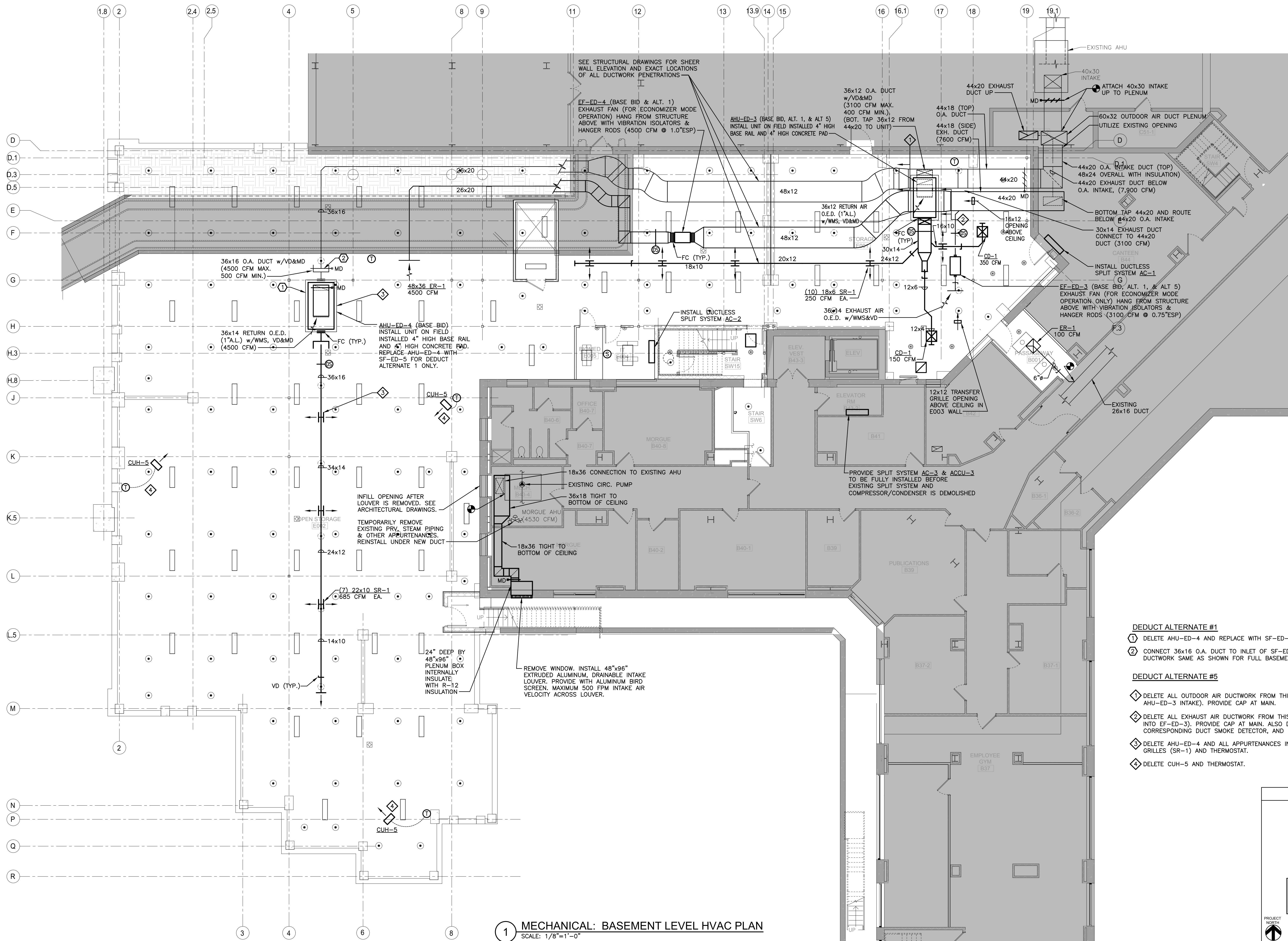


Project Number 528-809
Building Number 1
Drawing Number 1-MH-101B

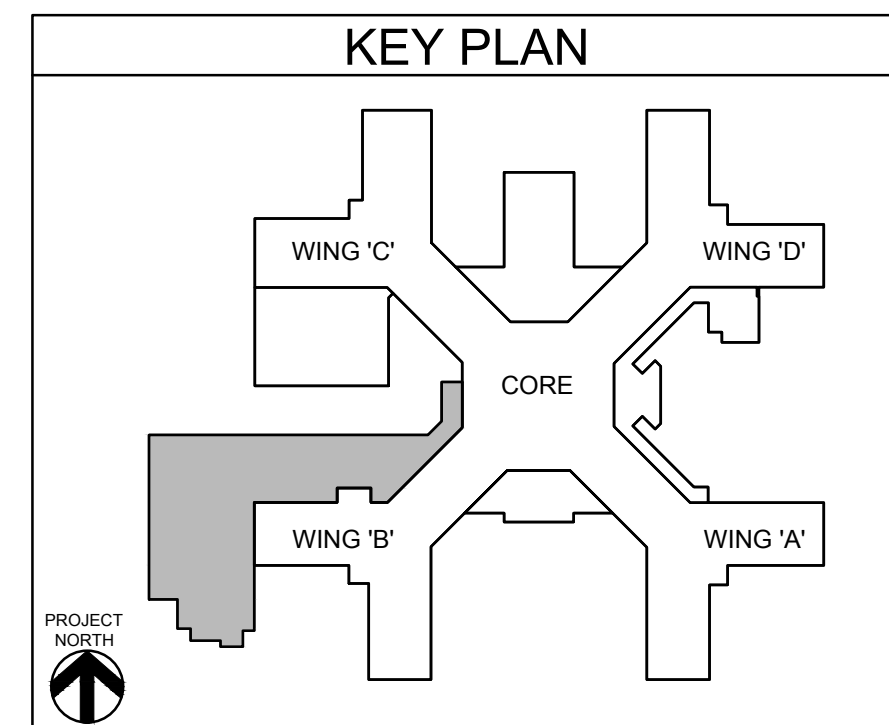
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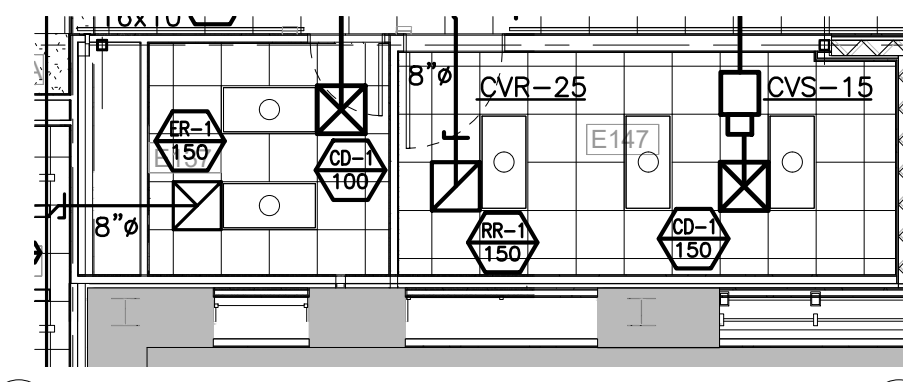
1 MECHANICAL: BASEMENT LEVEL HVAC PLAN
SCALE: 1/8"=1'-0"

- DEDUCT ALTERNATE #1**
- 1 DELETE AHU-ED-4 AND REPLACE WITH SF-ED-5.
 - 2 CONNECT 36x16 O.A. DUCT TO INLET OF SF-ED-5 AND ROUTE 36x16 SUPPLY AIR DUCTWORK SAME AS SHOWN FOR FULL BASEMENT ON THIS PLAN (1-MH-200).
- DEDUCT ALTERNATE #5**
- 1 DELETE ALL OUTDOOR AIR DUCTWORK FROM THIS POINT, LEFT. (AFTER DROP INTO AHU-ED-3 INTAKE). PROVIDE CAP AT MAIN.
 - 2 DELETE ALL EXHAUST AIR DUCTWORK FROM THIS POINT, LEFT. (AFTER CONNECTION INTO EF-ED-3). PROVIDE CAP AT MAIN. ALSO DELETE EF-ED-4, ITS CORRESPONDING DUCT SMOKE DETECTOR, AND ER-1 GRILLE.
 - 3 DELETE AHU-ED-4 AND ALL APPURTENANCES INCLUDING ITS SUPPLY DUCTWORK, GRILLES (SR-1) AND THERMOSTAT.
 - 4 DELETE CUH-5 AND THERMOSTAT.



		CONSULTANT		ARCHITECT/ENGINEER OF RECORD		STAMP		Office of Construction and Facilities Management		Drawing Title		Phase		Project Title		Project Number	
		HYMAN HAYES ASSOCIATES		FELLENER III ENGINEERING LLP		JOHN D. FELLENER, P.E.		VA		MECHANICAL: BASEMENT LEVEL HVAC PLAN		100% FOR BID		STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT		528-809	
		800 TROY SCHNEIDER ROAD, STE 103 LARAWAY, NY 12110 (518) 452-3400 www.hymanhayes.com		FE PROJECT NO: 19-181		NY PROFESSIONAL ENGINEER NO. 069373-1				Approved: Project Director		FULLY SPRINKLERED		Location		Drawing Number	
		22 Mulberry St., Suite 2A, Middletown, NY 10940 1-845-343-1481; fx 855-320-8735		181 Church St., Suite 100, Poughkeepsie, NY 12601 1-845-454-9704; fx 855-320-8735										ALBANY, NY		1-MH-200	
		Revisions:		Date:										Issue Date		Checked	
														MARCH 18, 2022		JDF	
																SRB	

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**MECHANICAL: DEDUCT ALTERNATE #5
(SLAB ON GRADE) FIRST FLOOR HVAC PLAN**
SCALE: 1/8"=1'-0"

ALTERNATE:

- FOR ALTERNATE #5:
 - EXTEND 8" EXHAUST DUCTWORK TO ER-1 DUE TO ENLARGEMENT OF CHASE IN E137.

35x33 UP TO SPECIAL EXHAUST EF-ED-2

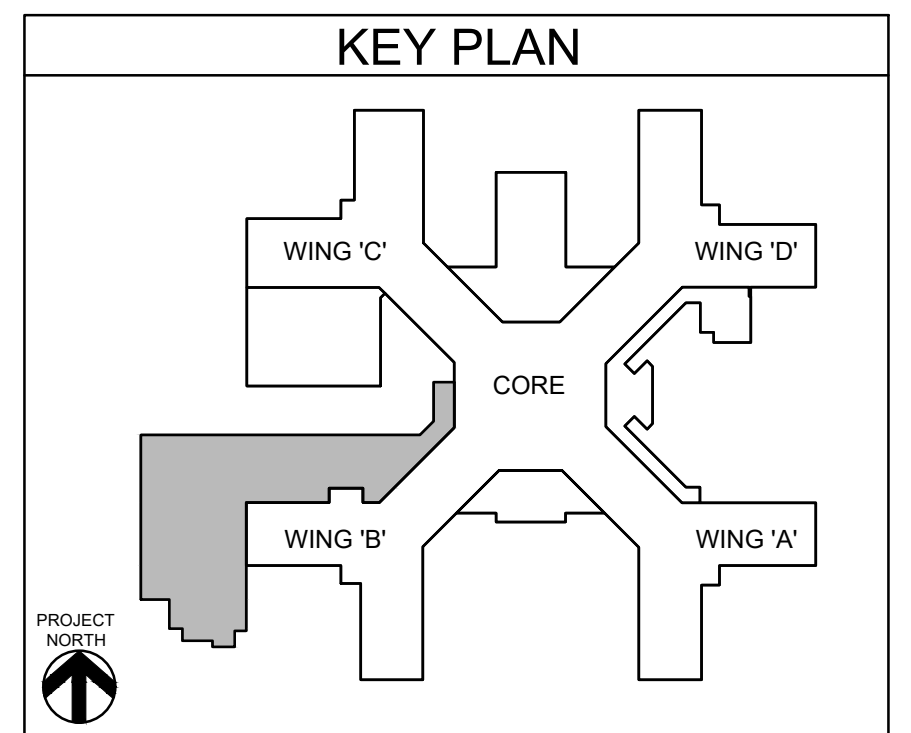
44x20 EXHAUST DUCT UP TO ROOF GOOSENECK

60x32 INTAKE DUCT UP TO ROOF GOOSENECK (64x36 OVERALL WITH INSULATION)

MECHANICAL: FIRST FLOOR HVAC PLAN
SCALE: 1/8"=1'-0"

KEYED NOTES:

- PROVIDE SOUND ATTENUATING ELBOW FOR ALL DROPS FROM AHU. PROVIDE KINETIC NOISE CONTROL OR APPROVED EQUAL. PROVIDE SHOP DRAWINGS FOR APPROVAL.
- 34x22 SUPPLY & EXHAUST UP TO ROOF. SEE ROOF PLAN 1-MH-202 FOR PENETRATION LOCATION ON ROOF.
- PROVIDE ROOM PRESSURE, TEMPERATURE & HUMIDITY MONITORING SYSTEM WITH VISUAL DISPLAY ON WALL NEXT TO ENTRANCE OF ROOM AND BAGNET INTERFACE TO BE CONNECTED TO BMS. COORDINATE FINAL LOCATIONS WITH V.A. C.O.R.
- 20x18 SUPPLY DUCT TO BE ROUTED IN THE LEFT SIDE OF THE SOFFIT TO AVOID PNEUMATIC TUBE RISER.
- ROUTE DUCTWORK INSIDE SOFFIT FRAMING.



CONSULTANT

HYMAN HAYES ASSOCIATES
H-HA

800 TROY SCHENECTADY
ROAD, STE 103
LATHAM, NY 12110
(518) 452-3470
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III
ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
1-845-343-1481; fx 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
1-845-454-9704; fx 855-320-8735

STAMP

JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

Office of
Construction
and Facilities
Management

VA U.S. Department
of Veterans Affairs

Drawing Title

**MECHANICAL:
FIRST FLOOR HVAC PLAN + DEDUCT. ALT.
(SLAB ON GRADE) FIRST FLOOR HVAC PLAN**

Approved: Project Director

Phase

100% FOR BID

FULLY SPRINKLERED

Project Title

STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location

ALBANY, NY

Issue Date

MARCH 18, 2022

Checked

JDF

Drawn

SRB

Project Number

528-809

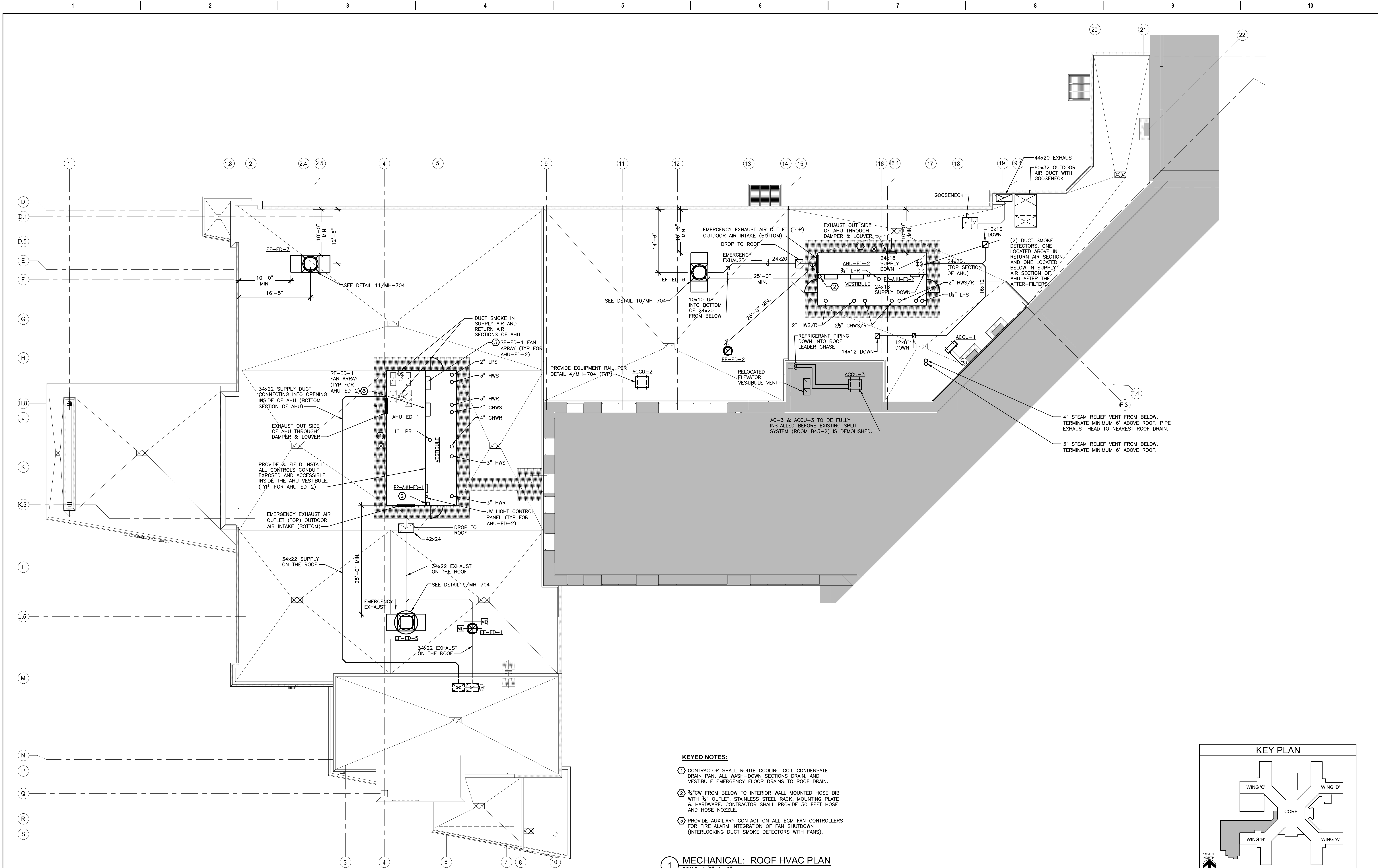
Building Number

1

Drawing Number

1-MH-201

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- KEYED NOTES:**
- CONTRACTOR SHALL ROUTE COOLING COIL CONDENSATE DRAIN PAN, ALL WASH-DOWN SECTIONS DRAIN, AND VESTIBULE EMERGENCY FLOOR DRAINS TO ROOF DRAIN.
 - 3/4" CW FROM BELOW TO INTERIOR WALL MOUNTED HOSE BIB WITH 3/4" OUTLET, STAINLESS STEEL RACK, MOUNTING PLATE & HARDWARE. CONTRACTOR SHALL PROVIDE 50 FEET HOSE AND HOSE NOZZLE.
 - PROVIDE AUXILIARY CONTACT ON ALL ECM FAN CONTROLLERS FOR FIRE ALARM INTEGRATION OF FAN SHUTDOWN (INTERLOCKING DUCT SMOKE DETECTORS WITH FANS).

1 MECHANICAL: ROOF HVAC PLAN
SCALE: 1/8"=1'-0"

Revisions:	Date:

CONSULTANT

HYMAN HAYES ASSOCIATES

I-HA

800 TROY SCHENECTADY ROAD, STE 103
LATAMAH, NY 12110
(518) 452-2470
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III

ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; fx 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704; fx 855-320-8735

www.fellip.com

STAMP

JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

Office of
Construction
and Facilities
Management

VA U.S. Department
of Veterans Affairs

Drawing Title

MECHANICAL:
ROOF HVAC PLAN

Approved: Project Director

Phase

100% FOR BID

FULLY SPRINKLERED

Project Title

STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location

ALBANY, NY

Issue Date

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Drawn

SRB

Project Number

528-809

Building Number

1

Drawing Number

1-MH-202

AHU				AHU POINT LIST	OUTPUTS										INPUTS					SYSTEM SOFTWARE/CONTROL								
					BINARY		ANALOG			BINARY		ANALOG			ALARM PROCESSING		APPLICATION											
AHU-ED-1	AHU-ED-2	AHU-ED-3	AHU-ED-4	SYSTEM COMPONENT:	ABBREVIATION	START/STOP	OPEN/CLOSE	SPEED COMMAND	VALVE POSITION	DAMPER POSITION	STATUS	OPEN/CLOSED	ALARM	PRESSURE	LOW TEMPERATURE	TEMPERATURE	PRESSURE	FLOW	STATIC PRESSURE	HUMIDITY	HIGH LIMIT	LOW LIMIT	OPEN	SCHEDULE	TEMPERATURE RESET	FULL COMMUNICATION	TRENDING	REMARKS
•	•			COOLING COIL FREEZE PUMP 1 DIFFERENTIAL PRESSURE	CCFP1-DP						•						•									•		
•	•			COOLING COIL FREEZE PUMP 1 STATUS	CCFP1-S																					•	ENERGIZES FPP ON AHU-ED-1+2	
•	•			COOLING COIL FREEZE STAT	CCF																	•				•		
•	•			RE-HEAT COIL FREEZE STAT	RHF																					•		
•	•	•	•	PRE-HEAT COIL ENTERING WATER	PH-EWT																	•				•		
•	•	•	•	PRE-HEAT COIL LEAVING WATER	PH-LWT																					•		
•	•	•	•	PRE-HEAT FREEZE STAT	PHF																					•	ENERGIZES FPP ON AHU-ED-1+2	
•	•			RE-HEAT COIL ENTERING WATER	RH-EWT																					•		
•	•			RE-HEAT COIL LEAVING WATER	RH-LWT																					•		
•	•	•	•	EXHAUST AIR STATIC PRESSURE	EASP															•						•		
•	•	•	•	RETURN AIR DUCT STATIC PRESSURE	RASP																	•				•		
•	•	•	•	DUCT SMOKE DETECTOR, SUPPLY	DSS								•													•	ENABLES FAN SHUT-DOWN	
•	•	•	•	DUCT SMOKE DETECTOR, RETURN	DSR																					•	ENABLES FAN SHUT-DOWN	
•	•	•	•	DUCT SMOKE DETECTOR, EXHAUST	DSE								•													•	ENABLES FAN SHUT-DOWN	
•	•	•	•	OUTSIDE AIR HUMIDITY	OAH																•					•		
•	•	•	•	RETURN AIR DAMPER	RD		•			•		•														•		
•	•			EMERGENCY MODE EXHAUST AIR DAMPER (RETURN)	EED-1		•		•	•		•														•		
•	•			EMERGENCY MODE EXHAUST AIR DAMPER (EXHAUST)	EED-2		•		•	•		•														•		
•	•			DISPERSION DAMPER	DMD		•		•	•		•														•		
•	•			GENERAL EXHAUST AIR DAMPER	EAD		•		•	•		•														•		
•	•			ECONOMIZER RELIEF DAMPER	ERD		•		•	•		•														•		
				ED ROOM E### CONTROLLER TEMPERATURE	ED-E###-T											•										•	FILL IN E### WITH EACH ROOM NUMBER A CONTROLLER IS IN	
				ED ROOM E### CONTROLLER PRESSURE	ED-E###-P												•									•	FILL IN E### WITH EACH ROOM NUMBER A CONTROLLER IS IN	
				ED ROOM E### CONTROLLER HUMIDITY	ED-E###-H																•					•	FILL IN E### WITH EACH ROOM NUMBER A CONTROLLER IS IN	
				ED CHS CONNECTION TEMPERATURE	ED-CHS												•									•		
				ED CHR CONNECTION TEMPERATURE	ED-CHR													•								•		
				ED HWS CONNECTION TEMPERATURE	ED-HWS													•								•		
				ED HWR CONNECTION TEMPERATURE	ED-HWR													•								•		
				ED MPS CONNECTION PRESSURE	ED-MPS													•								•		
				ED LPR CONNECTION PRESSURE	ED-LPR														•							•		
				ED-PRV INLET PRESSURE	PRV-IN														•							•		
				ED-PRV OUTLET PRESSURE	PRV-OUT														•							•		
				ED-PRV STEAM FLOW	PRV-FLOW															•						•		
				SPECIAL EXHAUST AIR DAMPER	SED		•		•																	•		
				SPECIAL EXHAUST AIR FLOW	SEF															•						•		
				VAV SUPPLY BOX ENTERING WATER TEMP	VAVS-#-EWT												•					•				•		
				VAV SUPPLY BOX LEAVING WATER TEMP	VAVS-#-LWT													•					•			•		
				VAV SUPPLY BOX HOT WATER VALVE	VAVS-#-CV				•										•							•		
				VAV SUPPLY BOX DISCHARGE AIR TEMP	VAVS-#-DAT													•								•		
				VAV SUPPLY BOX AIRFLOW (CFM)	VAVS-#-SAF														•							•		
				VAV SUPPLY BOX DAMPER	VAVS-#-SAD		•		•		•															•		
				VAV RETURN BOX AIRFLOW (CFM)	VAVR-#-RAF														•							•		
				VAV RETURN BOX DAMPER	VAVR-#-RAD		•		•		•															•		
				CAV SUPPLY BOX ENTERING WATER TEMP	CVS-#-EWT													•								•		
				CAV SUPPLY BOX LEAVING WATER TEMP	CVS-#-LWT														•							•		
				CAV SUPPLY BOX HOT WATER VALVE	CVS-#-CV				•										•							•		
				CAV SUPPLY BOX DISCHARGE AIR TEMP	CVS-#-DAT														•							•		
				CAV SUPPLY BOX AIRFLOW (CFM)	CVS-#-SAF														•							•		
				CAV SUPPLY BOX DAMPER	CVS-#-SAD		•		•		•															•		

