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February 9, 2023

# ADDENDUM NO. 4

# PROJECT #21030 - Jefferson Co. Jerry Ware Terminal and ARFF Station Rehabilitation BEAUMONT, TEXAS

The following changes, corrections and additions or deletions to the Drawings and Specifications are hereby made part of the Contract Documents. Bidders shall acknowledge receipt of this Addendum in the Bid Form

# GENERAL

- 1. The areas of the terminal building receiving work shall be unoccupied for the duration of construction.
- 2. Abatement of hazardous materials shall be included in bids as specified in the Construction Documents. Bidders should contact abatement contractors for proposals on abatement.
- 3. There is no fire sprinkler system specified in this project.
- 4. As indicated in the Legal Notice for this project: Bids are to be sealed and addressed to the Purchasing Agent with the bid number and name marked on the outside of the envelope or box. Bidders shall forward **an original and two (2) copies** of their bid to the address shown below. Jefferson County does not accept bids submitted electronically. Late bids will be rejected as non-responsive. Bids will be publicly opened and read aloud in the Jefferson County Engineering Department Conference Room (5th Floor, Historic Courthouse) 1149 Pearl Street, Beaumont, Texas 77701, at the time and date below. Bidders are invited to attend the sealed bid opening.
  - a. BID NAME: Jerry Ware Terminal and Aircraft Fire Fighting (ARFF) Station Rehabilitation at the Jack Brooks Regional Airport BID NUMBER: IFB 23-005/JW DUE BY TIME/DATE: 11:00 AM CT, Wednesday, February 22, 2023 MAIL OR DELIVER TO: Jefferson County Purchasing Department, 1149 Pearl Street, 1st Floor, Beaumont, Texas 77701
  - b. Drawings for bid packages may be reduced to 11" x 17" format for inclusion in the bid package.
- 5. Project does not include technology cabling, communications, security, cameras, access control other than wire ways and boxes for future components. Contractor to provide all items indicated on drawings or as identified in the specifications.
- 6. The Texas Ethics Commission Form 1295 does need to be completed and inserted in the bid submission. Contact ID # is: IFB 23-005/JW.
- 7. Due to the amount of slab demolition required to install under slab plumbing per P 2.0 drawing, it shall be the contractor's option to either remove the entire slab or to sawcut and pour back trenches.

# **SPECIFICATIONS**

# Section 061050 - Roof Carpentry

- 1. Add this section attached.
- 2. This specification section pertains only to roofing.

# Section 072500 – WEATHER BARRIER

1. Add this section attached.

# Section 074113 – Symmetrical Roof Panels

- 1. Part 2, Article 2.1: The following products are acceptable for use.
  - Berridge Tee-Lock Panel a. 2.1.B:
  - b. 2.1.C: Imetco Series 300

#### Section 074140 - Metal Wall Panels

- 1. Delete this section in its entirety and replace with new section attached.
- 2. Corrections and additions to this section:
  - a. Part 2, Article 2.1: The following products are acceptable for use.
    i. 2.1.A.5: Berridge "R" Panel

    - ii. 2.1.A.6: Imetco "R" Panel
  - b. Part 2, Article 2.3.A: Identifies insulation board specified in Detail 1/R10 of the drawings.

# DRAWINGS

# Sheet A3.3

# 6/A3.3 – Interior Elevations

1. Wall graphics shown on elevations 6D & 6F shall be supplied and installed by owner.

# Sheet R10

# 1/R10 – Section @ Wall Panel Transition

1. <sup>1</sup>/<sub>2</sub>" rigid insulation shown on detail is specified in Section 074140, Part 2, Article 2.3.A.

# Sheet M1.2

#### General

1. Change title of Detail 1/M1.2 from "Jerry Ware Terminal – Demolition Plan – 1st Floor" to "Jerry Ware Terminal – Demolition Plan – 2nd Floor".

# Sheet M1.3

# General

1. Change title of Detail 1/M1.2 from "Jerry Ware Terminal – Demolition Plan – 1<sup>st</sup> Floor" to "Jerry Ware Terminal – Demolition Plan – 3rd Floor".

# <u>Sheet E3.1</u>

 <u>1/E3.1 Jerry Ware Terminal – Power Plan – 1<sup>st</sup> Floor</u>
 The generator pad will require enlargement for the generator specified. Should bidders offer generators different than shown on the Construction Documents, pads are required to be enlarged for generators supplied by contractor.

#### Sheet E3.4

# 1/E3.4 Generator Renovation Plan

2. Pad size as currently shown is 40"x94". Pad should extend 3" minimum beyond the dimensions of the generator. If a different generator is used confirm generator size and adjust pad size

accordingly.

# 3/E3.4 Generator Renovation Plan

3. Pad size as currently shown is 40"x94". Pad should extend 3" minimum beyond the dimensions of the generator. If a different generator is used confirm generator size and adjust pad size accordingly.

