

## Fargo VAMC – Refurbish Elevators and Replace Controls

Fargo, North Dakota Project #19-2481

February 9, 2024

## ADDENDUM NO. 1

The following becomes a part of the original Plans and Specifications, just as if printed and bound therein, and takes precedence over any items that may conflict. The bidder shall acknowledge receipt of this Addendum on his bid form, incorporating its provisions in his bid.

#### **SPECIFICATIONS:**

- 1. Section 21 13 13 1.5 Quality Assurance A: Wet-Pipe Sprinkler Systems Remove reference to 'Oklahoma' and replace with 'North Dakota'.
  - a. See attached revised Specification Section 21 13 13 Wet-Pipe Sprinkler Systems.

## **CHANGES AND CLARIFICATIONS TO DRAWINGS:**

## **ARCHITECTURAL**

Drawing Sheet AD5.21 ENLARGED PLANS - DEMOLITION – See revised drawing sheet for the inclusion of additional floor demo to support the installation of underfloor plumbing at Elevator #10.

Drawing Sheet A5.21 ENLARGED PLANS – See revised drawing sheet for the inclusion of additional floor repair to support the installation of underfloor plumbing at Elevator #10.

## PLUMBING

Drawing Sheet P0.00 PLUMBING ABBREIVIATIONS, SYMBOLS, LEGENDS AND GENERAL NOTES – See revised drawing sheet for removal of epoxy coated steel requirement.

#### **PLAN HOLDERS:**

Provided by Fargo VAMC

END OF ADDENDUM NO. 1

# SECTION 21 13 13 WET-PIPE SPRINKLER SYSTEMS

#### PART 1 - GENERAL

#### 1.1 DESCRIPTION

- A. Design, installation, and testing shall be in accordance with NFPA 13, 2019 Edition. See Section 1.6.B for additional standards.
- B. Modification of the existing sprinkler systems serving existing elevator pits, shafts and penthouses as indicated on the drawings and as further required by these specifications.

#### 1.2 RELATED WORK

- A. Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES
- В.
- C. Section 07 84 00, FIRESTOPPING
- D.
- E. Section 28 31 00, FIRE DETECTION AND ALARM.

#### 1.3 DESIGN CRITERIA

- A. Design Basis Information: Provide design, materials, equipment, installation, inspection, and testing of the automatic sprinkler system in accordance with the requirements of NFPA 13.
- B. Sprinkler Protection: Sprinkler hazard classifications shall be in accordance with NFPA 13. The office space and circulation space shall be classified as a light hazard occupancy. The hazard classification examples of uses and conditions identified in the Annex of NFPA 13 shall be mandatory for areas not listed below. Request clarification from the Government for any hazard classification not identified.
- C. Hydraulic Calculations: Calculated demand including hose stream requirements shall fall no less than 10 percent below the available water supply curve.
- D. Zoning: For each sprinkler zone confirm an existing control valve, flow switch, and test and drain assembly with pressure gauge. For buildings greater than two stories, confirm a check valve at each control valve.

#### 1.4 SUBMITTALS

A. Submit as one package in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES. Prepare detailed working drawings that are signed by a NICET Level III or Level IV Sprinkler Technician

Fargo VAMC Refurbish Elevators and Replace Controls or stamped by a Registered Professional Engineer licensed in the field of Fire Protection Engineering. As the Government review is for technical adequacy only, the installer remains responsible for correcting any conflicts with other trades and building construction that arise during installation. Partial submittals will not be accepted. Material submittals shall be approved prior to the purchase or delivery to the job site. Suitably bind submittals in notebooks or binders and provide an index referencing the appropriate specification section. In addition to the hard copies, provide submittal items in Paragraphs 1.4(A)1 through 1.4(A)5 electronically in pdf format on a compact disc or as directed by the COR. Submittals shall include, but not be limited to, the following:

## 1. Qualifications:

- a. Provide a copy of the installing contractors Oklahoma state contractor's license.
- b. Provide a copy of the NICET certification for the NICET Level III or Level IV Sprinkler Technician who prepared and signed the detailed working drawings unless the drawings are stamped by a Registered Professional Engineer licensed in the field of Fire Protection Engineering.
- c. Provide documentation showing that the installer has been actively and successfully engaged in the installation of commercial automatic sprinkler systems for the past ten years.
- 2. Drawings: Submit detailed 1:100 (1/8 inch) scale (minimum) working drawings conforming to the Plans and Calculations chapter of NFPA 13. Drawings shall include graphical scales that allow the user to determine lengths when the drawings are reduced in size. Include a plan showing the piping to the water supply test location.
- 3. Manufacturer's Data Sheets: Provide data sheets for all materials and equipment proposed for use on the system. Include listing information and installation instructions in data sheets. Where data sheets describe items in addition to those proposed to be used for the system, clearly identify the proposed items on the sheet.