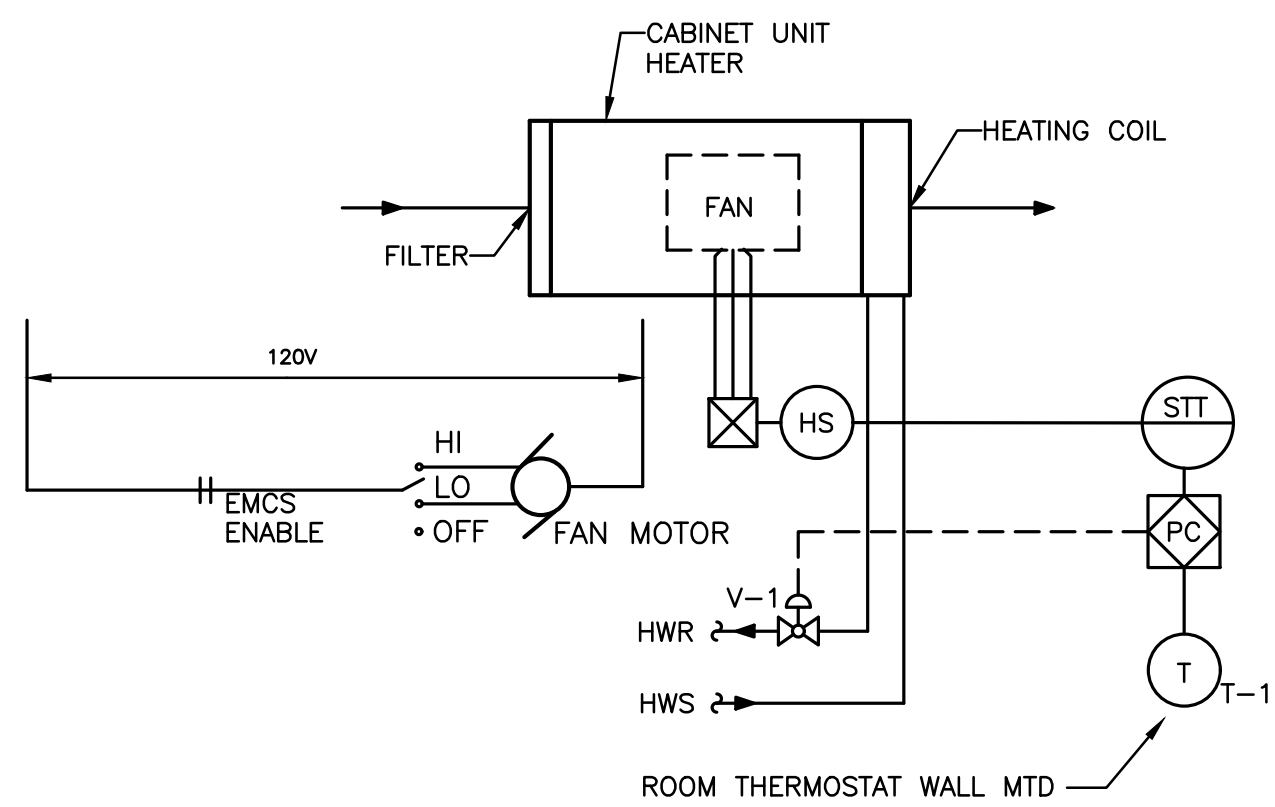
1. ALL CONTROLS POINTS ARE TO CONNECT INTO CLOSEST BMS ALC PANEL; ROOM S15 OR S1.

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1	2	3	4	5	6	7	8	9	10

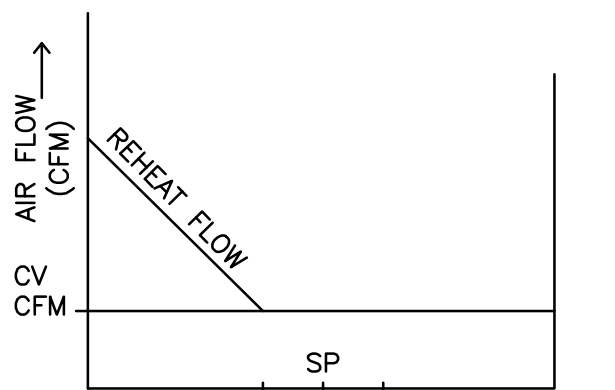
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HOT WATER CABINET UNIT HEATER SEQUENCE

1. CABINET HEATER SHALL OPERATE ON A SCHEDULE AS SET BY THE ECC. FAN STATUS SHALL BE MONITORED AND AN ALARM MESSAGE GENERATED IN THE EVENT THE UNIT FAILS TO RUN. THE ROOM TEMP SETPOINT WILL BE 70° (ADJ.). THE HOT WATER VALVE WILL BE ENABLED AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT. HI/LO/OFF SWITCH WILL ALLOW LOCAL FAN SPEED ADJUSTMENT.

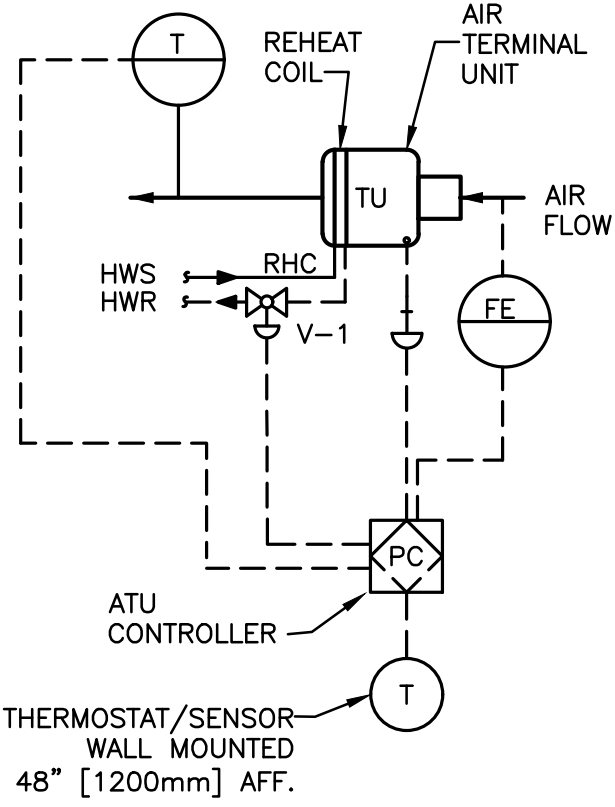


1 HOT WATER CABINET UNIT CONTROLS
N.T.S.



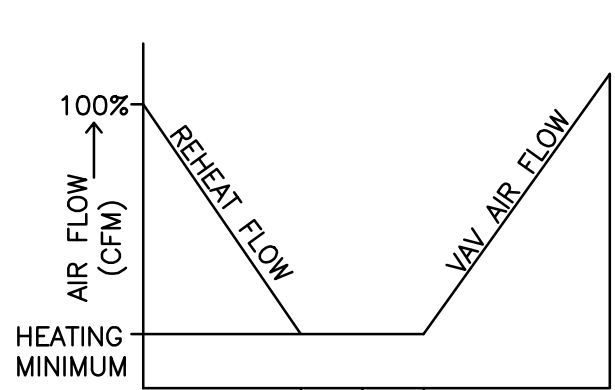
CV BOX CONTROL SEQUENCE
W/DEADBAND

- A. SET POINTS SHALL SET AS FOLLOWS:
COOLING 75° F (ADJ.)
HEATING 70° F (ADJ.)
DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINT WILL BE MAINTAINED
- B. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° THE ADJUSTABLE TOLERANCE OF ± .5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING
- C. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.



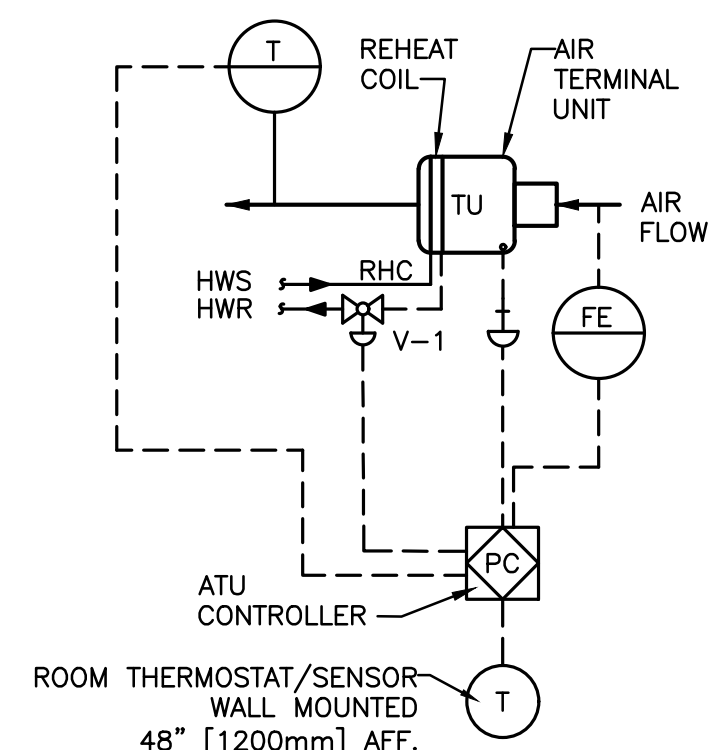
WITH REHEAT

2 CONSTANT VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM
N.T.S.



VAV BOX CONTROL SEQUENCE
W/DEADBAND

- A. SET POINTS SHALL BE SET AS FOLLOWS:
COOLING 75° F (ADJ.)
HEATING 70° F (ADJ.)
DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINTS WILL BE MAINTAINED.
- B. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
- C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± .5° F. THE ADJUSTABLE TOLERANCE OF ± .5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING
- D. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.



WITH REHEAT

3 VARIABLE VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM
N.T.S.

SEQUENCE OF OPERATIONS:

AHU-ED-1 & -2

1. GENERAL:

- 1.1 REFERENCE THE POINT SCHEDULE ON DRAWINGS FOR ALL SYSTEM FUNCTIONS, S/S, STATUS, CONTROL, ALARM, ETC.
- 1.2 THE UNIT IS NORMALLY STARTED AND STOPPED REMOTELY AT THE ECC.
- 1.3 WHEN THE SYSTEM IS DISABLED THE SUPPLY FANS, RETURN FANS, ROOFTOP EXHAUST FANS, INTAKE DAMPERS, EXHAUST DAMPERS, PRE-HEAT COIL CONTROL VALVES, RE-HEAT COIL CONTROL VALVES, CHILLED WATER COIL VALVES AND THE HUMIDIFIER VALVES SHALL BE CLOSED OFF, UNLESS REQUIRED OTHERWISE FOR FREEZE PROTECTION PER SECTION 6.
- 1.4 WHEN THE SYSTEM IS ENABLED, THE SUPPLY FAN AND RETURN FAN SHALL NOT START UNTIL THE END SWITCHES AT THE INTAKE AND RETURN AIR DAMPER/EXHAUST DAMPERS HAVE INDICATED THAT THE DAMPERS ARE OPENED TO THEIR SET-POINT PER THE OPERATING CONDITIONS.
- 1.5 NORMAL OPERATION - 24 HOUR CONTINUOUS OPERATION FOR AIR HANDLING UNITS AND EXHAUST FANS.
- 1.6 THE HEATING HOT WATER VALVES PHWV-1 AND PHWV-2 SHALL MODULATE IN HEATING MODE TO MAINTAIN SUPPLY AIR TEMPERATURE AFTER THE PREHEAT COIL, AS SENSED BY THE PHT SENSOR, OF 45°F (ADJ.). THE HEATING HOT WATER VALVES RHWV-1 AND RHWV-2 SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE, AS SENSED BY THE SAT SENSOR.
- 1.7 THE CHILLED WATER VALVES CCV-1 AND CCV-2 SHALL MODULATE IN COOLING MODE TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT OF 55°F (ADJ.).
- 1.8 HOT WATER VALVES PHWV-1, PHWV-2, RHWV-1, RHWV-2 AND CHILLED WATER VALVES CCV-1 AND CCV-2 SHALL BE SIZED AND CONTROLLED FOR A 1/3, 2/3 OPERATION.

2. TEMPERATURE CONTROL:

- 2.1 WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS ABOVE 75°F (ADJ.), THE RETURN AIR DAMPER RD, OUTSIDE AIR DAMPER OAD AND EXHAUST AIR DAMPER ERD SHALL NOT MODULATE AND SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION [AS INDICATED ON THE CONTROL SYSTEM SCHEMATIC]. CCV-1 AND CCV-2 SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AS SENSED BY THE SAT SENSOR.
- 2.2 WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW THE SUPPLY AIR TEMPERATURE SETPOINT, DAMPERS RD, OAD AND ERD SHALL NOT MODULATE AND SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION [AS INDICATED ON CONTROL SYSTEM SCHEMATIC]. PHWV-1 AND PHWV-2 SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AFTER THE PREHEAT COIL OF 45°F (ADJ.) SENSED BY PHT. RHWV-1 AND RHWV-2 SHALL THEN MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE.
- 2.3 ENTHALPY/ECONOMIZER COOLING: ECONOMIZER COOLING IS ENABLED/DISABLED BASED ON THE RETURN AIR AND OUTSIDE AIR ENTHALPY DIFFERENTIAL SWITCHOVER SET POINT WITH A 1.5 BTU/LB. DEAD-BAND. WHEN THE OUTSIDE AIR ENTHALPY IS NO MORE THAN 1.0 BTU/LB. BELOW THE RETURN AIR ENTHALPY, ECONOMIZER COOLING IS DISABLED. WHEN THE OUTSIDE AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY BY AT LEAST 2.5 BTU/LB., ECONOMIZER COOLING IS ENABLED. WHEN ENABLED DAMPERS RD, OAD AND ERD SHALL MODULATE TO MAINTAIN A MIXED AIR TEMPERATURE, AS SENSED BY MAT, OF 55°F (ADJ.).

3. AIRFLOW CONTROL:

- 3.1 THE SUPPLY AIR FLOW SHALL BE CONTROLLED BY THE DDC PANEL MODULATING THE SUPPLY FAN VARIABLE SPEED MOTOR CONTROLLER TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT AS SENSED BY THE SUPPLY AIR STATIC PRESSURE SENSOR SASP.
- 3.2 THE DDC PANEL, USING TOTAL SUPPLY AIR AND RETURN AIR FLOWS, SHALL RESET THE RETURN AIR FAN VSMC TO MAINTAIN A CONSTANT AIR FLOW DIFFERENCE BETWEEN THE SUPPLY AIR AND THE RETURN AIR EQUAL TO MINIMUM OUTSIDE AIR.
- 3.3 HIGH PRESSURE SENSOR SHP LOCATED AT THE SUPPLY FAN DISCHARGE, AND LOW-PRESSURE SENSORS GELP, DELP AND RLP LOCATED AT THE GENERAL EXHAUST FAN DISCHARGE, DISPERSION FAN DISCHARGE AND RETURN FAN DISCHARGE ACCORDINGLY, SHALL PREVENT THE FANS FROM DEVELOPING +3"/-3" WG (ADJ.) OF STATIC PRESSURE. IF THE STATIC PRESSURE EXCEEDS THE LIMIT FOR THAT FAN, THE FAN SHALL STOP. SHP, GELP, DELP AND RLP SHALL BE HARDWIRED TO THEIR RESPECTIVE FANS VSMC AND THE UNIT SHALL BE SHUTDOWN IN HAND, AUTO OR BYPASS MODE. THE PRESSURE SENSORS WILL REQUIRE MANUAL RESET AT THE DEVICE.

4. EMERGENCY 100% OUTSIDE AIR/100% EXHAUST MODE:

- 4.1 EMERGENCY MODE SHALL BE ENABLED BY THE ECC. WHEN ENABLED, DAMPERS RD, ERD AND EAD SHALL FULLY CLOSE WHILE DAMPERS OAD, OMD, EED-1 AND EED-2 SHALL FULLY OPEN. EMERGENCY DISPERSION EXHAUST FAN EF-ED-5 AND EF-ED-6 SHALL BE ENERGIZED AND MAINTAIN AIRFLOW THAT IS INDICATED ON THE CONTROL SYSTEM SCHEMATIC.
- 4.2 IN COOLING MODE, CCV-1 AND CCV-2 SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AS SENSED BY THE SAT SENSOR. IN HEATING MODE, VALVES PHWV-1 AND PHWV-1 SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AFTER THE PREHEAT COIL, AS SENSED BY THE PHT SENSOR, OF 45°F (ADJ.). VALVES RHWV-1 AND RHWV-2 SHALL THEN MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE, AS SENSED BY THE SAT SENSOR.

5. HUMIDITY CONTROL:

- 5.1 WHEN HUMIDIFICATION IS NOT CALLED FOR, SENSED BY RETURN AIR HUMIDITY RAH, STEAM ISOLATION VALVE SIV SHALL REMAIN CLOSED. WHEN HUMIDIFICATION IS CALLED FOR, SIV SHALL OPEN.
- 5.2 RETURN AIR HUMIDITY SHALL BE MAINTAINED AT SETPOINT OF 35% RH (ADJ.) VIA STEAM HUMIDIFIER VALVE SHV MODULATING. THE ECC SHALL OVERRIDE THIS CONTROL TO MAINTAIN HUMIDITY OF 80% AS SENSED BY SAH. THE ECC SHALL CLOSE SIV WHENEVER THE SUPPLY FAN IS OFF. STEAM ISOLATION VALVE SIV SHALL BE INTERLOCKED TO THE TEMPERATURE SENSOR CRT TO KEEP THE HUMIDIFIER OFF UNTIL THE CONDENSATE TEMPERATURE APPROACHES STEAM TEMPERATURE.
- 5.3 DEHUMIDIFICATION - IF THE RETURN AIR HUMIDITY EXCEEDS 58% RH (ADJ.), THE SUPPLY AIR TEMPERATURE SHALL DECREASE INCREMENTALLY TO MAINTAIN 58% RH AS MEASURED BY RAH. THE SUPPLY AIR TEMPERATURE SET POINT SHALL NOT BE COMMANDED LESS THAN 55°F (ADJ.). IF THE RETURN AIR HUMIDITY EXCEEDS 58% FOR 30 MINUTES (ADJ.), AN ALARM SHALL INDICATE AT THE ECC.

6. FREEZE PROTECTION:

- 6.1 IF THE AIR TEMPERATURE AS SENSED BY PHF FALLS BELOW 45°F (ADJ.), AN ALARM SIGNAL SHALL INDICATE AT THE ECC. FREEZE PROTECTION PUMP PHFP-#/1 SHALL BE ENERGIZED ON THE PRE-HEAT COIL. THE RETURN AIR DAMPER SHALL FULLY OPEN AND THE OUTSIDE DAMPER SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION. IF THE TEMPERATURE FALLS BELOW 40°F (ADJ.) AS SENSED BY PHF, THE SUPPLY, RETURN AND EXHAUST FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE ECC. PHF SHALL BE HARDWIRED TO THE FAN'S VSMC AND THE UNIT SHALL SHUTDOWN INTO HAND, AUTO OR BYPASS MODE. PHF WILL REQUIRE MANUAL RESET AT THE DEVICE.
- 6.2 IF THE AIR TEMPERATURE AS SENSED BY CCF FALLS BELOW 45°F (ADJ.), AN ALARM SIGNAL SHALL INDICATE AT THE ECC. FREEZE PROTECTION PUMP CCFP-# SHALL BE ENERGIZED ON THE CHILLED WATER COIL. THE RETURN AIR DAMPER SHALL FULLY OPEN AND THE OUTSIDE DAMPER SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION. IF THE TEMPERATURE FALLS BELOW 40°F (ADJ.) AS SENSED BY CCF, THE SUPPLY, RETURN AND EXHAUST FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE ECC. CCF SHALL BE HARDWIRED TO THE FAN'S VSMC AND THE UNIT SHALL SHUTDOWN INTO HAND, AUTO OR BYPASS MODE. CCF WILL REQUIRE MANUAL RESET AT THE DEVICE.

- 6.3 IF THE AIR TEMPERATURE AS SENSED BY RHF FALLS BELOW 45°F (ADJ.), AN ALARM SIGNAL SHALL INDICATE AT THE ECC. THE RETURN AIR DAMPER SHALL FULLY OPEN AND THE OUTSIDE DAMPER SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION. IF THE TEMPERATURE FALLS BELOW 40°F (ADJ.) AS SENSED BY RHF, THE SUPPLY, RETURN AND EXHAUST FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE ECC. RHF SHALL BE HARDWIRED TO THE FAN'S VSMC AND THE UNIT SHALL SHUTDOWN INTO HAND, AUTO OR BYPASS MODE. RHF WILL REQUIRE MANUAL RESET AT THE DEVICE.

7. AUTOMATIC SHUTDOWN:

- 7.1 WHEN SMOKE IS DETECTED BY A DUCT SMOKE DETECTOR, DS, THE SUPPLY AND RETURN FANS SHALL SHUT OFF AND AN ALARM SIGNAL SHALL BE TRANSMITTED TO THE FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE HARDWIRED TO THE SUPPLY FAN AND RETURN FANS VSMC.
- 7.2 EXHAUST FANS SERVING AREA OF THE SUPPLY FAN SHALL CONTINUE TO RUN. SUPPLY AND RETURN FANS SHALL REQUIRE MANUAL RESET AT THE UNIT.
- 7.3 IF THE SUPPLY FAN AND/OR RETURN FAN FAILS TO PROVE STATUS FOR 30 SECONDS (ADJ.), THE FAN SHALL SHUT OFF, THE OUTSIDE AIR DAMPER SHALL CLOSE, ALL VALVES WILL CLOSE AND AN ALARM SHALL INDICATE AT THE ECC. A MANUAL RESET SHALL BE REQUIRED TO RESTART THE FAN AT THE UNIT.

8. EMERGENCY CONSTANT SPEED OPERATION:

- 8.1 UPON FAILURE OF THE VSMC, THE SUPPLY AND RETURN FANS SHALL BE STARTED/STOPPED MANUALLY AT THE ECC. FANS SHALL THEN BE OPERATED AT CONSTANT SPEED.

AHU-ED-3 & -4

1. GENERAL:

- 1.1 REFERENCE THE POINT SCHEDULE ON DRAWINGS FOR ALL SYSTEM FUNCTIONS, S/S, STATUS, CONTROL, ALARM, ETC.
- 1.2 THE UNIT IS NORMALLY STARTED AND STOPPED REMOTELY AT THE ECC.
- 1.3 WHEN THE SYSTEM IS DISABLED THE SUPPLY FANS, EXHAUST FANS, INTAKE DAMPERS, EXHAUST DAMPERS, PRE-HEAT COIL CONTROL VALVES, AND CHILLED WATER CONTROL VALVES SHALL BE CLOSED OFF, UNLESS REQUIRED OTHERWISE FOR FREEZE PROTECTION PER SECTION 6.
- 1.4 WHEN THE SYSTEM IS ENABLED, THE SUPPLY FAN AND EXHAUST FAN SHALL NOT START UNTIL THE END SWITCHES AT THE INTAKE AND RETURN AIR DAMPER/EXHAUST DAMPERS HAVE INDICATED THAT THE DAMPERS ARE OPENED TO THEIR SET-POINT PER THE OPERATING CONDITIONS.
- 1.5 NORMAL OPERATION - 24 HOUR CONTINUOUS OPERATION FOR AIR HANDLING UNITS AND EXHAUST FANS.
- 1.6 THE HEATING HOT WATER VALVES PHWV-1 AND PHWV-2 SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE, AS SENSED BY THE SAT SENSOR.
- 1.7 THE CHILLED WATER VALVE CCV-1 SHALL MODULATE IN COOLING MODE TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT OF 55°F (ADJ.).
- 1.8 HOT WATER VALVES PHWV-1, PHWV-2 SHALL BE SIZED AND CONTROLLED FOR A 1/3, 2/3 OPERATION.

