

ADDENDUM NO. 2

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

**TASMG READINESS CENTER
AVCRAD Facility
Springfield, Missouri
PROJECT NO.: T1809-01**

Bid Opening Date: 1:30 PM, Thursday, May 21, 2020 (Not Changed)

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. ADD attached Section 013513.28 - SITE SECURITY AND HEALTH REQUIREMENTS
2. Section 014000 – Quality Control
 - a. ADD Paragraph 1.1-H. as follows:

H. All materials testing and special inspections shall be included and contracted by the general contractor as indicated in this section and not by the Owner as some Sections in Division 5 specifications indicate.
3. Section 015000 – TEMPORARY FACILITIES AND SERVICES
 - a. ADD Paragraph 1.04-C. as follows:

C. Temporary power and water for construction and trailer shall not utilize the 3A building and it's power distribution. Contractor shall coordinate with City utilities and bring any temporary services to the site as required. All costs shall be included with bid as indicated in the specifications.
4. Section 033000 – CAST-IN-PLACE CONCRETE
 - a. ADD Paragraphs 2.3-B. and 2.3-C. as follows:

B. Sheet vapor retarder shall maintain permeance of less than 0.01 Perms [grains/(ft² · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).

C. Approved manufacturers:
 - i. Normaflex
5. Section 053100 – STEEL DECKING
 - a. ADD Paragraph 2.3-B as follows:

D. Approved Manufacturers:
 - i. Epic Metals Long span acoustic structural decking

ii. New Millennium Versa-Dek acoustic structural decking

6. Section 072119 – FOAMED IN PLACE INSULATION

a. ADD Paragraph 2.1-B as follows:

B. Approved Manufacturers:

i. Icynene ProSeal

7. Section 072726 – FLUID APPLIED MEMBRANE AIR BARRIERS

a. ADD Paragraph 2.3-A.1.a.3. as follows:

3. Carlisle Coating & Waterproofing Barritech

b. ADD Paragraph 2.4-A.1.g. as follows :

g. Carlisle Coating & Waterproofing Barritech

c. ADD Paragraph 2.5-A.1.d. as follows:

d. Carlisle Coating & Waterproofing Barritech

8. Section 074113.19 - BATTEN SEAM METAL ROOF PANELS

a. ADD Paragraphs 2.2-B.1.d. and 2.2-B.1.e. as follows:

d. McElroy

e. Dimensional Metals, Inc.

b. REVISE Paragraph 2.2-B.2.a. as follows:

a. Nominal Thickness: 22 gauge

c. REVISE Paragraph 2.2-B.2.b. as follows:

b. Exterior Finish: Three coat fluoropolymer

d. REVISE Paragraph 2.2-B.2.c. as follows:

c. Color: Centria “Steel Gray” 9922 or custom color to match Centria “Steel Gray”.

e. REVISE Paragraph 2.2-B.4.a. as follows:

a. Material: 0.062 inches

f. REVISE Paragraph 2.2-B.5. as follows:

5. Panel Coverage: 18 inches

g. ADD sentence to Paragraph 2.4-B. as follows:

B. Provide Grade 2 fasteners in lieu of Grade 3.

9. Section 074213.13 - FORMED METAL WALL PANELS

- a. ADD Paragraphs 2.2-B.1.n. and 2.2-B.1.o. as follows:
 - n. Peterson
 - o. Dimensional Metals, Inc.
- b. ADD Paragraphs 2.2-C.1.m. and 2.2-C.1.n. as follows:
 - m. Peterson
 - n. Dimensional Metals, Inc.
- c. REVISE Paragraph 2.2-B.2.c. as follows:
 - c. Color shall match existing metal panel. Existing metal panel is Centria. Color to match Centria's color or custom color.
- d. ADD Paragraph 2.2-C.2. as follows:
 - 2. Color: Centria "Slate Gray" or custom color to match Centria "Slate Gray".

10. Section 074213.19 - INSULATED METAL WALL PANELS

- a. ADD Paragraph 2.2-B.2.d. as follows:
 - d. SGH Concepts – Gen Wall
- b. REVISE Paragraph 2.2-B.2.b.1. as follows:
 - 1. Color: Centria "Steel Gray" or custom color to match Centria "Steel Gray".

11. Section 074293 - SOFFIT PANELS

- a. ADD Paragraph 2.2-C.1.c. as follows:
 - c. Dimensional Metals, Inc.

12. Section 075419 - POLYVINYL-CHLORINE (PVC) ROOFING

- a. ADD Paragraph 2.2-A.1.e. as follows:
 - e. SGH Concepts
- b. ADD Paragraph 3.6-D. as follows:
 - D. ALL Insulation shall be fully adhered for both the metal deck and the concrete deck.

13. DELETE Section 077200 - ROOF ACCESSORIES in its entirety.

14. Section 096723 – RESINOUS FLOORING

a. ADD Paragraph 2.2-A.2.m. as follows:

m. Tennant

15. Section 233600 – AIR TERMINAL DEVICES

a. ADD Paragraph 2.1-I.5. as follows:

5. Trane

16. ADD attached Section 237200 – AIR TO AIR ENERGY RECOVERY EQUIPMENT.

17. Section 237313 – MODULAR CENTRAL STATION AHU'S

a. ADD Paragraph 2.1-A.5, 6, 7, and 8. as follows:

5. York/JCI

6. Trane

7. McQuay

8. Carrier

18. Section 238220 – FAN COIL UNITS AND UNIT VENTILATORS

a. ADD Paragraph 2.5-B.7, 8, 9, and 10. as follows:

7. York/JCI

8. Trane

9. McQuay

10. Carrier

19. Section 263213 – ENGINE GENERATORS

a. ADD Paragraph 2.1-A.5. as follows:

5. ASKA Power Generation

20. Section 265100 – INTERIOR LIGHTING

a. ADD Paragraph 2.1-B. as follows:

B. Approved Distributor Lighting Packages:

i. Foley Group

ii. C&O Sales

iii. Mercer Zimmerman

iv. Convergence

Note: The AE has approved these lighting packages, but this still requires the Contractor/vendor to furnish all equals to product, including controls, voltage, color, mounting means, LED output, CRI/K, etc.

DRAWING CHANGES:

1. Sheet C500 – STORM WATER DRAINAGE PLAN

- a. See attached revised Sheet C500 – STORM WATER DRAINAGE PLAN for changes to storm piping and relocation of splash block.

2. Sheet C700 – EROSION CONTROL PLAN

- a. REMOVE Erosion Control Note #6 in its entirety and REPLACE as follows:

6. ALL DISTURBED AREAS SHALL BE FINE-GRADED, FERTILIZED, SEEDED AND MULCHED. TEMPORARY SEEDING AND MULCHING SHALL BE PERFORMED IN ACCORDANCE WITH #4 ABOVE. ALL DISTURBED AREAS NOT DESIGNATED AS SOD ON SHEET LP100 SHALL BE SEEDED. PERMANENT SEEDING AND SODDING SHALL FOLLOW TOPSOILING (SPECIFICATION SECTION 329200). PERMANENT SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 329220. SODDING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 329210.

3. Sheet LP100 – LANDSCAPE PLAN

- a. Add the following Note:

ALL DISTURBED AREAS NOT DESIGNATED AS SOD ON THIS SHEET SHALL BE SEEDED. REFER TO SPECIFICATION SECTION 329200 FOR TOPSOILING, SECTION 329220 FOR SEEDING, AND SECTION 329210 FOR SODDING.