#### 4. Calculation Sheets:

Submit hydraulic calculation when required on sheets in tabular form conforming to the requirements and recommendations of the Plans and Calculations chapter of NFPA 13.

- 5. Valve Charts: Provide a valve chart that identifies the location of each control valve. Coordinate nomenclature and identification of control valves with COR. Where existing nomenclature does not exist, the chart shall include no less than the following: Tag ID No., Valve Size, Service (control valve, main drain, aux. drain, inspectors test valve, etc.), and Location.
- 6. Final Document Submittals: Provide as-built drawings, testing and maintenance instructions in accordance with the requirements in Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES. In addition, submittals shall include, but not be limited to, the following:
  - a. A complete set of as-built drawings showing the installed system with the specific interconnections between the system switches and the fire alarm equipment. Provide a complete set in the formats as follows. Submit items 2 and 3 below on a compact disc or as directed by the COR.
    - 1) One full size (or size as directed by the COR) printed copy.
    - 2) One complete set in electronic pdf format.
    - 3) One complete set in AutoCAD format or a format as directed by the COR.
  - b. Material and Testing Certificate: Upon completion of the sprinkler system installation or any partial section of the system, including testing and flushing, provide a copy of a completed Material and Testing Certificate as indicated in NFPA 13. Certificates shall be provided to document all parts of the installation.
  - c. Operations and Maintenance Manuals that include step-by-step procedures required for system startup, operation, shutdown, and routine maintenance and testing. The manuals shall include the manufacturer's name, model number, parts list, and tools that should be kept in stock by the owner for routine maintenance, including the name of a local supplier, simplified wiring and controls diagrams, troubleshooting guide, and recommended service organization, including address and telephone number, for each item of equipment.
  - d. One paper copy of the Material and Testing Certificates and the Operations and Maintenance Manuals above shall be provided in a

- binder. In addition, these materials shall be provided in pdf format on a compact disc or as directed by the COR.
- e. Provide one additional copy of the Operations and Maintenance Manual covering the system in a flexible protective cover and mount in an accessible location adjacent to the riser or as directed by the COR.

#### 1.5 QUALITY ASSURANCE

- A. Installer Reliability: The installer shall possess a valid State of North Dakota contractor's license. The installer shall have been actively and successfully engaged in the installation of commercial automatic sprinkler systems for the past ten years.
- B. Materials and Equipment: All equipment and devices shall be of a make and type listed by UL or approved by FM, or other nationally recognized testing laboratory for the specific purpose for which it is used. All materials, devices, and equipment shall be approved by the VA. All materials and equipment shall be free from defect. All materials and equipment shall be new unless specifically indicated otherwise on the contract drawings.

#### 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 the basic designation only.
- B. National Fire Protection Association (NFPA):

13-19Installation of Sprinkler Systems
25-20Inspection, Testing, and Maintenance of Water-
Based Fire Protection Systems
101-21Life Safety Code
170-21Fire Safety Symbols

#### PART 2 - PRODUCTS

#### 2.1 PIPING & FITTINGS

- A. Piping and fittings for sprinkler systems shall be in accordance with NFPA 13.
  - Plain-end pipe fittings with locking lugs or shear bolts are not permitted.
  - 2. Piping 2 inches and smaller shall be black steel Schedule 40 with threaded end connections.

- 3. Piping sizes 2 ½ inches and larger shall be black steel Schedule 10 with grooved connections. Grooves in Schedule 10 piping shall be rolled grooved only.
- 4. Plastic piping shall not be permitted except for drain piping.
- 5. Flexible sprinkler hose shall be FM Approved and limited to hose with threaded end fittings with a minimum inside diameter of 1-inch and a maximum length of 6-feet.

