GENERAL NOTES

XXIX - 816 SIGNAL SUPPORT, BY SIZE & 816 OVERHEAD SIGN SUPPORT, BY SIZE

This item of work shall consist of furnishing and erecting the signal supports as shown and specified inthe plans. Vertical shafts and mast arms shall be tapered tubes fabricated from steel having a minimum yield strength of 52,000 p.s.i. and galvanized in accordance with Supplemental Specification 816. The mast arms shall be attached to the pole by four high strength steel bolts. This connection shall develop the full moment resisting capabilities of the arm.

This item shall also include the furnishing of anchor bolts, Type III rigid ferrous metal 3" conduit ells, and a 3/4" electrical metallic tubing ell for grounding lead for installation in the foundation plus a (4" x 8"), curved, flush handhole with cover, "J" hook, and removable pole cap for each pole in accordance with details on Sheet 42.

Basis of payment shall be at the contract price bid per each 816 Signal Support, By Size, 816 Overhead Sign Support, By Size including all labor, material, equipment and incidentals related to this item of work.

XXX - 625 POWER SERVICE

This item shall consist of the necessary components to run the power cable down the service pole into the controller.

Power service shall consist of weather head, one (1) inch conduit, stainless steel conduit straps, one (1) inch conduit fittings and ells and number four (4) insullated seven (7) strand copper ground wire connected to handhole ground lug as shown in "Power Service Detail", sheet 39.

Weather head shall be cast aluminum or galvanized cast ferrous metal and shall prevent entry of water. Conduit shall by Type III as specified in 713.04. Stainless steel straps shall be 3/4 inch wide by 0.020 inch thick and shall be spaced at maximum intervals of five (5) feet.

Payment for 625 Power Service will be made at the unit price bid for each power service completely installed and accepted, including all labor, material, equipment and incidentals necessary to perform the required item of work.

XXXI - THERMO-PLASTIC PAVEMENT MARKING MATERIAL

This pavement marking material shall be reflectorized "Perma-line" thermoplastic compound as manufactured by Permaline Corporation of America or reflectorized "Catatherm" thermoplastic compound as manufactured by Cataphote Corporation, or approved equal. In addition, the thermoplastic material furnished on this contract shall meet the following specifications:

Glass beads meeting Ohio Specification No. 712.05 shall be uniformly mixed throughout the material at the rate of not less than 250 lbs. of beads per 1,000 lbs. of thermo-plastic material. Immediate reflectorization shall be accomplished by the application of beads conforming to the following grading:

Sieve No.	Total Percent Passing
20	90 - 100
35	0 - 10

XXXI - THERMO-PLASTIC PAVEMENT MARKING MATERIAL - Continued

Beads shall be applied to the surface of the compound at the time the thermo-plastic material is applied to the pavement. A glass bead dispenser of approved design shall be used for a uniform surface application of beads at a rate of not less than two (2) pounds of beads per 33 square feet of line.

The material shall withstand temperature variation from minus 20°F. to plus 120°F., without deformation or discoloration, and shall maintain its original dimensions and placement, free from tack, chipping, or spalling. White thermo-plastic material shall be free of dirt or tint.

Samples:

The Contractor shall furnish a 10 pound material sample of the white thermo-plastic compounds he proposes to furnish and also white typical samples of line 4 inches wide by 10 inches long.

Material installed on the road on this contract in accordance with the contractor's standard practice shall be compared with the original samples at least 90 days after construction and shall show no darkening or discoloration. The material shall harden sufficiently within 15 minutes after application to allow traffic over the line without pickup or impression. A material certification and performance guarantee may be substituted for the required material sample and performance evaluation specified above. These exceptions would be allowed for projects where less than 4000 lbs. of thermo-plastic material is to be used.

Construction Details:

The material shall be applied to a uniform minimum thickness of 1/8 inch to the width specified. Lines shall be straight and true and at the location designated by the Engineer. Line widths shall be achieved by the use of 4", 6", 8" and 12" combination applicators. The minimum number of passes shall be used, that is, a 24" line should consist of two 12" passes. When the width of a line requires more than one pass, the individual lines shall not overlap. A 1/4" gap will be acceptable between lines in this case.

All pavement marking shall be applied in accordance with the standard pavement marking symbol, word or line specifications dimension drawing governing the types of symbols or lines shown on the plans. A set of templates are required for layout prior to the installation of arrows and words.

On all pavement surfaces and at locations where a new thermo-plastic line is to be applied over an old painted line, the contractor shall prepare the surface to insure adjesion. No lines shall be applied directly longitudinally over any construction crack or joint. Epoxy resin primer shall be used on all pavement surfaces prior to applied plastic markings. Type and application rate of primer shall be submitted to the Engineer for approval.

Placement of all markings shall be in accordance with the plans, subject to any adjustments as directed by the Engineer.

The air temperature at the time of application shall be not less than 50°F. The temperature of the compound during application shall never fall below 375°F.

XXXI - THERMO-PLASTIC PAVEMENT MARKING MATERIAL - Continued

Method of Measurement:

The quantity paid for shall be the number of linear feet or miles of the several types of lines and each symbol or word installed and accepted, measured in place. Measurements shall be made by a representative of the contractor and the engineer. The length of lane lines to be paid for shall be the actual number of miles, inclusive of gaps, measured in place, completed and accepted. Pavement arrows and words shall be measured per each and transverse stripes shall be paid for on a per lineal foot basis.

Basis of Payment:

These items shall be paid for in accordance with Item 621. Price and payment shall constitute full compensation for providing materials, hauling, surface preparation, placing, protecting all applied items as specified or required by the Engineer, and for all labor, tools, materials, equipment and incidentals necessary to lay out and complete the work.

Maintaining Traffic:

When stationary pavement marking operations are performed under traffic such as placing stop bars, words and pavement arrows, the work site must be protected using traffic cones, barricades and advance warning signs. A police cruiser and officer must be used to direct traffic around the work site.

Cost of all labor, materials, equipment, and incidentals for maintaining traffic shall be included in the cost of the various thermo-plastic pavement marking items.

XXXII - 614 TEMPORARY SIGNS AND SUPPORTS FOR MAINTAINING TRAFFIC

The following requirements shall be adhered to regarding materials and placement of signs to be furnished, installed, maintained, and subsequently removed by the contractor in accordance with the plans.

Signs shall be aluminum sheet or plywood type with reflective sheeting in accordance with Supplemental Specification 815. Sign material shall fonform with the following schedule:

Individual Sign Area	Material
Less than 10 sq. ft.	0.060 Alum. Sheet
10-16 sq. ft.	0.080 Alum. Sheet
16-20 Sq. Ft.	0.100 Alum. Sheet
Over 20 sq. ft.	3/4 inch Plywood

The contractor shall have the option of furnishing extrusheet aluminum panels as a substitute for plywood.

All supports for ground mounted signs not erected on drumbs or overpass mounted shall be sheet channel type, driven to a minimum depth of 5 feet. Signs shall have 1, 2, and 3 separate supports in accordance with the following schedule:

Total Sign Assembly Area (Sq. Ft.)	Support Type, Sign Length (Horiz.)		
	4 Ft. or Less	4-10 Ft.	11 Ft. or More
10 or Less	1-4 Lb. Post	2-3 Lb.Post	-
10-20	1-6 Lb. Beam	2-4 Lb.Post	-
21-40	-	2-6 Lb.Beam	3-6 Lb.Beam
41-75	-	-	3-6 Lb.Beam

Supports for ground mounted signs greater than 75 sq. ft. in area shall be as directed by the Engineer.