



COLUMBIA
COUNTY

REQUEST FOR BIDS

FIBER OPTIC – SOLID WASTE

COLUMBIA COUNTY MIS

Issued: May 20, 2025

Due: June 26, 2025

Columbia County, Wisconsin

David Drews, MIS Director

112 East Edgewater Street

Portage, WI 53901

(608) 742-9626

<https://www.co.columbia.wi.us/ColumbiaCounty>

FIBER OPTIC – SOLID WASTE REQUEST FOR BID

PROJECT SCOPE

Columbia County (County) hereby requests sealed bids for the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954. Project specifications can be found on the County Bid Form on pages 9-23. A diagram of the site is on page 24.

PRE-BID SITE VISIT

A **mandatory** pre-bid meeting is scheduled for Tuesday, June 10, 2025, at 9:00 a.m. (CST) at the Solid Waste office building, located at W7465 Highway 16, Pardeeville, WI 53954. All contractors who wish to submit a bid, **MUST** attend.

BID BOND

In accordance with Wisconsin Statutes Section 779.14(1m)(e), Bonds are required for the work. A 5% Bid Bond shall be delivered with the Bid on the date due.

QUESTIONS

For interpretation or correction of any of the bid material, a request may be made to David Drews, MIS Director, at david.drews@columbiacountywi.gov. Any questions should be received no later than Monday, June 23, 2025, at 2:00 p.m. (CST). Questions received after that time will not be considered. Questions and answers will be posted to [DemandStar](#) and the [County's website](#) by 4:30 p.m. (CST) on Tuesday, June 24, 2025.

BID SUBMISSION

Bidder must submit three (3) copies, including all required materials for acceptance of their bid by 9:00 a.m. (CST) on Thursday, June 26, 2025, to the Columbia County Clerk, 112 East Edgewater Street, Portage, WI 53901.

Bids will be publicly opened and read at 9:05 a.m. (CST) on Thursday, June 26, 2025, at the Columbia County Administration Building, 112 East Edgewater Street, Portage, WI 53901 in room 115.

All bids are to be packaged, sealed, and show the following information on the **outside of the package**:

- Vendor's Name and Address
- Request for Bid Title (Fiber Optic-Solid Waste)

BID RESPONSE REQUIREMENTS

In order for your bid to be considered, the following information must be provided by the due date and time. Required documents include:

- County Bid Form (pages 9-23)
- Signature Page (page 25)
- Bid Bond
- Company and staff project experiences on projects similar in nature (include contact references).
- Timeline for schedule of completing the work.

CALENDAR OF EVENTS

Date	Event
May 20, 2025	Date bid was issued.
June 10, 2025	Mandatory pre-bid meeting at 9:00 a.m. (CST) at the Solid Waste office building, located at W7465 Highway 16, Pardeeville, WI 53954. All contractors who wish to submit a bid, MUST attend.
June 23, 2025	Questions related to this bid should be received no later than 2:00 p.m. (CST). Questions received after that time will not be considered
June 24, 2025	Questions and answers will be posted to DemandStar and the County's website by 4:30 p.m. (CST).
June 26, 2025	Bids are due at 9:00 a.m. to the Columbia County Clerk, 112 East Edgewater Street, Portage, WI 53901.
June 26, 2025	Bids will be publicly opened and read at 9:05 a.m. (CST) at the Columbia County Administration Building, 112 East Edgewater Street, Room 115, Portage, WI 53901.

BID DOCUMENT

Bid price shall remain in effect for sixty (60) days from the date and time of the bid opening. All bids received after the Bid Opening date listed above may be rejected.

Any person with disability requiring special accommodations must contact the County no later than (seven) 7 days prior to the pre-bid site visit and/or bid opening.

Taxes: Pursuant to Wisconsin Statutes Section 77.54(9m), certain building materials and other eligible items may be purchased for this project by the County without the requirements to pay the regular sales or use tax. When permitted under Wisconsin Statutes Section 77.54(9m), the Bidder will exclude sales or use tax on building materials and other eligible items.

Contractor and Subcontractors shall not be barred from working on County projects and shall not appear on the Sam.gov disbarment list. A detailed listing of all subcontractors shall be provided by the Bidder prior to award of contract to assure that all workers are compliant with all qualifications required of this Request for Bid. In accordance with Contract Documents, documentation shall be submitted and provided that the Bidder and its subcontractors meet minimum qualifications of the bid.

The winning Bidder will enter into a 2-party Contract with County, in the form as outlined in the Bidding Documents, within the timeframe proposed in accordance with the other terms and conditions of the Request for Bid. The winning Bidder shall act then as prime contractor and be responsible maintaining a list of all subcontractors, suppliers, and service providers; and for payment of all claims for labor, services, materials, plans, or specifications performed, furnished, procured, used, or consumed that pertain to the project.

County hereby notifies all bidders that it will affirmatively ensure that all bidders will be afforded a full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award of any contract entered into pursuant to this advertisement. Columbia County is an Equal Opportunity Employer.

County reserves the right to reject any or all bids and is not bound to accept any bid if that bid is contrary to the best interest of Columbia County. County will award the bid to the lowest responsible bidder.

General Specifications and Proposal Forms for the above-listed project may be obtained at Onvia DemandStar. Bidders must register to access free procurement documents and related information. Bidders may also obtain

bid notices and documents through the Columbia County website. Bidders who do not have access to the Internet may contact Onvia or the Columbia County Accounting Department for assistance.

- **DemandStar**
 - National procurement information distribution system.
 - **Registration is FREE** in connection with the Wisconsin Association of Public Purchasers (WAPP): <https://www.demandstar.com/app/wapp/registration>
 - Additional levels of subscription service covering local, state, regional, or national territories are available at various fee rates.
 - Registration assistance is available: Toll free: 1-866-273-1863; supplierservices@demandstar.com

It is the responsibility of the Bidder to regularly monitor this Website. Properly registered Bidders can expect to receive automatic notification of solicitations for quotes, proposals, and bids by participating public purchasing entities. A bidder's failure to retrieve available, required procurement information and include the appropriate documentation and information in solicitation responses may result in disqualification.

Published by authority of the Columbia County Executive Committee.

BID RECIPIENT (OWNER)

- 1.01** Bid is submitted to:
Columbia County
County Clerk's Office
112 East Edgewater Street
Portage, WI 53901
- 1.02** The undersigned BIDDER proposes and agrees, if this bid is accepted, to enter into a purchase order with OWNER, to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.
- 1.03** Columbia County MIS staff will function as OWNER representative for this project.

BIDDER'S REPRESENTATIONS

- 2.01** In submitting this Bid, BIDDER represents; BIDDER has examined and carefully studied the Bidding Documents, other related data identified in Bidding Documents, and the following addenda; receipt of all which is hereby acknowledged;

- 2.02** BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, and performance of the Work.
- 2.03** BIDDER acknowledges that the bid is for the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954.
- 2.04** **BIDDER ACKNOWLEDGES BID IS A UNIT PRICE CONTRACT** for completion of all work and minor alternatives for consideration of each owner identified bid item(s); within the depicted areas as specified in the bid documents.

- 2.05 BIDDER SHALL BE RESPONSIBLE TO VERIFY THE PROJECT QUANTITY.** Quantities as presented or represented within the Bid Documents are included to provide the actual quantity of equipment to be provided. BIDDER shall verify and assure proper account of project scope prior to formation and submittal of unit pricing for the project. Change orders shall NOT be allowed for BIDDER'S negligence or variance in based on "assumed" versus "actual" quantities required for the project.
- 2.06** BIDDER shall perform all work in a safe manner in full legal accordance with OSHA, Federal, State, County, Town, WDNR, and local rules and regulations.
- 2.07** BIDDER accepts all of the terms and conditions of the Bid. This Bid will remain subject to acceptance for 60 days after the Bid Opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.
- 2.08** BIDDER is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work including, but not limited to;
- 2.08.1** Title VIII of the Federal Civil Rights Act of 1968 (as amended), and Wisconsin Statutes Section 106.50, and any subsequent relevant laws or amendments.
- 2.09** After BID has been submitted, BIDDER shall not assert that there was a misunderstanding concerning the quantities of equipment to be provided, or nature of project to be completed.
- 2.10** BIDDER is responsible for inspecting the site and for being thoroughly familiar with the Bidding Documents. Failure or omission of BIDDER to conduct due diligence shall in no way relieve BIDDER from any obligations in respect to BID. Based on the information and observations referred to, BIDDER does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the timeframes required, and in accordance with the other terms and conditions of this Bid.
- 2.11** BIDDER is aware of the general nature of work to be performed by OWNER, the public, and others at the Site that relates to the Work as indicated in this Bid. BIDDER also represents that Work performed in accordance with this bid shall not interfere with OWNER or public's performance of work.
- 2.12** BIDDER has provided OWNER written notice of all conflicts, errors, or discrepancies that BIDDER has discovered. For any conflicts, errors, or discrepancies identified, the resolution provided by OWNER is acceptable to BIDDER.
- 2.13** BIDDER has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for this contract. Bid is genuine and not made in the interest or on behalf of any undisclosed entity and is not submitted in conformity with any collusive agreement. BIDDER has not induced or solicited any other BIDDER to submit a false or sham bid. BIDDER has not solicited or induced any entity to refrain from bidding.

