



**Addendum No. 1
RFP 17-201**

MOTOROLA DIGITAL TWO- WAY RADIO SYSTEM UPGRADE

Each recipient of this Addendum No. 1 to the Request for Proposal (RFP) who responds to the RFP acknowledges all of the provisions set forth in the RFP and agrees to be bound by the terms thereof. This addendum shall modify, clarify, change or add information and clarification and become part of the above referenced RFP.

POSTPONEMENT OF DUE DATE

From: Tuesday, November 22, 2016 at 3:00 PM

To: Tuesday, December 6, 2016 at 3:00 PM

CHANGE TO THE TERM "MOTOROLA"

The term "Motorola" is replaced by "Project Objective" on page 2 and page 3.

CLARIFICATION:

1. The project objective states to implement a Link Capacity Plus solution, however on the repeater specifications, it states Single Site Capacity Plus. Is there a second site to link? If so, where is it? If not, then this should be a Single Site Capacity Plus system.
A: This is a single site only
2. How many radios from each group (T&D Electric, Sysops, etc.) are to be tracked using GPS?
XPR7550e portables: all 78? SL7550e portables: 0 XPR5550e mobiles: all 71?
A: All portable and all mobile radios shall be tracked via dispatch console(s)
3. Should the 2 Dispatchers at Water Department have access to only the Water Department talk group, or to all 6 talk groups?
A: Water Department Only
4. Should the 2 Dispatchers at Electric Department have access to only the Electric Department talk group, or to all 6 talk groups?
A: All 6 talk groups
5. Should the 1 Dispatcher at Meter Shop Department have access to only the Meter Shop Department talk group, or to all 6 talk groups?
A: Meter Shop only



6. How many mobile phone users will need access to voice services?

A: None

7. How many mobile phone users will need access to GPS services?

A:None

8. What are the addresses for the dispatch locations at Water Department, Electric Department, and the Meter Shop Department?

A:

*Water Plant
301 College Street
Lake Worth, FL 33460*

*Electric Department
116 College Street
Lake Worth, FL 33460*

*Meter Shop
1900 2nd Avenue North
Lake Worth, FL 33461*

9. What functions/capabilities/features below are you asking for at each of the (5) dispatch positions:

- a) Voice dispatch for all 6 talk groups? *Yes*
- b) GPS mapping? *Yes*
- c) Text messaging? *Yes*
- d) System monitoring/data logging/diagnostics/printing? *Yes*
- e) Separate monitors for voice dispatch, GPS mapping, and system monitoring? *Yes*
- f) What size and type (21", 24", touchscreen, etc.) monitors do you request at each dispatch position? *City will provide computer and display console for all dispatchers*
- g) Do you want desk mics, headsets, and/or footswitches at the 5 primary dispatch locations?
Desk mics

10. Are there any other city departments or locations in the city requiring separate base control station for secondary dispatching?

A: No



11. The Project Objective describes the requirement for a Motorola Linked Capacity Plus system. Are all repeaters to be co-located at the City's water tower? If so, then is a single site Capacity Plus system sufficient? With a single site Capacity Plus system, there is no need to spend additional money on multi-site software that is not required, unless the repeaters will be installed at multiple locations.

A: A single site Capacity Plus system is sufficient

12. Do you want us to include mobile radio installation pricing in the proposal, or just an hourly installation rate? If so, we will require a matrix breakdown by department for each type of vehicle that you require mobile radios to be installed? Are there existing VHF mobile radios in each vehicle that need removal?

A: Yes, fixed rate.

A: All existing VHF mobile radios shall be removed and returned to the City

13. Are the (2) SLR5700 repeaters that you recently purchased installed and operational? If so, are they installed in a rack? If installed in a rack, what is the rack dimensions?

A: The SLR5700 repeaters have not been installed.

