prime/RF Site - 1□

Primary/Redundant Site						
Equipment	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Transmitters	10	$ 69,404	$ 694,040	24.99%	$ 52,060	$ 520,599
Transmitter Antenna System	2	$ 11,772	$ 23,544	25%	$ 8,829	$ 17,658
Receiver Antenna System	1	$ 28,910	$ 28,910	25%	$ 21,683	$ 21,683
Network Equipment	1	$ 154,298	$ 154,298	25%	$115,724	$ 115,724
Mutual Aid System	1	$ 140,141	$ 140,141	24.79%	$105,400	$ 105,400
Microwave Interface Equipment	1	$ 1,246,837	$1,246,837	25%	$935,128	$ 935,128
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
Inter SubSystem Interface (ISSI)	1	$ 4,050,000	$4,050,000	82.44%	$711,180	$ 711,180
DC Power	1	$ 280,464	$ 280,464	25%	$210,348	$ 210,348
Network Management	1	$ 5,634	$ 5,634	14.46%	$ 4,819	$ 4,819
DVRS	5	$ 25,394	$ 126,970	26.11%	$ 18,764	$ 93,822
						$ 2,747,448

Compound/Room	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Core	1	$ 1,022,438	$1,022,438	24.99%	$766,931	$ 766,931
Prime	1	$ 491,181	$ 491,181	24.94%	$368,680	$ 368,680
KVL	1	$ 10,896	$ 10,896	24.86%	$ 8,187	$ 8,187
						$ 1,143,798

Compound/Room	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Equipment Shelter (Greenfield)	1	$ 1,177,289	$1,177,289	16%	$988,923	$ 988,923
						$ 988,923

On-Site Work	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Site Civil Modifications; includes A&E; MW Dish installs; Shelter Install	LOT					$ 286,392
						$ 286,392

Administration and Engineering	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Project Management	LOT					$ 487,348
System Engineering and Technologist, Documentation, Engineering Studies, Optimization, Networking, Travel, Staging, Equipment Installation	LOT					$ 1,384,813
BDA Allowance* - *See Note Below*	LOT					$ 227,727
						$ 2,099,888

Total Equipment and Labor	**$ 7,266,450**

** Note: Motorola Solutions has included an allowance for BDAs per the following parameters:*

Based on the coverage prediction, Motorola Solutions has included an allowance to address the buildings that have a high probability of needing an inbuilding BDA solution. Motorola Solutions and City of Fort Lauderdale will work together after testing of the buildings is complete to determine further BDA requirements.

If the actual BDA costs exceed the allowance, Motorola Solutions will invoice the additional cost to City of Fort Lauderdale for payment. If the actual BDA costs are less than the stated allowance, Motorola Solutions will provide a Technology Credit to the City of Fort Lauderdale

Utilities Tower - DSR/Geo Prime Site/RF Site 2

Primary/Redundant Site

Equipment	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Transmitters	10	$ 69,404	$ 694,040	24.95%	$ 52,088	$ 520,877
Transmitter Antenna System	1	$ 11,344	$ 11,344	25%	$ 8,508	$ 8,508
Receiver Antenna System	1	$ 27,821	$ 27,821	25%	$ 20,866	$ 20,866
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
DC Power	1	$ 198,234	$ 198,234	25%	$ 148,676	$ 148,676
Network Management	1	$ 5,634	$ 5,634	14.46%	$ 4,819	$ 4,819
						$ 714,834

Compound/Room	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
DSR Core	1	$ 386,129	$ 386,129	25%	$ 289,597	$ 289,597
Geo-Redundant Prime	1	$ 435,531	$ 435,531	24.94%	$ 326,910	$ 326,910
						$ 616,506

On-Site Work	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Site Civil Modifications; includes A&E; MW Dish installs	LOT					$ 140,094
						$ 140,094

Administration and Engineering	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Project Management	LOT					$ 158,954
System Engineering and Technologist, Documentation, Engineering Studies, Optimization, Networking, Travel, Staging, Equipment Installation	LOT					$ 513,635
						$ 672,589

Total Equipment and Labor	**$ 2,144,023**

Dispatch Site - Consoles (Primary & Backup)

1300 W Broward Dispatch

Equipment	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
Dispatch Consoles	6	$ 94,486	$ 566,913	24.99%	$ 70,874	$ 425,241
Gateway Control Stations	6	$ 22,179	$ 133,071	25.80%	$ 16,456	$ 98,739
Logging	1	$ 201,275	$ 201,275	24.97%	$ 151,017	$ 151,017
Network Equipment	1	$ 82,890	$ 82,890	17.11%	$ 68,708	$ 68,708
Network Management	1	$ 8,740	$ 8,740	20.04%	$ 6,989	$ 6,989
Power Distribution	1	$ 5,389	$ 5,389	25%	$ 4,042	$ 4,042
						$ 765,823

2200 Executive Airport Way

Equipment	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
Dispatch Consoles	8	$ 94,486	$ 755,884	24.99%	$ 70,874	$ 566,989
Gateway Control Stations	8	$ 20,942	$ 167,534	25.84%	$ 15,530	$ 124,243
Network Equipment	1	$ 60,829	$ 60,829	18.33%	$ 49,679	$ 49,679
Network Management	1	$ 11,964	$ 11,964	21.37%	$ 9,407	$ 9,407
Power Distribution	1	$ 5,389	$ 5,389	25%	$ 4,042	$ 4,042
						$ 765,448

Compound/Room	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Monopole Tower	1	$ 386,129	$ 386,129	25%	$ 50,544	$ 50,544
						$ 50,544

On-Site Work	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Site Civil Modifications; includes A&E; MW Dish installs	LOT					$ 199,476
						$ 199,476

Administration and Engineering	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Project Management	LOT					$ 139,783
System Engineering and Technologist, Documentation, Engineering Studies, Optimization, Networking, Travel, Staging, Equipment Installation	LOT					$ 429,825
						$ 569,608

Total Equipment and Labor	**$ 2,350,898**

Point of Americas - Site 3

RF Site						
Equipment	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
DC Power	1	$ 111,956	$ 111,956	25%	$ 83,967	$ 83,967
Network Management	1	$ 5,634	$ 5,634	14.46%	$ 4,819	$ 4,819
Power Distribution	1	$ 4,060	$ 4,060	25%	$ 3,045	$ 3,045
Receiver Antenna System	1	$ 25,187	$ 25,187	25%	$ 18,890	$ 18,890
Transmitter Antenna System	1	$ 5,935	$ 5,935	25%	$ 4,451	$ 4,451
Transmitters	10	$ 69,404	$ 694,040	24.95%	$ 52,088	$ 520,877
						$ 647,138

On-Site Work	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Site Civil Modifications; includes A&E; MW Dish installs	LOT					$ 219,552
						$ 219,552

Administration and Engineering	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Project Management	LOT					$ 106,253
System Engineering and Technologist, Documentation, Engineering Studies, Optimization, Networking, Travel, Staging, Equipment Installation	LOT					$ 373,825
						$ 480,078

Total Equipment and Labor	**$ 1,346,768**

Playa Del Sol - Site 4

RF Site						
Equipment	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Base Station Gateway	1	$ 12,320	$ 12,320	10%	$ 11,088	$ 11,088
DC Power	1	$ 111,956	$ 111,956	25%	$ 83,967	$ 83,967
Network Management	1	$ 5,634	$ 5,634	14.46%	$ 4,819	$ 4,819
Power Distribution	1	$ 4,060	$ 4,060	25%	$ 3,045	$ 3,045
Receiver Antenna System	1	$ 25,187	$ 24,003	25%	$ 18,003	$ 18,003
Transmitter Antenna System	1	$ 5,935	$ 6,673	25%	$ 5,004	$ 5,004
Transmitters	10	$ 69,404	$ 694,037	24.95%	$ 52,088	$ 520,881
						$ 646,807

On-Site Work	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Site Civil Modifications; includes A&E; MW Dish installs	LOT					$ 218,417
						$ 218,417

Administration and Engineering	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Extended Cost
Project Management	LOT					$ 106,253
System Engineering and Technologist, Documentation, Engineering Studies, Optimization, Networking, Travel, Staging, Equipment Installation	LOT					$ 373,825
						$ 480,078

Total Equipment and Labor	**$ 1,345,302**

Broadband Connectivity Gateway

	Number Req'd	Unit Cost	Extended Cost
Equipment, Project Management, Systems Engineering & Technologist Services	LOT		$456,000
Total One Time Cost			**$456,000**
Description - Annual Subscription Services			
Year 1 Device Subscription	100	Included	Included
Year 1 On-Site Service	1	Included	Included
Year 2 Device Subscription	100	Included	Included
Year 2 On-Site Service	1	Included	Included
Year 3 Device Subscription	100	Included	Included
Year 3 On-Site Service	1	Included	Included
Year 4 Device Subscription	100	Included	Included
Year 4 On-Site Service	1	Included	Included
Year 5 Device Subscription	100	Included	Included
Year 5 On-Site Service	1	Included	Included
Year 6 Device Subscription	100	Included	Included
Year 6 On-Site Service	1	$ 60,241	$ 60,241
Year 7 Device Subscription	100	Included	Included
Year 7 On-Site Service	1	$ 60,639	$ 60,639
Year 8 Device Subscription	100	Included	Included
Year 8 On-Site Service	1	$ 61,054	$ 61,054
Year 9 Device Subscription	100	Included	Included
Year 9 On-Site Service	1	$ 61,485	$ 61,485
Year 10 Device Subscription	100	Included	Included
Year 10 On-Site Service	1	$ 61,934	$ 61,934
Year 11 Device Subscription	100	Included	Included
Year 11 On-Site Service	1	$ 64,410	$ 64,410
Year 12 Device Subscription	100	Included	Included
Year 12 On-Site Service	1	$ 64,896	$ 64,896
Year 13 Device Subscription	100	Included	Included
Year 13 On-Site Service	1	$ 65,400	$ 65,400
Year 14 Device Subscription	100	Included	Included
Year 14 On-Site Service	1	$ 65,925	$ 65,925
Year 15 Device Subscription	100	Included	Included
Year 15 On-Site Service	1	$ 66,471	$ 66,471
Year 16 Device Subscription	100	Included	Included
Year 16 On-Site Service	1	$ 69,130	$ 69,130
Year 17 Device Subscription	100	Included	Included
Year 17 On-Site Service	1	$ 69,720	$ 69,720
Year 18 Device Subscription	100	Included	Included
Year 18 On-Site Service	1	$ 70,335	$ 70,335
Year 19 Device Subscription	100	Included	Included
Year 19 On-Site Service	1	$ 70,973	$ 70,973
Year 20 Device Subscription	100	Included	Included
Year 20 On-Site Service	1	$ 71,638	$ 71,638
Total Price - Annual Subscription Services			**$ 984,251**

ASTRO Connectivity Services (ACS)

Description	Number Req'd	Unit Cost	Extended Cost
Equipment, Project Management, Systems Engineering & Technologist Services	LOT	-	$240,850
Total One Time Cost	-	-	**$240,850**
Annual Subscription Services			
ASTRO Connectivity Services - Year 1	1	-	Included
ASTRO Connectivity Services - Year 2	1	-	Included
ASTRO Connectivity Services - Year 3	1	-	Included
ASTRO Connectivity Services - Year 4	1	-	Included
ASTRO Connectivity Services - Year 5	1	-	Included
ASTRO Connectivity Services - Year 6	1	-	$23,936
ASTRO Connectivity Services - Year 7	1	-	$23,936
ASTRO Connectivity Services - Year 8	1	-	$23,936
ASTRO Connectivity Services - Year 9	1	-	$23,936
ASTRO Connectivity Services - Year 10	1	-	$23,936
ASTRO Connectivity Services - Year 11	1	-	$24,655
ASTRO Connectivity Services - Year 12	1	-	$24,655
ASTRO Connectivity Services - Year 13	1	-	$24,655
ASTRO Connectivity Services - Year 14	1	-	$24,655
ASTRO Connectivity Services - Year 15	1	-	$24,655
ASTRO Connectivity Services - Year 16	1	-	$25,394
ASTRO Connectivity Services - Year 17	1	-	$25,394
ASTRO Connectivity Services - Year 18	1	-	$25,394
ASTRO Connectivity Services - Year 19	1	-	$25,394
ASTRO Connectivity Services - Year 20	1	-	$25,394
Total Price Years 1-20 ASTRO Connectivity Services Subscription			**$369,925**

