ADDENDUM NO. 5

to the

PROJECT DOCUMENTS AND SPECIFICATIONS

for

CONSTRUCT OKALOOSA COUNTY WATER AND SEWER FIELD OFFICES (ITB WS 02-21)

Prepared for:

OKALOOSA COUNTY

Prepared By:



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AVCON Project No. 2018.125.02

Addendum Date: December 2, 2020

Note: The bidder shall acknowledge receipt of this addendum on the Bid Form, Page BF-1 in the space provided.

ADDENDUM NO. 5 CONSTRUCT OCWS FIELD OFFICES (ITB WS 02-21)

Date of Issue: December 2, 2020

Bid Submittal Deadline: Wednesday, December 9, 2020 @ 3:00 p.m. (local time) (UNCHANGED)

Notice to all Plan Holders: Please insert this addendum (4 pages including cover, excluding attachments)

into your copy of the Project Bid Documents.

The following changes to the Project Documents and Specifications are issued by the Engineer and shall have the same force and effect as though part of the original issue:

A. Changes to the Bid Documents and Specifications:

1. Technical Specifications REPLACE Technical Specification 09250 Gypsum Drywall, in its entirety, with

Technical Specification 09250 Gypsum Drywall, attached as Attachment A (13

pages) hereto.

This technical specification was revised to remove the impact rated drywall requirement.

B. Changes to the Bid Drawings:

1. Bid Drawings **REPLACE** Sheets AF2.01, MF2.11, and MM1.11 in their entirety with Sheets

AF2.01, MF2.11, and MM1.11, attached as **Attachment B** (3 pages) hereto.

2. Bid Drawings **REVISE** Sheet EF0.01, Power Riser Diagram Keynotes, Note 3 as follows:

"3. FEEDER FROM EXISTING SWITCHBOARD MSB TO PANEL MP WILL BE FURNISHED AND INSTALLED BY OWNER CONTRACTOR; CONTRACTOR SHALL TERMINATE CONDUCTORS AT BOTH ENDS. OWNER SHALL PROVIDE AT LEAST 6 FEET OF SLACK CONDUCTOR AT EACH END. ALL WORK REQUIRED TO CONNECT THE FIELD OFFICE TO THE BACKUP GENERATOR SHALL BE PROVIDED BY THE CONTRACTOR."

3. Bid Drawings **REVISE** Sheet EF1.00, to add the following requirements:

"CONTRACTOR SHALL FURNISH THE FOLLOWING EQUIPMENT FOR OWNER INSTALLATION:

- 1. ARUBA 3810M 48 PORT SWITCH JL074 (02QTY) + SFP + MODULE JL083A (01 QTY) + POWER SUPPLY JL086A (04 QTY)
- 2. 2 X PANDUIT 48 PORT ANGLES PUNCH DOWN PATCH PANELS.
- 3. 2 X APC 1500VA SMART UPS WITH SMART CONNECTS RACK MOUNT.

ALL ACCESS CONTROL EQUIPMENT SHALL BE INSTALLED BY

THE CONTRACTOR AND MEET THE FOLLOWING REQUIREMENTS:

- 1. S2 EXPANSION NODE WHICH ACCOMODATES UP TO 14 DOORS.
- 2. ASSOCIATED ACM BOARDS.
- 3. ASSOCIATED POWER SUPPLY FOR THE NODE.
- 4. ALL ACCESS CONTROL READERS SHALL BE MT15 MULTI-TECH CARD READERS BY SCHLAGE/ALLEGIANT.
- 5. ALL NETWORK CABLES SHALL BE GREEN FOR SECURITY RELATED ITEMS."

4. Bid Drawings

REVISE Sheet EM0.01, Power Riser Diagram Keynotes, Note 5 as follows:

"5. FEEDER FROM EXISTING SWITCHBOARD MSB TO PANEL MPA WILL BE FURNISHED AND INSTALLED BY OWNER CONTRACTOR; CONTRACTOR SHALL TERMINATE CONDUCTORS AT BOTH ENDS. OWNER SHALL PROVIDE AT LEAST 6 FEET OF SLACK CONDUCTOR AT EACH END. ALL WORK REQUIRED TO CONNECT THE MAINTENANCE BUILDING TO THE BACKUP GENERATOR SHALL BE PROVIDED BY THE CONTRACTOR."

5. Bid Drawings

REVISE Sheet EM1.00, to add the following requirements:

"CONTRACTOR SHALL FURNISH THE FOLLOWING EQUIPMENT FOR OWNER INSTALLATION:

- 1. JINGCHENGMEI 2 PCS OF 3U LIGHT-LOADING FOLDABLE 19 INCHES COLD ROLLED STEEL VERTICLE WALL MOUNT RACK INCLUDING HARDWARE FOR ASSEMBLY (3U2PC35P) (01 QTY = KIT INCLUDES 2 PIECES), ONE FOR THE SWITCH AND ONE FOR THE PATCH PANEL. THIS IS WALL MOUNT FOR SMALL SPACES.
- 2. PANDUIT DP48688TGY CATEGORY-6 48-PORT FLAT PUNCHDOWN PATCH PANEL (01 OTY).
- 3. ARUBA 3810, 48 PORT SWTICH JL074 (01 QTY) + SFP + MODULE JL083A (01 QTY) + POWER SUPPLY JL086A (02 QTY).
- 4. APC 1500VA SMART UPS WITH SMARTCONNECT, SMC1500-2UC RACK MOUNT UPS BATTERY BACKUP (01 OTY).

ALL ACCESS CONTROL EQUIPMENT SHALL BE INSTALLED BY THE CONTRACTOR AND MEET THE FOLLOWING REQUIREMENTS:

- 1. S2 MICRO NODE WHICH ACCOMODATES UP TO 2 DOORS.
- 2. ASSOCIATED ACM BOARDS.

- 3. ASSOCIATED POWER SUPPLY FOR THE NODE.
- 4. ALL ACCESS CONTROL READERS SHALL BE MT15 MULTI-TECH CARD READERS BY SCHLAGE/ALLEGIANT.
- 5. ALL NETWORK CABLES SHALL BE GREEN FOR SECURITY RELATED ITEMS."
- 6. Bid Drawings **REVISE** Sheet EM1.00, to relocate the access control card reader for Room 102 to Room 103.

C. Additional Information:

1. Response to Questions Please find attached the formal responses to plan-holder questions received after November 4, 2020 attached as **Attachment C** (4 pages) hereto.

END OF ADDENDUM NO. 5

SECTION 09250

GYPSUM DRYWALL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary conditions and Division 1 Specification Sections, apply to this Section.
- B. Related work specified elsewhere includes:
 - 1. Section 06100 "Rough Carpentry" (grounds and concealed P.T. blocking)
 - 2. Section 07600 "Flashing and Sheet Metal"
 - 3. Section 07900 "Joint Sealers"
 - 4. Section 09900 "Painting"

1.2 DESCRIPTION OF WORK:

- A. Work described in this section includes the following types of gypsum board construction:
 - 1. Steel framing members to receive gypsum board.
 - 2. Gypsum board screw-attached to steel framing and furring members, and to wood framing, where indicated, at no more than 16" o.c.
 - 3. Grid type suspension systems for sloped and horizontal ceiling applications of interior gypsum board products which are not attached directly to primary framing system (if any).
 - 4. Notes:
 - a. Extend framing and gypsum board up at fire-rated walls to bottom of fire-rated enclosures above (where occurs) or to roof or floor deck, and mud top edges.
 - b. Extend non-rated walls up to bottom of structure.
 - c. Extend only that partition framing <u>specifically indicated</u> as not full-height up to finished ceilings and tie-off every 4th stud to structure above.
 - d. Completed work in repair and renovation work shall be flush with and to match finish texture to immediately adjacent materials and work.
 - 5. Refer to Section 07210 "Building Insulation," for any thermal insulation and typical "sound batts".