A: Rack Specifications: <https://www.ddbunlimited.com/wp-content/uploads/2013/05/LTEE-D-new-Enclosure-Manual.pdf>

14. Are all of the repeater software licenses and hardware listed below included in the (2) existing SLR5700 repeaters:

- HKLV4427 Single site Capacity Plus trunking
- HKVN4048 Enhanced Scheduled GPS License
- HKVN4177 Restricted Access to System Security
- HKVN4205 Data Network Application Interface (IP Wireline Data Gateway)
- HKVN4055 Enhanced Scheduled GPS License
- PMLE4548 Rack Mount Duplexer/Filter Enclosure Kit (includes mounting screws)
- DSCP10725 UNTUNED UHF Duplexer - Un-tuned 406-500 MHz
- HFE8459 UHF Preselector, 440-474 MHz
- DSJ9782 HP Procurve 2530-24 Ethernet Switch or equivalent

A: Yes

15. Do you have or require a UPS to be installed at the repeater site and dispatch console locations to protect the equipment from a power surge, lightning strike, power failure, etc?

A: The City will provide UPSs for all repeaters and dispatchers consoles.



16. Are the (2) existing COL45 Series UHF Meander Collinear antennas and coaxial cables properly grounded at the top and bottom of the cable run, and do they have proper lightning surge protection installed?

A: Yes

17. Are you looking for system redundancy, in the event of repeater or site failure?

A: Repeater redudancy

18. Is this a single site Capacity Plus system or a multi-site Linked Capacity Plus system? If multi-site, what are the addresses of all the sites? Do all talk groups need to be accessed at all sites?

A: This is a single site only

19. What EIDs/Licenses have been purchased and/or activated in current SLR5700 repeaters?

- *HKLV4427 Singe site Capacity Plus trunking*
- *HKVN4048 Enhanced Scheduled GPS License*
- *HKVN4177 Restricted Access to System Security*
- *HKVN4205 Data Network Application Interface (IP Wireline Data Gateway)*
- *HKVN4055 Enhanced Scheduled GPS License*

20. Do customer supplied repeaters include duplexers and preselectors? Rack space for additional repeater and ancillary equipment? Power?

A: No duplexers and preselectors - Rack space and power only

21. Is there network connectivity at the tower site?

A: Yes

22. Will any existing installed cable, connectors, grounding equipment, antenna system, etc. be utilized? If so, do you have an equipment list? Will there be a site walk?

A: Existing installed cable, connectors, grounding equipment, and antenna system shall be utilized.

A: Please see antenna specifications

23. Are there any future plans to expand capacity of the system? More talkgroups and/or users?

A: 4 additional talk groups

24. Do all 6 talk groups need to be recorded?

A: Yes

25. How many concurrent tablet and/or mobile users need to be connected to a talkgroup at a given time? Do mobile users need access to both voice and GPS maps?

A: Talkgroup communication shall be resitricted to radios and dispatcher concole(s) only



27. Will both the XPR7550e and XPR5550e need to be tracked via GPS?

A: Yes

28. Does the tower site have generator backup and/or UPS or do we need to provide UPS equipment?

A: *The City will provide generator backup and UPS equipment*

CHANGE TO EXHIBIT "A"

See below the revised Exhibit "A" Rev.1

EXHIBIT "A" Rev.1

SCOPE OF SERVICES

INTRODUCTION

The City of Lake Worth is requesting proposals from qualified individuals or firms for the supply and deployment of a digital radio system which will cover all of City of Lake Worth Service territory. The project includes, at a minimum: seventy eight (78) digital portable radios, seven (7) digital portable radios, seventy one (71) digital mobile radios, GPS tracking system on a dedicated data revert channel, and a Radio 2 Radio Recording System for dispatchers.

BACKGROUND

This project is being pursued to allow The City of Lake Worth to have integrated communications with all of its service branches across all of its service area, thereby enhancing communications, and simplifying operating requirements. This system will allow clear communications across the entire City of Lake Worth service area, allowing City of Lake Worth to provide safer, more efficient customer service.

