ADDENDUM #1

Invitation for Bids
MARQUETTE MANOR GENERATOR REPLACEMENT
Solicitation No. 2022-3022

Cincinnati Metropolitan Housing Authority
1627 Western Avenue
Cincinnati, OH 45214

Addendum 1 – Issued February 21, 2022

To Offerors:

The following additions, deductions, changes and corrections to the proposal and specifications for the above referenced project shall hereby be incorporated into the work, and their affect on the proposal shall be reflected in the Offeror's proposal. Offerors shall also verify this fact by indicating the receipt of the addendum in their proposal.

Comments

1. The Bid due date changed from Thursday February 23 to **Thursday March 2 at 10:00 a.m.**
2. The Chain Link Fence and Gates Specification Section 323113 is attached.
3. The contractor shall include in the Bid an Allowance to cover a 10% increase in cables/wires length due to route changes caused by existing conditions.
4. The Pre Bid attendance sheet is attached.

FEB. 17

PRE-BID WALK

MARQUETTE MANOR

GENERATOR REPLACEMENT

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END OF ADDENDUM TO DATE 2/21/22

SECTION 323113

CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Chain-Link Fences: Industrial.
   2. Gates: Horizontal slide and swing.

1.3 SUBMITTALS

A. Shop Drawings: Show locations of fences, gates, posts, rails, tension wires, details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections, details of post anchorage, attachment, bracing, and other required installation and operational clearances.

B. Quality Assurance/Control Submittals:
   1. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
      a. Fence and gate posts, rails, and fittings.
      b. Chain-link fabric, reinforcements, and attachments.
      c. Gates and hardware.
      d. Accessories: Barbed wire.

C. Closeout Submittals:
   1. Maintenance Data: For the following to include in maintenance manuals:
      a. Gate hardware.
   2. Warranty form.

1.4 QUALITY ASSURANCE

A. Comply with Chain Link Fence Manufacturers Institute “Product Manual”.

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.

D. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for automatic gate operators serving as a required means of access.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

B. Interruption of Existing Utility Service: Do not interrupt utility services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect no fewer than two days in advance of proposed interruption of utility services.
2. Do not proceed with interruption of utility services without Architect's written permission.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 Articles where titles below introduce lists, the following requirements apply to product selection:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect's approval must be accompanied by the "Substitution Request Form" and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.2 CHAIN-LINK FENCE FABRIC

A. General: Height indicated on Drawings. Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual, ASTM A 392, CLFMI CLF 2445, and requirements indicated below:
1. Steel Wire Fabric and Mesh Size: 2 inch mesh, metallic-coated wire with a diameter of 0.148 inch
   a. Weight of Aluminum Coating: ASTM Class 2, 2.0 oz. /sq. ft.
   b. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.
2. Selvage: Knuckled at both selvages.

2.3 INDUSTRIAL FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe and the following:
1. Group: Provide either IA, round steel pipe, Schedule 40 or IC, round steel pipe, yield strength 50,000 psi.
2. Fence Height: As indicated.
3. Post Size and Thickness: According to ASTM F 1043.
   a. Intermediate Posts

1) 2.875 inch o.d., 5.8 lbs. per foot.

b. End, Corner, and Pull Posts

1) General

a) End post will be used to refer to terminal posts.

b) Corner post will be installed where all changes in direction occur in the fence line of 30 degrees or more.

c) Pull post shall be installed at all abrupt changes in grade or at locations directed by the Architect with a maximum spacing between pull posts not to exceed 500 feet.

2) Fabric 10 feet and under:

a) 4 inch o.d., 9.12 lbs. per foot.

4. Coating for Steel Framing:

a. Metallic Coating, unless otherwise noted.

1) IA: Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq.ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film.

2) IC: Type C, Zn-5-A1-MM alloy, consisting of not less than 1.8 oz./sq.ft. coating.

b. Polymer coating over metallic coating, where indicated.

5. Posts shall have sufficient length to meet the following embedment requirements:

a. Intermediate Posts: 36 inches (into concrete).

b. End, Corner, and Pull Posts:

1) Fabric 10 feet and under: 36 inches.

2) Fabric over 10 feet: 44 inches.

c. Gate Posts: 48 inches.

B. Post Brace Rails: Match top rail for coating and strength and stiffness requirements. Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly, for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.

C. Top Rails: Fabricate top rail from lengths 21 feet or longer, with swedged-end or fabricated for expansion-type coupling, forming a continuous rail along top of chain-link fabric.

1. The top rail shall be 1.660 inches o.d. pipe, provided in lengths not less than 18 feet unless otherwise noted, and fitted with couplings for connecting the lengths into a continuous run.

a. 1.66-inch wall thickness, 2.27 lbs. per lineal foot.

2. Couplings: Top rail couplings shall be a minimum of 6 inches long and at 21 feet maximum intervals, providing a substantial connection and allowing for expansion and connection of the rail.

3. The top rail shall pass through the line post tops and form a continuous brace from end to end of each stretch of fence.

4. The top rail shall securely fasten to the terminal posts by heavy pressed steel brace bands and malleable rail end connections.

