

**PROJECT:** *(Name and Address)*

VA Hot Springs DOM Renovation Building 8  
Hot Springs, South Dakota

**ADDENDUM NO.:** 01**DATE ISSUED:** 08-22-2025**BIDS DUE:** 09-03-2025**ARCHITECT'S PROJECT NO:** 211921

The following changes or modifications are to be incorporated into and become a part of the Contract Documents. The Bidder shall note receipt and make acknowledgement of this Addendum on the Bid Proposal, incorporating these provisions in the bid.

**PROJECT MANUAL:**

ITEM NO: 1: Spec Section 14 24 00 New Hydraulic Elevator revised.

ITEM NO: 2: Spec Section 23 07 11 HVAC and Boiler Plant Insulation revised.

**DRAWINGS:**

- ITEM NO: 1: GI100 – Life Safety Plan – Basement
- a) Added door in basement corridor.
  - b) Split basement corridor into two separate rooms and adjusted naming/numbering accordingly.
  - c) Updated background to show a new exterior door in the basement.
  - d) Updated occupant egress loads per change to basement corridor(s).
- ITEM NO: 2: GI101 – Life Safety Plan – 1<sup>st</sup> Floor
- a) Updated occupant egress loads per change to basement corridor(s).
- ITEM NO: 3: GI121 – Architectural Site Plans
- a) Updated keynote verbiage (1.02).
- ITEM NO: 4: HA100 – Hazardous Abatement Plan – Basement
- a) Added missing keynote tags to plan (2.91).
- ITEM NO: 5: HA102 – Hazardous Abatement Plan – 2<sup>nd</sup> Floor
- a) Added missing keynote tags to plan (2.91)
- ITEM NO: 6: AD100 – Demolition Plan – Basement
- a) Updated background to show the full removal of the existing exterior door in the basement.

- b) Added keynote to existing exterior door in the basement (2.03).

ITEM NO: 7: AD110 – Demolition RCP – Basement

- a) Updated background to show the full removal of the existing door in the basement.

ITEM NO: 8: AE100 – Architectural Floor Plan – Basement

- a) Updated background to show a new exterior door in the basement.
- b) Split basement corridor into two separate rooms and adjusted naming/numbering accordingly.
- c) Added door in basement corridor.
- d) Added door tag to new corridor door (B00A).
- e) Added door tag to new exterior door (B14A).

ITEM NO: 9: AE104 – Architectural Dimension Plan – Basement

- a) Updated background to show a new exterior door in the basement.
- b) Split basement corridor into two separate rooms and adjusted naming/numbering accordingly.
- c) Added additional wall tags around new corridor door.

ITEM NO: 10: AE110 – Reflected Ceiling Plan – Basement

- a) Updated background to show a new exterior door in the basement.
- b) Updated background to show a new corridor door in the basement.
- c) Split basement corridor into two separate rooms and adjusted naming/numbering accordingly.

ITEM NO: 11: AE301 – Building Sections

- a) Updated background to show a new exterior door in the basement.
- b) Added keynote to new exterior door in basement (8.51).

ITEM NO: 12: AE601 – Schedules

- a) Door B00A added to door schedule.
- b) Door B14A added to door schedule.
- c) Door hardware sets have been added to the door schedule.
- d) Door remarks have been updated in the door schedule.
- e) Gates are now called out to have hardware set 30.
- f) Door Frame Type Legend notes have been updated to ensure coordination w/ Access Control Contractor.
- g) Door Type Legend notes have been updated to ensure coordination w/ Access Control Contractor.

ITEM NO: 13: AI100 – Finish and Signage Plan – Basement

- a) Updated background to show a new exterior door in the basement.
- b) Updated background to show a new corridor door in the basement.

- c) Split basement corridor into two separate rooms and adjusted naming/numbering accordingly.
- d) Added room sign adjacent to new corridor door (B00A).

ITEM NO: 14: AI103 – Finish and Signage Schedules

- a) Room finishes schedule revised at basement corridor.

ITEM NO: 15: AI801 – Elevator Cab Details

- a) Added note to Elevator Cab Interior Elevation (D1/AI801)
- b) Elevator Control Panel to include integrated card reader.

#### **ATTACHMENTS:**

- Spec Section 14 24 00 New Hydraulic Elevator
- Spec Section 23 07 11 HVAC and Boiler Plant Insulation
- GI100 – Life Safety Plan – Basement
- GI101 – Life Safety Plan – 1<sup>st</sup> Floor
- AD100 – Demolition Plan – Basement
- AD110 – Demolition RCP – Basement
- AE100 – Architectural Floor Plan – Basement
- AE104 – Architectural Dimension Plan – Basement
- AE110 – Reflected Ceiling Plan – Basement
- AE301 – Building Sections
- AE601 – Schedules
- AI100 – Finish and Signage Plan – Basement
- AI103 – Finish and Signage Schedules
- AI801 – Elevator Cab Details
- MP – 103 – Enlarged Piping Plans
- MJ – 101 – Symbols & Details
- MJ – 102 – Schedules
- MJ – 105 – Mechanical Control Schematics
- EP – 201 – R1 – Basement Power Plans
- EP – 202 – R1 – First Floor Power Plan
- EP – 203 – R1 – Second Floor & Attic Power Plans
- ES – 301 – R1 – Basement Signal Plan
- ES – 302 – R1 – First Floor Signal Plan
- ES – 303 – R1 – Second Floor & Attic Signal Plans

- EJ – 402 – R1 – Electrical Details
- EJ – 403 – R1 – Electrical Schedules
- EJ – 404 – R1 – Electrical Schedules

END OF ADDENDUM

**Date:** 8/22/2025**Project:** Dom Renovation for Semiprivate Rooms**To:** All Plan Holders**Project #:** VA# 568-20-208, WPE# BR21039**From:** David Dowling/Michael Heinrich, Mike Sigman**Project Location:** Hot Springs, South Dakota**Addendum Number:** #001

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**To:** All prime contract bidders and all others to whom Drawings and Specifications have been issued by the Engineer. Acknowledge receipt of the Addendum by inserting its number and date on the Bid Form. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents. It modifies them as follows:

**Specifications**

## Section 22 0523

1. Add the following paragraph under Section 22 0523:

## 2.12 AUTOMATIC BALANCING VALVES

- A. Construction: Brass or bronze body with union on inlet and outlet, pressure compensating, temperature and pressure test plug on inlet and outlet with blowdown/backflush drain. All valves shall have access capability to allow field exchange of internal components without removing valve body from piping. Valves shall have 2-32 psi operating range. Valve shall be lead free.
- B. Calibration: Control flow within 5 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, maximum minimum pressure 3 psi.
- C. Control Mechanism: Stainless steel or nickel plated brass piston or regulator cup, operating against stainless steel helical or wave formed spring.
- D. Accessories: Flow control valve shall be in a union (or flanged)/flow control device/ball valve configuration.
- E. All valves shall be permanently marked to show direction of flow, flow rate and pressure range. Provide chain hung tags to indicate device served, service medium and flow rate.
- F. Flow for each balancing valve shall be 0.33 GPM.

## Section 23 0711

1. Include the attached specification section 23 0711 HVAC and Boiler Plant Insulation.

## Section 23 09 23:

1. Under 1.1F, Revise to indicate: This facility's existing direct-digital control (DDC) system is manufactured by Schneider Electric, with controls by Temperature Technology Inc.

**Drawings**

## Sheet FX-101

1. Fire Sprinkler Plan Note B to say the following: FIRE SPRINKLER PIPING WITHIN THE SCOPE OF WORK BOUNDARY SHALL BE REMOVED AND REPLACED TO PROVIDE COVERAGE FOR NEW ROOMS AND SPACES, UTILIZING THE EXISTING FIRE SERVICE ENTRANCE. FIRE SPRINKLER PIPING CROSSING THIS BOUNDARY SHALL BE MODIFIED ACCORDINGLY TO MAINTAIN EXISTING FIRE PROTECTION COVERAGE.

## Sheet PP-101

1. Revise the title of the first group of notes to say the following: MISCELLANEOUS WASTE AND VENT NOTES.

## Sheet PP-102

1. Revise the title of the first group of notes to say the following: MISCELLANEOUS WASTE AND VENT NOTES.

## Sheet PP-103

1. Revise the title of the first group of notes to say the following: MISCELLANEOUS WASTE AND VENT NOTES.

## Sheet MP-101

1. Add enlarged view tags 1 / MP-103 and 2 / MP-103 associated with room Mechanical B10.

## Sheet MP-103

1. Add the attached sheet MP-103.

## Sheet MH-101

1. Revise Mechanical Specific Note M225 to say the following: BAS TO PROVIDE ASTRONOMICAL CONTROL OF LIGHTING CONTACTOR WITHIN THIS SPACE. COORDINATE INSTALL WITH DIVISION 26 CONTRACTOR.

## Sheet MJ-101

1. Revise the Sequence of Operation to indicate that FC 2-07 and FC 2-08 shall have 3-way control valves for the heating water coils.
2. Remove the control schematics from Sheet MJ-101. Add typical pad mount mechanical equipment detail, as shown on the attached sheet MJ-101.

## Sheet MJ-102

1. Revise the AIR COOLED CHILLER SCHEDULE, as shown on the attached sheet MJ-102.
2. Revise the PUMP SCHEDULE, as shown on the attached sheet MJ-102.
3. Revise the EXPANSION TANK SCHEDULE, as shown on the attached sheet MJ-102.
4. Revise the HYDRONIC UNIT HEATER SCHEDULE, as shown on the attached sheet MJ-102.

## Sheet MJ-105

1. Add the attached sheet MJ-105.

## Sheet EP-201

1. Modified specific note E212 as shown on the attached revised sheet EP-201-R1.
2. Added power to two existing condensate return pumps CR-E1A and CR-E1B that are to remain and need to be reconnected. Also added associated note E215 as shown on the attached revised sheet EP-201-R1.

## Sheet EP-202

1. Modified specific note E213 as shown on the attached revised sheet EP-202-R1.
2. Added specific note E216 at door X1B as shown on the attached revised sheet EP-202-R1.
3. Removed ADA Operator from door X1B as shown on the attached revised sheet EP-202-R1.

## Sheet EP-203

1. Modified specific note E213 as shown on the attached revised sheet EP-203-R1.
2. Added specific note E216 at door X2B as shown on the attached revised sheet EP-203-R1.
3. Removed ADA Operator from door X2B as shown on the attached revised sheet EP-203-R1.

## Sheet ES-301

1. Modified specific notes E304, E305, E320 and added specific notes E321 and E322 as shown on the attached revised sheet ES-301-R1.
2. Modified note used at door B14 as shown on the attached revised sheet ES-301-R1.
3. Added access control items to new door B00A as shown on the attached revised sheet ES-301-R1.

## Sheet ES-302

1. Modified specific notes E304, E305, E311 and E320 as shown on the attached revised sheet ES-302-R1.
2. Modified note used at door 100 as shown on the attached revised sheet ES-302-R1.
3. Added access control items to door 101 as shown on the attached revised sheet ES-302-R1.
4. Deleted card reader and door position switches at door X1A and added note E323 to this door as shown on the attached revised sheet ES-302-R1.
5. Deleted card reader; door position switches; and ADA operator controls at door X1A and added note E323 to this door as shown on the attached revised sheet ES-302-R1.
6. Added note E304 to door 105A as shown on the attached revised sheet ES-302-R1.
7. Deleted access control from exterior doors at Lounge 118 and at doors leading exterior to the porch as shown on the attached revised sheet ES-302-R1.

## Sheet ES-303

1. Modified specific notes E304, E305, E311 and E320 as shown on the attached revised sheet ES-303-R1.
2. Modified the note used at door 200 as shown on the attached revised sheet ES-303-R1.
3. Added new note E323 to doors X2A and X2B as shown on the attached revised sheet ES-303-R1.
4. Added note E304 to door 205A as shown on the attached revised sheet ES-303-R1.
5. Deleted access control from exterior doors at Lounge 218 and at doors leading exterior to the porch as shown on the attached revised sheet ES-303-R1.

## Sheet EJ-402

1. Changed the detail name for detail 1 as shown on the attached revised sheet EJ-402-R1.
2. Modified the names of the three existing Detail 4 Door Details as shown on the attached revised sheet EJ-402-R1.
3. Added Door Numbers to applicable Access Control detail to be used.

## Sheet EJ-403

1. Changed HP designations in Starter Disconnect Schedule for CP-1A; CP-1B; CP-2A and CP-2B as shown on the attached revised sheet EJ-403-R1.
2. Added condensate pumps CR-E1A and CR-E1B to Starter Disconnect Schedule as shown on the attached revised sheet EJ-403-R1.

## Sheet EJ-404

1. Changed Panelboard 8EQB1 from 42 circuit panelboard to 54 circuit panelboard as shown on the attached revised sheet EJ-404-R1.
2. Added connections for condensate pumps CR-E1A and CR-E1B to Panelboard 8EQB1 as shown on the attached revised sheet EJ-404-R1.
3. Changed loads, breakers and conductor sizes in Panelboard 8EQB1 for change in HP related to CP-1A; CP-1B; CP-2A and CP-2B as shown on the attached revised sheet EJ-404-R1.
4. Changed Panelboard 8N11 circuit 24 from feeding ADA Operator to a spare.
5. Changed Panelboard 8N21 circuit 28 from feeding ADA Operator to a spare.

**END OF DOCUMENT – DLD/MRS**

## Attachments

Section 230711

Sheets MP-103; MJ-101; MJ-102; MJ-105; EP-201-R1; EP-202-R1; EP-203-R1; ES-301-R1; ES-302-R1; ES-303-R1; EJ-402-R1; EJ-403-R1; EJ-404-R1

**SECTION 14 24 00**  
**NEW HYDRAULIC ELEVATOR**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies the engineering, furnishing, and installation of the complete hydraulic elevator system as described herein and as indicated on the contract drawings.
- B. Items listed in the singular apply to each elevator in this specification except where noted.
- C. Passenger Elevator P\_\_ shall be oil hydraulic, machine room-less microprocessor control system, and power-operated car and hoistway doors. Elevator shall have Class "A" loading.

| ELEVATOR SCHEDULE          |                                                                       |
|----------------------------|-----------------------------------------------------------------------|
| Elevator Number            | B8-P1                                                                 |
| Overall Platform Size      |                                                                       |
| Clear Inside Platform      | Platform is to be 42.2sq ft. (min)<br>Provide largest to fit in shaft |
| Rated Load - kg (lb)       | 4000 lbs min                                                          |
| Contract Speed - m/s (fpm) | 80 fpm                                                                |
| Total Travel - m (ft)      | 24' 9 ½"                                                              |
| Floors Served              | 3                                                                     |
| Number of Openings         | 5                                                                     |
| Entrance Type & Size       | Two Speed (Left Hand, Right Hand)                                     |
| Plunger Size               | By Manufacture                                                        |

**1.2 RELATED WORK**

- A. Section 01 33 23 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21) and, SPECIAL NOTES (VAAR 852.236-91), in GENERAL CONDITIONS.
- B. Section 07 84 00, FIRESTOPPING: Sealing around penetrations to maintain the integrity of fire-rated construction.
- C. Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS: Requirements for seismic restraint of non-structural components.

- D. Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: General electrical requirements that are common to more than one section.
- E. Section 26 05 19, LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (600 VOLTS AND BELOW): Low Voltage power and lighting wiring.
- F. Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS: Requirements for personnel safety and to provide a low impedance path for possible ground fault currents.
- G. Section 26 05 33, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS: Conduits for cables and wiring.
- H. Section 26 05 73, OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY: Requirements for installing the over-current protective devices to ensure proper equipment and personnel protection.
- I. Section 26 22 00, LOW-VOLTAGE TRANSFORMERS: Low voltage transformers.
- J. Section 26 24 16, PANELBOARDS: Low voltage panelboards.
- K. Section 26 43 13, TRANSIENT-VOLTAGE SURGE SUPPRESSION: Surge suppressors installed in panelboards.
- L. Section 26 51 00, INTERIOR LIGHTING: Fixture and ballast type for interior lighting.

### **1.3 QUALIFICATIONS**

- A. Approval by the Contracting Officer is required for products and services of proposed manufacturers, suppliers, installers, and shall be contingent upon submission of certificates by the Contractor stating the following:
  - 1. Elevator contractor is currently and regularly engaged in the installation of elevator equipment as one of his principal products.
  - 2. Elevator contractor shall have five (5) years of successful experience, trained supervisory personnel, and facilities to install elevator equipment specified herein.
  - 3. Elevator Mechanic (Installer) shall have passed a Mechanic Examination approved by the U.S. Department of Labor and have technical qualifications of at least five years of experience in the elevator industry or 10,000 hours of field experience working in the elevator industry with technical update training. Apprentices shall be actively pursuing Certified Elevator Mechanic status. Certification shall be submitted for all workers employed in this capacity.
- B. Welding at the project site shall be performed by certified welders who have previously qualified by test as prescribed in American Welding

Society Publications AWS D1.1 to perform the type of work required. Certificates shall be submitted for all workers employed in this capacity. A welding or hot work permit is required for each day and shall be obtained from the VAMC safety department. Request permit one day in advance.

- C. Electrical work shall be performed by a Licensed Master Electrician and Licensed Journeymen Electricians as requirements by NEC. Certificates shall be submitted for all workers employed in this capacity.
- D. Approval will not be given to elevator contractors and manufacturers who have established on prior projects, either government, municipal, or commercial, a record for unsatisfactory elevator installations, have failed to complete awarded contracts within the contract period, and do not have the requisite record of satisfactory performing elevator installations of similar type and magnitude.
- E. Approval of Elevator Contractor's equipment will be contingent upon their providing factory training, engineering and technical support, including all manuals, wiring diagrams, and tools necessary for adjusting, maintenance, repair, and testing of equipment to the VA for use by the VA's designated Elevator Maintenance Service Provider. Identifying an elevator maintenance service provider that shall render services within two hours of receipt of notification, together with certification that the quantity and quality of replacement parts stock is sufficient to warranty continued operation of the elevator installation.
- F. Equipment within a group of hydraulic elevators shall be the product of the same manufacturer.
- G. The Contractor shall provide and install safety devices that have been subjected to tests witnessed and certified by an independent professional testing laboratory that is not a subsidiary of the firm that manufactures supplies or installs the equipment.

#### **1.4 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification. Elevator installation shall meet the requirements of the latest editions published and adopted by the United States Department of Veterans Affairs on the date contract is signed.
- B. Federal Specifications (Fed. Spec.):
  - J-C-30B - Cable and Wire, Electrical (Power, Fixed Installation)
  - J-C-580 - Cord, Flexible, and Wire, Fixture

- W-S-610 - Splice Connectors
- W-C-596F - Connector, Plug, Electrical; Connector, Receptacle, Electrical
- W-F-406E - Fittings for Cable, Power, Electrical and Conduit, Metal, Flexible
- HH-I-558C - Insulation, Blankets, Thermal (Mineral Fiber, Industrial Type)
- W-F-408E - Fittings for Conduit, Metal, Rigid (Thick-Wall and Thin-wall EMT Type)
- RR-W-410 - Wire Rope and Strand
- TT-E-489J - Enamel, Alkyd, Gloss, Low VOC Content
- QQ-S-766 - Steel, Stainless and Heat Resisting, Alloys, Plate, Sheet and Strip
- C. American Society of Mechanical Engineers (ASME):
  - A17.1 - Safety Code for Elevators and Escalators
  - A17.2 - Inspectors Manual for Electric Elevators and Escalators
- D. National Fire Protection Association:
  - NFPA 13 - Standard for the Installation of Sprinkler Systems
  - NFPA 70 - National Electrical Code (NEC)
  - NFPA 72 - National Fire Alarm and Signaling Code
  - NFPA 101 - Life Safety Code
  - NFPA 252 - Fire Test of Door Assemblies
- E. International Building Code (IBC)
- F. American Society for Testing and Materials (ASTM):
  - A1008/A1008M-09 - Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High Strength Low-Alloy with Improved Formability
  - E1042-02 - Acoustically Absorptive Materials Applied by Trowel or Spray
- G. Manufacturer's Standardization Society of the Valve and Fittings Industry (MSS):
  - SP-58 - Pipe Hangers and Supports
- H. Society of Automotive Engineers, Inc. (SAE):
  - J517-91 - Hydraulic Hose, Standard
- I. Gages: For Sheet and Plate: U.S. Standard (USS)
  - For Wires: American Wire Gauge (AWG)
- J. American Welding Society (AWS):
  - D1.1 - Structured Welding Code - Steel
- K. National Electrical Manufacturers Association (NEMA):

LD-3 - High-Pressure Decorative Laminates

L. Underwriter's Laboratories (UL):

486A - Safety Wire Connectors for Copper Conductors

797 - Safety Electrical Metallic Tubing

M. Institute of Electrical and Electronic Engineers (IEEE)

N. Regulatory Standards:

VA Barrier Free Design Handbook H-18-13

VA Seismic Design Manual H-18-8

### 1.5 SUBMITTALS

A. Submit in accordance with Specification Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES.

B. Before execution of work, furnish information to evidence full compliance with contract requirements for proposed items. Such information shall include, as required: Manufacturer's Name, Trade Names, Model or Catalog Number, Nameplate Data (size, capacity, and rating) and corresponding specification reference (Federal or project specification number and paragraph). All submitted drawings and related elevator material shall be forwarded to the Contracting Officer.

C. Shop Drawings:

1. Complete scaled and dimensioned layout in plan and section view showing the arrangement of equipment and all details of each elevator unit specified including:

a. Complete layout showing location of storage tank/pump assembly, controller, piping layout, outside diameter of cylinder/plunger assembly, size of car platform, car frame members, and support assembly.

b. Car, guide rails, brackets, buffers, and other components located in hoistway.

c. Rail bracket spacing and maximum vertical forces on guide rails in accordance with H-18-8 for Seismic Risk Zone 2 or greater.

d. Reaction at points of support and buffer impact loads.

e. Weight of principal parts.

f. Top and bottom clearances and over travel of the car.

g. Location of main line switch/shunt trip circuit breaker, switchboard panel, light switch, and feeder extension points in the machine room.

2. Drawings of hoistway entrances and doors showing details of construction and method of fastening to the structural members of the building.
  - a. If drywall construction is used to enclose hoistway, submit details of interface fastenings between entrance frames and drywall.
  - b. Sill details including sill support.
- D. Samples:
  1. One each of stainless steel, 75 mm x 125 mm (3 in. x 5 in.).
  2. One each of baked enamel, 75 mm x 125 mm (3 in. x 5 in.).
  3. One each of color floor covering.
  4. One each of protection pads, 75 mm x 125 mm (3 in. x 5 in.) if used.
  5. One each car and hoistway Braille plate sample.
  6. One each car and hall button sample.
  7. One each car and hall lantern/position indicator sample.
  8. One each wall and ceiling material finish sample.
  9. One each car lighting sample.
- E. Name of manufacturer, type or style designation, and applicable data of the following equipment shall be shown on the elevator layouts:
  1. Storage tank/pump assembly.
  2. Pump and motor, HP and RPM rating, Voltage, Starting and Full Load Ampere, Number of phases, and Gallons per minute.
  3. Controller.
  4. Starters and Overload Current Protection Devices.
  5. Car Safety Device; Rupture Valve and Manual Shut Off Valves.
  6. Electric Door Operator; HP, RPM, Voltage, and Ampere rating of motor.
  7. Hoistway Door Interlocks.
  8. Car Buffers; maximum and minimum rated load, maximum rated striking speed and stroke.
  9. Cab Ventilation Unit; HP rating and CFM rating.
- F. Complete construction drawings of elevator car enclosure, showing dimensioned details of construction, fastenings to platform, car lighting, ventilation, ceiling framing, top exits, and location of car equipment.
- G. Complete dimensioned detail of vibration isolating foundations for storage tank/pump assembly.
- H. Dimensioned drawings showing details of:

1. All signal and operating fixtures.
  2. Car slide guides/roller guides.
  3. Hoistway door tracks, hangers, and sills.
  4. Door operator, infrared curtain units.
- I. Cut sheets or drawings showing details of controllers and supervisory panels.
  - J. Furnish certificates as required under: Paragraph "QUALIFICATIONS".

#### **1.6 WIRING DIAGRAMS**

- A. Provide three complete sets of paper and one electronic set of field wiring and straight-line wiring diagrams showing all electrical circuits in the hoistway, machine room and fixtures. Install one set coated with an approved plastic sealer and mounted in the elevator machine room as directed by the Resident Engineer.
- B. In the event field modifications are necessary during installation, diagrams shall be revised to include all corrections made prior to and during the final inspection. Corrected diagrams shall be delivered to the Resident Engineer within thirty (30) days of final acceptance.
- C. Provide the following information relating to the specific type of microprocessor controls installed:
  1. Owner's information manual, containing job specific data on major components, maintenance, and adjustment.
  2. System logic description.
  3. Complete wiring diagrams needed for field troubleshooting, adjustment, repair and replacement of components. Diagrams shall be base diagrams, containing all changes and additions made to the equipment during the design and construction period.
  4. Changes made during the warranty period shall be noted on the drawings in adequate time to have the finalized drawings reproduced for mounting in the machine room no later than six months prior to the expiration of the warranty period.

#### **1.7 TOOL CABINET**

- A. Provide a metal parts/tool cabinet, having two shelves and hinged doors. Cabinet size shall be 1200 mm (48 in.) high, 750 mm (30 in.) wide, and 450 mm (18 in.) deep.

#### **1.8 PERFORMANCE STANDARDS**

- A. The elevators shall meet the highest standards of the industry and specifically the following:

1. Contract speed is high speed in either direction of travel with rated capacity load in the elevator. Speed variation under all load conditions, regardless of direction of travel, shall not vary more than five (5) percent.
  2. The controlled rate of change of acceleration and retardation of the car shall not exceed 0.1G per ft/s/s and the maximum acceleration and retardation shall not exceed 0.2G per ft/s/s.
  3. Starting, stopping, and leveling shall be smooth and comfortable without appreciable steps of acceleration and deceleration.
- B. Passenger/Service door operators shall open the car door and hoistway door at 75 cm (2.5 ft) per second and close at 30 cm (1 ft) per second. Freight door operators shall open and close at 30 cm (1 ft) per second.
- C. Floor level stopping accuracy shall be within 3 mm (.125 in.) above or below the floor, regardless of load condition.
- D. Noise and Vibration Isolation: All elevator equipment including their supports and fastenings to the building, shall be mechanically and electrically isolated from the building structure to minimize objectionable noise and vibration transmission to car, building structure, or adjacent occupied areas of building.
- E. Sound Isolation: Noise level relating to elevator equipment operation in machine room shall not exceed 80 decibels. All db readings shall be taken three (3) feet off the floor and three (3) feet from equipment.
- F. Airborne Noise: Measured noise level of elevator equipment during operation shall not exceed 50 decibels in elevator lobbies and 60 decibels inside car under any condition including door operation and car ventilation exhaust blower on its highest speed.

#### **1.9 WARRANTY**

- A. Submit all labor and materials furnished regarding elevator system and installation to terms of "Warranty of Construction" articles of FAR clause 52.246-21. The One-Year Warranty and Guarantee Period of Service shall commence and run concurrent after final inspection, completion of performance test, and upon acceptance of each elevator.
- B. During warranty period if a device is not functioning properly in accordance with specification requirements, more maintenance than the contract requires keeping device operational, device shall be removed and a new device meeting all requirements shall be installed as part of work until satisfactory operation of installation is obtained. Period of warranty shall start anew for such parts from date of completion of

each new installation performed, in accordance with foregoing requirements.

#### **1.10 POWER SUPPLY**

- A. For power supply in each machine room, see Specification 26 05 19, Electrical specifications, and Electrical drawings.
- B. Main Line Fused Disconnect Switch/Shunt Trip Circuit Breaker for each controller shall be located inside the machine room at the strike side of the machine room door and lockable in the "Off" position.
- C. Provide Surge Suppressors to protect the elevator equipment.

#### **1.11 EMERGENCY POWER SUPPLY**

- A. Emergency power supply, its starting means, transfer switch for transfer of elevator supply from normal to emergency power, two pair of conductors in a conduit from an auxiliary contact on the transfer switch (open or close contacts as required by Controller Manufacturer) to terminals in the group elevator controller and other related work shall be provided by the Electrical Contractor.
- B. Upon loss of normal power supply there shall be a delay before transferring to emergency power of 10 seconds minimum to 45 seconds maximum, the delay shall be accomplished through an adjustable timing device.
- C. Prior to the return of normal power an adjustable timed circuit shall be activated that will cause all cars to remain at a floor if already there or stop and remain at the next floor if in flight. Actual transfer of power from emergency power to normal building power shall take place after all cars are stopped at a floor with their doors open.
- D. Car lighting circuits shall be connected to the emergency power panel.

#### **1.12 MACHINE ROOM-LESS ELEVATOR**

- A. Controller for elevator to be located within wall on lowest level.
- B. Hydraulic Power Unit shall be located within pit. All required disconnects shall be located as applicable
- B. Provide stairs and landing for access to the Elevator Pit/Equipment.
- C. Locate the light switch inside elevator pit.
- D. Locate sprinkler pipes to provide seven 210 cm (7 ft) head clearance. Do not locate sprinkler heads, heat detectors, and smoke detectors directly over elevator equipment.

**1.13 HOISTWAY LIGHTING**

- A. Provide lighting throughout the entire hoistway with 3-way switches at the top and bottom of the hoistway accessible from elevator hoistway entrance prior to entering the pit or stepping onto the car top.
- B. Lighting shall illuminate top of elevator cab when it is at the top floor and the pit when at the bottom floor.

**PART 2 - PRODUCTS****2.1 MATERIALS**

- A. Where stainless steel is specified, it shall be corrosion resisting steel complying with Fed. Spec. QQ-S-766, Class 302 or 304, Condition A with Number 4 finish on exposed surfaces. Stainless steel shall have the grain of belting in the direction of the longest dimension and surfaces shall be smooth and without waves. During installation stainless steel surfaces shall be protected with a suitable material.
- B. Where cold rolled steel is specified it shall be low-carbon steel rolled to stretcher level standard flatness, complying with ASTM A109.

**2.2 MANUFACTURED PRODUCTS**

- A. Materials, devices, and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items. The elevator equipment, including controllers, door operators, and supervisory system shall be the product of manufacturers of established reputation, provided such items are capably engineered and produced under coordinated specifications to ensure compatibility with the total operating system.
- B. Manufacturers of equipment assemblies which include components made by others shall assume complete responsibility for the final assembled unit. Components shall be compatible with each other and with the total assembly for the intended service.
- C. Mixing of manufactures related to a single system or group of components shall be identified in the submittals.
- D. If key operated switches are furnished in conjunction with component of this elevator installation, furnish four (4) keys for each individual switch or lock. Provide different key tumblers for different switch and lock functions. Each key shall have a tag bearing a stamped or etched legend identifying its purpose.

**2.3 CONDUIT AND WIREWAY**

- A. Install electrical conductors, except traveling cables, in rigid zinc-coated steel or aluminum conduit, electrical metallic tubing or metal

wireways. Rigid conduit smaller than 18.75 mm (.75 in.) or electrical metallic tubing smaller than 12.5 mm (.50 in.) electrical trade size shall not be used. All raceways completely embedded in concrete slabs, walls, or floor fill shall be rigid steel conduit. Wireway (duct) shall be installed in the hoistway and to the controller and between similar apparatus in the elevator machine room. Fully protect self-supporting connections, where approved, from abrasion or other mechanical injury. Flexible metal conduit not less than 9.375 mm (.375 in.) electrical trade size may be used, not exceeding 45 cm (18 in.) in length unsupported, for short connections between risers and limit switches, interlocks, and for other applications permitted by NEC.

- B. All conduits terminating in steel cabinets, junction boxes, wireways, switch boxes, outlet boxes and similar locations shall have approved insulation bushings. Install a steel lock nut under the bushings if they are constructed completely of insulating materials. Protect the conductors at ends of conduits not terminating in steel cabinets or boxes by terminal fittings having an insulated opening for the conductors.
- C. Rigid conduit and EMT fittings using set screws or indentations as a means of attachment shall not be used.
- D. Connect motors or other items subject to movement, vibration or removal to the conduit or EMT systems with flexible, steel conduits.

#### **2.4 CONDUCTORS**

- A. Conductors shall be stranded or solid coated annealed copper in accordance with Federal Specification J-C-30B for Type RHW or THW. Where 16 and 18 AWG are permitted by NEC, single conductors or multiple conductor cables in accordance with Federal Specification J-C-580 for Type TF may be used provided the insulation of single conductor cable and outer jacket of multiple conductor cable is flame retardant and moisture resistant. Multiple conductor cable shall have color or number coding for each conductor. Conductors for control boards shall be in accordance with NEC. Joints or splices are not permitted in wiring except at outlets. Tap connectors may be used in wireways provided they meet all UL requirements.
- B. Provide all conduit and wiring between equipment space, hoistway, and fixtures.

- C. All wiring must test free from short circuits or ground faults. Insulation resistance between individual external conductors and between conductors and ground shall be a minimum of one megohm.
- D. Where size of conductors is not given, voltage and amperes shall not exceed limits set by NEC.
- E. Provide equipment grounding. Ground the conduits, supports, controller enclosure, motor, platform and car frame, and all other non-current conducting metal enclosures for electrical equipment in accordance with NEC. The ground wires shall be copper, green insulated and sized as required by NEC. Bond the grounding wires to all junction boxes, cabinets, and wire raceways.
- F. Terminal connections for all conductors used for external wiring between various items of elevator equipment shall be solderless pressure wire connectors in accordance with Federal Specification W-S-610. The Elevator Contractor may, at his option, make these terminal connections on #10 gauge or smaller conductors with approved terminal eyelets set on the conductor with a special setting tool, or with an approved pressure type terminal block. Terminal blocks using pierce-through serrated washers are not acceptable.

## **2.5 TRAVELING CABLES**

- A. All conductors to the car shall consist of flexible traveling cables conforming to the requirements of NEC. Traveling cables shall run from the junction box on the car directly to the controller. Junction boxes on the car shall be equipped with terminal blocks. Terminal blocks having pressure wire connectors of the clamp type that meet UL 486A requirements for stranded wire may be used in lieu of terminal eyelet connections. Terminal blocks shall have permanent indelible identifying numbers for each connection. Cables shall be securely anchored to avoid strain on individual terminal connections. Flame and moisture resistant outer covering must remain intact between junction boxes. Abrupt bending, twisting and distortion of the cables shall not be permitted.
- B. Provide spare conductors equal to 10 percent of the total number of conductors furnished, but not less than 5 spare conductors in each traveling cable.
- C. Provide shielded wires for the auto dial telephone system within the traveling cable, five (5) pair shielded wires for card reader, one (1) RG-6 Ethernet cable for Wi-Fi, two (2) pair 14-gauge wires for 110 Volt power supply, and wire for video display monitor if specified.

- D. If traveling cables contact the hoistway or elevator due to sway or change in position, provide shields or pads to the elevator and hoistway to prevent damage to the traveling cables.
- E. Hardware cloth may be installed from the hoistway suspension point to the elevator pit to prevent traveling cables from rubbing or chafing and securely fastened and tensioned to prevent buckling. Hardware cloth is not required when traveling cable is hung against a flat wall.

## **2.6 CONTROLLER AND SUPERVISORY PANEL**

- A. UL/CSA Labeled Controller: Mount all assemblies, power supplies, chassis switches, and relays on a steel frame in a NEMA Type 1 General Purpose Enclosure. Machine Room-less controller to be mounted per manufacturer.
- B. Properly identify each device on all panels by name, letter, or standard symbol which shall be neatly stencil painted or decaled in an indelible and legible manner. Identification markings shall be coordinated with identical markings used on wiring diagrams. The ampere rating shall be marked adjacent to all fuse holders. All spare conductors to controller and supervisory panel shall be neatly formed, laced, and identified.
- C. Controller shall be provided with wiring and components for additional future travel if required.

## **2.7 MICROPROCESSOR CONTROL SYSTEM**

- A. Provide a microprocessor control system with absolute position/speed feedback to control dispatching, signal functions, door operation, pump motor, and hydraulic valve control. Complete details of the components and printed circuit boards, together with a complete operational description, shall be submitted for approval. Provide closed transition SCR soft start.
- B. Controller manufacturer shall provide factory training, engineering and technical support, including all manuals, wiring diagrams, and tools necessary for adjusting, maintenance, repair, and testing of equipment to the VA for use by the VA's designated Elevator Maintenance Service Provider.
- C. Provide low oil and hot oil shutdown features that shall shut off the motor and pump and return the elevator to the lowest landing. Upon reaching the lowest landing, doors will open automatically allowing passengers to leave the elevator, and then doors shall close. All

control buttons, except the door open button, alarm bell button, and the call for help button shall be made ineffective.

## **2.9 EMERGENCY POWER OPERATION**

- A. The control system for Elevator(s) shall provide for the operation of elevator on emergency power upon failure of the normal power supply.
- B. Auxiliary equipment on elevator controller, wiring between associated elevator controller and remote selector panel as required to permit the elevator to operate as detailed, shall be provided by the Elevator Contractor.
- C. Upon loss of normal power supply there shall be a delay before transferring to emergency power of 10 seconds minimum to 45 seconds maximum, the delay shall be accomplished through an adjustable timing device.
- D. Prior to the return of normal power an adjustable timer circuit shall activate that will cause all cars to remain at a floor if already there or stop and remain at the next floor if in flight. Actual transfer of power from auxiliary power to normal building power shall take place after all cars are stopped at a floor with their doors open.
- E. Emergency Rescue Operation: Provide a power source to send the elevator to the lowest landing. After the elevator has leveled at the lowest landing, provide power to open the car and hoistway doors automatically. After a predetermined time, the doors shall close. Power shall stay applied to the door open button to reopen the doors from the inside of the elevator. The elevator shall remain shut down at the bottom landing until normal power is restored. Install a sign on the controller indicating that power is applied to emergency rescue operator and door operator during loss of normal power.

## **2.10 FIREFIGHTER'S SERVICE**

- A. Provide Firefighter's Service.
  - 1. Main Floor: Basement
  - 2. Alternate Floor: Lower Level Arcade
  - 3. Verify main and alternate floors with Contracting Officer's Representative.

## **2.11 INDEPENDENT SERVICE**

- A. Provide an INDEPENDENT SERVICE key switch on the face of the main car operating panel that shall have its positions marked "ON" and "OFF". When the switch is in the "ON" position, the car shall respond only to calls registered on its car dispatch buttons and shall bypass all calls

registered on landing push buttons. The car shall start when a car call is registered, car call button or door close button is pressed, car and hoistway doors are closed, and interlock circuits are made. When switch is returned to "OFF" position, normal service shall be resumed.

## **2.12 MEDICAL EMERGENCY SERVICE - PATIENT CARE FACILITIES ONLY**

- A. Provisions shall be made for calling elevator(s) to any floor served by the elevator on an emergency basis, operating independently from the dispatch signals and landing call signals.
- B. Install card reader/key switch in the floor landing push button fixture above the push buttons.
- C. Provide a call registered light indicator adjacent to card reader/key switch. The card reader/key switch at the landings and in the car, shall only be operable by authorized personnel with a valid VA ID badge/key.
- D. When card reader/key switch is activated at any floor, the call register light indicator shall illuminate at the call floor and inside the elevator only. The elevator control system shall instantly select an elevator to respond to the medical emergency call. Immediately upon selection, all car calls shall be cancelled. If car is traveling away from the medical emergency call, it shall slow down and stop at the nearest floor, maintain closed doors, reverse direction and proceed nonstop to the medical emergency call floor. If the car is traveling toward the medical emergency call floor, it shall proceed to that floor nonstop. If at the time of selection, it is slowing down for a stop, the car shall stop, maintain doors closed, and start immediately toward the medical emergency floor.
- E. Arriving at the medical emergency floor, the car shall remain with doors open for 30 seconds. After this interval has expired and the car has not been placed on medical emergency operation inside the car, the car shall automatically return to normal service.
- F. Provide an LED illuminated indicator light next to the Medical Emergency card reader/key switch the same size as the Fire Service indicator.
  - 1. Locate a "Medical Emergency" card reader/key switch above call buttons in the main car operating panel for selecting medical emergency service. Activation of the card reader will allow the car to accept a car call for any floor, close doors, and proceed nonstop to the floor desired.

2. After medical emergency call has been completed the elevator shall return to normal operation after an adjustable time of 30 to 90 seconds has expired.

G. In the center of the rear cab panel provide a back lighted "MEDICAL EMERGENCY" LED illuminated display that shall flash on and off continuously when the car is assigned to this operation and until it is restored to normal service. "MEDICAL EMERGENCY" indicator shall be a photographic negative type 1800 mm (72 in.) to center above the floor, 150 mm (6 in.) wide X 75 mm (3 in.) high, with 12.5 mm (.50 in.) high letters legible only when illuminated.

H. If the car being operated on "Independent Service", the medical emergency service indicator lights in the car operating panel and rear wall shall be illuminated, buzzer shall sound, and the "Audio Voice" system shall direct the attendant to return the car to automatic operation.

I. If the car is out of service and unable to answer medical emergency calls, the call register light shall not illuminate.

J. Each card reader/key switch shall have its identity legible and indelible engraved in faceplates. All lettering shall be 6 mm (.25 in.) high, filled with black paint.

K. When Phase I firefighter's recall is activated it shall over-ride elevators on medical emergency service and return them to the main or alternate fire service recall floor. When the fire emergency floor has been identified the attendants may complete their medical emergency run on Phase II firefighter's operation if life safety is not affected.

## **2.13 SEISMIC REQUIREMENTS**

A. Meet the requirements of VA Seismic Design Manual H-18-8.

## **2.14 PUMP, MOTOR, AND VALVE ASSEMBLY**

A. Provide pump assembly for the control of the elevator self-contained in a unit fabricated of structural steel. The unit shall consist of a hydraulic fluid pump, AC motor, oil control valves, muffler, piping, and fittings.

B. Enclose V-belt power unit on four open sides with not less than 16-gauge steel removable panel sections. Provide a 50 mm (2 in.) minimum, 100mm (4 in.) maximum air space between the top of the panels and bottom of tank. Line panels on the interior side with one-inch rigid acoustical insulation board. Install expanded metal belt guard that can be easily removed with hand tools for servicing and inspection.

Submersible motor and pump power units are acceptable but are best suited for lower traffic areas. Submersible pump with motor mounted above the tank are a better choice to eliminate heat from the motor being transferred to the oil.

- C. Control valves shall be electronically controlled. Hydraulic fluid flow shall be controlled to insure speed variation of not more than five (5) percent under all load conditions in either direction of travel. Locate the manual lowering valve, easily accessible, properly identified, and not concealed within the storage tank. Mark the operating handle in red.
- D. Pump shall be designed for hydraulic elevator service, having a steady discharge without pulsation to give smooth and quiet operation. Pump output shall be capable of lifting elevator car with rated capacity, with a speed variation of no more than five (5) percent between no load and full load. Hydraulic fluid by-pass shall discharge directly into storage tank.
- E. Provide motor specifically designed for elevator service, synchronous speed not more than 1800 RPM, not to exceed nameplate full load current by more than 10%, and rated 120 starts per hour without exceeding a rise of 40 degrees C.
- F. Provide isolation pads to prevent transmission of pump and motor vibration to the building.
- G. Install blowout-proof, non-hammering, oil-hydraulic muffler in the hydraulic fluid supply pressure line near power unit in machine room. Design muffler to reduce to a minimum any pulsation or noises that may be transmitted through the hydraulic fluid into the hoistway.

## **2.15 HYDRAULIC SYSTEM**

- A. Construct the storage tank of sheet steel, welded construction, and a steel cover with means for filling, a minimum one-inch protected vent opening, and a valve drain connection. Tank shall be sized to pass through machine room door as shown on drawings. Provide marked gauge to monitor hydraulic fluid level. Tank shall be sized to hold volume of hydraulic fluid required to lift elevator to stop ring, plus a reserve of not less than ten gallons. Provide a baffle in the bottom of the tank to prevent entry of any sediment or foreign particles into hydraulic system. Baffle shall also minimize aeration of hydraulic fluid. Permissible minimum hydraulic fluid level shall be clearly indicated. Hydraulic fluid shall be of good grade to assure free flow

when cool and have minimum flash point of 380-400 degrees F. Provide initial supply of hydraulic fluid for operation of elevator.

1. Provide a means to maintain the fluid viscosity in the reservoir, pump, and control valve at a recommended operating temperature.
  2. Provide a data plate on the tank framing indicating the characteristics of the hydraulic fluid used.
- B. Furnish and install connections between the storage tank, pump, muffler, operating valves, and cylinder complete with necessary valves, pipe supports, and fittings. Pipe shall be minimum schedule 40 steel with threaded, flanged, or welded mechanical couplings. Size of pipe and couplings between cylinder and pumping unit shall be such that fluid pressure loss is limited to 10 percent.
- C. Hydraulic system working pressure shall not exceed 500 psi under any load condition. Do not subject valves, piping, and fittings to working pressure greater than those recommended by the manufacturer.
- D. Support all horizontal piping. Place hangers or supports within 300 mm (12 in.) on each side of every change of direction of pipeline and space supports not over 3.0 m (10 ft) apart. Secure vertical runs properly with iron clamps at sufficiently close intervals to carry weight of pipe and contents. Provide supports under pipe to floor.
1. Provide all piping from machine room to hoistway, including necessary supports or hangers. If remote piping is underground or in damp inaccessible areas, install hydraulic piping thru PVC sleeve.
- E. Install pipe sleeves where pipes pass through walls or floors. Set sleeves during construction. After installation of piping, equip the sleeves with snug fitting inner liner of fire rated insulation.
- F. Provide an automatic shut-off valve in the oil supply line at the cylinder inlet. Weld inlet pipe to cylinder, threaded to receive shut-off valve. Activate the automatic shut-off valve when there is more than a ten percent increase in high speed in the down direction. When activated, this device shall immediately stop the descent of the elevator and hold the elevator. The exposed adjustments of the automatic shut-off valve shall have their means of adjustment sealed after being set to their correct position.
- G. Provide external tank shut-off valve to isolate hydraulic fluid during maintenance operations.

- H. Provide shut-off valves in the pit near the cylinder and in the machine room capable of withstanding 150 percent of design operating pressure. Each manual valve shall have an attached handle.
- I. Provide oil-tight drip pan for assembled pumping unit, including storage tank. Pan shall be not less than 16-gauge sheet steel, with one-inch sides.
- J. Components of the hydraulic system shall be factory certified to withstand pressure equal to twice the calculated working pressure.

#### **2.16 HYDRAULIC PLUNGER ASSEMBLY**

- A. Cylinder and plunger shall be sized to lift gross load the height specified. Factory test the plunger assembly at a pressure equal to twice the calculated working pressure, for strength and to insure freedom from leakage. Provide bottom of cylinder head with internal guide bearing and top of cylinder head with removable packing gland. Victaulic type packing gland head shall not be permitted.
  - 1. Provide a bleeder valve located below the cylinder flange to release air or other gases from the system.
  - 2. Equip cylinder with drip ring below the packing gland to collect leakage of hydraulic fluid.
  - 3. Bolt the cylinder mounting brackets to footing channels that support the buffers.
- B. Install a flexible tubing scavenger line with an electrically operated pump between the piston drip ring and oil storage tank. Scavenger line, pump and strainers shall operate independently of hydraulic fluid pressure. Equip scavenger pump with a water float designed to prevent operation of the pump should the pit flood and designed to be manually reset. Secure pump and reservoir to the pit channels.
- C. Plunger shall be heavy seamless steel tubing, turned smooth and true to within plus or minus .38 mm (0.015 in.) tolerance and no diameter change greater than .07 mm (0.003 in.) per-inch of length. Where plunger is multi-piece construction, machine the joints to assure perfectly matching surfaces.
  - 1. Secure plunger to underside of platform supporting beams with fastenings capable of supporting four times the weight of the plunger. The platen plate shall incorporate piston to car vibration isolation.
  - 2. Provide a stop ring welded or screwed to the bottom of plunger that shall prevent the plunger from leaving its cylinder. //For plunger

units that include future travel, locate the stop ring to permit only the actual travel and required runby//.

3. Isolate plunger head from the platen plate to prevent corrosion or electrolysis.
4. Protect plunger, repair or replace if gouged, nicked or scored.

#### **2.18 CAR BUFFERS**

- A. Provide a minimum of two spring buffers for each elevator. Securely fasten buffers and supports to the pit channels and in the alignment with striker plates on elevator. Buffers shall have a permanently attached metal plate indicating its stroke and load rating. Buffer anchorage shall not puncture pit waterproofing.
- B. Furnish pipe stanchions and struts as required to properly support the buffer.

#### **2.19 GUIDE RAILS, SUPPORTS, AND FASTENINGS**

- A. Guide rails for car shall be planed steel T-sections and weigh 27.5 kg/m (18.5 lb/ft).
- B. Securely fasten guide rails to the brackets or other supports by heavy duty steel rail clips.
- C. Provide car rail brackets of sufficient size and design to insure substantial rigidity to prevent spreading or distortion of rails under any condition.
- D. Guide rails shall extend from channels on pit floor to within 76 mm (3 in.) of the underside of the concrete slab or grating at top of hoistway with a maximum deviation of 3.2 mm (.125 in.) from plumb in all directions. Provide a minimum of 19 mm (.75 in.) clearance between bottom of rails and top of pit channels.
- E. Guide rail anchorages in pit shall be made in a manner that will not reduce effectiveness of the pit waterproofing.
- F. In the event inserts or bond blocks are required for the attachment of guide rails, the Contractor shall furnish such inserts or bond blocks and shall install them in the forms before the concrete is poured. Use inserts or bond blocks only in concrete or block work where steel framing is not available for support of guide rails. Expansion-type bolting for guide rail brackets will not be permitted.
- G. Guide rails shall be clean and free of any signs of rust, grease, or abrasion before final inspection. Paint the shank and base of the T-section with two field coats of manufacturer's standard enamel.

**2.20 NORMAL AND FINAL TERMINAL STOPPING DEVICES**

- A. Mount terminal slowdown switches and direction limit switches on the elevator or in hoistway to reduce speed and bring car to an automatic stop at the terminal landings.
  - 1. Switches shall function with any load up to and including 100 percent of rated elevator capacity at any speed obtained in normal operation.
  - 2. Switches, when opened, shall permit operation of elevator in reverse direction of travel.
- B. Mount final terminal stopping switches in the hoistway.
  - 1. Switches shall be positively opened should the car travel beyond the terminal direction limit switches.
  - 2. Switches shall be independent of other stopping devices.
  - 3. Switches, when opened, shall remove power from pump motor and control valves preventing operation of car in either direction.

**2.21 CROSSHEAD DATA PLATE AND CODE DATA PLATE**

- A. Permanently attach a non-corrosive metal Data Plate to car crosshead.
- B. Permanently attach a Code Data Plate, in plain view, to the controller.

**2.22 WORKMAN'S LIGHTS AND OUTLETS**

- A. Provide duplex GFCI protected type receptacles and lamp, with guards on top of elevator car and beneath platform. The receptacles shall be in accordance with Fed. Spec. W-C-596 for Type D7, 2-pole, 3-wire grounded type rated for 15 amperes and 125 volts.

**2.23 CARTOP OPERATING DEVICE**

- A. Provide a cartop operating device.
- B. The device shall be activated by a toggle switch mounted in the device. The switch shall be clearly marked "INSPECTION" and "NORMAL" on the faceplate, with 6 mm (.25 in.) letters.
- C. Movement of the elevator shall be accomplished by the continuous pressure on a direction button and a safety button.
- D. Provide an emergency stop switch, push to stop/pull to run.
- E. Provide permanent identification for the operation of all components in the device.
- F. The device shall be permanently attached to the elevator crosshead on the side of the elevator nearest to the hoistway doors used for accessing the top of the car.

**2.24 CAR LEVELING DEVICE**

- A. Car shall be equipped with a two-way leveling device to automatically bring the car to within 3 mm (.125 in.) of exact level with the landing for which a stop is initiated regardless of load in car or direction.
- B. If the car stops short or travels beyond the floor, the leveling device, within its zone shall automatically correct this condition and maintain the car within 3 mm (.125 in.) of level with the floor landing regardless of the load carried.

**2.25 EMERGENCY STOP SWITCHES**

- A. Provide an emergency stop switch, push to stop/pull to run, for each top-of-car device, pit, machine spaces, service panel and firefighter's control panel inside the elevator. Mount stop switches in the pit adjacent to pit access door, at top of the pit ladder 1200 mm (48 in.) above the bottom landing sill and 1200 mm (48 in.) above the pit floor adjacent to the pit ladder.
- B. Each stop switch shall be red in color and shall have "STOP" and "RUN" positions legibly and indelibly identified.

**2.26 MAIN CAR OPERATING PANEL**

- A. Locate the main car operating panel in the car enclosure on the front return panel for passenger/service elevators and the front of the side wall for freight elevators. The top floor car call push button shall not be more than 1200 mm (48 in.) above the finished floor. Car call push buttons and indicator lights shall be round with a minimum diameter of 25 mm (1 in.), LED white light illuminated.
- B. One-piece hinged front faceplate with edges beveled 15 degrees hinged swing return panel shall have the firefighter's service panel recessed into the upper section and the service operation panel recessed into the lower section fitted with hinged doors. Doors shall have concealed hinges, be in the same front plane as the faceplate and fitted with key operated locks. Secure the faceplate with stainless steel tamperproof screws.
- C. All terminology and tactile symbols on the faceplate shall be on square or rectangular plates recessed into the faceplate with its surface flush with the surface of the faceplate. Use 6 mm (.25 in.) letters to identify all devices in the faceplate. The handicapped markings with contrasting background shall be 12.5 mm (.50 in.) high raised .075 mm (.030 in.) on the plate. Surface mounted plates are not acceptable.

D. The upper section shall contain the following items in order listed from top to bottom:

1. Elevator number, 12.5 mm (.50 in.) high with black paint for contrast.
2. Capacity plate information with black paint for contrast with freight loading class and number of passengers allowed.
3. LED illuminated digital car position indicator with direction arrows.
4. Emergency car lighting system consisting of a rechargeable battery, charger, controls, and LED illuminated light fixture. The system shall automatically provide emergency light in the car upon failure or interruption of the normal car lighting service, and function irrespective of the position of the light control switch in the car. The system shall maintain a minimum illumination of 1.0 foot-candle when measured 1220 mm (48 in.) above the car floor and approximately 300 mm (12 in.) in front of the car operating panel, for not less than four (4) hours.
5. Firefighter's Emergency Operation Panel shall be 1650 mm (66 in.) minimum to 1800 mm (72 in.) maximum to the top of the panel above finished floor.
6. Firefighter's Emergency Indicator Light shall be round with a minimum diameter of 25 mm (1 in.).
7. Medical Emergency card reader/key switch marked "MEDICAL EMERGENCY" with two positions labeled "ON" and "OFF" and Medical Emergency Indicator Light located next to the card reader/key switch shall be round with a minimum diameter of 25 mm (1 in.). Instruction for Medical Emergency operation shall be engraved below the card reader/key switch and light.
8. Key operated Independent Service Switch on the face of panel or toggle switch inside service panel.
9. Provide a Door Hold Button on the faceplate next to the Independent Service Key Switch. It shall have "DOOR HOLD" indelibly marked on the button. Button shall light when activated. When activated, the door shall stay open for a maximum of one minute. To override hold timer, push a car call button or door close button.
10. Complete set of round car call push buttons, minimum diameter of 25 mm (1 in.), and LED white light illuminated, corresponding to the floors served. Car call buttons shall be legibly and indelibly

- identified by a floor number and/or letter not less than 12.5 mm (.50 in.) high in the face of the call button.
11. Door Open and Door Close buttons shall be located below the car call buttons. They shall have "OPEN" and "CLOSE" legibly and indelibly identified by letters in the face of the respective button. The Door Open button shall be located closest to the door jamb.
    - a. Rear Door Open and Rear Door Close buttons shall be located below the Front Door Open and Front Door Close buttons. They shall have "REAR OPEN" and "REAR CLOSE" legibly and indelibly identified by letters in the face of the respective button.
  12. Red Emergency Alarm button that shall be located below the car operating buttons. Mount the emergency alarm button not lower than 875 mm (35 in.) above the finished floor. It shall be connected to audible signaling devices. Provide audible signaling devices including the necessary wiring.
  13. Emergency Help push button shall activate two-way communications by Auto Dial telephone system that is compatible with the VAMC's telephone system. Help button shall be LED white light illuminated and flash when call is acknowledged. Legibly and indelibly label the button "HELP" in the face of the button with 12.5 mm (.50 in.) high letters.
- E. The service operation panel, in the lower section shall contain the following items:
1. Light switch labeled "LIGHTS" for controlling interior car lighting with its two positions marked "ON" and "OFF".
  2. Inspection switch that will disconnect normal operation and activate hoistway access switches at terminal landings. Switch shall be labeled "ACCESS ENABLE" with its two positions marked "ON" and "OFF".
  3. Three position switch labeled "FAN" with its positions marked "HIGH", "LOW" and "OFF" for controlling car ventilating blower.
  4. Two position, spring return, toggle switch or push button to test the emergency light and alarm device. It shall be labeled "TEST EMERGENCY LIGHT AND ALARM".
  5. Independent service switch labeled "ON" AND "OFF".
  6. Two-position emergency stop switch, when operated, shall interrupt power supply and stop the elevator independently of regular

operating devices. Emergency stop switch shall be marked "PUSH TO STOP" and "PULL TO RUN".

## **2.27 AUXILIARY CAR OPERATING PANEL**

- A. Provide an auxiliary car operating panel in the side wall of the elevator between the handrails immediately adjacent to the front entrance column strike jamb. The auxiliary car operating panel shall contain only those controls essential to passenger (public) operation. The auxiliary car operating panel faceplate shall match the main car operating panel faceplate in material and general design. Secure the faceplate with stainless steel tamperproof screws.
1. Complete set of round car call push buttons, minimum diameter 25 mm (1 in.), and LED white light illuminated, corresponding to the floors served. Car call button shall be legibly and indelibly identified by a floor number and/or letter not less than 12.5 mm (.50 in.) high in the face of the call button corresponding to the numbers of the main car panel operating buttons.
  2. Mount door "OPEN" and door "CLOSE" buttons closest to the door jamb and mount the alarm button no lower than 875 mm (35 in.) above the finished floor. The Door Open button shall be located closest to the door.
  3. Cross-connect all buttons in the auxiliary car operating panels to their corresponding buttons in the main car operating panel. Registration of a car call shall cause the corresponding button to illuminate in the main and auxiliary car operating panel.
  4. Emergency Help push button shall activate two-way communications by auto dial telephone that is compatible with the VAMC's telephone system. Help button shall be LED white light illuminated and flash when call is acknowledged. Legibly and indelibly label the button "HELP" in the face of the button with 12.5 mm (.50 in.) high letters.
- B. All terminology and tactile symbols on the faceplate shall be on square or rectangular plates recessed into the faceplate with its surface flush with the surface of the faceplate. Use 6 mm (.25 in.) letters to identify all devices in the faceplate. The tactile symbols with contrasting background shall be 12.5 mm (0.5 in.) high raised .075 mm (.030 in.) on the plate. Surface mounted plates are not acceptable.

**2.28 CAR POSITION INDICATOR**

- A. Provide an alpha-numeric digital car position indicator in the main car operating panel, consisting of numerals and arrows not less than 63 mm (2.5 in.) high, to indicate position of car and direction of car travel. Locate position indicator at the top of the main car operating panel, illuminated by light emitting diodes.

**2.29 AUDIO VOICE SYSTEM**

- A. Provide digitized audio voice system activated by stopping at a floor. Audio voice shall announce floor designations, direction of travel, and special announcements. The voice announcement system shall be a natural sounding human voice that receives messages and shall comply with ADA requirements for audible car position indicators. The voice announcer shall have two separate volume controls, one for the floor designations and direction of travel, and another for special announcements. The voice announcer shall have a full range loudspeaker, located on top of the cab. The audio voice unit shall contain the number of ports necessary to accommodate the number of floors, direction messages, and special announcements. Install voice announcer per manufacturer's recommendations and instructions. The voice system shall be the product of a manufacturer of established reputation. Provide manufacturer literature and list of voice messages.