SCOPE OF WORK

The successful proposer shall be responsible for providing, installing and ensuring the proper operation of the radio equipment. Successful proposers must be a factory authorized dealer or distributor of the product bid and is qualified and equipped to offer in-house service, maintenance and technical training assistance, including availability of spare parts and replacement units as set by the manufacturer guidelines for the proposed equipment. The successful proposer will design and submit the radio system to comply with the current regulations as well as the requests contained in this RFP from the City of Lake Worth.



SPECIAL PROVISIONS

Proposer is responsible for the procurement of all necessary band-width and will ensure that there will be sufficient data coverage for all City of Lake Worth radios. The City currently has a registered UHF FCC license, UHF Antenna, and two (2) SL 5700 Motorola Digital repeaters that are to be integrated into the system solution by the successful proposer. Propose only new, unused equipment. No obsolete or soon-to-be-phased out equipment may be included in the proposal. The City will not accept refurbished equipment or equipment deemed to be a factory second or blemished. The City of Lake Worth reserves the right to reject any equipment with visible damage.

Proposals shall consist of one manufacturer of equipment to complete the entire two-way radio system. The City will not accept the mixing of multiple brands of equipment to complete the system. Exceptions may be accepted on non-radio equipment upon approval of The City of Lake Worth staff. Installation of equipment will be at a location and time to be determined by City of Lake Worth staff.

Proposals shall be based at a minimum 6 talk-groups consisting of the following channels in each:

1. Water Department - 2 Dispatchers
2. Electric Department - 2 Dispatchers
3. Meter Shop Department - 1 Dispatcher
4. Public Services Department
5. Engineering Department
6. Maintenance

The talk-around channel should be accessible to all radios on the trunk.

RADIO INVENTORY

CLWU Radio Count 10/12/16								
No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS (IMPRES)	PORTABLE MULTI-CHARGER STATION (6 slots / IMPRES)	TALKGROUP NAME	TALKGROUP #
1	T&D ELECTRIC	15	19	0	1	3	LWU - ELECTRIC	2
2	SYSOPS	3	0	0	3	0	LWU - ELECTRIC	2
3	ENGINEERING	7	0	0	5	0	LWU - ELECTRIC	2
4	METERSHOP	11	11	0	11	0	LWU - METERSHOP	3
5	CITYHALL	1	0	0	1	0	LWU - ELECTRIC	0
TOTAL		37	30	0	21	3		

No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS	PORTABLE MULTI-CHARGER STATION (6 slots)	TALKGROUP NAME	TALKGROUP #
1	WATER TREATMENT PLANT	13	3	0	7	1	LWU - WATER	1
2	WATER DISTRIBUTION	20	20	0	14	2	LWU - WATER	1
TOTAL		33	23	0	21	3		

No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS	PORTABLE MULTI-CHARGER STATION (6 slots)	TALKGROUP NAME	TALKGROUP #
1	PUBLIC SERVICES	15	18	0	15	0	PUBLIC SERVICES	4
TOTAL		15	18	0	10	0		



GPS CAPABILITIES AND FLEET MONITORING

Proposals should include a GPS tracking system that allows users to track and manage fleets in real-time via a web browser on a desktop, tablet or mobile phone. Manage mobile assets, increase personnel safety, audit vehicle routes and create comprehensive reports to optimize efficiency. The application should be easy to operate and can be applied to a wide range of applications for both mobile and portable radio fleets.

