



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header 2

[List View](#)
**General Information**
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**Procurement Folder:** 501766

**Procurement Type:** Central Master Agreement

**Vendor ID:** 000000178509

**Legal Name:** MOTOROLA SOLUTIONS INC

**Alias/DBA:**
**Total Bid:** \$0.00

**Response Date:** 06/18/2019

**Response Time:** 13:06

**SO Doc Code:** CRFQ

**SO Dept:** 0619

**SO Doc ID:** FIC1900000003

**Published Date:** 6/6/19

**Close Date:** 6/18/19

**Close Time:** 13:30

**Status:** Closed

**Solicitation Description:** RADIO CONTRACT

**Total of Header Attachments:** 2

**Total of All Attachments:** 2



Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

State of West Virginia  
Solicitation Response

Proc Folder : 501766

Solicitation Description : RADIO CONTRACT

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-06-18 13:30:00	SR 0619 ESR06181900000005880	1

**VENDOR**

000000178509

MOTOROLA SOLUTIONS INC

Solicitation Number: CRFQ 0619 FIC19000000003

Total Bid : \$0.00

Response Date: 2019-06-18

Response Time: 13:06:04

**Comments:** Motorola has filed on-line 2 files which constitutes the response. The one file contains is a copy of the issued CRFQ with all sections filled in except the pricing. The 2nd file submitted to the on-line is the price pages. The Motorola response is fully compliant to the technical specifications and with clarifications to the identified terms.

**FOR INFORMATION CONTACT THE BUYER**

Stephanie L Gale  
(304) 558-8801  
stephanie.l.gale@wv.gov

Signature on File

FEIN #

DATE

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	RADIOS	0.00000	EA	\$2,000.000000	\$0.00

Comm Code	Manufacturer	Specification	Model #
43221700			

Extended Description :	RADIOS
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Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

State of West Virginia  
Request for Quotation  
27 — Miscellaneous

Proc Folder: 501766

Doc Description: RADIO CONTRACT

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-06-06	2019-06-18 13:30:00	CRFQ 0619 FIC1900000003	1

BID CLERK  
DEPARTMENT OF ADMINISTRATION  
PURCHASING DIVISION  
2019 WASHINGTON ST E  
CHARLESTON WV 25305  
US

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Stephanie L. Gale  
(304) 558-8801  
stephanie.l.gale@wv.gov

Signature X

FEIN #

DATE

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia State Fire Marshal's Office, and the WV Department of Military Affairs with the exception of Department of Corrections and Public Safety (SMAPS) to establish an open-end contract for Digital Mobile and Portable Radios.

SHIP TO	SHIP TO
ADMINISTRATIVE SERVICES MANAGER 1 STATE FIRE COMMISSION OFFICE OF STATE FIRE MARSHAL 1207 QUARRIER ST, 2ND FLOOR CHARLESTON WV25301-0140 US	ADMINISTRATIVE SERVICES MANAGER 1 STATE FIRE COMMISSION OFFICE OF STATE FIRE MARSHAL 1207 QUARRIER ST, 2ND FLOOR CHARLESTON WV 25301-0140 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	RADIOS	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
43221700			

**Extended Description :**

RADIOS

## **INSTRUCTIONS TO VENDORS SUBMITTING BIDS**

**1. REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

**2. MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

**3. PREBID MEETING:** The item identified below shall apply to this Solicitation.

☐ A pre-bid meeting will not be held prior to bid opening

☐ A NON-MANDATORY PRE-BID meeting will be held at the following place and time:

☐ A MANDATORY PRE-BID meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

**4. VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: **June 12, 2019 @ 10:00am**

Submit Questions to: **Stephanie Gale**

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: **Stephanie.L.Gale@wv.gov**

**5. VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

**6. BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.



The bid delivery address is:  
Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:

BUYER:

SOLICITATION NO.:

BID OPENING DATE:

BID OPENING TIME:

FAX NUMBER:

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

**For Request For Proposal ("RFP") Responses Only:** In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus \_\_\_\_\_ convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

☐ Technical

☐ Cost

**7. BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: **June 18, 2019 @ 1:30pm**

Bid Opening Location: Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

**8. ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

**9. BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**10. ALTERNATE MODEL OR BRAND:** Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

☐ This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

**11. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

**12. COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

**13. REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

**14. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

**15. PREFERENCE:** Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and should include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**15A. RECIPROCAL PREFERENCE:** The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. A request form to help facilitate the request can be found at:

<http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf>.

**16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

**17. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

**18. ELECTRONIC FILE ACCESS RESTRICTIONS:** Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

**19. NON-RESPONSIBLE:** The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

**20. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

**21. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled “confidential,” “proprietary,” “trade secret,” “private,” or labeled with any other claim against public disclosure of the documents, to include any “trade secrets” as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**22. INTERESTED PARTY DISCLOSURE:** West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**23. WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

## **GENERAL TERMS AND CONDITIONS:**

**1. CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

**2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

**2.1. "Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

**2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.

**2.3. "Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

**2.4. "Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

**2.5. "Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

**2.6. "Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

**2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

**2.8. "State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

**2.9. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.



**3. CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☒ **Term Contract**

**Initial Contract Term:** This Contract becomes effective on June 17, 2019 and extends for a period of one (1) year(s).

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for \_\_\_\_\_ successive \_\_\_\_\_ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

**Delivery Order Limitations:** In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within \_\_\_\_\_ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for \_\_\_\_\_ year(s) thereafter.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

**4. NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

**5. QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☒ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

**6. EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

**7. REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐

☐

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.



**8. INSURANCE:** The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: 1,000,000 per occurrence.

☐ **Automobile Liability Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: \_\_\_\_\_ per occurrence.

☐ **Cyber Liability Insurance** in an amount of: \_\_\_\_\_ per occurrence.

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐ **Pollution Insurance** in an amount of: \_\_\_\_\_ per occurrence.

☐ **Aircraft Liability** in an amount of: \_\_\_\_\_ per occurrence.

☐☐☐☐



**16. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

**17. ADDITIONAL FEES:** Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

**18. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

**19. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

**20. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

**21. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

**22. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**23. ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

**24. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

**25. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

**26. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

**27. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

**28. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

**29. STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

**30. PRIVACY, SECURITY, AND CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

**31. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

**DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.**

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**32. LICENSING:** In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

**SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**33. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

**34. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

**35. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

**36. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.



**37. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

**38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

**39. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

**40. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☐ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).

**41. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Revised 01/24/2019

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

**42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more of such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

**43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:** In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a



“substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

**44. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE:** W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title)

Peter Marotta, Account Manager

(Printed Name and Title)

809 Pinnacle Drive, Suite G, Linthicum Heights, MD 21090

(Address)

410-712-6200 / 410-712-6501

(Phone Number) / (Fax Number)

petermarotta@motorolasolutions.com

(email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Motorola Solutions, Inc.

(Company)



(Authorized Signature) (Representative Name, Title)

Michael Leonard, MSSSI Vice President

(Printed Name and Title of Authorized Representative)

June 17, 2019

(Date)

410-712-6200 / 410-712-6501

(Phone Number) (Fax Number)

REQUEST FOR QUOTATION  
DIGITAL MOBILE AND PORTABLE RADIOS

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SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia State Fire Marshal's Office, and the WV Department of Military Affairs *with the exception of Department of Corrections and Public Safety (DMAPS)* to establish an Open-End contract for Digital Mobile and Portable Radios.
2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
  - 2.1. **"Contract Item" or "Contract Items"** means the list of items identified in Section 3, Subsections 1,2,3,4,5,6, and 7 below.
  - 2.2. **"Pricing Pages"** means the schedule of prices, estimated order quantity, and totals attached hereto as Exhibit A and used to evaluate the Solicitation responses.
  - 2.3. **"P-25 Phase 2 compliant"** means a digital trunking standard utilizing a 9600 baud control channel. P25 Phase 2 infrastructure can provide a "dynamic transcoder" feature that translates between Phase 1 and Phase 2 as needed.
  - 2.4. **"Encryption Algorithms: AES/ DES-OFB"** means DES (Data Encryption Standard) and AES (Advanced Encryption Standard) both are the symmetric block cipher. In AES the entire data block is processed as a single matrix. In DES the data block is divided into two halves. The *Output Feedback* (OFB) mode makes a block cipher into a synchronous stream cipher. It generates keystream blocks, which are then XORed with the plaintext blocks to get the ciphertext.
  - 2.5. **"Encryption standards FIPS 140-2 Level 3, FIPS 197"** means FIPS 140-2 Level 3 Adds requirements for physical tamper-resistance and identity-based authentication. There must also be physical or logical separation between the interfaces by which "critical security parameters" enter and leave the module. Private keys can only enter or leave in encrypted form. FIPS 197 certification looks at the hardware encryption algorithms used to protect the data.
  - 2.6. **"Trunking Channels"** means a more automated and complex radio system but provides the benefits of less user intervention to operate the radio and greater spectral efficiency with large numbers of users. Instead of assigning, for example, a radio channel to one organization at a time, users are instead assigned to a logical grouping, a "talkgroup". When any user in that group wishes to converse with another user in the talkgroup, a vacant radio channel is found automatically by the system and the conversation takes place on that channel. Many unrelated conversations can occur on a channel, making use of the otherwise idle time between conversations. Each radio transceiver contains a microcomputer to control it. A control channel coordinates all

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DIGITAL MOBILE AND PORTABLE RADIOS

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the activity of the radios in the system. The control channel computer sends packets of data to enable one talkgroup to talk together, regardless of frequency on a "Trunking Channel".

- 2.7 "Conventional Channels"** means the most basic radio communications system. Conventional, as its name implies, refers to a "traditional" method of frequency utilization. Conventional radios operate on fixed channels and each user group is permanently assigned a fixed frequency or a set of frequencies.
- 2.8 "AES Encryption"** means a symmetric-key block cipher algorithm and U.S. government standard for secure and classified data encryption and decryption. These standards can be found online at <https://www.csrc.nist.gov>
- 2.10 "Over-The-Air Programming (OTAP)"** means allows radios in the field to be reprogrammed without a physical connection to the programming computer.
- 2.11 "Over-The-Air Rekeying (OTAR)"** means allows radios in the field to be recoded with new encryption keys without a physical connection to the key loader.
- 2.12 "Key Variable Loader (KVL 4000)"** means A device that is used to code encryption into secure enabled Motorola products. Note: There is no equivalent to the KVL 4000 and it is already owned by the State.
- 2.13 "Integrated GPS"** means the radio equipment has Global Positioning System software and hardware built in and that it can be used simultaneously during normal use of voice/data communication.
- 2.14 "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

**3. GENERAL REQUIREMENTS:**

- 3.1 Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

ALL RADIOS LISTED BY THE VENDOR IN THE PRICING PAGES MUST BE APPROVED BY THE STATEWIDE INTEROPERABLE EXECUTIVE COMMITTEE PER EXECUTIVE ORDER NO. 2-11, attached hereto as Attachment "B" and must be compatible with the Statewide Interoperable Radio Network (SIRN). Any Vendor submitting a response to this Solicitation should submit the specifications for each radio that they are offering with their bid response to help with the evaluation of responses. This information will be required before award of contract

**REQUEST FOR QUOTATION  
DIGITAL MOBILE AND PORTABLE RADIOS**

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**3.1.1 DIGITAL MULTI BAND MOBILE RADIOS**

**3.1.1** Digital Multi Band mobile radio shall be capable of at least three thousand (3000) channel operation and shall be P-25 Phase 2 compliant.

**3.1.1.1** Each Digital Multi Band Mobile Radio shall come with the following:

- A.** Specified radio
- B.** under dash mounting bracket
- C.** remote speaker
- D.** microphone, with microphone hang-up clip,
- E.** all necessary cables, including ignition sense wire, mounting hardware
- F.** instruction or Owner's manual.

**3.1.2** Digital Multi Band mobile radio shall be capable of operating in the following frequency bands: VHF (136-174 Mhz.), UHF (380-520 Mhz.), 700 Mhz. (764-776 Mhz., 794-806 Mhz.) 800 Mhz. (806-824 Mhz, 851-870 Mhz.).

**3.1.3** Digital Multi Band mobile radio shall be capable of utilizing the following channel spacing: 6.25 Khz., 12.5 Khz. and 25 Khz.

