

Section 1100

Fiber

1101.0 DESCRIPTION

This section covers the furnishing of all labor, material, equipment and performance of all work and service necessary or incidental to Fiber conduit installation as shown on the plans or as specified herein.

1102.0 COOPERATION BY CONTRACTORS

The Fiber optic system is an alternate bid. The Owner reserves the right to select whether the bid alternate is used or not, regardless of the amount bid on the bid alternate or base bid. If the Contract is to be awarded, it will be awarded to the lowest and best Bidder of the sum of the base bid and bid alternate if the bid alternate is used, or it will be awarded to the lowest and best Bidder of the base bid if the bid alternate is not used. Unless otherwise specifically requested or removed by addendum, the Contractor is required to bid the alternate included in the proposal form.

If the bid alternate is not used, the Contractor shall be responsible for coordinating their construction schedule and work areas with other fiber installation contractors in the area. The coordination of construction on this Contract and other contracts shall be done such that all project completion dates are met on all contracts.

1103.0 CONTACT INFORMATION

The City contact for fiber optic equipment requirements, fiber optic splicing requirements, in building connections and equipment specifications is:

Jacque Smith
Communications and Technology Director
952.924.2500
jsmith@stlouisparkmn.gov

The Engineer will provide the general supervision and direction of this project.

1104.0 DOCUMENTATION

The Contractor must warrant, maintain and replace components or equipment that become defective for a minimum of one year from the completion date at no additional charge to the City. This warranty must include all components and labor.

All changes made by the Contractor during maintenance or warranty repair must be documented to the City and maintained in a service logbook located at the City. The Contractor must also provide all warranties from the manufacturer for equipment and materials. The Contractor is responsible for all locates and facility maintenance during the construction period. The Contractor must register the build with Gopher State One Call.

1105.0 MATERIALS

All materials used in this work shall be new, and conform to the requirements for class, kind,

size and materials as specified below. All materials permanently incorporated in the work shall be made in the United States of America. The Contractor shall submit in writing a list of materials showing the manufacturer designation of all materials. This list must be approved by the Engineer.

Any new physical components installed by the Contractor, including conduits, hand holes, and entrance facilities must be approved by the Engineer and conform to the following:

1105.1 **CONDUITS**

The City requires all conduit construction to be two (2) inch SDR 13.5 inner ducts to connect the locations. Contractor must upgrade the conduits to the specification of two (2) inch SDR11 for use when the conduits span large distances of directional boring or when installed under roads. For any new building entrance facilities that are required, those entrance facilities must be four (4) inch stub PVC conduits. Conduit must be of color as described in plan.

Conduit couplings must be water and air-tight and suitable for blowing fiber. Suggested coupling are Comfits made by Duraline. Contractor must pre-approve all conduits, couplings and hand holes with the Engineer before ordering and installation. Pull ropes and locator wire must be installed and left in place in each conduit.

The conduit must be installed at a minimum depth of 30 to 36 inches along the route. Note: Contractor must comply with the permit requirements, which may require deeper depths when crossing county roads, railroads, or state highways. Contractor must supply a warning/locator wire that will be used in the future for all locates. This wire must terminate in every hand hole.

When running in parallel, conduit is not to be placed on top of any existing Water Main, Sanitary Sewer Line, Storm Sewer Line, or Gas Line. There must be a 5-foot separation from existing City or private utilities. When digging, catch basin filter bags and erosion control must be in place so as to catch sediment runoff before entering into the Storm Sewer system.

1105.2 **HAND HOLES**

Hand holes must be furnished and installed at a maximum of every 800 feet along the inner duct. Hand holes must be a minimum of 24 inches by 36 inches by 24 inches with an 8-inch base of Pea rock to allow for drainage. See plan sheets for size and location of hand holes. Hand hole covers must be rated to handle 20,000 pounds and must be secured with 5-point Penta bolts.

Hand holes must be installed at any 90-degree turn along the route of the conduits.

Exact hand hole locations are shown on the plans and will be marked in the field by the Engineer.

1106.0 RESTORATION

The Contractor is responsible for all restoration of disturbed surfaces to a condition equal to or better than it was prior to the construction. Grass areas shall be restored with sod.

1107.0 PERMITS

The Contractor is responsible for any and all permits. This would include but not be limited to City, county, state and railroad permits that are required to complete construction. Contractor is required to comply with all permit requirements and pay for the permit costs. Final conduit location in the right-of-way will be determined when permits are issued.

All underground telecommunication wires, fibers, conduits and etc. shall be buried within city rights-of-way unless placed within utility easements or placed on private property with the knowledge and permission of the Owner of the occupied property. Such wires, fibers, conduits, etc., shall occupy a space within the designated right-of-way as assigned by the City.

1108.0 METHOD OF MEASUREMENT

All items will be measured separately according to design designation as indicated in the pay item name and as may be detailed and defined in the Drawings, Specifications, or Special Conditions.

1109.0 BASIS OF PAYMENT

Payment for construction of Fiber will be made as detailed in the method of measurement and as shown in the Contract Documents or detailed in the Special Conditions. Payment shall include all costs of furnishing and installing the complete facility as required by the Drawings, Specifications, and Special Conditions.