



## **Wireless System Upgrade**

### **Request for Proposal And Response Document**

*Company Response for:* \_\_\_\_\_

**August 25, 2023**

**PLEASE NOTE: MANDATORY MEETING ON PAGE 3**

**THIS IS A REQUIRED MEETING FOR ALL WHO SUBMIT PROPOSALS**

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## **Invitation to Submit Proposal**

August 25, 2023

Dear Vendor:

The Village of Hoffman Estates invites you to submit a sealed proposal for:

### **Wireless System Upgrade/Update**

The enclosed proposal form(s) **must** be used in submitting the proposal. Proposal must be addressed as follows:

**Village of Hoffman Estates  
Information Technology Department  
Wireless System Upgrade/Update  
1900 Hassell Road  
Hoffman Estates, Illinois 60169**

Proposals will be received until - **3:30PM CDT, Tuesday, September 19, 2023.**

**Interested vendors must attend a mandatory pre-proposal meeting on 9/5/2023 at 1:00 p.m. at the Hoffman Estates Village Hall located at 1900 Hassell Rd., Hoffman Estates IL 60169.**

The required Contractor's Certification forms must be completed and returned with the proposal.

The Village reserves the right to reject any or all proposals if the evidence submitted by, or investigation of, such vendor(s) fails to satisfy the Village that such vendor(s) is properly qualified to carry out the obligations of the contract and to complete work contemplated therein. The Village of Hoffman Estates further reserves the right to waive any minor irregularities or minor defects in the proposal, which do not affect the price nor constitute some type of substitution for a designated item, and to accept the proposal, which is in the best interest of the Village. Conditional proposals will not be accepted. Strikeouts or addition of conditions or provisions or insertion of substitutes shall be reason for rejecting a proposal without any specification of reason for the rejection. Any request for information shall be made to Darek Raszka, Director of Information Technology by email at RFP@vohe.org, but the response may not be used as a condition to any proposal being submitted.

Sincerely,

Darek Raszka  
Director of Information Technology

## **Public Notice**

### **NOTICE TO Vendors**

**The Village of Hoffman Estates is accepting sealed proposals for:**

#### **Wireless System Upgrade/Update**

**Sealed proposals will be accepted until 3:30PM CDT, Tuesday, September 19, 2023 at the Hoffman Estates Village Hall.**

RFP Documents and Scope of Work will be available on Friday, August 25, 2023, after 12:00PM. Proposal specifications will be available through our website at <http://www.hoffmanestates.org>. To obtain proposal specifications, please follow these instructions:

- Go to: <http://www.hoffmanestates.org>
- Go to Business tab
- Click on RFPs area for the document
- Download the RFP in PDF format
- Download W-9 Form from <http://www.irs.gov/pub/irs-pdf/fw9.pdf> and complete
- Submit with your response

**Direct any questions to Darek Raszka, Director of Information Technology at [RFP@vohe.org](mailto:RFP@vohe.org).**

## Proposed Project Timeline

TIMELINE - AS OF 8/25/2023

ACTION	DATE	TIME	LOCATION
SPECIFICATIONS RELEASED	8/25/2023	12:00PM	<a href="http://www.hoffmanestates.org">www.hoffmanestates.org</a>
PRE-PROPOSAL VENDOR MEETING	9/5/2023	1:00PM	Hoffman Estates 1900 Hassell Road Hoffman Estates IL
SITE TOUR (weather permitting)	9/5/2023	2:00PM	Begins at 1900 Hassell
SITE TOUR (if needed)	9/6/2023	9:00AM	Begins at 1900 Hassell
PROPOSAL DEADLINE	9/19/2023	3:30PM	Hoffman Estates 1900 Hassell Road Hoffman Estates IL

# **Instructions to Vendor**

## **1. GENERAL**

- a. Proposal shall be hardcopy, signed and submitted in an envelope properly marked with the title of the proposal and date and time of opening. Unsigned proposals will be rejected. **Note, this document is your response.**
- b. Seal and deliver proposals to the Information Technology Department on or before the time scheduled for the opening. Late proposals will not be opened nor considered.
- c. All proposals shall be made using the forms response areas included in this RFP document.
- d. The Village Board is not subject to Federal Excise Tax or Illinois Retailers Occupational Tax.
- e. Prices quoted shall include all charges for packing, transportation and delivery to the locations designated on the proposal specification and installation as called for in the proposal specifications.
- f. Correspondence shall be addressed to the Director of Information Technology, Darek Raszka.
- g. Oral, telephonic, telegraphic, facsimile or electronically transmitted bids will not be accepted.

## **2. ERRORS AND OMISSIONS**

All proposals shall be submitted with each space properly completed. The special attention of vendors is directed to the policy that no claim for relief because of errors or omissions in the proposal will be considered, and vendors will be held strictly to the proposals as submitted. Should a vendor find any claimed discrepancies in, or omissions from, any of the documents, or be in doubt as to their meanings, vendor shall advise the purchasing official first orally, followed by written (FAX, Email attachment or letter) with specification of the claimed problems which must be received during regular working hours at least 10 days before the date set for proposal opening so that a written notification can be prepared by any purchasing official, who will issue the necessary clarifications to all prospective vendor by means of addenda.

