ARTICLE I

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN that sealed bids are sought by Montgomery County, New York according to Project Specifications for the Communications Tower Project.

Sealed bids will be received by Jaclyn Hernigle, Purchasing Agent, c/o Montgomery County Purchasing, 20 Park Street, Annex Building, Fonda, New York 12068, on Wednesday, August 2nd until 2:00 p.m. Prevailing Time, and will then and there be publicly opened and read. Project Specifications may also be examined at the office of Jaclyn Hernigle, Purchasing Agent.

A Pre-Bid meeting will be held at 10:00 a.m. on Friday May 21, 2023 at 10:00 a.m. Prevailing Time. The meeting will be held at Emergency Management, 200 Clark Drive, Fultonville, NY. Prospective Bidders are strongly encouraged to attend.

Each Bidder shall deposit, with his or her bid, security in an amount not less than five percent (5%) of the amount of the bid in the form and subject to the requirements set forth in the Instructions to Bidders. No Bidder may withdraw his or her bid within forty-five (45) days after the date set for opening thereof, but any bid may be withdrawn at any time prior to closing time for the receipt of bids.

The Successful Bidder shall be required to provide a Performance and Labor and Material Bonds in the amount of their Bid in accordance with the Project Specifications.

Bidders shall not include sales and compensating use taxes in the cost of materials that are to be incorporated into this project. All work under this contract shall comply with all applicable ordinances, regulations, laws and with all applicable rules of the New York State Department of Labor.

The Owner reserves the right to waive any informality in bids, or to reject any or all bids, or to make an award to other than the low bidder.

This shall be a prevailing wage rate project.

ARTICLE II

INSTRUCTIONS TO BIDDERS

1. COPIES OF PROJECT SPECIFICATIONS:

A. The project Specifications shall Be obtained from:

JACLYN HERNIGLE, PURCHASING AGENT
ANNEX BUILDING
20 PARK STREET
FONDA, NY 12095

2. QUALIFICATIONS OF BIDDERS:

A. All Bidder shall complete and attach to their bid the Bidder's Qualification Form containing such information as similar work experiences and evidence of authority to conduct business in New York State.
B. Each Bid must contain evidence of Bidder's qualifications to do business in New York State.
C. The Successful bidder shall demonstrate to the Owner its successful performance on similar work to that included in these Project Specifications.

3. PPOJECT SITES:

A. Tower

1241 Latimer Hill Road, Canajoharie, NY 13317

4. EXAMINATION OF PROJECT SPECIFICATIONS AND SITES:

A. Before submitting a Bid, each Bidder must:
   1. Examine the Project Specifications.
   2. Visit the Project sites to familiarize himself or herself with local conditions that may in any manner affect cost, progress or performance of the work.
   3. Familiarize himself or herself with Federal, State and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the work.
   4. Study and carefully correlate Bidder's observations with the Project Specifications.

B. Before submitting his or her Bid, each Bidder will, at his or her own expense, make such additional investigations and test as the Bidder may deem necessary to

determine his or her Bid for performance of the work in accordance with the time, price and other terms and conditions of the Project Specifications.

C. On request, Owner will provide each Bidder access to the Project Sites to conduct such investigations and test as each Bidder deems necessary for submission of his or her Bid.

D. The submission of the Bid will constitute an incontrovertible representation by the Bidder that he or she has complied with every requirement of Project Specifications.

5. QUESTIONS

A. All Questions about the meaning or intent of the Project Specifications shall be submitted to:

Jeffery T. Smith, Sheriff
Montgomery County Sheriff's Office
200 Clark Drive/PO Box 432
Fultonville, NY 12072
518-853-5533

B. All questions shall be in writing and submitted within ten (10) calendar days of the Bid Due Date. Replies will be issued by Addenda, mailed or delivered to all parties recorded by Owner as having received the Project Specifications.

C. Only questions answered by formal written Addenda will be biding. Oral and other interpretations or clarifications, including answers by telephone, will be without legal affect.

6. BID SECURITY:

A. A Bid Security, made payable to the Montgomery County Treasurer, in an amount of five percent (5%) of the Bidder's Total Bid Price shall be submitted with each Bid. Bid Security shall be in the form of a certified bank check or a Bid Bond issued by a surety.

B. The Bid Security of the successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Performance and Labor and Materials Bonds and insurances, whereupon it will be returned. If the successful Bidder fails to execute and deliver the Agreement and furnish the required bonds and insurances within fifteen (15) days of the Notice of Award, Owner may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. Bid Security of other Bidders will be returned once an Agreement has been executed.

7. CONTRACT TIME:

A. All work shall be completed by August 1, 2024.

8. SUBCONTRACTORS:

A. The identity of all subcontractors and other person and organizations to be utilized shall be identified on the List of Subcontractors Form attached to the Bid Form.

9. BID FORM:

A. The Bid Form shall be completed in ink or by typewriter. The Total Bid on the Bid Form shall be stated in both words and numerals. In case of conflict, words will take precedence.

B. Bids by corporations must be executed in the corporate name by the president or vice president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

C. Bids by partnerships must be executed in the partnership name and signing by a partner, who title must appear under the signature and the official address of the partnership must be shown below the signature.

D. All names must be typed or printed below the signature.

E. Bidders shall acknowledge on the Bid Form the receipt of all Addenda (the number of which shall be filled in on the Bid Form).

F. The Bid Form shall include pages 7-19 of the Project Specifications. All Bids shall be stapled and must include the following:

Bid Form
Bid Security Form
List of Subcontractors
Tower Manufacturers
Bidder's Qualification
Non-Collusion Affidavit
Certified Copy of Resolution of Board of Directors, if applicable

10. SUBMISSION OF BIDS:

A. Bids shall be submitted at the time and place indicated in the Notice to Bidders and shall be included in an opaque sealed envelope, marked with project title and name and address of the Bidder and accompanied by the Bid Security and other required documents.

B. Bids shall be submitted in sealed envelope with the notation "Communications Tower Project Bid Enclosed" on the face thereof.

11. BIDDER REPRESENTATIONS:

A. In submitting a Bid, a Bidder represents that:

1. Bidder has visited the Sites and become familiar with and is satisfied as to the general, local and Site Conditions that may affect cost, progress, and performance of the Work.
2. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
3. Bidder has carefully studied the physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Sites.
4. Bidder does not consider that any further examinations, investigations, explorations, test, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Project Specifications.
5. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Project Specifications.
6. Bidder has correlated the information know to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Project Specifications and all additional examinations, investigations, explorations, test, studies, and data with the Project Specifications.
7. Bidder has given Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Project Specifications, and the written resolution thereof by Owner is acceptable to Bidder.
8. The Project specifications are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

12. MODIFICATION AND WITHDRAWAL OF BIDS:

A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the office of Jaclyn Hernigle at any time prior to the opening of Bids.

13. AWARD OF CONTRACT:

A. Owner shall award a contract to the lowest, responsible Bidder who complies with all requirements of the Project Specifications.

B. Owner reserves the right to reject any and all Bids, to reject Bids deemed frivolous or incomplete, to waive any and all informalities in Bids and the right to disregard all non-conforming, non-responsive or conditional Bids.

C. In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternates and unit prices if requested in the Bid Forms. It is Owner's intent to accept alternates (if any are accepted) in the order in which they are listed in the Bid Form but Owner may accept them in any order or combination.

D. Owner may conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of the Bidders, proposed subcontractors and other persons and organizations to do the work in accordance with the Project Specifications to Owner's satisfaction within the prescribed time.

E. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

BID FORM

Communications Tower Project

The Undersigned, as Contractor, having examined the Project Specifications and Project Sites, shall provide all of the labor, materials, tools, equipment, machinery, parts, insurance, transportation and the completion of the Project in accordance with the Project Specifications and Addenda issued thereto for the price shown below.

1. Total Base Bid: Total Bid, including labor, material, tools, equipment, machinery, parts, insurance, transportation, incidentals, overhead and profit and the Allowance identified in Article V: Section 2. Allowances to perform all work identified and described in Project Specifications.

$_____
(figures)

_____
(words)

2. Alternate Bid 1: Total Alternate Bid including labor, material, tools, equipment, machinery, parts, insurances, transportation, incidentals overhead and profit to supply and install Fencing and Gates at Latimer Hill Road site per Article V: Section 3: Alternates.

$_____
(figures)

_____
(words)

3. Addenda:

A. The Undersigned hereby acknowledges receipt of the following Addenda:

Addendum No.	Dated
_____	_____

_____ _____

_____ _____

4. Required Attachments to Bid Form:

Bid Security Form
List of Subcontractors
Tower Manufacturers
Bidder's Qualification
Non-Collusion Affidavit
Certified Copy of Resolution of Board of Directors, if applicable

5. Signatures:

If Bidder is:

1. **INDIVIDUAL**

Name (typed or printed): _____

By: _____

Doing Business as: _____

Business address: _____

_____

Phone No.: _____ FAX No.: _____

Email: _____

Employer Tax ID No.: _____

State Contractor License No.:_____(if applicable)

2. PARTNERSHIP

Partnership Name: _____(SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

_____

Phone No.: _____ FAX No. _____

Email: _____

Employer Tax ID No.: _____

State Contractor License No. _____ (if applicable)

3. CORPORATION

Corporation Name: _____(SEAL)
State of Incorporation:_____
Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____(CORPORATE SEAL)

Attest: _____
(signature of Corporate Secretary)

Business address: _____
_____

Phone No.:_____ FAX No.: _____

Email: _____

Employer Tax ID No.: _____

State Contractor License No. _____(if applicable)

4. JOINT VENTURE

Joint Venturer Name: _____(SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____
_____

Pone No.: _____ FAX No.: _____

Email: _____

State Contractor License No. _____(if applicable)

Joint Venturer Name: _____(SEAL)

By: _____

(Signature – attach evidence of authority to sign)

Employer Tax ID No. _____

Name (typed or printed): _____

Title: _____

Business address: _____

_____

Phone No.: _____ FAX No.: _____

Email: _____

Phone and FAX Number, and Address for receipt of official communications:

_____

_____

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

BID SECURITY FORM

BIDDER (Name and address):

_____

_____

_____

SURETY (Name and address of Principal Place of Business):

_____

_____

_____

OWNER (Name and Address):

_____

_____

_____

BOND:

BOND NUMBER: _____

DATE (Not later than Bid due date): _____

PENAL SUM: _____ _____

(Words) (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	SURETY
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal

By: _____ By: _____

Attest: _____ Attest: _____
Signature and Title Signature and Title

Note:

(1) Above address are to be used for giving required notice.
(2) any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

5. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond.

6. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.

7. This obligation shall be null and void if:

7.1 OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents, or

7.2 All Bids are rejected by OWNER, or

7.3 OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

8. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

9. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extension shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

10. Surety shall cause to be attached to the Bond a current and effective Power or Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

LIST OF SUBCONTRACTORS

1. Do you plan to subcontract any part of the Work? YES_____ NO _____

2. If YES, list the names and address of all Subcontractors that you propose to use on this Contract and the Work assigned to each. Please print in ink or type in the spaces provided. Attach additional sheets if necessary.

Name of Subcontractor	Address	Work to be Performed

3. This identification of subcontractors is **required** of all Bidders as part of their Bid and is in partial fulfillment of requirements of the Instructions to Bidders. Additional data on proposed Subcontractors may be requested from selected Bidders after the Bid Opening by the Owner.

TOWER
MANUFACTURERS

List the make and model of Communications Tower the Bidder proposes to provide. In addition, list the name of the supplier for the Tower and Building. Please print in ink or type in the spaces provided. Attach additional sheets if necessary.

1. <u>Communications Tower:</u>

A. Manufacturer : _____

B. Model # : _____

C. Supplier : _____

D. Installer : _____

E. Lead Time for Delivery : _____

F. List all Accessories to be Supplied and Installed : _____

_____

_____

BIDDER'S QUALIFICATIONS

The undersigned Bidder guarantees the accuracy of all statements made herein. Please print in ink or type in the spaces provided. Attach additional sheets if necessary.

This statement of Bidder's qualifications is required of all Bidders as part of their Bid and is in partial fulfillment of requirements of the Instructions of Bidders. Additional data on Bidder's qualifications may be requested from selected Bidders after the Bid Opening by Owner.

1. List up to three (3) projects that are of the same or related nature to the one now now being bid that you have completed in the last ten (10) years. For each project, list the name, address, and telephone number of the Owner and/or the Engineer, the original bid price, the completion date, and the completed contract price.

Project Name	Address	Engineer/Owner	Phone #	Bid Price	Final Cost
1.					
2.					
3.					

2. List projects presently under construction by your firm, including information requested below:

Project Name	Address	Contract Amount	State Date	Completions Date	%Complete
1.					
2.					
3.					
4.					
5.					

3. Is your firm qualified to do business in New York State?

_____YES _____NO

If NO, by signing the Qualification Statement at the end you are agreeing to obtain such qualification prior to award of contract within fourteen (14) days of Owner's request.

4. How many years has your firm been in business as a Contractor? _____ Years

5. List equipment that you own that is available for this work.

_____

_____

_____

_____

_____

_____

6. List equipment that you plan to rent or purchase for this work and specify whether rent or purchase. If none, so state.

_____

_____

_____

_____

_____

_____

7. Have you ever failed to complete a contract awarded to you? YES ___ NO ___ If YES, state where and why.

_____

_____

_____

_____

_____

8. Give the name, address, and telephone number of an individual who represents each of the following and whom the Owner may contact to investigate your financial responsibility: a surely, a bank, and a major material supplier.

	Name	Title	Phone
Bank			
Surety			
Supplier			

The undersigned herby authorizes and request any person, firm, or corporation to furnish any information requested by the Owner in certification of the recitals comprising this Statement of Bidder's Qualifications.

_____
(Name of Bidder)

By: _____
(signature)

_____
(individual's name & title)

NON-COLLUSION AFFIDAVIT

(Required by Section 103-d of the New York State General Municipal Law)

By Submission of this Bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the opening, directly or indirectly, to any other bidder or to any competitor; and

3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

_____

(print or type name of Bidder)

By:

_____ _____

(signature) (individual's name & title)

CERTIFIED COPY OF RESOLUTION OF BOARD OF DIRECTORS

_____

(NAME OF CORPORATION)

"RESOLVED that_____, _____

(Person Authorized to Sign) (Title)

of _____ authorized to sign and submit the Bid of this corporation for

(NAME OF CORPORATION)

the following Project:

_____

and to include in such bid the certificate as to non-collusion, and for any inaccuracies or misstatements in such certificate this corporate Bidder shall be liable under the penalties of perjury.

The foregoing is a true and correct copy of the resolution adopted by

_____

(NAME OF CORPORATION)

at a meeting of its Board of Directors held on the _____day of_____20_____.

