Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

September 10, 2019

SUBJECT: Route FAP 345 (IL 390)
Section 14-00245-05-LS
Cook-DuPage Counties
Contract No. 61E69
Item 005
September 20, 2019 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. **Revised pages 16 and 32-42 of the Special Provisions**
2. **Revised plan sheets 19 and 22**

Prime contractors must utilize the enclosed material when preparing their bid and must include any changes to the Schedule of Prices in their bid.

Very truly yours,

Jack A. Elston, P.E.
Bureau Chief, Design and Environment

FENCE REMOVAL

Description. This work shall consist of complete removal and salvage of the existing fence as shown in the Plans, regardless of type or method of installation. The removal shall include posts, fittings, and accessories. This work includes cleaning the existing concrete bridge parapet of structure SN 022-0208.The salvage shall include the transportation of the fence to the District Bridge Maintenance Yard.

Construction Requirements. No removal work shall be completed without the approval of the Engineer. All associated hardware and appurtenances of the existing fence including but not limited to posts, fittings, and accessories, shall be removed off-site and disposed of by the Contractor in a legal disposal site. Any part of the fence that is damaged that is not called out for to be removed shall be replaced at the Contractor's expense.

All sides of the existing concrete parapet where the fence is to be replaced are to be cleaned per Section 592 of the Standard Specifications except it will not paid for separately but included in the cost of FENCE REMOVAL.

Method of Measurement. Fence removal shall be measured for payment in feet of FENCE REMOVAL and measured along the top of the fence from center of post to center of post.

Basis of Payment. This work will paid for at the contract unit price per foot for FENCE REMOVAL. The price shall include all labor, materials, and equipment necessary to complete the work described herein and as shown in the plans. No additional compensation will be allowed.

GATEWAY MONUMENT SIGN COMPLETE

Description. Work under this item shall consist of providing all the labor, tools, equipment, and materials necessary to fabricate and furnish, deliver, and install Gateway Monument Sign above the concrete foundation, ornamental metal fabrications, metal letters, limestone veneers, stone cap, CMU core, and all mounting hardware as shown in the drawings and as herein specified, all complete and subject to the terms and conditions of the Contract Documents, and as directed by the Engineer. Gateway Monument Sign as shown on the Drawings and specified herein include but are not necessarily limited to the following:

Gateway monument sign – with dimensions and colors as specified in plans

1. Metal component of Gateway monument sign:
    - A. Dimensions – as indicated on drawings
    - B. Aluminum I-Beam
    - C. Aluminum letters with different sizes and thicknesses
    - D. All anchoring hardware and accessories required
    - E. Stone cap
    - F. 15 year manufacturer's warranty against fade and deterioration for all painted metal components.
    - G. 15 year manufacturer's corrosion warranty for all painted steel components.
2. Masonry component of Gateway Monument Sign:
    - A. Dimensions – as indicated on drawings
    - B. Concrete Block – see structural drawings
    - C. Sandstone Veneer
    - D. Cast Stone Cap
    - E. Accessory materials, such as bond breaker strips, and others indicated on the Contract Documents, including all hardware and materials required to complete, assemble and install each fabrication
    - F. Anchoring accessories such as steel dowel, bolts, including all hardware and materials required to complete, assemble and install each fabrication

General Requirements.

Fabricator Certifications: Provide Ornamental metal sign fabrications by a firm specializing in the type of ornamental metal sign work shown on the Drawings and described herein as

evidenced by past experience. Upon request, the fabricator must submit such required evidence to the Engineer with a minimum experience of five years.

A. All welding personnel and weld procedures used in the fabrication of the Gateway monument sign shall be qualified according to AWS D1.2, "Standard Welding Code – Aluminum"

B. Gateway monument sign Fabricator shall participate in the American Society of Steel Construction (AISC) Quality Certification Program and shall be designated an AISC-Certified Plant, Category STD.

   a. Non-AISC Certified Fabricator shall not be used unless the fabricator's written quality control manual is submitted to and approved by the Engineer prior to beginning the Work.