1.3 DEFINITIONS:

A. Gypsum Board Construction Terminology: Refer to ASTM C 11 and GA 505 for definitions of terms for gypsum board construction not otherwise defined in this section or other referenced standards.

1.4 SUBMITTALS:

- A. Submit the following according to Conditions of the Contract and Division 1 Specifications Sections.
 - 1. Current product data and installation instructions from manufacturers for each type of product specified; Six (6) Sets minimum.

1.5 QUALITY ASSURANCE:

A. Fire-Resistance Ratings:

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- 1. Where indicated, provide materials and construction which are identical with those of assemblies whose fire resistance rating has been determined per ASTM E 119 by a testing and inspecting organization acceptable to authorities having jurisdiction.
- 2. Provide fire-resistance rated assemblies identical to those indicated by reference to GA File numbers in GA-600 "Fire Resistance Design Manual" or to design designations in U.L. "Fire Resistance Directory" or in listing of other testing agencies acceptable to authorities having jurisdiction.
- B. Single Source Responsibility: Obtain all steel framing and all metal trim, and each type of gypsum board and related joint treatment materials from a single manufacturer.
- C. Pre-Construction Conference: Prior to beginning work, the Contractor and appropriate subcontractors shall meet to discuss coordination of the work of the trades associated with the installation of suspended acoustical and gypsum board ceiling, suspended mechanical ductwork, suspended light fixtures, etc. This work shall be planned and coordinated to provide hanger attachments needed by the various trades in a manner that will minimize conflict with installation of each component and system.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside, under cover, and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes. Neatly stack gypsum boards flat to prevent sagging.
- C. When materials are moved into the building, distribute pallets and loads evenly around work areas so as to avoid overloading structure, causing damage to any materials, interfering with work of other trades, etc.
- D. Handle gypsum boards to prevent damage to edges, ends and surfaces. Do not bend or otherwise damage metal corner beads, trim, etc.
- E. Refer to Division 1 Sections "Summary of Work" and "Special Conditions" for additional information and requirements regarding stored materials.

1.7 PROJECT CONDITIONS:

- A. Environmental Requirements, General: Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840, with gypsum board manufacturer's recommendations, and with adhesive manufacturer's recommendations, for before, during, and after installation.
- B. Minimum Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 degrees F.
- C. Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.

1.8 SEQUENCING AND SCHEDULING:

A. Properly sequence installation of gypsum board with installation of other work.

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PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Steel Framing and Furring:
 - a. Aegis Metal Framing, LLC
 - b. ClarkeWestern Building Systems
 - c. Dale/Incor
 - d. Dietrich Metal Framing; Div. of Worthington Industries, Inc.
 - e. Marino/WARE Industries, Corp.
 - f. SEMCO, Southeastern Metals, Div. of Gibraltar Industries
 - g. Southeastern Stud & Components, Inc.
 - h. Steel-Con; Div. of Steel Construction Systems
 - i. Telling Industries, LLC
 - 2. Grid or Direct Suspension Systems:
 - a. Armstrong World Industries, Inc.
 - b. CertainTeed
 - c. Chicago Metallic Corp.
 - d. USG Interiors, Inc.; United States Gypsum Company
 - e. Worthington Industries, Inc.
 - 3. Gypsum Board and Related Products:
 - a. CertainTeed
 - b. Georgia-Pacific Corp.
 - c. Gold Bond Building Products Div., National Gypsum Company
 - d. Lafarge Gypsum
 - e. United States Gypsum Company
 - 4. Extruded Moldings and Reveal Moldings:
 - a. AMICO
 - b. Fry Reglet Corporation
 - c. Gordan, Inc.
 - d. M&M Systems Corporation

2.2 <u>STEEL FRAMING COMPONENTS FOR SUSPENDED AND FURRED CEILINGS</u>:

- A. General: Provide components which comply with ASTM C 754 for materials and sizes, unless otherwise indicated.
- B. Wires for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft temper.
- C. Flat Hangers: Mild steel, zinc coated or protected with rust-inhibitive paint.
- D. Steel Studs for Furring Channels: ASTM C 645, with flange edges bent back 90 deg. and doubled over to form 3/16-inch minimum lip (return), minimum thickness of base (uncoated) metal and minimum depth as follows:
 - 1. Thickness: 20 gauge, unless otherwise indicated.

2. Depth: As indicated.

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- 3. Spacing: As indicated in referenced standard and on drawings, but no less than at all edges and 24-inches o.c.
- E. Steel Rigid Furring Channels: ASTM C645, hat-shaped, depth of 7/8-inch, and minimum thickness of base (uncoated) metal as follows:
 - 1. Thickness: 20 gauge at interior and 18-gauge at exterior, unless otherwise indicated.
 - 2. Spacing: As indicated in referenced standard and on drawings, but not less than at all edges and 24-inches o.c.
 - a. At ceilings and soffits indicated to receive more than a single layer of gypsum board, spacing shall be not less than at all edges and 16-inches o.c.
 - 3. At locations indicated on the Drawings, provide 25 gauge "resilient channels" at spacing indicated, or if not indicated, horizontally and at all edges at no more than 24" o.c.
- F. Grid Suspension System: ASTM C 645, manufacturer's standard grid suspension system composed of main beams and cross furring members which interlock to form a modular supporting network.
 - 1. Locations for Use: Provide grid type suspension systems for sloped and horizontal ceiling applications of interior gypsum board products which are not attached directly to primary framing system; Minimum 4-feet x 4-feet grid and cross tees at 2-feet o. c., with minimum installation requirements as required by manufacturer's current written instructions, referenced standards, and as indicated in this Section 09250 and Section 09511 "Acoustical Panel Ceilings". Provide and comply with manufacturer's published requirements for accessories, trim, and hanger wire, and as otherwise required to provide flat ceilings without deflection or sag.
 - 2. Product/Manufacturer: Provide suspended modular grid furring system equivalent to standard drywall suspension system for flat ceilings, with 1-1/2-inch grid faces, and as follows:
 - a. Equivalent to "Drywall Suspension System", as manufactured by USG Interiors, or one of the other above named manufacturers.

2.3 <u>STEEL FRAMING FOR WALLS AND PARTITIONS</u>:

- A. Steel Studs and Runners: Provide deflection track at exterior walls and floor-to-floor walls typical.
 - 1. ASTM C 645, with flange edges bent back 90 deg. and doubled over to form 3/16-inch minimum lip (return), and complying with the following requirements for minimum thickness of base (uncoated) metal and minimum depth as follows:
 - 2. Metal studs at interior partitions shall be 3-5/8-inches x 20 gauge (362S162-33), 6-inches x 20 gauge (600S162-33), or 8-inches x 18 gauge (800S162-43), at locations indicated on the Drawings, spaced at 16-inches o.c., unless otherwise indicated below, or otherwise shown on drawings or required by project conditions. Stud width shall be 1-5/8-inches unless otherwise indicated.
 - a. Provide triple-metal studs at overhead door jambs;
 - b. Provide metal studs at no more than 16" o.c. at any load-bearing walls and at walls supporting ramps or similar construction;
 - c. <u>Metal stud gauge at these locations (two paragraphs above) shall be as indicated</u> on the Drawings, but in no case less than 18 gauge (800S162-43).
 - 3. Use double studs or 6-inch studs, as indicated or as otherwise required, for chase walls, piping, conduits, or etc.

