

Messenger Wire 3-Strand (By Size) With Accessories

Messenger wire shall be aluminum clad steel meeting ASTM designation A 474-68. It shall consist of three strand (1/4" nominal diameter with a breaking load of 4500 lbs.) galvanized steel lashing rods shall be used to suspend the signal cable from the messenger wire, tightly secured. Wet-porcelain strain insulators (600 volts), guy clamps, and galvanized preformed guy grip dead ends, thimbles, and bull rings (when required) with a rated loading strength equal to or greater than the breaking load of the messenger wire shall be installed as shown on the plans and/or specified by the Engineer.

The messenger wire shall be installed so that the entire load will not cause sag to exceed a maximum of 5% or a minimum of 3% of the span.

Payment for Item 025 "Messenger Wire (By Size) 3 Strand With Accessories" will be made at the contract unit price per lineal foot (measured to center of pole or aerial corners) completely assembled in accordance with the typical signal installation details and shall include messenger wire, lashing rods, strain insulators, preformed guy grips, thimbles, guy clamps, and aerial corner bull rings, as described above.

Special Provision of Telephone Interconnect

This item shall consist of completion of arrangements with Ohio Bell Telephone Company (Contact - Mr. Peter Piazza, Telephone No. 216-622-2213) to provide telephone service drop at each traffic sampling station signified intersection and the location of the master. The telephone company shall provide a single pair of voice grade wires running continuous to all phone service drop points. The Ohio Bell Comp. will also install, as a part of this work certain devices to protect and operate their circuits.

The contractor shall also be responsible for providing any required entrance fixtures, weather heads, conduits, wires and miscellaneous items necessary to connect the telephone service drops to the encoder/decoder items in a manner acceptable to the engineer and in conformance with applicable regulations of the Telephone Company. The City shall subsequently bear the cost of monthly line rental charges. Payment will be made at the lump sum bid for item Special "Provision of Telephone Interconnect".

816 Span Wire Mounted Sign Attachment

This item of work shall consist of the furnishing and installation of a steel angle, span wire mounting bracket, and hardware as detailed on sheet 40.

Basis of payment shall be at the contract bid price per each span wire mounted sign attachment, as per plan which price shall include all labor, material, equipment and incidentals necessary to perform the required item of work.

815 Signs, Flat Sheet Type, as per plan

The aluminum flat sheet sign blanks shall be fabricated in accordance with Sheet 46 (Drawing SBD).

Mounting hardware, i.e., bolts, washers, bearing plates, and nuts shall be included as part of the signs. The number and sizes furnished of each of these items shall conform with that shown on Sheets 44-46 (Drawings SBD, ~~SBD~~, ~~SBD~~ GMSS, and ~~SBD~~ TPS-1).

Sign face background material shall be reflective sheeting, Type F.

The typical sign legend shall be silk screened and include letters, digits, symbols, borders and outlines. The following color coding shall be shown on shop drawing submitted for review and approval:

CODE	COLOR
RSTR	Silver-White, Grade 2, with reverse screen transparent red
RSY	Yellow
RSW-B	Silver-White, Grade 1
RSTRB	Silver-White, Grade 2, with reverse screen transparent blue and red
RSTB	Silver-White, Grade 2, with reverse screen transparent blue
RSTG	Silver-White, Grade 2, with reverse screen transparent green
RSG	Green

For Type Code

Signs, direct applied sheeting shall be used for legend including letters, digits, symbols, borders and outlines. The following color coding shall be shown on shop drawings submitted for review and approval:

CODE	DESCRIPTION
RSW-A	Reflective Sheeting, Type F (Silver-White, Grade 2)
SPBK	Silk Screen Paste (Black)
DAB	Reflective Sheeting, Direct Applied (Silver-White, Grade 2)
DAB	Non-reflective Sheeting, Direct Applied (Black)

The unit price bid per square foot "815 Signs, Flat Sheet Type, as per plan", shall include payment for all required legend, hardware, plus all necessary equipment, labor and tools to furnish and erect the signs including packaging, delivery and storage when needed.