Fabricator Responsibilities: Provide ornamental metal sign fabrications and accessories of the assembly by a firm having full responsibility for the design, fabrication and installation as shown on the Drawings and specified herein.

Graphics: Digital output ready graphics will be supplied to the Contractor by the Engineer. The Contractor will develop finished artwork and all necessary attachments for the final Gateway monument sign.

Gateway monument sign element connection requirements:

1. All final connections for structural elements shall be either welded connections or high-strength bolted connections utilizing ASTM A325 bolts and subject to the requirements of the "Specification for Structural Joints Using High-Strength Bolts" published by the Research Council on Structural Connections (RCSC).

2. The use of self-tapping screws will not be acceptable as a final structural connection.

3. Gateway monument sign Structural elements shall be assembled in the shop to the greatest extent possible

4. Gateway monument sign Fabricator shall engage an independent testing and inspecting agency to perform shop and field tests and inspections and prepare test reports for all welded connections. Submit the name and qualifications of the independent testing agency to the Engineer for approval. In addition to Visual Inspections, all welded connections shall be shall be tested an inspected according to AWS D1.2 and the following inspection procedures:

   a. Radiographic Inspection in accordance with ASTM E94

5. Connections of the aluminum panels to the concrete or masonry structure of the Gateway Monument Sign shall be made at a maximum spacing of 18" on center. Additional connections shall be provided as required by the Delegated Designer.

6. Connections between dissimilar metals shall be detailed to preclude galvanic corrosion. Dissimilar metals shall be separated through the use of advanced non-stick coating insulating washers and bolt sleeves (bushings).

Performance Requirements.

A. Structural Performance for architectural metalwork: Gateway Monument Sign Assemblies, including anchorages and supports, shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to the following design criteria:

   a. Wind Loads: Design for the condition resulting from

      i. Basic Wind Speed of 90 miles per hour, and Exposure Category B, according to SEI/ASCE 7, 2005.

      ii. Wind Loading as defined by the Chicago Building Code, 2015

Submittals.

Quality Assurance Submittals:

A. Gateway Monument Sign Fabricator's letter of certification for AISC-Certified Plant, Category STD

B. Welding certificates for all welders involved in fabrication of the Gateway monument sign.

C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs):

   a. Provide according to AWS D1.2, "Structural Welding Code – Aluminum," for each welded joint whether prequalified or qualified by testing, including the following:

      i. Power source (constant current or constant voltage).

      ii. Electrode manufacturer and trade name.

D. Mill Test Reports for aluminum assemblies used in the fabrication of the Gateway Monument Sign.

E. Product Test Reports for the following:

   a. Bolts, nuts, and washer including mechanical properties and chemical analysis.

F. Submit Independent Testing Agencies test and inspection reports for all welded connections.

G. Submit a working plan and schedule for the coordination of installation of masonry work and metal components with related work. This includes coordinating the delivery and installation of limestone veneers, concrete, delivery to site and final erection.

Product Data: For each product specified herein or on drawings.

Samples:

A. Color samples: For each paint color to be utilized, as determined by Engineer and as approved thru the submittal review process.

B. Panel Assembly and Graphic Approval Samples: Submit 24"x24" sample of typical section of Gateway monument sign artwork, including thermal or water jet cut aluminum panel assemblies for approval of quality, connections, finish and color fidelity of all colors shown.

Shop Drawings:

A. Provide shop drawings for all items including:

1. Complete fabrication and installation drawings for Gateway Monument Sign. Indicate dimensions, materials, finishes, fastenings, anchorage (size and arrangement of anchor bolts), jointing, sealing, backing, utility requirements, rough-in, and adjacent site conditions.

2. Details: Thermal or Water Jet Cut areas, lettering, graphics, metal materials, dimensions, gages, finishes, methods of fabrication, fasteners, fittings, accessories, supports, framing and anchors. Show adjacent construction and method of anchorage of fabricated items.

3. Additional elements required to clearly convey the fabrication and installation requirements.

B. Scaled color print of each ornamental metal fabricated item as shown and specified on the Drawings.

C. Gateway monument sign Shop drawings for signage and fabricated metal assemblies shall be signed and sealed by a licensed structural engineer responsible for their preparation.