BASIS OF THE BID

- 3.01** The executed purchase order will bind OWNER to make payment to the successful BIDDER as unit price payments based upon completion of the work. Payment shall be made by progress payment method based on actual quantity of work performed; determined as completion of the unit price item(s) contract amount and provided the work is completed in timely, professional, safe, efficient, consistent manner, acceptable to OWNER.

- 3.02** BID shall be inclusive of all labor, equipment, materials, overhead, supervision, fuel, taxes, insurance, benefits, profit and all other costs deemed necessary to fulfill requirements of the Work.
- 3.03** Work under this Bid shall be Finally Complete and ready for Owner's acceptance on the due date.
- 3.04** BIDDER's obligations will be coordinated with OWNER and shall be performed independently and without assistance from the OWNER.
- 3.05** OWNER reserves the right to nullify the purchase order between OWNER and BIDDER in the event BIDDER is unable to fulfill its obligation, at OWNER's sole determination. Purchase order termination, if enacted, shall be effective immediately upon BIDDER'S receipt of written notice from OWNER.
- 3.06** BIDDER shall warrant all work performed by Bidder in relation to this Contract for a period of one (1) year from Final Completion certification of project; unless otherwise specified within the Bid.
- 3.07** BID is a Unit Price for the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954. OWNER has the right to award single or multiple unit price item(s) at OWNER'S discretion.

PROJECT IDENTIFICATION

Work of the Contract shall be conducted in accordance with the following conditions:

- 4.01** The purpose of this project is for the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954. For the price quoted in relation to this project, BIDDER shall provide all labor, equipment, materials, taxes, overhead, fuel, subcontractors, and all other direct and indirect costs necessary in accordance with the Contract Documents.
- 4.02** BIDDER shall be solely, wholly, and completely responsible for the safety of all employee(s) working in connection with this project. Work shall conform to all safety related Statutes, rules, ordinances, and guidance whether at the federal, state, county, or local level.
- 4.03** BIDDER shall coordinate and procure all necessary permits, prior to initiating work on-site.
- 4.04** The work is generally described as the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954. This is a Unit Price Bid. BIDDER shall be responsible for conducting their own material take-off, field measurements, fit determinations, and procuring the correct amount of materials needed to complete the work as specified. OWNER merely provides the following for informational purposes to allow a prospective bidder to easily approximate the amount of work needed for this project to determine their interest level in the project. BIDDER is responsible for determining proper measurements.

PROCEDURAL SPECIFICATIONS (BIDDER'S RESPONSIBILITIES)

- 5.01** Proceed expeditiously so as to complete all work in a reasonable timeframe. All areas opened during the daytime, shall be secured and protected during hours when the BIDDER is not working.
- 5.02** Maintain work areas in a safe, efficient, professional manner. Protect and store all work areas, equipment, materials, and tools in a secure, safe, protected area.

5.03 COVID-19 Protocols

- 5.03.1** Any employee or worker experiencing Covid-like symptoms shall not be allowed to work at the Facility or on the project until such time as they are required to no longer quarantine and should follow all CDC guidelines.
- 5.03.2** Owner will be held harmless for any delay of installation/construction due to the event of a COVID-19 outbreak within the facility.

USE OF PREMISES (BIDDER'S RESPONSIBILITIES)

This is an active Facility. Staff and permitted public personnel frequent the work areas. BIDDER shall operate at all times with consideration for Facility operations and shall confine operations to the site of the proposed work.

- 6.01** Responsibility for the protection and safekeeping of manpower, equipment, and materials on or near the site will be entirely that of the BIDDER and no claim shall be made against the OWNER by reason of any act of an employer or trespasser. OWNER will hold BIDDER to the highest standards of conduct.
 - 6.01.1** Appropriate conduct is required.
 - 6.01.2** A criminal background check shall be required of all BIDDER personnel that access the Facility. BIDDER shall provide a minimum of three (3) working days advance notice to Facility prior to conducting work on site and shall continue working expeditiously and continuously for the duration of that specific activity. Daily work hours shall be completed Monday thru Friday, beginning at 7:00 a.m.
 - 6.01.3** BIDDER shall not leave any work area, tools, chemicals, supplies, etc. unattended.
- 6.02** Any Facility damage caused by BIDDER shall be repaired to pre-existing condition at BIDDER's expense.
- 6.03** Further, should any occasion arise necessitating access by the OWNER to the site, BIDDER shall accommodate the request expeditiously.
- 6.04** No materials or equipment shall be placed on the property of OWNER until the OWNER has agreed to the location contemplated to be used. The intent of this project is the rapid construction and installation of all work; therefore, excessive storage of materials at the site shall not occur.
 - 6.04.1** Upon completion of the project, all excess material shall be removed from the site and properly disposed of at the cost of the BIDDER.
 - 6.04.2** BIDDER shall police the area frequently to assure there is no migration of debris, glass, nails, or other sharp objects which could damage staff, passersby, vehicles, or equipment.
- 6.05** BIDDER shall be solely responsible for obtaining any additional work area, storage sites, additional access to the site, or temporary right-of-way or easement which may be required for proper completion of the work, at BIDDER'S exclusive cost.
- 6.06** BIDDER shall be solely responsible to maintain the structural and security integrity of any/all adjacent utilities, structures, or public spaces and take whatever means are necessary to protect same.
 - 6.06.1** Fixtures or areas removed or destroyed shall be repaired and replaced to satisfaction of the OWNER.

SCHEDULING (BIDDER'S RESPONSIBILITIES)

Become familiar with all items of the project requiring coordination and plan the work to ensure safe, orderly progress and completion from the beginning of activity through the project close-out period, within the Contract time.

- 7.01** Schedule the work to minimize inconvenience and impact to the OWNER and adjacent property owners.
- 7.02** Once project has started, BIDDER shall continue unimpeded, expeditiously, continuously and in a consistent manner in order to complete the project in the utmost timeframe and without detrimental collateral damage to either the existing buildings or their surroundings.
- 7.03** Coordinate closely with Facility staff, providing at least three (3) working days' notice prior to the time when field work will be required.
- 7.04** Minimize obstructions and impact to Facility activity.
- 7.05** Coordinate activity with the OWNER to minimize disruption at the site.
- 7.06** Provide testing and inspection services where required by Contract Documents.
- 7.07** Schedule and coordinate the work of all trades (including; but not limited to, other contractors, subcontractors, utilities, disposal locations, suppliers, etc.) under this Contract.
- 7.08** No project work shall be initiated until notified by COUNTY via the purchase order.

HOUSEKEEPING (BIDDER'S RESPONSIBILITIES)

Clean and protect site work in progress and adjoining work on a continual basis in order to keep project neat, orderly, and in a safe condition at all times.

- 8.01** Provide containers for collection of rubbish and dispose of it at frequent intervals during work progress. Do not allow rubbish to accumulate.
- 8.02** Take all necessary reasonable measures to reduce air and water pollution from any material or equipment used during construction.
- 8.03** Do not dispose of volatile wastes or oils in storm or sanitary drains, nor allow such materials to reach natural waters. Do not allow volatile wastes to be washed into surface water bodies. Keep volatile waste in covered containers.
- 8.04** No burning of debris will be permitted.
- 8.05** Take all necessary precautions to prevent fire during performance of the Contract; provide and maintain adequate fire protection at all times. Provide adequate ventilation during use of volatile or noxious substances.

INDUSTRY STANDARDS (BIDDER'S RESPONSIBILITIES)

- 9.01** Remove and replace workers responsible for non-complying work and/or workmanship.
- 9.02** Remove and replace work that does not comply with workmanship standards as specified and as recognized in the industry for applications indicated.

- 9.03** Remove and replace other work damaged or deteriorated by faulty workmanship.
- 9.04** Conduct work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion that will ensure the best possible results for each unit of work.
- 9.05** Provide adequate supervision, labor, equipment, materials, and expertise in order to complete work timely, safe, effective, and efficiently for the duration of the project.
- 9.06** Normal work hours shall be Monday thru Friday, beginning at 7:00 a.m., not including holidays. Any work performed outside of these normal hours, except work identified as an emergency, requires OWNER'S prior approval.
- 9.07** Persons performing work at the site shall be skilled and knowledgeable in methods and craftsmanship needed to produce the required quality level for work completed in a safe, efficient, effective manner.
- 9.08** Comply with Federal Project and Employment Standards and Requirements; including but not limited to, National Environmental Policy Act of 1969, Affirmative Action Requirements (EO 11246), Equal Opportunity Clause (41 CFR 60-4), Disclosure of Lobbying Activities (31 U.S.C. 1352), and Conflict of Interest (18 U.S.C. § 208).