SYSTEM MAINTENANCE - OEM MANUFACTURED EQUIPMENT																									
OPTIONAL POST-WARRANTY MAINTENANCE SERVICES - LIST	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**Subtotal**	**YEAR 6**	**YEAR 7**	**YEAR 8**	**YEAR 9**	**YEAR 10**	**Subtotal**	**YEAR 11**	**YEAR 12**	**YEAR 13**	**YEAR 14**	**YEAR 15**	**Subtotal**	**YEAR 16**	**YEAR 17**	**YEAR 18**	**YEAR 19**	**YEAR 20**	**Subtotal**	**Total**
Network Monitoring	Included	Included	Included	Included	Included	Included	$69,504	$72,282	$75,171	$78,176	$81,303	$376,436	$84,555	$87,937	$91,455	$95,113	$98,918	$457,978	$102,874	$106,989	$111,269	$115,720	$120,348	$557,200	$1,391,614
Technical Support	Included	Included	Included	Included	Included	Included	$87,793	$91,302	$94,951	$98,747	$102,696	$475,489	$106,804	$111,076	$115,519	$120,140	$124,945	$578,484	$129,943	$135,141	$140,547	$146,168	$152,015	$703,814	$1,757,787
Dispatch Services	Included	Included	Included	Included	Included	Included	$31,613	$32,876	$34,190	$35,557	$36,979	$171,215	$38,458	$39,997	$41,596	$43,260	$44,991	$208,302	$46,790	$48,662	$50,609	$52,633	$54,738	$253,432	$632,949
On-Site Premier (2 Hour)	Included	Included	Included	Included	Included	Included	$291,086	$302,721	$314,820	$327,406	$340,500	$1,576,533	$354,120	$368,285	$383,016	$398,337	$414,270	$1,918,028	$430,841	$448,075	$465,998	$484,638	$504,023	$2,333,575	$5,828,136
Infrastructure Repair	Included	Included	Included	Included	Included	Included	$182,390	$189,680	$197,261	$205,147	$213,352	$987,830	$221,886	$230,762	$239,992	$249,592	$259,575	$1,201,807	$269,958	$280,757	$291,987	$303,667	$315,813	$1,462,182	$3,651,819
Annual Preventive Maintenance	Included	Included	Included	Included	Included	Included	$42,841	$44,553	$46,334	$48,186	$50,113	$232,027	$52,118	$54,202	$56,371	$58,625	$60,970	$282,286	$63,409	$65,946	$68,583	$71,327	$74,180	$343,445	$857,758
System Update Service (SUS)	Included	Included	Included	Included	Included	Included	$64,127	$66,690	$69,355	$72,128	$75,012	$347,312	$78,013	$81,133	$84,379	$87,754	$91,264	$422,543	$94,915	$98,711	$102,660	$106,766	$111,037	$514,089	$1,283,944
Remote System Update Service (RSUS)	Included	Included	Included	Included	Included	Included	$84,414	$87,788	$91,296	$94,946	$98,744	$457,188	$102,693	$106,801	$111,073	$115,516	$120,137	$556,220	$124,942	$129,940	$135,137	$140,543	$146,165	$676,727	$1,690,135
SUA	Included	Included	Included	Included	Included	Included	$347,080	$360,963	$375,401	$390,417	$406,036	$1,879,897	$422,276	$439,168	$456,733	$475,003	$494,003	$2,287,183	$513,764	$534,315	$555,687	$577,913	$601,031	$2,782,710	$6,949,790
Subtotal - List Price	**Included**	**Included**	**Included**	**Included**	**Included**	**Included**	**$1,200,848**	**$1,248,855**	**$1,298,779**	**$1,350,710**	**$1,404,735**	**$6,503,927**	**$1,460,923**	**$1,519,361**	**$1,580,134**	**$1,643,340**	**$1,709,073**	**$7,912,831**	**$1,777,436**	**$1,848,536**	**$1,922,477**	**$1,999,375**	**$2,079,350**	**$9,627,174**	**$24,043,932**

OPTIONAL POST-WARRANTY MAINTENANCE SERVICES - DISCOUNTED	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**Subtotal**	**YEAR 6**	**YEAR 7**	**YEAR 8**	**YEAR 9**	**YEAR 10**	**Subtotal**	**YEAR 11**	**YEAR 12**	**YEAR 13**	**YEAR 14**	**YEAR 15**	**Subtotal**	**YEAR 16**	**YEAR 17**	**YEAR 18**	**YEAR 19**	**YEAR 20**	**Subtotal**	**Total**
Network Monitoring	Included	Included	Included	Included	Included	Included	$36,835	$38,307	$39,839	$41,431	$43,088	$199,500	$44,812	$46,604	$48,468	$50,407	$52,423	$242,714	$54,520	$56,701	$58,969	$61,328	$63,781	$295,299	$737,513
Technical Support	Included	Included	Included	Included	Included	Included	$46,527	$48,387	$50,321	$52,333	$54,426	$251,994	$56,603	$58,867	$61,222	$63,670	$66,217	$306,579	$68,866	$71,621	$74,485	$77,465	$80,563	$373,000	$931,573
Dispatch Services	Included	Included	Included	Included	Included	Included	$16,754	$17,423	$18,120	$18,844	$19,598	$90,739	$20,382	$21,197	$22,045	$22,927	$23,844	$110,395	$24,797	$25,789	$26,821	$27,894	$29,010	$134,311	$335,445
On-Site Premier (2 Hour)	Included	Included	Included	Included	Included	Included	$154,267	$160,433	$166,845	$173,515	$180,455	$835,515	$187,673	$195,180	$202,987	$211,106	$219,551	$1,016,497	$228,333	$237,466	$246,965	$256,843	$267,117	$1,236,724	$3,088,736
Infrastructure Repair	Included	Included	Included	Included	Included	Included	$96,661	$100,525	$104,542	$108,722	$113,070	$523,520	$117,593	$122,297	$127,188	$132,276	$137,567	$636,921	$143,070	$148,793	$154,744	$160,934	$167,371	$774,912	$1,935,353
Annual Preventive Maintenance	Included	Included	Included	Included	Included	Included	$26,243	$27,291	$28,382	$29,517	$30,697	$142,130	$31,925	$33,202	$34,530	$35,912	$37,348	$172,917	$38,842	$40,396	$42,011	$43,692	$45,440	$210,381	$525,428
System Update Service (SUS)	Included	Included	Included	Included	Included	Included	$33,985	$35,343	$36,756	$38,225	$39,754	$184,063	$41,344	$42,998	$44,718	$46,507	$48,367	$223,934	$50,302	$52,314	$54,406	$56,583	$58,846	$272,451	$680,448
Remote System Update Service (RSUS)	Included	Included	Included	Included	Included	Included	$44,737	$46,525	$48,384	$50,319	$52,331	$242,296	$54,424	$56,601	$58,865	$61,220	$63,669	$294,779	$66,216	$68,864	$71,619	$74,483	$77,463	$358,645	$895,720
SUA	Included	Included	Included	Included	Included	Included	$183,942	$191,299	$198,951	$206,910	$215,185	$996,287	$223,793	$232,745	$242,055	$251,737	$261,806	$1,212,136	$272,279	$283,170	$294,497	$306,278	$318,529	$1,474,753	$3,683,176
Subtotal - After Discount	**Included**	**Included**	**Included**	**Included**	**Included**	**Included**	**$639,951**	**$665,533**	**$692,140**	**$719,816**	**$748,604**	**$3,466,044**	**$778,549**	**$809,691**	**$842,078**	**$875,762**	**$910,792**	**$4,216,872**	**$947,225**	**$985,114**	**$1,024,517**	**$1,065,500**	**$1,108,120**	**$5,130,476**	**$12,813,392**

Total List Price per Year	Included	Included	Included	Included	Included	Included	$1,200,848	$1,248,855	$1,298,779	$1,350,710	$1,404,735	$6,503,927	$1,460,923	$1,519,361	$1,580,134	$1,643,340	$1,709,073	$7,912,831	$1,777,436	$1,848,536	$1,922,477	$1,999,375	$2,079,350	$9,627,174	$24,043,932
DISCOUNT	N/A	N/A	N/A	N/A	N/A		46.71%	46.71%	46.71%	46.71%	46.71%		46.71%	46.71%	46.71%	46.71%	46.71%		46.71%	46.71%	46.71%	46.71%	46.71%		
Yearly Total	**Included**	**Included**	**Included**	**Included**	**Included**	**Included**	**$639,951**	**$665,533**	**$692,140**	**$719,816**	**$748,604**	**$3,466,044**	**$778,549**	**$809,691**	**$842,078**	**$875,762**	**$910,792**	**$4,216,872**	**$947,225**	**$985,114**	**$1,024,517**	**$1,065,500**	**$1,108,120**	**$5,130,476**	**$12,813,392**

3RD PARTY EQUIPMENT MAINTENANCE																								
POST-WARRANTY MAINTENANCE SERVICES	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**Subtotal**	**YEAR 6**	**YEAR 7**	**YEAR 8**	**YEAR 9**	**YEAR 10**	**Subtotal**	**YEAR 11**	**YEAR 12**	**YEAR 13**	**YEAR 14**	**YEAR 15**	**Subtotal**	**YEAR 16**	**YEAR 17**	**YEAR 18**	**YEAR 19**	**YEAR 20**	**Subtotal**	**Total**
Third Party Maintenance (Eventide)	Included	Included	Included	Included	Included	Included	$32,904	$32,904	$32,904	$32,904	$32,904	$164,520	$35,536	$35,536	$35,536	$35,536	$35,536	$177,680	$37,313	$39,179	$41,138	$43,195	$45,355	$206,180	$548,380
Third Party Maintenance (Infinity Microwave)	Included	Included	Included	Included	Included	Included	$41,227	$41,227	$154,081	$54,560	$54,560	$345,655	$54,560	$54,560	$54,560	$54,560	$54,560	$272,800	$480,169	$54,560	$54,560	$54,560	$54,560	$698,409	$1,316,864
Third Party Maintenance (Tower Maintenance)	Included	Included	Included	Included	Included	Included	$2,958	$3,076	$3,200	$3,328	$3,461	$16,023	$3,599	$3,743	$3,893	$4,048	$4,210	$19,493	$4,379	$4,554	$4,736	$4,926	$5,123	$23,718	$59,234
Third Party Maintenance (Eltek DC Power)	Included	Included	Included	Included	Included	Included	$24,852	$26,105	$27,421	$28,803	$30,254	$137,435	$31,779	$33,381	$35,063	$36,830	$38,687	$175,740	$40,636	$42,685	$44,836	$47,096	$49,469	$224,722	$537,897
Third Party Maintenance (VSS)	Included	Included	Included	Included	Included	Included	$40,271	$172,494	$48,022	$52,440	$130,996	$444,223	$62,533	$68,286	$74,568	$270,199	$88,920	$564,506	$97,100	$106,034	$115,789	$126,441	$138,074	$583,438	$1,592,167
Yearly Total	**Included**	**Included**	**Included**	**Included**	**Included**	**Included**	**$142,212**	**$275,806**	**$265,628**	**$172,035**	**$252,175**	**$1,107,856**	**$188,007**	**$195,506**	**$203,620**	**$401,173**	**$221,913**	**$1,210,219**	**$659,597**	**$247,012**	**$261,059**	**$276,218**	**$292,581**	**$1,736,467**	**$4,054,542**

SPARE EQUIPMENT						
Equipment Description	**Number Req'd**	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Core Spares	LOT				$ 191,908	$ 191,908
RF Site Spares	LOT				$ 96,834	$ 96,834
Dispatch Site Spares	LOT				$ 80,744	$ 80,744
Virtual Prime Site Spares	LOT				$ 46,535	$ 46,535
SPARE EQUIPMENT SUBTOTAL						
Subtotal Equipment						**$ 416,021**

Training						
	# of Students	**List Unit Cost**	**Total List**	**Discount**	**Unit Cost**	**Extended Cost**
Dispatch Console Operator Training - On Site Fort Lauderdale						
CommandCentral AXS Dispatch Console Technical Workshop	Up to 12					$ 20,718
WAVE 5000 End User Train-the-Trainer	Up to 12					$ 9,418
CommandCentral AXS Dispatch Console ADMIN with CommandCentral AXS Dispatch Console Operator with ASTRO APX Mobile Consolette	4					$ 3,488
CommandCentral AXS Dispatch Console Operator 7 (4 hr) Sessions ASTRO APX Mobile Consolette	38					$ 11,825
System Administrator Training - On Site Fort Lauderdale; 2 Students						
ASTRO 25 System Overview - Online	Up to 12					Included
ASTRO 25 Applied Networking	Up to 12					$ 32,016
ASTRO 25 IV&D Admin Workshop	Up to 12					$ 32,016
ASTRO® 25 IV&D System Core Workshop	Up to 12					$ 32,016
ASTRO® 25 IV&D DBR RF Technical Workshop	Up to 12					$ 20,718
ASTRO® Virtualized Simulcast Prime Site Workshop	Up to 12					$ 20,718
ASTRO® 25 IV&D IP Based Digital Simulcast Workshop	Up to 12					$ 20,718
ASTRO® 25 IV&D Secure Communications Workshop	Up to 12					$ 32,016
ASTRO® 25 Domain Controller Administration	Up to 12					$ 20,718
ASTRO® 25 ISSI 8000 - CSSI 8000 Feature Overview	Up to 12					$ 2,183
Shipping & Leasing of all Training Equipment to City of Fort Lauderdale	Up to 12					$ 8,814
ASTRO Learning Subscription (All ASTRO and County Self-Paced Content Included) - 1 Year Subscription	Up to 12					Included
Total End-User and System Administrator Training						$ 221,933