4. Sheet A110 – FIRST FLOOR PLAN – AREA B

- a. See attached 1. PARTIAL FLOOR PLAN – AREA B for loading dock revisions and exterior wall relocation with new structural overhang.

5. Sheet A302 – WALL SECTIONS

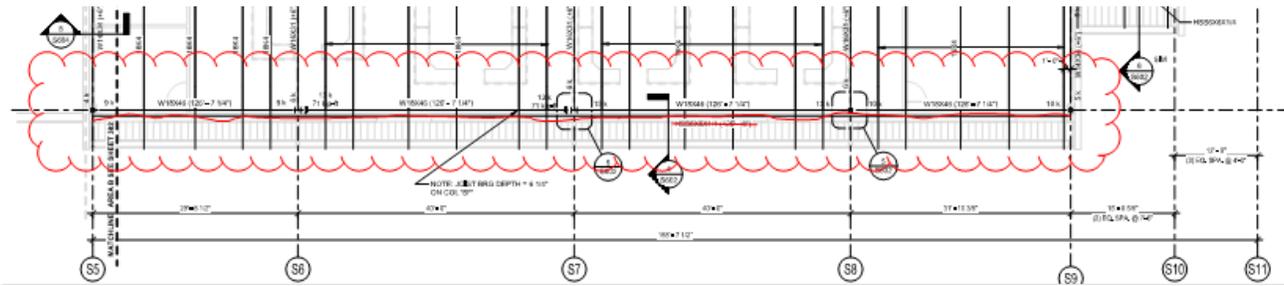
- a. See attached 3. WALL SECTION modifying profile of exterior wall at column line S1.

6. Sheet S102 – AREA B FOUNDATION PLAN

- a. See attached revised Sheet S102 – AREA B FOUNDATION PLAN for loading dock revisions and exterior wall relocation with new structural overhang.

7. Sheet S301 – AREA A-ROOF FRAMING PLAN

- a. DELETE horizontal HSS6x6x1/4 at elevation 125'-8" shown on column line SF between column lines S5 and S9. Refer to architectural drawings for column lines and image below for additional information.



8. Sheet M211 – FIRST FLOOR MECHANICAL PIPING PLAN – AREA B

- a. See attached revised Sheet M211 – FIRST FLOOR MECHANICAL PIPING PLAN-AREA B for changes to hydronic piping locations related to loading dock wall adjustments.

9. Sheet P111 – FIRST FLOOR WASTE AND VENT PLUMBING PLAN – AREA B

- a. See attached revised Sheet P111 – FIRST FLOOR WASTE AND VENT PLUMBING PLAN-AREA B for changes to sump pump discharge and adjacent building overflow drain piping.

10. Sheet E111 – FIRST FLOOR LIGHTING PLAN – AREA B

- a. See attached revised Sheet E111 – FIRST FLOOR LIGHTING PLAN-AREA B for changes to lighting locations related to loading dock wall adjustments.

11. Sheet E211 – FIRST FLOOR POWER PLAN – AREA B

- a. See attached revised Sheet E211 – FIRST FLOOR POWER PLAN-AREA B for changes to power locations related to loading dock wall adjustments.

GENERAL COMMENTS:

1. Gravel mulch bed shown in B1/C800 is specified in Section 329300.2.10.B. Inert mulch materials shall be washed river gravel and shall range in size from 1” to 2.5” in accordance with ASTM C 136.
2. The Virtual Pre-Bid Meeting was held virtually at 1000am CST, April 30, 2020; List of attendees is attached.
3. The deadline for technical questions is May 15, 2020 at noon.
4. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
5. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
6. Current Planholders list available online at:
<https://www.adsplanroom.net/jobs/444/details/t1809-01-tasmq-readiness-center-avcrad-facility>
7. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 1C, Columbia MO 65201, 573-446-7768 to order official plans and specifications.
8. Televisions and room visual display units are FFE items not furnished in contract by the Contractor. The State is responsible for furnishing and installation.

ATTACHMENTS:

1. Specification Section 013513.28 - SITE SECURITY AND HEALTH REQUIREMENTS
2. Specification Section 237200 - AIR TO AIR ENERGY RECOVERY EQUIPMENT
3. Drawing Sheets C500, A110 PARTIAL, A302 PARTIAL, S102, M211, P111, E111, E211
4. Pre-bid Meeting Attendance Sheet

May 7, 2020

END OF ADDENDUM NO. 2

SECTION 013513.28 – SITE SECURITY AND HEALTH REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.

1.2 SUBMITTALS

- A. List of required submittals:
 - 1. Materials Safety Data Sheets for all hazardous materials to be brought onsite.
 - 2. Schedule of proposed shutdowns, if applicable.
 - 3. Required fingerprinting for criminal background and warrants check. A list of the names of all employees who will submit fingerprints for a background check and the signed privacy documents identified below for each employee.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 ACCESS TO THE SITE

- A. The Contractor shall arrange with the Construction Representative and appropriate Facility Representatives for the controlled entry of construction personnel, materials, and equipment into the work areas.
- B. The Contractor shall establish regular working hours with the Construction Representative and the Facility. Working hour changes or overtime are to be reported and approved (48) hours ahead of time. Emergency overtime is to be reported as soon as it is evident that overtime is needed.
- C. The Contractor shall provide the name and phone number of the individual(s) who is in charge onsite and who can be contacted in case of an emergency. This individual(s) must be able to furnish names and addresses of all construction personnel upon request.
- D. All construction personnel shall be identified to the Facility Representative and, when the Facility Representative feels it is necessary, they will be issued identification cards.

3.2 FIRE PROTECTION, SAFETY, AND HEALTH CONTROLS

- A. The Contractor shall be responsible and take all necessary precautions to guard against and eliminate possible fire hazards. Onsite burning is prohibited.
- B. Store all flammable or hazardous materials in proper container located outside the buildings or offsite, if possible.
- C. Provide and maintain in good order, during construction, all fire extinguishers as required by the National Fire Protection Association. In areas of flammable liquids, asphalt, or electrical hazards, extinguishers of the 15-pound carbon dioxide type or 20-pound dry chemical type shall be provided.
- D. Fire exits, alarm systems, and sprinkler systems shall remain fully operational at all times unless written approval is received from the Construction Representative and the appropriate Facility Representative at least (24) hours in advance. The Contractor shall submit a written time schedule for any proposed shutdowns.

- E. Conduct operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent facilities. Do not obstruct streets or walks or use facilities without permission from the Facility.
- F. Construction personnel shall not exceed the Facility speed limit of 15mph unless posted otherwise.
- G. Take all necessary reasonable measures to reduce air and water pollution by any material or equipment use during construction. Keep volatile wastes in covered containers. Do not dispose of volatile wastes or oils in storm or sanitary drains.
- H. Keep project neat, orderly, and in a safe condition at all times. Immediately remove all hazardous waste. Do not allow rubbish to accumulate. Provide onsite containers for collection of rubbish and dispose of it at frequent intervals during progress of Work.
- I. For all hazardous materials brought onsite, Material Safety Data Sheets shall be on site and readily available upon request at least a day before delivery.
- J. Intoxicating beverages or narcotics shall not be brought upon the premises nor shall Contractor's personnel be under the influence of these substances while on the premises.