**3.1.4** Digital Multi Band mobile radio shall be capable of using the following encryption algorithms: AES/ DES-OFB . Defined as requested

**3.1.4.1** Digital Multi Band mobile radio shall have an Encryption Algorithm Capacity of at least eight (8) keys.

**3.1.4.2** Encryption Keys Module for the Digital Multi Band mobile radio shall be capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID).

**3.1.4.3** The Encryption frame re-sync interval shall be: P25 CAI 300 m.Sec. P25 Common Air Interface (CAI) is a digital voice (modulation) type and therefore can be used on conventional simplex or repeater radio systems or in a trunking radio system.

**REQUEST FOR QUOTATION  
DIGITAL MOBILE AND PORTABLE RADIOS**

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**3.1.4.4** Encryption keying shall be loaded by the manufacture .  
Motorola KVL 4000 is equipment already owned by the State and there is no equivalent for the KVL 4000. Key Variable Loader (KVL 4000) or other External Key Variable Loader that is equivalent.

**3.1.4.5** Synchronization shall be; OFB-Output Feedback.

**3.1.4.6** The Vector Generator shall be the National Institute of Standards and Technology (NIST) approved random number generator. These standards can be found online at: <https://www.csrc.nist.gov>.

**3.1.4.7** The encryption shall be digital.

**3.1.4.8** Key erasure shall be accomplished by keyboard command and tamper detection.

**3.1.4.9** Encryption standards shall be: FIPS 140-2 Level 3, FIPS 197

**3.1.4.10** Key storage shall be in tamper protected volatile or non-volatile memory.

**3.1.5** Digital Multi Band mobile radio shall be capable of the following transmit power levels: 10-30 watts (700 Mhz), 10-35 watts (800 Mhz.), 10-50 watts (VHF dash mount low-medium power), 25-110 watts (VHF Remote mount high power), 10-40 watts (UHF 380-520 Mhz. dash mount low-medium power), 25-110 watts (UHF 380-520 Mhz. remote mount high power).

**3.1.5.1** Transmitter channel spacing shall be: 25/12.5 kHz in the 700 MHz. range; 25/12.5 kHz in the 800 MHz range; 30/25/12.5 kHz in the VHF range; 25/12.5 kHz in UHF range.

**3.1.5.2** The frequency separation shall be the full bandwidth.

**3.1.5.3** Frequency stability shall be +/- 0.8 PPM in all frequency ranges.

**3.1.5.4** Audio distortion shall be 0.50% in all frequency ranges.



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- Revised 09/18/2018

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DIGITAL MOBILE AND PORTABLE RADIOS

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Programming (OTAP) and Over-The-Air Rekeying (OTAR)

**3.1.9.1** The radio shall have OTAP enabled.

**3.1.9.2** The manufacturer's OTAP infrastructure software and hardware must be compatible and operational through the existing SIRM equipment and software connected to the State /Agency owned Motorola Core Switch to facilitate OTAP, or it must be furnished at no additional charge. The Motorola Core Switch is the master site that oversees the system. In order to utilize OTAP on the system, it is currently required that the radio be compatible with the Motorola Master Site as that is where it is going to get the material to do the programming. It is currently in the switch, though to utilize it, you have to interface with someone that has a Network Management Client. It operates on 7.11 software, soon to be 7.17 software. There is no charge to use OTAP except the radio must have the option in it to allow it to happen.

**3.1.10** Digital Multi Band mobile radio shall meet the following standards: MIL-STD 810C, MIL-STD 810D, MIL-STD 810E, MIL-STD 810E, MIL-STD 810F, MIL-STD 810G. These standards are military standards and are found in a document that establishes uniform engineering and technical requirements for military-unique or substantially modified commercial processes, procedures, practices, and methods. These standards can be located through the United States Department of Defense.

**3.1.11** Digital Multi Band mobile radio shall be capable of using multiple control head configurations :

**3.1.12** Receiver channel spacing shall be 25/12.5 kHz in 700 MHz, 800 MHz, UHF Range. Receiver channel spacing shall be 30/25/12.5 kHz in the VHF Range.

**The following technical aspects are requirements under existing WV SIRM Regulations for equipment placed on the system.**

**3.1.12.1** Maximum frequency separation shall be full bandsplit for each frequency range.

**3.1.12.2** Audio output power at 3% distortion shall be 7.5 W or 15 W for all frequency ranges.



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DIGITAL MOBILE AND PORTABLE RADIOS**

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- 3.1.12.3** Receiver frequency stability shall be +/- 0.8 PPM for all frequency ranges.
- 3.1.12.4** Analog sensitivity at 12dB SINAD shall be -121 dBm for 700 MHz and 800 MHz. Analog sensitivity at 12dB SINAD shall be -123 dBm using a pre-amp and -119 dBm standard for VHF, and UHF.
- 3.1.12.5** Digital sensitivity at 5% BER shall be -121.5 dBm for 700 MHz and 800 MHz. Digital sensitivity at 5% BER shall be -123 dBm using a pre-amp and -119 dBm standard for VHF, and UHF.
- 3.1.12.6** Intermodulation at 25 kHz shall be 82 dB for 700 MHz and 800 MHz. Intermodulation at 25 kHz using a pre-amp shall be 84 dB in VHF, 82 dB in UHF. Intermodulation at 25 kHz without a pre-amp shall be 86 dB for VHF, and UHF.
- 3.1.12.7** Intermodulation at 12.5 kHz shall be 82 dB for 700 MHz and 800 MHz. Intermodulation at 12.5 kHz using a pre-amp shall be 85 dB in VHF, 83 dB in UHF. Intermodulation at 12.5 kHz without a pre-amp shall be 86 dB in VHF and 85 dB in UHF range 1 and UHF.
- 3.1.12.8** Spurious rejection shall be 91 dB for 700 MHz and 800 MHz, 95 dB for VHF, and 93 dB for UHF.
- 3.1.12.9** Audio Distortion as rated shall be 1.2%.
- 3.1.12.10** FM Hum and Noise at 25 kHz separation shall be 59 dB for 700 MHz, 800 MHz and VHF, and 55 dB for UHF.
- 3.1.12.11** FM Hum and Noise at 12.5 kHz separation shall be 50 dB for all frequency ranges.
- 3.1.12.12** Selectivity at 25 kHz shall be 85 dB for all frequency ranges, at 12.5 kHz it shall be 75 dB for all frequency ranges, at 30 kHz it shall be 90 dB for VHF.
- 3.1.13** Digital Multi Band mobile radio shall operate at 13.8V DC +/- 20% Negative Ground
  - 3.1.13.1** Standby current at 13.8 V shall be no greater than 0.85A for all frequency ranges.

**REQUEST FOR QUOTATION  
DIGITAL MOBILE AND PORTABLE RADIOS**

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- 3.1.13.2** Receive current at rated audio at 13.8V shall be no greater than 3.2A for all frequency ranges.
- 3.1.13.3** Transmit current at rated power shall be no greater than: 136-174 MHz (10-50 Watts), 13A (50 W), 8A (15W); 380-470 MHz (10-40 Watts), 11A (40 W), 8A (15W); 764-870 MHz (10-35 Watts), 12A (50W), 8A (15W); 136-174 MHz (25-110 Watts) 20A (110W), 380-470 MHz (25- 110Watts) 24A (110W).
- 3.1.14** Digital Multi Band mobile radio shall be Integrated GPS.
  - 3.1.14.1** GPS shall be capable of receiving at least 12 channels.
  - 3.1.14.2** GPS tracking sensitivity shall be -153dBm or better.
  - 3.1.14.3** GPS accuracy shall be <10 meters (95%).
  - 3.1.14.4** GPS cold start shall be <60 seconds (95%).
  - 3.1.14.5** GPS hot start shall be <10 seconds (95%).
  - 3.1.14.6** GPS mode of operation shall be Autonomous.
- 3.1.15** Digital Multi Band mobile radio shall support the following trunking standards: clear or digital encrypted ASTRO 25 9600 baud Trunked operation.
- 3.1.16** Digital Multi Band mobile radio shall have Analog MDC-1200 and Digital APCO P25 Conventional (CAI) Systems Configurations enabled.
- 3.1.17** Digital Multi Band mobile radio shall be capable of Embedded Digital signaling (ASTRO and ASTRO 25).
  - 3.1.17.1** Astro Mode signaling rate shall be 9.6kbps.
  - 3.1.17.2** Digital ID capacity shall be 10,000,000 Conventional / 48,000 Trunking.
  - 3.1.17.3** Digital access codes shall be at least 4,096 network site addresses.
  - 3.1.17.4** Astro Digital user Group network site addresses shall be at least 4,096 network addresses.

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- 3.1.17.5** Project 25-CAI Digital User Group addresses shall be at least 65,000 Conventional / 4,096 Trunking.
- 3.1.18** Digital Multi Band mobile radio must use Windows 7 or newer software for all programming functions.
  - 3.1.18.1** Programming cable must use USB technology to connect to the programming computer.
  - 3.1.18.2** All currently licensable frequencies shall be considered acceptable to the unit.
  - 3.1.18.3** Each channel shall be individually programmable with regard to wideband/narrowband operation, digital/analog, trunking/non-trunking, encode/decode, encrypted/non-encrypted, transmit frequency, receive frequency, digital/analog CTCSS tones/no-tones.
  - 3.1.18.4** The radio shall have an alphanumeric display with a minimum of 2 rows of 14 characters, each.
  - 3.1.18.5** The radio shall have a minimum of 5 programmable function buttons.
  - 3.1.18.6** The radio shall have an “emergency” button with a clearly distinctive color.
  - 3.1.18.7** The radio shall have a menu navigation button capability.
- 3.1.19** Each Digital Multi Band Mobile radio shall have the following configuration available for purchase:
  - 3.1.19.1** Digital Multi Band Mobile radio, 380-520 Mhz and VHF, with AES Encryption, Dash Mount (low-medium power as specified in Section 3.1.5).
    - 3.1.19.1.1** Digital Multi Band Mobile Radio, 380-520 MHz and 700 MHz, with AES encryption, Dash Mount (low-medium power as specified in Section 3.1.5).
    - 3.1.19.1.2** Digital Multi Band Mobile Radio, 380-520 MHz and 800 MHz, with AES encryption, Dash Mount (low-medium power as specified in Section 3.1.5).

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- 3.1.19.2** Digital Multi Band Mobile radio with, 380-520 MHz and VHF, with AES Encryption. Remote mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.2.1** Digital Multi Band Mobile radio with, 380-520 MHz and 700 MHz, with AES Encryption, Remote mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.2.2** Digital Multi Band Mobile radio with, 380- 520 MHz and 800 MHz, with AES Encryption, Remote mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.2.3** Hand Held Full Function Control Head for Digital Multi Band Mobile radio with Remote Mount.
- 3.1.19.3** Multi control head option for Remote mount Digital Multi Band Mobile radio.
- 3.1.19.4** Digital Multi Band Mobile radio 380-520 MHz and VHF with NO AES Encryption, Dash mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.4.1** Digital Multi Band Mobile Radio, 380-520 MHz and 700 MHz, NO AES encryption, Dash Mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.4.2** Digital Multi Band Mobile Radio, 380-520 MHz and 800 MHz, NO AES encryption, Dash Mount (low-medium power as specified in Section 3.1.5).
- 3.1.19.5.** Digital Multi Band Mobile radio 380-520 MHz and VHF with NO AES Encryption, remote mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.5.1** Digital Multi Band Mobile Radio, 380-520 MHz and 700 MHz, NO AES encryption, remote Mount (low-medium power as specified in Section 3.1.5).
  - 3.1.19.5.2** Digital Multi Band Mobile Radio, 380-520 MHz and 800 MHz, NO AES encryption, remote Mount (low-medium power as specified in Section 3.1.5).

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**3.1.19.5.3 Hand Held Full Function Control Head for Digital  
Multi Band Mobile radio with Remote Mount.**

- 3.1.20** Spare Microphone for Digital Multi Band Mobile radio.
- 3.1.21** The Digital Multi Band Mobile radio shall be capable of having at least two “Dynamic” zones in the radio permitting users to create user defined zones of channels/talkgroups.
- 3.1.22** Programming Software for Digital Multi Band Mobile Radio. Programming software shall include unlimited seats.
- 3.1.23** Programming Cable for Digital Multi Band Mobile radio.
- 3.1.24** High Power Option (up to 110 watts added on to Digital Multi Band Mobile radio, (as specified in Section 3.1.5).
- 3.1.25** GPS enable shall be an option.
  - 3.1.25.1** GPS antenna for GPS for Digital Multi Band Radio
- 3.1.26** AC power supply for desk top operation.
- 3.1.27** Desk style microphone.
- 3.1.28** Optional spare remote speaker for Digital Multi Band Mobile Radio.
- 3.1.29** Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.
- 3.1.30** Digital Multi Band radio shall be Phase 2 capable and must meet current P25 standards, and be backwards and forwards compatible and future-ready to support new technology and data applications.
- 3.1.31** Over-The-Air Programming (OTAP) shall be enabled, unless requested to not be included.
  - 3.1.31.1** There shall be an option for removing the OTAP feature from the radio.
- 3.1.32** Over-The-Air Rekeying (OTAR) shall be available as an option to be enabled.