Subscribers

Equipment Description	Subscriber Model	Number Req'd	List Unit Cost	Total List	Discount	Unit Cost	Addl. Discount	Extended Cost
High Tier Portable with **5** Yr Warranty	APX XN (NEPA)	359	$ 11,172.00	$ 4,010,748	27%	$ 8,156		**Bundled Discount**
SMARTFEATURES		359	$ 2,412.00	$ 865,908	0%	$ 2,412		
DESK CHARGER		359	$ 221.64	$ 79,569	27%	$ 162		
EXTRA BATTERY		359	$ 285.00	$ 102,315	27%	$ 208		
Leather Case		359	$ 122.00	$ 43,798	27%	$ 89		
RSM Accy (XVN500 - Green with Knob)		359	$ 871.00	$ 312,689	27%	$ 636		
Core Features		359	$ 3,635.00	$ 1,304,965	27%	$ 2,654		
Encryption Features		359	$ 1,667.00	$ 598,453	27%	$ 1,217		
Total Radio Cost		**359**	**$ 20,385.64**	**$ 7,318,445**		**$ 15,533**		**$ 5,576,260**
High Tier Portable with **5** Yr Warranty - SINGLE BAND	APX N70 (PD)	0	$ 5,365.00	$ -	27%	$ 3,916		**Not Included in Bundled Discount**
SMARTFEATURES		0	$ 2,003.40	$ -	0%	$ 2,003		
DESK CHARGER		0	$ 221.64	$ -	27%	$ 162		
EXTRA BATTERY		0	$ 225.00	$ -	27%	$ 164		
hybrid Leather holster / belt loop		0	$ 166.91	$ -	27%	$ 122		
RSM Accy (WM800 with battery and charger) - see RSM Section		0	$ -	$ -	27%	$ -		See RSM Section
Core Features		0	$ 3,580.60	$ -	27%	$ 2,614		
Encryption Features		0	$ 1,549.00	$ -	27%	$ 1,131		
Total Radio Cost		**0**	**$ 13,111.55**	**$ -**		**$ 10,112**		**$ -**
LE RSM Option 1 (WM800 with battery & charger)		0	$ 680.00	$ -	27%	$ 496		**Either RSM option**
LE RSM Option 2 (XVP 830)		0	$ 520.00	$ -	27%	$ 380		
High Tier Portable with **5** Yr Warranty - ALL BAND	APX Next All Band (PD Alternate)	720	$ 8,818.00	$ 6,348,960	27%	$ 6,437		**Bundled Discount**
SMARTFEATURES		720	$ 2,044.80	$ 1,472,256	0%	$ 2,045		
DESK CHARGER		720	$ 221.64	$ 159,581	27%	$ 162		
EXTRA BATTERY		720	$ 248.05	$ 178,596	27%	$ 181		
hybrid Leather holster / belt loop		720	$ 166.91	$ 120,175	27%	$ 122		
RSM Accy (WM800) - see RSM Section		720	$ 680.00	$ 489,600	27%	$ 496		
Core Features		720	$ 3,727.00	$ 2,683,440	27%	$ 2,721		
Encryption Features		720	$ 1,549.00	$ 1,115,280	27%	$ 1,131		
Total Radio Cost		**720**	**$ 18,655.40**	**$ 12,567,888**		**$ 14,171**		**$ 10,202,787**
High Tier Mobile with **5** Yr Warranty	APX 6500 (Encry Rem Mt.)	200	$ 3,764.00	$ 752,800	27%	$ 2,748		**Bundled Discount**
SMARTFEATURES		200	$ 1,104.00	$ 220,800	0%	$ 1,104		
CH (Control Head)		200	$ 767.00	$ 153,400	27%	$ 560		
Antenna/cables/Accy		200	$ 205.00	$ 41,000	27%	$ 150		
Modems		200	$ 4,303.00	$ 860,600	17%	$ 3,571		
Palm Microphone/accy & cables		200	$ 85.00	$ 17,000	27%	$ 62		
Core Features		200	$ 4,960.00	$ 992,000	27%	$ 3,621		
Encryption Features		200	$ 1,549.00	$ 309,800	27%	$ 1,131		
Total Radio Cost		**200**	**$ 16,736.99**	**$ 3,347,400**		**$ 12,946**		**$ 2,589,276**
High Tier Mobile with **5** Yr Warranty	APX 8500 (Dual Head)	13	$ 6,558.00	$ 85,254	27%	$ 4,787 $ -		**Bundled Discount**
SMARTFEATURES		13	$ 1,104.00	$ 14,352	0%	$ 1,104		
DUAL CH (Control Head)		13	$ 1,438.00	$ 18,694	27%	$ 1,050		
Antenna/cables/Accy		13	$ 230.00	$ 2,990	27%	$ 168		
Modems		13	$ 4,303.00	$ 55,939	17%	$ 3,571		
Palm Microphone/accy & cables		26	$ 174.00	$ 4,524	27%	$ 127		
Core Features		13	$ 5,020.00	$ 65,260	27%	$ 3,665		
Encryption Features		13	$ 1,549.00	$ 20,137	27%	$ 1,131		
Total Radio Cost		**13**	**$ 20,376.00**	**$ 267,150**		**$ 15,603**		**$ 202,837**

Mid-Tier Portable with **5** Yr Warranty	APX N50	211	$ 3,496.00	$ 737,656	27%	$ 2,552		**Bundled Discount**
SMARTFEATURES		211	$ 816.00	$ 172,176	0%	$ 816		
DESK CHARGER		211	$ 91.71	$ 19,351	27%	$ 67		
EXTRA BATTERY		211	$ 196.35	$ 41,430	27%	$ 143		
holster		211	$ 75.00	$ 15,825	17%	$ 62		
RSM Accy		211	$ 140.00	$ 29,540	27%	$ 102		
Core Features		211	$ 3,821.60	$ 806,358	27%	$ 2,790		
Encryption Features		211	$ 1,549.00	$ 326,839	27%	$ 1,131		
Total Radio Cost		211	**$ 10,185.66**	**$ 2,149,174**		**$ 7,663**		**$ 1,616,967**

Bank Chargers (PMPN 4591 - NEXT, N70, XN, XE)	MUC	44	$ 1,925.24	$ 84,711	27%	$ 1,405		**$ 61,839**
Vehicle Chargers (PMPN 4639 - NEXT, N70, XN, XE)	Vehicle Charger	800	$ 641.00	$ 512,800	27%	$ 468		**$ 374,344**
Desk Chargers (PMPN 4604 - NEXT, N70, XN, XE)	Desk Charger	0	$ 221.00	$ -	27%	$ 161		**$ -**
Desk Chargers (PMPN4820 - N50&N30)	Desk Charger	0	$ 91.71	$ -	27%	$ 67		**$ -**

Services for Radio/Chargers Setup

Portable Programming and Optimization	All	1290	$ 132	$ 170,280	84.21%	$ 21		**$ 26,887**
Mobile Programming, Optimization, Install, (and Decommission if required) - Dash Mount		213	$ 923	$ 196,599	84.19%	$ 146		**$ 31,082**

Total of all Radios for Fort Lauderdale included in the RFP offer and negotiation.	**List Price**	**$ 25,650,057**	**Radios Discounted**	**$**	**20,188,127**
SubTotal Bank Chargers, and vehicular chargers.	**List Price**	**$ 597,511**	**Chargers Discounted**	**$**	**436,183**
Services for Radio/Chargers setup	**List Price**	**$ 366,879**	**Services Discounted**	**$**	**57,970**
***One time subscriber discount for purchase of all subscribers as proposed with purchase of system.**				**$**	**(11,384,096)**
Total Subscriber Equipment and Labor (after Incentives)		**$ 26,614,447**		**$**	**9,298,183**

High Tier - All Band Mobile - Dash Mount with 5 Yr Warranty	APX8500 Dash Mount	1	$ 7,876.00	$ 7,876	27%	$ 5,749		$ 5,749
High Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
High Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
High Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
High Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
High Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
High Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 634.00	$ 634	27%	$ 463		$ 463
Subscriptions as proposed:		1	$ 96.00	$ 96	0%	$ 96		$ 96
Total Radio Cost								**$ 10,074**

High Tier - All Band Mobile - Remote Mount with 5 Yr Warranty	APX8500 Remote	1	$ 8,226.00	$ 8,226	27%	$ 6,005		$ 6,005
High Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
High Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
High Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
High Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
High Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
High Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 634.00	$ 634	27%	$ 463		$ 463
Subscriptions as proposed:		1	$ 96.00	$ 96	0%	$ 96		$ 96
Total Radio Cost								**$ 10,330**

High Tier - All Band Mobile - Dual Head Mount with 5 Yr Warranty	APX 8500 Remote D CH	1	$ 8,897.00	$ 8,897	27%	$ 6,495		$ 6,495
High Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
High Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
High Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
High Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
High Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
High Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 826.00	$ 826	27%	$ 603		$ 603
Subscriptions as proposed:		1	$ 96.00	$ 96	0%	$ 96		$ 96
Total Radio Cost								**$ 10,960**

High Tier - All Band Mobile - Motorcycle Mount with 5 Yr Warranty	APX 8500 Motorcycle	1	$ 7,876.00	$ 7,876	27%	$ 5,749		$ 5,749
High Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
High Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
High Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
High Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
High Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
High Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
High Tier Mobile Peripherals incl. all band antenna, helmet headset, and handlebar PTT		1	$ 1,314.00	$ 1,314	27%	$ 959		$ 959
Subscriptions as proposed:		1	$ 96.00	$ 96	0%	$ 96		$ 96
Total Radio Cost								**$ 10,571**

Mid Tier - All Band Mobile - Dash Mount with 5 Yr Warranty	APX 8500 DASH	1	$ 7,876.00	$ 7,876	27%	$ 5,749		$ 5,749
Mid Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
Mid Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
Mid Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
Mid Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 634.00	$ 634	27%	$ 463		$ 463
Total Radio Cost								**$ 9,978**

Mid Tier - All Band Mobile - Remote Mount with 3 Yr Warranty	APX8500 Remote	1	$ 7,963.00	$ 7,963	27%	$ 5,813		$ 5,813
Mid Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
Mid Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
Mid Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
Mid Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 634.00	$ 634	27%	$ 463		$ 463
Total Radio Cost								**$ 10,042**

Mid Tier - All Band Mobile - Dual Head Mount with 5 Yr Warranty	APX 8500 Remote D CH	1	$ 8,634.00	$ 8,634	27%	$ 6,303		$ 6,303
Mid Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
Mid Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
Mid Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
Mid Tier Mobile Peripherals incl. all band antenna, auxiliary speaker and standard palm microphone		1	$ 826.00	$ 826	27%	$ 603		$ 603
Total Radio Cost								**$ 10,672**

Mid Tier - All Band Mobile - Motorcycle Mount with 5 Yr Warranty	APX 8500 Motorcycle	1	$ 7,613.00	$ 7,613	27%	$ 5,557		$ 5,557
Mid Tier Mobile Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
Mid Tier Mobile Multikey		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
Mid Tier Mobile Wi-Fi Operation		1	$ 353.00	$ 353	27%	$ 258		$ 258
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 436.00	$ 436	27%	$ 318		$ 318
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 2,726.00	$ 2,726	27%	$ 1,990		$ 1,990
Mid Tier Mobile Peripherals incl. all band antenna, helmet headset, and handlebar PTT		1	$ 1,314.00	$ 1,314	27%	$ 959		$ 959
Total Radio Cost								**$ 10,283**

High Tier Portable with 5 Yr Warranty	APX N70	1	$ 5,365.00	$ 5,365	27%	$ 3,916		$ 3,916
SMARTFEATURES		1	$ 2,003.40	$ 2,003	0%	$ 2,003		$ 2,003
DESK CHARGER		1	$ 221.64	$ 222	27%	$ 162		$ 162
EXTRA BATTERY		1	$ 225.00	$ 225	27%	$ 164		$ 164
hybrid Leather holster / belt loop		1	$ 166.91	$ 167	27%	$ 122		$ 122
RSM Accy (WM800 with battery and charger) - see RSM Section		1	$ 680.00	$ 680	27%	$ 496		$ 496
Core Features		1	$ 3,580.60	$ 3,581	27%	$ 2,614		$ 2,614
Encryption Features		1	$ 1,549.00	$ 1,549	27%	$ 1,131		$ 1,131
Total Radio Cost								**$ 10,609**