2. TEMPERATURE CONTROL:

- 2.1 WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS ABOVE 75°F (ADJ.), THE RETURN AIR DAMPER RD, OUTSIDE AIR DAMPER OAD AND EXHAUST AIR DAMPER ERD SHALL NOT MODULATE AND SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION [AS INDICATED ON CONTROL SYSTEM SCHEMATIC]. CCV-1 SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AS SENSED BY THE SAT SENSOR.
- 2.2 WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW THE SUPPLY AIR TEMPERATURE SETPOINT, DAMPERS RD, OAD AND ERD SHALL NOT MODULATE AND SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION [AS INDICATED ON CONTROL SYSTEM SCHEMATIC]. PHWV-1 AND PHWV-2 SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AS SENSED BY SAT SENSOR.
- 2.3 ENTHALPY/ECONOMIZER COOLING: ECONOMIZER COOLING IS ENABLED/DISABLED BASED ON THE RETURN AIR AND OUTSIDE AIR ENTHALPY DIFFERENTIAL SWITCHOVER SET POINT WITH A 1.5 BTU/LB. DEAD-BAND. WHEN THE OUTSIDE AIR ENTHALPY IS NO MORE THAN 1.0 BTU/LB. BELOW THE RETURN AIR ENTHALPY, ECONOMIZER COOLING IS DISABLED. WHEN THE OUTSIDE AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY BY AT LEAST 2.5 BTU/LB., ECONOMIZER COOLING IS ENABLED. WHEN ENABLED DAMPERS RD, OAD AND ERD SHALL MODULATE TO MAINTAIN A MIXED AIR TEMPERATURE, AS SENSED BY MAT, OF 55°F (ADJ.).

3. AIRFLOW CONTROL:

- 3.1 THE SUPPLY AIR FLOW SHALL BE CONTROLLED BY THE ECC/DDC PANEL MODULATING THE SUPPLY FAN VARIABLE SPEED MOTOR CONTROLLER TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT AS SENSED BY THE SUPPLY AIR STATIC PRESSURE SENSOR SASP.
- 3.2 THE ECC/DDC PANEL, USING TOTAL SUPPLY AIR AND RETURN AIR FLOWS, SHALL RESET THE RETURN AIR FAN VSMC TO MAINTAIN A CONSTANT AIR FLOW DIFFERENCE BETWEEN THE SUPPLY AIR AND THE RETURN AIR EQUAL TO MINIMUM OUTSIDE AIR.
- 3.3 HIGH PRESSURE SENSOR SHP LOCATED AT THE SUPPLY FAN DISCHARGE AND LOW-PRESSURE SENSOR GELP LOCATED AT THE GENERAL EXHAUST FAN DISCHARGE, SHALL PREVENT THE FAN FROM DEVELOPING +3"/-3" WG (ADJ.) OF STATIC PRESSURE. IF THE STATIC PRESSURE EXCEEDS THE LIMIT FOR THAT FAN, THE FAN SHALL STOP. SHP AND GELP SHALL BE HARDWIRED TO THEIR RESPECTIVE FANS VSMC AND THE UNIT SHALL BE SHUTDOWN IN HAND, AUTO OR BYPASS MODE. THE PRESSURE SENSORS WILL REQUIRE MANUAL RESET AT THE DEVICE.

4. HUMIDITY CONTROL:

- 4.1 DEHUMIDIFICATION - IF THE RETURN AIR HUMIDITY EXCEEDS 58% RH (ADJ.), THE SUPPLY AIR TEMPERATURE SHALL DECREASE INCREMENTALLY TO MAINTAIN 58% RH AS MEASURED BY RAH. THE SUPPLY AIR TEMPERATURE SET POINT SHALL NOT BE COMMANDED LESS THAN 55°F (ADJ.). IF THE RETURN AIR HUMIDITY EXCEEDS 58% FOR 30 MINUTES (ADJ.), AN ALARM SHALL INDICATE AT THE ECC.

5. FREEZE PROTECTION:

- 5.1 IF THE AIR TEMPERATURE AS SENSED BY PHF FALLS BELOW 45°F (ADJ.), AN ALARM SIGNAL SHALL INDICATE AT THE ECC. THE RETURN AIR DAMPER SHALL FULLY OPEN AND THE OUTSIDE DAMPER SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION. IF THE TEMPERATURE FALLS BELOW 40°F (ADJ.) AS SENSED BY PHF, THE SUPPLY AND EXHAUST FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE ECC. PHF SHALL BE HARDWIRED TO THE FAN'S VSMC AND THE UNIT SHALL SHUTDOWN INTO HAND, AUTO OR BYPASS MODE. PHF WILL REQUIRE MANUAL RESET AT THE DEVICE.
- 5.2 IF THE AIR TEMPERATURE AS SENSED BY CCF FALLS BELOW 45°F (ADJ.), AN ALARM SIGNAL SHALL INDICATE AT THE ECC. THE RETURN AIR DAMPER SHALL FULLY OPEN AND THE OUTSIDE DAMPER SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION. IF THE TEMPERATURE FALLS BELOW 40°F (ADJ.) AS SENSED BY CCF, THE SUPPLY AND EXHAUST FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE ECC. CCF SHALL BE HARDWIRED TO THE FAN'S VSMC AND THE UNIT SHALL SHUTDOWN INTO HAND, AUTO OR BYPASS MODE. CCF WILL REQUIRE MANUAL RESET AT THE DEVICE.

7. AUTOMATIC SHUTDOWN:

- 7.1 WHEN SMOKE IS DETECTED BY A DUCT SMOKE DETECTOR, DS, THE SUPPLY AND EXHAUST FANS SHALL SHUT OFF AND AN ALARM SIGNAL SHALL BE TRANSMITTED TO THE FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE HARDWIRED TO THE SUPPLY FAN AND RETURN FANS VSMC.
- 7.2 SUPPLY AND EXHAUST FANS SHALL REQUIRE MANUAL RESET AT THE UNIT.
- 7.3 IF THE SUPPLY FAN AND/OR EXHAUST FAN FAILS TO PROVE STATUS FOR 30 SECONDS (ADJ.), THE FAN SHALL SHUT OFF, THE OUTSIDE AIR DAMPER SHALL CLOSE, ALL VALVES WILL CLOSE AND AN ALARM SHALL INDICATE AT THE ECC. A MANUAL RESET SHALL BE REQUIRED TO RESTART THE FAN AT THE UNIT.

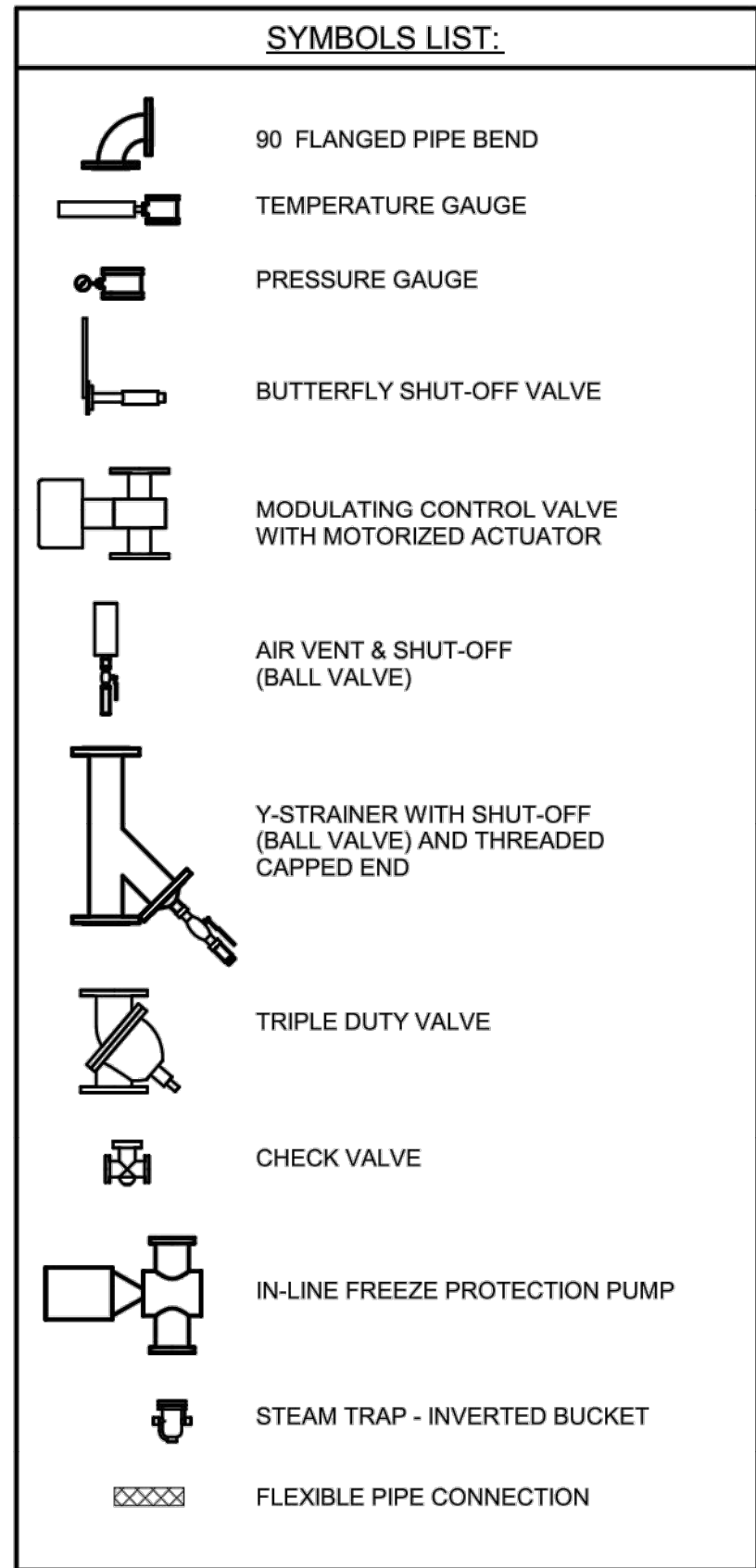
8. EMERGENCY CONSTANT SPEED OPERATION:

- 8.1 UPON FAILURE OF THE VSMC, THE SUPPLY AND EXHAUST FANS SHALL BE STARTED/STOPPED MANUALLY AT THE ECC. FANS SHALL THEN BE OPERATED AT CONSTANT SPEED.

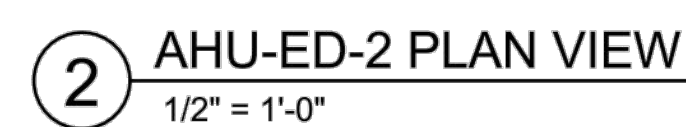
CONTROLS SYMBOLS


- T ROOM THERMOSTAT/TRANSMITTER - WALL MOUNT
- TT TEMPERATURE TRANSMITTER
- HS HAND SWITCH (HAND-OFF-AUTO SWITCH)
- PC PRESSURE CONTROLLER. SEE SEQUENCE OF OPERATION

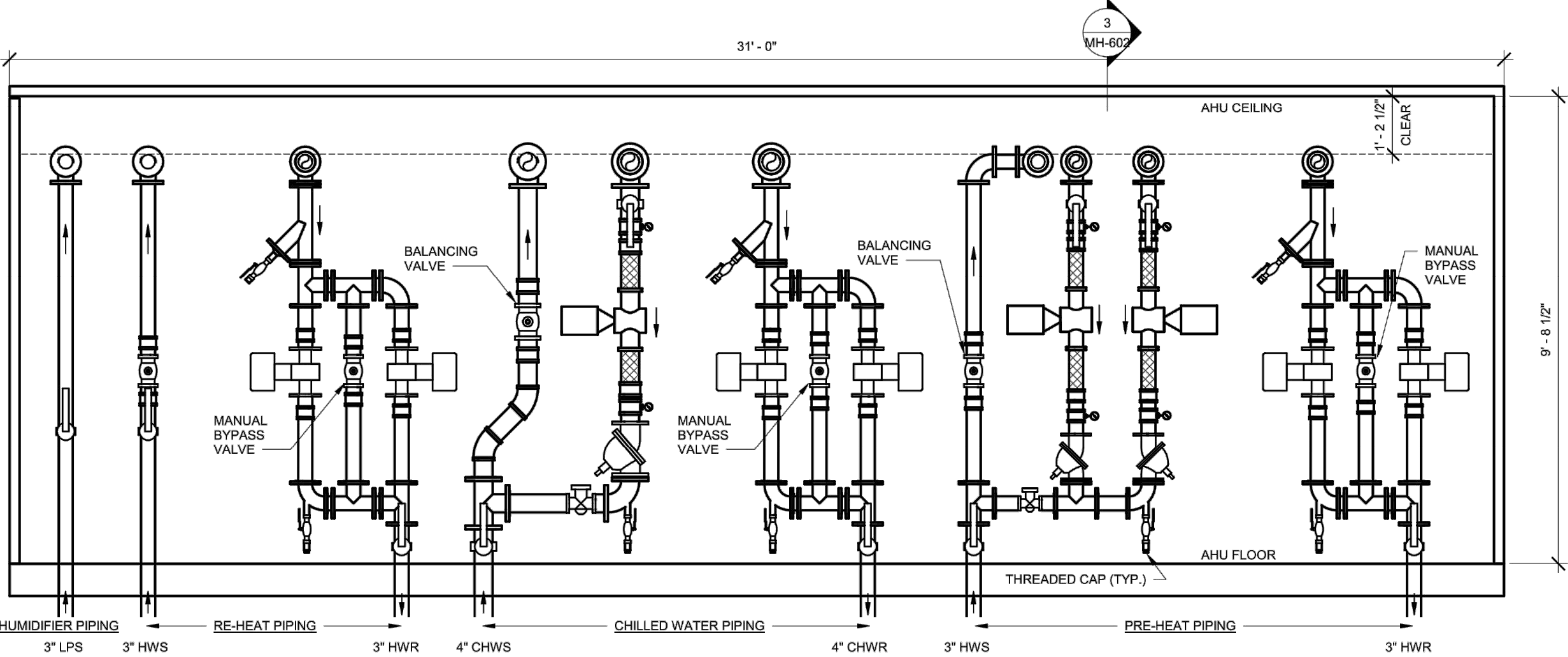
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HYMAN HAYES ASSOCIATES		FELLENER III ENGINEERING LLP		JOHN D. FELLENER, P.E.		MECHANICAL: CONTROLS DIAGRAMS + SEQUENCE OF OPERATIONS	100% FOR BID	STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT	528-809
Revisions:		FE PROJECT NO: 19-181		NY PROFESSIONAL ENGINEER NO. 069373-1	U.S. Department of Veterans Affairs	Approved: Project Director	FULLY SPRINKLERED	Location	Drawing Number
Date:		22 Mulberry St., Suite 2A, Middletown, NY 10940 1-845-343-1481; fx 855-320-8735						ALBANY, NY	1-MH-403
		181 Church St., Suite 100, Poughkeepsie, NY 12601 1-845-454-9704; fx 855-320-8735						Issue Date	Checked
								MARCH 18, 2022	JDF
								Drawn	SRB



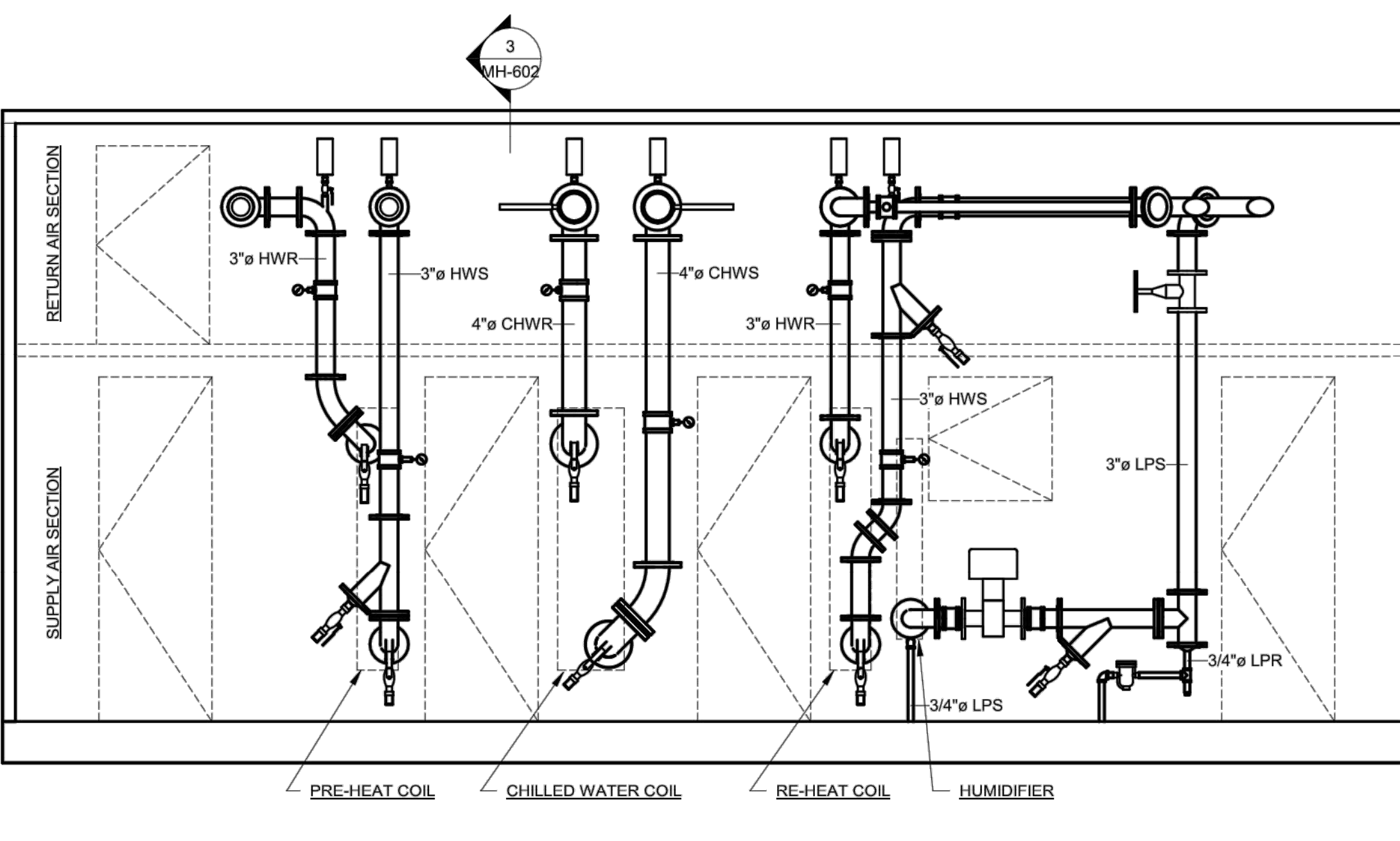
1 AHU-ED-1 PLAN VIEW
1/2" = 1'-0"



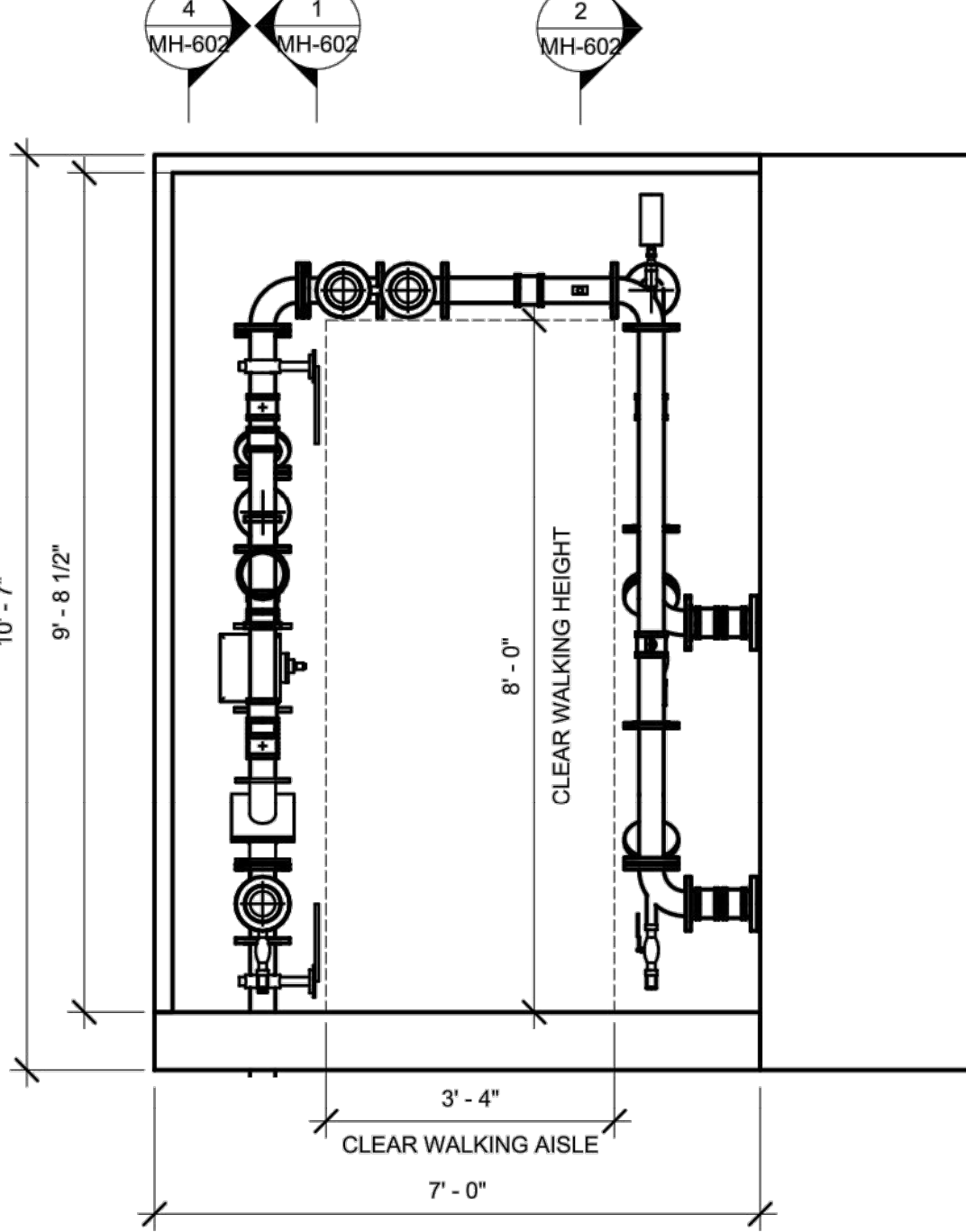
		<div>CONSULTANT</div> <div><div><div>HYMAN HAYES ASSOCIATES</div><div></div><div>800 TROY SCHNECTADY ROAD, STE 100 LATHAM, NY 12110 (518) 432-3470 www.hymanhayes.com</div></div></div>	<div>ARCHITECT/ENGINEER OF RECORD</div> <div><div><div>FELLENZER III ENGINEERING LLP</div><div>www.fellp.com</div></div><div>FE PROJECT NO: 19-181</div><div><div>22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735</div><div>181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; fx 855-320-8735</div></div></div>	<div>STAMP</div> <div><div>JOHN D. FELLENZER, P.E.</div><div></div><div>NY PROFESSIONAL ENGINEER NO. 06873-1</div></div>	<div>Office of Construction and Facilities Management</div> <div><div>VA</div><div>U.S. Department of Veterans Affairs</div></div>	<div>Drawing Title</div> <div>MECHANICAL: AHU VESTIBULE PIPING PLANS</div>	<div>Phase</div> <div>100% FOR BID</div>	<div>Project Title</div> <div>STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT</div>	<div>Project Number</div> <div>528-809</div>
						<div>Building Number</div> <div>1</div>			
						<div>Drawing Number</div> <div>1-MH-601</div>			
<div>Revisions:</div>	<div>Date:</div>								