End of Addendum No. 4

MMm



### SECTION 061050 - ROOF CARPENTRY

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 through Division 26 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

#### A. Section Includes:

- 1. Framing with dimension lumber.
- 2. Rooftop equipment bases and support curbs.
- 3. Wood blocking and nailers.
- 4. Plywood sheathing.
- 5. Isolation tape.
- B. Related Sections:
  - 1. Section 072200 Roof Insulation
  - 2. Section 075216 Modified Bitumen Roof System
  - 3. Section 076200 Flashing and Sheet Metal
  - 4. Section 077200 Roof Accessories

#### 1.3 REFERENCES

- A. American Lumber Standards Committee (ALSC): National Design Specification for Wood Construction.
- B. American Wood Preservers' Association (AWPA): AWPA Book of Standards.
- C. American Wood Preservers Bureau (AWPB): APA Design Construction Guide.
- D. Product Standard of NBS (PS):
  - 1. PS 1 Construction and Industrial Plywood.
  - 2. PS 20 American Softwood Lumber Standard.

#### 1.4 SUBMITTALS

- A. Comply with provisions of Division 01.
- B. Mark each product data cut-sheet by circling or highlighting and affix the corresponding Article and Paragraph designations from this Specification Section. Product data not so marked will be returned without review, for re-submittal complying with the above requirements.
- C. Product Data: For each type of product indicated, including but not limited to items specified in Part 2 Products or otherwise required by the Work, as follows:
  - 1. Data for wood-preservative treatment.
  - 2. Dimensional treated lumber.

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- 3. CDX plywood.
- 4. Fasteners.
- 5. Isolation tape.
- 6. Elastomeric sealant.
- D. Laboratory Test Reports:
  - 1. Provide documentation for adhesives and plywood, indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
  - 2. For each composite-wood product used, provide documentation indicating that the bonding agent contains no urea formaldehyde.
  - 3. For each adhesive used, provide documentation indicating that the adhesive contains no urea formaldehyde.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in bulk as necessary to provide continuous operations and no Work slow-down. Schedule and coordinate with Owner to cause the least inconvenience to Owner's daily activities. Deliveries and unloading or loading activities are the responsibility of the Contractor. Owner will not take responsibility for any delivery activities.
- B. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.
- C. Store materials in designated areas, out of the way of Owner's on-going operations.
- D. Store and handle materials to preclude damage and contamination with moisture or foreign matter.

#### PART 2 - PRODUCTS

- 2.1 WOOD PRODUCTS, GENERAL
  - A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
    - 1. Factory mark each piece of lumber with grade stamp of grading agency.
    - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
    - 3. Provide dressed lumber, S4S, unless otherwise indicated.
  - B. Maximum Moisture Content of Lumber: 19% at time of dressing unless otherwise indicated.

# 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1. Use Category UC3b for exterior construction not in contact with ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic, chromium or inorganic boron (SBX).
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Lumber shall bear the label KDAT (Kiln-Dried After Treatment).
- E. Application: Treat miscellaneous carpentry unless otherwise indicated, items indicated on Drawings, and the following:
  - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

#### 2.3 DIMENSION LUMBER FRAMING

- A. General: Provide visually graded miscellaneous lumber indicated and lumber for support or attachment of other construction.
  - 1. Grade: No. 1 and better,  $F_b \ge 1100$  psi.
  - 2. Species:
    - a. Mixed southern pine or southern pine; SPIB.
    - b. Hem-fir or hem-fir (north); NLGA, WCLIB, or WWPA.

#### 2.4 PLYWOOD

A. DOC PS 1, Exposure 1, C-D Plugged, thickness as shown on drawings. Do not further treat after manufacture.

#### 2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
  - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Provide fasteners in the sizes and of the type indicated.
  - 1. Screws, Nails and Small Bolts in Treated Wood: Stainless steel.
  - 2. Screws and Nails in Non-Treated Plywood: Hot-dipped galvanized finish.
  - 3. <sup>1</sup>/<sub>4</sub>-inch and Larger Diameter Bolts: Hot-dip galvanized finish.
- C. Masonry Anchors:
  - 1. Masonry and/or Concrete Substrate Fasteners: Steel pin and zinc-jacketed fasteners; Zamac "Hammer Screw," <sup>1</sup>/<sub>4</sub>-inch x 1 1/2-inch, or approved equal.
  - 2. Masonry Substrate Fasteners: "Tapcon," or approved equal, in sizes and lengths

dictated by existing conditions, and approved by the Architect.