By: _____

Title_____

(SEAL)

The above form must be completed if the Bidder is a Corporation.

ARTICLE III

SCOPE OF WORK

3.1 GENERAL

A. The Project generally consists of the following work components:

1. Latimer Hill Rd. Site:
   a. Supply and install a new 195' self-supporting communications tower.
   b. Design, supply and install a concrete foundation for the new tower.
   c. Install all antennas onto new tower including all standoffs, brackets, cabling hardware. Antennas to be supplied by Motorola.

3.2 SCOPE OF WORK:

A. the Contractor shall, at a minimum, be responsible for the following as part of the Base Bid. This list is not intended to be all inclusive.

1. Sheriff Department Site:

   a. New Communications Tower:

      1) Perform all soils and geotechnical testing and analysis work necessary to prepare foundation design.
      2) Design the foundation for new tower. Supply and install concrete foundation for new Tower.
      3) Supply to Owner design and as-built drawings stamped by a New York State licensed professional engineer for Tower and foundation.
      4) Perform all necessary site preparation work.
      5) Supply and install new 195' self-supporting communications tower and foundation.
      6) Supply and install new ice bridge.
      7) Supply and install protective grounding system for tower, dishes, antennas, cabling, foundation, ice bridge and port entry panel. Supply and install lightning protection for Tower.
      8) Supply and install ground bar at the bottom on the Tower for grounding RF cables before they make horizontal transition.
      9) Supply and install a climbing ladder and wave guide ladders.
      10) Relocate two (2) County-owned WiFi antennas on the existing tower to the new

tower. Supply and install cable for antenna.

11) Install one (1) new WiFi antenna and cable provided by Montgomery County. Install cable into Communications Room and Sheriff Department.
12) Supply and install two (2) new 12 port cable entry panels and assembly kits on exterior wall of Sheriff Department Building in location designated by Owner. Supply and install grounding system for cable entry panels.
13) Supply and install boots/covers for each of the ports in the existing cable entry panel. Make existing panel waterproof.
14) Hire independent inspection firm to inspect all work and submit written report to the County.
15) All other work as described in the Project Specifications and as required to provide complete and operational tower and communications system.

b. Install New Antennas:

1) Install all new antennas on new tower. Antennas shall be supplied by Motorola.
2) Run new coaxial cable supplied by Motorola from each antenna to 2' inside communications room in Sheriff's Department Building.
3) Supply and install all side arms, standoff mounts and accessories for the antennas supplied by Motorola.
4) Perform Antenna system test on all new transmission lines. Use Frequency Domain Refectometer (FDR) Technology.

3.3 RELATED WORK:

1. New Communications Tower:

A. Motorola shall:

1) Supply all antennas to Contractor to install on new Tower.
2) Connect all new cables installed by Contractor to inside of Communications Room to communications equipment in communications Room.

B. Alcatel-Lucent shall:

1) Supply and install all microwave dishes, cables and brackets on new Tower.
2) Connect cables to microwave equipment in communications room.

ARTICLE IV

GENERAL REQUIREMENTS

4.1 PERFORMANCE AND LABOR AND MATERIAL BONDS

A. The successful bidder, at the time of execution of the Agreement, shall furnish Montgomery County with a Performance and labor and material Bonds of a surety company licensed to do business in New York State satisfactory to Montgomery County, equal to the full amount of the Agreement.

B. The Bonds shall guarantee the full and faithful performance of all work of the Agreement, including any additions or deletions and the full payment of all laborers, workers, subcontractors, suppliers and others who may have claim upon their work or materials.

4.2 INSURANCE

A.The Contractor and all subcontractors shall secure and maintain insurance in the types and amounts as shown below during the duration of the project.

B. The Contractor and all subcontractors shall furnish Montgomery County a Certificate of Insurance verifying the existence of the following insurance prior to commencement of work on the project:

Types		Limits
1. Workman's Compensation		
A. Each Occurrence	:	Statutory
B. Aggregate	:	Statutory
2. General Liability		
A. Each Occurrence	:	$1,000,000
B. Each Accident	:	$1,000,000
3. Employer's Liability		
A. Each Accident	:	$1,000,000
4. Automotive Liability		
A. Bodily Injury	:	$1,000,000
B. Property Damage	:	$1,000,000

C. The Insurance Certificate shall specifically state: Montgomery County and its assigns shall be named additional insured party on all insurance policies."

4.3 PROJECT ADMINISTRATION

A. The Contractor shall designate an individual as the Project Manager. The Project Manager shall be the sole source of contact between Montgomery County and the Contractor. This designation shall be transmitted to, and approved by, Montgomery County prior to the commencement of the installation.

B. The Project Manager shall bear full responsibility for supervising and coordinating the installation of the new tower described in the Project Specification. It shall also be the responsibility of the Project Manager, as a minimum, to ensure completeness of the material list, correct equipment failures in timely manner, participate in the performance of the acceptance testing, and administer as directed by Montgomery Conty.

C. The Project Manager shall be employed by the Contractor. Assignment of other personnel to replace the existing project manager during the term of this contract shall be subject to the approval of Montgomery County.

4.4 INFORMATION TO BE FURNISHED BY CONTRACTOR

A. Within thirty (30) days of executing an Agreement with Montgomery County, the Contractor shall supply the County with:

1. A detailed schedule showing the order in which the Contractor proposes to carry out the work, with dates at which the Contractor will begin the distinct segments of the work and estimated dates of completion of the distinct segments.

2. A schedule of values, Montgomery County shall review and approve this schedule of values. The approved schedule of values shall be used as basis of preparing payment applications.

4.5 SUBCONTRACTOR QUALIFICATIONS

A. The Contractor shall submit, in writing, for Montgomery County's approval, qualification information for all subcontractors.

B. Qualification information will include years in business, related experience and specific work to be performed.

C. Subcontractors proposed by the Contractor must be approved by Montgomery County before starting any work.

4.6 LABOR AND MATERIALS

A. The contractor shall provide and pay for all materials and labor necessary for the execution and completion of work. Unless otherwise specified, all materials incorporated in the permanent work shall be new and meet the requirements of this specification.

B. All material furnished and work completed shall be subject to inspections by Montgomery County. Such inspection shall not relieve the Contractor of the responsibility of furnishing the best labor and materials in strict accordance with the specification.

C. The Contractor shall promptly remove from the premises all materials and work condemned by Montgomery County as failing to meet the contract requirements, whether incorporated in the work or not. The Contractor shall promptly replace the work, without expense to Montgomery County.

D. The labor required to execute the work shall be performed by individuals qualified to do the work. The assurance of the quality of workmanship for the work is the responsibility of the contractor. The contractor shall, if requested by Montgomery County, remove from the job site any employee whom Montgomery County determines to be incompetent or undesirable.

E. The contractor shall comply with the requirements of Article 8 (Section 220-223) of the New York State Labor Law.

4.7 RESPONSIBLITIES FOR WORK

A. The Contractor assumes full responsibility for the acts and omissions of all employees, suppliers, subcontractors, their agents and employees, and all other persons performing any of the work or supplying any materials and equipment under the project.

B. Until final acceptance by Montgomery County, the Contractor shall be fully responsible for damage to or destruction to all materials, equipment, buildings, towers, equipment and facilities.

4.8 SAFETY

A. All employees of the Contractor, and subcontractors, shall be instructed in and be familiar with local NYS Department of Labor and OSHA safety rules and regulations applicable to the nature of the work being performed under this contract.