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- 4. Metal studs at any shaft wall or similar construction shall be type, thickness, depth and configuration indicted, or if not indicated, not less than the studs used in the tested assembly. Minimum thickness of 3-5/8-inch studs shall be 22 gauge, and of 6-inch studs shall be 20 gauge.
- 5. Any load-bearing studs, if any, shall be at least 6-inches depth x 18 gauge (600S162-43), or 8-inches x 18 gauge (800S162-43), unless heavier gauge is otherwise indicated on Drawings galvanized C-studs spaced at 16-inches o.c.

B. Track:

- 1. Bottom Track: Unless otherwise indicated or required by project conditions, fire-ratings, etc., provide manufacturer's standard Deep Leg Tracks, unpunched unless otherwise indicated, of size, shape and gauge indicated, with 1-5/16-inch flange.
- 2. Deflection Track Typical at Stud Walls Up To Slab or Similar Fixed Structure at Top of Walls: Provide for no less than 1" of vertical movement, Equivalent to one of the following:

a. Dietrich Double Track System
b. Dietrich Track-Over-Track System
c. Dietrich SLP-TRK slotted track system
d. Dietrich TR-Series with Spazzer 9200 Bar (SPZD)

- 3. <u>Special stud tracks for all curved walls</u> shall be equivalent to "Flex-C Trac" galvanized flexible segmented track with slidable side straps, as manufactured by Flex-Ability Concepts, Inc.; Oklahoma City, OK; Phone: (405) 996-5343.
- 4. <u>Special stud tracks for all arched walls</u> shall be equivalent to "Flex-C Arch" galvanized flexible segmented track with slidable straps, as manufactured by Flex-Ability Concepts, Inc.; Oklahoma City, OK; Phone: (405) 996-5343.
- C. Fasteners: Provide fasteners of type, material, size, corrosion resistance, holding power and other properties required to fasten steel framing and furring members securely to substrates involved; complying with the recommendations of gypsum drywall manufacturers for applications indicated.
- D. Continuous Horizontal Bridging / Bracing:
 - 1. 1-1/2-inch cold-rolled channels (galvanized).
 - 2. Spacing: 4'-0" or 4'-6" o.c. vertically, through pre-punched slots in studs.
 - 3. Splice Plates: 16 gauge at all splices.
 - 4. Anchors (bridging channels to studs): 1-1/2-inches x 2-inches x 16 gauge clip angle, 1/4-inch less than stud width, secured with four (4) 5/8-inch S-14 screws. (Anchors required at ends of runs, where snap-in fit to stud slots is not snug or allows stud to move/slide on channels, and at studs on each side of splices in bridging channels).
- E. Strap Bracing: 1-1/2-inch x 20-gauge galvanized steel, anchored at ends, splices, and each stud with typical framing screws. Placement at curved walls shall align with radius or curve indicated at each such location.
- F. Extruded Moldings and Reveal Moldings: Provide manufacturer's standard alloy 6063-T5 extruded units with 70% resin 2-coat "Kynar 500" baked enamel finish, and as follows:
 - 1. Design: Provide shapes and configurations as indicated on the Drawings.
 - a. Form reveal moldings to cover at least two sides and rear of reveal.
 - b. At drywall (or plaster) edge, provide continuous expanded metal edge, designed for mudding-in.

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- c. At ceiling grid edge, provide continuous edge designed for compatibility with layin ceiling grid.
- 2. Color: To match ceiling grid in same room where occurs, unless indicated otherwise, and color as selected by Architect at any exterior locations.

2.4 GYPSUM BOARD:

- A. General: Provide gypsum board of types indicated in maximum lengths available to minimize end-to-end ioints.
- B. Gypsum Wallboard: ASTM C 36, and as follows:
 - 1. Type: Type X at all locations.
 - 2. Edges: Tapered and featured (rounded or beveled) for prefilling.
 - 3. Thickness: 5/8-inch for general use, except where 1/4-inch layers (at least two layers) may be indicated or required for curved wall or ceiling assemblies.
- C. Gypsum Backing Board for Multi-Layer Applications: ASTM C 442 or, where backing board is not available from manufacturer, gypsum wallboard, ASTM C 36, and as follows:
 - 1. Type: Type X at all locations.
 - 2. Edges: Manufacturer's standard.
 - 3. Thickness: 5/8-inch.
- D. Moisture- and Mold- Resistant Gypsum Board: ASTM C 36, and as follows:
 - 1. Type: Type X; Moisture- and mold- resistant core and facings/surfaces.
 - 2. Edges: Manufacturer's standard.
 - 3. Thickness: 5/8-inch.
 - 4. Locations: At rooms with toilet fixtures and/or service sinks, entire wall behind sinks, and elsewhere only as indicated.
 - 5. Use equivalent to 5/8-inch thick Georgia-Pacific "Dens-Shield" tile backer board with sealed and facing-taped joints, at ceramic and hard tile; ASTM C 1177 or ASTM C 1178.
 - 6. Use "exterior gypsum board" where exposed at any exterior locations; ASTM C 931 or ASTM C 1396.
 - 7. Old style "Green Board" WILL NOT BE ACCEPTABLE FOR ANY USE.
- E. Gypsum Sheathing Board with Water-Resistant Core: Gypsum sheathing board consisting of noncombustible gypsum core incorporating a water-resistant material, surfaced on face, back and long edges with water-repellent surface; complying with ASTM C 1177, and requirements indicated below:
 - 1. Type: Type X at all locations.
 - 2. Edge and End Configuration: Square.
 - 3. Thickness: 5/8-inch, unless indicated otherwise on the Drawings.
 - 4. Size: 4'-0" x 8'-0" or 9'-0" as required for coordination with framing.
 - 5. **Note:** Use equivalent to 5/8-inch thick CertainTeed "GlasRoc Sheathing" or Georgia-Pacific "Dens-Glass Gold", with **sealed and facing-taped joints** at any exterior EIFS systems, stucco systems, and metal siding systems, **only** where plywood or other wood sheathing is not indicated.
 - 6. Cover ALL SHEATHING with air infiltration barrier.

2.5 TRIM ACCESSORIES:

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- A. Cornerbead and Edge Trim for Interior Installation: Provide corner beads, edge trim and control joints which comply with ASTM C 1047 and requirements indicated below:
 - 1. Material: Formed metal, plastic, or metal combined with paper, with metal complying with the following requirement.
 - a. Sheet steel coated with zinc by hot-dip or electrolytic processes, or with aluminum.
 - 2. Edge trim shapes indicated below by reference to designations of Fig. 1 in ASTM C 1047:
 - a. "LC" Bead, unless otherwise indicated.
 - b. "L" Bead where indicated or required.
 - c. "U" Bead where indicated.
 - 3. One-Piece Control Joint: Formed with vee-shaped slot per Fig. 1 in ASTM C 1047, with slot opening covered with removable strip.