STATUTORY GUIDANCE ON BONDING AND PROJECT PAYMENTS

- 10.01** OWNER is authorized to enter into the Contract to make direct payment to subcontractors or to pay the prime contractor with checks that are made payable jointly to the prime contractor and to one or more subcontractors. Wisconsin Statutes Section 779.14(1m)(d)1. for local government contracts exceeding \$16,000 but not exceeding \$74,000.
- 10.02** Performance and Payments bonds of this Contract and as required under Wisconsin Statutes Section 779.14(1m)(d) must carry a penalty in at least the amount of the Contract, and be conditioned upon: (1) the faithful performance of the Contract; and (2) the payment to "every person, including every subcontractor, supplier, or service provider, of all claims that are entitled to payment for labor, services, materials, plans, or specifications performed, furnished, or procured for the purpose of making the public improvement or performing the public work as provided in the contract. Wisconsin Statutes Section 779.14(1m)(e)2.
- 10.03** Local government contracts with a price exceeding \$74,000 but not exceeding \$148,000 may provide for direct payment if the local government allows the prime contractor to substitute a different payment assurance, such as an irrevocable letter of credit or an escrow account in lieu of bonding requirements (Wisconsin Statutes Section 779.14(1m)(d)2.
- 10.04** The requirements to provide bonding or other payment assurances "do not apply to ... contract[s] for the direct purchase of materials by the state or ... local unit of government." (Wisconsin Statutes Section 779.14(1m)(f). A prime contractor for a public works project must provide a bond only for the labor and materials in its own contract.

COUNTY BID FORM

Bidder shall complete the work in accordance with the Contract Documents for the following price(s).

PROJECT NAME: FIBER OPTIC – SOLID WASTE

CONTRACTOR NAME: _____

PRE-BID SITE VISIT

A **mandatory** pre-bid meeting is scheduled for Tuesday, June 10, 2025, at 9:00 a.m. (CST) at the Solid Waste office building, located at W7465 Highway 16, Pardeeville, WI 53954. All contractors who wish to submit a bid, **MUST** attend.

PROJECT SPECIFICATIONS

The County is requesting bids on the installation of 24 strands of single-mode fiber optic cable from the Solid Waste Office Building to the new waste recycling building being constructed.

The manufacturer(s) of cabling and connectivity components shall be a company specializing in and having a minimum of five years of documented experience in producing products similar to those specified in this and related sections.

The contractor shall have been in this line of business for a minimum of five (5) years and have completed one or more projects of scope 50% or more of the magnitude specified by these documents:

- Contractor shall have necessary certifications to provide for Guarantees as specified herein.
 - Contractor shall be an active participant in Installers Program operated by Manufacturer of Cabling or Termination Components used. Contractor shall be a participant in this program at time of Bidding and remain so throughout project.
 - Contractor shall have on the project team at a minimum one (1) certified Installer trained by the manufacturer(s) of the cabling, hardware and accessories installed under this project.
 - At least one (1) member of each test team shall be factory trained/certified in use of the test equipment. The project foreman shall have been factory trained in the use of the test equipment.

All questions should be directed to the project point of contact via email.

All questions received and corresponding responses will be provided to all participating vendors. (The origin of all questions will be kept confidential.) All questions must be received no later than Monday, June 23, 2025, at 2:00 p.m. (CST).

Project deadline is September 30, 2025.

Selected contractors will be required to obtain all required permits.

A diagram of the site is on page 24.

SUBMITTALS

Submit shop drawings, catalog data, and manufacturer's technical data showing complete information on resin, pipe and fittings material composition, physical properties, and dimensions of the new pipe and fittings. Include manufacturer's recommendations for handling, storage, and repair of pipe and fittings if damaged. Furnish a certificate of compliance with specified pipe material requirements.

Provide written drilling plan outlining proposed equipment and construction methods, including the following:

- Detailed description of the procedures including construction techniques to provide the access required to install the pipeline.
- Dimensioned drawings of any proposed changes in the pipe alignment or profile.
- Literature describing in detail the drilling system to be used, including drill steering and locating system.
- Drawings showing: Layout of boring and receiving locations and associated equipment at each location, grade and alignment control system details, groundwater control provision of drilling equipment.
- Qualifications and experience record of the drilling superintendent and machine operators.
- Drilling fluid generation and management.

Provide a directional drilling contingency plan that accounts for the following:

- Unforeseen obstructions that stop or delay the progress of drilling equipment.
- Deviation from planned line and grade in excess of allowable tolerances.
- Loss of drilling fluid.
- Damage to other utilities.
- Soil settlement or heaving.

Provide written copies of quality assurance test results and reports performed by or for the contractor.

Note the location of any utilities or difficult drilling that was encountered.

AS-BUILD DOCUMENTS

Provide printed and electronic in pdf format records of actual horizontal and vertical location of installed pipe from borehole survey instrumentation in addition to marked-up drawings.

CONDUIT, FITTINGS AND SPLICES

Conduit:

- Schedule 80
- Continuous length smooth-wall HDPE conduit for electrical applications per ASTM F2160.
- Conduit shall be listed by a Nationally Recognized Testing Laboratory (NRTL).
- Color: Communications – Orange

Marking:

- Each length of pipe and each fitting shall be clearly and durably marked on their outer surface with their manufacturing details.
- Marking shall include Material Type, listing and the date of manufacture.
- Fittings shall be clearly and durably marked, including manufacturer's name or trademark, material type, class of pipe, listing and a date or code of manufacture.
- Spacing of labeling on pipe shall not exceed 10-feet.

TRACER WIRE

Tracer wire shall be #10 stainless steel wire with 45 mil HDPE jacket. Alternately, tracer wire may be embedded in conduit wall.

DRILLING FLUID

ANSI/NSF 60 (Drinking Water Treatment Chemicals – Health Effects) certified bentonite-based drilling fluid.

EXECUTION

Comply with the requirements of applicable specification sections for the utility line being installed.

Conduct any necessary field surveys, subsurface investigations and geotechnical investigations necessary to complete the work.

Locate all known utilities located adjacent to or crossing the utility line being installed. Excavate to expose utilities prior to initiating drilling and as required to verify applicable clearances. Clearance shall meet applicable code requirements and the requirements of the directional drilling process.

Locate and verify the clearance of known structures and foundations/footings located adjacent to or crossing the utility line being installed.

EXCAVATION, BACKFILL AND COMPACTION

Excavate insertion and receiving pits, and other access points as necessary to complete the work.

CONDUIT INSTALLATION

HDPE conduit may only be used in horizontal directional drilling applications. Installation must be in accordance with NFPA 70 National Electrical Code and be direct buried or encased in concrete.

HDPE shall not be routed such that it is exposed above grade.

Storage and handling of polyethylene pipe shall not result in damage to or deformation of the pipe. Protect polyethylene pipe from long-term exposure to temperature fluctuations and sunlight.

Prepare pipe on a relatively smooth surface, free of sharp rocks, sticks, or debris. Utilize cribbing, pipe stands, rollers, or other equipment as necessary to support the pipe.

Lift and move piping using ropes, slings, or straps. Do not use unprotected chains, hooks, or clamps to lift pipe.

When lifting and moving pipe, provide a minimum of two points of support. Do not support pipes at butt-fused joints.

Sections of pipes with cuts and gouges exceeding 10 percent of the pipe wall thickness or kinked sections shall be removed and rejoined at the Contractor's expense.

Plug all pipes at end of each workday. Provide a watertight plug to prevent entry of foreign materials into the pipe.

DRILLING

Drilling methods shall generally consist of drilling a pilot hole the length of the bore, followed by reaming and pullback of the pipeline. Ream borehole multiple times, as necessary. The equipment and methods used to complete the bore and install piping shall be determined by the Contractor, but subject to the Contract Documents.

The drill staging area shall be kept neat and orderly and disturb as little area as possible. The pipe staging area shall disturb as little area as needed to accommodate workers and equipment, and to string, fuse, and inspect the pipe.

Install all pulleys, rollers, bumpers, alignment control devices and other equipment required to support and protect the new pipe from damage during installation.

Utilize a drilling fluid cleaning/recycling system. Entry and exit pits shall be sized and constructed to completely contain drilling fluid.

Install boring to line and grade shown on drawings. Alignment shall be within tolerances specified in applicable utility specification sections.

Borehole survey instrumentation shall be used to monitor line and grade of the pilot hole. Contractor shall maintain records documenting the line and grade of the pilot hole.

JOINING PIPE

Joints between lengths of conduit and between conduit and couplings, fittings and boxes shall be by an approved method using either Heat Fusion, Electrofusion or listed Mechanical Fittings. Glue and/or solvents are NOT approved.

Any joining method employed shall be in accordance with manufacturer recommendations.

The tensile strength at yield of the butt-fusion joints shall not be less than the pipe.

REAM AND PULLBACK

Back-ream Pilot hole reamed to accommodate pipe. Select reamer size and number of passes required.

Pull pipe back using swivel to prevent torsion of pipe.

Monitor tension forces on pipe during pullback. Do not exceed maximum stresses recommended by the pipe supplier.

Support pipeline during pullback operations. Provide supports/rollers in accordance with manufacturer's recommendations. Supports and rollers shall allow for free movement of the pipeline and prevent damage to the pipe.

Use a drilling fluid in conjunction with the installation of the pipe to fill the annular space around the installed pipeline. Contractor is responsible for determining the type of fluid to use.

Properly dispose all excess drilling fluid and slurry material recovered from the hole during drilling operations and displaced by the pipe during installation.

Unless otherwise noted on the drawings, terminate and cap carrier pipe 5' above the proposed ground surface.