**2.30 AUTO DIAL TELEPHONE SYSTEM**

- A. Furnish and install a complete ADA compliant auto dial telephone that is compatible with the VAMC's telephone system.
- B. Provide a two-way communication device in the car with automatic dialing, tracking and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with two numbers.
- C. "HELP" button shall illuminate and flash when call is acknowledged. Button shall match floor push button design.
- D. Provide "HELP" button tactile symbol signage and Braille adjacent to button mounted integral with car operating panels.
- E. The auto dial system may be in the main or auxiliary car operating panel. The speaker and unit shall be mounted on the backside of the perforated stainless-steel plate cover.
- F. Each elevator shall have individual phone numbers.
- G. If the operator ends the call, the passenger shall be able to redial the telephone immediately.

**2.31 CORRIDOR OPERATING DEVICES**

- A. Fabricate faceplates for elevator operating and signal devices from not less than 3 mm (.125 in.) thick flat stainless steel with all edges beveled 15 degrees.
- B. Corridor push button faceplates shall be sized to accommodate corridor pictograph on faceplate. The centerline of the landing push buttons shall be 105 cm (42 in.) above the corridor floor.
- C. Elevator Corridor Call Station Pictograph shall be engraved in the faceplate.
- D. Fasten all car and corridor operating device and signal device faceplates with stainless steel tamperproof screws.
- E. All terminology and tactile symbols on the faceplate shall be raised .030 inch with contrasting background, on square or rectangular plates recessed into the faceplate with its surface flush with the surface of the faceplate. The handicapped markings with contrasting background shall be 12.5 mm (0.5 in.) high raised .075 mm (.030 in.) on the plate, square or rectangular. Use 6 mm (.25 in.) letters to identify all other devices in the faceplate. Surface mounted plates are not acceptable.
- F. Provide one riser of landing call buttons for each elevator or group of elevators as shown on contract drawings.
- G. Each button shall contain an integral registration LED white light which shall illuminate upon registration of a call and shall extinguish when that call is answered.
- H. The direction of each button shall be legibly and indelibly identified by arrows not less than 12.5 mm (.50 in.) high in the face of each button. Provide a corresponding Braille plate on the left side of each button.
- I. Landing push buttons shall not re-open the doors while the car and hoistway doors are closing at that floor, the call shall be registered for the next available elevator. Calls registered shall be canceled if closing doors are re-opened by means of "DOOR OPEN" button or infrared curtain unit.
- J. Provide emergency power indicator light, medical emergency card reader/key switch and indicator light, fire service recall key switch and indicator light, fire recall instruction, communication failure light, audible enunciator, and reset key switch in a separate fixture at the designated main floor.
- K. Submit design of hall pushbutton fixtures for approval.

**2.32 DIGITAL CORRIDOR ARRIVAL LANTERN/POSITION INDICATOR**

- A. Provide elevator with combination corridor lantern/position indicator digital display mounted over the hoistway entrances at each floor in healthcare facilities. For non-healthcare facilities provide combination fixtures only at main and alternate fire recall floors. Provide each terminal landing with "UP" or "DOWN", minimum 63 mm (2.5 in.) high digital arrow lanterns and each intermediate landing with "UP" and "DOWN" digital arrow lanterns. Each lens shall be LED illuminated of proper intensity, so shielded to illuminate individual lens only. The lenses in each lantern shall be illuminated green to indicate "UP" travel and red to indicate "DOWN" travel. Lanterns shall signal in advance of car arrival at the landing indicating the direction of travel. Corridor lanterns shall not be illuminated when a car passes a floor without stopping. Each lantern shall be equipped with an audible electronic chime which shall sound once for "UPWARD" bound car and twice for "DOWNWARD" bound car. Audible signal shall not sound when a car passes the floor without stopping. Provide adjustable sound level on audible signal. Car riding lanterns are not acceptable.
- B. Install alpha-numeric digital position indicator between the arrival lanterns. Indicator faceplate shall be stainless steel. Numerals shall be not less than 63 mm (2.5 in.) high with direction arrows. Cover plates shall be readily removable for re-lamping. The appropriate direction arrow shall be illuminated during entire travel of car in corresponding direction.

**2.33 HOISTWAY ACCESS**

- A. Provide hoistway access switches for elevator at top terminal landing to permit access to top of car, and at bottom terminal landing to permit access to pit. Elevators with side slide doors, mount the access key switch 180 cm (6 ft) above the corridor floor in the wall next to the strike jamb.
- B. Exposed portion of each access switch or its faceplate shall have legible, indelible legends to indicate "UP", "DOWN", and "OFF" positions.
- C. Each access switch shall be a constant pressure cylinder type lock having not less than five pins or five stainless steel disc combination with key removable only when switch is in the "OFF" position.

- D. Lock shall not be operable by any other key which will operate any other lock or device used for any other purpose at the VA Medical Center.
- E. Arrange the hoistway switch to initiate and maintain movement of the car. When the elevator is operated in the down direction from the top terminal landing, limit the zone of travel to a distance not greater than the top of the car crosshead level with the top floor. Submit design and location of access switches for approval.
- F. Provide emergency access for all hoistway entrances, keyways for passenger and service elevators.

#### **2.34 HOISTWAY ENTRANCES: PASSENGER/SERVICE ELEVATORS**

- A. Provide complete entrances with sills, sill supports, hangers, hanger supports, tracks, angle struts, unit frames, door panels, fascia plates, toe guards, hardware, bumpers, sight guards, and wall anchors.
- B. Provide one piece extruded stainless steel sills grooved for door guides and recessed for fascia plates. Sills shall have overall height of not less than 19 mm (.75 in.) set true, straight, and level, with hoistway edges plumb over each other, and top surfaces flush with finished floor. Hoistway entrance frames and sills shall be grouted solid full length after installation.
- C. Construct hanger supports of not less than 9.375 mm (.375 in.) thick steel plate and bolted to strut angles.
- D. Structural steel angles 75 mm x 75 mm x 9.375 mm (3 in. x 3 in. x .375 in.) shall extend from top of sill to bottom of floor beam above and shall be securely fastened at maximum 45 cm (18 in.) on center and at each end with two bolts.
- E. Provide jambs and head soffits, of not less than 14-gauge stainless steel. Jambs and head soffits shall be bolted/welded construction and provided with three anchors each side. Side jambs shall be curved. Radius of curvature shall be 88 mm (3.5 in.). Head jamb shall be square and shall overhang corridor face of side jambs by 6 mm (.25 in.). Rigidly fasten jambs and head soffits to building structure and grouted solid. After installation, protect jambs and head soffits to prevent damage to finish during construction.
- F. Provide raised numerals or letters on cast, rear mounted plates for all openings. Numerals shall be a minimum of 50 mm (2 in.) high, located on each side of entrance frame, with centerline of 150 cm (5 ft) above the landing sill. The number plates shall contain Braille.

- G. Provide unique car number on every elevator entrance at designated main fire service floor level, minimum 75 mm (3 in.) in height.
- H. Provide passenger entrances with single speed center opening horizontal sliding doors and service entrances with center or side opening horizontal sliding doors.
1. Door panels shall be flush hollow metal construction, not less than 32 mm (1.25 in.) thick, consisting of one continuous piece 16-gauge stainless steel on corridor side wrapped around the leading edge. Separate two plates by a sound-deadening material and reinforce by steel shapes welded to the plates at frequent intervals. Reinforce panels as required for installation of hangers, power-operating and door-opening devices. Top and bottom of door panels shall have continuous stiffener channels welded in place. Reinforcement of the door panels shall be a minimum of 1.0 mm (0.04 in.) in thickness and of the hat section type.
  2. Hang doors on two-point suspension hangers having sealed ball-bearing sheaves not less than 75 mm (3 in.) in diameter, made of non-metallic sound-reducing material. Equip hangers with adjustable ball-bearing rollers to take upward thrust of panels. Upthrust rollers shall be capable of being locked in position after adjustment to a maximum of .38 mm (.015625 in.) clearance. Provide the hanger sheaves with steel fire stops to prevent disengagement from tracks. Do not use hangers that are constructed integrally with the door panels.
  3. Provide two removable laminated phenolic gibs or other approved material guides and a separate fire gib at the bottom of door panel.
  4. Reinforce each door panel for interlock mechanism, drive assembly, and closer. Provide relating devices to transmit motion from one door panel to the other.
  5. One door panel for each entrance shall bear a BOCA label, Underwriters' label or labels from other accredited test laboratories may be furnished provided they are based on fire test reports and factory inspection procedures acceptable to the COR.
  6. Fasten sight guard of 14-gauge stainless steel, extending full height of panel, to leading edge of fast speed panel of two-speed doors.
- I. Provide 14-gauge sheet steel fascia plates in hoistway to extend vertically from head of hanger support housing to sill above. Plates

shall be three (3) inches wider than door opening of elevator and reinforced to prevent waves and buckles. Below bottom terminal landing and over upper terminal landing provide shear guards beveled back to and fastened to the wall.

- J. Equip each hoistway door with an electrical/mechanical interlock, functioning as hoistway unit system, to prevent operation of car until all hoistway doors are locked in closed position.
- K. Wiring installed from the hoistway riser to each door interlock shall be NEC type SF-2 or equivalent.

## **2.35 CAR GUIDES**

- A. Install on car frame four adjustable roller guides, each assembled on a substantial metal base, to permit individual alignment to the guide rails.
- B. Each guide shall consist of not less than three (3) wheels, each with a durable, resilient oil-resistant material tire rotating on ball bearings having sealed-in lubrication. Assemble rollers on a substantial metal base and mount to provide continuous spring pressure contact of all wheels with the corresponding rail surfaces under all conditions of loading and operation. Secure the roller guides at top and bottom on each side of car frame and counterweight frame. All mounting bolts shall be fitted with nuts, flat washers, split lock washers, and if required, beveled washers.
- C. Provide sheet metal guards to protect rollers on top of car and counterweight.
- D. Minimum diameter of car rollers shall be 150 mm (6 in.). The entire elevator car shall be properly balanced to equalize pressure on all guide rollers. Cars shall be balanced in post-wise and front-to-back directions. Test for this balanced condition shall be witnessed at time of final inspection.
- E. Equip car with an auxiliary guiding device for each guide shoe/roller which shall prevent the car from leaving the rails if the normal guides fail. These auxiliary guides shall not, during normal operation, touch the guiding surfaces of the rails. Fabricate the auxiliary guides from hot rolled steel plate and mount between the normal guide shoes and the car frames. The auxiliary guides may be an extension of the normal guide shoe mounting plate if that plate is fabricated from hot rolled steel. The portion of the auxiliary guide which shall contact the rail guiding surfaces in the event of loss of the normal guides shall be

lined with an approved bearing material to minimize damage to the rail guiding surfaces.

F. Alternate Guide Shoes for service and freight elevators:

1. Provide each shoe with renewable non-metallic gibs of durable material having low coefficient of friction and long-wearing qualities, when operated on guide rails receiving infrequent, light applications of rail lubricant. Gibs containing graphite or other solid lubricants are not acceptable.
2. Flexible guide shoes of approved design, other than swivel type, may be used provided they are self-aligning on all three faces of the guide rails.
3. Provide spring take-up in car guide shoes for side play between rails.

**2.36 CAR FRAME: PASSENGER/SERVICE ELEVATORS**

- A. Car frame shall be constructed of channel stiles, crosshead, gussets, and braces securely bolted and/or welded. The entire assembly shall be constructed to withstand unequal loading of platform. Car frame members shall be constructed to relieve the car enclosure of all strains.

**2.37 CAR PLATFORM: PASSENGER/SERVICE ELEVATORS**

- A. Construct the car platform to meet the requirements of class loading specified. The platform shall be designed to withstand the forces developed under the loading conditions specified. Provide car entrances with extruded stainless steel sill or better with machined or extruded guide grooves. Cover underside and all exposed edges of wood filled platform with sheet metal of not less than 27-gauge, with all exposed joints and edges folded under. Fire resistant paint is not acceptable. Platform shall have flexible composition flooring not less than 3 mm (.125 in.) thick. Adhesive material shall be type recommended by manufacturer of flooring. Lay flooring flush with threshold plate and base.
- B. Provide a platform guard (toe guard) of not less than 12-gauge sheet-steel on the entrance side, extend 75 mm (3 in.) beyond each side of entrance jamb. Securely brace platform guard to car platform, and bevel bottom edge at a 60-75-degree angle from horizontal. Install platform in the hoistway, so that the clearance between front edge and landing threshold shall not exceed 32 mm (1.25 in.).
- C. Isolate the platform from the car frame by approved rubber pads or other equally effective means.

- D. Provide adjustable diagonal brace rods to hold platform firmly within car suspension frame.
- E. Balance car front to back and side to side. Provide balancing frame and weights, properly located, to achieve the required true balance.
- F. Provide a bonding wire between frame and platform.

**2.38 CAR ENCLOSURE: PASSENGER/SERVICE ELEVATORS**

- A. Car enclosure shall have a dome height inside the cab of 2400 mm (8 ft).
- B. Securely fasten car enclosure to platform by through bolts located at intervals of not more than 450 mm (18 in.) running through an angle at the base of panels to underside of platform.
- C. Front return wall panel, entrance columns, entrance head-jamb, and transom shall be 14-gauge stainless steel. Transom shall be full width of cab. Side and rear walls shall be constructed of 14-gauge cold rolled steel. Coat exterior of walls with mastic sound insulation material approximately 2.5 mm (.10 in.) thick followed by a prime coat of paint.
- D. Side and rear walls of passenger elevators may have raised panels covered in fire rated materials approved for use in elevator interior.
- E. Side and rear walls of service elevators, up to the center line of the top handrail, shall be covered with stainless steel. Side and rear walls to the ceiling shall be covered with high pressure plastic laminate panels. Submit a method of fastening panels to steel walls.
- F. Construct canopy of not less than 12-gauge steel.
- G. Provide car top railings.
- H. Provide a hinged top emergency exit cover. Exit shall be unobstructed when open and shall have mechanical stops on the cover. Provide an exit switch to prevent operation of the elevator when the emergency exit is open.
- I. Provide duplex, GFCI protected receptacle in car. Locate flush-mounted receptacle on the centerline of the main car operating panel, 150 mm (6 in.) above the car floor.
- J. Lighting for passenger/service elevators:
  - 1. Provide stainless steel hanging ceiling frame. Construct frame of 3.125 mm (.125 in.) thick x 37.5 mm (1.50 in.) wide x 37.5 mm (1.50 in.) high "T" and "L" sections, divide ceiling into six panels.

2. Provide LED illuminated car light fixtures above the ceiling panels. Maintain a minimum light level of 50-foot candles at 90 cm (36 in.) above the finished floor.
- K. Optional lighting for service elevators:
1. Provide car with indirect LED lamps mounted front to rear in lighting coves along each side of the cab ceiling, no hanging ceiling.
  2. Equip the lighting cove with asymmetrical reflectors having specular finish. Maintain a minimum light level of 50-foot candles 90 cm (36 in.) above finished floor at the car operating panels.
  3. Enclose the entire vertical space between the light trough outer edge and the cab canopy with approved opaque white or clear lumicite sheeting. Lumicite sheeting shall be removable for cleaning and re-lamping.
- L. Provide a blower unit arranged to exhaust through an opening in the canopy. Provide a stainless or chrome plated fan grill around the opening. Provide 2-speed fan with rated air displacement of 250 cfm and 400 cfm at respective speeds. Mount fan on top of car with rubber isolation to prevent transmission of vibration to car structure. Provide screening over intake and exhaust end of blower. Provide a 3-position switch to control the unit in the service panel.
- M. Provide car enclosure with **two** sets of handrails with centerlines 75 cm and 105 cm (30 in. and 42 in.) above the car floor.
1. Locate handrails 37.5 mm (1.50 in.) from cab wall. Install handrails on side walls only for front and rear openings. Conceal all handrail fastenings. Handrails shall be removable from inside the car enclosure.
  2. Provide service elevators with flat stock handrails with the ends at the entrance turned back to the wall.
  3. Coordinate with alternate control panel
- N. Provide passenger car with center opening horizontal sliding doors and service car with center or side opening horizontal sliding doors constructed the same as hoistway doors.
- O. Provide one set of protective pads for elevator of sufficient length to completely cover two sides, rear walls and front return of cab interior. Pads shall consist of a minimum of 6 mm (.25 in.) thick glass fiber insulation securely sewn between flame resistant vinyl coated coverings. Color of the covering shall be approved by the COR. Provide

stainless steel pad buttons or hooks, spaced at intervals of not more than 150 mm (18 in.) to adequately support pads.

## **2.39 POWER DOOR OPERATORS: PASSENGER/SERVICE ELEVATORS**

- A. Provide a high-speed heavy-duty door operator to automatically open the car and hoistway doors simultaneously when the car is level with the floor, and automatically close the doors simultaneously at the expiration of the door-open time. Provide microprocessor door control with circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Motor shall be of the high-internal resistance type, capable of withstanding high currents resulting from stall without damage to door operator/motor. The door operator shall open the car door and hoistway door simultaneously, at a speed of 75 cm (2.5 ft) per second. Closing speed of the doors shall be 30 cm (1 ft) per second. Reversal of direction of the doors from the closing to opening operation, whether initiated by obstruction of the infrared curtain or the door "OPEN" button, shall be accomplished within 37.5 mm (1.5 in.) maximum of door movement. Emphasis is placed on obtaining quiet interlock and door operation; smooth, fast, dynamic braking for door reversals, and stopping of the doors at extremes of travel.
- B. Equip car doors with electric contact that prevents operation of car until doors are closed unless car is operating in leveling zone or hoistway access switch is used. Locate door contact to prevent its being tampered with from inside of car.
- C. Car and hoistway doors shall be manually operable in an emergency without disconnecting the power door operating equipment unless the car is outside the unlocking zone.
  - 1. It shall not be possible for the doors to open by power unless the elevator is within the leveling zone.
  - 2. Provide infrared curtain unit. The device shall cause the car and hoistway doors to reverse automatically to the fully open position should the unit be actuated while the doors are closing. Unit shall function when the doors are not closed, except during firefighter's operation.
- D. Should the doors be prevented from closing for more than a predetermined adjustable interval of 20 to 60 seconds by operation of the curtain unit, the doors shall stay open, the audio voice message

and a buzzer located on the car shall sound only on automatic operation. Do not provide door nudging.

1. If an obstruction of the doors should not activate the photo-electric door control device and prevent the doors from closing for more than a predetermined adjustable interval of 15 to 30 seconds, the doors shall reverse to the fully open position and remain open until the "Door Close" button re-establishes the closing cycle.
- E. Provide door "OPEN" and "CLOSE" buttons. When the door "OPEN" button is pressed and held, the doors, if in the open position, shall remain open and if the doors are closing, they shall stop, reverse and re-open. Momentary pressure of the door "CLOSE" button shall initiate the closing of the doors prior to the expiration of the normal door open time.

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION**

- A. Examine work of other trades on which the work of this Specification depends. Report defects to the Resident Engineer in writing that may affect the work of elevator contractor.
- B. Examine elevator hoistway openings for plumb, level, in line, and that elevator pit is proper size, waterproofed and drained with necessary access door, and ladder.
- C. Examine machine room for proper illumination, heating, ventilation, electrical equipment, and beams are correctly located complete with access stairs and door.
- D. If the Elevator Contractor requires changes in size or location of trolley beams or their supports and trap doors, etc., to accomplish their work, he must justify the changes, subject to approval of the Contracting officer, and include additional cost in their bid.
- E. Work required prior to the completion of the elevator installation:
  1. Supply of electric feeder wires to the terminals of the elevator control panel, including circuit breaker.
  2. Provide light and GFCI outlets in the elevator pit and machine room.
  3. Furnish electric power for testing and adjusting elevator equipment.
  4. Furnish circuit breaker panel in machine room for car and hoistway lights and receptacles.
  5. Supply power for cab lighting and ventilation from an emergency power panel specified in Division 26, ELECTRICAL.

6. Machine room enclosed and protected from moisture, with self-closing, self-locking door and access stairs.

7. Provide fire extinguisher in machine room.

F. Provide to General Contractor for installation; inserts, anchors, bearing plates, brackets, supports and bracing including all setting templates and diagrams for placement.

### **3.2 ARRANGEMENT OF EQUIPMENT**

A. Arrange equipment in machine room so that major equipment components can be removed for repair or replacement without dismantling or removing other equipment in the same machine room. Locate controller near and visible to its respective hoisting machine.

### **3.3 WORKMANSHIP, INSTALLATION, AND PROTECTION**

A. Installations shall be performed by Certified Elevator Mechanics and Apprentices to best possible industry standards. Details of the installation shall be mechanically and electrically correct. Materials and equipment shall be new and without imperfections.

B. Recesses, cutouts, slots, holes, patching, grouting, refinishing to accommodate installation of equipment shall be included in the Contractor's work. All new holes in concrete shall be core drilled.

C. Structural members shall not be cut or altered. Work in place that is damaged or defaced shall be restored equal to original new condition.

D. Finished work shall be straight, plumb, level, and square with smooth surfaces and lines. All machinery and equipment shall be protected against dirt, water, or mechanical injury. At completion, all work shall be thoroughly cleaned and delivered in perfect unblemished condition.

E. Sleeves for conduit and other small holes shall project 50 mm (2 in.) above concrete slabs.

F. Hoist cables that are exposed to accidental contact in the machine room and pit shall be completely enclosed with 16-gauge sheet metal or expanded metal guards.

G. Exposed gears, sprockets, and sheaves shall be guarded from accidental contact.

### **3.4 CLEANING**

A. Upon completion of installation and prior to final inspection, all equipment shall be thoroughly cleaned of grease, oil, cement, plaster, dust, and other debris.

B. CLEAN MACHINE ROOM AND EQUIPMENT.

- C. Perform hoistway clean down.
- D. Prior to final acceptance remove protective coverings from finished or ornamental surfaces. Clean and polish surfaces with regarding type of material.

### **3.5 PAINTING AND FINISHING**

- A. All equipment, except specified as architectural finish, shall be painted one coat of approved color, conforming to manufacturer's standard.
- B. Hoist machine, motor, shall be factory painted with manufacturer's standard finish and color.
- C. Controller, sheave, car frame and platform, counterweight, beams, rails and buffers except their machined surfaces, cams, brackets and all other uncoated ferrous metal items shall be painted one factory primer coat or approved equal.
- D. Stencil or apply decal floor designations not less than 100 mm (4 in.) high on hoistway doors, fascia or walls within door restrictor areas. The color of paint used shall contrast with the color of the surfaces to which it is applied.
- E. Elevator pump/motor machine, controller, main line switch/shunt trip circuit breaker, bolster channel, and cross head of car shall be identified by 100 mm (4 in.) high numerals and letters located as directed. Numerals shall contrast with surrounding color and shall be stenciled or decaled.
- F. Hoistway Entrances of Passenger, and Service Elevators:
  - 1. Door panels shall be given rust resistant treatment and a factory finish of one coat of baked-on primer and one factory finish coat of baked-on enamel.
  - 2. Fascia plates, top and bottom shear guards, dust covers, hanger covers, and other metalwork, including built-in or hidden work and structural metal, (except stainless steel entrance frames and surfaces to receive baked enamel finish) shall be given one approved prime coat in the shop, and one field coat of paint of approved color.
- G. Hoistway Entrances of Freight Elevators:
  - 1. Metal surfaces of doors and frames shall receive shop prime coat.
  - 2. Finish painting, after installation, shall be one coat of paint of approved color.
- H. Elevator Cabs for Passenger and Service Elevators:

1. Interior and exterior steel surfaces shall be given rust resistant treatment before finish is applied.
2. Interior steel surfaces shall be factory finished with one coat of paint of approved color.
3. Give exterior faces of car doors one finish coat of paint of approved color.

### **3.6 PRE-TESTS AND TESTS**

- A. Pre-test the elevators and related equipment in the presence of the Resident Engineer or his authorized representative for proper operation before requesting final inspection. Conduct final inspection at other than normal working hours, if required by Resident Engineer.
  1. The VA shall obtain the services of an Independent QEI Certified Elevator Inspector. The QEI must utilize an Elevator Acceptance Inspection Form to record the results of inspection and all testing and to identify safety code and contract deficiencies. Specific values must be provided for all tests required by ASME A17.1, ASME A17.2, and contract documents. Upon completion of inspection and testing, the QEI must sign a copy of the completed form and provide it to the Contracting Officer. Within 2 weeks of the inspection, the QEI must also prepare a formal inspection report, including all test results and deficiencies. Upon successful completion of inspection and testing, the QEI will complete, sign, and provide a certificate of compliance provide by the VA.
  2. Government shall furnish electric power including necessary current for starting, testing, and operating machinery of each elevator.
  3. Contractor shall furnish the following test instruments and materials on-site and at the designated time of inspection: properly marked certified test weights, voltmeter, amp probe, thermometers, direct reading tachometer, megohm meter, vibration meter, sound meter, light meter, stopwatch, and a means of two-way communication.
- B. Inspection of workmanship, equipment furnished, and installation for compliance with specification.
- C. Full-Load Run Test: Elevators shall be tested for a period of one-hour continuous run with full contract load in the car. The test run shall consist of the elevator stopping at every floor, in either direction of travel, for not less than five or more than ten seconds per floor.
- D. Speed Test: The actual speed of the elevator shall be determined in both directions of travel with full contract load and no load in the

elevator. Speed shall be determined by certified tachometer. The actual measured speed of the elevator with all loads in either direction shall be within five (5) percent of specified rated speed. Full speed runs shall be quiet and free from vibration and sway.

- E. Temperature Rise Test: The temperature rise of the pump motor shall be determined during the full load test run. Temperatures shall be measured using thermometers. Under these conditions, the temperature rise of the equipment shall not exceed 50 degrees Centigrade above ambient temperature. Test shall start when all machine room equipment is within 5 degrees Centigrade of the ambient temperature. Other tests for heat run on motors shall be performed as prescribed by the Institute of Electrical and Electronic Engineers.
- F. Car Leveling Test: Elevator car leveling devices shall be tested for accuracy of leveling at all floors with no load in car and with contract load in car in both directions of travel. Accuracy of floor level shall be within plus or minus 3 mm (.125 in.) of level with landing floor for which the stop has been initiated regardless of load in car or direction of travel. The car leveling device shall automatically correct over travel as well as under travel and shall maintain the car floor within plus or minus 3 mm (.125 in.) of level with the landing floor regardless of change in load.
- G. Insulation Resistance Test: The elevator's complete wiring system shall be free from short circuits and ground faults and the insulation resistance of the system shall be determined by use of megohm meter, at the discretion of the Elevator Inspector conducting the test.
- H. Overload Devices: Test all overload current protection devices in the system at final inspection.
- I. Limit Stops:
  - 1. The position of the car when stopped by each of the normal limit switches with no load and with contract load in the car shall be accurately measured.
  - 2. Final position of the elevator relative to the terminal landings shall be determined when the elevator has been stopped by the final limits. The lower limit stop shall be made with contract load in the elevator. Elevator shall be operated at inspection speed for both tests. Normal limit stopping devices shall be inoperative for the tests.

- J. Working Pressure: Verify working pressure of the hydraulic system by pressure gauge placed in the system line. Take readings with no load and full load in car.
- K. Test automatic shut-off valve for proper operation.
- L. Operating and Signal System: The elevator shall be operated by the operating devices provided and the operation signals and automatic floor leveling shall function in accordance with requirements specified. Starting, stopping and leveling shall be smooth and comfortable without appreciable steps of acceleration or deceleration.
- M. Performance of the Elevator supervisory system shall be witnessed and approved by the elevator inspector and a representative of the Resident Engineer.
- N. Evidence of malfunction in any tested system or parts of equipment that occurs during the testing shall be corrected, repaired, or replaced at no additional cost to the Government, and the test repeated.
- O. If equipment fails test requirements and a re-inspection is required, the Contractor shall be responsible for the cost of re-inspection; salaries, transportation expenses, and per-diem expenses incurred by the elevator inspector and the representative of the Resident Engineer.

### **3.7 INSTRUCTION OF VA PERSONNEL**

- A. Provide competent instruction to VA personnel regarding the operation of equipment and accessories installed under this contract, for a period equal to one eight-hour workday. Instruction shall commence after completion of all work and at the time and place directed by the Resident Engineer.
- B. Written instructions in triplicate relative to care, adjustments and operation of all equipment and accessories shall be furnished and delivered to the Resident Engineer in independently bound folders. DVD recordings will also be acceptable. Written instructions shall include correct and legible wiring diagrams, nomenclature sheet of all electrical apparatus including location of each device, complete and comprehensive sequence of operation, complete replacement parts list with descriptive literature, and identification and diagrams of equipment and parts. Information shall also include electrical operation characteristics of all circuits, relays, timers, electronic devices, and related characteristics for all rotating equipment.
- C. Provide supplementary instruction for any new equipment that may become necessary because of changes, modifications or replacement of equipment

or operation under requirements of paragraph entitled "Warranty of Construction".

**3.8 ELEVATOR GUARANTEE PERIOD OF SERVICE: MAINTENANCE SERVICE AND INSPECTIONS**

- A. Furnish complete maintenance service and inspections on each elevator installation for a period of one (1) year after completion and acceptance of each elevator in this specification by the Resident Engineer. This maintenance service shall run concurrently with the warranty. Maintenance work shall be performed by Certified Elevator Mechanics and Apprentices.
- B. This contract will cover full maintenance including emergency call back service, inspections and servicing the elevators listed in the schedule of elevator. The Elevator Contractor shall be required to perform the following:
  - 1. Monthly systematic examination of equipment.
  - 2. During each maintenance visit the Elevator Contractor shall clean, lubricate, adjust, repair and replace all parts as necessary to keep the equipment in like new condition and proper working order.
  - 3. Furnishing all lubricant, cleaning materials, parts and tools necessary to perform the work required. Lubricants shall be only those products recommended by the manufacturer of the equipment.
  - 4. As required, motors, controllers, selectors, leveling devices, operating devices, switches on cars and in hoistways, hoistway doors and car doors or gate operating device, interlock contacts, guide shoes, guide rails, car door sills, hangers for doors, car doors or gates, and signal system shall be cleaned, lubricated and adjusted.
  - 5. Guide rails and bottom of platforms shall be cleaned every three months. Car tops and machine room floors shall be cleaned monthly. Accumulated rubbish shall be removed from the pits monthly. A general cleaning of the entire installation including all machine room equipment and hoistway equipment shall be accomplished quarterly. Cleaning supplies and vacuum cleaner shall be furnished by the Contractor.
  - 6. Maintain the performance standards set forth in this specification.
  - 7. The operational system shall be maintained to the standards specified hereinafter including any changes or adjustments required to meet varying conditions of hospital occupancy.
  - 8. Maintain smooth starting and stopping and accurate leveling.

- C. Maintenance service shall not include the performance of work required because if improper use, accidents, and negligence for which the Elevator Contractor is not directly responsible.
- D. Provide 24-hour emergency call-back service that shall consist of promptly responding to calls within two hours for emergency service should a shutdown or emergency develop between regular examinations. Overtime emergency call-back service shall be limited to minor adjustments and repairs required to protect the immediate safety of the equipment and persons in and about the elevator.
- E. Service and emergency personnel shall report to the Resident Engineer or his authorized representative upon arrival at the hospital and again upon completion of the required work. A copy of the work ticket containing a complete description of the work performed shall be given to the Resident Engineer.
- F. The Elevator Contractor shall maintain a logbook in the machine room. The log shall list the date and time of all bi-weekly examinations and all trouble calls. Each trouble call shall be fully described including the nature of the call, necessary correction performed, or parts replaced.
- G. Written "Maintenance Control Program" shall be in place to maintain the equipment in compliance with ASME A17.1.

- - - E N D - - -

**SECTION 23 07 11**  
**HVAC AND BOILER PLANT INSULATION**

**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. Field applied insulation for thermal efficiency and condensation control for
1. HVAC piping, ductwork and equipment.
  2. Re-insulation of HVAC piping, ductwork and equipment, and boiler plant piping, breeching and stacks and equipment after asbestos abatement.
- B. Definitions
1. ASJ: All service jacket, white finish facing or jacket.
  2. Air-conditioned space: Space having air temperature and/or humidity controlled by mechanical equipment.
  3. Cold: Equipment, ductwork or piping handling media at design temperature of 16 degrees C (60 degrees F) or below.
  4. Concealed: Ductwork and piping above ceilings and in chases and interstitial spaces.
  5. Exposed: Piping, ductwork, and equipment exposed to view in finished areas including mechanical and electrical equipment rooms or exposed to outdoor weather. Attics and crawl spaces where air handling units are located are considered to be mechanical rooms. Shafts, chases, interstitial spaces, unfinished attics, crawl spaces and pipe basements are not considered finished areas.
  6. FSK: Foil-scrim-kraft facing.
  7. Hot: HVAC Ductwork handling air at design temperature above 16 degrees C (60 degrees F); HVAC equipment or piping handling media above 41 degrees C (105 degrees F) and piping media and equipment 32 to 230 degrees C (90 to 450 degrees F).
  8. Density:  $\text{kg/m}^3$  - kilograms per cubic meter (Pcf - pounds per cubic foot).
  9. Runouts: Branch pipe connections up to 25-mm (one-inch) nominal size to fan coil units or reheat coils for terminal units.
  10. Thermal conductance: Heat flow rate through materials.
    - a. Flat surface: Watt per square meter (BTU per hour per square foot).
    - b. Pipe or Cylinder: Watt per square meter (BTU per hour per linear foot).

11. Thermal Conductivity (k): Watt per meter, per degree C (BTU per inch thickness, per hour, per square foot, per degree F temperature difference).
12. Vapor Retarder (Vapor Barrier): A material which retards the transmission (migration) of water vapor. Performance of the vapor retarder is rated in terms of permeance (perms). For the purpose of this specification, vapor retarders shall have a maximum published permeance of 0.1 perms and vapor barriers shall have a maximum published permeance of 0.001 perms.
13. HPS: High pressure steam (415 kPa [60 psig] and above).
14. HPR: High pressure steam condensate return.
15. MPS: Medium pressure steam (110 kPa [16 psig] thru 414 kPa [59 psig]).
16. MPR: Medium pressure steam condensate return.
17. LPS: Low pressure steam (103 kPa [15 psig] and below).
18. LPR: Low pressure steam condensate gravity return.
19. PC: Pumped condensate.
20. HWS: Hot water heating supply.
21. HWR: Hot water heating return.
22. PC: Pumped condensate.
23. RHW: Recirculating hot water.
24. CW: Cold water.
25. HW: Hot water.
26. CWS: Chilled water supply.
27. CWR: Chilled water return.
28. RS: Refrigerant suction.
29. RL: Refrigerant liquid.

## **1.2 RELATED WORK**

- A Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES.
- B. Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT.
- C. Section 07 84 00, FIRESTOPPING.
- D. Section 23 05 11, COMMON WORK RESULTS FOR HVAC.
- E. Section 23 08 00, COMMISSIONING OF HVAC SYSTEMS.
- F. Section 23 21 13, HYDRONIC PIPING.

## **1.3 QUALITY ASSURANCE**

- A. Refer to article QUALITY ASSURANCE, in Section 23 05 11, COMMON WORK RESULTS FOR HVAC.
- B. Criteria:

1. Comply with NFPA 90A, particularly paragraphs 4.3.3.1 through 4.3.3.6, 4.3.10.2.6, and 5.4.6.4, parts of which are quoted as follows:

**4.3.3.1** Pipe insulation and coverings, duct coverings, duct linings, vapor retarder facings, adhesives, fasteners, tapes, and supplementary materials added to air ducts, plenums, panels, and duct silencers used in duct systems, unless otherwise provided for in 4.3.3.1.1 or 4.3.3.1.2., shall have, in the form in which they are used, a maximum flame spread index of 25 without evidence of continued progressive combustion and a maximum smoke developed index of 50 when tested in accordance with NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials.

**4.3.3.1.1** Where these products are to be applied with adhesives, they shall be tested with such adhesives applied, or the adhesives used shall have a maximum flame spread index of 25 and a maximum smoke developed index of 50 when in the final dry state. (See 4.2.4.2.)

**4.3.3.1.2** The flame spread and smoke developed index requirements of 4.3.3.1.1 shall not apply to air duct weatherproof coverings where they are located entirely outside of a building, do not penetrate a wall or roof, and do not create an exposure hazard.

**4.3.3.2** Closure systems for use with rigid and flexible air ducts tested in accordance with UL 181, Standard for Safety Factory-Made Air Ducts and Air Connectors, shall have been tested, listed, and used in accordance with the conditions of their listings, in accordance with one of the following:

(1) UL 181A, Standard for Safety Closure Systems for Use with Rigid Air Ducts and Air Connectors

(2) UL 181B, Standard for Safety Closure Systems for Use with Flexible Air Ducts and Air Connectors

**4.3.3.3** Air duct, panel, and plenum coverings and linings, and pipe insulation and coverings shall not flame, glow, smolder, or smoke when tested in accordance with a similar test for pipe covering, ASTM C 411, Standard Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation, at the temperature to which they are exposed in service.

**4.3.3.3.1** In no case shall the test temperature be below 121°C (250°F).

**4.3.3.4** Air duct coverings shall not extend through walls or floors that are required to be fire stopped or required to have a fire resistance rating, unless such coverings meet the requirements of 5.4.6.4.

**4.3.3.5\*** Air duct linings shall be interrupted at fire dampers to prevent interference with the operation of devices.

**4.3.3.6** Air duct coverings shall not be installed so as to conceal or prevent the use of any service opening.

4.3.10.2.6 Materials exposed to the airflow shall be noncombustible or limited combustible and have a maximum smoke developed index of 50 or comply with the following.

4.3.10.2.6.1 Electrical wires and cables and optical fiber cables shall be listed as noncombustible or limited combustible and have a maximum smoke developed index of 50 or shall be listed as having a maximum peak optical density of 0.5 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.5 m (5 ft) or less when tested in accordance with NFPA 262, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

4.3.10.2.6.4 Optical-fiber and communication raceways shall be listed as having a maximum peak optical density of 0.5 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 1.5 m (5 ft) or less when tested in accordance with UL 2024, Standard for Safety Optical-Fiber Cable Raceway.

4.3.10.2.6.6 Supplementary materials for air distribution systems shall be permitted when complying with the provisions of 4.3.3.

5.4.6.4 Where air ducts pass through walls, floors, or partitions that are required to have a fire resistance rating and where fire dampers are not required, the opening in the construction around the air duct shall be as follows:

(1) Not exceeding a 25.4 mm (1 in.) average clearance on all sides

(2) Filled solid with an approved material capable of preventing the passage of flame and hot gases sufficient to ignite cotton waste when subjected to the time-temperature fire conditions required for fire barrier penetration as specified in NFPA 251, *Standard Methods of Tests of Fire Endurance of Building Construction and Materials*

2. Test methods: ASTM E84, UL 723, or NFPA 255.

3. Specified k factors are at 24 degrees C (75 degrees F) mean temperature unless stated otherwise. Where optional thermal insulation material is used, select thickness to provide thermal conductance no greater than that for the specified material. For pipe, use insulation manufacturer's published heat flow tables. For domestic hot water supply and return, run out insulation and condensation control insulation, no thickness adjustment need be made.

4. All materials shall be compatible and suitable for service temperature, and shall not contribute to corrosion or otherwise attack surface to which applied in either the wet or dry state.

C. Every package or standard container of insulation or accessories delivered to the job site for use must have a manufacturer's stamp or

label giving the name of the manufacturer and description of the material.

#### **1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES.
- B. Shop Drawings:
  - 1. All information, clearly presented, shall be included to determine compliance with drawings and specifications and ASTM, federal and military specifications.
    - a. Insulation materials: Specify each type used and state surface burning characteristics.
    - b. Insulation facings and jackets: Each type used. Make it clear that white finish will be furnished for exposed ductwork, casings and equipment.
    - c. Insulation accessory materials: Each type used.
    - d. Manufacturer's installation and fitting fabrication instructions for flexible unicellular insulation.
    - e. Make reference to applicable specification paragraph numbers for coordination.
- C. Samples:
  - 1. Each type of insulation: Minimum size 100 mm (4 inches) square for board/block/ blanket; 150 mm (6 inches) long, full diameter for round types.
  - 2. Each type of facing and jacket: Minimum size 100 mm (4 inches square).
  - 3. Each accessory material: Minimum 120 ML (4 ounce) liquid container or 120 gram (4 ounce) dry weight for adhesives / cement / mastic.

#### **1.5 STORAGE AND HANDLING OF MATERIAL**

Store materials in clean and dry environment, pipe covering jackets shall be clean and unmarred. Place adhesives in original containers. Maintain ambient temperatures and conditions as required by printed instructions of manufacturers of adhesives, mastics and finishing cements.

#### **1.6 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only.

## B. Federal Specifications (Fed. Spec.):

L-P-535E (2)-2022 Plastic Sheet (Sheeting): Plastic Strip; Poly (Vinyl Chloride) and Poly (Vinyl Chloride - Vinyl Acetate), Rigid.

## C. Military Specifications (Mil. Spec.):

MIL-A-3316C-1990 Adhesives, Fire-Resistant, Thermal Insulation

MIL-A-24179A (1)-2020 Adhesive, Flexible Unicellular-Plastic Thermal Insulation

MIL-C-19565C (1)-2021 Coating Compounds, Thermal Insulation, Fire-and Water-Resistant, Vapor-Barrier

MIL-C-20079H-1987 Cloth, Glass; Tape, Textile Glass; and Thread, Glass and Wire-Reinforced Glass

## D. American Society for Testing and Materials (ASTM):

A167-99 2017.....Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

B209 2022.....Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

C411 2019.....Standard test method for Hot-Surface Performance of High-Temperature Thermal Insulation

C449-07 2019.....Standard Specification for Mineral Fiber Hydraulic-Setting Thermal Insulating and Finishing Cement

C533-17 2023.....Standard Specification for Calcium Silicate Block and Pipe Thermal Insulation

C534/C534M-20a 2023.....Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form

C547-22a 2022.....Standard Specification for Mineral Fiber pipe Insulation

C552-22 2022.....Standard Specification for Cellular Glass Thermal Insulation

C553-13 2019.....Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications

- C585-90 2010.....Standard Practice for Inner and Outer Diameters  
of Rigid Thermal Insulation for Nominal Sizes  
of Pipe and Tubing (NPS System)
- C612-14 2019.....Standard Specification for Mineral Fiber Block  
and Board Thermal Insulation
- C1126-19 2019.....Standard Specification for Faced or Unfaced  
Rigid Cellular Phenolic Thermal Insulation
- C1136-21 2023.....Standard Specification for Flexible, Low  
Permeance Vapor Retarders for Thermal  
Insulation
- D1668/D1668M-97a 2021 ..Standard Specification for Glass Fabrics (Woven  
and Treated) for Roofing and Waterproofing
- E84-21a 2022.....Standard Test Method for Surface Burning  
Characteristics of Building  
Materials
- E119-20 2022.....Standard Test Method for Fire Tests of Building  
Construction and Materials
- E136-16 2016.....Standard Test Methods for Behavior of Materials  
in a Vertical Tube Furnace at 750 degrees C  
(1380 F)
- E. National Fire Protection Association (NFPA):
- 90A 2024.....Standard for the Installation of Air  
Conditioning and Ventilating Systems
- 96 2024.....Standards for Ventilation Control and Fire  
Protection of Commercial Cooking Operations
- 101 2021.....Life Safety Code
- 251 2006.....Standard methods of Tests of Fire Endurance of  
Building Construction Materials
- 255 2006.....Standard Method of tests of Surface Burning  
Characteristics of Building Materials
- F. Underwriters Laboratories, Inc (UL):
- 723/E84-21a 2022.....UL Standard for Safety Test for Surface Burning  
Characteristics of Building Materials
- G. Manufacturer's Standardization Society of the Valve and Fitting  
Industry (MSS):
- SP58 2018.....Pipe Hangers and Supports Materials, Design,  
and Manufacture

**PART 2 - PRODUCTS****2.1 MINERAL FIBER OR FIBER GLASS**

- A. ASTM C612 (Board, Block), Class 1 or 2, density 48 kg/m<sup>3</sup> (3 pcf), k = 0.037 (0.26) at 24 degrees C (75 degrees F), external insulation for temperatures up to 204 degrees C (400 degrees F) with foil scrim (FSK) facing.
- B. ASTM C553 (Blanket, Flexible) Type I, // Class B-3, Density 16 kg/m<sup>3</sup> (1 pcf), k = 0.045 (0.31) // Class B-5, Density 32 kg/m<sup>3</sup> (2 pcf), k = 0.04 (0.27) // at 24 degrees C (75 degrees F), for use at temperatures up to 204 degrees C (400 degrees F) with foil scrim (FSK) facing.
- C. ASTM C547 (Pipe Fitting Insulation and Preformed Pipe Insulation), Class 1, k = 0.037 (0.26) at 24 degrees C (75 degrees F), for use at temperatures up to 230 degrees C (450 degrees F) with an all-service vapor retarder jacket with polyvinyl chloride pre-molded fitting covering.

**2.2 RIGID CELLULAR PHENOLIC FOAM**

- A. Preformed (molded) pipe insulation, ASTM C1126, type III, grade 1, k = 0.021(0.15) at 10 degrees C (50 degrees F), for use at temperatures up to 121 degrees C (250 degrees F) with all service vapor retarder jacket with polyvinyl chloride pre-molded fitting covering.
- B. Equipment and Duct Insulation, ASTM C 1126, type II, grade 1, k = 0.021 (0.15) at 10 degrees C (50 degrees F), for use at temperatures up to 121 degrees C (250 degrees F) with rigid cellular phenolic insulation and covering, and all service vapor retarder jacket.

**2.3 CELLULAR GLASS CLOSED-CELL**

- A. Comply with Standard ASTM C177, C518, density 120 kg/m<sup>3</sup> (7.5 pcf) nominal, k = 0.033 (0.29) at 240 degrees C (75 degrees F).
- B. Pipe insulation for use at temperatures up to 200 degrees C (400 degrees F) with all service vapor retarder jacket.

**2.4 FLEXIBLE ELASTOMERIC CELLULAR THERMAL**

ASTM C177, C518, k = 0.039 (0.27) at 24 degrees C (75 degrees F), flame spread not over 25, smoke developed not over 50, for temperatures from minus 4 degrees C (40 degrees F) to 93 degrees C (200 degrees F). No jacket required.

**2.5 CALCIUM SILICATE**

- A. Preformed pipe Insulation: ASTM C533, Type I and Type II with indicator denoting asbestos-free material.

- B. Pre-molded Pipe Fitting Insulation: ASTM C533, Type I and Type II with indicator denoting asbestos-free material.
- C. Equipment Insulation: ASTM C533, Type I and Type II
- D. Characteristics:

| <b>Insulation Characteristics</b>                                                                                                    |                 |                  |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|
| <b>ITEMS</b>                                                                                                                         | <b>TYPE I</b>   | <b>TYPE II</b>   |
| Temperature, maximum degrees C<br>(degrees F)                                                                                        | 649 (1200)      | 927 (1700)       |
| Density (dry), Kg/m <sup>3</sup> (lb/ ft <sup>3</sup> )                                                                              | 232 (14.5)      | 288 (18)         |
| Thermal conductivity:<br>Min W/ m K (Btu in/h ft <sup>2</sup> degrees F)<br>@<br>mean temperature of 93 degrees C<br>(200 degrees F) | 0.059<br>(0.41) | 0.078<br>(0.540) |
| Surface burning characteristics:<br>Flame spread Index, Maximum                                                                      | 0               | 0                |
| Smoke Density index, Maximum                                                                                                         | 0               | 0                |

## 2.6 INSULATION FACINGS AND JACKETS

- A. Vapor Retarder, higher strength with low water permeance = 0.02 or less perm rating, Beach puncture 50 units for insulation facing on exposed ductwork, casings and equipment, and for pipe insulation jackets. Facings and jackets shall be all service type (ASJ) or PVDC Vapor Retarder jacketing.
- B. ASJ jacket shall be white kraft bonded to 0.025 mm (1 mil) thick aluminum foil, fiberglass reinforced, with pressure sensitive adhesive closure. Comply with ASTM C1136. Beach puncture 50 units, Suitable for painting without sizing. Jackets shall have minimum 40 mm (1-1/2 inch) lap on longitudinal joints and minimum 75 mm (3 inch) butt strip on end joints. Butt strip material shall be same as the jacket. Lap and butt strips shall be self-sealing type with factory-applied pressure sensitive adhesive.
- C. Vapor Retarder medium strength with low water vapor permeance of 0.02 or less perm rating), Beach puncture 25 units: Foil-Scrim-Kraft (FSK) or PVDC vapor retarder jacketing type for concealed ductwork and equipment.

- D. Field applied vapor barrier jackets shall be provided, in addition to the specified facings and jackets, on all exterior piping and ductwork as well as on interior piping and ductwork exposed to outdoor air (i.e.; in ventilated attics, piping in ventilated (not air conditioned) spaces, etc.) in high humidity areas, conveying fluids below ambient temperature. The vapor barrier jacket shall consist of a multi-layer laminated cladding with a maximum water vapor permeance of 0.001 perms. The minimum puncture resistance shall be 35 cm-kg (30 inch-pounds) for interior locations and 92 cm-kg (80 inch-pounds) for exterior or exposed locations or where the insulation is subject to damage.
- E. Glass Cloth Jackets: Pre-sized, minimum 0.18 kg per square meter (7.8 ounces per square yard), 2000 kPa (300 psig) bursting strength with integral vapor retarder where required or specified. Weather proof if utilized for outside service.
- F. Factory composite materials may be used provided that they have been tested and certified by the manufacturer.
- G. Pipe fitting insulation covering (jackets): Fitting covering shall be pre-molded to match shape of fitting and shall be polyvinyl chloride (PVC) conforming to Fed Spec L-P-335, composition A, Type II Grade GU, and Type III, minimum thickness 0.7 mm (0.03 inches). Provide color matching vapor retarder pressure sensitive tape.
- H. Aluminum Jacket-Piping systems: ASTM B209, 3003 alloy, H-14 temper, 0.6 mm (0.023 inch) minimum thickness with locking longitudinal joints. Jackets for elbows, tees and other fittings shall be factory-fabricated to match shape of fitting and of 0.6 mm (0.024) inch minimum thickness aluminum. Fittings shall be of same construction as straight run jackets but need not be of the same alloy. Factory-fabricated stainless-steel bands shall be installed on all circumferential joints. Bands shall be 13 mm (0.5 inch) wide on 450 mm (18 inch) centers. System shall be weatherproof if utilized for outside service.

## **2.7 REMOVABLE INSULATION JACKETS**

- A. Insulation and Jacket:
1. Non-Asbestos Glass mat, type E needled fiber.
  2. Temperature maximum of 450°F, Maximum water vapor transmission of 0.00 perm, and maximum moisture absorption of 0.2 percent by volume.
  3. Jacket Material: Silicon/fiberglass and LFP 2109 pure PTFE.

4. Construction: One piece jacket body with three-ply braided pure Teflon or Kevlar thread and insulation sewn as part of jacket. Belt fastened.

## 2.8 PIPE COVERING PROTECTION SADDLES

- A. Cold pipe support: Pre-molded pipe insulation 180 degrees (half-shells) on bottom half of pipe at supports. Material shall be cellular glass or high density Polyisocyanurate insulation of the same thickness as adjacent insulation. Density of Polyisocyanurate insulation shall be a minimum of 48 kg/m<sup>3</sup> (3.0 pcf).

| Nominal Pipe Size and Accessories Material (Insert Blocks) |                           |
|------------------------------------------------------------|---------------------------|
| Nominal Pipe Size mm (inches)                              | Insert Blocks mm (inches) |
| Up through 125 (5)                                         | 150 (6) long              |

- B. Warm or hot pipe supports: Pre-molded pipe insulation (180 degree half-shells) on bottom half of pipe at supports. Material shall be high density Polyisocyanurate (for temperatures up to 149 degrees C [300 degrees F]), cellular glass or calcium silicate. Insulation at supports shall have same thickness as adjacent insulation. Density of Polyisocyanurate insulation shall be a minimum of 48 kg/m<sup>3</sup> (3.0 pcf).

## 2.9 ADHESIVE, MASTIC, CEMENT

- A. Mil. Spec. MIL-A-3316, Class 1: Jacket and lap adhesive and protective finish coating for insulation.
- B. Mil. Spec. MIL-A-3316, Class 2: Adhesive for laps and for adhering insulation to metal surfaces.
- C. Mil. Spec. MIL-A-24179, Type II Class 1: Adhesive for installing flexible unicellular insulation and for laps and general use.
- D. Mil. Spec. MIL-C-19565, Type I: Protective finish for outdoor use.
- E. Mil. Spec. MIL-C-19565, Type I or Type II: Vapor barrier compound for indoor use.
- F. ASTM C449: Mineral fiber hydraulic-setting thermal insulating and finishing cement.
- G. Other: Insulation manufacturers' published recommendations.

## 2.10 MECHANICAL FASTENERS

- A. Pins, anchors: Welded pins, or metal or nylon anchors with galvanized steel-coated or fiber washer, or clips. Pin diameter shall be as recommended by the insulation manufacturer.
- B. Staples: Outward clinching.

- C. Wire: 1.3 mm thick (18 gage) soft annealed galvanized or 1.9 mm (14 gage) copper clad steel or nickel copper alloy.
- D. Bands: 13 mm (0.5 inch) nominal width, brass, galvanized steel, aluminum or stainless steel.

## **2.11 REINFORCEMENT AND FINISHES**

- A. Glass fabric, open weave: ASTM D1668, Type III (resin treated) and Type I (asphalt treated).
- B. Glass fiber fitting tape: Mil. Spec MIL-C-20079, Type II, Class 1.
- C. Tape for Flexible Elastomeric Cellular Insulation: As recommended by the insulation manufacturer.
- D. Hexagonal wire netting: 25 mm (one inch) mesh, 0.85 mm thick (22 gage) galvanized steel.
- E. Corner beads: 50 mm (2 inch) by 50 mm (2 inch), 0.55 mm thick (26 gage) galvanized steel; or, 25 mm (1 inch) by 25 mm (1 inch), 0.47 mm thick (28 gage) aluminum angle adhered to 50 mm (2 inch) by 50 mm (2 inch) Kraft paper.
- F. PVC fitting cover: Fed. Spec L-P-535, Composition A, 11-86 Type II, Grade GU, with Form B Mineral Fiber insert, for media temperature 4 degrees C (40 degrees F) to 121 degrees C (250 degrees F). Below 4 degrees C (40 degrees F) and above 121 degrees C (250 degrees F). Provide double layer insert. Provide color matching vapor barrier pressure sensitive tape.

## **2.12 FIRESTOPPING MATERIAL**

Other than pipe and duct insulation, refer to Section 07 84 00  
FIRESTOPPING.

## **2.13 FLAME AND SMOKE**

Unless shown otherwise all assembled systems shall meet flame spread 25 and smoke developed 50 rating as developed under ASTM, NFPA and UL standards and specifications. See paragraph 1.3 "Quality Assurance".

## **PART 3 - EXECUTION**

### **3.1 GENERAL REQUIREMENTS**

- A. Required pressure tests of duct and piping joints and connections shall be completed and the work approved by the Resident Engineer for application of insulation. Surface shall be clean and dry with all foreign materials, such as dirt, oil, loose scale and rust removed.
- B. Except for specific exceptions, insulate entire specified equipment, piping (pipe, fittings, valves, accessories), and duct systems.

Insulate each pipe and duct individually. Do not use scrap pieces of insulation where a full-length section will fit.

- C. Where removal of insulation of piping, ductwork and equipment is required to comply with Section 02 82 11, TRADITIONAL ASBESTOS ABATEMENT and Section 02 82 13.13, GLOVE BAG ASBESTOS ABATEMENT, such areas shall be reinsulated to comply with this specification.
- D. Insulation materials shall be installed in a first-class manner with smooth and even surfaces, with jackets and facings drawn tight and smoothly cemented down at all laps. Insulation shall be continuous through all sleeves and openings, except at fire dampers and duct heaters (NFPA 90A). Vapor retarders shall be continuous and uninterrupted throughout systems with operating temperature 16 degrees C (60 degrees F) and below. Lap and seal vapor retarder over ends and exposed edges of insulation. Anchors, supports and other metal projections through insulation on cold surfaces shall be insulated and vapor sealed for a minimum length of 150 mm (6 inches).
- E. Install vapor stops at all insulation terminations on either side of valves, pumps and equipment and particularly in straight lengths of pipe insulation.
- F. Construct insulation on parts of equipment such as chilled water pumps and heads of chillers, convertors and heat exchangers that must be opened periodically for maintenance or repair, so insulation can be removed and replaced without damage. Install insulation with bolted 1 mm thick (20 gage) galvanized steel or aluminum covers as complete units, or in sections, with all necessary supports, and split to coincide with flange/split of the equipment.
- G. Insulation on hot piping and equipment shall be terminated square at items not to be insulated, access openings and nameplates. Cover all exposed raw insulation with white sealer or jacket material.
- H. Protect all insulations outside of buildings with aluminum jacket using lock joint or other approved system for a continuous weather tight system. Access doors and other items requiring maintenance or access shall be removable and sealable.
- I. Insulate steam traps.
- J. HVAC work not to be insulated:
  - 1. Internally insulated ductwork and air handling units.
  - 2. Relief air ducts (Economizer cycle exhaust air).
  - 3. Exhaust air ducts and plenums, and ventilation exhaust air shafts.

4. Equipment: Expansion tanks, hot water pumps.
  5. In hot piping: Unions, flexible connectors, control valves, safety valves and discharge vent piping, vacuum breakers, thermostatic vent valves, steam traps 20 mm (3/4 inch) and smaller, exposed piping through floor for convectors and radiators. Insulate piping to within approximately 75 mm (3 inches) of uninsulated items.
- K. Apply insulation materials subject to the manufacturer's recommended temperature limits. Apply adhesives, mastic and coatings at the manufacturer's recommended minimum coverage.
- L. Elbows, flanges and other fittings shall be insulated with the same material as is used on the pipe straights. Use of polyurethane spray-foam to fill a PVC elbow jacket is prohibited on cold applications.
- M. Firestop Pipe and Duct insulation:
1. Provide firestopping insulation at fire and smoke barriers through penetrations. Fire stopping insulation shall be UL listed as defines in Section 07 84 00, FIRESTOPPING.
  2. Pipe and duct penetrations requiring fire stop insulation including, but not limited to the following:
    - a. Pipe risers through floors
    - b. Pipe or duct chase walls and floors
    - c. Smoke partitions
    - d. Fire partitions
- N. Provide vapor barrier jackets over insulation as follows:
1. All interior piping and ducts conveying fluids exposed to outdoor air (i.e., in attics, ventilated (not air conditioned) spaces, etc.).