2.6 GYPSUM BOARD JOINT TREATMENT MATERIALS:

- A. General: Provide materials complying with ASTM C 475, ASTM C 840, and recommendations of manufacturer of both gypsum board and joint treatment materials for the application indicated.
- B. Joint Tape: Paper reinforcing tape.
- C. Drying-Type Joint Compounds:
 - Factory-prepackaged vinyl-based products complying with the following requirements for formulation and intended use.
 - 2. Ready-Mix Formulation: Factory-premixed product.
 - 3. Taping compound formulated for embedding tape and for first coat over fasteners and flanges of corner beads and edge trim.
 - 4. Topping compound formulated for fill (second) and finish (third) coats.
 - 5. All-purpose compound for use as both taping and topping compound.
- D. Setting-Type Joint Compound:
 - 1. Factory-prepackaged, job-mixed, chemical-hardening powder products formulated for uses indicated.
 - 2. For filling joints and treating fasteners of water-resistant gypsum backing board behind base for ceramic tile, use formulation recommended by gypsum board manufacturer for this purpose.

2.7 MISCELLANEOUS MATERIALS:

- A. General: Provide auxiliary materials for gypsum drywall construction which comply with referenced standards and the recommendations of the manufacturer of the gypsum board.
- B. Spot Grout: ASTM C 475, setting-type joint compound of type recommended for spot grouting hollow metal door frames.
- C. Fasteners: Type S steel drill screws, 1-inch long unless otherwise required for any shaft wall or any multi-layer application, with corrosion-resistant finish in form of cadmium plating or proprietary coating, and as follows:

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- 1. For attachment of gypsum board panels to light gauge steel framing of less than 0.033 of an inch in thickness (20 gauge), provide steel drill screws complying with ASTM C 1002.
- 2. For attachment of gypsum board panels, to steel framing from 0.033 (20 gauge) to 0.112 of an inch in thickness, provide steel drill screws complying with ASTM C 954.

PART 3 - EXECUTION

3.1 **EXAMINATION**:

A. Examine substrates to which drywall construction attaches or abuts, preset hollow metal frames, cast-in-anchors, and structural framing, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of drywall. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION FOR METAL SUPPORT SYSTEMS:

- A. Ceiling Anchorages:
 - 1. Coordinate installation of ceiling suspension system with installation of overhead structural systems to ensure that inserts and other structural anchorage provisions have been installed to receive ceiling anchors in a manner that will develop their full strength and at spacing required to support ceiling.

3.3 INSTALLATION OF STEEL FRAMING, GENERAL:

- A. Steel Framing Installation Standard: Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.
- B. Install supplementary framing, blocking and bracing at terminations in the work and for support of fixtures, equipment services, heavy trim, cabinets, countertops, shelving, grab bars, toilet accessories, furnishings, and similar construction to comply with details indicated and with recommendations of gypsum board manufacturer, or if none available, with "Gypsum Construction Handbook" published by United States Gypsum Co.
 - 1. Refer to Section 06100 "Rough Carpentry" for additional information and requirements.
 - 2. Provide additional horizontal framing (flat studs or tracks) at 24-inches o.c. minimum in walls at cabinets and at ends of countertops, and as otherwise required, to assure square corners and flat walls without bowing, warping, etc.
- C. Isolate steel framing from building structure to prevent transfer of loading imposed by structural movement, at locations indicated below to comply with details shown on Drawings:
 - 1. Where edges of suspended ceilings abut building structure horizontally at ceiling perimeters or penetration of structural elements.
 - 2. Where partition and wall framing abuts overhead structure:
 - a. Provide slip or cushioned type joints as detailed to attain lateral support and avoid axial loading.
 - b. Unless framing is specifically indicated to terminate below ceilings, <u>all</u> framing and gypsum board shall extend up to bottom of structure above.
- D. Do not bridge building expansion and control joints with steel framing or furring members; independently frame both sides of joints with framing or furring members or as indicated.

3.4 INSTALLATION OF STEEL FRAMING FOR SUSPENDED AND FURRED CEILINGS:

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- A. Suspend ceiling hangers from building structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 - 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 - 3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 - 4. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
 - 5. Secure hangers to structural support by connecting directly to structure where possible; otherwise, connect to anchorage devices or fasteners as indicated or required.
 - 6. Do not support ceilings directly from permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
 - 7. Do not attach hangers to steel deck tabs.
 - 8. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 - 9. Do not connect or suspend steel framing from ducts, pipes or conduit.
 - 10. Keep hangers and braces 2-inches clear of ducts, pipes and conduits.
 - 11. Sway-brace suspended steel framing with hangers used for support.
 - 12. Install suspended steel framing components in sizes and at spacing indicated but not less than that required by referenced steel framing installation standard.
 - 13. Installation Tolerances: Install steel framing components for suspended ceilings so that cross furring members or grid suspension members are level to within 1/8-inch in 12 ft. as measured both lengthwise on each member and transversely between parallel members.
 - 14. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross furring members to each other and butt-cut to fit into wall track.
 - 15. Suspension Systems:
 - a. Suspend ceiling hangers from building structural members and as follows below, with system leveling tolerance of 1/8 inch in 12'-0".
 - b. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 - c. Wire Hangers: 0.1620-inch diameter (8 gauge), 4-feet on center. Install supplementary hangers as necessary at ceiling fixtures to provide a hanger at each corner of each fixture, diffuser, grille, and other ceiling-mounted equipment.
 - d. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits indicated and as established by referenced standards.
 - e. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate,

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- and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
- f. Secure, angle, and rod hangers, (if any) to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for structure to which hangers are attached as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
- g. Space hangers not more than 4'-0" o.c. along each member supported directly from hangers, unless otherwise shown, and provide hangers not more than 8 inches from ends of each member.
- h. Provide additional hangers as necessary, so that one hanger occurs on each side of lay-in and surface-mounted light fixtures, and at other grid supported equipment, devices, etc.

3.5 INSTALLATION OF STEEL FRAMING FOR WALLS AND PARTITIONS:

- A. Install runners (tracks) at floors, ceilings and structural walls and columns, where gypsum drywall stud system abuts other construction.
- B. Installation Tolerances: Install each steel framing and furring member so that fastening surface does not vary more than 1/8-inch from plane of faces of adjacent framing.
- C. Extend wall and partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
 - 1. Provide studs up to tie to structure at 4'-0" o.c. minimum, from partitions terminating below ceilings.
- D. Install steel studs and furring in sizes and at spacings, indicated but not less than that required by referenced steel framing installation standard.
- E. Install steel studs so that flanges point in the same direction and gypsum boards can be installed in the direction opposite to that of the flange.
- F. Install horizontal steel bridging/bracing in all walls, and the additional strap bracing at curved walls as steel framing progresses (refer to Paragraph 2.3 C and D above). Install in compliance with stud manufacturer's recommendations, at spacing indicated.
 - 1. Galvanized steel strap bracing shall be provided continuous at top and bottom runner tracks and at bridging locations at all curved stud walls.
- G. Frame door openings to comply with details indicated, with GA-219 and with applicable published recommendations of gypsum board manufacturer. Attach vertical studs at jambs with screws either directly to frames or to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - 1. Extend vertical jamb studs (double studs-typical) through suspended ceilings and attach to underside of floor or roof structure above, unless otherwise indicated.
- H. Frame openings other than door openings to comply with details indicated, or if none indicated, in same manner as required for door openings; and install framing below sills of openings to match framing required for door heads.