TRACER WIRE

General:

- Install Tracer Wire (unless embedded in conduit wall) during pullback operations.
- Terminate Tracer Wire at conduit end points and at all intermediate pull points in a fashion as to make it available for locating.
- Allow the manufacturer's recommended amount of time for cooling and relaxation due to tensile stressing prior to connecting pipe to adjacent pipe sections, fittings, or structures, or backfilling of the insertion pit. Provide sufficient excess length of new pipe at insertion pits to allow for cooling and relaxation.

Continuity Testing:

- Test continuity of the Tracer Wire using an ohmmeter prior to demobilizing.
- Tracer Wire Resistance shall be no greater than 105% of the specified unit resistance times installed length.
- Conduct testing in the presence of the MIS Department representative unless this requirement is waived.

- Provide a written report describing the equipment used, test methods, and detailed test results.
- In the event of a failed test, make all necessary repairs required to provide a tracer wire system that complies with the performance requirements of this section.

FIBER OPTIC TERMINATION ENCLOSURE

Fiber Optic Connector:

- The Optical Connector shall be LC type.
- The connector ferrule shall be ceramic or glass-in-ceramic. The optical fiber within the connector ferrule shall be secured with an adhesive to prevent pistoning and other movement of the fiber strand.
- Cable termination method(s) shall be as follows:
 - Inter-building (OSP) Backbone- Fusion splicing of factory-terminated cable assemblies (e.g., "pigtailed") to the installed cable.
- The Connector Body shall be a Composite material.
- The attenuation per mated pair shall not exceed the following values:
 - Single-mode 0.75 dB
 - Mated pair attenuation shall include in-connector stub splice or splice used to splice pigtail to backbone cable.
 - These values shall hold throughout the Cable System. Connectors shall sustain a minimum of 200 mating cycles per EIA/TIA-455-21 without violating specifications.
- The connector shall meet the mechanical performance criteria of the applicable EIA/TIA-455 Fiber Optic Test Procedures (FOTP).
- Connector End-Face finish:
 - Single-mode Ultra Physical Contact; UPC
- Color of Connector Body or strain-relief boot of Connector shall indicate fiber type as follows:
 - Single-mode (UPC) Blue
- Reflectance (max) when mated with a patch-cord made up of connectors of comparable design:
 - Single-mode (UPC) -40 dB

Enclosure and Adapter Panels:

- All terminated fibers shall be mated to Duplex LC Adapters. Adapters shall be mounted on a panel that, in turn, snaps into the enclosure.
- Product enclosure and adapter panels shall be Corning fiber and pigtail cassettes.
- Each Adapter Panel shall support a maximum of 24-fibers (duplex adapters).
- Color of Adapter shall indicate fiber type as follows: (Not all may apply.)
 - Single-mode (UPC) Blue
- Fiber Optic Patch Panels shall be rack-mounted.
- Fiber Optic Patch Panel enclosure shall be sized to accommodate the total fiber count to be installed at each location as defined in the specifications and drawings - including those not terminated (if applicable).
- Unit height shall be 1 RU minimum to simplify access.
- Fiber Optic Patch Panel shall be enclosed assemblies affording protection to the cable subassemblies and to the terminated ends. The enclosures shall incorporate a hinged or retractable front cover designed to protect the connector couplings and fiber optic jumpers.
- The unit shall be lockable.
- The patch panel enclosure shall provide for strain relief of incoming cables and shall incorporate radius control mechanisms to limit bending of the fiber to the manufacturer's recommended minimums or 1.2", whichever is larger.
- Access to the inside of the patch panel enclosure during installation shall be from the front and/or rear. Panels that require any disassembly of the cabinet to gain entry will not be accepted.

- All Fiber Optic Patch Panels shall provide protection to both the “facilities” and “user” side of the coupling. The patch panel enclosure shall be configured to require front access only when patching. The incoming cables (e.g., Backbone, Riser, etc.) shall not be accessible from the patching area of the panel. The enclosure shall provide a physical barrier to access of such cables.
- Where termination is to include splicing of factory-terminated cable assemblies, Patch Panel enclosure shall be sized adequately to accommodate the required splice hardware and fiber slack. Alternately, a separate enclosure may be used. The splice hardware shall not be accessible from the "user" side of the enclosure. Refer to “Splicing Procedure – Fiber Optic” for installation and performance requirements.

FLEXIBLE NONMETALLIC INNERDUCT AND FITTINGS

General:

- Flexible non-metallic Innerduct (e.g., “Innerduct”) may be used as follows:
 - To segment conduit(s), increasing their capacity,
 - As protection to backbone fiber optic cables where otherwise installed unenclosed, and/or
 - As protection to fiber optic cable(s) within equipment rooms and Telecommunications Rooms.
- Innerduct shall be corrugated.
- Where not installed in a continuous length, innerduct segments should be spliced using couplings designed for that purpose.
- Any vacant innerduct shall be equipped with a pull cord and capped at all ends to inhibit the entry of water and contaminants.
- Nominal duct size shall be 1-inch (minimum).
- Innerduct should be rated (e.g., Flame-retardant, Riser or Plenum) as required by the installation environment. Riser and Plenum innerduct shall be of a color contrasting to that of the “Standard” and Flame-retardant innerduct. The preferred colors are Orange (“Standard & Flame-retardant) and White (Riser and Plenum).

Flame-Retardant Innerduct:

- Innerduct installed within buildings (not including riser paths) or utility tunnels shall meet all of the above General requirements plus:
 - Be fabricated of flame-retardant materials suitable for installation such environments, and
 - Meet or exceed all requirements for flame resistant duct as required by Bellcore TR-NWT-000356 (Section 4.33).

Riser-Rated Innerduct:

- Innerduct installed within building riser shafts shall meet all of the above General requirements plus:
 - Be fabricated of flame-retardant materials suitable for installation such environments, and
 - Meet or exceed all requirements for flame propagation as specified by test method UL-1666 and referenced by the National Electrical Code (NEC) Section 770.154 for listed optical fiber raceways being installed in vertical runs in a shaft between floors.

Plenum-Rated Innerduct:

- Innerduct installed within a plenum air-return shall meet all of the above General requirements plus:
 - Be fabricated of flame-retardant and smoke inhibiting materials suitable for installation in such environments, and
 - Meet or exceed all requirements for flame propagation and emissions as specified by test method UL-910 and referenced by the National Electrical Code (NEC) Section 770-154 for listed optical fiber raceways being installed in ducts, plenums and other areas for environmental air, and
 - Meet or exceed all requirements specified by the National Fire Protection Agency (NFPA) 90A and 262 for Plenum spaces. Testing for fire and smoke characteristics shall be per UL-910.

Security Fastener Tools:

- Provide tools required to operate the specified tamper-proof (security) fasteners. These tools shall be new and unused.
 - Quantity: five (5) sets of each tool required
- Deliver tools to owner's representative prior to project closeout.
- Provide Tool model number(s) to allow for ordering of additional sets.

IN GRADE HANDHOLES AND BOXES

Handholes and Boxes: Polymer- Concrete.

Handhole and Box Covers: Polymer- Concrete.

Handhole and box bottoms: Open.

Handholes and boxes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.

Handhole and cover Assembly Load Rating: ANSI/SCTE Tier 8 or better.

Covers: Weatherproof, secured by tamper-resistant locking devices with non-skid finish.

Cover Label: FIBER OPTICS

Units shall be designed – typically with a flared wall and footed base – to prevent frost heaving.

DRAWINGS**General:**

- Refer to Project Drawings which indicate Equipment Outlet locations, major cable routes and termination location(s) within each building. Coordinate duct allocation with the Agency.
- Furnish and install all cables, connectors, hardware and equipment as shown on drawings and as specified above.
- It is the contractor's responsibility to survey the site and include all necessary costs to perform the installation as specified.
- Identifying and report to the County any existing damage to walls, flooring, tiles and furnishings in the work area prior to start of work. All damage to interior spaces caused by the installation of cable, raceway or other hardware must be repaired by the Contractor. Repairs must match preexisting color and finish of walls, floors and ceilings. Any contractor-damaged ceiling tiles are to be replaced by the contractor to match color, size, style and texture.
- Where unacceptable conditions are found, bring this to the attention of the County's MIS Department immediately. A written resolution will follow to determine the appropriate action to be taken.
- Project Design Intent is for cable fill in conduit for communications to not exceed 40% based on the maximum number of cables anticipated (initial requirement plus 25% growth) and a nominal assumed cable outside dimension of 0.25 inches".
- Beginning installation means contractor accepts existing conditions.
- Should it be found by the Engineer that the materials or any portion thereof furnished and installed under this contract fail to comply with the specifications and drawings with the respect or regard to the quality, value of materials, appliances or labor used in the work, it shall be rejected and replaced by the Contractor and all work disturbed by changes necessitated in consequence of said defects or imperfections shall be made good at the Contractor's expense.
- Furnish, install, test and document all cables, termination components and support hardware unless noted otherwise.

EQUIPMENT RACK LAYOUT

Position termination hardware between 18- and 72-inches above the finished floor unless otherwise directed on drawings.

Position Fiber Optic Termination Hardware above other hardware.

Layout equipment with Horizontal Management positioned at the top of the rack and adjacent to termination hardware as specified.

