SECTION 00920

ADDENDUM NO. 2
CONTRACT 170-18-103
WATER TREATMENT PLANT
STANDBY POWER
RICHMOND UTILITIES BOARD
RICHMOND, KENTUCKY

April 13, 2018

The attention of contractors bidding the titled contract is called to the following additions, substitutions, or deletions to the Drawings and / or Specifications.

A. SPECIFICATIONS

1. Section 00410 – Bid Form for Construction Contracts

In the third paragraph under Section 2 – Major Equipment Bid Items on page 00410-6, replace the sentences that read "However, should the Bidder choose to offer, for consideration to the OWNER, any alternate manufacturers/products to those listed, the Bidder shall provide a detailed submittal of applicable items such as catalog cut sheets, pump curves, hydraulic calculations, specifications, wiring diagrams, P&ID's, technical literature, dimensional drawings, etc., or any other information requested by the OWNER. This submittal information shall be included with the Bidder's bidding documents for proper evaluation by the OWNER." with "However, should the Bidder choose to offer, for consideration to the OWNER, any alternate manufacturers/products to those listed, the Bidder shall provide brochures/pictures with the Bidder's bidding documents. Detailed information such as catalog cut sheets, pump curves, hydraulic calculations, specifications, wiring diagrams, P&ID's, technical literature, dimensional drawings, etc., or any other information requested by the OWNER, shall be provided in a timely manner after the bid for proper evaluation by the OWNER."

2. Section 16230 – Standby Power Generation System

In article 1.01.A on page 16230-1, add the following sentence: "The provision of a low-voltage generator with step-up transformer or the provision of multiple generators with paralleling switchgear will not be considered equal to the specified equipment."

3. Section 16401 – Overhead Distribution

This section is being added as Attachment No. 1.

B. DRAWINGS – N/A

1. Drawing Sheet S-3 – Structural Sections and Details

In the bottom right corner of the sheet above the lintel details the tables which are unreadable are being included here as Attachment No. 2.

2. Drawing Sheet M-1 – New Electrical Building HVAC

In the fan/ventilator equipment schedule, change the "CFM" from 15,500 to 5,500 for both EF-1 and EF-2.

3. Drawing Sheet E-1 – Electrical Site Plan

Add the following general note: "All work indicated is located downstream of the primary meter and is the responsibility of the Contractor. The electrical utility owns the overhead system upstream of the primary meter, whereas Richmond Utilities owns the overhead system downstream of the primary meter."

Attachments: Attachment 1 – Section 16401
Attachment 2 – Excerpt from Drawing Sheet S-3.

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SECTION 16401
OVERHEAD DISTRIBUTION

PART 1 GENERAL

1.01 SCOPE

A. Provide new pole equipment including standoff brackets, insulators, hardware, fuse cutouts, arrestors, cable terminators, grounding, and other miscellaneous equipment and as indicated and as specified herein.

1.02 SUBMITTALS

A. Provide copies of manufacturer test reports and field test reports.

B. Submit product data on insulators, arrestors, cutouts, and terminators.

C. Submit O&M manuals for the equipment supplied, including product data, installation instructions, and operation/maintenance instructions.

1.03 QUALITY ASSURANCE

A. Comply with the National Electrical Safety Code and the NEC.

B. Standard Products: Provide materials and equipment that are products of manufacturers regularly engaged in the production of such products for a minimum of 5 years.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Equipment shall be compliant with RUS 202-1.

B. Provide equipment and component items (except where hot-dip galvanized) with corrosion-resistant finishes which withstand 120 hours of exposure to the salt spray test specified in ASTM B 117. Coat cut

edges or otherwise damaged surfaces of hot-dip galvanized sheet steel or mill galvanized sheet steel with a zinc rich paint conforming to the manufacturer's standard.

2.02 HARDWARE

A. Provide zinc-coated hardware that complies with IEEE C135.1, IEEE C135.2, NEMA C135.4, ANSI C135.14 IEEE C135.22. Install washers under boltheads and nuts on wood surfaces and elsewhere as required. Provide washers used on through-bolts and double-arming bolts that are approximately 2-1/4 inches square and 3/16 inch thick. Make the diameter of holes in washers the correct standard size for the bolt on which a washer is used. Provide washers for use under heads of carriage-bolts, of the proper size to fit over square shanks of bolts. Use eye bolts, bolt eyes, eyenuts, strain-load plates, lag screws, guy clamps, fasteners, hooks, shims, and clevises wherever required to support and to protect poles, brackets, crossarms, guy wires, and insulators.