#### 2.6 MISCELLANEOUS MATERIALS

- A. Isolation Tape: Premanufactured multi-purpose grade tape, with polyethylene-coated cloth backing, natural rubber-based adhesive, and silver in color.
  - 1. Acceptable Products:
    - a. 3M<sup>™</sup> DT-11, as manufactured by 3M<sup>™</sup>, <u>www.3m.com</u>.
    - b. 3M<sup>™</sup> Performance Plus Duct Tape 8979, as manufactured by 3M<sup>™</sup>, <u>www.3m.com</u>.
    - c. Nashua<sup>®</sup> #398, as manufactured by Berry Plastics Corp., <u>www.berryglobal.com</u>.
    - d. Polyken<sup>®</sup> #251, as manufactured by Berry Plastics Corp., <u>www.berryglobal.com</u>.
  - 2. Performance Requirements:
    - a. Total Thickness: 11 mils minimum, ASTM D3652 or ASTM D1000.
    - b. Peel Adhesion: 70 oz/in. minimum, ASTM D3330 or PSTC 101.
    - c. Tensile Strength: 23 lb/in. minimum, ASTM D3759 or ASTM D1000.
    - d. Maximum Performance Temperature: 200° F.
- B. Elastomeric Sealant: Sonneborn NP-1, or an approved equal. One component urethane gun-grade sealant, meeting ASTM C-920, Type S, Grade NS.

#### PART 3 - EXECUTION

- 3.1 INSTALLATION
  - A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
    - 1. Securely attach carpentry Work to substrate by anchoring and fastening as shown and as required by recognized standards.
    - 2. Countersink nail heads on exposed carpentry Work and fill holes.
    - 3. Use common wire nails, except as otherwise indicated.
    - 4. Select fasteners of size that do not penetrate members where opposite sides are exposed to view or will receive finish materials.
    - 5. Make tight connections between members.
    - 6. Pre-drill holes when required to prevent splitting of wood.
    - 7. Isolation tape shall be installed between treated wood and metal.
  - B. Where wood-preservative-treated lumber is installed adjacent to metal decking, metal curbs or other steel members, install continuous isolation tape between wood and metal or steel components.
  - C. Discard units of material with defects which might impair quality of Work, and units which are too small to use in fabricating Work with minimum joints or optimum joint arrangement.
  - D. Provide wood products to size and shape shown and coordinate closely with other scheduled Work for continuous operation of other trades.
  - E. Install wood nailers at perimeters and flanged penetrations, matching insulation in height.

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# F. Wood Blocking for Curbs:

- 1. Wood blocking shall be preservative-treated lumber.
- 2. Isolation tape shall be installed on the bottom face of wood blocking in contact with metal decking and on the top face of wood blocking in contact with metal curbs.
- 3. Wood blocking shall be a minimum of 2 x 6 nominal or greater to support the full width of metal curb base including flange(s) plus an additional 1 inch minimum.
- 4. Metal curb base and flange(s) shall be fully supported in length and width (longitudinally and transversely) by wood blocking.
- 5. Tapered blocking, if required for a continuous level support plane, shall be installed with no voids or gaps in excess of 1/2".
- 6. Wood blocking running parallel with metal roof deck flutes shall have a minimum width of 4" supported continuously on the top deck flange. If this is not practicable provide one of the following:
  - a. The first blocking layer running parallel with metal roof deck flutes shall be increased in width to provide a minimum width of 2" supported continuously on each of two adjacent metal deck flutes.
  - b. The first layer of blocking shall be oriented perpendicular to the metal roof deck flutes and spaced at a maximum of 2'-0" oc with one board occurring at each end of the curbing. Boards shall extend to provide full bearing on the first adjacent metal deck flutes beyond the curb perimeter.
- G. Securing Wood Blocking:
  - 1. When securing wood blocking to metal deck with screws:
    - a. Screws shall be equal to OMG HeadLok with spade point or approved equal.
    - b. Length as required to penetrate metal support decking by 3/4-inch minimum.
  - 2. When securing wood blocking by nailing:
    - a. Secure 3/4-inch and 1-inch materials with 8d stainless steel framing nails.
    - b. Secure 1-1/2 inch or 2-inch materials with 16d stainless steel framing nails.
  - 3. Secure each end of full length or cut boards with two (2) fasteners.
  - 4. Between end fasteners, do not exceed fastener spacing of 12-inches on center staggered, or as detailed.
  - 5. Remove and dispose of bent or deformed fasteners.
- H. Correlate locations of nailers, blocking, and similar supports to allow proper attachment of other Work necessary.
- I. Provide additional fasteners in existing perimeter wood blocking as necessary so fastener spacing does not exceed 24" on center staggered.

# 3.2 PROTECTION

- A. Protective Walkways: When traffic must traverse new or existing roof surfaces, provide a protective covering consisting of 4 ft. x 8 ft., 1/2-inch plywood sheets or equivalent secured to a layer of 1/2-inch polyisocyanurate insulation board and laid loose over the membrane with the insulation board side to the roof surface.
  - 1. Do not store materials on the roof without this protective covering.
  - 2. Any damage to new or existing roofs shall be repaired at the Contractor's cost per requirements of the manufacturer holding or providing the current Warranty.