3.3 DISRUPTION OF UTILITIES

- A. The Contractor shall give minimum (72) hours written notice to the Construction Representative and Facility Representative before disconnecting electric, gas, water, fire protection, or sewer service to any building.
- B. The contractor shall give minimum (72) hours written notice to the Construction Representative and Facility Representative before closing any access drives and shall make temporary access available if possible. Do not obstruct streets, walks, or parking.

3.4 REQUIRED FINGERPRINTING FOR CRIMINAL BACKGROUND AND WARRANTS CHECK

- A. All employees of the Contractor are required to submit fingerprints to the Missouri State Highway Patrol to enable the Office of Administration, Division of Facilities Management, Design and Construction (FMDC) to receive state and national criminal background checks on such employees. FMDC will also check with law enforcement to determine if any of the Contractor's employees has an outstanding warrant for his or her arrest. FMDC reserves the right to prohibit any employee of the Contractor from performing work in or on the premises of any facility owned, operated, or utilized by the State of Missouri for any reason.
- B. The Contractor shall ensure all of its employees submit fingerprints to the Missouri State Highway Patrol and pay for the cost of such background checks. The Contractor shall submit to FMDC a list of the names of the Contractor's employees who will be fingerprinted and a signed Missouri Applicant Fingerprint Privacy Notice, Applicant Privacy Rights and Privacy Act Statement for each employee. All employees of the Contractor approved by FMDC to work at a State facility must obtain a contractor ID badge from FMDC prior to beginning work on-site, unless the Director of FMDC, at the Director's discretion, waives the requirement for a contractor ID badge. The Contractor and its employees must comply with the process for background checks and contractor ID badges found on FMDC's website at: <https://oa.mo.gov/fmdc-contractor-id-badges>
- C. Pursuant to section 43.540, RSMo, FMDC participates in the Missouri Rap Back and National Rap Back programs as of August 28, 2018. This means that the Missouri State Highway Patrol, Central Records Repository, and the Federal Bureau of Investigation will retain the fingerprints submitted by each of the Contractor's employees, and those fingerprints will be searched against other fingerprints on file, including latent fingerprints. While retained, an employee's fingerprints

may continue to be compared against other fingerprints submitted or retained by the Federal Bureau of Investigation, including latent fingerprints.

- D. As part of the Missouri and National Rap Back programs, FMDC will receive notification if a new arrest is reported for an employee whose fingerprints have been submitted for FMDC after August 28, 2018. If the employee is performing work on a State contract at the time of the arrest notification, FMDC will request and receive the employee's updated criminal history records. If the employee is no longer performing work on a State contract, FMDC will not obtain updated criminal records.
- E. Pursuant to section 43.540, RSMo, the Missouri State Highway Patrol will provide the results of the employee's background check directly to FMDC. FMDC may NOT release the results of a background check to the Contractor or provide the Contractor any information obtained from a background check, either verbally or in writing. FMDC will notify the Contractor only whether an employee is approved to work on State property.
- F. Each employee who submits fingerprints to the Missouri State Highway Patrol has a right to obtain a copy of the results of his or her background check. The employee may challenge the accuracy and completeness of the information contained in a background check report and obtain a determination from the Missouri State Highway Patrol and/or the FBI regarding the validity of such challenge prior to FMDC making a final decision about his or her eligibility to perform work under a State contract.
- G. The Contractor shall notify FMDC if an employee is terminated or resigns from employment with the Contractor. If the Contractor does not anticipate performing work on a State contract in the future, the Contractor may request that FMDC remove its employees from the Rap Back programs. However, if removed from the Rap Back programs, employees will be required to submit new fingerprints should the contractor be awarded another State contract.
- H. Upon award of a Contract, the Contractor should contact FMDC to determine if its employees need to provide a new background check. If a Contractor's employee has previously submitted a fingerprint background check to FMDC as part of the Missouri and National Rap Back programs, the employee may not need to submit another fingerprint search for a period of three to six years, depending upon the circumstances. The Contractor understands and agrees that FMDC may require more frequent background checks without providing any explanation to the Contractor. The fact that an additional background check is requested by FMDC does not indicate that the employee has a criminal record.

END OF SECTION 013513.28

SECTION 237200 - AIR-TO-AIR ENERGY RECOVERY EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Packaged energy recovery units.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: For air-to-air energy recovery equipment. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Wiring Diagrams: For power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Plans, elevations, and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from Installers of the items involved:
 - 1. Structural members to which equipment or suspension systems will be attached.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For air-to-air energy recovery equipment to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Filters: One set(s) of each type of filter specified.
 - 2. Wheel Belts: One set(s) of belts for each heat wheel.

1.7 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. ARI Compliance:
 - 1. Capacity ratings for air-to-air energy recovery equipment shall comply with ARI 1060, "Performance Rating of Air-to-Air Heat Exchangers for Energy Recovery Ventilation Equipment."
 - 2. Capacity ratings for air coils shall comply with ARI 410, "Forced-Circulation Air- Cooling and Air-Heating Coils."
- C. ASHRAE Compliance:
 - 1. Applicable requirements in ASHRAE 62.1, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."
 - 2. Capacity ratings for air-to-air energy recovery equipment shall comply with ASHRAE 84, "Method of Testing Air-to-Air Heat Exchangers."
- D. NRCA Compliance: Roof curbs for roof-mounted equipment shall be constructed according to recommendations of NRCA.
- E. UL Compliance:
 - 1. Packaged heat recovery ventilators shall comply with requirements in UL 1812, "Ducted Heat Recovery Ventilators"; or UL 1815, "Nonducted Heat Recovery Ventilators."
 - 2. Electric coils shall comply with requirements in UL 1995, "Heating and Cooling Equipment."

1.8 COORDINATION

- A. Coordinate layout and installation of air-to-air energy recovery equipment and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.
- B. Coordinate sizes and locations of concrete bases with actual equipment provided.
- C. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

1.9 WARRANTY

- 1. Warranty Period for Packaged Energy Recovery Units: Two years.

PART 2 - PRODUCTS

2.1 PACKAGED ENERGY RECOVERY UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Advanced Thermal Technologies.
 2. American Energy Exchange, Inc.
 3. Applied Air.
 4. Carnes Company.
 5. Engineered Air.
 6. Fairchild Industrial Products Company.
 7. Gaylord Industries, Inc.
 8. Greenheck Fan Corporation.
 9. Loren Cook Company.
 10. Mitsubishi Electric & Electronics USA, Inc.
 11. RenewAire LLC.
 12. SEMCO LLC.
 13. Trane.
 14. Wing, L. J.
- B. Housing: Manufacturer's standard construction with corrosion-protection coating and exterior finish, gasketed and calked weathertight, hinged access doors with neoprene gaskets for inspection and access to internal parts, minimum 1-inch- (25-mm-) thick thermal insulation, knockouts for electrical and piping connections, exterior drain connection, and lifting lugs.
- a. Exhaust: Gravity backdraft damper.
 - b. Supply: Gravity backdraft damper.
- C. Heat Recovery Device: Heat wheel.
- D. Supply and Exhaust Fans: Forward-curved, centrifugal fan with spring isolators flexible duct connections.
1. Motor and Drive: Direct driven.
 2. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Section 230513 "Common Motor Requirements for HVAC Equipment."
 3. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
 4. Spring isolators on each fan having **1-inch (25-mm)** static deflection.
- E. Piping and Wiring: Fabricate units with space within housing for piping and electrical conduits. Wire motors and controls so only external connections are required during installation.
1. Indoor Enclosure: NEMA 250, Type 12 enclosure contains relays, starters, and terminal strip.
 2. Include fused disconnect switches.
- F. Accessories:
1. Intake weather hood with 2-inch- (50-mm-) thick filters.
 2. Exhaust weather hood with birdscreen.
 3. Low-Leakage, Isolation Dampers: Double-skin, airfoil-blade, galvanized-steel dampers with compressible jamb seals and extruded-vinyl blade edge seals, in opposed-blade arrangement with steel operating rods rotating in stainless-steel sleeve bearings mounted in a single galvanized-steel frame, with operating rods connected with a common linkage, and electric damper operator factory wired. Leakage rate shall not exceed 5 cfm/sq. ft. (0.22 L/s per sq. m) at 1-inch wg (250 Pa) and 9 cfm/sq. ft. (0.4 L/s per sq. m) at 4-inch wg (1.0 MPa).
 4. Duct flanges.
 5. Rubber-in-shear isolators for ceiling-mounted units.
 6. Hinged access doors with quarter-turn latches.