B. The Contractor shall have sole responsibility to see that their employees are so informed and that they follow safety practices.

4.9 INSPECTION OF WORK

A. Montgomery County will inspect the work in progress, to ascertain that the completed work will comply in all respect with the standards and requirements set forth in the Project Specifications. Notwithstanding such inspection, the Contractor will be held responsible for the acceptability of the finished work.

B. Montgomery County and its representatives shall, at all times, have access to all project sites. The Contractor shall provide proper facilities for such access and for inspection.

4.10 ROYALTIES, PATENTS, COPYRIGHTS, AND TRADEMARKS

A. The Contractor shall assume the defense of all claims and suits against Montgomery County, its officers, agent and employees for infringement of the patents, copyrights or trademarks of any person arising out of any article supplied under the Project Specification by the Contractor.

B. The Contractor shall indemnify and hold harmless Montgomery County, its officers, agents, or employees for many and all liability, loss or damage arising from such claims or suits, including attorney fees.

4.11 APPLICABLE STANDARDS

A. All equipment, installation and maintenance work to be performed under this contract shall comply, unless otherwise specified, with the applicable sections of the standards and or regulations of the following organizations:

- NYS Uniform Fire Prevention and Building Code
- American National Standard Institute (ANSI)
- National Electric Code (NEC)
- Electronics Industries Association (EIA) standard RS-222E
- Federal Aviation Administration (FAA) Advisory Circular AC 70/7460 1G
- National Fire Protection Agency (NFPA)
- American Institute of Steel Construction (AISC)
- American Welding Society (AWS)
- American Concrete Institute (ACI)
- American Society for Testing and Materials (ASTM)
- Occupational, Safety and Health Administration (OSHA)
- Local ordinances, building and zoning codes

4.12 OTHER EQUIPMENT

A. The Contractor shall not be relieved of the responsibility for the performance of the equipment procured from other contractors, nor is the Contractor to whom the award is made relieved of the responsibility for the timely delivery and cooperation during installation of such equipment when such equipment is an integral part of the tower described in this document.

4.13 PERMITS

A. All permits or licenses and the cost thereof required for the successful installation of new tower and communications building shall be incorporated into each Bidder's Bid.

B. The Contractor shall be required to obtain Building & Certificate of Occupancy Permits from Montgomery County's Code Enforcement Officer. There shall be no fees for these permits.

4.14 NYS DEPARTMENT OF LABOR PREVAILING WAGES

A. This shall be a NYS Department of Labor Prevailing Wage Rate Project.

B. The Project's PRC # is 2015003774 and can be viewed online. The Contractor shall be responsible for complying with any updated PRC's issued by the Department of Labor.

C. Certified payrolls shall be submitted with all payment requisitions.

D. Contractor shall be responsible for complying with all NYS Department of Labor rules and regulations.

ARTICLE V

TECHNICAL SPECIFICATION

SECTION 1 – SUBMITTALS

1.01 SUMMARY

A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including, but not necessarily limited to:

1. Shop Drawings (specially prepared technical data specific to this project)
2. Product Data (standard printed information by manufacturers, for products not specific to this project).
3. Samples
4. Letters of Acceptance (from manufactures approving Installers, from Installers approving substrate conditions, etc.).
5. Qualification Statements (from manufacturers or Installers indicating their experience and qualifications to perform the Work).
6. Copies or Samples of Warranties (unsigned).

B. Administrative Submittals: Such submittals include, but are not necessarily limited to:

1. Permits.
2. Project Schedule.
3. Schedule of Values.
4. Applications for payment.
5. Signed Warranties and Owner's Manuals.
6. Material Safety Data Sheets.

1.02 SUBMITTAL PROCEDURES:

A. Coordination: Within ten (10) working days after the signing of the Agreement, submit to the Owner a schedule of all submittals including the dates they will each be submitted. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

B. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

C. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

1. Allow two weeks for initial review after receipt by Owner.
2. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Owner will promptly advise that Contractor when a submittal being processed must be delayed for coordination.
3. If an intermediate submittal is necessary, process the same as the initial submittal.
4. Allow two weeks for reprocessing each submittal.
5. No extension of Contract Time will be Authorized because of failure to transmit submittals sufficiently in advance of the Work to permit processing.

D. Submittal Preparation: Place a cover sheet, permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. Include the following information on the label for processing and recording action taken.

1. Project name
2. Description of Submittal, including date Submittal was prepared for transmittal to Owner.
3. Name of Contract.
4. Name and address of Contractor.
5. Name and address of supplier.
6. Name of manufacturer, make and model #.
7. Number and title of appropriate Specification Section.
8. Drawing number and retail references, as appropriate.
9. Additional information appropriate to the submittal.

E. submission for review must be made prior to delivery of equipment or materials to Project Site. If any materials or equipment are installed before approval of submittals, the Contractor shall be liable for removal and/or replacement of the materials at no charge if, in the option of the Owner, the material and/or equipment does not meet the intent of the Project Specifications.

F. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Owner using a Transmittal form. Submittals received from sources other than the Contractor will be returned without action.

1. On the transmittal, record relevant information and request for data.
2. On the form, or separate sheet, records deviations from Project Specifications' requirements, including minor variations and limitations.
3. Include Contractor's certification that information complies with Project Specifications' requirements.

1.03 <u>SHOP DRAWINGS:</u>

A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Project Specifications. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurements.

C. Initial Submittal and Resubmissions: Submit three (3) blue or black line prints and one (1) sepia reproducible (optional) for the Oner' review; one (1) print and the sepia will be returned. The returned prints shall be marked-up and maintained as a "Record Document."

1.01 <u>PRODUCT DATA:</u>

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

B. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the flowing information:

1. Manufacturer's printed recommendations.
2. Compliance with recognized trade association standards.
3. Compliance with recognized testing agency standards.
4. Application of testing agency labels and seals.
5. Notation of dimensions verified by field measurement.
6. Notation of coordination requirements.

C. Do not submit product Data until compliance with requirements of the Project Specifications has been confirmed.

D. Submittals: Submit three (3) copies of each required submittal. The Oner will retain two (2) copes, and will return the other one (1) marked with action taken and corrections or modifications required. If the Contractor requires more than one (1) marked copy, the contractor shall submit additional copies of the Owner.

E. Distribution: Furnish copies for final submittal to Installers, Subcontractors, suppliers, manufactures, fabricator, and other required for performance of construction activities. Show distribution on transmittal forms.

1. Do not proceed with installation until an approved, applicable copy of Product Data is in the Installer's possession.

2. Do not permit use of unmarked copies of Product Data in connection with construction.

1.05 <u>OWNER'S ACTION:</u>

A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Owner will review each submittal, mark to indicate action taken, and return within two (2) weeks of receipt.

B. Compliance with specified characteristics is the Contractor's responsibility.

SECTION 2 – ALLOWANCE

1.01 SUMMARY:

A. Cost and authorization for Allowances:

1. Overhead and profit for Allowances shall not be included in the Allowance price. Overhead and profit for Allowances shall be incorporated into the Base Bid.
2. An Allowance Charge shall be approved by written authorization of the Owner.
3. Upon completion of the Project, any money remaining for the Allowance shall be credited back to the Owner by Change Order.