# 3.3 CLEANING

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A. Pick up spilled nails and fasteners from grounds and roof surface continually.

END OF SECTION 061050

#### SECTION 072500 – WEATHER BARRIER

#### PART 1 GENERAL

- 1.1 RELATED DOCUMENTS
  - A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:1. Weather Barrier.
- B. Related Sections1. Section 074140 Metal Wall Panels
- 1.3 DEFINITIONS
  - A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
  - B. Air Barrier: Air-tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces. Note: For the purposes of this specification, vapor impermeable air barriers are classified as vapor retarders.

#### 1.4 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D1970/D1970M Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2013.
- C. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2013a.
- D. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials; 2013.
- E. ASTM E2178 Standard Test Method for Air Permeance of Building Materials; 2013.
- F. ICC-ES AC38 Acceptance Criteria for Water-Resistive Barriers; ICC Evaluation Service, Inc.; 2013.
- G. ICC-ES AC212 Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing; ICC Evaluation Service, Inc.; 2012.

#### 1.5 SUBMITTALS

- A. Comply with provisions of Division 01.
- B. Mark each product data cut-sheet by circling or highlighting and affix the corresponding Article and Paragraph numbers from this Specification Section. Product data not so marked will be returned without review, for re-submittal complying with the above requirements.
- C. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of wall panel and accessory.
- 1.6 FIELD CONDITIONS
  - A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

#### PART 2 PRODUCTS

- 2.1 WEATHER BARRIER ASSEMBLIES
  - A. Air Barrier:
    - 1. Under metal wall panels: On outside surface of sheathing of exterior walls use air barrier sheet, self-adhesive type.
    - 2. Self-adhering membrane flashing and self-adhering air barrier shall all be from same manufacturer and compatible with each other to form a system of water resistive, air barrier protected exterior envelope.
- 2.2 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)
  - A. Air Barrier Sheet, Self-Adhered:
    - 1. Air Permeance: 0.004 cubic feet per minute per square foot, maximum, when tested in accordance with ASTM E2178.
    - 2. Water Vapor Permeance: 29 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant method).
    - 3. Ultraviolet and Weathering Resistance: Approved in writing by manufacturer for maximum of 150 days weather exposure.
    - 4. Surface Burning Characteristics: Flame spread index of 50 or less, smoke developed index of 450 or less (Class A), when tested in accordance with ASTM E84.
    - 5. Water Resistance: Comply with applicable water-resistive requirements of ICC-ES Acceptance Criteria AC38.
    - 6. Thickness: varies per manufacturer, minimum thickness 30 mil.
    - 7. Products:
      - a. Henry Company; Blueskin VP160: www.henry.com.
      - b. Grace, Permabarrier; www.grace.com.
      - c. Carlisle, CCW-705; www.carlisle.com.

#### 2.3 SEALANTS

- A. Primers, Cleaners, and Other Sealant Materials: As recommended by sealant manufacturer, appropriate to application, and compatible with adjacent materials.
- 2.4 ADHESIVES
  - A. Mastic Adhesive : Compatible with sheet seal and substrate, thick mastic of uniform knife grade consistency .

#### PART 3 EXECUTION

- 3.1 EXAMINATION
  - A. Verify that surfaces and conditions are ready to accept the work of this section.
- 3.2 PREPARATION
  - A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
  - B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.
  - C. Install gyp sheathing or similar product to provide adequate substrate to apply weather barrier. Provide sheet membrane flashing at any gap to provide completely sealed cavity.
  - D. Install sheet membrane flashing around windows, masonry lugs and other locations required to complete envelope.
- 3.3 INSTALLATION
  - A. Install materials in accordance with manufacturer's instructions.
  - B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
  - C. Openings and Penetrations in Exterior Weather Barriers:
    - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
    - 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with at least 4 inches wide; do not seal sill flange.
    - 3. At openings to be filled with non-flanged frames, seal weather barrier to all sides of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
    - 4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
    - 5. At interior face of openings, seal gap between window/door frame and rough

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framing, using joint sealant over backer rod.

- 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.
- 3.4 FIELD QUALITY CONTROL
  - A. Do not cover installed weather barriers until required inspections have been completed.
  - B. Obtain approval of installation procedures by the weather barrier manufacturer based on a mock-up installed in place, prior to proceeding with remainder of installation.
  - C. Take digital photographs of each portion of the installation prior to covering up.

# 3.5 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.
- B. Do not leave paper- or felt-based barriers exposed to weather for longer than one week.

