

Addendum # 2

Date: November 17, 2015

Project: Facilities Building Generator and Installation Project

Contract: FD-14-003

The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

Clarifications:

1. See questions and answers below.

Changes to Specifications:

1. Provide new 10 foot fencing and gates instead of 8 foot where indicated as per revised Bid Document, see alternate # 1.
2. See below fence specifications.

Changes to Drawings:

1. None

Questions and Answers:

1. **Question:** Confirm that the wire is supposed to be copper for the 350 MCM or is aluminum acceptable?
Answer: All wiring shall be copper.
2. **Question:** What is the spec for the duct bank installation? Please clarify, drawing does not specify concrete or fill?
Answer: Refer to duct bank detail on drawing E 0.1, Concrete shall be 3000 psi compressive strength.
3. **Question:** 2.2E mentions closed transition. Confirm if ATS are to be closed or delayed transition
Answer: Open transition
4. **Question:** 2.2J.3.c. Mentions NEMA 3R for outdoor switches and 2.2.J.3.d mentions NEMA 4 or 4X for outdoor switches. Clarify the enclosure type requirement.

Answer: NEMA 3R is required; NEMA 4 and 4X are acceptable.

5. **Question:** 2.3.H. states a battery charger may be necessary to be provided at the ATS. This is usually provided at the generator. Clarify if the battery charger can be provided by the generator supplier at the generator set.

Answer: Supply battery charger with Genset

6. **Question:** 2.3.I.8 mentions Network Monitoring Equipment. What parameters need to be monitored at the load side of the ATS; voltage, frequency, current, power calculations?

Answer: Network monitoring equipment is not required.

7. **Question:** Why is there a sub-contractor for Masonry? I don't see any work involved with that trade?

Answer: As per addendum # 1 Meeting # 1 section 1.8 (Subcontractors List section of the bid form shall not be left blank for any reason. Noncompliance may result in a rejection of submitted bid. **If bidding contractor is doing the work in the place of a subcontractor, indicate accordingly on said form.** The following subcontractor categories have been established and shall be reflected in each bid)

8. **Final Notes:** All underground gas piping shall be Polyethylene. All above ground piping shall be Schedule 40 metallic piping.

END

COMMERCIAL, INDUSTRIAL AND SECURITY CHAIN LINK FENCE AND GATES

SECTION 32 31 13

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. DIVISION 01 - GENERAL REQUIREMENTS: Drawings, quality, product and performance requirements, general and supplemental conditions apply as applicable to the project and project documents.

1.2 SUMMARY

- A. This Section includes materials applicable for commercial/industrial and security chain link fence and gates.
1. Polymer coated steel chain link fabric
 2. Galvanized steel framework and fittings
 3. Polymer coated galvanized steel framework and fittings
 4. Gates: swing and cantilever slide
 5. Installation
- B. Related Project Contract Sections:
1. 01 33 23 Shop Drawings, product data
 2. 01 43 13 Manufacturers Qualifications
 3. 01 43 23 Installer Qualifications
 4. 01 45 00 Quality Control
 5. 01 65 00 Product Delivery Requirements
 6. 01 66 00 Product Storage and Handling Requirements
 7. 03 30 53 Miscellaneous Cast in Place Concrete

1.3 SUBMITTALS

- A. Shop drawings: Site plan showing layout of fence location with dimensions, location of gates and opening size, cleared area, elevation of fence and gates, details of attachments and footings.
- B. Certifications: Manufacturers material certifications in compliance with current ASTM specifications.
- C. Domestic certifications: Material certifications, Made in U.S.A., Buy American Act or Buy America when required.
- D. Specification Changes: May not be made after the date of bid.

1.4 QUALITY ASSURANCE

A. Manufacturer: Company operating in the United States having U.S. manufacturing facility/facilities specializing in manufacturing chain link fence products with at least 5 years experience.

B. Fence contractor: Company with demonstrated successful experience installing similar projects and products in accordance with ASTM F567 and have at least 5 years experience.

C. Tolerances: Current published edition of ASTM specifications tolerances apply. ASTM specification tolerances supersede any conflicting tolerance.