SYSTEM MONITORING

A system-monitoring terminal or web application that will provide total radio system monitoring and diagnostics. The System Monitoring package shall include all necessary equipment, software, cables and wiring for installation and proper operation by City of Lake Worth employees and meet or exceed the following specifications:

- User-friendly operation
- Complete monitoring of the City of Lake Worth radio system
- Data logging with the ability to print or store activity
- Identify users and activity
- Complete system diagnostics

WARRANTY

The successful bidder shall provide warranty on all equipment under this Contract for a period of three (3) years. The warranty shall guarantee the equipment to be free of defects in materials and workmanship under normal usage and conditions for this period. The warranty shall begin upon City of Lake Worth's final acceptance of all work. In the event of shipment of equipment, the successful bidder shall pay shipping costs to return or replace the equipment to the City of Lake Worth. The warranty shall also cover any costs incurred to reprogram and reinstall the equipment. Bidders are expected to include with their bid all warranty information pertaining to the equipment proposed in the Bid.

TESTING

The successful bidder shall perform comprehensive and thorough testing of the two-way radio system once work is complete. Final approval from the City of Lake Worth is contingent, but not limited to, the system passing all phases of testing.



TRAINING

The successful bidder shall provide comprehensive and thorough training to City of Lake Worth staff to adequately operate and maintain the two-way radio system. This training shall include, but not be limited to, proper operation, user programming, and troubleshooting of radios and related equipment.

MAINTENANCE

The successful proposer shall provide a comprehensive maintenance service plan to include testing, replacement, and repair as necessary of all equipment installed for the entire radio system. Include the cost for the first three (3) years of the City of Lake Worth two-Way Radio, along with the cost for an additional two (2) one-year options.

COMPLIANCE

Only propose equipment that will properly operate according to all FCC and Federal, State, and local regulations.

