

Tioga County

INVITATION TO BID

Construct Outside Plant Fiber Optic Cabling

Owner:

Tioga County Information Technology & Communication Services
Douglas J. Camin, Director ICTS
56 Main Street
Suite 211
Owego, New York 13827

Prepared By:

ECC Technologies, Inc.
2136 Five Mile Line Road
Penfield, New York 14526
Phone: (585) 377-1850
www.ecctechnologies.com



Date: September 14, 2017

Tioga County Bid Manual

00010	-	Table of Contents.....	page 2
01010	-	Summary of Work.....	page 3
01020	-	General Requirements	page 11
01025	-	Contractor Qualifications	page 17
01030	-	Proposal Evaluation	page 18
01100	-	Abbreviations and Acronyms.....	page 19
01200	-	Definitions.....	page 21
01300	-	Reference Standards.....	page 22
01400	-	Aerial Plant Installation.....	page 24
01500	-	Underground Plant Installation	page 28
01600	-	Optical Fiber Specifications.....	page 34
01700	-	Optical Fiber Splicing, Termination & Testing.....	page 39
00300	-	Bid Form.....	page 41

Appendix A – “Response Matrix”
Appendix B – “Form of Agreement”
Appendix C – “Non-Collusive Bidding Certification”
Appendix D – “Form of Bonds”

END OF SECTION

Invitation to Bid – Tioga County OSP Fiber Construction

SUMMARY OF WORK

1.01 DESCRIPTION OF PROJECT

The scope of services includes furnishing and installing outside fiber optic cabling system for Tioga County (herein County). ECC Technologies, Inc. (Design Consultant and Construction Administrator), together with the County has designed the fiber optic cable route. The fiber optic alignment and segment configuration is completed and all required construction permits have been submitted and received. This information is intended to provide the Contractor with the routes, traffic corridors, neighborhoods, working conditions, and other general environmental information as may be required to familiarize Bidders with the work environments that may impact pricing or scheduling.

The fiber optic cable will be placed (aerial and underground) within existing state, county or local Rights-of-Way (ROW). New poles will be placed where poles don't exist. The County has secured all required pole attachment agreements and conduit occupancy agreements from existing utilities.

For aerial construction, strand and lash will be used. The aerial fiber optic cable will be placed on poles at the top of the communications zone, and a minimum of forty inches (40") below the lowest electric per the National Electric Safety Code (NESC).

The drawings in Exhibit E shows the route, poles, attachment locations, approximate distances

The entire scope of this proposal includes 20,000 ft (plus or minus) of new construction on two (2) segments. Segments are defined by municipal jurisdictions. Types of work will include:

- 1. New 24-SMF aerial fiber cable placed on existing pole lines within the communications zone (estimated 20,000 ft)**
- 2. New utility poles (estimated 3) with new 24-SMF aerial fiber placed minimum 24" from top of pole**
- 3. New 24-SMF underground fiber cable placed in existing conduit (estimated 300-ft)**
- 4. Terminate and test SMF between tower site and 56 Main St (24 fibers)**

Respondents will be asked to submit lump sum pricing for a complete and fully functional fiber optic system, with the aerial fiber cable placed in the communications zone and pulling new fiber in existing underground conduit.

1.02 INQUIRIES/ISSUING OFFICE

All inquiries concerning this invitation will be addressed to the following:

Ron Healey, Manager of Broadband Design
ECC Technologies, Inc.
2136 Five Mile Line Road,
Penfield, NY 14526
Office: (585) 377-1850/Direct: (585) 643-2226
Fax: (585) 381-5654
Email: rhealey@ecctec.com

All questions should be submitted in writing and/or e-mail, citing the particular section and paragraph number of this document. Bidders should note that all clarifications relating to the bid process are to be resolved prior to the submission of a bid. Answers to all questions of a substantive nature will be given to all Bidders in the form of a formal addendum, which will be annexed to and made a part of this bid to the same extent as though it had been originally included therein.

1.03 KEY EVENTS/DATES

EVENT	DATE	TIME
Advertise Bid	11/01/2017	17:00
Submit Final Questions	11/03/2017	16:00
Responses to Questions Sent	11/06/2017	16:00
Bids Submitted (email)	11/08/2017	16:00
Hard copies received	11/10/2017	16:00

1.04 DELIVERY AND RECEIPT OF BIDS

Scanned bids shall be submitted electronically to rhealey@ecctec.com at 4:00 PM on the date listed in Section 1.03 or authorized postponement thereof. Two complete sets of bids and all supporting material shall be delivered to ECC Technologies, Inc., Attention: Ronald Healey, 2136 Five Mile Line Rd, Penfield, NY 14526 at 4:00 PM on the date listed in Section 1.03 or authorized postponement thereof. Any bid may be withdrawn prior to the above scheduled time. Any bid received subsequent to the date and time specified will not be considered.

1.05 INTERPRETATION AND ADDENDA

Interpretation of this document shall be the responsibility of the County and their representatives. All questions regarding the meaning and intent of this Invitation to Bid shall be addressed to the Issuing Office. Answers to all questions will be in the form of written addenda and will be provided to all prospective bidders. Interpretations, corrections or changes made in any other manner will not be binding. Upon mailing, any addendum will become part of these specifications to the same extent as though originally included herein and will become binding upon all Bidders.

1.06 PROJECT SCHEDULE

Project work shall commence promptly upon selection of a Contractor and execution of an agreement with the County. To date, ECC Technologies, on behalf of the County has completed applications to the utility companies for pole attachment and conduit occupancy agreements. By the time a contract is awarded, all make-ready exhibits and permits will have been received from the utilities and AHJ.

The County intends to have this project completed (including testing and acceptance) and fully operational by 12/31/2017.

1.07 LUMP SUM

This bid includes lump sum pricing for all items required to construct the fiber optic network. Approximate quantities (see **1.01 DESCRIPTION OF PROJECT and EXHIBIT E Drawings**) are provided in order for Bidders to assess the full scope of the project. Bid tabulations will be evaluated and determined at the sole discretion of the County and will be awarded based on best value.

Qualifiers can also be submitted with the bids in cover letter form. Examples of qualifiers are:

1. number of crews available,
2. types of equipment to perform underground and aerial construction that are owned by the Contractor,
3. Corning Network of Preferred Installers membership, and
4. Contractor certification with utility companies (Verizon, National Grid, NYSEG, etc.).

Mobilization and demobilization shall be inclusive in the lump sum bid and will not be paid as a separate item.

There is no unit price for Maintenance and Protection of Traffic (MPOT). The technical specifications reference the NYS DOT specification, Tioga County DOT's specification, and the "Manual of Uniform Traffic Control Devices." Contractors shall comply with the most recent version of each. The cost of maintenance and protection of traffic is inclusive in all bid items and will not be paid as a separate item.

1.08 PERMITS

The County will obtain all agreements related to pole attachments, conduit occupancy, or easements required to permanently place the fiber optic cable and all related pathway facilities. The Contractor shall prepare and submit all applications for permits associated with construction of the project. Supporting documents and drawings will be provided by the County and ECC Technologies. All permit costs will be handled as a reimbursable expense to the project and need not be built into the lump sum pricing.

1.09 CONTRACT SUMMARY OF WORK

- A. Construct the Work under this Contract, based on the agreed upon Lump Sum on the Bid Form.
- B. The following notes are integral to the Contract:
 1. All Bidders are herein notified to review **all** information in the Invitation to Bid.
 2. The Contractor is responsible to submit to the Construction Administrator, within two weeks of Contract award, a complete schedule of all activities necessary to complete the Contract Work, including but not limited to: submittal schedule, weekly updates of a three-week look-ahead schedule, and manpower loading schedule. The Contractor shall participate with developing an overall schedule integrating their activities with the other contractors (i.e. utilities and County DPW's), while meeting the parameters of the contract schedule.
 3. All shop drawings and/or submittals shall be provided for review within ten (10) days. Submittals for each specification section will need to be transmitted as a complete package. This includes but is not limited to shop drawings, catalogue cuts, literature, sample warranties, samples, and detailed installation instructions (see **General Requirements, section 1.01** below).

4. The Contractor is required to prepare and submit for approval a site-specific safety plan. The Contractor is also required to implement and maintain a project specific safety program. The Contractor shall submit their safety program to the Construction Administrator for approval, prior to the start of the Work of the Contract. The program shall include company safety philosophy, history, an action plan, manuals; hazardous communications sheets (MSDS), OSHA filings, safety meeting minutes, and a reporting system for any accidents or injuries.
5. The Contractor, before installation of any materials, shall examine the materials which are to be applied and shall notify the Construction Administrator in writing of all defects which would affect the quality and appearance of the Work applied in place.
6. The Contractor shall provide all de-watering temporary shoring, bracing, supports, or protection systems needed to complete the Work of their Contract. The Contractor is responsible, individually and collectively, for maintaining safe working conditions and procedures at all times. In addition, they must protect all Owner facilities, personnel, and activity areas. The Contractor is responsible for de-watering and erosion control, if required by permit.
7. The Contractor is responsible for the layout and survey of their own work, unless otherwise noted in the Invitation to Bid.
8. The Contractor is responsible for providing adequate manpower as needed throughout the course of the project to maintain the overall construction schedule.
9. The Contractor is required to clean their work area at the end of each workday. The Contractor shall provide daily debris removal to dumpsters provided by the Contractor. Failure to comply with cleaning requirements will activate Owner remedies (see **6.14** below).
10. The Contractor performing sub-grade work shall arrange for underground utility stakeout immediately upon issuance of drawing and obtaining appropriate permits. The Contractor shall be responsible for maintaining these stakeout location marks throughout construction. The Contractor shall obtain the services of a professional utility locating company using underground scanning equipment if necessary.
11. Owner may retain the services of an independent testing laboratory for all special inspections and testing services.
12. The Contractor shall provide, maintain, and remove temporary safety barricades as required to protect open excavations and work as required by OSHA.
13. Dust control shall be the Contractor's responsibility, if required.
14. Location of storage trailers, dumpsters, etc. must be approved by the County or the Construction Administrator prior to staging on the project site(s).
15. Construction workers shall park in areas designated by the County or Construction Administrator. Onsite parking will be provided to the extent possible, but some walking may be necessary.
16. The Contractor is responsible for all material receiving, unloading and hoisting required for its work.
17. Instructions for the preparation of a monthly payment application will be provided upon award

of the Contract.

18. Portable toilets shall be provided by the Contractor when required.
19. All spoils for site excavation shall be hauled off of the property and legally disposed of.
20. The Contractor shall provide full time and on-site supervision from commencement of their work activities until the end of the project. Furnishing items for the job site does not constitute the commencement of work activities. If supervision is reduced or terminated without consent of the Construction Administrator, the Construction Administrator will appoint an individual to manage work under this Contract with all cost borne by the Contractor. The Contractor shall assume all responsibilities for the individual and Work of this Contract.
21. Anyone found loitering, pandering or engaging in lewd activities, fighting or other rowdy behavior, using profane language or gestures or otherwise disrupting the smooth and efficient flow of work and or activities on the site, will be removed from the job site and prohibited from future work on this project. Proper attire for each respective job shall be worn at all times. Smoking is not permitted on any public property within the three (3) counties (school district facilities included), except at designated locations.
22. The Contractor is responsible for protection of its own materials and work during installation and until final acceptance. In addition, during the course of work, each Contractor shall provide protection for and be responsible for damage to adjacent work resulting from its operations.
23. The Contractor shall provide such post-substantial completion services as may be required to complete the closeout process and provide administration for any warranty items which may arise.
24. If the Contractor is tracking construction debris into public streets, private streets, and parking lots, they will be required to sweep and clean as necessary to return to original condition as directed by the Construction Administrator. Failure to comply with this direction shall result in a back charge to the Contractor.

C. Scope of Work per Contract

1. This written specification and associated drawings, attachments, etc., together constitute the project specification.
2. The Contractor is responsible for project underground and aerial OSP construction and ISP construction, to include splicing, terminating, testing, and labeling of the fiber optic system.
3. The Work included under this specification is considered to be turn-key. The Contractor shall furnish all materials, labor, equipment, and supplies, as well as perform all operations necessary to complete the installation of this fiber optic network in compliance with the specifications and drawings.
4. The County's interpretation of the specifications shall be final and binding upon the Contractor.
5. Should it appear that there is a discrepancy, real or perceived, between different sections of specifications concerning the nature, quality, or extent of work to be furnished, it shall be assumed that the Contractor has based its proposal on the more expensive manner. The County will have final decision on such matters.