### **3.2 INSULATION INSTALLATION**

- A. Mineral Fiber Board:
1. Faced board: Apply board on pins spaced not more than 300 mm (12 inches) on center each way, and not less than 75 mm (3 inches) from each edge of board. In addition to pins, apply insulation bonding adhesive to entire underside of horizontal metal surfaces. Butt insulation edges tightly and seal all joints with laps and butt strips. After applying speed clips cut pins off flush and apply vapor seal patches over clips.
  2. Plain board:
    - a. Insulation shall be scored, beveled or mitered to provide tight joints and be secured to equipment with bands spaced 225 mm (9

- inches) on center for irregular surfaces or with pins and clips on flat surfaces. Use corner beads to protect edges of insulation.
- b. For hot equipment: Stretch 25 mm (1 inch) mesh wire, with edges wire laced together, over insulation and finish with insulating and finishing cement applied in one coat, 6 mm (1/4 inch) thick, trowel led to a smooth finish.
  - c. For cold equipment: Apply meshed glass fabric in a tack coat 1.5 to 1.7 square meter per liter (60 to 70 square feet per gallon) of vapor mastic and finish with mastic at 0.3 to 0.4 square meter per liter (12 to 15 square feet per gallon) over the entire fabric surface.
  - d. Chilled water pumps: Insulate with removable and replaceable 1 mm thick (20 gage) aluminum or galvanized steel covers lined with insulation. Seal closure joints/flanges of covers with gasket material. Fill void space in enclosure with flexible mineral fiber insulation.
3. Exposed, unlined ductwork and equipment in unfinished areas, mechanical and electrical equipment rooms and attics and where duct work exposed to outdoor weather:
- a. 50 mm (2 inch) thick insulation faced with ASJ (white all service jacket): Supply air.
  - b. 50 mm (2 inch) thick insulation faced with ASJ: Return air duct, mixed air plenums and prefilter housing.
  - c. Outside air intake ducts: 25 mm (one inch) thick insulation faced with ASJ.
4. Cold equipment: 40 mm (1-1/2 inch) thick insulation faced with ASJ.
- a. Chilled water pumps, water filter, chemical feeder pot or tank.
5. Hot equipment: 40 mm (1-1/2 inch) thick insulation faced with ASJ.
- a. Convertors, air separators, steam condensate pump receivers.
  - b. Reheat coil casing and separation chambers on steam humidifiers located above ceilings.
- B. Flexible Mineral Fiber Blanket:
1. Adhere insulation to metal with 75 mm (3 inch) wide strips of insulation bonding adhesive at 200 mm (8 inches) on center all around duct. Additionally secure insulation to bottom of ducts exceeding 600 mm (24 inches) in width with pins welded or adhered on 450 mm (18 inch) centers. Secure washers on pins. Butt insulation

- edges and seal joints with laps and butt strips. Staples may be used to assist in securing insulation. Seal all vapor retarder penetrations with mastic. Sagging duct insulation will not be acceptable. Install firestop duct insulation where required.
2. Supply air ductwork to be insulated includes main and branch ducts from AHU discharge to room supply outlets, and the bodies of ceiling outlets to prevent condensation. Insulate sound attenuator units, coil casings and damper frames. To prevent condensation, insulate trapeze type supports and angle iron hangers for flat oval ducts that are in direct contact with metal duct.
  3. Concealed supply air ductwork.
    - a. Above ceilings at a roof level, in attics, and duct work exposed to outdoor weather: 50 mm (2 inch) thick insulation faced with FSK.
    - b. Above ceilings for other than roof level: 40 mm (1 ½ inch) thick insulation faced with FSK.
  4. Concealed return air duct:
    - a. In attics (where not subject to damage) and where exposed to outdoor weather: 50mm (2 inch) thick insulation faced with FSK.
    - b. Above ceilings at a roof level, unconditioned areas, and in chases with external wall or containing steam piping; 40 mm (1-1/2 inch) thick, insulation faced with FSK.
    - c. Concealed return air ductwork in other locations need not be insulated.
  5. Concealed outside air duct: 40 mm (1-1/2 inch) thick insulation faced with FSK.
- C. Molded Mineral Fiber Pipe and Tubing Covering:
1. Fit insulation to pipe or duct, aligning longitudinal joints. Seal longitudinal joint laps and circumferential butt strips by rubbing hard with a nylon sealing tool to assure a positive seal. Staples may be used to assist in securing insulation. Seal all vapor retarder penetrations on cold piping with a generous application of vapor barrier mastic. Provide inserts and install with metal insulation shields at outside pipe supports. Install freeze protection insulation over heating cable.
  2. Contractor's options for fitting, flange and valve insulation:

- a. Insulating and finishing cement for sizes less than 100 mm (4 inches) operating at surface temperature of 16 degrees C (61 degrees F) or more.
  - b. Factory pre-molded, one-piece PVC covers with mineral fiber, (Form B), inserts. Provide two insert layers for pipe temperatures below 4 degrees C (40 degrees F), or above 121 degrees C (250 degrees F). Secure first layer of insulation with twine. Seal seam edges with vapor barrier mastic and secure with fitting tape.
  - c. Factory molded, ASTM C547 or field mitered sections, joined with adhesive or wired in place. For hot piping finish with a smoothing coat of finishing cement. For cold fittings, 16 degrees C (60 degrees F) or less, vapor seal with a layer of glass fitting tape imbedded between two 2 mm (1/16 inch) coats of vapor barrier mastic.
  - d. Fitting tape shall extend over the adjacent pipe insulation and overlap on itself at least 50 mm (2 inches).
3. Nominal thickness in millimeters and inches specified in the schedule at the end of this section.
- D. Rigid Cellular Phenolic Foam:
1. Rigid closed cell phenolic insulation may be provided for piping, ductwork and equipment for temperatures up to 121 degrees C (250 degrees F).
  2. Note the NFPA 90A burning characteristics requirements of 25/50 in paragraph 1.3.B
  3. Provide secure attachment facilities such as welding pins.
  4. Apply insulation with joints tightly drawn together
  5. Apply adhesives, coverings, neatly finished at fittings, and valves.
  6. Final installation shall be smooth, tight, neatly finished at all edges.
  7. Minimum thickness in millimeters (inches) specified in the schedule at the end of this section.
  8. Exposed, unlined supply and return ductwork exposed to outdoor weather: 50 mm (2 inch) thick insulation faced with a multi-layer vapor barrier with a maximum water vapor permeance of 0.00 perms.
  9. Condensation control insulation: Minimum 25 mm (1.0 inch) thick for all pipe sizes.

- a. HVAC: Cooling coil condensation piping to waste piping fixture or drain inlet. Omit insulation on plastic piping in mechanical rooms.

E. Cellular Glass Insulation:

1. Pipe and tubing, covering nominal thickness in millimeters and inches as specified in the schedule at the end of this section.
2. Cold equipment: 50 mm (2 inch) thick insulation faced with ASJ for chilled water pumps, water filters, chemical feeder pots or tanks, expansion tanks, air separators and air purgers.

F. Polyisocyanurate Closed-Cell Rigid Insulation:

1. Polyisocyanurate closed-cell rigid insulation (PIR) may be provided for exterior piping, equipment and ductwork for temperature up to 149 degree C (300-degree F).
2. Install insulation, vapor barrier and jacketing per manufacturer's recommendations. Particular attention should be paid to recommendations for joint staggering, adhesive application, external hanger design, expansion/contraction joint design and spacing and vapor barrier integrity.
3. Install insulation with all joints tightly butted (except expansion joints in hot applications).
4. If insulation thickness exceeds 63 mm (2.5 inches), install as a double layer system with longitudinal (lap) and butt joint staggering as recommended by manufacturer.
5. For cold applications, vapor barrier shall be installed in a continuous manner. No staples, rivets, screws or any other attachment device capable of penetrating the vapor barrier shall be used to attach the vapor barrier or jacketing. No wire ties capable of penetrating the vapor barrier shall be used to hold the insulation in place. Banding shall be used to attach PVC or metal jacketing.
6. Elbows, flanges and other fittings shall be insulated with the same material as is used on the pipe straights. Use of polyurethane spray-foam to fill PVC elbow jacket is prohibited on cold applications.
7. For cold applications, the vapor barrier on elbows/fittings shall be either mastic-fabric-mastic or 2 mil thick PVDC vapor barrier adhesive tape.

8. All PVC and metal jacketing shall be installed so as to naturally shed water. Joints shall point down and shall be sealed with either adhesive or caulking (except for periodic slip joints).
9. Note the NFPA 90A burning characteristic requirements of 25/50 in paragraph 1.3B. Refer to paragraph 3.1 for items not to be insulated.
10. Minimum thickness in millimeter (inches) specified in the schedule at the end of this section.

G. Flexible Elastomeric Cellular Thermal Insulation:

1. Apply insulation and fabricate fittings in accordance with the manufacturer's installation instructions and finish with two coats of weather resistant finish as recommended by the insulation manufacturer.
2. Pipe and tubing insulation:
  - a. Use proper size material. Do not stretch or strain insulation.
  - b. To avoid undue compression of insulation, provide cork stoppers or wood inserts at supports as recommended by the insulation manufacturer. Insulation shields are specified under Section 23 05 11, COMMON WORK RESULTS FOR HVAC.
  - c. Where possible, slip insulation over the pipe or tubing prior to connection, and seal the butt joints with adhesive. Where the slip-on technique is not possible, slit the insulation and apply it to the pipe sealing the seam and joints with contact adhesive. Optional tape sealing, as recommended by the manufacturer, may be employed. Make changes from mineral fiber insulation in a straight run of pipe, not at a fitting. Seal joint with tape.
3. Apply sheet insulation to flat or large curved surfaces with 100 percent adhesive coverage. For fittings and large pipe, apply adhesive to seams only.
4. Pipe insulation: nominal thickness in millimeters (inches as specified in the schedule at the end of this section).
5. Minimum 20 mm (0.75 inch) thick insulation for pneumatic control lines for a minimum distance of 6 m (20 feet) from discharge side of the refrigerated dryer.
6. Use Class S (Sheet), 20 mm (3/4 inch) thick for the following:
  - a. Chilled water pumps
  - b. Bottom and sides of metal basins for winterized cooling towers (where basin water is heated).

- c. Chillers, insulate any cold chiller surfaces subject to condensation which has not been factory insulated.
  - d. Piping inside refrigerators and freezers: Provide heat tape under insulation.
  - 7. Exposed, unlined supply and return ductwork exposed to outdoor weather: 50 mm (2 inch) thick insulation faced with a multi-layer vapor barrier with a water vapor permeance of 0.00 perms.
  - H. Calcium Silicate:
    - 1. Minimum thickness in millimeter (inches) specified in the schedule at the end of this section for piping other than in boiler plant.
- See paragraphs 3.3 through 3.7 for Boiler Plant Applications.

### 3.3 COMMISSIONING

- A. Provide commissioning documentation in accordance with the requirements of section 23 08 00 - COMMISSIONING OF HVAC SYSTEMS for all inspection, start up, and contractor testing required above and required by the System Readiness Checklist provided by the Commissioning Agent.
- B. Components provided under this section of the specification will be tested as part of a larger system. Refer to section 23 08 00 - COMMISSIONING OF HVAC SYSTEMS and related sections for contractor responsibilities for system commissioning.

### 3.4 PIPE INSULATION SCHEDULE

Provide insulation for piping systems as scheduled below:

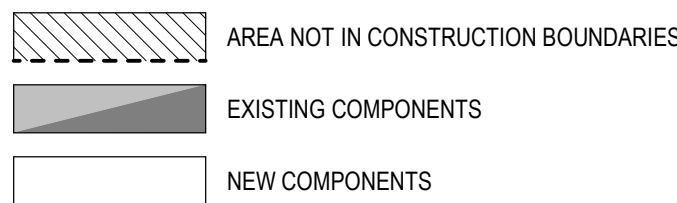
| Insulation Wall Thickness Millimeters (Inches)                          |                                          |                                                |                  |                  |                   |
|-------------------------------------------------------------------------|------------------------------------------|------------------------------------------------|------------------|------------------|-------------------|
|                                                                         |                                          | Nominal Pipe Size Millimeters (Inches)         |                  |                  |                   |
| Operating Temperature Range/Service                                     | Insulation Material                      | Less than 25 (1)                               | 25 - 32 (1 - 1¼) | 38 - 75 (1½ - 3) | 100 (4) and Above |
|                                                                         |                                          | Insulation Wall Thickness Millimeters (Inches) |                  |                  |                   |
| 122-177 degrees C (251-350 degrees F) (HPS, MPS)                        | Mineral Fiber (Above ground piping only) | 75 (3)                                         | 100 (4)          | 113 (4.5)        | 113 (4.5)         |
| 93-260 degrees C (200-500 degrees F) (HPS, HPR)                         | Calcium Silicate                         | 100 (4)                                        | 125 (5)          | 150 (6)          | 150 (6)           |
| 100-121 degrees C (212-250 degrees F) (HPR, MPR, LPS and Safety Valves) | Mineral Fiber (Above ground piping only) | 62 (2.5)                                       | 62 (2.5)         | 75 (3.0)         | 75 (3.0)          |

|                                                                                               |                                                                                 |             |          |          |          |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------|----------|----------|----------|
| 100-121 degrees C<br>(212-250 degrees F)<br>(HPR, MPR, LPS and<br>Safety Valves)              | Rigid Cellular<br>Phenolic Foam                                                 | 50<br>(2.0) | 50 (2.0) | 75 (3.0) | 75 (3.0) |
| 38-94 degrees C<br>(100-200 degrees F)<br>(LPR, PC, HWS and<br>HWR)                           | Mineral Fiber<br>(Above ground<br>piping only)                                  | 38<br>(1.5) | 38 (1.5) | 50 (2.0) | 50 (2.0) |
| 38-99 degrees C<br>(100-211 degrees F)<br>(LPR, PC, HWS and<br>HWR)                           | Rigid Cellular<br>Phenolic Foam                                                 | 38<br>(1.5) | 38 (1.5) | 50 (2.0) | 50 (2.0) |
| 38-94 degrees C<br>(100-200 degrees F)<br>(LPR, PC, HWS and<br>HWR)                           | Flexible<br>Elastomeric<br>Cellular<br>Thermal (Above<br>ground piping<br>only) | 38<br>(1.5) | 38 (1.5) | ----     | ----     |
| 4-16 degrees C<br>(40-60 degrees F)<br>(CWS, CWR, and RS<br>for DX<br>refrigeration)          | Rigid Cellular<br>Phenolic Foam                                                 | 38<br>(1.5) | 38 (1.5) | 38 (1.5) | 38 (1.5) |
| 4-16 degrees C<br>(40-60 degrees F)<br>(CWS and CWR within<br>chiller room and<br>pipe chase) | Cellular<br>Glass Closed-<br>Cell                                               | 50<br>(2.0) | 50 (2.0) | 75 (3.0) | 75 (3.0) |
| 4-16 degrees C<br>(40-60 degrees F)<br>(CWS, CWR, and RS<br>for DX<br>refrigeration)          | Cellular<br>Glass Closed-<br>Cell                                               | 38<br>(1.5) | 38 (1.5) | 38 (1.5) | 38 (1.5) |
| (40-60 degrees F)<br>(CWS, CWR, and RS<br>for DX<br>refrigeration)                            | Flexible<br>Elastomeric<br>Cellular<br>Thermal (Above<br>ground piping<br>only) | 38<br>(1.5) | 38 (1.5) | 38 (1.5) | 38 (1.5) |

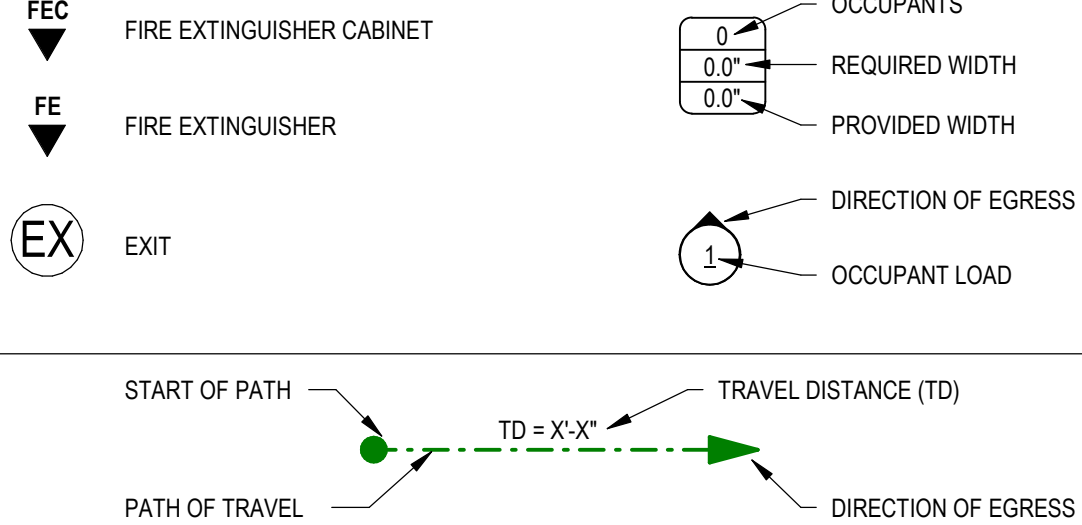
- - - E N D - - -

THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")  
ONE SIXTEENTH INCH - ONE FOOT (1/16" = 1'-0")

### CONSTRUCTION LEGEND



### CODE & EGRESS SYMBOL LEGEND



### BUILDING & LIFE SAFETY REQUIREMENT LEGEND

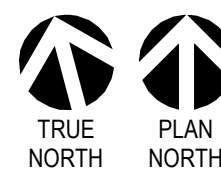
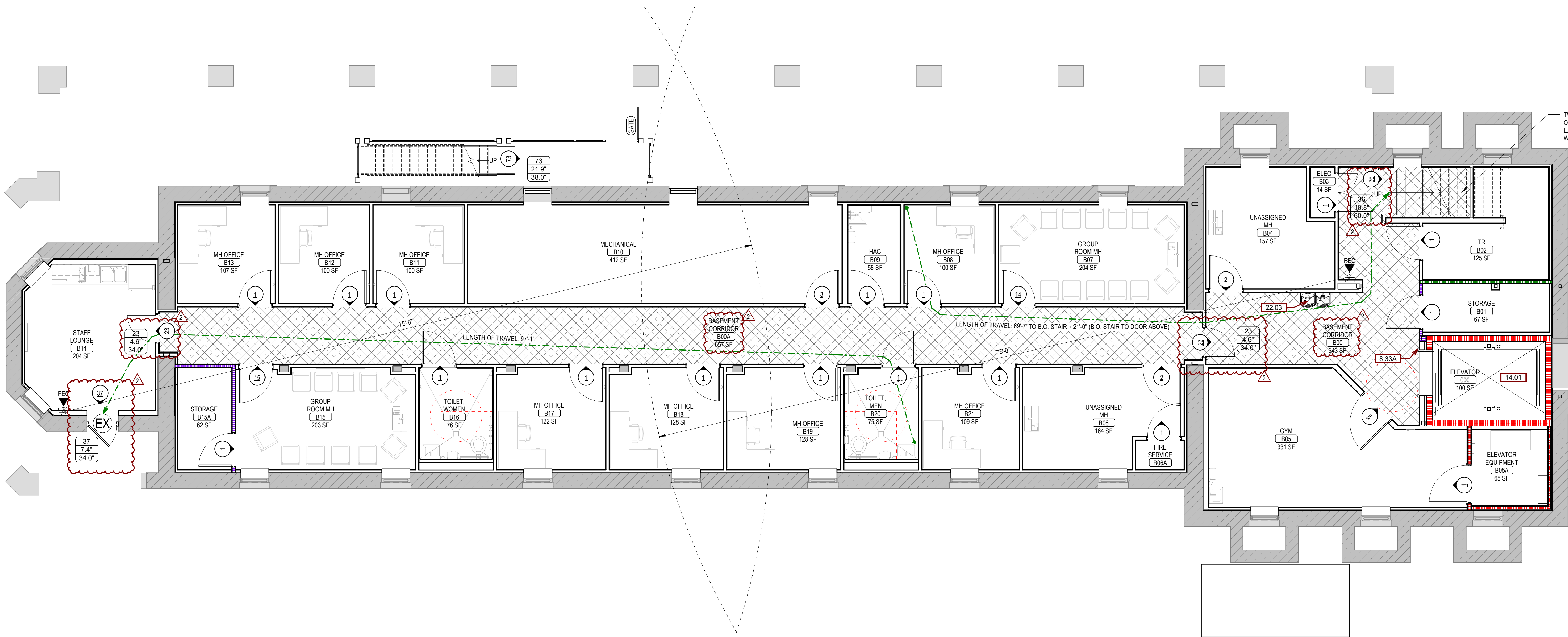
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|---------------|-------------|----------------------------------------------------------------------|--------------------------|--------|------------------------------------|---------------------------------------|---------------------|--|
|               |             |                                                                      |                          |        | REFERENCE                          | TYPE                                  | REFERENCE           |  |
| ---           | 2 HOUR      | FIRE WALL: BUILDING SEPARATION                                       | NFPA 8.2.1.3 IBC 716.1   | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | FIRE 90 MIN                           | N/A                 |  |
|               |             | FIRE BARRIER: OCCUPANCY/AREA SEPARATION                              | NFPA 8.2.1.3 IBC 716.1   | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | FIRE 90 MIN                           | NFPA 8.3.4.3, 9.2.1 |  |
|               |             | FIRE BARRIER: HORIZONTAL EXIT & REFUGE AREA                          | NFPA 7.1.3.2             | 90 MIN | NFPA 8.3.3.2.2                     | FIRE 90 MIN                           | NFPA 8.3.4.3, 9.2.1 |  |
| ---           | 1 HOUR      | FIRE BARRIER                                                         | NFPA 8.7.1.1 IBC 716.1   | 45 MIN | NFPA 8.3.3.2.2, 8.7.1.1 IBC 716.1  | N/A                                   | N/A                 |  |
|               |             | SMOKE BARRIER SUBDIVIDING SPACES                                     | NFPA 8.5 IBC 716.1       | 20 MIN | NFPA 8.3.3.2.2, 19.3.7.8 IBC 716.1 | SMOKE 90 MIN                          | NFPA 8.5.5.3        |  |
| ---           | NR          | SMOKE PARTITION (SPRINKLERED) HAZARDOUS/INCIDENTAL USE               | NFPA 8.4.2 NFPA 8.7.1.2  | NR     | NFPA 8.7.1.2                       | VARIES                                | NFPA 8.4.4          |  |
| ---           | 0.5 HOUR    | SMOKE PARTITION SLEEPING RM SEPARATION REQ                           | NFPA 8.4.2 NFPA 32.3.3.6 | NR     | NFPA 8.3.3.2.2, 8.4 NFPA 32.3.3.6  | VARIES                                | NFPA 8.4.4, 8.4.6.2 |  |
| ---           | NR          | EXIT ACCESS CORRIDOR (SPRINKLERED) CORRIDOR WALLS                    | NFPA 8.4.2 IBC 407.3     | NR     | NFPA 8.4.3                         | VARIES                                | NFPA 8.4.4, 8.4.6.2 |  |
| ---           | 2 HR        | FIRE BARRIER VERTICAL EXIT ENCLOSURE(SHAFT 2 HR = 4 OR MORE STORIES) | NFPA 8.6 IBC 716.1       | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | NOT ALLOWED UNLESS SERVING STAIR ONLY | N/A                 |  |
| ---           | 1 HR        | FIRE BARRIER HORIZONTAL EXIT PASSAGEWAY                              | NFPA 7.2.6               | 60 MIN | NFPA 8.3.3.2.2                     | NOT ALLOWED                           | N/A                 |  |
| ---           | 2 HR        | FIRE BARRIER VERTICAL EXIT PASSAGEWAY                                | NFPA 8.6                 | 90 MIN | NFPA 8.3.3.2.2                     | N/A                                   | NFPA 8.6.4          |  |
| ---           | 1 HR        |                                                                      |                          | 60 MIN |                                    |                                       |                     |  |

### KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                |
|-----------|-----------------------------------------------------------------------------|
| 8.33A     | SMOKE GUARD CURTAIN. INSTALL FLUSH WITH CEILING.                            |
| 14.01     | ELEVATOR                                                                    |
| 22.03     | B LEVEL ADA DRINKING FOUNTAIN W/ BOTTLE FILLING STATION. REF PLUMB & SPECS. |

### GENERAL CODE NOTES

- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
- B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
- C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- D. DETAILS SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.
- E. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- F. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CL" IS USED UNLESS OTHERWISE NOTED.
- G. SMOKE SEALS TO BE INSTALLED AT ALL RATED DOORS.
- H. SMOKE SEALS TO BE INSTALLED AT NON RATED SMOKE PARTITION & BARRIER DOORS UNLESS OTHERWISE NOTED.

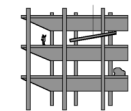


D5 LIFE SAFETY PLAN - BASEMENT  
3/16" = 1'-0"

| ISSUE # | DESCRIPTION   | DATE       |
|---------|---------------|------------|
| 2       | ADDENDUM 01   | 08/22/2025 |
| 1       | BID DOCUMENTS | 06/03/2025 |

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STEPHEN KILBER



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MIKE SIGMAN (ELEC)  
MICHAEL HEINRICH (MECH)



### DESIGNER OF RECORD

**A/E:**  
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600 EAST 7TH ST.  
SIOUX FALLS, SD 57103  
605-271-1144  
TODD STONE



STONE GROUP  
ARCHITECTS

### STAMP

Office of  
Construction  
and Facilities  
Management



U.S. Department  
of Veterans Affairs

Drawing Title  
LIFE SAFETY PLAN - BASEMENT

Approved  
DOUG SPRINKLE

Phase  
BID DOCUMENTS

FULLY SPRINKLERED

Project Title  
DOM RENOVATION FOR  
SEMIPRIVATE ROOMS

Location  
HOT SPRINGS, SD

Issue Date  
06/03/2025

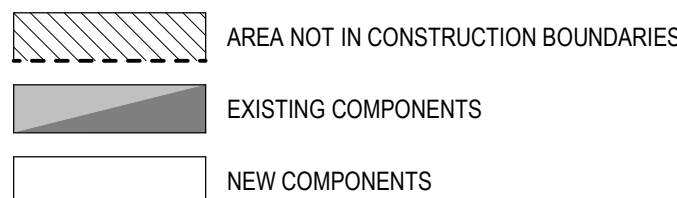
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JM/GB/TM

Drawn  
TL/KK

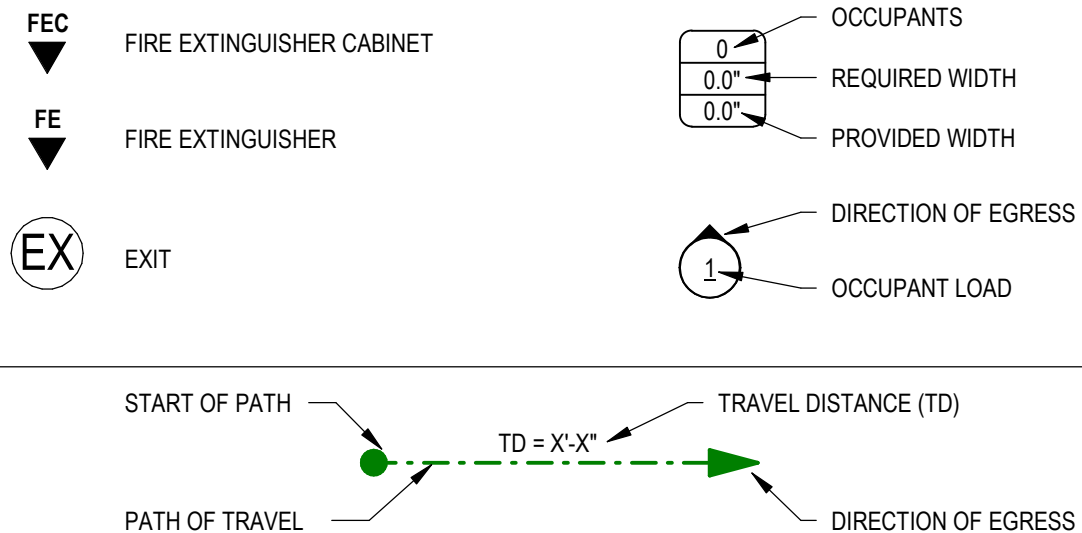
Project Number  
VA #568A4-21-208  
SGA #211921  
Building Number  
8

Drawing Number  
G1100

CONSTRUCTION LEGEND



CODE & EGRESS SYMBOL LEGEND



BUILDING & LIFE SAFETY REQUIREMENT LEGEND

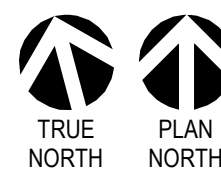
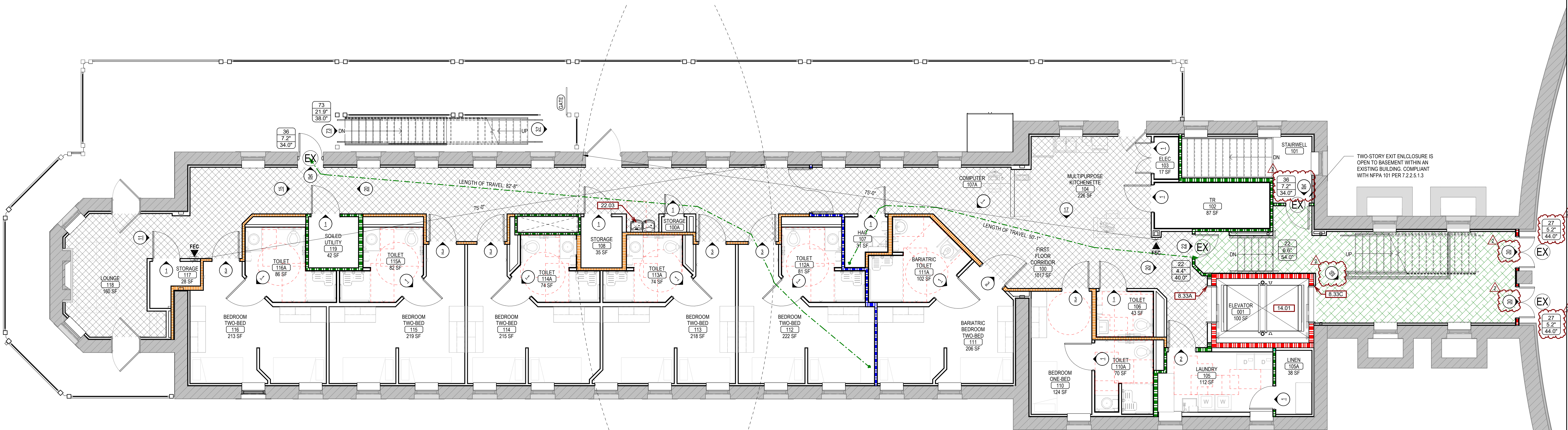
| PARTITION KEY | WALL RATING | DESCRIPTION                                                          | NFPA 101-2021 IBC 2023   | RATING | OPENINGS                           |                                       | DAMPERS   |                     |
|---------------|-------------|----------------------------------------------------------------------|--------------------------|--------|------------------------------------|---------------------------------------|-----------|---------------------|
|               |             |                                                                      |                          |        | REFERENCE                          | TYPE                                  | REFERENCE |                     |
| ---           | 2 HOUR      | FIRE WALL: BUILDING SEPARATION                                       | NFPA 8.2.1.3 IBC 716.1   | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | FIRE                                  | 90 MIN    | N/A                 |
|               |             | FIRE BARRIER: OCCUPANCY/AREA SEPARATION                              | NFPA 8.2.1.3 IBC 716.1   | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | FIRE                                  | 90 MIN    | NFPA 8.3.4.3, 9.2.1 |
|               |             | FIRE BARRIER: HORIZONTAL EXIT & REFUGE AREA                          | NFPA 7.1.3.2             | 90 MIN | NFPA 8.3.3.2.2                     | FIRE                                  | 90 MIN    | NFPA 8.3.4.3, 9.2.1 |
| ---           | 1 HOUR      | FIRE BARRIER                                                         | NFPA 8.7.1.1 IBC 716.1   | 45 MIN | NFPA 8.3.3.2.2, 8.7.1.1 IBC 716.1  | N/A                                   | N/A       | N/A                 |
|               |             | SMOKE BARRIER SUBDIVIDING SPACES                                     | NFPA 8.5 IBC 716.1       | 20 MIN | NFPA 8.3.3.2.2, 19.3.7.8 IBC 716.1 | SMOKE                                 | 90 MIN    | NFPA 8.5.5.3        |
| ---           | NR          | SMOKE PARTITION HAZARDOUS/INCIDENTAL USE                             | NFPA 8.4.2 NFPA 8.7.1.2  | NR     | NFPA 8.7.1.2                       | VARIES                                |           | NFPA 8.4.4          |
| ---           | 0.5 HOUR    | SMOKE PARTITION SLEEPING RM SEPARATION REQ                           | NFPA 8.4.2 NFPA 32.3.3.6 | NR     | NFPA 8.3.3.2.2, 8.4 NFPA 32.3.3.6  | VARIES                                |           | NFPA 8.4.4, 8.4.6.2 |
| ---           | NR          | EXIT ACCESS CORRIDOR (SPRINKLERED) CORRIDOR WALLS                    | NFPA 8.4.2 IBC 407.3     | NR     | NFPA 8.4.3                         | VARIES                                |           | NFPA 8.4.4, 8.4.6.2 |
| ---           | 2 HR        | FIRE BARRIER VERTICAL EXIT ENCLOSURE(SHAFT 2 HR = 4 OR MORE STORIES) | NFPA 8.6 IBC 716.1       | 90 MIN | NFPA 8.3.3.2.2 IBC 716.1           | NOT ALLOWED UNLESS SERVING STAIR ONLY |           | N/A                 |
| ---           | 1 HR        | FIRE BARRIER HORIZONTAL EXIT PASSAGEWAY                              | NFPA 7.2.6               | 60 MIN | NFPA 8.3.3.2.2                     | NOT ALLOWED                           |           | N/A                 |
| ---           | 2 HR        | FIRE BARRIER VERTICAL EXIT PASSAGEWAY                                | NFPA 8.6                 | 90 MIN | NFPA 8.3.3.2.2                     | N/A                                   |           | NFPA 8.6.4          |
| ---           | 1 HR        |                                                                      |                          | 60 MIN |                                    |                                       |           |                     |

KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                 |
|-----------|------------------------------------------------------------------------------|
| 8.33A     | SMOKE GUARD CURTAIN. INSTALL FLUSH WITH CEILING.                             |
| 8.33C     | EXPOSED SMOKE GUARD CURTAIN.                                                 |
| 14.01     | ELEVATOR.                                                                    |
| 22.03     | B1 LEVEL ADA DRINKING FOUNTAIN W/ BOTTLE FILLING STATION. REF PLUMB & SPECS. |

GENERAL CODE NOTES

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- G. SMOKE SEALS TO BE INSTALLED AT ALL RATED DOORS.
- H. SMOKE SEALS TO BE INSTALLED AT NON RATED SMOKE PARTITION & BARRIER DOORS UNLESS NOTED OTHERWISE.



D5 LIFE SAFETY PLAN - FIRST FLOOR  
3/16" = 1'-0"

| ISSUE # | DESCRIPTION   | DATE       |
|---------|---------------|------------|
| 2       | ADDENDUM 01   | 08/22/2025 |
| 1       | BID DOCUMENTS | 06/03/2025 |

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**STRUCTURAL:**  
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**STONE GROUP** ARCHITECTS

STAMP

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
LIFE SAFETY PLAN - 1ST FLOOR

Approved  
DOUG SPRINKLE

Phase  
BID DOCUMENTS

FULLY SPRINKLERED

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DOM RENOVATION FOR  
SEMIPRIVATE ROOMS

Location  
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Checked  
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Drawn  
TL/KK

Project Number  
VA #568A4-21-208  
SGA #211921  
Building Number  
8

Drawing Number  
G1101

GENERAL SITE NOTES

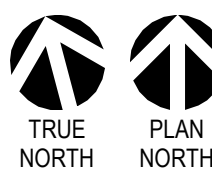
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- G. SEE MECHANICAL & ELECTRICAL PLANS FOR LOCATIONS OF HOSE BIBS & EXTERIOR OUTLETS. PROTECT ALL EXISTING UTILITIES UN.

GENERAL DEMOLITION NOTES

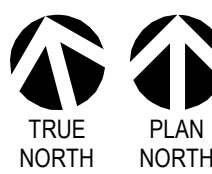
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- J. PATCHING AND/OR INFILL TO MATCH EXISTING CONSTRUCTION & FINISHES UN.
- K. EXISTING ITEMS TO REMAIN ARE SHOWN IN GRAY.
- L. EXISTING ITEMS TO BE DEMOLISHED ARE SHOWN WHITE WITH DASHED LINES.
- M. INFILL OF FIRE PARTITION PENETRATIONS/OPENINGS SHALL MAINTAIN THE INTEGRITY OF THE RATING.
- N. CONTRACTOR TO COORDINATE RELOCATION AND/OR STORAGE OF SALVAGED ITEMS WITH THE OWNER UN.
- O. REFERENCE HAZARDOUS MATERIALS, MECHANICAL DEMOLITION, AND/OR PLUMBING DEMOLITION SHEETS FOR INFORMATION REGARDING DEMOLITION OF HAZARDOUS MATERIALS.
- P. SEE STRUCTURAL DETAILS FOR INFORMATION REGARDING INFILL OF EXISTING STRUCTURAL FLOOR & ROOF PENETRATIONS.
- Q. ALL CONSTRUCTION WASTE PRODUCED BY DEMOLITION TO BE PROPERTY OF CONTRACTOR UN.
- R. PLUMBING ON BASEMENT LEVEL TO BE REMOVED TO BELOW THE FLOOR AND CAPPED. SEE STRUCTURAL FOR CONCRETE PATCH DETAILS.
- S. EXISTING INTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW STAIN FINISH. EXISTING EXTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW PAINT.
- T. STRIP EXISTING STAINED WOOD WINDOWS, TRIM, AND SILLS. PREPARE FOR NEW STAIN FINISH. EXISTING WOOD TRIM AND SILLS TO BE REMOVED AND SALVAGED AS NECESSARY FOR REINSTALLATION.

KEYNOTES

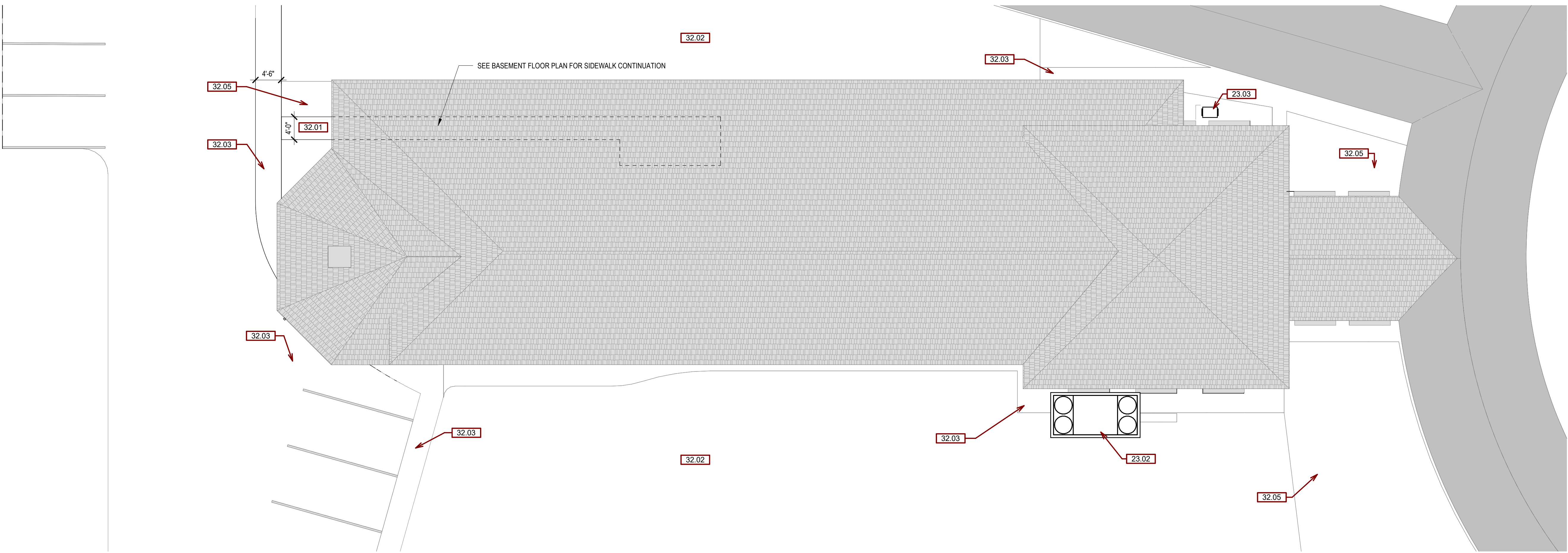
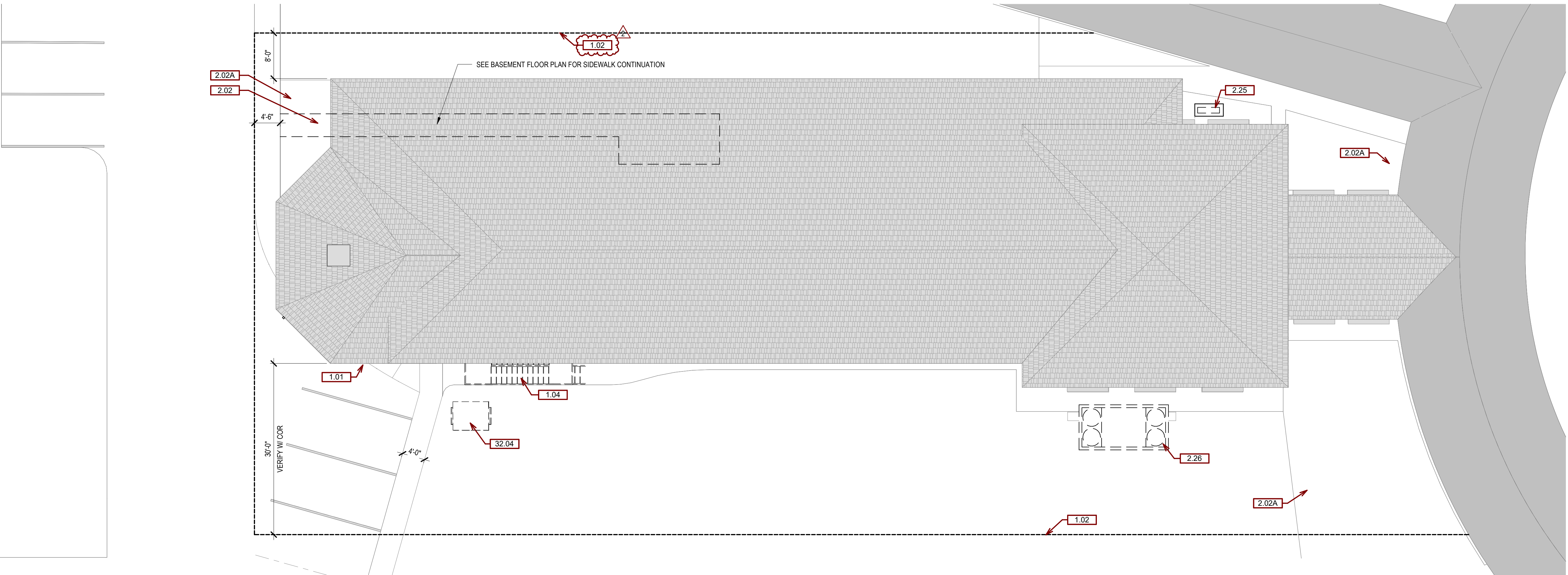
| KEY VALUE | KEYNOTE TEXT                                                                                                 |
|-----------|--------------------------------------------------------------------------------------------------------------|
| 1.01      | CONTRACTOR'S ENTRANCE.                                                                                       |
| 1.02      | 8'-0" CONSTRUCTION FENCE.                                                                                    |
| 1.04      | STAIR TO BE REMOVED. MAY RETAIN AS NECESSARY FOR USE DURING DEMOLITION/CONSTRUCTION. CONFIRM W/ COR.         |
| 2.02      | REMOVE LANDSCAPE ROCK FOR NEW SIDEWALK.                                                                      |
| 2.02A     | EXISTING LANDSCAPE ROCK TO REMAIN.                                                                           |
| 2.25      | REMOVE MECH ELEMENT. CONCRETE SLAB TO REMAIN. SEE MECHANICAL.                                                |
| 2.26      | REMOVE MECH ELEMENT. CONCRETE SLAB. CANOPY. SEE MECHANICAL.                                                  |
| 23.02     | MECH ELEMENT ON NEW CONCRETE PAD. SEE MECHANICAL.                                                            |
| 23.03     | MECH ELEMENT ON EXISTING CONCRETE PAD. SEE MECHANICAL.                                                       |
| 32.01     | NEW 4" CONCRETE SIDEWALK OVER GRANULAR SUB-BASE.                                                             |
| 32.02     | REPAIR/REPLACE LAWN WHERE DISTURBED BY CONSTRUCTION ACTIVITIES. CONFIRM FINAL GRADING IS AWAY FROM BUILDING. |
| 32.03     | REPAIR/REPLACE DAMAGED CONCRETE WALK AND/OR PARKING FROM CONSTRUCTION ACTIVITIES.                            |
| 32.04     | REMOVE DUMPSTER.                                                                                             |
| 32.05     | REPAIR LANDSCAPE ROCK DISRUPTED BY CONSTRUCTION.                                                             |



B5 SITE PLAN - DEMOLITION  
1" = 10'-0"



D5 SITE PLAN  
1" = 10'-0"



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Drawing Title  
ARCHITECTURAL SITE PLANS

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DOUG SPRINKLE

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HAZARDOUS WASTE LEGEND

ASBESTOS TILE/LINOLEUM TO BE ABATED

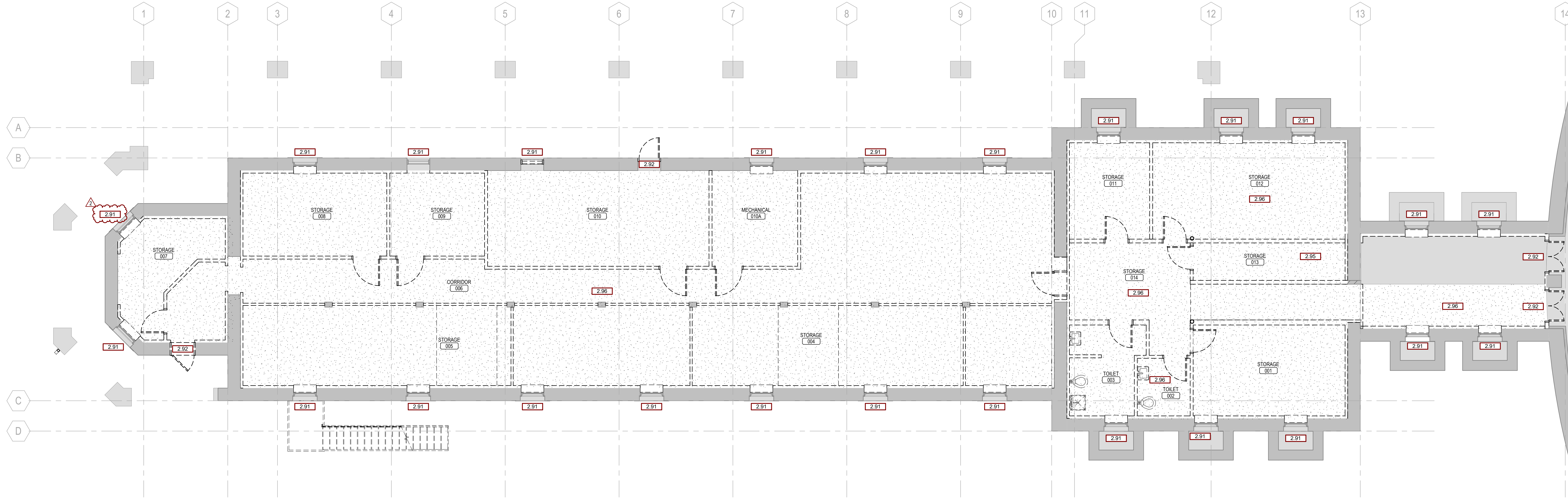
EXISTING COMPONENT TO REMAIN

GENERAL HAZARDOUS MATERIAL NOTES

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- G. MATERIALS CONTAINING LESS THAN 1% ASBESTOS ARE NOT REQUIRED BY NESHAP OR AHERA; HOWEVER THE OSHA PERSONAL EXPOSURE LIMITS (0.1 FIC OF AIR AS AN EIGHT HOUR TIME WEIGHTED AVERAGE OR 1.0 FIC OF AIR OVER 30 MINUTES) FOR ASBESTOS APPLY WHEN MATERIALS CONTAINING 1% ASBESTOS OR LESS ARE DISTURBED DURING RENOVATIONS OR DEMOLITIONS. REFERENCE ASBESTOS SURVEY FOR A LIST OF MATERIALS THAT CONTAIN 1% ASBESTOS OR LESS WHICH WILL ENABLE THE RENOVATION / DEMOLITION CONTRACTOR TO MAKE APPROPRIATE DECISIONS CONCERNING COMPLIANCE ISSUES WITH APPLICABLE OSHA REGULATIONS.
- H. REFERENCE MECHANICAL AND/OR PLUMBING DEMOLITION SHEETS FOR IDENTIFIED & POSSIBLE LOCATIONS OF PIPES WRAPPED WITH ASBESTOS MATERIALS.
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- J. REFERENCE ARCHITECTURAL DEMOLITION SHEETS FOR INFORMATION REGARDING DEMOLITION OF NON-HAZARDOUS MATERIALS.
- K. PROVIDE BARRIERS BETWEEN RENOVATION AREAS AND OCCUPIED AREAS AS REQUIRED.
- L. REMOVE ALL MOUNTABLE OBJECTS WITHIN SCHEDULED ABATEMENT AREAS PRIOR TO COMMENCEMENT OF ABATEMENT ACTIVITIES.
- M. PRIOR TO CONDUCTING ABATEMENT ACTIVITIES, MECHANICAL CONTRACTOR TO REMOVE DIFFUSERS AND CAP SUPPLY AND RETURN DUCTS. ABATEMENT CONTRACTOR TO SEAL ANY SEAMS IN HVAC SYSTEM COMPONENTS THAT PASS THROUGH THE REGULATED AREA.

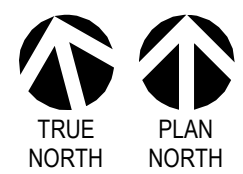
KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                                                                   |
|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| 2.91      | ABATE LEAD PAINT ON WOOD WINDOW SASHES, SILLS, FRAMES & TRIM, INTERIOR AND EXTERIOR.                                           |
| 2.92      | ABATE LEAD PAINT ON WOOD DOOR AND TRIM.                                                                                        |
| 2.95      | ABATE ASBESTOS 12" WHITE/BLACK & 12" TAN FLOOR TILE.                                                                           |
| 2.96      | ABATE ASBESTOS TAN LINOLEUM SHEET FLOORING. SEE HAZARDOUS ABATEMENT PLANS FOR ABATEMENT OF ASBESTOS CONTAINING FLOOR MATERIAL. |



HAZARDOUS ABATEMENT PLAN - BASEMENT

3/16" = 1'-0"



|                                                                                                                                                                                         |  |  |                                                                                                                                                                                           |  |  |                                                                                                                          |  |  |                                                                                                 |  |  |                                                           |  |  |                                                                                                                                                                                             |  |  |                                                                                                                           |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>CONSULTANTS</b><br><b>STRUCTURAL:</b><br>ALBERTSON ENGINEERING, INC.<br>3202 W. MAIN ST., #C<br>RAPID CITY, SD 57702<br>605-343-9606<br>STEPHEN KILBER<br>Albertson Engineering Inc. |  |  | <b>DESIGNER OF RECORD</b><br><b>A/E:</b><br>STONE GROUP ARCHITECTS<br>600 EAST 7TH ST.<br>SIOUX FALLS, SD 57103<br>605-271-1144<br>TODD STONE<br><b>WPE</b> WEST PLAINS ENGINEERING, INC. |  |  | <b>STAMP</b><br><b>Office of Construction and Facilities Management</b><br><b>VA</b> U.S. Department of Veterans Affairs |  |  | <b>Drawing Title</b><br>HAZARDOUS ABATEMENT PLAN - BASEMENT<br><b>Approved</b><br>DOUG SPRINKLE |  |  | <b>Phase</b><br>BID DOCUMENTS<br><b>FULLY SPRINKLERED</b> |  |  | <b>Project Title</b><br>DOM RENOVATION FOR SEMIPRIVATE ROOMS<br><b>Location</b><br>HOT SPRINGS, SD<br><b>Issue Date</b><br>06/03/2025<br><b>Checked</b><br>JMB/MTM<br><b>Drawn</b><br>TL/KK |  |  | <b>Project Number</b><br>VA #568A4-21-208<br>SGA #211921<br><b>Building Number</b><br>8<br><b>Drawing Number</b><br>HA100 |  |  |
| 2 ADDENDUM 01 08/22/2025<br>ISSUE # DESCRIPTION DATE                                                                                                                                    |  |  |                                                                                                                                                                                           |  |  |                                                                                                                          |  |  |                                                                                                 |  |  |                                                           |  |  |                                                                                                                                                                                             |  |  |                                                                                                                           |  |  |

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- U. EXISTING WOOD TRIM AND SILLS TO BE REMOVED AND SALVAGED AS NECESSARY FOR REINSTALLATION.

HAZARDOUS WASTE LEGEND

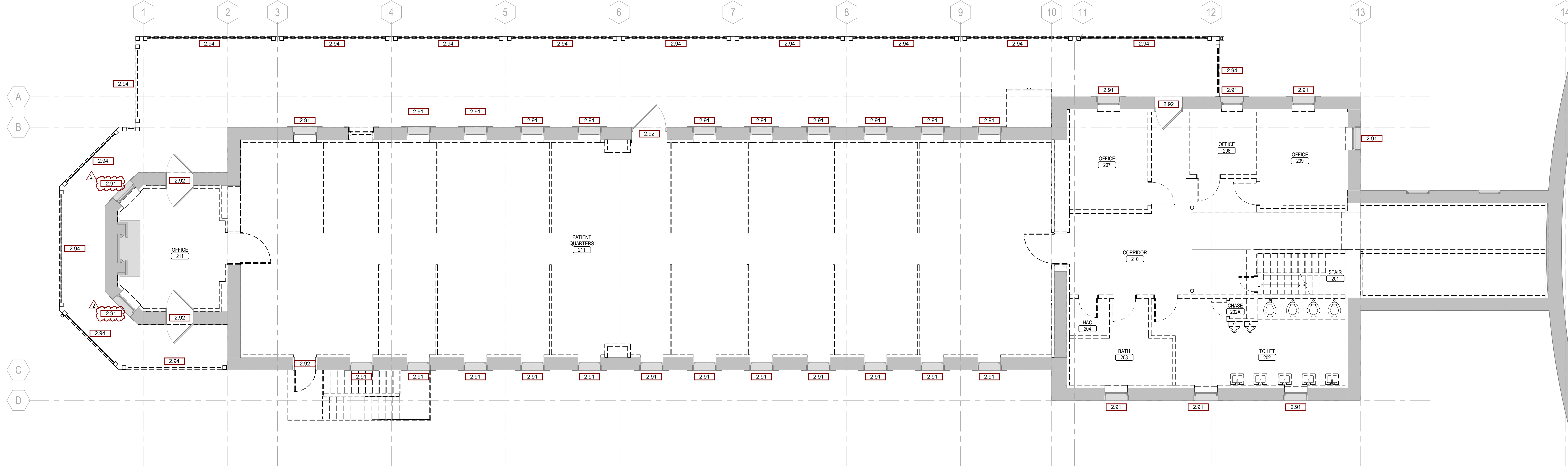
- ASBESTOS TILE/INOLEUM TO BE ABATED
- EXISTING COMPONENT TO REMAIN

GENERAL HAZARDOUS MATERIAL NOTES

- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
- B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
- C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- D. DETAILS SHOWN ARE TYPICAL UN. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.
- E. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- F. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CLR" IS USED UN.
- G. MATERIALS CONTAINING LESS THAN 1% ASBESTOS ARE NOT REQUIRED BY NESHA OR AHERA; HOWEVER THE OSHA PERSONAL EXPOSURE LIMITS (0.1 FCC OF AIR AS AN EIGHT HOUR TIME WEIGHTED AVERAGE OR 1.0 FCC OF AIR OVER 30 MINUTES) FOR ASBESTOS APPLY WHEN MATERIALS CONTAINING 1% ASBESTOS OR LESS ARE DISTURBED DURING RENOVATIONS OR DEMOLITIONS. REFERENCE ASBESTOS SURVEY FOR A LIST OF MATERIALS THAT CONTAIN 1% ASBESTOS OR LESS WHICH WILL ENABLE THE RENOVATION / DEMOLITION CONTRACTOR TO MAKE APPROPRIATE DECISIONS CONCERNING COMPLIANCE ISSUES WITH APPLICABLE OSHA REGULATIONS.
- H. REFERENCE MECHANICAL AND/OR PLUMBING DEMOLITION SHEETS FOR ADDITIONAL INFORMATION REGARDING PIPES WRAPPED WITH ASBESTOS MATERIALS.
- I. REFERENCE MECHANICAL AND/OR PLUMBING DEMOLITION SHEETS FOR IDENTIFIED & POSSIBLE LOCATIONS OF PIPES WRAPPED WITH ASBESTOS MATERIALS.
- J. REFERENCE ARCHITECTURAL DEMOLITION SHEETS FOR INFORMATION REGARDING DEMOLITION OF NON-HAZARDOUS MATERIALS.
- K. PROVIDE BARRIERS BETWEEN RENOVATION AREAS AND OCCUPIED AREAS AS REQUIRED.
- L. REMOVE ALL MOUNTABLE OBJECTS WITHIN SCHEDULED ABATEMENT AREAS PRIOR TO COMMENCEMENT OF ABATEMENT ACTIVITIES.
- M. PRIOR TO CONDUCTING ABATEMENT ACTIVITIES, MECHANICAL CONTRACTOR TO REMOVE DIFFUSERS AND CAP SUPPLY AND RETURN DUCTS. ABATEMENT CONTRACTOR TO SEAL ANY SEAMS IN HVAC SYSTEM COMPONENTS THAT PASS THROUGH THE REGULATED AREA.