B. Hot-Line Clamps - Make connections to overhead primary conductors with hot-line clamps of the screw type with concealed threads. Fill thread chamber with corrosion-resistant compound. Provide hot-line clamp tap conductor of bare soft-drawn seven-strand No. 4 copper. Provide stirrups for hot-line clamp connections that are 4 by 4 inches, and are constructed of bare hard-drawn copper the same size as the tap line but not less than No. 4.

2.03 INSULATORS

A. Insulators shall be wet process porcelain type which are radio interference free and compliant with ANSI C29.5.

2.04 GROUNDING AND BONDING

A. Connect to existing ground system.

B. Grounding Conductors: ASTM B 8. Provide soft drawn copper wire ground conductors a minimum No. 4 AWG. Provide PVC ground wire protectors.

C. Grounding Connections: UL 467. Exothermic weld or compression connector.

2.05 FUSED CUTOUTS

A. Open type fused cutouts rated at 200 amps and 14,000 amperes symmetrical interrupting current at 15kV conforming to IEEE C37.42. Provide fuses conforming to IEEE C37.42 with ampere ratings as indicated. Open link type fuse cutouts are not acceptable.

B. Provide fiberglass 3-phase standoff bracket for mounting of cutouts/arrestors.

2.06 SURGE ARRESTERS

A. Provide IEEE C62.11, metal oxide, polymeric-housed, surge arresters with 9 kV RMS voltage rating. Provide Distribution class arresters. Arrestors may be separate or combination arrestor/cutout assembly may be utilized at contractor's option.

2.07 CAULKING COMPOUND

A. Provide compound for sealing of conduit risers that is of a puttylike consistency workable with hands at temperatures as low as 35 degrees F, that does not slump at a temperature of 300 degrees F, and that does not harden materially when exposed to air. Provide compound that readily caulks or adheres to clean surfaces of the materials with which it is designed to be used. Provide compound that has no injurious effects upon the workmen or upon the materials.

2.08 Cable Terminations

A. Shielded power cable termination kits shall be factory engineered for the application. The kits shall consist of high-permittivity, high-resistivity, heat-shrinkable stress control tubing, and outer insulation tubing and skirts made from UV-stable, nontracking (per ASTM D 2303) materials.

Heat-activated sealant materials to help prevent moisture ingress and contamination should also be included. Termination kits shall meet or exceed all rating requirements of IEEE-48 for Class I terminations and the test sequence prescribed by IEEE-404, including 130°C load cycling and 130°C impulse withstand. Raychem or equal.

PART 3 EXECUTION

3.01 INSTALLATION

A. Provide pole installation conforming to requirements of IEEE C2 and NFPA 70. Provide material required to make connections into existing system.

B. Hardware: Provide hardware with washer against wood and with nuts and lock nuts applied wrench tight. Provide locknuts on threaded hardware connections. Provide M-F style locknuts and not palnut style.

C. Grounding: Unless otherwise indicated, provide grounding that conforms to IEEE C2 and NFPA 70.

1. Grounding Electrode Installation: Use existing electrode. Confirm conductivity per required testing below.

2. Grounding Electrode Conductors: Staple grounding electrode conductors to wood poles at intervals not exceeding 2 feet. Size grounding electrode conductors as indicated. Bends greater than 45 degrees in grounding electrode conductor are not permitted. Make above grade grounding connections on pole lines by exothermic weld or by using a compression connector. Make below grade grounding connections by exothermic weld. Make exothermic welds strictly in accordance with manufacturer's written recommendations.

3. Grounding and Grounded Connections: Bond together metal parts and frames of equipment and connect to a dedicated primary grounding electrode.

D. Conductor Installation

1. Conductor-To-Insulator Attachments: Attach conductors to insulators by means of clamps, shoes or tie wires, in accordance with the type of insulator. For insulators requiring conductor tie-wire attachments, provide #4 tie-wire.

2. Aluminum Connections: Make aluminum connections to copper or other material using only splices, connectors, lugs, or fittings designed for that specific purpose.

3.02 FIELD QUALITY CONTROL

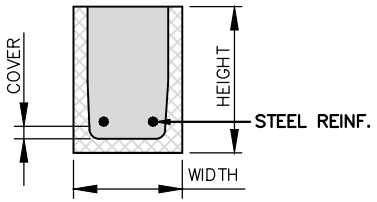
A. General: Furnish materials, labor, and equipment necessary to conduct field tests. Perform tests and inspections recommended by the manufacturer. Maintain a written record of tests which includes date, test performed, personnel involved, devices tested, serial number and name of test equipment, and test results. Sign and date field reports.