6. The Contractor will provide (unless otherwise provided by the County) and install all of the required materials to form a complete system, whether specifically addressed in this specification or not.
 - a. Measurements provided are for reference purposes. Contractor is responsible for verifying measurements required for project activity.
7. The Contractor is responsible for all employee PPE, UFPO notifications, permits, licenses, safety plans, traffic control, soil erosion, backfill, and restoration work associated with this project.
 - a. All necessary safety signage shall be provided by the Contractor.
 - b. All traffic control cones and signage shall be provided by the Contractor.
 - c. The Contractor shall provide flaggers for traffic control.
 - d. Restoration shall begin as soon as conduit placing operations are completed in each area, or at the direction and per the specifications of Tioga County, the local cities or towns, or the NYS DOT, where applicable.
 - e. Right-of-Way shall be restored to its original or better condition within 24 hours or as soon as practical following conduit and cable placing operations.
 - f. All restoration shall be at the Contractor's expense.
8. The Contractor is required to be proficient in OSHA safety regulations, underground construction (including directional boring), aerial construction, and the installation and testing of complex fiber optic networks.
9. The Contractor shall comply with all manufacturer, NEC, NESC, ANSI/TIA, BICSI, and ASTM specifications, standards, recommendations, and instructions when installing and testing the fiber optic network and associated components.
10. Tree trimming should be avoided if at all possible, as this is an extremely sensitive area. Consider tree guards where possible. If trimming is unavoidable, consult with the Construction Administrator prior to trimming, minimize any approved trimming, and promptly remove trimmings from the area.
11. The Contractor shall guarantee that the installation shall be made in accordance with all applicable provisions of OSHA, NESC, Corning SRP, telecommunications industry practices, NEC, local fire and building codes, and FCC rules and regulations.
 - a. Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced unless the County indicates otherwise.
 - b. Refer any requirements that are different but apparently equal to the Construction Administrator for a decision before proceeding.
12. The quality of the workmanship for this project shall be subject to inspection by the County or Construction Administrator at any time. Should it be found that the quality of workmanship is not satisfactory, or that the requirements of the specifications are not being met, the County

may terminate the Contract and employ an alternative Contractor to fulfill the requirements of the Contract.

- a. The County will document, in writing, the problem(s) and provide a copy to the Contractor.
- b. The Contractor will have thirty (30) days to repair or resolve the problem.
- c. Determination that the problem has been resolved shall be at the sole discretion of the County.
- d. The existing Contractor shall be liable to the County for all costs incurred on account thereof.

1.10 SHOP DRAWINGS AND SUBMITTALS

- A. The Contractor shall furnish to the County for review and approval, within ten (10) days after the date of the Contract, five (5) sets of illustrations, specifications, shop drawings, and engineering data sheets on all materials proposed to be furnished and installed.
 1. The County will promptly review these submittals and return two (2) sets to the Contractor.
 2. Each set will be stamped with one of the following:
 - a. Approved as Submitted
 - b. Approved as Noted
 - c. Returned for Correction
 - d. Revise as Noted and Resubmit
 3. In the case of 2c or 2d above, the submittal shall either be corrected or revised as indicated and five (5) sets returned to the County for additional review.
 4. No construction work shall be started by the Contractor prior to obtaining the approval of these submittals.
- B. Drawings or articles so submitted shall be understood to be offered by the Contractor as fulfilling requirements of the Contract, and no approval given by the County shall relieve the Contractor from compliance with the general terms of the specifications in regards to the articles so approved.

1.11 AS-BUILTS

- A. Upon completion of installation, the Contractor is required to provide the County with red-lined as-built drawings (in a mutually agreed-upon electronic format) and courtesy copies of all close-out documents no later than 14 days after completion. These must be submitted as a condition of the system acceptance and contractor payment.
- B. The Contractor is responsible to document as-built information and red-lines, including GPS location (decimal degree format: 40.446° N 79.982° W) information for any conduit(s) placed and cable sheath footage markings for cables placed. Conduit location and depth information should be taken periodically (100' minimum) along straight runs and additionally at changes in horizontal or vertical grade, hand hole locations, at foreign utility crossings and at road or railroad crossings. Cable sheath footage markings shall be recorded at cable ends, at the **in and out** of all hand holes and buildings,

and at the **start and end** of all slack coils. Cable sheath footage markings and cardinal/intercardinal directions shall be recorded for each sheath in splice cases. This as-built information will be recorded on a clean set of Contract drawings and made a part of the project documentation manuals.

- C. The County staff may coordinate with the Contractor to obtain GPS coordinate data of all underground data transport facilities including, but not limited to manholes, hand holes, conduit, inner duct, fiber cable and surface markers. The Contractor shall not backfill or bury any underground facility until County planning staff have taken GPS coordinate readings.

1.12 FACILITY REGISTRATION/PROTECTION

All facilities must be registered and protected by the Underground Facilities Protective Organization (UFPO) and identified to other applicable "Call Before You Dig" services. The awarded contractor is responsible for the cost of ensuring this service is provided and maintained over the term of this contract (ten years). The expense associated with the first year of service is expected to be recovered through the vendor's proposal price to the County. UFPO service for all subsequent years (2-10) may be included in the monthly rates for fiber maintenance provided by the vendor in their proposal submission.

1.13 WARRANTY OF THE FIBER OPTIC FACILITIES

Corning NPI certificate identifying twenty-five (25) year extended warranty is required for acceptance. The awarded vendor is expected to warranty all materials, labor, installation and workmanship for the first thirty-six (36) months following acceptance at no cost to the County. If a fiber or connection fails to perform during this period, the vendor is required to resolve the problem at the vendor's sole expense. The only exception to this requirement is when the fiber cable or service is disrupted by a significant outage not directly attributed to the installation or workmanship. Examples of these exceptions are fiber cuts/breaks caused by another party, failure of the conduit system, or fire. In these cases, the selected vendor will be called and requested to restore service on a Time and Materials (T&M) basis. The preceding maintenance requirements also apply during the first-year warranty period.

END OF SECTION

GENERAL REQUIREMENTS

1.01 FINANCIAL AND BILLING REQUIREMENTS

- A. Bidders must agree to provide the County with their best available price for the duration of the contract. If the selected Contractor provides a lower cost to any other similarly situated customer, the County's charges must be lowered to a matching or lower rate. The Contractor shall provide written detail identifying and comparing such best available price to other pricing that it offers.
- B. Provide a detailed sample monthly invoice with layout and format.
- C. Bidders must identify all state and/or federal surcharges, which will be assessed to the County, and the current formula used to calculate each surcharge and include these charges in quoted one-time or monthly recurring rates. The County is exempt from federal, state and local taxes and will provide the selected Bidder its federal registration number upon contract award.
- D. Bidders must complete the Bid Form provided in full. If an item does not apply to your proposal enter "N/A" for that item.

1.02 PAYMENT

Payment will be made upon the completion of work for a one-month period or upon completion of the entire project. Payment will be made upon the Executive Director's approval of the invoice and in accordance with New York State Prompt Payment Legislation. Contractor and the County representatives will mutually agree to the invoice format. ECC Technologies' (Construction Administrator) representatives will confirm the Contractor's request for payment, including materials stored and installed on-site. Upon confirmation, approved invoices will be submitted to the County Executive Director for payment.

1.03 PREVAILING WAGE RATES

- A. New York State Department of Labor Prevailing Wage rates shall apply. Refer to most current wage rate schedule for Tioga County.
- B. Tioga PRC#2017011941 - Prevailing Wage Schedule is attached to this bid.

1.04 PRICE STABILITY

If for any reason, during the term of the contract, the Contractor reduces the pricing for similar services to a similar entity, the County shall receive an equivalent reduction in pricing for the services or products delivered to the County.

1.05 PRICE ESCALATION

The Contractor may not increase monthly installation costs quoted in the original bid for the term of the contract.

1.06 FORCE MAJEURE

Neither party will be liable for losses, defaults or damages which result from delays in performing any or all of the obligations or responsibilities imposed upon it in any contract resulting from this Invitation to Bid because of Acts of God, acts of government, earthquakes, floods, or other causes beyond the reasonable control of the party so delayed in, or so unable to perform, provided that such party was not negligent and shall have used reasonable efforts to avoid and overcome such cause. Such party will

resume full performance of such obligations and responsibilities promptly upon removal of any such cause.

1.07 INSURANCES AND INDEMNIFICATION

Required Insurance

A. Contractor and Subcontractor Insurance

Contractor and any/all Subcontractors shall secure and maintain the following coverages, with the insurance limits as specified herein. Subcontractors must be approved in advance by the County.

1. Workers' compensation insurance including employers' liability and statutory disability insurance for all persons employed in connection with the Project.
2. Commercial general liability insurance covering liability for bodily injury including death, property damage and personal injury with regard to the Project specified in this Agreement. Coverage is to be provided on an occurrence basis and be written via the ISO CG 00 01 12 07 (or equivalent) form. Further, the general liability policy shall contain no exclusions in addition to the standard exclusions contained in the ISO CG 00 01 12 07 (or equivalent) form as relates to:
 - a. Contractual Liability
 - b. Pollution
 - c. Bodily Injury
 - d. Property Damage
 - e. Personal Injury
 - f. Explosion, Collapse, Underground Property (XCU)
 - g. Mobile Equipment.
3. Business automobile liability insurance for all owned, non-owned, leased, rented and/or hired vehicles insuring against liability for bodily injury including death and for property. Coverage is to be provided via the ISO CA 00 01 03 06 (or equivalent) form.
4. Umbrella/Excess liability providing excess coverage above general liability, automobile liability and employers' liability. Coverage is to be afforded on an occurrence basis and not be any more restrictive in coverage than the scheduled underlying policies (general liability, business automobile and employers' liability).
5. All-risk property insurance in an amount equal to the cost of replacing materials and equipment to become part of the Work and for Contractor's and Subcontractor's temporary plant and equipment.
6. Depending upon the scope of work being performed by Contractor and Subcontractor, it may be necessary to provide additional insurance coverage such as contractor's pollution legal liability or errors & omissions liability. Any need for insurance coverage not listed herein, along with the requirements for the coverage limits, deductibles and terms, will be made at the sole discretion of the County prior to the execution of this Agreement.

7. Should any of the insurance carried by Contractor and Subcontractor contain a deductible or self-insured retention, payment of said deductible or self-insured retention shall be the sole responsibility of Contractor or Subcontractor. In addition, the County shall have the right to request sufficient proof of Contractor's or Subcontractor's ability to meet said deductible or self-insured retention obligation.
8. Contractor's and Subcontractor's insurance is to be primary and non-contributory with any insurance carried by the County.
9. Contractor's and Subcontractor's insurance including property coverage (covering Contractor's and Subcontractor's property) shall include a waiver of subrogation in favor of the additional insured parties as required herein.
10. Contractor's and Subcontractor's insurance shall be provided through valid and enforceable policies issued by a company or companies which are licensed to issue insurance in the State of New York and having an A.M. Best or S&P rating of "A-" and "VII" or better (or which are otherwise acceptable to the County).
11. Contractor's and Subcontractor's commercial general liability coverage shall designate County of Tioga, ECC Technologies Inc., and all other Indemnitees (as applicable), as additional insured. Additional insured status shall be granted via ISO CG 20 26 or CH 20 10 (or equivalent) forms. No additional insured endorsement will be accepted which attempts to limit Contractor's or Subcontractor's insurance carrier's responsibility (as outlined in ISO CG 20 26 or CG 20 10) to provide defense and indemnification to the County, and all other Indemnitees (as applicable).

