

**City of Presque Isle
Invitation to Bid
For**

Presque Isle Police and Fire Department
New Digital Radio System

Sealed Proposals are being accepted for the purchase of reliable, efficient, radio functionality for the PIPD & PIFD's operational groups and shall accommodate the communication requirements between these operational groups.

Proposals will be received by the City of Presque Isle, Maine at the City Clerk's office, 12 Second Street, until **2 p.m. on Wednesday September 28, 2011**. Bids will be opened and read aloud beginning at 2 p.m.

All materials and labor required to complete the work will be supplied by the Contractor. The cost and expense of all necessary labor, tools and equipment required to complete the work will be included in the prices stated in the Proposal. Specifications can be obtained on the City Website at www.presqueisle.govoffice2.com.

A bid package can also be obtained at the following locations:

- Office of the Fire Chief, 43 North Street – telephone 764-2538;
- Finance Department, 12 Second Street – telephone 760-2718.

The City of Presque Isle is an Equal Opportunity Employer.

Date: August 31, 2011

City of Presque Isle
Bid Request
For

Digital Radios and a Repeater to replace current
equipment at the Presque Isle Police and Fire
Departments.

City of Presque Isle
REQUEST for BID

Section 1. General

The City of Presque Isle (City) cordially invites bids from qualified individuals and firms (Bidder) for digital radios and a repeater to replace current equipment at the Presque Isle Police and Fire Departments. The work generally consists of providing equipment according to the technical specifications.

Section 2. Standard Conditions

1. The Bidder shall be responsible for all taxes, fees, and permits required of this bid.
2. The Bidder shall be responsible for the proper disposal of any waste generated by this bid.
3. The Bidder shall serve in the capacity of an independent contractor and shall not be deemed an employee or representative of the municipality. The Bidder understands and agrees that he is an Independent Contractor for whom no Federal or State Income Tax will be deducted by the City, and for whom no retirement benefits, medicare, survivor benefit insurance, group life insurance, vacation, and sick leave, worker's compensation, unemployment, and similar benefits available to City employees will accrue. The Bidder further understands that annual information returns as required by the Internal Revenue Code or State of Maine Income Tax Law will be furnished to the Bidder for his Income Tax records.
4. Unless otherwise stated, all bids shall be in a lump sum basis, FOB Presque Isle, in U.S. funds.
5. Any bids received after the date and time of opening will be rejected and returned unopened to the Bidder.
6. Unless otherwise stated, all bids shall be submitted on the bid form supplied by the City.
7. The City Manager shall have the authority to reject any or all bids and to waive any informalities as he deems necessary. The City Manager shall retain the right to determine what constitutes informality. In his/her decision, the City Manager may consider if other bidders are placed at a disadvantage by its decision. In all cases, the decision of the City Manager shall be final.
8. Fax bids will not be accepted.
9. No bid may be withdrawn for a period of 30 days after the bid opening.

10. The Bidder shall be responsible to provide all labor, materials, and equipment necessary to perform the work or supply the material(s) requested in this bid and shall insure a timely completion of the work involved or the material(s) supplied in conformance with generally work standards. All work shall be in conformance with all applicable local, state, and federal laws, ordinances, rules, and regulations.
11. The Bidder shall not sublet, sell, transfer, assign, or otherwise dispose of this agreement or any portion thereof, or of his right, title, or interest therein, without written request to and written consent of the City Manager, except to a bank. No sub-contracts or transfer or agreement shall in any case release the Bidder of his liability under this agreement.
12. The performance of work or the delivery of material under the contract may be terminated by the City in whole, or from time to time, in part whenever for any reason the City Manager shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to the Bidder of a Notice of Termination specifying the extent to which such termination becomes effective. The contract shall be equitably adjusted to compensate for such termination and the contract modified accordingly. In any event, this contract shall be terminated on the contract end date.
13. The Bidder agrees to indemnify, defend, and save harmless the City, its officers, agents, and employees from any and all claims and losses accruing or resulting from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, materialmen, laborers, and any other person, firm or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged by the Bidder in performance of this contract and against any liability, including costs and expenses, for violation of proprietary rights, copyrights, or rights of privacy, arising out of publication, translation, reproduction, delivery, performance, use of disposition of any data furnished under this contract or based on any libelous or other unlawful matter contained in such data.
14. Any and all notebooks, maps, plans, working paper or other work produced in the performance of this contract are the property of the City.
15. Failure to provide requested information at the time the bid is submitted may result in the bid being rejected.