B. Bidder shall include the Allowance in their Base Bid.

1.02 ALLOWANCE SCHEDULE:

A. Total Allowance: $10,000

SECTION 3 – ALTERNATES

1.01 SUMMARY:

A. This Section specifies administrative and procedural requirements for Alternates.
B. An Alternate is an amount proposed by Bidders and stated on the Bid Form for Certain construction activities defined in the Project specifications that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to a completed, or in the products, materials, equipment, systems or installation methods described in Project Specifications.
C. Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted. Alternate is complete and fully integrated into the project.
D. Immediately following the award of the Contract, the Owner shall advise the Contractor whether each Alternate was accepted or rejected.

1.02 SCHEDULE OF ALTERNATES:

A. Alternate Bid 1: Fencing

1. Supply and install all fencing, gates and concrete where shown on Site Plan.
2. Fencing, gates and concrete shall be provided in accordance with Section 7 of the Technical Specifications.

PART 1 – GENERAL

1.1 SUMMARY:

A. This Section describes one (1) complete, 195' self-supporting, steel communications tower, including foundation, design of the tower and foundation, procurement and delivery to site, construction, erection and inspection, of tower and related equipment as described herein.
B. Tower Location:

1241 Latimer Hill Road, Canajoharie, NY 13317

42.819918, -74.544071

1.2 SUBMITALS:

A. The Contractor shall provide, for Owner review and approval, prior to commencement of any work:
   1. Complete and detailed design drawings and calculations for the:

a. Tower
b. Tower Foundations including Geotechnical Report
c. Grounding System for:
    1) Tower
    2) Antennas and dishes
    3) Cabling
    4) Ice Bridge
    5) Cable Entry Panel

2. All drawings and calculations shall be stamped and sealed by a Professional Engineer, Registered in the State of New York, and competent in civil and structural design.
3. By submittal and sea, Contractor's submittal shall attest that the designs are in full compliance with the mechanical, structural, and electrical parameters established by the Project Specifications, the tower manufacturer's requirements and the NYS Uniform Fire Prevention and Building Code.
4. Tower loading calculations of all antennas, dishes, cabling and other attachments to the Tower shall include a 30% future expansion factor.

1.3 <u>AS-BUILT DRAWING:</u>

A. Upon completion of the work, the Contractor shall provide to the Owner.
1. Tow complete sets of all final design plans and as-built drawings, prepared in AutoCad.
2. Two (2) CD's with design and as-built plans in format acceptable to Owner.
3. Final acceptance and testing report.
4. Two sets of Operation and Maintenance (O&M) Manuals for each major component of the tower. Each set of O&M manuals shall be compiled in one comprehensive binder.

1.4 <u>QUALITY ASSURANCE:</u>

A. The Contractor shall have the complete and total responsibility for:
1. Tower and foundation design.
2. Licenses and liability insurance of any required items for himself and any required subcontractors.
3. All shipping handling, receiving, storage and erection.
4. All site work required to install the tower and its foundation including stump removals.
5. All work required to provide a complete and operational tower.

B. Manufacturer Qualifications: A firm experienced in manufacturing towers similar to that indicated for this Project and with a record of successful in-service performance.

C. Installer Qualifications: An experienced installer who is an authorized representative of the tower manufacturer for both installation and maintenance of units required f460-IK or lates revision,or this Project.

D. Source Limitations: Obtain all tower components and accessories shall come from the same manufacturer.
E. All work shall comply with the following:
    1. ANSI/TIA-222-G STANDARD latest revision.
    2. Federal Aviation Administrations (FAA), Advisory Circular, AC 70/7460-IK or latest revision
    3. NYS Uniform Fire Prevention and Building Code
    4. Motorola R56 Grounding Standards
    5. Applicable Federal, State and local codes and regulations.

1.5 DELIVWERY, STORAGE AND HANDLING:

A. The Contractor shall schedule and coordinate the shipping and delivery of the tower and components with the Owner.
B. The Contractor shall be responsible for the protection, safety and security of the tower, components and accessories to be installed while stored on site waiting installation.
C. The Contractor shall coordinate with the Owner on a location to store the tower while awaiting installation.

1.6 COORDINATION

A. Contractor shall coordinate the scheduling, site preparation, foundation construction and tower erection with the Owner, Motorola and Alcatel-Lucent.
B. The site contains an existing guyed communications tower that shall remain in operation during the construction of the new self-supporting tower and appurtenances. The Contractor shall not cause any interruption to the function of the existing tower during construction. No modification to any existing tower guys shall be allowed. Any damage done to the existing communication system (including tower, guys, antennas, etc.) shall be repaired by the Contractor at no cost to the Owner.

1.7 TRAINING:

A.
B. Contractor shall provide Owner's designated staff with a minimum of four (4) hours of training o the operations, maintenance and repair of the new Tower and grounding system.

1.8 WARRANTEY:

A. Contractor shall provide a 1-year labor and materials warranty on all work. Said 1-year warranty shall commence on the date of system acceptance by the Owner.
B. Contractor shall inspect the new tower and all components within six (6) months of completing work on the tower and inspect and properly maintain all tower components in order to validate manufacturer's 1-year warranty.

PART 2 – PRODUCTS

1.1 TOWER REQUIREMENTS:

A. **GENERAL**

1. The tower shall be suitable for general communications use including two way radio antennas and microwave dishes.
2. The tower shall be capable of supporting all antennas microwave dishes and cabling described in these Project Specifications. The tower and foundation design shall also incorporate a 30% expansion loading.
3. The Contractor shall include in the Base Bid all cost associated with:
   a. Obtaining on-site geotechnical information necessary to design the tower foundation including but may not be limited to conducting; soil borings, laboratory testing, etc. and the preparation of a Geotechnical Report.
   b. Designing and constructing the Tower foundation including but not limited to furnishing and installing all labor, formwork, concrete, concrete reinforcement, testing etc.
   c. All site preparation work, excavation, excavation support, dewatering, tree and stump removal, disposal of excavated material off-site, backfilling, backfilling material, compaction of backfill, topsoiling and seeding mulching and fertilizing all disturbed areas on-site.

B. **TOWERS STANDARDS**

1. Tower structural steel work shall be governed by the AISC Specifications, the AISC Code, and the EIA Standard. Where applicable, the EIA Standard shall supersede AISC requirements.

2. The tower should be constructed of high-strength, North American steel. All components and hardware being hot dip galvanized with zinc coating per EIA standards after fabrication. A zinc coating shall be permanently fused to steel, both inside and outside, so all surfaces are protected and no painting is required for rust protection.

3. All concrete used in the foundation shall meet or exceed tower manufacturer foundation design requirements.

4. The tower shall be new, unused, and shall meet the latest design and fabrications standards.

5. The self-supporting tower structures shall be designed and installed in accord with latest ANSI/TIA-222-G STANDARD and meeting other specifications as detailed in the Project Specifications.

6. All tower sections shall be attached to each other by methods recommended by the manufacturer.

7. All welding must be done in the factory prior to the galvanizing process. Field welding is not acceptable.

8. Prior to galvanize, each and every piece of steel and every weld shall be deburred and smooth finished.

C. TOWER MANUFACTURER

1. Rohn SSV Heavy-Duty Tower, Assembly No. 55190D90 or equal.

D. TOWER HEIGHT

1. The tower height shall be 195 feet above ground level.

E. FOUNDATION DESIGN AND GEOTECHNICAL INVESTIGATIONS

1. The Contractor shall be responsible for designing a foundation capable of supporting the 195' self-supporting tower and all dishes, antennas, cabling, equipment brackets, standoffs and a 30% expansion in accordance with the tower manufacturer recommendations and the latest edition of the New York State Uniform Fire Prevention and Building Code.

