SECTION 00 91 11

ADDENDUM NO. 4

DATE: January 26, 2017

RE: UTHSC-H UCT Vertical Expansion
Houston, TX
WHR Project No. G15311.00

FROM: WHR Architects, Inc.
1111 Louisiana, 26th Floor
Houston, TX 77002

TO: Invited Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated October 26, 2016 as noted below.

This Addendum consists of 1 pages plus attachments.

REVISED SPECIFICATIONS:

1.01 The following Specifications Sections are revised and reissued herewith:
Section 05 50 00 Metal Fabrications

END OF ADDENDUM NO. 4

SECTION 05 50 00

METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

A. Section 03 30 00 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.

B. Section 04 20 00 - Unit Masonry: Placement of metal fabrications in masonry.

C. Section 05 51 00 - Metal Stairs.

D. Section 05 52 13 - Pipe and Tube Railings.

E. Section 09 90 00 - Painting and Coating: Paint finish.

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel ; 2014.

B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless ; 2012.

C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products ; 2013.

D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates ; 2013.

E. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength ; 2014.

F. ASTM A325M - Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength (Metric) ; 2014.

G. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes ; 2013.

H. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing ; 2014.

I. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2007.

J. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; American Welding Society ; 2012.

K. AWS D1.1/D1.1M - Structural Welding Code - Steel; American Welding Society ; 2011 w/Errata.

L. SSPC-Paint 15 - Steel Joist Shop Primer; Society for Protective Coatings ; 1999 (Ed. 2004).

M. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings ; 2002 (Ed. 2004).

N. SSPC-SP 2 - Hand Tool Cleaning; Society for Protective Coatings ; 1982 (Ed. 2004).

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

C. Welders' Certificates: Submit certification for welders employed on the project, verifying AWS qualification within the previous 12 months.

D. Design Data: Provide framing member structural and physical characteristics, engineering calculations, dimensional limitations for ceiling hung equipment supports.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.

C. Plates: ASTM A283.

D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

E. Fasteners: Match or be compatible with metals being fastened.

F. Bolts, Nuts, and Washers: ASTM A325 (ASTM A325M), Type 1 .

G. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E488, conducted by a qualified independent testing agency.
1. Material for Anchors in Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B633, Class Fe/Zn 5.
2. Material for Anchors in Exterior Locations: Alloy Group 2 stainless-steel bolts complying with ASTM F593 and nuts complying with ASTM F594.

H. Stair Nosings: Two-piece extruded aluminum with colored abrasive insert.
1. At Concrete Steps: Model XH-330 manufactured by Balco, Inc.; www.balcousa.com.
2. Other Manufacturers:
a. Babcock-Davis: www.babcockdavis.com.
b. Nystrom: www.nystrom.com.

I. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

J. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

K. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

A. The following is a list of principal items only. Refer to Drawings for items not specifically listed.

B. Bollards: Removable, carbon steel bollard pipe, galvanized finish.

1. Product: Model IBP06040 SCH 40 manufactured by Cal Pipe Manufacturing: www.calpipebollards.com.
2. Other Manufacturers:
   a. ScopeLock Security Systems, Inc.: www.scopelocksecurity.com.
   b. SecureUSA: www.secureusa.net.
3. Diameter: 6 inch.
4. Total Length: 48 inch.
5. Cap Type: Flat.

C. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of masonry; prime paint finish.

D. Lintels: As detailed; prime paint finish.

E. Metal bracing and supports for architectural woodwork; prime paint finish.

F. Above ceiling supports for ceiling hung equipment and special conditions; prime painted.

G. Toilet Partition Suspension Members: Steel angle sections; prime paint finish.

H. Masonry partition bracing; prime painted.

I. Bent steel plate pipe guards at exposed vertical pipes in parking garage where not protected by curbs or other barriers; galvanized finish. Mount pipe guards top edge 26 inches above driving surface.

J. Parking garage steel barricade cables; galvanized finish.

2.04 FINISHES - STEEL

A. Prime paint steel items.
   1. Exceptions: Galvanize items to be embedded in concrete and items to be imbedded in masonry.
   2. Exceptions: Galvanize items exposed to outside atmosphere or damp environments.
   3. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.

B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

D. Prime Painting: One coat.

E. Galvanizing of Non-structural Items Exposed to Outside Atmosphere: Galvanize after fabrication to ASTM A123/A123M requirements.

2.05 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16 inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components as indicated on drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

F. After erection, prime welds, abrasions , and surfaces not shop primed , except surfaces to be in contact with concrete.

G. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

3.05 FIELD QUALITY CONTROL

A. Expansion Anchors: Prior to installation, verify that the expansion anchor complies with the specified loading criteria for material, size, and length. During installation, verify 100 percent of the expansion anchors for the following:
   1. Drilled hole diameter is the same as the anchor diameter.
   2. Anchor is installed to the specified embedment depth.
   3. Verify the installation torque is in compliance with manufacturer's installation instructions.
   4. Anchor is installed in compliance with the manufacturer’s printed instructions.

B. If reinforcement steel, prestressing strands, or other embedded items are encountered in the concrete where the expansion anchor is to be located, notify the Architect and Engineer of such interference.

END OF SECTION