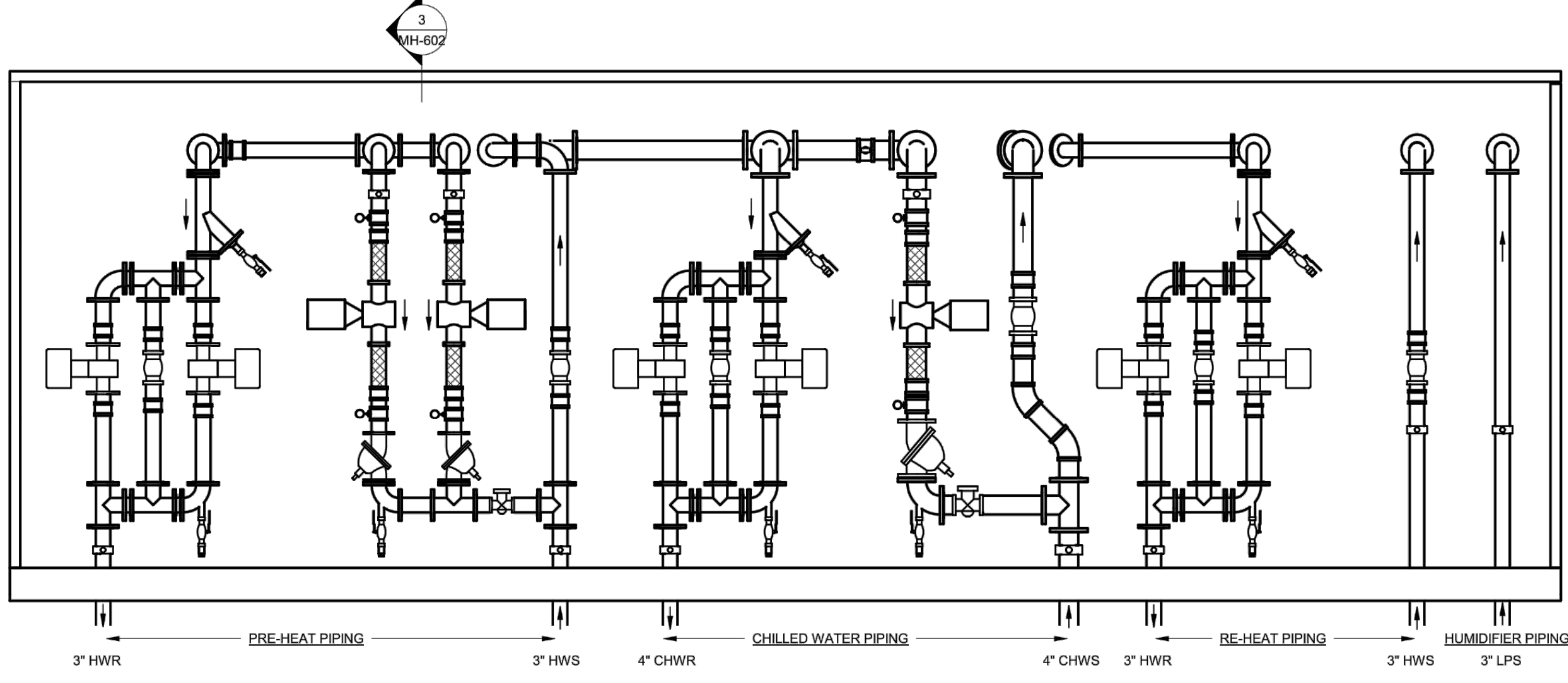
1 AHU-ED-1 FRONT ELEVATION VIEW
1/2" = 1'-0"



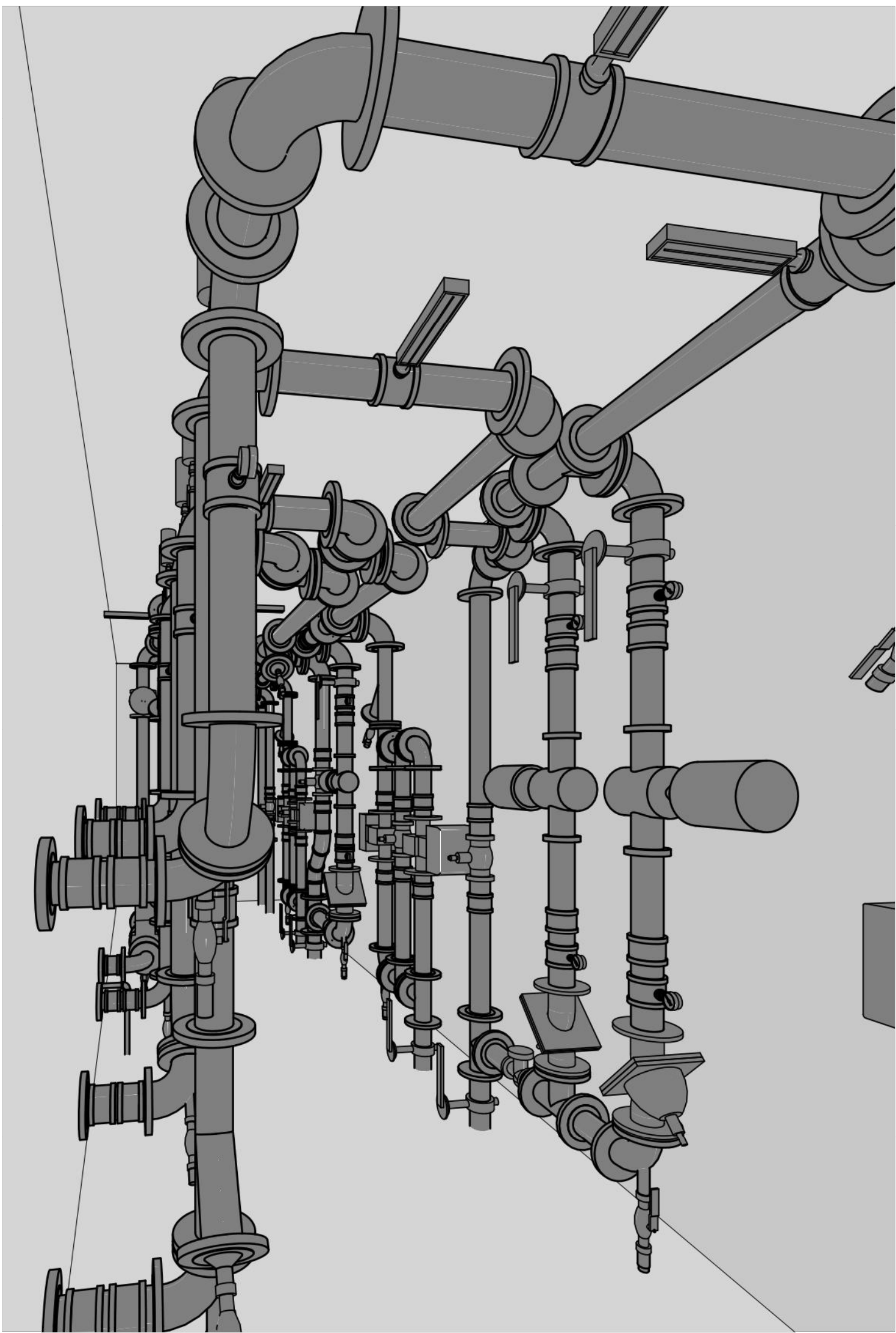
2 AHU-ED-1 COIL CONNECTION ELEVATION
1/2" = 1'-0"



3 AHU-ED-1 VESTIBULE SECTION
1/2" = 1'-0"



4 AHU-ED-1 REAR ELEVATION VIEW
1/2" = 1'-0"



5 AHU-ED-1 - 3D VIEW

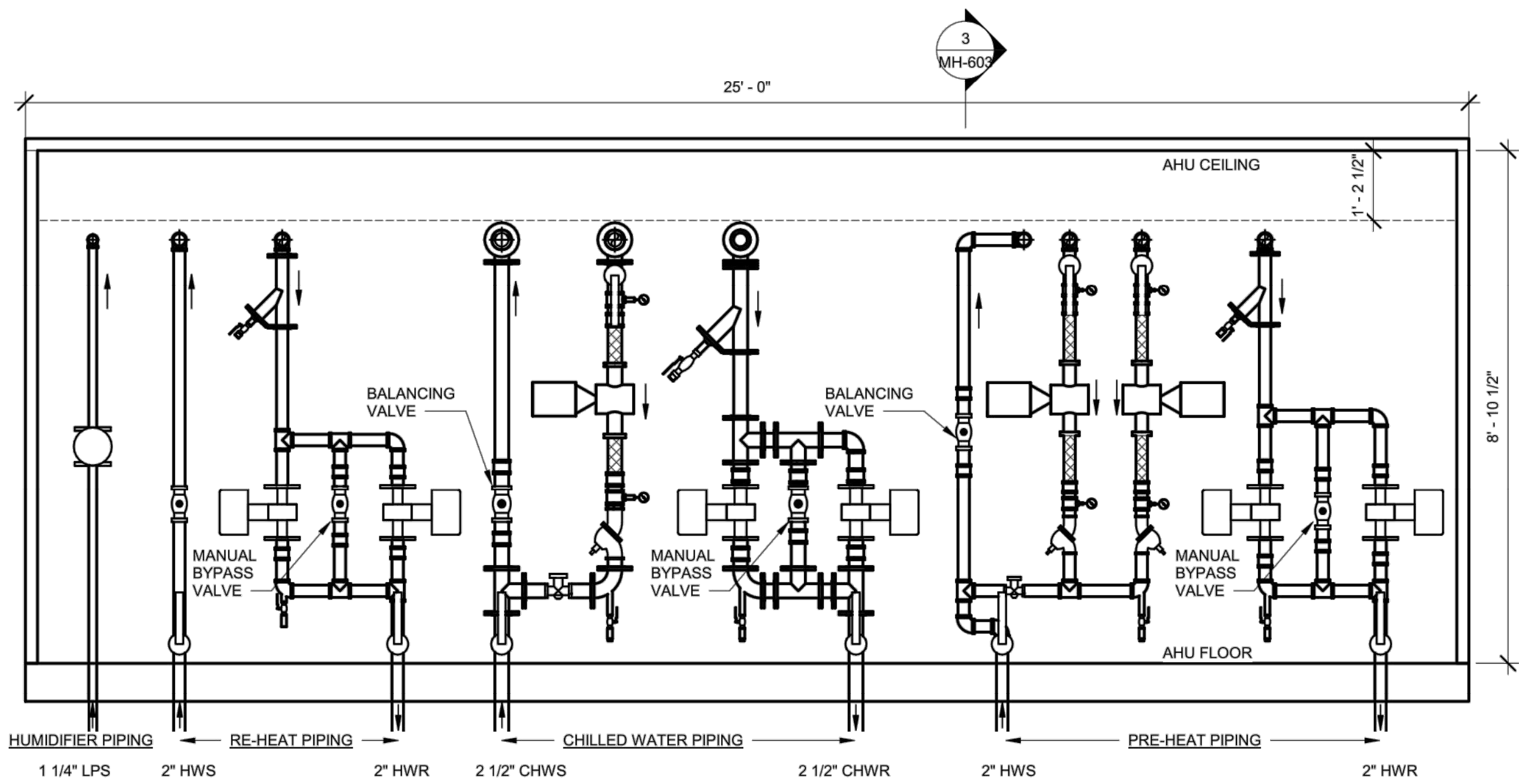
SYMBOLS LIST:	
	90 FLANGED PIPE BEND
	TEMPERATURE GAUGE
	PRESSURE GAUGE
	BUTTERFLY SHUT-OFF VALVE
	MODULATING CONTROL VALVE WITH MOTORIZED ACTUATOR
	AIR VENT & SHUT-OFF (BALL VALVE)
	Y-STRAINER WITH SHUT-OFF (BALL VALVE) AND THREADED CAPPED END
	TRIPLE DUTY VALVE
	CHECK VALVE
	IN-LINE FREEZE PROTECTION PUMP
	STEAM TRAP - INVERTED BUCKET
	FLEXIBLE PIPE CONNECTION

GENERAL NOTE:
1. INSULATION & HANGERS NOT SHOWN.

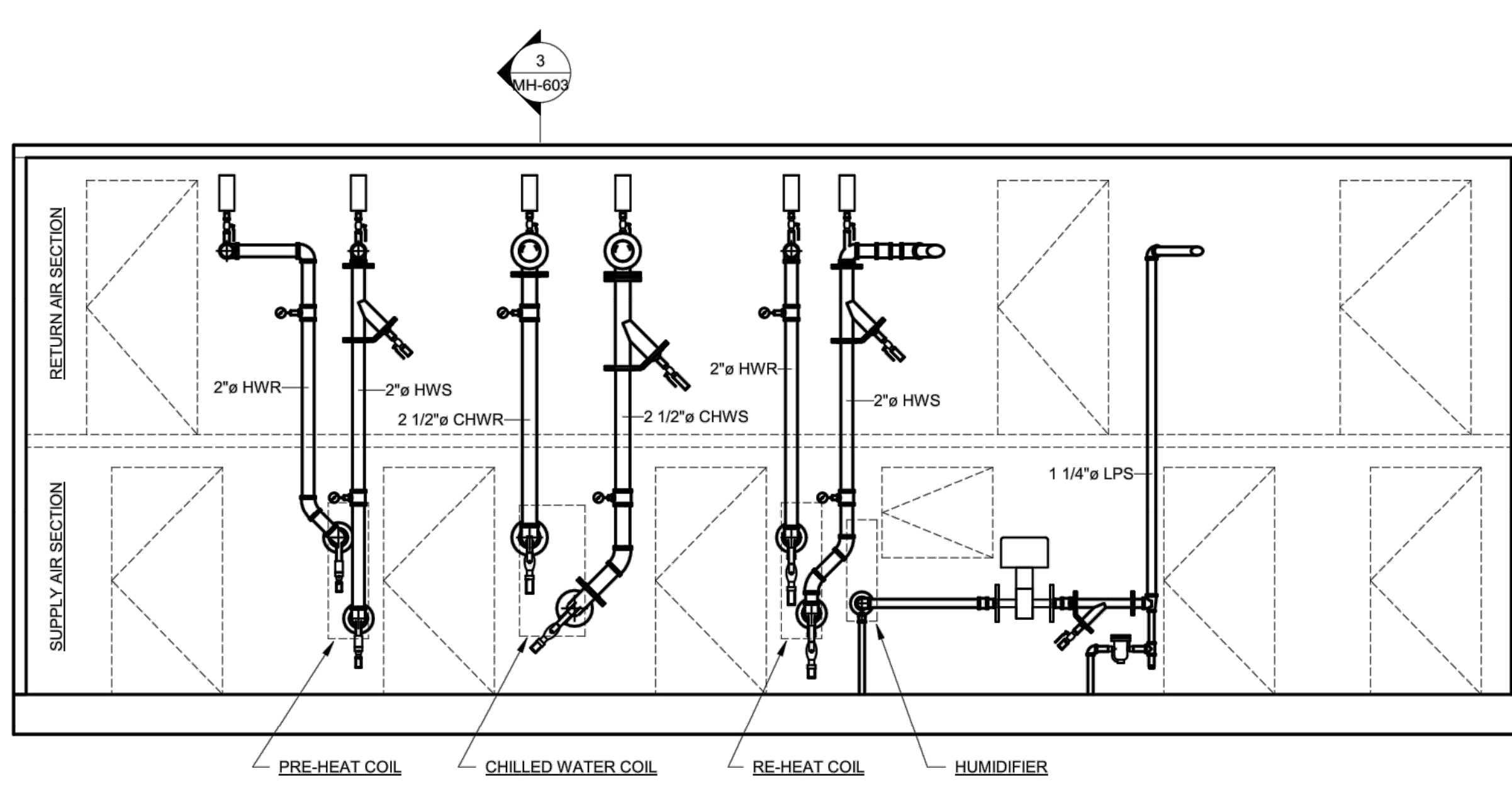
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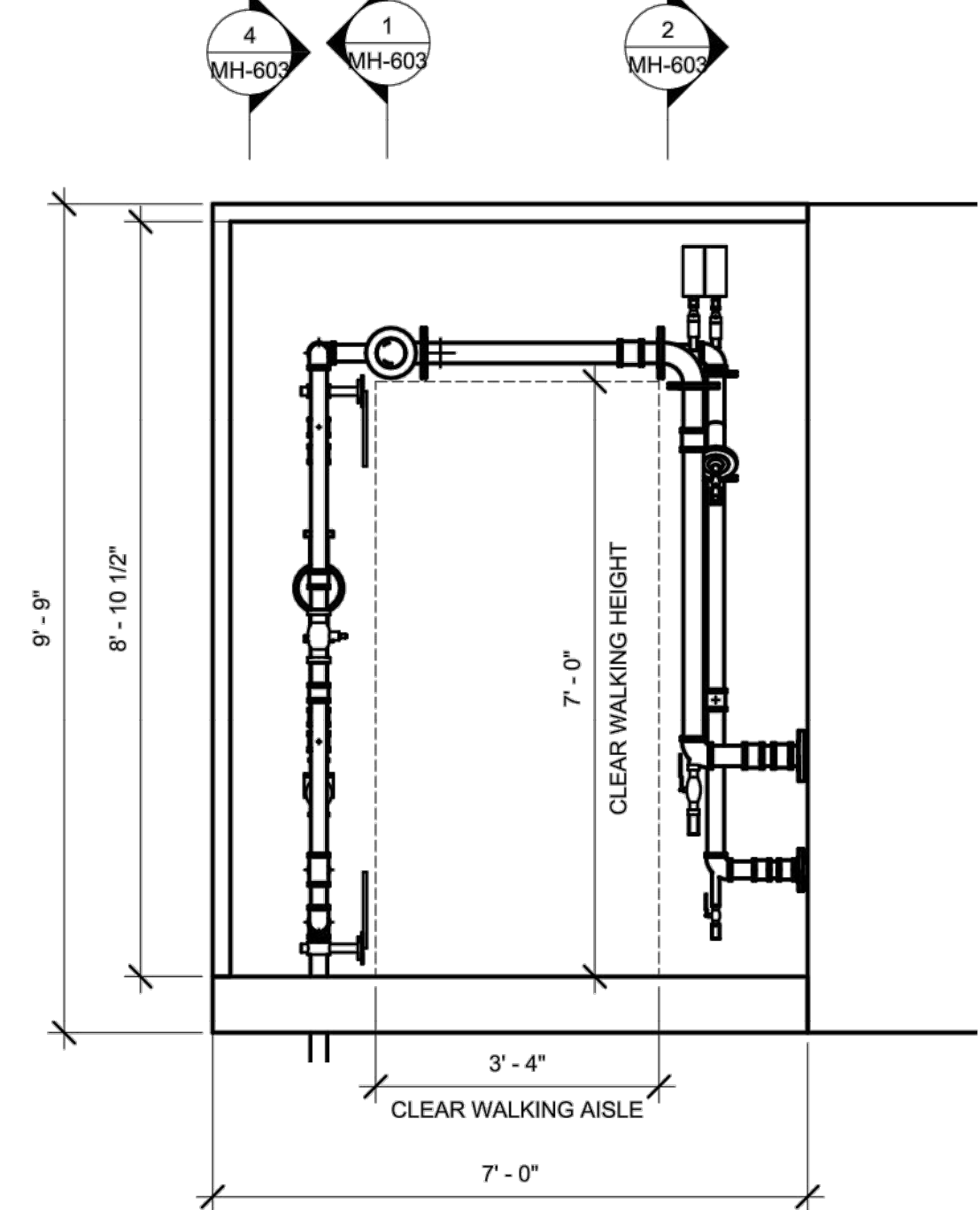
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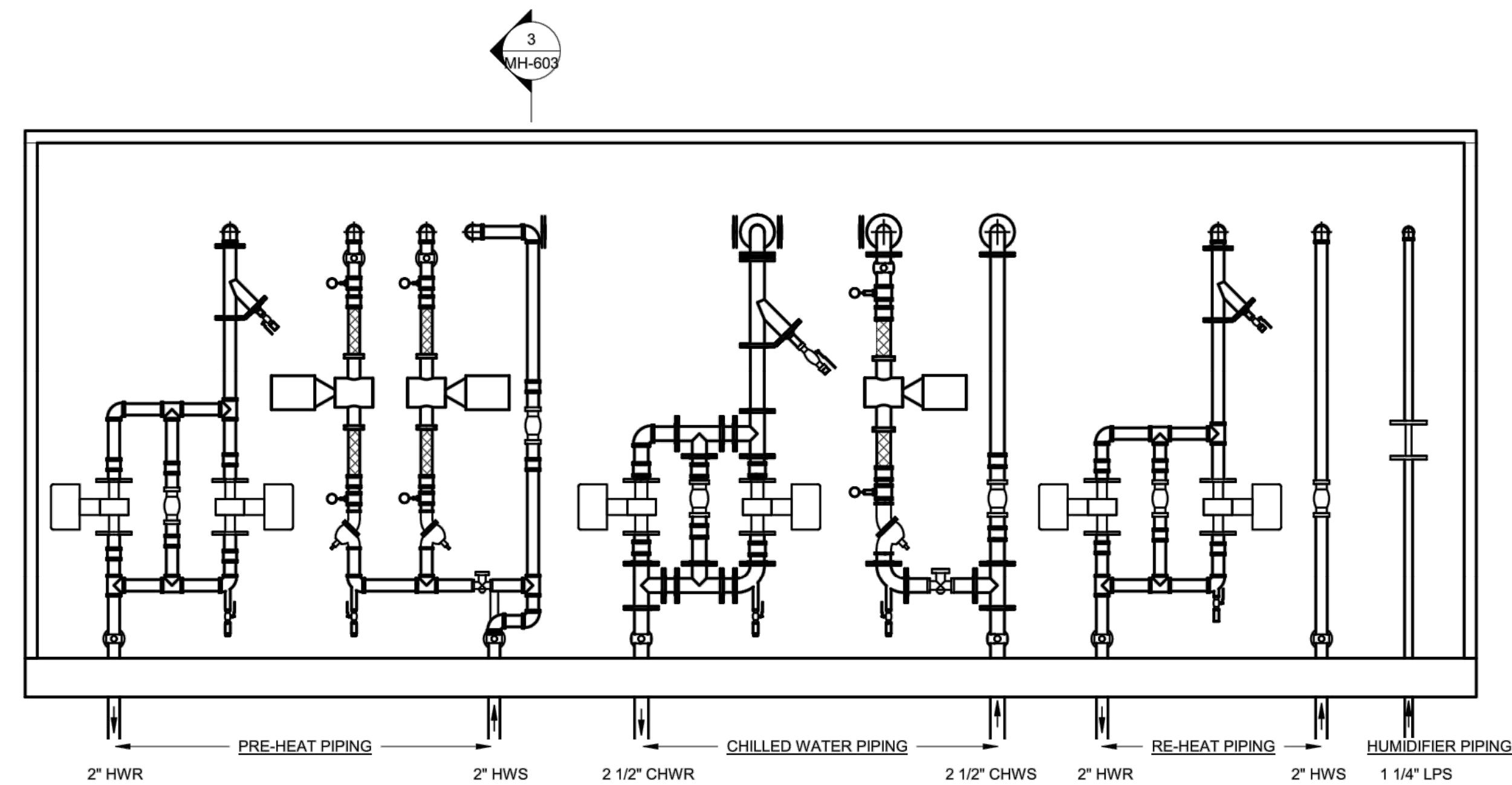
1 AHU-ED-2 FRONT ELEVATION VIEW
1/2" = 1'-0"



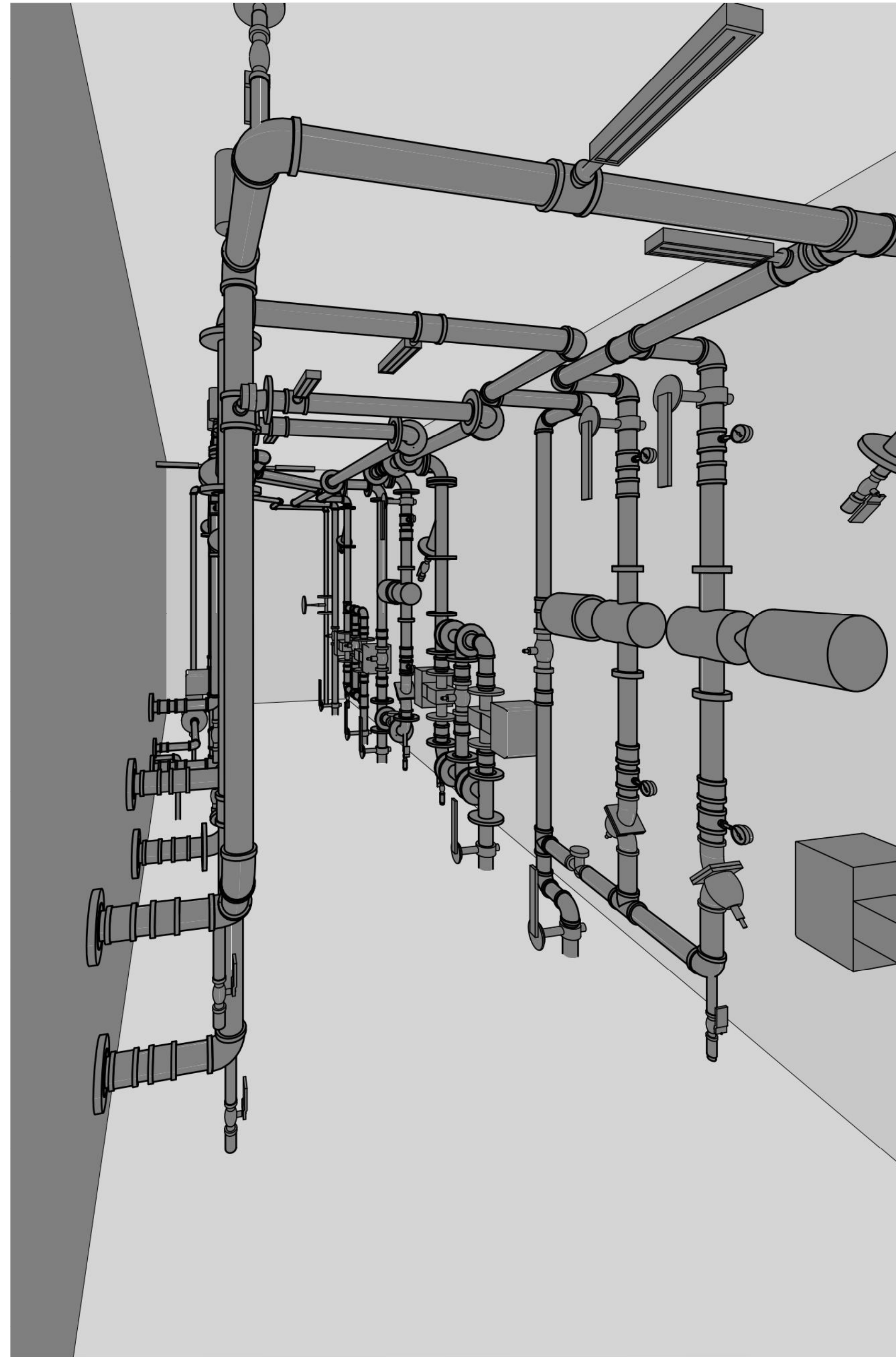
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1/2" = 1'-0"



3 AHU-ED-2 VESTIBULE SECTION
1/2" = 1'-0"



4 AHU-ED-2 REAR ELEVATION VIEW
1/2" = 1'-0"



5 AHU-ED-2 - 3D VIEW

SYMBOLS LIST:	
	90 FLANGED PIPE BEND
	TEMPERATURE GAUGE
	PRESSURE GAUGE
	BUTTERFLY SHUT-OFF VALVE
	MODULATING CONTROL VALVE WITH MOTORIZED ACTUATOR
	AIR VENT & SHUT-OFF (BALL VALVE)
	Y-STRAINER WITH SHUT-OFF (BALL VALVE) AND THREADED CAPPED END
	TRIPLE DUTY VALVE
	CHECK VALVE
	IN-LINE FREEZE PROTECTION PUMP
	STEAM TRAP - INVERTED BUCKET
	FLEXIBLE PIPE CONNECTION

GENERAL NOTE:
1. INSULATION & HANGERS NOT SHOWN.