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3.6 <u>APPLICATION AND FINISHING OF GYPSUM BOARD, GENERAL:</u>

- A. Gypsum Board Application and Finishing Standard: Install and finish gypsum board to comply with ASTM C 840 and GA-216.
- B. Locate exposed end-butt joints as far from center of walls and ceilings as possible, and stagger not less than 24-inches in alternate courses of board.
- C. Install ceiling boards across framing in the manner which minimizes the number of end-butt joints, and which avoids end joints in the central area of each ceiling. Stagger end joints at least 24- inches.
- D. Install wall/partitions boards in manner which minimizes the number of end-butt joints or avoids them entirely where possible. At high walls, install boards horizontally with end joints staggered over studs.
- E. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16-inch open space between boards. Do not force into place.
- F. Locate either edge or end joints over supports, except in horizontal applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Position boards so that like edges abut, tapered edges against tapered edges and mill-cut or field-cut ends against mill-cut or field-cut ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions.
- G. Attach gypsum board to steel studs so that leading edge or end of each board is attached to open (unsupported) edge of stud flange first.
- H. Attach gypsum board to supplementary framing and blocking provided for additional support at openings and cutouts.
- I. Spot grout hollow metal door frames for solid core wood doors, hollow metal doors and doors over 32-inches wide. Apply spot grout at each jamb anchor clip just before inserting board into frame.
- J. Form control joints and expansion joints at locations indicated, with space between edges of boards, prepared to receive trim accessories.
 - 1. Provide control joints in long partitions and walls at a maximum spacing of 30 feet on center, unless a closer spacing is indicated. Provide control joints in large ceiling areas at a maximum spacing of 50 feet on center in each direction, unless a closer spacing is indicated. Consult with Architect on locations of all control joints prior to beginning work.
- K. Cover both faces of steel stud partition framing with gypsum board in concealed spaces (above ceilings, etc.), except inside double or chase walls which are required to be braced internally.
 - 1. Except where concealed application is required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. area, and may be limited to not less than 75% of full coverage.
 - 2. Fit gypsum board around ducts, pipes, and conduits.
 - 3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4-to-1/2-inch-wide joints to install sealant.
 - 4. Fire-stop around penetrations as required by Codes and authorities having jurisdiction. Refer to Section 07270 for additional information and requirements.

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- L. Where interior partitions are indicated to extend to the structure above, the drywall shall also extend to the structure with the same number of layers as required below the ceiling.
- M. Isolate perimeter of non-load-bearing drywall partitions at structural abutments. Provide 1/4-inch to 1/2-inch space and trim edge with "U" bead edge trim. Seal joints with acoustical sealant.
- N. At all interior walls, seal construction at perimeters, control and expansion joints, openings and penetrations with a continuous bead of acoustical sealant including a bead at both faces of partitions. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim, and close off sound-flanking paths around or through construction, including sealing of partitions above acoustical ceilings.
- O. Space fasteners in gypsum boards in accordance with referenced gypsum board application and finishing standard and manufacturer's recommendations.

3.7 METHODS OF GYPSUM BOARD APPLICATION:

- A. Single-layer Application: Install gypsum wallboard as follows:
 - 1. On ceilings apply gypsum board prior to wall/partition board application to the greatest extent possible.
 - 2. On partitions/walls apply gypsum board vertically (parallel to framing), unless otherwise indicated or required for fire or smoke resistive rated assemblies. Provide maximum length panels, to minimize end joints.
 - 3. On partitions/walls 8'-1" or less in height apply gypsum board horizontally (perpendicular to framing); use maximum length sheets possible to minimize end joints.
- B. Multi-Layer Application:
 - 1. Install gypsum backing board for base layer and gypsum wallboard for face layer.
 - 2. On ceilings apply base layer(s) prior to base layer application on walls/partitions; apply face layers in same sequence. Offset joints between layers at least 10-inches. Apply base layers at right angles to supports unless otherwise indicated.
 - 3. On partitions/walls apply base layer(s) and face layers vertically (parallel to framing) with joints of base layers over supports and face layer joints offset at least one stud or furring member space from base layer joints.
- C. Single-Layer Fastening Methods: Apply gypsum boards to supports as follows:
 - 1. Fasten with screws.
- D. Multi-Layer Fastening Methods:
 - 1. Apply base layer(s) of gypsum board and face layer to base layer(s) as follows:
 - 2. Fasten both base layer(s) and face layer separately to supports with screws.
- E. Shaft Wall Construction (if any): Install in accordance with gypsum manufacturer's current published tested assembly, utilizing standard or special shaft wall framing in accordance with the assembly tested.

3.8 INSTALLATION OF DRYWALL TRIM ACCESSORIES:

A. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, fasten flanges to comply with manufacturer's recommendations.

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- B. Install corner beads at external corners.
- C. Install metal edge trim whenever edge of gypsum board would otherwise be exposed or semiexposed, and except where plastic trim is indicated. Provide type with face flange to receive joint compound except where "U" bead (semi-finishing type) is indicated.
 - 1. Install "LC" bead where drywall construction is tightly abutted to other construction and back flange can be attached to framing or supporting substrate.
 - 2. Install "L" bead where edge trim can only be installed after gypsum board is installed.
 - 3. Install U-type trim where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints).
- D. Install edge trim where indicated on wall panels at juncture with ceilings.
- E. Install control joints at locations indicated, or if not indicated, at spacings and locations required by referenced gypsum board application and finish standard, and approved by the Architect for visual effect.

3.9 <u>FINISHING OF DRYWALL</u>:

- A. General: Apply treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joints; penetrations; fastener heads, surface defects and elsewhere as required to prepare work for decoration.
- B. Prefill open joints and rounded or beveled edges, if any, using setting-type joint compound.
- C. Apply joint tape at joints between gypsum boards, except where trim accessories are indicated.
- D. Finish interior gypsum wallboard by applying the following joint compounds in 3 coats (not including prefill of openings in base), and sand between coats and after last coat:
 - 1. Embedding and First Coat: Ready-mix drying-type all-purpose or taping compound.
 - 2. Fill (Second) Coat: Ready-mix drying-type all-purpose or topping compound.
 - 3. Finish (Third) Coat: Ready-mix drying-type all-purpose or topping compound.
- E. Water-Resistant Gypsum Board and Exterior Gypsum Board: Finish joints between water-resistant backing board with tape and setting-type joint compound to comply with gypsum board manufacturer's written recommendations and installation standards referenced in related sections.
- F. Partial Finishing: Omit third coat and sanding on concealed drywall construction which is indicated for drywall finishing, except where finishing is required to achieve fire-resistance rating, sound rating or to act as air or smoke barrier.

3.10 CLEANING AND PROTECTION OF WORK:

- A. Promptly remove any joint compound and adhesives and similar residue from adjacent surfaces, as it may occur.
- B. Provide final protection and maintain conditions, in a manner suitable to Installer, which ensures gypsum drywall construction remain without damage or deterioration at time of Substantial Completion.