CABLE INSTALLATION

General:

- Install all cables in continuous lengths from endpoint to endpoint. No splices shall be allowed unless noted otherwise.
- Cable shall be suitable for and meeting the Listing requirements of the installation environment through which it passes.
- Furnish all required installation tools to facilitate cable pulling without damage to the cable jacket. Such equipment is to include, but not limited to, sheaves, winches, cable reels, cable reel jacks, duct entrance tunnels, pulling tension gauge and similar devices. All equipment shall be of substantial construction to allow steady progress once pulling has begun. Makeshift devices, which may move or wear in a manner to pose a hazard to the cable, shall not be used.
- Pull all cable by hand unless installation conditions require mechanical assistance. Where mechanical assistance is used, care shall be taken to ensure that the maximum tensile load for the cable as defined by the manufacturer is not exceeded. This may be in the form of continuous monitoring of pulling tension, use of a "break-away" or other approved method.
- Where recommended by the cable manufacturer, use a swivel between the pull-line and pulling grip to prevent the pull-line from imparting a twist to the cable.
- Complete all work using qualified personnel utilizing state-of-the-art equipment and techniques. During pulling operation an adequate number of workers shall be present to allow cable observation at all points of duct entry and exit, as well as to feed cable and operate pulling machinery.
- Pull cable in accordance with cable manufacturer's recommendations and ANSI/IEEE C2 standards. Manufacturer's recommendations shall be a part of the cable submittal. Recommended pulling tensions and pulling bending radius shall not be exceeded.
- Install cable unenclosed, in a secured metal raceway, in cable tray or in modular furniture as designated on the plan drawings. All cable shall be free of tension at both ends.
- Avoid abrasion and other damage to cables during installation.
- Pulling Lubricant may be used to ease pulling tensions. Lubricant shall be of a type that is non-injurious to the cable jacket and other materials used. Lubricant shall not harden or become adhesive with age.
- All cable shall be free of tension at both ends. In cases where the cable must bear some stress, Mesh-type (e.g., "Kellem") grips may be used to spread the strain over a longer length of cable.
- Manufacturer's minimum bend radius specifications shall be observed in all instances.
- Within the equipment room in which cabling is terminated, use only Hook and Loop (e.g., "Velcro") ties from room entry to the point of termination. This is to facilitate the addition of future cables.
- A pull cord (nylon; 1/8" minimum) shall be co-installed with all cable installed in any conduit.

Fiber Optic Cable Installation:

- Provide cable slack in each Backbone fiber optic cable. This slack is exclusive of the length of fiber that is required to accommodate termination requirements and is intended to provide for cable repair and/or equipment relocation.
- Store cable slack in a fashion as to protect it from damage and be secured in the termination enclosure or a separate enclosure designed for this purpose, in a loop secured to cable runway or wall. Multiple cables may share a common enclosure. Slack required in the various subsystems is as follows:

- Backbone Inter-Building: A minimum of 5-meters (approx. 15-feet) of slack cable (each cable) shall be coiled and secured at both ends - preferably at the Entrance Room and/or Main Equipment Room.
- Backbone Intra-Building: A minimum of 5-meters (approx. 15-feet) of slack cable (each cable) shall be coiled and secured at one (1) end - preferably at the Entrance Room and/or Main Equipment Room.
- Backbone Fiber Optic Cable shall be installed in protective innerduct. This includes areas where the cable is routed in cable tray and where making a transition between paths (e.g., between conduit & cable tray or into equipment racks).

Splicing Procedure – Fiber Optic:

- Size enclosure based on cable type(s), cable count and total fiber count. Counts shall not exceed maximums recommended by the splice closure manufacturer.
- Provide adequate slack cable to allow for splicing operation to be performed in a protected area.
- For cabling installed in underground ducts, this slack shall be adequate to perform the splice in a tent or vehicle positioned in an accessible area adjacent to the maintenance hole in which the splice is to be secured.
- For cabling installed on an aerial route, this slack shall be adequate to perform the splice in a tent or vehicle positioned in an accessible area adjacent to utility pole closest to where the splice is to be secured.
- Prepare Splice Enclosure and cables per manufacturers recommended procedures.
- Configure splice as a “Butt” splice (all cables enter same end of closure).
- Secure each cable central member and strength element(s) individually.
- Bond metallic cable elements and make continuous through the splice. Bond to ground
- Splice optical fibers using the fusion method. Individual splice loss shall not exceed:
- 0.3 dB for Multimode fibers
- 0.3 dB for Single-mode fibers
- Secure and protect finished splices in Splice Tray(s) per splice closure and cable manufacturer’s recommendations.
- Complete and seal splice enclosure.
- Secure cable slack.
- For cabling installed in underground ducts, coil cable slack in maintenance hole. Diameter of coil shall meet minimum cable bend radius requirements.
- For cabling installed on an aerial route, run cable slack along messenger and use cable “Snowshoe” product per manufacturer’s recommendations.

INNERDUCT

Innerduct shall be Listed as Riser- or Plenum-type as required by the installation environment.

Where not installed in a continuous length, splice innerduct segments using couplings designed for that purpose.

Label exposed innerduct at 35-foot (minimum) intervals with tags indicating cable type (e.g., "Fiber Optic Cable") and the cables it contains.

Contractor shall determine optimum size and quantity to satisfy the requirements of the installation ensure that the mechanical limitations - including Minimum Bend Radius - of the cable are considered.

Where protective innerduct is used in an Equipment Room, extend innerduct to the termination enclosure.

CABLE TERMINATION – FIBER OPTIC

Provide Fiber Optic Patch Panels configured with connector adapters (couplings) adequate to accommodate the number of fibers to be terminated.

Terminate optical fibers using the specified connector type.

Mate terminated fibers to couplings mounted on patch panels. Adapters shall be mounted on a panel that, in turn, snaps into the housing assembly.

Fit any unused panel positions with a blank panel which blocks access to the fiber optic cable from the front of the housing.

Provide and organize couplers as follows:

- Fibers from multiple locations may share a common enclosure. They must, however, be segregated on the connector panels and clearly identified.
- Connectors from different location shall never share a common coupling panel.
- Segregate single mode and multi-mode (where applicable) optical fibers on the panels as to clearly identify the distinction between the fiber types.
- Install Duplex Adapters with polarity (e.g., keyway orientation) on each end same that of the other end (i.e., A-B, A-B... on one end and A-B, A-B... on the other). Polarity shall be per TIA-568 (referenced version). Refer to that standard for further detail. Note: Factory screening of adapter panels sometimes complicates adapter panel layout. Confirm plan with engineer prior to construction.
- Position optical fibers consecutively and mapped "position for position" between patch panels. There shall be no transpositions in the cabling. "Reverse-pair positioning" is not allowed.

Fit all couplings with a dust cap.

Provide slack in each fiber as to allow for future re-termination in the event of connector or fiber end-face damage. Adequate slack shall be retained to allow termination at a 30" high workbench positioned adjacent to the termination enclosure(s). A minimum of 1-meter (~39") of slack shall be retained regardless of panel position relative to the potential work area.

Where "Loose Buffered" cables are installed, use a manufactured "fan-out" kit whereby individual fibers are secured in a protective covering which extends from the buffer tube to the connector assembly.

Clean all fibers once mated to adapters and protect with dust cap. Follow manufacturer's recommendations for cleaning technique and products.

Where fibers are to be left unterminated, prep all such fibers in a fashion as to facilitate future termination. Splice Tray. Label Blank Panels intended for initially unterminated fibers as "Future" and indicate fiber count.

FIBER OPTIC CABLE

General:

- The fibers utilized in the installed cable shall be traceable to the manufacturer. Upon request by the Owner, provide cable manufacturer's test report for each reel of cable provided. These test reports shall include:
 - Manufacturer's on the reel attenuation test results at the specified wavelengths for each optical fiber of each reel prior to shipment from the manufacturer.
 - On-the-reel Bandwidth performance as tested at the factory.

Tests Prior to Installation:

At Contractor discretion and at no additional cost to the project, contractor may perform tests s/he considers necessary to ensure integrity of any cable to be installed. Upon request, supply this test data to the Engineer prior to installation.

Tests After Installation:

- Upon completion of cable installation and termination, test Fiber Optic cabling to include:
 - Optical Attenuation
 - Verification of Link Integrity and component losses
 - Connector End-face Condition per IEC 61300-3-35 (inter-building backbone cabling only)

Optical Attenuation Testing

- Measure Optical Attenuation on all terminated optical fibers in at least one direction of transmission. Measurement shall be inclusive of the optical connectors and couplings installed at the system endpoints.
- Test using one of the following methods:
 - Insertion Loss method using an Optical Loss Test Set (OLTS) or an OTDR which integrates an Attenuation Measurement function.
 - OTDR method must record the combined loss of the optical fiber and connectors at both ends of the link. Configure OTDR set-up to match project specifications.
- Where Insertion Loss method is used:
 - Test single-mode fibers in accordance with TIA-568 and -526-7 (Method A.1; one jumper reference) at 1310 nm (nominal) and 1550 nm.
- Attenuation of optical fibers shall not exceed the values calculated as follows:
 - Single-mode fiber where cable length ≤ 300 -meters and includes no splices – 1.8 dB
 - Cable > 300 -meters or any cable containing splices – $2 * C + (L * F) + S$
Where:
C = maximum allowable Connector Loss
L = length of the run
F = maximum allowable fiber loss per unit length (e.g., dB/kf.
S = total splice loss (# of splices * max. attenuation per splice; Do not count the “pigtail” splice.).
 - Where an OTDR is used to measure attenuation, use of the bi-directional test (average) is acceptable.