#### 2.2 VALVES

- A. General:
  - 1. Valves shall be in accordance with NFPA 13.
  - Do not use quarter turn ball valves for 2 inch or larger drain valves.
- B. Control Valve: The control valves shall be a listed indicating type.

  Control valves shall be UL Listed or FM Approved for fire protection installations. System control valves shall be rated for normal system pressure but in no case less than 175 PSI.
- C. Check Valve: Shall be of the swing type with a flanged cast iron body and flanged inspection plate.

#### 2.3 SPRINKLERS

- A. All sprinklers shall be FM approved quick response.
- B. Provide sprinkler guards in accordance with NFPA 13 and when the elevation of the sprinkler head is less than 7 feet 6 inches above finished floor. The sprinkler guard shall be UL listed or FM approved for use with the corresponding sprinkler.

#### 2.4 SPRINKLER CABINET

- A. Update existing sprinkler cabinet with the required number of sprinkler heads of all ratings and types installed, and a sprinkler wrench for each type of sprinkler in accordance with NFPA 13.
- B. Provide a list of sprinklers installed in the area of work in the cabinet. The list shall include the following:
  - 1. Manufacturer, model, orifice, deflector type, thermal sensitivity, and pressure for each type of sprinkler in the cabinet.
  - 2. General description of where each sprinkler is used.
  - 3. Quantity of each type present in the cabinet.
  - 4. Issue or revision date of list.

#### 2.5 SPRINKLER SYSTEM SIGNAGE

Rigid plastic, steel or aluminum signs with white lettering on a red background with holes for easy attachment. Sprinkler system signage shall be attached to the valve or piping with chain.

#### 2.6 SWITCHES:

- A. Water flow Alarm Switches: Confirm existing is mechanical, non-coded, non-accumulative retard and adjustable from 0 to 60 seconds minimum. Set flow switches at an initial setting between 20 and 30 seconds.
- B. Valve Supervisory Switches for Ball and Butterfly Valves: May be integral with the valve.

#### 2.7 GAUGES

Provide gauges as required by NFPA 13. Provide gauges where the normal pressure of the system is at the midrange of the gauge.

#### 2.8 PIPE HANGERS, SUPPORTS AND RESTRAINT OF SYSTEM PIPING

Pipe hangers, supports, and restraint of system piping shall be in accordance with NFPA 13.

#### 2.9 WALL, FLOOR AND CEILING PLATES

Provide chrome plated steel escutcheon plates.

#### 2.10 VALVE TAGS

Engraved black filled numbers and letters not less than 1/2 inch high for number designation, and not less than 1/4 inch for service designation on 19 gage, 1-1/2 inches round brass disc, attached with brass "S" hook, brass chain, or permanent nylon tie wraps.

### PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Installation shall be accomplished by the licensed contractor. Provide a qualified technician, experienced in the installation and operation of the type of system being installed, to supervise the installation and testing of the system.
- B. Installation of Piping: Accurately cut pipe to measurements established by the installer and work into place without springing or forcing. In any situation where bending of the pipe is required, use a standard pipe-bending template. Conceal piping in spaces that have finished ceilings. In stairways, locate piping as near to the ceiling as possible to prevent tampering by unauthorized personnel and to provide a minimum headroom clearance of seven feet six inches. Piping shall not obstruct the minimum means of egress clearances required by NFPA 101.

- Pipe hangers, supports, and restraint of system piping, shall be installed in accordance with NFPA 13.
- C. Welding: Conform to the requirements and recommendations of NFPA 13.
- D. Drains: Provide drips and drains, including low point drains, in accordance with NFPA 13. Pipe drains to discharge at safe points outside of the building or to sight cones attached to drains of adequate size to readily carry the full flow from each drain under maximum pressure. Do not provide a direct drain connection to sewer system or discharge into sinks. Install drips and drains where necessary and required by NFPA 13. The drain piping shall not be restricted or reduced and shall be of the same diameter as the drain collector.
- E. Supervisory Switches: Confirm supervisory switches are provided for all sprinkler control valves.
- F. Waterflow Alarm Switches: Confirm existing waterflow alarm switches are provided on the existing sprinkler riser for the second floor.
- G. Inspector's Test Connection: Confirm existing in accordance with NFPA 13, located in a secured area, and discharged to the exterior of the building.
- H. Affix cutout disks, which are created by cutting holes in the walls of pipe for flow switches and non-threaded pipe connections to the respective waterflow switch or pipe connection near to the pipe from where they were cut.
- I. Provide escutcheon plates for exposed piping passing through walls, floors or ceilings.
- J. Sleeves: Provide for pipes passing through masonry or concrete. Provide space between the pipe and the sleeve in accordance with NFPA 13. Seal this space with a UL Listed through penetration fire stop material in accordance with Section 07 84 00, FIRESTOPPING. Where core drilling is used in lieu of sleeves, also seal space. Seal penetrations of walls, floors and ceilings of other types of construction, in accordance with Section 07 84 00, FIRESTOPPING.
- K. Firestopping shall be provided for all penetrations of fire resistance rated construction. Firestopping shall comply with Section 07 84 00, FIRESTOPPING.
- L. Any non-factory painted sprinkler shall be replaced with a new sprinkler.