Revisions:	Date:

CONSULTANT	
HYMAN HAYES ASSOCIATES	
800 TROY SCHENECTADY ROAD, STE 103 LATHAM, NY 12110 (518) 452-2470 www.hymanhayes.com	

ARCHITECT/ENGINEER OF RECORD	
FELLENZER III ENGINEERING LLP	www.fellp.com
FE PROJECT NO: 19-181	
22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735	181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; fx 855-320-8735

STAMP
JOHN D. FELLENER, P.E.
NY PROFESSIONAL ENGINEER NO. 069373-1

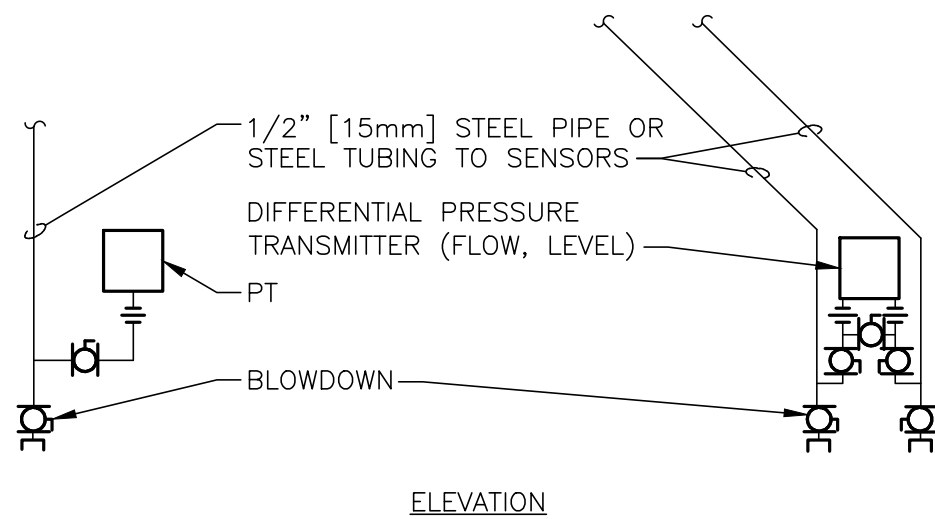
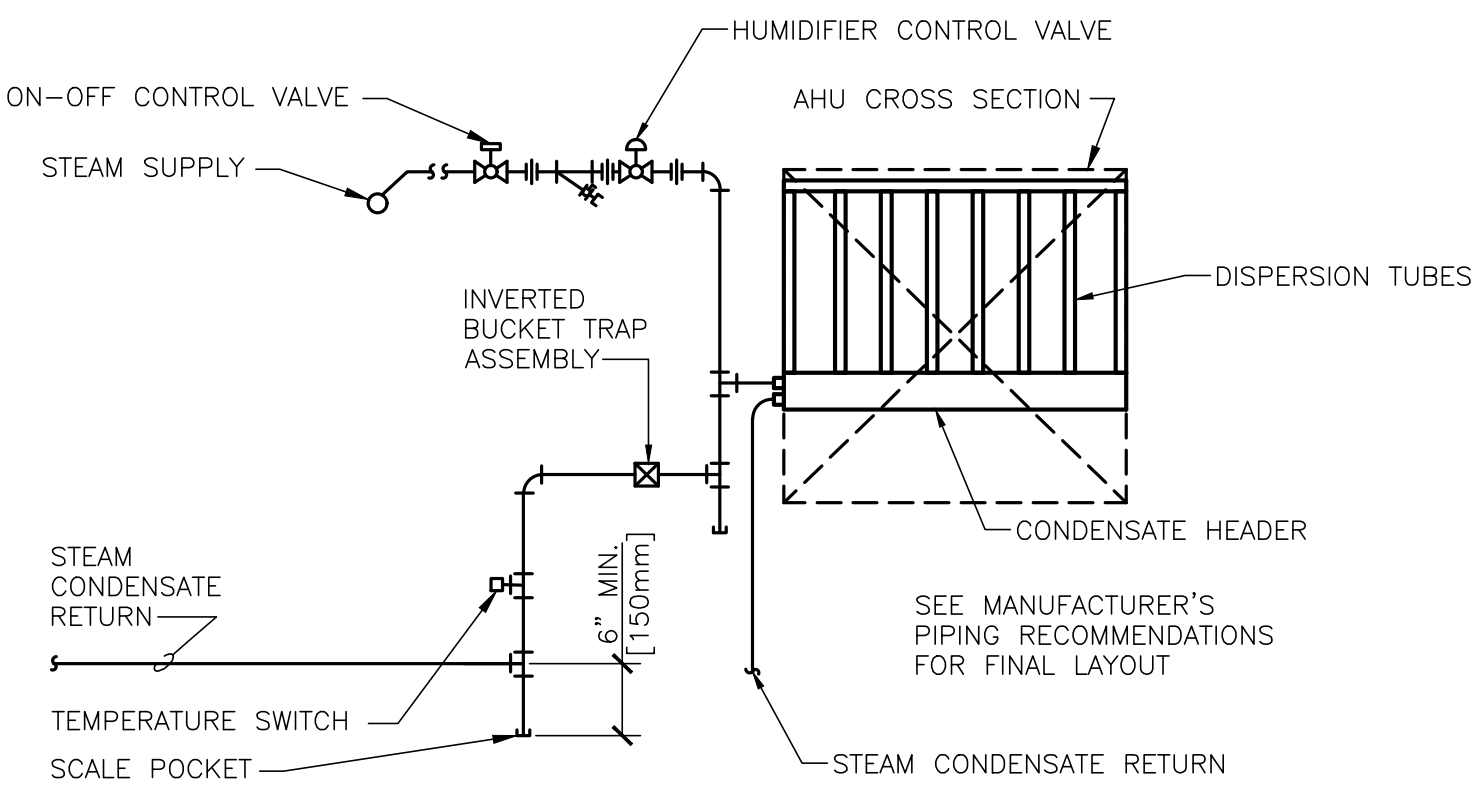
Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title MECHANICAL: AHU-ED-2 VESTIBULE PIPING SECTIONS + ELEVATIONS
Approved: Project Director

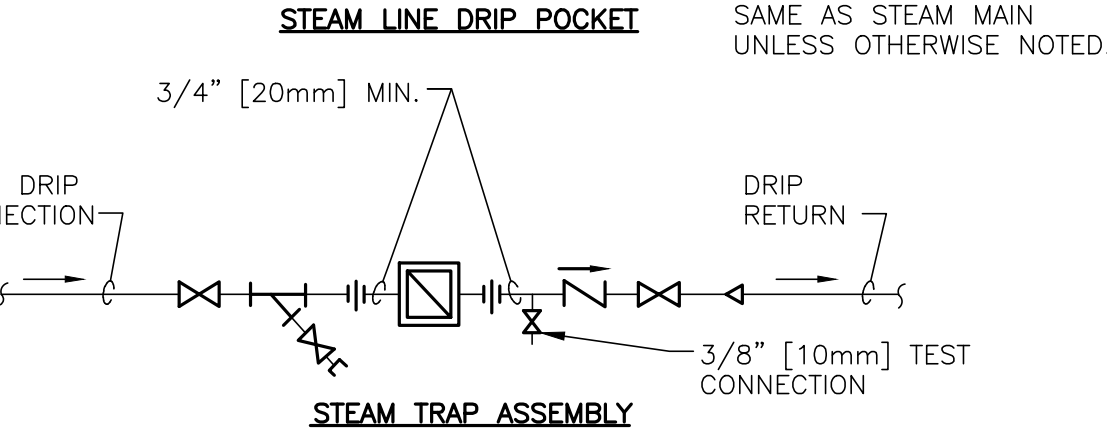
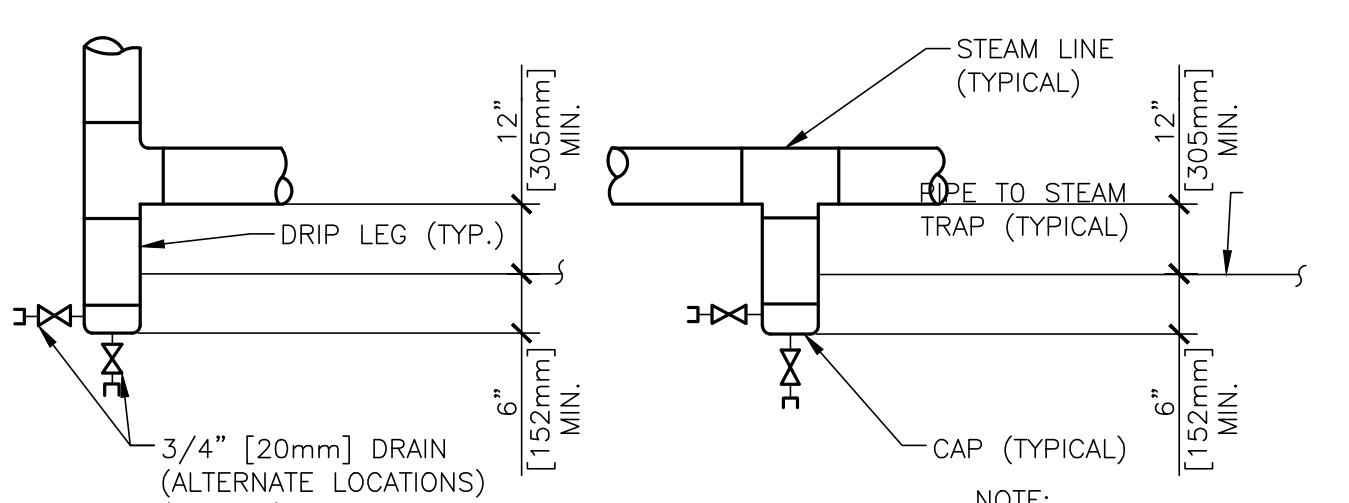
Phase 100% FOR BID
FULLY SPRINKLERED

Project Title STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT
Location ALBANY, NY
Issue Date MARCH 18, 2022
Checked JDF
Drawn SRB

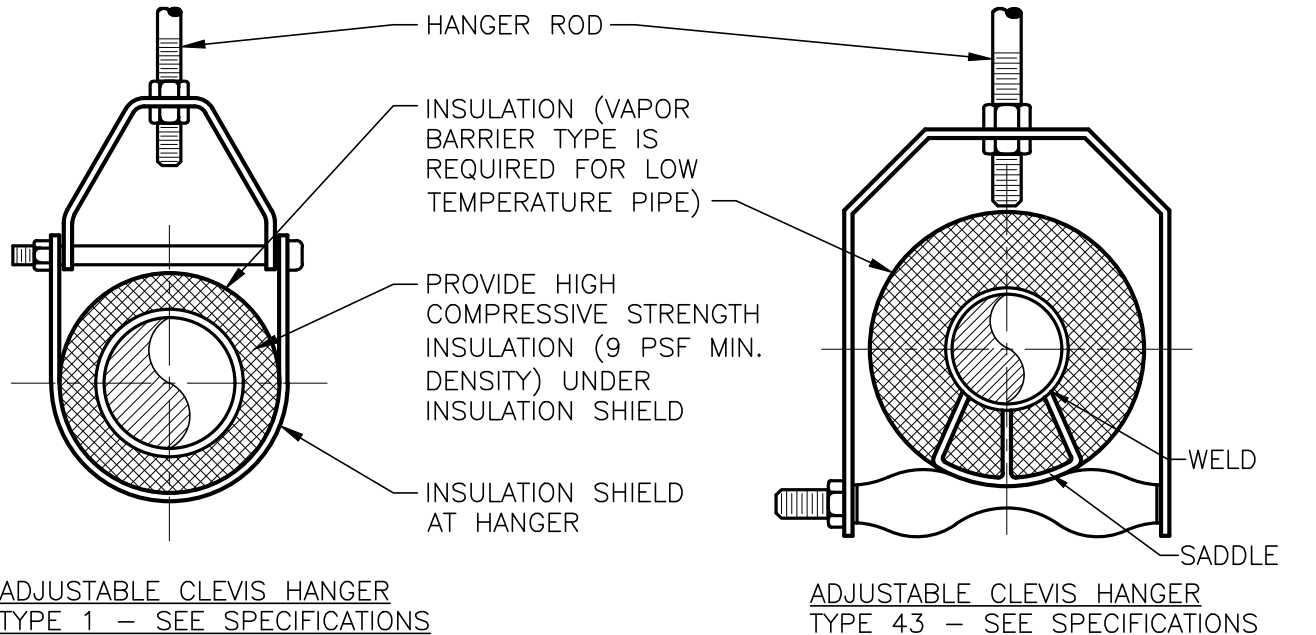
Project Number 528-809
Building Number 1
Drawing Number 1-MH-603



NOTES:
1. INSTALLATION OF SENSORS AND TRANSMITTERS SHALL CONFORM TO RECOMMENDATIONS OF MANUFACTURERS OF TRANSMITTERS.



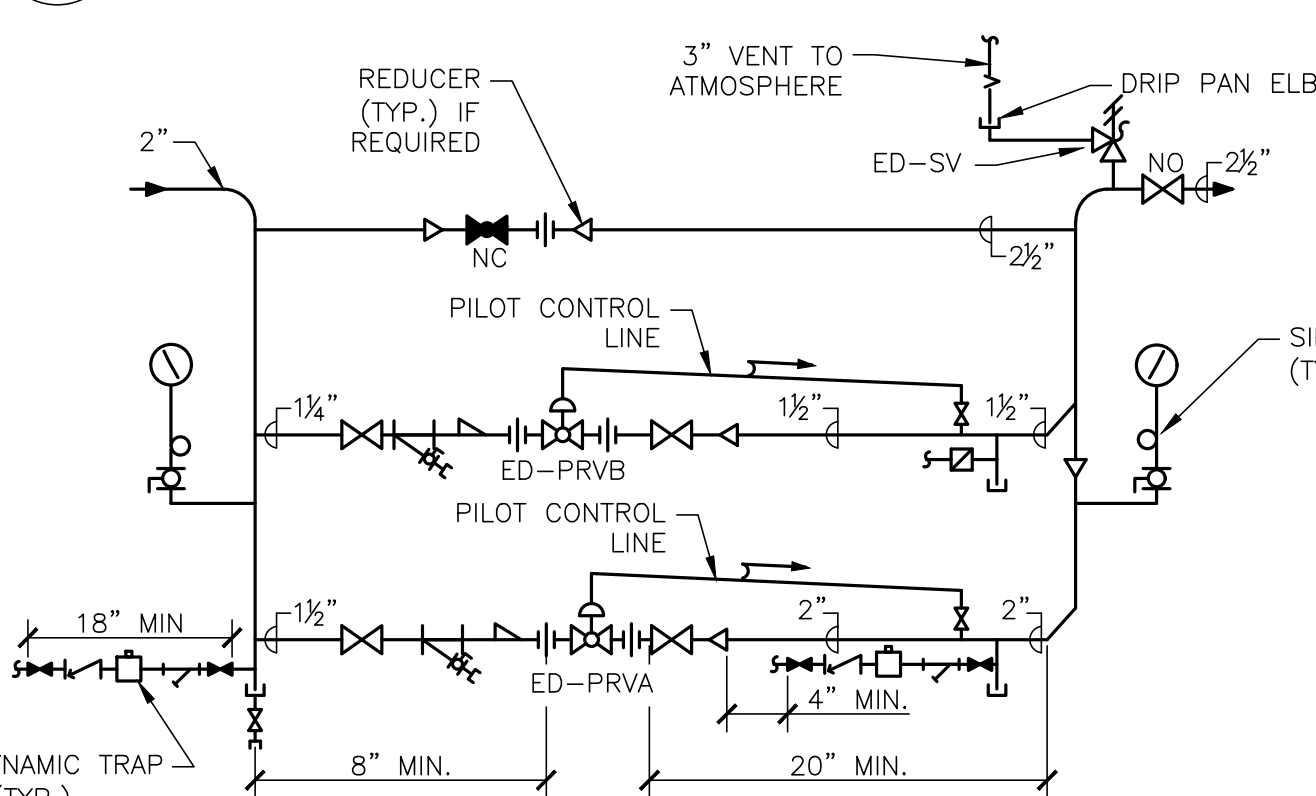
STEAM LINE DRIP POCKET
STEAM TRAP ASSEMBLY



NOTES:
SEE SPECIFIER FOR DETAILED HANGER REQUIREMENTS

SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. [45.3KG] UNIFORM LOAD																							
MAXIMUM PIPE/TUBING SUPPORT SPACING																							
NOM.	SIZE,	IN.	THRU	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24		
		(mm)	(20)	(25)	(32)	(41)	(50)	(65)	(75)	(95)	(100)	(125)	(150)	(175)	(225)	(250)	(300)	(350)	(400)	(500)	(600)		
PIPE		(mm)	[2100]	[2100]	[2100]	[2700]	[3000]	[3400]	[3700]	[4100]	[4900]	[5200]	[5800]	[6700]	[7000]	[7600]	[8200]	[8500]	[9100]	[9600]			
TUBING		(mm)	[1500]	[1800]	[2100]	[2400]	[2400]	[2700]	[3000]	[3700]	[4000]	[4900]	[5200]	[5800]	[6700]	[7000]	[7600]	[8200]	[8500]	[9100]	[9600]		
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.																							

PIPE HANGERS

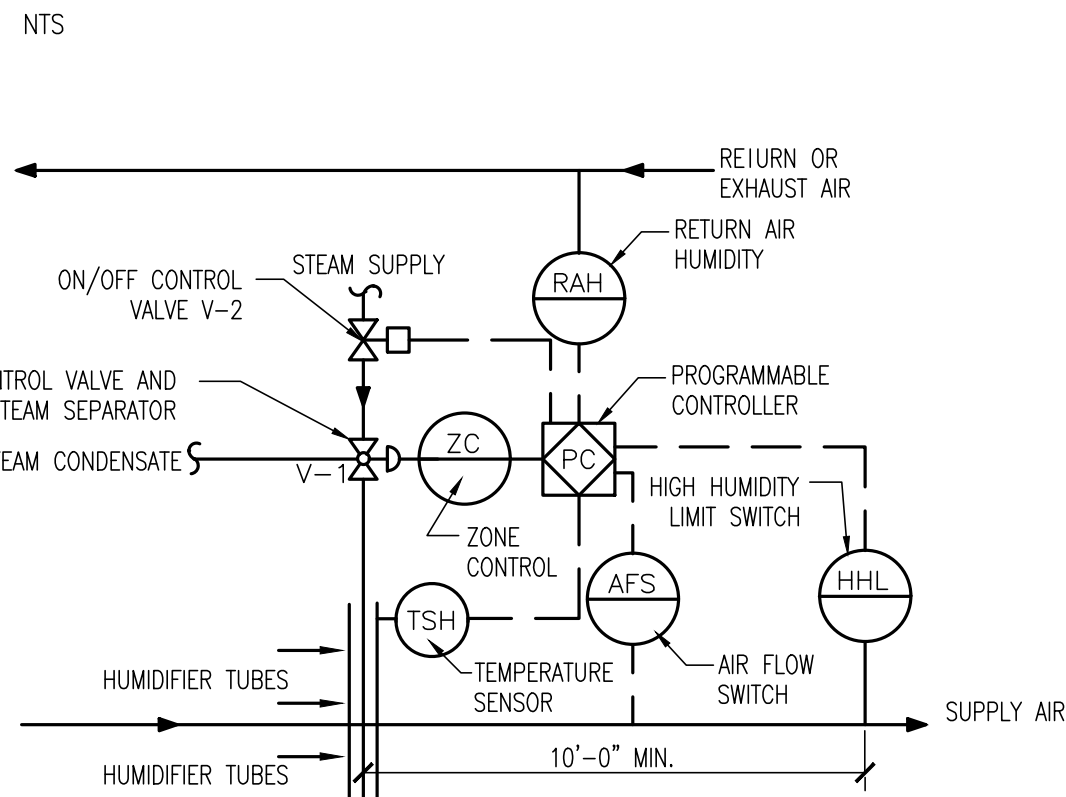


NOTES:
1. INSTALL VALVES AS RECOMMENDED BY MANUFACTURER.
2. PROVIDE NECESSARY UNIONS FOR THE REMOVAL OF VALVE WITH SCREWED CONNECTIONS.
3. SLOPE PILOT CONTROL LINE FROM PRESSURE REDUCING VALVE TO DOWN STREAM STEAM PIPING.
MINIMUM SLOPE SHALL BE 25'/100', [1"/12"]
4. SET SYSTEM PRESSURE TO 15 PSIG FOR ED-PRVA AND SET PRESSURE 2 PSIG HIGHER FOR ED-PRVB (17PSIG).
5. SAFETY VALVES SHALL BE SIZED SO AS TO RELIEVE AT PRESSURES OF 5-10 PSIG IN EXCESS OF DELIVERED PRESSURES OF PRV'S AND TO HAVE A CAPACITY EQUAL TO THE MAXIMUM CAPACITY OF PRV IT IS TO RELIEVE. VENT PIPE SHALL BE NO LESS THAN ONE PIPE SIZE LARGER THAN SAFETY VALVE DISCHARGE AND SHALL FURTHER BE SIZED SO THAT FRICTIONAL RESISTANCE OR VENT DOES NOT EXCEED VELOCITY PRESSURE AT SAFETY VALVE OUTLET. VENTS FROM SAFETY VALVES SHALL RUN THE SHORTEST AND MOST DIRECT ROUTE TO OUTDOOR THRU THE ROOF. WHERE VENTS RUN IN FINISHED SPACE THEY SHALL BE FURRED IN TO MATCH ADJACENT BUILDING CONSTRUCTION; IN UNFINISHED SPACE, PIPE TO BE COVERED ONLY. SAFETY VALVES SHALL BE LOCATED AS SHOWN ON THE FLOOR PLANS.
6. IF ELECTRONIC PRV'S ARE USED, REPLACE PILOT CONTROL LINE WITH ELECTRONIC PILOT ON THE PRV AND PROVIDE A PRESSURE TRANSDUCER DOWNSTREAM OF PRV.

