

CITY OF GRAND JUNCTION  
DEPARTMENT OF PUBLIC WORKS AND UTILITIES  
ENGINEERING DIVISION

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**Persigo WWTP Internal Fiber Optic Loop Installation Project**

**SPECIAL PROVISIONS**

**GENERAL:**

The descriptions of the pay items listed in the Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Bid Schedule.

**STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:**

The *City of Grand Junction Standard Specifications for Road and Bridge Construction* are hereby modified or supplemented for this Project by the following modifications to *The Standard Specifications for Road and Bridge Construction*, State Department of Highways, Division of Highways, State of Colorado:

**SP-1 BID PROPOSAL FORM**

**1. Bid Item A – Microduct (Lineal Feet Unit Price)**

- a. Cost of the Future Path 4-way 16/12 microduct – thicker over sheath.
- b. Cost of installation of the microduct via directional bore drilling where possible and micro-trenching where necessary.
- c. Warning tape included for all open-cut trenching methods.
- d. Supplemental #10AWG tracer wire.
- e. Cost of testing microducts.

**2. Bid Item B – Handholes (48”x30”x36”) (Each Unit Price)**

- a. Cost of materials including the precast handhole, microduct end caps, microduct connectors, tracer wires, grounding rods, warning tape, gravel base, and galvanized steel hardware cloth.
- b. Cost of installation of the handholes, including excavation, installation, grounding rods, all microduct entries and all microduct connections, and backfilling.

- 3. Bid Item C – Building Entry Exterior Mounted Pull-boxes (Each Unit Price)**
  - a. Cost of materials including the NEMA 4X S.S. pull-box (24"x16"x8"), 3" PVC-80 conduit and fittings, NEMA 4X S.S. J-boxes, and 1" PVC-RGS conduit.
  - b. Cost of installation of the pull-box, routing the 4-way microduct in the 3" conduit, and building conduit penetration including fittings, wall coring, supports and accessories.
  
- 4. Bid Item D – Exterior Unistrut-Mounted Pull-boxes (Each Unit Price)**
  - a. Cost of materials including the NEMA 4X S.S. pull-box (24"x16"x8"), 3" PVC-80 conduit and fittings, and Unistrut mounts and anchors for free-standing pull-boxes not mounted to building exteriors.
  - b. Cost of installation of pull-box on the Unistrut and routing the 4-way microduct inside the 3" conduit including fittings, supports, 1" PVC-RGS conduit, and accessories.
  - c. Cost of concrete slab foundations for Unistrut racks.
  
- 5. Bid Item E – Fiber Patch Panels (Each Unit Price)**
  - a. Cost of materials including fiber patch panel lockable enclosures, enclosure back panels, fiber patch panel housings, 24-strand LC fiber patch panels, and DIN rails.
  - b. Cost of installation of parts including supports and accessories, and terminations of all fiber in fiber patch panels.
  - c. Quality control testing of all fiber optic cables and connections/terminations at each fiber patch panel to the fiber patch panel on the opposite end of the fiber optic cable.
  
- 6. Bid Item F – Building Interior Conduit (Lineal Feet Unit Price)**
  - a. Cost of 1" RGS conduit.
  - b. Cost of installation of building interior conduit between pull-boxes and fiber patch panel enclosures including all fittings, supports and accessories.
  
- 7. Bid Item G – Exterior Conduit (Lineal Feet Unit Price)**
  - a. Cost of 1" RGS-PVC conduit.
  - b. Cost of installation of exterior conduit between pull-boxes and fiber patch panel enclosures or between pull-boxes and building entry locations.
  
- 8. Bid Item H – Fiber Optic Cable (Lineal Feet Unit Price)**
  - a. Cost of 24-strand single-mode fiber.
  - b. Cost of installation of fiber inside microducts, handholes, pull-boxes, and conduit to each fiber patch panel.