

**SECTION 11.14
MESSENGER AND SPAN WIRE**

11.14.01--Description: Work under this item shall consist of furnishing and installing span wire or messenger, whichever is applicable, at the locations indicated on the plans or as directed by the Engineer in accordance with the following requirements.

11.14.02--Materials: The materials for this work shall conform to the requirements of Article M.16.15.

11.14.03--Construction Methods:

1. Span Wire used for the suspension of traffic signals shall be attached to the supporting poles at such a level as to make the lowest part of the signal head not less than 4.9 m, nor more than 5.2 m above the roadway surface.

A normal sag of not more than 5 percent of the total span shall be permitted. Wire secured to the pole bands shall be protected from sharp bends by a thimble clevis. Thimble eyebolts, nuts and washers shall be used instead of eyebolts. Ends of cable shall be fastened to the standing part by 150 mm clamps and shall be wrapped with galvanized wire. A wet porcelain strain insulator shall be used at locations where the messenger or span wire is attached between steel and wood poles. Traffic signal control cable shall be suspended from the span wire by means of 50 or 75 mm rings as required by the number and size of the cables installed, spaced not more than 450 mm apart. The traffic signal cable may be suspended from the messenger with the use of 50 mm rings, or by a spiral wrapping of 2.4 mm galvanized steel wire, applied by a machine in a uniform spiral with a lay or pitch of no more than 450 mm. All overhead conductors shall have an 200 mm drip loop at the junction with a pole or signal head. At all electrical cable turns and drops, plastic tie wraps shall be used to insure against any change in physical relationship between the electrical cable and the span wire.

Service wires between a power supply and controller cabinet on a pole shall be connected to the pole by an approved cable grip and enter the poles by means of a wire inlet with a bushing. An 200 mm drip loop shall be formed in the wires at the entrance of the wire inlet. The installation of span wire shall be as shown on the plans.

2. Messenger for carrying signal cable between poles shall be installed as shown on the plans.

The suspension of cable shall conform to either the 50 mm or 75 mm ring or spiral wrapping methods, which are covered elsewhere in this specification.

11.14.04--Method of Measurement: Work under these items will be measured for payment by the actual number of meters of steel wire cable, of the type specified, installed and accepted in place with necessary appurtenances.

11.14.05--Basis of Payment: This work will be paid for at the Contract unit price per meter for "Messenger" or "Span Wire," whichever applies, which price shall include messenger or span wire, wet porcelain insulators, pole bands, thimble eyebolts, nuts, washers, cable rings, all materials, tools, equipment, labor and work incidental thereto.

Pay Item	Pay Unit
Messenger Wire	m
Span Wire	m