STEAM PRESSURE REDUCING STATION
DOUBLE VALVE (1/3 AND 2/3)

NTS

STEAM HUMIDIFIER -
PIPING CONNECTIONS (MULTIPLE DISPERSION TUBES)



HEEL DRIP-STEAM RISER (MEDIUM PRESSURE)

NTS

JACKETED
STEAM HUMIDIFIER CONTROLS

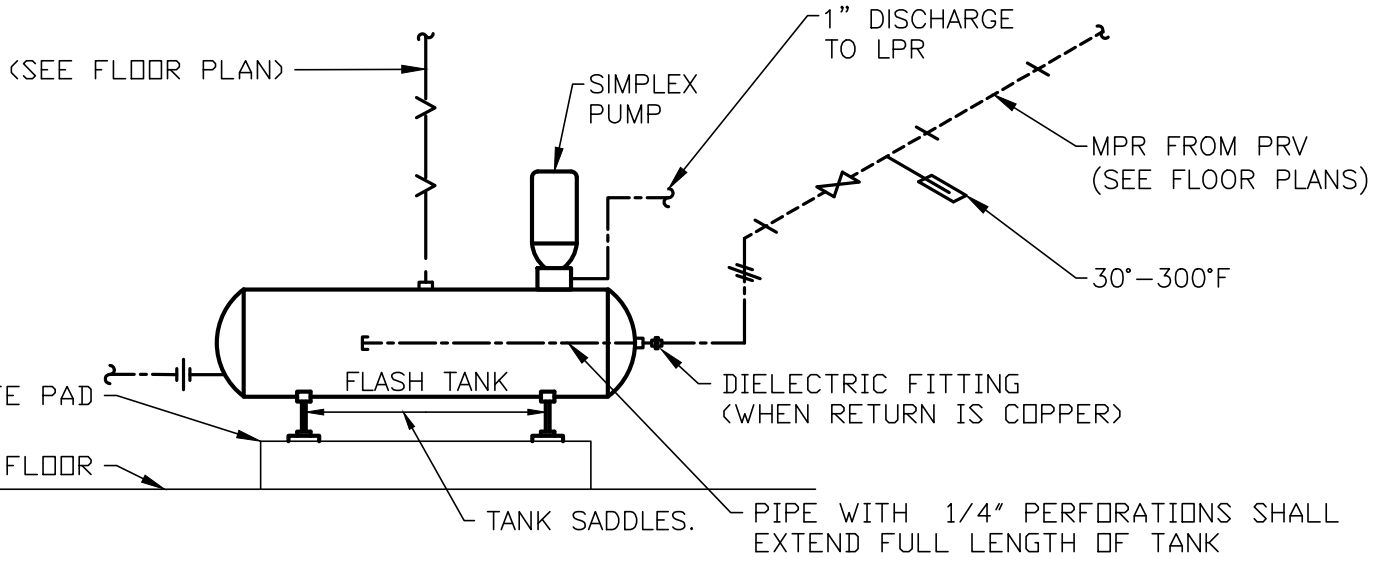
NTS

STEAM SAFETY VALVE

NTS

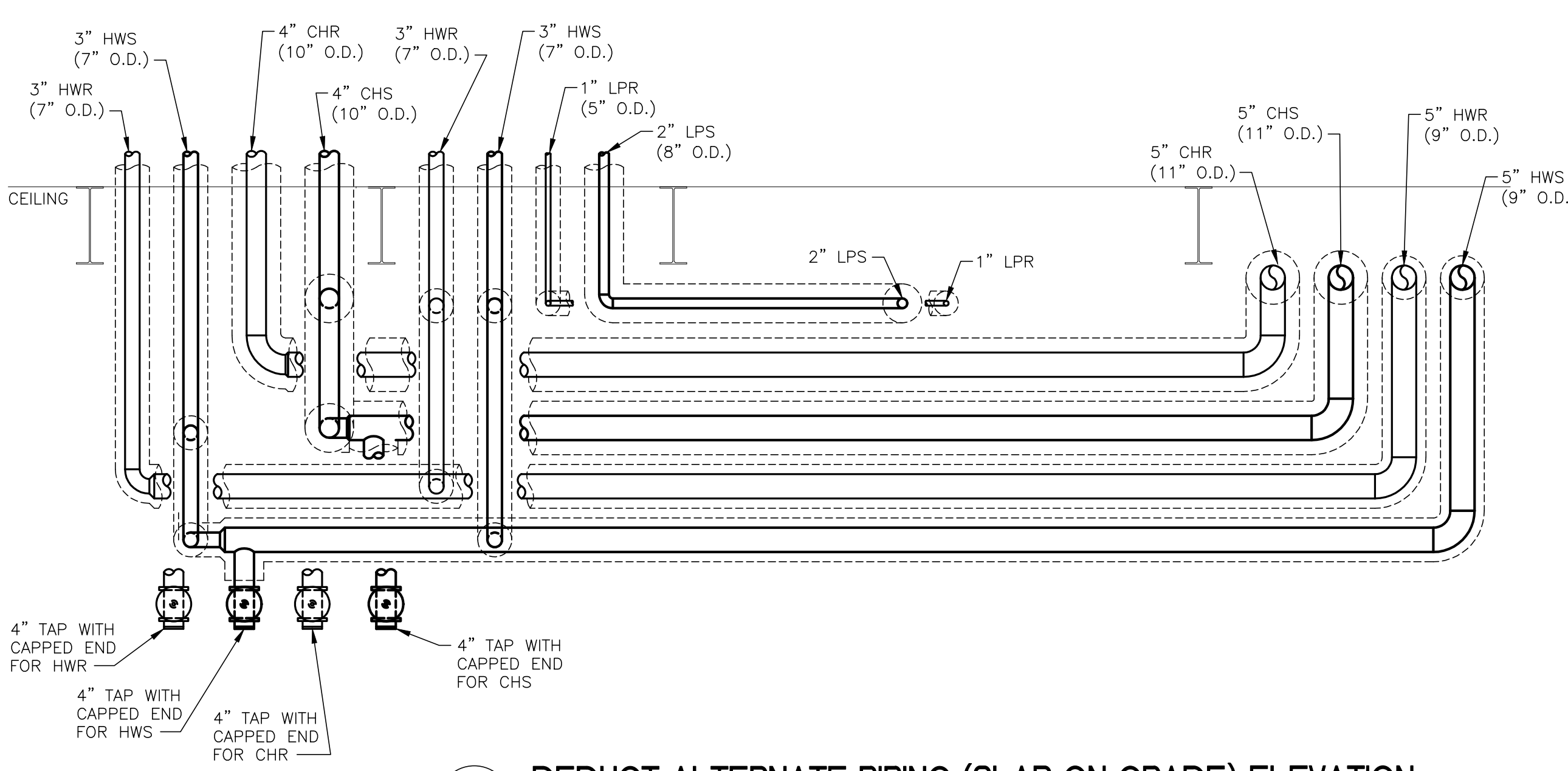
PRV SAFETY VALVE STEAM
RELIEF VENT PIPE ROOF TERMINATION

NTS



TYPICAL CONNECTIONS TO COMBINATION
FLASH TANK AND CONDENSATE PUMP

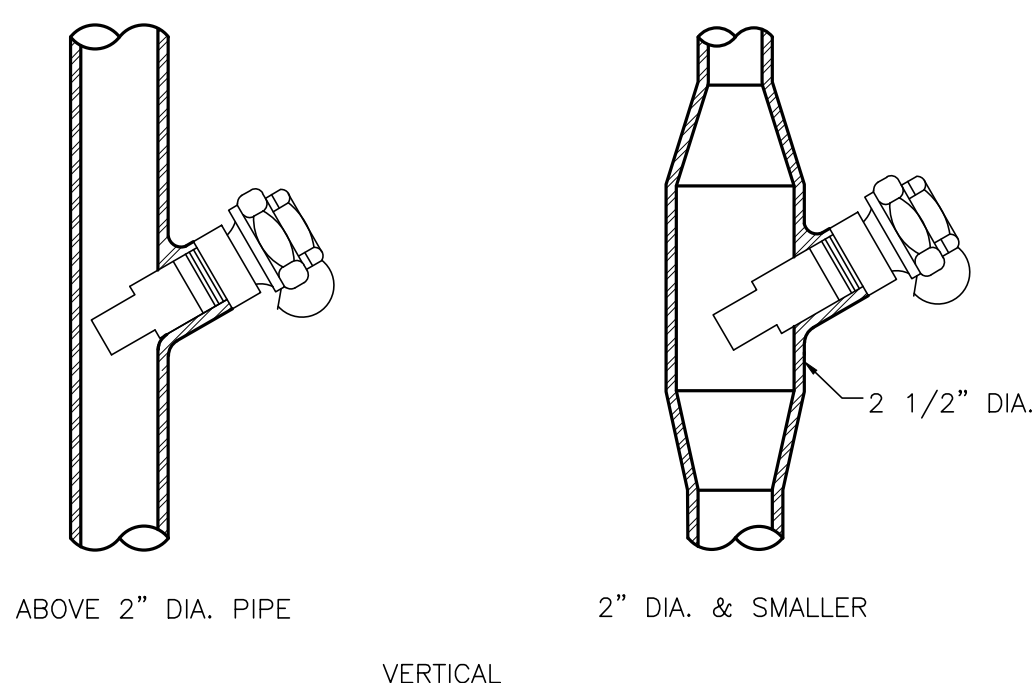
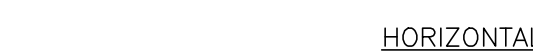
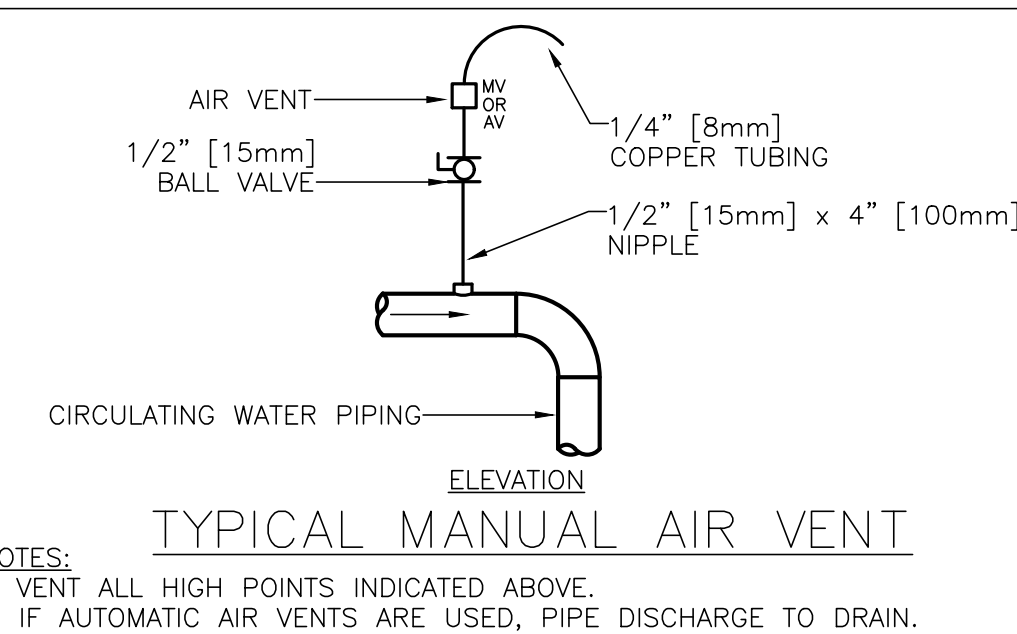
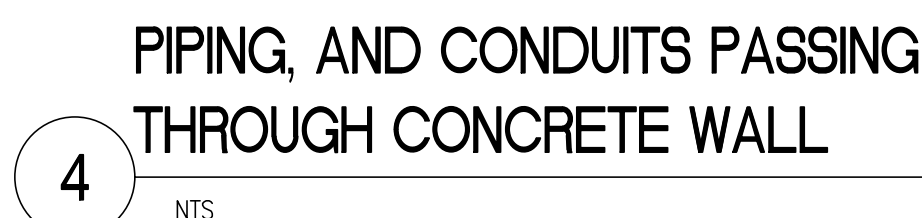
NTS



DEDUCT ALTERNATE PIPING (SLAB ON GRADE) ELEVATION

1/2"=1'-0"

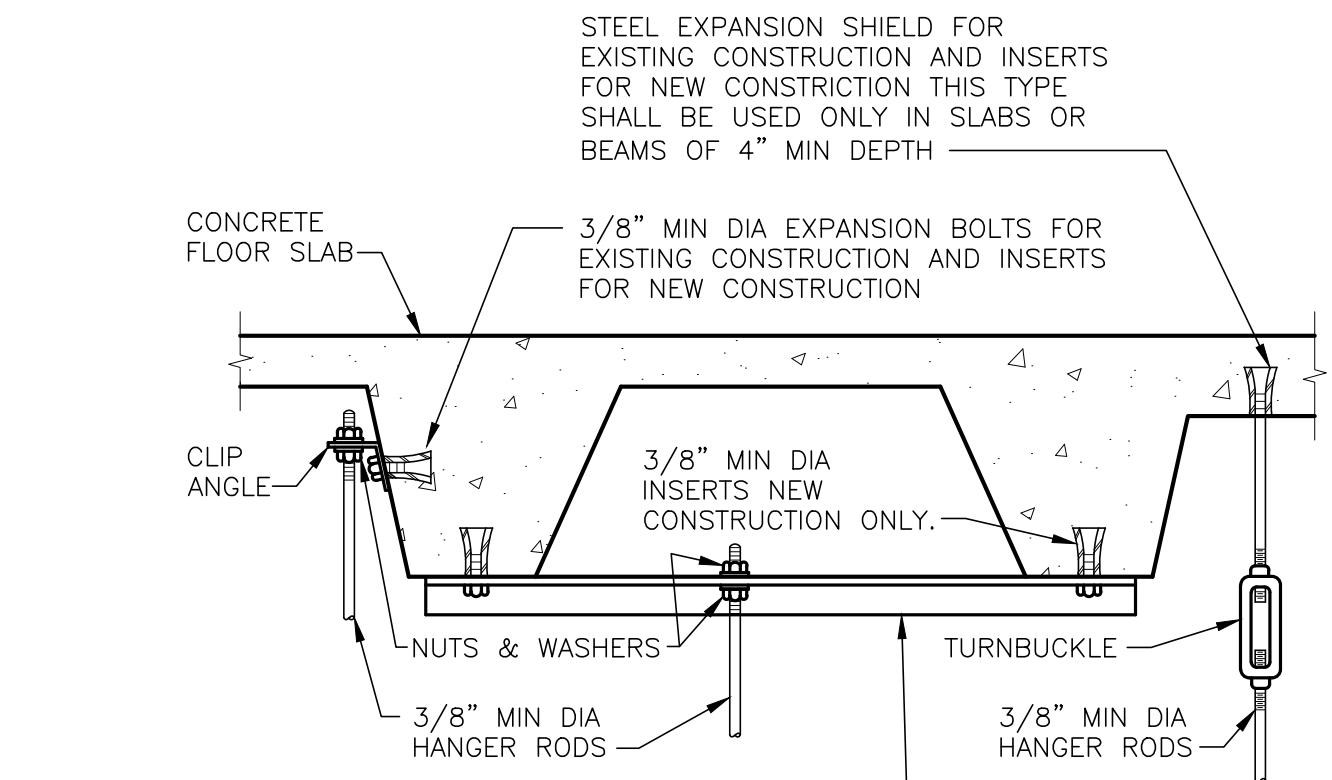
		CONSULTANT		ARCHITECT/ENGINEER OF RECORD		STAMP		Office of Construction and Facilities Management		Drawing Title MECHANICAL: DETAILS		Phase 100% FOR BID		Project Title STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT		Project Number 528-809	
		HYMAN HAYES ASSOCIATES		FELLENZER ENGINEERING LLP		JOHN D. FELLENZER, P.E.		U.S. Department of Veterans Affairs		Approved: Project Director		FULLY SPRINKLERED		Location ALBANY, NY		Building Number 1	
		Revisions:		FE PROJECT NO: 19-181		NY PROFESSIONAL ENGINEER NO. 069373-1								Issue Date MARCH 18, 2022		Drawing Number 1-MH-701	
		Date:		22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; f 855-320-8735										Checked JDF			
				181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; f 855-320-8735										Drawn SRB			



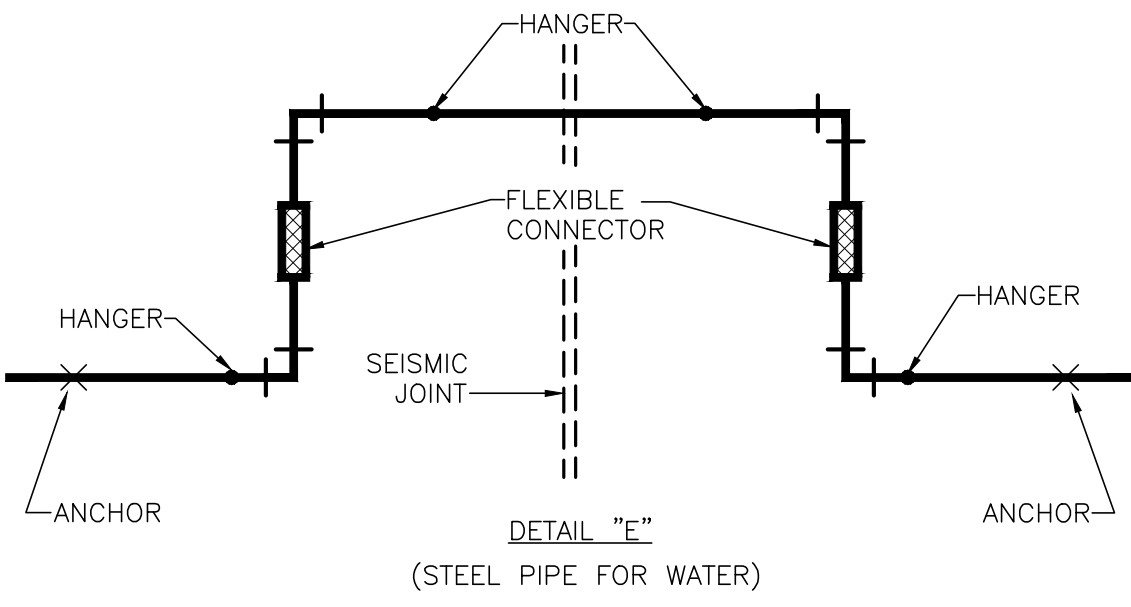
7 INSTALLATION OF THERMOMETER WELLS



Project Number	528-809
Building Number	1
Drawing Number	1-MH-703

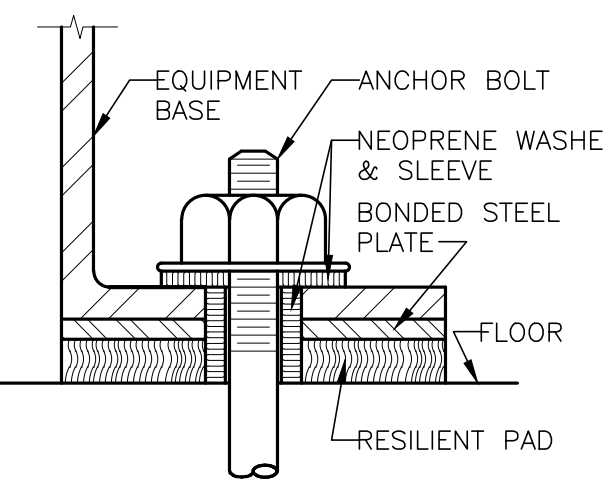


1 SECURING HANGER RODS IN BASEMENT CEILING
NTS

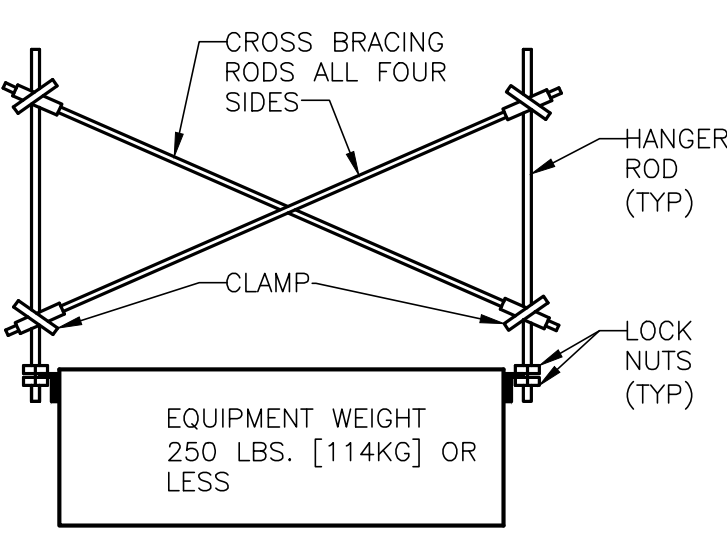


GENERAL NOTE:
1. THIS CONFIGURATION SHOWN IN THIS DETAIL IS A SUGGESTED ARRANGEMENT, NOT MANDATED FOR USE IN AS IS CONDITION. THE REGISTERED PROFESSIONAL STRUCTURAL ENGINEER IN CHARGE OF THE PROJECT SHALL PROVIDE SEISMIC CALCULATIONS AND MODIFY THE CONFIGURATION AS NEEDED TO MAKE THE ARRANGEMENT PROJECT-SPECIFIC. SIZE OF PIPE LOOP TO BE CALCULATED AND FURNISHED BY PROVIDED BY THE REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.