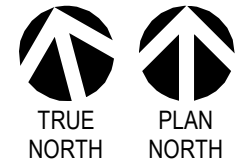
KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                             |
|-----------|------------------------------------------------------------------------------------------|
| 2.91      | ABATE LEAD PAINT ON WOOD WINDOW SASHES, SILLS, FRAMES & TRIM, INTERIOR AND EXTERIOR.     |
| 2.92      | ABATE LEAD PAINT ON WOOD DOOR AND TRIM.                                                  |
| 2.94      | ABATE LEAD PAINT ON WOOD PORCH FLOORS, SUPPORTS, RAILINGS & TRIM, INTERIOR AND EXTERIOR. |

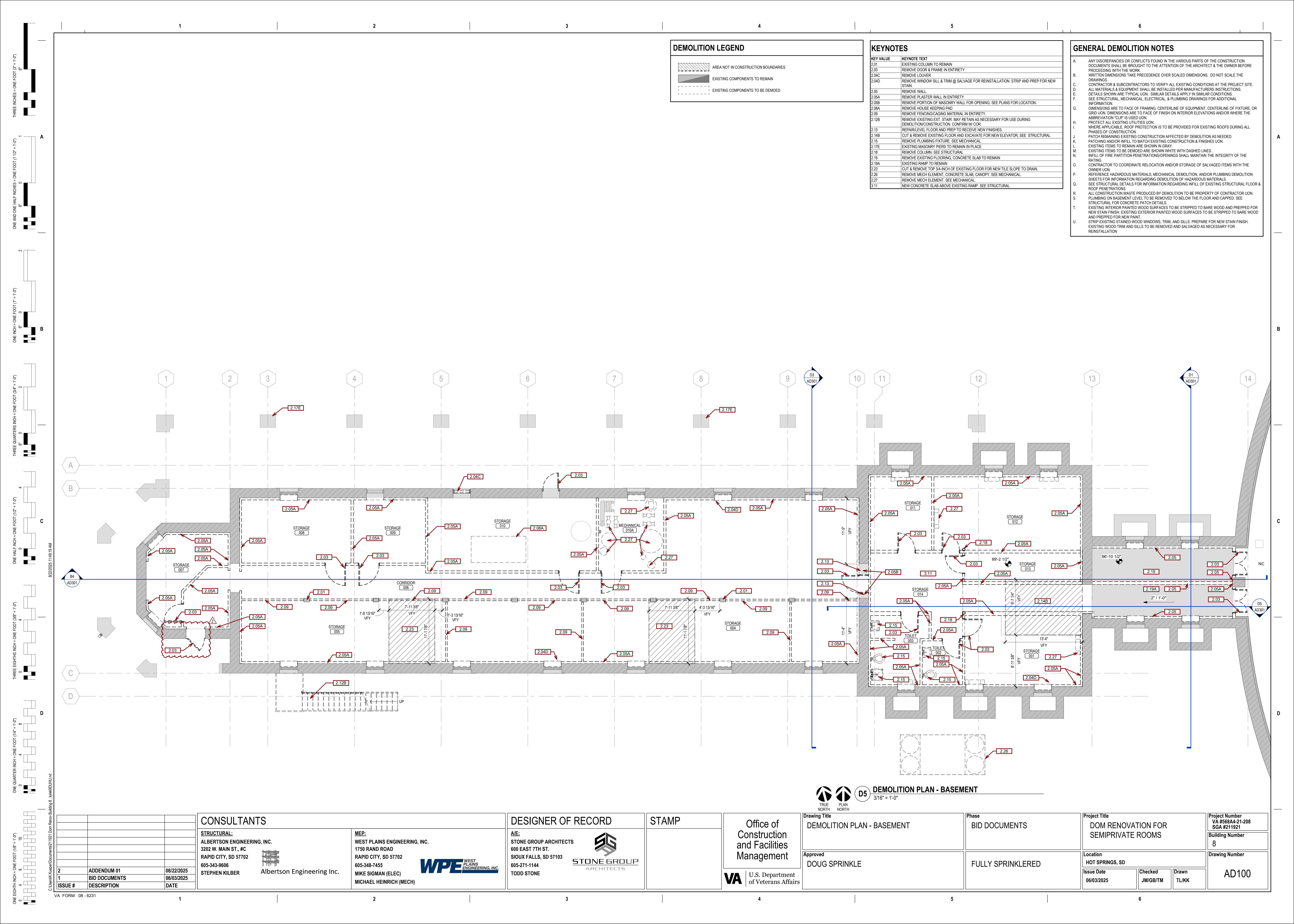


HAZARDOUS ABATEMENT PLAN - SECOND FLOOR

3/16" = 1'-0"



|                                                                                                                                                                                         |  |  |                                                                                                                                                                                           |  |  |                                                                                                                       |  |  |                                                                                                      |  |  |                                                        |  |  |                                                                                                                                                                                                  |  |  |                                                                                                                           |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>CONSULTANTS</b><br><b>STRUCTURAL:</b><br>ALBERTSON ENGINEERING, INC.<br>3202 W. MAIN ST., #C<br>RAPID CITY, SD 57702<br>605-343-9606<br>STEPHEN KILBER<br>Albertson Engineering Inc. |  |  | <b>DESIGNER OF RECORD</b><br><b>A/E:</b><br>STONE GROUP ARCHITECTS<br>600 EAST 7TH ST.<br>SIOUX FALLS, SD 57103<br>605-271-1144<br>TODD STONE<br><b>WPE</b> WEST PLAINS ENGINEERING, INC. |  |  | <b>STAMP</b><br><br>Office of Construction and Facilities Management<br><b>VA</b> U.S. Department of Veterans Affairs |  |  | <b>Drawing Title</b><br>HAZARDOUS ABATEMENT PLAN - 2ND FLOOR<br><br><b>Approved</b><br>DOUG SPRINKLE |  |  | <b>Phase</b><br>BID DOCUMENTS<br><br>FULLY SPRINKLERED |  |  | <b>Project Title</b><br>DOM RENOVATION FOR SEMIPRIVATE ROOMS<br><br><b>Location</b><br>HOT SPRINGS, SD<br><b>Issue Date</b><br>06/03/2025<br><b>Checked</b><br>JM/GB/TM<br><b>Drawn</b><br>TL/KK |  |  | <b>Project Number</b><br>VA #568A4-21-208<br>SGA #211921<br><b>Building Number</b><br>8<br><b>Drawing Number</b><br>HA102 |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------|--|--|



**DEMOLITION LEGEND**

AREA NOT IN CONSTRUCTION BOUNDARIES

EXISTING COMPONENTS TO REMAIN

EXISTING COMPONENTS TO BE DEMOED

| KEY VALUE | KEYNOTE TEXT                                                                                                |
|-----------|-------------------------------------------------------------------------------------------------------------|
| 2.01      | EXISTING COLUMN TO REMAIN                                                                                   |
| 2.03      | REMOVE DOOR & FRAME IN ENTIRETY                                                                             |
| 2.04C     | REMOVE LOUVER                                                                                               |
| 2.04D     | REMOVE WINDOW SILL & TRIM @ SALVAGE FOR REINSTALLATION. STRIP AND PREP FOR NEW STAIN                        |
| 2.05      | REMOVE WALL                                                                                                 |
| 2.05A     | REMOVE PLASTER WALL IN ENTIRETY                                                                             |
| 2.05B     | REMOVE PORTION OF MASONRY WALL FOR OPENING. SEE PLANS FOR LOCATION                                          |
| 2.06A     | REMOVE HOUSE KEEPING PAD                                                                                    |
| 2.09      | REMOVE FENCING/CAGING MATERIAL IN ENTIRETY                                                                  |
| 2.12B     | REMOVE EXISTING EXIT STAIR. MAY RETAIN AS NECESSARY FOR USE DURING DEMOLITION/CONSTRUCTION. CONFIRM W/ COR. |
| 2.13      | REPAIR/LEVEL FLOOR AND PREP TO RECEIVE NEW FINISHES                                                         |
| 2.14B     | CUT & REMOVE EXISTING FLOOR AND EXCAVATE FOR NEW ELEVATOR. SEE STRUCTURAL                                   |
| 2.15      | REMOVE PLUMBING FIXTURE. SEE MECHANICAL                                                                     |
| 2.17E     | EXISTING MASONRY PIERS TO REMAIN IN PLACE                                                                   |
| 2.18      | REMOVE COLUMN. SEE STRUCTURAL                                                                               |
| 2.19      | REMOVE EXISTING FLOORING. CONCRETE SLAB TO REMAIN                                                           |
| 2.19A     | EXISTING RAMP TO REMAIN                                                                                     |
| 2.23      | CUT & REMOVE TOP 3/4-INCH OF EXISTING FLOOR FOR NEW TILE SLOPE TO DRAIN                                     |
| 2.26      | REMOVE MECH ELEMENT. CONCRETE SLAB. CANOPY. SEE MECHANICAL                                                  |
| 2.27      | REMOVE MECH ELEMENT. SEE MECHANICAL                                                                         |
| 3.11      | NEW CONCRETE SLAB ABOVE EXISTING RAMP. SEE STRUCTURAL                                                       |

**GENERAL DEMOLITION NOTES**

A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.

B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.

C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.

D. DETAILS SHOWN ARE TYPICAL UNLESS NOTED. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

E. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UNLESS NOTED. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CLF" IS USED UNLESS NOTED.

F. PROTECT ALL EXISTING UTILITIES UNLESS NOTED.

G. WHERE APPLICABLE, ROOF PROTECTION IS TO BE PROVIDED FOR EXISTING ROOFS DURING ALL PHASES OF CONSTRUCTION.

H. PATCH REMAINING EXISTING CONSTRUCTION AFFECTED BY DEMOLITION AS NEEDED.

I. PATCHING AND/OR INFILL TO MATCH EXISTING CONSTRUCTION & FINISHES UNLESS NOTED.

J. EXISTING ITEMS TO REMAIN ARE SHOWN IN GRAY.

K. EXISTING ITEMS TO BE DEMOED ARE SHOWN WHITE WITH DASHED LINES.

L. INFILL OF FIRE PARTITION PENETRATIONS/OPENINGS SHALL MAINTAIN THE INTEGRITY OF THE RATING.

M. CONTRACTOR TO COORDINATE RELOCATION AND/OR STORAGE OF SALVAGED ITEMS WITH THE OWNER UNLESS NOTED.

N. REFERENCE HAZARDOUS MATERIALS, MECHANICAL DEMOLITION, AND/OR PLUMBING DEMOLITION SHEETS FOR INFORMATION REGARDING DEMOLITION OF HAZARDOUS MATERIALS.

O. SEE STRUCTURAL DETAILS FOR INFORMATION REGARDING INFILL OF EXISTING STRUCTURAL FLOOR & ROOF PENETRATIONS.

P. ALL CONSTRUCTION WASTE PRODUCED BY DEMOLITION TO BE PROPERTY OF CONTRACTOR UNLESS NOTED.

Q. PLUMBING ON BASEMENT LEVEL TO BE REMOVED TO BELOW THE FLOOR AND CAPPED. SEE STRUCTURAL FOR CONCRETE PATCH DETAILS.

R. EXISTING INTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW STAIN FINISH. EXISTING EXTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW PAINT.

S. STRIP EXISTING STAINED WOOD WINDOWS, TRIM, AND SILLS. PREPARE FOR NEW STAIN FINISH. EXISTING WOOD TRIM AND SILLS TO BE REMOVED AND SALVAGED AS NECESSARY FOR REINSTALLATION.

| ISSUE # | DESCRIPTION   | DATE       |
|---------|---------------|------------|
| 2       | ADDENDUM 01   | 08/22/2025 |
| 1       | BID DOCUMENTS | 06/03/2025 |

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TODD STONE

**STONE GROUP ARCHITECTS**

**STAMP**

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
DEMOLITION PLAN - BASEMENT

**Approved**  
DOUG SPRINKLE

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
DOM RENOVATION FOR SEMIPRIVATE ROOMS

**Location**  
HOT SPRINGS, SD

**Issue Date**  
06/03/2025

**Checked**  
JM/GB/TM

**Drawn**  
TL/KK

**Project Number**  
VA #568A4-21-208  
SGA #211921

**Building Number**  
8

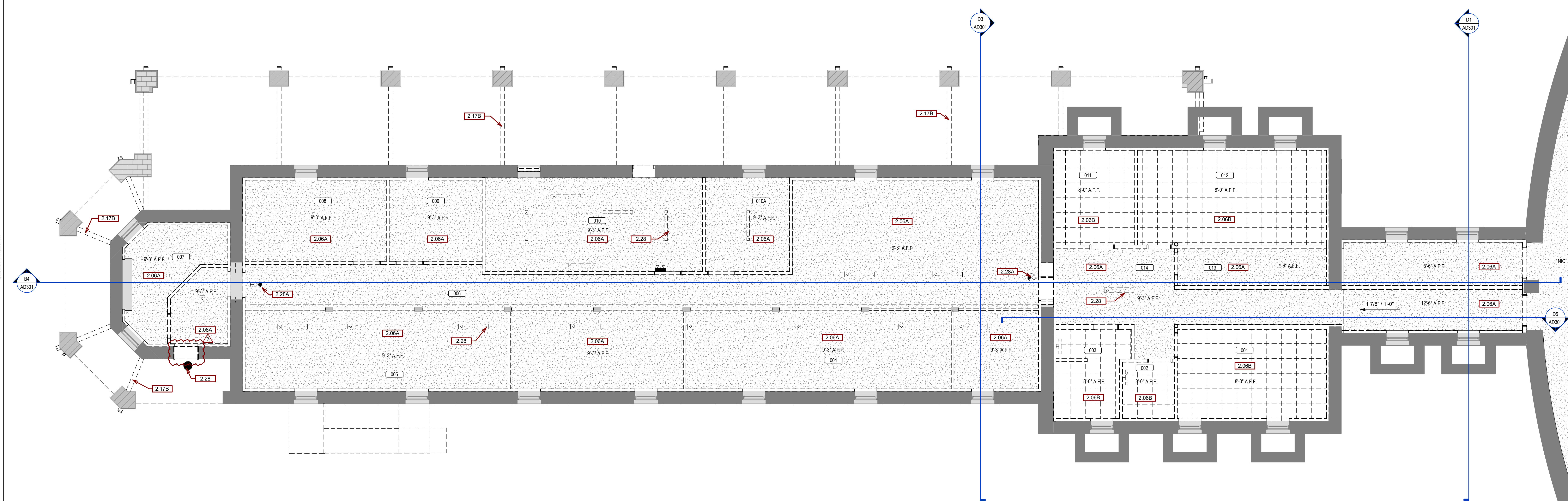
**Drawing Number**  
AD100

THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
THREE EIGHTHS INCH - ONE FOOT (3/8" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")

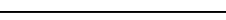
| DEMOLITION LEGEND |                                      |
|-------------------|--------------------------------------|
|                   | AREA NOT IN CONSTRUCTION BOUNDARIES  |
|                   | EXISTING COMPONENTS TO REMAIN        |
|                   | EXISTING COMPONENTS TO BE DEMOLISHED |

| KEY VALUE | KEYNOTE TEXT                                                                                                                                                 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.06A     | REMOVE PLASTER CEILING IN ENTIRETY.                                                                                                                          |
| 2.06B     | REMOVE EXISTING CEILING TILE & GRID.                                                                                                                         |
| 2.17B     | REMOVE PORCH BEAMS AND COLUMNS IN THEIR ENTIRETY. SEE STRUCTURAL FOR TEMPORARY SHORING OF EXISTING ROOF. SEE HAZARDOUS ABATEMENT PLANS FOR ABATEMENT OF LBP. |
| 2.28      | REMOVE LIGHT FIXTURE (TYP). SEE ELECTRICAL.                                                                                                                  |
| 2.28A     | REMOVE EXT. SIGNAGE (TYP). SEE ELECTRICAL.                                                                                                                   |

| GENERAL DEMOLITION NOTES |                                                                                                                                                                                                                                               |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A.                       | ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.                                                       |
| B.                       | WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.                                                                                                                                                         |
| C.                       | CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE.                                                                                                                                                            |
| D.                       | ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.                                                                                                                                                                  |
| E.                       | DETAILS SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.                                                                                                                                                |
| F.                       | SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.                                                                                                                                                       |
| G.                       | DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UNLESS NOTED OTHERWISE. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CL" IS USED UNLESS NOTED OTHERWISE. |
| H.                       | PROTECT ALL EXISTING UTILITIES UNLESS NOTED OTHERWISE.                                                                                                                                                                                        |
| I.                       | WHERE APPLICABLE, ROOF PROTECTION IS TO BE PROVIDED FOR EXISTING ROOFS DURING ALL PHASES OF CONSTRUCTION.                                                                                                                                     |
| J.                       | PATCH REMAINING EXISTING CONSTRUCTION AFFECTED BY DEMOLITION AS NEEDED.                                                                                                                                                                       |
| K.                       | PATCHING AND/OR INFILL TO MATCH EXISTING CONSTRUCTION & FINISHES UNLESS NOTED OTHERWISE.                                                                                                                                                      |
| L.                       | EXISTING ITEMS TO REMAIN ARE SHOWN IN GRAY.                                                                                                                                                                                                   |
| M.                       | EXISTING ITEMS TO BE DEMOLISHED ARE SHOWN WHITE WITH DASHED LINES.                                                                                                                                                                            |
| N.                       | INFILL OF FIRE PARTITION PENETRATIONS/OPENINGS SHALL MAINTAIN THE INTEGRITY OF THE RATING.                                                                                                                                                    |
| O.                       | CONTRACTOR TO COORDINATE RELOCATION AND/OR STORAGE OF SALVAGED ITEMS WITH THE OWNER UNLESS NOTED OTHERWISE.                                                                                                                                   |
| P.                       | REFERENCE HAZARDOUS MATERIALS, MECHANICAL DEMOLITION, AND/OR PLUMBING DEMOLITION SHEETS FOR INFORMATION REGARDING DEMOLITION OF HAZARDOUS MATERIALS.                                                                                          |
| Q.                       | SEE STRUCTURAL DETAILS FOR INFORMATION REGARDING INFILL OF EXISTING STRUCTURAL FLOOR & ROOF PENETRATIONS.                                                                                                                                     |
| R.                       | ALL CONSTRUCTION WASTE PRODUCED BY DEMOLITION TO BE PROPERTY OF CONTRACTOR UNLESS NOTED OTHERWISE.                                                                                                                                            |
| S.                       | PLUMBING ON BASEMENT LEVEL TO BE REMOVED TO BELOW THE FLOOR AND CAPPED. SEE STRUCTURAL FOR CONCRETE PATCH DETAILS.                                                                                                                            |
| T.                       | EXISTING INTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW STAIN FINISH. EXISTING EXTERIOR PAINTED WOOD SURFACES TO BE STRIPPED TO BARE WOOD AND PREPARED FOR NEW PAINT.                                        |
| U.                       | STRIP EXISTING STAINED WOOD WINDOWS, TRIM, AND SILLS. PREPARE FOR NEW STAIN FINISH. EXISTING WOOD TRIM AND SILLS TO BE REMOVED AND SALVAGED AS NECESSARY FOR REINSTALLATION.                                                                  |



TRUE NORTH  
PLAN NORTH  
D5 DEMOLITION RCP - BASEMENT  
3/16" = 1'-0"

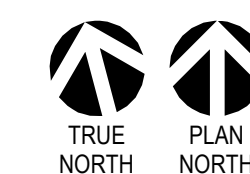
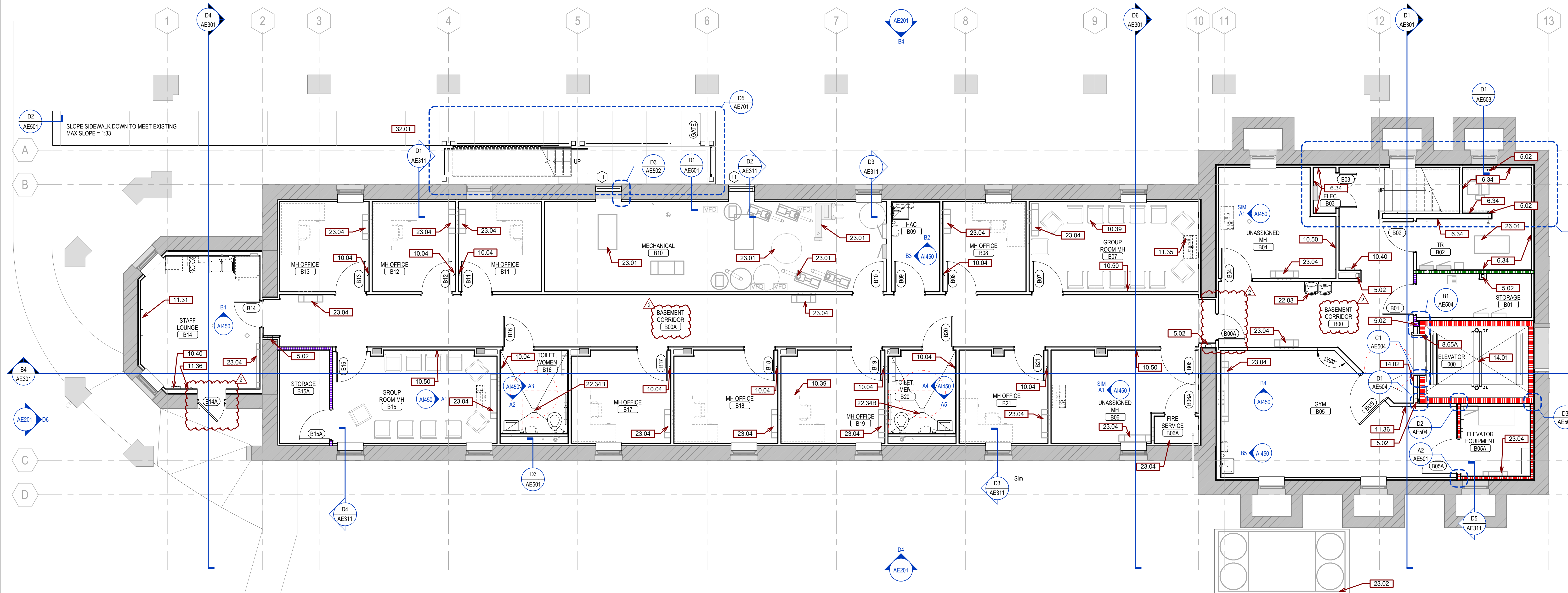
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|                                                                                                                                                                                                            |  |  | <div>CONSULTANTS</div> <div><div><div>STRUCTURAL:</div><div>ALBERTSON ENGINEERING, INC.<br/>3202 W. MAIN ST., #C<br/>RAPID CITY, SD 57702<br/>605-343-9606<br/>STEPHEN KILBER</div><div><div>Albertson Engineering Inc.</div></div></div><div><div>MEP:</div><div>WEST PLAINS ENGINEERING, INC.<br/>1750 RAND ROAD<br/>RAPID CITY, SD 57702<br/>605-348-7455<br/>MIKE SIGMAN (ELEC)<br/>MICHAEL HEINRICH (MECH)</div><div></div></div></div> |  | <div>DESIGNER OF RECORD</div> <div><div><div>A/E:</div><div>STONE GROUP ARCHITECTS<br/>600 EAST 7TH ST.<br/>SIOUX FALLS, SD 57103<br/>605-271-1144<br/>TODD STONE</div><div></div></div></div> |  | <div>STAMP</div> <div><div>Office of Construction and Facilities Management</div><div>U.S. Department of Veterans Affairs</div></div> |  | <div><div><div>Drawing Title</div><div>DEMOLITION RCP - BASEMENT</div></div><div><div>Approved</div><div>DOUG SPRINKLE</div></div></div> |  | <div><div>Phase</div><div>BID DOCUMENTS</div></div> <div><div>FULLY SPRINKLERED</div></div> |  | <div><div><div>Project Title</div><div>DOM RENOVATION FOR SEMIPRIVATE ROOMS</div></div><div><div>Location</div><div>HOT SPRINGS, SD</div></div><div><div>Issue Date</div><div>06/03/2025</div></div><div><div>Checked</div><div>JM/GB/TM</div></div><div><div>Drawn</div><div>TL/KK</div></div></div> |  | <div><div><div>Project Number</div><div>VA #568A4-21-208<br/>SGA #211921</div></div><div><div>Building Number</div><div>8</div></div><div><div>Drawing Number</div><div>AD110</div></div></div> |  |
| <div><div>2</div><div>ADDENDUM 01</div><div>08/22/2025</div></div> <div><div>1</div><div>BID DOCUMENTS</div><div>06/03/2025</div></div> <div><div>ISSUE #</div><div>DESCRIPTION</div><div>DATE</div></div> |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                            |  |                                                                                                                                          |  |                                                                                             |  |                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                 |  |

## KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                                                            |
|-----------|-------------------------------------------------------------------------------------------------------------------------|
| 5.02      | STEEL COLUMN. SEE STRUCT.                                                                                               |
| 6.34      | PROVIDE PAINTED 3/4" FIRE RETARDANT PLYWOOD OVER GNB.                                                                   |
| 8.65A     | ROUNDED ELEVATOR DOOR FRAME.                                                                                            |
| 10.04     | CLOTHES HOOK. CONTRACTOR PROVIDED AND INSTALLED.                                                                        |
| 10.39     | VA PROVIDED AND INSTALLED FURNITURE.                                                                                    |
| 10.40     | SEM-RECESSED F.E.C.                                                                                                     |
| 10.50     | WHITEBOARD. VA PROVIDED AND INSTALLED. CONTRACTOR TO INSTALL BLOCKING AS REQUIRED.                                      |
| 11.31     | WALL MOUNTED FLAT SCREEN TELEVISION AND BRACKET. VA PROVIDED AND INSTALLED. CONTRACTOR TO INSTALL BLOCKING AS REQUIRED. |
| 11.35     | TELEPHONE CONFERENCE SYSTEM. VA PROVIDED AND INSTALLED.                                                                 |
| 11.36     | WALL HUNG TELEPHONE. VA PROVIDED AND INSTALLED.                                                                         |
| 14.01     | ELEVATOR.                                                                                                               |
| 14.02     | ELEVATOR CONTROLLERS.                                                                                                   |
| 22.03     | B-LEVEL ADA DRINKING FOUNTAIN W/ BOTTLE FILLING STATION. REF PLUMB & SPECS.                                             |
| 22.34B    | SQUARE COVER PLATE FLOOR DRAIN. SEE PLUMBING.                                                                           |
| 23.01     | MECH ELEMENT. SEE MECHANICAL.                                                                                           |
| 23.02     | MECH ELEMENT ON NEW CONCRETE PAD. SEE MECHANICAL.                                                                       |
| 23.04     | FAN COIL. SEE MECHANICAL.                                                                                               |
| 26.01     | ELEC EQUIPMENT. SEE ELECTRICAL.                                                                                         |
| 32.01     | NEW 4" CONCRETE SIDEWALK OVER GRANULAR SUB-BASE.                                                                        |

## GENERAL PLAN NOTES

- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
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- F. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UN. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CL" IS USED UN.
- G. PROVIDE BACKING FOR ALL EQUIPMENT & HANDRAILS ATTACHED TO BUILDING WALLS.
- H. WOOD BACKING IN MTL STUD WALLS AND/OR RATED WALLS TO BE FIRE TREATED UN.
- I. GNB USED IN RESTROOMS, JANITOR CLOSETS, AND OTHER AREAS OF EXPOSED MOISTURE TO BE WATER RESISTANT GNB UN. USE DURAROCK @ ALL PORCELAIN & CERAMIC TILE LOCATIONS.
- J. SEE SCHEDULES & LEGENDS FOR MORE INFORMATION REGARDING WINDOW & DOOR TYPES.
- K. GNB CONTROL JOINTS SHALL BE INSTALLED AS PER THE LATEST EDITIONS OF GA-216 & ASTM C840 UN. PROVIDE CONTROL JOINTS IN GNB EVERY 30'-0" MIN.
- L. SEE ARCHITECTURAL INTERIOR PLANS FOR MORE INFORMATION.
- M. PROVIDE ADA COMPLIANT SIGNAGE FOR ALL REQUIRED AREAS, ROOMS, & ACCESSIBLE PATHS.
- N. FURNITURE IS PROVIDED AND INSTALLED BY OTHERS.
- O. MTL STUD WALLS ALONG EXISTING EXTERIOR WALLS TO BE INSULATED TO A VALUE OF R-20.
- P. ADD INSULATION TO ATTIC AS REQ'D TO MEET INSULATION VALUE OF R-49.
- Q. WALL CORNER PROFILE TO MATCH RADIUS OF EXISTING CORNERS, TYP. EXCEPT ROOMS WITH PORCELAIN OR CERAMIC WALL TILE. INSTALL AT ALL VERTICAL AND HORIZONTAL EXTERNAL CORNERS (BULLNOSE), INSIDE CORNER (COVE) AT TRANSITION FROM WALL TO CEILING, AND WHERE SHOWN.
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- S. PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD SURFACES THAT WERE PREVIOUSLY PAINTED.
- T. PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD WINDOWS, TRIM AND SILLS.
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- V. REPAIR ANY CRACKED GLAZING AT EXISTING WINDOWS.
- W. HEIGHT OF OPERATIONAL OR DISPENSING PORTION OF ACCESSORIES & FIXTURES NOT TO EXCEED 48" A.F.F.



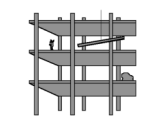
D5 FLOOR PLAN - BASEMENT

3/16" = 1'-0"

| ISSUE # | DESCRIPTION   | DATE       |
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| 2       | ADDENDUM 01   | 08/22/2025 |
| 1       | BID DOCUMENTS | 06/03/2025 |

## CONSULTANTS

**STRUCTURAL:**  
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3202 W. MAIN ST., #C  
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MICHAEL HEINRICH (MECH)



## DESIGNER OF RECORD

**A/E:**  
STONE GROUP ARCHITECTS  
600 EAST 7TH ST.  
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605-271-1144  
TODD STONE

STONE GROUP  
ARCHITECTS

## STAMP

Office of  
Construction  
and Facilities  
Management

U.S. Department  
of Veterans AffairsDrawing Title  
ARCHITECTURAL FLOOR PLAN - BASEMENTApproved  
DOUG SPRINKLEPhase  
BID DOCUMENTS

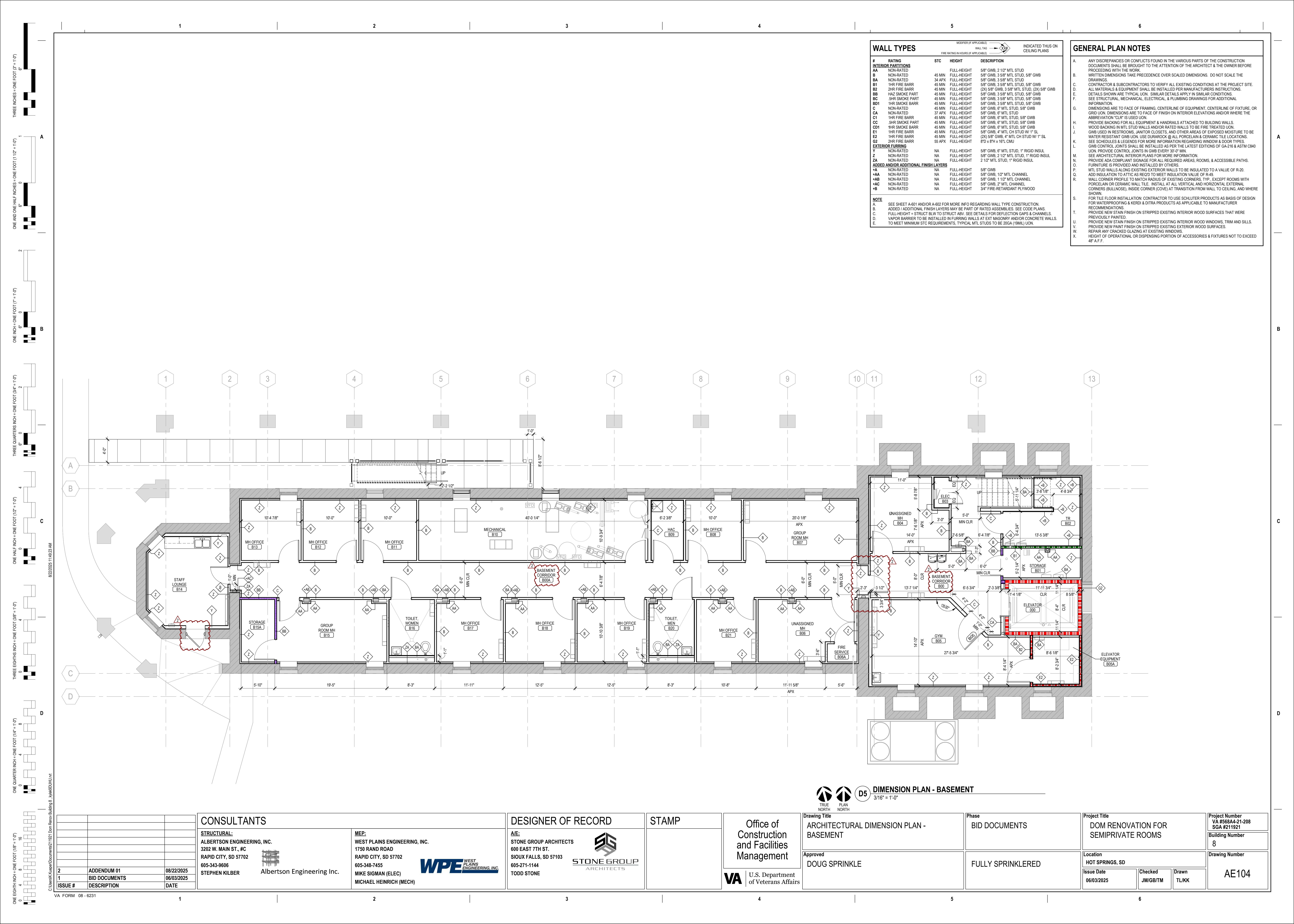
FULLY SPRINKLERED

Project Title  
DOM RENOVATION FOR  
SEMPRIVATE ROOMS

Location  
HOT SPRINGS, SDIssue Date  
06/03/2025Checked  
JMG/MTMDrawn  
TL/KK

Project Number  
VA #568A4-21-208  
SGA #211921  
Building Number  
8

Drawing Number  
AE100



| WALL TYPES                                                                           |                |                                      |                                             |
|--------------------------------------------------------------------------------------|----------------|--------------------------------------|---------------------------------------------|
| #                                                                                    |                | MODIFIER (IF APPLICABLE)             |                                             |
| RATING                                                                               |                | WALL TAG                             |                                             |
| INTERIOR PARTITIONS                                                                  |                | FIRE RATING IN HOURS (IF APPLICABLE) |                                             |
| STC                                                                                  |                | HEIGHT                               |                                             |
| DESCRIPTION                                                                          |                | INDICATED THUS ON CEILING PLANS      |                                             |
| AA                                                                                   | NON-RATED      | FULL-HEIGHT                          | 5/8" GWB, 2 1/2" MTL STUD                   |
| B                                                                                    | NON-RATED      | FULL-HEIGHT                          | 5/8" GWB, 3 5/8" MTL STUD, 5/8" GWB         |
| BA                                                                                   | NON-RATED      | 34 APX                               | 5/8" GWB, 3 5/8" MTL STUD                   |
| B1                                                                                   | 1HR FIRE BARR  | 45 MIN                               | 5/8" GWB, 3 5/8" MTL STUD, 5/8" GWB         |
| B2                                                                                   | 2HR FIRE BARR  | 45 MIN                               | 2X 5/8" GWB, 3 5/8" MTL STUD, (2X) 5/8" GWB |
| BB                                                                                   | HAZ SMOKE PART | 45 MIN                               | 5/8" GWB, 3 5/8" MTL STUD, 5/8" GWB         |
| BC                                                                                   | 5HR SMOKE PART | 45 MIN                               | 5/8" GWB, 3 5/8" MTL STUD, 5/8" GWB         |
| B01                                                                                  | 1HR SMOKE BARR | 45 MIN                               | 5/8" GWB, 3 5/8" MTL STUD, 5/8" GWB         |
| C                                                                                    | NON-RATED      | 45 MIN                               | 5/8" GWB, 6" MTL STUD, 5/8" GWB             |
| CA                                                                                   | NON-RATED      | 37 APX                               | 5/8" GWB, 6" MTL STUD                       |
| C1                                                                                   | 1HR FIRE BARR  | 45 MIN                               | 5/8" GWB, 6" MTL STUD, 5/8" GWB             |
| CC                                                                                   | 5HR SMOKE PART | 45 MIN                               | 5/8" GWB, 6" MTL STUD, 5/8" GWB             |
| CD1                                                                                  | 1HR SMOKE BARR | 45 MIN                               | 5/8" GWB, 6" MTL STUD, 5/8" GWB             |
| E1                                                                                   | 1HR FIRE BARR  | 45 MIN                               | 5/8" GWB, 4" MTL CH STUD W/ 1" SL           |
| E2                                                                                   | 1HR FIRE BARR  | 45 MIN                               | (2X) 5/8" GWB, 4" MTL CH STUD W/ 1" SL      |
| G2                                                                                   | 2HR FIRE BARR  | 55 APX                               | 6" x 8" x 16" CMU                           |
| EXTERIOR FURRING                                                                     |                |                                      |                                             |
| Y                                                                                    | NON-RATED      | NA                                   | 5/8" GWB, 6" MTL STUD, 1" RIGID INSUL       |
| Z                                                                                    | NON-RATED      | NA                                   | 5/8" GWB, 2 1/2" MTL STUD, 1" RIGID INSUL   |
| ZA                                                                                   | NON-RATED      | NA                                   | 2 1/2" MTL STUD, 1" RIGID INSUL             |
| ADDED AND/OR ADDITIONAL FINISH LAYERS                                                |                |                                      |                                             |
| +A                                                                                   | NON-RATED      | NA                                   | 5/8" GWB                                    |
| +AA                                                                                  | NON-RATED      | NA                                   | 5/8" GWB, 1/2" MTL CHANNEL                  |
| +AB                                                                                  | NON-RATED      | NA                                   | 5/8" GWB, 1 1/2" MTL CHANNEL                |
| +AC                                                                                  | NON-RATED      | NA                                   | 5/8" GWB, 2" MTL CHANNEL                    |
| +B                                                                                   | NON-RATED      | NA                                   | 3/4" FIRE-RETARDANT PLYWOOD                 |
| NOTE                                                                                 |                |                                      |                                             |
| SEE SHEET A-601 AND/OR A-602 FOR MORE INFO REGARDING WALL TYPE CONSTRUCTION.         |                |                                      |                                             |
| ADDED/ADDITIONAL FINISH LAYERS MAY BE PART OF RATED ASSEMBLIES. SEE CODE PLANS.      |                |                                      |                                             |
| FULL-HEIGHT = STRUCT BLW TO STRUCT ABV. SEE DETAILS FOR DEFLECTION GAPS & CHANNELS.  |                |                                      |                                             |
| VAPOR BARRIER TO BE INSTALLED IN FURRING WALLS AT EXT MASONRY AND/OR CONCRETE WALLS. |                |                                      |                                             |
| TO MEET MINIMUM STC REQUIREMENTS, TYPICAL MTL STUDS TO BE 20GA (15MU) UON.           |                |                                      |                                             |

- GENERAL PLAN NOTES**
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  - B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
  - C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
  - D. DETAILS SHOWN ARE TYPICAL UON. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.
  - E. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
  - F. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UON. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CLR" IS USED UON.
  - G. PROVIDE BACKING FOR ALL EQUIPMENT & HANDRAILS ATTACHED TO BUILDING WALLS. WOOD BACKING IN MTL STUD WALLS AND/OR RATED WALLS TO BE FIRE TREATED UON.
  - H. GWB USED IN RESTROOMS, JANITOR CLOSETS, AND OTHER AREAS OF EXPOSED MOISTURE TO BE WATER RESISTANT GWB UON. USE DURALOCK @ ALL PORCELAIN & CERAMIC TILE LOCATIONS.
  - I. SEE SCHEDULES & LEGENDS FOR MORE INFORMATION REGARDING WINDOW & DOOR TYPES.
  - J. GWB CONTROL JOINTS SHALL BE INSTALLED AS PER THE LATEST EDITIONS OF GA-216 & ASTM C840 UON. PROVIDE CONTROL JOINTS IN GWB EVERY 30'-0" MIN.
  - K. SEE ARCHITECTURAL INTERIOR PLANS FOR MORE INFORMATION.
  - L. PROVIDE ADA COMPLIANT SIGNAGE FOR ALL REQUIRED AREAS, ROOMS, & ACCESSIBLE PATHS. FURNITURE IS PROVIDED AND INSTALLED BY OTHERS.
  - M. MTL STUD WALLS ALONG EXISTING EXTERIOR WALLS TO BE INSULATED TO A VALUE OF R-20.
  - N. ADD INSULATION TO ATTIC AS REQD TO MEET INSULATION VALUE OF R-49.
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**D5 DIMENSION PLAN - BASEMENT**  
3/16" = 1'-0"

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TODD STONE

**STONE GROUP ARCHITECTS**

**STAMP**

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
ARCHITECTURAL DIMENSION PLAN - BASEMENT

**Approved**  
DOUG SPRINKLE

**Phase**  
BID DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
DOM RENOVATION FOR SEMIPRIVATE ROOMS

**Location**  
HOT SPRINGS, SD

**Issue Date**  
06/03/2025

**Checked**  
JM/JB/TM

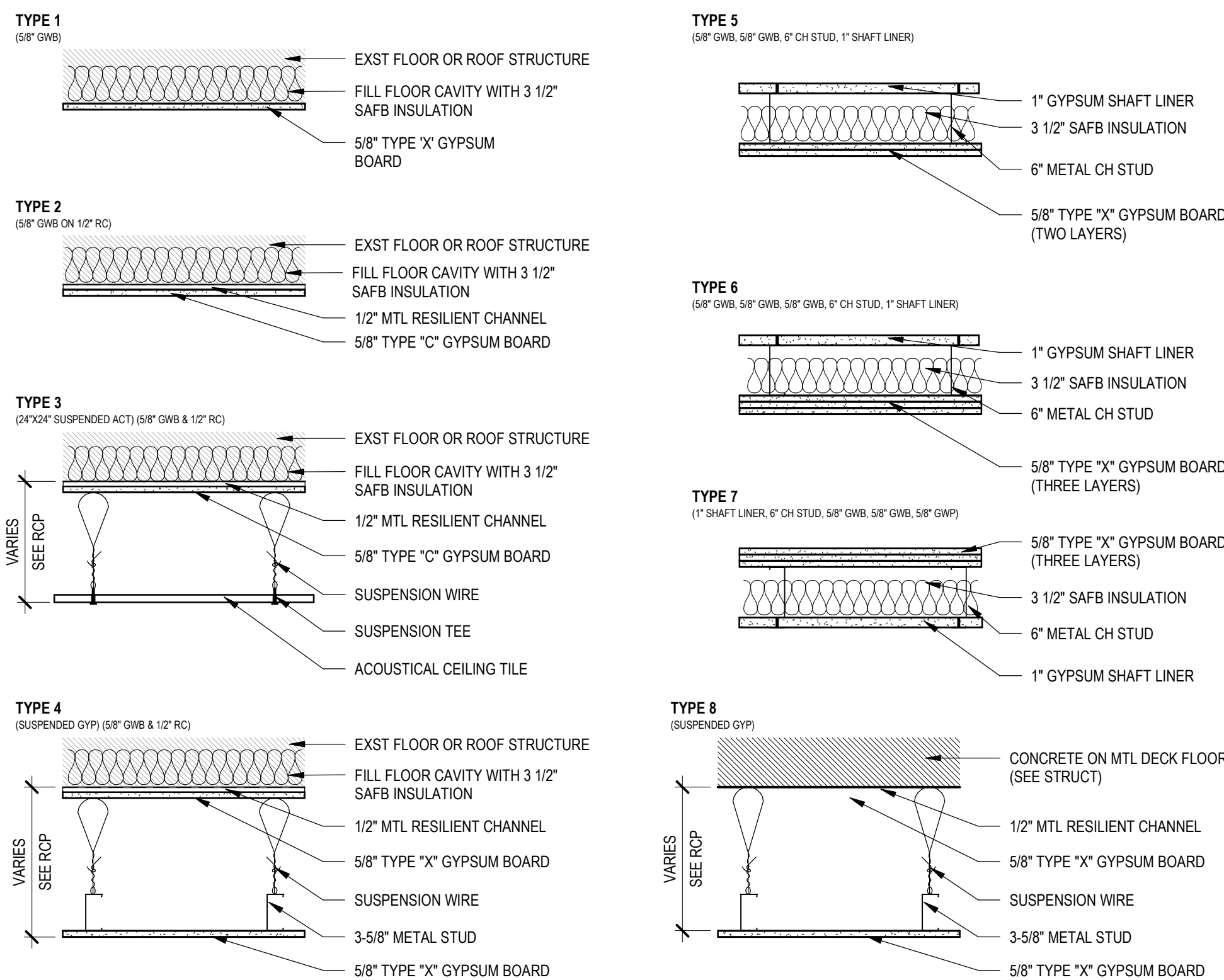
**Drawn**  
TL/KK

**Project Number**  
VA #568A4-21-208  
SGA #211921

**Building Number**  
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**Drawing Number**  
AE104

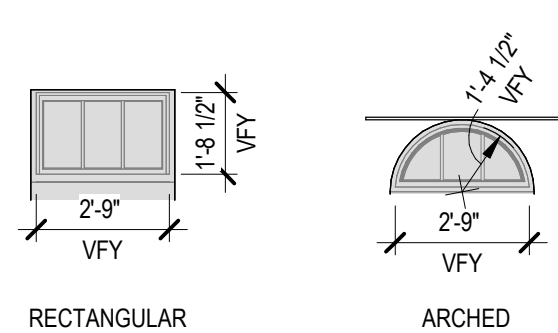
# CEILING TYPES



# REFLECTED CEILING LEGEND

| PATTERN | DESCRIPTION                                                        |
|---------|--------------------------------------------------------------------|
|         | HATCH INDICATES 2' X 2' SUSPENDED GRID AND ACOUSTICAL CEILING TILE |
|         | HATCH INDICATES GYPSUM BOARD WITH SMOOTH FINISH AND PAINT          |
|         | EXPOSED CONC. CORE FLOOR                                           |

# EXISTING TRANSOM TYPES



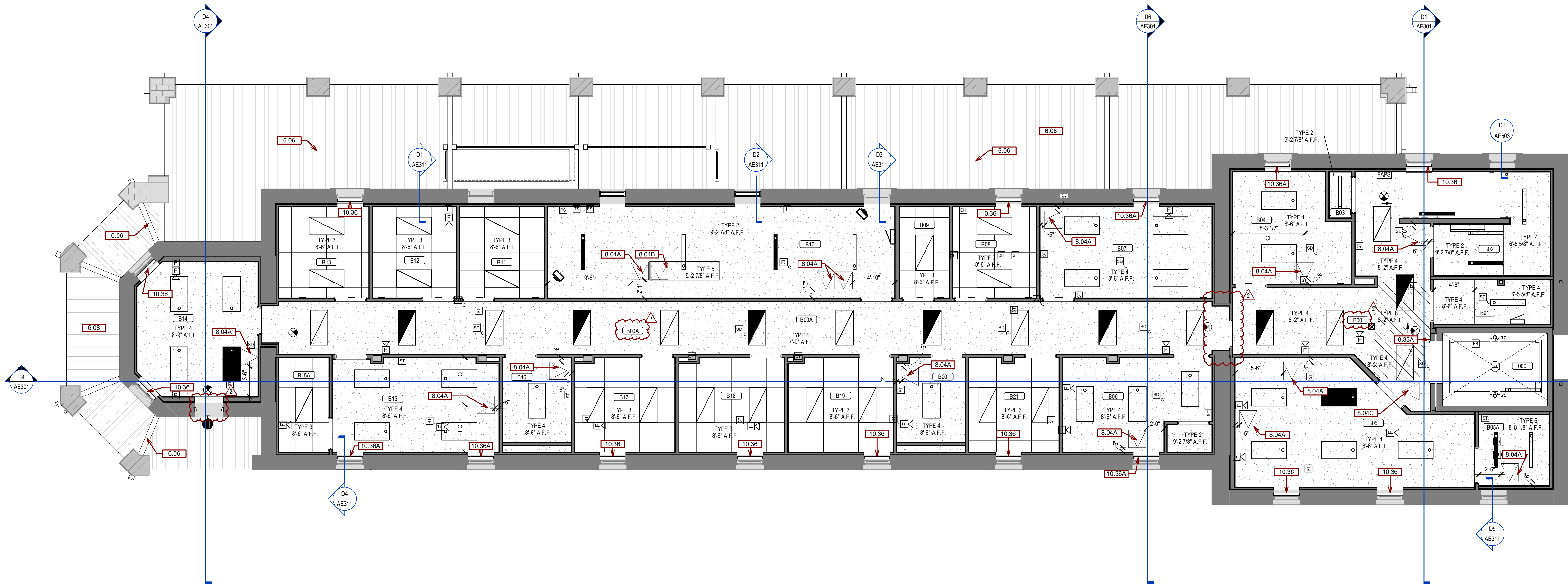
NOTE: PROVIDE CUSTOM FIXED WINDOW SHADES AT EXISTING TRANSOMS. MOUNT INSIDE OF TRIM, NOT WINDOW JAMBS.

# GENERAL CEILING NOTES

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- ALL ITEMS INSTALLED IN CEILINGS ARE TO BE CENTERED AND/OR SYMMETRICAL ON THE CENTERLINE OF ROOMS AND CENTERED IN TILES UNLESS NOTED.
- SUSPENDED CEILINGS ARE TO BE CENTERED IN THE ROOM WHEN POSSIBLE WITH EDGE UNITS NO LESS THAN 25% OF THE TILE SIZE UNLESS NOTED.
- INSTALL ALL WALL MOUNTED EXIT SIGNS & OTHER FIXTURES CENTERED ABOVE OPENINGS WHERE POSSIBLE.
- REFLECTED CEILING PLANS SHOW LOCATIONS OF ITEMS THAT ARE ARCHITECTURALLY SIGNIFICANT ONLY. MECHANICAL AND ELECTRICAL ITEMS INDICATED ARE FOR REFERENCE ONLY.
- GWB USED IN RESTROOMS, JANITOR CLOSETS, AND OTHER AREAS OF EXPOSED MOISTURE TO BE WATER RESISTANT GWB UNLESS NOTED.
- SOFFIT PAINT COLOR TO BE APPLIED TO BOTH VERTICAL AND HORIZONTAL SURFACES UNLESS NOTED. SOFFITS TO BE PAINTED THE COLOR OF ADJACENT WALLS UNLESS NOTED. SPECIAL ACCENT COLORS ARE INDICATED ON THE REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE WHERE APPLICABLE.
- ALL GWB CEILINGS TO BE PAINTED AS INDICATED ON THE ROOM FINISH SCHEDULE.
- ALL VERTICAL SOFFITS TO EXTEND PAST ADJACENT CEILING HEIGHT BY AT LEAST 6\"/>

# KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                         |
|-----------|----------------------------------------------------------------------|
| 6.06      | WOOD BEAM. SEE STRUCTURAL.                                           |
| 6.08      | PORCH DECKING. SEE STRUCTURAL.                                       |
| 8.04A     | ACCESS PANEL. COORDINATE FINAL LOCATION WITH MEP.                    |
| 8.04B     | FIRE-RATED ACCESS PANEL. COORDINATE FINAL LOCATION WITH MEP.         |
| 8.04C     | ACCESS PANEL. COORDINATE FINAL LOCATION WITH ELEVATOR SMOKE CURTAIN. |
| 8.33A     | SMOKE GUARD CURTAIN. INSTALL FLUSH WITH CEILING.                     |
| 10.36     | WINDOW ROLLER SHADE WDS-1.                                           |
| 10.36A    | BLACK OUT WINDOW SHADE WDS-2.                                        |



# REFLECTED CEILING PLAN - BASEMENT

3/16" = 1'-0"

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# STAMP

Office of  
Construction  
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U.S. Department  
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Drawing Title  
REFLECTED CEILING PLAN - BASEMENT

Approved  
DOUG SPRINKLE

Phase  
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FULLY SPRINKLERED

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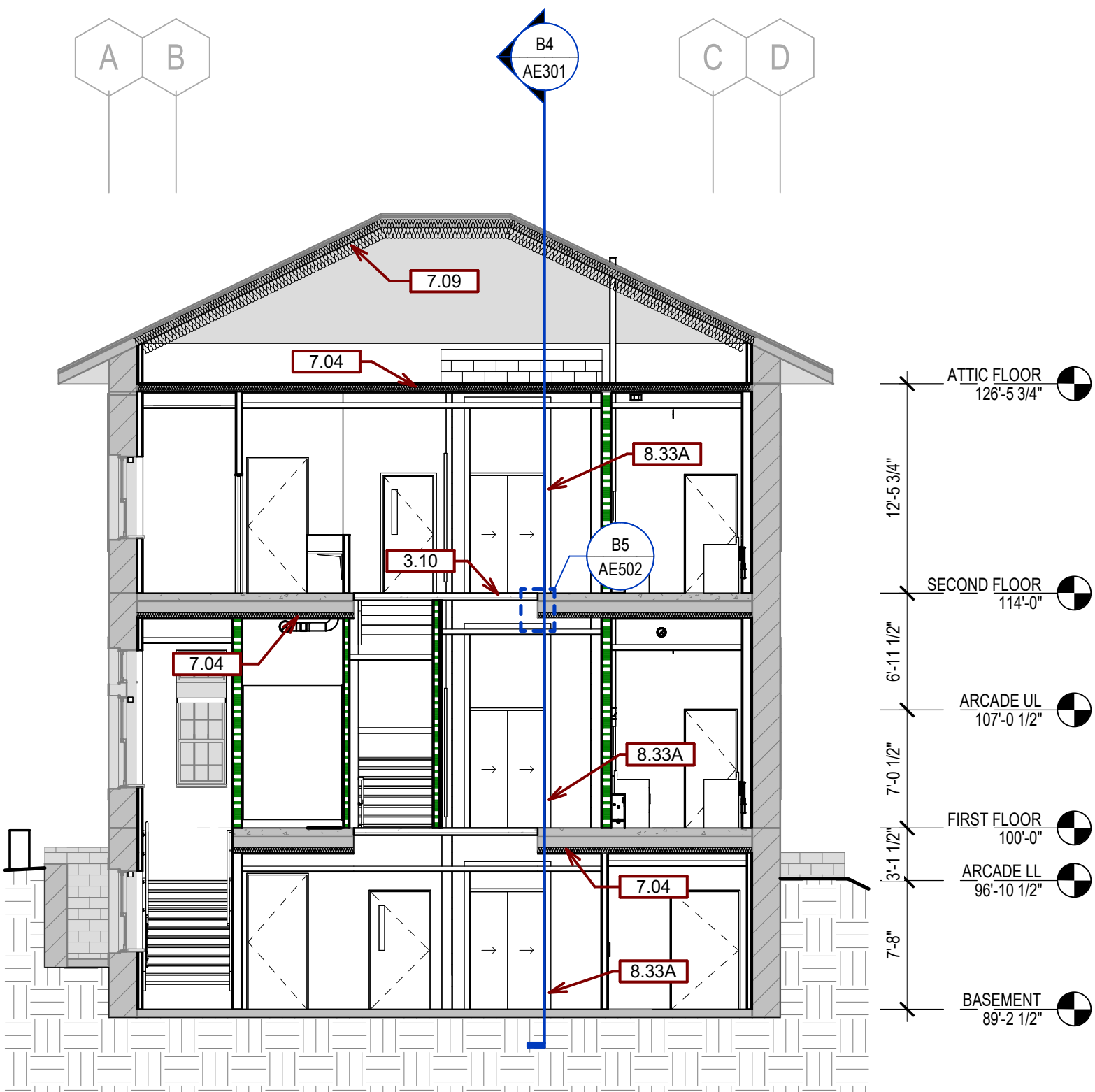
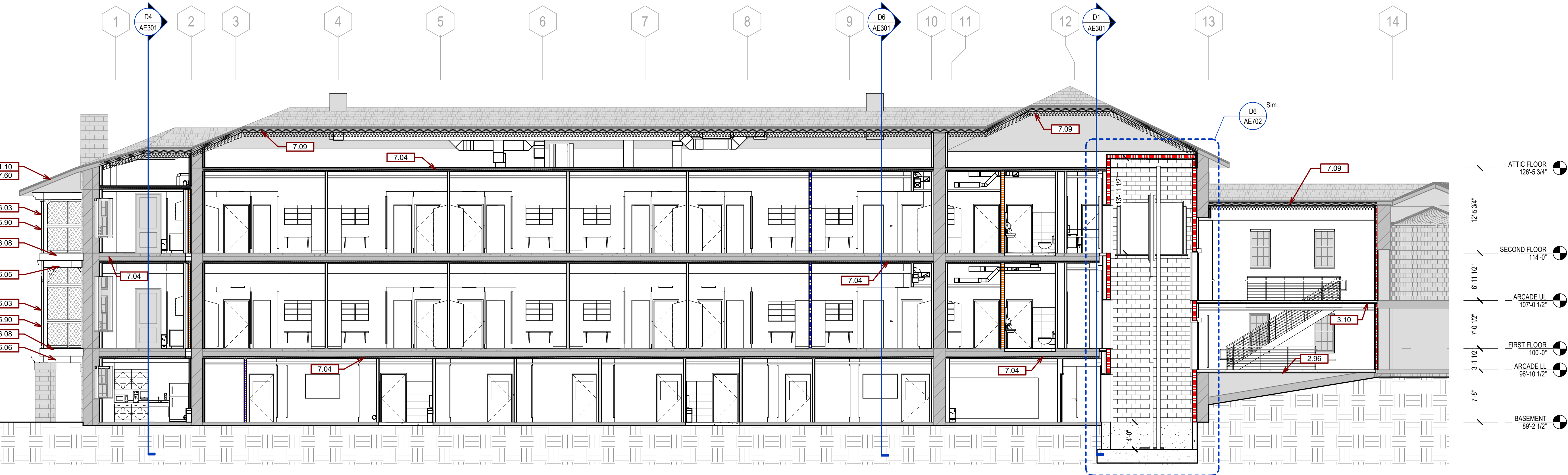
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- SEE SCHEDULES & LEGENDS FOR MORE INFORMATION REGARDING WINDOW & DOOR TYPES.
- SEE ELEVATIONS FOR MORE INFORMATION.