Mid Tier Portable with 5 Yr Warranty (5 year)	APX N50	1	$ 3,496	$ 3,496	27%	$ 2,552		$ 2,552
Mid Tier Portable Encryption - AES Encryption		1	$ 560	$ 560	27%	$ 409		$ 409
Mid Tier Portable Multikey (included w OTAR)		1	$ -	$ -	27%	$ -		$ -
Mid Tier Portable TDMA Operation		1	$ 2,436	$ 2,436	27%	$ 1,778		$ 1,778
Mid Tier Mobile Wi-Fi Operation		1	$ 353	$ 353	27%	$ 258		$ 258
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 871	$ 871	27%	$ 636		$ 636
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 816	$ 816	0%	$ 816		$ 816
Mid Tier Portable Accessories incl. additional battery, single unit charger, remote speaker microphone and swivel case		1	$ 459	$ 459	27%	$ 335		$ 335
Total Radio Cost								**$ 6,870**

Multi-unit Charger	MUC - DESKTOP N70	1	$ 1,925.00	$ 1,925	27%	$ 1,405		$ 1,405
Single-unit Charger	SUC-DESKTOP	1	$ 222.00	$ 222	27%	$ 162		$ 162
Additional Battery		1	$ -	$ -	0%	$ -		$ -
Remote Speaker Microphone	VXP750 RSM	1	$ 543.00	$ 543	27%	$ 396		$ 396
Swivel Case	holster case	1	$ 40.00	$ 40	27%	$ 29		$ 29
Belt Clip	clip	1	$ 40.00	$ 40	27%	$ 29		$ 29
Total Accessories Cost								**$ 2,022**

Control Station with 5 Yr Warranty	APX Consolette	1	$ 14,754.00	$ 14,754	27%	$ 10,770		$ 10,770
Control Station Encryption - AES Encryption		1	$ 560.00	$ 560	27%	$ 409		$ 409
Control Station Multikey		1	$ 814.00	$ 814	27%	594.22		$ 594
Control Station TDMA Operation		1	$ 530.00	$ 530	27%	$ 387		$ 387
Mid Tier Mobile Wi-Fi Operation		1	$ 412.00	$ 412	27%	$ 301		$ 301
Mid Tier Mobile Over-the-Air-Rekeying (OTAR) Operation		1	$ 871.00	$ 871	27%	$ 636		$ 636
Mid Tier Mobile Over-the-Air-Programming (OTAP) Operation		1	$ 118.00	$ 118	27%	$ 86		$ 86
Mid Tier Software/Features required but not listed above		1	$ 960.00	$ 960	27%	$ 701		$ 701
Total Radio Cost								**$ 13,884**

Control Station Antenna Assembly		1			27%			Included
								$ -

Portable Programming and Optimization	All	1	-	$ -	-	$ 162		$ 162
Mobile Programming, Optimization, Install, (and Decommission if required) - Dash Mount		1	-	$ -	-	$ 1,428		$ 1,428
Mobile Programming, Optimization, Install, (and Decommission if required) - Remote Mount		1	-	$ -	-	$ 1,686		$ 1,686
Mobile Programming, Optimization, Install, (and Decommission if required) - Dual Head Mount		1	-	$ -	-	$ 2,086		$ 2,086
Mobile Programming, Optimization, Install, (and Decommission if required) - Motorcycle Mount		1	-	$ -	-	$ 1,686		$ 1,686
Control Station Programming, Optimization, Installation, Antenna Assembly (and Decommission if required)		1	-	$ -	-	$ 1,718		$ 1,718

Subscriber Post-Warranty and Preventative Maintenance

Subscriber Services	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Total
APX NEXT - ASTRO Device Managed Services	Included	Included	Included	Included	Included	$ 182.40	$ 182.40	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	$364.80
APX XN - ASTRO Device Managed Services	Included	Included	Included	Included	Included	$ 182.50	$ 182.50	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	$365.00
APX N50 - ASTRO Device Managed Services	Included	Included	Included	Included	Included	$ 75.80	$ 75.80	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	$151.60
APX6500 - Essentials Services	Included	Included	Included	Included	Included	$ 134.00	$ 134.00	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	$268.00
APX8500 - Essentials Services	Included	Included	Included	Included	Included	$ 134.00	$ 134.00	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	$268.00
						$708.70	**$708.70**									**$1,417.40**

DMS/Essential Services are only quoted through year 7 per Subscriber recommendation to refresh radios every 6-8 years.

All Radios can have support for additional years based on Motorola's official support plan and EOL information..

Radios included in bundle offer include:

APX NEXT qty 720

APX XN qty 359

APX N50 qty 211

APX 6500 qty 200

APX 8500 qty 13

Note : Subscriber repair options for year 8+ can be quoted to support radio fleet after year 8

Optionally Proposed Equipment & Services

City Of Fort Lauderdale, FL Cyber Security & Cirrus Management Option

WARRANTY & MAINTENANCE SERVICES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL (YRS 1 - 5)
Cyber Security (MDR) - OPTIONAL	$73,104	$76,029	$79,070	$82,235	$85,525	$482,762
Cirrus Central Management - OPTIONAL	$46,000	$47,840	$49,754	$51,747	$53,813	$249,154
Contingency ACS Link for Backup EOC - OPTIONAL	Included w/ Optional ACS Scope	Included w/ Optional ACS Scope	Included w/ Optional ACS Scope	Included w/ Optional ACS Scope	Included w/ Optional ACS Scope	Included w/ Optional ACS Scope

WARRANTY & MAINTENANCE SERVICES	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	TOTAL (YRS 6 - 10)
Cyber Security (MDR) - OPTIONAL	$88,946	$92,506	$96,206	$100,051	$105,053	$482,762
Cirrus Central Management - OPTIONAL	$55,966	$58,205	$60,532	Not Included	Not Included	$174,703
Contingency ACS Link for Backup EOC - OPTIONAL	$11,983	$11,983	$11,983	$11,983	$11,983	$59,915

WARRANTY & MAINTENANCE SERVICES	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15	TOTAL (YRS 11 - 15)
Cyber Security (MDR) - OPTIONAL	$110,306	$115,821	$121,612	$127,693	$134,078	$609,510
Contingency ACS Link for Backup EOC - OPTIONAL	$12,701	$12,701	$12,701	$12,701	$12,701	$63,505

WARRANTY & MAINTENANCE SERVICES	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	TOTAL (YRS 16 - 20)
Cyber Security (MDR) - OPTIONAL	$140,782	$147,821	$155,212	$162,972	$171,121	$777,908
Contingency ACS Link for Backup EOC - OPTIONAL	$13,456	$13,456	$13,456	$13,456	$13,456	$67,280

**Motorola reserves the right to re-price any optionally priced items not committed to at the time of initial contract execution*

City of Fort Lauderdale, FL FUTURE PURCHASE CONSIDERATION

Purchase Price Discount Years 6 - 10	
Fixed Site Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Antenna Related Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Console Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Control Station Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Spare Parts	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Managed & Support Services	10% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Purchase Price Discount Years 11-15	
Fixed Site Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Antenna Related Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Console Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Control Station Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Spare Parts	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Managed & Support Services	10% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Purchase Price Discount Years 16-20	
Fixed Site Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Antenna Related Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Microwave Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Console Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Network Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Control Station Equipment	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Spare Parts	25% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment
Managed & Support Services	10% on Motorola Solutions Manufactured Equipment; 10% on 3rd Party Equipment

Exhibit G – MTM

Motorola will resolve the D series MTN issue prior to the system acceptance of the proposed system.

Exhibit H – ISSI 8000 Statement of Work

ISSI 8000 System Installation and Configuration		
Install proposed solution equipment in allocated rack space.	MSI	
Validate servers and network are ready for software load.	MSI	

Exhibit I – IMW Text Messaging (3000 Subscribers)

Motorola will provide the text-messaging feature for 3000 subscribers for $405,000 to the City of Fort Lauderdale. Below is a high-level description of the same. Usage parameters will be defined in post sale after a capacity analysis is performed using this feature.

Solution Description: Advanced Messaging Service (AMS)

Executive Summary

The ASTRO 25 Advanced Messaging Solution (AMS) connects fixed messaging clients and subscriber radios in a comprehensive text messaging network. This solution supplements voice communications by providing a rapid, convenient means of sending accurate information, reducing operating costs, and providing an alternative communication method for noisy or covert environments.

This proposed solution is sized and quoted to support **3,000 subscriber radio messaging licenses** and **14 ASTRO 25 Messaging Smart Client seat licenses**. AMS runs on the proposed IMW Server, which supports a maximum of 2,500 subscribers being logged on to the AMS service simultaneously. Motorola recommends a capacity study be performed to set forth reasonable usage expectations for this service, in view of the capacity ceiling inherent with the use of P25 Integrated Voice and Data channels. Motorola engineering resources for a capacity study have been included, with the intention that this study be scheduled during the project execution phase.

Core Architecture & System Functions

All text messages are routed through a central AMS application located on the IMW Server in the Customer Enterprise Network (CEN). The system provides robust backend capabilities to ensure reliable message delivery:

- **Store and Forward Service:** The AMS server stores messages destined for out-of-service or unavailable users and automatically delivers them once the receiver becomes available on the network.
- **User Mailboxes:** Mailboxes are maintained on a per-user basis.
- **Message Logging:** The system logs all text messages in a SQL database, which is managed by an automatic purge job based on typical message sizes and available disk space.
- **Flexible Addressing:** The system supports addressing messages to specific radio devices, user names, or email addresses.

Subscriber Radio Text Messaging Capabilities

Equipped ASTRO 25 subscriber radios allow users to seamlessly send and receive text messages in the field. The radio messaging experience includes:

- **Freeform Text:** Users can compose custom text messages using their radio keypad.
- **Message Size & Content Adaptation:** Text messages sent to a radio can be up to 200 characters long. Messages exceeding 200 characters are automatically divided into multiple smaller messages for delivery. Furthermore, if a message contains file attachments, the attachments are stripped off and discarded before the message is sent over the air to the radio.
- **Predefined Quick Text:** To save time, radios can be programmed via Customer Programming Software (CPS) to store up to 150 predefined quick text messages.
- **Virtual Storage Folders:** Each subscriber unit is equipped with virtual folders that store up to 30 received messages, 10 sent messages, and 10 draft messages.
- **Address Book:** The radio address book can store up to 100 addresses, allowing users to pick recipients quickly rather than typing them manually.
- **Audio & Visual Alerts:** Radios provide an audio tone and visual display alert when a new message arrives.
- **Priority & Reply Requests:** Senders can flag messages as high priority to alert the receiver of their importance, and can also send a "Reply Request" that automatically prompts the receiver to compose a response addressed back to the sender.