2 PIPING CROSSING A SEISMIC JOINT DETAIL "E"
NTS

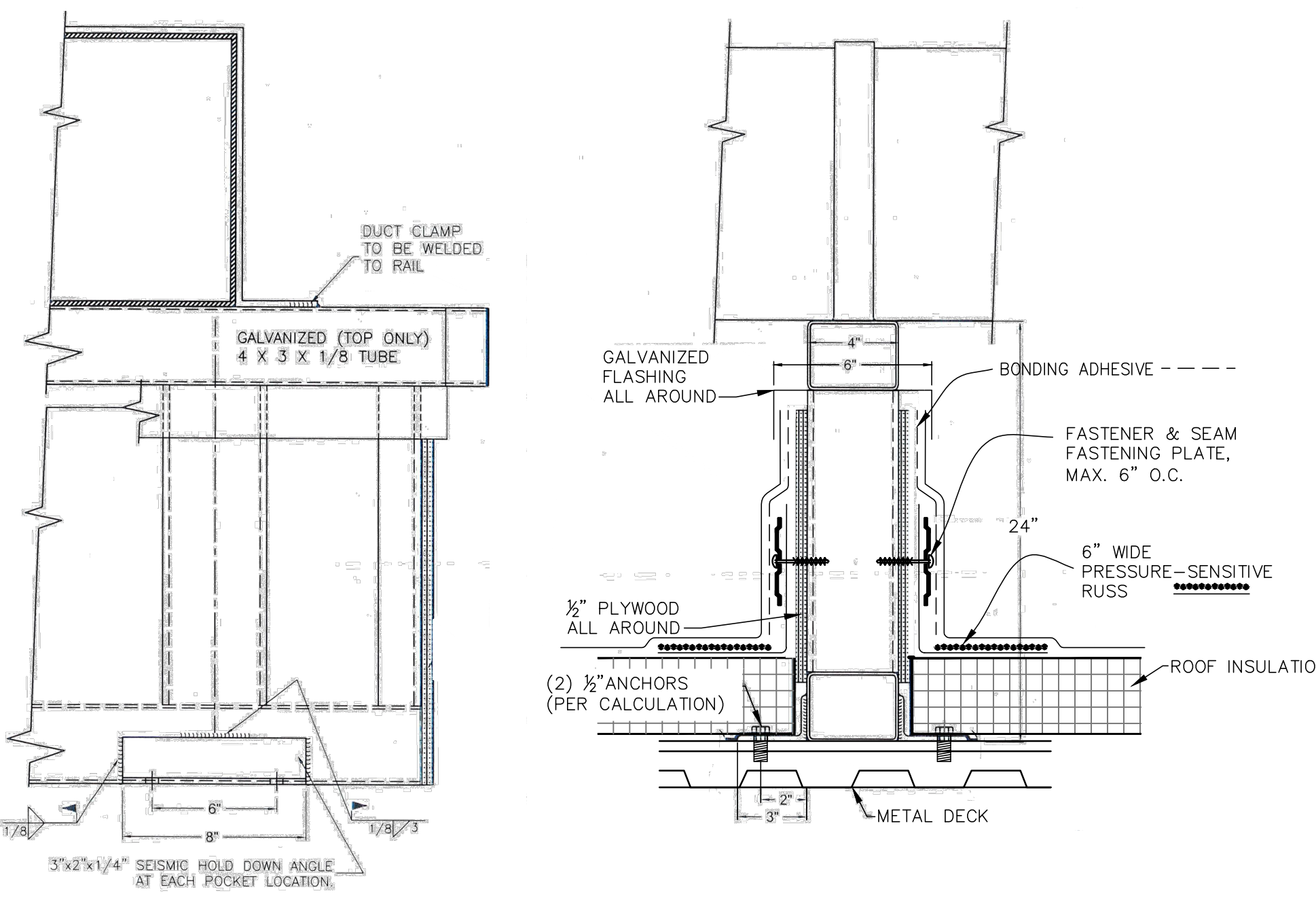


3 SEISMIC BRACING FOR EQUIPMENT
NTS

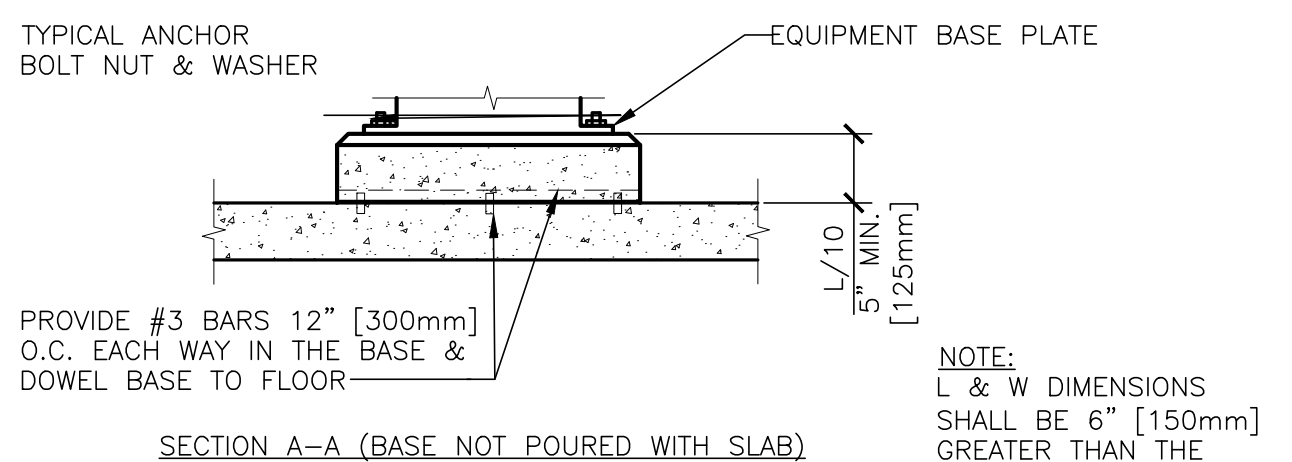
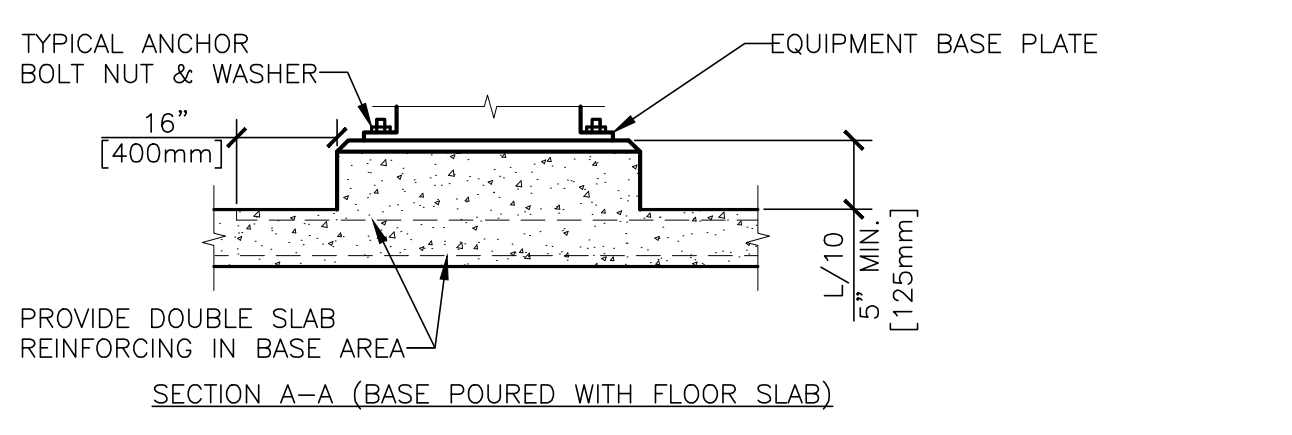
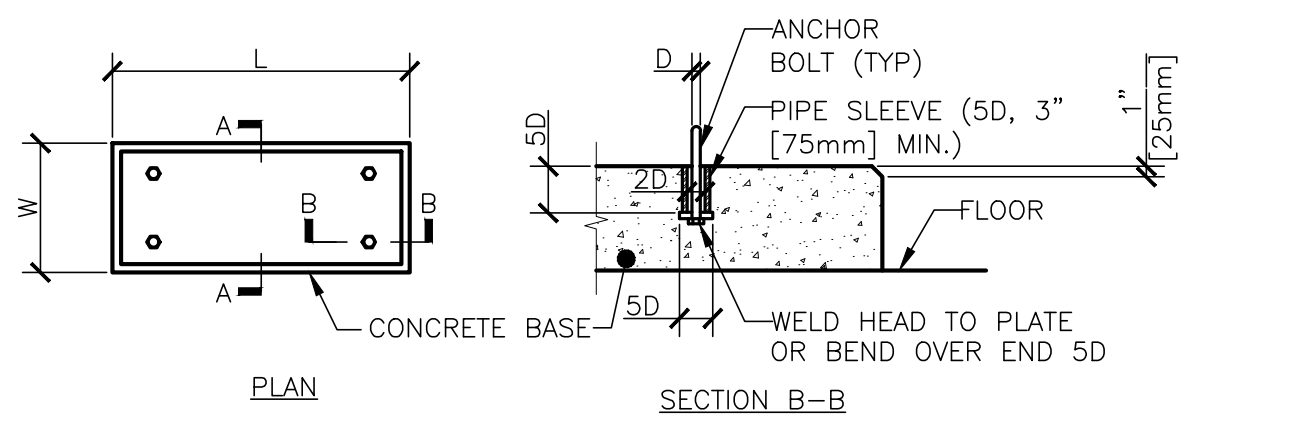


NOTES:
1. WEIGHT OF UNIT TO BE EVENLY DISTRIBUTED OVER CROSS-SECTIONAL AREA OF WOOD NAILER.
2. RAIL SHALL BE FASTENED TO STRUCTURE PER MANUFACTURER RECOMMENDATIONS.
3. VIBRATION ISOLATORS SHALL BE FASTENED TO EQUIPMENT RAIL AND MECHANICAL EQUIPMENT.
4. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ROOFING WORK.

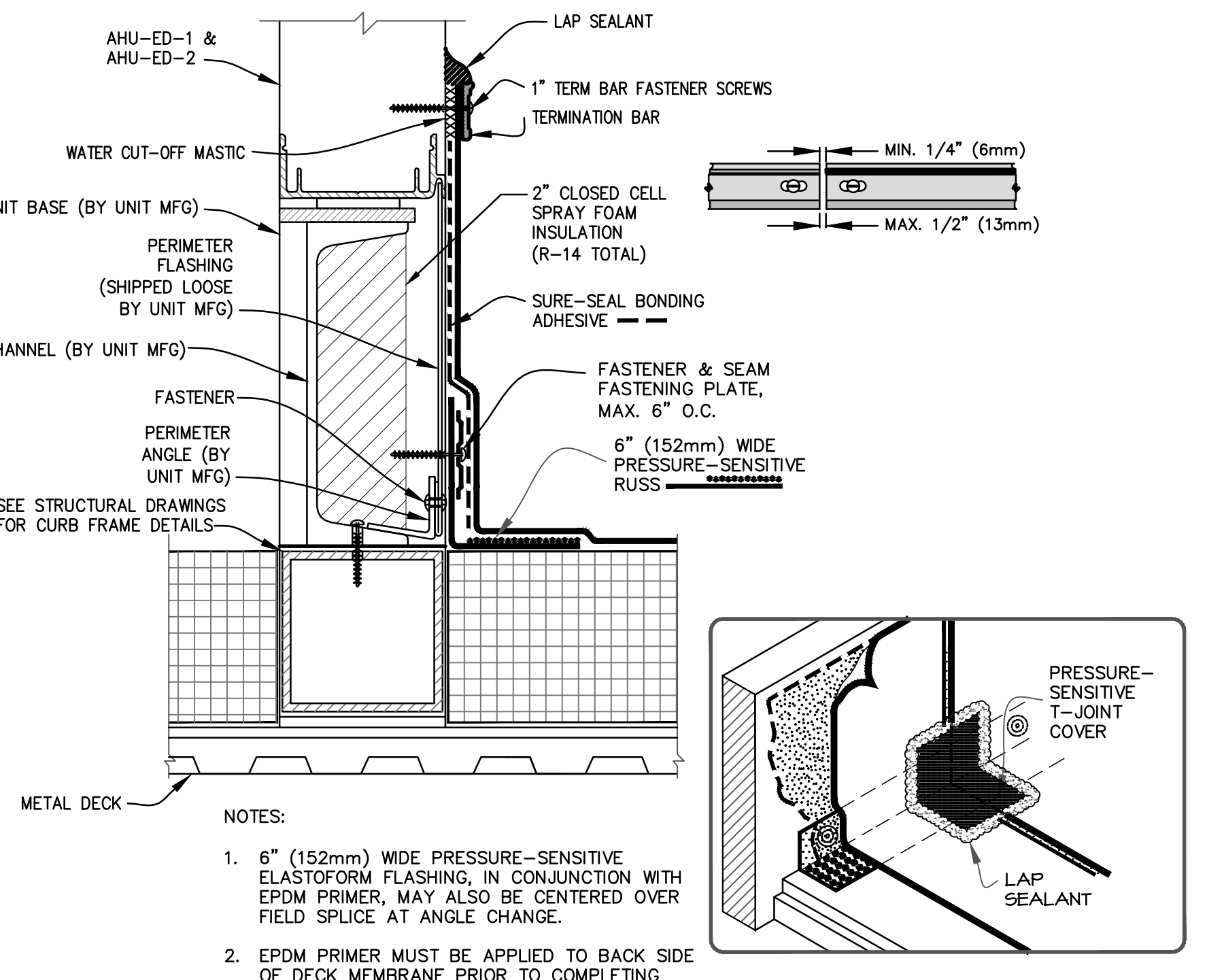
4 ROOF EQUIPMENT RAIL DETAIL
NTS



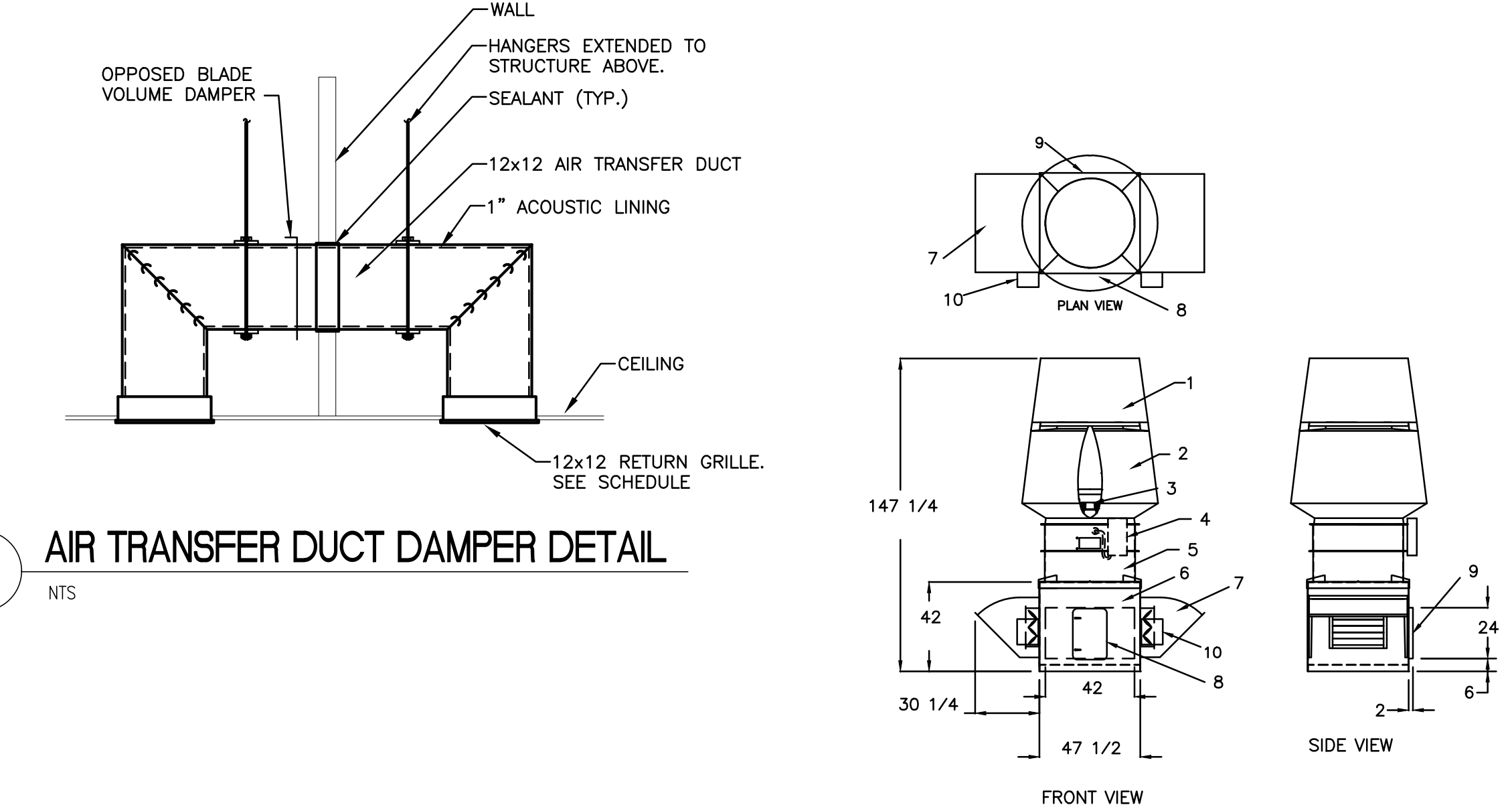
5 ROOFTOP DUCTWORK SUPPORTS
NTS



6 CONCRETE EQUIPMENT BASES
NTS



7 AHU ROOF CURB DETAIL
NTS

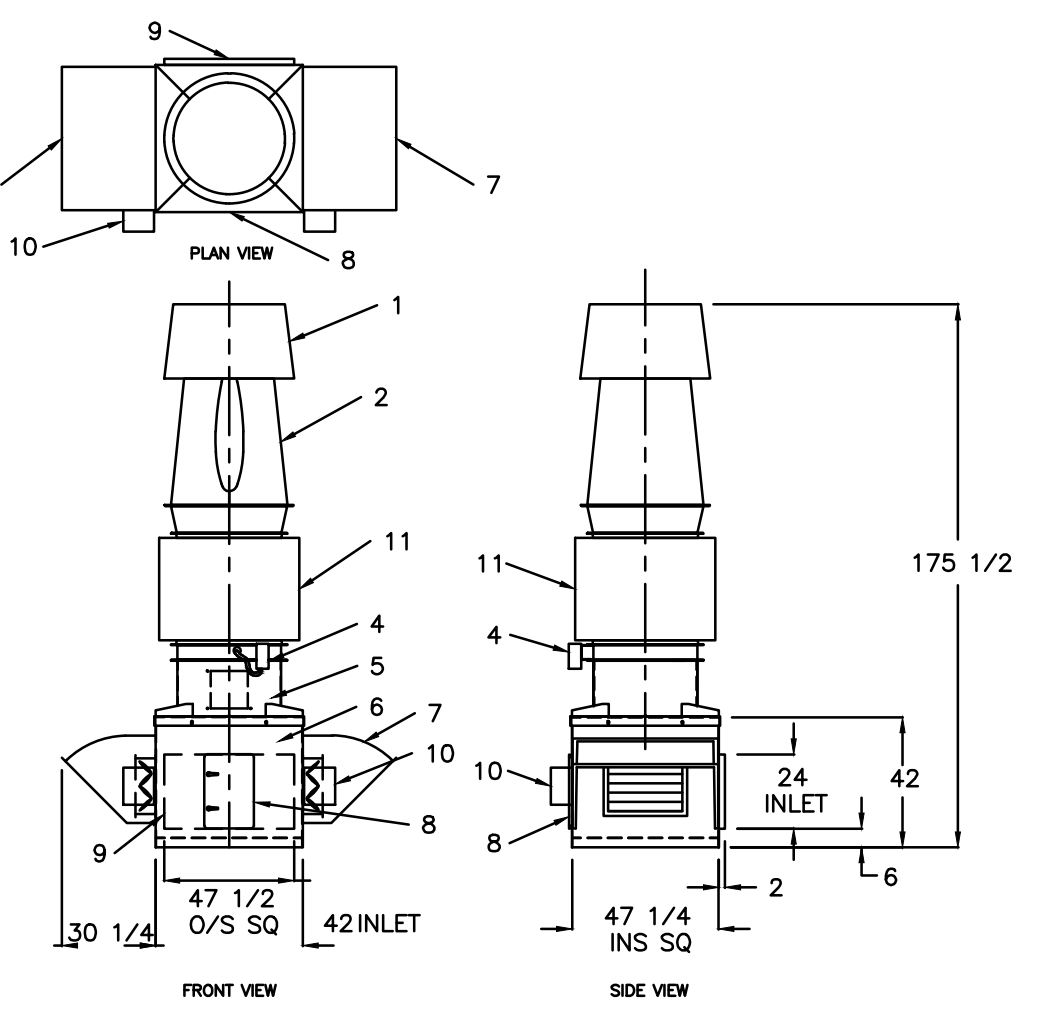


8 AIR TRANSFER DUCT DAMPER DETAIL
NTS

NOTES:
1. ENTRAINMENT WINDBAND
2. SILENCER NOZZLE
3. MOTOR
4. DISCONNECT SWITCH
5. FAN HOUSING
6. SINGLE-WALLED MIXING PLENUM
7. BYPASS DAMPER WITH RAINHOOD (TYP-2)
8. 16\"/>

DIMENSIONS GIVEN IN INCHES

ADDITIONAL NOTES:
APPROXIMATE A 3\"/>

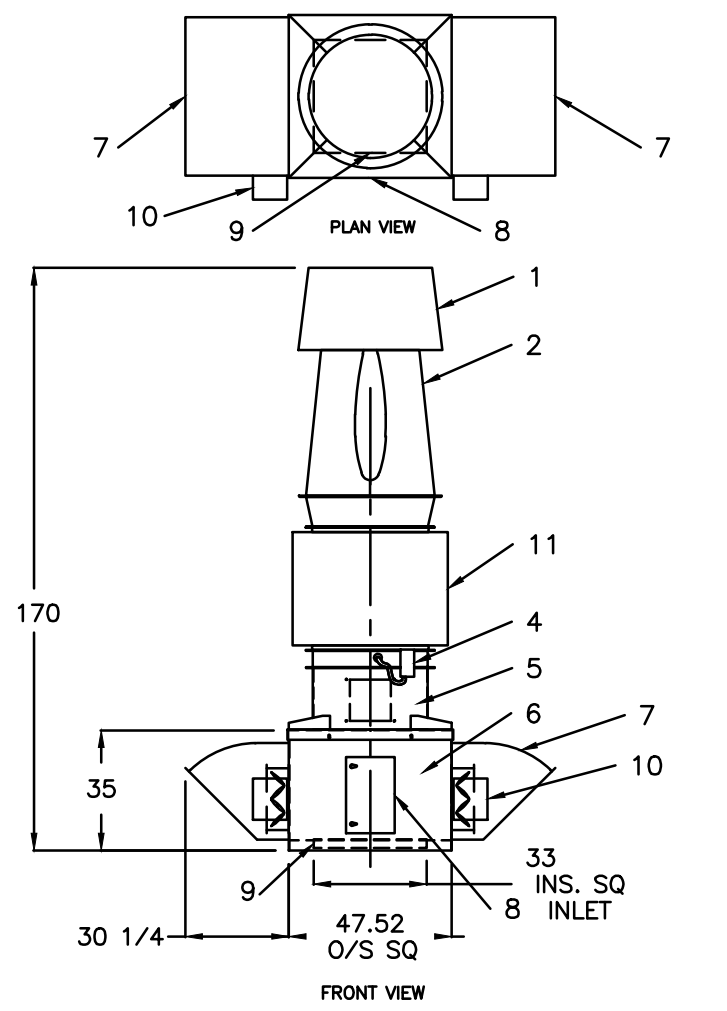


10 EF-ED-6 DISPERSION FAN
NTS

NOTES:
1. ENTRAINMENT WINDBAND
2. NOZZLE
3. MOTOR (NOT SHOWN)
4. DISCONNECT SWITCH
5. FAN HOUSING
6. SINGLE-WALLED MIXING PLENUM
7. BYPASS DAMPER WITH RAINHOOD (TYP-2)
8. 14\"/>

DIMENSIONS GIVEN IN INCHES

ADDITIONAL NOTES:
APPROXIMATE A 3\"/>



11 EF-ED-7 DISPERSION FAN
NTS

NOTES:
1. ENTRAINMENT WINDBAND
2. NOZZLE
3. MOTOR (NOT SHOWN)
4. DISCONNECT SWITCH
5. FAN HOUSING
6. SINGLE-WALLED MIXING PLENUM
7. BYPASS DAMPER WITH RAINHOOD (TYP-2)
8. 14\"/>

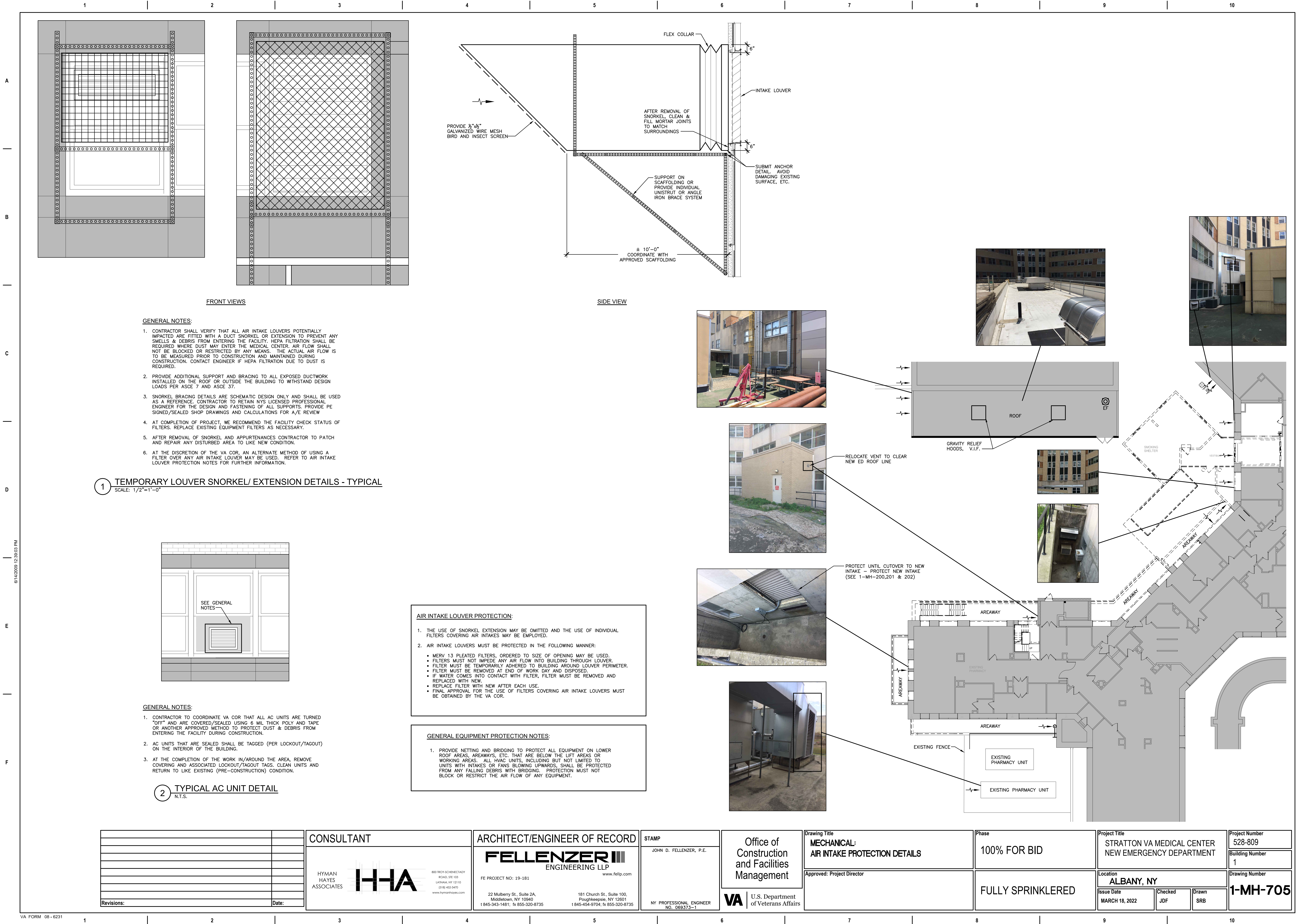
DIMENSIONS GIVEN IN INCHES

ADDITIONAL NOTES:
APPROXIMATE A 3\"/>

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6/14/2020 12:36:03 PM



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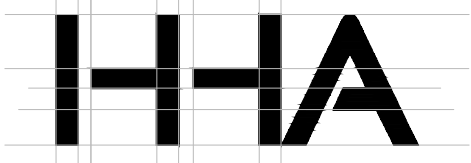
CABINET UNIT HEATERS											
UNIT NO.	TYPE UNIT	CFM	MIN. MBH	ENT. TEMP. °F		GPM	MAX. P.D.	MOTOR		BASIS OF DESIGN MANU. AND MODEL NO. OR APPROVED EQUAL	REMARKS
				AIR	WATER			WATTS OR HP	PHASE VOLT.		
CUH-1	HYDRONIC SURFACE WALL MOUNTED	230	16.4	60	140	1.6	0.2	1/15	115/1/60	BEACON/MORRIS FI-1040	PROVIDE HOT WATER CONTROL VALVE
CUH-2	HYDRONIC RECESSED WALL MOUNTED	230	16.4	60	140	1.6	0.2	1/15	115/1/60	BEACON/MORRIS RWI-1130	
CUH-4	CABINET UNIT HEATER	230	22.8	60	140	2.28	0.38	1/15	120/1/60	VULCAN C-03-1160	PROVIDE HOT WATER CONTROL VALVE
CUH-5	HYDRONIC CEILING HUNG	1400	62.7	0	140	7.0	0.29	1/12	115/1/60	BEACON/MORRIS HB-96	

- NOTES:**
- CONTROLS FOR ALL WALL MOUNTED CABINET UNIT HEATERS SHALL BE UNIT MOUNTED UNLESS OTHERWISE NOTED.
 - PROVIDE CUH-4 AND CUH-5 WITH LOCAL ONLY EXTERNAL THERMOSTATS, TWO-WAY CONTROL VALVE AND INTERLOCK WITH FAN OPERATION.
 - CUH-3 NOT USED.