**3.2 DIGITAL SINGLE BAND MOBILE RADIO**

- 3.2.1** Digital Single Band mobile radio shall be capable of at least three thousand (3000)

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channel operation and shall be P-25 Phase 2 compliant.

**3.2.1.1** Each Digital Single Band Mobile Radio shall come with the following:  
Specified radio, under dash mounting bracket, remote speaker, microphone, microphone hang-up clip, all necessary cables, including ignition sense wire, mounting hardware, and instruction manual.

**3.2.2** Digital Single Band mobile radio shall be capable of operating in the following frequency bands: VHF (136-174 Mhz.), UHF (380-520 Mhz.), 700 Mhz. (764-776 Mhz, 794-806 Mhz.), 800 Mhz. (806-824 Mhz., 851-870 Mhz.).

**3.2.3** Digital Single Band mobile radio shall be capable of utilizing the following channel spacing: 6.25 KHz., and 12.5 KHz.

**3.2.4** Digital Single Band mobile radio shall be capable of using the following encryption algorithms: AES/DES-OFB.

**3.2.4.1** Digital Single Band mobile radio shall have an Encryption Algorithm Capacity of eight (8).

**3.2.4.2** Encryption Keys Module for the Digital Single Band mobile radio shall be capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID).

**3.2.4.3** The Encryption frame re-sync interval shall be: P25 CAI 300 mSec.

**3.2.4.4** Encryption keying shall be loaded by a Key Variable Loader (KVL).

**3.2.4.5** Synchronization shall be: ~~XL Counter Addressing~~ ; OFB-Output Feedback.

**3.2.4.6** The Vector Generator shall be the National Institute of Standards and Technology (NIST) approved random number generator.

**3.2.4.7** The encryption shall be digital.

**3.2.4.8** Key erasure shall be accomplished by keyboard command and tamper detection.

**3.2.4.9** Encryption standards shall be: FIPS 140-2 Level 3, FIPS 197.

**3.2.4.10** Key storage shall be in tamper protected volatile or non-volatile memory.

**3.2.5** Digital Single Band mobile radio shall be capable of the following transmit power

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levels: 10-30 watts (700 Mhz), 10-35 watts (800 Mhz.), 10-50 watts (VHF dash mount low-medium power), 25-110 watts (VHF Remote mount high power), 10-40 watts (UHF dash mount low-medium power), 25-110 watts (UHF Remote mount high power). The Vendor shall list each power range option as a separate listing in the Pricing Pages.

**3.2.5.1** Transmitter channel spacing shall be: 25/12.5 kHz in the 700 MHz. range; 25/12.5 kHz in the 800 MHz range; 30/25/12.5 kHz in the VHF range; 25/12.5 kHz in UHF.

**3.2.5.2** The frequency separation shall be the full bandwidth.

**3.2.5.3** Frequency stability shall be:  $\pm 0.00015\%$  in 700 Mhz,  $\pm 0.00015\%$  in 800 Mhz.,  $\pm 0.0002\%$  in VHF,  $\pm 0.0002\%$  in UHF R-1,  $\pm 0.0002\%$  in UHF R-2 frequency ranges.

**3.2.5.4** Audio distortion shall be 2% in all frequency ranges.

**3.2.5.5** FM Hum and Noise at 25 kHz separation shall be: -50 dB in 700 MHz and 800 MHz, -53 dB in VHF, and UHF. At 12.5 kHz separation shall be - 48 dB in 700 MHz and 800 MHz, -52 dB in VHF, and -50 dB in UHF.

**3.2.5.6** Modulation Fidelity (C4FM) for 12.5 kHz digital channel shall be  $\pm 2.8$  kHz. in all frequency ranges.

**3.2.6** Digital Single Band mobile radio shall be P-25 compliant, P-25 Trunking if an option shall be included.

**3.2.7** Digital Single Band mobile radio shall be configured to operate in one of the following configurations: VHF (136-174 Mhz), UHF (380-520 Mhz), 700/800 (764-870Mhz).

**3.2.8** Digital Single Band mobile radio shall be capable of scanning both Analog channels and digital channels in the same scan list with priority scan utilizing Intelligent Priority Scanning (Ability for priority 1 & 2 scanning between conventional and trunking systems).

**3.2.8.1** Radio shall be capable of using and storing user defined scan lists.

**3.2.8.2** Predefined scan lists may be edited by the user utilizing buttons on the radio.

**3.2.8.3** Scan lists shall be able to be established at the user/keypad level.



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- 3.2.8.4** Scanning shall be enabled and disabled by depressing no more than one button one time.
- 3.2.8.7** The radio shall be able to simultaneously scan both bands in the radio as well as “Trunking” and “Conventional” channels with Priority Scanning.
- 3.2.9** Digital Single Band mobile radio shall be capable of Over-The-Air Programming (OTAP) and Over-The-Air Rekeying (OTAR).
  - 3.2.9.1** The radio shall have OTAP enabled.
  - 3.2.9.2** The manufacturer’s OTAP infrastructure software and hardware must be compatible and operational through the existing SIRM equipment and software connected to the State/Agency owned Motorola Core Switch to facilitate OTAP, or it must be furnished at no additional charge.
- 3.2.10** Digital Single Band mobile radio shall meet the following Standards: MIL-STD 810C, MIL-STD 810D, MIL-STD 810E, MIL-STD 810E, MIL-STD 810F, MIL-STD 810G.
- 3.2.11** Digital Single Band mobile radio shall be capable of using multiple control head configurations and Vendor shall list each control head configuration as an option on the Pricing Pages.
- 3.2.12** Receiver channel spacing shall be 25/12.5 kHz in 700 MHz, 800 MHz, and UHF. Receiver channel spacing shall be 30/25/12.5 kHz. in the VHF Range.
  - 3.2.12.1** Maximum frequency separation shall be full bandsplit for each frequency range.
  - 3.2.12.2** Audio output power at 3% distortion shall be 7.5 W or 15 W for all frequency ranges.
  - 3.2.12.3** Receiver frequency stability shall be +/- 0.8 PPM for frequency ranges.
  - 3.2.12.4** Analog sensitivity at 12dB SINAD shall be -121 dBm for 700 MHz and 800 MHz. Analog sensitivity at 12dB SINAD shall be -123 dBm using a pre-amp and -119 dBm standard for VHF, and UHF range.
  - 3.2.12.5** Digital sensitivity at 5% BER shall be -121.5 dBm for 700 MHz and 800 MHz. Digital sensitivity at 5% BER shall be – 123 dBm using a pre-amp and –119 dBm standard for VHF, and UHF range.



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- 3.2.12.6** Intermodulation at 25 kHz shall be 82 dB for 700 MHz and 800 MHz. Intermodulation at 25 kHz using a pre-amp shall be 84 dB in VHF, and 82 dB in UHF. Intermodulation at 25 kHz without a pre-amp shall be 86 dB for VHF, and UHF.
- 3.2.12.7** Intermodulation at 12.5 kHz shall be 82 dB for 700 MHz and 800 MHz. Intermodulation at 12.5 kHz using a pre-amp shall be 85 dB in VHF, and 83 dB in UHF. Intermodulation at 12.5 kHz without a pre-amp shall be 86 dB in VHF and 85 dB in UHF.
- 3.2.12.8** Spurious rejection shall be 91 dB for 700 MHz and 800 MHz, 95 dB for VHF, and 93 dB for UHF.
- 3.2.12.9** Audio Distortion as rated shall be 1.2%.
- 3.2.12.10** FM Hum and Noise at 25 kHz separation shall be 59 dB for 700 MHz, 800 MHz and VHF, and 55 dB for UHF.
- 3.2.12.11** FM Hum and Noise at 12.5 kHz separation shall be 50 dB for all frequency ranges.
- 3.2.12.12** Selectivity at 25 kHz shall be 85 dB for all frequency ranges, at 12.5 kHz it shall be 75 dB for all frequency ranges, at 30 kHz it shall be 90 dB for VHF.
- 3.2.13** Digital Single Band mobile radio shall operate at 13.8V DC +/- 20%, Negative Ground
  - 3.2.13.1** Standby current at 13.8 V shall be no greater than 0.85A for all frequency ranges.
  - 3.2.13.2** Receive current at rated audio at 13.8V shall be no greater than 3.2A for all frequency ranges.
  - 3.2.13.3** Transmit current at rated power shall be: 136-174 MHz (10-50 Watts), 13A (50 W), 8A (15W); 380-520 MHz (10-40 Watts), 11A (40 W), 8A (15W); 450-520 MHz (10-45 Watts), 11A (45 W), 8A (15W); 764-870 MHz (10-35 Watts), 12A (50W), 8A (15W); 136-174 MHz (25-110 Watts) 20A (100W), 380-520 MHz (25-110Watts) 24A (100W).
- 3.2.14** Digital Single Band mobile radio shall be Integrated GPS capable.
  - 3.2.14.1** GPS shall be capable of receiving at least 12 channels.

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- 3.2.14.2** GPS tracking sensitivity shall be -153dBm or better.
- 3.2.14.3** GPS accuracy shall be <10 meters (95%).
- 3.2.14.4** GPS cold start shall be <60 seconds (95%).
- 3.2.14.5** GPS hot start shall be <10 seconds (95%).
- 3.2.14.6** GPS mode of operation shall be Autonomous.
- 3.2.15** Digital Single Band mobile radio shall support the following trunking standards:  
clear or digital encrypted ASTRO 25 Trunked operation.
- 3.2.16** Digital Single Band mobile radio shall be capable of Analog MDC-1200 and  
Digital APCO P25 Conventional Systems Configurations.
- 3.2.17** Digital Single Band mobile radio shall be capable of Embedded Digital signaling  
(ASTRO and ASTRO 25).
  - 3.2.17.1** Astro Mode signaling rate shall be 9.6kbps.
  - 3.2.17.2** Digital ID capacity shall be 10,000,000 Conventional / 48,000 Trunking.
  - 3.2.17.3** Digital access codes shall be at least 4,096 network site addresses.
  - 3.2.17.4** Astro Digital user Group network site addresses shall be at least 4,096  
network addresses.
  - 3.2.17.5** Project 25-CAI Digital User Group addresses shall be at least 65,000  
Conventional / 4,096 Trunking.
- 3.2.18** Digital Single Band mobile radio must use Windows 7 or newer software for all  
programming functions.
  - 3.2.18.1** Programming cable must use USB technology to connect to the  
programming computer.
  - 3.2.18.2** All currently licensable frequencies shall be considered acceptable to  
the unit.
  - 3.2.18.3** Each channel shall be individually programmable with regard to

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wideband/narrowband operation, digital/analog, trunking/non-trunking, encode/decode, encrypted/non-encrypted, transmit frequency, receive frequency, digital/analog CTCSS tones/no-tones.

- 3.2.18.4** The radio shall have an alphanumeric display with a minimum of 2 rows of 14 characters each.
- 3.2.18.5** The radio shall have a minimum of 5 programmable function buttons.
- 3.2.18.6** The radio shall have an “emergency” button with a clearly distinctive color.
- 3.2.18.7** The radio shall have a menu navigation button capability.
- 3.2.19** Each Digital Single Band Mobile radio shall have the following Options available for purchase:
  - 3.2.19.1** Digital Single Band Mobile radio, 1250 channels, 380-520 MHz with, AES Encryption, Dash Mount (low-medium power as specified in Section 3.2.5).
    - 3.2.19.1.1** Digital Single Band Mobile Radio, 1250 channels VHF, with AES encryption, Dash Mount (low-medium power as specified in section 3.1.5).
  - 3.2.19.2** Digital Single Band Mobile radio with, 1250 channels AES Encryption, 380-470 MHz, Remote mount (low-medium power as specified in Section 3.2.5).
    - 3.2.19.2.1** Digital Single Band Mobile Radio, 1250 channels VHF, with AES encryption, remote Mount (low-medium power as specified in section 3.1.5).
    - 3.2.19.2.2** Hand Held Full Function Control Head for Digital Single Band Mobile radio with Remote Mount.
  - 3.2.19.3** Multi-control head option for Remote mount Digital Single Band Mobile radio.
  - 3.2.19.4** Digital Single Band Mobile radio, 1250 channels, 380-520 MHz, with NO AES Encryption, Dash mount (low-medium power as specified in Section 3.2.5).