Section 3. Bidder Qualifications

Each bidder must meet the following qualifications:

1. The Bidder must be a factory authorized dealer, be able to perform warranty work, and provide parts and service.
2. Bidder must provide warranty information. Bidder must provide manufacturer's literature and/or catalog cuts with applicable information.

Section 4. Submitting a Bid

All bids must be submitted in a sealed envelope clearly marked "**Radio Bid**" on the outside of the envelope. Bids must be received **Wednesday September 28, 2011 at 2:00 pm** local prevailing time at the City Clerk's Office, 12 Second Street, Presque Isle, Maine 04769-2459. Any questions pertaining to this bid shall be directed to the Fire Chief at 207-764-2538.

All bids will be opened and read aloud in public on **Wednesday September 28, 2011 at 2:00 pm at the above address**. Bidders are welcome to attend the bid opening.

Section 5. Instructions to Bidders

Bidder Qualifications: The statement of bidder's qualifications (Attachment A) must be completed and submitted with the bidder's proposal. Failure to do so may result in disqualification.

Contract Award and Funding: Services under this contract will be funded by the City of Presque Isle and will be subject to all their applicable requirements.

Exceptions: *Exceptions to the specifications are to be listed separately, attached to and submitted with the bidder's proposal.* If the services offered by a bidder under the specifications meets the specifications except for minor factors or reasonably small amounts in dimensions, and if it is determined by the City that these minor variations from the specifications do not prevent the services being bid from performing as satisfactorily or from being as good as services fully meeting these specifications, then those minor variations in specifications may be waived by the City, if it deems it to be to its advantage, and the services with the waived variations in specifications will be accepted as fully meeting these specifications.

Verbal Agreements: No verbal agreements or conversations with any agent or employee of the City either before or after execution of the contract shall affect or modify any of the terms or obligations contained in any of the contract documents.

Tax Exemption: The City of Presque Isle is exempt from payment of taxes imposed by the State of Maine and/or the Federal Government. Such taxes must not be reflected in the bid price.

Timing of the Work: The project is expected to be completed within 30 days after the awarding of the bid.

Payment Schedule: Payment will consist of a lump sum payment upon receipt of an invoice at the completion of the project.

SECTION 6: BID AND PERFORMANCE BONDS

You must furnish to following bond satisfactory to the City:

The purpose of this bond is to protect the City should you elect not to undertake the project. The City will then be paid the difference between your bid and the next lowest bid.

*A **Performance Bond** in an amount equal to the contract price, this bond must be obtained prior to signing this agreement. The purpose of the performance bond is to make money available to the City in the event that you do not complete part or all of your duties under this contract. The money will be used to get the work completed. A copy of the bond shall be included in the bid.*

Section 7. Technical Specifications

System Features - General

The system shall provide reliable, efficient, radio functionality for PIPD & PIFD's operational groups and shall accommodate the communications requirements between these operational groups. The Radio System shall be provided with the features, functions, and capabilities as described herein.

Required Features and Functions

The proposed Radio System and protocol shall support the following features and functions:

1. The system and/or user equipment must support digital transmissions on a 6.25 equivalent, 12.5 kHz TDMA channel. The system and/or user equipment must also support analog transmissions on 12.5 kHz channels.
2. The system and/or user equipment must follow ETSI DMR Tier 2 standards based operation.
3. The repeater/base station equipment must be able to manage two independent time slots on a single 12.5 kHz frequency using TDMA (Time Division Multiple Access) technology transmissions.
4. The system shall use a non-proprietary over the air signaling protocol for communications between the infrastructure and the subscriber radios.
5. All user portable radios must incorporate increased digital battery life over analog by operating in a TDMA digital mode.
6. All user portable radios must include battery technology for automatic maintenance and

reconditioning.

7. All radio equipment must support the use of radio subscriber accessories for automatic gain control and noise suppression.

8. The system and/or user equipment must include imbedded digital forward error correction technology to increase clarity throughout range.