## **3. PROPOSALS**

All proposals will be considered to be firm for a period of sixty (60) days from the date established for the opening of proposals.

## **4. WITHDRAWAL OF PROPOSALS**

Proposals may be withdrawn by letter, or telegram, or fax received by the Village or in person prior to the time and date established for the opening of bids.

## **5. INVESTIGATION OF VENDORS**

- a. The purchasing official will make such investigation as is necessary to determine the ability of the vendor to fulfill proposal requirements. The vendor shall furnish such information as may be requested and shall be prepared to show completed installations of equipment, types of service or supplies similar to those included in the proposal.
- b. The Village Board reserves the right to reject any proposal if it is determined that the vendor is not

properly qualified to carry out the obligations of the contract. The Village Board reserves the right to reject any or all proposals, to waive irregularities and to accept that proposal which is considered to be in the best interest of the institution. Any such decision shall be considered final. All items proposed shall be new unless otherwise specified in the requirements.

#### **6. VENDOR APPLICATION AND W-9 FORM**

The Village of Hoffman Estates requires that a current W-9 form be included with your sealed proposal. This form can be found at <http://www.irs.gov/pub/irs-pdf/fw9.pdf>. Submit the first page of the form with a signature attached to this document with your response.

#### **7. COMPLIANCE WITH LEGISLATION**

It shall be mandatory upon the Contractor(s) to whom the contract is awarded and upon any sub-Contractor thereof to pay to all laborers, workmen and mechanics employed by them not less than the general prevailing rate of wages in the locality for each craft or type of workman or mechanic needed to perform such work and the general prevailing rate for legal holiday and overtime work as ascertained by the Department of Labor. Vendors are required to increase wages as necessary during the term of this contract so as to keep current with prevailing wage rates. No changes will be allowed in the amount of this contract as additional compensation for such changes.

#### **8. SIGNATURE CONSTITUTES ACCEPTANCE**

The signing of these proposal forms shall be construed as acceptance of all provisions contained herein.

#### **9. CONTRACTS**

The successful vendor will be required to enter into a contract incorporating the terms and conditions of this proposal.

#### **10. EQUAL EMPLOYMENT OPPORTUNITY**

During the performance of this contract (whether or not federal funds are involved) the Contractor agrees as follows:

- a. The Contractor will not unlawfully discriminate against any employee or applicant for employment because of age, race, creed, color, sex, religion, ancestry, marital status, handicap, military status, unfavorable discharge from military service or national origin, as those terms are contained in the Illinois Human Rights Act (775ILCS 5/1-10 et seq., hereinafter "unlawful discrimination". The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated equally during employment, without unlawful discrimination. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- b. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without unlawful discrimination.

## **11. COMPLETION DELIVERY TIME**

If delivery time for materials will exceed thirty (30) days after receipt of a purchase order, vendor shall state the delivery time by each respective item. All prices must be quoted FOB Destination. Shipments shall become property of consignee after delivery and acceptance. Regardless of statements to the contrary, payment terms will begin no sooner than the date of delivery of goods.

## **12. EVALUATIONS**

The Village Board reserves the right to reject any and all proposals, to waive any technicalities in the proposal and to award each item to a different vendor or all items to a single vendor unless otherwise noted on proposal request, and to determine whether in the opinion of the Village Board: (1) an early delivery date is entitled to more consideration than price, (2) an earlier delivery date is to be disregarded because of the reputation of the vendor for not meeting delivery dates, (3) a vendor is not a responsible bidder and should be disregarded. The Village Board will authorize the release of purchase orders upon acceptance of proposals. In the event of pricing errors, the unit count(s) listed will prevail and be considered accurate.

## **13. EXAMINATION OF DOCUMENTS AND SITE**

Before submitting a proposal for work on any project, each vendor shall carefully examine the project site and the contract documents, fully inform itself of existing conditions and limitations of the project sites, rely entirely upon its own judgment in making the proposal, and include in its own proposal all sums sufficient to provide all work required by the contract documents. After opening of proposals, no additional allowance will be made for changes in project scope and/or price due to work, which would have been apparent, by examination of the documents and sites. By submitting a proposal, each vendor shall be held to represent that vendor has made the examination in complete detail and has determined beyond doubt that the documents and existing conditions are sufficient, adequate and satisfactory for completion of the work.