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- 3.2.19.4.1** Digital Single Band Mobile Radio, 1250 channels VHF, NO AES encryption, dash Mount (low-medium power as specified in Section 3.1.5).
- 3.2.19.5** Digital Single Band Mobile radio, 1250 channels, 380-520 MHz, with NO AES Encryption, remote mount (low-medium power as specified in Section 3.2.5).
- 3.2.19.5.1** Digital Single Band Mobile Radio, 1250 channels VHF, NO AES encryption, remote Mount (low-medium power as specified in Section 3.1.5).
- 3.2.20** Spare Microphone for Digital Single Band Mobile radio.
- 3.2.21** Programming Software for Digital Single Band Mobile Radio. Programming software shall include unlimited seats.
- 3.2.22** Programming Cable for Digital Single Band Mobile radio.
- 3.2.23** High Power Option (up to 110 watts added on to Digital Single Band Mobile radio (as specified in Section 3.1.5).
- 3.2.24** GPS enable shall be an option.
  - 3.2.24.1** GPS antenna for Digital Single Band Mobile Radio
- 3.2.25** AC power supply to convert a Digital Single Band Mobile radio into a base station.
- 3.2.26** Desk microphone for a Digital Single Band radio.
- 3.2.27** Optional remote speaker for Digital Single Band Mobile Radio.
- 3.2.28** Encryption Key Loader cable (for KVL4000) for Digital Single Band Mobile radio.
- 3.2.29** The Digital Multi Band Mobile radio shall be capable of having at least two “Dynamic” zones in the radio permitting users to create user defined zones of channels/talkgroups.
- 3.2.30** Digital Multi Band portable radio shall be Phase 2 capable and must meet current P25 standards, and be backwards and forwards compatible and future-ready to support new technology and data applications.

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**3.2.31** Over-The-Air Programming (OTAP) shall be enabled, unless requested to not be included.

**3.2.31.1** There shall be an option for removing the OTAP feature from the radio.

**3.2.32** Over-The-Air Rekeying (OTAR) shall be available as an option to be enabled.

**3.3 DIGITAL MULTI BAND PORTABLE RADIO**

**3.3.1** Digital Multi Band Portable radio shall be capable of at least three thousand (3000) channels, shall have a Multi display The front display shall have a full bitmap color LCD display with 4 lines of text of at least 14 characters, 2 lines of ICONs, 1 menu line with 3 menus and be white backlit. The backlit keypad shall have at least 2 soft keys, 4 direction Navigation key, Home and button, and a 4 X 3 keypad and shall be P-25 Phase 2 compliant.

**3.3.1.1** Digital Multi Band Portable shall be delivered with the following: the radio, antenna, battery, spare battery, a hard plastic case, a rapid charger, a 3" belt clip, a remote speaker microphone with a 3.5mm audio jack, and instruction manual.

**3.3.2** Digital Multi Band Portable radio shall be capable of operating in the following frequency bands: VHF (136-174 Mhz.), UHF(380-520 Mhz.), 700 Mhz. (764-776 Mhz., 794-806 Mhz. 800 Mhz. (806-824 Mhz., 851-870 Mhz.).

**3.3.3** Digital Multi Band portable radio shall be capable of utilizing the following channel spacing: 6.25 Khz., 12.5 Khz. and 25 Khz.

**3.3.4** Digital Multi Band portable radio shall be capable of using the following encryption algorithms: AES/DES-OFB.

**3.3.4.1** Digital Multi Band portable radio shall have an Encryption Algorithm Capacity of eight (8).

**3.3.4.2** Encryption Keys Module for the Digital Multi Band mobile radio shall be capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID).

**3.3.4.3** The Encryption frame re-sync interval shall be: P25 CAI 300 mSec.

**3.3.4.4** Encryption keying shall be loaded by a Key Variable Loader (KVL).

**3.3.4.5** Synchronization shall be; OFB-Output Feedback.

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- 3.3.4.6** The Vector Generator shall be the National Institute of Standards and Technology (NIST) approved random number generator.
- 3.3.4.7** The encryption shall be digital.
- 3.3.4.8** Key erasure shall be accomplished by keyboard command and tamper detection.
- 3.3.4.9** Encryption standards shall be: FIPS 140-2 Level 3, FIPS 197.
- 3.3.4.10** Key storage shall be in tamper protected volatile or non-volatile memory.
- 3.3.5** Digital Multi Band portable radio shall be capable of the following transmit power levels: 1- 2.5 watts (700 Mhz), 1- 3 watts (800 Mhz.), 1 - 6 watts (VHF ), 1- 5 watts (UHF).
  - 3.3.5.1** Transmitter channel spacing shall be: 25/12.5 kHz in the 700 MHz. range; 25/12.5 kHz in the 800 MHz range; 30/25/12.5 kHz in the VHF range; 25/12.5 kHz in UHF.
  - 3.3.5.2** The frequency separation shall be the full bandsplit.
  - 3.3.5.3** Frequency stability shall be +/- 0.00010% in all frequency ranges.
  - 3.3.5.4** Audio distortion shall be 0.60% in 700Mhz. range, 1 % in 800 Mhz range, 0.50% in VHF range, 0.50% in UHF range.
  - 3.3.5.5** FM Hum and Noise at 25 kHz separation shall be: 48 dB in 700 MHz., -47 dB in 800 MHz, 47 dB in VHF, and UHF. At 12.5 kHz separation shall be -46 dB in 700 MHz., -45 dB in 800 MHz, VHF, and UHF.
- 3.3.6** Digital Multi Band portable radio shall be P-25 compliant, P-25 Trunking if an option shall be included.
- 3.3.7** Digital Multi Band portable radio shall be capable of multi-band operation. Multi-band means the following: a multi-band radio shall be capable of operating in two or more bands in the same radio. Each multi-band radio shall be configured to operate in one of the following configurations: VHF (136-174 Mhz) and UHF (380-520 Mhz), VHF (136-174 Mhz) and 700/800 (764-870 Mhz), UHF (380-520 Mhz), 700/800 (764-870 Mhz),
- 3.3.8** Digital Multi Band portable radio shall be capable of scanning both bands of the

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radio at the same time with Intelligent Priority Scanning (Ability for priority 1 & 2 scanning between conventional and trunking systems).

**3.3.8.1** Radio shall be capable of using and storing user defined scan lists.

**3.3.8.2** Predefined scan lists may be edited by the user utilizing buttons on the radio.

**3.3.8.3** Scan lists shall be able to be established at the user/keypad level.

**3.3.8.4** Scanning shall be enabled and disabled by depressing no more than one button one time.

**3.3.8.5** Digital Multi Band Mobile radio shall be capable of having a separate scan list for each zone as well as at least two "Dynamic" scan lists for the radio.

**3.3.8.6** The radio shall be able to simultaneously scan both bands in the radio as well as "Trunking" and "Conventional" channels.

**3.3.9** Digital Multi Band portable radio shall be capable of Over-The-Air Programming (OTAP) and Over-The-Air Rekeying (OTAR).

**3.3.9.1** The radio shall have OTAP enabled.

**3.3.9.2** The manufacturer's OTAP infrastructure software and hardware must be compatible and operational through the existing SIRM equipment and software connected to the Motorola Core Switch to facilitate OTAP, or it must be furnished at no additional charge.

**3.3.10** Digital Multi Band portable radio shall meet the following standards: MIL-STD 810C, MIL-STD 810D, MIL-STD 810E, MIL-STD 810F, MIL-STD 810G.

**3.3.11** Digital Multi Band portable radio shall be Phase 2 capable and must meet current P25 standards, and be backwards and forwards compatible and future-ready to support new technology and data applications.

**3.3.12** Receiver channel spacing shall be 25/12.5 kHz in 700 MHz, 800 MHz, and UHF. Receiver channel spacing shall be 30/25/12.5 kHz in the VHF Range.

**3.3.12.1** Maximum frequency separation shall be full bandsplit for each frequency range.

**3.3.12.2** Audio output power at rated shall be 1000 mW for all frequency ranges.



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- 3.3.12.3** Receiver frequency stability shall be +/- 0.8 PPM for frequency ranges.
- 3.3.12.4** Analog sensitivity at 12dB SINAD shall be 0.250 $\mu$ V for 700 MHz and 800 MHz. Analog sensitivity at 12dB SINAD shall be 0.216 $\mu$ V for VHF and 0.234 $\mu$ V for UHF.
- 3.3.12.5** Digital sensitivity at 5% BER shall be 0.251  $\mu$ V for 700 MHz and 800 MHz. Digital sensitivity at 5% BER shall be 0.188 $\mu$ V for VHF and 0.207  $\mu$ V for UHF.
- 3.3.12.6** Sensitivity at 25 kHz shall be 75.7 dB for 700 MHz and 800 MHz. Sensitivity at 25 kHz shall be 79.3 dB in VHF, and 78.3 dB in UHF.
- 3.3.12.7** Sensitivity at 12.5 kHz shall be 67.5 dB for 700 MHz and 800 MHz. Sensitivity at 12.5 kHz shall be 70 dB in VHF, and 68.1 dB in UHF.
- 3.3.12.8** Spurious rejection shall be 76.6 dB for 700 MHz and 800 MHz, 93.2 dB for VHF, 80.3 dB for UHF.
- 3.3.12.9** Audio Distortion as rated shall be 0.9% for 700MHz and 800 MHz, 1.2% for VHF and 0.91% for UHF.
- 3.3.12.10** FM Hum and Noise at 25 kHz separation shall be -54 dB for 700 MHz and 800 MHz and -53.8 dB for VHF, and -53.5 dB for UHF.
- 3.3.12.11** FM Hum and Noise at 12.5 kHz separation shall be -48 dB for 700 MHz and 800 MHz and VHF, it shall -47.4 dB for UHF.
- 3.3.12.12** Intermodulation shall be 80 dB for 700 MHz and 800 MHz, 80.5 dB for VHF and 80.2 dB for UHF.
- 3.3.13** Digital Multi Band portable radio shall be Integrated GPS capable.
  - 3.3.13.1** GPS shall be capable of receiving at least 12 channels.
  - 3.3.13.2** GPS tracking sensitivity shall be -151dBm or better.
  - 3.3.13.3** GPS accuracy shall be <10 meters (95%).
  - 3.3.13.4** GPS cold start shall be <60 seconds (95%).
  - 3.3.13.5** GPS hot start shall be <10 seconds (95%).

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- 3.3.13.6** GPS mode of operation shall be Autonomous.
- 3.3.14** Digital Multi Band portable radio shall support the following trunking standards: clear or digital encrypted ASTRO 25 Trunked operation.
- 3.3.15** 5 Digital Multi Band portable radio shall be capable of Analog MDC-1200 and Digital APCO P25 Conventional Systems Configurations.
- 3.3.16** Digital Multi Band portable radio shall be capable of Embedded Digital signaling (ASTRO and ASTRO 25).
  - 3.3.16.1** Astro Mode signaling rate shall be 9.6kbps.
  - 3.3.16.2** Digital ID capacity shall be 10,000,000 Conventional / 48,000 Trunking.
  - 3.3.16.3** Digital access codes shall be at least 4,096 network site addresses.
  - 3.3.16.4** Astro Digital user Group network site addresses shall be at least 4,096 network addresses.
  - 3.3.16.5** Project 25-CAI Digital User Group addresses shall be at least 65,000 Conventional / 4,096 Trunking.
- 3.3.17** Digital Multi Band portable radio must use Windows 7 or newer Software for all programming functions.
  - 3.3.17.1** Programming cable must use USB technology to connect to the programming computer.
  - 3.3.17.2** All currently licensable frequencies shall be considered acceptable to the unit.
  - 3.3.17.3** Each channel shall be individually programmable with regard to wideband/narrowband operation, digital/analog, trunking/non-trunking, encode/decode, encrypted/non-encrypted, transmit frequency, receive frequency, digital/analog CTCSS tones/no-tones.
  - 3.3.17.4** The radio shall have an alphanumeric display with a minimum of 2 rows of 14 characters each.
  - 3.3.17.5** The radio shall have a minimum of 5 programmable function buttons.
  - 3.3.17.6** The radio shall have an “emergency” button with a clearly distinctive

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color.