OTDR Testing:

- Document all fibers – even those that are left un-terminated (if applicable) – in both directions of transmission using an Optical Time Domain Reflectometer (OTDR).
 - Test single-mode fibers at 1310 nm (nominal) and 1550 nm.
- OTDR(s) used in testing shall incorporate high-resolution optics optimized for viewing of short cable sections. Set Pulse Width to shortest width usable and still obtain clean trace.
- Use jumpers of adequate length at both ends of cable under test to allow viewing and accurate measurement of the entire link – including cable and connectors at the launch and tail end.
- OTDR traces revealing a point discontinuity greater than 0.2 dB in a multi-mode fiber, or 0.1 dB in a single mode fiber at any of the tested wavelengths or any discontinuity showing a reflection at that point shall be a basis for rejection of that fiber by the Owner. The installation of that cable shall be reviewed in an effort to remove any external stress that may be causing the fault. If such efforts do not remove the fault, that cable and the associated terminations shall be replaced at the expense of the contractor.
- Submitted traces should document connector Reflectance performance as meeting the specified criteria for the connector type(s) installed.

DUCT TYPE FIBER OPTIC CABLE

This cable shall be suitable for installation in underground duct.

Cable shall be a Loose Buffer design.

Cable materials shall be all dielectric (no conductive material).

Exception: Where armored cable is specified, that cable element may be metallic.

Cable shall incorporate a dry water-blocking material, to prevent the incursion of water into the cable.

Cable Jacket:

- Material: Polyethylene (PE). PE shall be compounded to provide protection against the effects of ultraviolet light and limit the growth of fungus.
- Cable jacket shall be free of holes, splits, and blisters.
- The cable jacket shall be marked with the manufacturer’s name, words identifying the cable type (e.g., “Optical Cable” or “Fiber Optic Cable”), year of manufacture, and sequential length markings in feet. The marking shall be in a contrasting color to the cable jacket.

Temperature Range:

- Storage: -40o to +70oC (no irreversible change in attenuation)
- Operating -40o to +70oC
- Installation 0o to +60oC

Humidity Range: 0 to 100%

Maximum Tensile Load:

- During Installation: 2700 Newton (600 lb. force) (no irreversible change in attenuation)
- Long Term: 800 N (180 lb. force)

Bending Radius:

- During Installation: 20 times cable diameter
- No Load: 10 times cable diameter

SINGLE MODE OPTICAL FIBERS

Fiber Type - Single mode; doped silica core surrounded by a concentric glass cladding.

Fiber shall be meet requirements of:

- TIA-492CAAB - Detail Specification for Class IVa Dispersion-unshifted (non-shifted) Single-Mode Optical Fibers with Low Water Peak (equivalent to ITU G652.D.)
- IEC 60793-2-50 Type B1.3

Cabled Fiber:

- Indoor / Tight-Buffer - ISO/IEC type OS1 (sometimes manufacturer mis-identified as OS2)
- Outdoor / Loose-Buffer - ISO/IEC type OS2

Fiber Coating Diameter:

- 250 μm (nominal) primary coating; 900 mm (nominal) secondary coating where tight buffer cable design is specified.
- All coatings shall be mechanically strippable without damaging the optical fiber.

Fiber Attenuation (max. dB/km @ 23±5 °C)		
	Intra-Building (ISP)	Inter-Building (OSP)
@ 1310 nm	1.0	0.65
@ 1550 nm	1.0	0.65

No single mode optical fiber shall show a point discontinuity greater than 0.1 dB at the specified wavelengths.

INDOOR/OUTDOOR FIBER OPTIC CABLE

Cables shall be suitable for installation in multiple environments including underground duct and inside the project building(s).

Cable shall be a loose-tube design.

Cable materials shall be all dielectric (no conductive material).

Cable Rating: OFCR (Optical Fiber Conductive Riser)

Cable shall incorporate a blocking material, swell able yarn, or other means to prevent the incursion of water into the cable.

Cable construction shall be as required to meet the specified rating.

The Cable Jacket sheath shall be marked with the manufacturer's name, words identifying the cable type (e.g., "Optical Cable" or "Fiber Optic Cable"), year of manufacture, and sequential length markings. The actual length of the cable shall be within -0/+1% of the length markings. The marking shall be in a contrasting color to the cable jacket.

Temperature Range:

- Storage: -40o to +70oC (no irreversible change in attenuation)
- Operating -40o to +70oC
- Installation 0o to +60oC

Humidity Range: 0 to 100%

Maximum Tensile Load:

- During Installation: 1350 Newton (312 lb. force) (no irreversible change in attenuation)
- Long Term: 400 N (85 lb. force)

Bending Radius:

- During Installation: 20 times cable diameter
- No Load: 10 times cable diameter

DOCUMENTATION

General:

- Provide project documentation as detailed in the sub-sections below.
- Submit all documentation in electronic form.
- Where documentation provided in electronic form requires unique software (e.g., NATIVE formats) other than Adobe Acrobat Reader for viewing test results, provide one (1) copy of such software. The software shall run on Microsoft Windows operating system. Software shall include license if applicable.
- Organize documentation by Building, Telecom Room and cable type.

- Name file(s) and records to include building, route or other cable identifiers that match labeling formats used. Prefix file name with the project number.
- Provide test results and describe the conduct of the tests including the date of the tests, the equipment used, and the procedures followed.
 - Where interim documentation has been submitted, submit a composite results package containing all records at project closeout.
- Where the installation includes re-use of existing cabling and/or components, documentation shall include a summary of such materials including manufacturer/part and where used.

TEST DATA – FIBER OPTIC MEDIA

Test results shall include a record of test wavelengths, cable type, cable and fiber I.D., measurement direction, test equipment type, model and serial number, calibration date, test date, reference setup, and crew member name(s).

Use United States customary units (e.g., “feet”) rather than International System units (SI; metric) unless otherwise instructed.

Submit Attenuation (Insertion Loss) Test Results for each fiber in electronic form as follows:

- In the native format of the test instrument.
- Summarized to include a list of all fibers and the corresponding attenuation values. The Summary shall be in Adobe Acrobat (.pdf) format and include all records.
 - Attenuation values documents should be actual measured Loss and not “Headroom” relative to the Pass/Fail limit.

Submit OTDR in electronic form in the native format of the test instrument.

Document connector end-face condition per IEC 61300-3-35 (inter-building backbone cabling only).

RECORD DRAWINGS

Provide Record Drawings which denote as-built information.

- Include cable routes and outlet locations.
- Identify Telecommunications and other low-voltage Outlet locations by their sequential number as defined elsewhere in these documents. Numbering, icons and drawing conventions used shall be consistent throughout all documentation provided.

The County may provide floor plans in electronic (AutoCAD .dwg) format on which as-built construction information can be added. Modify these documents to denote as-built information as defined above and return to the Engineer for acceptance. Coordinate the schedule for creation of these drawings, including interim and final sets, during construction to accommodate scheduled occupancy.

Prior to generation of the drawings, provide a sample file to the County’s MIS Department for review and approval.

All documentation, including hard copy and electronic forms shall become the property of the County.

SITE / OUTSIDE PLANT DOCUMENTATION

Provide documentation of inter-building cable and new and existing routes to allow the agency to update existing drawings and tables.

Include:

- Ductbank Conduit utilization.
- Directional Bore or Direct Buried information.
- Manholes/Vaults and Handholes used.

Confirm the availability of existing records with the agency.

WARRANTY

See Division 1, GENERAL CONDITIONS, and GENERAL REQUIREMENTS - Guarantee Documents for general requirements.

Where all materials are contractor-provided, minimum Warranty Period for Structured Cable System sub-systems shall be as follows:

- Horizontal Copper Permanent Link – 15 years. Warranty shall be direct from manufacturer(s) of cabling and connecting components to Owner. Exception: Where cabling is terminated in a modular plug, such links shall be covered by a 2-year system warranty. Cabling and Connecting Components shall carry a 15-year manufacturer's component warranty.
- Fiber Optic Backbone – 2 years. Cabling and Connecting Components shall carry a 15-year manufacturer's component warranty.

Project completion date: September 30, 2025

Total bid amount for ALL offered and extended: \$ _____

Any add-on options need to be listed separately and clearly specified with the cost.

DIAGRAM



Note: The blue line in the image above is intended to indicate a general path a fiber optic cable run might take. It is not intended to indicate the exact path.

SIGNATURE PAGE

PROJECT NAME: FIBER OPTIC – SOLID WASTE

SUBMITTED BY

Vendor: _____

Address: _____

Email: _____

Phone: _____

Contact Name: _____

Title: _____

Signature: _____ Date: _____

Date of qualification to do business in Wisconsin: _____

CONTRACT DOCUMENT

PROJECT NAME: FIBER OPTIC – SOLID WASTE

This CONTRACT is dated as of the _____ day of _____, 20_____, by and between Columbia County, Wisconsin, (Owner) and _____, (Contractor). Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK. Contractor shall complete all work as specified or indicated in the Contract Documents. The work is generally described as the installation of 24 strands of single-mode fiber optic cable from the Solid Waste office building to the new waste recycling building being constructed, located at W7465 Highway 16, Pardeeville, WI 53954. All equipment, materials, labor, overhead, taxes, and all other costs are included in order to complete the work in accordance with the Contract Documents.