7. Automatic, in-place, spray-wash system.
8. Weatherproofing for tilt-control system.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine casing insulation materials and filter media before air-to-air energy recovery equipment installation. Reject insulation materials and filter media that are wet, moisture damaged, or mold damaged.
- C. Examine roughing-in for electrical services to verify actual locations of connections before installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install heat wheels so supply and exhaust airstreams flow in opposite directions and rotation is away from exhaust side to purge section to supply side.
 1. Install access doors in both supply and exhaust ducts, both upstream and downstream, for access to wheel surfaces, drive motor, and seals.
 2. Install removable panels or access doors between supply and exhaust ducts on building side for bypass during startup.
 3. Access doors and panels are specified in Section 233300 "Air Duct Accessories."
- B. Install floor-mounted units on 4-inch- (100-mm-) high concrete base.
- C. Equipment Mounting:
 1. Install air-to-air energy recovery equipment on cast-in-place concrete equipment bases. Comply with requirements for equipment bases and foundations specified in Section 033000 "Cast-in-Place Concrete."
- D. Install units with clearances for service and maintenance.
- E. Install new filters at completion of equipment installation and before testing, adjusting, and balancing. Replace filters again just prior to Owner turnover.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

C. Tests and Inspections:

1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
2. Adjust seals and purge.
3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
4. Set initial temperature and humidity set points.
5. Set field-adjustable switches and circuit-breaker trip ranges as indicated.

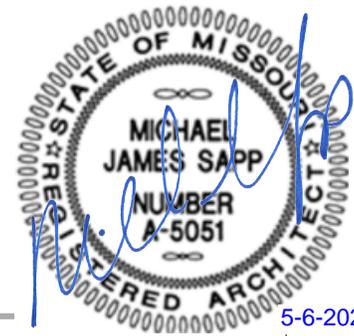
D. Air-to-air energy recovery equipment will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

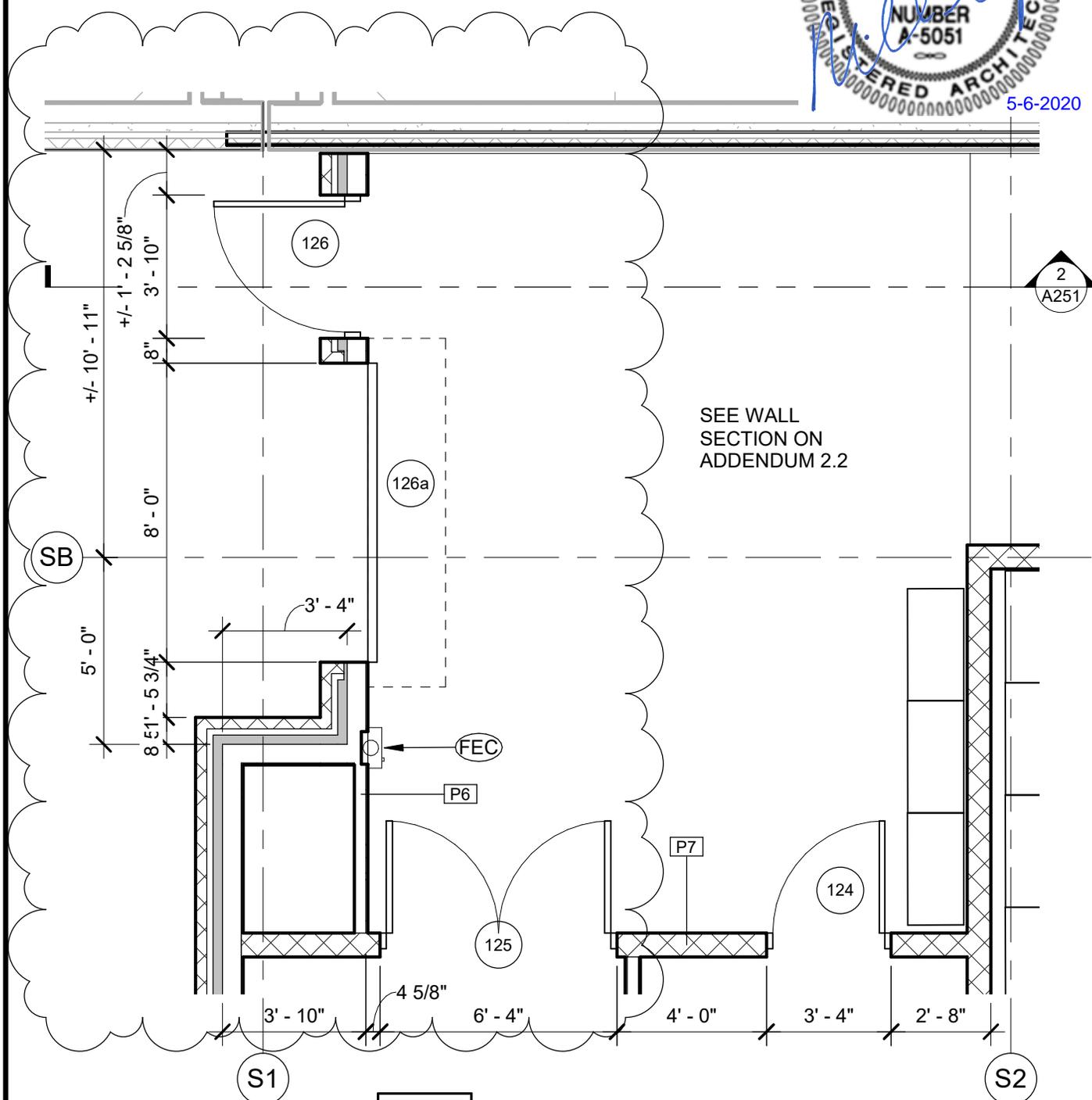
3.4 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain air-to-air energy recovery units.