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver products to site per contract requirements.

B. Storage: Store and protect products off the ground when required.

PART 2-PRODUCTS

2.1 CHAIN LINK FABRIC

A. Steel Chain Link Fabric: 2 in. mesh, 9 gauge 10' high, top selvage knuckle, bottom selvage twist.

1. Polymer Coated Steel Fabric: ASTM F668, the wire gauge specified for polymer-coated wire is that of the metallic coated steel core wire

a. Class 2b fused and adhered

c. Color: Black in compliance with ASTM F934

2.2 STEEL FENCE FRAMEWORK

A. Round steel pipe and rail: ASTM F1043 Group IA Table 3 Heavy Industrial Fence Framework, schedule 40 galvanized pipe per ASTM F1083. Exterior zinc coating Type A, interior zinc coating Type A. Regular Grade

1. Line post: 2-7/8"

2. End, Corner, Pull post: 3-1/2"

3. Top, brace, bottom and intermediate rails, 1.660 in. (42.2 mm) OD, 2.27 lb/ft

4. Polymer Coated Framework: Polymer coated framework shall have a **PVC** coating fused and adhered to the exterior zinc coating of the post or rail. PVC and polyolefin coatings shall have minimum thickness 10-mils, polyester coating minimum thickness 3 mils (0.0076 mm) per ASTM F1043. Color to match fabric, Black, per ASTM F934.

2.3 TENSION WIRE

A. Polymer Coated Steel Tension Wire: 7 gauge (0.177 in.) (4.50 mm) wire complying with ASTM F1664. Wire gauge specified is the core wire gauge.

1. Class 2b, fused and adhered.

2.4 FITTINGS

- A. Tension and Brace Bands: Galvanized pressed steel complying with ASTM F626, minimum steel thickness of 12 gauge (0.105 in.) (2.67 mm), minimum width of 3/4 in. (19 mm) and minimum zinc coating of 1.20 oz/ft² (366 g/m²).
- B. Terminal Post Caps, Line Post Loop Tops, Rail and Brace Ends, Boulevard Clamps, Rail Sleeves: In compliance to ASTM F626, pressed steel galvanized after fabrication having a minimum zinc coating of 1.20 oz/ft² (366 g/m²).
- C. Truss Rod Assembly: In compliance with ASTM F626, 3/8 in. (9.53 mm) diameter steel truss rod with a pressed steel tightener, minimum zinc coating of 1.2 oz/ft² (366 g/m²), assembly capable of withstanding a tension of 2,000 lbs. (970 kg).
- D. Tension Bars: In compliance with ASTM F626. Galvanized steel one-piece length 2 in. (50 mm) less than the fabric height. Minimum zinc coating 1.2 oz. /ft² (366 g/m²).
 1. Bars for 2 in. (50 mm) and 1 3/4 in. (44 mm) mesh shall have a minimum cross section of 3/16 in. (4.8 mm) by 3/4 in. (19 mm).
- E. Polymer Coated Color Fittings: In compliance with ASTM F626. Polymer coating minimum thickness 0.006 in. (0.152 mm) fused and adhered to zinc coated fittings. Color: Black

2.5 TIE WIRE and HOG RINGS

- A. Tie Wire and Hog Rings: Polymer coated; match the coating, class and color to that of the chain link fabric

2.9 SWING GATES

- A. Swing Gates: Galvanized steel welded fabrication in compliance with ASTM F900. Gate frame members 1.900 in. OD (48.3 mm). Frame members spaced no greater than 8 ft. (2440 mm) apart vertically and horizontally. Welded joints protected by applying zinc-rich paint in accordance with ASTM Practice A780. Positive locking gate latch fabricated of 5/16 in. (7.9 mm) thick by 1 3/4" (44.45 mm) pressed steel galvanized after fabrication. Galvanized malleable iron or heavy gauge pressed steel post and frame hinges. Match gate fabric to that of the fence system. Polymer coated gate frames and gateposts; match the coating type and color to that specified for the fence framework. Moveable parts such as hinges, latches and drop rods may be field coated using a liquid polymer touch up.