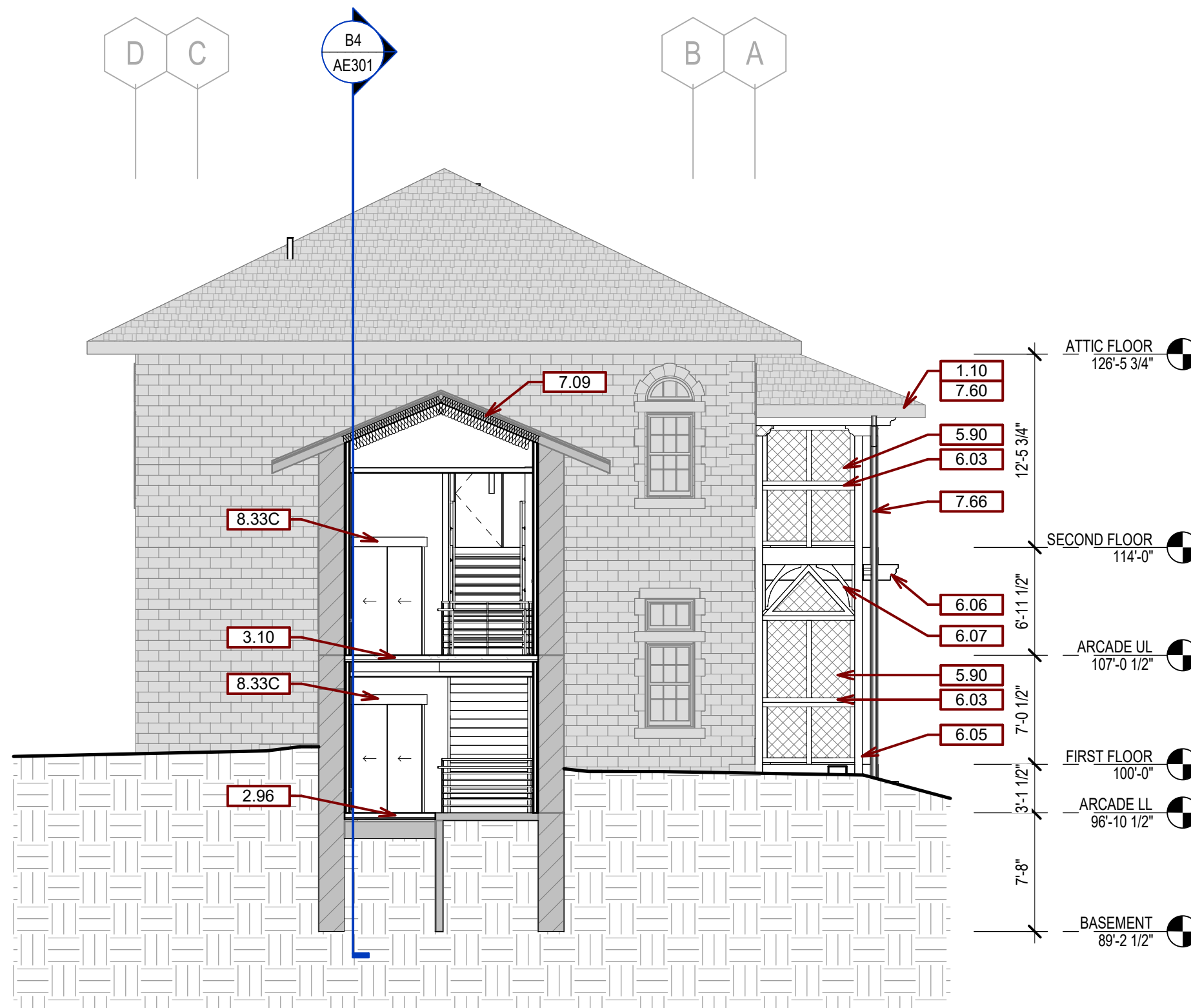
# KEYNOTES

| KEY VALUE | KEYNOTE TEXT                                                                                                                                                                                                                                                          |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.10      | SEE STRUCTURAL FOR TEMPORARY SHORING OF EXISTING ROOF DURING PORCH RECONSTRUCTION.                                                                                                                                                                                    |
| 2.96      | ABATE ASBESTOS TAN LINOLEUM SHEET FLOORING. SEE HAZARDOUS ABATEMENT PLANS FOR ABATEMENT OF ASBESTOS CONTAINING FLOOR MATERIAL.                                                                                                                                        |
| 3.10      | NEW CONCRETE SLAB. SEE STRUCTURAL.                                                                                                                                                                                                                                    |
| 5.90      | CHAIN LINK FENCE TO MATCH EXISTING PORCH FENCING. REF SPECS.                                                                                                                                                                                                          |
| 6.03      | WOOD FRAMED ENCLOSURE. DESIGNED AND FINISHED TO MATCH EXISTING PORCH ENCLOSURE.                                                                                                                                                                                       |
| 6.05      | WOOD COLUMN. SEE STRUCTURAL.                                                                                                                                                                                                                                          |
| 6.06      | WOOD BEAM. SEE STRUCTURAL.                                                                                                                                                                                                                                            |
| 6.07      | WOOD CORBEL. SEE STRUCTURAL.                                                                                                                                                                                                                                          |
| 6.08      | PORCH DECKING. SEE STRUCTURAL.                                                                                                                                                                                                                                        |
| 7.04      | 3 1/2" SAFB INSULATION.                                                                                                                                                                                                                                               |
| 7.09      | R-49 MIN ROOF ASSEMBLY. CONSTRUCTED USING LAYERED BATT INSULATION (NEW & EXST) & MTL Z-FLOORING FASTENED TO UNDERSIDE OF EXISTING ROOF ASSEMBLY. REF DETAILS. GC TO MODIFY EXST SPRINKLER SYSTEM AS NEEDED SO THAT ALL PIPES & HEADS ARE BELOW THE NEW ROOF ASSEMBLY. |
| 7.60      | REPAIR/REPLACE ANY GLASS TILE DAMAGED BY CONSTRUCTION ACTIVITY.                                                                                                                                                                                                       |
| 7.66      | EXISTING DOWNSPOUT REINSTALLED.                                                                                                                                                                                                                                       |
| 8.33A     | SMOKE GUARD CURTAIN. INSTALL FLUSH WITH CEILING.                                                                                                                                                                                                                      |
| 8.33C     | EXPOSED SMOKE GUARD CURTAIN.                                                                                                                                                                                                                                          |
| 8.51      | DOOR. SEE SCHEDULE.                                                                                                                                                                                                                                                   |

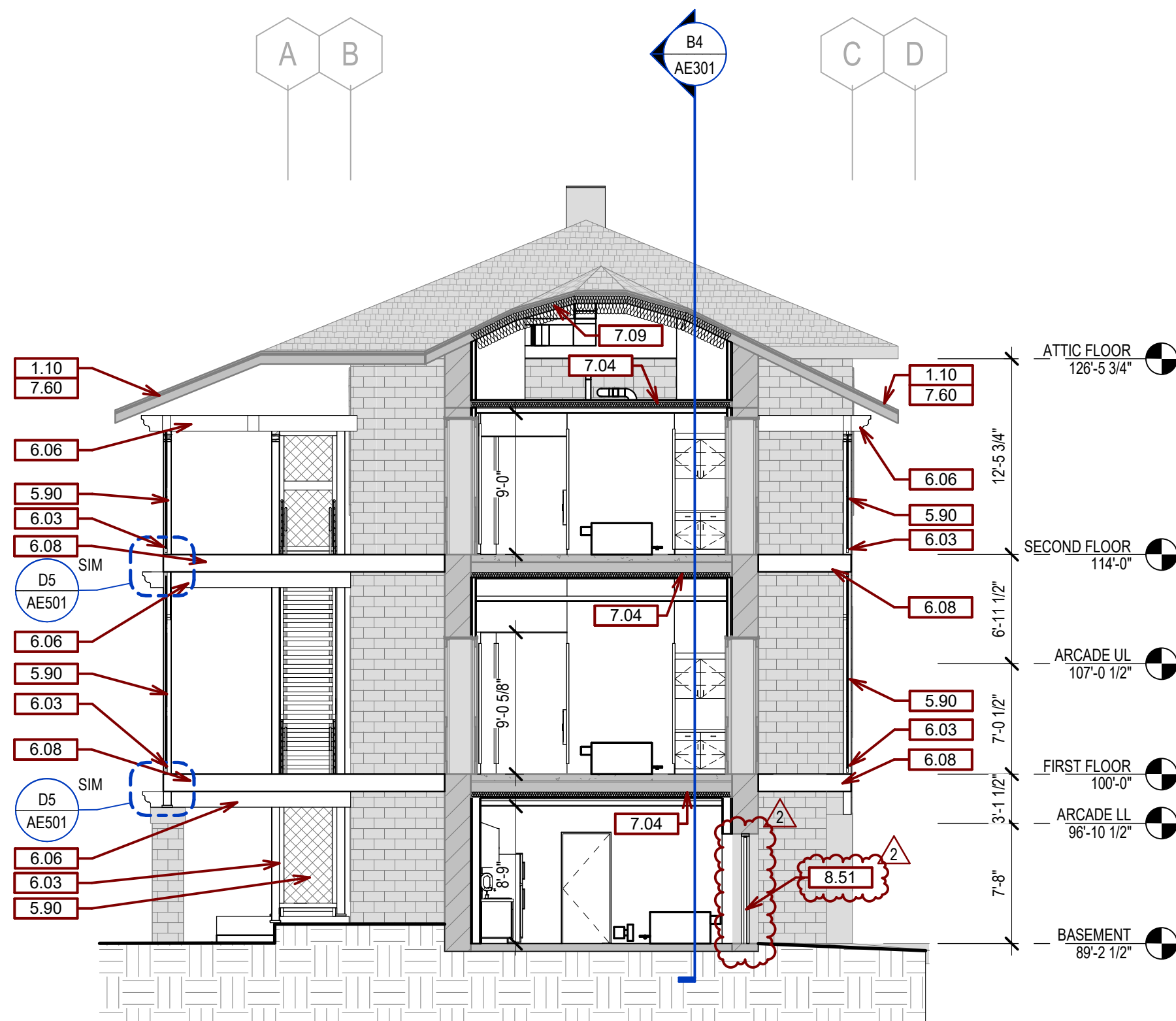
**B4 BUILDING SECTION - W/E**  
1/8" = 1'-0"



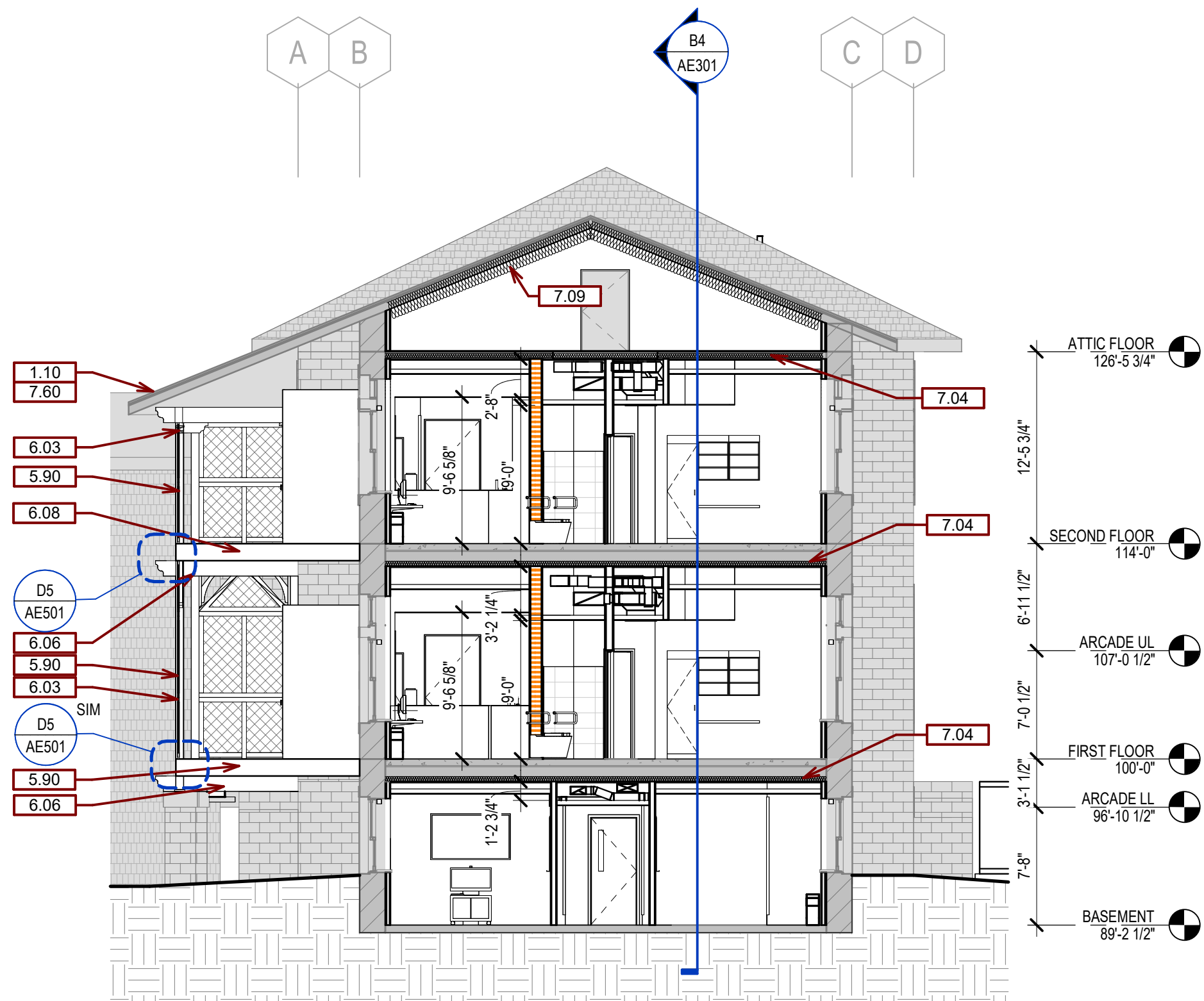
**D1 BUILDING SECTION - N/S RECEPTION**  
1/8" = 1'-0"



**D3 BUILDING SECTION - ARCADE LINK**  
1/8" = 1'-0"



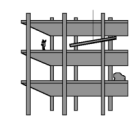
**D4 BUILDING SECTION - N/S DAYROOM**  
1/8" = 1'-0"



**D6 BUILDING SECTION - N/S PATIENT ROOMS**  
1/8" = 1'-0"

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Project Number  
VA #568A4-21-208  
SGA #211921

Building Number  
8

Drawing Number  
AE301

## 6

THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")

### FINISH PLAN NOTES

1. INSTALL HIGH-IMPACT WALL COVERING (HWC) ON ALL WALLS ABOVE WALL BASE.
2. INSTALL HANDRAILS (HR) ON ALL WALLS, 34" AFF TO TOP. INSTALL WHERE WALLS CAN ACCOMMODATE AND WHERE NO OBSTRUCTIONS SUCH AS WINDOWS OCCUR.  
CG-1, CG-2, EG INSTALL CORNER GUARD OR END GUARD

### FINISH AND SIGNAGE PLAN LEGEND

- |       |     |      |     |
|-------|-----|------|-----|
| LVT-1 | WSF | PT-1 | RES |
| LVT-2 | EDT | CPT  | ### |
- PROVIDE INTERIOR SIGN. REFER TO SIGN MESSAGE SCHEDULE IN SPECIFICATIONS.

### GENERAL WALL PROTECTION NOTES

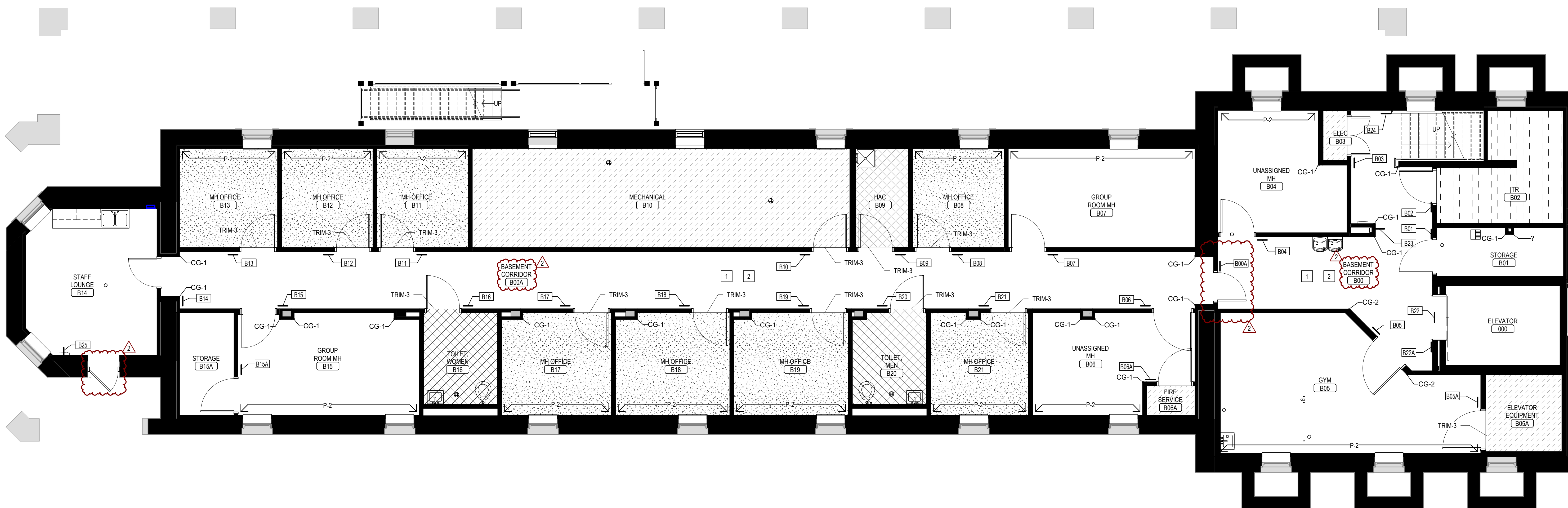
- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
- B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
- C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS. DETAILS SHOWN ARE TYPICAL UON. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- D. DIMENSIONS ARE TO FACE OF FRAMING, CENTERLINE OF EQUIPMENT, CENTERLINE OF FIXTURE, OR GRID UON. DIMENSIONS ARE TO FACE OF FINISH ON INTERIOR ELEVATIONS AND/OR WHERE THE ABBREVIATION "CLR" IS USED UON.
- E. BASIS OF DESIGN FOR SELECTED FINISHES IS IDENTIFIED ON COLOR & MATERIAL SCHEDULE. ARCHITECT APPROVAL IS REQUIRED FOR ALL FINISHES.
- F. SOME SPECIFIED PRODUCTS & FINISHES MAY HAVE SUBSTANTIAL LEAD TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ORDERS IN A MANNER TO ENSURE THEIR TIMELY ARRIVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXPENSES, INCLUDING DESIGN FEES, RELATED TO ANY RESELECTIONS REQUIRED DUE TO FAILURE TO ORDER PRODUCTS IN A TIMELY MANNER.
- G. WALL PROTECTION PLAN DEPICTS WALL PROTECTION LOCATIONS & FINISH LOCATIONS IN AREAS OF SPECIAL SIGNIFICANCE, I.E., MATERIAL CHANGES WITHIN A SINGLE ROOM OR SPACE. REFER TO ROOM FINISH SCHEDULE & MATERIAL & COLOR SCHEDULE FOR THE FINISH SELECTIONS OF EACH INDIVIDUAL ROOM NOT OTHERWISE DESIGNATED ON PLAN.
- H. REFER TO INTERIOR ELEVATIONS FOR WALL TILE PATTERNS.
- I. VERIFY GROUT & MORTAR THICKNESS PER MANUFACTURERS RECOMMENDATIONS.
- J. INSTALL ALL WALL CONERGUARDS, ANGLE GUARDS, & END GUARDS ABOVE WALL BASE.
- K. INSTALL RIGID VINYL SHEET ABOVE WALL BASE.
- L. REFER TO COLOR & MATERIAL SCHEDULE & SPECIFICATIONS MANUAL FOR WALL PROTECTION MANUFACTURER, SIZE, & COLOR.

### GENERAL SIGNAGE NOTES

- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
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- E. PROVIDE ADA COMPLIANT SIGNAGE FOR ALL REQUIRED AREAS, ROOMS, & ACCESSIBLE PATHS. SIGN LOCATION I.D. DISTINGUISHED WITH SIGN TAG NUMBER EQUAL TO THE ROOM NUMBER & SIGN TYPE (AST-PT).
- F. REFERENCE SIGNAGE DETAILS (P) FOR SIGNAGE REQUIRING ROOM NUMBERS.
- G. OWNER, CONTRACTOR, AND SIGNAGE SUPPLIER TO MEET & CONFIRM SIGNAGE COPYMESSAGE/TEXT PRIOR TO ISSUING SIGNAGE SUBMITTAL DOCUMENTS FOR APPROVAL.
- H. SIGNAGE SUBMITTAL TO INCLUDE VISUAL GRAPHIC OF EACH INDIVIDUAL SIGN IN PROJECT.
- I. WALL MOUNTED SIGNS TO BE MECHANICALLY FASTENED TO WALL UON.
- J. ALL SIGNAGE TO BE IN COMPLIANCE WITH ADA & ADA ACCESSIBILITY STANDARDS FOR FEDERAL FACILITIES.
- K. SIGNAGE DESIGN & MATERIALS TO MATCH EXISTING SIGNAGE STANDARDS IF APPLICABLE. REFERENCE SPECIFICATIONS.
- L. SIGNAGE INSTALLER TO COORDINATE LOCATIONS OF CEILING-HUNG SIGNS WITH FIRE PROTECTION SPRINKLER HEADS IN ACCORDANCE WITH NFPA REGULATIONS.
- M. SIGNAGE MOUNTED TO GLASS SHALL HAVE BLANK FACE PLATE ON OPPOSITE SIDE TO CONCEAL ATTACHMENT METHOD.

### GENERAL FINISH NOTES

- A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & THE OWNER BEFORE PROCEEDING WITH THE WORK.
- B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.
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- F. SOME SPECIFIED PRODUCTS & FINISHES MAY HAVE SUBSTANTIAL LEAD TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ORDERS IN A MANNER TO ENSURE THEIR TIMELY ARRIVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXPENSES, INCLUDING DESIGN FEES, RELATED TO ANY RESELECTIONS REQUIRED DUE TO FAILURE TO ORDER PRODUCTS IN A TIMELY MANNER.
- G. ALL FINISH WORK SHALL BE PERFORMED IN COMPLIANCE WITH DRAWINGS & SPECIFICATIONS. SHOP DRAWINGS, SAMPLES & PRODUCT DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR THEIR REVIEW PRIOR TO BEGINNING WORK.
- H. REFER TO ROOM FINISH SCHEDULE & COLOR & MATERIAL SCHEDULE FOR THE FINISH SELECTIONS OF EACH INDIVIDUAL ROOM NOT OTHERWISE DESIGNATED ON INTERIOR DRAWINGS.
- I. FLOOR FINISH LEGEND HATCHES/PATTERNS INDICATE FLOORING TYPES. NOT ACTUAL FLOORING PATTERN & LAYOUT UON. FOR FLOOR PATTERN INSTALL DIRECTION REFER TO THE INSTALLATION SYMBOL.
- J. EXTEND ALL FLOORING UNDER FURNITURE, DESKS, COUNTERTOPS, ETC. UON FINISH PLAN MAY NOT INDICATE FLOORING UNDER OPEN COUNTERTOPS, CASEWORK, EQUIPMENT, ETC.
- K. PROVIDE TRANSITION STRIPS AT ALL LOCATIONS THAT HAVE A CHANGE IN FLOORING MATERIALS. REFER TO TYPICAL TRANSITION STRIP DETAILS FOR APPROVED TRANSITION STRIPS.
- L. ALL FLOORING TRANSITIONS TO BE CENTERED UNDER DOORS IN A CLOSED POSITION UON.
- M. CONTRACTOR IS RESPONSIBLE FOR VERIFYING APPROPRIATE SIZES OF TRANSITION STRIPS BASED ON MATERIAL TYPES.
- N. ALL VINYL TRANSITION STRIP COLORS TO MATCH ADJACENT FLOORING UON.
- O. ALL SOLID SURFACE SINK FINISHES AND MATERIALS TO MATCH THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE.
- P. ALL INTERIOR GWB WALLS AND CEILINGS SHALL RECEIVE A LEVEL 4 FINISH WITH LIGHT ORANGE PEEL TEXTURE UON AND PAINTED ACCORDING TO THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE & ROOM FINISH SCHEDULE.
- Q. ALL SCHLITZER TRANSITION STRIPS TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- R. VERIFY GROUT & MORTAR THICKNESS PER MANUFACTURERS RECOMMENDATIONS.
- S. JOINTS IN FLOORING SHOULD ALIGN WITH JOINTS IN CONCRETE SLABS. ADDITIONAL JOINTS SHOULD BE CUT IF NECESSARY AS PER THE LATEST EDITION OF THE TONA HANDBOOK. VERIFY LOCATIONS WITH ARCHITECT & INTERIOR DESIGNER.
- T. WOOD DOORS AND FRAME BASE MOLDINGS TO BE FILLED, STAINED, SEALED & SHOP FINISHED TO MATCH ARCHITECTS SAMPLE. WORK SHOULD BE PERFORMED IN A DUST FREE ENVIRONMENT.
- U. ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED OR PREFINISHED ACCORDING TO THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE & ROOM FINISH SCHEDULE.
- V. SOFFIT OR BULKHEAD PAINT COLOR TO BE APPLIED TO BOTH VERTICAL & HORIZONTAL SURFACES UON. ALL SOFFITS TO BE PAINTED THE COLOR OF ADJACENT WALLS UON. SPECIAL ACCENT COLORS ARE INDICATED ON THE REFLECTED CEILING PLAN & ROOM FINISH SCHEDULE.
- W. REFER TO REFLECTED CEILING PLANS & ROOM FINISH SCHEDULE FOR INFORMATION REGARDING CEILING FINISHES AND SYSTEMS.
- X. REFER TO INTERIOR ELEVATIONS FOR WALL TILE PATTERNS.
- Y. PROVIDE ADA COMPLIANT SIGNAGE FOR ALL REQUIRED AREAS, ROOMS, & ACCESSIBLE PATHS.
- Z. ALL METAL COMPONENTS TO BE PAINTED OR PREFINISHED ACCORDING TO THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE & ROOM FINISH SCHEDULE.
- AA. CORNER GUARDS ARE TO BE INSTALLED AT ALL OUTSIDE CORNERS IN PUBLIC SPACES & CORRIDORS.
- AB. ALL WINDOW SILLS TO BE SOLID SURFACE UON.
- AC. REFERENCE SPECIFICATIONS, ELEVATIONS, & DETAIL DRAWINGS FOR SPECIAL MATERIALS.
- AD. WOOD GRAIN LAMINATE TO BE INSTALLED WITH WOOD GRAIN RUNNING VERTICALLY UON.
- AE. WHERE TRIM IS NOT SPECIFIED, CAULK ALL EXPOSED EDGES OR SEAMS OF RVS WITH CLEAR CAULKING.
- AF. CAULK BETWEEN BASE OF DOOR FRAMES TO ALL FINISHED HARD SURFACE FLOORING.
- AG. INSTALL GROUT COLOR MATCHING FLEXIBLE SEALANT MAPEI "MAPESEIL T" AT ALL CHANGE OF PLANE LOCATIONS PER TONA.
- AH. PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD SURFACES THAT WERE PREVIOUSLY PAINTED.
- AI. PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD WINDOWS, TRIM, AND SILLS.



### FINISH AND SIGNAGE PLAN - BASEMENT

3/16" = 1'-0"

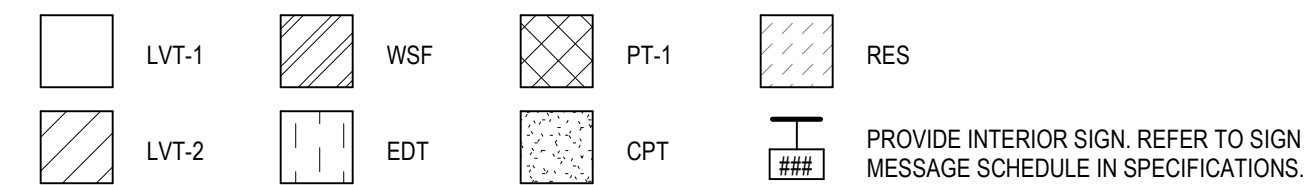


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| <b>CONSULTANTS</b><br><b>STRUCTURAL:</b><br>ALBERTSON ENGINEERING, INC.<br>3202 W. MAIN ST., #C<br>RAPID CITY, SD 57702<br>605-343-9606<br>STEPHEN KILBER<br>Albertson Engineering Inc. |  |  | <b>DESIGNER OF RECORD</b><br><b>A/E:</b><br>STONE GROUP ARCHITECTS<br>600 EAST 7TH ST.<br>SIOUX FALLS, SD 57103<br>605-271-1144<br>TODD STONE<br><b>WPE</b> WEST PLAINS ENGINEERING, INC. |  |  | <b>STAMP</b><br><b>Office of Construction and Facilities Management</b><br><b>VA</b> U.S. Department of Veterans Affairs |  |  | <b>Drawing Title</b><br>FINISH AND SIGNAGE PLAN - BASEMENT<br><b>Approved</b><br>DOUG SPRINKLE |  |  | <b>Phase</b><br>BID DOCUMENTS<br><b>FULLY SPRINKLERED</b> |  |  | <b>Project Title</b><br>DOM RENOVATION FOR SEMIPRIVATE ROOMS<br><b>Location</b><br>HOT SPRINGS, SD<br><b>Issue Date</b><br>06/03/2025<br><b>Checked</b><br>JMB/ITM<br><b>Drawn</b><br>TL/KK |  |  | <b>Project Number</b><br>VA #568A4-21-208<br>SGA #211921<br><b>Building Number</b><br>8<br><b>Drawing Number</b><br>A1100 |  |  |
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FINISH PLAN NOTES

- 1 INSTALL HIGH-IMPACT WALL COVERING (HWC) ON ALL WALLS ABOVE WALL BASE.
- 2 INSTALL HANDRAILS (HR) ON ALL WALLS, 34" AFF TO TOP. INSTALL WHERE WALLS CAN ACCOMMODATE AND WHERE NO OBSTRUCTIONS SUCH AS WINDOWS OCCUR.
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FINISH AND SIGNAGE PLAN LEGEND



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- R ALL INTERIOR GWB WALLS AND CEILINGS SHALL RECEIVE A LEVEL 4 FINISH WITH LIGHT ORANGE PEEI TEXTURE UON AND PAINTED ACCORDING TO THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE & ROOM FINISH SCHEDULE.
- S ALL SCULLTER TRANSITION STRIPS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. U. VERIFY GROUT & MORTAR THICKNESS PER MANUFACTURER'S RECOMMENDATIONS.
- T JOINTS IN FLOORING SHOULD ALIGN WITH JOINTS IN CONCRETE SLABS. ADDITIONAL JOINTS SHOULD BE CUT IF NECESSARY AS PER THE LATEST EDITION OF THE TONA HANDBOOK. VERIFY LOCATIONS WITH ARCHITECT & INTERIOR DESIGNER.
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- X ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED OR PREFINISHED ACCORDING TO THE INFORMATION PROVIDED IN THE COLOR & MATERIAL SCHEDULE & ROOM FINISH SCHEDULE.
- Y SOFT/ OR BULKHEAD PAINT COLOR TO BE APPLIED TO BOTH VERTICAL & HORIZONTAL SURFACES UON. ALL SOFFITS TO BE PAINTED THE COLOR OF ADJACENT WALLS UON. SPECIAL ACCENT COLORS ARE INDICATED ON THE REFLECTED CEILING PLAN & ROOM FINISH SCHEDULE.
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- GG WOOD GRANT LAMINATES TO BE INSTALLED WITH WOOD GRANT RUNNING VERTICALLY UON.
- HH WHERE TRIM IS NOT SPECIFIED, CAULK ALL EXPOSED EDGES OR SEAMS OF RVS WITH CLEAR CAULKING.
- II CAULK BETWEEN BASE OF DOOR FRAMES TO ALL FINISHED HARD SURFACE FLOORING.
- JJ INSTALL GROUT COLOR MATCHING FLEXIBLE SEALANT MAPESIL T AT ALL CHANGE OF PLANE LOCATIONS PER TONA.
- KK PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD SURFACES THAT WERE PREVIOUSLY PAINTED.
- LL PROVIDE NEW STAIN FINISH ON STRIPPED EXISTING INTERIOR WOOD WINDOWS, TRIM, AND SILLS.

COLOR AND MATERIAL SCHEDULE

| ABBR CODE                       | Material                       | Manufacturer          | Number                            | Style | Name                                                                                                                                     | Number                                    | Name                                                                                                    | Size        | Finish                  | Texture        | Installation Notes                                            | Location                                                 | Remarks |
|---------------------------------|--------------------------------|-----------------------|-----------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------|-------------------------|----------------|---------------------------------------------------------------|----------------------------------------------------------|---------|
| 06 2000 - FINISH CARPENTRY      |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| PL                              | Plastic Laminate               | Wilsonart             |                                   |       | High Pressure Laminate                                                                                                                   | 7994-05                                   | Lowell Ash                                                                                              |             |                         | Timbergrain    |                                                               | Casework                                                 |         |
| SSM                             | Solid Surface                  | Wilsonart             |                                   |       | Solid Surface                                                                                                                            | 9236SS                                    | Beige Travertine                                                                                        |             |                         |                |                                                               | Countertops                                              |         |
| 09 3000 - TILING                |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| GT-1                            | Grout                          | Bostik                |                                   |       | TriColor RapidCure                                                                                                                       | Equal to TEC 939                          | Equal to TEC Mist                                                                                       | 1/8" joint  |                         |                |                                                               | Floors                                                   |         |
| GT-2                            | Grout                          | Bostik                |                                   |       | TriColor RapidCure                                                                                                                       | 906                                       | Dove Gray                                                                                               | 3/16" joint |                         |                |                                                               | Walls                                                    |         |
| PT-1                            | Porcelain Tile                 | American Clean        |                                   |       | Un glazed Mosaiqa                                                                                                                        | K43                                       | Light Smoke                                                                                             | 1" Hexagon  | Un glazed               |                |                                                               | Tiled Floors; See Room Finish Schedule and Finish Plans  |         |
| PT-2                            | Porcelain Tile                 | Daltile               |                                   |       | Avery                                                                                                                                    | AV17                                      | White                                                                                                   | 12" x 24"   | Glazed                  |                | Stack bond pattern                                            | Tiled Walls; See Room Finish Schedule                    |         |
| TRIM-1                          | Metal Trim                     | Schluter Systems      | AHK                               |       | DILEX                                                                                                                                    |                                           | Anodized Aluminum                                                                                       |             |                         |                |                                                               | Inside corners and cove base at tiled walls.             |         |
| TRIM-2                          | Metal Trim                     | Schluter Systems      |                                   |       | RONDEC                                                                                                                                   |                                           | Anodized Aluminum                                                                                       |             |                         |                |                                                               | Outside corners at tiled walls                           |         |
| TRIM-3                          | Metal Trim                     | Schluter Systems      |                                   |       | RENO-U                                                                                                                                   |                                           | Stainless Steel                                                                                         |             |                         |                |                                                               | Transitions from PT-1 to LVT; RES to LVT; and CPT to LVT |         |
| 09 5100 - ACOUSTICAL CEILINGS   |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| ACT-1                           | Acoustical Ceiling Tile        | Armstrong             | 704                               |       | Cortega - Angled Tegalur                                                                                                                 |                                           | White                                                                                                   | 24" x 24"   |                         |                |                                                               | See Room Finish Schedule                                 |         |
| ACT-2                           | Acoustical Ceiling Tile        | Armstrong             | 868 (Vinyl-faced)                 |       | Clean Room VL                                                                                                                            |                                           | White                                                                                                   | 24" x 24"   |                         |                |                                                               | See Room Finish Schedule                                 |         |
| 09 6500 - RESILIENT FLOORING    |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| EDT                             | Electrostatic Dissipative Tile | Nora                  | Environcare ED                    |       | Noraplan                                                                                                                                 | 7036                                      | Clam Bake                                                                                               | 24" x 24"   |                         |                |                                                               | See Room Finish Schedule and Finish Plans                |         |
| LVT-1                           | Luxury Vinyl Tile              | Mannington Commercial |                                   |       | Amico Signature Wood                                                                                                                     | AROW7910                                  | Brushed Oak                                                                                             | 6" x 36"    |                         |                | Length of plank runs east-west                                | See Room Finish Schedule and Finish Plans                |         |
| LVT-2                           | Luxury Vinyl Tile              | Mannington Commercial |                                   |       | Amico Signature Stone                                                                                                                    | AFRISM43                                  | Stria Basalt                                                                                            | 12" x 12"   |                         |                | Stack bond pattern                                            | See Room Finish Schedule and Finish Plans                |         |
| PRB                             | Profile Resilient Base         | Tarkett               |                                   |       | Milwork Wall Finishing System; Infection Wall Base                                                                                       | 32                                        | Pebble                                                                                                  | 5 1/4" H    |                         |                |                                                               | See Room Finish Schedule                                 |         |
| RB                              | Resilient Base                 | Tarkett               |                                   |       | Wall Base - Vinyl                                                                                                                        | 32                                        | Pebble                                                                                                  | 4" H        |                         |                | Cove typical; Straight at carpet.                             | See Room Finish Schedule                                 |         |
| RES                             | Resinous Flooring              | Tennant Coatings      |                                   |       | Flake SB System; Primer Coat: Eco-MPE; Broadcast Coat: Eco-MPE with Decorative Flake Eco-DFS; Grout Coat: Eco-URE; Top Coat: Eco-HTS 100 |                                           | Eco-MPE; Medium Gray; Eco-DFS; Pumice; Eco-URE; Clear                                                   |             | Top Coat of Eco-HTS 100 |                |                                                               | See Room Finish Schedule and Finish Plans                |         |
| RT                              | Rubber Treads                  | Tarkett               |                                   |       | Angle Fit Stair Treads with Integrated Riser                                                                                             | 32                                        | Rubber; Pebble; Grit Tape; Black                                                                        |             |                         | with grit tape |                                                               | Interior stair treads and risers                         |         |
| WSF                             | Welded Seam Sheet Flooring     | Mannington Commercial |                                   |       | BioSpec MD                                                                                                                               | 15369                                     | Bedrock                                                                                                 |             |                         |                | Integral cove base                                            | See Room Finish Schedule and Finish Plans                |         |
| 09 6800 - CARPETING             |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| CPT                             | Carpet Tile                    | Tarkett               | 11128                             |       | Colorknit                                                                                                                                | 30205                                     | Warm Tweed                                                                                              | 24" x 24"   |                         |                |                                                               | See Room Finish Schedule and Finish Plans                |         |
| 09 9000 - PAINTING AND COATINGS |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| P-1                             | Paint                          | Diamond Vogel         |                                   |       | Zero Plus Zero VOC                                                                                                                       | 0559                                      | Always Neutral                                                                                          |             | Satin                   |                |                                                               | Walls - Typical                                          |         |
| P-2                             | Paint                          | Diamond Vogel         |                                   |       | Zero Plus Zero VOC                                                                                                                       | 0488                                      | Luna Light                                                                                              |             | Satin                   |                |                                                               | Accent Walls - See Finish Plans                          |         |
| P-3                             | Paint                          | Sherwin Williams      |                                   |       | Pro Industrial                                                                                                                           |                                           | Match Diamond Vogel Drifting Sand                                                                       |             | Semi-Gloss              |                |                                                               | Interior HM frames                                       |         |
| P-4                             | Paint                          | Diamond Vogel         |                                   |       | Zero Plus Zero VOC                                                                                                                       | OW1                                       | Acoustic White                                                                                          |             | Satin                   |                |                                                               | GWB Ceilings                                             |         |
| P-5                             | Paint                          | Diamond Vogel         |                                   |       | PermAcryl Exterior 100% Acrylic                                                                                                          |                                           | Match Existing                                                                                          |             | Semi-Gloss              |                |                                                               | Exterior Wood Balcony Framing                            |         |
| P-6                             | Paint                          | Diamond Vogel         |                                   |       | PermAcryl Exterior 100% Acrylic                                                                                                          |                                           | Match Existing                                                                                          |             | Semi-Gloss              |                |                                                               | Exterior Wood Windows/Doors                              |         |
| P-7                             | Paint                          | Diamond Vogel         |                                   |       | PermAcryl Exterior 100% Acrylic                                                                                                          |                                           | Match Existing                                                                                          |             | Semi-Gloss              |                |                                                               | Exterior Wood Window/Door Trim                           |         |
| P-8                             | Paint                          | Sherwin Williams      |                                   |       | Interior/Exterior Porch & Floor Low Gloss Alkyd Enamel                                                                                   |                                           | Match Existing                                                                                          |             | Low-Gloss               |                |                                                               | Exterior Wood Balcony Flooring                           |         |
| SC-1                            | Specialty Glazed Coating       | Sherwin Williams      | B73W00311                         |       | Pro Industrial Water Based Epoxy                                                                                                         |                                           | Match Paint P-1                                                                                         |             | Gloss                   |                |                                                               | Walls - See Room Finish Schedule                         |         |
| SC-2                            | Specialty Glazed Coating       | Sherwin Williams      | B73W00311                         |       | Pro Industrial Water Based Epoxy                                                                                                         |                                           | Match Paint P-4                                                                                         |             | Gloss                   |                |                                                               | Ceilings - See Room Finish Schedule                      |         |
| ST                              | Interior Wood Stain            | Sherwin Williams      |                                   |       | Minwax Performance Series Tintable Interior Wood Stain 250 VOC                                                                           |                                           | Match Existing                                                                                          |             |                         |                |                                                               | Interior Wood                                            |         |
| VAR                             | Interior Wood Varnish          | Sherwin Williams      |                                   |       | Minwax Polyurethane                                                                                                                      |                                           | Clear                                                                                                   |             | Satin                   |                |                                                               | Interior Wood                                            |         |
| 10 2600 - WALL PROTECTION       |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| CG-1                            | Corner Guard - 90              | InPro Corporation     | 150                               |       | High Impact Surface-Mount Corner Guard                                                                                                   | 0119                                      | Pepperdust                                                                                              | 8" H        |                         | Velvet         | Install at top of base.                                       | See Finish Plans                                         |         |
| CG-2                            | Corner Guard - 135             | InPro Corporation     | 130                               |       | High Impact Surface-Mount Corner Guard                                                                                                   | 0119                                      | Pepperdust                                                                                              | 8" H        |                         | Velvet         | Install at top of base.                                       | See Finish Plans                                         |         |
| EG-1                            | End Guard                      | InPro Corporation     | 1600                              |       | High Impact Surface-Mount End Guard                                                                                                      | 0119                                      | Pepperdust                                                                                              | 8" H        |                         | Velvet         | Install at top of base.                                       | See Finish Plans                                         |         |
| HR                              | Handrails                      | InPro Corporation     | 3510P/VV                          |       | Handrail                                                                                                                                 | Top: 0536; Top Return: 0284; Bottom: 0119 | Top: Hazelwood; Top Return: Truffle; Bottom: Pepperdust; Bracket: Stainless Steel                       |             |                         | Pebblette      | Install 36" AFF to top.                                       | See Finish Plans                                         |         |
| HWC                             | High Impact Wall Covering      | InPro Corporation     | 406                               |       | Palladium Rigid Vinyl Sheet                                                                                                              | 0119                                      | Pepperdust                                                                                              | 4" H        |                         | Velvet         | Install at top of base.                                       | See Room Finish Schedule and Finish Plans                |         |
| 12 2400 - WINDOW SHADES         |                                |                       |                                   |       |                                                                                                                                          |                                           |                                                                                                         |             |                         |                |                                                               |                                                          |         |
| WDS-1                           | Roller Shades                  | MechoShade Systems    | 1100 Series, 1% Density           |       | Soflo Collection                                                                                                                         |                                           | To be selected from Manufacturer's full line. Architect approval required.                              |             |                         |                | Provide custom fixed shade at transom wdw above where occurs. | See Reflected Ceiling Plans                              |         |
| WDS-2                           | Roller Shades                  | MechoShade Systems    | 0250 Series, Acrylic Foam Backing |       | Cheslea Blackout                                                                                                                         |                                           | Fabric and light track color to be selected from Manufacturer's full line. Architect approval required. |             |                         |                | Provide custom fixed shade at transom wdw above where occurs. | See Reflected Ceiling Plans                              |         |

ROOM FINISH SCHEDULE

| NUMBER      | ROOM NAME                | FLOOR | BASE | WALL | WAIN      | CEILING     | FINISH REMARKS                                                      |
|-------------|--------------------------|-------|------|------|-----------|-------------|---------------------------------------------------------------------|
| BASEMENT    |                          |       |      |      |           |             |                                                                     |
| B00         | BASEMENT CORRIDOR        | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B00A        | BASEMENT CORRIDOR        | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B02         | TR                       | EDT   | RB   | P-1  |           | GWB/P-4     | PROVIDE PAINTED 34" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| B03         | ELEC                     | RES   | RB   | P-1  |           | GWB/P-4     | PROVIDE PAINTED 34" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| B04         | UNASSIGNED MH            | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B05         | GVM                      | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B05A        | ELEVATOR EQUIPMENT       | RES   | RB   | P-1  |           | EXP/GWB/P-4 |                                                                     |
| B06         | UNASSIGNED MH            | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B06A        | FIRE SERVICE             | RES   | RB   | P-1  |           | GWB/P-4     |                                                                     |
| B07         | GROUP ROOM MH            | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B08         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B09         | HAC                      | PT-1  | PT-2 | SC-1 | PT-2-6-0" | ACT-2       |                                                                     |
| B10         | MECHANICAL               | RES   | RB   | P-1  |           | GWB/P-4     |                                                                     |
| B11         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B12         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B13         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B14         | STAFF LOUNGE             | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B15         | GROUP ROOM MH            | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| B15A        | STORAGE                  | LVT-1 | RB   | P-1  |           | ACT-1       |                                                                     |
| B16         | TOILET, WOMEN            | PT-1  | PT-2 | P-1  | PT-2-6-0" | GWB/P-4     |                                                                     |
| B17         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B18         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B19         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| B20         | TOILET, MEN              | PT-1  | PT-2 | P-1  | PT-2-6-0" | GWB/P-4     |                                                                     |
| B21         | MH OFFICE                | CPT   | RB   | P-1  |           | ACT-1       |                                                                     |
| ARCADIE LL  |                          |       |      |      |           |             |                                                                     |
| X1          | CONNECTING LINK          | LVT-1 | PRB  | P-1  |           | GWB/P-4     | IRT ON STAIRS                                                       |
| FIRST FLOOR |                          |       |      |      |           |             |                                                                     |
| 100         | FIRST FLOOR CORRIDOR     | LVT-1 | PRB  | P-1  | HWC 4-0"  | GWB/P-4     |                                                                     |
| 100A        | STORAGE                  | LVT-1 | RB   | P-1  |           | ACT-1       | RT ON STAIRS                                                        |
| 101         | STAIRWELL                | LVT-1 | PRB  | P-1  |           | GWB/P-4     |                                                                     |
| 102         | TR                       | EDT   | RB   | P-1  |           | GWB/P-4     | PROVIDE PAINTED 34" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| 103         | ELEC                     | RES   | RB   | P-1  |           | GWB/P-4     | PROVIDE PAINTED 34" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| 104         | MULTIPURPOSE KITCHENETTE | LVT-2 | PRB  | P-1  | HWC 4-0"  | GWB/P-4     | RB AT CASEWORK                                                      |
| 105         | LAUNDRY                  | WSF   | WSF  | P-1  |           | GWB/P-4     |                                                                     |
| 105A        | LINEN                    | WSF   | WSF  | SC-1 | HWC 4-0"  | ACT-2       |                                                                     |
| 106         | TOILET                   | PT-1  | PT-2 | P-1  | PT-2-6-0" | GWB/P-4     |                                                                     |
| 107         | HAC                      | PT-1  | PT-2 | SC-1 | PT-2-6-0" | ACT-2       |                                                                     |
| 108         | STORAGE                  | LVT-1 | RB   | P-1  |           | ACT-1       |                                                                     |
| 110         | BEDROOM ONE-BED          | LVT-1 | PRB  | P-1  |           | GWB/P-4     | RB AT CASEWORK                                                      |
| 110A        | TOILET                   | PT-1  | PT-2 | SC-1 | PT-2-6-0" | GWB/S-2     | PT 8-0" AT SHOWER                                                   |

NOTE: SEE FINISH PLANS FOR WALL ACCENT P-2 LOCATIONS

ROOM FINISH SCHEDULE

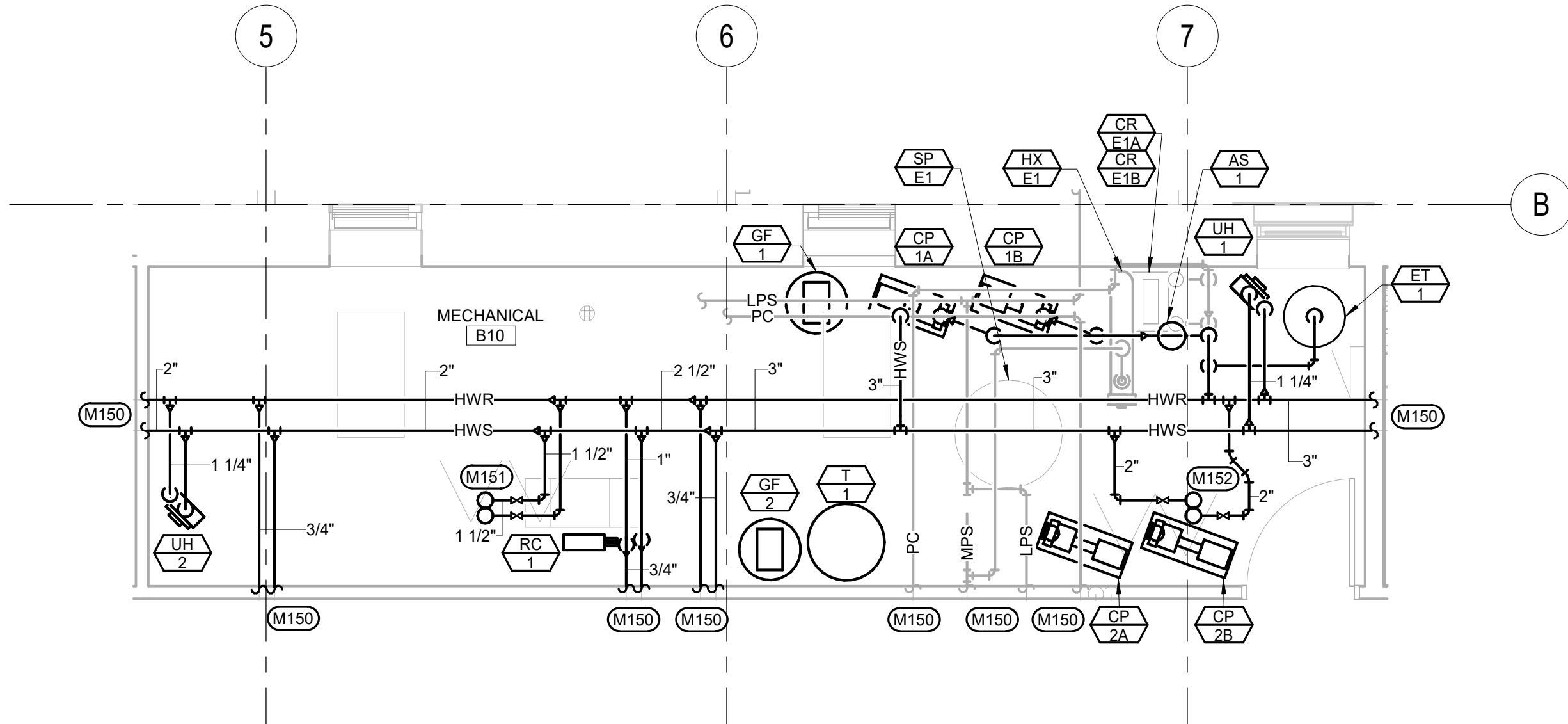
| NUMBER       | ROOM NAME                 | FLOOR | BASE | WALL | WAIN      | CEILING | FINISH REMARKS                                                       |
|--------------|---------------------------|-------|------|------|-----------|---------|----------------------------------------------------------------------|
| 111          | BARIATRIC BEDROOM TWO-BED | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 111A         | BARIATRIC TOILET          | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 112          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 112A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 113          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 113A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 114          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 114A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 115          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 115A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 116          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 116A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 117          | STORAGE                   | LVT-1 | RB   | P-1  | ACT-1     |         |                                                                      |
| 118          | LOUNGE                    | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 119          | SOILED UTILITY            | WSF   | WSF  | SC-1 | HWC 4'-0" | ACT-2   |                                                                      |
| ARCADIE UL   |                           |       |      |      |           |         |                                                                      |
| X2           | CONNECTING LINK           | LVT-1 | PRB  | P-1  | HWC 4'-0" | GWB/P-4 | RT ON STAIRS                                                         |
| SECOND FLOOR |                           |       |      |      |           |         |                                                                      |
| 200          | SECOND FLOOR CORRIDOR     | LVT-1 | PRB  | P-1  | HWC 4'-0" | GWB/P-4 |                                                                      |
| 200A         | STORAGE                   | LVT-1 | RB   | P-1  | ACT-1     |         |                                                                      |
| 201          | TR                        | EDT   | RB   | P-1  |           | GWB/P-4 | PROVIDE PAINTED 3/4" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| 202          | STORAGE                   | LVT-1 | RB   | P-1  | ACT-1     |         |                                                                      |
| 203          | ELEC                      | RES   | RB   | P-1  |           | GWB/P-4 | PROVIDE PAINTED 3/4" FIRE RETARDANT PLYWOOD OVER GWB WHERE INDICATED |
| 204          | MULTIPURPOSE KITCHENETTE  | LVT-2 | PRB  | P-1  | HWC 4'-0" | GWB/P-4 | RB AT CASEWORK                                                       |
| 205          | LAUNDRY                   | WSF   | WSF  | P-1  |           | GWB/P-4 |                                                                      |
| 206          | WSP                       | WSF   | WSF  | SC-1 | HWC 4'-0" | ACT-2   |                                                                      |
| 206          | TOILET                    | PT-1  | PT-2 | P-1  | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 207          | HAC                       | PT-1  | CT   | SC-1 | PT 2-6-0" | ACT-2   |                                                                      |
| 208          | ATTIC ACCESS              | LVT-1 | RB   | P-1  |           | GWB/P-4 |                                                                      |
| 210          | BEDROOM ONE-BED           | LVT-1 | PRB  | P-1  |           | GWB/S-2 | RB AT CASEWORK                                                       |
| 210A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 211          | BARIATRIC BEDROOM TWO-BED | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 211A         | BARIATRIC TOILET          | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 212          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 212A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 213          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 213A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 214          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 214A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 215          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 215A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 216          | BEDROOM TWO-BED           | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 216A         | TOILET                    | PT-1  | PT-2 | SC-1 | PT 2-6-0" | GWB/S-2 | PT 8'-0" AT SHOWER                                                   |
| 217          | STORAGE                   | LVT-1 | RB   | P-1  | ACT-1     |         |                                                                      |
| 218          | LOUNGE                    | LVT-1 | PRB  | P-1  |           | GWB/P-4 | RB AT CASEWORK                                                       |
| 219          | SOILED UTILITY            | WSF   | WSF  | SC-1 | HWC 4'-0" | ACT-2   |                                                                      |
| ATTIC FLOOR  |                           |       |      |      |           |         |                                                                      |
| 300          | ATTIC                     | EXP   | EXP  | EXP  |           | EXP     |                                                                      |
| 301          | ELEVATOR SHAFT            | EXP   | EXP  | EXP  |           | EXP     |                                                                      |



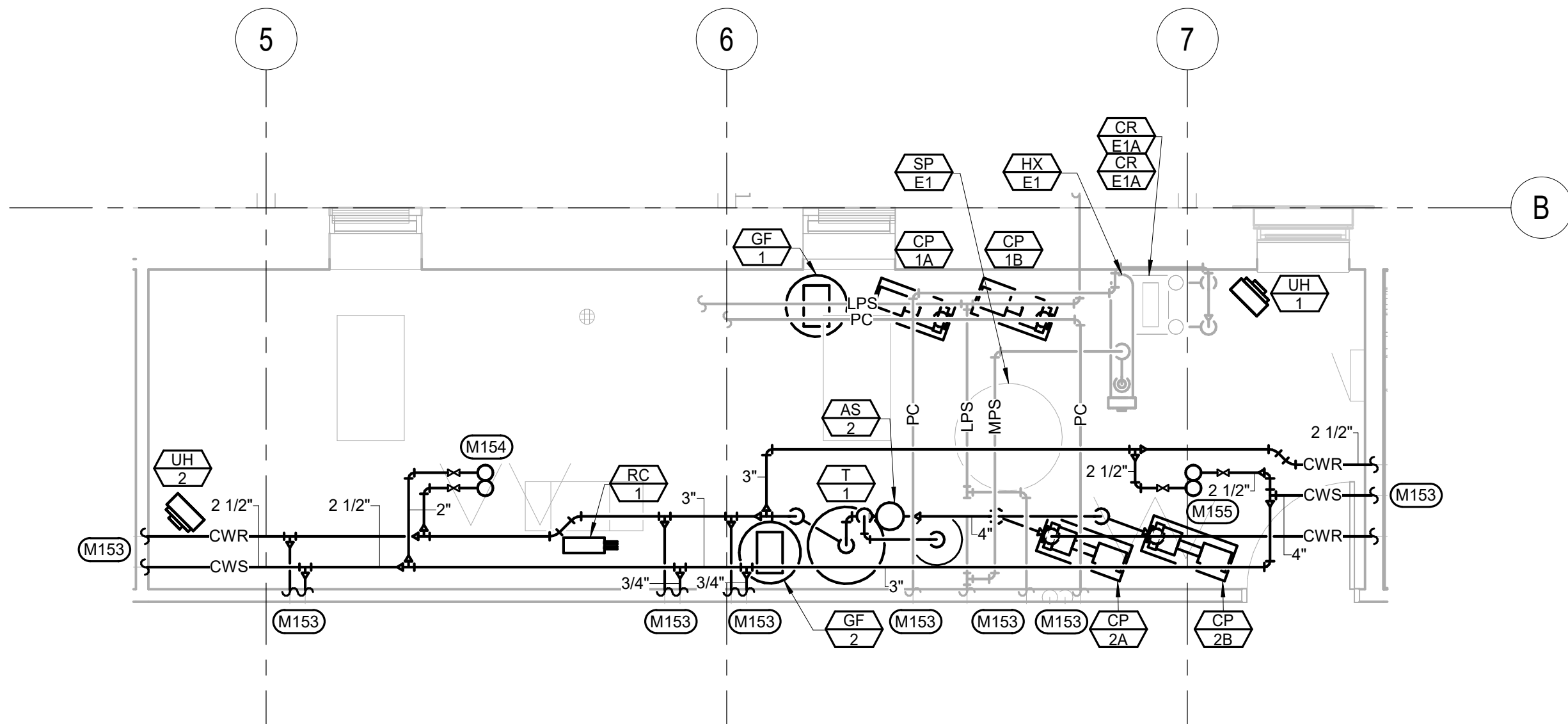
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|---------------------------------------------------|
| Project Number<br>VA #568A4-21-208<br>SGA #211921 |
| Building Number<br>8                              |
| Drawing Number<br>AI801                           |

- MISCELLANEOUS HYDRONIC NOTES**
- A. COORDINATE LOCATIONS OF PIPING WITH OTHER TRADES.
- B. DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- C. ALL PIPING INSULATION SERVING CHILLED WATER PIPING SHALL BE INSTALLED WITH UNBROKEN VAPOR BARRIERS AS PER SPECIFICATIONS. CONTRACTOR TO USE METAL SADDLES AND STRAPS ON EXTERIOR OF INSULATION FOR SUPPORT OF PIPING AT HANGERS, UNISTRUT, ETC.
- D. ISOLATE ALL COPPER PIPES FROM BEARING ON FERROUS HANGERS, ETC. WITH ELECTRICALLY INSULATING MATERIALS AS SPECIFIED. USE DIELECTRIC UNIONS IN CONNECTION OF ALL COPPER PIPING TO FERROUS PIPING AS SPECIFIED.
- E. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF STRUCTURE, WITH SPACE FOR INSULATION.
- F. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- G. UNIONS OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.
- H. PROVIDE ISOLATION VALVES TO ALL EQUIPMENT TO FACILITATE MAINTENANCE.

- MECHANICAL SPECIFIC NOTES**
- M150 REFER TO SHEET 1/MP-101, BASEMENT PIPING PLAN, FOR CONTINUATION.
- M151 1-1/2" HWS AND 1-1/2" HWR PIPING UP TO FIRST FLOOR. REFER TO SHEET 2/MP-101, FIRST FLOOR PIPING PLAN, FOR CONTINUATION.
- M152 2" HWS AND 2" HWR PIPING UP TO FIRST FLOOR. REFER TO SHEET 2/MP-101, FIRST FLOOR PIPING PLAN, FOR CONTINUATION.
- M153 REFER TO SHEET 1/MP-101, BASEMENT PIPING PLAN, FOR CONTINUATION.
- M154 2" CWS AND 2" CWR PIPING UP TO FIRST FLOOR. REFER TO SHEET 2/MP-101, FIRST FLOOR PIPING PLAN, FOR CONTINUATION.
- M155 2-1/2" CWS AND 2-1/2" CWR PIPING UP TO FIRST FLOOR. REFER TO SHEET 2/MP-101, FIRST FLOOR PIPING PLAN, FOR CONTINUATION.



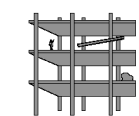
1 ENLARGED BASEMENT PIPING PLAN - HEATING WATER  
1/4" = 1'-0"



2 ENLARGED BASEMENT PIPING PLAN - CHILLED WATER  
1/4" = 1'-0"

#### CONSULTANTS

**STRUCTURAL:**  
ALBERTSON ENGINEERING, INC.  
3202 W. MAIN ST., #C  
RAPID CITY, SD 57702  
605-343-9606  
STEPHEN KILBER



Albertson Engineering Inc.