## **14. PERFORMANCE BONDS - LABOR AND MATERIAL PAYMENT BOND REQUIREMENTS**

Within ten days of the date of the Notice of Award, the successful Contractor shall enter into a formal contract with the Village Board and shall provide a Performance Bond and a Labor and Material Payment Bond, each in the full amount of the contract. Each bond shall be in accordance with AIA Document A311. The Contractor shall pay the cost of premiums for said bonds. The bonds shall be signed and sealed by an authorized representative of the bonding company and authorized officer or representative of the Contractor, and a certificate of the authority of those signing the bonds, if not officers, shall be attached thereto.

The Performance Bond and the Labor and Material Payment Bond shall guarantee the performance of the duties placed on the Contractor by the Prevailing Wage Act, as well as all other duties undertaken pursuant to the contract with the Village Board, and shall indemnify the Village Board from any liability or loss resulting to the Village Board from any failure of the Contractor fully to perform each or all of said duties.

The Performance Bond and the Labor and Material Payment Bond herein provided shall be placed with a Surety company or companies having a policy holder's rating not lower than "A" and a financial rating not lower than "AAA" in Best's Insurance Guide (current edition).



**15. BID SECURITY**

A Bid Bond is not required for this project.

**16. SCOPE OF WORK**

See Attachment 8 for the Scope of Work and Materials Requirements for this project. Also see Attachment 9 for the Cable Installation Standards

**17. INSURANCE REQUIREMENTS**

In submission of this proposal, the Contractor is certifying that the firm has all insurance coverages required by law or would typically be expected for a firm conducting this type of business. In addition, the Contractor is certifying that they have at least the following coverages:

<u>Type of Insurance</u>	<u>Occurrence</u>	<u>Liability Limits</u>	
		<u>Each</u>	<u>Aggregate</u>
<b>GENERAL LIABILITY</b>			
Bodily Injury	\$1,000,000		\$3,000,000
Property Damage	\$1,000,000		\$3,000,000
Contractual Insurance-Broad Form	\$1,000,000		\$3,000,000
<b>AUTOMOBILE LIABILITY</b>			
Bodily Injury	\$1,000,000		\$1,000,000
Property Damage	\$1,000,000		\$1,000,000

This insurance must include non-owned, hired, or rented vehicles, as well as owned vehicles.

**WORKMEN'S COMPENSATION & OCCUPATIONAL DISEASES:** Statutory for Illinois

Employers Liability Coverage: \$1,000,000 per accident

NOTE: The specifications may require higher limits or additional types of insurance coverages than shown above and the contractor will be required to furnish a certificate of proof of insurance coverages.

With respect to the insurance required herein, the Contractor shall provide such insurance naming the Village, the Village Board and its members individually, and its employees and agents as **additional named insured**. The Contractor shall also purchase and maintain such insurance as will protect the institution from and against all claims, damages, loss and expenses, including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense, (1) is attributable to bodily injury to or destruction of tangible property (other than the work itself), including the loss of use resulting there from, and (2) is caused in whole or in part by a negligent act or omission of the Contractor, Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable, regardless of whether or not it is caused in part by a party to whom insurance is afforded pursuant to this paragraph.

It is MANDATORY within ten (10) days after the bid award, that the Certificate(s) of Insurance shall be submitted to the Village Risk Manager for approval.

**18. TOTAL PRICE FOR ALL ITEMS PROPOSED**

A total proposed dollar amount, regardless of whether or not the vendor is proposing all items, must be entered in the appropriate section of the proposal form before signing and submitting the proposal.

**19. HOLD HARMLESS AND INDEMNIFICATION**

The Contractor shall assume all liability for, and shall protect, defend, indemnify and hold harmless, the Village, Village Board and its members individually, their officers, employees, servants and agents, from and against all claims, actions suits, judgments, costs, losses, expenses and liabilities of whatsoever kind or nature including reasonable legal fees incurred by owner arising out of:

A. Any infringement (actual or claimed) of any patents, copyrights or trade names by reason of any work performed or to be performed by the Contractor under this contract or by reason of anything to be supplied by the Contractor pursuant to this contract.

B. Bodily injury, including death, to any person or persons (including Contractor's officers, employees, agents and servants) or damage to or destruction of any property, including the loss of use thereof:

-Caused in whole or in part by an act, error or omissions by the Contractor or any Subcontractor or anyone directly or indirectly employed by any of them regardless of whether or not it is caused in part by a party to be indemnified hereunder.

-Arising directly or indirectly out of the presence of any person in or about any part of the project site or the streets, sidewalks and property adjacent thereto.

-Arising directly or indirectly out of the use, misuse or failure of any machinery or equipment used directly or indirectly in the performance of this contract.

**20. LATE PROPOSALS**

Proposals received after the time specified in the Invitation will not be opened or considered. The method of transmittal of the proposal is at the vendor's risk of untimely receipt by the Village Board. The use of Village Board equipment for transmission of proposals is prohibited.

**21. PAYMENT**

Payment to be made within 45 days of the project acceptance. Partial payment may be acceptable at the time of the PO to cover the cost of materials. Ten percent of the project shall be retained for 60 days after the final acceptance date.