9. The system and/or user equipment must include imbedded software based privacy or scrambling to protect user privacy during communications. This imbedded scrambling must support at least 40-bit protection with multiple keys.

10. All user radios must include Emergency Declaration capability with single button activation. The Emergency Declaration shall provide visual and audible status notification to specified radios. The Vendor's Proposal shall include a detailed description of the Emergency Declaration features and programming options.

11. The system and/or user equipment must include imbedded GPS receivers in both the portable and mobile radios. Any additional external receivers or accessories shall not be required to receive or send GPS information. GPS shall be supported in a repeater and/or talk around mode.

12. The system and/or user equipment must include imbedded text messaging capabilities. Any additional external receivers or accessories shall not be required to receive or send text message information. The user equipment must support unit-to-unit canned and user creatable text messaging capability. The user equipment must support at least 140 scrolling characters. Text messaging shall be supported in a repeater and/or talk around mode.

13. The system and/or user equipment must include imbedded telemetry capabilities. Any additional external receivers or accessories shall not be required to receive or send telemetry information. Telemetry shall be supported in a repeater and/or talk around mode.

14. The system and/or user equipment must include intelligent channel steering capabilities to revert GPS traffic to alternate channels to control and manage data traffic more efficiently on the system.

15. Automatic Vehicle Location (AVL) information shall include vehicle identification, location, speed and time of transmission.

16. Voice shall take priority over data transmissions on radios transmitting both voice and data information.

17. The system user shall have the option of applying for licensure to detailed radio interface information. This information shall allow the radio user, if capable, to develop custom applications.

Multi-Site Capabilities

1. The system shall be a multi-site, multi-channel radio network capable of supporting multiple interconnected user groups/fleets. Various entities and work groups must be able to communicate

without regard to geographic location.

2. The system design should allow connection of any site in the network to any site in the network over IP (Internet Protocol) to achieve the required network connectivity between sites. The network infrastructure should allow the system operator the flexibility of being able to configure the network in a linear, star or mesh type of network configuration. Third party equipment shall not be required for this connection.

3. System capability should allow expandability to support additional and/or future sites, radio channels, and users. The network should have the capability of being expanded to at least 15 sites.

4. The system design should allow seamless roaming between sites. The system shall provide for automatic radio switching between network sites without any action by the user to provide communications without any message interruption throughout the designated coverage area.

Trunking Capabilities

1. The system shall support the ability to trunk voice or data traffic to available system channels to maximize efficiency. The Trunking system shall automatically detect a P-T-T as a request to talk, and automatically select and assign a voice path for the communications of the selected talk group. Various entities and work groups must be able to communicate without regard to channel selection, radio site selection or geographic location.

2. The system Trunking protocol shall not require the use of a dedicated control channel, allowing voice/data to simultaneously trunk on all system channels.

3. While in trunked mode, the subscriber access time, defined as PTT to system access, shall not exceed 900 milliseconds when a trunked voice path is available.

4. The system must support the ability to simultaneously trunk twelve (12) voice paths.

5. The system must support twenty-four (24) additional data revert paths for additional data traffic needs.

6. The system shall be capable of supporting data communications that include GPS location services, text messaging, and a data interface for other customer specific and supplied applications including telemetry, system performance management, VoIP dispatch, AVL, work-order management, and email connectivity.

7. In the event of a repeater failure, the system shall continue to maintain its trunked operation, regardless of which repeater fails.

8. In the event of frequency interference, the system shall continue to maintain its trunked operation, regardless of the channel being interfered with.

9. The system shall provide a software application that allows the system administrator the ability to monitor and control the radio repeaters within the system. The Repeater Diagnostics and Reporting system shall provide the following capabilities: a. Repeater Diagnostics that include enabled-disabled station status, Transmitter power status, available channels and RSSI levels.

- b. Repeater Controls that include changing channels, transmitter power, station reset and repeater knockdown.
- c. Repeater Alarm Reporting including Receiver lock failure, transmit lock detect, station overheating, AC Power supply failure and detect and report of failure.
- d. The application shall operate over the IP network or locally via USB or GPIO connection.