**MEP:**  
WEST PLAINS ENGINEERING, INC.  
1750 RAND ROAD  
RAPID CITY, SD 57702  
605-348-7455  
MIKE SIGMAN (ELEC)  
MICHAEL HEINRICH (MECH)



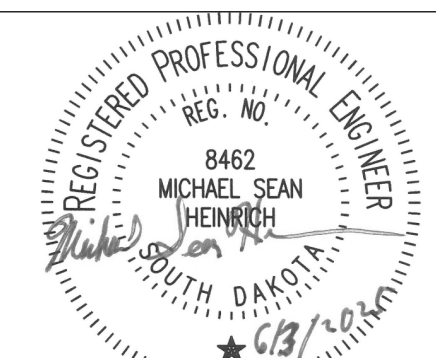
#### DESIGNER OF RECORD

**A/E:**  
Stone Group Architects  
600 E. 7th Street  
Sioux Falls, SD 57103  
phone: 605.271.1144  
stonegrouparchitects.com



STONE GROUP  
ARCHITECTS

#### STAMP



Office of  
Construction  
and Facilities  
Management



U.S. Department  
of Veterans Affairs

Drawing Title  
ENLARGED PIPING PLANS

Approved  
DOUG SPRINKLE

Phase  
100% CONSTRUCTION  
DOCUMENTS

FULLY SPRINKLERED

Project Title  
DOM RENOVATION FOR  
SEMIPRIVATE ROOMS

Location  
HOT SPRINGS, SOUTH DAKOTA

Issue Date  
08/22/2025

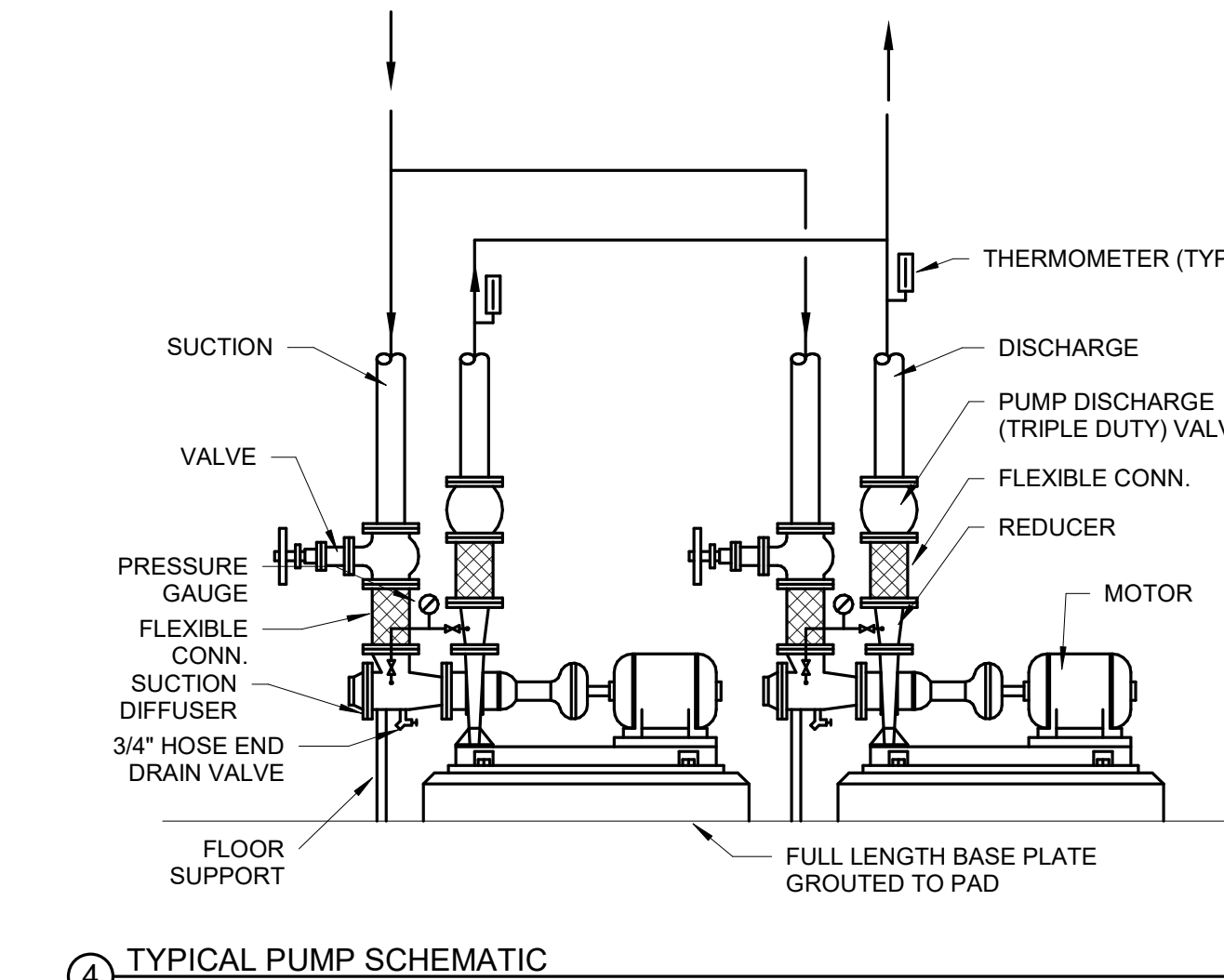
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DLD

Drawn  
JNR

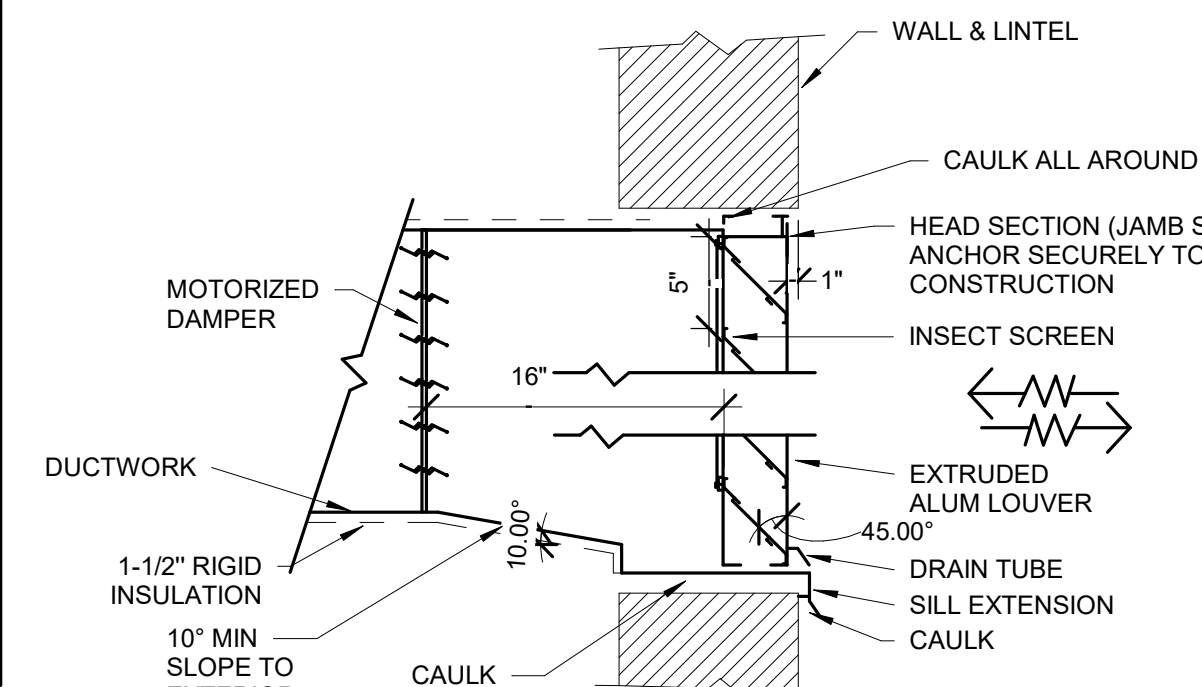
Project Number  
VA #568A4-21-208  
SGA #BR21039  
Building Number  
8

Drawing Number  
MP-103

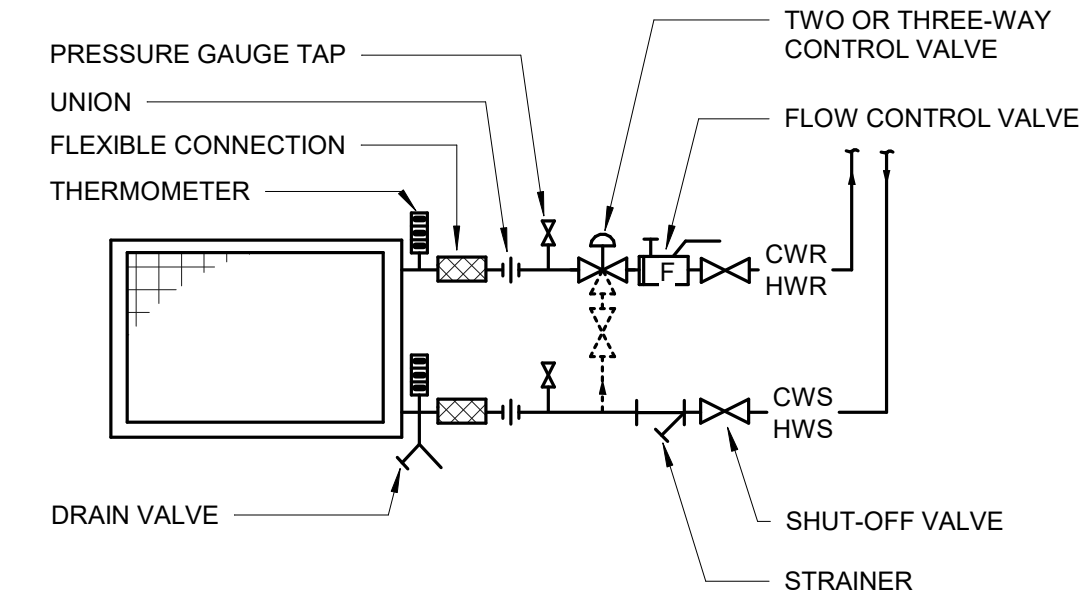
| VENTILATION SYMBOLS |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
|                     | SUPPLY DUCT (UP & DOWN)                                                        |
|                     | RETURN DUCT (UP & DOWN)                                                        |
|                     | EXHAUST DUCT (UP & DOWN)                                                       |
|                     | STANDARD RADIUS ELBOW<br>R EQUAL W (MINIMUM)                                   |
|                     | DUCT TURN WITH TURN VANES                                                      |
|                     | FLEXIBLE DUCT CONNECTION                                                       |
|                     | SPIRAL DUCTWORK                                                                |
|                     | LOW PRESSURE DUCTWORK<br>MAX 2" W.G. PRESSURE                                  |
|                     | MEDIUM PRESSURE DUCTWORK<br>2" - 4" W.G. PRESSURE                              |
|                     | F - FIRE DAMPER                                                                |
|                     | S - SMOKE DAMPER                                                               |
|                     | B - BACKDRAFT DAMPER                                                           |
|                     | C - COMBINATION FIRE SMOKE DAMPER                                              |
|                     | MANUAL VOLUME DAMPER                                                           |
|                     | BRANCH DUCT INTO SIDE OF MAIN DUCT                                             |
|                     | DUCT RISE OR DROP IN DIRECTION<br>OF AIR FLOW                                  |
|                     | DUCT DIMENSION- WIDTH x DEPTH                                                  |
|                     | DUCT INSULATION (SEE SPECIFICATION)                                            |
|                     | DUCT TURN AND AIR SPLIT TAKEOFF<br>(NON-ADJUSTABLE)                            |
|                     | GRILLE, REGISTER & DIFFUSER DESIGNATION<br>SUPPLY, RETURN, EXHAUST, & TRANSFER |
|                     | EQUIPMENT DESIGNATION                                                          |
|                     | FLEX DUCT (5" MAXIMUM)                                                         |



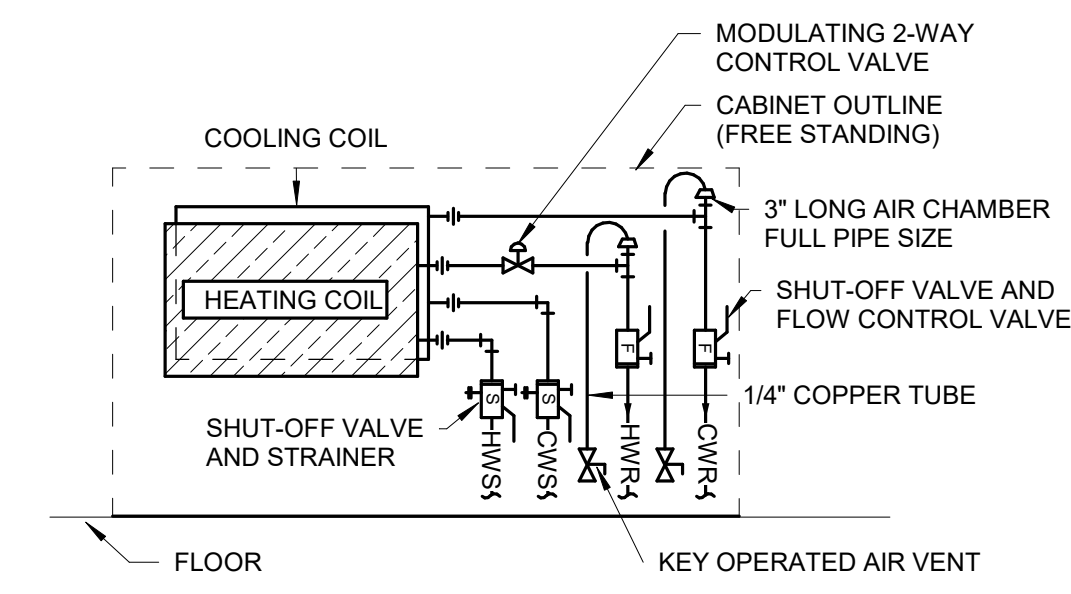
④ TYPICAL PUMP SCHEMATIC  
NO SCALE



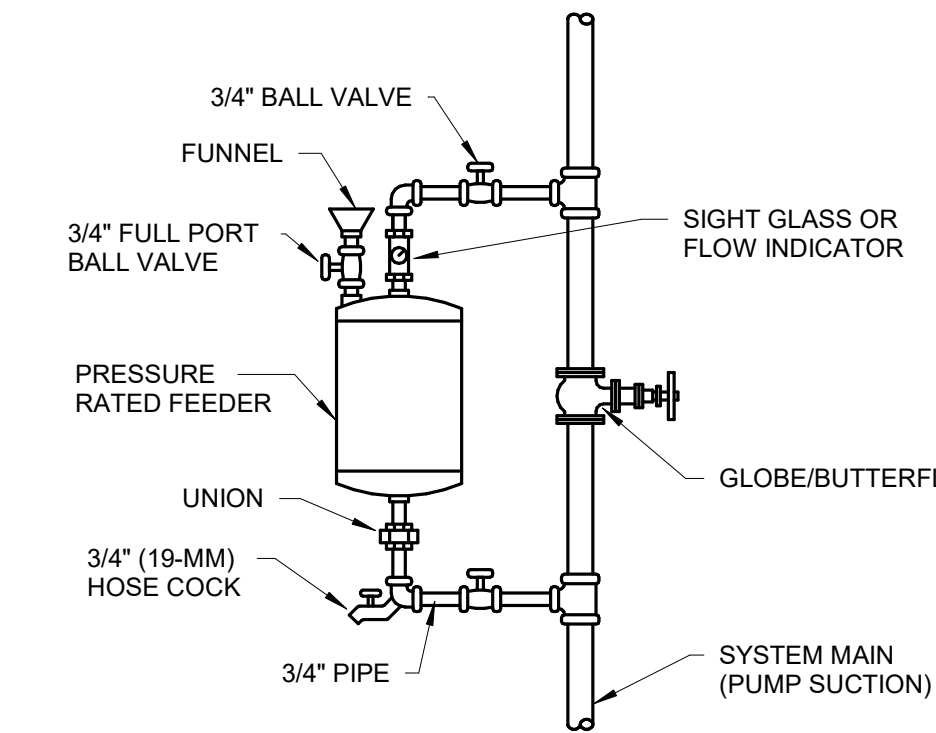
① LOUVER-INTAKE/EXHAUST AIR DETAIL  
NO SCALE



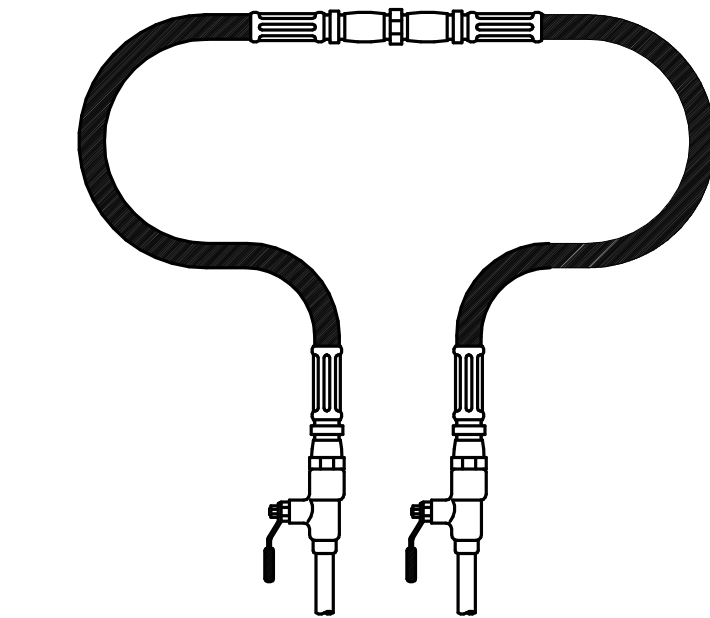
② WATER COIL PIPING DETAIL  
NO SCALE



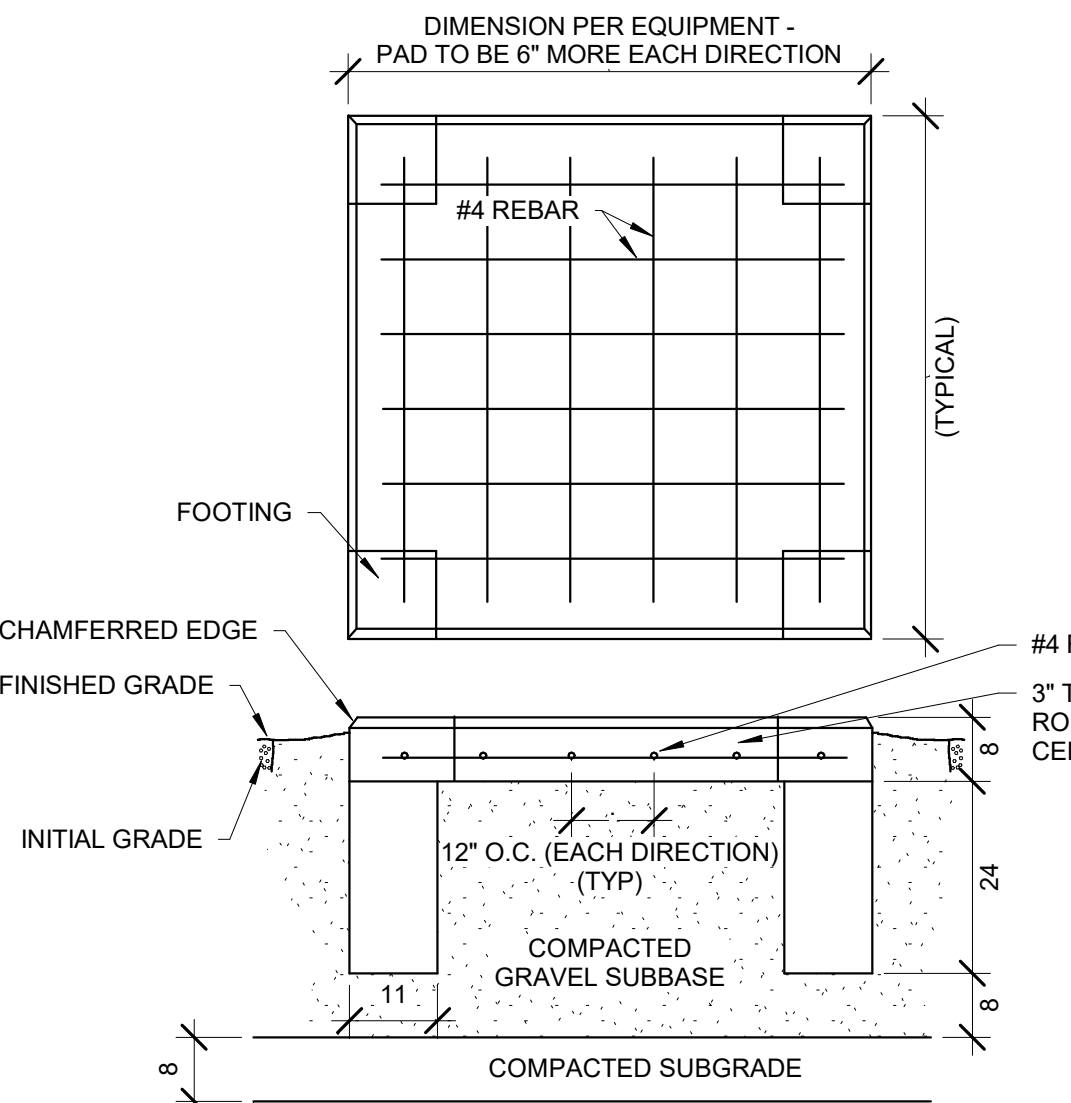
③ CABINET UNIT HEATER PIPING DETAIL  
NO SCALE



⑤ CHEMICAL FEEDER DETAIL  
NO SCALE



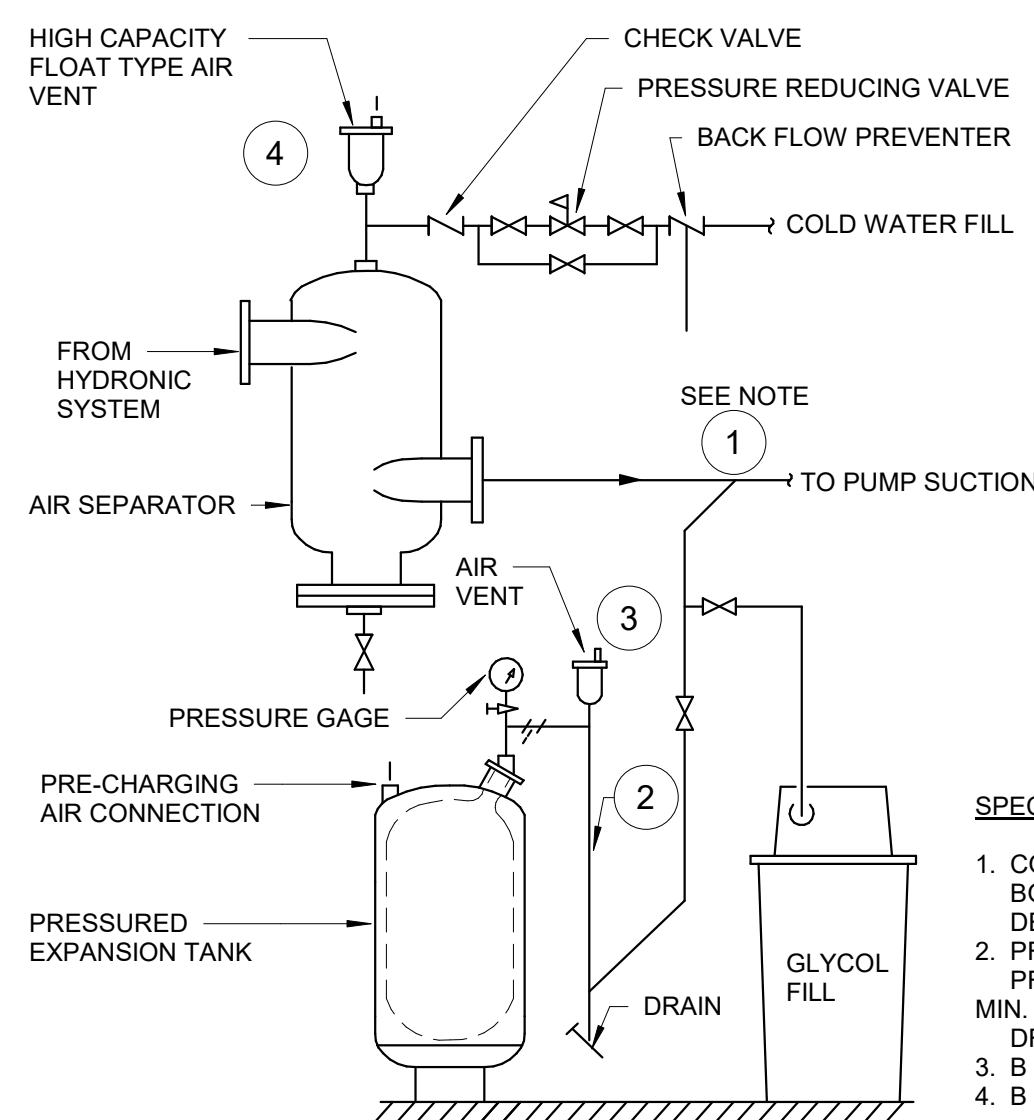
⑥ TEMPORARY CONNECTIONS FOR SYSTEM FLUSHING  
NO SCALE



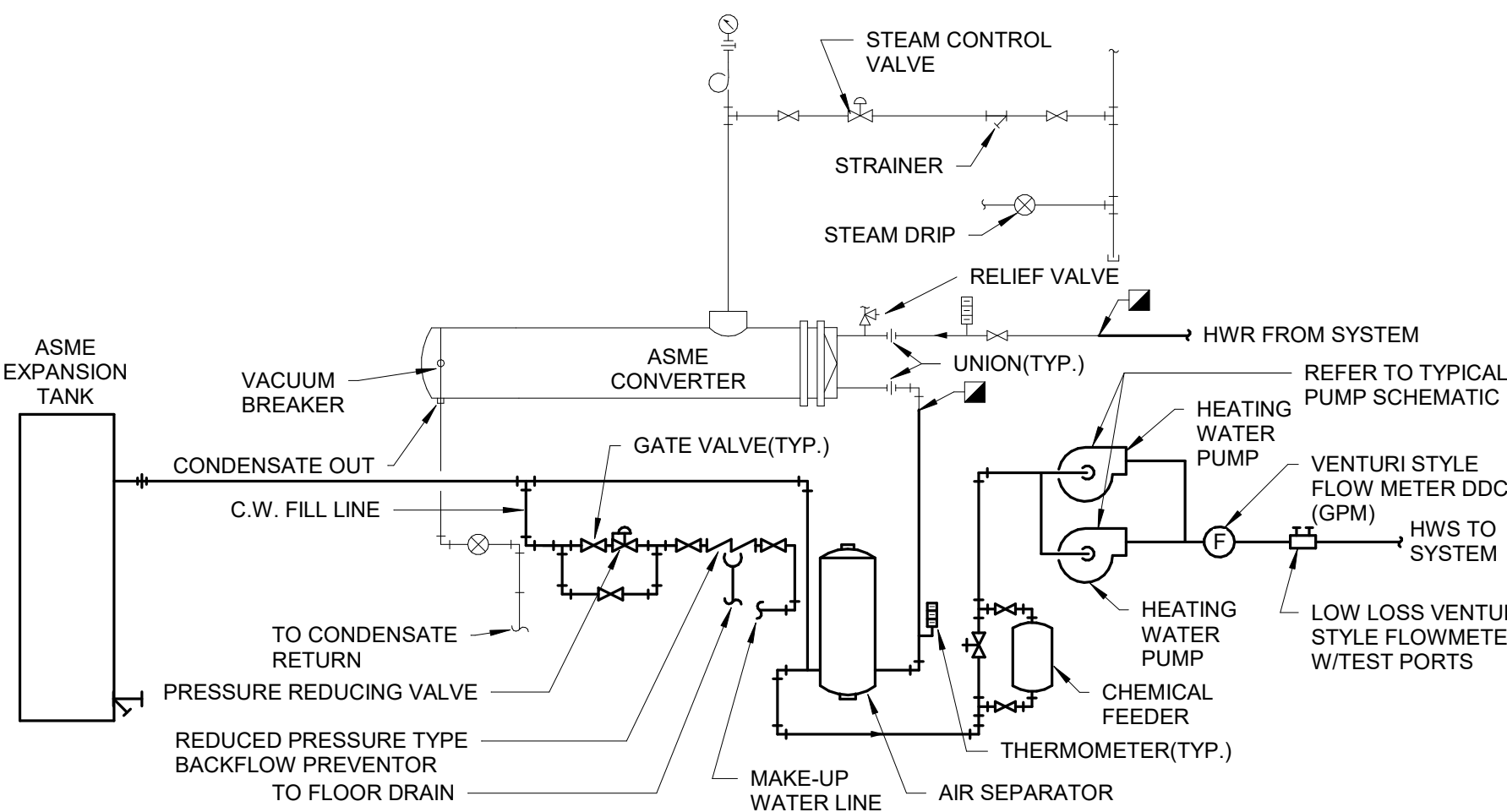
**NOTES:**

- (1) AIR ENTRAINED CONCRETE - 3750 LB/IN. AFTER 28 DAYS. MAX. AGGREGATE 3/4".
- (2) REINFORCING RODS, TYPE A-305 NEW BILLET STOCK A.S.T.M. INTERMEDIATE GRADE, WELDED OR WIRED TOGETHER
- (3) STEEL FLOAT FINISH
- (4) INSTALL ANCHOR BOLTS AS REQUIRED FOR SPECIFIC EQUIPMENT.

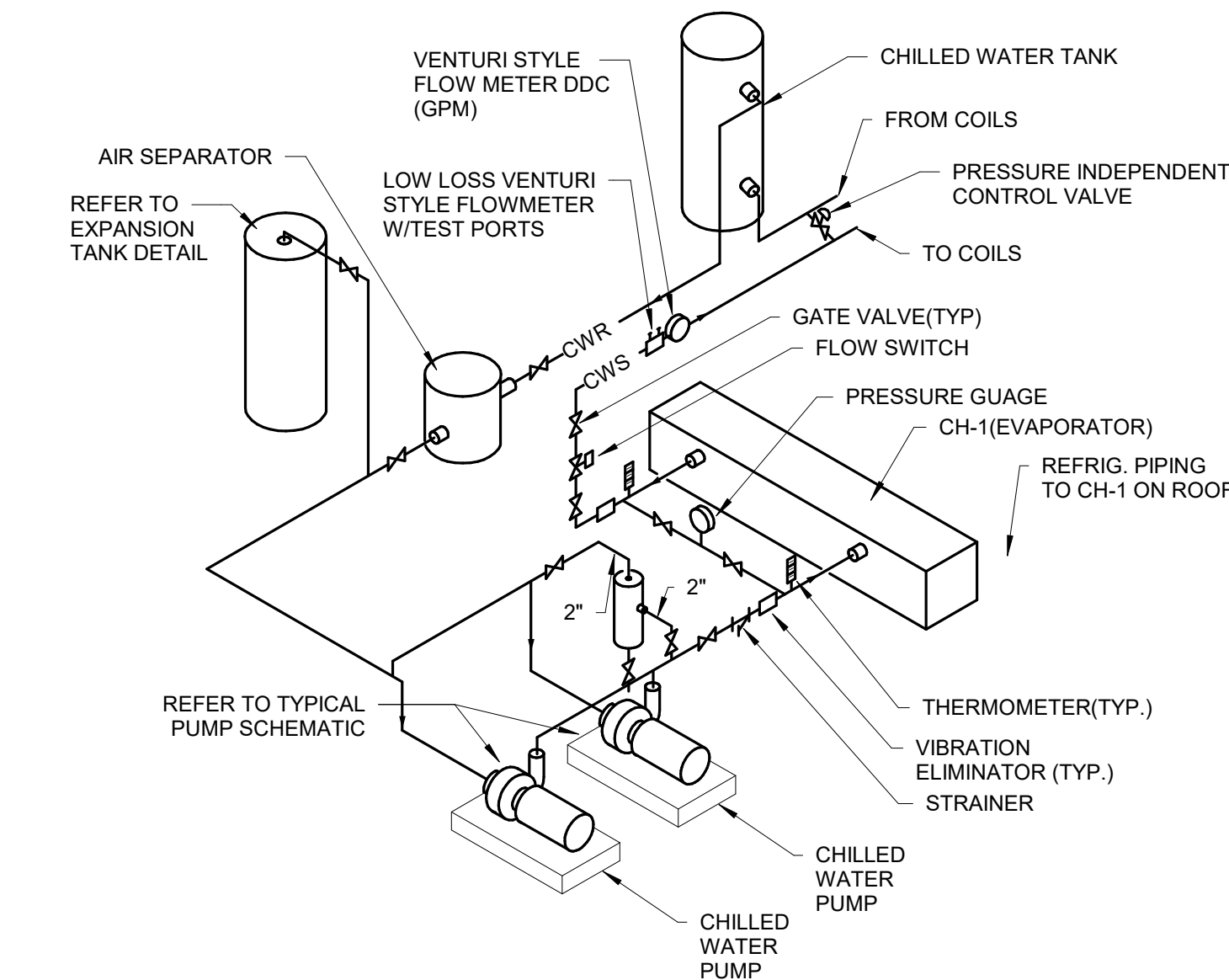
7 TYPICAL PAD MOUNT MECHANICAL EQUIPMENT DETAIL  
NO SCALE



⑩ VERTICAL DIAPHRAM EXPANSION TANK DETAIL  
NO SCALE



⑧ CONVERTER DETAIL  
1/8" = 1'-0"



9 CHILLED WATER PIPING SCHEMATIC  
NO SCALE



|                                                                                                                                                                                              |                                                                                                                       |                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>STRUCTURAL:</b><br/>         ALBERTSON ENGINEERING, INC.<br/>         3202 W. MAIN ST., #C<br/>         RAPID CITY, SD 57702<br/>         605-343-9606<br/>         STEPHEN KILBER</p> |  <p>Albertson Engineering Inc.</p> | <p><b>MEP:</b><br/>         WEST PL<br/>         1750 RAND<br/>         RAPID CIT<br/>         605-348-74<br/>         MIKE SIGM</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|

**MEP:**  
WEST PLAINS ENGINEERING, INC.  
1750 RAND ROAD  
RAPID CITY, SD 57702  
605-348-7455  
MIKE SIGMAN (ELEC)  
MICHAEL HEINRICH (MECH)

**A/E:**  
**Stone Group Architects**  
**600 E. 7th Street**  
**Sioux Falls, SD 57103**  
**phone: 605.271.1144**  
**stonegrouparchitects.com**



STONE GROUP

Office of  
Construction  
and Facilities  
Management

**VA** U.S. Department  
of Veterans Affairs

Drawing Title

SYMBOLS & DETAILS

Approved  
DOUG SPRINKLE

Phase  
100% CONSTRUCTION  
DOCUMENTS

FULLY SPRINKLERED

Project Title  
DOM RENOVATION FOR  
SEMIPRIVATE ROOMS

|          |                           |
|----------|---------------------------|
| Location | HOT SPRINGS, SOUTH DAKOTA |
|----------|---------------------------|

Project Number  
VA #568A4-21-208  
SGA #BR21039

Building Number  
8

Drawing Number

MJ-101

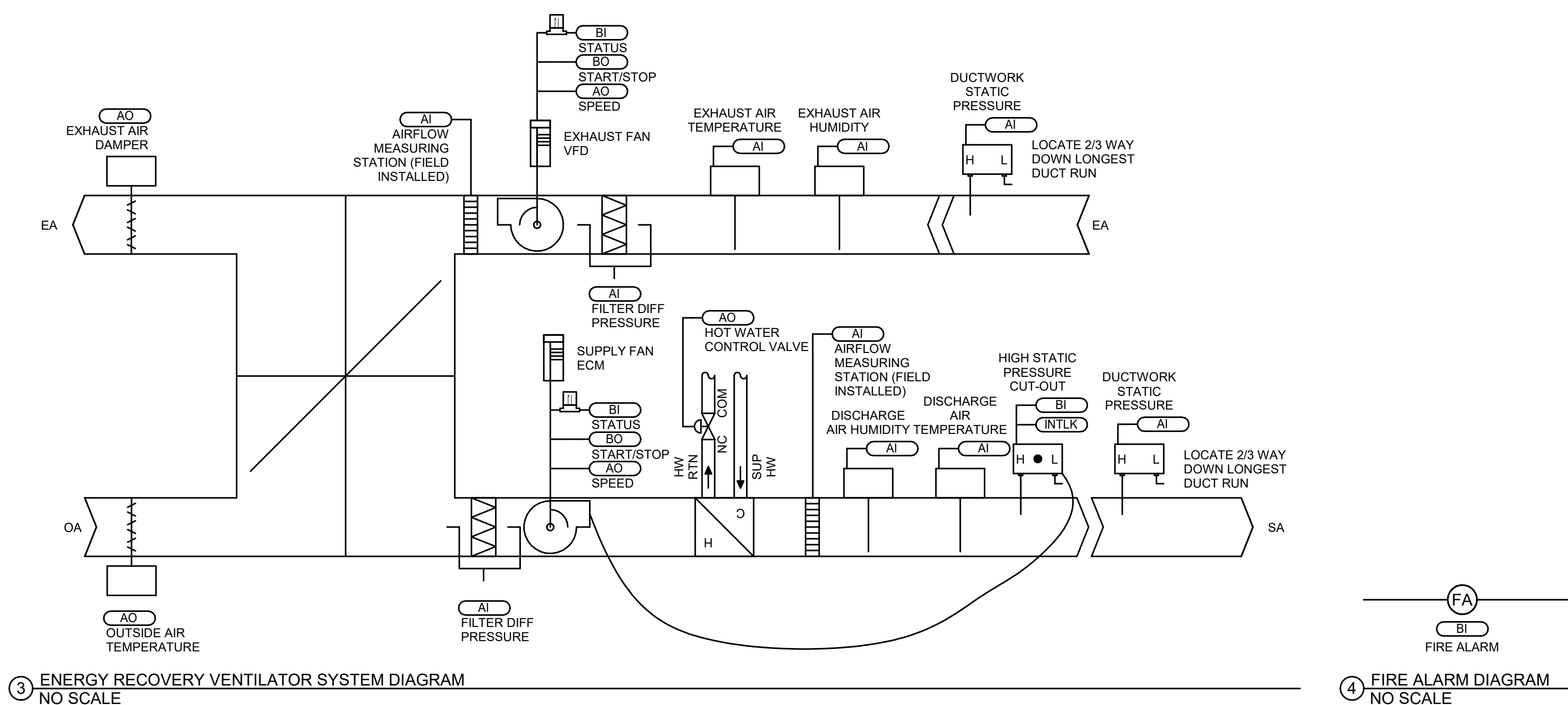
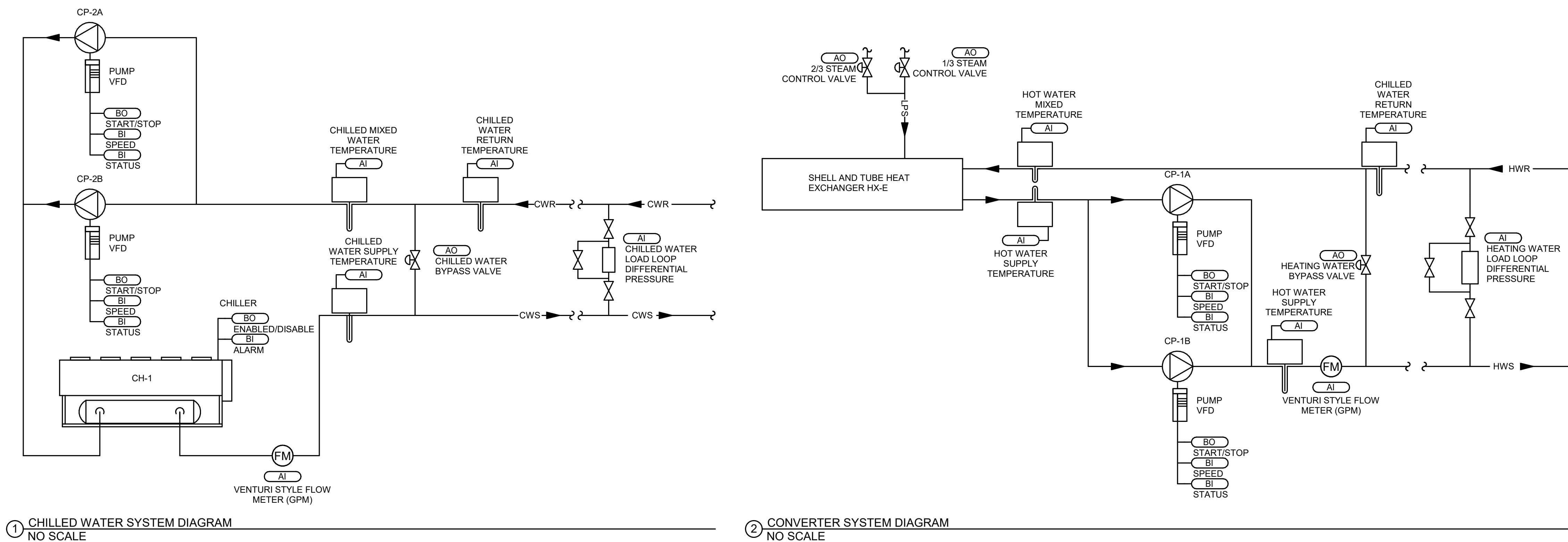
| UNIT TYPE | UNIT NUMBER | MANUFACTURER | MODEL  | SERVES        | COOLING BTUH | AMBIENT TEMPERATURE | GPM   | MIN GPM | EWT   | LWT   | WATER P D | REFRIGERANT TYPE | GLYCOL | NUMBER OF CIRCUITS | COMPRESSOR TYPE | VOLTAGE | PHASES | MCA   | SCCR    | COMMENTS          |
|-----------|-------------|--------------|--------|---------------|--------------|---------------------|-------|---------|-------|-------|-----------|------------------|--------|--------------------|-----------------|---------|--------|-------|---------|-------------------|
| CH        | 1           | DAIKIN       | AG204F | CHILLED WATER | 329880       | 95 °F               | 106.2 | 44.5    | 50 °F | 43 °F | 10.6 RH20 | R-32             |        | 2                  | DIGITAL SCROLL  | 208     | 3      | 159 A | 65 KAIC | 1,2,3,4,5,6,7,8,9 |

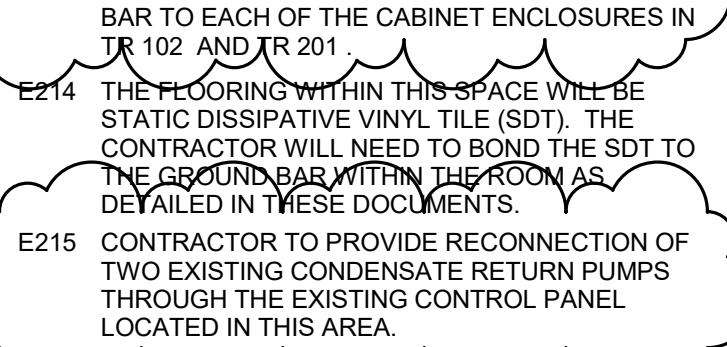
COMMENTS:

- PERFORMANCE BASED ON 40% PROPYLENE GLYCOL.
- PROVIDE DISCONNECT SWITCH.
- PROVIDE CONTROL PANEL WITH INTERFACE TO BAS.
- PROVIDE FLOW SWITCH(ES).
- PROVIDE 5-YEAR PARTS ONLY WARRANTY.
- PROVIDE HEAT TRACE ON TUBE BUNDLE WITH SEPARATE 120V/1PH POWER CONNECTION.
- COMPRESSORS SHALL BE RECIPROCATING TYPE, SCROLL TYPE, OR SCREW TYPE.
- PROVIDE SOUND CONTROL ABOVE COMPRESSORS.
- PROVIDE LOW AMBIENT COOLING DOWN TO 10 DEG. F.

## FAN COIL UNIT SCHEDULE

|           |             | ELECTRIC     |         |     |         |        |       |       |      |            |        | COOLING COIL |         |         |       |         |      |          |       |     |           | HEATING COIL |          |        |          |      |          |               |  |  |  |  |  |
|-----------|-------------|--------------|---------|-----|---------|--------|-------|-------|------|------------|--------|--------------|---------|---------|-------|---------|------|----------|-------|-----|-----------|--------------|----------|--------|----------|------|----------|---------------|--|--|--|--|--|
| UNIT TYPE | UNIT NUMBER | MANUFACTURER | MODEL   | CFM | VOLTAGE | PHASES | MCA   | BTUH  | GPM  | WPD        | EAT DB | EAT WB       | LAT DB  | LAT WB  | EWT   | LWT     | ROWS | % GLYCOL | BTUH  | GPM | WPD       | EAT          | LAT      | EWT    | LWT      | ROWS | % GLYCOL | COMMENTS      |  |  |  |  |  |
| FC        | 1-01        | DAIKIN       | FCV5108 | 450 | 120     | 1      | 8.8 A | 9708  | 5.2  | 8.93 RH20  | 78 °F  | 62 °F        | 56.0 °F | 54.2 °F | 48 °F | 52.1 °F | 4    | 30%      | 16609 | 1.5 | 3.19 RH20 | 68 °F        | 106.4 °F | 140 °F | 116.7 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-02        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-03        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-04        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-05        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-06        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-07        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 1-08        | DAIKIN       | FCV5104 | 250 | 120     | 1      | 4.4 A | 5729  | 2    | 2.97 RH20  | 78 °F  | 62 °F        | 54.1 °F | 53.9 °F | 48 °F | 53.8 °F | 4    | 30%      | 9596  | 1   | 1.12 RH20 | 68 °F        | 108.0 °F | 140 °F | 119.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-09        | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-10A       | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-10B       | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-10C       | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 1-11        | DAIKIN       | FCV5108 | 650 | 120     | 1      | 8.8 A | 9706  | 5.2  | 8.93 RH20  | 78 °F  | 62 °F        | 56.0 °F | 54.2 °F | 48 °F | 52.1 °F | 4    | 30%      | 16609 | 1.5 | 3.19 RH20 | 68 °F        | 106.4 °F | 140 °F | 116.7 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-01        | DAIKIN       | FCV5108 | 450 | 120     | 1      | 8.8 A | 9706  | 5.2  | 8.93 RH20  | 78 °F  | 62 °F        | 56.0 °F | 54.2 °F | 48 °F | 52.1 °F | 4    | 30%      | 16609 | 1.5 | 3.19 RH20 | 68 °F        | 106.4 °F | 140 °F | 116.7 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-02        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-03        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-04        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-05        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-06        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-07        | PRICE        | FCHG-40 | 510 | 120     | 1      | 6.6 A | 11200 | 4.97 | 2.88 RH20  | 78 °F  | 62 °F        | 55.0 °F | 50.5 °F | 48 °F | 52.8 °F | 6    | 30%      | 15600 | 1.8 | 0.15 RH20 | 68 °F        | 100.0 °F | 140 °F | 121.3 °F | 2    | 30%      | 1,2,3,4,5,6,7 |  |  |  |  |  |
| FC        | 2-08        | DAIKIN       | FCV5104 | 250 | 120     | 1      | 4.4 A | 5729  | 2    | 2.97 RH20  | 78 °F  | 62 °F        | 54.1 °F | 53.9 °F | 48 °F | 53.8 °F | 4    | 30%      | 9596  | 1   | 1.12 RH20 | 68 °F        | 108.0 °F | 140 °F | 119.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-09        | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-10A       | DAIKIN       | FCV5104 | 350 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-10B       | DAIKIN       | FCV5104 | 350 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-10C       | DAIKIN       | FCV5104 | 350 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-11A       | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | 2-11B       | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-01        | DAIKIN       | FCV5108 | 450 | 120     | 1      | 8.8 A | 9706  | 5.2  | 8.93 RH20  | 78 °F  | 62 °F        | 56.0 °F | 54.2 °F | 48 °F | 52.1 °F | 4    | 30%      | 16609 | 1.5 | 3.19 RH20 | 68 °F        | 106.4 °F | 140 °F | 116.7 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-02        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-03        | DAIKIN       | FCV5108 | 450 | 120     | 1      | 8.8 A | 9706  | 5.2  | 8.93 RH20  | 78 °F  | 62 °F        | 56.0 °F | 54.2 °F | 48 °F | 52.1 °F | 4    | 30%      | 16609 | 1.5 | 3.19 RH20 | 68 °F        | 106.4 °F | 140 °F | 116.7 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-04        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-05        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-06        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-07        | DAIKIN       | FCV5103 | 200 | 120     | 1      | 4.4 A | 4469  | 2.4  | 3.08 RH20  | 78 °F  | 62 °F        | 55.7 °F | 53.9 °F | 48 °F | 51.9 °F | 4    | 30%      | 7643  | 1   | 0.97 RH20 | 68 °F        | 107.8 °F | 140 °F | 123.9 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-08        | DAIKIN       | FCV5103 | 200 | 120     | 1      | 4.4 A | 4469  | 2.4  | 3.08 RH20  | 78 °F  | 62 °F        | 55.7 °F | 53.9 °F | 48 °F | 51.9 °F | 4    | 30%      | 7643  | 1   | 0.97 RH20 | 68 °F        | 107.8 °F | 140 °F | 123.9 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-09        | DAIKIN       | FCV5103 | 200 | 120     | 1      | 4.4 A | 4469  | 2.4  | 3.08 RH20  | 78 °F  | 62 °F        | 55.7 °F | 53.9 °F | 48 °F | 51.9 °F | 4    | 30%      | 7643  | 1   | 0.97 RH20 | 68 °F        | 107.8 °F | 140 °F | 123.9 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-10        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-11        | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-12        | DAIKIN       | FCV5103 | 200 | 120     | 1      | 4.4 A | 4469  | 2.4  | 3.08 RH20  | 78 °F  | 62 °F        | 55.7 °F | 53.9 °F | 48 °F | 51.9 °F | 4    | 30%      | 7643  | 1   | 0.97 RH20 | 68 °F        | 107.8 °F | 140 °F | 123.9 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-13        | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-14        | DAIKIN       | FCV5104 | 300 | 120     | 1      | 4.4 A | 6736  | 2.4  | 3.5 RH20   | 78 °F  | 62 °F        | 54.6 °F | 54.4 °F | 48 °F | 53.8 °F | 4    | 30%      | 10382 | 1   | 1.13 RH20 | 68 °F        | 104.0 °F | 140 °F | 118.2 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-15        | DAIKIN       | FCV5103 | 200 | 120     | 1      | 4.4 A | 4469  | 2.4  | 3.08 RH20  | 78 °F  | 62 °F        | 55.7 °F | 53.9 °F | 48 °F | 51.9 °F | 4    | 30%      | 7643  | 1   | 0.97 RH20 | 68 °F        | 107.8 °F | 140 °F | 123.9 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-16        | DAIKIN       | FCV5112 | 750 | 120     | 1      | 8.8 A | 14768 | 7.8  | 12.79 RH20 | 78 °F  | 62 °F        | 57.5 °F | 52.8 °F | 48 °F | 52.1 °F | 4    | 30%      | 18191 | 1   | 2.25 RH20 | 68 °F        | 93.2 °F  | 140 °F | 101.8 °F | 2    | 30%      | 1,2,3,4,5,7   |  |  |  |  |  |
| FC        | B-17A       | DAIKIN       | FCV5102 | 150 | 120     | 1      | 4.4 A | 3656  | 1.6  | 1.75 RH20  | 78 °F  | 62 °F        | 53.8 °F | 53.1 °F | 48 °F | 52.9 °F | 4    | 30%      | 5820  | 1   | 0.83 RH20 | 68 °F        | 108.4 °F | 140 °F | 127.8 °F | 2    | 30%      |               |  |  |  |  |  |





Project Number  
VA #568A4-21-208  
SGA #BR21039

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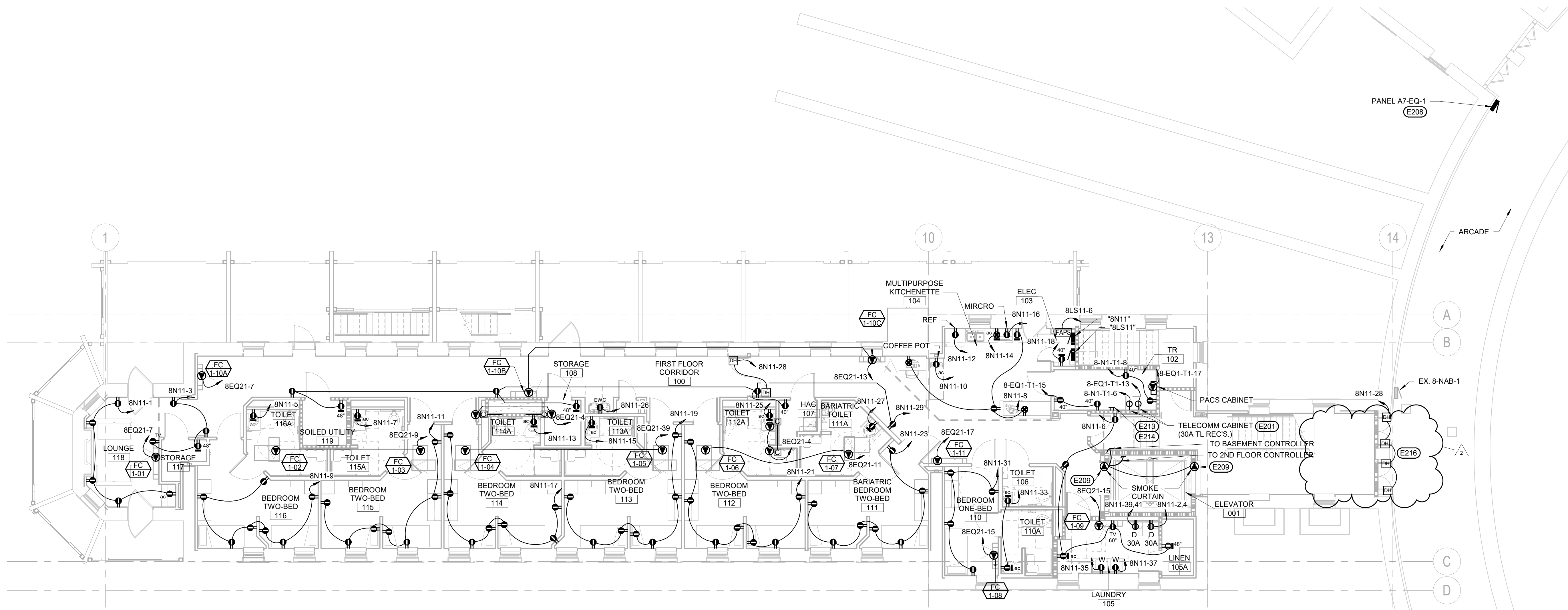
Building Number  
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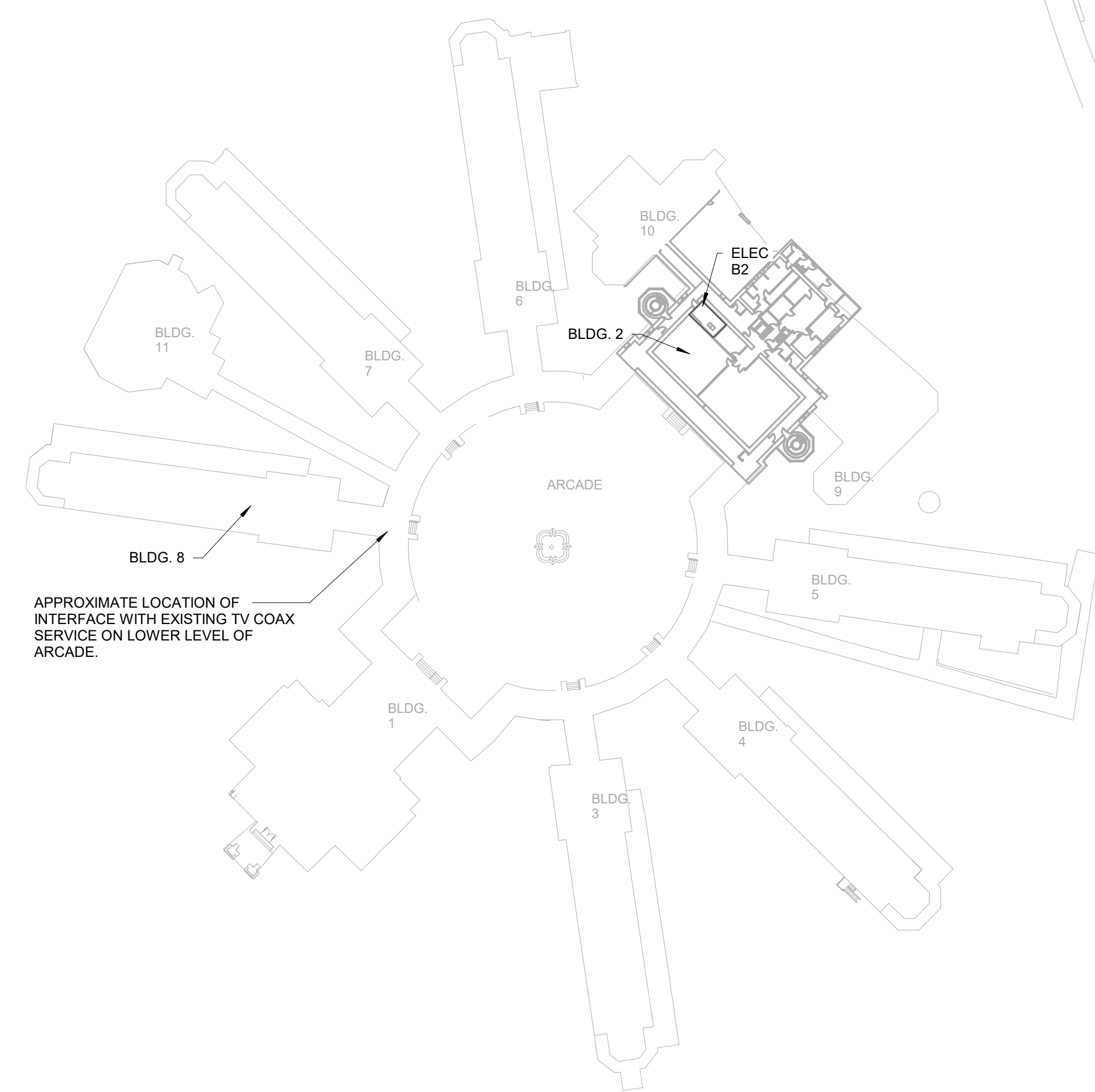
Drawing Number  
EP-201-R1

THREE INCHES = ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES = ONE FOOT (1 1/2" = 1'-0")  
ONE INCH = ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH = ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH = ONE FOOT (1/2" = 1'-0")  
THREE EIGHTHS INCH = ONE FOOT (3/8" = 1'-0")  
ONE QUARTER INCH = ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH = ONE FOOT (1/8" = 1'-0")

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



2 PROJECT KEY PLAN  
1" = 60'-0"

- ELECTRICAL MISCELLANEOUS NOTES**
- A ALL FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEETROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.
  - B ELECTRICAL ITEMS IN LIGHT PEN ARE EXISTING. ELECTRICAL ITEMS IN DARK PEN ARE NEW OR ARE TO BE TREATED AS NOTED.
  - C COORDINATE ALL ROUGH-IN WITH CASEWORK AND EQUIPMENT PRIOR TO INSTALLATION.
- ELECTRICAL SPECIFIC NOTES**
- E201 CONTRACTOR TO PROVIDE NEMA LS-30R RECEPTACLES BEHIND CABINET ENCLOSURE. ONE CIRCUIT WILL BE USED TO PLUG THE UPS INTO WHICH WILL THEN FEED ONE OF THE PDU'S. THE SECOND CIRCUIT WILL PROVIDE POWER DIRECTLY TO THE OTHER PDU.
  - E208 EXISTING PANEL A7-EQ-1 TO BE REPLACED WITH NEW PANEL AT SAME LOCATION. SEE NEW POWER ONE-LINE DIAGRAM AND NEW PANEL SCHEDULE FOR MORE DETAILS.
  - E209 PROVIDE POWER TO ELEVATOR SMOKE CURTAIN AS SHOWN. THE SMOKE CURTAIN INTO FIRE ALARM SYSTEM SO THAT CURTAIN WILL DEPLOY WHEN SMOKE IS DETECTED BY THE SMOKE DETECTOR IN THE ELEVATOR LOBBY.
  - E213 PROVIDE NEW GROUND BAR AND TIE TO GROUND BAR IN TR 802 AS NOTED ON SHEET EP-201. CONTRACTOR TO PROVIDE #6 BONDING CONNECTION TO THE CABINETS AND RACKS WITHIN THIS ROOM AND EACH PIECE OF EQUIPMENT WITHIN THE CABINETS AND RACKS TO INCLUDE SWITCHES, PATCH PANELS, PDUS, UPS'S, ETC. PER DETAIL 11 ON SHEET EL-401. PROVIDE BONDING TO THE BUILDING STEEL AND PROVIDE BONDING TO ALL RACEWAYS, CABLE TRAYS AND LADDER RACKS.
  - E214 THE FLOORING WITHIN THIS SPACE WILL BE STATIC DISSIPATIVE VINYL TILE (SDT). THE CONTRACTOR WILL NEED TO BOND THE SDT TO THE GROUND BAR WITHIN THE ROOM AS DETAIL IN THESE DOCUMENTS.
  - E215 DOOR HOLDS WILL REQUIRE WIREMOLD CONNECTIONS EXTENDING FROM BUILDING 8 INTO THE ARCADE. WIREMOLD SHALL BE PAINTED PER OWNER DIRECTION TO BEST MATCH THE STONE INTERIOR.

|         |               |          |
|---------|---------------|----------|
| 2       | ADDENDUM 01   | 08/22/25 |
| 1       | BID DOCUMENTS | 06/03/25 |
| ISSUE # | DESCRIPTION   | DATE     |

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8/22/2025

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
FIRST FLOOR POWER PLAN

**Approved**  
DOUG SPRINKLE

**Phase**  
100% CONSTRUCTION DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
DOM RENOVATION FOR SEMIPRIVATE ROOMS

**Location**  
HOT SPRINGS, SOUTH DAKOTA

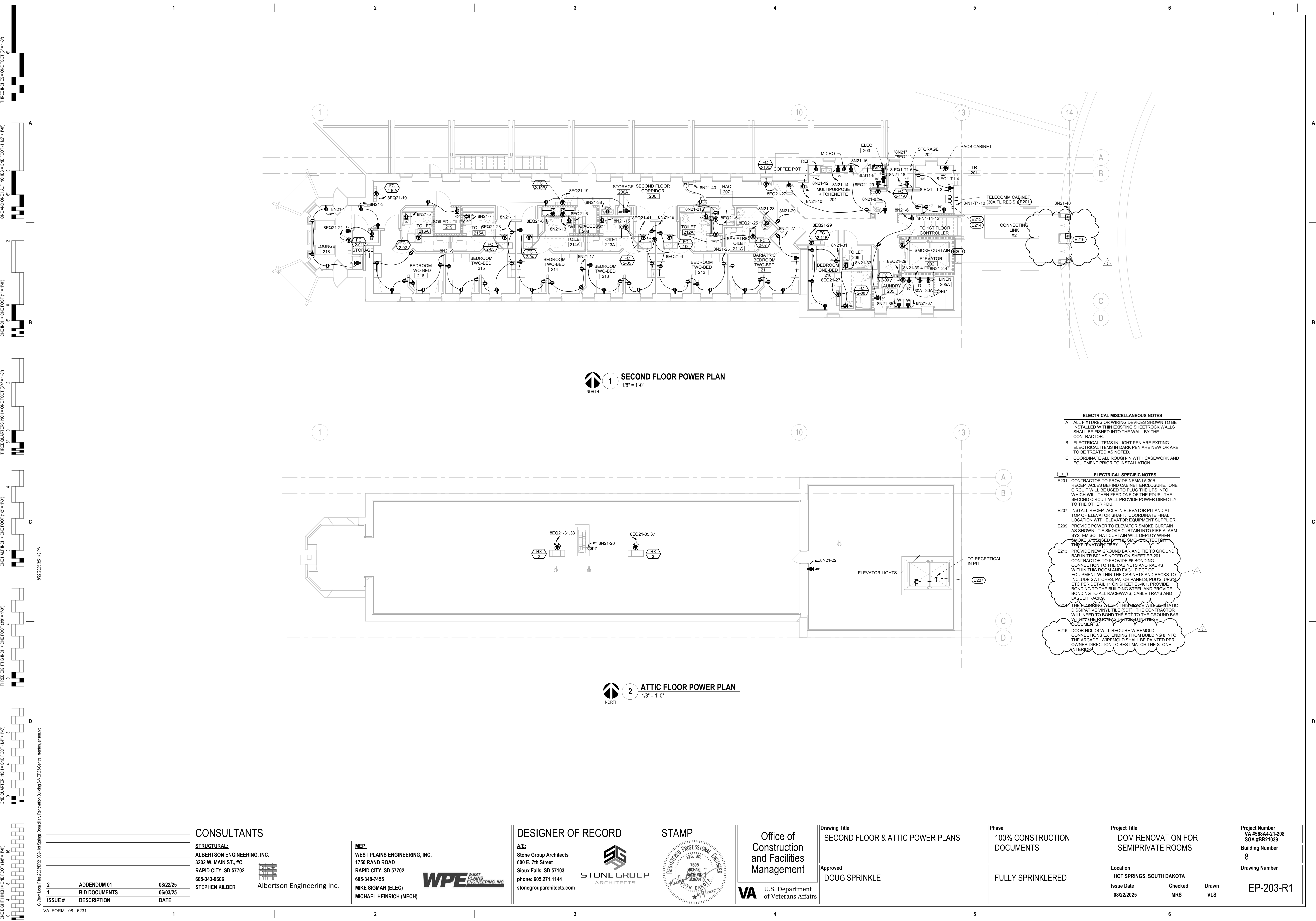
**Issue Date**  
08/22/2025

**Checked**  
MRS

**Drawn**  
VLS

**Project Number**  
VA #568A4-21-208  
SGA #BR21039  
Building Number  
8

**Drawing Number**  
EP-202-R1



1 SECOND FLOOR POWER PLAN  
1/8" = 1'-0"

2 ATTIC FLOOR POWER PLAN  
1/8" = 1'-0"

- ELECTRICAL MISCELLANEOUS NOTES**
- A ALL FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEETROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.
  - B ELECTRICAL ITEMS IN LIGHT PEN ARE EXISTING. ELECTRICAL ITEMS IN DARK PEN ARE NEW OR ARE TO BE TREATED AS NOTED.
  - C COORDINATE ALL ROUGH-IN WITH CASEWORK AND EQUIPMENT PRIOR TO INSTALLATION.