2. The Tower's foundation design shall be prepared by a Professional Engineer licensed in the State of New York. Two signed and sealed copies of the foundation plans and design calculations shall be provided to the Owner prior to construction of the foundation.

F. TOWER GROUNDING

1. The Contractor shall supply and install a complete and appropriate tower grounding system for the soil conditions at the site that meets or exceeds Motorola R56 grounding standards and the manufacturer's requirements for the Tower antennas, dishes, cabling, ice bridge, cable entry panels and all other components of the Tower system.

2. The grounding system shall include a lightning rod at the top of the Tower.

G. TOWER LOADING

1. The Tower shall be designed and installed to withstand a minimum of 90 MPH Rev. F winds at 180 ft. (54.86 meters) with all attachments and a coating of 1/2 –inch solid radial ice or the requirements in ANSI/TIA-222-G STANDARD, whichever is greater.

2. The tower and foundation shall be designed to support all attachments as shown below plus an additional load factor of at least 30 percent to allow for future design and equipment changes.

    a. Microwave Dishes

Model #	Quantity	Mounting Height
RFS PAD6-W57BD	2	193’

b. Antennas:

Model#	Quantity	Mounting Height
COL54160	1	180’
COL4570	1	180’
SG101SFXSNM	1	180’
COL54160	1	155’
SG101SFXSNM	1	155’
COL54160	1	130’
COL54160	1	130’
COL54160	1	105’

H. TRANSMISSION LINE SUPPORT

1. Cable ladder:

a. The Contractor shall supply and install vertical galvanized cable ladder to securely attach all antenna and microwave dishes and wifi antenna transmission lines to.

b. Holes shall be provided in the tower support members, tower hanger adapter plates or separate ladder structures to allow installation of snap-in cable hangers and bolt-in cable hangers at maximum 3-foot intervals. The mounting holes shall be precision punched or drilled and sufficiently separated to accommodate the snap-in or bolt-in hangers.

c. The Cable ladder shall run to the highest mounted antenna and allow for two times the identified cable requirements.

d. All cable ladder components are to be made of hot dipped galvanized steel pants.

e. Acceptable cable ladder shall be a Rohn Waveguard Ladder or equivalent.

2. Ice bridge:

a. The Contractor shall supply and install a 2-foot wide, galvanized steel ice bridge capable of shredding falling ice between the new tower and the Sheriff Department Building.

b. The ice bridge shall be installed approximately seven to eight feet above ground.

c. The ice bridge shall extend from the tower cable ladder to the exterior wall of the Sheriff Department building.

d. The ice bridge shall not be attached to the Tower, be installed such that it will not create additional tower load and not supported by the tower.

e. The ice bridge shall be bonded to the tower grounding system.

f. Multiple sections of ice bridge shall be bonded together using two-hole lugs and

stainless steel hardware, or other suitable method.

g. Poles supporting the ice bridge shall be set in 8" sonotubes, 5' deep, filled with concrete.

h. Acceptable manufacturer shall be a Rohn Heavy-Duty Waveguide Ridge or equal.

I. CLIMBING LADDER

1. The Tower shall be furnished with a climbing ladder.

2. The Tower shall be equipped with an OSHA approved anti-fall safety device in accordance with ANSI/TIA-222-G STANDARD. This device must not interfere with the climber's ease of reach by hand or foot from one rung of the ladder to the next, either going up or coming down.

3. The Tower shall be supplied with safety and climbing cables and climbing harness and slider.

4. Acceptable manufacturer shall be a Rohn, heavy duty ladder. HL161A with an inside corner mount or equivalent.

J. CABLE ENTRY PANELS

1. Contractor shall supply and install two (2) 12 port cable entry panels. Ports shall be 4". The Contractor shall drill/cut opening in exterior mansonry wall to fit new panel in location designated by Owner.

2. One Panel shall be installed on the inside of the Sheriff Department building and one on the outside. The location of the cable entry panel shall be designated by the Owner.

3. The Contractor shall also supply and install 12 boot assembly kits.

4. The contractor shall supply and install a grounding system for the cable entry panel in compliance with Motorola's R56 grounding standards and manufacturer's requirements.

5. Acceptable manufacturers are:

a. Cable Entry Panel: Valmont Site Pro 1/ SKU E1118 or equivalent

b. Boot Assembly Kits; Valmont site Pro 1: Part #BA78 or equivalent

K. ANTENNAS

1. Motorola shall supply the following antennas, cable, connectors and accessories to the Contractor for the Contractor to install on the new Tower:

5	COL54160	VHF LOW PIM ANTENNA
1	COL4570	UHF LOW PIM ANTENNA
2	SG101SFXSNM	LOW BAND ANTENNA
3000	L3617	7/8" HELIAX
26	DDN1077	DIN F 7/8" CONNECTOR
26	DDN1080A	NM 7/8" CONNECTOR

6	VHF50DMAPGR	DIN M TO DIN F POLYPHASER V/U
3	TUSXDFM	DIN M TO DIN F POLYUPHASER 800
8	ISB50HNC2	POLYPHASER NF TO NF
8	JAU012DMDM6	JUMPER DM TO DM 6’
8	JAU012DMDM10	JUMPER DM TO DM 10’
8	JAU012NMNM10	JUMPER NM TO NM 10’

2. Contractor shall supply and install all mounts and side arms required to install new antennas on Tower. Mounts shall be standard 6 foot, PSAF.

3. Contractor shall run all cables from antennas installed on new tower through cable entry panel and terminate 2’ into Communications Room in Sheriff’s Department.

L. ACCESSORIES

1. Contractor shall provide any other accessories needed for completion of the work.

M. FASTERNERS

1. All screws, bolts and other fasteners shall be constructed of stainless steel.

PART 3 – INSTALLATION

3.1 GENERAL INSTALLATION AND REQUIREMENTS:

A. The Contractor shall install and erect the Tower in strict accordance with all manufacturer requirements, instructions, and specifications.

B. Any deviation from manufacturer requirements, instructions, and specifications shall be brought to Owner’s attention, in writing prior to performing any work.

C. the Contractor shall be responsible for all the hardware and supplies necessary for the proper and completer installation of the self-supporting tower, which includes bolts, clamps, ground wires and other hardware, as required.

D. During tower installation, the Contractor shall check the structure for plumbness. This shall be done after the erection of each section. At least two sights shall be made for each check at right angles to each other, with elevations less than 45 degrees. The tower shall at all times be in plumbness in accordance with Manufacturer’s specifications and be true and vertical within 1 inch in 195 feet in height.

E. When tower erection is completed with all appurtenances installed, and all tower hardware is tightened, the Contractor shall check the structure for plumbness. The Tower’s plumbness shall be in strict accordance with Manufacturer’s recommendations.

F. Installation of the cable ladder and conduit shall be, so that it will fully protect transmission lines, and not all excessive bending of cables.

3.2 FIELD QUALITY CONTROL:

A. GENERAL

1. Installation monitoring and reporting shall be conducted during the installation.
2. Inspection of all materials shall be conducted upon arrival to site and prior to installation.
3. Provide Owner with a copy of Acceptance Test Plan (ATP) from manufacturer.
4. Contractor shall prepare written reports of test and observations. Record defective materials and workmanship and unsatisfactory test results. Record repairs and adjustments. These reports shall be supplied to the Owner according to the ATP.
5. Repair damaged finishes using methods and materials recommended by manufacturer.