- M. Sprinkler System Signage: Provide rigid sprinkler system signage in accordance with NFPA 13 and NFPA 25. Sprinkler system signage shall include, but not limited to, the following:
  - 1. Identification Signs:
    - a. Provide signage for each control valve, drain valve, sprinkler cabinet, and inspector's test valve.
    - b. Provide valve tags for each operable valve. Coordinate nomenclature and identification of operable valves with COR. Where existing nomenclature does not exist, the Tag Identification shall include no less than the following: (FP-B-F/SZ-#) Fire Protection, Building Number, Floor Number/Smoke Zone (if applicable), and Valve Number. (E.g., FP-500-1E-001) Fire Protection, Building 500, First Floor East, Number 001.)
  - 2. Instruction/Information Signs:
    - a. Provide signage for each control valve to indicate valve function and to indicate what system is being controlled.
    - b. Provide signage indicating the number and location of low point drains.
  - 3. Hydraulic Placards (when required):
    - a. Provide signage indicating hydraulic design information. The placard shall include:
      - (1) Location of the design area or areas
      - (2) Size (area) of or number of sprinklers in the design area
      - (3) Discharge densities over the design area or areas
      - (4) Required flow and residual pressure demand at the base of the riser or fire pump where applicable
      - (5) Occupancy classification or commodity classification and maximum permitted storage height and configuration
      - (6) Hose stream allowance included in addition to the sprinkler demand
      - (7) Name of the installing contractor.
    - b. Locate hydraulic placard information signs at the sprinkler riser main control valve.
- N. Repairs: Repair damage to the building or equipment resulting from the installation of the sprinkler system by the installer at no additional expense to the Government.

O. Interruption of Service: There shall be no interruption of the existing sprinkler protection, water, electric, or fire alarm services without prior permission of the Contracting Officer. Contractor shall develop an interim fire protection program where interruptions involve occupied spaces. Request in writing at least one week prior to the planned interruption.