D. Details on drawings indicate a design approach for fabricated metalwork and sign fabrication but do not necessarily include all fabricating details required for the complete structural integrity of the signs, erecting, and service at the installed locations, nor do they necessarily consider the preferred shop practices of the individual Sign Fabricators. Therefore, it shall be the responsibility of the fabricator to perform the complete structural design of the signs and to incorporate all the reasonable safety factors. Designs which survive rational engineering analysis will be acceptable, provided that

shop drawings, including structural design. Signs must meet all applicable local, state, and federal codes, as well as testing laboratory listings where required.

E. Subsequent iterations for submittal will be included in the cost of this item.

F. Maintenance data: For installed products, including precautions against harmful cleaning materials and methods.

G. Pre-Product Sample: One sample of pre-production casting of typical aluminum letters and other accessories- bracelets, brackets, gussets, plates, straps, tubes and couplings required for assembly.

H. Warranty: Provide written manufacturer's warranty for painted metal finishes.

Metals Materials:

A. Metal Material Components:

1. Metal Material: Alloy and temper must be of adequate strength and durability, and capable of performing function of holding identifier securely in place without bending or deforming.

2. Aluminum Plate and Sheet: ASTM B209 or alloy and temper as recommended by manufacturer.

3. Aluminum Extrusions: ASTM B221 or alloy and temper as recommended by manufacturer.

4. Aluminum Bars, Rods and Wire: ASTM 8211.

5. Steel Tubes (if used): ASTM A500, Grade B.

6. Steel Plate (if used): ASTM A36 or ASTM A572.

7. High-Strength Bolts: ASTM A325

8. Anchor Bolts: ASTM F1554, Grade 36, minimum.

9. Non-shrink, non-metalic grout: ASTM C1107

B. Fasteners: Use fasteners fabricated from same basic metal or alloy as the metal fastened, and finished to match in color and texture, unless otherwise specified. Comply with Federal Specification (GSA) FF-S-92 for machine screws. Use of metals that are corrosive or incompatible with joined materials are prohibited. If dissimilar metals are unavoidable, provide connection details that isolate the dissimilar metals to ensure galvanic corrosion will not occur.

C. Provide bracelets, brackets, gussets, plates, straps, tubes and couplings with each fabricated assembly, as may be required for proper support and anchorage to the

construction and for other work. Cut, reinforce, drill and tap fabricated metal work as may be required to receive other items of work.

Masonry Materials:

A. Masonry Material Components:

1. Concrete Block - Concrete Masonry Units (CMU) – as indicated on structural drawings

2. Materials - Mortar and Grout:

a. Portland Cement: ASTM C 150, Type I.

b. Masonry Cement: ASTM C 91.

c. Lime: ASTM C 207, Type S.

d. Aggregate for Mortar: Sand, ASTM C 144 or ASTM C 404, Size No. 2, except for joints 1/4" and less (if any) use aggregate graded with 100% passing the No. 16 sieve.

e. Water: Clean, free of deleterious materials which would impair strength or bond.

f. Aggregate for Grout: ASTM C 404.

4. Continuous Wire Reinforcing– as indicated on structural drawings

a. Anchoring Devices: as indicated on the structural drawings

5. Accessory Materials:

a. Bond Breaker Strips: 15 lb. asphalt impregnated building felt.

b. Pre-Molded Control Joint Strips: Solid rubber or PVC strips with a minimum Shore A durometer hardness of 70, designed to maintain lateral stability in masonry wall.

c. Compressible Filler: Expanded polyethylene.

6. Steel Lintels: Fabricate from ASTM A-36 steel. Shop prime with one heavy coat of dust inhibitive, non-lead and non-chrome metal primer after fabrication.