User Equipment - General

All user radios proposed (portables, mobiles, and control stations) shall fully support all features and functions available for user radios in the proposed system. The pricing for user radios shall include all programming and installation services required for operation. At the appropriate time during the implementation process the Vendor will be expected to develop detailed programming personalities and talk group configurations with input and assistance from PIPD & PIFD. User radio programming shall not be performed until PIPD & PIFD's Project Manger has approved the programming personalities and issued a written notice to proceed with radio programming.

All proposed portable, mobile, and control station radios shall conform to the minimum standards specified by TIA/EIA-603, Section 5 "Standards for Portables".

Portable Radios

The proposed portable radio should be rugged, reliable, and provide the following minimum features:

- Emergency button.
- 12.5 kHz analog channel bandwidth.
- 12.5 kHz TDMA (6.25e) digital channel bandwidth.
- Alphanumeric display.
- 1000 Channels.
- Digital Signaling - PTT ID, Private Call, All Call, Call Alert, Escalating Alerts, Emergency, Radio Check, Radio Disable/Enable and Remote Monitor
- Analog Signaling - MDC1200: PTT ID, Emergency and Call Alert
- 16-position channel selector.
- Group scan.
- External microphone and speaker connections.
- Li-ion battery.
- Full line of optional accessories.
- Optional intrinsically safe model.
- 6 Programmable buttons (supporting both long and short press)
- Meets IP57 submersibility with or w/o accessory cover attached

Proposed portable radio units shall conform to applicable Portable Military Standards 810C, 810D, and 810E. The portable transmitters and receivers must further meet or exceed the following specifications.

Portable Transmitter

Frequency Range	XXX - YYY MHz
Frequency Stability	+/- 1.5ppm (Non-GPS) +/- 0.5ppm (GPS)
RF Power Output	1 – 4 or 5 watts
Channel Spacing	12.5 or 25 kHz
Adjacent Channel Power	60 dB @ 12.5 kHz

Portable Receiver

Frequency Range	XXX - YYY MHz
Channel Spacing	12.5 or 25 kHz
Analog Sensitivity(12 dB SINAD)	0.35 uV / .22uV (typical]
Digital Sensitivity	5% BER: 0.3 uV
Adjacent Channel Selectivity	60dB at 12.5 kHz @ (TIA603) 45dB at 12.5 kHz @ (TIA603C)
Spurious Rejection	70 dB
Audio Distortion	3%

Mobile Radios

The proposed mobile radio should be rugged, reliable, and provide the following minimum features:

- Emergency button.
 - 12.5 kHz analog channel bandwidth.
 - 12.5 kHz TDMA (6.25e) digital channel bandwidth.
 - Alphanumeric display.
 - 1000 Channels.
 - Digital Signaling - PTT ID, Private Call, All Call, Call Alert, Escalating Alerts, Emergency, Radio Check,
Radio Disable/Enable and Remote Monitor
 - Analog Signaling - MDC1200: PTT ID, Emergency and Call Alert
 - Group scan.
 - Full line of optional accessories.
 - Optional high power unit (at least 40 watts).
 - 4 Programmable buttons (supporting both long and short press)
- Mobile and control station transmitters and receivers must further meet or exceed the following specifications.

Mobile/Control Station Transmitter

Frequency Range	XXX - YYY MHz
Frequency Stability	+/- 1.5ppm (Non-GPS) +/- 0.5ppm (GPS)
RF Power Output	1-25 watts (low power model) 40 or 45 watts (high power model)
Channel Spacing	12.5 or 25 kHz
Adjacent Channel Power	60 dB @ 12.5 kHz

Mobile/Control Station Receiver

Frequency Range	XXX - YYY MHz
Channel Spacing	12.5 or 25 kHz
Analog Sensitivity (12 dB SINAD)	0.30 uV/ .22uV (typical]
Digital Sensitivity	5% BER: 0.3 uV
Adjacent Channel Selectivity	65dB at 12.5 kHz (w/ TIA603) 50dB at 12.5 kHz (w/ TIA603C)
Spurious Rejection	75 dB
Audio Distortion	3%

Base Station Transmitter

The base station transmitters shall conform to the minimum standards specified by TIA/EIA-603, Section 4.2, and the Code of Federal Regulations 47, Part 90, Subpart I. The transmitters shall further meet or exceed the following specifications.