## **22. MANUALS**

For equipment, the successful vendor shall supply, at no cost to the Village Board, a detailed service manual, parts list, and list of service locations.

## **23. COMPLETION OF WORK**

Product and installation must be completed as-soon-as-possible. We understand that permits are required from other government agencies and will provide every assistance to expedite approvals.

## **24. PERSONNEL**

If any person employed on the work site was, in the opinion of the Village, intemperate, disorderly, incompetent, willfully negligent or dishonest on the performance of his/her duties, he or she shall be directed by the Contractor to cease work and vacate the job site immediately.

## **26. QUALIFICATIONS**

Vendor must be an authorized dealer and installer of products vendor is proposing on. Vendor must supply a list of references of like products and installations. Your references shall be entered in Attachment 1.

## **27. CANCELLATION**

The Village of Hoffman Estates reserves the right to cancel this contract at any time for reasons of unsatisfactory services.

## **28. SPECIFICATIONS**

All material provided under this contract must be equivalent, meet or exceed the specifications stated in this document.

## **30. ADDITIONAL INFORMATION**

Contact Darek Raszka, Director of Information Technology, by email – [RFP@vohe.org](mailto:RFP@vohe.org).

## Attachment 1 - References

List below the last three (3) businesses or other organizations for which you have provided comparable services.

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1. ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE, and ZIP CODE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
DATE OF SERVICES: \_\_\_\_\_  
DOLLAR AMOUNT OF THE JOB: \_\_\_\_\_

2. ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE, and ZIP CODE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
DATE OF SERVICES: \_\_\_\_\_  
DOLLAR AMOUNT OF THE JOB: \_\_\_\_\_

**REFERENCES (CONTINUED)**

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3. ORGANIZATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE, and ZIP CODE: \_\_\_\_\_  
TELEPHONE NUMBER: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
DATE OF SERVICES: \_\_\_\_\_  
DOLLAR AMOUNT OF THE JOB: \_\_\_\_\_

OFFEROR'S NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

COMMENTS

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**Attachment 2 - Certificate of Eligibility**

720 ILCS 5/33E-11 requires that all Contractors bidding for public agencies in the State of Illinois certify that they are not barred from bidding on public contracts for bid rigging or bid rotation.

The following certification must be signed and submitted with bidder's bid proposal. FAILURE TO DO SO MAY RESULT IN DISQUALIFICATION OF THE BIDDER.

\_\_\_\_\_, as part of its bid for the \_\_\_\_\_ work for Hoffman Estates, 1900 Hassell Road, Hoffman Estates, Illinois 60169, of Cook County, Illinois certifies that said Contractor is not barred from bidding on the aforementioned contract as a result of a violation of either 720 ILCS 5/33E-3 or 720 ILCS 5/33-E4.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
NOTARY PUBLIC

### Attachment 3 - Certificate of Compliance with Illinois Drug - Free Workplace Act

\_\_\_\_\_, having 25 or more employees, does hereby certify pursuant to section 3 of the *Illinois Drug-Free Workplace Act* (30 ILCS 580/3) that it shall provide a drug-free workplace for all employees engaged in the performance of work under the contract by complying with the requirements of the *Illinois Drug-Free Workplace Act* and, further certifies that it is not ineligible for award of this contract by reason of debarment for a violation of the *Illinois Drug-Free Workplace Act*.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
NOTARY PUBLIC

## Attachment 4 - Certificate Regarding Sexual Harassment Policy

\_\_\_\_\_, does hereby certify pursuant to Section 2-105 of the *Illinois Human Rights Act* (775 ILCS 5/2-105) that it has a written sexual harassment policy that includes, at a minimum, the following information: (i) the illegality of sexual harassment; (ii) the definition of sexual harassment under State law; (iii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties; (v) the legal recourse, investigative and complaint process available through the Department of Human Rights and Human Rights Commission; (vi) directions on how to contact the Department of Human Rights and Human Rights Commission; and (vii) protection against retaliation.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
NOTARY PUBLIC



**Attachment 5 - Certificate Regarding Equal Employment Opportunity**

\_\_\_\_\_, does hereby certify pursuant to Section 2-105 of the *Illinois Human Rights Act* (775 ILCS 5/2-105) that it has a written equal employment opportunity policy that is in compliance with all terms and conditions of the Equal Employment Opportunity provisions of the Illinois Human Rights Act.

Firm: \_\_\_\_\_

By: \_\_\_\_\_

(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_

NOTARY PUBLIC

**Attachment 6 - Certificate Regarding Employment of Illinois Workers on Public Works**

\_\_\_\_\_ agrees if at the time the Agreement is executed, or if during the term of the Agreement, there is excessive unemployment in Illinois as defined in the Employment of Illinois Workers on Public Works Act, 30 ILCS 570/0/01 et seq., as two consecutive months of unemployment exceeding 5%, then \_\_\_\_\_ agrees to employ Illinois laborers in accordance with the Employment of Illinois Workers on Public Works Act. An "Illinois laborer" is defined as any person who has resided in Illinois for at least thirty (30) days and intends to become or remain an Illinois resident.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
NOTARY PUBLIC

**Attachment 7 - Non-Collusion Affidavit**

AFFIDAVIT: "I (we) hereby certify and affirm that my (our) proposal was prepared independently for this project and that it contains no fees or amounts other than that for the legitimate execution of this work as specified and that it includes no understanding or agreements in restraint of trade."