# END OF SECTION 072500

#### SECTION 074140 – METAL WALL PANELS

#### PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS
  - A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Metal wall panels.
  - 2. Underlayment.
- B. Related Sections
  - 1. Section 072500 Weather Barrier
  - 2. Section 075220 Roofing Installer's Warranty
  - 3. Section 076200 Flashing and Sheet Metal

#### 1.3 DEFINITIONS

- A. Metal Wall Panel Assembly: Metal wall panels, attachment system components, miscellaneous metal framing and accessories.
- B. Coordinate with Work of other trades. Although such Work is not specifically indicated, furnish and install supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.

#### 1.4 SYSTEM PERFORMANCE

- A. System shall accommodate movement of underlying structure and of wall components, without buckling, failure of joint seals, undue stress on fasteners, or other detrimental effects, when subject to seasonal temperature ranges.
- B Sheet metal wall system including, but not limited to, metal wall panels, anchors and fasteners, sheet metal flashing integral with sheet metal wall, trim and accessories, shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction
- 1.5 SUBMITTALS
  - A. Comply with provisions of Division 01.
  - B. Mark each product data cut-sheet by circling or highlighting and affix the corresponding Article and Paragraph numbers from this Specification Section. Product data not so marked will be returned without review, for re-submittal complying with the above requirements.

- C. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of wall panel and accessory.
- D. Shop Drawings:
  - 1. Submit complete shop drawings and erection details to the Architect for review. Shop drawings shall be prepared by metal wall panel manufacturer specifically for this project. Contractor prepared shop drawings are not acceptable.
  - 2. Show method of erection, elevations, and plans of wall, sections and details, flashings, gutters, roof curbs, vents, sealant locations, interfaces with materials not supplied, and proposed identification of component parts and their finishes.
  - 3. Include full-sized cross-section details of the standing seams.
    - a. One in the field of the roof
    - b. One at a typical roof rake condition.
  - 4. Do not proceed with manufacture prior to Architect's review and approval of shop drawings.

# 1.6 QUALITY ASSURANCE

- A. Installation of metal panels and accessories shall be by installers with a minimum of three (3) years' experience in Work of this nature. Installer must be able to show satisfactory evidence of completion of at least three (3) projects of similar size and complexity within an area of no more than 200-mile radius of the project site in the past five (5) years.
- B. Any material or operation specified by reference to the published specification or standard of a manufacturer, trade association, technical organization or other published standard, shall comply with the requirements of the current specification or standard listed:
  - 1. AISC: "Steel Construction Manual," American Institute of Steel Construction.
  - 2. AISI: "Cold Form Steel Design Manual," American Iron and Steel Institute (1986 edition).
  - 3. ASTM A792-83-A355: Specification for Steel Sheet, aluminum-zinc alloy coated (galvanized) by the hot dip process, general requirements (Galvalume®).
  - 4. SMACNA: "Architectural Sheet Metal Manual" Sheet Metal and Air Conditioning Contractors National Association, Inc.
  - 5. ANSI/ASTM A153: Zinc Coating (hot-dipped) on Iron and Steel Hardware.
  - 6. ANSI/ASTM A446: Steel Sheet, Zinc-Coated (galvanized) by the hot-dip Process, Structural (physical) Quality.
  - 7. ASTM E84: Surface Burning Characteristics of Building Materials.
- C. The forming and installation of sheet metal shall be as indicated on the Drawings and in accordance with the applicable details of the SMACNA Manual.
- D. In case of conflict between the referenced specifications or standard and the project specification, the Contractor shall be deemed to have assumed the more expensive method of accomplishing the Work, unless prior to signing of the Agreement, the Contractor shall have asked for and obtained a decision as to which method or material is intended.
- 1.7 DELIVERY, STORAGE, AND HANDLING
  - A. Deliver components, metal panels, and other manufactured items so as not to be

damaged or deformed. Package metal panels for protection during transportation and handling.

- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

#### 1.8 WARRANTY

- A. The installer shall warrant materials and installation of wall systems for two (2) years against leaks and defects in materials and workmanship. Submit on form found in Section 075220.
- B. Pre-finished metal panel manufacturer's standard 20-year finish warranties
- C. Warranties shall commence on the Date of Substantial Completion for the overall project.

#### PART 2 - PRODUCTS

#### 2.1 WALL PANELS

- A. Acceptable Products:
  - 1. McElroy Metal: "R-Panel"
  - 2. MBCI "PBR"
  - 3. PAC-CLAD "R-36"
  - 4. Berridge "R" Panel
  - 5. Imetco "R" Panel
  - 6. Wall panels shall be manufactured by the same manufacturer as approved for the metal roof panels.
- B. Type: Shop-formed, 36-inch wide profiled pre-finished metal sheet, used as wall panels.
- C. Style: Exposed fasteners.
- D. Panel Length: Continuous, uninterrupted length.
- E. Construction:
  - 1. 24-gauge pre-finished Galvalume® sheet metal, primed and finished under precision conditions.
  - 2. Panel gauge shall be verified by manufacturer's engineering analysis.
- F. Panel Finish:
  - 1. Exposed Finish: Kynar 500® fluorocarbon coating.
  - 2. Unexposed Finish: Manufacturer's standard primer coat.