Sign Legends

Sign legend shall be in accordance with the American Association of State Highway Officials "Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways" 1970 edition. Sign lettering when indicated as a series type such as C, D, etc., shall be designed in accordance with the "Standard Alphabets for Highway Signs" published by the Federal Highway Administration. Copies of the above references are on file in the Department of Transportation Office of Design Services, 25 South Front Street, Columbus, Ohio 43215.

Clear Coating of Reflective Sheeting:

The provisions of Section 815.10 apply except where pressure sensitive reflective sheeting is used. Pressure sensitive reflective sheeting shall not be clear coated and only the edge sealer is required for this type of sheeting.

Colors:

Colors proposed and shown on each sign layout shop drawing submitted for review shall conform to those shown in the Ohio Manual of Uniform Traffic Control Devices for Streets and Highway, current edition, latest revision, or, in special circumstances, as may be indicated in the plans.

In addition to the requirements of Supplemental Specification 815, colors for reflective sheeting shall conform to the latest edition of Color Tolerance charts produced by the Federal Highway Administration.

Processing of Sign Shop Drawings

- The State will furnish the following information to the contractor upon award of the contract:
 - Sign Design Layout Standards for Directional Guide Signs.
 - Traffic Standard Drawings for regulatory, warning, and route marker signs.
 - Special design layout criteria as applicable.
- The contractor shall submit 8 copies of individual shop drawings as follows:
 - Each separate sign message layout including legend size and spacing with reference and/or code number. Shop drawings for standard warning, regulatory, and route marker signs are not required unless specifically requested by the State in information furnished under Item 1 above.
 - Sign backing material designs showing overall dimensions, extrusheet panel widths, overlay panel widths, notches in glare shields, and number of mounting clips.
 - Proposed sign face colors including legend, border, and background of sign.

815 Packaging, Shipment, and Storage of Signs

In addition to the requirements of Supplemental Specification 815, the following requirements shall be adhered to:

Extrusheet Signs:

- Signs shall be protected by crating or by temporary vertical backbracing attached to signs to assure that the sign is rigid and protected during packaging, loading, shipment, and handling or storage of signs at the job site prior to erection.

Vertical bracing (if signs are not crated) shall be at a minimum spacing of 6 feet and maximum of 8 feet on each sign with temporary mounting devices attaching signs to backbracing at a maximum of 2 feet intervals. Bracing shall extend a minimum of 3 inches below bottom of signs to assure that the bottom of sign is kept above ground during shipment or storage.

- Sign faces shall be protected by a plastic coated paper with the plastic surface adjacent to the sign face and heavy corrugated cardboard, blankets or equivalent covering over the plastic material attached to the sign.

- Signs shall be shipped completely assembled in 1 piece, except for signs over 8 feet in height which may be shipped in 2 pieces for assembly at the project site.

Sign identification shall also be provided on the back of each extrusheet sign. This identification shall be inconspicuously located or in a detachable form.

Signs or sign components which are shipped with aluminum overlays mounted on the extrusheet panels shall have adequate identification to permit assembly and erection at the proper location without detaching the overlay.

Flat Sheet Signs:

- Flat sheet signs of like size may be packaged together.

- Sign faces shall be protected by slip sheets which have plastic coated finish on the side adjacent to each sign face. Oily or waxy paper slip sheets are not acceptable.

Storage of Signs:

Sign faces shall not become wet during shipment or storage. If it is necessary to store signs on or near the project site prior to erection, adequate protection by approved shelter or protective covering is required at all times to assure that signs are not exposed to weather elements.

Extrusheet signs shall be stored in a vertical position in crates or supported by temporary bracing above natural ground, with the top edge of sign up. Under no circumstances shall extrusheet signs be stored in a horizontal position.