Messaging Smart Client Capabilities

The fourteen (14) quoted ASTRO 25 Messaging Smart Client licenses (corresponding to the proposed quantity of AXS console positions) provide feature-rich messaging functionality for deployment on the agency's in-house Windows workstations. The Smart Client software provides dispatchers and office personnel with a familiar, email-like interface:

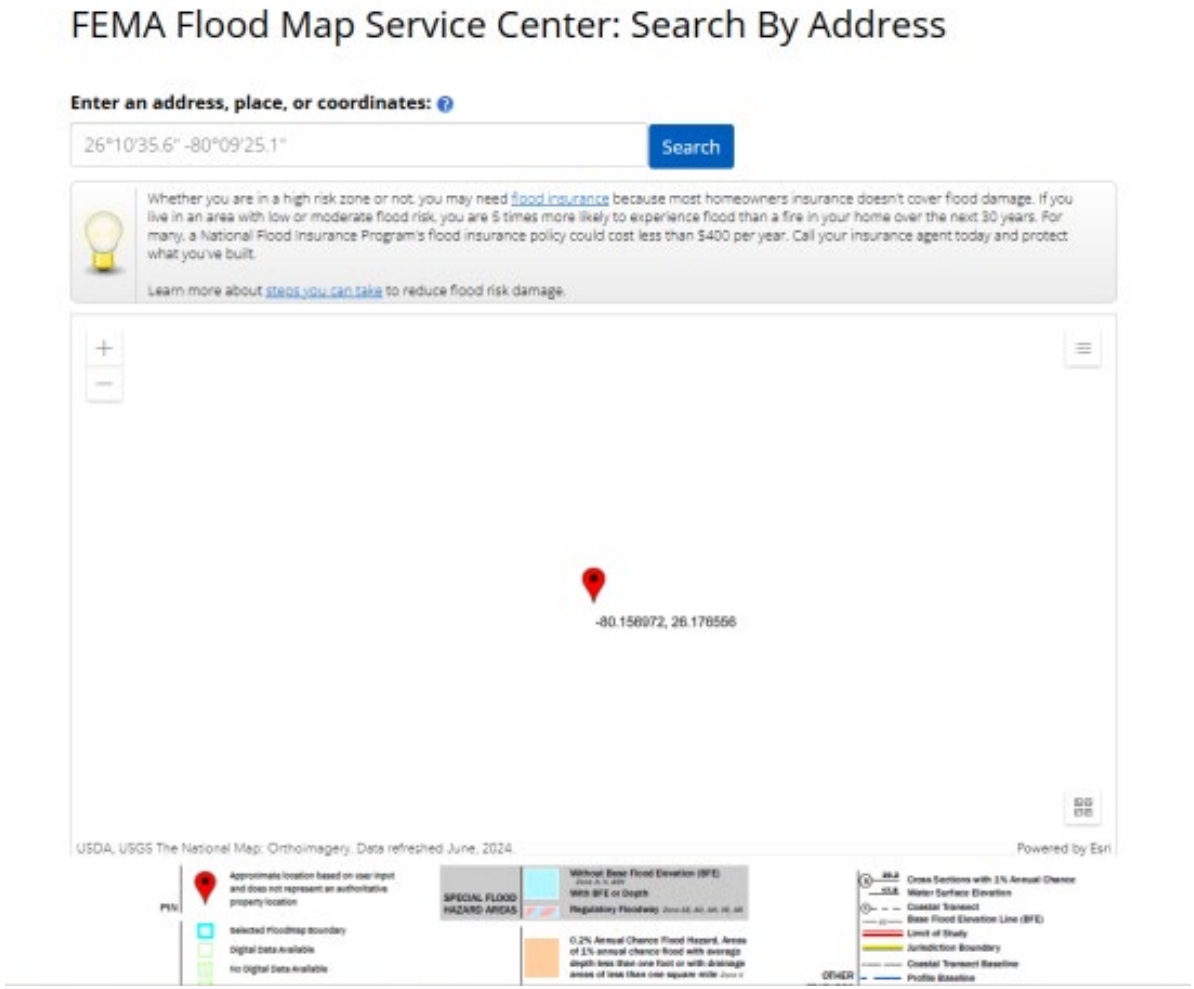
- **Message Management:** The application provides dedicated windows for users to manage their Inbox, Drafts, Sent, and Deleted messages.
- **Advanced Addressing:** Smart Client users can access both Personal Address Books and a global Agency Address Book to easily find recipients.
- **Be On the LookOut (BOLO):** The Smart Client includes specialized BOLO management capabilities. Users can create, display, print, and retire BOLOs regarding people or vehicles of interest, ensuring first responders receive critical notifications.

Optional and Excluded Capabilities

The following capabilities are **not included** in the proposed solution:

- **Talkgroup Text Messaging (Optional):** Talkgroup Text Messaging is an optional feature that allows a single message to be broadcast simultaneously over the voice channel to all radios affiliated with a specific talkgroup. Because this feature requires a dedicated Talk Group Messaging Gateway Console and additional software licensing, it is not included in the current design but can be added as an optional upgrade.
- **CAD & Database Integration:** The quoted solution is provided as a standalone messaging application using Smart Client software running at dispatcher positions. It does *not* include integration with PremierOne or any other Computer Aided Dispatch (CAD) system. Consequently, automated database queries (such as CJIS or NCIC lookups) directly from the radio are not supported in this configuration.

Exhibit J (Flood Plain Document for Utilities Site)



CITY OF FORT LAUDERDALE

RFP No.: 549

RFP Title: P25 Radio Communication System Refresh-Replacement - Rebid

COMPETITIVE NEGOTATIONS TERM SHEET

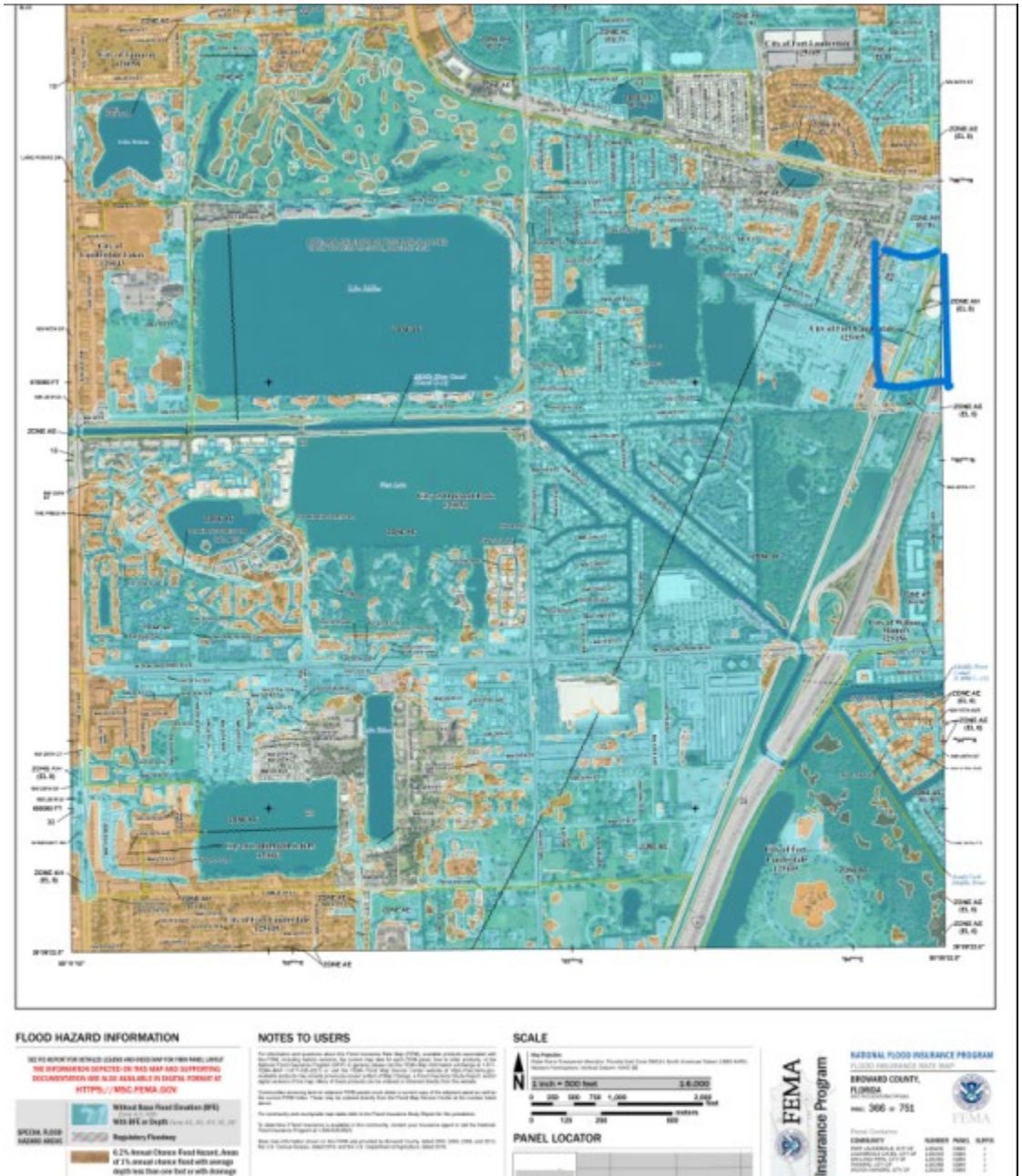


Exhibit K (Aviat MW Sample ATP)

Field Acceptance Test Procedures, Overall Test Plan

Motorola Solutions, Inc.
P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale
NA250422-55473

Release 1
May 27, 2025

Issue Releases

Release	Release Date	Changes	Preparer
1.0	May 27, 2025	Pre-Release (Proposal)	Name

Aviat Networks		***Customer Representative***	
Prepared By:		***Approved By:***	
Title:		***Title:***	
Date:		***Date:***	

TABLE OF CONTENTS

INTRODUCTION

1.1. Purpose of Document

Aviat Networks provides for the installation and commissioning of a new digital microwave radio system to provide the Ethernet backhaul for Motorola Solutions, Inc. – P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale. The purpose of this document is to outline the stages of field testing to be performed and the method of procedure to be used at the various stages to test the Project Name Digital Microwave System. The stages of testing will be organized as follows:

- Antenna System Installation Test
- Site Level Installation Checks
- Hop Level Performance Tests
- System Level Performance Tests

The site level and system level tests will verify the as-installed performance of the equipment and design. Due to the number of sites involved and the layout of the system, the antenna, site level and hop level tests will be performed using site specific test procedures. Likewise, the system level procedures will be performed using a series of regional test procedures based on the final topology of the system.

1.2. Responsibilities

Aviat Networks will perform the testing of all microwave radios and associated Aviat provided ancillary equipment. The Customer will sign off the completion of the Field Acceptance Test and perform the cutover of traffic, unless otherwise agreed to in the signed Statement of Works.

1.3. System Description

- Eclipse IRU600 V3
- Eclipse INUe/NTUe/CTR8611
- Antenna Systems
- ProVision NMS

1.4. Reference Documents

The following documents will be used during the testing and will be supplied by Aviat Networks or the Customer:

- Eclipse IRU600 User Manual
- ProVision NMS User Manual
- System Layout Drawings
- Path Calculations
- Frequency Coordination Sheets
- Rack Profile Drawings
- Site Specific Diagrams
- OEM User Manuals
- Factory Test Data Sheets
- Installation Specification

TEST EQUIPMENT

In addition to the standard test equipment suggested below, it is recommended to have a laptop PC with the Eclipse Portal software available on-site when performing the outlined test procedures in this document. This provides access to the Eclipse radio's on-board diagnostics and real-time performance monitoring tools.

All test equipment will have a current Calibration certification, if applicable.

- Line Sweep Test Set (*Anritsu Site Master or equivalent*) – waveguide sweep tests
- Digital Volt Meter - Measures rack DC voltages.
- Clamp on Ground Tester *(AEMC 3711 or equivalent)* – Measures ground resistance
- RF Power Meter (*HP435 or equivalent*) - Measures transmitter output power.
  - Standard Power Head (*HP8481A or equivalent*) - Used in conjunction with the RF Power Meter.
  - High Power Head (*HP8481B or equivalent*) - Used in conjunction with the RF Power Meter.
  - Low Power Head (*HP8481D or equivalent*) - Used in conjunction with the RF Power Meter.
- Variable and Fixed Attenuator with SMA connectors – Used for Receiver threshold test.
- Ethernet Tester capable of performing Y.1564 Testing – Measures the Ethernet performance.

Description	Manufacturer*	Model Number*	Serial Number*	Calibration Due Date*
Line sweep test set				
Digital Volt Meter				
Ground Resistance Tester				
RF Power Meter				
Standard Power Head				
High Power Head				
Low Power Head				
Variable Attenuator				
Ethernet Tester				

* Details to be completed on site.

TESTING

3.1. Antenna System Installation Test

The antenna system tests will typically be performed when the antenna systems are installed as the performance of the antenna systems impacts the performance of the radio hops. The antenna system tests will be documented using a standalone test procedure.

3.1.1. Antenna System Test

Perform a sweep test of the antenna system to verify that the transmission system will work at coordinated frequencies.

- *Configure the test set to provide the following markers per sweep:*
  - *The horizontal marker clearly shows manufacture return loss (-23dB)*
  - *One vertical marker showing transmit frequency as per PCN sheet.*
  - *One vertical marker showing receive frequency as per PCN sheet.*
  - *One vertical marker showing highest return loss on sweep within manufactures waveguide specification range.*
- ❖ *Passing criteria is a return loss better than -17dB for the selected frequency band.*
- ❖ *Record the results on the Waveguide Sweep Data Form.*
- ❖ *Raw Sweep Data ".dat" file must be submitted along with a .pdf printout of the results.*

3.1.2. Dehydrator Leak Test

Perform a four (4) hour pressure test of the waveguide and antenna system.

- *Shut off the gas distribution manifold valve to antenna being tested.*
- *Record the starting pressure in pounds per square inch (psi).*
- *Record the finishing pressure (psi) after four (4) hours.*
- ❖ *A pressure loss of <= 1 psi is within tolerance.*

3.2. Site Level Installation Checks

Upon completion of the system installation, the first phase of the Equipment and System Testing commences. This test phase verifies all site and equipment grounding as well as all Aviat Networks equipment installation and rack wiring. All work must be done in accordance with the Aviat Networks Best Practices Guide:

3.2.1. Grounding Inspection

Use the following instructions to perform the Grounding Inspection and record the results in the corresponding fields on the Station Test sheet for each site:

3.2.1.1. Verify continuity of ground wires on the indoor equipment and their bonding by measuring from a reference ground conductor (such as the master ground bar).