END OF GYPSUM DRYWALL

PAGE 13 OF 13 SECTION 09250



(LB)

DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: PROJECT NO: 18.0125.02

DATE: OCTOBER 2020 SHEET NUMBER

1950

EXHAUST SUPPLY FAN COOLING ELECTRIC HEAT FILTER ELECTRICAL FAN SHIP OPER. WT. WT. COMP. COMP. MODEL UNIT CONTROLS MFG REFRIG. TOT. ' SENS. CAP. MCA MOCP TYPE QTY. ESP AIRFLOW CAPACITY CONTROL APD DB | WB | DB | WB | VEL. LB) ROWS SIZE MERV NOMINAL (IN-WG) | (FPM) DESCRIPTION AREA | (IN-WG) | (CFM) STEPS (IN-WG) VFD (BTU/H) | (BTU/H) | (°F) | (°F) | (°F) | (°F) (SF) 1200 243 R410A Scroll 3400 90081 74341 74.1 63.0 54.1 54.0 3 15 69844 52121 75.8 64.4 53.7 53.5 4 16 0.52 358 R410A Scroll 1 18 4 Stage 2 inch MERV 8 7.1 16 x 16 x 2 0.14 MERV 8 Variable Air Volume, Single Zone 1411 1411 DAIKIN APPLIED DPS006 11.3 460 3 23 25 2200 1200 SWSI AF 1.00 Yes 1200 | 90081 | 74341 | 74.1 | 63.0 | 54.1 | 54.0 | 3 | 15 | 0.17 | 243 | R410A | Scroll | 2 18 | 4 Stage | 2 inch MERV 8 | 18.0 | 18 x 24 x 2 | 0.07 | MERV 8 | Variable Air Volume, Single Zone | 2149 | 2149 1. UNIT SHALL BE EQUIPPED WITH DDC CONTROLS, VARIABLE SPEED COMPRESSOR OR INVERTER, ANTI-SHORT-CYCLE TIMER & LOW AMBIENT COOLING.

IT ROOM MINISPLIT AIR HANDLER SCHEDULE Max Sound Voltage/Phase Mark Load Circuit Pressure CLG CLG HTG **Ampacity Ampacity** AHU-1 | 425 | 76.7°FDB/67.0°FWB | 59.3°F | 70.0°F | N/A | 43 0.33 A 1 A 208 V / 10

PROVIDE WIRELESS THERMOSTAT FOR INDOOR UNIT, INTEGRAL FILTER, PIPE CONDENSATE TO SPLASH BLOCK OUTSIDE, & LOW AMBIENT COOLING

2. UNIT SHALL BE MOUNTED ON 34" HIGH CURB TECHNOLOGIES CURB TO TRANSITION FROM VERTICAL DISCHARGE TO HORIZONTAL DISCHARGE. CURB SHALL BE INSULATED MINIMUM R-8.

IT ROOM CONDENSING UNIT SCHEDULE Maximum Minimum Total Cooling Sensible Cooling IEER SEER Circuit Overcurrent Voltage/Phase Capacity Capacity Protection Ampacity 11,786 Btu/h 8,416 Btu/h 13,491 Btu/h 10.1 13 A 15 A 208 V / 1ø

EQUIPMENT SCHEDULE Ceiling Exhaust Fan MARK EF-1 Volume External SP Total SP FRPM Motor Information Operating Weight Greenheck (CFM) Power (hp) (Lb.) Model Size (hp) V/C/P Encl: | Windings | FLA (in wg) RPM 0.25 SP-B70 0.01 OP 675 50 12 NA 115/60/1 0.25

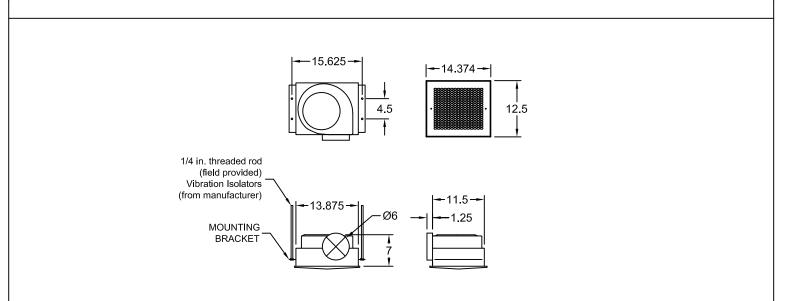
OPTIONS AND ACCESSORIES

UL/cUL 507 Listed - Electric Fan Solid State Speed Control, 6 Amp, Shipped Loose Aluminum Grille with White Enamel Finish, (PN: 504879) Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose Aluminum Wheel Material

MARK

Energy Star Rated Can Be Used to Comply with: ASHRAE 62.2, California Title 24, and Washington State Energy Code

PROVIDE INVERTER DUTY COMPRESSOR & COIL GUARD. OUTDOOR UNIT SHALL POWER INDOOR UNIT



EQUIPMENT SCHEDULE

Ceiling Exhaust Fan MARK: EF-2													
Qty	Greenheck Model	Volume (CFM)	External SP Total SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information						
							Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA	
1	SP-A110	100	0.25	950	0.01	20	NA	115/60/1	OB	950	1	NA	
	5P-A110		0.238					115/60/1	OP	930			

OPTIONS AND ACCESSORIES

UL/cUL 507 Listed - Electric Fan

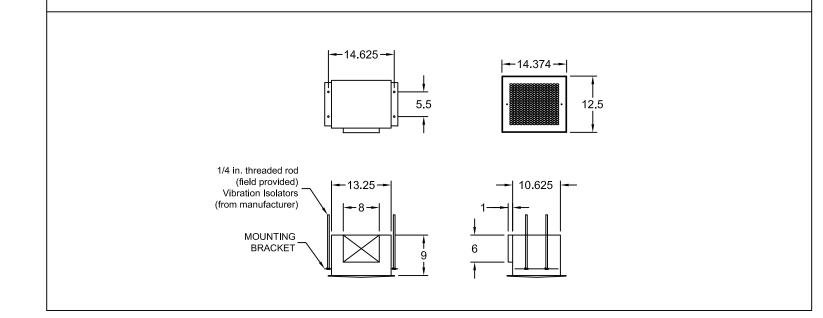
Solid State Speed Control, 6 Amp, Shipped Loose

Aluminum Grille with White Enamel Finish, (PN: 504878)

Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose Aluminum Wheel Material

Energy Star Rated

Can Be Used to Comply with: ASHRAE 62.2, California Title 24, and Washington State Energy Code



GENERAL MECHANICAL NOTES

FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS TO PROVIDE A COMPLETE MECHANICAL SYSTEM. DUE TO THE SCHEMATIC NATURE OF THESE PLANS, THE CONTRACTOR SHALL FIELD-VERIFY LOCATIONS FOR EQUIPMENT DUCTWORK, AND ACCESSORIES. IN ADDITION, THIS WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS. THE CONTRACTOR SHALL ALSO REVIEW THE STRUCTURAL DRAWINGS BEFORE FABRICATING AND INSTALLING DUCTWORK OR EQUIPMENT.

ALL WORK SHALL BE PERFORMED BY SKILLED AND EXPERIENCED WORKMEN. WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED PERMITS,

ALL MATERIALS SHALL BE NEW AND WITHOUT DEFECTS. SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT. ALL WORK DONE BY THIS CONTRACTOR SHALL BE WARRANTED FOR ONE YEAR FROM THE TIME THE OWNER GIVES ACCEPTANCE OR GAINS BENEFICIAL USE, WHICHEVER IS FIRST. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

DUCT SIZES ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. DUCT SHALL BE OF LOW-PRESSURE (2.0" w.g.) CONSTRUCTION AS CLASSIFIED BY SMACNA UNLESS OTHERWISE NOTED. ALL DUCT SHALL HAVE MINIMUM 2" EXTERNAL WRAP (MINIMUM R-6.0). LINER MAY ONLY BE USED WHERE REQUIRED FOR SOUND ATTENUATION. DUCTBOARD SHALL NOT BE USED.