Contractor's or Subcontractor's commercial general liability coverage shall designate the County, ECC Technologies, Inc. and all other Indemnitees (as applicable) as additional insureds with regard to completed operations. Additional insured status shall be granted via ISO CG 20 37 (or equivalent) form. No additional insured endorsement will be accepted which attempts to limit Contractor's or Subcontractor's insurance carrier's responsibility (as outlined in ISO CG 20 37 form) to provide defense and indemnification to the County, ECC Technologies, Inc. and all other Indemnitees (as applicable).
12. Contractor and Subcontractor shall maintain all applicable policies of insurance as described herein from the effective date of this Agreement through Final Completion and for the greater of 6 years or applicable statute repose (and thereafter during any period while Contractor and/or any Subcontractor is performing any Work, including any warranty or corrective work or furnishing any services pursuant to the Contract Documents).
13. Contractor shall require that all Subcontractors and their invitees carry insurance of the same type, coverage and limits as specified herein unless and except as the County agrees in writing. It shall be the responsibility of the Contractor to secure the same documentation of such coverage as required of Contractor hereunder.
14. Each policy of Contractor and Subcontractor's insurance shall contain (whether or not requiring additional premium) an agreement by the insurer that such policy shall not be cancelled or amended, or any coverages reduced, without at least thirty (30) days prior written notice by registered mail to the County at the address specified in this Agreement.
15. Prior to the commencement of Work, Contractor and Subcontractor shall deliver to the County

and ECC Technologies, Inc. certificates of insurance including applicable additional insured endorsement (and copies of the applicable policy if requested by the County and / or ECC Technologies, Inc.) evidencing compliance with the insurance requirements and limits of liability as outlined herein.

The certificates of insurance must contain the specific number (including edition date) of the general liability form covering Contractor or Subcontractor as well as the additional insured form.

The certificates of insurance must include:

Certificate Holder:	County of Tioga 56 Main St, Suite 211 Owego, NY 13827
---------------------	---

Additional Insured:	ECC Technologies Inc. 2136 Five Mile Line Rd. Penfield NY, 14526
---------------------	--

and all other Indemnitees (as applicable), are included additional insureds with regard to the County. Coverage shall be primary and non-contributory with insurance carried by the County. Further the general liability and workers' compensation policies contain a waiver of subrogation in favor of the County.

Contractor and Subcontractor (and their invitees) will not be granted access to the project site without receipt and review of a valid certificate of insurance.

It is also agreed and understood that Contractor and Subcontractor shall supply replacement certificates of insurance no less than fifteen (15) days prior to renewal of any insurance policy referenced on the certificate and applying to this Agreement.

B. Limits of Liability

By requiring insurance herein, the County does not represent that coverage and limits will necessarily be adequate to protect Contractor or Subcontractor's liability under the indemnities granted to the County in this Agreement nor do the requirements herein limit any liability of the Contractor or Subcontractor to the County. The County will maintain no insurance for the Contractor or Subcontractor including coverage for temporary plant equipment used in connection with or for materials and equipment to become part of the Work prior to their acceptance at the Project Site.

With regard to the insurance policies outlined herein, the below limits shall constitute the minimum limits accepted by the County, and shall pertain specifically to this Project, and shall not be included with other projects of Contractor or Subcontractor unless and except as the County agrees in writing.

Commercial general liability:

Each Occurrence	\$1,000,000
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000

Business automobile:		
	Combined Single Limit:	\$1,000,000
Workers' compensation:		
	Coverage A (workers' Compensation)	Statutory
	Coverage B (Employers Liability)	\$1,000,000
Excess liability:		
	Each Occurrence	\$10,000,000
	General Aggregate	\$10,000,000

Should any limits of liability become fully exhausted due to the payment of claims, Contractor and Subcontractor shall procure replacement policies no less than thirty (30) days from the date the limits were deemed exhausted.

In addition, should any insurance carrier affording coverage for the Contractor or Subcontractor fall below the minimum A.M. Best ratings as set forth herein, Contractor and Subcontractor hereby agree to obtain replacement policies with an insurance carrier meeting said financial requirements within thirty (30) days from the date the carrier was deemed unacceptable.

If at any time, Contractor or Subcontractor fails to secure required policies, the County shall have the right but not the obligation to purchase said insurance at Contractor's or Subcontractor's expense.

Indemnification Agreement

To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the County, ECC Technologies Inc. (if applicable), agents and employees of them from and against liabilities, claims, damages, losses and expenses, including but not limited to attorney's fees arising out of or resulting from performance of the Contractor's Work under this Subcontract, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by any acts or omissions of the Contractor, the Contractor's Sub-Contractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce other rights or obligations of indemnity, which would otherwise exist as to a party or person described in this agreement.

In claims against any person or entity indemnified under this agreement by an employee of the Contractor, the Contractor's Sub-Contractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor, the Contractor's Sub-Contractors under workers' or workmen's compensation acts, disability benefit acts or other employee benefits acts.

1.08 PERFORMANCE & MAINTENANCE BOND

Contractor shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Price & a Maintenance Bond in an amount at least equal to twenty-five (25%) of the Contract

Price, as security for the faithful performance of all Contractor's obligations under the Agreement. These Bonds shall remain in effect at least one (1) year after the date of final payment — Performance Bond and one (1) year after the final acceptance by OWNER — Maintenance Bond, and be executed by such sureties as:

1. Are licensed to conduct business in the state where the Project is located, and
2. Are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department.

All Bonds signed by an agent must be accompanied by a certified copy of the authority to act. All bonds must be acceptable to the OWNER.

If the surety of any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.1. A, CONTRACTOR shall within five days thereafter substitute another Bond and surety, both of which shall be acceptable to OWNER.

The County will accept only bonds or notes of the United States of America, New York State, or political subdivisions thereof in lieu of all or part of the cash retainage.

3. CONTRACTOR shall execute bonds acceptable to the OWNER as specified herein below:
 - a. Performance Bond: one hundred percent (100%) of contract price and may be in the form of one (1) or two (2) bonds.
 - b. Maintenance Bond: twenty-five percent (25%) of the contract price for one (1) year from the date of final acceptance by the OWNER.

Form of bonds shall be in accordance with Attached PBI & MBI documents (**Appendix D**).

END OF SECTION

CONTRACTOR QUALIFICATIONS

1.01 QUALIFICATIONS OF PROSPECTIVE CONTRACTORS

- A. The Bidders shall submit satisfactory evidence that it has had previous experience and possesses an adequate certifications, tools and equipment, financial resources, and organization as herein specified to perform the type, magnitude, and quality of work specified (see **Appendix B, "Response Matrix"**).
- B. The Bidders shall have maintained an organization capable of performing the work hereinafter described, in continuous operation for at least the past three (3) years.
- C. The County recognizes that there may be equally qualified and reliable Bidders who do not meet all of the requirements specifically stated above, but may in fact meet the objectives and criteria intended in some other manner. However, the Bidders shall have the burden of demonstrating to the County's satisfaction that it can in fact perform the work. This shall be in the form of written notarized statements as to the Bidder's experience, references, listing of contracts performed, financial statements, human resources, or ability to respond such that the County can evaluate the Prospective Contractor's ability. All statements made must be able to be independently verifiable by the County.
- D. The County retains the right to request any additional information pertaining to the Bidder's ability, qualifications, and procedures used to accomplish all work under this contract, as it deems necessary to ensure safe and satisfactory work.

Note: Any Bidder failing to submit in whole or in part the above-notarized statement attesting to its qualifications may result in a rejection of their proposal.

1.02 CLIENT REFERENCES

The bid shall include a customer reference list of at least three (3) similar sized contracts for the successful installation of fiber optic networks, provided over a period of at least two (2) years. Each reference must contain, at a minimum, the following information: company name, address, telephone number, contact person, and the beginning date services were provided to the customer (see **Appendix A, "Response Matrix"**).

1.03 EVIDENCE OF ABILITY AND FINANCIAL SECURITY

Bidders must have an organization which is financially and logistically able to handle a contract with the potential for simultaneous multiple orders. Bidders must submit with their proposal: 1) information on current or previous contracts of similar nature that is being or was successfully administered by Bidder. For purposes of evaluation, information should include customer names, contract numbers, term of contracts, type of products supplied, dollar value of contracts, total sales of such services/products, customer contacts, (for reference verification) and telephone numbers; 2) a notarized copy of the most recent Consolidated Statement of Income and a Consolidated Balance Sheet arrived at by generally accepted accounting principles (see **Appendix A, "Response Matrix"**).

END OF SECTION

PROPOSAL EVALUATION

1.01 METHOD OF AWARD OF CONTRACT – BEST VALUE EVALUATION PROCESS

The County will use the following two-step approach to evaluate proposal submissions and make its award. Lump Sum Pricing and Contractor Qualifications will be factors used to assess “Best Value”. The County reserves the right to seek clarifications during the evaluation process to ensure its full understanding of the responsiveness of proposals.

All financial data requested in APPENDIX A shall be submitted with the Bidder’s proposal. This envelope shall be clearly labeled as to identify the submitting bidder.

The County reserves the right to award contracts to one or multiple contractors based on the “Best Value Process”. Award will be made to the responder/s having the lowest construction costs and Lump Sum Price for the Construction segments, who meets the requirements of the specifications, and who is responsive and responsible. The County reserves the right to make awards within one hundred and twenty (120) days after the date of the proposal opening, during which period, proposals shall not be withdrawn unless the responder specifically states in the proposal that acceptance thereof must be made within a shorter specified time. Only fully completed proposals will be accepted. Partial proposals will not be considered.

The County reserves the right to award all, parts or none of this project at its sole discretion.

1.02 CONTRACTOR QUALIFICATIONS, EXPERIENCE and FINANCIAL CAPABILITIES (40 Points)

All proposals will be reviewed for compliance with the General Requirements (Section 01020) and Contractor Qualifications (Section 01025) outlined in this bid and as indicated by the Contractor in the **Response Matrix (Appendix B)**. The **Response Matrix** contains a checklist which is intended to acquaint the Bidder with all items of information that must be submitted with the proposal. Failure to submit any item may result in rejection of the proposal. Bidders whose qualifications do not meet these requirements will be disqualified and no further review will be made of their submission.

Bids which meet all of the Technical Requirements will be evaluated on a weighted basis in accordance with the factors noted in Section 1.03, below. The County will prepare an analysis of each Responder’s response and will evaluate the companies based on its sole discretion.

1.03 BID COST EVALUATION (60 Points)

Contractors are required to provide Lump Sum Pricing on all identified components of the fiber optic build. Lump Sum Pricing shall include: all materials, labor, equipment, documentation and testing as appropriate to provide a complete, secure, professionally installed and operational fiber optic system. The Bidder’s lump sum pricing will be compared to determine the lowest price. The remaining compliant proposals will be ranked from the lowest cost to the highest cost.

The County reserves the right to enter into an agreement with none, one or more than one firm for the construction that this Invitation to Bid encompasses. No award will be considered final until an agreement is negotiated and executed.

END OF SECTION

ABBREVIATIONS AND ACRONYMS

1.01 SUMMARY

This section identifies abbreviations and acronyms that may be used in this document

1.02 ABBREVIATIONS

AASHTO	American Association of State Highway Transportation Officials
ANSI	American National Standards Institute
ASTM	American Society for Testing Materials
AWPA	American Wood Products Association
AHJ	Authority having jurisdiction
dB/km	Decibel per kilometer
DOT	Department of Transportation
DR	Dimension Ratio
EHS	Extra High Strength
EIA	Electronic Industries Alliance
EMT	Electrical Metallic Tubing (conduit)
EWPP	Extended Warranty Program (Corning Cable Systems)
EX	Existing
F&P	Furnish and Place
FCC	Federal Communications Commission
GPS	Global Positioning System
HDPE	High Density Polyethylene
ICEA	Insulated Cable Engineers Association, Inc.
ISP	Inside Plant
MGN/V	Multi-Ground Neutral/Vertical
MIN	Minimum
MM(F)	Multi-mode (fiber)
nm	Nanometer
NEC	National Electric Code
NESC	National Electric Safety Code
NPI	Network of Preferred Installers (Corning Cable Systems)
NYS	New York State

OSHA	Occupational Safety and Health Administration
OSP	Outside Plant
OTDR	Optical Time Domain Reflectometer
PE	Professional Engineer; Permanent Easement; or Polyethylene
PPE	Personal Protective Equipment
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
R	Radius
RFP	Request for Proposal
SDR	Size Dimension Ratio
SM(F)	Single-mode (fiber)
SRP	Standard Recommended Procedure
TIA	Telecommunications Industry Association
UFPO	Underground Facilities Protective Organization

END OF SECTION

DEFINITIONS

1.01 DEFINITIONS

- A. *ATTENUATION*: The measurement of reduction in signal strength in fiber optic cable in decibel units.
- B. *AS-BUILT DRAWING*: Construction drawings modified to reflect changes made during the installation of facilities.
- C. *CONTRACTOR*: Individual or firm who installs the fiber optic facilities for, or as an Agent of, the District.
- D. *FURNISH, INSTALL, and PROVIDE*: Furnish means to supply and deliver to the project site, ready for installation. Install means to place in position for service or use. Provide means to furnish and install, complete and ready for intended use.
- E. *MAY or CAN*: Permissible condition.
- F. *NANOMETER*: A unit of measurement equal to one billionth of a meter; 10^{-9} (10 to the minus 9th power) meters; typically used to express wavelength of light, e.g.; 1300 nm.
- G. *SHALL or WILL*: A required condition.
- H. *SUPPLY*: To purchase and make ready and available for use or installation, not including delivery to project site.
- I. *WAVELENGTH*: The distance between two successive points of an electromagnetic waveform, usually measured in nanometers (nm).