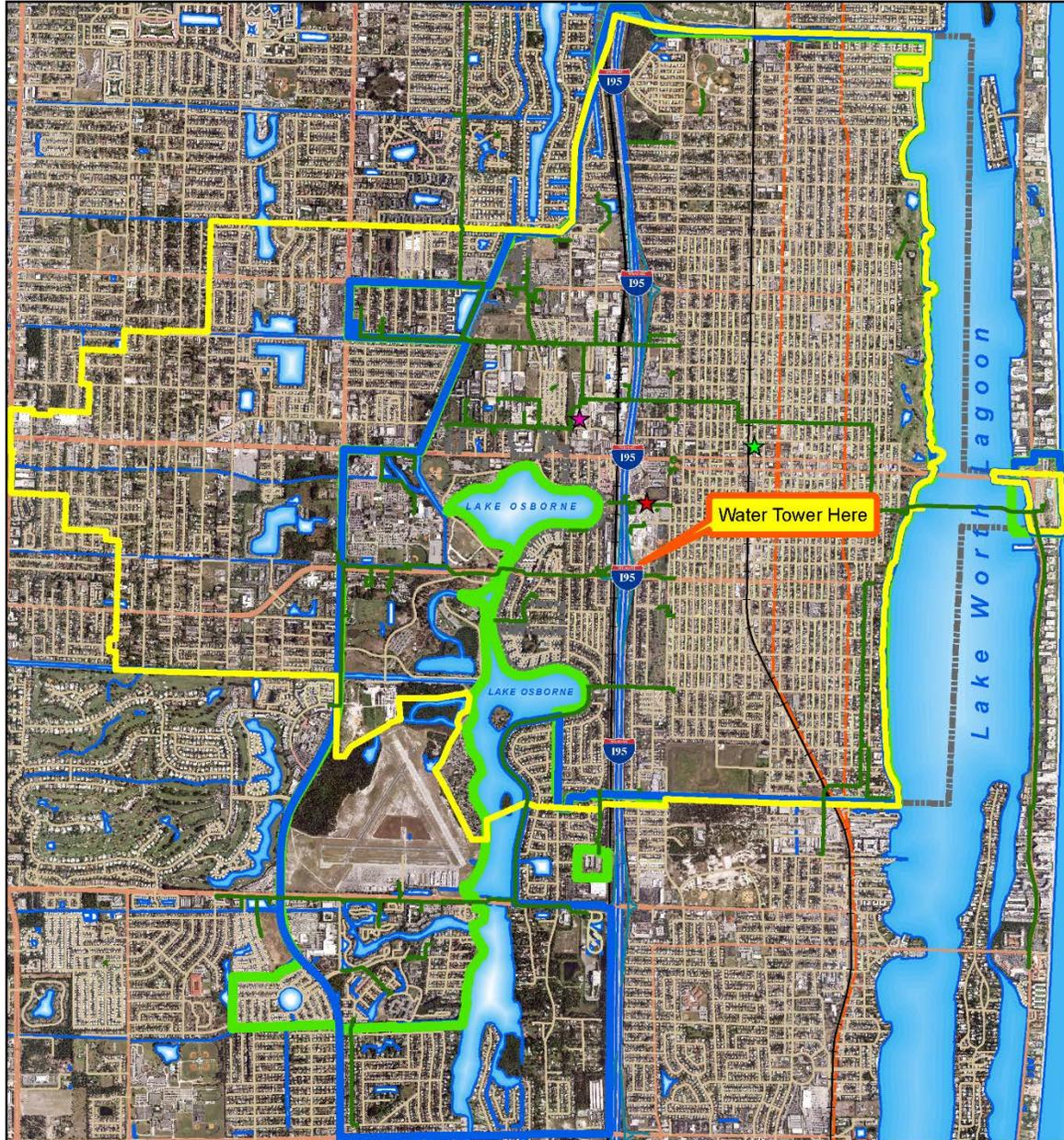
CERTIFICATIONS

The successful bidder shall have a Certified Service Center in the State of Florida and be a authorized service partner employing certified, insured technicians authorized to provide onsite in-warranty repair services.



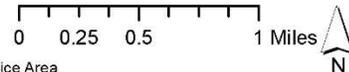
City of Lake Worth
The Art of Florida Living

City Utilities Service Area



Map Legend

- ★ Electric Administration
- ★ Information Technologies
- ★ System Operations
- Sanitary Service Area
- Water Tower
- Electric Service Area
- Potable Service Area
- Sewer Force Mains
- Municipal Boundary





UHF ANTENNA SPECIFICATIONS

COL45 Series

UHF Meander™ Collinear

380-520 MHz



This range of Meander™ collinear antennas have been specifically designed for UHF applications requiring high performance, strong bandwidth and exceptional PIM specifications.

The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With each dipole element being printed on a single sided PCB the susceptibility to passive intermodulation is practically eliminated. Placing the elements on a board not only controls PIM but also removes manufacturing variations so that each and every antenna will provide the same pattern, tilt and VSWR characteristics over it's operating bandwidth. Consistency is guaranteed and a cost effective, reliable, high performance, low PIM antenna results.

The radome and mounting tube support this high performance antenna in a truly rugged package. Everything about these Meander™ collinears reflects the new demand for unquestioned performance electrically and physically in the most demanding public safety and industrial applications, where nothing can be left to chance.

The antenna has set frequency bands with the common bands generally available in stock.

- Strong Bandwidth
- Internally DC grounded for lightning protection and reduction of precipitation noise
- Tightly controlled radiation patterns for optimum coverage
- Patented PCB design for optimum RF pattern stability
- Full band coverage
- **Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum performance.**



USA Patent: 6,909,403

European Patent: 1411588

Australian Patent: 2003255049

China Patent: ZL200310100548.5

India Patent: 254674



RFI
2023 Case Parkway North
Twinsburg, OH 44099
Phone: 330 486 0706
Fax: 330 486 0705

Copyright RF Industries Pty Ltd 2013. Subject to change without notice.

P.41248-3

rfiamericas.com



UHF ANTENNA SPECIFICATIONS (cont.)