- G. Color: Exposed, top side of panels shall match pre-finished metal color selected under Section 076200.
- H. Protection: Deliver metal to the site with a factory-applied protective plastic film which shall be removed immediately upon installation.
- 2.2 UNDERLAYMENT MATERIALS
  - A. Re: Section 072500 Weather Barrier
- 2.3 INSULATION MATERIALS
  - A. Extruded Polystyrene Board Insulation: ASTM C578, Type X; Extruded polystyrene board with either natural skin or cut cell surfaces; with the following characteristics:
    - 1. Board Size: 48x96 inch.
    - 2. Board Thickness: 1/2 inch.
    - 3. Board Edges: Square.
    - 4. Thermal Conductivity (k factor) at 25 degrees F: 0.18.
    - 5. Compressive Resistance: 15 psi.
    - 6. Board Density: 1.3 lb/cu ft.
    - 7. Water Absorption, maximum: 0.3 percent, volume.
    - 8. Manufacturers:
      - a. Dow Chemical Co: www.dow.com
      - b. Owens Corning Corp: www.owenscorning.com
      - c. Pactiv Building Products: greenguard.pactiv.com

#### 2.4 FASTENERS

- A. Panel Fasteners: Stainless steel pancake-head Phillips screws; #12 x length required.
- B. Miscellaneous Fasteners: See Section 076200.
- C. Compatibility: Fasteners shall be compatible with materials to be joined.
- 2.5 FLASHINGS AND TRIM
  - A. Flashings shall not compromise the integrity of the wall system by constricting movement due to thermal expansion and contraction.
  - B. Trim and flashing shall be manufactured from minimum 24 ga. pre-finished Galvalume® sheet metal. See Section 076200.
  - C. Seam Sealant: Sonneborn NP-1, or an approved equal. One-component urethane gungrade sealant, meeting ASTM C 920, Type S, Grade NS.
- 2.6 TRIM PRODUCTION
  - A. Corners: Same materials, thickness, and finish as wall panels as detailed on the drawings, brake formed, shop cut, and factory mitered to required angles.

- B. Miscellaneous trim: Same material, thickness, and where exposed, of same finish as sheet stock; brake formed to required profiles.
- C. On-site fabrication of component profiles must be with approved equipment intended for that purpose. Hand- or tong-braking of sheet metal components will not be permitted unless approved in advance.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Inspect and ensure surfaces are free from objectionable warp, wave, and buckle before proceeding with installation of metal wall/mansard panels.
- B. Ensure substrate is ready to receive underlayment and metal panels. Report items for correction and do not proceed with metal roof panel system installation until resolved.