B. CONCRETE

1. The Contractor shall pay for the cost of employing an approved commercial testing laboratory, approved by the Owner, to provide field inspection of all concrete. Continuous inspection shall be provided during all concrete pours. I any portion of the work shows unacceptable test results, the Owner may require additional testing, load test, cored samples, or replacement of the faulty work, etc., at the Contractor's expense.
2. The Contractor shall submit concrete mix designs to be reviewed by the Owner and Tower manufacturer.
3. The Contractor shall make all laboratory or field test as required and shall furnish all necessary equipment. The Contractor shall transport all test cylinders from the site to the laboratory.
4. The Contractor shall utilize a competent field concrete inspector to:

   a. Check each truck on arrival to make sure that the concrete is not retempered.

   b. Make necessary slump test for uniformity control.

   c. Make air test and yield test as required.

   d. Make any and all test cylinders as may be required in the Specifications.

5. Test: Concrete shall be tested as follows:

   a. Standard 6" x 12" compression cylinders shall be in compliance with C-39 in sets of four and shall be moist cured.

   b. Break 2 at 7 days and 2 at 28 days. One set shall be made for approval of each mix design, one set for first pour of 50 cubic yards or less, and one set for each additional

pour of 50 cubic yards. If less than 50 cubic yards are placed in one day, one set shall be made for each day's pour. Slump tests shall be made of each batch.

6. All cost associated with concrete testing shall be included in Contractor's Base Bid.

3.3 FOUNDATION:

A. Forms for concrete foundations shall fully support the concrete and be braced accordingly. Finished concrete surfaces shall be even and smooth and be level within 1/16 inch.

B. Steel used for reinforcement shall be new material and be free of foreign matter.

C. The top of the foundation shall be level within a maximum tolerance of 1/16 inch total variation. The exposed top shall be broom finished. All corners and edges of the exposed concrete shall be beveled 1 inch on 1:1 slope.

D. All exposed concrete shall have two (2) coats of a concrete sealant applied after the concrete has cured for at least twenty-eight (28) days.

3.4 ANTENNAS:

A. Contractor shall install the antennas, cable, connectors and accessories supplied by Motorola as shown on Part II, Section 1.1, (G) of this Article.

B. Contractor shall supply and install all mounts and side arms.

C. All cable shall be run through cable entry panel and terminated 2 feet into Communications Room in Sheriff's Department.

D. Contractor shall supply and install all additional cable, equipment connectors and accessories to ensure that all antennas are complete and operational to satisfaction of Owner.

3.5 WIFI ANTENNAS:

A. the Contractor shall:

a. Relocate two (2) existing County-owned WiFi antennas on the existing guyed tower to the new tower. These antennas will be mounted near the top of the new tower. The two (2) existing antennas are:

1. FM-1200-VOLO

- Frequency Band	:	4.9 – 5.9 GHz
- Dimensions	:	12(h) x 6.1(w) x 79.9(d)
- Weight	:	18.34 oz

2. FM 3100 MITO
   - Frequency Band : 4.9 – 5.9 GHz
   - Dimension : 14.3(h) x 3.1(w) x 80(d)

b. Install one (1) new WiFi antenna onto new tower. This antenna shall be supplied by the County.

B. The Contractor shall supply and install new cable needed to connect both antennas. The cables shall be installed through the new cable entry panel into the Sheriff's Department Communications Room. The Contractor shall supply enough new cable for the County to connect the cable to equipment in the Communications Room.

C. The cable shall be CAT 6, outdoor rated, 100 ohm UTP, screened cable or 100 ohm shielded UTP.

D. Montgomery County shall test both WiFi Antennas. The Contractor shall make whatever adjustments to both Antennas as may be needed to make them fully operational.

3.6 FINAL TESTING AND ACCEPTANCE:

A. Upon completion of the work, the Contractor shall hire an independent inspection firm, approved by the Owner, to inspect all work to verity it has been completed in strict accordance with the Project Specifications, all manufacturer's requirements and recommendations, as well as all federal, State and local laws, rules and regulations.

B. The independent firm shall inspect the following:

1. Foundation

a. The foundation was designed and constructed in accordance with a design plan acceptable to the manufacturer, in accordance with the NYS Uniform Fire Prevention and Building Code and prepared and stamped by New York State licensed professional engineer.

b. Concrete meets tolerances.

c. Concrete finish have been installed.

d. Backfilling, grading and seeding has been completed.

2. Tower

a. Verify that Tower is vertically aligned and plumb

b. Bolts are tight and torqued to manufacturer's recommendations

c. No damaged or missing structural members

d. No signs of stress or vibration

e. All climbing ladder, and other devices have been installed correctly

f. Labels and tags are installed

3. Antennas and Dishes

a. All antennas and dishes are functioning properly.

4. Grounding

a. A grounding system for the tower, cabling, equipment, ice bridge, cable entry panel and other components has been designed and installed in compliance with the tower Manufacturer's requirements and Motorola's R-56 Grounding Standards.

b. All lugs and cadwelds have been properly installed.

c. Ground resistance has been tested and recorded.

5. Ice Bridge

a. The ice bridge was installed per the Project Specifications and manufacturer's recommendation.

C. The independent inspection firm shall prepare and submit to the Owner a written report summarizing all of their findings. The Report shall include any corrective actions that should be undertaken by the Contractor.

D. The Contractor shall supply the Owner with the following photographs:

a. Overall structure – from N, E, S, W
b. Foundation form, reinforcing, concrete cylinders, finished foundation
c. All components of Grounding System.
d. All installed antennas and dishes.

3.7 DISMANTLING OF EXISTING GUYED TOWER:

A. The Contractor shall dismantle the existing guyed communications tower once the new tower, antennas and dishes are completed, tested and accepted and operational.

B. The Contractor shall schedule and coordinate this work with Alcatel-Lucent, Motorola and the Owner prior to starting any work.

C. The Contractor shall:

1. Remove the Tower and all existing cables, antennas, dishes, mounts, brackets and other components of the Tower.
2. Remove all existing guy wires.
3. Remove ice bridge, support poles and foundations.

4. Remove all tower and guy wire foundations and grounding ring.
5. Backfill and compact all foundation holes with suitable fill.
6. Provide 4" of topsoil. Seed and fertilize.

SECTION 7 – TECHNICAL SPECIFICATIONS FOR CHAIN LINK FENCES AND GATES

PART 1 – GENERAL

1.8 SUMMARY:

A. This section includes the following:

1. Exterior aluminum-coated steel chain link fences and gates.
2. Fence and gate post, ties, band and other accessories.
3. Concrete bases for all post.
4. Barbed Wire.

PART 2 – PRODUCT

2.1 BABRIC:

A. Aluminum Steel Finish: Fabric conforming to ASTM A 491 with not less than 0.40 oz. aluminum pre sq. ft. of uncoated surface in accordance with ASTM A817. Degrease, rinse and coat fabric with clear acrylic lacquer by complete immersion prior to rolling for shipment.

B. Aluminized Steel Fabric: 9-gauge (0.145-inch diameter) 2-inch mesh wire. Top and bottom edges shall have knuckled selvages. Mesh size is the distance between the wires forming parallel sides of mesh with tolerance plus/minus 0.250 inches. Fabric heights, measured from top of knuckle to bottom of knuckle, shall be as per drawings with tolerance plus/minus 1 inch. Mesh shape shall be a grid of 2" squares on a 45-degree angle.