The following affidavit must be signed and submitted with bidder's bid proposal. FAILURE TO DO SO MAY RESULT IN DISQUALIFICATION OF THE BIDDER.

\_\_\_\_\_, as part of its bid for the \_\_\_\_\_ work for Hoffman Estates, 1900 Hassell Road, Hoffman Estates, Illinois 60169 certifies that said Contractor is not barred from bidding on the aforementioned contract as a result of a violation of the above Non-Collusion Affidavit.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name & Title)

SUBSCRIBED and SWORN TO before me

This \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
NOTARY PUBLIC

## Attachment 8 - Scope of Work

The Village of Hoffman Estates is requesting a proposal and pricing to install updated wireless point-to-point data transport systems providing bandwidth in the 1 GB range. The upgrade and update process will include relocation of some existing links and addition of two new radio links. The Village has an existing wireless system that is built using Cambium P2P series and operating in licensed spectrum. The current network is operating at 800 Mbps using the Cambium 820s radios.

### The current wireless paths are:

- a. Stonington Water Tower to Westbury Water Tower
- b. Stonington Water Tower to Fire Station 22
- c. Stonington Water Tower to Police Department
- d. Stonington Water Tower to Now Arena
- e. Now Arena to Beacon Pointe Water Tower

### Additional wireless path needed:

- f. Police Department to Aster Water Tower

2. The current equipment is licensed with equipment at the following locations:

<b>Building</b>	<b>Address</b>	<b>Ground Elevation</b>	<b>Tower Top Elevation</b>	<b>Height Above Ground</b>	<b>LAT</b>	<b>LON</b>
Aster	95 Aster Lane	776.00	956.00	180.00	42.04857	-88.07784
Stonington	2150 Stonington Ave.	810.07	960.07	150.00	42.06448	-88.14026
Westbury	1355 Westbury Dr.	852.50	987.50	135.00	42.10302	-88.11285
Now Arena	5333 Prairie Stone Pkwy	857	157		42.0693	-88.2129
Police Department	411 W Higgins Rd.	808	36		42.0459	-88.0903
Beacon Pointe	5795 Beacon Pointe Dr.	840.50	1014.33	173.83	42.06278	-88.22765
Fire Station 22	1700 Moon Lake Blvd	818	29.5		42.0551	-88.1364

## Wireless Path Upgrade Requirements

1. Stonington Water Tower to Westbury Water Tower: The Village of Hoffman Estates seeks to upgrade the existing link between the Stonington and Westbury Water towers to a radio system that will support an approximate 1 Gbps bandwidth throughput.
2. Stonington Water Tower to Fire Station 22: The Village of Hoffman Estates seeks to upgrade the existing link between the Stonington and Fire Station 22 to a radio system that will support an approximate 1 Gbps bandwidth throughput.
3. Stonington Water Tower to Police Department: The Village of Hoffman Estates seeks to upgrade the existing link between the Stonington and Police Department to a radio system that will support an approximate 1 Gbps bandwidth throughput.
4. Stonington Water Tower to Now Arena: The Village of Hoffman Estates seeks to upgrade the existing link between the Stonington and Now Arena to a radio system that will support an approximate 1 Gbps bandwidth throughput.
5. Now Arena to Beacon Pointe Water Tower: The Village of Hoffman Estates seeks to upgrade the existing link between the Now Arena and Beacon Pointe Water tower to a radio system that will support an approximate 1 Gbps bandwidth throughput.
6. New link between Police Department and Aster Water Tower: The Village of Hoffman Estates seeks to install a new link between the Police Department and Aster water tower to a radio system that will support an approximate 1 Gbps bandwidth throughput.