7. Custom sandstone veneer:

a. General: All sandstone shall be of structural sandstone, dark red/warm sandstone color Engineering Grade, and hard and durable. Sandstone shall be free from seams which impair its structural integrity, and shall be of smooth splitting character. Natural variations characteristic of the

deposit will be permitted for cobbles. Sandstone shall come from an approved quarry. Test samples of sandstone shall conform to the requirements of ASTM C 616, Classification I Sandstone.

b. All sandstone to be used under this contract shall be quarried from the same parent material source and shipped to the Contractor at the same time. Contractor shall store sandstone venners in a dry and covered condition until such time as they shall be installed.

c. Stone shall conform to the following minimum requirements as demonstrated by submitted certified test results.

i. Density = 155 lbs/CF

ii. Absorp. = 3%

iii. Comn. PSI = 15,000

iv. Mod. Of Rupture PSI = 2,500

d. Varieties and Sources: Subject to compliance with requirements, provide the following:

a. Depth = 4" nominal (full bed stone)

b. Pattern = Ashlar

8. Stone cap: color and finish to be determined by Engineer

B. MORTAR MIXES

1. Comply with ASTM C 270, Proportion Specifications for Type "N" Mortar.

a. Where used in ground-face CMU, tinted mortar colors selected by the Engineer to match CMU.

2. Grout: Portland cement, sand, gravel and water, proportioned as required to provide a 28-day minimum compressive strength of 3000 psi.

3. Mixing Mortar and Grout:

a. Combine and mix cement, lime, water and aggregates for a minimum of 5 minutes in a mechanical batch mixer. For mortar, add as much water as is required for workability. Mortar may be retempered by adding water and remixing, as required for workability. Do not use mortar or grout which has begun to set or if more than 2-1/2 hours, has elapsed after initial mixing.

b. Mix grout to have a slump of 10" plus or minus 1" at time of placement.

c. Do not add air-entraining agents or other admixtures

Fabrication.

Fabricate and assemble all items in the shop and mark each item to ensure proper installation at the project site. Disassemble for shipment only to the extent required by shipping limitations.

Carefully match parts of the fabrication to maintain continuity of line and design. Joint all parts with hairline contact, flush and smooth with adjacent surfaces. Form joints exposed to weather to be watertight. Remove all mold marks so as to produce smooth, even surfaces, free of blemishes and surface shadows.

Fabricate and thermal or water jet cut to the thicknesses, sizes and shapes shown on the Drawings, or as required to produce work of adequate strength and durability, without objectionable deflections. Perform all cutting by machine. Plane cut edges which are to be welded. Use proven details of fabrication, as required to achieve proper assembly and alignment of the various components of the work. Provide finished fabrications with surfaces, exposed to view, which do not exhibit pitting, stains, marks, discolorations or other imperfections on the finished units.

The approved Independent Testing Agency shall perform inspections and test on all shop-fabricated structural joints for the Gateway monument sign, and any defects shall be repaired and retested prior to the assembly being delivered.

Delivery and Handling.

Deliver fabrications to the project site clearly marked for proper identification. Wrap fabrications to protect finish from damage during delivery, storage and handling. Deliver to site when supporting construction is completed and prepared for fabrication installation.

Handle materials at the job site in such a manner as to prevent damage. Immediately remove from the job site, damaged or otherwise unsuitable material when so ascertained.

Examination and Preparation.

Contractor must examine all parts of supporting structures and conditions under which ornamental work is to be erected, and notify Engineer in writing of conditions detrimental to proper and timely completion of the work. Correct conditions that affect the proper installation of the ornamental metal fabrications. Fabrication and/or installation of ornamental metal and associated items constitutes acceptance of the existing conditions by the Contractor.

Field Measurements: Where ornamental fabrications are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

Provide a Mock-Up: Prior to the start of production prepare the following for the Engineer's review.

A. Artwork graphics panel displaying wide range of colors and finishes to be used in the finished work.

B. Anchoring accessories such as straps, gussets, tubes, and couplings, including all hardware and materials required to complete, assemble and install each fabrication

C. Approved mockups may become part of finished work

The Engineer's review of the mock-ups will be for final acceptance of material finish, conformance with general quality prior to production and does not relieve the Contractor from the responsibility and conformance of requirements as herein specified.

Finish.

Metal Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

Paint Finish:

A. Surface Preparation:

1. Mechanically or chemically abrade surface to establish a surface profile similar to medium grit sandpaper finish.

   a. If chemically abraded, use a concentrated, water-reducible phosphoric acid and detergent blend formulated to clean and profile. Dilute with water before use.