#### 3.2 INSULATION INSTALLATION

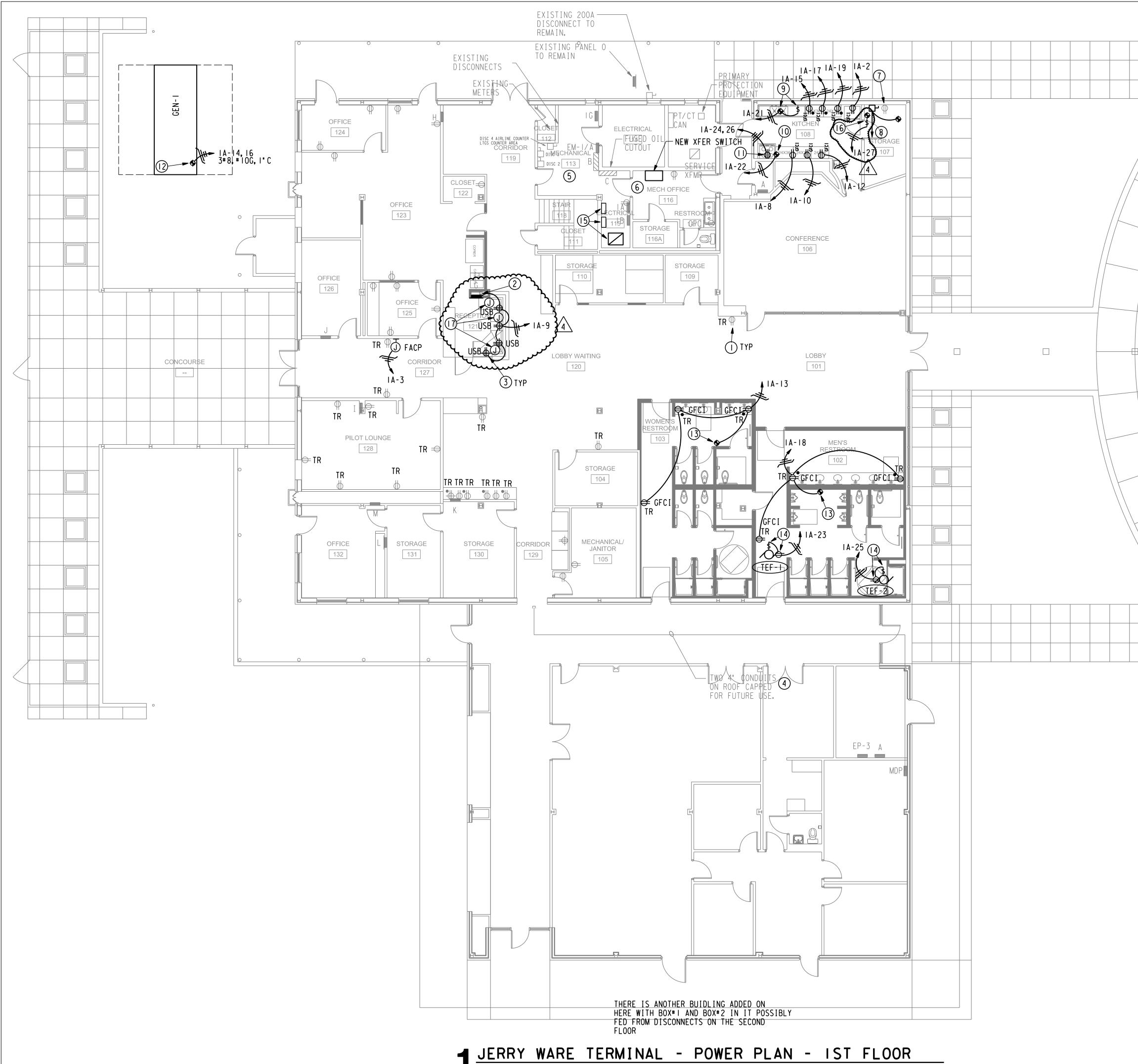
- A. Install boards horizontally on walls.
  - 1. Install in running bond pattern.
  - 2. Butt edges and ends tightly to adjacent boards and to protrusions.
  - 3. Cut and fill insulation tightly to protrusions or interruptions to the insulation plane.

#### 3.3 UNDERLAYMENT INSTALLATION

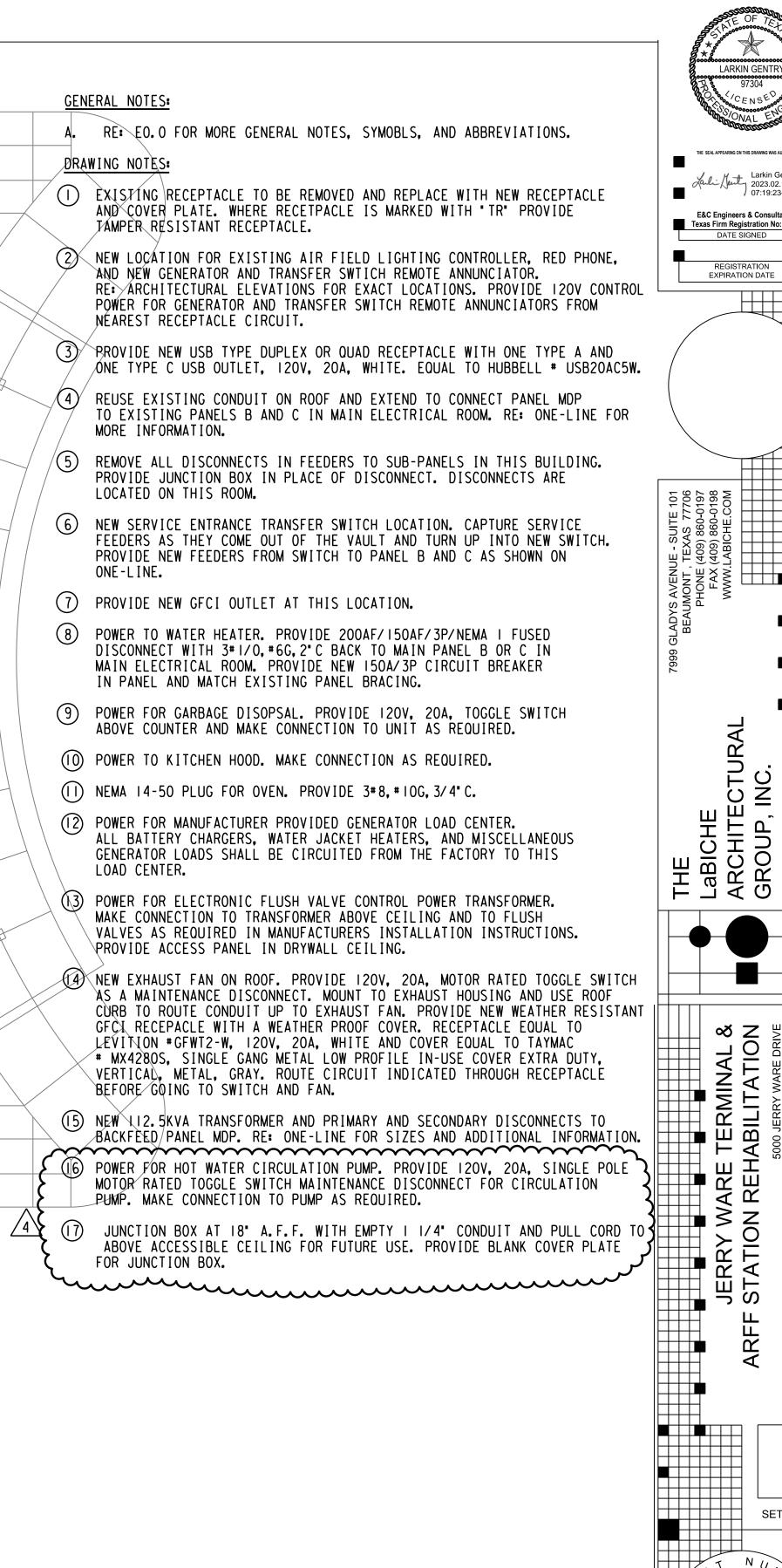
- A. Re: Section 072500 Weather Barrier.
- 3.4 WALL PANEL INSTALLATION
  - A. Install accessory Work such as trim, cleats, etc., prior to installation of panels, as required.
  - B. Install panels in accordance with the Drawings, the current edition of the specified standards and approved shop drawings.
  - C. Install panels, plumb, level, and straight with seams and ribs parallel, conforming to design as indicated.
  - D. Fabricate and install Work with lines and corners of exposed units true and accurate. Form exposed faces flat and free of buckles, excessive waves and avoidable tool marks, considering the temper and reflectively of the metal. Provide uniform, neat seams. Except as otherwise shown, fold back the sheet metal to form a hem on the concealed side of exposed edges where required.
  - E. When fitting panels and seams provide maximum care to prevent deformation of the metal.
  - F. Install metal wall panels mounted to furring channels and/or light gauge framing members. Furring and panels shall be installed in accordance with manufacturer's written instructions.