**3.3.17.7** The radio shall have a menu navigation button capability.

**3.3.18** Each Digital Multi Band portable radio shall have the following options available for purchase if purchased with a UHF option.

**3.3.18.1** Digital Multi Band portable radio, Statewide Operation 380-520 MHz UHF and VHF operation with, AES Encryption (SIRN Tier 1).

**3.3.18.1.1** Digital Multi Band Portable Radio, Statewide Operation 380-520 MHz UHF and 700 MHz operation with AES encryption (SIRN Tier 1).

**3.3.18.1.2** Digital Multi Band Portable Radio, Statewide Operation 380-520 MHz UHF and 800 MHz operation with AES encryption (SIRN Tier 1).

**3.3.18.2** Digital Multi Band portable radio, Statewide Operation 380-520 MHz UHF and VHF operation without AES Encryption, (SIRN Tier 2).

**3.3.18.2.1** Digital Multi Band Portable Radio. Statewide Operation 380-520 MHz and 700 MHz operation without AES Encryption, (SIRN Tier 2).

**3.3.18.2.2** Digital Multi Band Portable Radio, Statewide Operation 380-520 MHz and 800 MHz operation without AES Encryption, (SIRN Tier 2).

**3.3.19** Programming Software for Digital Multi Band portable Radio. Programming software shall include unlimited seats.

**3.3.20** Programming Cable for Digital Multi Band portable radio.

**3.3.21** Public Safety Yellow housing

**3.3.22** GPS enable shall be an option.

**3.3.23** Spare speaker microphone w/3.5mm audio jack.

**3.3.24** Spare battery.

**3.3.25** Spare ac rapid charger.

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**3.3.26 Spare antenna for Digital Multi Band Portable Radio.**

**3.3.26.1 Spare GPS/Multi Band antenna for Digital Multi Band Portable Radio.**

**3.3.27 Battery life shall have the capability to be 8 hours or greater. A Lithium-Ion battery or Lithium Polymer battery is acceptable. Nickel-Cadmium batteries are not acceptable.**

**3.3.27.1 A rapid charge battery shall be provided and shall be able to reach full capacity in 4 hours.**

**3.3.27.2 The radio shall have a duty cycle of 5/5/90 per Telecommunications Industry Association/Electronic Industry Alliance (TIA/EIA), Specification 903 (5% receive/5% transmit/90% standby).**

**3.3.28 Spare hard plastic case with a 3 inch belt clip.**

**3.3.29 Encryption Key Loader cable (for KVL4000) for Digital Multi Band Portable Radio (2000 channels).**

**3.3.30 The Digital Multi Band Portable radio shall be capable of having at least two "Dynamic" zones in the radio permitting users to create user defined zones of channels/talkgroups.**

**3.3.31 Over-The-Air Programming (OTAP) shall be enabled, unless requested to not be included.**

**3.3.31.1 There shall be an option for removing the OTAP feature from the radio.**

**3.3.32 Over-The-Air Rekeying (OTAR) shall be available as an option to be enabled.**

**3.4 DIGITAL SINGLE BAND PORTABLE RADIO**

**3.4.1 Digital Single Band Portable radio shall be capable of at least three thousand (3000) Channels, have a Multi display. The front display shall have a full bitmap color LCD display with 4 lines of text of at least 14 characters, 2 lines of ICONs, 1 menu line with 3 menus and be white backlit. The backlit keypad shall have 3 soft keys, 4 direction Navigation key, Home and Data buttons and shall be P-25 Phase 2 compliant.**

**3.4.1.1 Digital Single Band Portable shall be delivered with the following: the radio, antenna, battery, spare battery, a hard plastic case, a rapid charger, a 3"**

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belt clip, a remote speaker microphone with a 3.5mm audio jack, and instruction manual.

- 3.4.2 Digital Single Band Portable radio shall be capable of operating in the following frequency bands: VHF (136-174 Mhz.), UHF (380-520 Mhz.), 700 Mhz. (764-776 Mhz., 794-806 Mhz.) 800 Mhz. (806-824 Mhz., 851-870 Mhz.).
- 3.4.3 Digital Single Band portable radio shall be capable of utilizing the following channel spacing: 6.25 Khz., 12.5 Khz. and 25 Khz.
- 3.4.4 Digital Single Band portable radio shall be capable of using the following encryption algorithms: AES/DES-OFB.
  - 3.4.4.1 Digital Single Band portable radio shall have an Encryption Algorithm Capacity of eight (8).
  - 3.4.4.2 Encryption Keys Module for the Digital Single Band mobile radio shall be capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID).
  - 3.4.4.3 The Encryption frame re-sync interval shall be: P25 CAI 300 mSec.
  - 3.4.4.4 Encryption keying shall be loaded by a Key Variable Loader (KVL).
  - 3.4.4.5 Synchronization shall be: ~~XL Counter Addressing~~ ; OFB-Output Feedback.
  - 3.4.4.6 The Vector Generator shall be the National Institute of Standards and Technology (NIST) approved random number generator.
  - 3.4.4.7 The encryption shall be digital.
  - 3.4.4.8 Key erasure shall be accomplished by keyboard command and tamper detection.
  - 3.4.4.9 Encryption standards shall be: FIPS 140-2 Level 3, FIPS 197.
  - 3.4.4.10 Key storage shall be in tamper protected volatile or non-volatile memory.
- 3.4.5 Digital Single Band portable radio shall be capable of the following transmit power levels: 1- 3 watts (700 Mhz), 1- 3 watts (800 Mhz.), 1 - 6 watts (VHF ), 1- 5 watts (UHF).
  - 3.4.5.1 Transmitter channel spacing shall be: 25/12.5 kHz in the 700 MHz. range;

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25/12.5 kHz in the 800 MHz range; 30/25/12.5 kHz in the VHF range;  
25/12 kHz in UHF.

- 3.4.5.2** The frequency separation shall be the full bandsplit.
- 3.4.5.3** Frequency stability shall be +/- 0.00010% in all frequency ranges.
- 3.4.5.4** Audio distortion shall be 0.60% in 700Mhz. range, 1 % in 800 Mhz range, 0.50% in VHF range, 0.50% in UHF range.
- 3.4.5.5** FM Hum and Noise at 25 kHz separation shall be: -48 dB in 700 MHz., -47 dB in 800 MHz, -47 dB in VHF, and UHF range 1. At 12.5 kHz separation shall be -46 dB in 700 MHz. -45 dB in 800 MHz, VHF, and UHF.
- 3.4.6** Digital Single Band portable radio shall be P-25 compliant, P-25 trunking if an option shall be included.
- 3.4.7** Digital Single Band portable radio shall be capable of single band operation.
- 3.4.8** Digital Single Band portable radio shall be capable of scanning both analog channels and digital channels in the same scan list.
  - 3.4.8.1** Radio shall be capable of using and storing user defined scan lists.
  - 3.4.8.2** Predefined scan lists may be edited by the user utilizing buttons on the radio.
  - 3.4.8.3** Scan lists shall be able to be established at the user/keypad level.
  - 3.4.8.4** Scanning shall be enabled and disabled by depressing no more than one button one time.
  - 3.4.8.5** The radio shall be able to simultaneously scan both bands in the radio as well as "Trunking" and "Conventional" channels.
- 3.4.9** Digital Single Band portable radio shall be capable of Over-The-Air Programming (OTAP) and Over-The-Air Rekeying (OTAR).
  - 3.4.9.1** The radio shall have OTAP enabled.
  - 3.4.9.2** The manufacturer's OTAP infrastructure software and hardware must be

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compatible and operational through the existing SIRM equipment and software connected to the Motorola Core Switch to facilitate OTAP, or it must be furnished at no additional charge.

- 3.4.10** Digital Single Band portable radio shall meet the following standards: MIL-STD 810C, MIL-STD 810D, MIL-STD 810E, MIL-STD 810F, MIL-STD 810G.
- 3.4.11** Digital Single Band portable radio shall be Phase 2 capable and must meet current P25 standards, and be backwards and forwards compatible and future-ready to support new technology and data applications.
- 3.4.12** Receiver channel spacing shall be 25/12.5 kHz in 700 MHz, 800 MHz, UHF. Receiver channel spacing shall be 30/25/12.5 kHz in the VHF Range.
- 3.4.12.1** Maximum frequency separation shall be full bandsplit for each frequency range.
- 3.4.12.2** Audio output power at rated shall be 500 mW for all frequency ranges.
- 3.4.12.3** Receiver frequency stability shall be +/- 0.8 PPM for frequency ranges.
- 3.4.12.4** Analog sensitivity at 12dB SINAD shall be 0.250 $\mu$ V for 700 MHz and 800 MHz. Analog sensitivity at 12dB SINAD shall be 0.216 $\mu$ V for VHF and 0.234 $\mu$ V for UHF.
- 3.4.12.5** Digital sensitivity at 5% BER shall be 0.251  $\mu$ V for 700 MHz and 800 MHz. Digital sensitivity at 5% BER shall be 0.188 $\mu$ V for VHF and 0.207  $\mu$ V for UHF.
- 3.4.12.6** Selectivity at 25 kHz shall be -75.7 dB for 700 MHz and 800 MHz. Sensitivity at 25 kHz shall be -79.3 dB in VHF, and -78.3 dB in UHF.
- 3.4.12.7** Selectivity at 12.5 kHz shall be -67.5 dB for 700 MHz and 800 MHz. Sensitivity at 12.5 kHz shall be -70 dB in VHF, and -68.1 dB in UHF.
- 3.4.12.8** Spurious rejection shall be -76.6 dB for 700 MHz and 800 MHz, -93.2 dB for VHF, -80.3 dB for UHF.
- 3.4.12.9** Audio Distortion as rated shall be 0.9% for 700MHz and 800 MHz, 1.2% for VHF and 0.91% for UHF.
- 3.4.12.10** FM Hum and Noise at 25 kHz separation shall be -54 dB for 700 MHz and 800 MHz and -53.8 dB for VHF, and -53.5 dB for UHF.



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- 3.4.12.11** FM Hum and Noise at 12.5 kHz separation shall be -48 dB for 700 MHz and 800 MHz and VHF, it shall -47.4 dB for UHF.
- 3.4.12.12** Intermodulation shall be -80 dB for 700 MHz and 800 MHz, -80.5 dB for VHF and -80.2 dB for UHF.
- 3.4.13** Digital Single Band portable radio shall be Integrated GPS capable.
  - 3.4.13.1** GPS shall be capable of receiving at least 12 channels.
  - 3.4.13.2** GPS tracking sensitivity shall be -159 dBm or better.
  - 3.4.13.3** GPS accuracy shall be <10 meters (95%).
  - 3.4.13.4** GPS cold start shall be <60 seconds (95%).
  - 3.4.13.5** GPS hot start shall be <10 seconds (95%).
  - 3.4.13.6** GPS mode of operation shall be Autonomous.
- 3.4.14** Digital Single Band portable radio shall support the following trunking standards: clear or digital encrypted ASTRO 25 Trunked operation.
- 3.4.15** Digital Single Band portable radio shall be capable of Analog MDC-1200 and Digital APCO P25 Conventional Systems Configurations.
- 3.4.16** Digital Single Band portable radio shall be capable of Embedded Digital signaling (ASTRO and ASTRO 25).
  - 3.4.16.1** Astro Mode signaling rate shall be 9.6kbps.
  - 3.4.16.2** Digital ID capacity shall be 10,000,000 Conventional / 48,000 Trunking.
  - 3.4.16.3** Digital access codes shall be at least 4,096 network site addresses.
  - 3.4.16.4** Astro Digital user Group network site addresses shall be at least 4,096 network addresses.
  - 3.4.16.5** Project 25-CAI Digital User Group addresses shall be at least 65,000 Conventional / 4,096 Trunking.
- 3.4.17** Digital Single Band portable radio must use Windows 7 or newer software for all programming functions.