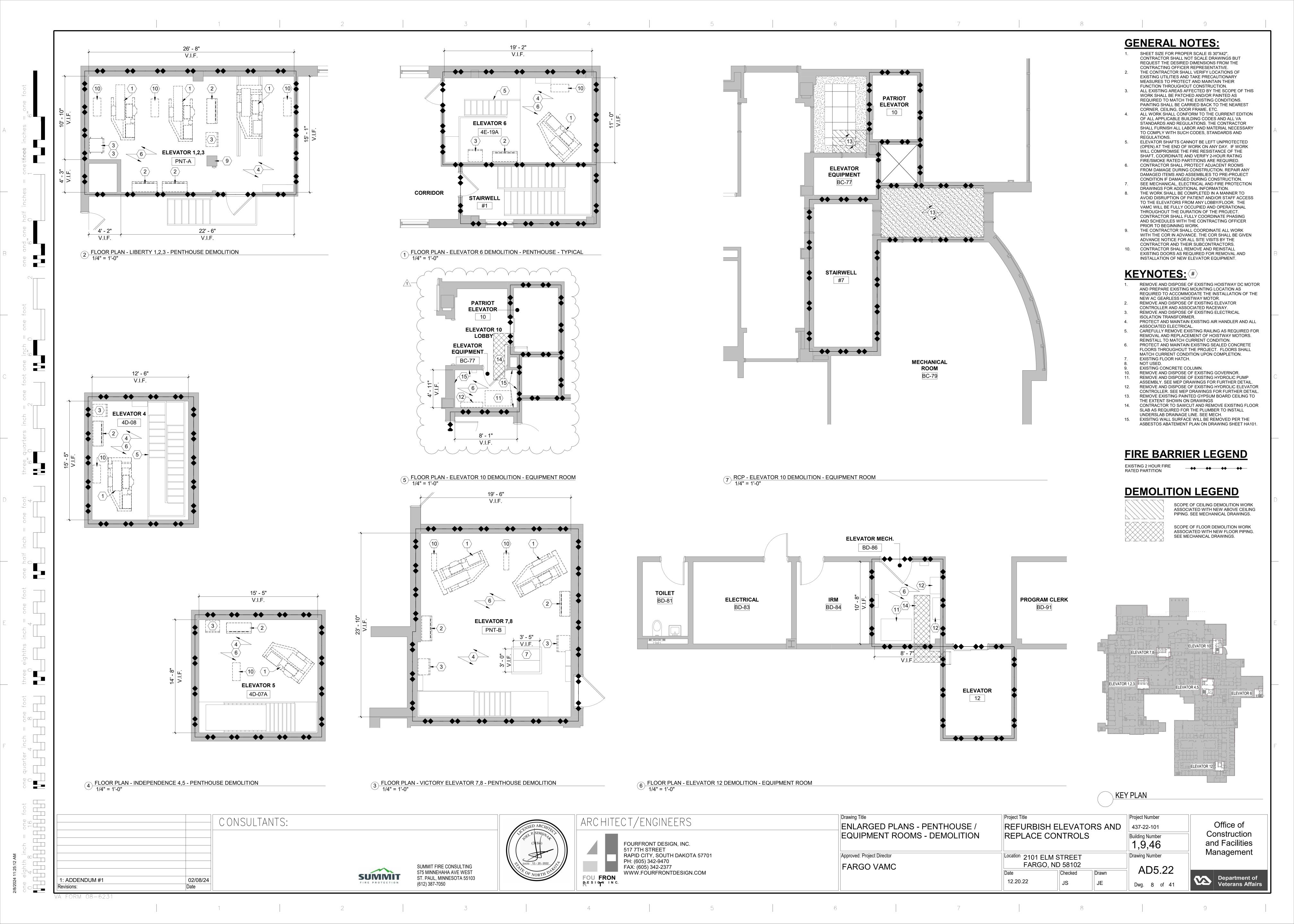
#### 3.2 INSPECTION AND TEST

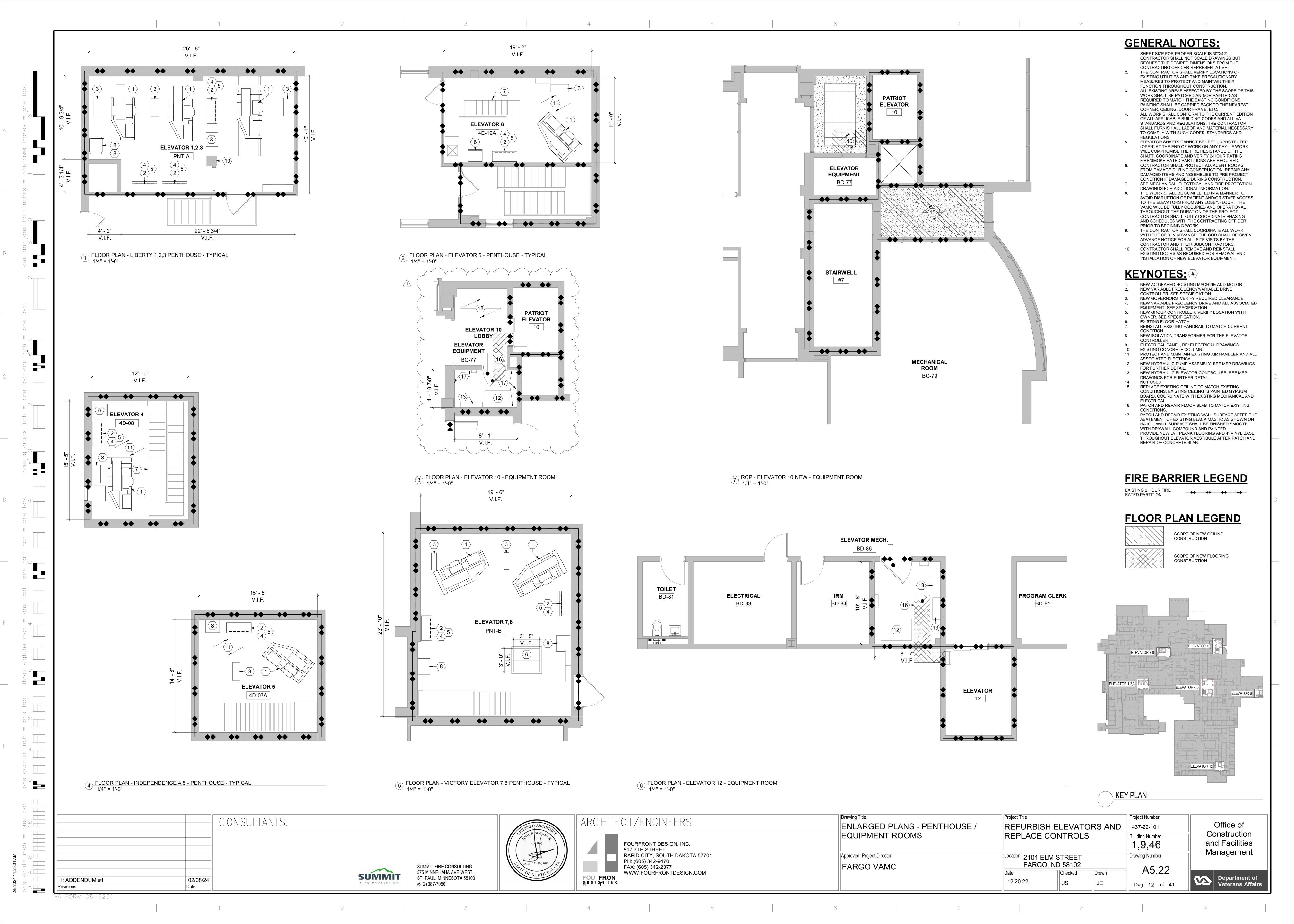
- A. Preliminary Testing: Flush newly installed systems prior to performing hydrostatic tests in order to remove any debris which may have been left as well as ensuring piping is unobstructed. Hydrostatically test system, including the fire department connections, as specified in NFPA 13, in the presence of the Contracting Officers Representative (COR) or his designated representative. Test and flush underground water line prior to performing these hydrostatic tests.
- B. Final Inspection and Testing: Subject system to tests in accordance with NFPA 13, and when all necessary corrections have been accomplished, advise COR to schedule a final inspection and test. Connection to the fire alarm system shall have been in service for at least ten days prior to the final inspection, with adjustments made to prevent false alarms. Furnish all instruments, labor and materials required for the tests and provide the services of the installation foreman or other competent representative of the installer to perform the tests. Correct deficiencies and retest system as necessary, prior to the final acceptance. Include the operation of all features of the systems under normal operations in test

