

ITEM 026270

Item 0262701 #2 AWG COPPER CONDUCTOR

Item 0262702 #4 AWG COPPER CONDUCTOR

Item 0262703 #6 AWG COPPER CONDUCTOR

Item 0262704 #8 AWG COPPER CONDUCTOR

DESCRIPTION

Work under this item shall consist of furnishing and installing AWG insulated copper conductor of the size specified for street lighting power. The work shall include furnishing and installing the conductor, in the quantities (number of conductors per conduit) indicated, splicing, insulating of splices, tap conductors, tap connections, insulation of taps and testing of the conductors. Conduit for conductors, pull boxes and hand holes will be installed and paid for under other bid items.

REFERENCED ITEMS

None

REQUIRED SUBMITTALS

Material Certificate of Compliance:

Submit 5 copies of material certificate of compliance for conductors in accordance with the contract general requirements.

MATERIALS

CONDUCTOR:

General: Single insulated conductor consisting of a stranded (Class B) copper conductor, #2, #4, #6 or #8AWG with 600 volt, 90 degree C, type EPR insulation, UL Listed as Type RHW-2/USE-2.

Manufacturer: Okonite Okoguard-Okolon, Type RHW-2/USE-2 or equal.

CONSTRUCTION METHODS

SPLICES/TAPS:

Splices: Conductor splices shall be hydraulic compression type consisting of a long barrel, tin-plated copper compression splice. The splice shall be applied using a

hydraulic compression tool which compresses the barrel onto the conductor with a circumferential crimp.

Taps: Conductor taps shall be made using a watertight, underground in-line splice unit. The splice shall be totally encapsulated with EDPM rubber with pre marked inserts, O-ring screw cap inserts and a tin-plated aluminum (6061-T6) set screw connector. The connector shall be designed to accept the copper conductors to be spliced.

Manufacturer: Splices and lugs shall be as follows:

Splices: Burndy No. YS2C or Equal.

Taps: IlSCO No. USPA-DD or Equal.

Heat Shrink Tubing: Heat shrink tubing shall be utilized to insulate hydraulic compression splices. The tubing shall be heavy wall tubing made of cross-linked polyolefin with a shrink ration of 3 to 1. The tubing shall be coated with an adhesive sealant to prevent the ingress of moisture. Tubing shall extend 3 inches beyond the end of the conductor insulation at the splice. Tubing shall be applied using an electric heat gun. Torches or open flame heat sources shall not be used. Equal to Burndy No. HSB34H9PF10.

TESTING:

Testing: The installed and splices conductors shall be tested to verify the integrity of the conductors. The contractor shall retain the services of a NETA member, independent electrical testing firm to provide testing of the installed conductors. Testing shall include an insulation resistance test of the conductors. This testing shall be performed to measure the insulation resistance from phase-to-phase, phase-to-neutral, and phase-to-ground. Testing shall be performed for each section of conductors installed and spliced, based on the sequence of construction.

METHOD OF MEASUREMENT:

Installation of conductors shall be measured for payment by the linear feet of conductor installed, spliced and tested and accepted.

BASIS OF PAYMENT:

The work will be paid for at the contract unit price each linear foot of "(SIZE) AWG COPPER CONDUCTOR" installed, spliced and tested, which price shall include all materials, labor, equipment, tools and incidental expenses thereto.

<u>PAY ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
Item 0262701	#2 AWG Copper Conductor	LF
Item 0262702	#4 AWG Copper Conductor	LF
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