COL45 Series

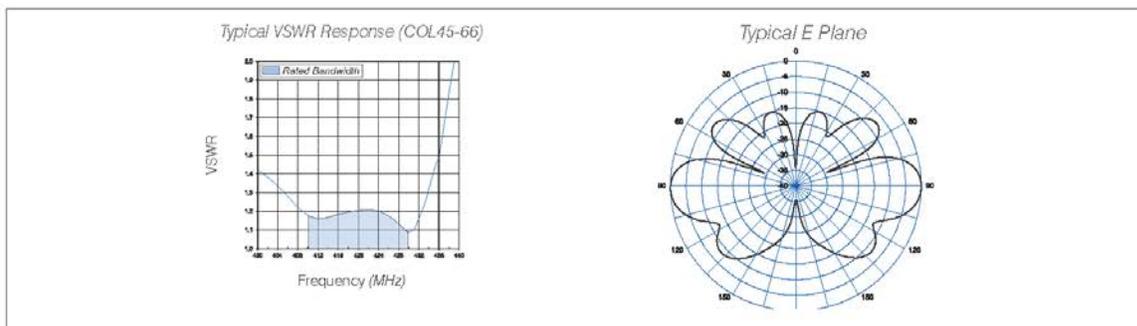
UHF Meander™ Collinear

380-520 MHz



Electrical Specifications						
Model Number	COL 45-58	COL45-65	COL45-66	COL45-70	COL45-71	COL45-72
Nominal Gain dBi (dB)	7 (9.1)					
Frequency MHz	380 - 400	400 - 420	400 - 430	450 - 470	470 - 490	490 - 520
Tuned Bandwidth MHz	20	20	30	20	20	30
VSWR	<1.5:1					
Nominal Impedance Ω	50					
Vertical Beamwidth*	12.5					
Horizontal Beamwidth*	Omni +/- 0.5dB					
Input Power Wats	250					
Passive IM 3rd order (2x20W) dBc	-150					
Peak Instantaneous Power kW	25					

Mechanical Specifications							
Model Number	COL 45-58	COL45-65	COL45-66	COL45-70	COL45-71	COL45-72	
Construction	Composite fiberglass sky blue radome, aluminum mounting tube						
Length in	132	122	119	111	107	103	
Radome Diameter in	1.5						
Weight lbs	9			8			
Shipping Weight lbs	25			23			
Shipping Dimensions inches	H	3					
	W	3					
	L	138	128	128	118	114	110
Termination	7/16" DIN fixed female						
Mounting Area in	20" x 2" diam. aluminum						
Suggested Clamps (not included)	UC12						
Projected area ft ²	no ice	1.6	1.5	1.5	1.4	1.3	1.3
	with ice	2.7	2.5	2.5	2.2	2.1	2.0
Lateral (Thrust) @ 100mph lbs	40	37	37	34	33	32	
Wind Gust Rating mph	>150						
Torque @ 100mph ft/lbs	163	135	130	106	98	88	



RFI
2023 Case Parkway North
Twinsburg, OH 44087
Phone: 330 486 0706
Fax: 330 486 0705

Copyright RF Industries Pty Ltd 2013 Subject to change without notice.



RADIO STATION AUTHORIZATION

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



**Federal Communications Commission
Wireless Telecommunications Bureau**

RADIO STATION AUTHORIZATION

LICENSEE: LAKE WORTH, CITY OF

ATTN: UTILITIES DIRECTOR
LAKE WORTH, CITY OF
1900 2ND AVE. NORTH
LAKE WORTH, FL 33461

Call Sign WQPL571	File Number 0007018541
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number 20151106103633	

FCC Registration Number (FRN): 0001803972

Grant Date 06-20-2012	Effective Date 11-10-2015	Expiration Date 06-20-2022	Print Date 11-11-2015
---------------------------------	-------------------------------------	--------------------------------------	---------------------------------