#### 3.3 INSTRUCTIONS

Furnish the services of a competent instructor for not less than two hours for instructing personnel in the operation and maintenance of the system, on the dates requested by the COR.

---END---





# **ABBREVIATIONS:**

AIR HANDLING UNIT ACCESS PANEL AIR SEPARATOR **ABOVE GRADE** AMERICAN SOCIETY OF MECHANICAL ENGINEERS **BUILDING MANAGEMENT SYSTEM BELOW GRADE** CONDENSATE DRAIN CFM CUBIC FEET PER MINUTE CO CLEANOUT CONDENSATION CONTRACTING OFFICER'S REPRESENTATIVE CIRCULATING PUMP CONDENSATE RETURN CONTROL VALVE DAMP. DAMPER DAT DISCHARGE AIR TEMPERATURE DCW DOMESTIC COLD WATER DE DEIONIZED WATER DEG DEGREES DOMESTIC HOT WATER RETURN DOMESTIC HOT WATER DIFF. DIFFERENTIAL DIST DISTRUBUTION DS DOWNSPOUT DWV DRAIN, WASTE AND VENT **EXISTING** EXHAUST AIR ENERGY CONTROL CENTER EEW EMERGENCY EYE WASH ELECT. ELECTRICAL **ELEVATION** ELEV ENERGY RECOVERY COIL - AHU ESH EMERGENCY SHOWER **EWC** ELECTRIC WATER COOLER **FAHRENHEIT** FLOOR DRAIN FLOOR SINK FILTER FILT. FPM FEET PER MINUTE FEET GALLONS GENERAL CONTRACTOR GPM GALLONS PER MINUTE GLYCOL TANK HEIGHT HUMIDIFIER - AHU HOSE BIBB HORSEPOWER HIGH PRESSURE STEAM HOUR HRP HEAT RECOVERY PUMP HUMIDIFICATION SET POINT HEATING, VENTILATION, AND AIR CONDITIONING HX HEAT EXCHANGER HYDRAULIC OIL HYDRAULIC OIL DRAIN HERTZ INTERNATIONAL BUILDING CODE INTERNAIONAL ENERGY CONSERVATION CODE INTEGRAL FACE AND BYPASS INTERNATIONAL MECHANICAL CODE I/O INPUT/OUTPUT INTERNATIONAL PLUMBING CODE LABORATORY EQUIPMENT COMPRESSED AIR LAVATORY