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- 3.4.17.1** Programming cable must use USB technology to connect to the programming computer.
- 3.4.17.2** All currently licensable frequencies shall be considered acceptable to the unit.
- 3.4.17.3** Each channel shall be individually programmable with regard to wideband/narrowband operation, digital/analog, trunking /non-trunking, encode/decode, encrypted/non-encrypted, transmit frequency, receive frequency, digital/analog CTCSS tones/no-tones.
- 3.4.17.4** The radio shall have an alphanumeric top display with a minimum of 2 rows of 14 characters each, plus a full bitmap color LCD display of 4 rows of text X 14 characters, 2 lines of icons, 1 menu line X 3 menus.
- 3.4.17.5** The radio shall have a backlight keyboard, 3 soft keys, a 4 direction navigation key, home and data buttons.
- 3.4.17.6** The radio shall have an “emergency” button with a clearly distinctive color.
- 3.4.18** Each Digital Single Band portable radio shall have the following options available for purchase.
  - 3.4.18.1** Digital Single Band portable radio, Statewide Operation 380-520 MHz UHF with AES Encryption (SIRN Tier 1)
    - 3.4.18.1.1** Digital Single Band Portable radio, VHF operation with AES encryption.
  - 3.4.18.2** Digital Single Band portable radio, Statewide Operation 380-520 MHz UHF without AES Encryption, (SIRN Tier 2)
    - 3.4.18.2.1** Digital Single Band Portable radio, VHF operation without AES encryption.
- 3.4.19** Programming Software for Digital Single Band portable Radio. Programming software shall include unlimited seats.
- 3.4.20** Programming Cable for Digital Single Band portable radio.
- 3.4.21** Public Safety Yellow housing

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- 3.4.22** GPS enable shall be an option.
- 3.4.23** Spare speaker microphone w/3.5mm audio jack.
- 3.4.24** Spare battery.
- 3.4.25** Spare ac rapid charger.
- 3.4.26** Spare antenna for Digital Single Band Portable Radio.
  - 3.4.26.1** Spare GPS capable antenna for Digital Single Band Portable Radio.
- 3.4.27** Battery life shall have the capability to be 8 hours or greater. A Lithium-Ion battery or Lithium Polymer battery is acceptable. Nickel-Cadmium batteries are not acceptable.
  - 3.4.27.1** A rapid charge battery shall be provided and shall be able to reach full capacity in 4 hours.
  - 3.4.27.2** The radio shall have a duty cycle of 5/5/90 per Telecommunications Industry Association/Electronic Industry Alliance (TIA/EIA), specification 90(5% receive/5% transmit/90% standby).
- 3.4.28** Spare hard plastic case with 3 inch belt clip.
- 3.4.29** Encryption Key Loader cable (for KVL4000) for Digital Single Band Portable Radio (2000 channels).
- 3.4.30** The Digital Single Band Portable radio shall be capable of having at least two "Dynamic" zones in the radio permitting users to create user defined zones of channels/talk groups.
- 3.4.31** Over-The-Air Programming (OTAP) shall be enabled, unless requested to not be included.
  - 3.4.31.1** There shall be an option for removing the OTAP feature from the radio.
- 3.4.32** Over-The-Air Rekeying (OTAR) shall be available as an option to be enabled.

**3.5 WARRANTY and SOFTWARE**

- 3.5.1** All items offered for purchase under this-Solicitation-shall be warranted by the seller for a minimum of one (1) year.

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- 3.5.2 Vendor shall furnish a copy of the most current version of software with each radio.
- 3.5.3 All features that are placed into the radio by way of programming shall remain for the life of the radio.
- 3.5.4 Any lost feature (i.e., number of channels, type of radio, etc.) will be replaced at no charge during the warranty period.
- 3.5.5 All firmware needed to correct radio product defects as identified by the user agency must be provided free of charge during the warranty period. This does not include enhancements or addition of features.

**4. CONTRACT AWARD:**

- 4.1 **Contract Award:** The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest TOTAL BID AMOUNT as shown on the Pricing Pages.
- 4.2 **Pricing Pages:** Vendor should complete the Pricing Pages by placing the cost of a single unit of the requested item in the "Unit Price" section and then multiplying the "Unit Price" by the "Estimated Quantity" and then placing the result in the "Extended Price". The Vendor will then total all of the "Extended Price" lines and place the total at the bottom of the "Extended Price" column. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Notwithstanding the foregoing, the Purchasing Division may correct errors at its discretion. Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation. The Pricing Pages were created as a Microsoft Excel document and Vendor can download an electronic copy for bid purposes from the wvOASIS Vendor Self Service (VSS) Portal: <https://prod-fin-vss.wvoasis.gov/webapp/prdvss11/AltSelfService>

**5 ORDERING AND PAYMENT:**

- 5.1 **Ordering:** Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written form of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to

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accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

- 5.2 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

**6 DELIVERY AND RETURN:**

- 6.1 Delivery Time:** Vendor shall deliver standard orders within thirty (30) calendar days after orders are received. Vendor shall deliver emergency orders within twenty (20) calendar days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.
- 6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

- 6.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.
- 6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

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**6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

**7. VENDOR DEFAULT:**

**7.1.** The following shall be considered a vendor default under this Contract.

**7.1.1.** Failure to provide Contract Items in accordance with the requirements contained herein.

**7.1.2.** Failure to comply with other specifications and requirements contained herein.

**7.1.3.** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

**7.1.4.** Failure to remedy deficient performance upon request.

**7.2.** The following remedies shall be available to Agency upon default.

**7.2.1.** Immediate cancellation of the Contract.

**7.2.2.** Immediate cancellation of one or more release orders issued under this Contract.

**7.2.3.** Any other remedies available in law or equity.

**8 MISCELLANEOUS:**

**8.1 No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

**8.2 Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

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- 8.3 Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.
- 8.4 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**Contract Manager:** Peter Marotta

**Telephone Number:** 304-860-5051

**Fax Number:** 410-712-6501

**Email Address:** petermarotta@motorolasolutions.com



	<b>Approved Equipment List</b>		
	<b>Title / Subject</b> <b><u>SIRN Approved Equipment List</u></b>	<b>Effective Date</b> 09/01/2011	<b>Revision Date</b> 09/12/17
	Addition of Kenwood VP-5330, VM-5830, VM-6830 radios.		

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## 1. Introduction:

- 1.1. In an effort to maintain system integrity and proper operation of the Statewide Interoperable Radio Network (SIRN), the Statewide Interoperability Executive Committee (SIEC) has determined the need to test and maintain a list of radios approved for operation on the SIRN. This list will be updated when new radios are added or reevaluated. Radios not listed as Approved Equipment herein cannot be activated on the network.

## 2. Levels:

- 2.1 Per FCC licensing, mobile unit output power is limited to 40 watts.
- 2.2 Site equipment (such as new sites or related equipment) will be evaluated on a case by case basis. Parties interested in purchasing a new site or spare site equipment should contact the Statewide Interoperability Coordinator (SWIC) to begin the process.
- 2.3 All equipment must be evaluated and approved as per the Subscriber Unit Equipment Test SOP prior to being placed on the SIRN Approved Equipment List.
- 2.4 The approved radios will be broken down in the following format utilizing 4 Levels;
- ❖ **Level 1** – Radios in this section shall meet or exceed ALL of the below criteria
    - Operational Frequency Range of 400-470 MHz
    - Capable of AES Encryption with Multi-Key
    - At Least 1000 Channels
    - Capable of Mixing Conventional and Trunking in the Same Zone
    - Capable of Scanning Conventional and Trunking in the Same List
    - Capable of TDMA (Phase 2) Operation

- ❖ **Level 2** – Radios in this section shall meet or exceed ALL of the below criteria:
  - Operational Frequency Range of 400-470 MHz
  - Capable of AES Encryption with Multi-Key
  - 512 or More Channels
  - Capable of Mixing Conventional and Trunking in the Same Zone
  - Capable of Scanning Conventional and Trunking in the Same List
  
- ❖ **Level 3** – Radios in this section will meet 1 or more of the below criteria:
  - Operational Frequency Range of 400-470 MHz  
NOTE: Only radios approved prior to 04/12/16 with an operating range other than 400-470 MHz are authorized for operation on SIRN.
  - NOT Capable of AES Encryption with Multi-Key
  - LESS than 512 Channels
  - NOT Capable of Mixing Conventional and Trunking in the Same Zone
  - NOT Capable of Scanning Conventional and Trunking in the Same List
  
- ❖ **Level 4** – Special Circumstance Radios (Not Recommended For Purchase)  
Special Note: Radios in this Level have significant limitations or operational concerns when operating on the system. Please check the notes to determine if the limitations will affect your planned operations.

**Note to Vendors,** the SIEC will only test and approve radios based on the data available from the vendors and the configuration of the radio sent for testing. Please submit properly equipped radios and proper documentation with the radios for testing. The SIEC will not incur any expense for the evaluation of radios or be limited by time on software provided.

**Note to users,** the Approved Equipment List is based on properly equipped radios. Due to different options available from various manufacturers please ensure the radio is properly configured for operation on the SIRN.

### 3. Approved Equipment:

#### 3.1 Level 1 – (Level criteria above)

##### ❖ Portables

- EF Johnson VP600
- Kenwood NX-5300
- Kenwood TK-5330
- Kenwood VP-5330
- Kenwood VP-6330
- Harris XL200P
- Motorola APX-4000 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-6000 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-7000 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-8000

##### ❖ Mobiles

- Kenwood NX-5800
- Kenwood TK-5830
- Kenwood VM5830
- Kenwood VM6830
- Motorola APX-4500 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-6500 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-7500 (Range 1 Only) Firmware 14.05.00 or above
- Motorola APX-8500 (Range 1 Only)

#### 3.2 Level 2 – (Level criteria above)

##### ❖ Portables

- Bendix-King KNG-P400
- EF Johnson 51xx Series
- Harris XG-25
- Harris XG-75P
- Harris Unity XG-100
- Harris P7300
- Kenwood TK-5310
  - Version 2, Firmware 4.43 (Checksum 8226), Software 8.23 & 2016 Programming Settings
  - Version 3, Firmware 6.10 (Checksum 0ADA), Software 8.23 & 2016 Programming Settings
- Motorola XTS-2500 (Range 1 Only)
- Motorola XTS-5000 (Range 1 Only)
- Tait TP91xx

##### ❖ Mobiles

- Bendix-King KNG-400M
- EF Johnson 53xx Series
- Harris XG-25
- Harris Unity XG-100M

- Harris M7300
- Kenwood TK-5810
  - Version 2, Firmware 4.43 (Checksum AFF2), Software 8.23 & 2016 Programming Settings
  - Version 3, Firmware 6.10 (Checksum QADA), Software 8.23 & 2016 Programming Settings
- Motorola XTL-2500 (Range 1 Only)
- Motorola XTL-5000 (Range 1 Only)
- Tait TM91xx

### 3.3 Level 3 – (Level criteria above)

#### ❖ Portables

- ICOM IC-F9021
  - Cannot Scan Conventional and Trunking in the same List
  - Not capable of operator programmable scan list
- Harris P3300
  - No Encryption
- Kenwood TK-5320 Firmware 2.18 (Checksum 33E4), Software 2.33 & 2016 Program Settings
  - Will not mix Conventional and Trunking in the same Zone; and
  - Cannot Scan Conventional and Trunking in the same List
- Motorola APX-1000 (Range 1 Only) Firmware 14.05.00 or above
  - Only 512 Channels;
  - Not capable of multi-key Encryption; and
  - No AES Encryption
- Motorola XTS-1500 (Range 1 Only)
  - No AES Encryption

#### ❖ Mobiles

- Harris M3300
  - No Encryption
- ICOM IC-F9521
  - Cannot Scan Conventional and Trunking in the same List
- Kenwood TK-5820 Firmware 2.18 (Checksum 33E4), Software 2.33 & 2016 Programming Settings
  - Will not mix Conventional and Trunking in the same Zone; and
  - Cannot Scan Conventional and Trunking in the same List
- Motorola APX-1500 (Range 1 Only) Firmware 14.05.00 or above
  - Not capable of multi-key encryption; and
  - No AES Encryption
- Motorola XTL-1500 (Range 1 Only)
  - No AES Encryption

### 3.4 Level 4 (Special Condition Radios) – (Level criteria above)

**Special Note:** *These radios are Special Condition Radios, Caution Should Be Taken before purchasing these radios. Please read the notes and understand the limitations before purchasing.*

❖ **Portables**

- No radios currently in this level.

❖ **Mobiles**

- No radios currently in this level.