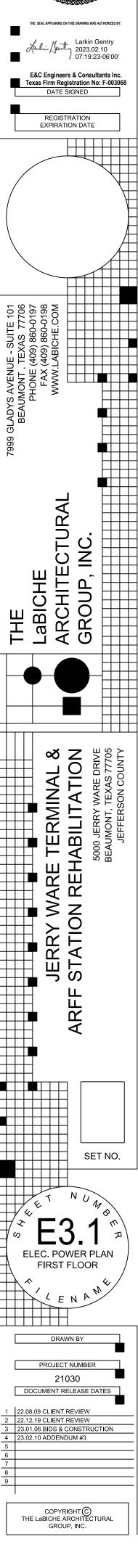
- G. Install panels continuous from major termination to major or natural termination. Transverse - or lap seams - are not permitted.
- H. Factory-cut panels to length. Field cutting of panel ends is discouraged. When field cutting is required, do so with snips or shears, and not with high speed saws.
- I. Install sheet metal trim at terminations and as shown on the drawings. Provide neat rectangular or square escutcheons around penetrations.
- 3.5 CLEANING AND PROTECTION
  - A. Dispose of excess materials and remove debris from site.
  - B. Clean Work in accordance with standard NRCA industry recommendations.
  - C. Protect Work against damage until final acceptance. Replace or repair to the satisfaction of the Architect and Owner any Work that becomes damaged prior to final acceptance.
  - D. Do not use touch-up paint to repair scratched metal surfaces. Scratches unacceptable to the Architect shall result in replacement of the damaged metal. This determination shall be the Architect's alone.

END OF SECTION 074140

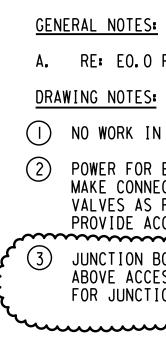


SCALE: 1/8" = 1' -0"





97304



A. RE: EO.O FOR MORE GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS. ○ NO WORK IN THIS ROOM/AREA. 2 POWER FOR ELECTRONIC FLUSH VALVE CONTROL POWER TRANSFORMER. MAKE CONNECTION TO TRANSFORMER ABOVE CEILING AND TO FLUSH VALVES AS REQUIRED IN MANUFACTURERS INSTALLATION INSTRUCTIONS. PROVIDE ACCESS PANEL IN DRYWALL CEILING. JUNCTION BOX AT 18" A.F.F. WITH EMPTY I 1/4" CONDUIT AND PULL CORD TO ABOVE ACCESSIBLE CEILING FOR FUTURE USE. PROVIDE BLANK COVER PLATE FOR JUNCTION BOX. ..... ·····