2.10 CONCRETE

- A. Concrete for post footings shall have a 28-day compressive strength of 2,500 psi. (17.2 MPa).

2.11 SLATS

- A. Provide slats made of High Density Polyethylene(HDPE), color pigments and UV inhibitors
- B. Slats should provide approximately 90% Privacy/Blockage.
- C. Color selection by owner, from manufacturer's standard range of colors.

PART 3-EXECUTION

3.1 FRAMEWORK INSTALLATION

- A. Posts: Posts shall be set plumb in concrete footings in accordance with ASTM F567. Minimum footing depth, 24 in. (609.6 mm) plus an additional 3 in. (76.2 mm) for each 1 ft. (305 mm) increase in the fence height over 4 ft. (1220 mm). Minimum footing diameter four times the largest cross section of the post up to 4.00" (101.6mm) O.D. and three times the largest cross section of post greater than 4.00" (101.6mm). O.D. Gate posts require larger footings; minimum requirements are listed in ASTM F567. Top of post concrete footing to be at grade crowned to shed water away from the post. Line posts installed at intervals not exceeding 10 ft. (3.05 m) on center.
- B. Top rail: When specified, install 21 ft. (6.4 m) lengths of rail continuous thru the line post or barb arm loop top. Splice rail using top rail sleeves minimum 6 in. (152 mm) long. The rail shall be secured to the terminal post by a brace band and rail end. Bottom rail or intermediate rail shall be field cut and secured to the line posts using boulevard bands or rail ends and brace bands.
- C. Terminal posts: End, corner, pull and gate posts shall be braced and trussed for fence 6 ft. (1.8 m) and higher and for fences 5 ft. (1.5 m) in height not having a top rail. The horizontal brace rail and diagonal truss rod shall be installed in accordance with ASTM F567.
- D. Tension wire: Shall be installed 4 in. (101.6 mm) up from the bottom of the fabric. Fences without top rail shall have a tension wire installed 4 in. (101.6 mm) down 3.3

3.2 CHAIN LINK FABRIC INSTALLATION

- A. Chain Link Fabric: Install fabric to outside of the framework. Attach fabric to the terminal post by threading the tension bar through the fabric; secure the tension bar to the terminal post with tension bands and 5/16 in. (7.94 mm) carriage bolts spaced no greater than 12 inches (304.8mm) on center. Small mesh fabric less than 1 in. (25 mm), attach to terminal post by sandwiching the mesh between the post and a vertical 2 in. wide (50mm) by 3/16 in. (4.76 mm) steel bar using carriage bolts, thru bolted thru the bar, mesh and post spaced 15 in. (381 mm) on center. Chain link fabric to be stretched taut free of sag. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches (304.8 mm) on center and to rail spaced no greater than 18 inches (457.2 mm) on center. Secure fabric to the tension wire with hog rings spaced no greater than 18 inches (457.2 mm) apart. Tie wire shall be wrapped 360 degrees (6.28 rad) around the post or rail and the two ends twisted together three full turns. Excess wire shall be cut off and bent over to prevent injury. The installed fabric shall have a ground clearance on no more than 2 inches (50 mm).

3.3 GATE INSTALLATION

- A. Swing Gates: Installation of swing gates and gateposts in compliance with ASTM F567. Direction of swing shall be inward/outward as indicated. Gates shall be plumb in the closed position having a bottom clearance of 3 in. (76 mm) grade permitting. Hinge and latch offset opening space from the gate frame to the post shall be no greater than 3 in. (76 mm) in the closed position. Double gate drop bar receivers shall be set in a concrete footing minimum 6 in. (152 mm) diameter 24 in. (609.6 mm) deep. Gate leaf holdbacks shall be installed for all double gates.

3.4 NUTS AND BOLTS

- A. Bolts: Carriage bolts used for fittings shall be installed with the head on the secure side of the fence. All bolts shall be peened over to prevent removal of the nut.

3.5 CLEAN UP

- A. Clean Up: The area of the fence line shall be left neat and free of any debris caused by the installation of the fence.

END OF SECTION 32 31 13