END OF SECTION

REFERENCE STANDARDS

1.01 APPLICABILITY OF STANDARDS

Except where the County requirements include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the County requirements. Such standards are made part of the County requirements by reference.

1.02 PUBLICATION DATES

Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of the date of the County issuance of this Lump Sum Price RFP.

1.03 CONFLICTING REQUIREMENTS

- A. Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the County requirements indicate otherwise.
- B. Requirements that are different but apparently equal should be referred to the County for a decision before proceeding when it is uncertain as to which is the more stringent requirement.

1.04 COPIES OF STANDARDS

- A. Each entity engaged in construction on the project is required to be familiar with industry standards applicable to that entity's construction activity.
- B. Where copies of standards are needed for the performance of a required construction activity, obtain copies directly from the publication source.

1.05 STANDARDS

- A. American Society for Testing and Materials:
 - 1. ASTM A48, "Specifications for Gray Iron Castings"
 - 2. ASTM C33, "Specification for Concrete Aggregates"
 - 3. ASTM C94, "Specification for Ready-Mixed Concrete"
 - 4. ASTM C150, "Specification for Portland Cement"
 - 5. ASTM C207, "Specification for Hydrated Lime for Masonry Purposes"
 - 6. ASTM C270, "Specification for Mortar for Unit Masonry"
 - 7. ASTM C478, "Specification for Precast Reinforced Concrete Manhole Sections"
 - 8. ASTM D2247, "Specification for Polyethylene Plastic Pipe, Schedule 40 and 80, Based On Outside Diameter"
 - 9. ASTM D3035, "Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based On Controlled Outside Diameter"
 - 10. ASTM D3350, "Specification for Polyethylene Plastics Pipe and Fittings Materials"

- B. American National Standards Institute (ANSI)/Insulated Cable Engineers Association, Inc. (ICEA):
 - 1. ANSI/ICEA S-87-640, "Standard for Optical Fiber Outside Plant Communications Cable"
 - 2. ANSI/ICEA S-104-696, "Standard for Indoor-Outdoor Optical Fiber Cable"
 - 3. ANSI/ICEA S-110-717, "Standard for Optical Fiber Drop Cable"
- C. Corning Cable Systems:
 - 1. SRP 005-010, "Fiber Optic Cable Placing – Lashed Aerial"
 - 2. SRP 005-011, "Fiber Optic Cable Placing – Duct"
 - 3. SRP 005-012, "Fiber Optic Cable Placing – Direct Buried"
 - 4. SRP 005-014, "Intrabuilding Installation of Corning Cable Systems Fiber Optic Cable"
 - 5. SRP 005-033, "Installing a Wire Mesh Pulling Grip on ALTOS® Riser Fiber Optic Cable"
- D. Iberdrola USA SOP 04, Splicing, Testing Acceptance
- E. NYSEG/RG&E "Electric Distribution OH Construction Standards Manual" 5.1-001
- F. New York State Department of Transportation (NYS DOT), Standard Specification, January 2, 1990 edition, including addenda
- G. Telecommunications Industry Association (TIA):
 - 1. TIA TSB-140, "Additional Guidelines for Field Testing Length, Loss, and Polarity of Optical Fiber Cabling Systems"
 - 2. TIA TSB-143, "Fiber Optic Power Meters: Measurement and Application Issues"
 - 3. TIA/EIA-455-B, "Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components"
 - 4. TIA-526, "Standard Test Procedures for Fiber Optic Systems"
 - 5. TIA-758, "Customer Owned Outside Plant Telecommunications Cabling Standard"
- H. National Electric Code (NEC)
- I. National Electric Safety Code (NESC)
- J. Manual of Uniform Traffic Control Devices, latest edition
- K. AT&T Outside Plant Engineering Handbook, latest edition

END OF SECTION

AERIAL PLANT INSTALLATION

PART 1 – GENERAL

1.01 SUMMARY

This section identifies aerial pole line hardware and related components for aerial construction of fiber optic systems.

1.02 REFERENCES

- A. See Section 01 42 19 – Reference Standards for a full description of Standard Titles
- B. National Electric Code
- C. National Electric Safety Code
- D. Tioga County DOT's
- E. NYS DOT
- F. AT&T Engineering Handbook

PART 2 – PRODUCTS

2.01 MANUFACTURERS

All fiber optic system components such as poles, cables, connectors, splice trays, splice closures, and associated hardware shall be approved by Corning Cable Systems for use with the Corning Cable Systems Network of Preferred Installers (NPI). Immediately notify the engineer if any discrepancy is discovered between customer requirements, Corning NPI requirements, and requirements or materials listed in this specification.

2.02 WOOD POLES

- A. All poles shall be Southern Yellow Pine and meet the requirements of ANSI Standards 05.1-1992, "Specifications and Dimensions of Wood Poles," or the latest revision.
- B. The preservative shall be penta chlorophenol meeting the requirements of AWWA Standard P8, "Standard for Oil-Borne Preservative." Treatment shall be in accordance with AWWA Standards C.1, "All Timber Products Preservative Treatment by Pressure Processes," and C.4, "Poles Preservative Treatment by Processes."
- C. Class and Height. Class 5 wood poles with a height of 30' or greater, refer to Construction Drawings.

2.03 ANCHOR ROD AND GUY GUARD

- A. Anchor rod:
 - 1. Screw type, hot-dip galvanized
 - 2. Anchor Rod: 5/8" diameter, Minimum length of 7', Hot dip galvanized, Thimbleye.
 - 3. Acceptable product: Joslyn or equivalent

B. Guy guard:

1. Bright yellow for increased visibility, eight (8') feet length.
2. Acceptable product: Endot, Endoguard.

Note: Each guy placed shall receive a guy guard.

2.05 MESSENGER/SUPPORT STRAND

A. 6.6 m Extra High Strength (EHS) galvanized

1. Minimum breaking strength: 11,200 lbs

B. Acceptable product: Indiana Steel & Wire Co. or equivalent

2.06 3-BOLT SUSPENSION CLAMP

Acceptable product: Joslyn

2.06 GUY HOOK

Acceptable product: Joslyn

2.07 GUY GRIP DEAD-ENDS

Acceptable product: Preformed Line Products

2.08 STRANDWISE

Acceptable product: Reliable Power Products

2.09 BOLTS AND MISCELLANEOUS HARDWARE

Acceptable product: Joslyn

2.10 TREE GUARD

Acceptable product: Hendrix Line-Duc or equivalent

2.11 SPLICE CLOSURES

Corning splice closures (See Optical Fiber Specifications, Part 2, Section 2.05)

2.12 LASHING WIRE

- A. Type 430 Stainless, .045" diameter
- B. Acceptable product: General Machine Products

2.13 STEEL CABLE ("U") GUARD

- A. 'U' Guard. Hot dipped galvanized used to protect cable at riser locations.
- B. Acceptable product: Joslyn

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify site conditions and pole line quality prior to placement of any hardware, strand, or cable.
- B. Any discrepancies or concerns shall immediately be reported to the Construction Administrator.

3.02 PREPARATION

- A. Provide stakeout of anchors and/or poles to be placed.
- B. Notify Underground Protective Facilities Organization (UFPO) three (3) business days prior to any excavating, digging, or drilling.
- C. Protect against and prevent any disturbance of existing facilities and structures.
- D. Establish safe traffic control as necessary or required through:
 - 1. proper signage and
 - 2. adequate number of flaggers.

3.03 PLACEMENT OF POLE HOLES

- A. The hole diameter shall be based on diameter of the pole base, which is the end with the largest diameter.
- B. The hole must be large enough to place the pole in a plumb position with adequate room to tamp fill around base once set. Allow at least 3" around pole.
- C. Depth of setting poles 40' or greater shall be 10% of the pole height plus 2'.

3.04 SETTING WOOD POLE (DERRICK/AUGER)

- A. Deploy outrigger legs prior to boring a hole and setting the pole.
- B. Auger the hole to the requisite depth. Remove (via hand tools) any loose soil from the bottom of the hole.
- C. Raise and move the pole over a hole using a winch line with hook along with an approved sling attached to the pole above the center of gravity. Tag lines shall be attached to help control as the pole is lifted.
- D. Raise the pole to a near vertical position with butt end clear of the ground. Ground workmen are to guide the top of the pole into grabber claws.
- E. With the derrick, move the pole and lower into the hole. Ground workmen shall position the pole with cant hooks.
- F. Once the pole is vertical, use a plumb bob to check the pole is plumb. Repeat this action at a position 90 degrees from the original position.
- G. Once the pole is plumb, backfill with soil. Compact the soil in 'lifts' of 3"-6" with hydraulic or hand tamper.

In areas of poor soil, the hole shall be backfilled with crushed stone or concrete to ensure stability.

Refer to **Optical Fiber Specifications Section 3.04 CONSTRUCTION – AERIAL**, for further aerial plant installation execution.

END OF SECTION

**UNDERGROUND PLANT INSTALLATION
DUCTS, MANHOLES, AND HANDHOLES**

PART 1 – GENERAL

1.01 SUMMARY

This section describes the requirements for materials and construction of fiber optic duct, risers, splice boxes, manholes, handholes, frame and cover castings, tracer wire, warning tape, and route markers.

1.02 REFERENCES

- A. See Section 01 42 19 – Reference Standards for a full description of Standard Titles
- B. ASTM A48
- C. ASTM D2247
- D. ASTM D3035
- E. ASTM D3350
- F. National Electric Code
- G. National Electric Safety Code
- H. Tioga County DOT's
- I. New York State Department of Transportation
- J. AT&T Engineering Handbook

PART 2 – PRODUCTS

2.01 UNDERGROUND DUCT

- A. High Density Polyethylene Duct and Fittings
 - 1. 1 ¼" toneable HDPE SDR 11 smooth with 1250 lb polyester rope
 - 2. 1 ¼" HDPE SDR 11 smooth with 1250 lb polyester rope
- B. PVC, Schedule 80, with 1250 lb polyester rope and suitable for use with directional boring equipment
 - 1. Duct diameter and material will be determined by the County for each work location
 - 2. 90° sweep to be a minimum of a 36" radius
- C. Galvanized steel
 - 1. Duct diameter and material will be determined by the County for each work location
 - 2. 90° sweep to be a minimum of a 36" radius
- D. Duct plugs are required for duct adjacent to building or other structure where water, debris and animal infiltration are not desired. Provide split plugs for the seal between fiber optic cable and duct.
 - 1. Acceptable product: Carlon or County approved equal

- E. Pull tape inside of duct
 - 1. Woven polyester tape
 - a. Pre-lubricated
 - b. Low friction
 - c. High-abrasion resistant
 - d. Low coefficient of friction
 - e. Printed with footage markings
 - f. Minimum 1,250 lb tensile strength

2.02 ROUTE MARKERS

ACP International model ACP-072 or equivalent flat, flexible fiberglass marker.