**Pictures of radio locations:**



**Aster Water Tower**

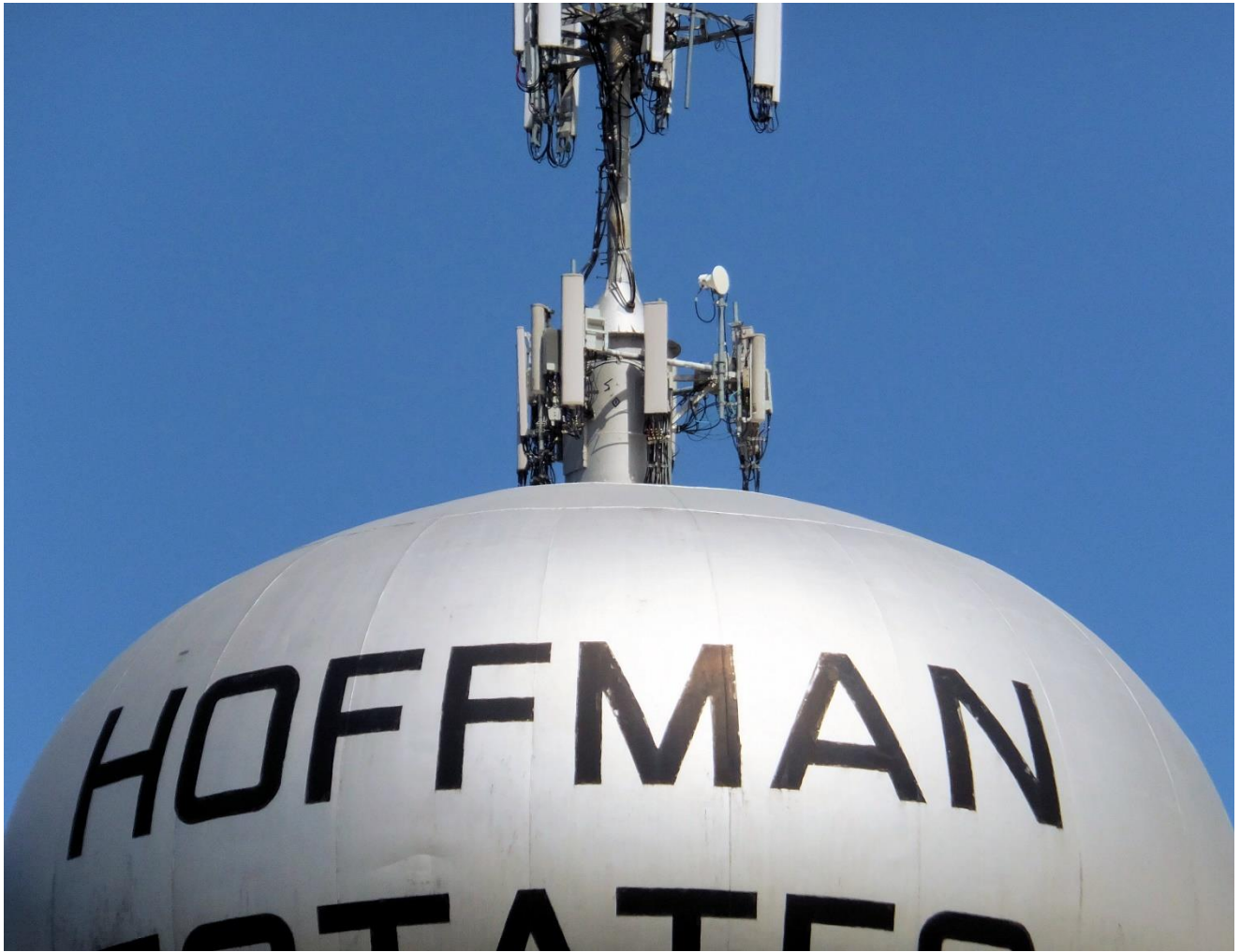


**Police Station**

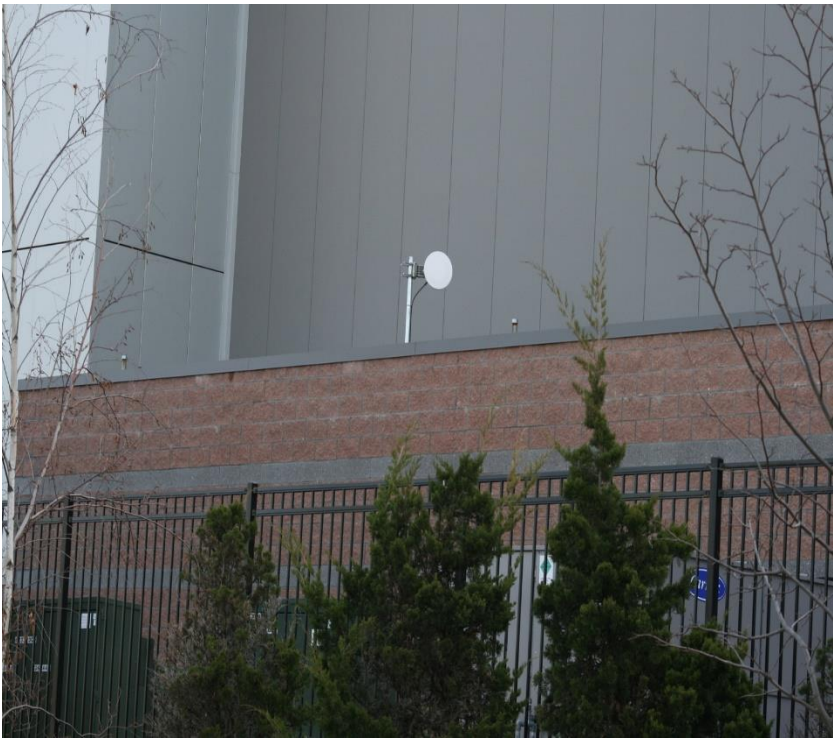


Stonington Water Tower





Westbury Water Tower



**Now Arena**



**Beacon Pointe Water Tower**



**Fire Station #22**

## General Requirements

The following general requirements shall apply to all proposals.