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1 Address:** 1/4 MILE SOUTH OF 115 SOUTH COLLEGE
City: LAKE WORTH County: PALM BEACH State: FL
Lat (NAD83): 26-36-35.2 N Long (NAD83): 080-04-02.9 W ASR No.: Ground Elev: 7.0
- Loc. 2 Area of operation**
Operating within a 40.0 km radius around fixed location 1
- Loc. 3 Area of operation**
Land Mobile Control Station meeting the 6.1 Meter Rule: PALM BEACH county, FL

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	000153.69500000	FB2	1		11K0F3E 7K60FXW	100.000	200.000	54.0	59.0	06-20-2013
1	1	000461.57500000	FB2	1		11K0F3E 7K60FXW	50.000	50.000	54.0	59.0	11-10-2016
1	1	000461.70000000	FB2	1		11K0F3E 7K60FXW	50.000	50.000	54.0	59.0	11-10-2016

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.



RADIO STATION AUTHORIZATION (cont.)

Licensee Name: LAKE WORTH, CITY OF

Call Sign: WQPL571

File Number: 0007018541

Print Date: 11-11-2015

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
2	1	000158.26500000	MO	100		11K0F3E 7K60FXW	50.000	45.000			06-20-2013
2	1	000158.26500000	MO	100		11K0F3E 7K60FXW	5.000	4.000			06-20-2013
2	1	000466.57500000	MO	100		11K0F3E 7K60FXW	50.000	45.000			11-10-2016
2	1	000466.70000000	MO	100		11K0F3E 7K60FXW	50.000	45.000			11-10-2016
3	1	000158.26500000	FX1	2		11K0F3E 7K60FXW	50.000	50.000			
3	1	000466.57500000	FX1	2		11K0F3E 7K60FXW	50.000	50.000			
3	1	000466.70000000	FX1	2		11K0F3E 7K60FXW	50.000	50.000			

Control Points

Control Pt. No. 1

Address: 115 SOUTH COLLEGE

City: LAKE WORTH County: PALM BEACH State: FL Telephone Number: (561)586-1701

Associated Call Signs

Waivers/Conditions:

NONE



CLWU Radio Count 10/12/16								
No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS (IMPRES)	PORTABLE MULTI-CHARGER STATION (6 slots / IMPRES)	TALKGROUP NAME	TALKGROUP #
1	T&D ELECTRIC	15	19	0	1	3	LWU - ELECTRIC	2
2	SYSOPS	3	0	0	3	0	LWU - ELECTRIC	2
3	ENGINEERING	7	0	0	5	0	LWU - ELECTRIC	2
4	METERSHOP	11	11	0	11	0	LWU - METERSHOP	3
5	CITYHALL	1	0	0	1	0	LWU - ELECTRIC	0
TOTAL		37	30	0	21	3		

No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS	PORTABLE MULTI-CHARGER STATION (6 slots)	TALKGROUP NAME	TALKGROUP #
1	WATER TREATMENT PLANT	13	3	0	7	1	LWU - WATER	1
2	WATER DISTRIBUTION	20	20	0	14	2	LWU - WATER	1
TOTAL		33	23	0	21	3		

No.	DEPARTMENT	PORTABLE RADIOS	MOBILE RADIOS	DESKTOP RADIOS	PORTABLE SINGLE CHARGERS	PORTABLE MULTI-CHARGER STATION (6 slots)	TALKGROUP NAME	TALKGROUP #
1	PUBLIC SERVICES	15	18	0	15	0	PUBLIC SERVICES	4
TOTAL		15	18	0	10	0		

The City reserves the right to delete or amend any of the services as listed and described herein in negotiations with the selected firm.

END OF SCOPE OF SERVICES

Proposers must acknowledge receipt of this Addendum No. 1 in the space provided below. This Addendum forms an integral part of the RFP documents and therefore must be executed and submitted with you proposal.

Issued By: City of Lake Worth
Financial Services
November 16, 2016

Signed By: Hirut Darge
Hirut Darge
Purchasing Agent

PROPOSER/Company

Company Name: _____

Signed By: _____ Print Name: _____

Title: _____ Date: _____