Article 2. OWNER DESIGNATIONS. The following representative has been identified in relation to this project.

Owner:	Columbia County 112 E Edgewater Street Portage, WI 53901
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Owner Representative:	David Drews
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Article 3. CONTRACT TIMES. The Work will be conducted during normal business hours.

Article 4. CONTRACT PRICE. Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds not to exceed \$_____.

Article 5. PAYMENT PROCEDURES. Progress draws and payments will be allowed at the end of each month for proportional work completed. Progress payments shall be made in an amount equal to 100 percent of proportional work completed and 100 percent of proportional materials and equipment incorporated in the Work, less in each case, the aggregate of payments previously made. Owner retains the right to reduce Contractor's pay application amount if Owner determines that Contractor has not performed appropriately on the project or in the event that Owner feels Contractor is over billing the project. Contractor shall be notified in writing within fifteen (15) business days; in event Owner determines it necessary to reduce a payment amount.

Contractor shall submit an application for payment to Owner prior to the 30th day of each month. Payments are made by the 25th of each subsequent month.

Article 6. CONTRACTOR'S REPRESENTATIONS. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

- 6.1 Contractor has examined and carefully studied the Contract Documents and other related data identified in the Bid Documents.
- 6.2 Contractor has visited the site, become familiar with, and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 6.3 Contractor is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

- 6.4 Contractor is aware of the general nature of work to be performed by Owner and others at the site that relates to the Work as indicated in the Contract Documents.
- 6.5 Contractor has correlated the information known to Contractor, information and observations obtained from visits to the site and reports and drawings identified in the Contract Documents to Owner.
- 6.6 Contractor will comply with Federal Project and Employment Standards and Requirements; including but not limited to, National Environmental Policy Act of 1969, Affirmative Action Requirements (EO 11246), Equal Opportunity Clause (41 CFR 60-4), Disclosure of Lobbying Activities (31 U.S.C. 1352), and Conflict of Interest (18 U.S.C. § 208).
- 6.7 Contractor has given Owner written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in the Contract Documents. Contractor acknowledges that the Contract Documents are sufficient to indicate and convey an understanding of all terms and conditions for performance and furnishing of the Work.
- 6.8 Contractor estimates that the work will be completed on or around _____. If it is necessary for the work to extend beyond _____, Contractor will make every effort to finish the Work within a reasonable timeframe.

Article 7. CONTRACT DOCUMENTS. The Contract Documents, which comprise the entire agreement between Owner and Contractor concerning the Work, consist of the following:

- 7.1 This Agreement; three (3) pages inclusive.
- 7.2 Columbia County Terms and Conditions, five (5) pages inclusive.
- 7.3 County's Request for Bid.
- 7.4 Contractor's Bid documents.
- 7.5 Any modifications, including Change Orders, duly delivered after execution of this Contract.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified, or supplemented if agreed to, in writing, by both Owner and Contractor.

Article 8. MISCELLANEOUS.

- 8.1 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 the 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.
- 8.2 Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, in respect to all covenants, agreements and obligations contained in the Contract Documents.

8.3 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

8.4 Owner and Contractor hereby agree that this Contract shall be governed by the laws of the State of Wisconsin and the lawful court for proper resolution of any or all legal actions shall be the Columbia County, Wisconsin, Circuit Court.

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract with a fully signed copy provided to each.

This Contract will be effective on receipt of the executed document by Contractor from Owner.

Owner:

Columbia County
112 E Edgewater Street
Portage, WI 53901

Contractor Name & Address:

By: _____

David Drews
MIS Director

By: _____

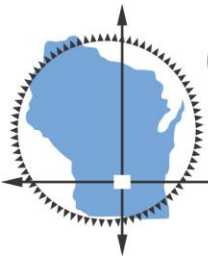
(Signature)

(Printed Name)

Address for giving notices:

Columbia County
112 E Edgewater Street
Portage, WI 53901
(608) 742-9801

Address for giving notices:
(Contractor Name/Address)



(Request For Bids/Proposals/Contracts) Columbia County Purchasing Division

1.0 APPLICABILITY: These standard terms and conditions apply to Requests for Written Quotes (RFWQ), Proposals (RFP), contracts and all other applicable transactions whereby the County acquires goods or services, or both. Special provisions for a contract may also apply.

2.0 SPECIFICATIONS: The listed specifications are the minimum acceptable. When specific manufacturer and model numbers are used, they are to establish a design, type of construction, quality, functional capability or performance level, or any combination thereof, desired. When alternates are proposed, they must be identified by manufacturer, stock number, and such other information necessary to establish equivalency. The County shall be the sole judge of equivalency. Vendors are cautioned to avoid proposing alternates to the specifications that may result in rejection of their bid.

3.0 DEVIATIONS AND EXCEPTIONS: Deviations and exceptions from terms, conditions, or specifications shall be described fully on the vendor's letterhead, signed, and attached to the bid. In the absence of such statement, the bid shall be accepted as in strict compliance with all terms, conditions, and specifications and vendor shall be held liable for injury resulting from any deviation.

4.0 QUALITY: Unless otherwise indicated in the request, all material shall be first quality. No pre-owned, obsolete, discontinued or defective materials may be used.

5.0 QUANTITIES: The listed quantities shown herein are based on estimated needs. The County reserves the right to increase or decrease quantities to meet actual needs.

6.0 DELIVERY: Deliveries shall be FOB destination freight prepaid and included unless otherwise specified. County will reject shipments sent C.O.D. or freight collect.

7.0 PRICING: Unit prices shown on the bid shall be the price per unit of sale as stated on the request or contract. For any given item, the quantity multiplied by the unit price shall establish the extended price, the unit price shall govern in the bid evaluation, permits, inspections, and all other contract administration activities.

7.1 Prices established in continuing agreements and term contracts may be lowered due to market conditions, but prices shall not be subject to increase for the term specified in the award. Vendor shall submit proposed increases to the contracting department thirty (30) calendar days before the proposed effective date of the price increase. Proposed increases shall be limited to fully documented cost increases to the vendor that are demonstrated to be industry wide. Price increases may not be granted unless they are expressed in bid documents and contracts or agreements.

7.2 Submission of a bid constitutes bidder's certification that no financial or personal relationship exists between the bidder and any County official or employee except as specially set forth in writing attached to and made part of the bid. The successful bidder shall disclose any such relationship which develops during the term of the contract. See Columbia County Code of Ordinances Title 3, Chapter 1, Code of Ethics.

8.0 ACCEPTANCE-REJECTION: The County reserves the right to accept or reject any or all bids, to waive any technicality in any bid submitted and to accept any part of a bid as deemed to be in the best interests of the County. Submission of a proposal or a bid constitutes the making of an offer to contract and gives the County an option valid for 90 days after the date of submission to the County. The County reserves the right to perform background and reference checks on vendors providing goods and/or services to the County.

8.1 Bids **MUST** be dated and time stamped by the County on or before the date and time that the bid is due. Bids deposited or time stamped after the deadline will be rejected. Actual receipt by the County is necessary. Timely deposit in the mail is not sufficient. All bids must be clearly labeled with bidder name, return address, and bid title. THERE WILL BE NO EXCEPTIONS TO THIS POLICY.

9.0 METHOD OF AWARD: Award shall be made to the lowest responsible responsive vendor conforming to the specifications, terms, and conditions, or to the most advantageous bid submitted to the County on a quality versus price basis.

10.0 ORDERING/ACCEPTANCE: Written notice of award to a vendor in the form of a purchase order or other document, mailed or delivered to the address shown on the bid will be considered sufficient notice of acceptance of bid. A formal contract signed by both parties shall be used.

10.1 SUBCONTRACTING: Awarded vendor(s) will not be permitted to sublet, sell, transfer, assign or otherwise dispose of the contract or any portion therein, or its right, title, or interest in the contract to any person, vendor(s) or other organization without the prior written consent of the County. No subcontract shall, under any circumstances, relieve the contractor of liability and obligation under this contract. The awarded contractor shall be fully responsible for the acts, errors, and omission of subcontractor(s).

11.0 PAYMENT TERMS AND INVOICING: Unless otherwise agreed, the County will pay properly submitted vendor invoices within forty five (45) days of receipt of goods and services. Payment will not be made until goods or services are delivered, installed (if required), and accepted as specified. Invoices presented for payment must be submitted in accordance with the contract.

11.1 NO WAIVER OF DEFAULT: In no event shall the making of any payment or acceptance of any service or product constitute or be construed as a waiver by the County of any breach of the covenants of a contract, or a waiver of any default of the successful vendor. The making of any such payment or acceptance of any such service or

product by the County while any such default or breach shall exist shall in no way impair or prejudice the right of the County with respect to recovery of damages or other remedy as a result of such breach or default.