Frequency Range	XXX - YYY MHz
Frequency Stability	+ / - 0.5 ppm
RF Power Output	40+ watts (continuous)
Channel Spacing	12.5 kHz
Audio Distortion	3%

Base Station Receiver

The base station receivers shall conform to the minimum standards specified by TIA/EIA-603, Section 4.1. The base station receivers shall further meet or exceed the following specifications.

Frequency Range	XXX - YYY MHz
Analog Sensitivity(12 dB SINAD)	0.30 uV/ .22uV (typical]
Digital Sensitivity	5% BER: 0.3 uV
Adjacent Channel Selectivity	65dB at 12.5 kHz @ (TIA603) 50dB at 12.5 kHz @ (TIA603C)
Spurious Rejection	75 dB
Audio Distortion	3%

Site Assembled Rack Equipment

It is expected that the Vendor will design, prepare and assemble each system network site equipment into a compact, industry rated, equipment rack. The system equipment rack may include all associated network components of base station repeaters, duplexer, transmitter combiners, receiver multicoupler, band pass/band reject filter and AC and lightning protection 19-inch rack mounted. System documentation shall include detailed drawings of these racks and the associated equipment and termination cabling.

Service and Support

The Vendor will maintain a Manufacturer approved parts and service facility; this facility will be capable of bench repairs to subscriber units, 24-hour emergency field service for any of the infrastructure components, and Manufacturer warranty service. Vendors having facilities beyond a 50 mile radius of Presque Isle, Maine are required to describe in writing the time frame for emergency repairs to the infrastructure components.

Equipment List

Police Department

- 11 Motorola XPR4550 VHF Mobile Radio – 45W
- 11 Removal of existing analog radio equipment and re-installation of new digital radio Equipment in PIPD vehicles.
- 17 Motorola XPR6550 VHF Portable Radio
- 17 Motorola Speaker Microphone w/3.5mm Audio Jack
- 1 Motorola XPR4550 VHF Control Station and antenna system to be installed at PIPD dispatch center and interfaced with existing communications console.

Fire Department

- 12 Motorola XPR4550 VHF Mobile Radio – 45W
- 12 External Speaker for Motorola XPR4550 Mobile Radio
- 12 Removal of existing analog radio equipment and re-installation of new digital radio Equipment in PIFD vehicles.
- 24 Motorola XPR6550 VHF Portable Radio
- 24 Motorola Speaker Microphone w/3.5mm Audio Jack
- 1 Motorola XPR4550 VHF Control Station and antenna system to be installed at PIPD dispatch center and interfaced with existing communications console.

Police and Fire Department

- 1 Motorola MTR3000 VHF Repeater – 100W – w/Duplexer, antenna system and installation.

End of Technical Specifications

STATEMENT OF BIDDER'S QUALIFICATIONS
(If desired, the bidder may submit additional information.)

1. Name of Bidder: _____

Bidder is: Corporation () Partnership() Individual()

2. Permanent Main Office Address: _____

3. Federal ID Number (Employer's ID No.): _____

4. When organized: _____

4. If a corporation, where incorporated? _____

5. How many years have you been engaged in business under your present firm or trade name?

6. Similar Projects Completed:

7. Similar Projects Under Construction:

9. A financial statement may be required of the successful bidder prior to award.

The Undersigned hereby authorize and requests any person, firm, or corporation to furnish any information requested by the Sponsor in verification of the recitals comprising this Statement of the Bidder's Qualifications.

Attest

Name of Bidder: _____

By; _____

Title: _____

Dated: _____

BID FORM

Deadline: September 28, 2011

Submit to: City Clerk
12 Second Street
Presque Isle, ME 04769-2459

Company name: _____

Address: _____

Telephone/Fax: _____

The following bid is submitted in response to the Request for Bid to Provide Digital Radio Equipment and Repeater.

The undersigned certifies that the information provided on the Bid Form is correct and that the Equipment bid meets or exceeds the specifications.

Have all specifications been met? _____yes _____no If no, have all deviations been listed on a separate page attached to this Bid Form? _____yes _____no

Latest date of completion if the is order placed 2 weeks after bid opening: _____

Base Price Bid: \$ _____

Signature: _____

Printed Name: _____

Date: _____

By affixing my signature I certify that I have the authority to submit and bid and further certify that this bid meets or exceeds all requirements of the bid.