END OF SECTION 237200

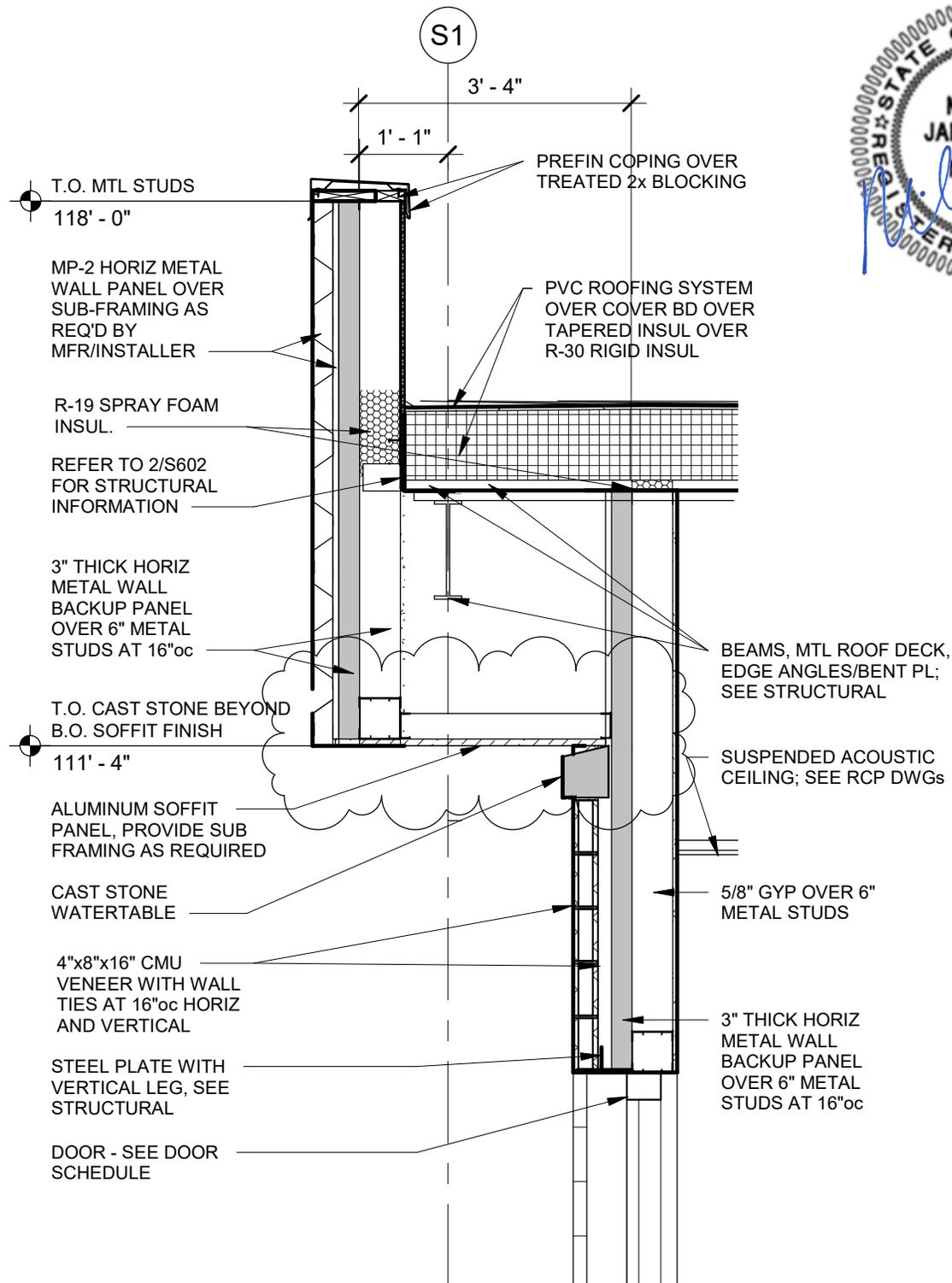


5-6-2020



1 PARTIAL FLOOR PLAN - AREA B
 1/4" = 1'-0"

<p>3790 S. Fremont Ave. Springfield, MO 65804 417.877.9600</p>	PROJECT: Missouri National Guard TASMG READINESS CENTER SITE # 9019 ASSET #136270008	PROJECT NO: #290186 DATE: 05/06/20
	ADD2.1	



3 WALL SECTION
 1/2" = 1'-0"

SHEET: A302



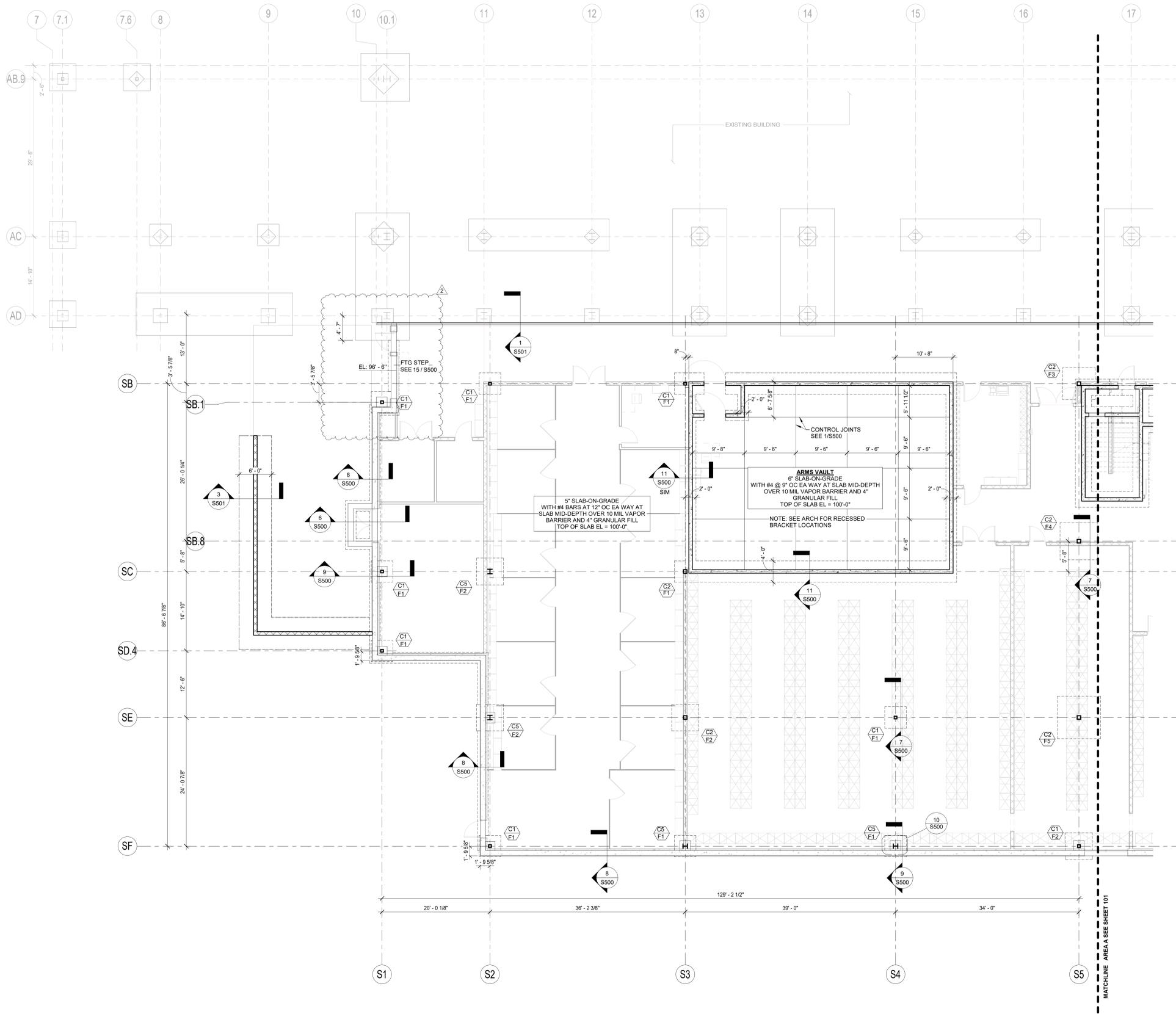
PROJECT:

Missouri National Guard
 TASMG READINESS CENTER
 SITE # **9019**
 ASSET #3136270008

PROJECT NO: #290186

DATE: 05/06/20

ADD2.2



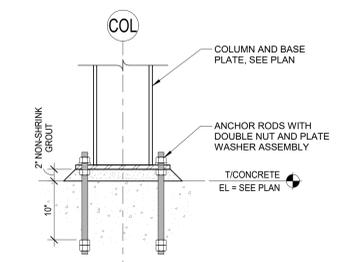
1 AREA B FOUNDATION PLAN
SCALE = 1/8" = 1'-0"

FOUNDATION PLAN NOTES

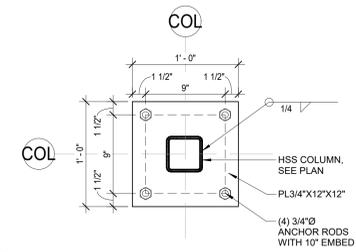
1. TOP OF SLAB EL = 100'-0"
2. TOP OF INTERIOR FOOTING ELEVATION = 99'-4" AND TOP OF EXTERIOR FOOTING ELEVATION = 98'-0" UNLESS NOTED THUS: 'X'-XX"
3. INDICATES COLUMN SIZE- SEE SCHEDULE BELOW
 INDICATES FOOTING SIZE AND REINF- SEE SCHEDULE BELOW

COLUMN SCHEDULE	
MARK	Type
C1	24 x 24 HSS6X6X1/4
C2	HSS8X8X1/4
C3	HSS8X8X1/2
C4	HSS8X8X5/8
C5	W10X45
C6	W10X60

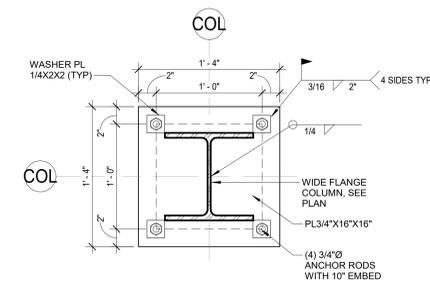
FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	THICKNESS (INCHES)	REINFORCING
F1	4'-0"	4'-0"	14"	(5) #6 BARS BOT EQUALLY SPACED EA WAY
F2	5'-0"	5'-0"	14"	(6) #6 BARS BOT EQUALLY SPACED EA WAY
F3	6'-0"	6'-0"	14"	(7) #6 BARS BOT EQUALLY SPACED EA WAY
F4	7'-0"	7'-0"	14"	(8) #6 BARS BOT EQUALLY SPACED EA WAY
F5	8'-0"	8'-0"	14"	(7) #6 BARS BOT EQUALLY SPACED EA WAY
F6	8'-0"	8'-0"	16"	(9) #6 BARS BOT EQUALLY SPACED EA WAY
F7	9'-0"	9'-0"	16"	(10) #6 BARS BOT EQUALLY SPACED EA WAY
F8	10'-0"	10'-0"	16"	(11) #6 BARS BOT EQUALLY SPACED EA WAY
F9	12'-0"	12'-0"	16"	(17) #7 BARS BOT EQUALLY SPACED EA WAY



2 TYPICAL BASE PLATE SECTION
SCALE = 1" = 1'-0"



3 TUBE COLUMN BASEPLATE
SCALE = 1 1/2" = 1'-0"



4 WIDE FLANGE COLUMN BASEPLATE
SCALE = 1 1/2" = 1'-0"



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Chris Philby, Engineer MO PE-2019023464

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CENTER

AVCRAD SITE
1107TH THEATER AVIATION
SUSTAINMENT MAINTENANCE
GROUP

MISSOURI NATIONAL GUARD
SPRINGFIELD, MISSOURI

NATIONAL GUARD BUREAU PROJECT #290186
MISSOURI NATIONAL GUARD PROJECT #11809-01
SITE #0019
ASSET #9136270008
DRAWN BY: C/P/ALO
CHECKED BY: ARC
DESIGNED BY: KPK

REVISION: addendum #2
DATE: 05/06/2020
REVISION: DATE:
REVISION: DATE:
ISSUED DATE: 26 FEBRUARY 2020

SHEET TITLE:
AREA B - FOUNDATION PLAN

SHEET NUMBER:
S102

64 OF 1131 SHEETS

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SHEET KEYNOTES

- CONNECT HEATING HOT WATER AND CHILLED WATER TO SYSTEMS FROM ADJACENT BUILDING.
- FINAL CONNECTIONS TO HYDRONIC COILS NOT SHOWN FOR CLARITY. SEE VAV COIL CONNECTION DETAIL FOR FITTINGS AND ACCESSORIES NECESSARY.
- HEATING HOT WATER LINES TO DOMESTIC HOT WATER HEATERS SEE DETAIL FOR CONNECTION SIZE AND NECESSARY FITTINGS AND ACCESSORIES.



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Cory Wilson, Engineer MO PE-201009876

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MISSOURI NATIONAL GUARD PROJECT #11809-01
SITE #0019
ASSET #B136270008
DRAWN BY: AL
CHECKED BY: MS
DESIGNED BY: AL

REVISION: Addendum 2
DATE: 05/06/2020
REVISION: DATE:
REVISION: DATE:
ISSUED DATE: 26 February 2020

SHEET TITLE:

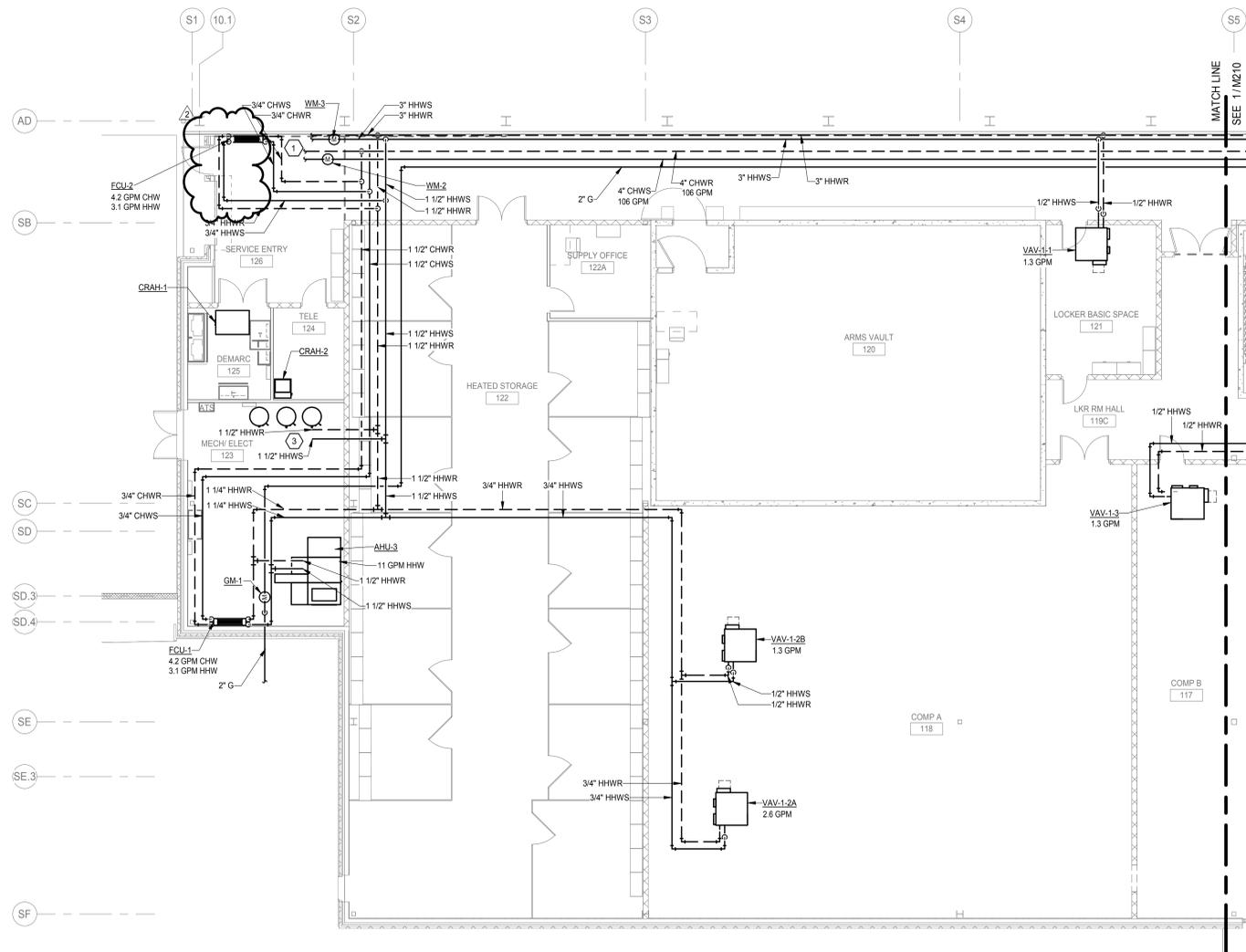
FIRST FLOOR MECHANICAL
PIPING PLAN - AREA B

SHEET NUMBER:

M211

83 OF 131 SHEETS

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1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA B
1/8" = 1'-0"





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MISSOURI NATIONAL GUARD PROJECT #11809-01
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DATE: 05/06/2020

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ISSUED DATE: 26 February 2020

SHEET TITLE:

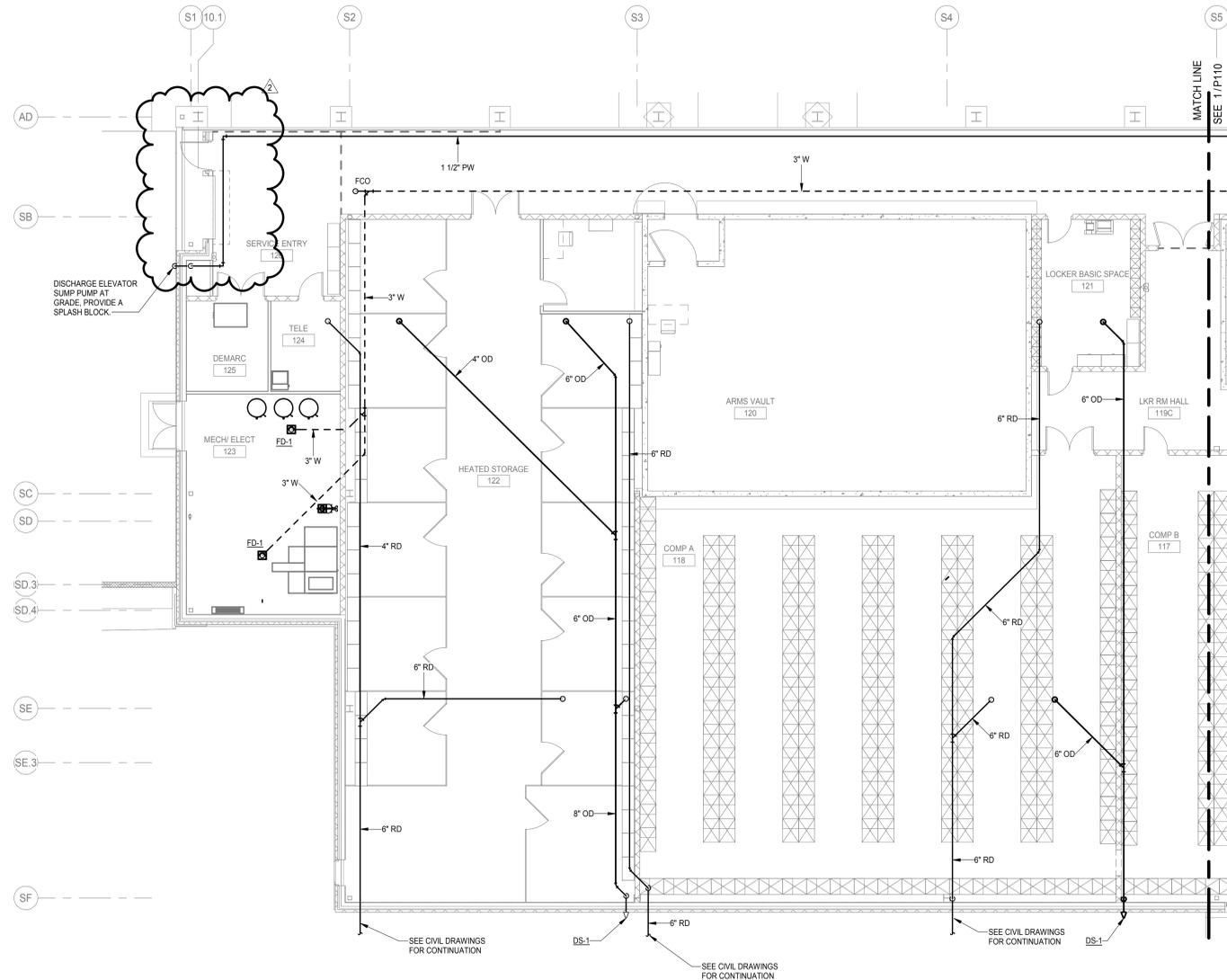
FIRST FLOOR WASTE & VENT
PLUMBING PLAN - AREA B

SHEET NUMBER:

P111

91 OF 131 SHEETS

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1 FIRST FLOOR WASTE & VENT PLUMBING PLAN - AREA B
1/8" = 1'-0"



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MISSOURI NATIONAL GUARD PROJECT #11809-01
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DRAWN BY: SH
CHECKED BY: TD
DESIGNED BY: SH

REVISION: Addendum 2
DATE: 05/06/2020
REVISION: DATE:
REVISION: DATE:
ISSUED DATE: 26 February 2020

SHEET TITLE:
FIRST FLOOR POWER PLAN -
AREA B

SHEET NUMBER:
E211

114 OF 131 SHEETS

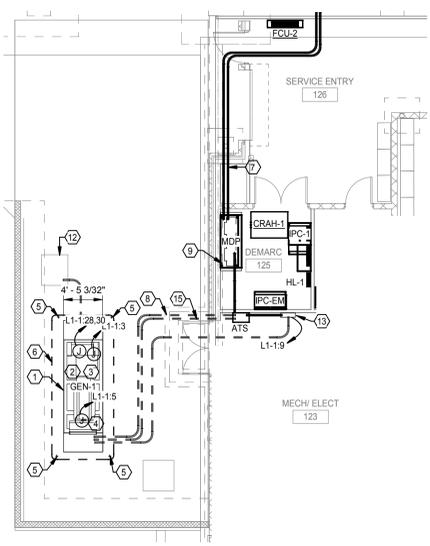
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GENERAL SHEET NOTES