3.2.1.2. Verify ground connections on equipment and rack are properly fastened and the system is grounded to an appropriate ground point(s). The ground connection should measure less than 1Ω when using a clamp-on ground tester.

3.2.2. Equipment Inspection

Use the following instructions to perform the Equipment Inspection and record the results in the corresponding fields on the Station Test sheet for each site:

3.2.2.1. Perform an inventory check on all hardware using the Inventory Checklist found in the installation spec.

3.2.2.2. Perform a visual inspection of the antennas and waveguide routing outside the equipment shelter or on the antenna mounting structure/tower for proper installation and quality of workmanship.

3.2.2.3. Perform a visual inspection of the waveguide routing inside the equipment shelter for proper installation, bending, labeling and quality of workmanship.

3.2.2.4. Perform a visual inspection of the rack, floor mounting and supporting hardware for proper installation of the equipment, mechanical correctness, and quality of the workmanship.

3.2.2.5. Perform a visual inspection of all installed rack circuit breakers for correct sizes and positions. Refer to the Configuration Summary (CS).

3.2.2.6. Perform a visual inspection of all installed equipment and cabling in the rack (including wall mounted equipment and dehydrators) for proper installation, mechanical correctness, and quality of the workmanship. Refer to Rack Profiles (RP), System Block Diagrams (SBD) and Configuration Summary (CS).

3.2.3. DC Power Distribution Test

The following tests will record the voltage levels at the equipment and calculate the voltage drop. The voltage drop to the equipment should not exceed 2%.

Verify the voltage drop to the equipment.

- *Using a DVM, measure the voltage of the -48VDC supply at the DC power system's -48VDC Distribution panel and record the voltage on the test data sheet.*
- *At each of the installed microwave equipment racks, on the Trimm breaker panel, measure the voltage at one of the breakers that supply power to the INUe.*

Note
There are no DC voltage test points on the IRU600 or INUe.

- Compare the measured voltage at the distribution panel to the measured voltage at the INUe supply breakers.

❖ *The voltage drop between the two points must be 2% or less.*

3.2.4. Dehydrator Alarm Test

Verify alarms on the Dehydrator.

- *Using a DVM, verify the state of the alarm relays (NO or NC) under no alarm condition.*
- *Open an unused manifold port and verify that the low-pressure alarm occurs when the pressure drops below 1 psi.*

- *Close the port and observe that the alarms clear when the system regains pressure and the compressor cycles off.*
- *Using a USB memory stick with a test configuration file, reprogram the dehydrator to have a high-pressure alarm point that is one Psi less than the current system pressure.*
- *With the new configuration loaded, observe that a high-pressure alarm occurs.*
- *Restore configuration to the original settings once completed.*
- *If the dehydrator has been configured to report alarms through SNMP, confirm operation of the alarms through the ProVision Test.*

3.3. Hop Test

Upon completion of the Station Tests, the third phase of the Equipment and System Testing commences. This test phase verifies all Aviat Networks equipment operation including alarm and control points, DC power, and Aviat Networks provided OEM equipment, as applicable.

Note
If Automatic Transmit Power Control (ATPC) is enabled, it must be turned off for testing. It must be re-enabled after testing. The use of ATPC is required if Nominal/Coordinated/Maximum transmit power levels are indicated on the PCN.

3.3.1. Microwave Equipment Test

Use the following instructions to perform the Aviat Microwave Equipment Test for each rack and record the results in the corresponding fields on the Hop Test sheet:

3.3.1.1. Verify the redundancy of the power supply if the INU is fitted with the Node Protection Card (NPC). Power protection switching is hitless.

- *Ensure that the Eclipse INU is powered up.*
- *Ensure that the NCC and NPC Status LED are green. The NPC Protect LED should be unlit.*
- *Disconnect the -48Vdc supply from the NCC and remove the NCC card from the chassis. Eclipse should not lose power.*
- *Power is now provided by the NPC. The NPC Protect LED should now be lit.*
- *Re-insert the NCC card and power to the NCC.*

3.3.1.2. Verify INU IP Address as per the NMS Plan and the Configuration Summary (CS).

- *Using Aviat Networks Portal/ProVision software, log into the INU using the assigned IP Address.*
- *Verify the Portal/Networking page has been configured correctly and proper IP addresses, subnet masks, OSPF/RIP settings, DHCP Server settings, static routing and trap destinations have been assigned where applicable.*

3.3.1.3. Verify INU and RFU firmware versions.

3.3.1.4. Record Transmitter (Tx) and receiver (Rx) ACU Insertion Losses are configured as per the labels on the ACU units.

3.3.2. IRU Transmit Power Output Test

Use the following instructions to perform the IRU Transmit Power output Test for each microwave radio and record the results in the corresponding fields on the Hop Test sheet:

Verify Transmitter (Tx) Power Output. Refer to the Eclipse/IRU600 Transmitter output power specification data for the expected Tx output power level as per modulation configuration of the RFU/ODU under test.

1. *Zero out and calibrate the power meter and set correct power factor setting for the frequency band under test.*

2. *Attach a 20dB attenuator to the power sensor and enter its attenuation as the Power Meter offset.*
3. *Remove the ACU front panel cover of the IRU600 shelf.*
4. *In the Portal Diagnostics/System/Controls screen, send a Tx mute to the RFU under test.*
5. *Disconnect the RFU Tx output cable and connect the power sensor (with 20dB attenuator) to the RFU Tx output.*
6. *In the Portal Diagnostics/System/Controls screen, turn off Tx mute and click send.*
7. *Tx power setting can be adjusted in the Portal radio plug-in screen in 0.1 dB steps. Tx power output accuracy is +/- 2dB.*
8. *Compare the measured Tx output power to the Detected Tx power displayed in Portal.*
9. *To measure the Tx output level of the Diversity radio, send a Tx protection switch to the secondary radio using Portal. Repeat steps 4 to 9 above.*
10. *To return to the original setup, mute the Tx, disconnect the power sensor, restore the Tx output cables, and unmute the Tx.*

3.3.3. IRU Receive Signal Level (RSL) Test

Use the following instructions to record the IRU RSL for each microwave hop and record the results in the corresponding fields on the Hop Test sheet:

Verify Receiver (Rx) Received Signal Level (RSL).

- *Measure the top of rack (TOR) RSL at receiver filters output with the power meter.*
- *Compare RSL TOR to path calculation datasheet.*
- *Compare RSL measurement to the RSL level measured by Portal. On protected terminals repeat the test for the standby radio.*
  - ❖ *Measurement must be within +/- 2dB of calculated value.*

3.3.4. IRU Receiver Threshold (Fade Margin) and Interference Test

Use the following instructions to perform the IRU Receiver Fade Margin and Interference Test for each microwave hop and record the results in the corresponding fields on the Hop Test sheet:

3.3.4.1. Verify Receiver (Rx) Threshold (fade margin). Refer to the Eclipse/IRU600 Receiver Specification datasheet for the expected Rx threshold level as per modulation configuration of the RFU/ODU under test.

- *Measure insertion loss (Idb) of calibrated variable attenuator equipped with SMA cables at minimum attenuation.*
- *In the Portal Diagnostics/System/Controls screen, send a Tx mute to the RFU under test.*
- *Insert variable attenuator assembly between the transceiver Tx out and the Tx filter.*
- *In the Portal Diagnostics/System/Controls screen, turn off Tx mute and click send.*
- *Access the Portal Performance screen and configure the G.826 data capture routine to record a one-hour BER data block.*
- *Increase variable attenuator down to 10^{-6} BER and note attenuation (AdB).*
- *Calculate fade margin (dB): FM = AdB (attenuation) + IdB (insertion loss)*
- *Compare to margin given in the path calculation sheets. On protected terminals, repeat the test for the standby radio.*
  - ❖ *Margin must be +/- 2dB from calculation.*

3.3.4.2. Verify the absence of Interference. Refer to the Eclipse/IRU600 Receiver Specification datasheet for the expected Rx threshold level as per modulation configuration of the RFU/ODU under test.

- *In the Portal Diagnostics/System/Controls screen, initiate a Tx mute to the far end RFU under test.*
- *Note the RSL level measured by Portal.*
- *Restore configuration to original settings.*
  - ❖ *RSL reading, if any, should be below the 10^{-3} BER threshold of the radio.*

Note
The RSSI filter is 56 MHz wide. The Portal RSL reading may indicate an on-path adjacent channel signal that is not an interference signal. A true interference signal would cause degradation in performance at low RSL levels and result in a 10^{-6} BER threshold degradation. If the 10^{-6} BER threshold in step 3.3.4.1 is met, there is no interference on the path.

3.3.5. Transmitter/Receiver Switching Test

Use the following instructions to perform the Transmitter and Receiver Switching Test of protected terminals for each microwave hop and record the results in the corresponding fields on the Hop Test sheet:

3.3.5.1. *Verify Transmitter (Tx) switching when online Tx is removed or fails. Note that Tx switching is not hitless, but traffic continuity should be observed after the switch.*

- *Connect the BER tester to a DS1 port looped back at the far end site and check DS1 continuity and absence of errors.*
- *In the Portal Diagnostics/System/Controls screen, send a Tx mute to the RFU under test or switch to the off-line transmitter.*
- *Verify switching to other transmitter was successful.*
- *Verify traffic continuity.*
- *Restore configuration to original settings.*

3.3.5.2. *Verify Receiver (Rx) switching when source Rx is removed or fails. Note that Rx switching is hitless, and traffic continuity should be observed after the switch.*

- *Connect the BER tester to a DS1 port looped back at the far end site and check DS1 continuity and absence of errors.*
- *In the Portal Diagnostics/System/Controls screen, switch to the off-line transmitter or remove the on-line RAC card from the chassis.*
- *Verify switching to other receive was successful.*
- *Verify traffic continuity and the absence of BER errors.*
- *Restore configuration to the original settings once completed.*

3.3.6. 1-Hour Ethernet Test

Use the following instructions to perform the Ethernet throughput, Latency, and packet loss, for each VPN tunnel configured in the system. The test follows the Y.1564 Methodology, and consists of the following tests:

- Service Configuration test:
  - The service verifies that the assigned CIR is met.
- Service Performance test:
  - The stream is tested for the following:
    - Frame Delay (Latency) (For reference).
    - Frame delay variation (Packet Jitter). (For reference).
    - Frame Loss rate.

The test is service affecting, since the test sets will connect to the ports dedicated for end sites equipment/ CTR 86XX routers. The test should be run for 1 hour in both traffic directions, and at full traffic capacity, for each hop.

Run Sam Complete

- For a single Stream with a single QOS level:
  - Verify VPN tunnels are configured as per Traffic plan.
  - Connect test set equipment at both end points of the VPN tunnel ports. Configure the test set to run SAM complete, based on Y.1564 test methodology.
  - Configure the test equipment with the following criteria:
    - Service configuration, per stream/service:
      - Layer 2 or Layer 3, depending on the MPLS VPN type.

- Number of streams:
    - If a single stream, single QOS service, select one stream.
    - If multiple stream, or multiple services, each with a different QOS priority, select multiple streams.
- Use Symmetric, since both MPLS tunnels are identical.
- For Layer 2, enter source and destination MAC address. For Layer 3, enter source and destination IP addresses.
- TTL: 254.
- TOS/DSCP: default as 0, or as per traffic plan.

▪ Service performance test, per stream/service:

- CIR: per traffic plan.
    - If a single stream, set CIR to configured port shaping rate.
    - If multiple streams, set CIR per stream, and have the collective CIR below port shaping rate.
- EIR: set value to zero or disabled. EIR are not guaranteed, and should not be a pass/fail criteria, even if configured.
- Policing: Off.
- Frame loss tolerance: 0.000%.
- Frame delay: set to maximum value, test to measure latency, for reference only.
- Delay variation: set to maximum value, test to measure delay variation (Jitter), for reference only.

▪ Specific service configuration and performance settings:

- Number of steps below CIR: 3.
- Test duration per step: 60 seconds.
- Packet/ frame sizes: 64, 128, 256, 512, 1024, 1280 and 1518 Bytes.
- Tx Payload: Acterna.

o It is important to note that the CIR of the Ethernet port, or VPN tunnel should be enough to cover the total CIR of all configured streams. If the total CIR of all streams is exceeded, the test should show the higher priority traffic is prioritized compared to lower priority traffic.