1. The Contractor shall provide all engineering and design documents necessary for the permitting process as-required.
2. The Contractor shall identify all agencies with permitting responsibility and present the engineering documentation.
3. The Village will be available to provide assistance with the permitting process should a meeting with a board or council require their presence.
4. The contract shall provide all turnover documentation with one hard copy and one form of computer readable media. A program shall be provided to read the media if it is not standard to a Microsoft Windows based system.
5. Pricing shall be in the following form and itemized by link generally in the form of:
  - a. Labor
  - b. Materials
  - c. Estimate of permit costs
  - d. 5 year maintenance costs
6. The Contractor shall pay all fees beyond those that are not waived by the Village. Receipts and copies of permits are required for the Village.

Complete the pricing summaries in Attachment 10 to complete your quote. Note, this RFP document is also your quote response.

## Materials Specifications

The existing radios are Cambium 820s units.

As part of your proposal, describe your proposed antenna installation approach for each of the locations. Include pictures and/or drawings as illustrations.

The wireless data system for the Village of Hoffman Estates must provide a scalable multi-megabit data connectivity network to support IP services including IP based voice, video and data transmission. The proposed system should provide throughputs in 800 megabit to 1 gigabit (or higher) per second range and provide low latency that is suitable to support VoIP applications.

The wireless data system must be optimized to support Metropolitan Area Network types of protocols and applications. Some of the characteristics include:

### 1. Frequency Spectrum

The proposed radio systems shall operate in the licensed spectrum licensed to the Village of Hoffman Estates. The vendor shall be responsible for all the necessary paperwork to update the existing license for the spectrum as-required.

### 2. Throughput

The wireless network access point shall be able to provide approximately 1 Gbps of bandwidth when measured in a half-duplex manner. Bandwidth shall be incrementally upgradeable through software

enhancements. Our preference is a radio system that is full duplex as these systems generally provide lower latency and jitter to voice and video traffic. All throughput claims shall be quoted as half duplex with an assumption that a full duplex radio shall have twice the quoted throughput capacity as the aggregated link speed.

### 3. Prioritization

The wireless data network link, from local layer 3 switch to local radio to remote radio and remote layer 3 switch, shall be capable of data prioritization so that traffic may be queued to send latency sensitive voice (VoIP) traffic first, video traffic second, and all remaining traffic on a bandwidth as available basis.

### 4. Bandwidth Allocations and Limiting

The wireless data network shall be able to offer bandwidth management and limiting on a facility-by-facility link basis. Parameters controlling upstream and downstream bandwidth should be independently variable.

### 5. Encryption

The wireless data network shall provide standards based encryption capability for all subscriber data sent across the wireless link such as Data Encryption Standard (DES) or Advanced Encryption Standard (AES). AES is the preferred approach to encryption.

### 6. Management

Network management capability for all active wireless components shall be provided by the wireless data network. SNMP Public and Private MIB access shall be required as a minimum. Remote monitoring tools will use security approaches such as HTTPS and multilayer authentication. Some proprietary interfaces may be acceptable after review.

### 7. Upgrade

Remote upgrades of software images for the radios must be supported.

### 8. Interface

The network interface for data connectivity between the wireless data network modules and the subscriber or network equipment shall be auto negotiated 10/100/1000 Ethernet. The port shall be fully 802.3 compliant and offer full and half duplex operation.

### 9. Equipment Mounting and Lightning Protection

In order to divert lightning strikes away from active components in the wireless data network, radio equipment should be installed no less than 2 feet below the top of the tower or mounting structure. Subscriber modules should be installed no less than two feet below tallest building components or mounting mast. When placing the antenna on an existing mast on a roof top mount or chimney mount, at least two feet of mast should remain above the mounting point for the module. Should the mast need to be larger to support the new antenna the vendor shall be responsible for the providing and installing the new mast. Should the equipment be placed on a water tower, the new equipment cannot block the beacon on the top of the tower. The equipment on the water tower shall be placed in such manner that lightning will not be attracted to the data devices or lightning arrestor devices shall be placed on the tower to divert lightning away from the antenna system. Should the existing antennas and masts be usable, the existing locations are acceptable mounting locations.

## 10. Conduit

Cables may have been run in the open and are directly attached to the water tower structure. Cables run in the open must be shielded or placed in conduit to prevent interference. If conduit and cabling currently exists between the network equipment location at the each facility and the antenna is reused by the contractor, the contractor is responsible for the inspection, repair and certification that may be needed as well as warranty/maintenance.