2.03 DETECTABLE WARNING TAPE

- A. 3-inch wide, 4-mil minimum thickness, lay-flat orange color.
 - 1. Wording on tape: "Caution Fiber Optic Buried Below"
- B. Acceptable product:
 - 1. Carlon, part number MAT3021 or MAT3026
 - 2. Panduit Corp, part number HTU3O-FO-M
 - 3. County approved equivalent

2.04 DUCT SUPPORT

- A. Provide plastic conduit support for duct that will be concrete encased.
- B. Acceptable product:
 - 1. Underground Products, Livonia, Michigan
 - 2. County approved equivalent

2.05 HAND HOLES AND COVERS

Polymer concrete hand holes used for splice boxes, and pull boxes along with covers are required to conform to ANSI/SCTE 77 "Specifications for Underground Enclosures" for Tier 22 applications. All covers are required to have Tier level rating embossed on the surface. Design load of 22,500 lbs, test load 33,750 lbs.

- A. 24"x36" Hand hole flared wall assembly, CDR style, and open bottom. Cover, Tier 22 with two bolts.
- B. 30"x48" Hand hole flared wall assembly, PD style, and open bottom with mouseholes. Cover, Tier 22, heavy duty, two-piece with 2 bolts.
- C. Acceptable product: 24"x36 hand hole

1. Hubbell Power Systems, hand hole part number: B19243636M with standard mouseholes. Cover part number: C16243603A.
 2. Pencil Plastics, part number: PEM-24-36-36 PC.
 3. County approved equivalent.
- D. Acceptable product 30"x48" hand hole
1. Hubbell Power Systems, hand hole part number: PD3048BB48 with 2 Mouseholes, Cover part number: PG3048HS00
 2. Pencil Plastics, part number: PEM-3048-36PC.
 3. County approved equivalent.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify conditions and utility crossing elevations prior to installation.
1. Any utility crossing or other condition that results in the duct having less than 30" of cover shall be concrete encased.
- B. Report any discrepancies immediately upon discovery.

3.02 PREPARATION

- A. Notify Underground Facilities Protective Organization (UFPO) three (3) business days prior to excavating or drilling.
- B. Provide stakeout of and clearly mark in the field temporary easements for construction. Re-establish marks if destroyed during construction.
- C. Provide stakeout for new construction.
- D. Where permitted and when necessary, saw-cut asphalt and concrete pavement and/or sidewalks along the route of the fiber optic duct.
- E. Protect against and prevent undermining of facilities and structures.
1. Provide shoring and/or bracing of existing utilities encountered during excavation.
 2. Shore or brace utilities in a manner acceptable to utility owner.
- F. Inspect duct for dimensional tolerances and damage prior to incorporation into the work.

3.03 CONSTRUCTION

- A. The Contractor shall coordinate with the County and Construction Administrator during construction activities so that GPS data can be acquired for underground facilities prior to backfilling any excavation.
1. GPS coordinates will be taken for all handholes, manholes, splice boxes, conduit bends, etc.

- B. The Contractor shall install duct, innerduct, splice boxes, handholes, manholes, and any other material or equipment related to buried or underground construction in accordance with all applicable provisions of OSHA, NEC, NESC, Corning SRPs, telecommunications industry practices, and local codes.
- C. All underground or buried fiber optic cable shall be placed in innerduct.
 - 1. In the event that innerduct cannot be placed, immediately notify engineer so that an alternative installation can be developed.
- D. The minimum depth of cover over duct for fiber optic cable shall be 3'.
 - 1. Concrete encasement is required for any duct with less than 3' of cover.
- E. Concrete encasement, if used, shall not be placed at temperatures below 40°F (Forty degrees Fahrenheit) without prior written permission from the County.
 - 1. Additives to prevent concrete from freezing are not permitted.
 - 2. Place plastic conduit support chairs beneath duct at a maximum distance of 8' on the center.
 - a. Support chairs are to be secured to duct with wire ties.
- F. Handle duct and structures carefully when transporting and lowering into the trench. Do not drop or dump into the trench.
- G. Lay duct in a generally straight alignment with gentle sweeps to facilitate pulling of fiber optic cable through the duct.
 - 1. Limit vertical and horizontal curves so that wall stresses do not exceed 50% of yield stress for flexural bending of duct.
 - 2. Buckled or otherwise damaged duct section(s) are to be replaced at the Contractor's expense.
 - 3. Fabricated bends are not permitted.
 - 4. Ends of ducts shall be securely plugged when laying of duct is not in progress.
 - 5. Under no conditions shall duct be laid in water.
 - 6. Duct shall not be laid when conditions or weather are unsuitable for such work.
- H. Install pull tape inside of the duct to facilitate installation of fiber optic cable in the duct.
- I. Where an existing pipe or duct crosses the new duct path at an elevation which conflicts with the proposed grade for the new duct, either the grade for the new duct shall be changed or the existing pipe/duct shall be relocated.
 - 1. Written approval from the County's Construction Administrator must be obtained prior to performing this work.
 - 2. Provide a minimum 9" (over) or 12" (under) clearance between new duct and existing pipe/duct.

3. Space between new duct and existing pipe/duct shall be compacted select or other material as directed by the County's Construction Administrator.
4. Permanently support duct and pipes before the trench is backfilled.
- J. Install detectable warning tape above duct during backfill operations.
 1. Tape shall be no greater than 1' above duct.
- K. Where duct is to pass through existing concrete manhole walls, core drill an opening sufficiently large enough for the work and no larger.
 1. Impact devices are not to be employed in this operation.
 2. Fill the void between the duct and the opening with non-shrink hydraulic cement.
- L. Perform duct deflection test on flexible duct prior to placing cable in the duct.
 1. Maximum allowable duct deflection: 5%
 2. Perform the test on duct after final backfill has been completed.
 3. Perform the test by means of compressed air pushing mandrel or hand pulling through duct.
 4. Winch pulling of mandrel is not permitted.
- M. In addition to other tensioning and/or pulling devices, a 600 lb breakaway pulling swivel shall be used when pulling underground fiber.
- N. Install post-type route markers at 500' intervals, at turning points, at each handhole, at each manhole, and at each side of any road crossing.

3.04 JOINING DUCT

- A. Solvent weld joints to be used for joining bell and spigot PVC duct.
 1. Apply solvent weld compound as recommended by the duct manufacturer.

3.05 SPLICE BOXES AND HANDHOLES

- A. Typically, splice boxes and handholes will be placed as engineered and shown on segment drawings.
 1. Spacing between splice boxes/handholes - 750' typical, unless otherwise directed by the County.
- B. Splice boxes and handholes are to be installed on a minimum of 6-inches of No. 1 and No. 2 crushed stone leveling base.
- C. Backfill around splice boxes and handholes to be with material appropriate for the site condition.
 1. Grass areas: Common earth, meaning clay, loam, sand, gravel, topsoil, and similar material free from debris and frozen materials, and which may contain some stones, pebbles, lumps, and rock fragments up to 3" in greatest dimension.

2. Asphalt and Concrete areas: Select fill sand, gravel, and similar material free from clay, loam, organic material, debris, frozen material, and shall contain only small amounts of stone, pebbles, or lumps over 1" in greatest dimension up to the asphalt or concrete sub-base.

3.06 REPAIR/RESTORATION

- A. Restore disturbed utilities with new materials that match or exceed the qualities of existing utilities, or to the requirements of the permitting authorities.
 1. Reuse existing materials if they are not damaged **and** if acceptable by the permitting authority.
- B. When establishing turf, hand-rake the areas in order to remove stones and other objects over 2" in greatest dimension prior to seeding. Any method of sowing that does not injure the seeds in the process of spreading is acceptable.
 1. Rates per 1,000 square feet:
 - a. Fertilizer: 20 lbs
 - b. Seed: 6 lbs
 - c. Mulch: 100 lbs
- C. Restore disturbed pavements to the thickness noted, or to the requirements of the permitting authority. Saw-cut and remove damaged areas prior to paving.
 1. Driveway sub-base: 6" minimum sub-base, or match existing thickness.
 2. Driveway top: 2" minimum asphalt top, or match existing thickness.

END OF SECTION

OPTICAL FIBER SPECIFICATIONS

PART 1 – GENERAL

1.01 SUMMARY

This section describes the requirements for materials and construction of fiber optic cable, splicing, and accessories.

1.02 REFERENCES

- A. See Section 01 42 19 – Reference Standards for a full description of Standard Titles
- B. ANSI/ICEA S-87-640
- C. ANSI/ICEA S-104-696
- D. ANSI/ICEA S-110-717
- E. National Electric Code
- F. National Electric Safety Code
- G. Tioga County DOT's
- H. NYS DOT
- I. AT&T Engineering Handbook
- J. Corning Cable Systems
 - 1. SRP 005-010, "Fiber Optic Cable Placing – Lashed Aerial"
 - 2. SRP 005-011, "Fiber Optic Cable Placing – Duct"
 - 3. SRP 005-012, "Fiber Optic Cable Placing – Direct Buried"
 - 4. SRP 005-014, "Intrabuilding Installation of Corning Cable Systems Fiber Optic Cable"
 - 5. SRP 005-033, "Installing a Wire Mesh Pulling Grip on ALTOS® Riser Fiber Optic Cable"

1.03 SUBMITTALS

- A. Submit manufacturer's technical product data, installation instructions, and certifications for fiber optic cable, splice case, and appurtenances.
- B. Upon completion of installation, the Contractor is required to provide the County with three (3) sets of detailed as-built drawings (in a mutually agreed upon electronic format) and courtesy copies of all executed facility use agreements within 14 days of completion. These must be submitted as a condition of the system acceptance and contractor payment.
 - 1. Identify cable between structures.
 - 2. Include cable description and fiber count.
 - 3. Provide cable lengths.
 - 4. Sheath markings in and out of structures.

5. GPS location info in decimal degree format: 40.446° N 79.982° W

1.04 QUALITY ASSURANCE

Single-mode optical fiber quality shall meet or exceed the performance and specifications of Corning® SMF-28e® fiber.

PART 2 – PRODUCTS

2.01 FIBER OPTIC UNDERGROUND CABLE - SINGLEMODE

Altos® xxxEU4-T4101D20 by Corning Cable Systems, LLC

2.02 FIBER OPTIC AERIAL CABLE - SINGLEMODE

Altos® xxxEU4-T4101D20 by Corning Cable Systems, LLC

2.03 FIBER OPTIC FREEDOM (INDOOR/OUTDOOR) CABLE - SINGLEMODE

- A. Fiber optic cable intended for use where a non-metallic pathway originates outside a building and extends greater than 50' inside buildings
- B. Gel-free, all-dielectric, loose-tube, indoor-outdoor rated:
 - 1. Fully waterblocked
 - 2. UV-resistant, flame-retardant outer jacket
 - 3. Tensile strength:
 - a. Short-term: 600 lbs per linear foot
 - b. Long-term: 180 lbs per linear foot
 - 4. Fiber count specific to each locations, and will be determined by the County
- C. Acceptable product
 - 1. Freedm® xxxEWP-T4101D20 Loose-Tube, Gel-Free, All-Dielectric Cable by Corning Cable Systems, LLC
 - 2. County approved equivalent

2.04 SPLICE CASE

- A. Corning (part # as appropriate)
 - 1. Corning part # 2181-LS Cable addition kit
 - 2. Corning part # 2524-FT splice tray
 - 3. Corning fusion splice protect sleeve, pre-shrunk/60mm long, SS pre-polished pin, 50 pk

2.06 CONNECTORS, EQUIPMENT, AND MISCELLANEOUS

- A. All County-owned fiber terminations shall be fusion splice pigtailed UPC (ultra physical contact) SC/LC connectors, Corning CCH-CP12-3C-P03RH (SC) or Corning CCH-CP12-A9-P03RH(LC).
- B. Wall-mounted connector housings shall be Corning WCH-02P or WCH-04P.