▪ If strict priority is used for all QOS queues, then the higher priority traffic should pass completely before the lower priority traffic.
▪ If a weighted round robin is used, then the traffic should pass based on the weight assigned per queue.
▪ If both strict and weighted round robin are used, and strict priority is used for the higher priority streams, then the higher priority traffic should pass completely (provided it's still under the port/VPN CIR), before the remaining, unused, throughput is distributed on the lower priority queues, based on the weight given per queue.

o Run the test.
o When the test is done, save and name the test result document.

3.3.7. AUX Alarm/Data Card Test

Use the following instructions to perform the AUX alarm input/output tests on the AUX Alarm/Data plug-in card for each microwave radio and record the results in the corresponding fields on the Hop Test sheet. In this application the cards are used for alarm inputs/outputs only. The Aux data port is not configured.

Verify configuration and functionality of the AUX alarms.

- *Using Portal, verify that the relay contacts have been configured for specific alarm input or output conditions as per the design documentation.*

- *For alarm outputs, using a DVM, verify the state of the relay (NO or NC) under no alarm condition.*
- *Create an alarm condition on the alarm output under test and verify the change in the relay state with the DVM.*
- *For alarm inputs, using Portal verify the alarm input is not in an alarm condition.*
- *Provide an alarm closure to the alarm input under test and verify the change in the alarm state in Portal.*
- *Restore configuration to the original settings once completed.*

3.3.8. Layer 2 Link Aggregation Test

Use the following instructions to perform the Layer 2 Link Aggregation Test for each microwave hop and record the results in the corresponding fields on the Hop Test sheet. In order to accomplish the test, the "aggregate node to gateway node" needs to be configured at a minimum as a 2+0 system. The system can consist of three (3) configuration options:

- Single Chassis using the backplane
- Dual Chassis using the backplane
- Single Chassis using the DPP (Data Packet Plane)

3.3.8.1. Verify Link Aggregation using a single chassis with traffic configured onto the backplane.

- *Only perform this test if the path was designed to support Layer 2 Link Aggregation.*
- *In the Portal/Configuration/Plug-ins/DAC GE screen, ensure Channel C1 and C2 has been aggregated (check boxes checked), that the capacity for both Channels have been set and that "Link Status Propagation" has been enabled.*
- *Configure the Ethernet test set profile to have a minimum of 16 unique source and destination MAC addresses and execute the test profile or traffic generator.*
- *Using the Portal RMON performance screen, verify that the traffic is passing over the LAG group and that no frames are dropped.*
- *Note the traffic load on the LAG group.*
- *Note the traffic performance at the Test Center.*
- *Disconnect one of the LAG ports and note the alarms in Portal.*
- *Verify the reduced throughput in the Portal RMON performance screen and Ethernet test set.*
- *Reconnect the LAG port and verify that the alarms in Portal have cleared.*
- *Verify the original throughput in the Portal RMON performance screen and Ethernet test set.*

3.3.8.2. Verify Link Aggregation using a dual chassis with traffic configured onto the backplane.

- *Only perform this test if the path was designed to support Layer 2 Link Aggregation.*
- *In the Portal/Configuration/Plug-ins/DAC GE screen, ensure Channel C1 and Port P1 has been aggregated (check boxes checked), that the capacity for Channel C1 has been set and that "Link Status Propagation" has been enabled.*
- *Configure the Ethernet test set profile to have a minimum of 16 unique source and destination MAC addresses and execute the test profile or traffic generator.*
- *Using the Portal RMON performance screen, verify that the traffic is passing over the LAG group and that no frames are dropped.*
- *Note the traffic load on the LAG group.*
- *Note the traffic performance at the Test Center.*
- *Disconnect one of the LAG ports and note the alarms in Portal.*
- *Verify the reduced throughput in the Portal RMON performance screen and Ethernet test set.*
- *Reconnect the LAG port and verify that the alarms in Portal have cleared.*
- *Verify the original throughput in the Portal RMON performance screen and Ethernet test set.*

3.3.8.3. Verify Link Aggregation using a single chassis with traffic configured onto the DPP.

- *Only perform this test if the path was designed to support Layer 2 Link Aggregation.*
- *In the Portal/Configuration/Plug-ins/DAC GE screen, ensure Port P1 and Port P2 have been aggregated (check boxes checked), and that "Link Status Propagation" has been enabled. Channel capacity should be set to zero.*
- *Configure the Ethernet test set profile to have a minimum of 16 unique source and destination MAC addresses and execute the test profile or traffic generator.*
- *Using the Portal RMON performance screen, verify that the traffic is passing over the LAG group and that no frames are dropped.*
- *Note the traffic load on the LAG group.*
- *Note the traffic performance at the Test Center.*
- *Disconnect one of the LAG ports and note the alarms in Portal.*
- *Verify the reduced throughput in the Portal RMON performance screen and Ethernet test set.*
- *Reconnect the LAG port and verify that the alarms in Portal have cleared.*
- *Verify the original throughput in the Portal RMON performance screen and Ethernet test set.*

3.3.9. Bit Error Rate (BER) Test

Use the following instructions to perform a one (1) hour Bit Error Rate (BER) test on the main radio and a one (1) hour BER test on the standby radio, if equipped, and record the results in the corresponding fields on the Hop Test sheet. This test should be performed after the final alignment of the antennas for each hop. As the Eclipse radios are configured to pass Ethernet traffic only, you will need to access the Portal Performance screen and configure the G.826 data capture routine to record a one-hour data block.

3.3.9.1. One (1) hour Bit Error Rate (BER) Test on Main radio.

- *Verify the microwave equipment is configured as per the Configuration Summary (CS) and Site Block Diagram (SBD).*
- *Access the Portal Performance screen and configure the G.826 data capture routine to record a one-hour BER data block.*
  - ❖ *Performance objective: $1x10^{-10}$ BER one-way, under no fade conditions.*

3.3.9.2. One (1) hour Bit Error Rate (BER) Test on the standby radio.

- *Verify the microwave equipment is configured as per the CS and SBD.*
- *Verify that radio traffic has been switched to the standby radio and that the main radio is offline.*
- *Access the Portal Performance screen and configure the G.826 data capture routine to record a one-hour BER data block.*
  - ❖ *Performance objective: $1x10^{-10}$ BER one-way, under no fade conditions.*

3.4. System Test

The system level tests will be performed after all sites have been hop tested. Some tests will require personnel at more than one site. Tests may be conducted out of sequence to accommodate site logistics.

Note
The following tests provide the format only for the test. For the installed system, the system level procedures will be written as a series of regional test procedures based on the final topology of the system

3.4.1. Network Continuity Test

Use the following instructions to perform the Network Continuity Test and record the results in the corresponding fields on the System Test sheet. Note that this test only applies to systems utilizing out-of-band management. For in-band management systems, the test should be done in conjunction with the Ethernet test.

Perform Network Continuity Test.

- *Verify the microwave equipment is configured as per the CS.*
- *Verify laptop is connected to the NMS ports on the NCC.*
- *Using a DOS prompt, send a ping command to the IP Address of the first radio and note the success reply.*
- *Continue sending ping commands to the remainder of the radios in the network as per the CS and note the success replies.*

3.4.2. Provision Element Management System Test

Use the following instructions to verify that the ProVision Element Management System is reporting the sites correctly after installation. The field testing will include verification of equipment alarms and any site alarms.

3.4.2.1. Basic ProVision Element Operation

- *Start ProVision Client software*
- *Log into the ProVision server.*
- *Check that ProVision opens and displays the tree, map, and event panes correctly.*
- *Deploy a segment of the network including sites and Aviat Networks devices.*
- *Establish communications with a random sample of Aviat Networks devices.*
- *Record the embedded software version running on the Aviat Networks devices under test.*

3.4.2.2. Functionality Tests

- *Use the event browser to view, acknowledge, or clear network alarms on a random sample of devices. Use PreFilters, Event Groups, and Scoreboards.*
- *Use the configuration screen to change device parameters on a random sample of devices.*
- *Review device hardware inventory data.*
- *Enable 15-minute data collection and review RSSI and G.826 history and performance trends on a random sample of devices.*

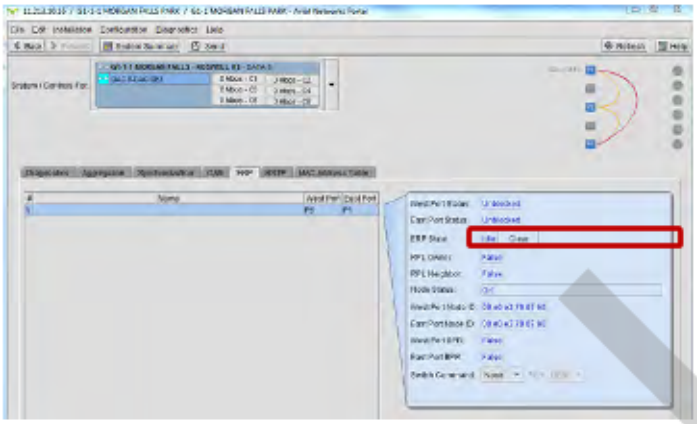
3.4.3. Ethernet Ring Protection (ERP, ITU-T G.8032) Verification

Use the following instructions to test the Ethernet protection switching on the loop and record the results in the corresponding fields on the System Test sheet.

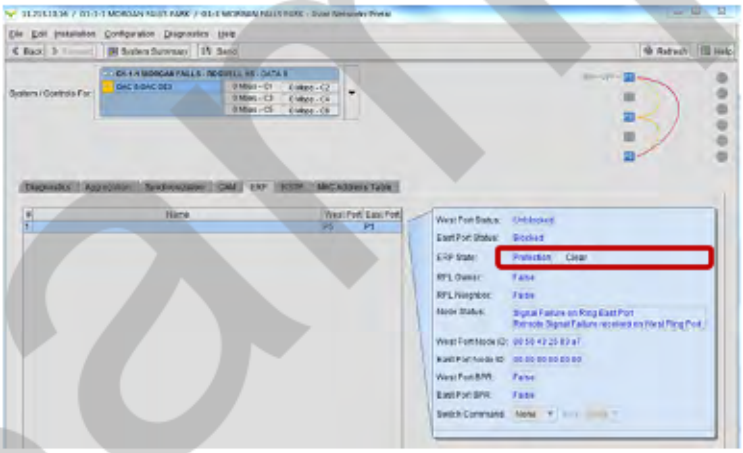
The ERP ring protection verification can be tested from any location on the loop.

- *Connect to the Portal radio management application*

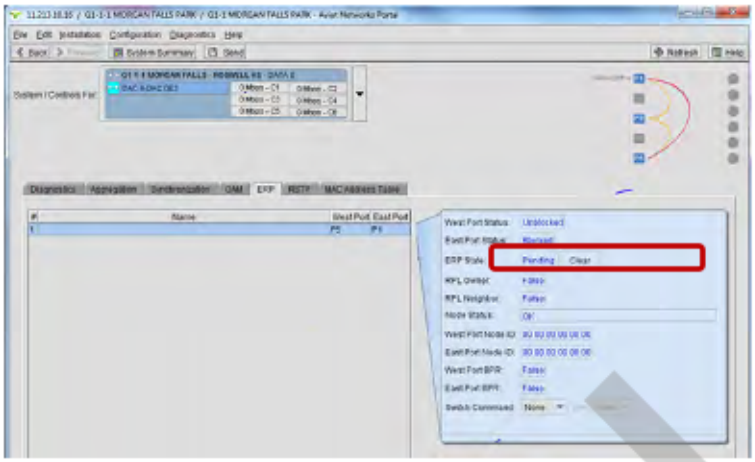
- *Go to the diagnostics screen ⇨ system control ⇨ ERP screen to confirm the proper ring status: expected outcome ⇨ ERP state is idle.*

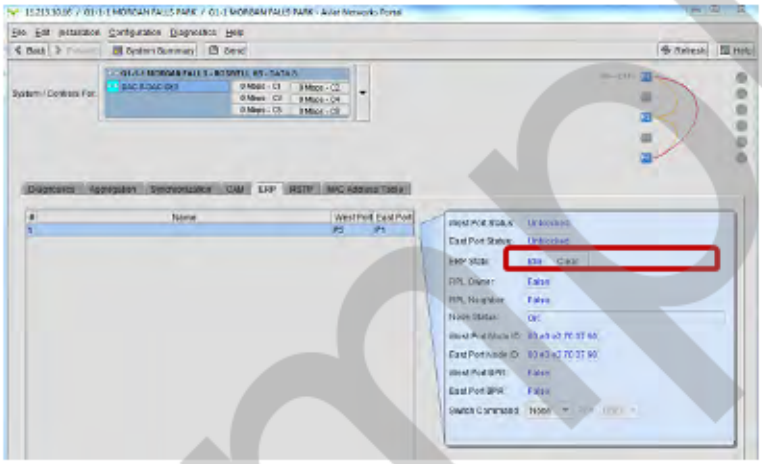


- *Configure the Ethernet test sets for a packet loss test.*
- *Start the packet loss test.*
- *Manually create a path failure at the site (disconnect RAC card DPP cable)*
- *Go to the diagnostics screen ⇨ system control ⇨ ERP screen to confirm the proper ring status*
  - ❖ *Expected outcome: ERP state is "Protection"*
- *Calculate the number of lost packets in order to determine the switching time*
  - ❖ *Each lost packet represents 1 msec.*



- Remove the link failure by reconnecting the DPP cable.
  - ❖ Expected outcome: the ring initiates the recovery process and moves to "Pending" state for ~5 minutes and then back to "Idle"





- *Calculate the number of additional lost packets in order to determine the ERP revertive switching time*
  - ❖ *Each additional lost packet represents 1 msec.*

3.4.4. System Level 12-hour Ethernet Performance Verification

Use the following instructions to perform the Ethernet throughput, Latency, and packet loss, for each VPN tunnel configured in the system. The test follows the Y.1564 Methodology, and consists of the following tests:

- Service Configuration test:
  - The service verifies that the assigned CIR is met.
- Service Performance test:
  - The stream is tested for the following:
    - Frame Delay (Latency) (For reference).
    - Frame delay variation (Packet Jitter). (For reference).
    - Frame Loss rate.