12.0 TAXES: The County and its departments are exempt from payment of all federal tax and Wisconsin state and local taxes on its purchases except Wisconsin excise taxes as described below. The Federal Government Internal Revenue Service has issued tax exempt number 39-6005681 to the County.

12.1 The County is required to pay the Wisconsin excise or occupation tax on its purchase of motor vehicle fuel. The County is exempt from Wisconsin sales or use tax on these purchases. The County may be subject to other states' taxes on its purchases in that state depending on the laws of that state. Vendors performing construction activities are required to pay state use tax on the cost of materials.

13.0 GUARANTEED DELIVERY: Failure of the vendor to adhere to delivery schedules as specified or to promptly replace rejected materials shall render the vendor liable for all costs in excess of the contract price when alternate procurement is necessary. Excess costs shall include administrative costs.

14.0 APPLICABLE LAW AND VENUE: This contract shall be governed under the laws of the State of Wisconsin, and venue for any legal action between the parties shall be in the Columbia County Circuit Court. The vendor shall at all times comply with and observe all federal and state laws, local laws, ordinances, and regulations which are in effect during the period of a contract and which in any manner affect the work or its conduct. The County also has the right to cancel a contract with any federally or state debarred contractor or a contractor that is presently identified on the list of parties excluded from federal procurement and non-procurement contracts.

15.0 ASSIGNMENT: No right or duty in whole or in part of the vendor under a contract may be assigned or delegated without the prior written consent of the County.

16.0 NONDISCRIMINATION/AFFIRMATIVE

ACTION: The vendor agrees, in accordance with Sec. 111.321, Wis. Stats. not to discriminate against any person, whether an applicant or recipient of services, an employee, or applicant for employment, on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs. The vendor shall provide a harassment-free work environment. These provisions shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, including apprenticeships, rates of pay or other forms of compensation. Failure to comply with these Terms and Conditions may result in the vendor being debarred, termination of the contract and/or withholding of payment.

17.0 PATENT, COPYRIGHT AND TRADEMARK

INFRINGEMENT: The vendor guarantees goods sold to the County were manufactured or produced in accordance with applicable federal labor laws, and that the sale or use of the articles described herein do not infringe any patent, copyright or trademark. The vendor covenants that it will, at its own expense, defend every suit which shall be brought against the County (provided that such vendor is promptly notified of such suit, and all papers therein are delivered to it) for any alleged infringement of any patent, copyright or trademark by reason of the sale or use of such articles, and agrees that it will pay all costs, damages, and profits recoverable in any such suit.

18.0 SAFETY REQUIREMENTS:

All materials, equipment, and supplies provided to the County must fully comply with all safety requirements as set forth by the Wisconsin Department of Safety and Professional Services and all applicable OSHA Standards. The vendor shall also comply with the County's worksite rules. Vendor shall comply, train, and accept exclusive responsibility for its employees while on County property.

18.1 MATERIAL SAFETY DATA SHEET: If any item(s) on an order(s) resulting from an award(s) is a hazardous chemical, as defined under 29 CFR 1910.1200, the vendor must provide one (1) copy of the Material Safety Data Sheet for each item with the shipped container(s) and one (1) copy with the invoice(s).

19.0 WARRANTY: Unless specifically expressed otherwise in writing, goods and equipment purchased by the County shall be warranted against defects by the vendor for one (1) year from the date of receipt. An equipment manufacturer's standard warranty shall apply as a minimum and must be honored by the vendor.

20.0 INDEMNIFICATION & INSURANCE: The vendor shall bear the full and complete responsibility for all risk of damage of premises, equipment, procedure or money resulting from any cause whatsoever and shall not penalize the County for any losses incurred.

Vendor shall indemnify the County against any loss, damage, injury or death caused by vendor's negligent acts or omissions or the negligent acts or omissions of vendor's agents or employees, or losses, damages, injuries or death caused by vendor's negligence and arising out of the consumption or use of the projects sold; provided, however, that nothing contained herein shall require vendor to defend or indemnify the County for losses, damages, injuries or death arising out of the negligence of the County, its agents or employees. In order to secure vendor's obligation to hold harmless and indemnify the County, vendor shall procure and maintain the following insurance:

1. Worker's Compensation Insurance as prescribed by the laws of the State of Wisconsin;
2. Comprehensive Automobile Bodily Injury Liability and Property Damage Liability Insurance, with limits of \$500,000 for bodily injury or death of any one person, \$1,000,000 for bodily injury or death of two or more persons in any one accident, and \$100,000 for property damage in any one accident;
3. Comprehensive General Bodily Injury Liability and Property Damage Liability

Insurance, with limits of \$500,000 for bodily injury or death of any one person, \$1,000,000 for bodily injury or death of two or more persons in any one accident, and \$100,000 for property damage in any one accident;

4. Commercial General Liability of \$2,000,000 for general aggregate including product and \$1,000,000 for each occurrence;

The vendor shall add the County, its officers, agents and employees and additional insurers under the Commercial, General and Automobile liability policies.

20.1 CERTIFICATE OF INSURANCE: Upon notification of award and prior to issuance of contract, the vendor shall provide the County a Certificate of Insurance with the required coverage and limits of insurance.

21.0 CANCELLATION: The County reserves the right to terminate any contract in whole or part without penalty due to non-appropriation of funds or failure of vendor/ contractor to comply with terms, conditions, performance, and specifications of a contract.

22.0 PUBLIC RECORDS ACCESS: It is the intention of the County to maintain an open and public process in the solicitation, submission, notice of bid opening, review, and approval of procurement activities. Bid openings are public unless otherwise specified.

22.1 PROPRIETARY INFORMATION: Any restrictions on the use of data contained within a request must be clearly stated in the bid/proposal itself. Proprietary information submitted in response to a request will become the property of the County. The County will work with vendors to meet their confidentiality requirements, provided they are within reason. All vendors' proprietary/confidential materials must have each document or item clearly marked as such. All proprietary information will be handled in accordance with the Wisconsin public records law. However, when accepted, it is the vendor's responsibility to defend the determination in the event of an appeal or litigation.

22.2 Any material submitted by a vendor that the vendor considers confidential and proprietary information and which the vendor believes qualifies as a trade secret, as provided in Section 19.36(5) Wis. Stats., must be identified by the vendor. Pricing will not be held confidential after the award of a contract.

22.3 Data contained in a bid, all documentation provided therein, and innovations developed as a result of contracted commodities or services cannot be copyrighted or patented. All data, documentation, and innovations shall be the property of the County.

23.0 PROMOTIONAL ADVERTISING: Reference to or use of the County, any of its departments or sub-units, or any county official or employee for commercial promotion is prohibited without prior specific authorization.

24.0 ANTITRUST ASSIGNMENT: The vendor and the County recognize that in actual economic practice, overcharges resulting from antitrust violation are in fact usually borne by the purchaser. Therefore, the successful vendor hereby assigns to the County any and all claims for overcharges as to goods, materials or services purchased in connection with a contract.

25.0 RECORDKEEPING AND RECORD RETENTION - PUBLIC WORKS CONTRACTS: The successful bidder on a public works contract shall comply with the State of Wisconsin prevailing wage scale, if applicable, and shall establish and maintain adequate payroll records for all labor utilized as well as records for expenditures relating to all sub-contracts and suppliers. All records must be kept in accordance with generally accepted accounting procedures. The County shall have the right to audit, review, examine, copy, and transcribe any such records or documents. The vendor will retain all documents applicable to a contract for a period of not less than five (5) years after final payment is made.

25.1 RECORDKEEPING AND RECORD RETENTION - COST REIMBURSEMENT CONTRACTS: Where payment to a vendor is based on the vendor's costs, vendor shall establish and maintain adequate records of all expenditures

incurred under the contract. All records must be kept in accordance with generally accepted accounting procedures. The County contracting agency shall have the right to audit, review, examine, copy, and transcribe any pertinent records or documents relating to any contract resulting from a bid/proposal held by the vendor. The vendor will retain all documents applicable to the contract for a period of not less than five (5) years after final payment is made.

failure to perform such must be beyond the reasonable control and without the fault or negligence of the party.

26.0 LICENSURE, CERTIFICATION, AND STATUTORY REQUIREMENTS: Vendor is responsible to comply with all statutory rules and regulations. All federal, state and local laws, rules and regulations governing the service described in the specification will apply and will be deemed incorporated into the contract. These requirements shall be at the vendors' expense.

26.1 Vendor shall be responsible for ensuring compliance with all Wisconsin and Federal grant funding requirements. If any of the services performed under a contract are subcontracted, the selected vendor shall ensure compliance by all subcontractors. Vendor shall comply with all reporting requirements of any grant.

26.2 The County, the Federal Government, auditors for the State of Wisconsin, or their duly authorized representatives, will have full access to and the right to examine any site, pertinent books, documents, paper and records of any invoicing transaction for a period of not less than five (5) years after the expiration or termination of a contract.

27.0 CONFIDENTIALITY OF PERSONAL HEALTH INFORMATION: HIPAA/HITECH laws apply.

28.00 FORCE MAJEURE: Neither party shall be in default by reason of any failure in performance of a contract in accordance with reasonable control and without fault or negligence on its part. Such causes may include, but are not restricted to, acts of nature or the public enemy, acts of the government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather, but in every case the