## 11. AC Power

If 120 Volt AC power is required for the equipment, AC cabling and network/control cabling shall be routed in separate conduit runs. All changes to the existing conduit runs shall be grounded per the current NEC code.

## 12. Grounding

All network interconnect, power and control cabling routed between the equipment building and the access point or between an inside device and an outdoor antenna must be grounded utilizing the appropriate UL approved device for the cable type. Radios shall be grounded in accordance with the standards published in the most current Motorola R56 Publication or equivalent.

## Deliverables

The scope of work shall be written to address the following objectives:

- a. Proposals must include a listing of all services to be provided by the vendor and any services or materials that must be provided by the Village.
- b. For each wireless segment provide an itemized quote that shows materials, labor and five years of monitoring, software upgrades and equipment maintenance.
- c. All work is subject to relevant Village codes, regulations and inspection standards.

In your proposal address the following:

**Warranty** – Describe manufacturer and installer warranties that are provided as part of your proposal. Describe any required maintenance the wireless system will require during the warranty period.

**Repair and Maintenance services** - Maintenance responsibilities and services with related costs should be described.

**Schedule** – Provide a proposed schedule for the work describing tasks and times.

**Ownership of the wireless infrastructure** - The proposal must indicate that the Village will own all wireless equipment and related cabling upon acceptance of the completed installation.

**Cost** - The proposal must address initial capital costs for installation, required maintenance services, and any other related costs. Total costs must be itemized.

**Payment options** - Vendors should submit any proposed payment options.

**Turnover Documentation** - The as-built documents must include a scale map indicating the path of the wireless link. The Contractor will provide final "as built" drawing in ArcView/ArcInfo (ESRI Shape File) format in both hardcopy and digital copy for the records of the respective Village and County agencies. Documentation for the Village must be in AutoCAD format.

**Termination, Performance and Acceptance Testing**

- a. Documentation with installation data and for each wireless link shall be provided to the Village in PDF and digital format.



# **Attachment 10 - Village of Hoffman Estates Pricing Summary**

## **One Sheet per Link**

Contractor \_\_\_\_\_

Link Stonington Water Tower to Westbury Water Tower

Technology Wireless Link

Labor \$ \_\_\_\_\_

Materials \$ \_\_\_\_\_

Permits \$ \_\_\_\_\_ (estimated)

As-built \$ \_\_\_\_\_

Maintenance \$ \_\_\_\_\_ (5 years)

Vendor Comments:

**Village of Hoffman Estates  
Pricing Summary**

**One Sheet per Link**

Contractor \_\_\_\_\_

Link           Stonington Water Tower to Fire Station 22

Technology   Wireless Link

Labor         \$ \_\_\_\_\_

Materials    \$ \_\_\_\_\_

Permits      \$ \_\_\_\_\_ (estimated)

As-built     \$ \_\_\_\_\_

Maintenance \$ \_\_\_\_\_ (5 years)

Vendor Comments:

**Village of Hoffman Estates  
Pricing Summary**

**One Sheet per Link**

Contractor \_\_\_\_\_

LINK            Stonington Water Tower to Police Department

Technology    Wireless Link

Labor            \$ \_\_\_\_\_

Materials       \$ \_\_\_\_\_

Permits          \$ \_\_\_\_\_ (estimated)

As-built          \$ \_\_\_\_\_

Maintenance    \$ \_\_\_\_\_ (5 years)

Vendor Comments:

**Village of Hoffman Estates  
Pricing Summary**

**One Sheet per Link**

Contractor \_\_\_\_\_

Link           Stonington Water Tower to Now Arena

Technology   Wireless Link

Labor         \$ \_\_\_\_\_

Materials     \$ \_\_\_\_\_

Permits      \$ \_\_\_\_\_ (estimated)

As-built     \$ \_\_\_\_\_

Maintenance \$ \_\_\_\_\_ (5 years)

Vendor Comments:

**Village of Hoffman Estates  
Pricing Summary**

**One Sheet per Link**

Contractor \_\_\_\_\_

Link            Now Arena to Beacon Pointe Water Tower

Technology    Wireless Link

Labor            \$ \_\_\_\_\_

Materials       \$ \_\_\_\_\_

Permits         \$ \_\_\_\_\_ (estimated)

As-built         \$ \_\_\_\_\_

Maintenance   \$ \_\_\_\_\_ (5 years)

Vendor Comments:

**Village of Hoffman Estates  
Pricing Summary**

**One Sheet per Link**

Contractor \_\_\_\_\_

NEW LINK Police Department to Aster Water Tower

Technology Wireless Link

Labor \$ \_\_\_\_\_

Materials \$ \_\_\_\_\_

Permits \$ \_\_\_\_\_ (estimated)

As-built \$ \_\_\_\_\_

Maintenance \$ \_\_\_\_\_ (5 years)

Vendor Comments: