

SEPTEMBER 22, 2017
REPLACEMENT OF HIGHWAY SIGNING ON ROUTE 15

FEDERAL AID PROJECT NO. 000T(030)

STATE PROJECT NO. 0173-0472
TOWNS OF GREENWICH, STAMFORD, NEW CANAAN, NORWALK, WESTPORT,
FAIRFIELD, TRUMBULL, STRATFORD, MILFORD, ORANGE

ADDENDUM NO. 2

This Addendum addresses the following questions and answers contained on the “CT DOT QUESTIONS AND ANSWERS WEBSITE FOR ADVERTISED CONSTRUCTION PROJECTS”:

Question and Answer Nos. 13, 14 and 18.

SPECIAL PROVISIONS

NEW SPECIAL PROVISION(S)

The following Special Provision is hereby added to the Contract:

- **ITEM NO. 1206011A – REMOVAL OF EXISTING OVERHEAD SIGNING**

REVISED SPECIAL PROVISIONS

The following Special Provisions are hereby deleted in their entirety and replaced with the attached like-named Special Provisions:

- **ITEM NO. 0603475A – STRUCTURE STEEL SIGN SUPPORTS (PAINTED)**
- **ITEM NO. 1207030A – PAINTING OF ALUMINUM SIGNS**

REVISED CONTRACT ITEM(S)

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ORIGINAL QUANTITY</u>	<u>REVISED QUANTITY</u>
<u>0603475A</u>	<u>STRUCTURE STEEL SIGN SUPPORT (PAINTED)</u>	<u>1150 CWT.</u>	<u>1245 CWT.</u>

PLAN(S)

NEW PLAN(S)

The following Plan Sheets are hereby added to the Contract:

04.04A2, 04.05.02, 04.06.A2, 04.07.A2, 04.08.A2.

REVISED PLAN(S)

The following Plan Sheet is hereby deleted and replaced with the like-numbered Plan Sheet(s):

02.01.A2

The Bid Proposal Form has been revised to reflect these changes.

The Detailed Estimate Sheets do not reflect this change.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

ITEM #1206011A - REMOVAL OF EXISTING OVERHEAD SIGNING

Section 12.06 is supplemented as follows:

Article 12.06.01 – Description is supplemented with the following:

Work under this item shall also consist of measuring, removing and disposing of existing vertical attachment members, signs and associated attachment hardware.

Article 12.06.03 – Construction Methods is supplemented with the following:

Prior to removal of existing vertical attachment members, the Contractor shall measure the existing sign panels and vertical attachment members relative to their respective sign supports. The Contractor shall provide these measurements, and any other measurements requested by the Engineer, to the Engineer for review. The Contractor shall carefully remove the existing vertical attachment members and associated hardware as indicated on the drawings or as directed by the Engineer. The Contractor shall take care during the removal so as not to damage the portions of the sign support structure that are to remain. Damage caused by the Contractor shall be repaired to the satisfaction of the Engineer, at no additional cost to the State.

Article 12.06.04 – Method of Measurement is supplemented with the following:

Removal and disposal of vertical attachment members and associated hardware designated for removal will be included in the Contract lump sum price, and will not be measured for payment.

Article 12.06.05 – Basis of Payment is supplemented with the following:

The price for “Removal of Existing Overhead Signing” shall also include the measurement, removal and disposal of existing vertical attachment members, signs, and associated hardware.

ITEM #0603475A - STRUCTURE STEEL SIGN SUPPORTS (PAINTED)

ITEM #1207030A - PAINTING OF ALUMINUM SIGNS

Description:

Work under this provision shall consist of furnishing, fabricating, transporting and erecting painted galvanized sign supports and vertical attachment members including brackets, sign hooks and sign stops, at the location shown on the plans or as directed by the Engineer. Also included under this section is the work required to paint the backs of extruded aluminum signs, stainless steel and galvanized hardware being installed under Item No. 1207034A - "Sign Face – Extruded Aluminum;" and the work required to paint the backs of sheet aluminum Town Line signs (Sign No. 51-2005) and sign supports being installed under Item No. 1208932 – Sign Face – Sheet Aluminum (Type IV Retroreflective Sheeting) as shown on the Signing Plans contained in the contract plans. Also included under this section are the breakaway coupling system that connect new sign supports to existing sign foundations.

Materials:

The materials for this work shall conform to the following:

Steel for side mounted sign supports shall conform to the requirements of the ASTM A 36. Steel for overhead sign support vertical attachment members, brackets, sign hooks and sign stops shall conform to the requirements of AASHTO M270 Grade 50.

High strength bolts shall conform to ASTM A 325, Type 1. U-Bolts shall conform to ASTM A 449. Nuts shall conform to ASTM A 563, Grade DH or ASTM A 194, Grade 2H. Flat hardened washers shall conform to ASTM F 436. Bolts, U-bolts, nuts and washers shall be galvanized in conformance with ASTM A 153.

Hot-dip galvanizing of steel shall conform to the requirements of ASTM A 123.

Zinc Rich Field Primer for touch-up shall conform to the requirements of Federal Specification TT-P-641-Type I, and ASTM A780. The use of Aerosol spray cans shall not be permitted.

Breakaway coupling system brackets, breakaway couplings, bolts, special bolts and shims shall meet the requirements indicated on the plans.

The applied paint system over galvanized, aluminum and stainless steel hardware shall be one of the following:

SHERWIN WILLIAMS

Primer Coat	Recoatable Epoxy Primer
Finish Coat	Hi-Solids Polyurethane

KEELER AND LONG

Primer Coat Kolor-Poxy #3200
Finish Coat Kolorane U-Series Enamel

CARBOLINE

Primer Coat Carboline 890 Primer
Finish Coat Carbothane 134 HB Enamel

AMERON

Primer Coat Vyguard Val Chem 13-F-62 Primer
Finish Coat Vyguard V40 Series Urethane Enamel

The color of the finish coat shall be Charcoal Gray, Federal Standard 595 Color No. 26134.

Storage of the paint system materials shall be in a dry, well-ventilated area, not in direct contact with the ground, where the temperature is maintained between 10° and 38° C. Damaged materials and/or materials exceeding the manufacturer's recommended shelf life shall not be used.

Construction Methods:

General:

Before starting fabrication of structural steel sign supports, the Contractor shall determine the actual locations and elevations of the foundations.

The Contractor shall submit shop drawings for vertical attachment members, brackets, sign hooks and sign stops in accordance with Article 1.05.02.

Contractor shall notify the Department of Transportation Office of Research and Materials 48 hours prior to fabrication of structural steel sign supports and vertical attachment members, brackets, sign hooks and sign stops, hot-dip galvanizing and painting of structural steel, aluminum signs and associated hardware.

All hot-dip galvanizing and painting shall be performed in climate controlled shop ambient conditions.

Fabrication of Galvanized Sign Supports:

Structural steel sign supports shall be fabricated in conformity of the requirements of the plans or as ordered.

All welding shall conform to the requirements of the current AWS Structural Welding Code.

Steel surface defects such as fins, slivers, tears, delaminations, burrs, sharp edges and other defects shall be ground down with the use of a power disc grinder or other tools approved by the Engineer, to afford as close to a continuous surface characteristic as possible for coating material application and continuous film build. Defects that, in the opinion of the inspection personnel, are so large or deep that grinding may not rectify the defect, shall be referred to the Engineer for resolution.

After the steel members have been fabricated, they shall be hot-dip galvanized in accordance with ASTM A 123.

Painting:

The galvanized structural steel sign supports, vertical attachment members, brackets, sign hooks and sign stops, aluminum signs, and associated hardware shall be painted with the same paint system.

Only the back surface of the aluminum signs shall be painted. Steps shall be taken to protect the front side of the signs. Any signs that are damaged shall be repaired and if necessary replaced at the Contractor's expense.

(A) Site Foreman:

The site foreman overseeing surface preparation and painting operations shall have the following:

- Copy of this provision
- Wet film thickness gauge
- Dry film thickness gauge
- Surface temperature and relative humidity gauges
- Psychometric charts or psychometric tables from the U.S. Weather Bureau
- Product data sheets and applicable instructions for the products specified
- Material Safety data sheets for the products specified

(B) Surface Preparation:

Surface preparation shall consist of cleaning galvanized, aluminum, and stainless steel surfaces in accordance with the methods listed herein. The cleaned surface shall be approved by the Engineer or his appointed inspector prior to any painting. Exposed bare steel surfaces on galvanized structures shall be touched up in accordance with ASTM A 780 prior to applying the paint system. Galvanized steel shall be prepared in accordance with ASTM D 6386 prior to painting.

All foreign matter such as oil, grease, and dirt shall be cleaned from the surface using a bio-degradable cleaner (i.e. Carboline #3 Cleaner or Dev-Prep 88) in accordance with Steel Structures Painting Council Surface Preparation No. 1 (SSPC-SP1) "Solvent Cleaning." All surfaces shall then be brush blasted in accordance with SSPC-SP7 "Brush-Off Blast Cleaning" using a fine abrasive at nozzle pressures not to exceed 0.4 MPa. Brush blasting must be performed to 100% of the surface area being coated.

All surfaces brush blasted must be primed the same day.

(C) Application:

Handling, mixing, and all other facets of application and curing of paint shall be in accordance with the manufacturer's written instructions, unless otherwise instructed by the manufacturer, and in accordance with these specifications.

Paint, substrate, and air temperature at the time of application shall be between 15° and 38° C unless otherwise specified by the manufacturer.

Paint shall not be applied unless the temperature of the surfaces being coated is, and will remain, at least 3°C above the dew point until the coating is dry "to touch."

The relative humidity shall be less than 85% during application.

The paint shall be thoroughly mixed prior to and during application. Mechanical agitation during application may be necessary to keep pigment in suspension. Paint shall not be transferred (other than to simplify mixing) until all pigment has been incorporated. Air shall not be used directly for agitation.

Paint materials may not be used beyond the recommended pot life.

Thinners shall not be added to paint unless it is absolutely necessary for application. The amount of thinner used shall not exceed the manufacturer's recommendations for quantity and type. If used, the thinner shall only be added in accordance with the manufacturer's instructions, under the Engineer's presence.

Spraying is the preferred method of application. Brushing, rolling and/or mitt application may be used where appropriate.

The paint system shall have the following thickness:

Galvanized Surfaces

Primer Coat	75 to 125 microns Dry Film Thickness
Finish Coat	38 to 63 microns Dry Film Thickness

Aluminum and Stainless Steel Surfaces

Primer Coat	50 to 75 microns Dry Film Thickness
Finish Coat	38 to 63 microns Dry Film Thickness

Paint thickness will be determined in accordance with SSPC-PA-2 "Measurement of Dry Paint Thickness with Magnetic Gages." The number of readings will be a minimum of that stated in SSPC-PA-2.

Completed work shall be free from runs, drips, sags, holidays, voids, and other imperfections.

Any coating damaged prior to or during installation of structural steel sign supports and/or aluminum signs shall be repaired. Areas to be repaired shall be clean, dry, and free from grease, oil, corrosion products and other contamination. If contaminated, power wash or scrub with a stiff brush and clean water. Repair areas may be brushed or sprayed as appropriate. Damaged zinc shall be touched up in accordance with ASTM A 780. Spray aerosol cans of zinc rich primer will not be permitted. After the zinc rich primer has cured, the damaged paint system shall be touched up using the same material as the prime and finish coats.

All defective work shall be corrected by the Contractor at no cost to the Department.

(D) Compliance with Regulations:

The Contractor is required to meet all OSHA and EPA as well as state and local government regulations regarding worker safety and protection, hazardous waste handling and disposal through the use of appropriate containment, engineering controls, respirators, monitors, etc.

Painted Galvanized Sign Support and Vertical Attachment Member Installation:

The painted galvanized sign supports, vertical attachment members, brackets, sign hooks and sign stops, and associated hardware shall be erected in accordance with the details shown on the plans or as directed by the Engineer.

To prevent damage to surfaces of the steel during transportation, the members shall be wrapped or otherwise protected.

The sign support structure and vertical attachment members shall be erected with nylon slings or in a manner that will prevent damage to the finish coat of paint.

All damaged areas of the galvanizing and paint system shall be repaired. Damaged zinc shall be touched up in accordance with ASTM A 780. Spray aerosol cans of zinc rich primer will not be permitted. After the zinc rich primer has cured, the damaged paint system shall be touched up using the same material as the prime and finish coats.

Method of Measurement:

This work will be measured as follows:

Structural steel sign supports, vertical attachment members, brackets, sign hooks and sign stops fabricated, galvanized, painted and installed will be measured for payment based on the net weight of metal in the fabricated element. Breakaway coupling system brackets, breakaway couplings, bolts, special bolts and shims will be measured for payment based on the net weight of the metal in the fabricated element. It shall include rivet heads, high tensile strength bolt-heads, nuts, stick-through and washers required. This net weight shall be determined by computation as described in Sub-article 6.03.04-1, unless it is provided that it be determined by scale weighing, as described in Sub-article 6.03.04-2. If the scale weight of any member is less than 97.5% of the computed weight, the member may be rejected.

Painting of aluminum signs will be measured for payment by the number of square feet of aluminum signs to be painted in the project.

There will be no measurement or direct payment for the surface preparation and painting of hardware for the aluminum signs, but the cost of this work shall be considered as included in the general cost of the work.

Basis of Payment:

This work will be paid for as follows:

The structural steel and metal of the various other types covered by this section, incorporated in the completed and accepted structures, excluding the aluminum signs, stainless steel and galvanized hardware, will be paid for at the contract unit price per cubic weight for “Structure Steel Sign Supports (Painted),” which price shall include furnishing, fabricating, transporting, erecting, surface preparation, galvanizing, paint, painting, and all materials, equipment, tools, labor and work incidental thereto.

The painting of the backs of aluminum signs covered by this section will be paid for at the contract unit price per square feet for “Painting of Aluminum Signs,” complete and accepted, which price shall include transporting, surface preparation, paint, painting, and all materials, equipment, tools, labor and work incidental thereto.

<u>Pay Item</u>	<u>Pay Unit</u>
Structure Steel Sign Supports (Painted)	cwt
Painting of Aluminum Signs	sq.ft.