- ELECTRICAL SPECIFIC NOTES**
- E201 CONTRACTOR TO PROVIDE NEMA L5-30R RECEPTACLES BEHIND CABINET ENCLOSURE. ONE CIRCUIT WILL BE USED TO PLUG THE UPS INTO WHICH WILL THEN FEED ONE OF THE PDUS. THE SECOND CIRCUIT WILL PROVIDE POWER DIRECTLY TO THE OTHER PDU.
  - E207 INSTALL RECEPTACLE IN ELEVATOR PIT AND AT TOP OF ELEVATOR SHAFT. COORDINATE FINAL LOCATION WITH ELEVATOR EQUIPMENT SUPPLIER.
  - E209 PROVIDE POWER TO ELEVATOR SMOKE CURTAIN AS SHOWN. TIE SMOKE CURTAIN INTO FIRE ALARM SYSTEM SO THAT CURTAIN WILL DEPLOY WHEN SMOKE IS DETECTED BY THE SMOKE DETECTOR IN THE ELEVATOR COBBY.
  - E213 PROVIDE NEW GROUND BAR AND TIE TO GROUND BAR IN TR 802 AS NOTED ON SHEET EP-201. CONTRACTOR TO PROVIDE #6 BONDING CONNECTION TO THE CABINETS AND RACKS WITHIN THIS ROOM AND EACH PIECE OF EQUIPMENT WITHIN THE CABINETS AND RACKS TO INCLUDE SWITCHES, PATCH PANELS, PDUS, UPS'S, ETC PER DETAIL 11 ON SHEET EJ-401. PROVIDE BONDING TO ALL RACEWAYS, CABLE TRAYS AND LADDER RACKS.
  - E214 THE FLOORING WITHIN THIS SPACE WILL BE STATIC DISSIPATIVE VINYL TILE (SDT). THE CONTRACTOR WILL NEED TO BOND THE SDT TO THE GROUND BAR WITHIN THE ROOM AS NOTED ON SHEET EP-201.
  - E216 DOOR HOLDS WILL REQUIRE WIREMOLD CONNECTIONS EXTENDING FROM BUILDING 8 INTO THE ARCADE. WIREMOLD SHALL BE PAINTED PER OWNER DIRECTION TO BEST MATCH THE STONE INTERIOR.

|         |               |          |
|---------|---------------|----------|
| 2       | ADDENDUM 01   | 08/22/25 |
| 1       | BID DOCUMENTS | 06/03/25 |
| ISSUE # | DESCRIPTION   | DATE     |

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**STONE GROUP** ARCHITECTS

**STAMP**

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MICHAEL HEINRICH  
ELECTRICAL  
SOUTH DAKOTA  
12/19/2022

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
SECOND FLOOR & ATTIC POWER PLANS

**Approved**  
DOUG SPRINKLE

**Phase**  
100% CONSTRUCTION DOCUMENTS

**FULLY SPRINKLERED**

**Project Title**  
DOM RENOVATION FOR SEMIPRIVATE ROOMS

**Location**  
HOT SPRINGS, SOUTH DAKOTA

**Issue Date**  
08/22/2025

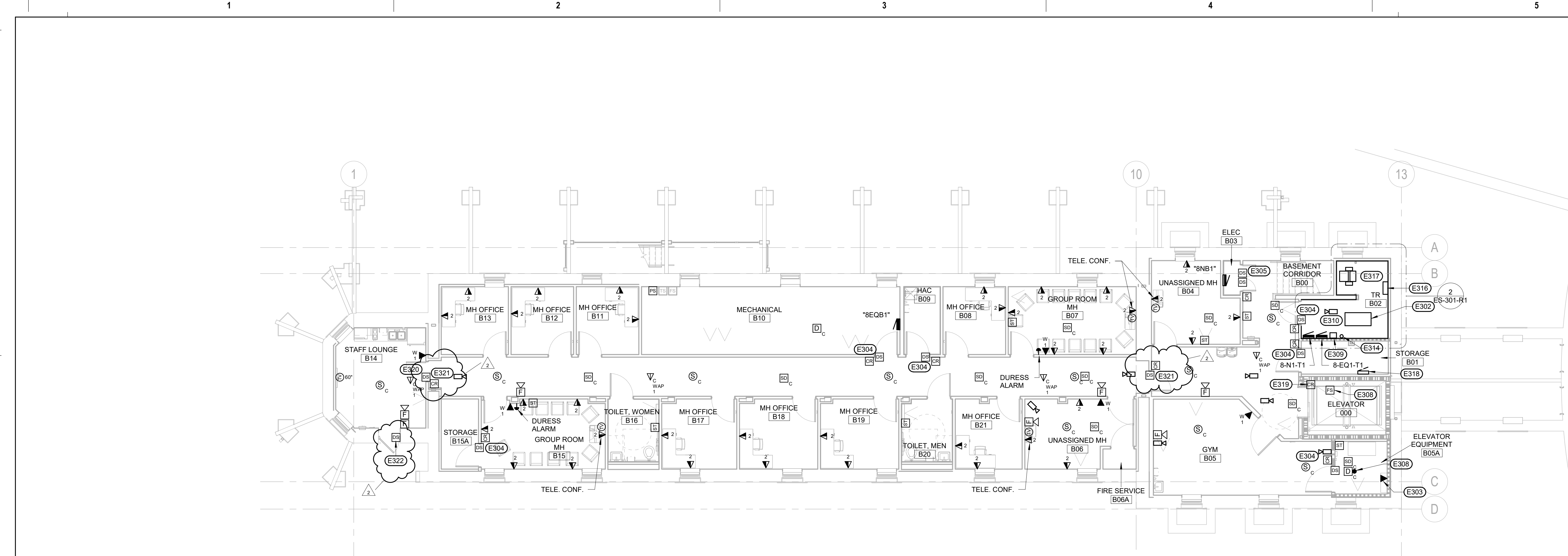
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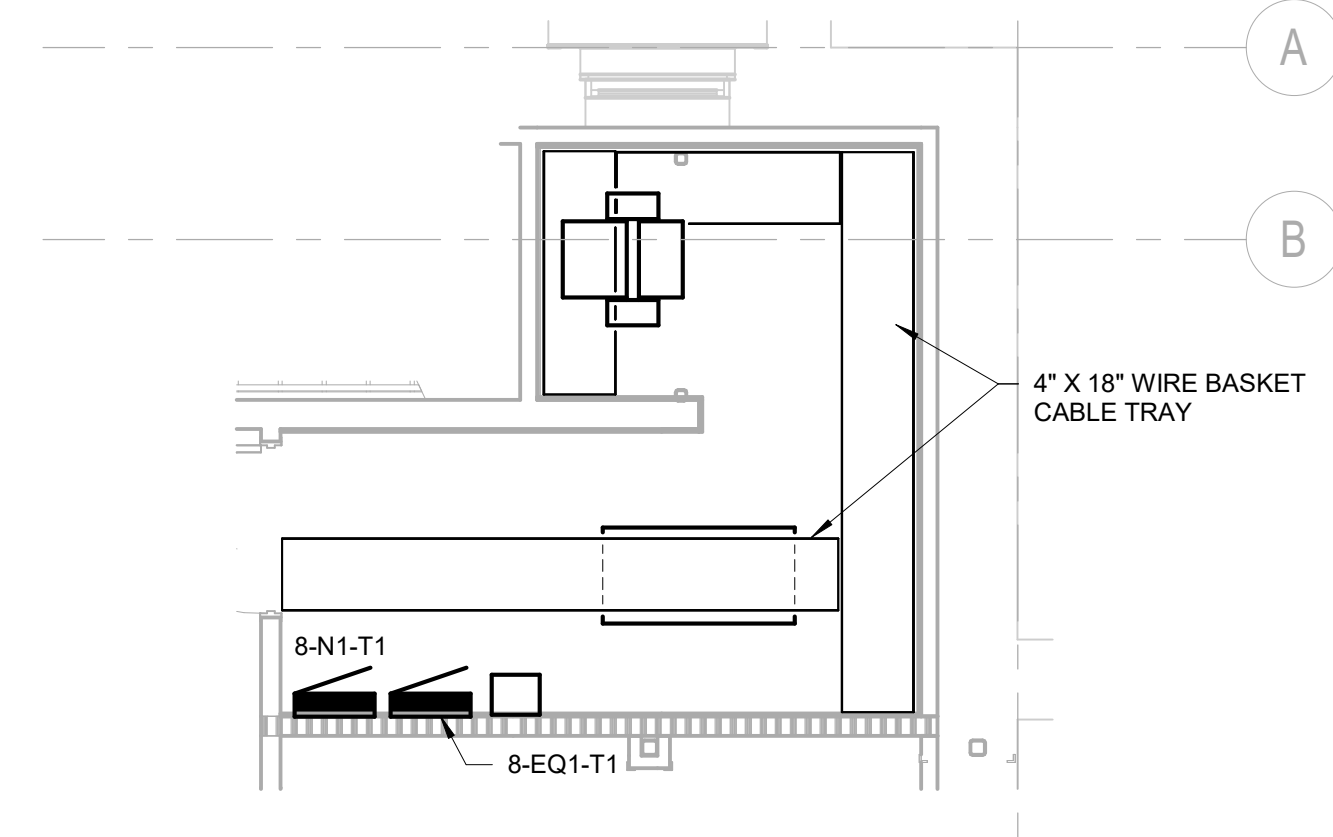
**Project Number**  
VA #568A4-21-208  
SGA #BR21039  
Building Number  
8

**Drawing Number**  
EP-203-R1

THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
THREE EIGHTHS INCH - ONE FOOT (3/8" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")



**1 BASEMENT SIGNAL PLAN**  
1/8" = 1'-0"

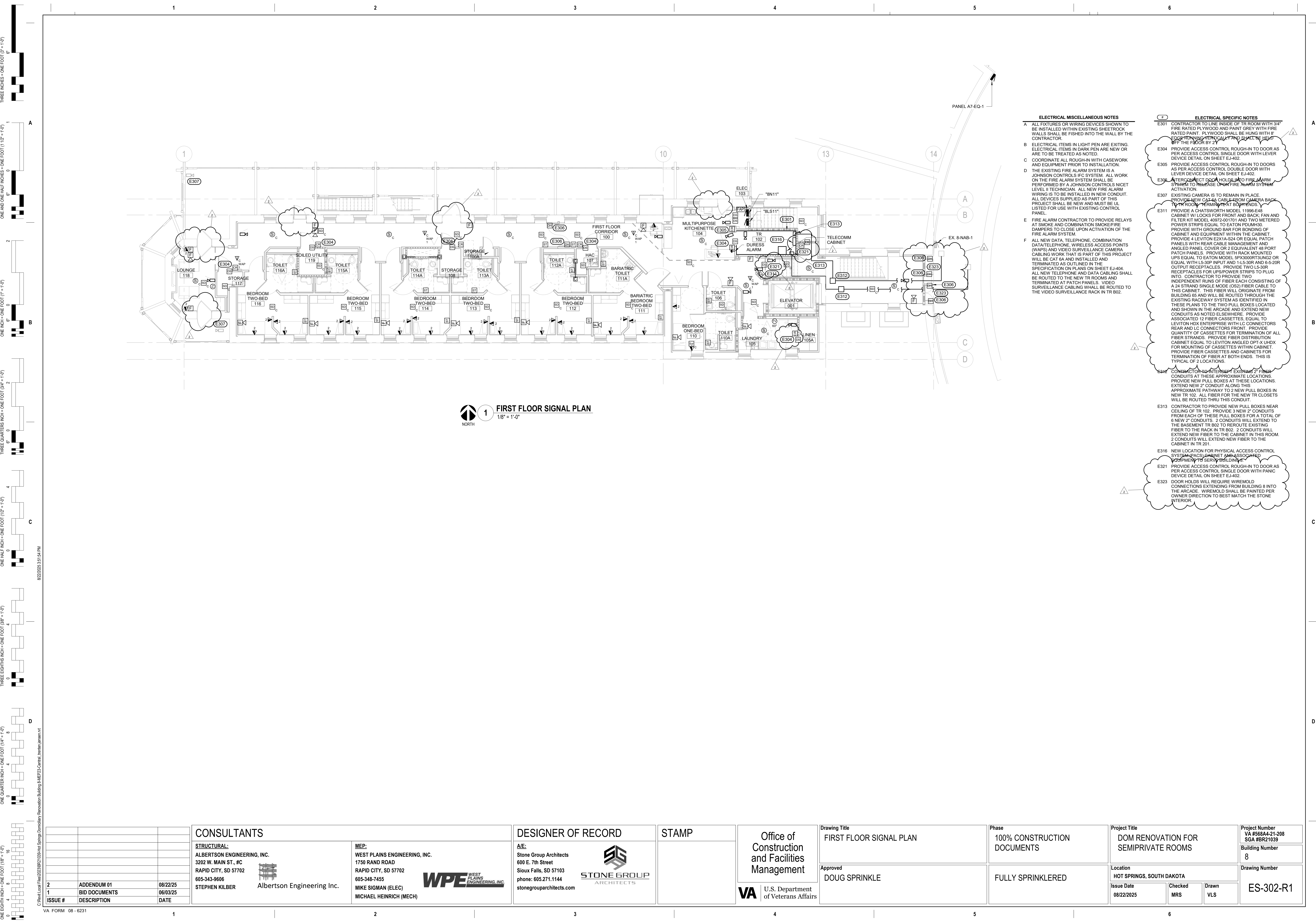


**2 ENLARGED BASEMENT CABLE TRAY PLAN**  
1/4" = 1'-0"

- ELECTRICAL MISCELLANEOUS NOTES**
- A ALL FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEETROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.
  - B ELECTRICAL ITEMS IN LIGHT PEN ARE EXISTING. ELECTRICAL ITEMS IN DARK PEN ARE NEW OR ARE TO BE TREATED AS NOTED.
  - C COORDINATE ALL ROUGH-IN WITH CASEWORK AND EQUIPMENT PRIOR TO INSTALLATION.
  - D THE EXISTING FIRE ALARM SYSTEM IS A JOHNSON CONTROLS IFC SYSTEM. ALL WORK ON THE FIRE ALARM SYSTEM SHALL BE PERFORMED BY A JOHNSON CONTROLS NICET LEVEL II TECHNICIAN. ALL NEW FIRE ALARM WIRING IS TO BE INSTALLED IN NEW CONDUIT. ALL DEVICES SUPPLIED AS PART OF THIS PROJECT SHALL BE NEW AND MUST BE UL LISTED FOR USE WITH EXISTING CONTROL PANEL.
  - E FIRE ALARM CONTRACTOR TO PROVIDE RELAYS AT SMOKE AND COMBINATION SMOKE/FIRE DAMPERS TO CLOSE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
  - F ALL NEW DATA, TELEPHONE, COMBINATION DATA/TELEPHONE, WIRELESS ACCESS POINTS (WAPS) AND VIDEO SURVEILLANCE CAMERA CABLING WORK THAT IS PART OF THIS PROJECT WILL BE CAT 6A AND INSTALLED AND TERMINATED AS OUTLINED IN THE SPECIFICATION ON PLANS ON SHEET EJ-404. ALL NEW TELEPHONE AND DATA CABLING SHALL BE ROUTED TO THE NEW TR ROOMS AND TERMINATED AT PATCH PANELS. VIDEO SURVEILLANCE CABLING SHALL BE ROUTED TO THE VIDEO SURVEILLANCE RACK IN TR B02.
- ELECTRICAL SPECIFIC NOTES**
- E302 CONTRACTOR TO RELOCATE EXISTING RACK FROM EXISTING 1ST FLOOR TR ROOM TO THIS NEW TR ROOM. EXISTING RACK IS AN ORTRONICS MODEL MM073038W WITH CABLE MANAGEMENT. THIS RACK HAS EXISTING FIBER PATCH CASSETTES THAT ACCOMMODATE THE TERMINATION OF 48 SINGLE MODE FIBERS THAT SERVE THE RACK; A 24 PORT CAT 6A PATCH PANEL FOR SERVICE TO EXISTING WIRELESS ACCESS POINTS (WAPS) AND A 48 PORT CAT 6A PATCH PANEL FOR SERVICE TO EXISTING TELECOMDATA PANELS TO BE LEVITON EX21A-548 WITH REAR CABLE MANAGEMENT AND ANGLED PANEL COVER. TO MATCH EXISTING PANELS BEING USED BY THE OWNER. PROVIDE QUANTITY AS NEEDED FOR CONNECTION OF ALL DROPS SHOWN IN THE BASEMENT PLUS 20% SPARES. THIS RACK IS CURRENTLY FED BY TWO SEPARATE FIBER CABLES ROUTED USING TWO INDEPENDENT PATHWAYS, EACH CONSISTING OF 24 FIBERS. THAT ORIGINATE FROM BUILDING 65. THIS FIBER IS ROUTED BY WAY CONDUIT THROUGH THE ARCADE AND THEN TO THE RACK. THESE FIBER CABLES WILL NEED TO BE PULLED BACK TO EXISTING PULL BOXES LOCATED IN THE ARCADE. THE CONTRACTOR WILL THEN NEED TO PROVIDE NEW 2" CONDUITS AS NOTED ELSEWHERE. CONTRACTOR TO PROVIDE 10 - 10' SINGLE MODE FIBER PATCH CORDS PRE-TERMINATED WITH LC CONNECTORS. CONTRACTOR TO PROVIDE 8 - 30' SINGLE MODE FIBER PATCH CORDS PRE-TERMINATED WITH LC CONNECTORS. CONTRACTOR TO ALSO PROVIDE ONE 7' CAT 6A PATCH CORD FOR THE CLOSET AND ONE 10' CAT 6A PATCH CORD FOR THE WORKSTATION END FOR EACH DROP INSTALLED.

- E303 PROVIDE CAT 6A CABLE TO ELEVATOR CONTROL PANEL FOR COMMUNICATIONS. CABLE SHALL BE RUN TO TR B02.
- E304 PROVIDE ACCESS CONTROL ROUGH-IN TO DOOR AS PER ACCESS CONTROL. SINGLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.
- E305 PROVIDE ACCESS CONTROL ROUGH-IN TO DOORS AS PER ACCESS CONTROL. DOUBLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.
- E306 PROVIDE RELAYS WITH HEAT DETECTOR AND FLOW SWITCH TO INTERFACE WITH ELEVATOR SHUNT-TRIP DISCONNECT TO SHUNT POWER UPON ACTIVATION OF EITHER DEVICE.
- E309 NEW LOCATION FOR ANALOG TERMINATION CABINET THAT IS BEING RELOCATED. THE 25 PAIR CABLE SERVING THE EXISTING IT CLOSET IS BE PULLED BACK TO ARCADE AND NEW CONDUIT PROVIDED FROM THE ARCADE TO THE NEW CABINET LOCATION FOR RE-ROUTING THE CABLE.
- E310 NEW LOCATION FOR RELOCATED SECURITY CAMERA.
- E314 CONTRACTOR TO PROVIDE 4" SLEEVE BETWEEN BASEMENT AND FIRST FLOOR. PROVIDE SMOKE AND FIRE RATING AROUND SLEEVE. PROVIDE FIRE PUTTY ON INSIDE OF CONDUIT.
- E316 NEW LOCATION FOR PHYSICAL ACCESS CONTROL SYSTEM (PACS) CABINET AND ASSOCIATED EQUIPMENT TO SERVE BUILDING 8.
- E317 NEW VIDEO SURVEILLANCE RACK TO BE CHATSWORTH MODEL 46353-E03 OR EQUAL WITH TWO VERTICAL CABLE MANAGEMENT CHATSWORTH MODEL 40098-703 OR EQUAL PROVIDE WITH GROUND BAR FOR BONDING OF RACK AND EQUIPMENT WITHIN THE RACK. CONTRACTOR TO ALSO PROVIDE TWO VERTICAL PDUS PER RACK EQUAL TO CHATSWORTH E1-2002-C. PROVIDE MOUNTING BRACKETS FOR CONNECTION TO RACKS. PROVIDE WITH RACK MOUNTED UPS EQUAL TO EATON MODEL SPX300RT3UN02 OR EQUAL WITH L5-30P INPUT AND L5-30R AND L5-5-20R OUTPUT RECEPTACLES. PROVIDE TWO L5-30R RECEPTACLES FOR UPS/POWER STRIPS TO PLUG INTO. THE CONTRACTOR TO PROVIDE CAT 6A PATCH PANEL LEVITON MODEL EX21A-548 WITH REAR CABLE MANAGEMENT AND ANGLED PANEL COVER TO MATCH EXISTING PATCH PANELS BEING USED BY THE OWNER. PROVIDE FOR CONDUIT AND SINGLE MODE FIBER AS REQUIRED FOR EXTENSION AND CONNECTION TO THE EXISTING VIDEO SURVEILLANCE SYSTEM. PROVIDE THE NECESSARY SINGLE MODE FIBER CASSETTES, AND CASSETTE ENCLOSURES AS NECESSARY TO PROVIDE A COMPLETE AND OPERATIONS VIDEO SURVEILLANCE SYSTEM THAT IS INTEGRATED WITH THE EXISTING CAMPUS WIDE VIDEO SURVEILLANCE SYSTEM.
- E318 PROVIDE FIRE ALARM IN ARCADE. PROVIDE CURTAIN IN FRONT OF ELEVATOR TO PROVIDE SIGNAL FOR CURTAIN TO CLOSE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
- E319 PROVIDE CARD READER WITH ELEVATOR FOR CONTROLLED ACCESS TO BASEMENT.
- E320 THE SECURITY SYSTEM FOR THIS DOOR WILL REQUIRE THE DOOR TO OPERATE AS A DELAYED EGRESS DOOR DURING ACTIVATION OF THE FIRE ALARM SYSTEM AS THIS IS A REQUIRED EXIT DURING EMERGENCY.
- E321 PROVIDE ACCESS CONTROL ROUGH-IN TO DOOR AS PER ACCESS CONTROL. SINGLE DOOR WITH PANIC DEVICE DETAIL ON SHEET EJ-402.
- E322 PROVIDE ACCESS CONTROL ROUGH-IN TO DOOR AS PER ACCESS CONTROL. SINGLE DOOR WITH PANIC DEVICE DETAIL ON SHEET EJ-402. EXCEPTION DOOR WILL NOT HAVE A CARD READER.

|         |  |  |                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                 |  |                                                                                                              |  |                      |  |                                       |  |                                      |  |                                  |  |
|---------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|----------------------|--|---------------------------------------|--|--------------------------------------|--|----------------------------------|--|
|         |  |  | <b>CONSULTANTS</b>                                                                                                                                                                                                                                    |  | <b>DESIGNER OF RECORD</b>                                                                                                                                                                                                                       |  | <b>STAMP</b>                                                                                                                                                                                                                    |  | <b>Drawing Title</b>                                                                                         |  | <b>Phase</b>         |  | <b>Project Title</b>                  |  | <b>Project Number</b>                |  |                                  |  |
|         |  |  | <u>STRUCTURAL:</u><br>ALBERTSON ENGINEERING, INC.<br>3202 W. MAIN ST., #C<br>RAPID CITY, SD 57702<br>605-343-9606<br>STEPHEN KILBER<br> Albertson Engineering Inc. |  | <u>MEP:</u><br>WEST PLAINS ENGINEERING, INC.<br>1750 RAND ROAD<br>RAPID CITY, SD 57702<br>605-348-7455<br>MIKE SIGMAN (ELEC)<br>MICHAEL HEINRICH (MECH)<br> |  | <u>A/E:</u><br>Stone Group Architects<br>600 E. 7th Street<br>Sioux Falls, SD 57103<br>phone: 605.271.1144<br>stonegrouparchitects.com<br> |  | <div>Office of Construction and Facilities Management</div> <div>VAU.S. Department of Veterans Affairs</div> |  | BASEMENT SIGNAL PLAN |  | BID DOCUMENTS                         |  | DOM RENOVATION FOR SEMIPRIVATE ROOMS |  | VA #568A4-21-208<br>SGA #BR21039 |  |
|         |  |  |                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                 |  | Approved<br>DOUG SPRINKLE                                                                                    |  | FULLY SPRINKLERED    |  | Location<br>HOT SPRINGS, SOUTH DAKOTA |  | Building Number<br>8                 |  |                                  |  |
| 2       |  |  | ADDENDUM 01                                                                                                                                                                                                                                           |  | 08/22/25                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                 |  |                                                                                                              |  |                      |  | Issue Date<br>08/22/2025              |  | Checked<br>MRS                       |  | Drawing Number<br>ES-301-R1      |  |
| 1       |  |  | BID DOCUMENTS                                                                                                                                                                                                                                         |  | 06/03/25                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                 |  |                                                                                                              |  |                      |  |                                       |  |                                      |  |                                  |  |
| ISSUE # |  |  | DESCRIPTION                                                                                                                                                                                                                                           |  | DATE                                                                                                                                                                                                                                            |  |                                                                                                                                                                                                                                 |  |                                                                                                              |  |                      |  |                                       |  |                                      |  |                                  |  |



- ELECTRICAL MISCELLANEOUS NOTES**

A ALL FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEETROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.

B ELECTRICAL ITEMS IN LIGHT PEN ARE EXISTING. ELECTRICAL ITEMS IN DARK PEN ARE NEW OR ARE TO BE TREATED AS NOTED.

C COORDINATE ALL ROUGH-IN WITH CASEWORK AND EQUIPMENT PRIOR TO INSTALLATION.

D THE EXISTING FIRE ALARM SYSTEM IS A JOHNSON CONTROLS IFC SYSTEM. ALL WORK ON THE FIRE ALARM SYSTEM SHALL BE PERFORMED BY A JOHNSON CONTROLS NICET LEVEL II TECHNICIAN. ALL NEW FIRE ALARM WIRING IS TO BE INSTALLED IN NEW CONDUIT. ALL DEVICES SUPPLIED AS PART OF THIS PROJECT SHALL BE NEW AND MUST BE UL LISTED FOR USE WITH EXISTING CONTROL PANEL.

E FIRE ALARM CONTRACTOR TO PROVIDE RELAYS AT SMOKE AND COMBINATION SMOKE/FIRE DAMPERS TO CLOSE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.

F ALL NEW DATA, TELEPHONE, COMBINATION DATA/TELEPHONE, WIRELESS ACCESS POINTS (WAPs) AND VIDEO SURVEILLANCE CAMERA CABLING WORK THAT IS PART OF THIS PROJECT WILL BE CAT 6A AND INSTALLED AND TERMINATED AS OUTLINED IN THE SPECIFICATION ON PLANS ON SHEET EJ-404. ALL NEW TELEPHONE AND DATA CABLING SHALL BE ROUTED TO THE NEW TR ROOMS AND TERMINATED AT PATCH PANELS. VIDEO SURVEILLANCE CABLING SHALL BE ROUTED TO THE VIDEO SURVEILLANCE RACK IN TR 802.
- ELECTRICAL SPECIFIC NOTES**

E301 CONTRACTOR TO LINE INSIDE OF TR ROOM WITH 3/4" FIRE RATED PLYWOOD AND PAINT GREY WITH FIRE RATED PAINT. PLYWOOD SHALL BE HUNG WITH 8" EDGES RUNNING VERTICALLY AND SHALL BE HELD OFF THE FLOOR BY 2" V.

E304 PROVIDE ACCESS CONTROL, ROUGH-IN TO DOOR AS PER ACCESS CONTROL SINGLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.

E305 PROVIDE ACCESS CONTROL, ROUGH-IN TO DOORS AS PER ACCESS CONTROL DOUBLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.

E306 INTERCONNECT DOOR HOLDS INTO FIRE ALARM SYSTEM TO RELEASE UPON FIRE ALARM SYSTEM ACTIVATION.

E307 EXISTING CAMERA IS TO REMAIN IN PLACE. PROVIDE NEW CAT 6A CABLE FROM CAMERA BACK TO TR ROOM TERMINATED AT BUILDINGS.

E311 PROVIDE A CHATSWORTH MODEL 11996-E48 CABINET W/ LOCKS FOR FRONT AND BACK; FAN AND FILTER KIT MODEL 40972-001701 AND TWO METERED POWER STRIPS EQUAL TO EATON PDUHM30. PROVIDE WITH GROUND BAR FOR BONDING OF CABINET AND EQUIPMENT WITHIN THE CABINET. PROVIDE 4 LEVITON E2X1A-S24 OR EQUAL PATCH PANELS WITH REAR CABLE MANAGEMENT AND ANGLED PANEL COVER OR 2 EQUIVALENT 48 PORT PATCH PANELS. PROVIDE WITH RACK MOUNTED EQUAL TO EATON MODEL SPX3000R13UNG2 OR EQUAL WITH LS-30P INPUT AND 1-LS-30R AND 6-6-20R OUTPUT RECEPTACLES. PROVIDE TWO LS-30R RECEPTACLES FOR UPS/POWER STRIPS TO PLUG INTO. CONTRACTOR TO PROVIDE TWO INDEPENDENT RUNS OF FIBER EACH CONSISTING OF A 24 STRAND SINGLE MODE (OS2) FIBER CABLE TO THIS CABINET. THIS FIBER WILL ORIGINATE FROM BUILDING 65 AND WILL BE ROUTED THROUGH THE EXISTING RACEWAY SYSTEM AS IDENTIFIED IN THESE PLANS TO THE TWO PULL BOXES LOCATED AND SHOWN IN THE ARCADE AND EXTEND NEW CONDUITS AS NOTED ELSEWHERE. PROVIDE ASSOCIATED 12 FIBER CASSETTES, EQUAL TO LEVITON HDX ENTERPRISE WITH LC CONNECTORS REAR AND LC CONNECTORS FRONT. PROVIDE QUANTITY OF CASSETTES FOR TERMINATION OF ALL FIBER STRANDS. PROVIDE FIBER DISTRIBUTION CABINET EQUAL TO LEVITON ANGLED OPT-X HDX FOR MOUNTING OF CASSETTES WITHIN CABINET. PROVIDE FIBER CASSETTES AND CABINETS FOR TERMINATION OF FIBER AT BOTH ENDS. THIS IS TYPICAL OF 2 LOCATIONS.

E312 CONTRACTOR TO INTERSEPT EXISTING 2" FIBER CONDUITS AT THESE APPROXIMATE LOCATIONS. PROVIDE NEW PULL BOXES AT THESE LOCATIONS. EXTEND NEW 2" CONDUIT ALONG THIS APPROXIMATE PATHWAY TO 2 NEW PULL BOXES IN NEW TR 102. ALL FIBER FOR THE NEW TR CLOSETS WILL BE ROUTED THRU THIS CONDUIT.

E313 CONTRACTOR TO PROVIDE NEW PULL BOXES NEAR CEILING OF TR 102. PROVIDE 3 NEW 2" CONDUITS FROM EACH OF THESE PULL BOXES FOR A TOTAL OF 6 NEW 2" CONDUITS. 2 CONDUITS WILL EXTEND TO THE BASEMENT TR 802 TO REROUTE EXISTING FIBER TO THE RACK IN TR 802. 2 CONDUITS WILL EXTEND NEW FIBER TO THE CABINET IN THIS ROOM. 2 CONDUITS WILL EXTEND NEW FIBER TO THE CABINET IN TR 201.

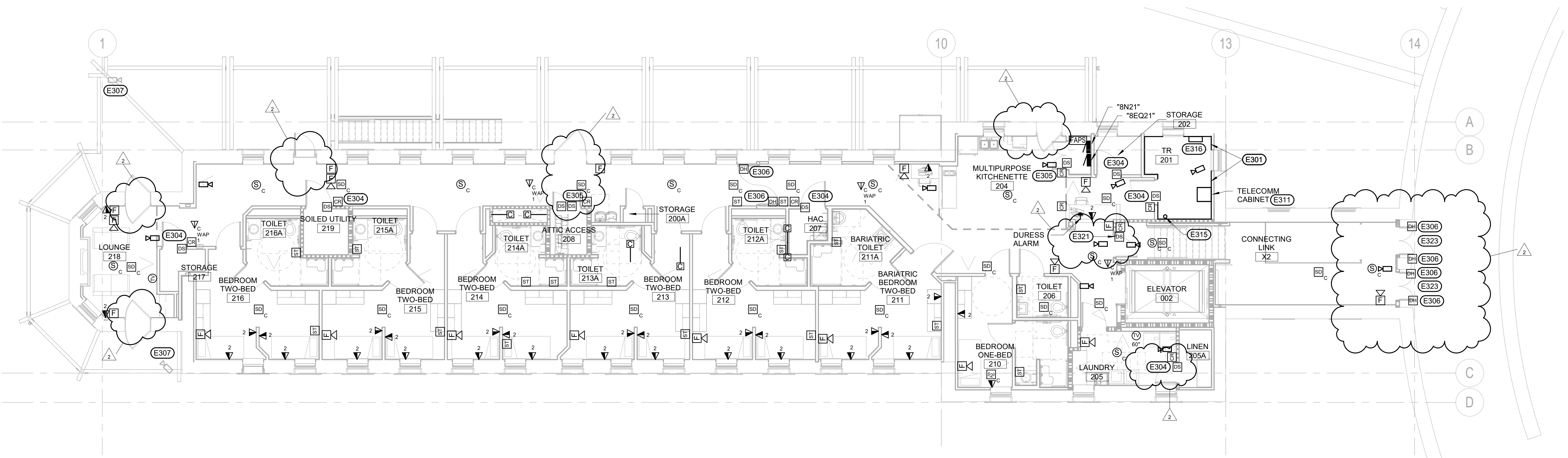
E316 NEW LOCATION FOR PHYSICAL ACCESS CONTROL SYSTEM (PACS) CABINET AND ASSOCIATED WIRING TO BE SERVED BY BUILDING 65.

E321 PROVIDE ACCESS CONTROL, ROUGH-IN TO DOOR AS PER ACCESS CONTROL SINGLE DOOR WITH PANIC DEVICE DETAIL ON SHEET EJ-402.

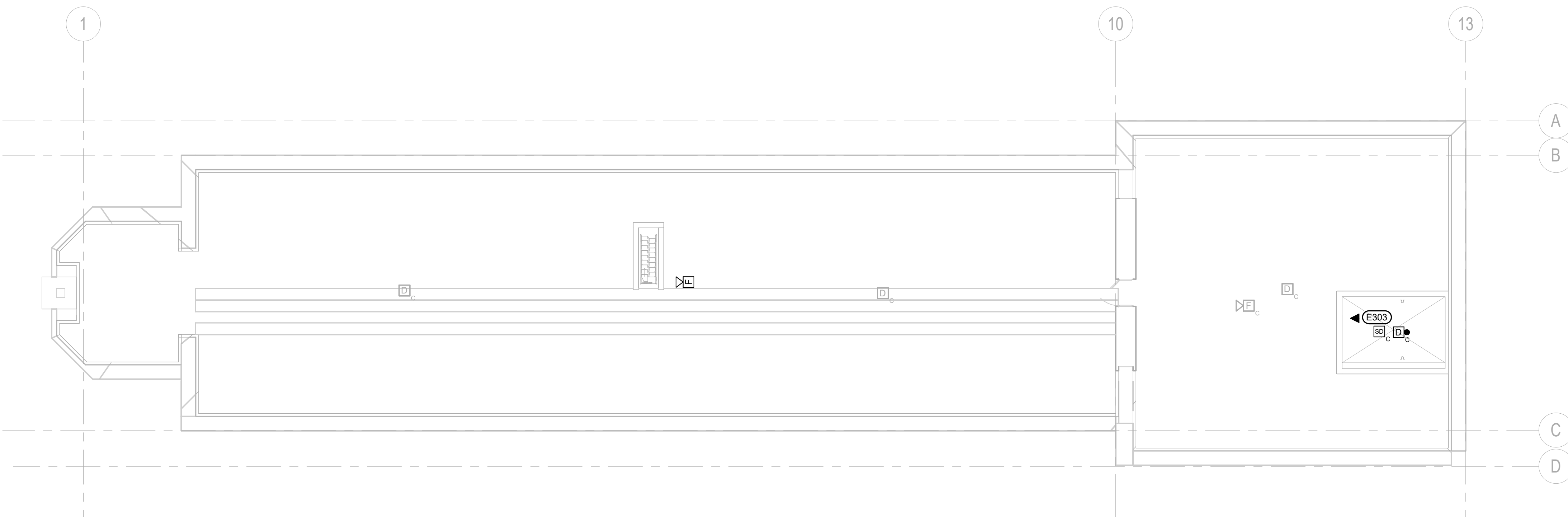
E323 DOOR HOLDS WILL REQUIRE WIREMOLD CONNECTIONS EXTENDING FROM BUILDING 8 INTO THE ARCADE. WIREMOLD SHALL BE PAINTED PER OWNER DIRECTION TO BEST MATCH THE STONE INTERIOR.

|                                                                                                     |  |  |                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                   |                                                                                                              |  |                                                             |  |                                                         |  |                                                                          |  |                                                                        |  |                                         |  |
|-----------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------|--|---------------------------------------------------------|--|--------------------------------------------------------------------------|--|------------------------------------------------------------------------|--|-----------------------------------------|--|
|                                                                                                     |  |  | <b>CONSULTANTS</b>                                                                                                                                                                                                                                                                               |  | <b>DESIGNER OF RECORD</b>                                                                                                                                                                                                                                                         |  | <b>STAMP</b>                                                                                                                                                                                                                                                                                      | <div>Office of Construction and Facilities Management</div> <div>VAU.S. Department of Veterans Affairs</div> |  | <div>Drawing Title</div> <div>FIRST FLOOR SIGNAL PLAN</div> |  | <div>Phase</div> <div>100% CONSTRUCTION DOCUMENTS</div> |  | <div>Project Title</div> <div>DOM RENOVATION FOR SEMIPRIVATE ROOMS</div> |  | <div>Project Number</div> <div>VA #568A4-21-208<br/>SGA #BR21039</div> |  |                                         |  |
|                                                                                                     |  |  | <div><div>STRUCTURAL:</div><div>ALBERTSON ENGINEERING, INC.<br/>3202 W. MAIN ST., #C<br/>RAPID CITY, SD 57702<br/>605-343-9606<br/>STEPHEN KILBER</div><div><div>Albertson Engineering Inc.</div></div></div> |  | <div><div>MEP:</div><div>WEST PLAINS ENGINEERING, INC.<br/>1750 RAND ROAD<br/>RAPID CITY, SD 57702<br/>605-348-7455<br/>MIKE SIGMAN (ELEC)<br/>MICHAEL HEINRICH (MECH)</div><div></div></div> |  | <div><div>A/E:</div><div>Stone Group Architects<br/>600 E. 7th Street<br/>Sioux Falls, SD 57103<br/>phone: 605.271.1144<br/>stonegrouparchitects.com</div><div><div>STONE GROUP ARCHITECTS</div></div></div> |                                                                                                              |  |                                                             |  |                                                         |  |                                                                          |  |                                                                        |  | <div>Building Number</div> <div>8</div> |  |
| <div>2ADDENDUM 0108/22/25</div> <div>1BID DOCUMENTS06/03/25</div> <div>ISSUE #DESCRIPTIONDATE</div> |  |  |                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                   |                                                                                                              |  | <div>Approved</div> <div>DOUG SPRINKLE</div>                |  | <div>FULLY SPRINKLERED</div>                            |  | <div>Location</div> <div>HOT SPRINGS, SOUTH DAKOTA</div>                 |  | <div>Drawing Number</div> <div>ES-302-R1</div>                         |  |                                         |  |
|                                                                                                     |  |  |                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                   |                                                                                                              |  |                                                             |  |                                                         |  | <div>Issue Date</div> <div>08/22/2025</div>                              |  | <div>Checked</div> <div>MRS</div>                                      |  | <div>Drawn</div> <div>VLS</div>         |  |

THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")



1 SECOND FLOOR SIGNAL PLAN  
1/8" = 1'-0"

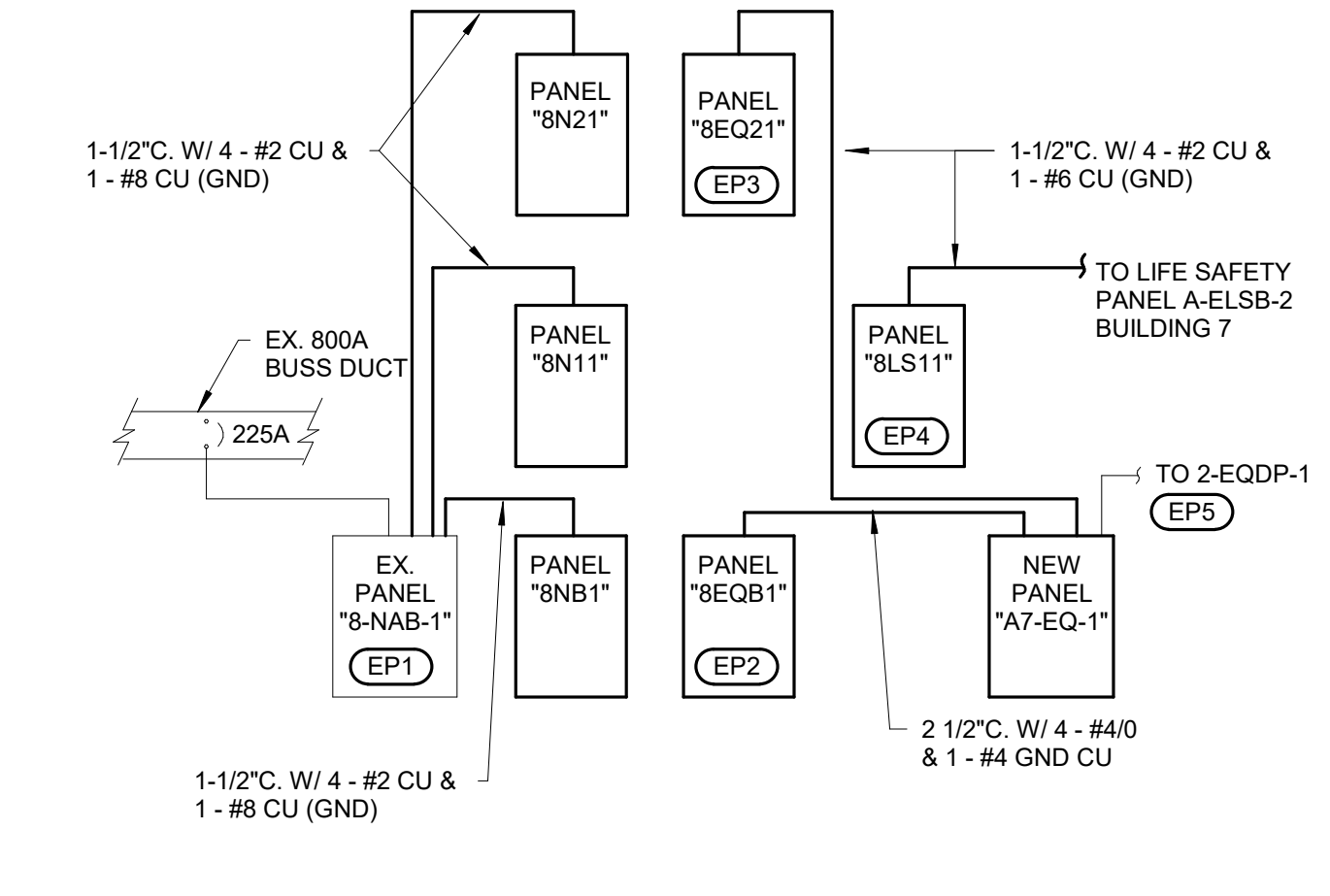
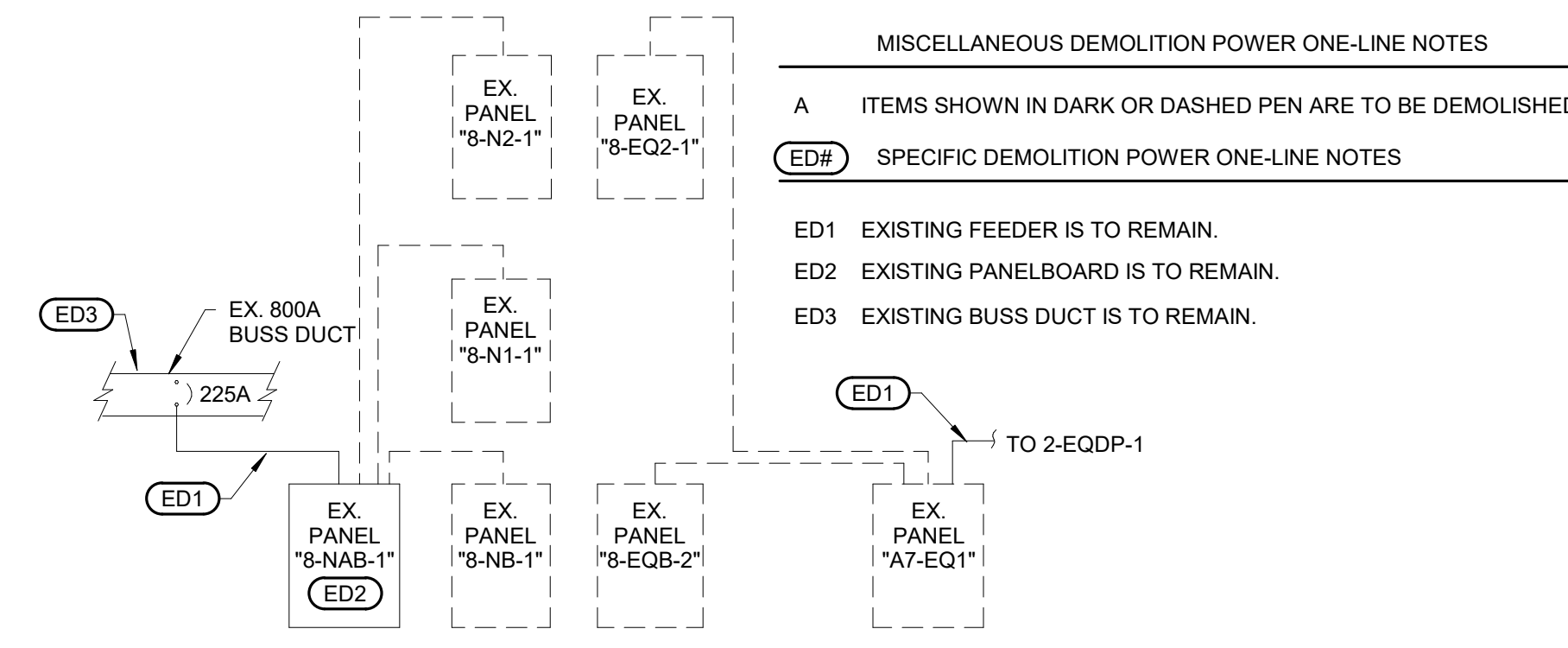
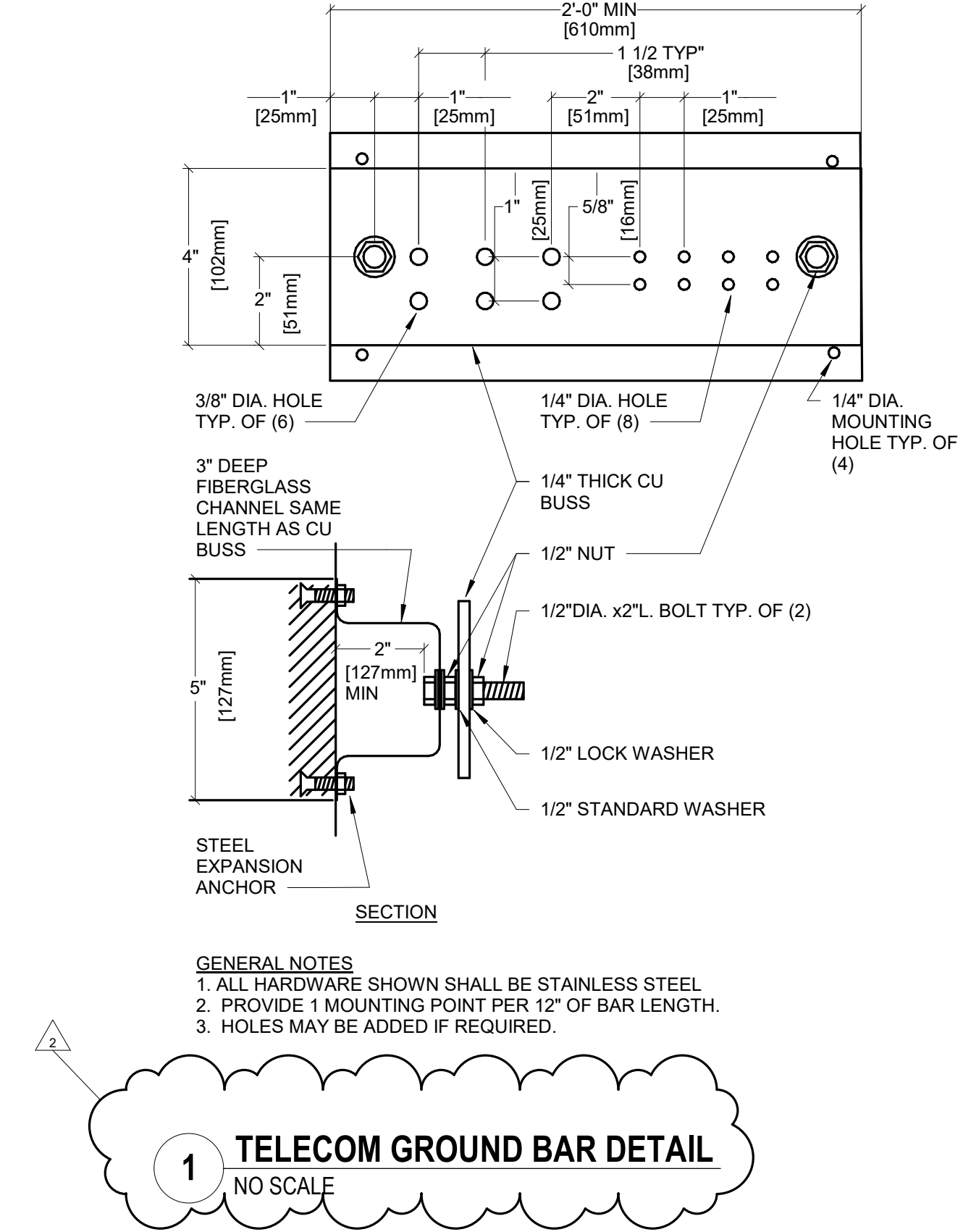