FLEXIBLE DUCT MAY BE INSTALLED ONLY WHERE SHOWN ON THE DRAWINGS. DUCT SHALL BE EXTERNALLY-INSULATED CORRUGATED METAL WITH A MAXIMUM LENGTH OF 6'-0". FOR TAKE-OFFS LONGER THAN 6'-0", THE REMAINDER OF THE DISTANCE SHALL BE EXTERNALLY-WRAPPED SINGLE-WALL ROUND DUCT WITH A SPIN-IN STYLE TAP AT THE MAIN DUCT.

HANGERS FOR EQUIPMENT AND PIPING SHALL BE SECURED TO THE BUILDING STRUCTURE. NO HANGERS SHALL BE ATTACHED TO THE FLOOR OR ROOF DECK MATERIAL, OR CONCRETE DECKS LESS THAN 4" THICK. ALL RETURN AND EXHAUST GRILLES SHALL HAVE OPPOSED-BLADE DAMPERS. ALL SUPPLY-SIDE TAKE-OFFS SHALL

HAVE A BALANCING DAMPER. FIRE DAMPERS AND FIRE-STOPPING SHALL BE PROVIDED FOR ANY PENETRATIONS OF FIRE-RATED PARTITIONS.

VERIFY LOCATIONS OF ALL FIRE-STOPPING ON THE ARCHITECTURAL DRAWINGS. 9. ALL GRILLES AND REGISTERS SHALL BE EQUAL TO TITUS WITH ALUMINUM CONSTRUCTION. SUPPLY GRILLES SHALL BE EQUAL TO MODEL TDC. SUPPLY REGISTERS SHALL BE EQUAL TO MODEL 301. RETURN, EXHAUST AND TRANSFER GRILLES SHALL BE EQUAL TO MODEL 355 WITH OPPOSED-BLADE DAMPERS. GRILLE FINISH SHALL BE

APPROVED BY THE OWNER AND THE ARCHITECT 10. EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE ABLE TO PROVIDE THE REQUIRED CAPACITIES IN THE MIDDLE OF IT'S PERFORMANCE RANGE. ALL COMPRESSORS SHALL HAVE A MINIMUM 5-YEAR WARRANTY UNLESS OTHERWISE NOTED. THE EQUIPMENT SHALL HAVE ALL THE NECESSARY CONTROLS AND ACCESSORIES TO ALLOW FOR FULL OPERATION. IF EQUIPMENT HAS COMPONENTS OF A VIBRATIVE NATURE, THE CONTRACTOR SHALL PROVIDE THE NECESSARY VIBRATION CONTROLS.

. REFRIGERANT PIPING SHALL BE HARD-DRAWN TYPE K OR L COPPER WITH COPPER SOLDER FITTINGS. PIPING SHALL BE SOLDERED WITH SILVER SOLDER AND INSULATED WITH 1/2" THICK THERMAL TUBULAR JACKETING. SEAL INSULATION JOINTS WITH TAPE AND CEMENT OR PER MANUFACTURER'S INSTRUCTIONS. PRE-INSULATED AND PRE-CHARGED REFRIGERANT LINES MAY BE USED AS PROVIDED BY THE EQUIPMENT MANUFACTURER. WHERE INSULATION IS EXPOSED TO WEATHER PROTECT LINES WITH AN ALUMINUM COVER AND PAINT TO MATCH EXTERIOR

12. CONDENSATE DRAINS SHALL BE FULL-SIZE (1" MINIMUM) COPPER OR SCHEDULE 40 PVC. DRAINS SHALL BE HISULATED UNTHE SAME MANNER AS REFRIGERANT LIMES. DISCHARGE AS SHOWN ON THE DRAWTINGS. PROVIDE A COMPLETE DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR THE AIR CONDITIONING, HEATING, AND VENTILATING

SYSTEMS SHOWN DESIGNED, INSTALLED, AND CALIBRATED BY SYSTEM SPECIALISTS, INC. (SSI). A QUALIFIED INSTRUCTOR APPROVED BY THE COUNTY AND THE COMMISSIONING AGENT SHALL PROVIDE COMPLETE TRAINING ON THE OPERATION AND MAINTENANCE OF THE EQUIPMENT FOR THE COUNTY FACILITY MAINTENANCE DEPARTMENT. THE DURATION OF THIS TRAINING SHALL BE NOT LESS THAN 4 HOURS BUT SHALL NOT EXCEED 8 HOURS. ALL CONTROLS SHALL BE DDC UNLESS OTHERWISE NOTED OR UNLESS INTEGRAL WITH THE EQUIPMENT SPECIFIED.

14. THE HVAC SYSTEM—SHALL BE TESTED AND BALANCED ACCORDING TO AABG STANDARDS. THE CONTRACTOR SHALL

PROVIDE THE ARCHITECT WITH A COPY OF THE TEST AND BALANCE REPORT AND THE OWNER WITH A LETTER STATING THAT THE SYSTEM(S) HAVE BEEN BALANCED TO WITHIN 10% OF DESIGN PARAMETERS.

CU	CONDENSING UNIT/HEAT PUMP
CD	SUPPLY DIFFUSER (TITUS TDCA-AAA)
RR	RETURN REGISTER (TITUS 25FL)
OA	OUTSIDE AIR
TG	TRANSFER GRILLE (TITUS 25FL)
WSR	WALL REGISTER (TITUS 300FS)
RTU	ROOFTOP UNIT
EX	EXISTING
→AD	SUPPLY AIR
ॏ	AUTOMATIC DAMPER (24 VOLT)
#-→	RETURN OR EXHAUST AIR
①	THERMOSTAT/SENSOR
S	SMOKE DETECTOR
WRR	WALL RETURN REGISTER (TITUS 350)
FD	FIRE DAMPER
2 1,1,1	TURNING VANES IN DUCT
₽ X P	MANUAL VOLUME DAMPER
X	SUPPLY DIFFUSER (TITUS TDCA-AAA)
	SUPPLY OR OUTSIDE AIR
	DUCT IN SECTION EXISTING DUCTWORK
\$ <u></u>	SUPPLY AIR DUCTWORK
\$ X \$	EXHAUST AIR DUCTWORK
\$ X \$	RETURN AIR DUCTWORK
\$ X \$	OUTSIDE AIR DUCTWORK

MECHANCIAL LEGEND

DESCRIPTION

CUBIC FEET PER MINUTE

MARK

CFM

Direc	Direct Drive Upblast Centrifugal Wall Exhaust Fan														
MARK INFORMATION FAN INFORMATION										MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	1	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*		
1	EF-3	CUE-101HP-VG	600	0.388	1,662	0.14	63	0.25	115/60/1	OP	1725	1	5.8		

*NEC FLA - Based on tables 150 or 148 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.



UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-1, Toggle, Shipped with Unit

High Wind Rated (+/- 150 PSF Rating)

Florida Product Approval #FL13225.1 & Miami-Dade NOA #19-0717.02 Hinged Bracket Kit (PN 877580) (Shipped Loose) Foam Curb Seal (Attached)

Damper Shipped Loose, WD-330-PB-12X12, Gravity Operated, Not Coated Stainless Steel Fasteners - 300 Series

Birdscreen: Aluminum, nom. 86% Free Area

SUGGESTED WALL OPENING RECOMMENDED EXHAUST DUCT SIZE

DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB. CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE. OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR.