LABORATORY EQUIPMENT VACUUM

THOUSAND BRITISH THERMAL UNITS PER HOUR

LOW PRESSURE STEAM

MECHANICAL CONTRACTOR

LBS

LPS

MAX

MBH

REVISION #1 - ADDENDUM #1

Revisions:

POUNDS

MEDICAL AIR

MAXIMUM

MOTORIZED DAMPER MD MECHANICAL MFG MANUFACTURER MIN MINIMUM MIN MINUTE

PASCAL

**MILLIMETER** MEDIUM PRESSURE STEAM MOISTURE (HUMIDITY) TRANSMITTER

MANUAL VENT NORMALLY CLOSED NOISE CRITERIA LEVEL NATIONAL FIRE PROTECTION ASSOCIATION

NG NATURAL GAS NATIONAL PIPE THREAD **OUTSIDE AIR** OUTSIDE AIR TEMPERATURE ORAL EVACUATION OVERFLOW ROOF DRAIN ORD

OSA OUTSIDE AIR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OXY OXYGEN

PUMPED CONDENSATE PREHEAT STEAM COIL - AHU PRESSURE DROP PRESSURE DIFFERENTIAL SENSOR PHASE

PROPORTIONAL INTEGRAL PID PROPORTIONAL INTEGRAL DERIVATIVE PRESS. PRESSURE HIGH PRESSURE SWITCH

POUNDS PER SQUARE INCH - GAUGE PSL LOW PRESSURE SWITCH QUANT. QUANTITY

**RADIUS** RETURN RETURN AIR REHEAT STEAM COIL - AHU RD ROOF DRAIN REQUIRED REVOLUTIONS PER MINUTE

SINK SUPPLY AIR SANITARY SOFT COLD WATER SD SMOKE DAMPER FAN SECTION - AHU SF SQUARE FEET SHOWER STATIC PRESSURE SPECIFICATION SANITARY SEWER SST START/STOP STEAM VENT

**THERMOSTAT** TEMPERATURE TEMPERATURE SENSOR/TRANSMITTER

TYPICAL **UNIT HEATER** 

VARIABLE AIR VOLUME VFD VARIABLE FREQUENCY DRIVE VARIABLE SPEED MOTOR CONTROLLER VENT THROUGH ROOF

VTR WITH WET BULB WATER CLOSET WATER DISPENSER WD

ZONE AIR TEMPERATURE VALVE OR DAMPER CONTROLLER **PLUMBING SYMBOLS** 

CONNECT

3-WAY CONTROL VALVE A BALL VALVE 2-WAY CONTROL VALVE CHECK VALVE TEMPERATURE SENSOR or 🗸 TRIPLE DUTY VALVE THERMOSTATIC MIXING VALVE PRESSURE REDUCING VALVE VACUUM BREAKER REDUCED PRESSURE ZONE VALVE → TEST PORT PRESSURE RELIEF VALVE HAMMER ARRESTOR SOLENOID VALVE PIPE UNION PRESSURE GAUGE PIPE ELBOW PIPE DOWN THERMOMETER PUMP PIPE UP STEAM TRAP PIPE TEE DOWN STRAINER 2 PLUMBING PLAN NOTE CONCENTRIC REDUCER

PLUMBING SHEET INDEX

PLUMBING ABBREVIATIONS, SYMBOLS, LEGENDS, AND GENERAL NOTES PLUMBING PLANS AND SECTIONS PLUMBING ISOMETRIC VIEWS PLUMBING DETAILS AND SCHEDULES

## **GENERAL PLUMBING NOTES:**

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL FUEL GAS CODE (IFGC), NFPA 101 LIFE SAFETY CODE, AND ANY AUTHORITY HAVING JURISDICTION. THIS IS A FEDERAL PROJECT, AS SUCH ALL CODE REQUIREMENTS ARE REQUIRED.