- C. Rack-mounted connector housings shall be Corning CCH-02U.
- D. Wall-mounted splice housings shall be Corning WSH-16SPT
- E. Rack-mounted splice housings shall be Corning CSH-03U-F.
- F. Wall-mounted interconnect centers shall be Corning WIC-02P
- G. Connector panels shall be Corning CCH-CP12-3C-P03RH (SC).
- H. Splice trays shall be Corning M67-076 and M67-110.
- I. Connectors shall be Corning 95-200-41 (SC).
- J. Buffer tube fan out kits shall be Corning FAN-BT25-12.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify site conditions prior to installation.
- B. Verify that duct deflection tests have been performed and any duct repairs completed.
- C. Immediately report discrepancies to the engineer.

3.02 PREPARATION

- A. It is the Contractor's responsibility to perform on-the-reel testing of fiber optic cable, prior to installation and provide all test results to the County.
- B. The use of an OTDR per Corning Cable Systems Testing and Documentation procedures will be acceptable for this test.
- C. Test results for each fiber and each reel shall be provided to the County prior to installation of the cable.
- D. A hard copy and DVD copy (with appropriate software for viewing) of test results shall be included in the project documentation manuals.

3.03 CONSTRUCTION - UNDERGROUND

- A. Pull fiber optic cable through duct, structure to structure, leaving 50' of slack at each end of cable to facilitate splicing outside of splice boxes or other structures where a splice is intended.
 - 1. Monitor pull force with a maximum tension rated breakaway swivel link designed to fail at the rated force, or
 - 2. include a calibrated tension monitoring device in the pull sequence, or
 - 3. pull with tension limiting winch.
- B. Maintain a minimum bending radius on cable at all times:
 - 1. ANSI/ICEA S-87-640
 - a. Unloaded, installed condition: 20 times cable outside diameter
 - b. Loaded, during installation: 40 times cable outside diameter

2. Or per manufacturer's printed specifications
 - a. Corning Cable Systems SRP 005-011
- C. Provide cable slack in handholes and manholes to keep cable clear of the opening in the top slab to prevent inadvertent damage from falling objects.
- D. Join fibers at the splice location by fusion method and secure in a splice case. Follow the manufacturer's printed instructions for splicing and securing.
- E. Install a cable-identifying label on fiber cable immediately outside of the splice case and at each access location, including handholes and manholes.
- F. Install an identifying tag on each buffer tube inside of the splice case, outside of tray.
- G. Spool excess cable on the floor of the splice box in a manner that does not kink the cable. Keep cable and splice case clear of opening in top slab to prevent inadvertent damage from falling objects.
- H. Install watertight plug for ducts that lead to buildings or other structures where water infiltration from the duct is not desired, as directed by the County.
- I. Test installed fiber optic cable in accordance with requirements of Section 01700.

3.04 CONSTRUCTION – AERIAL

- A. The Contractor shall place hardware, strand, and cable in accordance with all applicable provisions of OSHA, NEC, NESC, Corning SRPs, Iberdrola USA (RG&E/NYSEG), telecommunications industry practices, and local codes. Refer to project drawings for exact attachment location.
 1. Generally, the attachment shall be 12" above the top telecommunications attachment (usually CATV, but possibly telephone) on the same side of the pole, unless otherwise noted on drawing.
 2. 40" clearance on the pole is required from the electric zone.
 3. 30" clearance mid-span is required from electric.
- B. Anchors with guys are required at pole route turns, junctions, and dead ends.
 1. The Contractor is responsible for determining actual placement location.
 2. Anchors are to have no more than 12" exposure above ground.
 3. Attachment to anchors provided by others is prohibited.
 4. Tree attachments/tree guys are prohibited.
- C. Support/messenger strand and guys to be minimum 6.6m galvanized EHS grade strand.
- D. Lashing wire shall be span continuous, terminated with a lashing wire clamp and spacer at each pole. Single lash will be used except where noted below or by permit.
 1. Roads, rails, parking lots, and water crossings shall be double lashed.
- E. Cable position shall be maintained below strand at all times.
 1. Cable wrapped around strand shall be re-lashed below strand at the Contractor's expense.
- F. Maintain minimum bending radius on cable at all times:

1. ANSI/ICEA S-87-640
 - a. Unloaded, installed condition: 20 times cable outside diameter
 - b. Loaded, during installation: 40 times cable outside diameter
 2. Or per manufacturer's printed specifications:
 - a. Corning Cable Systems SRP 005-011
- G. Cable shall be tagged at each pole with "Tioga County Fiber Optic Cable" tag. Number to be provided prior to start of tagging
- H. Maintenance/service loops of fiber optic cable shall each be 100' in length.
1. Loops shall be strand supported utilizing "snowshoe" type devices.
 2. Loops shall be placed approximately every 1,500', or as shown on drawings.
 3. Aerial splice point loops shall be strand supported utilizing "snowshoe" type devices.
- I. Test installed fiber optic cable in accordance with requirements of Section 01700.

3.05 CONSTRUCTION - INSIDE PLANT

- A. Free-standing equipment racks shall be fastened to the communications room floor using a minimum of four (4) 3/8" concrete anchors.
- B. Equipment racks shall be positioned according to drawings with a minimum of 3' clearance in front and back. The Contractor shall field verify the dimensions of the room prior to installation of the rack and report any discrepancies to the County or the Construction Administrator.
- C. The equipment rack shall be bonded to the Telecommunications Grounding Busbar (one per telecommunications room), which shall be bonded to the Telecommunications Main Grounding Busbar (TMGB), which shall be grounded to the main electrical ground. Coordinate with the electrical contractor or staff electrician. Coordinate exact routing and connection points with the electrical work. All surfaces that are used as a bond shall be filed to bare metal before completing connections.

END OF SECTION

OPTICAL FIBER SPLICING, TERMINATION AND TESTING

1.01 SUMMARY

This section describes the requirements for splicing and testing fiber optic cable and provides the desired performance parameters of the fully installed and spliced fiber optic cable system.

1.02 SPLICING

- A. All splicing shall be fusion and accomplished utilizing an ISO 9901 certified core-alignment fusion splicing machine with current calibration.
- B. All fusion splices shall be heat shrink sleeve protected.
- C. The Contractor is expected to minimize the quantity of splices/splice points along the route, as each splice increases overall facility loss.
- D. Any splice with a loss greater than 0.05 dB shall be corrected to less than 0.05 dB at the Contractor's expense.
- E. Connection point loss shall not exceed 0.5 dB per mated connection.

1.03 MEASURED POWER LOSS

- A. Using a light source and power meter, test each fiber strand for end-to-end signal loss.
- B. Test single-mode fiber strands at both 1310 nm and 1550 nm wavelengths.
- C. Test multi-mode fiber strands at 1300 nm wavelength.
- D. Minimum acceptance criteria for outside fiber optic cable:
 - 1. At 1310 nm wavelength: -0.35 dB/km
 - 2. At 1550 nm wavelength: -0.25 dB/km
 - 3. At 1300 nm wavelength: -1.0 dB/km
- E. Anomalies are to be no greater than 0.3 dB for each event.
- F. Splice loss is to be no greater than 0.05 dB.
- G. Return loss is to be a minimum of 40 dB.
- H. Record and document results of the testing and provide documentation of the results to the County.

1.04 OTDR CONTINUITY TEST

- A. Using an OTDR with appropriate launch cable, test each fiber strand for end-to-end continuity.
- B. Test single-mode fiber strands at both 1310 nm and 1550 nm wavelengths.
- C. Test multi-mode fiber strands at 1300 nm wavelength.
- D. Minimum acceptance criteria for outside fiber optic cable:
 - 1. At 1310 nm wavelength: -0.35 dB/km
 - 2. At 1550 nm wavelength: -0.25 dB/km

- 3. At 1300 nm wavelength: -1.0 dB/km
- E. Anomalies are to be no greater than 0.3 dB for each event.
- F. Splice loss is to be no greater than 0.05 dB.
- G. Return loss is to be a minimum of 40 dB.
- H. Record and document results of the testing and provide documentation of the results to the County.

1.05 ACCEPTANCE

- A. The Contractor shall certify in writing to the County that the installation is complete, all documentation provided, and the facility is ready for performance testing.
 - 1. If the results of this test are acceptable to the County and all documentation has been provided, the County will accept the system and authorize payment.
 - 2. If the results of this test are not acceptable to the County, the Contractor will resolve the problems and start the test over for another thirty (30) consecutive days.
- B. It is crucial that the Contractor submit final close-out documents promptly upon completion of each segment of fiber construction. Upon final acceptance, the Contractor will have no more than thirty (30) calendar days to submit the following documents:
 - 1. Entitlement documents (permits, licenses, agreements, etc.).
 - 2. Copies of all inspection documents and checklists stating construction compliance with drawings and specifications.
 - 3. Approved submittals and shop drawings.
 - 4. Manufacturer's data sheets (i.e. fiber cable reel labels, etc.).
 - 5. As-built drawings with GPS location data (performed by the Contractor and/or County staff).
 - 6. OTDR and fiber loss test results.
 - 7. Warranty certificates and manufacturer's operations and maintenance manuals.

END OF SECTION

BID FORM

1.0 INSTRUCTIONS TO BIDDERS (FORMAL)

- A. Bid shall be submitted on these County bid forms** or bid will not be considered. Bid must be typed or printed in ink. Original autograph signatures in ink are required. Facsimile or rubber stamp signatures will not be accepted. **ALL PAGES OF THIS BID DOCUMENT MUST BE RETURNED INTACT.**
- B. Late Proposals.** Any responses received after the date and time prescribed will not be considered for contract award.
- C. Emergency Closings.** In the event the closing of certain County facilities and/or operations and/or services due to any flood, fire, fire drill, power failure, uncontrolled weather conditions or other cause beyond the County's control, only bids received by the County prior to the date and time or postmarked as of the date prescribed will be considered for contract award.
- D. Any change in wording or interpretation by a bidder of the invitation to bid** as published by the County shall be reason to reject the proposal of such bidder, or in the event that such change in the Invitation to Bid is not discovered prior to entering into a contract, to void any contract entered into pursuant to such bid.
- E. The County reserves the right to reject any and all bids,** to accept either in whole or in part any one bid or combination of bids, as may be provided in the bid specifications, or to waive any informalities in bids. The County does not obligate itself to accept the lowest or any other bid.
- F. Award to the lowest responsible bidder.** For the purpose of determining which bidder is the lowest qualified responsible bidder, it shall be the lowest three bidders' responsibility, within FIVE DAYS of being so notified by the County, to present information and documentation to the Executive Director, to satisfy the County that the bidder possesses sufficient capital resources, skill, judgment and experience to perform the work or deliver the material, as per bid specifications.
- G. Contract(s) or purchase order(s) will be awarded** after due consideration of the suitability of goods and/or services bid to satisfy these specifications, the total cost of such goods and/or services including all cost elements, and the timeliness of the agreed upon delivery date.
- H. This EXECUTORY CLAUSE** shall be a part of any agreement entered into pursuant to this bid:
 - 1. It is understood by the parties that this agreement shall be executory only to the extent of the monies available to the County and appropriated therefore, and no liability on account thereof shall be incurred by the County beyond the monies available and appropriated for the purpose thereof.
- I. Failure to meet delivery schedule** as per accepted bid may result in legal action by the County to recover damages.
- J. Collect transportation charges will not be paid by the County.** All freight, cartage, rigging, postage or other transportation charges shall be prepaid and included. There will be no additional charges for delivery.
- K. No taxes are to be billed to the County.** Bids shall not include any Federal, State, or local excise, sales, transportation, or other tax, unless Federal or State law specifically levies such tax on

purchases made by a political subdivision. Any applicable taxes from which the County is not exempt shall be listed separately as cost elements, and added into the total net price at the time of contract execution.