**Note:** Most radio manufactures have options when ordering equipment, the tested and approved equipment should be reviewed and the purchaser should ensure that a radio is properly configured for operation on the SIRN before purchasing. Proper Make and Model numbers do not always indicate proper configuration.

#### **4. Previously Approved Equipment:**

**4.1** Equipment listed in this Section is no longer authorized to be newly activated on the SIRN as of the date being placed into this Section. Equipment with currently assigned Radio ID's and active on the SIRN as of the noted date for each radio may continue to be operated on the SIRN.

**4.2 Equipment:**

❖ **Portables**

- Harris P5400 (Effective 04/12/16)
  - Frequency range is 450-470)
- Harris XG15P (Effective 04/12/16)
  - Frequency range is 440-512
  - No AES Encryption

❖ **Mobiles**

- No radios currently in this level.

Digital Mobile Portable Radios

Exhibit A

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Item	Item Spec #	Description	Brand Bid	Brand Model	Estimated Annual Quantity *	Unit Price	Extended Cost
1	3.1.19.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.			1		0.00
2	3.1.19.1.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz, w/AES encryption, Dash Mount, low/med power, remote speaker, and microphone.			1		0.00
3	3.1.19.1.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz, w/AES encryption, Dash Mount, low/med power, remote speaker, and microphone.			1		0.00
4	3.1.19.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.			2		0.00
5	3.1.19.2.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00
6	3.1.19.2.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00

Digital Mobile Portable Radios

Exhibit A

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7	3.1.19.2.3	Hand Held Full Function Control Head for Digital Multi Band Mobile Radio with Remote Mount, remote speaker, and microphone.			2		0.00
8	3.1.19.3	Multi Control Head option for Remote Mount Multi Band Mobile Radio			2		0.00
9	3.1.19.4	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF NO AES encryption, dash mount, low/med power, remote speaker, and microphone.			1		0.00
10	3.1.19.4.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz, NO AES encryption, Dash Mount, low/med power, remote speaker, and microphone.			1		0.00
11	3.1.19.4.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz, NO AES encryption, Dash Mount, low/med power, remote speaker, and microphone.			1		0.00
12	3.1.19.5	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF NO AES Encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00
13	3.1.19.5.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz NO AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00



## Digital Mobile Portable Radios

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14	3.1.19.5.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz NO AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00
15	3.1.19.5.3	Hand Held Full Function Control Head for Digital Multi Band Mobile Radio with Remote Mount			1		0.00
16	3.1.20	Spare microphone for Digital Multi Band Mobile Radio			1		0.00
17	3.1.22	Programming software for Digital Multi Band Mobile Radio			1		0.00
18	3.1.23	Programming Cable for Digital Multi Band Mobile Radio			1		0.00
19	3.1.24	High Power Option for Digital Multi Band Mobile Radio			1		0.00
20	3.1.25	Enable GPS on Digital Multi Band Mobile Radio			2		0.00

Digital Mobile Portable Radios

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Pricing Page

21	3.1.25.1	GPS antenna for Digital Multi Band Mobile Radio			2		0.00
22	3.1.26	AC Power Supply to convert a Digital Multi Band radio into a base station.			1		0.00
23	3.1.27	Desk top style microphone for Digital Multi Band Mobile radio			1		0.00
24	3.1.28	Optional remote mount speaker.			2		0.00
25	3.1.29	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.			2		0.00
26	3.1.31.1	Delete Over-The-Air-Programming feature			1		0.00
27	3.1.32	Enable Over-The-Rekeying feature			1		0.00

## Digital Mobile Portable Radios

## Exhibit A

## Pricing Page

28	3.2.19.1	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.			1		0.00
29	3.2.19.1.1	Digital Single Band Mobile Radio, VHF, 3000 channels, w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.			1		0.00
30	3.2.19.2	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00
31	3.2.19.2.1	Digital Single Band Mobile Radio, VHF, 3000 channels, w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.			1		0.00
32	3.2.19.2.4	Hand Held Full Function Control Head for Digital Single Band Mobile radio with Remote Mount.			1		0.00
33	3.2.19.3	Multi Control Head option for Digital Single Band Mobile Radio w/remote mount			1		0.00
34	3.2.19.4	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, NO AES encryption, dash mount, low/medium power, remote speaker, and microphone.			26		0.00

## Digital Mobile Portable Radios

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35	3.2.19.4.1	Digital Single Band Mobile Radio, VHF, 3000 channels, NO AES encryption, dash mount, low/medium power, remote speaker, and microphone.			1		0.00
36	3.2.19.5	Digital Single Band Mobile Radio, 308-520 MHz, 3000 channels, NO encryption, remote mount, low/med power, remote speaker, and microphone.			1		0.00
37	3.2.19.5.1	Digital Single Band Mobile Radio, VHF, 3000 channels, NO encryption, remote mount, low/med power, remote speaker, and microphone.			1		0.00
38	3.2.20	Spare microphone for Digital Single Band Mobile Radio			1		0.00
39	3.2.21	Programming Software for Digital Single Band Mobile Radio			1		0.00
40	3.2.21	Programming Cable for Digital Single Band Mobile Radio			1		0.00
41	3.2.23	High Power Option for Digital Single Band Mobile Radio			1		0.00

## Digital Mobile Portable Radios

## Exhibit A

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42	3.2.24	Enable GPS on Digital Single Band Mobile Radio			26		0.00
43	3.2.24.1	GPS antenna for Digital Single Band Mobile Radio			26		0.00
44	3.2.25	AC Power Supply to convert a Digital Single Band radio into a base station.			1		0.00
45	3.2.26	Desk top style microphone for Digital Single Band Mobile radio			1		0.00
46	3.2.27	Optional remote speaker for Digital Single Band Mobile Radio			26		0.00
47	3.2.28	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.			1		0.00
48	3.2.31.1	Delete Over-The-Air-Programming feature			1		0.00

## Digital Mobile Portable Radios

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49	3.2.32	Enable Over-The-Air-Rekeying feature			1		0.00
50	3.3.18.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and VHF operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)			1		0.00
51	3.3.18.1.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 700 MHz operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, and spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier1)			1		0.00
52	3.3.18.1.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 800 MHz operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1).			1		0.00
53	3.3.18.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and VHF operation, wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, speaker microphone w/3.5mm audio jack (SIRN Tier 2)			1		0.00
54	3.3.18.2.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 700 MHz operation wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier2)			1		0.00

Digital Mobile Portable Radios

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55	3.3.18.2.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 800 MHz operation wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 2).			1		0.00
56	3.3.19	Programming Software for Digital Multi Band Portable Radio			1		0.00
57	3.3.20	Programming Cable for Digital Multi Band Portable Radio			1		0.00
58	3.3.21	Option for "Public Safety Yellow" housing for Digital Multi Band Portable radio			1		0.00
59	3.3.22	Option to enable GPS feature upon original purchase			1		0.00
60	3.3.23	Spare speaker microphone w/3.5mm audio jack for Digital Multi Band Portable Radio			1		0.00
61	3.3.24	Spare battery for Digital Multi Band Portable radio			1		0.00



### Digital Mobile Portable Radios

## Exhibit A

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62	3.3.25	Spare ac rapid charger for Digital Multi Band Portable Radio			1		0.00
63	3.3.26	Spare antenna for Digital Multi Band Portable Radio			1		0.00
64	3.3.26.1	Spare GPS/Multi Band antenna for Digital Multi Band Portable Radio			1		0.00
65	3.3.28	Spare hard plastic case with 2 ½ inch and 3 inch belt clips.			1		0.00
66	3.3.29	Encryption Key Loader cable (for KVL3000+) for Digital Multi Band Mobile radio.			1		0.00
67	3.3.31.1	Delete Over-The-Air-Programming feature			1		0.00
68	3.3.32	Enable Over-The-Air-Rekeying feature			1		0.00

## Digital Mobile Portable Radios

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69	3.4.18.1	Digital Single Band Portable Radio, 3000 channels, Multi display, 380-520 MHz operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)			1		0.00
70	3.4.18.1.1	Digital Single Band Portable Radio, 3000 channels, Multi display, VHF operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack			1		0.00
71	3.4.18.2	Digital Single Band Portable Radio, 3000 channels, Multi display, 380-520 MHz operation, w/o AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, speaker microphone w/3.5mm audio jack (SIRN Tier 2)			1		0.00
72	3.4.18.2.1	Digital Single Band Portable Radio, 3000 channels, Multi display, VHF operation w/o AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack			1		0.00
73	3.4.19	Programming Software for Digital Single Band Portable Radio			1		0.00
74	3.4.20	Programming Cable for Digital Single Band Portable Radio			1		0.00
75	3.4.21	Option for "Public Safety Yellow" housing for Digital Single Band Portable radio			1		0.00

Digital Mobile Portable Radios

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76	3.4.22	Option to enable GPS feature upon original purchase			1		0.00
77	3.4.23	Spare speaker microphone w/3.5mm audio jack for Digital Single Band Portable Radio			1		0.00
78	3.4.24	Spare battery for Digital Single Band Portable radio			1		0.00
79	3.4.25	Spare ac rapid charger for Digital Single Band Portable Radio			1		0.00
80	3.4.26	Spare antenna for Digital Single Band Portable Radio			1		0.00
81	3.4.26.1	Spare GPS capable for Digital Single Band Portable Radio			1		0.00
82	3.4.28	Spare hard plastic case with 3 inch belt clip			1		0.00

Digital Mobile Portable Radios

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83	3.4.29	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.			1		0.00
84	3.4.31.1	Delete Over-The-Air-Programming feature			1		0.00
85	3.4.32	Enable Over-The-Air-Rekeying feature			1		0.00
<p>Failure to use this form may result in disqualification.</p>							<p><b>Total Bid Amount      0.00</b></p>

STATE OF WEST VIRGINIA  
Purchasing Division

## PURCHASING AFFIDAVIT

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Motorola Solutions, Inc.; Michael Leonard, MSSSI Territory Vice President

Authorized Signature:  Date: June 17, 2019

State of Maryland

County of Anne Arundel, to-wit:

Taken, subscribed, and sworn to before me this 17th day of June, 2019.

My Commission expires October 17, 2021.

AFFIX SEAL HERE



NOTARY PUBLIC



Purchasing Affidavit (Revised 01/19/2018)

Digital Mobile Portable Radios  
Exhibit A  
Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
1	3.1.19.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 5,052.98	\$ 5,052.98
2	3.1.19.1.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 5,052.98	\$ 5,052.98
3	3.1.19.1.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 5,052.98	\$ 5,052.98
4	3.1.19.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	2	\$ 5,159.62	\$ 10,319.24
5	3.1.19.2.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 5,159.62	\$ 5,159.62

Digital Mobile Portable Radios  
Exhibit A  
Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
6	3.1.19.2.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 5,159.62	\$ 5,159.62
7	3.1.19.2.3	Hand Held Full Function Control Head for Digital Multi Band Mobile Radio with Remote Mount, remote speaker, and microphone.	Motorola	O3 control Head	2	\$ 334.10	\$ 668.20
					2		
8	3.1.19.3	Multi Control Head option for Remote Mount Multi Band Mobile Radio	Motorola	multi O5 control Head	1	\$ 370.50	\$ 370.50
9	3.1.19.4	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF NO AES encryption, dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,553.88	\$ 4,553.88
10	3.1.19.4.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz NO AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,553.88	\$ 4,553.88



Digital Mobile Portable Radios  
Exhibit A  
Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
11	3.1.19.4.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz NO AES encryption, Dash Mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,553.88	\$ 4,553.88
12	3.1.19.5	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and VHF NO AES Encryption, Remote Mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,660.52	\$ 4,660.52
13	3.1.19.5.1	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 700 MHz NO AES Encryption, Remote Mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,660.52	\$ 4,660.52
14	3.1.19.5.2	Digital Multi Band Mobile Radio, 3000 channels, 380-520 MHz and 800 MHz NO AES Encryption, Remote Mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 8500_WV	1	\$ 4,660.52	\$ 4,660.52
15	3.1.19.5.3	Hand Held Full Function Control Head for Digital Multi Band Mobile Radio with Remote Mount	Motorola APX	O3 control Head	1	\$ 334.10	\$ 334.10