2 ATTIC SIGNAL PLAN  
1/8" = 1'-0"

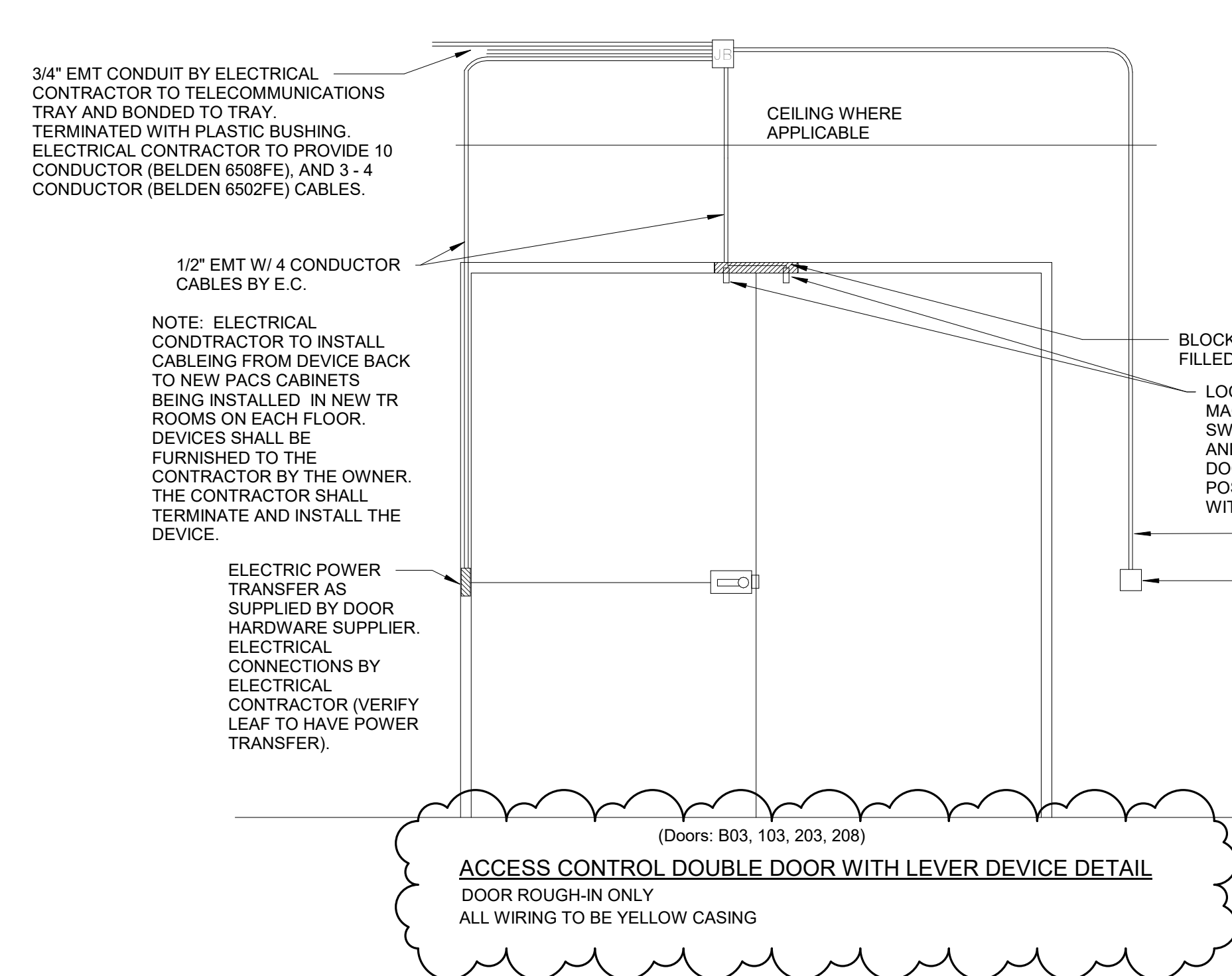
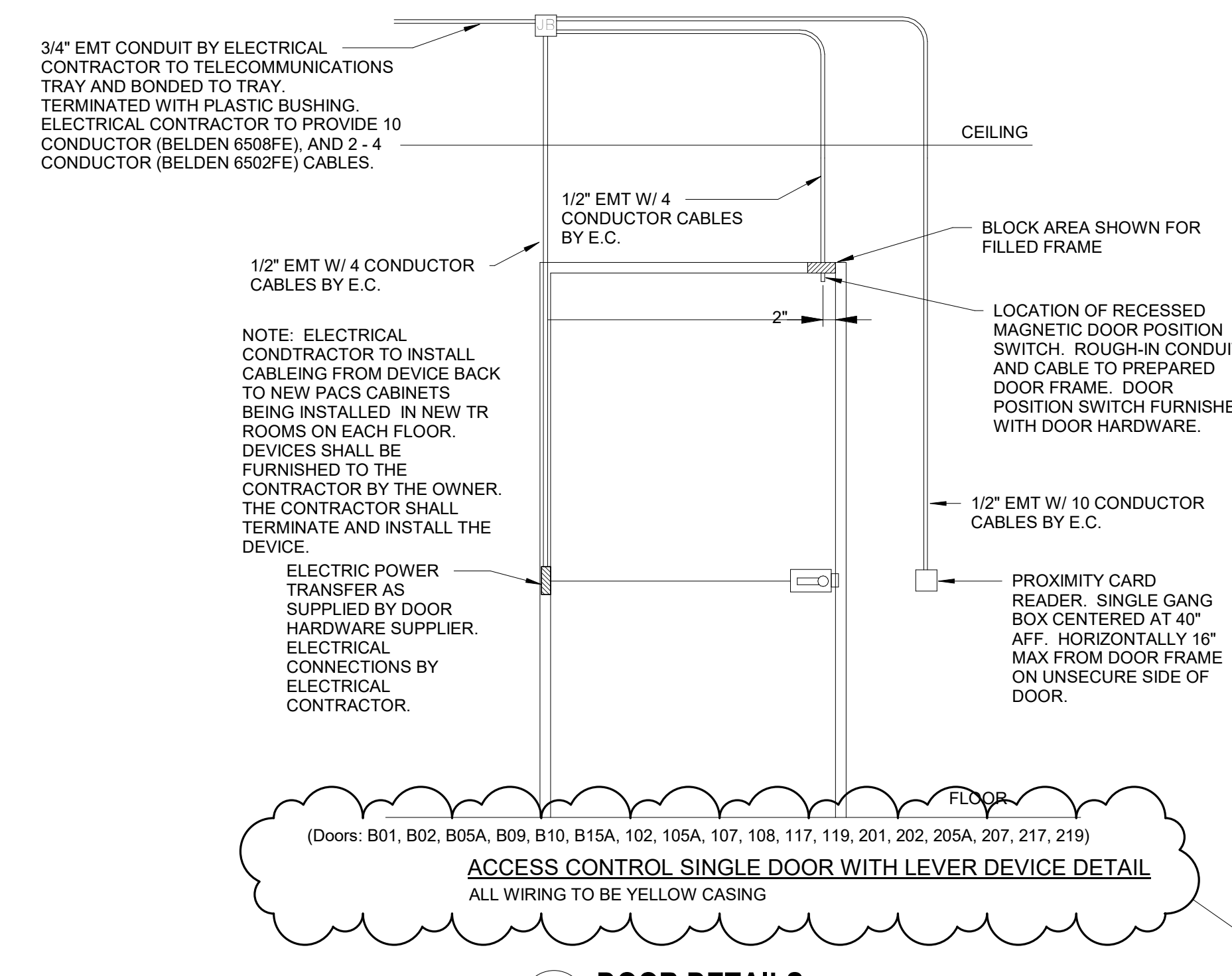
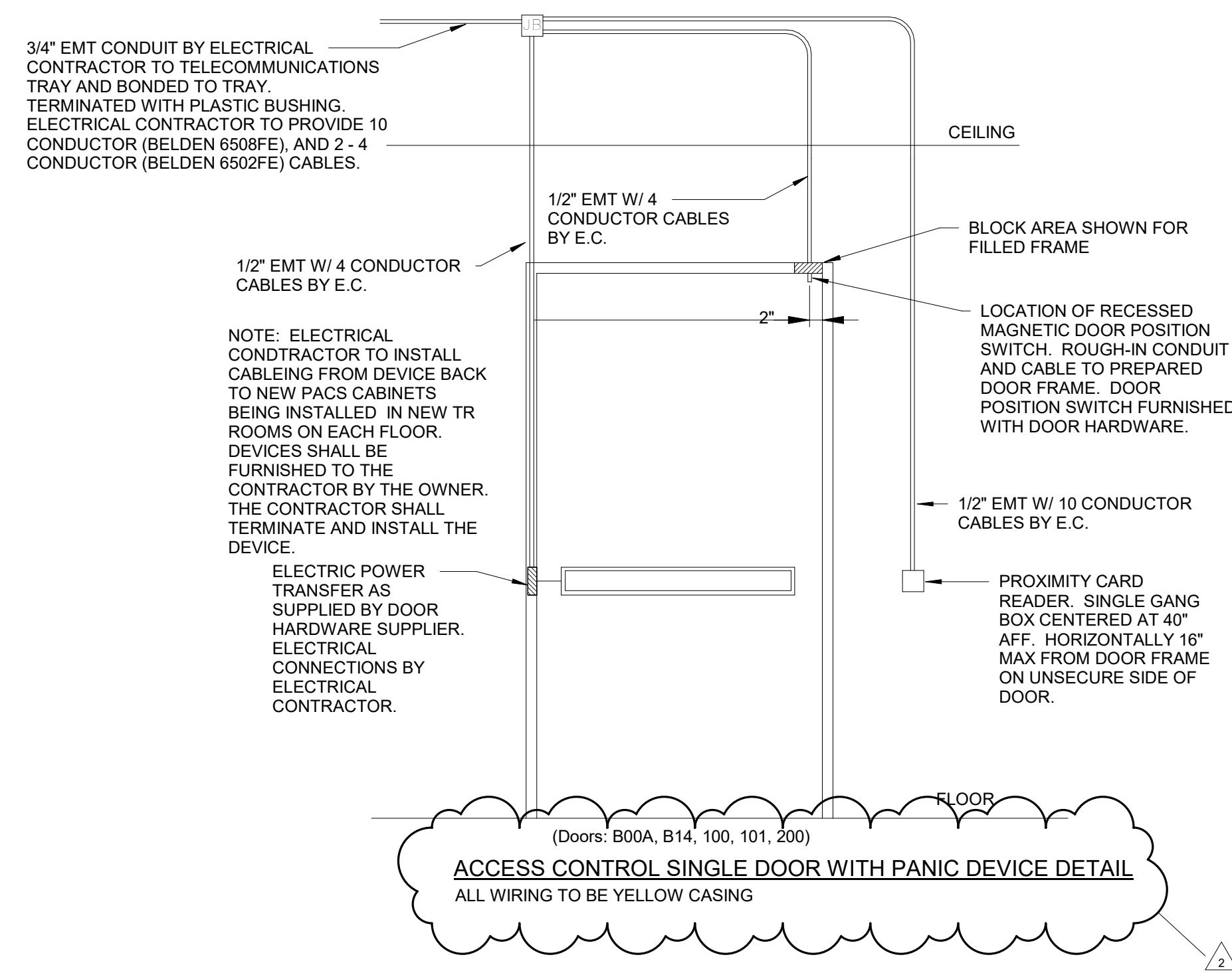
- ELECTRICAL MISCELLANEOUS NOTES**
- A ALL FIXTURES OR WIRING DEVICES SHOWN TO BE INSTALLED WITHIN EXISTING SHEETROCK WALLS SHALL BE FISHED INTO THE WALL BY THE CONTRACTOR.
  - B ELECTRICAL ITEMS IN LIGHT PEN ARE EXISTING. ELECTRICAL ITEMS IN DARK PEN ARE NEW OR ARE TO BE TREATED AS NOTED.
  - C COORDINATE ALL ROUGH-IN WITH CASEWORK AND EQUIPMENT PRIOR TO INSTALLATION.
  - D THE EXISTING FIRE ALARM SYSTEM IS A JOHNSON CONTROLS FCS SYSTEM. ALL WORK ON THE FIRE ALARM SYSTEM SHALL BE PERFORMED BY A JOHNSON CONTROLS NICET LEVEL II TECHNICIAN. ALL NEW FIRE ALARM WIRING IS TO BE INSTALLED IN NEW CONDUIT. ALL DEVICES SUPPLIED AS PART OF THIS PROJECT SHALL BE NEW AND MUST BE UL LISTED FOR USE WITH EXISTING CONTROL PANEL.
  - E FIRE ALARM CONTRACTOR TO PROVIDE RELAYS AT SMOKE AND COMBINATION SMOKE/FIRE DAMPERS TO CLOSE UPON ACTIVATION OF THE FIRE ALARM SYSTEM.
  - F ALL NEW DATA, TELEPHONE, COMBINATION DATA/TELEPHONE, WIRELESS ACCESS POINTS (WAPs) AND VIDEO SURVEILLANCE CAMERA CABLING WORK THAT IS PART OF THIS PROJECT WILL BE CAT 6A AND INSTALLED AND TERMINATED AS OUTLINED IN THE SPECIFICATION ON PLANS ON SHEET EJ-404. ALL NEW TELEPHONE AND DATA CABLING SHALL BE ROUTED TO THE NEW TR ROOMS AND TERMINATED AT PATCH PANELS. VIDEO SURVEILLANCE CABLING SHALL BE ROUTED TO THE VIDEO SURVEILLANCE RACK IN TR 202.
- ELECTRICAL SPECIFIC NOTES**
- E301 CONTRACTOR TO LINE INSIDE OF TR ROOM WITH 3/4" FIRE RATED PLYWOOD AND PAINT GREY WITH FIRE RATED PAINT. PLYWOOD SHALL BE HUNG WITH 8" EDGE RUNNING VERTICALLY AND SHALL BE HELD OFF THE FLOOR BY 2".
  - E303 PROVIDE CAT 6A CABLE TO ELEVATOR CONTROL PANEL FOR COMMUNICATIONS EQUIPMENT. THE ELEVATOR CAB SHALL BE RUN IN TR 202.
  - E304 PROVIDE ACCESS CONTROL ROUGH-IN TO DOOR AS PER ACCESS CONTROL SINGLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.
  - E305 PROVIDE ACCESS CONTROL ROUGH-IN TO DOORS AS PER ACCESS CONTROL DOUBLE DOOR WITH LEVER DEVICE DETAIL ON SHEET EJ-402.
  - E306 INTERCONNECT DOOR HOLDS AND FIRE ALARMS SMOKE/FIRE RELEASE FROM FIRE ALARM SYSTEM ACTIVATION.
  - E307 EXISTING CAMERA IS TO REMAIN IN PLACE. PROVIDE NEW CAT 6A CABLE FROM CAMERA BACK TO TR ROOM. TERMINATE AT BOTH ENDS.
  - E311 PROVIDE A CHATSWORTH MODEL 11996-E48 CABINET W/ LOCKS FOR FRONT AND BACK, FAN AND FILTER KIT MODEL 40972-001701 AND TWO METERED POWER STRIPS EQUAL TO EATON PDUMH30. PROVIDE WITH GROUND BAR FOR BONDING OF CABINET AND EQUIPMENT WITHIN THE CABINET. PROVIDE 4 LEVITON E2X1A-S24 OR EQUAL PATCH PANELS WITH REAR CABLE MANAGEMENT AND ANGLED PANEL COVER OR 2 EQUIVALENT 48 PORT PATCH PANELS. PROVIDE WITH RACK MOUNTED UPS EQUAL TO EATON MODEL 6PS300RTSUNG2 OR EQUAL WITH L5-30P INPUT AND 1-L5-30R AND 6-5-20R OUTPUT RECEPTACLES. PROVIDE TWO L5-30R RECEPTACLES FOR UPS/POWER STRIPS TO PLUG INTO. CONTRACTOR TO PROVIDE TWO INDEPENDENT RUNS OF FIBER EACH CONSISTING OF A 24 STRAND SINGLE MODE (OS2) FIBER CABLE TO THIS CABINET. THIS FIBER WILL ORIGINATE FROM BUILDING 65 AND WILL BE ROUTED THROUGH THE EXISTING RACEWAY SYSTEM AS IDENTIFIED IN THESE PLANS TO THE TWO PULL BOXES LOCATED AND SHOWN IN THE ARCADE AND EXTEND NEW CONDUITS AS NOTED ELSEWHERE. PROVIDE ASSOCIATED 12 FIBER CASSETTES, EQUAL TO LEVITON HX ENTERPRISE WITH LC CONNECTORS REAR AND LC CONNECTORS FRONT. PROVIDE QUANTITY OF CASSETTES FOR TERMINATION OF ALL FIBER STRANDS. PROVIDE FIBER DISTRIBUTION CABINET EQUAL TO LEVITON ANGLED OPT-X UHDX FOR MOUNTING OF CASSETTES WITHIN CABINET. PROVIDE FIBER CASSETTES AND CABINETS FOR TERMINATION OF FIBER AT BOTH ENDS. THIS IS TYPICAL OF 2 LOCATIONS.
  - E315 CONTRACTOR TO PROVIDE 4" SLEEVE BETWEEN FIRST FLOOR AND SECOND FLOOR. PROVIDE SMOKE AND FIRE RATING AROUND SLEEVE. PROVIDE FIRE PUTTY ON INSIDE OF CONDUIT.
  - E316 NEW LOCATION FOR PHYSICAL ACCESS CONTROL SYSTEM (PACS) CABINET AND ASSOCIATED EQUIPMENT TO SERVE BUILDING 65.
  - E321 PROVIDE ACCESS CONTROL ROUGH-IN TO DOOR AS PER ACCESS CONTROL SINGLE DOOR WITH PANIC DEVICE DETAIL ON SHEET EJ-402.
  - E323 DOOR HOLDS WILL REQUIRE WIREMOLD CONNECTIONS EXTENDING FROM BUILDING 6 INTO THE ARCADE. WIREMOLD SHALL BE PAINTED PER OWNER DIRECTION TO BEST MATCH THE STONE INTERIOR.

|   |             |          |                                                                                                                                                                                                                                                                                                   |  |  |                                                                                                                                                                                                                                                                   |  |  |                                                                                                                                                                                                                                                                                                               |  |  |                                                                                                 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|   |             |          | <div>CONSULTANTS</div> <div>STRUCTURAL:<br/>ALBERTSON ENGINEERING, INC.<br/>3202 W. MAIN ST., #C<br/>RAPID CITY, SD 57702<br/>605-343-9606<br/>STEPHEN KILBER</div> <div><br/>Albertson Engineering Inc.</div> |  |  | <div>MEP:<br/>WEST PLAINS ENGINEERING, INC.<br/>1750 RAND ROAD<br/>RAPID CITY, SD 57702<br/>605-348-7455<br/>MIKE SIGMAN (ELEC)<br/>MICHAEL HEINRICH (MECH)</div> <div></div> |  |  | <div>DESIGNER OF RECORD</div> <div>A/E:<br/>Stone Group Architects<br/>600 E. 7th Street<br/>Sioux Falls, SD 57103<br/>phone: 605.271.1144<br/>stonegrouparchitects.com</div> <div><br/>STONE GROUP<br/>ARCHITECTS</div> |  |  | <div>STAMP</div> <div>Office of<br/>Construction<br/>and Facilities<br/>Management</div> <div> U.S. Department<br/>of Veterans Affairs</div> |  |  | <div>Drawing Title</div> <div>SECOND FLOOR &amp; ATTIC SIGNAL PLANS</div> <div>Approved</div> <div>DOUG SPRINKLE</div> |  |  | <div>Phase</div> <div>100% CONSTRUCTION<br/>DOCUMENTS</div> <div>FULLY SPRINKLERED</div> |  |  | <div>Project Title</div> <div>DOM RENOVATION FOR<br/>SEMPRIVATE ROOMS</div> <div>Location</div> <div>HOT SPRINGS, SOUTH DAKOTA</div> <div>Issue Date</div> <div>08/22/2025</div> <div>Checked</div> <div>MRS</div> <div>Drawn</div> <div>VLS</div> |  |  | <div>Project Number</div> <div>VA #568A4-21-208<br/>SGA #BR21039</div> <div>Building Number</div> <div>8</div> <div>Drawing Number</div> <div>ES-303-R1</div> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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| 2 | ADDENDUM 01 | 08/22/25 |                                                                                                                                                                                                                                                                                                   |  |  |                                                                                                                                                                                                                                                                   |  |  |                                                                                                                                                                                                                                                                                                               |  |  |                                                                                                 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THREE INCHES - ONE FOOT (3" = 1'-0")  
ONE AND ONE HALF INCHES - ONE FOOT (1 1/2" = 1'-0")  
ONE INCH - ONE FOOT (1" = 1'-0")  
THREE QUARTERS INCH - ONE FOOT (3/4" = 1'-0")  
ONE HALF INCH - ONE FOOT (1/2" = 1'-0")  
ONE QUARTER INCH - ONE FOOT (1/4" = 1'-0")  
ONE EIGHTH INCH - ONE FOOT (1/8" = 1'-0")



- MISCELLANEOUS DEMOLITION POWER ONE-LINE NOTES
- A ITEMS SHOWN IN DARK OR DASHED PEN ARE TO BE DEMOLISHED.
- ED1 EXISTING FEEDER IS TO REMAIN.
- ED2 EXISTING PANELBOARD IS TO REMAIN.
- ED3 EXISTING BUSS DUCT IS TO REMAIN.
- MISCELLANEOUS NEW POWER ONE-LINE NOTES
- EP1 UTILIZE THE THREE EXISTING 100A/3P CIRCUIT BREAKERS IN EXISTING PANEL 8-NAB-1 THAT POWERING EXISTING PANELBOARDS THAT WERE DEMOLISHED UNDER THIS PROJECT TO POWER THREE NEW PANELBOARDS AS SHOWN. PROVIDE NEW FEEDERS AS SHOWN.
- EP2 PANEL FED FROM DOUBLE FEED LUGS IN NEW PANELBOARD A7-EQ-1 TO POWER NEW PANELBOARD 8EOB1. PROVIDE NEW FEEDER AS SHOWN.
- EP3 PANEL FED FROM NEW 100A/3P BREAKER IN NEW PANELBOARD A7-EQ-1. NEW PANELBOARD 8EO21 IS BEING RELOCATED. PROVIDE NEW FEEDER AS SHOWN.
- EP4 POWER NEW PANELBOARD 8LS11 FROM EXISTING PANELBOARD A-ELSB-2 IN BUILDING 7. PROVIDE A NEW 60A/3P CIRCUIT BREAKER IN EXISTING PANELBOARD A-ELSB-2. PROVIDE NEW FEEDER AS SHOWN.
- EP5 CONTRACTOR TO REPLACE EXISTING 150A/3P BREAKER IN PANEL 2-EQDP-1 WITH A NEW 225A/3P BREAKER. PANEL 2-EQDP-1 IS LOCATED IN BUILDING 2 ROOM B2 AND IS A WESTINGHOUSE COP PANEL. BREAKER SHALL BE RATED AT 65KAIC. FEEDER TO REMAIN.



## CONSULTANTS

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MICHAEL HEINRICH (MECH)

## DESIGNER OF RECORD

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## STAMP



Office of  
Construction  
and Facilities  
Management  
**VA** U.S. Department  
of Veterans Affairs

Drawing Title  
ELECTRICAL DETAILS  
Approved  
DOUG SPRINKLE

Phase  
FULLY SPRINKLERED

Project Title  
DOM RENOVATION FOR  
SEMPRIVATE ROOMS  
Location  
HOT SPRINGS, SOUTH DAKOTA  
Issue Date  
08/22/2025  
Checked  
MRS  
Drawn  
VLS

Project Number  
VA #568A4-21-208  
SGA #BR21039  
Building Number  
8  
Drawing Number  
EJ-402-R1

## STARTER DISCONNECT SCHEDULE

| A STANDARD LIST: NOT ALL WORDS APPEAR IN THESE DRAWINGS |                                         |                 |                                               |
|---------------------------------------------------------|-----------------------------------------|-----------------|-----------------------------------------------|
| A or AMP                                                | AMPERE                                  | L-2             | LIGHTING ARRESTOR                             |
| AC                                                      | AIR CONDITIONING                        | LT              | LIGHT                                         |
| AC or AE                                                | ARCHITECT & ENGINEER                    | LTG             | LIGHTING                                      |
| ACU                                                     | ABOVE COUNTER                           | LTS             | LIGHTS                                        |
| AC                                                      | ALTERNATING CURRENT                     |                 |                                               |
| ADA                                                     | AMERICANS WITH DISABILITIES ACT         | MC              | MECHANICAL CONTRACTOR                         |
| AFP                                                     | ABOVE FINISH FLOOR                      | MCB             | MAIN CIRCUIT BREAKER                          |
| AFP                                                     | ABOVE FINISH CHANGE                     | MCC             | MOTOR CONTROL CENTER                          |
| AFU or AFU1                                             | ARC FAULT CIRCUIT INTERRUPTER           | MCCB            | MODULAR CIRCUULAR MBS                         |
| AFU                                                     | AUTHORITY HAVING JURISDICTION           | MCD             | MAIN DISTRIBUTION PANEL                       |
| AH                                                      | AIR HANDLING UNIT                       | MECH            | MECHANICAL                                    |
| AI                                                      | AMPERES-TERMINATING CURRENT             | MFS             | MAIN FUSE SWITCH                              |
| AL                                                      | ALUMINUM                                | MS              | METAL HATCHE                                  |
| AN                                                      | ANNUNCIATOR                             | MSO             | MAIN SWITCH                                   |
| AS                                                      | AUTOMATIC SENSORS                       | MSS             | MAIN SWITCHBOARD                              |
| AWG                                                     | AMERICAN WIRE GAUGE                     | MTD             | MOUNTED                                       |
|                                                         |                                         | MTS             | MOTOR THERMAL SWITCH                          |
| bc                                                      | BELOW COUNTER                           | MV              | MERCURY VAPOR                                 |
| bc                                                      | BELOW COUNTER                           | MW              | MICROWAVE                                     |
| BL                                                      | BASKETBALL HOOP OVER                    | NA or N/A       | NOT APPLICABLE                                |
| BL                                                      | BLACKSTAR ELECTRIC OPERATOR             | NC              | NORMALLY CLOSED                               |
| BRD or BD                                               | BOARD                                   | NEMA            | NATIONAL ELECTRICAL CODE                      |
| BU                                                      | BUILT IN UNIT HEATER                    | NEMA            | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| C or COND                                               | CONDUIT                                 | NEU, NEUT or N  | NEUTRAL                                       |
| C or COND                                               | CIRCUIT BREAKER                         | NO              | NORMALLY OPEN                                 |
| CC                                                      | CATEGORY                                | NO              | NIGHT LIGHT                                   |
| CC or CCK                                               | CIRCUIT                                 | NO              | NORMALLY OPEN                                 |
| CM                                                      | CARBON MONOXIDE SENSOR                  | OFF, DR, or OFC | OFFICE                                        |
| COMB                                                    | COMBINATION                             | OH              | OVERHEAD                                      |
| CONF                                                    | CONFERENCE                              | OH              | OVERHEAD DOOR                                 |
| CP                                                      | CEILING PROJECTOR                       |                 |                                               |
| CTC                                                     | CABLE TERMINATION CABINET               |                 |                                               |
| CU or CU                                                | COPPER                                  | P               | POLE                                          |
| CU                                                      | CABINET UNIT HEATER                     | PA              | PUBLIC ADDRESSING                             |
|                                                         |                                         | PB              | PUSH BUTTON                                   |
| DC                                                      | DIRECT CURRENT                          | PBUS            | PUBLIC                                        |
| DC                                                      | DISTRIBUTION CABINET                    | PLBS            | PLUMBING                                      |
| DC                                                      | DISTRIBUTION PANEL                      | PLG             | PANEL                                         |
| DISC                                                    | DISCONNECT                              | PR or pr        | PRINTER                                       |
| DISC                                                    | DISCONNECT                              | PRV             | POWER ROOF VENTILATOR                         |
| DLD                                                     | DOOR LOCK                               | PS              | PULL SWITCH                                   |
| DL                                                      | DOOR LEVER                              | PSP             | PROTECTION SCREEN                             |
| DN or DOWN                                              | DOWN                                    | PTZ             | PAN/TILT ZOOM                                 |
| DR                                                      | DOOR                                    | PVC             | POLYVINYL CHLORIDE                            |
| DN                                                      | DOWN                                    | PWR             | POWER                                         |
| DWG                                                     | DRAWING                                 | RCP             | REFLECTED CEILING PLAN                        |
|                                                         |                                         | REC or RECP     | RECEPTACLE                                    |
| EC                                                      | ELECTRICAL CONTRACTOR                   | REF or REFRT    | REFRIGERATOR                                  |
| EC                                                      | ELECTRICAL CABINET                      | REH             | RED HAT                                       |
| EC                                                      | EXHAUST FAN                             | REI             | RED HAT                                       |
| EH                                                      | ELECTRICAL HEAT                         | REL             | RELAY                                         |
| EH                                                      | ELECTRIC OR ELECTRONIC                  | RM              | ROOM                                          |
| EM                                                      | ELECTRIC HAND DRIVER                    | RS              | REAR MOUNT SQUARE                             |
| EMERG                                                   | EMERGENCY                               | RWS             | REAR WINDOW SQUARE                            |
| EMT                                                     | ELECTRICAL METALLIC TUBING              | SC              | SHORT CIRCUIT CURRENT                         |
| EMT                                                     | ELECTRICAL NON-METALLIC TUBING          | SD              | SMOKE DETECTOR                                |
| EUH                                                     | ELECTRIC UNIT HEATER                    | SFR             | SMOKE RECEPTACLE                              |
| EW                                                      | ELECTRIC WATER COOLER                   | SAF             | SAFETY                                        |
| EXP                                                     | EXHAUST                                 | SHLD            | SHIELD OR SHIELDED                            |
| EXP                                                     | EXPLOSION PROOF                         | SRN             | SEISMIC                                       |
|                                                         |                                         | SMR             | SURFACE MOUNT RACEWAY                         |
| F or FUS                                                | FUSE OR FUSIBLE                         | SP              | SPEAKER                                       |
| FAAP                                                    | FIRE ALARM ANNUNCIATOR PANEL            | SPM             | SUMP PUMP                                     |
| FAAP                                                    | FIRE ALARM CONTROL PANEL                | SQ              | SUBSTATION                                    |
| FBO                                                     | FURNISHED BY OTHERS                     | SPR             | SPEAKER                                       |
| FL                                                      | FLUORESCENT                             | SPR             | SPLIT RECEPTACLE                              |
| FLA                                                     | FULL LOAD AMPERES                       | SW              | SWITCH                                        |
| FWR                                                     | FULL VOLTAGE, NON-REVERSING             | SWB             | SWITCH BOARD                                  |
| FWR                                                     | FULL VOLTAGE, REVERSING                 | TC              | TEMPERATURE CONTROL                           |
| GC                                                      | GENERAL CONTRACTOR                      | TC              | TEMPERATURE CABINET                           |
| GC                                                      | GARBAGE DISPOSAL                        | TC              | TEMPERATURE CONTROL, CONTROL                  |
| GEN                                                     | GENERATOR                               | TEL             | TELEPHONE                                     |
| GFI or GFCI                                             | GROUND FAULT CIRCUIT INTERRUPTER        | TL              | TWIST LOCK                                    |
| GND                                                     | GROUND/NEUTRAL RIGID CONDUIT            | TR              | TRANSFORMER                                   |
| GND or GRND                                             | GROUND OR GROUND                        | TR              | TELEPHONE TERMINATION BOARD                   |
|                                                         |                                         | TR              | TRANSFORMER                                   |
| H & B                                                   | HEATING & AIR CONDITIONING              | TVB             | TRANSIENT VOLTAGE SURGE SUPPRESSION           |
| H & B                                                   | HEATING & VENTILATING                   | TYG             | TYPICAL                                       |
| HA                                                      | HANDICAP ACCESS DOOR                    | UG              | UNDERGROUND                                   |
| HD                                                      | HAND DRIVER                             | UH              | UNIT HEATER                                   |
| HD                                                      | HIGH INTENSITY DISCHARGE                | UV              | UNIT VENTILATOR                               |
| HP                                                      | HORSE POWER                             |                 |                                               |
| HPS                                                     | HIGH PRESSURE SODIUM                    | V               | VOLT                                          |
| HTG                                                     | HEATING                                 | VFD             | VARIABLE FREQUENCY DRIVE                      |
| HTG                                                     | HEATER                                  |                 |                                               |
| HVAC                                                    | HEATING, VENTILATION & AIR CONDITIONING | W               | WATT                                          |
| HZ                                                      | HERTZ (CYCLES/SECOND)                   | W               | WATT                                          |
|                                                         |                                         | WD              | WATER                                         |
| IGR                                                     | INTERMEDIATE CURRENT                    | WD              | WEATHERPROOF                                  |
| IGR                                                     | ISOLATED GROUND RECEPTACLE              | WTR or HD       | WINDOW SHADE                                  |
| IMC                                                     | INTERMEDIATE METAL CONDUIT              |                 |                                               |
| INCANDESCENT                                            | INCANDESCENT                            |                 |                                               |
| ISO or ISOI                                             | ISOLATED OR ISOLATION                   | YMR             | Y-TRANSFORMER                                 |
| J                                                       | JUNCTION BOX                            | YE              | WYE CONNECTION                                |
| KCAL                                                    | THOUSAND KILLOCALORIE MLBS              |                 |                                               |
| KALVOLT                                                 | KILOVOLT                                | Φ               | PHASE                                         |
| KVA                                                     | KILOVOLT-AMPERE                         | Δ               | DELTA                                         |
| KVAR                                                    | KILOVOLT-AMPERE REACTIVE                |                 |                                               |
| KW                                                      | KILOWATT                                |                 |                                               |
| KWH                                                     | KILOWATT - HOUR                         |                 |                                               |

[illegible]

| UNIT TYPE   |  | UNIT NUMBER | KW       | MOTOR   |         | PHASES | STARTER TYPE | STARTER NEMA SIZE | STARTER ENCLOSURE TYPE | CONTROL   | DISCONNECT SWITCH SIZE | DISCONNECT FUSE SIZE | COMMENTS             |
|-------------|--|-------------|----------|---------|---------|--------|--------------|-------------------|------------------------|-----------|------------------------|----------------------|----------------------|
|             |  |             |          | HP      | VOLTAJE |        |              |                   |                        |           |                        |                      |                      |
| ACU         |  |             |          | 17 A    | 208 V   | 1      |              |                   |                        |           | 30A/2P/NEMA 3R/F       |                      | NOTE 1, 7            |
| CH          |  | 1           |          | 159 A   | 208 V   | 3      |              |                   |                        |           | 200A/3P/NEMA 3R/F      | PER NEC              | NOTE 1               |
| CP          |  | 1A          |          | 5 hp    | 208 V   | 3      | VFD          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | NOTE 6               |
| CP          |  | 1B          |          | 5 hp    | 208 V   | 3      | VFD          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | NOTE 6               |
| CP          |  | 2A          |          | 7.5 hp  | 208 V   | 3      | VFD          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | NOTE 6               |
| CP          |  | 2B          |          | 7.5 hp  | 208 V   | 3      | VFD          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | NOTE 6               |
| CR          |  | E1A         |          | 0.33 hp | 1A      | 120 V  | 1            | MMS               | -                      | NEMA 1    | INTEGRAL               | -                    | MOTOR THERMAL SWITCH |
| CR          |  | E1B         |          | 0.33 hp | 1A      | 120 V  | 1            | MMS               | -                      | NEMA 1    | INTEGRAL               | -                    | MOTOR THERMAL SWITCH |
| ELEV LIGHTS |  |             |          | 0 A     | 120 V   | 1      |              |                   |                        |           |                        |                      |                      |
| ELEV POWER  |  |             |          | 25 hp   | 0A      | 208 V  | 3            |                   |                        |           |                        |                      |                      |
| FC          |  | 1-01        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-02        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-03        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-04        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-05        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-06        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-07        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-08        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-09        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-10A       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-10B       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-10C       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 1-11        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-01        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-02        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-03        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-04        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-05        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-06        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-07        |          | 7 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-08        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-09        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-10A       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-10B       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-10C       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-11A       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | 2-11B       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-01        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-02        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-03        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-04        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-05        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-06        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-07        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-08        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-09        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-10        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-11        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-12        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-13        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-14        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-15        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-16        |          | 9 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-17A       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-17B       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-17C       |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| FC          |  | B-18        |          | 4 A     | 120 V   | 1      | -            | -                 | -                      | TC SYSTEM | -                      | -                    | NOTE 2               |
| GF          |  | 1           |          | 120 V   | 1       | 1      | -            | -                 | -                      | -         | -                      | -                    | NOTE 3               |
| GF          |  | 2           |          | 120 V   | 1       | 1      | -            | -                 | -                      | -         | -                      | -                    | NOTE 3               |
| HX          |  | 1           | 0.6 hp   | 7 A     | 208 V   | 1      | -            | -                 | -                      | TC SYSTEM | 30A/2P/F/NEMA 1        | PER NEC              | NOTE 1               |
| HX          |  | 2           | 0.6 hp   | 7 A     | 208 V   | 1      | -            | -                 | -                      | TC SYSTEM | 30A/2P/F/NEMA 1        | PER NEC              | NOTE 1               |
| HX          |  | 3           | 0.6 hp   | 7 A     | 208 V   | 1      | -            | -                 | -                      | TC SYSTEM | 30A/2P/F/NEMA 1        | PER NEC              | NOTE 1               |
| PD          |  | B-01        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-02        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-03        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-04        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-05        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-06        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-07        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-08        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-09        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-10        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-12        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-13        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-14        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-15        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-16        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-17A       | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-17B       | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-17C       | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| PD          |  | B-18        | 0.033 hp | 120 V   | 1       | MMS    | -            | NEMA 1            | INTEGRAL               | -         | -                      | -                    | MOTOR THERMAL SWITCH |
| SP          |  | 2           | 0.4 hp   | 120 V   | 1       | -      | -            | -                 | -                      | INTEGRAL  | -                      | -                    | NOTE 5               |
| SP          |  | E1          | 0.02 hp  | 120 V   | 1       | -      | -            | -                 | -                      | INTEGRAL  | -                      | -                    | NOTE 5               |
| UH          |  | 1           | 0.02 hp  | 1A      | 120 V   | 1      | MMS          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | MOTOR THERMAL SWITCH |
| UH          |  | 2           | 0.02 hp  | 1A      | 120 V   | 1      | MMS          | -                 | NEMA 1                 | TC SYSTEM | -                      | -                    | MOTOR THERMAL SWITCH |

## LIGHTING FIXTURE SCHEDULE

| FIXTURE MARK | MANUFACTURER | MODEL                                                | MOUNTING             | TYPE | LUMENS AND WATTS         | LPW        | COMMENTS                                                                         | ADDITIONAL MANUFACTURERS        |
|--------------|--------------|------------------------------------------------------|----------------------|------|--------------------------|------------|----------------------------------------------------------------------------------|---------------------------------|
| A4           | LITHONIA     | 2BLT4-40L-ADP-EZ1-LP835                              | CEILING/RECESSED     | LED  | 4197 LUMENS, 30.5 WATTS  | 137.81     | 2X4 VOLUMETRIC RECESSED FIXTURE, NOTE 1                                          | COOPER, COLUMBIA, LSI           |
| A4F          | LITHONIA     | 2BLT4-40L-ADP-EZ1-LP835-DG424                        | CEILING/RECESSED     | LED  | 4197 LUMENS, 30.50 WATTS | 137.81     | 2X4 VOLUMETRIC RECESSED FIXTURE, CEILING FLANGE ACCESSORY, NOTE 1                | COOPER, COLUMBIA, LSI           |
| A5           | LITHONIA     | 2BLT4-48L-ADP-EZ1-LP835                              | CEILING/RECESSED     | LED  | 5032 LUMENS, 39.3 WATTS  | 128.09     | 2X4 VOLUMETRIC RECESSED FIXTURE, NOTE 1                                          | COOPER, COLUMBIA, LSI           |
| B1           | LITHONIA     | 2BLT4-48L-ADP-EZ1-LP835-2X45MX5HP PAF                | CEILING/SURFACE      | LED  | 5032 LUMENS, 39.3 WATTS  | 130.5      | 2X4 VOLUMETRIC FIXTURE, SURFACE MOUNTING FRAME, NOTE 1                           | COOPER, COLUMBIA, LSI           |
| C1           | LITHONIA     | ZL1D-148-5000L-M-FT-MV/OLT-35K-ROCR-WH-C36 M12-WG248 | SURFACE AND/OR CHAIN | LED  | 5456 LUMENS, 41 WATTS    | 133.07     | CHAIN HUNG STRIP LIGHT, WIRE GARD, NOTE 1                                        | COOPER, COLUMBIA, LSI           |
| DP           | SPECTRUM     | SGELED0530.35KXD0101BH27AR8230SSGSO                  | CEILING/RECESSED     | LED  | 1533 LUMENS, 28 WATTS    | 90         | 8 INCH, RECESSED CAN, NOTE 1                                                     | LITHONIA, COOPER, COLUMBIA, LSI |
| D5           | SPECTRUM     | SGELED0530.35KXD0101BH27AR8230SSGSOVL                | CEILING/RECESSED     | LED  | 2819 LUMENS, 20 WATTS    | 92         | 8 INCH, RECESSED CAN, WET LOCATION, NOTE 1                                       | LITHONIA, COOPER, COLUMBIA, LSI |
| F2           | LITHONIA     | ST14-48L-EZ1-LP835                                   | CEILING/SURFACE      | LED  | 3534 LUMENS, 26.9 WATTS  | 107.3      | SURFACE MOUNT WRAP FIXTURE, NOTE 1                                               | COOPER, COLUMBIA, LSI           |
| F2           | LITHONIA     | ST14-48L-EZ1-LP835                                   | CEILING/SURFACE      | LED  | 4850 LUMENS, 45.2 WATTS  | 107.3      | SURFACE VOLUMETRIC WRAP FIXTURE, NOTE 1                                          | COOPER, COLUMBIA, LSI           |
| FZ           | LITHONIA     | WL4-40L-EZ1-LP835-NO                                 | WALL/SURFACE         | LED  | 4124 LUMENS, 29.5 WATTS  | 104        | SURFACE WALL MOUNT LIGHT FIXTURE, NOTE 1                                         | COOPER, COLUMBIA, LSI           |
| W1           | LITHONIA     | WST LED-P1-40K-WV-MV/OLT-T-PE-DBBXD                  | WALL/SURFACE         | LED  | 1659 LUMENS, 12 WATTS    | 138        | LED WALL MOUNT EXTERIOR LIGHT, NOTE 1                                            | COOPER, COLUMBIA, LSI           |
| X            | LITHONIA     | LQM-2-W-3-R-120V/72                                  | UNIVERSAL            | LED  | -                        | 0.62 WATTS | EXIT SIGN, THERMOPLASTIC, PROVIDE ONE OR TWO SIZED AS REQUIRED PER THE DRAWINGS. | SURE LITES, DUALITE, MUE        |

COMMENTS:

|   |                                                                                                   |
|---|---------------------------------------------------------------------------------------------------|
| 1 | FIXTURES SUBMITTED FOR APPROVAL CANNOT BE MORE THAN 5% LESS EFFICIENT THAN THE FIXTURE SPECIFIED. |
|---|---------------------------------------------------------------------------------------------------|

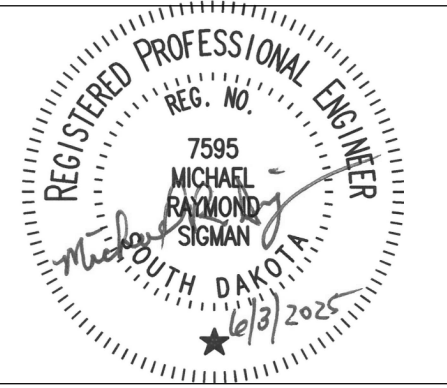
## CONSULTANTS

|                                                                                                                                                                                                   |                                                                                                                       |                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b><u>STRUCTURAL:</u></b><br/> <b>ALBERTSON ENGINEERING, INC.</b><br/>         3202 W. MAIN ST., #C<br/>         RAPID CITY, SD 57702<br/>         605-343-9606<br/> <b>STEPHEN KILBER</b></p> |  <p>Albertson Engineering Inc.</p> | <p><b><u>MEP:</u></b><br/> <b>WEST PL</b><br/>         1750 RAND<br/>         RAPID CIT<br/>         605-348-74<br/> <b>MIKE SIGM</b></p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|

## DESIGNER OF RECORD

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**Stone Group Architects**  
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## STAMP



Office of  
Construction  
and Facilities  
Management

**VA** | U.S. Department  
of Veterans Affairs

Drawing Title

Approved  
DOUG SPRINKLE

Phase  
100% CONSTRUCTION  
DOCUMENTS

FULLY SPRINKLERED

|               |                                      |
|---------------|--------------------------------------|
| Project Title | DOM RENOVATION FOR SEMIPRIVATE ROOMS |
|---------------|--------------------------------------|

|                           |
|---------------------------|
| Location                  |
| HOT SPRINGS, SOUTH DAKOTA |

Checked ☐ Drawn ☐

**Project Number**  
VA #568A4-21-208  
SGA #BR21039

**Building Number**

Drawing Number

EJ-403-R1

| A7-EQ-1                                                         |                  | VOLTS:      |      |       | 120/208 Wye |           |           | PHASES:      |      |           | 3                          |      |             | WIRE:  |          |   | 4                |  |  | MAIN CAPACITY: |  |  | 225 A |  |  |  |
|-----------------------------------------------------------------|------------------|-------------|------|-------|-------------|-----------|-----------|--------------|------|-----------|----------------------------|------|-------------|--------|----------|---|------------------|--|--|----------------|--|--|-------|--|--|--|
|                                                                 |                  | A/C RATING: |      |       | 22,000      |           |           | LOCATION:    |      |           |                            |      |             | ARCADE |          |   | MAIN CONNECTION: |  |  | MLO            |  |  |       |  |  |  |
|                                                                 |                  | MOUNTING:   |      |       | SURFACE     |           |           | FEEDER SIZE: |      |           | SEE POWER ONE-LINE DIAGRAM |      |             |        |          |   | MAIN TYPE:       |  |  | TYPE 1         |  |  |       |  |  |  |
|                                                                 |                  |             |      |       |             |           |           |              |      |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| CKT                                                             | ITEM FED         | WIRE SIZE   | AMPS | POLES | A (WATTS)   | B (WATTS) | C (WATTS) | POLES        | AMPS | WIRE SIZE | ITEM FED                   | CKT  |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| 1                                                               | EXISTING         | E           | 20 A | 1     | 0           | 0         |           |              |      | 1         | 20 A                       | E    | EXISTING    | 2      |          |   |                  |  |  |                |  |  |       |  |  |  |
| 3                                                               | EXISTING         | E           | 20 A | 1     |             | 0         | 0         |              |      | 2         | 20 A                       | E    | EXISTING    | 4      |          |   |                  |  |  |                |  |  |       |  |  |  |
| 5                                                               | EXISTING         | E           | 20 A | 2     |             | 0         | 0         |              | 0    | 0         |                            | 1    | 20 A        | E      | EXISTING | 6 |                  |  |  |                |  |  |       |  |  |  |
| 7                                                               |                  |             |      |       |             | 0         | 0         |              |      | 1         | 20 A                       | E    | EXISTING    | 8      |          |   |                  |  |  |                |  |  |       |  |  |  |
| 9                                                               |                  |             |      |       |             | 0         | 0         |              |      | 1         | 20 A                       | E    | EXISTING    | 10     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 11                                                              | AHU-6 (EXISTING) | E           | 30 A | 3     |             |           | 0         | 0            |      |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| 13                                                              |                  |             |      |       |             | 0         | 0         |              |      | 3         | 100 A                      | 2    | PANEL 8EQ21 | 12     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 15                                                              |                  |             |      |       |             |           | 0         | 0            |      |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| 17                                                              | AHU-7 (EXISTING) | E           | 30 A | 3     |             |           |           | 0            | 0    |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| 19                                                              |                  |             |      |       |             | 0         | 0         |              |      | 3         | 100 A                      | -    | SPARE       | 14     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 21                                                              | SPARE            | -           | 20 A | 1     |             |           | 0         | 0            |      |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| 23                                                              | SPARE            | -           | 20 A | 1     |             |           |           | 0            | 0    |           | 1                          | 20 A | -           | SPARE  | 16       |   |                  |  |  |                |  |  |       |  |  |  |
| 25                                                              | SPARE            | -           | 20 A | 1     |             |           |           |              | 0    | 0         | 1                          | 20 A | -           | SPARE  | 18       |   |                  |  |  |                |  |  |       |  |  |  |
| 27                                                              | SPARE            | -           | 20 A | 1     |             |           |           | 0            | 0    |           | 1                          | 20 A | -           | SPARE  | 20       |   |                  |  |  |                |  |  |       |  |  |  |
| 29                                                              | SPARE            | -           | 20 A | 1     |             |           |           |              | 0    | 0         | 1                          | 20 A | -           | SPARE  | 22       |   |                  |  |  |                |  |  |       |  |  |  |
| 31                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              |      | 1         | --                         | -    | SPACE       | 24     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 33                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              |      | 1         | --                         | -    | SPACE       | 26     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 35                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              | --   | --        | 1                          | --   | -           | SPACE  | 28       |   |                  |  |  |                |  |  |       |  |  |  |
| 37                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              |      | 1         | --                         | -    | SPACE       | 30     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 39                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              |      | 1         | --                         | -    | SPACE       | 32     |          |   |                  |  |  |                |  |  |       |  |  |  |
| 41                                                              | SPACE            | -           | --   | 1     | --          | --        |           |              | --   | --        | 1                          | --   | -           | SPACE  | 34       |   |                  |  |  |                |  |  |       |  |  |  |
| TOTAL CONNECTED LOAD:                                           |                  |             |      |       | 0 W         |           | 0 W       |              | 0 W  |           | AMPS: 0 A                  |      | LOAD: 0 W   |        |          |   |                  |  |  |                |  |  |       |  |  |  |
| NOTES:<br>1. PROVIDE WITH DOUBLE FEED LUGS TO FEED PANEL 8EQB1. |                  |             |      |       |             |           |           |              |      |           |                            |      |             |        |          |   |                  |  |  |                |  |  |       |  |  |  |

| 8NB1                                                                                     |                                | VOLTS:     |      | 120/208 Wye |           | PHASES:      |           | 3                          |      | WIRE:            |            | 4         |                                 | MAIN CAPACITY:        |     | 125 A  |  |
|------------------------------------------------------------------------------------------|--------------------------------|------------|------|-------------|-----------|--------------|-----------|----------------------------|------|------------------|------------|-----------|---------------------------------|-----------------------|-----|--------|--|
|                                                                                          |                                | A/C RATER: |      | 22,000      |           | LOCATION:    |           | ELEC B03                   |      | MAIN CONNECTION: |            | MLO       |                                 | ENCLOSURE TYPE:       |     | TYPE 1 |  |
|                                                                                          |                                | MOUNTING:  |      | SURFACE     |           | FEEDER SIZE: |           | SEE POWER ONE-LINE DIAGRAM |      | WIRE SIZE        |            | WIRE SIZE |                                 | ITEM FED              |     | CKT    |  |
| CKT                                                                                      | ITEM FED                       | WIRE SIZE  | AMPS | POLES       | A (WATTS) | B (WATTS)    | C (WATTS) | POLES                      | AMPS | WIRE SIZE        | AMPS       | POLES     | WIRE SIZE                       | ITEM FED              | CKT |        |  |
| 1                                                                                        | RM B14 REC'S.                  | 12         | 20 A | 1           | 900       | 180          |           |                            |      | 1                | 20 A       | 12        | RM. B07 TELE. CONF REC.(NOTE 2) | 2                     |     |        |  |
| 3                                                                                        | RM. B14 MICRO REC. (NOTE 1)    | 12         | 20 A | 1           |           | 1500         | 180       |                            |      | 1                | 20 A       | 12        | RM. B04 TELE. CONF REC.(NOTE 2) | 4                     |     |        |  |
| 5                                                                                        | RM B14 COFFEE REC.(NOTE 1)     | 12         | 20 A | 1           |           | 1500         | 900       |                            |      | 1                | 20 A       | 12        | RMS. B00, B04 REC'S.            | 6                     |     |        |  |
| 7                                                                                        | RM B14 REC.                    | 12         | 20 A | 1           | 360       | 540          |           |                            |      | 1                | 20 A       | 12        | RMS. B00, B01 REC'S. (NOTE 2)   | 8                     |     |        |  |
| 9                                                                                        | RM B14 REF. REC.               | 12         | 20 A | 1           |           | 1200         | 900       |                            |      | 1                | 20 A       | 12        | RMS. B03, B04 REC'S. (NOTE 2)   | 10                    |     |        |  |
| 11                                                                                       | RM. B13 REC'S.                 | 12         | 20 A | 1           |           |              |           | 1080                       | 1695 |                  |            |           | ACU-1                           | 12                    |     |        |  |
| 13                                                                                       | RM. B12 REC'S.                 | 12         | 20 A | 1           | 1080      | 1695         |           |                            |      | 2                | 20 A       | 12        |                                 | 14                    |     |        |  |
| 15                                                                                       | RM. B15 TELE. ONF REC.(NOTE 2) | 12         | 20 A | 1           |           | 180          | 0         |                            |      | 1                | 20 A       | -         | SPARE                           | 16                    |     |        |  |
| 17                                                                                       | RM. B11 REC'S.                 | 12         | 20 A | 1           |           |              |           | 1080                       | 977  |                  | 1          | 20 A      | -                               | BASEMENT LIGHTING     | 18  |        |  |
| 19                                                                                       | RM. B15, B15A REC'S. (NOTE 2)  | 12         | 20 A | 1           | 1260      | 1862         |           |                            |      | 1                | 20 A       | 12        | -                               | BASEMENT LIGHTING     | 20  |        |  |
| 21                                                                                       | RMS. B16, B17 REC'S.           | 12         | 20 A | 1           |           | 1260         | 180       |                            |      | 1                | 20 A       | 12        | -                               | EXTERIOR REC.         | 22  |        |  |
| 23                                                                                       | RM. B16 REC'S.                 | 12         | 20 A | 1           |           |              |           | 1080                       | 1500 |                  | 1          | 20 A      | 12                              | BASEMENT EWC (NOTE 1) | 24  |        |  |
| 25                                                                                       | RM. B19 REC'S.                 | 12         | 20 A | 1           | 1080      | 0            |           |                            |      | 1                | 20 A       | -         | SPARE                           | 26                    |     |        |  |
| 27                                                                                       | RMS. B00, B20 REC'S. (NOTE 2)  | 12         | 20 A | 1           |           | 360          | 0         |                            |      | 1                | 20 A       | -         | SPARE                           | 28                    |     |        |  |
| 29                                                                                       | RM. B08 REC'S                  | 12         | 20 A | 1           |           |              |           | 1080                       | 0    |                  | 1          | 20 A      | -                               | SPARE                 | 30  |        |  |
| 31                                                                                       | RM. B07 REC'S. (NOTE 2)        | 12         | 20 A | 1           | 1080      | 0            |           |                            |      | 1                | 20 A       | -         | SPARE                           | 32                    |     |        |  |
| 33                                                                                       | RMS. B20, B10 REC'S.           | 12         | 20 A | 1           |           | 1260         | 0         |                            |      | 1                | 20 A       | -         | SPARE                           | 34                    |     |        |  |
| 35                                                                                       | RM. B06 TELE. CONF. REC.       | 12         | 20 A | 1           |           |              |           | 180                        | 0    |                  | 1          | 20 A      | -                               | SPARE                 | 36  |        |  |
| 37                                                                                       | RMS. B04, B05 REC'S. (NOTE 2)  | 12         | 20 A | 1           | 720       | 0            |           |                            |      | 1                | 20 A       | -         | SPARE                           | 38                    |     |        |  |
| 39                                                                                       | RM. B05 REC'S. (NOTE 2)        | 12         | 20 A | 1           |           | 360          | 0         |                            |      | 1                | 20 A       | -         | SPARE                           | 40                    |     |        |  |
| 41                                                                                       | RMS. B04, B04A REC'S. (NOTE 2) | 12         | 20 A | 1           |           |              |           | 720                        | 0    |                  | 1          | 20 A      | -                               | SPARE                 | 42  |        |  |
| TOTAL CONNECTED LOAD:                                                                    |                                |            |      |             | 10757 W   | 7380 W       | 11792 W   | AMPS:                      | 83 A | LOAD:            | 29928.63 W |           |                                 |                       |     |        |  |
| NOTES:<br>1. PROVIDE GFCI TYPE CIRCUIT BREAKER.<br>2. PROVIDE AFCI TYPE CIRCUIT BREAKER. |                                |            |      |             |           |              |           |                            |      |                  |            |           |                                 |                       |     |        |  |

| 8LS11                                          |                             | VOLTS:      |      | 120/208 Wye |           | PHASES:      |           | 3                          |      | WIRE:            |        | 4         |           | MAIN CAPACITY:              |     | 125 A  |  |
|------------------------------------------------|-----------------------------|-------------|------|-------------|-----------|--------------|-----------|----------------------------|------|------------------|--------|-----------|-----------|-----------------------------|-----|--------|--|
|                                                |                             | AIC RATING: |      | 22,000      |           | LOCATION:    |           | ELEC 103                   |      | MAIN CONNECTION: |        | 60A MCB   |           | ENCLOSURE TYPE:             |     | TYPE 1 |  |
|                                                |                             | MOUNTING:   |      | SURFACE     |           | FEEDER SIZE: |           | SEE POWER ONE-LINE DIAGRAM |      | WIRE SIZE        |        | WIRE SIZE |           | ITEM FED                    |     | CKT    |  |
| CKT                                            | ITEM FED                    | WIRE SIZE   | AMPS | POLES       | A (WATTS) | B (WATTS)    | C (WATTS) | POLES                      | AMPS | WIRE SIZE        | AMPS   | POLES     | WIRE SIZE | ITEM FED                    | CKT |        |  |
| 1                                              | BASEMENT EMERG. LIGHTING    | 12          | 20 A | 1           | 76        | 108          |           |                            |      | 1                | 20 A   | 12        |           | EXTERIOR LIGHTING           | 2   |        |  |
| 3                                              | BASEMENT EMERG. LIGHTING    | 12          | 20 A | 1           |           |              | 389       | 1000                       |      | 1                | 20 A   | 12        |           | ELEV. SMOKE CURTAINS & PNL. | 4   |        |  |
| 5                                              | FIRST FLOOR EMERG. LIGHTING | 12          | 20 A | 1           |           |              |           | 551                        | 1000 | 1                | 20 A   | 12        |           | ELEC 103 FAPS               | 6   |        |  |
| 7                                              | SECOND FLOOR EMERG. LTG.    | 12          | 20 A | 1           | 543       | 1000         |           |                            |      | 1                | 20 A   | 12        |           | ELEC 203 FAPS               | 8   |        |  |
| 9                                              | SPARE                       | -           | 20 A | 1           |           |              | 0         | --                         |      | 1                | --     | -         |           | SPACE                       | 10  |        |  |
| 11                                             | SPARE                       | -           | 20 A | 1           |           |              |           | 0                          | --   | 1                | --     | -         |           | SPACE                       | 12  |        |  |
| 13                                             | SPARE                       | -           | 20 A | 1           | 0         | --           |           |                            |      | 1                | --     | -         |           | SPACE                       | 14  |        |  |
| 15                                             | SPARE                       | -           | 20 A | 1           |           |              | 0         | --                         |      | 1                | --     | -         |           | SPACE                       | 16  |        |  |
| 17                                             | SPARE                       | -           | 20 A | 1           |           |              |           | 0                          | --   | 1                | --     | -         |           | SPACE                       | 18  |        |  |
| 19                                             | SPARE                       | -           | 20 A | 1           | 0         | --           |           |                            |      | 1                | --     | -         |           | SPACE                       | 20  |        |  |
| 21                                             | SPARE                       | -           | 20 A | 1           |           |              | 0         | --                         |      | 1                | --     | -         |           | SPACE                       | 22  |        |  |
| 23                                             | SPACE                       | -           | --   | 1           |           |              |           | --                         | --   | 1                | --     | -         |           | SPACE                       | 24  |        |  |
| 25                                             | SPACE                       | -           | --   | 1           | --        | --           |           |                            |      | 1                | --     | -         |           | SPACE                       | 26  |        |  |
| 27                                             | SPACE                       | -           | --   | 1           |           |              | --        | --                         |      | 1                | --     | -         |           | SPACE                       | 28  |        |  |
| 29                                             | SPACE                       | -           | --   | 1           |           |              |           | --                         | --   | 1                | --     | -         |           | SPACE                       | 30  |        |  |
| 31                                             | SPACE                       | -           | --   | 1           | --        | --           |           |                            |      | 1                | --     | -         |           | SPACE                       | 32  |        |  |
| 33                                             | SPACE                       | -           | --   | 1           |           |              | --        | --                         |      | 1                | --     | -         |           | SPACE                       | 34  |        |  |
| 35                                             | SPACE                       | -           | --   | 1           |           |              |           | --                         | --   | 1                | --     | -         |           | SPACE                       | 36  |        |  |
| 37                                             | SPACE                       | -           | --   | 1           | --        | --           |           |                            |      | 1                | --     | -         |           | SPACE                       | 38  |        |  |
| 39                                             | SPACE                       | -           | --   | 1           |           |              | --        | --                         |      | 1                | --     | -         |           | SPACE                       | 40  |        |  |
| 41                                             | SPACE                       | -           | --   | 1           |           |              |           | --                         | --   | 1                | --     | -         |           | SPACE                       | 42  |        |  |
| TOTAL CONNECTED LOAD:                          |                             |             |      |             | 1727 W    | 1389 W       | 1551 W    | AMPS:                      | 10 A | LOAD:            | 3667 W |           |           |                             |     |        |  |
| NOTES:<br>1. PROVIDE LOCKABLE CIRCUIT BREAKER. |                             |             |      |             |           |              |           |                            |      |                  |        |           |           |                             |     |        |  |

| 8EQ21 |                                     | VOLTS:                |      | 120/208 Wye |           | PHASES:      |           | 3                          |       | WIRE:            |       | 4         |           | MAIN CAPACITY:        |       | 125 A  |    |
|-------|-------------------------------------|-----------------------|------|-------------|-----------|--------------|-----------|----------------------------|-------|------------------|-------|-----------|-----------|-----------------------|-------|--------|----|
|       |                                     | AIC RATING:           |      | 22,000      |           | LOCATION:    |           | ELEC 203                   |       | MAIN CONNECTION: |       | MLO       |           | ENCLOSURE TYPE:       |       | TYPE 1 |    |
|       |                                     | MOUNTING:             |      | SURFACE     |           | FEEDER SIZE: |           | SEE POWER ONE-LINE DIAGRAM |       | WIRE SIZE        |       | WIRE SIZE |           | ITEM FED              |       | CKT    |    |
|       |                                     | WIRE SIZE             | AMPS | POLES       | A (WATTS) | B (WATTS)    | C (WATTS) | POLES                      | AMPS  | WIRE SIZE        | AMPS  | POLES     | WIRE SIZE | ITEM FED              | CKT   |        |    |
| 1     | SPARE                               | -                     | 20 A | 1           | 0         | 0            |           |                            |       |                  | 1     | 20 A      |           | SPARE                 |       | 2      |    |
| 3     | SPARE                               | -                     | 20 A | 1           |           |              | 0         | 720                        |       |                  | 1     | 20 A      | 12        | SMOKE DAMPERS FLOOR 1 |       | 4      |    |
| 5     | SPARE                               | -                     | 20 A | 1           |           |              |           |                            | 0     | 1080             | 1     | 20 A      | 12        | SMOKE DAMPERS FLOOR 2 |       | 6      |    |
| 7     | FC-1-1 & FC-1-10A (NOTE 2)          | 12                    | 20 A | 1           | 1584      | 0            |           |                            |       |                  | 1     | 20 A      | -         | SPARE                 |       | 8      |    |
| 9     | FC-1-2, FC-1-3 (NOTE 2)             | 12                    | 20 A | 1           |           |              | 1584      | 0                          |       |                  | 1     | 20 A      | -         | SPARE                 |       | 10     |    |
| 11    | FC-1-6 & FC-1-7 (NOTE 2)            | 12                    | 20 A | 1           |           |              |           | 1584                       | 0     |                  | 1     | 20 A      | -         | SPARE                 |       | 12     |    |
| 13    | FC-1-10B & FC-1-10C (NOTE 2)        | 12                    | 20 A | 1           | 1056      | --           |           |                            |       |                  | 1     | --        | -         | SPACE                 |       | 14     |    |
| 15    | FC-1-8 & FC-1-9 (NOTE 2)            | 12                    | 20 A | 1           |           |              | 1056      | --                         |       |                  | 1     | --        | -         | SPACE                 |       | 16     |    |
| 17    | FC-1-11 (NOTE 2)                    | 12                    | 20 A | 1           |           |              |           | 1056                       | --    |                  | 1     | --        | -         | SPACE                 |       | 18     |    |
| 19    | FC-2-10A & FC-2-10B (NOTE 2)        | 12                    | 20 A | 1           | 1056      | 0            |           |                            |       |                  | 1     | 20 A      | -         | SPACE                 |       | 20     |    |
| 21    | FC-2-1 (NOTE 2)                     | 12                    | 20 A | 1           |           |              | 1056      | --                         |       |                  | 1     | --        | -         | SPACE                 |       | 22     |    |
| 23    | FC-2-2, FC-2-3 (NOTE 2)             | 12                    | 20 A | 1           |           |              |           | 1584                       | --    |                  | 1     | --        | -         | SPACE                 |       | 24     |    |
| 25    | FC-2-4 & FC-2-7 (NOTE 2)            | 12                    | 20 A | 1           | 1584      | --           |           |                            |       |                  | 1     | --        | -         | SPACE                 |       | 26     |    |
| 27    | FC-2-8 & FC-2-10C (NOTE 2)          | 12                    | 20 A | 1           |           |              | 1056      | --                         |       |                  | 1     | --        | -         | SPACE                 |       | 28     |    |
| 29    | FC-2-9, FC-2-11A, FC-2-11B (NOTE 2) | 12                    | 20 A | 1           |           |              |           | 1584                       | --    |                  | 1     | --        | -         | SPACE                 |       | 30     |    |
| 31    | HX-2                                | 10                    | 20 A | 2           | 739       | --           |           |                            |       |                  | 1     | --        | -         | SPACE                 |       | 32     |    |
| 33    |                                     |                       |      |             |           |              |           |                            |       | 739              | --    | 1         | --        | -                     | SPACE |        | 34 |
| 35    | HX-3                                | 10                    | 20 A | 2           | 739       | --           |           |                            |       | 739              | --    | 1         | --        | -                     | SPACE |        | 36 |
| 37    |                                     |                       |      |             |           |              |           |                            |       |                  |       | 1         | --        | -                     | SPACE |        | 38 |
| 39    | FC-1-4, FC-1-5 (NOTE 2)             | 12                    | 20 A | 1           |           |              | 1584      | --                         |       |                  | 1     | --        | -         | SPACE                 |       | 40     |    |
| 41    | FC-2-4, FC-2-5 (NOTE 2)             | 12                    | 20 A | 1           |           |              |           | 1584                       | --    |                  | 1     | --        | -         | SPACE                 |       | 42     |    |
|       |                                     | TOTAL CONNECTED LOAD: |      |             |           | 6757 W       | 7795 W    | 9211 W                     | AMPS: | 66 A             | LOAD: | 23762 W   |           |                       |       |        |    |

NOTES:  
1. PROVIDE LOCKABLE CIRCUIT BREAKER.  
2. PROVIDE AFCI TYPE CIRCUIT BREAKER.