- L. The successful bidder shall comply with all laws, rules, regulations and ordinances** of the Federal Government, the State of New York, Tioga County, and any other political subdivision or regulatory body which may apply to its performance under this contract.
- M. Gratuities, Illegal or Improper Schemes.** The County may terminate this agreement if it is determined that gratuities in the form of entertainment, gifts or otherwise were offered or given by a vendor, his agent or representative to any County official or employee with a view towards securing favorable treatment with respect to the awarding of this bid or the performance of this agreement. The County may also terminate this agreement if it is determined that the successful bidder engaged in any other illegal or improper scheme promotive of favoritism or unfairness incidental to the bidding process or the performance of this agreement. In the event that it is determined that said improper or illegal acts occurred, the County shall be entitled to terminate this agreement and/or exercise any other remedy available to it under existing law.
- N. Insurance shall be procured by the Successful Bidder before commencing work,** no later than 14 days after notice of award and maintained without interruption for the duration of the Contract, in the kinds and amounts specified in the **General Requirements Section 1.11**. If the insurance is not provided in acceptable form within this period of time, then the Executive Director may declare the Bidder non-responsive and award the contract to the next responsible Bidder.
- O. Changes in work.** The County may, as the need arises, through the Construction Administrator, order changes in the work through additions, deletions, or modifications without invalidating the contract. Compensation, as it may be affected by any change, shall be adjusted by agreement between the contractor and the County through the Executive Director.
- P. Bid offering material other than that of specified manufacturer or trade name** will be considered unless stated otherwise. The use of the name of a particular manufacturer, trade name, or brand in describing an item does not restrict a bidder to that manufacturer or specific article. However, the substituted article on which a proposal is submitted must be of such character or quality that it would serve the purpose for which it is to be used equally well as the manufacturer or brand specified. Proposals will be accepted in accordance with specifications on file or approved equal.
- Q. If material or services other than those specified in this bid document are offered,** the bidder must so state and furnish at the time of bid opening, if so requested, and as part of his bid the following information in duplicate:
1. Complete description of the item offered, and detailed explanation of the differences between the item specified and the item offered. If, in the opinion of the Director of Purchasing, sufficient detail is not presented as a part of the sealed bid to permit definitive evaluation of any substitute item, the bid will not be considered.
 2. Descriptive literature of item offered, for evaluation.
 3. List of installations in the County of the item offered.

-
4. List of other installations.
- R. Any additional information** for which bidder desires to add to the bid shall be written on a separate sheet of paper, attached to and submitted with the formal sealed bid, to be read at the formal opening.
- S. THIS BID IS FIRM AND IRREVOCABLE for a period of 120 days** from the date and time of the bid opening. If a contract is not awarded within the 120-day period, a bidder to whom the bid has not been awarded may withdraw his bid by serving written notice of his intention to do so upon the County.
- T. In executing this bid, the bidder affirms** that all of the requirements of the specifications are understood and accepted by the bidder, and that the prices quoted include all required materials and services. The undersigned has checked all of the bid figures, and understands that the County will not be responsible for any errors or omissions on the part of the undersigned in preparing this bid. Mistakes or errors in the estimates, calculations or preparation of the bid shall not be grounds for the withdrawal or correction of the bid or bid security. In case of error in extension of prices in the bid, the unit price will govern.
- U. The undersigned shall be fully accountable** for his or its performance under this bid, or any contract entered into pursuant to this bid, and agrees that he, or its officers, will answer under oath all questions relevant to the performance thereof and to any transaction, act or omission had, done or omitted in connection therewith if called before any Judicial, County or State officer or agency empowered to investigate the contract or his performance.
- V. Termination of contract:**
1. This agreement may be terminated by either party upon seven (7) days written notice, should the party fail substantially to perform in accordance with its terms, through no fault of the party initiating the termination.
 2. At its option, the County may at any time for any reason terminate this agreement and the Contractor shall immediately cease all work under the agreement upon receipt of written notice of such termination from the County.
 3. In the event of termination for any reason other than the fault of the Contractor, or the non-availability of funds as provided in the above Executory Clause, the Contractor shall be paid the amount due to date of termination, and all reasonable expenses caused by such termination.
- W. Status as an independent contractor:** The successful Bidder to whom the bid is awarded and the County agree that the Bidder and its officers, employees, agents, contractors, subcontractors and/or consultants are independent contractors and not employees of the County or any department, agency or unit thereof. In accordance with their status as independent contractors, the Bidder covenants and agrees that neither the Bidder nor any of its officers, employees, agents, contractors, subcontractors and/or consultants will hold themselves out as, or claim to be, officers or employees of the Tioga County, or any department, agency or unit thereof.
- X. Governed by New York law:** This Agreement shall be construed and enforced in accordance with the laws of the State of New York. In addition, the parties hereby agree that for any cause of action arising out of this Agreement shall be brought in the County of Tioga.

1.01 GENERAL

- A. Pursuant to and in compliance with your Invitation to Bid dated __, 2017 and the information to bidders relative thereto and in accordance with the Contract Documents, including any addenda issued by the County, issued to the undersigned prior to the opening of Bids, and acknowledged herein, we

Name

Address

Contact

Phone

Fax

E-Mail

hereby propose to provide all supervision, labor, materials, supplies, equipment, and incidentals to complete all work for this Bid Package as required by and in strict accordance with the applicable provisions as set forth in the Specifications and Documents all to the satisfaction and approval of the *Owner, Architect and Construction Manager* in accordance with the terms and conditions of the Contract Documents.

1.02 LUMP SUM BID FORMS

1. BASE PROPOSAL

Include all equipment, hardware, cabling, shipping, delivery, installation, testing, and Corning NPI certificate identifying twenty-five (25) year extended warranty costs as described by the RFP Specifications and Drawings.

Total Cost for Network Equipment (inclusive of Performance Bond) \$ _____

Performance Bond Cost (100% Contract Value) \$ _____
(Provide after Contract is Awarded to Vendor)

2. ADD/DEDUCT UNIT PRICING (Materials & Installation cost)

Provide & Install 30' Wood Utility (Each)	\$ _____
Provide & Install 6.6M EHS Strand (per Foot)	\$ _____
Provide & Lash 24F Corning Altos 28e SMF Aerial (per Foot)	\$ _____
Provide & Install Pole Riser with 4" PVC U-Guard (Each)	\$ _____
Trench & Install 2" SCH 80 PVC Conduit Underground (per Foot)	\$ _____
Horizontal directional drill (1) 2" HDPE Conduit (per Foot)	\$ _____
Provide & Install 24F Corning Altos 28e SMF in existing duct (per foot)	\$ _____
Splice & Test 28e Fiber Cable Strand 1-12 fibers (Each)	\$ _____
Splice & Test 28e Fiber Cable Strand 13-24 fibers (Each)	\$ _____
Provide & Install 24-Port Wall Mount Fiber Panel (Each)	\$ _____
Provide & Install 24-Port Rack Mount Fiber Panel	(Each) \$ _____
Provide & Install splice case (Each)	\$ _____

A. The undersigned hereby declare(s) that (he/she is) (they are) the only (person) (firm) interested in this bid; that it is made without connection with any other person or firm submitting a bid for the same Contract; that the bid is in all respects fair and without collusion or fraud.

B. The undersigned also declares (he/she has) (the firm has) carefully examined the Contract Documents in their entirety and are prepared to perform the Work of the specific package. The undersigned hereby declares its corporation's most current Worker's Compensation Modification Ratio (EMR):

EMR: _____	Date Issued: _____
-------------------	---------------------------

If the above ratio is greater than 1.00, provide explanation in letter attached to this proposal form.

1.03 TIME OF COMPLETION

A. It is agreed by the undersigned that upon receipt of a Notice to Proceed, he/she will start work immediately and fully complete all work as required by the Contract and Contract Schedule.

Appendix A

Response Matrix

RESPONSE MATRIX

The matrix which follows must be completed in full. Omissions may subject your proposal to disqualification.

When required to submit a mandated response, attach these documents to this matrix. On each response enter the originating section number from the RFP.

All descriptions are **abbreviated**. You **must** refer to the text of the section listed in the RFP. In agreeing to the abbreviated text, you are agreeing to the expanded, complete text in the section.

SECTION	DESCRIPTION	ACTION – CHECK	
SECTION 01010	SUMMARY OF WORK		
1.01	Have reviewed the Overall Schematic proposed route drawings for possible influences in your proposal.	Yes	No
1.13	Agree to As-Built Drawing Requirements	Yes	No
1.14	Agree to UFPO Register and Protect Facilities/Route?	Yes	No
1.15	Agree to Warranty Requirements?	Yes	No
SECTION 01020	GENERAL REQUIREMENTS		
1.01 – 1.09	Agree to meet all General Requirements listed, including insurance and bonds?	Yes	No
SECTION 01025	BIDDER QUALIFICATIONS		
1.01	Provide company experience, qualifications and representative projects. Attached?	Yes	No
1.02	Provide three (3) business references. Attached?	Yes	No
1.03	Provide evidence of financial ability and security. Attached?	Yes	No
SECTIONS 01300-01700	TECHNICAL SPECIFICATIONS		
01300	Agree to comply with all stated reference standards and practices?	Yes	No
01400 - 01700	Agree to all product and execution sections of the Technical Specifications?	Yes	No
01700	Agree to Splicing, Terminating, Testing, Documentation and Acceptance Requirements?	Yes	No

SECTION 00300	LUM SUM PRICE BID FORM		
1.0 A-X	Agree to all Instructions to Bidders?	Yes	No
1.03	Lump Sum Bid Form has been completed in full?	Yes	No
APPENDIX B	RESPONSE MATRIX Completed in full?	Yes	No
APPENDIX C	FORM OF AGREEMENT Agree to form of agreement as presented?	Yes	No
APPENDIX D	Non-Collusive Bidding Certification completed and attached?	Yes	No
APPENDIX E	FORM OF PERFORMANCE AND MAINTENANCE BONDS. Reviewed and agree to form of bonds?	Yes	No

Appendix B

Form of Agreement

TIOGA COUNTY

To facilitate correct drawing and execution of contract, bidder shall supply full information concerning legal status:

FIRM NAME: _____

ADDRESS OF PRINCIPAL OFFICE:

STREET _____
CITY _____ STATE _____ ZIP _____
AREA CODE _____ PHONE _____

Check one: CORPORATION _____ PARTNERSHIP _____ INDIVIDUAL _____

INCORPORATED UNDER THE LAWS OF THE STATE OF _____

If foreign corporation, state if authorized to do business in the State of New York:

YES _____ NO _____

TRADE NAMES: _____

ADDRESS OF LOCAL OFFICE:

STREET _____
CITY _____ STATE _____ ZIP _____
AREA CODE _____ PHONE _____

NAMES AND ADDRESSES OF PARTNERS:

_____	_____
_____	_____
_____	_____
_____	_____

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 20____, by _____ and between Tioga County, hereinafter referred to as the "OWNER", with its office located at 56 Main St, Suite 211, Owego, NY 13827 and _____ hereinafter referred to as the "CONTRACTOR", with offices located at _____.

WITNESSETH: The OWNER and the CONTRACTOR, in consideration of mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

- 1.1 CONTRACTOR shall at his own cost and expense furnish all labor, services, tools, materials, equipment and incidentals necessary to perform all Work required by the Contract Documents to construct the Tioga County Fiber Optic Network, complete in accordance with the Contract Documents.
- 1.2 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: Tioga County Fiber Optic Network.

ARTICLE 2 - CONTRACT DOCUMENTS

- 2.1 The Contract Documents are defined in the General Requirements. The Contract Documents, which _____ comprise _____ the _____ entire agreement between OWNER and CONTRACTOR are attached to this Agreement and are made a part hereof.

ARTICLE 3 – EXECUTIVE DIRECTOR

- 3.1 The EXECUTIVE DIRECTOR of Tioga County will assume all duties and responsibilities, will have all rights and authority assigned in the Contract Documents.
- 3.2 From time to time the EXECUTIVE DIRECTOR may designate, in writing, associates, subcontractors, or sub consultants to assist in performing duties of the EXECUTIVE DIRECTOR, or who will assume the duties and responsibilities and have all said rights and authority assigned to the EXECUTIVE DIRECTOR.

ARTICLE 4 - CONTRACT TIME

- 4.1 The Work will be substantially completed in accordance with the provisions of SECTION _____ of the General Requirements, and completed and ready for final payment in accordance with Section 1.06 _____ of the General Requirements and Article 6 below.
- 4.2 No rules, requirements or customs of any society or association of professional Contractors or any similar association shall affect this Agreement in any way whatsoever or be binding upon the Customer.
- 4.3 Contractor shall indemnify and hold the Customer, its officers, agents, and employees, harmless from any and all liability, demands, claims, or expenses, awards or judgments imposed upon the Customer, its officers, agents, and/or employees, arising from the negligence, active or

passive, of Contractor, its officers, agents, subcontractors, and/or employees.