Digital Mobile Portable Radios  
Exhibit A  
Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
16	3.1.20	Spare microphone for Digital Multi Band Mobile Radio	Motorola APX	Palm Microphone	1	\$ 23.25	\$ 23.25
17	3.1.22	Programming software for Digital Multi Band Mobile Radio	Motorola APX	CPS, Downloadable	1	\$ 299.00	\$ 299.00
18	3.1.23	Programming Cable for Digital Multi Band Mobile Radio	Motorola APX	HKN6184	1	\$ 56.25	\$ 56.25
19	3.1.24	High Power Option for Digital Multi Band Mobile Radio	Motorola APX	APX 8500 HP	1	\$ 16.25	\$ 16.25
20	3.1.25	Enable GPS on Digital Multi Band Mobile Radio	Motorola APX	APX 8500 standard feature, no cost	2	\$ -	\$ -

Digital Mobile Portable Radios  
Exhibit A  
Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
21	3.1.25.1	GPS antenna for Digital Multi Band Mobile Radio	Motorola APX	GPS glass mount antenna	2	\$ 23.25	\$ 46.50
22	3.1.26	AC Power Supply to convert a Digital Multi Band radio into a base station.	Motorola APX	Control Staion Power supply	1	\$ 109.50	\$ 109.50
23	3.1.27	Desk top style microphone for Digital Multi Band Mobile radio	Motorola APX	Desk microphone	1	\$ 123.75	\$ 123.75
24	3.1.28	Optional remote mount speaker	Motorola APX	Ext Speaker	2	\$ 71.25	\$ 142.50
25	3.1.29	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.	Motorola APX	HKN6182, TKN 8531	2	\$ 56.25	\$ 112.50

Digital Mobile Portable Radios  
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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
26	3.1.31.1	Delete Over-the-Air-Programming feature	Motorola APX	No OTAP	1	\$ (64.00)	\$ (64.00)
27	3.1.32	Enable Over-the-Rekeying feature	Motorola APX	Enable OTAR	1	\$ 510.60	\$ 510.60
28	3.2.19.1	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 6500_WV	1	\$ 4,041.14	\$ 4,041.14
29	3.2.19.1.1	Digital Single Band Mobile Radio, VHF, 3000 channels, w/AES encryption, Dash mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 6500_WV	1	\$ 4,041.14	\$ 4,041.14
30	3.2.19.2	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 6500_WV	1	\$ 4,147.78	\$ 4,147.78

Digital Mobile Portable Radios  
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Pricing Page

Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
31	3.2.19.2.1	Digital Single Band Mobile Radio, VHF, 3000 channels, w/AES encryption, Remote mount, low/med power, remote speaker, and microphone.	Motorola APX	APX 6500_WV	1	\$ 4,147.78	\$ 4,147.78
32	3.2.19.2.4	Hand Held Full Function Control Head for Digital Single Band Mobile radio with Remote Mount.	Motorola	O3 control Head	1	\$ 334.10	\$ 334.10
33	3.2.19.3	Multi Control Head option for Digital Single Band Mobile Radio w/remote mount	Motorola	multi O5 control Head	1	\$ 390.00	\$ 390.00
34	3.2.19.4	Digital Single Band Mobile Radio, 380-520 MHz, 3000 channels, NO AES encryption, dash mount, low/medium power, remote speaker, and microphone.	Motorola	APX 6500_WV	26	\$ 3,542.04	\$ 92,093.04
35	3.2.19.4.1	Digital Single Band Mobile Radio, VHF, 3000 channels, NO AES encryption, dash mount, low/medium power, remote speaker, and microphone.	Motorola	APX 6500_WV	1	\$ 3,542.04	\$ 3,542.04

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
36	3.2.19.5	Digital Single Band Mobile Radio, 308-520 MHz, 3000 channels, NO encryption, remote mount, low/med power, remote speaker, and microphone.	Motorola	APX 6500_WV	1	\$ 3,648.68	\$ 3,648.68
37	3.2.19.5.1	Digital Single Band Mobile Radio, VHF, 3000 channels, NO encryption, remote mount, low/med power, remote speaker, and microphone.	Motorola	APX 6500_WV	1	\$ 3,648.68	\$ 3,648.68
38	3.2.20	Spare microphone for Digital Single Band Mobile Radio	Motorola APX	Palm Microphone	1	\$ 23.25	\$ 23.25
39	3.2.21	Programming software for Digital Single Band Mobile Radio	Motorola APX	CPS, Downloadable	1	\$ 299.00	\$ 299.00
40	3.2.21	Programming Cable for Digital Single Band Mobile Radio	Motorola APX	CPS cble	1	\$ 56.25	\$ 56.25

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
41	3.2.23	High Power Option for Digital Single Band Mobile Radio	Motorola	APX 8500, single band	1	\$ 796.70	\$ 796.70
42	3.2.24	Enable GPS on Digital Single Band Mobile Radio	Motorola APX	APX 6500 standard feature	26	0	\$ -
43	3.2.4.1	GPS antenna for Digital Single Band Mobile Radio	Motorola APX	GPS glass mount antenna	26	\$ 23.25	\$ 604.50
44	3.2.25	AC Power Supply to convert a Digital Single Band radio into a base station.	Motorola APX	Control Staion Power supply	1	\$ 109.50	\$ 109.50
45	3.2.26	Desk top style microphone for Digital Single Band Mobile radio	Motorola APX	Desk microphone	1	\$ 123.75	\$ 123.75



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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
46	3.2.27	Optional remote mount speaker for Digital Single Band Mobile Radio	Motorola APX	Ext Speaker	26	\$ 71.25	\$ 1,852.50
47	3.2.28	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Mobile radio.	Motorola APX	HKN6182, TKN 8531	1	\$ 56.25	\$ 56.25
48	3.2.31.1	Delete Over-the-Air-Programming feature	Motorola APX	No OTAP	1	\$ (64.00)	\$ (64.00)
49	3.2.32	Enable Over-the-Rekeying feature	Motorola APX	Enable OTAR	1	\$ 510.60	\$ 510.60
50	3.3.18.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and VHF operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)	Motorola APX	APX 8000_WV	1	\$ 5,579.64	\$ 5,579.64

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
51	3.3.18.1.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 700 MHz operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)	Motorola APX	APX 8000_WV	1	\$ 5,579.64	\$ 5,579.64
52	3.3.18.1.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 800 MHz operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)	Motorola APX	APX 8000_WV	1	\$ 5,579.64	\$ 5,579.64
53	3.3.18.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and VHF operation wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 2)	Motorola APX	APX 8000_WV	1	\$ 5,080.54	\$ 5,080.54
54	3.3.18.2.1	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 700 MHz operation wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 2)	Motorola APX	APX 8000_WV	1	\$ 5,080.54	\$ 5,080.54
55	3.3.18.2.2	Digital Multi Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and 800 MHz operation wo/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 2)	Motorola APX	APX 8000_WV	1	\$ 5,080.54	\$ 5,080.54

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
56	3.3.19	Programming software for Digital Multi Band Portable Radio	Motorola APX	CPS, Downloadable	1	\$ 299.00	\$ 299.00
57	3.3.20	Programming Cable for Digital Multi Band Portable Radio	Motorola APX	CPS USB cable	1	\$ 56.25	\$ 56.25
58	3.3.21	Option for "Public Safety Yellow" housing for Digital Multi Band Portable Radio	Motorola APX	APX yellow housing	1	\$ 16.25	\$ 16.25
59	3.3.22	Option to enable GPS feature upon original purchase	Motorola APX	Standard	1	0	\$ -
60	3.3.23	Spare speaker microphone w/3.5mm audio jack for Digital Multi Band Portable Radio	Motorola APX	Spare RSM	1	\$ 71.25	\$ 71.25

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
61	3.3.24	Spare battery for Digital Multi Band Portable radio	Motorola APX	spare battery	1	\$ 109.50	\$ 109.50
62	3.3.25	Spare ac rapid charger for Digital Multi Band Portable Radio	Motorola APX	AC Charger	1	\$ 123.75	\$ 123.75
63	3.3.26	Spare antenna for Digital Multi Band Portable Radio	Motorola APX	Dual band antenna	1	\$ 23.25	\$ 23.25
64	3.3.26.1	Spare GPS/Multi Band antenna for Digital Multi Band Portable Radio	Motorola APX	Dual band antenna w/ GPS	1	\$ 23.25	\$ 23.25
65	3.3.28	Spare hard plastic case with 2 1/2 inch and 3 inch belt clips	Motorola APX	Case	1	\$ 31.50	\$ 31.50

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
66	3.3.29	Encryption Key Loader cable (for KVL3000+) for Digital Multi Band Portable radio.	Motorola APX	cable	1	\$ 56.25	\$ 56.25
67	3.3.31.1	Delete Over-the-Air-Programming feature	Motorola APX	Del Otap	1	\$ (64.00)	\$ (64.00)
68	3.3.32	Enable Over-the-Rekeying feature	Motorola APX	En OTAR	1	\$ 510.60	\$ 510.60
69	3.4.18.1	Digital Single Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 1)	Motorola APX	APX 6000_WV	1	\$ 4,366.30	\$ 4,366.30
70	3.4.18.1.1	Digital Single Band Portable Radio, 3000 channels, Multi display, VHF operation w/AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack	Motorola APX	APX 6000_WV	1	\$ 4,366.30	\$ 4,366.30

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
71	3.4.18.2	Digital Single Band Portable Radio, 3000 channels, Multi display, 380-520 MHz and operation w/o AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack (SIRN Tier 2)	Motorola APX	APX 6000_WV	1	\$ 3,867.20	\$ 3,867.20
72	3.4.18.2.1	Digital Single Band Portable Radio, 3000 channels, Multi display, VHF operation w/o AES encryption, antenna, battery, rapid style ac charger, hard plastic case with 3" belt clip, spare battery, and speaker microphone w/3.5mm audio jack	Motorola APX	APX 6000_WV	1	\$ 3,867.20	\$ 3,867.20
73	3.4.19	Programming software for Digital Single Band Portable Radio	Motorola APX	CPS, Downloadable	1	\$ 299.00	\$ 299.00
74	3.4.20	Programming Cable for Digital Single Band Portable Radio	Motorola APX	CPS USB cable	1	\$ 56.25	\$ 56.25
75	3.4.21	Option for "Public Safety Yellow" housing for Digital Single Band Portable Radio	Motorola APX	APX yellow housing	1	\$ 16.25	\$ 16.25

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
76	3.4.22	Option to enable GPS feature upon original purchase	Motorola APX	Standard	1	0	\$ -
77	3.4.23	Spare speaker microphone w/3.5mm audio jack for Digital Single Band Portable Radio	Motorola APX	Spare RSM	1	\$ 71.25	\$ 71.25
78	3.4.24	Spare battery for Digital Single Band Portable radio	Motorola APX	spare battery	1	\$ 109.50	\$ 109.50
79	3.4.25	Spare ac rapid charger for Digital Single Band Portable Radio	Motorola APX	AC Charger	1	\$ 123.75	\$ 123.75
80	3.4.26	Spare antenna for Digital Single Band Portable Radio	Motorola APX	Single band antenna	1	\$ 15.75	\$ 15.75



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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
81	3.4.26.1	Spare GPS capable for Digital Single Band Portable Radio	Motorola APX	single band antenna w/ GPS	1	\$ 15.75	\$ 15.75
82	3.4.28	Spare hard plastic case with 3 inch belt clip	Motorola APX	Case	1	\$ 31.50	\$ 31.50
83	3.4.29	Encryption Key Loader cable (for KVL4000) for Digital Multi Band Portable radio.	Motorola APX	cable	1	\$ 56.25	\$ 56.25
84	3.4.31.1	Delete Over-the-Air-Programming feature	Motorola APX	Del Otap	1	\$ (64.00)	\$ (64.00)
85	3.4.32	Enable Over-the-Rekeying feature	Motorola APX	En OTAR	1	\$ 510.60	\$ 510.60
Failure to use this form may result in disqualification.							Total Bid Amount \$ 241,538.44

Items not requested; but, included below

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Item	Item Space #	Description	Brand Bid	Brand Model	Estimated Annual Quantity*	Unit Price	Extended Cost
86	3.5	Single Band UHF antenna	Motorola APX	UHF Antenna	1	\$ 40.02	\$ 40.02
87	3.6	Single Band VHF Antenna	Motorola APX	Vhf Antenna	1	\$ 44.16	\$ 44.16
88	3.7	All Band Antenna	Motorola APX	All Band Antenna	1	\$ 65.55	\$ 65.55