C. All fencing shall match height of existing fence which is approximately 7' 6".

2.2 PIPE:

A. Pipe shall be straight, true to section, material and sizes specified and shall conform to the following weights per foot:

Nominal Pipe Size In Inches	Outside Diameter (OD) in inches	Aluminized or Galvanized Steel (lb/ft
2-1/2	2.875	5.79

B. Steel Framework, General: Post, rails and braces.

1. Type I Pipe: Hot-dipped galvanized or aluminized steel pipe to ASTM F 1083, plain ends, standard weight (schedule 40) with not less than 1.8 oz. zinc or aluminum per sq. ft. of surface area coated.

2.3 <u>FITTINGS AND ACCESSORIES:</u>

A. Material: Comply with ASTM F 626. Mill-finished aluminum or galvanized iron or steel, to suit manufacturer's standards. Bolt or weld sleeved connections.

1. Zinc Coating: Unless specified otherwise, galvanized steel fence fittings and accessories in accordance with ASTM A 153, with zinc weights per Table I. Aluminized fitting are also acceptable.

B. Tie Wires: 12-gauge (0.106-inc diameter) galvanized steel with a minimum of 0.80 oz. per sq. ft. of zinc coating of surface area in accordance with ASTM A 641, class 3 or 9-gauge (0.106-inch diameter) aluminum wire allow 1100-H14 or equal, to match fabric core material.

C. Top Rails: Same material and weight as post.

D. Bottom and Center Rail: Same material, size and weight as top rail.

E. Post & Line Caps: Provide weathertight closure cap for each post. Provide line post caps with loop to receive tension wire or top rail. Provide caps made of same material as posts.

F. Tension Bars: Aluminized steel with minimum length 2 inches less than full height of fabric, minimum cross-section of 3/16 inch by 5/8 inch and minimum 1.2 oz. aluminum coating per sq. ft. of surface area. Provide one bar for each gate and end post, and two for each corner and pull post.

G. Tension and Brace Bands: Minimum 7/8-inch-wide aluminized steel with minimum 1.2 oz. aluminum coating per sq. ft. of surface area.

H. Concrete: Provide concrete consisting of Portland cement, ASTM C 150, aggregates ASTM C 33, and clean water. Minimum 28-day compressive strength of 4,000 psi.

I. Barbed Wire Support Arms: Galvanized pressed steel barb arm per ASTM F626 with provisions for attaching barbed wire. Provide arms with loop hole for applications using top rail. Arms shall withstand 250 lbs. downward pull at outermost end of arm without failure. Arms provide an additional 13 inc. fence height. Typed I 45° 3 strand single arm.

2.4 GATES:

A. Double leaf swing gates with 3 strands barbed wire: Fabricate chain link swing gates in accordance with ASTM F900. Gate frame to be of welded construction. Weld areas to be protected with zinc-rich paint per ASTM A780. The gate from members are to be spaced no greater than 8'0" (2.44m) apart horizontally or vertically. Exterior members to be 1.900" (48.3mm) OD pipe, interior members with required shall be 1.660" (42.2mm) OD pipe. Chain link fabric to match specification of fence system. Fabric to be stretched tightly and secure to vertical outer fame members using tension bar and tension bands spaced 12" (304.8mm) on center using 9 gauge galvanized steel ties per section 2.04.

B. Hinges, hot dip galvanized pressed steel or malleable iron, structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off type hinge design shall permit gate to swing 180°.

C. Latch: Galvanized forked type capable of retaining gate in closed position and have provision for padlock. Latch shall permit operation from either side of gate.

D. Double gates: Provide galvanized drop rod with center gate stop pipe or receiver to secure inactive leaf in the closed position. Provide galvanized pressed steel locking latch requiring one padlock for locking both gate leaves, accessible from either side. Provide padlock and keys (3) to Owner.

E. Keeper to secure open leafs: Provide galvanized gate hold back keeper for each gate leaf over 5' wide. Gate keeper shall consist of mechanical device for securing free end of gate when in full open position.

2.5 BARBED WIRE:

A. ASTM A121 Type A aluminum coated 12 ½ gauge (.099") (2.51 mm) double stand twisted line wire with 4-point 14 gauge, (0.080") (2.03 mm) barbs spaced average of 5" on center.

2.6 POST SETTING MATERIALS:

A. Concrete: Minimum 28-day compressive strength of 3,000 psi.

PART 3 – INSTALLATION

1.1 SITE PREPARATION:

A. Clean and grub area to receive fencing.

B. Grade area to receive fencing

1.2 FRAMEWORK:

A. Install chain link fence system in accordance with ASTM F567 and manufacturer's instructions.

B. Locate terminal post at each fence termination and change in horizontal or vertical direction of 30° or more.

C. space lines posts uniformly 8' on center.

D. Concrete set post: Excavate holes in firm, undisturbed or compacted soil. Holes shall have diameter 4 times greater than outside dimension of post, and depths approximately 6" deeper than post bottom. Excavate deeper as required for adequate support in soft and loose soils, and for post with heavy lateral loads. Set post bottom 48" below surface when in firm, undisturbed soil. Place concrete around post in a continuous pour. Trowel finish around post and slope to direct water away from post.

E. Check each post for vertical and top alignment, and maintain in position during placement and finishing operations.

F. Bracing: Install horizontal brace and truss assembly at mid-height or above and over at each fabric connection to the terminal post. The diagonal truss rod is installed at the point where the brace rail is attached to the terminal post and diagonally down to the bottom of the adjacent line post. Place the truss rod in tension by adjusting the turnbuckle.

G. Tension wire: Install tension wire so that it will be located 4" up from bottom the fabric. If top rail is not specified, install the tension wire so that it will be located4" down from the top of the fabric. Stretch and install tension wire before installing the chain link fabric and attach it to each post using wire ties.

H. Top rail: Connect ends with sleeves forming a rigid connection, allow for expansion and contraction.

I. Bottom Rail: Install bottom rails between post and attach to post using rail end or line rail clamp.

1.3 BARBED WIRE:

A. Uniformly space and stretch barbed wire between terminal post. Attach barbed wire to the terminal post using brace bands and snap and secure barbed wire into each line post barb arm slot.

1.4 CHAIN LINK FABRIC:

A. Fabric: Install fabric on security side, pull fabric taut; thread the tension bar through fabric and attach to terminal post with tension bands spaced minimum of 15” on center and attach so that fabric remains in tension after pulling force is released. Install fabric so that it is 2” +/-“(25 mm) above finish grade.

B. Secure fabric using wire ties to line post at 15” on center and to rails and braces 24” on center, and to the tension wire using hog rings 24” on center. Tie wire shall be secured to the fabric by wrapping it two 360 degree turns around the chain link wire spickets. Cut off any excess wire and bend back so as not to protrude so as to avoid injury if a pedestrian may come in contact with the fence.

1.5 <u>CHAIN LINK GATE:</u>

A. Swing gates: Installation of swing gates and gate posts shall be per ASTM F567. Direction of swing shall be outward. Gates shall be hung plumb in the closed position with minimal space from grade to bottom of gate leaf. Doublegate drop bar receiver shall be set in a minimum concrete footing 6” diameter by 24” deep. Gate leaf holdbacks shall be installed on all double gates and all gate leafs greater than 5’ in width.

1.6 <u>SITE CLEANUP:</u>

A. Clean up area adjacent to fence line from debris and unused material created by fence installation.