B. Coating:

1. Paint process shall be a 1-coat Polyamidoamine Epoxy primer and a 1-coat Advanced Thermoset Solution Fluoropolymer with a manufacturer's 15 year color and gloss retention warranty.

2. Epoxy prime coat: In the shop, all aluminum designated to be painted must be primed with a polyamidoamine epoxy base coat: Dry Mils 50 microns (2.0 mils) min., 250 microns (10.0 mils) max.

3. High-solids Fluoropolymer finish coat: In the shop, apply an Advanced Thermoset Solution Fluoropolymer coating that provides a semi-gloss durable finish with a brush, roll or spray application: Dry Mils 50 microns (2.0 mils) min., 75 microns (3.0 mils) max.

C. Fabricator to confirm surface preparation and coating process with paint system manufacturer. If any variation exists between the specified coating system and process

recommended by the paint system manufacturer, notify the Engineer in writing prior to the start of work.

D. The paint manufacturer's product data sheets must be submitted to the Engineer prior to start of work and the requirements as outlined in the data sheets must be followed.

E. Written approval of color by Engineer must be obtained prior to ordering and application of paint.

F. Application of Polyamidoamine primer and Advanced Thermoset Solution Fluoropolymer finish coat paint system will not be allowed when the metal and/or air temperature is expected to fall below 10 degrees C (50 degrees F).

G. Field cleaning and touch-up painting must only be done between May 1 and October 31.

Protection: Protect fabrication surfaces and corners by covering with padding and kraft paper or plastic covering prior to shipment from the fabrication shop.

Attachments: Bracelets, collars, couplings, and hardware necessary to assemble Gateway monument sign must be provided with dimensions as shown on the Drawings. All exposed screws shall be stainless steel and finished to match in color and texture metal being fastened, unless otherwise specified. Do not use metals that are corrosive or incompatible with joined materials.

Installation.

Examine all surfaces and conditions of the installation to receive ornamental metal fabrications. Installation of the ornamental metal fabrications and associated construction constitutes acceptance of the existing materials and conditions.

Verify dimensions and conditions of the supporting structures at the project site.

Provide protection of in-place construction, surfaces and materials which can be damaged during the installation of this work. Patch, repair or replace any such construction damaged during the work of this section as reviewed and approved by the Engineer at no additional cost to the Engineer.

Set ornamental metal fabrications accurately as measured from established building lines and levels, plumb and in true alignment with existing and previously completed new work. Allow for expansion and contraction of materials and building construction.

Anchor securely in place in the manner shown on the approved shop drawings and the final mock-up samples, using specified anchors. Separate aluminum and steel fabrications using plastic washers.

The approved Independent Testing Agency shall inspect all field welded and bolted connections, including radiographic testing of field welds. Any defects shall be repaired and retested to verify adequacy.

Do not cut or abrade finishes which cannot be completely restored in the field. Return units with such finishes to the shop for required alterations, followed by complete refinishing.

Remove protective coverings when there is no longer any danger of damage to the ornamental metal fabrications from other work yet to be performed in the same location. Restore protective coverings which have been removed or damaged during shipment or installation of the work, or if such other work is yet to be performed.

Repair and refinish all damaged surfaces of fabrications that will affect the appearance and performance of finish coatings. Submit materials and methods of surface repair and repainting to the Engineer for review prior to application. Damaged surfaces will be repaired and refinished at no additional cost to the Engineer. Remove and replace or remove and factory refinish any fabrication which, if after review and decision by the Engineer, cannot be successfully field repaired at no additional cost to the Engineer.

Method of Measurement. Gateway monument sign: This work shall be measured per each GATEWAY MONUMENT SIGN COMPLETE furnished and installed.

Basis of Payment. This item of work will be paid for at the Contract Unit Price per EACH for GATEWAY MONUMENT SIGN COMPLETE which will include all labor, furnishing, placing and installation, equipment, materials including architectural metalwork, metal letters, bracelets, limestone veneers, stone cap, CMU core, mounting hardware and any incidental work necessary to complete work as specified.