B. Safety: Provide and use safety devices such as rubber gloves, protective barriers, and danger signs to protect and warn personnel in the test vicinity. Replace any devices or equipment which are damaged due to improper test procedures or handling.

C. Grounding System Test: Perform ground-impedance measurements utilizing the fall-of-potential method to confirm that the existing grounding electrode is performing properly. Take measurements in normally dry weather, not less than 48 hours after rainfall. Use a portable ground testing megger in accordance with manufacturer's instructions to test each ground or group of grounds. Provide an instrument that is equipped with a meter reading directly in ohms or fractions thereof to indicate the ground value of the ground rod or grounding systems under test.

END OF SECTION

LINTEL NOTES



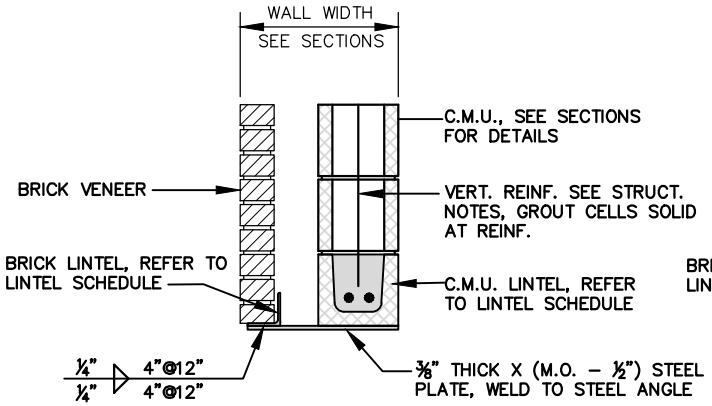
1. ALL LINTELS SHALL HAVE MIN. 8" BEARING AT EACH END.
2. PROVIDE LINTEL BLOCKS FOR LINTELS.
3. MASONRY LINTELS SHALL BE AS SPECIFIED, FILLED MONOLITHICALLY WITH GROUT. STEEL REINFORCEMENT SHALL BE PLACED AT BOTTOM OF LINTEL BLOCK WITH 2" MIN. COVER, AS SHOWN, UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS TO PROVIDE LINTELS FOR OPENINGS NOT SHOWN.

LINTEL SCHEDULE

Nominal Masonry Size	Masonry Opening (M.O.) Width			
	>8" to 2'-0"	>2'-0" to 4'-0"	>4'-0" to 6'-0"	>6'-0" to 8'-0"
8" CMU	8"X8" HIGH LINTEL	8"X16" HIGH LINTEL w/ (1) #5	8"X16" HIGH LINTEL w/ (2) #5	8"X16" HIGH LINTEL w/ (2) #7

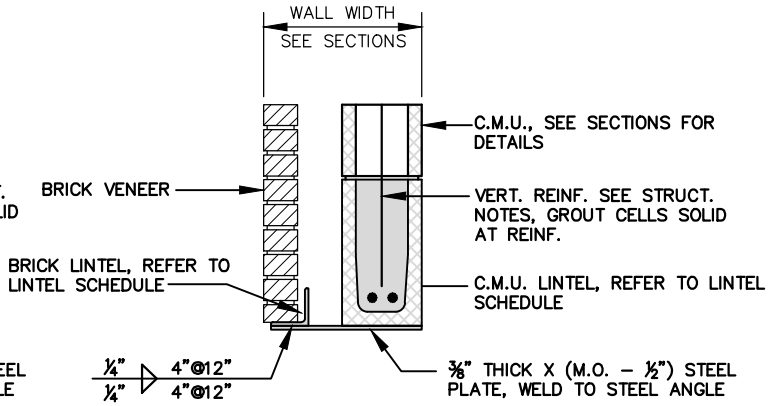
BRICK LINTEL SCHEDULE

Masonry Opening (M.O.) Width			
>8" to 2'-0"	>2'-0" to 4'-0"	>4'-0" to 6'-0"	>6'-0" to 8'-0"
PLATE 1/4"X3 1/4"	L 3 1/2"X3 1/2"X1/4" LLV	L 4"X4"X3/8"	L 6"X3 1/2"X3/8" LLV



L-1 LINTEL

NOTE:
SEE CIVIL DRAWINGS FOR CAVITY INSULATION, FLASHING, WEEPS, DOORS, DOOR FRAMES, ETC.



L-2 LINTEL

NOTE:
SEE CIVIL DRAWINGS FOR CAVITY INSULATION, FLASHING, WEEPS, DOORS, DOOR FRAMES, ETC.

(EXCERPT FROM SHEET S-3)

bell engineering

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CONTRACT 170-18-102
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