ALL EQUIPMENT, MATERIALS, AND ARTICLES INCORPORATED IN THE WORK SHALL BE NEW AND OF COMPARABLE QUALITY AS SPECIFIED. ALL WORKMANSHIP SHALL BE FIRST-CLASS AND SHALL BE PERFORMED BY MECHANICS SKILLED AND REGULARLY EMPLOYED IN THEIR RESPECTIVE TRADES.

ALL WORK SHALL BE COORDINATED WITH ALL AFFECTED TRADES PRIOR TO STARTING WORK. REWORK REQUIRED DUE TO COORDINATION ISSUES SHALL BE DONE BY THE INSTALLATION CONTRACTOR WITHOUT INCREASED COST TO THE OWNER. CONTRACTOR TO COORDINATE WITH THE OWNER PRIOR TO WORK FOR SCHEDULING OR ANY UTILITY SHUT DOWN.

THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. ALTHOUGH EVERY ATTEMPT HAS BEEN MADE TO INDICATE THE EXACT ROUTING AND LOCATION OF PROPOSED SYSTEMS, NOT ALL OFFSETS, REQUIRED FITTINGS AND/OR CONDITIONS CAN BE SHOWN. THE CONTRACTOR SHALL COORDINATE WORK AND MAKE REQUIRED CHANGES TO THE ROUTING IN ORDER TO AVOID CONFLICTS WITHOUT ANY INCREASED COST TO THE OWNER.

SYSTEMS DESIGNATED TO BE PROVIDED AND INSTALLED WITHIN THESE CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLETE AND OPERATIONAL. PROVIDE EVERYTHING ESSENTIAL FOR THE COMPLETION OF THE WORK TO MAKE THE SYSTEM READY FOR NORMAL AND PROPER OPERATION, INCLUDING ALL WORK OR MATERIALS NOT DIRECTLY SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS, BUT NECESSARY FOR THE PROPER OPERATION OF THE SYSTEM.

PLUMBING CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER MAINTENANCE CLEARANCES ARE MAINTAINED. CLOSE COORDINATION WILL BE REQUIRED WITH THE MECHANICAL PIPING, HVAC, FIRE PROTECTION, AND ELECTRICAL CONTRACTOR.

ALL DOMESTIC WATER PIPING ABOVE GRADE IS INTENDED TO BE INSULATED, TYPE K OR L HARD DRAWN COPPER PIPE AS SPECIFIED. TYPE M COPPER PIPE IS NOT ALLOWED.

ALL WASTE AND VENT PIPING ABOVE GRADE IS INTENDED TO BE CAST IRON OR DUCTILE IRON AS SPECIFIED. PVC IS NOT ALLOWED ABOVE GRADE, ALL WASTE TAND VENT PIPING BELOW GRADE IS INTENDED TO BE PVC OR CAST IRON PIPING AS munimum munimum minimum minimu

FOR PIPE SIZES NOT SHOWN ON FLOOR PLANS SEE PIPING ISOMETRIC DRAWINGS.

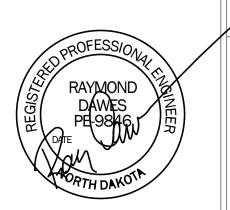
CONSULTANTS:

02/08/24

Date

SUMMIT

ST. PAUL, MINNESOTA 55103 (612) 387-7050





PLUMBING ABBREVIATIONS, SYMBOLS, LEGENDS, AND GENERAL NOTES Approved: Project Director FARGO VAMC

Project Title REFURBISH ELEVATORS AND REPLACE CONTROLS Location 2101 ELM STREE

Office of Construction 1,9,46 and Facilities Management Drawing Number

Department of eterans Affairs

SUMMIT FIRE CONSULTING 575 MINNEHAHA AVE WEST RAPID CITY, SOUTH DAKOTA 57701

FARGO, ND 58102 Checked 12.20.22

P0.00 Dwg. 17 of 41

Project Number

437-22-101