- 4.4 Contractor shall not commence work under this Agreement until it has obtained all insurance required under this paragraph and such insurance has been approved by the Customer.

- A. Compensation Insurance: Contractor shall take out and maintain during the life of this Agreement, Workers' Compensation Insurance for its employees to be assigned to the work hereto under.

4.5

- A. General Liability, Professional (if applicable) Liability, Automobile Liability, Excess Liability and Property Damage Insurance: Contractor shall take out and maintain during the life of this Agreement, such general liability and property damage insurance as shall protect it from claims for damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this Agreement. The amounts of such insurance shall be as follows:

- B. General and professional (if applicable) liability insurance in an amount not less than \$1,000,000.00 per occurrence for bodily injury and property damage including wrongful death, and \$2,000,000.00 aggregate. Excess Liability at a minimum of \$2,000,000 per occurrence.

Contractor shall ensure all its subcontractors, if any, have obtained all the above insurances.

Contractor shall furnish the above insurances, including subcontractors' insurances, to the Customer and shall also name the Customer as a primary additional insured in said policies.

- C. Any accident shall be reported to the County Attorney as soon as possible and not later than twenty-four (24) hours from the time of such accident. A detailed written report must be submitted to the County as soon thereafter as possible and not later than three (3) days after the date of such accident.

ARTICLE 5 - CONTRACT PRICE

- 5.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents the prices stipulated in CONTRACTOR's Bid, which Bid is attached hereto and identified as Exhibit I of this Agreement.

- 5.2 The Contract amount based on the OWNER's award is \$ _____

ARTICLE 6 - PAYMENT PROCEDURES

- 6.1 CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by EXECUTIVE DIRECTOR as provided in the General Conditions.

- 6.2 Progress Payments:

- A. OWNER shall make monthly progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment shall be approved and recommended by EXECUTIVE DIRECTOR. CONTRACTOR's Applications for Payment will be due on the 1st day of the month. All progress payments will be on the basis of the progress of the Work measured by the schedule of values (Contractor's Lum Sum Price Bids).

1. Prior to Final Completion, progress payments will be in the amount of 95 percent of the labor, materials and equipment incorporated into the Work and of materials and equipment not incorporated into the work but suitably stored, less the aggregate of payments previously made.
2. A payment equal to 90% of the invoiced price of materials received at the job site but not incorporated in the Work may be included in the monthly progress payments, providing the following conditions are satisfied:
 - a. The materials shall be received in a condition satisfactory for incorporation in the Work.
 - b. The materials shall be stored in such manner that they will not be damaged due to weather, construction operations or any other cause.
 - c. An invoice from the supplier shall be furnished for each item.
 - d. Materials which have been paid for by the OWNER shall not be removed from the approved storage site except to be incorporated in the Work. The CONTRACTOR shall have the sole responsibility for the care and protection of the materials.

6.3 Final Payment:

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.9 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by DESIGNER CONSULTANT as provided in said Paragraph 14.9.

ARTICLE 7 - CONTRACTOR'S REPRESENTATIONS

7.1 As part of the inducement of OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- A. CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.
- B. CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports, and data with the terms and conditions of the Contract Documents.
- C. CONTRACTOR has given DESIGN CONSULTANT written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by DESIGN CONSULTANT is acceptable to CONTRACTOR.

ARTICLE 8 - DRAWINGS AND ADDENDA

8.1 The Project Drawings are entitled; "Tioga County Fiber Network Overall Schematic Plan"

8.2 Addenda consisting of Numbers _____ to _____, inclusive.

ARTICLE 10 - MISCELLANEOUS

- 10.1 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due

may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

- 10.2 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, and his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 10.3 Waiver: No waiver of any breach of any condition of the Agreement shall be binding unless in writing and signed by the party waiving said breach. No such waiver shall in any way affect any other term or condition of this Agreement or constitute a cause or excuse for a repetition of such or any other breach unless the waiver shall include the same.
- 10.4 This agreement shall be governed by, and interpreted according to the laws of the State of New York. Any and all legal action necessary to enforce the agreement will be held in Tioga County, New York.
- 10.5 Authority for execution on behalf of Customer: The Executive Director has executed this Agreement pursuant to a Resolution adopted by Tioga County, at a meeting thereof held on _____, Douglas J Camin, Executive Director whose signature appears hereafter, is duly authorized and empowered to execute this instrument and enter into such an agreement on behalf of the Customer. This instrument shall be executed in duplicate. At least one copy shall be permanently filed, after execution thereof, in the office of the County.

Agreed to and Accepted by:

Agreed to and Accepted by: Tioga County

Print Name of Company

By: _____
Signature

Printed Name

Date: _____

By: _____
Marcia D. Weber, Director

Printed Name

Date: _____

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first written above.

OWNER:
TIOGA COUNTY

EXECUTIVE DIRECTOR (Acting
on behalf of TIOGA COUNTY):

(EXECUTIVE DIRECTOR)

TIOGA CO Attorney

CONTRACTOR:

(Address)

(Title)

(Seal if by Corporation)

WITNESS:

(Title)

STATE OF NEW YORK

ss:

COUNTY OF _____

On this _____ day of _____, 20____, before me personally came _____
_____ to me known, who, being by me duly sworn, did
depose and say that he/she resides at _____,
in the City of _____, New York; that he/she is of the TIOGA COUNTY, the
corporation named in the foregoing indenture; that he knows the seal of said corporation; that the seal
affixed to said instrument is such corporate seal; that it was so affixed by a duly adopted resolution of the
said Tioga County and that he/she signed his/her name thereto by like resolution.

Notary Public

**Acknowledgment if
Contractor is an Individual, Partnership or Corporation**

By: _____

Name: _____

Title: _____

Company: _____

STATE OF NEW YORK

)ss:

COUNTY OF _____

On _____, 20 _____, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person(s) upon behalf of which the individual(s) acted, executed the instrument.

Notary Public _____

Appendix C

Non-Collusive Bidding Certification

NON-COLLUSIVE BIDDING CERTIFICATION

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 his 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 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 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.

NOTICE

(Penal Law, Section 210.45)

IT IS A CRIME, PUNISHABLE AS A CLASS A MISDEMEANOR UNDER THE LAWS OF THE STATE OF NEW YORK, FOR A PERSON, IN AND BY A WRITTEN INSTRUMENT, TO KNOWINGLY MAKE A FALSE STATEMENT, OR TO MAKE A FALSE STATEMENT, OR TO MAKE A STATEMENT WHICH SUCH PERSON DOES NOT BELIEVE TO BE TRUE.

BID NOT ACCEPTABLE WITHOUT FOLLOWING CERTIFICATION:

Affirmed under penalty of perjury this _____ day of _____, 20 _____

FIRM NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

AUTHORIZED SIGNATURE _____

TYPED NAME OF AUTHORIZED SIGNATURE _____

TITLE _____ TELEPHONE NO. _____

Appendix D

Form of Bonds

PERFORMANCE BOND

BOND NO. _____

TIOGA COUNTY

KNOW ALL MEN BY THESE PRESENCE, that we, _____ of _____ (hereinafter called Principal) and the _____ a corporation of the State of _____ having its principal office in the City of _____ and authorized to do business in the State of New York (hereinafter called Surety), are held and firmly bound unto Tioga County (hereinafter called Obligee), in the amount of **One Hundred-percent (100%)** of the total contract value, or Dollars, lawful money of the United States of America, for the payment of which the Principal and the Surety hereby bind themselves, their heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the above bounded Principal has by written contract dated _____, 20 ____ entered into a contract with the Obligee for _____ which contract is by reference made a part hereof (hereinafter called Contract).

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall:

1. Well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life of any guaranty required under the Contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; and
2. promptly make payment to all persons having a direct contract with the Principal or with a subcontractor of the principal supplying labor and material in the prosecution of the work provided for in said Contract and any and all duly authorized modifications of said Contract that may hereinafter be made, notice of which modifications to the Surety being hereby waived; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, and this bond is executed and accepted upon the following express conditions:

1. That all persons who have supplied labor and material as aforesaid shall have a direct right of action hereunder against the Principal and the Surety, subject, however, to the prior right of

the Obligee to recover hereunder on account of any loss or damage caused to it by the failure of the Principal to perform the Contract as aforesaid.

2. That if the Principal shall abandon said Contract or be lawfully compelled by reason of a default to cease operations hereunder, the Surety shall have the right at its option to complete said Contract or sublet the completion thereof.
3. That, in accordance with the provisions of Tioga County Standard Specifications, the principal, at its own cost and expense, shall maintain the improvement and make all repairs resulting from faulty workmanship and/or defective materials occurring within one (1) year from the date of final payment pursuant to said Contract.
4. That the Obligee shall notify the Surety by registered letter, addressed and mailed to its Home Office, of any breach of said Contract within a reasonable time after such breach shall have come to the knowledge of the Obligee.
5. That the Surety shall not be liable hereunder for any damages or compensation recoverable under any Workmen's Compensation or Employer's Liability Statute.
6. That no, suit, action or proceeding for loss or damage caused by a breach of any of the conditions of this bond shall be brought against the Surety by the Obligee after one (1) year from the day on which final payment under the Contract is made.
7. That no suit, action or proceeding for loss caused by the failure of the Principal to pay all persons supplying labor and material in the prosecution of the work under said contract shall be brought against the Surety after six (6) months from the day on which final payment of the contract is made.

Signed, sealed, and dated this _____ day of _____, 20 ____

Principal

Principal

By _____
President, Vice President, Secretary, Treasurer

Surety

By _____

**Acknowledgment if
Contractor is an Individual, Partnership or Corporation**

By: _____

Name: _____

Title: _____

Company: _____

STATE OF NEW YORK

)ss:

COUNTY OF _____

On _____, 20____, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person(s) upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

ACKNOWLEDGMENT OF SURETY

State of _____

City of _____ to wit:

_____, a Notary Public in and for the City and State aforesaid, do certify that _____ personally appeared before me in my City and State aforesaid and made oath that he/she is _____ of the _____; that _____ is authorized by law to transact business in the State of New York; has complied with all laws relative to the execution of said bond; and that he is duly authorized to execute said bond for and on behalf of said company and to obligate the company with respect thereto.

My commission expires _____

Notary Public

Given my hand and seal this _____ day of _____, 20 _____

MAINTENANCE BOND
TIOGA COUNTY

KNOW ALL MEN BY THESE PRESENCE that we, _____
_____ located at _____
_____ herein called the PRINCIPAL and
_____ located at _____

herein called the SURETY, are held and firmly bound into TIOGA COUNTY, 56 Main St, Suite 211, Owego, NY 13827 herein called the OBLIGEE, in the amount of **twenty-five percent (25%)** of the total contract value, or _____
(\$ _____) dollars lawful money of the United States of America to be paid to the OBLIGEE, its successors or assigns for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the PRINCIPAL is required by the OBLIGEE to guarantee work, labor, services and materials, for the period of one (1) year covering the following project: **TIOGA COUNTY.**

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the PRINCIPAL shall faithfully comply with the guarantee on its part by replacing defective workmanship or materials and hold harmless the OBLIGEE against any cost, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that no suit shall be brought on this bond after one (1) year from the date of acceptance of this project by Tioga County

SIGNED, SEALED AND DATED this ____ day of _____ , 20

IN THE PRESENCE OF:

Principal

(Seal)

Title

Surety

(Seal)

Title

**Acknowledgment if
Contractor is an Individual, Partnership or Corporation**

By: _____

Name: _____

Title: _____

Company: _____

STATE OF NEW YORK

)ss:

COUNTY OF _____

On _____, 20____, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person(s) upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

ACKNOWLEDGMENT OF SURETY

State of _____

City of _____ to wit:

_____, a Notary Public in and for the City and State
aforesaid, do certify that _____ Personally appeared before me in my
City and State aforesaid and made oath that he/she is _____
of the _____; that
_____ is authorized by law to transact
business in the State of New York; has complied with all laws relative to the execution of said
bond; and that he is duly authorized to execute said bond for and on behalf of said company and
to obligate the company with respect thereto.

My commission expires _____

Notary Public

Given my hand and seal this _____ day of _____, 20 _____