The test is service affecting, since the test sets will connect to the ports dedicated for end sites equipment/ CTR 86XX routers. The test should be run for 12 hours in both clockwise and counterclockwise traffic directions, and at full traffic capacity, for each configured loop.

Run Sam Complete

- For a single Stream with a single QOS level:
  - Verify VPN tunnels are configured as per Traffic plan.
  - Connect test set equipment at both end points of the VPN tunnel ports. Configure the test set to run SAM complete, based on Y.1564 test methodology.

- Configure the test equipment with the following criteria:
  - Service configuration, per stream/service:
    - Layer 2 or Layer 3, depending on the MPLS VPN type.
    - Number of streams:
      - If a single stream, single QOS service, select one stream.
      - If multiple stream, or multiple services, each with a different QOS priority, select multiple streams.
    - Use Symmetric, since both MPLS tunnels are identical.
    - For Layer 2, enter source and destination MAC address. For Layer 3, enter source and destination IP addresses.
    - TTL: 254.
    - TOS/DSCP: default as 0, or as per traffic plan.
  - Service performance test, per stream/service:
    - CIR: per traffic plan.
      - If a single stream, set CIR to configured port shaping rate.
      - If multiple streams, set CIR per stream, and have the collective CIR below port shaping rate.
    - EIR: set value to zero or disabled. EIR are not guaranteed, and should not be a pass/fail criteria, even if configured.
    - Policing: Off.
    - Frame loss tolerance: 0.000%.
    - Frame delay: set to maximum value, test to measure latency, for reference only.
    - Delay variation: set to maximum value, test to measure delay variation (Jitter), for reference only.
  - Specific service configuration and performance settings:
    - Number of steps below CIR: 3.
    - Test duration per step: 60 seconds.
    - Packet/ frame sizes: 64, 128, 256, 512, 1024, 1280 and 1518 Bytes.
    - Tx Payload: Acterna.

- It is important to note that the CIR of the Ethernet port, or VPN tunnel should be enough to cover the total CIR of all configured streams. If the total CIR of all streams is exceeded, the test should show the higher priority traffic is prioritized compared to lower priority traffic.
  - If strict priority is used for all QOS queues, then the higher priority traffic should pass completely before the lower priority traffic.
  - If weighted round robin is used, then the traffic should pass based on the weight assigned per queue.
  - If both strict and weighted round robin are used, and strict priority is used for the higher priority streams, then the higher priority traffic should pass completely (provided it's still under the port/VPN CIR), before the remaining, unused, throughput is distributed on the lower priority queues, based on the weight given per queue.
- Run the test.
- When the test is done, save and name the test result document.

CUSTOMER SYSTEM ACCEPTANCE

After all testing has been successfully completed and the required test documents have been signed and dated, the Aviat Representative and the Customer Representative Authorized to Accept the System will complete, sign and date the FIELD ACCEPTANCE TEST COMPLETION REPORT enclosed in this document. All punch list items should be noted on this form prior to sign-off of the system.

FIELD TEST DATA FORMS

Test Data forms for each site follow.

Antenna System Test Record Sheet

Customer:	Motorola Solutions, Inc.		
Project:	P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale		
Site Name:	TBD	Facing Site(s):	TBD

3.1.1	**Antenna System Test**				
	Main antenna to:	Pass	Fail	N/A	
	Diversity antenna to:	Pass	Fail	N/A	
	Main antenna to:	Pass	Fail	N/A	
	Diversity antenna to:	Pass	Fail	N/A	
3.1.2	**Dehydrator Leak Test**				
	Dehydrator Leak Test	Pass	Fail	N/A	

COMMMENTS:

AVIAT NETWORKS REPRESENTATIVE		**CUSTOMER NAME REPRESENTATIVE**	
Signed:		**Signed:**	
Name:		**Name:**	
Title:		**Title:**	
Date:		**Date:**	

Station Test Record Sheet

Customer:	Motorola Solutions, Inc.		
Project:	P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale		
Site Name:	TBD	Facing Site(s):	TBD
Rack #:	TBD		

3.2.1	**Grounding Inspection**				
3.2.1.1	Ground Continuity Test	Pass	Fail	N/A	
3.2.1.2	Rack Grounding (<1 ohm)	Criteria	Measured	Pass/Fail	
		<1Ω			Ohm
3.2.2	**Equipment Inspection**				
3.2.2.1	Inventory Check	Pass	Fail	N/A	
3.2.2.2	Visual Inspection of Antennas and Waveguide on tower	Pass	Fail	N/A	
3.2.2.3	Visual Inspection of Waveguide/Coax routing inside equipment shelter	Pass	Fail	N/A	
3.2.2.4	Visual Inspection of Rack	Pass	Fail	N/A	
3.2.2.5	Visual Inspection of Rack Breakers	Pass	Fail	N/A	
3.2.2.6	Visual Inspection of Installed Equipment	Pass	Fail	N/A	
3.2.3	**DC Power Distribution Test**	Supply Voltage	Breaker Voltage	Voltage Drop	
	Microwave Rack #1	Measured	Measured	Calculated	
					%
	Microwave Rack #1	Measured	Measured	Calculated	
					%
	Microwave Rack #1	Measured	Measured	Calculated	
					%
	Microwave Rack #1	Measured	Measured	Calculated	
					%

COMMMENTS:

AVIAT NETWORKS REPRESENTATIVE		**CUSTOMER NAME REPRESENTATIVE**	
Signed:		**Signed:**	
Name:		**Name:**	
Title:		**Title:**	
Date:		**Date:**	

Hop Test Record Sheet

Customer:	Motorola Solutions, Inc.		
Project:	P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale		
Site Name:	TBD	Facing Site:	TBD
Rack #:	TBD		

3.3.1	**Microwave Equipment Test**				
3.3.1.1	INU Redundancy	Pass	Fail	N/A	
3.3.1.2	INU IP Address Configuration as per NMS Plan and SOS	Pass	Fail	N/A	
3.3.1.3	Firmware Versions	INU	RFU/ODU	RFU/ODU	
	Main:				
	Diversity:				
3.3.1.4	ACU Insertion Loss			ACU	
			Tx Main:		dB
			Tx Diversity:		dB
			Rx Main:		dB
			Rx Diversity:		dB
3.3.2	**IRU Transmit Power Output Test**				
	Tx Power Output	Spec	Measured	Portal	
	Main:				dB
	Standby:				dB
3.3.3	**IRU Receive Signal Level Test**				
	RSL	Calculated	Measured	Portal	
	Main:				dB
	Diversity:				dB
3.3.4	**IRU Receiver Threshold (Fade Margin) and Interference Test**				
3.3.4.1	Rx Threshold	Spec	Measured	Portal	
	Main:				dB
	Diversity:				dB
3.3.4.2	Interference	Spec	Measured	Portal	
	Main				dBm
3.3.5	**Transmitter/Receiver Switching Test**				
3.3.5.1	Transmitter Switching	Pass	Fail	N/A	
3.3.5.2	Receiver Switching	Pass	Fail	N/A	
3.3.6	**One Hour Y.1564 Ethernet Test**				
	Frame Delay		Spec	Measured	
					msec
	Jitter		Spec	Measured	
					%
	Lost Frames		Spec	Measured	

3.3.7	**AUX Alarm/Data Card Test**				
	AUX Alarm Test	Pass	Fail	N/A	
3.3.8	**Layer 2 Link Aggregation Test**				
3.3.8.1	Link Aggregation – Single Chassis		Pass	Fail	
3.3.8.2	Link Aggregation – Dual Chassis		Pass	Fail	
3.3.8.3	Link Aggregation – Single Chassis using DPP		Pass	Fail	
3.3.9	**One (1) Hour BER Test**				
3.3.9.1	One (1) Hour BER Test on Main Radio	Calculated	Measured	Pass/Fail	
		$>1x10^{-10}$			dB
3.3.9.2	One (1) Hour BER Test on Standby Radio	Calculated	Measured	Pass/Fail	
		$>1x10^{-10}$			dB

COMMMENTS:

AVIAT NETWORKS REPRESENTATIVE		**CUSTOMER NAME REPRESENTATIVE**	
Signed:		**Signed:**	
Name:		**Name:**	
Title:		**Title:**	
Date:		**Date:**	

System Test Record Sheet

Customer:	Motorola Solutions, Inc.		
Project:	P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale		
Start Name:	TBD	End Site:	TBD

3.4.1	**Network Continuity Test**				
	Network Continuity (Ping) Test	Pass	Fail	N/A	
3.4.2	**Provision Element Management System Test**				
3.4.2.1	Basic ProVision Element Operation	Pass	Fail	N/A	
3.4.2.2	Functionality Tests	Pass	Fail	N/A	
3.4.3	**Ethernet Ring Protection (ERP, ITU-T G.8032) Verification**				
	Protection Switching Time	Packets	Switch Time		
					msec
	Revertive Switching Time	Packets	Switch Time		
					msec
3.4.4	**System Level Y.1564 Ethernet Performance Verification – repeat for each loop**				
	12-hour Clockwise Performance Verification				
	Frame Delay	Spec	Measured		
					msec
	Jitter	Spec	Measured		
					%
	Lost Frames	Spec	Measured		
	12-hour Counter-Clockwise Performance Verification				
	Frame Delay	Spec	Measured		
					msec
	Jitter	Spec	Measured		
					%
	Lost Frames	Spec	Measured		

COMMMENTS:

AVIAT NETWORKS REPRESENTATIVE		**CUSTOMER NAME REPRESENTATIVE**	
Signed:		**Signed:**	
Name:		**Name:**	
Title:		**Title:**	
Date:		**Date:**	

Aviat Networks Field Acceptance Test Completion Report

Customer:	Motorola Solutions, Inc.
Project:	P25 Radio Communication System Refresh-Replacement RFP#358 for City of Fort Lauderdale

The Aviat supplied microwave equipment has been completely installed and tested and has been accepted for traffic use and/or all services contracted have been completed with the following exceptions

(Use additional sheets if required)

Please call our Customer service hotline at 1-800-227-8332 for service, equipment repair, training or miscellaneous sales or visit our Customer Service Web at: http://www.aviatnetworks.com

Please refer to your Sales Order Number for reference when calling.

ADDITIONAL COMMMENTS:

AVIAT NETWORKS REPRESENTATIVE		**CUSTOMER NAME REPRESENTATIVE**	
Signed:		**Signed:**	
Name:		**Name:**	
Title:		**Title:**	
Date:		**Date:**	

Exhibit L (Mutually Agreed Payment Terms)

Section 2.7: The following payment schedule SHALL apply:

1. 10% at Contract execution.
2. 10% at Detailed Design Review Meeting
3. 10% at Successful completion of factory acceptance testing.
4. 10% at Delivery of inventory by the City or their designee of radio infrastructure equipment and accessories (non-subscriber radio related) to the City's designated location(s).
5. 10% at Installation of Radio System Equipment
    1. Site Improvements
    2. Microwave backhaul
    3. Motorola Infrastructure Equipment
6. 5% Upon receipt of documentation and completion of applicable training.
7. 45% Upon Final Acceptance

Delayed Shipment of Subscribers Purchased:

- **Oct 2027 Subscriber Invoice:** 50% of Portable and Mobile Radios Purchased
- **Oct 2028 Subscriber Invoice:** 50% of Portable and Mobile Radios Purchased