RETURN REGISTER (TITUS 25FL)

HOOD INFORMATION

Aluminum Rub Ring

MARK	MODEL	HOOD DIMENSIONS (IN.)		NS (IN.)		EXHAUST					TOTAL OF STICK		LIGHTING DETAILS		
		LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	TOTAL CFM		COLLAR(S)			WEIGHT	SECTION LOCATION	I FIXTLIRE TYPE I	QTY	FOOT
							WIDTH	LENGTH	CFM	S.P.	LBS.	LOCATION	BULB / LAMP INFO	ווט	CANDLES
H-1	GO-60-S	D-60-S 60.00	0.00 36 12 4	10	430 SS 100%	600.0	12	12	600	0.032	140	CINCLE	INCANDESCENT (GLOBE)	2	40.66
H-1				430 55 100%	0.00					140	SINGLE	100W A19 (BULBS NOT INCL.)		42.66	

HOOD OPTIONS

18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED

FACTORY MOUNTED EXHAUST COLLAR(S)

WALL UTILITY CABINET 24 IN HIGH 36 IN LONG 12 IN WIDE

329 Brooks Street SE 827 Grace Avenue Fort Walton Beach, FL 32548 Panama City, FL 32401 850.244.6189V 850.244.0545F 850.215.4068V 850.215.4069 Alabama #CD-2429-E Arkansas #1654 Florida #0000901 JOHNSON PEADEN Georgia #PEF003983 Mississippi #E-00000862 ENGINEERING INC. Texas #F-16637 Missouri #2018035834

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JPE Job Number:

OCTOBER 2020

THAT THE SYSTEM(S) HAVE BEEN BALANCED TO WITHIN 10% OF DESIGN PARAMETERS.

OCTOBER 2020

RESPONSES TO PLAN HOLDER QUESTIONS CONSTRUCT OCWS FIELD OFFICES Questions Received After November 4, 2020

(ITB WS 02-21)

1. Please provide a conduit spec section.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

2. Sheet EF0.01 calls for a 2 ½ " conduit with 4/0 conductors from meter to existing pole. We are unable to find this pole on any drawing. Please locate pole or provide footage allowance.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

3. Sheet EM0.01 calls for a 2 ½ " conduit with 350MCM conductors from meter to existing pole. We are unable to find this pole on any drawing. Please locate pole or provide footage allowance.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

4. Are aluminum conductors acceptable if sized accordingly?

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

5. Please confirm Fire Alarm systems are not required for either building.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

6. Who pays for the building permit? The GC or OCWS?

RESPONSE: OCWS will pay the building permit fee.

7. Locations of existing Gulf Power company poles to be used for each building.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

8. Requirements for site lighting? (see drawing C-3 note 15)

RESPONSE: No site lighting is required for this project.

9. Any electrical requirements for the ALT #1 and ALT#2 gates? No electrical site drawings provided.

RESPONSE: These gates are manual and do not require power.

10. Sheet EF1.00 does not show power to the Overhead Coiling Door Motor Operators at doors 119B in Room 136 and Door 136B in Room 119. See Sheet AF6.01 Door Schedule, Door No. 119B and 136B both require a motor (operator).

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

- 11. Pre-engineered Metal Building (most RFI items can be applied to the Maintenance Building also)
 - a. Wall Section 2/AF4.01 Shows a Pre-Finished 5V Metal Panel which is a screw down roof panel. Please Provide a specification for the roof panel, so we can determine which roof panel is desired,

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

b. There is a standard detail from Nucor for this condition, but our quality supervisor says it is not advised to use it. Apparently, it is not fun to erect as you can imagine having a 36" wide panel installing it on a vertical plane versus a 16" or 24" panel on a horizontal plane. We have had customers claim the labor cost for installing the wall panels is increased substantially. Nucor is just one manufacturer; others may not have a detail at all. Please verify that thermal blocks are required due to the cost.

RESPONSE: Contractor shall provide thermal blocks.

c. Sheet AF4.01 – all Wall Sections – Are soffit panels required or is this an open structure? If soffit panels are required, please provide specifications.

RESPONSE: Soffit panels are required. Soffit panel manufacturer shall match exterior panels.

d. Sheet AF4.01 – all Wall Sections – What is the dimension of the roof overhang? There are no dimensions given.

RESPONSE: 2'-0" overhang typical

e. Sheet AF2.01 – What is the Wall Panel Type? If you scale the drawings, it could be an 18" panel or a 36" panel. Please provide a specification, stating Type, Width, Profile, Thickness, etc.

RESPONSE: 18" standard wall panel

f. Elevation 4/AF2.01 – does not show the air compressor room or the extended soffit? Please clarify.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

g. Sheet AF2.01 – Elevations 1 & 2 – There are only 2 downspouts show on each elevation. Please clarify that is enough downspouts for a building of this size?

RESPONSE: Sheet AF2.01 will be revised in Addendum 5 to show three downspouts on each side of the building.

h. Sheet AF4.01 Wall Sections shows either the brick tight against the wall panel or no wall panels at all. Please clarify the how the wall is sheathed behind the brick.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

12. Specification 09250 paragraph 2.4- spells out high impact Gypsum Board everywhere. Please clarify this is correct due to the cost of the impact gypsum board being so high. Usually the impact is only carried to a wall height of 8', and not used in areas such as offices.

RESPONSE: Please see revised Gypsum Drywall specification included with Addendum No. 5. High impact gypsum board is not required.

13. Specification 09250 paragraph 2.3 states steel frame stud gauge is true .33 not an eq. stud gauge thickness.

RESPONSE: 20ga is acceptable.

14. Plans reference 20 ga. studs. We usually use 20 ga. eq. studs but the spec's call for .33 mill material which is a true 20 ga. stud. Can we use the eq. studs? This will allow for an equal product at less cost to the Owner.

RESPONSE: 20ga is acceptable.

15. The plans reference 5/8" drywall type X. This is usually what we use. However, the spec's call for High Impact. Does High Impact go everywhere? Or can we just use it in high traffic areas below 8 feet? This will allow for an equal product at less cost to the Owner.

RESPONSE: 5/8 inch, Type X is required.

16. Reference Sheet SF.1 which does not indicate a brick shelf for either section.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

17. Reference Sheets AF3.01 and AF4.01 which indicates a brick shelf on an unknown depth.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

18. Reference Sheet AF2.01 which indicates the brick veneer to run various depths below finish floor without any means of support.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

19. Sheet C-9 provides perimeter sidewalk elevations. Clarify.

RESPONSE: We do not understand the question.

20. Section 08710 Finished Hardware - What are the required hinges, locks, closers, and exit devices? The specifications are unclear. Some of the numbers provided for "TYPE" do not correlate to the Manufacture's items. Please clarify.

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

21. Yale is the common brand on the specifications. Will you allow substitutions to Falcon locks, closers, and exit devices, and Design Hardware hinges?

RESPONSE: Yes, please refer to updated plans and specifications issued with Addendum No. 4.

22. Section 16415 Transfer Switches paragraph 2.2.H. – Manufactures need to know which switch needs to be closed transition. Also, please specify which American Act this type of switch needs to meet for this project?

RESPONSE: Please refer to updated plans and specifications issued with Addendum No. 4.

END OF RESPONSES