D. Intermediate Rails: Match top rail for coating and strength and stiffness requirements.

E. Extended Members: Extend end, corner and pull posts above top of chain-link fabric 12 inches or as required to attach barbed wire assemblies.

2.4 TENSION WIRE

A. General: Provide horizontal tension wire at the following locations:
1. Location: Extended along bottom of fence fabric, unless otherwise noted.

B. Metallic-Coated Steel Wire: 7 gauge, 0.177 inch diameter, marcelled tension wire complying with ASTM A 824 and the following:
1. Coating: Type II, zinc coated, ASTM A817 Class 5 – 2.0 oz./sq. ft.

2.5 SWING GATES (CHAIN-LINK)

A. General: Comply with ASTM F 900 for the following swing-gate types:
1. Single gate.
2. Double gate.

B. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.

C. Frames and Bracing: Fabricate members from round tubing with outside dimension and weight according to ASTM F 900.

D. Frame Corner Construction: As follows:
1. Welded.

E. Gate Posts: Fabricate members from round galvanized steel pipe with outside dimension and weight according to ASTM F 900 for the following gate fabric heights and leaf widths:
1. Gate leaf up to 6 feet wide.
   a. IA: 2.875 inch o.d. with 0.203-inch wall, 5.79 lbs. per lineal foot.
2. Gate leaf over 6 to 13 feet wide
   a. IA: 4 inch o.d. with 0.226-inch wall, 9.10 lbs. per foot.
3. Gate leaf over 13 to 18 feet wide.
   a. IA: 6.625 inch o.d. with 0.280-inch wall, 18.97 lbs. per foot.
4. Gate leaf over 18 feet wide.
   a. IA: 8.625 inch o.d. with 0.322-inch wall, 28.55 lbs. per foot.
5. Gateposts shall be equipped with tops so designed to exclude moisture from the post.

F. Hardware: Latches permitting operation from both sides of gate, hinges, center gate stops and, for each gate leaf more than 5 feet wide, keepers. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.
1. Hinges: Shall be adequate strength for gate, and with large bearing surfaces for clamping in position. The hinges shall not turn or twist under that action of the gate. The gates shall be capable of being opened and closed easily by one person. Hinges will be designed with offset arms to permit a 180-degree swing. Provide one pair hinges for each gate leaf.
2. Latch: Shall have a padlock eye or provision for padlocking (one padlock for locking both gate leaves), and shall permit single gate to swing only in one direction. Latches shall be forked-type for single gates and forked-type plunger bar for double gates to permit operation from both sides of gate. The plunger rod shall be a minimum 1-3/8 inch o.d. The center of the latch is to be 3 feet above grade.

3. Stops: Center stops for double gates shall consist of a device arranged to be set in concrete and to engage the plunger bar of the latch. Stop is to be a mushroom type or flush plate with anchors.
4. Keeper: Provide keepers for each gate leaf over 5 feet wide, which shall consist of a mechanical device for securing the free end of the gate when in a full open position. All vehicle or drive gates shall be equipped with "semi-automatic" outer catches to secure gate in open position (automatically holds gate in the open position until manually released).

2.6 HORIZONTAL SLIDE GATES (CHAIN-LINK)

A. General: Comply with ASTM F 1184 for the following slide-gate types:
1. Double gate.
2. Classification: Type II Cantilever Slide, Class 1 with external roller assemblies.

B. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.

C. Frames and Bracing: Fabricate from round tubing with outside dimension and weight according to ASTM F 1184.

D. Frame Corner Construction: As follows:
1. Gates: Welded.

E. Gate Posts: Fabricate members from round galvanized steel pipe with outside dimension and minimum weight according to ASTM F 1184 for the following gate characteristics:
1. Type II Gate Opening Width: Over 12 feet but not over 30 feet.

F. Guide Posts and Roller Guards: As required per ASTM F 1184 for Type II, Class 1 gate.

G. Hardware:
1. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
2. Gate leaf holdbacks required for each gate.

2.7 FITTINGS

A. General: Provide fittings for a complete fence installation, including special fittings for corners. Comply with ASTM F 626.

B. Post and Line Caps: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide weathertight closure cap for each post.
1. Provide line post caps with loop to receive top rail.

C. Rail and Brace Ends: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide rail ends or other means for attaching rails securely to each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:
1. Top Rail Sleeves: Hot-dip galvanized pressed steel or round steel tubing. Not less than 6 inches long.

2. Rail Clamps: Hot-dip galvanized pressed steel. Provide line and corner boulevard clamps for connecting intermediate rails in the fence line to line posts.

E. Tension and Brace Bands: Hot-dip galvanized pressed steel.

F. Tension Bars: Hot-dip galvanized steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Hot-dip galvanized steel rod and turnbuckle or other means of adjustment.

H. Barbed Wire Arms: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide the following type, according to ASTM F 626, with clips, slots, or other means for attaching strands of barbed wire, and means for attaching to posts, integral with post cap; one for each post, unless otherwise indicated. Provide corner arms at fence corner posts, unless extended posts are indicated.
1. Type I, single slanted arm (45 degree).