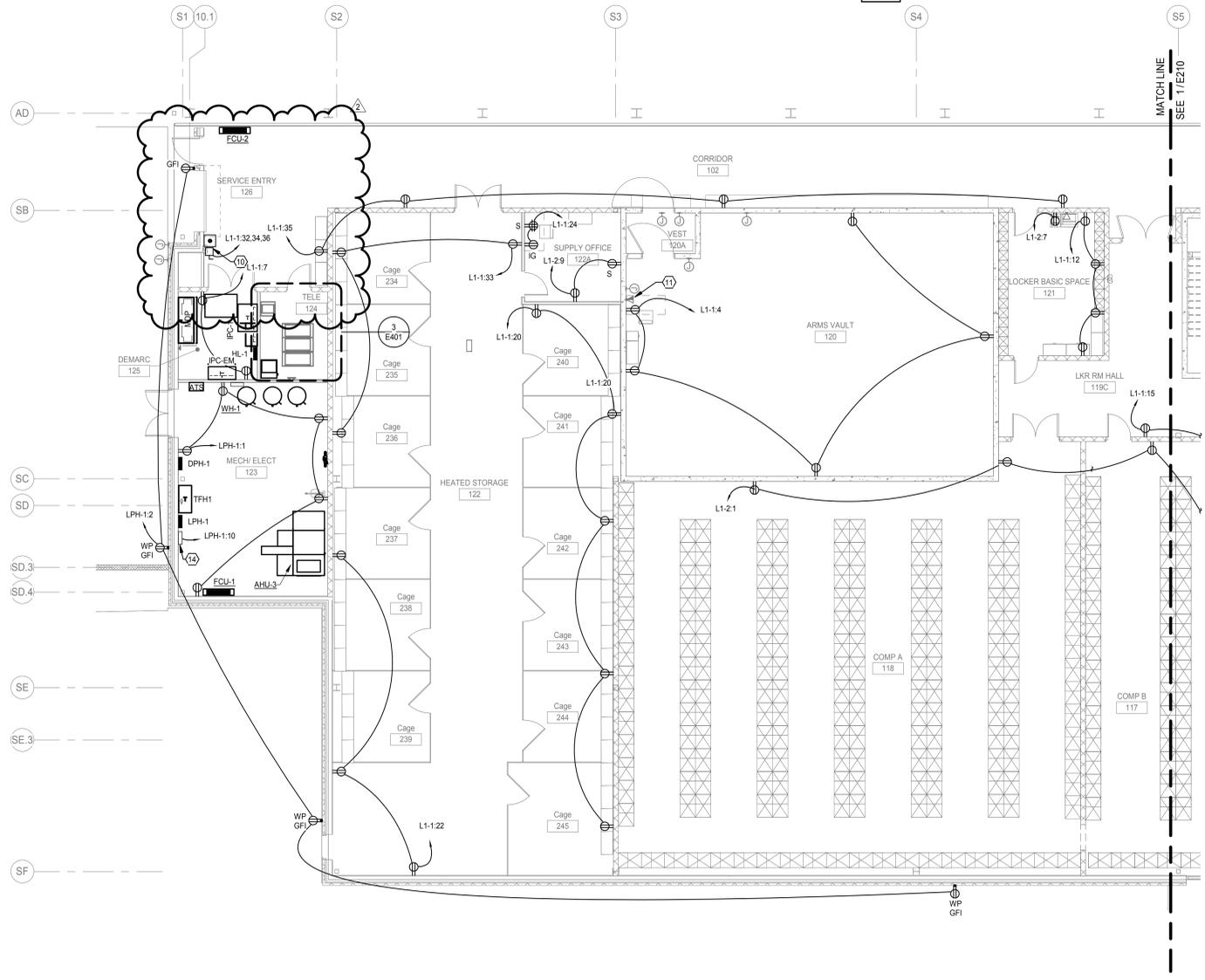
- A. ALL RECEPTACLES INDICATED WITH A "S" ARE SWITCHED RECEPTACLES AND ARE CONTROLLED BY THE OCCUPANCY SENSOR DEVICE IN THE ROOM.
- B. THE NEUTRAL OF MULTI-WIRE BRANCH CIRCUITS SHOULD BE SIZED AT 200% OF THE PHASE CONDUCTORS. THE OVERSIZED NEUTRAL WILL OCCUR AT MULTI-WIRE BRANCH CIRCUITS WHICH MAY HAVE COMPUTER EQUIPMENT CONNECTED.
- C. REFER TO SPECIAL SYSTEMS PLANS AND EQUIPMENT CONNECTION SCHEDULE FOR EQUIPMENT POWER CONNECTIONS AND ADDITIONAL INFORMATION.

SHEET KEYNOTES

- 1. PROPOSED LOCATION OF NEW NATURAL GAS GENERATOR ON HOUSEKEEPING PAD. REFER TO ONE-LINE AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 2. PROVIDE 208V CIRCUIT FOR GENERATOR WATER JACKET HEATER.
- 3. PROVIDE 120V CIRCUIT FOR GENERATOR BATTERY CHARGER.
- 4. PROVIDE 120V CIRCUIT FOR GENERATOR LIGHTING AND RECEPTACLES.
- 5. INSTALL 1/2" 3/4" COPPER CLAD GROUND ROD FOR GENERATOR GROUND SYSTEM PER NEC.
- 6. INSTALL COPPER GROUND RING AROUND NEW GENERATOR.
- 7. FEEDER ROUTED ABOVE ACCESSIBLE CEILING FROM EXISTING BUILDING DISTRIBUTION TO NEW MDP. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION. FIELD VERIFY EXACT ROUTING IN BUILDING.
- 8. FEEDER ROUTED BELOW GRADE FROM GENERATOR TO ATS.
- 9. FEEDER ROUTED FROM DISTRIBUTION SECTION OF NEW MDP TO ATS.
- 10. PROVIDE POWER TO COOL DOOR. ROUTE CIRCUIT THROUGH RAISE/LOWER PUSH BUTTON.
- 11. OUTLETS IN VAULT SHALL BE SURFACE MOUNTED WITH SURFACE MOUNTED RACEWAY. (TYP.)
- 12. LOAD BANK TAP BOX IN NEMA 3R ENCLOSURE ON HOUSEKEEPING PAD AT THIS LOCATION FOR GENERATOR LOAD BANK TESTING.
- 13. PROVIDE 120V POWER FOR GENERATOR ANNUNCIATOR PANEL. ROUTE (1)-1" CONDUIT BELOW GRADE FROM GENERATOR ANNUNCIATOR PANEL TO GENERATOR FOR COMMUNICATION CABLE.
- 14. 120V POWER FOR HVAC CONTROL PANEL.
- 15. (1) - 1" CONDUIT BELOW GRADE FROM GENERATOR TO ATS.



2 ENLARGED SITE PLAN
1/8" = 1'-0"



1 FIRST FLOOR POWER PLAN - AREA B
1/8" = 1'-0"

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ATTENDANCE RECORD

**T1809-01: Missouri TASMG Readiness Center
Olsson Project No. 018-2772**

**April 30, 2020
PRE-BID MEETING**

**10:00 AM
Go-to Meeting**

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Name of Attendees	Company Representing	Email Address
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