I. Tie Wires, Clips, and Fasteners: Provide the following types according to ASTM F 626:
1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
a. Hot-Dip Galvanized Steel: 0.148-inch diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
2. Round Wire Hog Rings: Hot-dip galvanized steel for attaching chain-link fabric to horizontal tension wires.

J. Finish:
1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz/sq.ft. zinc.

2.8 BARBED WIRE

A. Zinc-Coated Steel Barbed Wire: Comply with ASTM A 121, Standard grade for the following two-strand barbed wire:
1. Standard Size and Construction: 0.099 inch diameter line wire with 0.080 inch diameter, 2 point round barbs spaced not more than 4 inches o.c.

2.9 CAST-IN-PLACE CONCRETE

A. General: Comply with ACI 301 for cast-in-place concrete.

B. Materials: Portland cement complying with ASTM C 150 Type I or III, aggregates complying with ASTM C 33, and potable water for ready-mixed concrete complying with ASTM C 94. Measure, batch, and mix Project-site-mixed concrete according to ASTM C 94.
1. Concrete Mixes: Normal-weight concrete air entrained with not less than 3000-psi compressive strength (28 days), 3-inch slump, and 1-inch maximum size aggregate.

2.10 GROUT AND ANCHORING CEMENT

A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

B. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

2.11 FENCE GROUNDING

A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
1. Material Above Finished Grade: Copper or aluminum.
2. Material On or Below Finished Grade: Copper.
3. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

B. Connectors and Grounding Rods: Comply with UL 467
1. Connectors for Below-Grade Use: Exothermic welded type.
2. Grounding Rods: Copper-clad steel, 5/8-inch by 96 inches.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance.
1. Do not begin installation before final grading is completed, unless otherwise permitted by A/E.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.
1. Site soil conditions, local frost depth, fence height and wind load may require larger diameter or deeper footings.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.

B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
   a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water, unless otherwise noted.
3. Dimensions and Profile: As indicated hereinafter, unless otherwise noted on Drawings.
   a. Size of Footings: Concrete is to extend a minimum of 6 inches below bottom of post. Typical footings shall be as follows (see note under Installation for deeper excavations as required in loose soils and for posts with heavy lateral loads).
      1) Intermediate posts: minimum 12 inch diameter by 3'-6" below grade.
      2) End, corner, pull posts: minimum 18 inch diameter by 3'-6" below grade.
      3) Gate posts: minimum 24 inch diameter by 4'-6" below grade.

C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more, unless otherwise indicated.

D. Line Posts: Space line posts uniformly at 10 feet o.c., unless otherwise noted.

E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts.
1. Locate horizontal braces at midheight of fabric 6 feet or higher, on fences with top rail and at 2/3 fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

F. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric.
1. Bottom Tension Wire: Install tension wire within 4 inches of bottom of fabric and tie to each post with not less than same diameter and type of wire.

G. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

H. Intermediate and Bottom Rails: Install, spanning between posts, where indicated or required for performance.

I. Chain-Link Fabric: Apply fabric to outside of enclosing framework, unless otherwise indicated. Leave 2 inches between finish grade or surface and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches on center and to rail spaced no greater than 18 inches on center. Secure fabric to the tension wire with hog rings spaced no greater than 18 inches apart. Tie wire shall be wrapped 360 degrees around the post or rail and the two ends twisted together three full turns. Excess wire shall be cut off and beat over to prevent injury. The installed fabric shall have a ground clearance on no more than 2 inches.

J. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.

K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at 1 end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.
1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.

L. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

M. Barbed Wire: Install barbed wire uniformly spaced angled toward security side of fence. Pull wire taut and install securely to extension arms and secure to end post or terminal arms.

3.5 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference and ASTM F567. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

B. Swing Gates: Gates shall be plumb in the closed position having a bottom clearance of 3 inches (grade permitting). Hinge and latch offset opening space from the gate frame to the post shall be no greater than 3 inch in the closed position. Double gate drop bar receivers shall be set in concrete footing minimum 6 inch diameter 24 inch deep. Gate leaf holdbacks shall be installed for all double gates.

C. Horizontal Slide Gates: Installation varies by design and manufacturer, install according to manufacturer's instructions and in accordance with ASTM F567. Gates shall be plumb in the closed position, installed to slide with an initial pull force no greater than 40 pounds. Double gate drop bar receivers to be installed in a concrete footing minimum 6 inch diameter, 24 inch deep. Roller guards and guide posts must be installed in Type I external roller cantilever slide gate in compliance with ASTM F1184. Ground clearance shall be 3 inch, grade permitting.

3.6 GROUNDING AND BONDING

A. Fence Grounding: Install at fences 10 feet and over, at maximum intervals of 1500 feet except as follows:
1. Fences within 100 Feet of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet.
   a. Gates and Other Fence Openings: Ground fence on each side of opening.
      1) Bond metal gates to gate posts.

2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.

B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.

C. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location.

D. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.

E. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
2. Make connections with clean, bare metal at points of contact.
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

3.7 ADJUSTING

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

3.8 DEMONSTRATION

Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain gates. Refer to Division 01 Section "Closeout Procedures."

END OF SECTION 323113