Revisions:	Date:

CONSULTANT

HYMAN HAYES ASSOCIATES



800 TROY SCHENECTADY ROAD, STE 103
LATHAM, NY 12110
(518) 452-2400
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III
ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; f 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704; f 855-320-8735

STAMP
JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

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U.S. Department
of Veterans Affairs

Drawing Title
**MECHANICAL:
SCHEDULES**

Approved: Project Director

Phase
100% FOR BID

FULLY SPRINKLERED

Project Title
STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location
ALBANY, NY

Issue Date
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Checked
JDF

Drawn
SRB

Project Number
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Building Number
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Drawing Number

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DUCTLESS SPLIT-SYSTEM UNITS											
MARK	LOCATION		TYPE	MANUFACTURER	MODEL # INDOOR/ OUTDOOR	NET COOLING CAPACITY (MBH)	MOUNTING	FAN CFM	ELECTRICAL CHARACTERISTICS		REMARKS
	INDOOR	OUTDOOR							VOLTAGE/PHASE INDOOR/OUTDOOR	MCA/MOCF INDOOR/OUTDOOR	
AC-1	ACCU-1	CANTEN (B44)	ED ROOF	AIR COOLED	AMERICAN STANDARD, OR APPROVED EQUAL	NAXWST12A	12	WALL	400	208/1 10/15	SEE NOTES 1,3,4,5
AC-2	ACCU-2	IT (B43-6)	ED ROOF	AIR COOLED	DATA AIRE, OR APPROVED EQUAL	DCAU-02/ DXCU-0334	24	FLOOR	975	208/1 460/3	SEE NOTES 1,2,3,5
AC-3	ACCU-3	ELEVATOR MACHINE ROOM (B43-6)	ELEVATOR ROOF	AIR COOLED	DATA AIRE, OR APPROVED EQUAL	DCAU-02/ DXCU-0334	24	WALL	975	208/1 460/3	SEE NOTES 1,2,3,5

NOTES:

- CONTRACTORS SHALL SUPPLY ROOF CURB AND MOUNTING RAILS & HARDWARE FOR COMPLETE ACCU-1, ACCU-2, ACCU-3 INSTALLATION. CONTRACTOR SHALL PROVIDE MOUNTING BRACKETS AND ALL NECESSARY APPURTENANCES FOR WALL INSTALLATION OF AC-1, AC-3 AND FLOOR INSTALLATION OF AC-2.
- PROVIDE AC-2 & AC-3 WITH 5 LBS/HR STEAM GENERATOR & 4KW ELECTRIC HEATER.
- PROVIDE AC-1, AC-2, AC-3 WITH DIGITAL LOCAL THERMOSTATS AND CONDENSATE PUMPS.
- PROVIDE ACCU-1 THAT CORRESPONDS TO AC-1 WITH HEATING CAPACITY RATED FOR -8°F OUTSIDE AIR TEMPERATURE.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING TO INTERCONNECT OUTDOOR ACCU-#S AND THEIR CORRESPONDING INDOOR AC-#S.

PUMP SCHEDULE															"TACO" AS STANDARD OR APPROVED EQUAL	
UNIT NO.	LOCATION	SYSTEM	CIRCULATING FLUID				MOTOR HP	MOTOR RPM	MOTOR CONTROLLER	IMPELLER DIAMETER (N.)	MIN. EFF. (%)	ELECTRICAL DATA VOLT/PH	WEIGHT (LB)	MODEL NO.	REMARKS	
			FLUID	SPEC. GRAVITY	TEMP. (°F)	GPM										HEAD (FT.)
PHFP-1	AHU-ED-1 VESTIBULE	PHC	WATER	1.0	40	85	55	3.0	3500	VFD	4.30	58	480/3	90	1911	LEAD PUMP: PHFP-1/1 LAG PUMP: PHFP-1/2
PHFP-2	AHU-ED-2 VESTIBULE	PHC	WATER	1.0	40	20	45	1 1/2	1760	VFD	6.75	35	480/3	125	1919	LEAD PUMP: PHFP-2/1 LAG PUMP: PHFP-2/2
CCFP-1	AHU-ED-1 VESTIBULE	CC	WATER	1.0	40	200	70	7 1/2	3500	VFD	5.30	63	480/3	175	1935	—
CCFP-2	AHU-ED-2 VESTIBULE	CC	WATER	1.0	40	45	56	2	3500	VFD	3.95	51	480/3	80	1911	

NOTES:

- IMPELLER DIAMETER INDICATED IS APPROXIMATE. FINAL IMPELLER DIAMETER TO BE DETERMINED BY PUMP MFR. CONTRACTOR SHALL TRIM IMPELLER AFTER INITIAL FLOW BALANCING TO ACHIEVE OPTIMAL PUMP PERFORMANCE.
- COORDINATE MOTOR REQ. WITH E.C.. E.C. TO FURNISH AND INSTALL MOTOR STARTERS.
- FREEZE PROTECTION PUMPS (FP) SHALL BE LEAD/LAG (2) PUMPS FOR PRE-HEAT COILS ONLY AND SINGLE PUMP FOR COOLING COILS. NO FREEZE PUMPS ON RE-HEAT COILS.
- OMIT ON AHU-ED-3 & AHU-ED-4.

LOW PRESSURE DUCT GAUGE SCHEDULE				2000 FPM
FLAT OVAL DUCT DIM. OF MAJOR AXIS	ROUND DUCT	RECTANGULAR DUCT GREATEST DIMENSION	GAUGE GALVANIZED STEEL	
_____	3" TO 8"	UP TO 12"	26	
UP TO 24"	9" TO 14"	13" TO 30"	24	
25" TO 48"	15" TO 36"	31" TO 54"	22	
49" TO 70"	_____	55" TO 84"	20	

INSULATION SCHEDULE				"JOHNS MANVILLE" AS STANDARD OR APPROVED EQUAL
INSIDE BUILDING THERMAL ENVELOPE	FIBERGLASS FLEXIBLE BLANKET, 1.0 LB/CF R=8.0 (INSTALLED @ 25% COMPRESSION)	MINIMUM THICKNESS TO MEET ASHRAE 90.1 REQUIREMENTS		
SERVICE	FACING	2"		
SUPPLY/RETURN AIR	FSK	2"		
OUTDOOR AIR	FSK	2"		
EXHAUST AIR	-	NONE		
OUTSIDE BUILDING THERMAL ENVELOPE	FIBERGLASS FLEXIBLE BLANKET, 1.0 LB/CF R=12.0	THICKNESS TO EXCEED ASHRAE 90.1 REQUIREMENTS		
SERVICE	FACING	4"		
SUPPLY/RETURN AIR	ASJ	4"		

NOTES:

- FOR PIPE INSULATION SCHEDULE, SEE SPECIFICATION 230711.
- ALL EDGES SHALL BE CLEAN CUT.
- ALL SEAMS AND BUTT JOINTS SHALL BE ADHERED AND SEALED USING ADHESIVE. HORIZONTAL JOINTS SHALL BE AT BOTTOM OF DUCTS.
- ALL EXPOSED END CUTS SHALL BE COATED WITH ADHESIVE.
- FOR ALL OUTDOOR EXPOSED DUCTWORK, THE HORIZONTAL SURFACE SHALL BE SLOPED TO PREVENT POUNDING ON SURFACE OF COATED INSULATION (2" MIN.).

COMBINATION FLASH TANK & CONDENSATE PUMP SCHEDULE											"SHIPCO" AS STANDARD OR APPROVED EQUAL
UNIT TAG NO.	MODEL NO.	TANK CAPACITY GALLONS	TANK DIMENSIONS HORIZONTAL	RECEIVED INLET SIZE (NPT)	PUMP TYPE TOP MOUNTED	DISCHARGE CONNECTION SIZE	PUMP DISCHARGE PRESSURE PSIG	GPM PUMP RATING	MOTOR HP	ELECTRICAL DATA VOLT/PH/HZ	REMARKS
FTP-1	CT SINGLE	36	16"x36"L	2"	110-MU	¾"	20	15	1/3	115/1/60	SEE NOTES

NOTES:

- FLASH TANK UNIT CONSISTS OF TOP MOUNTED SIMPLEX WATER PUMP. PROVIDE SPARE PUMP FOR EMERGENCY REPLACEMENT.
- THE RECEIVER SHALL BE FLOOR MOUNTED ON 4" CONCRETE PAD BELOW THE PRV STATION.
- UNIT SHALL BE COMPLETE WITH FLOAT SWITCH, ELECTRICAL CONTROLS AND ACCESSORIES.

MOTORIZED AIR DAMPER						
SYMBOL	MATERIAL	PRESSURE RATING	VELOCITY RATING	TEMP RATING	OPERATOR	BASIS OF DESIGN OR APPROVED EQUAL
	GALVANIZED STEEL	1IN. WG	2000 FPM	180° F	9 VOLT ACTUATOR	GREENHECK RBD-10

NOTES:

- PROVIDE TWO HAND HELD REMOTE CONTROL DEVICES AND TURN OVER TO V.A. COR AT PROJECT CLOSEOUT.
- PROVIDE GANG BOX OUTLET WITH PORT WALL PLATES FOR CORRESPONDING NUMBER OF DAMPERS AS SHOWN ON DRAWINGS. PROVIDE ALL PLENUM RATED CABLING + CONNECTORS NECESSARY FOR COMPLETE INSTALLATION.

ETU/VAV/ACUV SCHEDULE

VAV/CV BASIS OF DESIGN: TITUS

Device Tag	Service	Rooms Served	Base				BACnet	Design Airflow			Hot Water Coil Data										Model Number	Remarks
			Integral Controller	Size	Shape	Actuator		0		PD @ Max Design Airflow	DEVICE TAG	CFM	MBH	GPM	P.D. (Ft.)	E.A.T. (°F)	L.A.T. (°F)	E.W.T. (°F)	L.W.T. (°F)			
								Min.	Max.													
AHU-ED-1																						
CVS-1	Supply	Vestibule Rm 100	Yes	-	Round	Per Controls	Included	600	-		RH-CVS-1	600	23.33	2.33		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-2	Supply	Checking In Area (E-102/A & E103/A)	Yes	-	Round	Per Controls	Included	2793	-		RH-CVS-2	2793	108.59	10.86		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-3	Supply	Corridor & Nurses Station (E126, E130))	Yes	-	Round	Per Controls	Included	580	-		RH-CVS-3	580	22.55	2.26		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-4	Supply	Corridor (E129)	Yes	-	Round	Per Controls	Included	540	-		RH-CVS-4	540	21.00	2.10		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-5	Supply	Clean Utility (E131)	Yes	-	Round	Per Controls	Included	145	-		RH-CVS-5	145	5.64	0.56		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-6	Supply	Corridor (E127)	Yes	-	Round	Per Controls	Included	630	-		RH-CVS-6	630	24.49	2.45		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-1	Supply	Reception (E101)	Yes	-	Round	Per Controls	Included	217	310		RH-VAVS-1	310	12.05	1.21		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-2	Supply	Triage (E104 & E104A)	Yes	-	Round	Per Controls	Included	343	474		RH-VAVS-2	474	18.43	1.84		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-3	Supply	Exam (E105 & E106)	Yes	-	Round	Per Controls	Included	280	400		RH-VAVS-3	400	15.55	1.56		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-4	Supply	Exam (E124 & E125)	Yes	-	Round	Per Controls	Included	280	400		RH-VAVS-4	400	15.55	1.56		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-5	Supply	Exam (E107)	Yes	-	Round	Per Controls	Included	273	355		RH-VAVS-5	355	13.80	1.38		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-6	Supply	Exam (E108, E109)	Yes	-	Round	Per Controls	Included	185	245		RH-VAVS-6	245	9.53	0.95		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-7	Supply	Vestibule (E111 & E111A)	Yes	-	Round	Per Controls	Included	350	-		RH-CVS-7	350	13.61	1.36		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-8	Supply	Nurse Station (E132, E133 & E133B)	Yes	-	Round	Per Controls	Included	370	-		RH-CVS-8	370	14.39	1.44		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-9	Supply	Corridor (E128)	Yes	-	Round	Per Controls	Included	585	-		RH-CVS-9	585	22.74	2.27		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-10	Supply	Corridor (E135/A)	Yes	-	Round	Per Controls	Included	586	-		RH-CVS-10	586	22.78	2.28		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-11	Supply	Resident Work (E138), Mail (E142), (E141)	Yes	-	Round	Per Controls	Included	240	-		RH-CVS-11	240	9.33	0.93		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-12	Supply	ISO Exam (E113)	Yes	-	Round	Per Controls	Included	505	-		RH-CVS-12	505	19.63	1.96		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-13	Supply	Decon (E114)	Yes	-	Round	Per Controls	Included	310	-		RH-CVS-13	310	12.05	1.21		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-14	Supply	Bariatric Isolation (E116)	Yes	-	Round	Per Controls	Included	515	-		RH-CVS-14	515	20.02	2.00		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-15	Supply	Storage (E147)	Yes	-	Round	Per Controls	Included	150	-		RH-CVS-15	150	5.83	0.58		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-16	Supply	Medicine (E134)	Yes	-	Round	Per Controls	Included	100	-		RH-CVS-16	100	3.89	0.39		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-7	Supply	Exam (E118) & (E119)	Yes	-	Round	Per Controls	Included	287	410		RH-VAVS-7	410	15.94	1.59		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-8	Supply	Break Kitchen (E140)	Yes	-	Round	Per Controls	Included	210	300		RH-VAVS-8	300	11.86	1.17		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-9	Supply	Office - MH (E142) Office (E144)	Yes	-	Round	Per Controls	Included	245	345		RH-VAVS-9	345	13.41	1.34		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-10	Supply	Office - MD (E145, E145A)	Yes	-	Round	Per Controls	Included	238	295		RH-VAVS-10	295	11.47	1.15		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-11	Supply	Exam - MH (E120)	Yes	-	Round	Per Controls	Included	105	150		RH-VAVS-11	150	5.83	0.58		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-12	Supply	Resuscitation (E112)	Yes	-	Round	Per Controls	Included	245	350		RH-VAVS-12	350	13.61	1.36		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-13	Supply	Exam (E121, E122 & E123)	Yes	-	Round	Per Controls	Included	420	600		RH-VAVS-13	600	23.33	2.33		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVR-1	Return	Reception (E101)	Yes	-	Round	Per Controls	Included	217	310		VAVR-1											
VAVR-2	Return	Triage (E104)	Yes	-	Round	Per Controls	Included	220	276		VAVR-2											
VAVR-3	Return	Exam (E105 & E106)	Yes	-	Round	Per Controls	Included	280	400		VAVR-3											
VAVR-4	Return	Exam (E124 & E125)	Yes	-	Round	Per Controls	Included	280	400		VAVR-4											
VAVR-5	Return	Exam (E107)	Yes	-	Round	Per Controls	Included	153	235		VAVR-5											
VAVR-6	Return	Exam (E108, E109)	Yes	-	Round	Per Controls	Included	140	200		VAVR-6											
VAVR-7	Return	Exam (E118) & (E119)	Yes	-	Round	Per Controls	Included	287	410		VAVR-7											
VAVR-8	Exhaust	Break Kitchen (E140)	Yes	-	Round	Per Controls	Included	210	300		VAVR-8											
VAVR-9	Return	Office (E143), Office (E144)	Yes	-	Round	Per Controls	Included	242	345		VAVR-9											
VAVR-10	Return	Office - MH (E142)	Yes	-	Round	Per Controls	Included	123	180		VAVR-10											
VAVR-11	Return	Exam - MH (E120)	Yes	-	Round	Per Controls	Included	105	150		VAVR-11											
VAVR-12	Return	Resuscitation (E112)	Yes	-	Round	Per Controls	Included	245	350		VAVR-12											
VAVR-13	Return	Exam (E121, E122 & E123)	Yes	-	Round	Per Controls	Included	420	600		VAVR-13											
AHU-ED-2																						
CVS-17	Supply	Corridor (E146)	Yes	-	Round	Per Controls	Included	300	-		RH-CVS-17	300	11.66	1.17		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-18	Supply	OT (E151)	Yes	-	Round	Per Controls	Included	460	-		RH-CVS-18	460	17.88	1.79		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-19	Supply	Control Room (E152)	Yes	-	Round	Per Controls	Included	200	-		RH-CVS-19	200	7.78	0.78		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-20	Supply	X-Ray (E153)	Yes	-	Round	Per Controls	Included	170	-		RH-CVS-20	170	6.61	0.66		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-21	Supply	Locker Room (E154)	Yes	-	Round	Per Controls	Included	275	-		RH-CVS-21	275	10.69	1.07		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-22	Supply	Corridor (E147) & Storage (E148)	Yes	-	Round	Per Controls	Included	393	-		RH-CVS-22	393	15.28	1.53		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-23	Supply	Corridor (E155)	Yes	-	Round	Per Controls	Included	340	-		RH-CVS-23	340	13.22	1.32		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-24	Supply	Corridor (E156)	Yes	-	Round	Per Controls	Included	350	-		RH-CVS-24	350	13.61	1.36		65	95	180	160		SUMMER HWS TEMP IS 140°F	
CVS-25	Supply	Corridor (E157) & (E159)	Yes	-	Round	Per Controls	Included	300	-		RH-CVS-25	300	11.66	1.17		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-14	Supply	Office (E149)	Yes	-	Round	Per Controls	Included	60	90		RH-VAVS-14	60	2.33	0.23		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVS-15	Supply	Grieving (E158)	Yes	-	Round	Per Controls	Included	123	175		RH-VAVS-15	123	4.76	0.48		65	95	180	160		SUMMER HWS TEMP IS 140°F	
VAVR-14	Return	Office (E148)	Yes	-	Round	Per Controls	Included	60	90		VAVR-14	60										
VAVR-15	Return	Grieving (E158)	Yes	-	Round	Per Controls	Included	123	175		VAVR-15	123										

GENERAL NOTES:

1. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.
3. THIS CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AS REQUIRED WHERE ACCESSIBILITY TO COMPONENTS (VALVES, TRAPS, CLEANOUTS, ETC.) IS REQUIRED FOR MAINTENANCE AND/OR SYSTEM OPERATION.
4. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
5. ALL PENETRATIONS THROUGH FOUNDATIONS AND EXTERIOR WALLS SHALL BE SEALED WITH EDM OR EDM RUBBER GASKET AND SEALED WITH A WATERPROOF, NON-HARDENING SEALANT.
6. FURNISH AND INSTALL UNDER SINK PROTECTIVE PIPE COVER KITS ON EXPOSED PIPING AT ALL ADA ACCESSIBLE SINKS AND LAVATORIES.
7. COORDINATE FIXTURE ROUGH-INS AND INSTALLATIONS WITH THE ARCHITECTURAL PLANS.
8. ALL EXPOSED DOMESTIC WATER DISTRIBUTION PIPING IS TO BE INSULATED.
9. PROVIDE SHUT-OFF VALVES AT ALL BRANCH PIPING TAKE-OFFS (UNO) AND AT ALL CONNECTIONS TO EQUIPMENT. PROVIDE UNIONS AT ALL EQUIPMENT CONNECTIONS.
10. PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS. PROVIDE MANUAL VENTS ON PIPING AT ALL HIGH POINTS.
11. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR.
12. ALL REQUIRED MOTOR STARTERS SHALL BE FURNISHED BY THIS CONTRACTOR AND INSTALLED BY THE E.C.
13. ALL REQUIRED CONTROL EQUIPMENT AND WIRING SHALL BE FURNISHED & INSTALLED BY THIS CONTRACTOR.
14. WHERE INSTALLATION OR REMOVAL OF BELOW-SLAB PIPING IS INDICATED IN EXISTING CONCRETE SLAB, THIS CONTRACTOR SHALL SAW-OUT AND EXCAVATE THE EXISTING SLAB AS REQUIRED. UPON COMPLETION OF WORK, THIS CONTRACTOR SHALL PATCH THE CONCRETE SLAB. FLOOR FINISH WORK BY G.C.
15. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
16. CONTRACTOR SHALL PROVIDE ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
17. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
18. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

PLUMBING DEMOLITION NOTES:

1. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
2. REMOVE ALL EQUIPMENT AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL FITTINGS, SUPPORTS AND HANGERS.
3. ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
4. DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT OR PIPING FOR CONNECTION TO NEW WORK. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
5. ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF-SITE, UNLESS OTHERWISE NOTED.
6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

GENERAL PLUMBING NOTES:

1. ALL AREAS SHALL BE SERVED WITH (110°F) HOT WATER. MAXIMUM OUTLET TEMPERATURE FOR ANY FIXTURE SHALL BE SET @ 100°F.
2. DRAIN PIPING SHOWN ON PLANS SHALL BE INSTALLED BELOW THE FLOOR SHOWN (BELOW SLAB OR ABOVE CEILING OF LOWER FLOOR AS APPROPRIATE) UNLESS OTHERWISE NOTED.
3. ALL PLUMBING SUPPLY & VENT PIPING SHOWN SHALL BE INSTALLED IN THE CEILING OF THE FLOOR PLAN SHOWN, UNLESS OTHERWISE NOTED.
4. PLUMBING CONTRACTOR IS RESPONSIBLE FOR OWN CUTTING & PATCHING AS REQUIRED. FINISHING SHALL BE BY GENERAL CONTRACTOR.
5. INSTALL SECTIONALIZING VALVES AT ALL MAIN "T" ON DOMESTIC HOT & COLD WATER SERVICE.
6. VENT PIPING UNDER SLABS SHALL BE A MINIMUM OF 2".
7. WASTE PIPING UNDER SLABS SHALL BE A MINIMUM OF 3".
8. ALL PLUMBING FIXTURES AND TRIM SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES, AS WELL AS ALL ADA AND ANSI-A-117.1 REQUIREMENTS.
9. INSTALL CONDENSATION CONTROL INSULATION: MINIMUM 1"-INCH THICK FOR ALL PIPE SIZES.
 - A. COOLING COIL CONDENSATION PIPING TO WASTE PIPING FIXTURE OR INLET. (COORDINATE W/ MECHANICAL CONTRACTOR).
 - B. PLUMBING PIPING AS FOLLOWS:
 - a. BODY OF ROOF DRAINS AND STORM PIPE OF HORIZONTAL & VERTICAL RUNS, & OFFSETS (INCLUDING ELBOWS) OF INTERIOR DOWN SPOUT PIPING IN ALL AREAS.
 - b. WASTE PIPING FROM ELECTRIC WATER COOLERS TO DRAINAGE SYSTEM.
 - c. WASTE PIPING LOCATED ABOVE BASEMENT FLOOR FROM AIR HANDLING UNITS, FROM FIXTURE (INCLUDING TRAP) TO MAIN VERTICAL WASTE PIPE. (COORDINATE W/ MECHANICAL CONTRACTOR).
 - d. COLD WATER PIPING.
10. HOT & HOT WATER RETURN PIPING SHALL BE INSULATED PER WRITTEN SPECIFICATIONS AND NYS ENERGY CONSERVATION CONSTRUCTION CODE.
11. PLUMBING CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ROOF DRAINS AND FOR ADDITIONAL ROOF DRAIN WORK NOT SHOWN ON PLUMBING DRAWING.
12. ROOF LEADERS MUST BE CONVEYED INDEPENDENTLY FROM SANITARY SEWER SYSTEMS, (STORM DRAIN SHALL NEVER BE INTO SANITARY SEWER SYSTEM).
13. UNLESS OTHERWISE NOTED, ALL VALVES 2" & SMALLER SHALL BE QUARTER-TURN BALL VALVES AND ALL VALVES 2½" & LARGER SHALL BE GATE VALVES. ALL VALVES SHALL BE OF FULL-PORT DESIGN.
14. PLUMBING CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED & PAY ALL FEES.
15. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING BEDDING AND BACK FILLING AS PER SPECIFICATIONS. ALL TRENCH WORK TO BE COORDINATED WITH THE GENERAL CONSTRUCTION CONTRACTOR.
16. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
17. PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE ACCESSIBILITY OF ALL NEW VALVES.

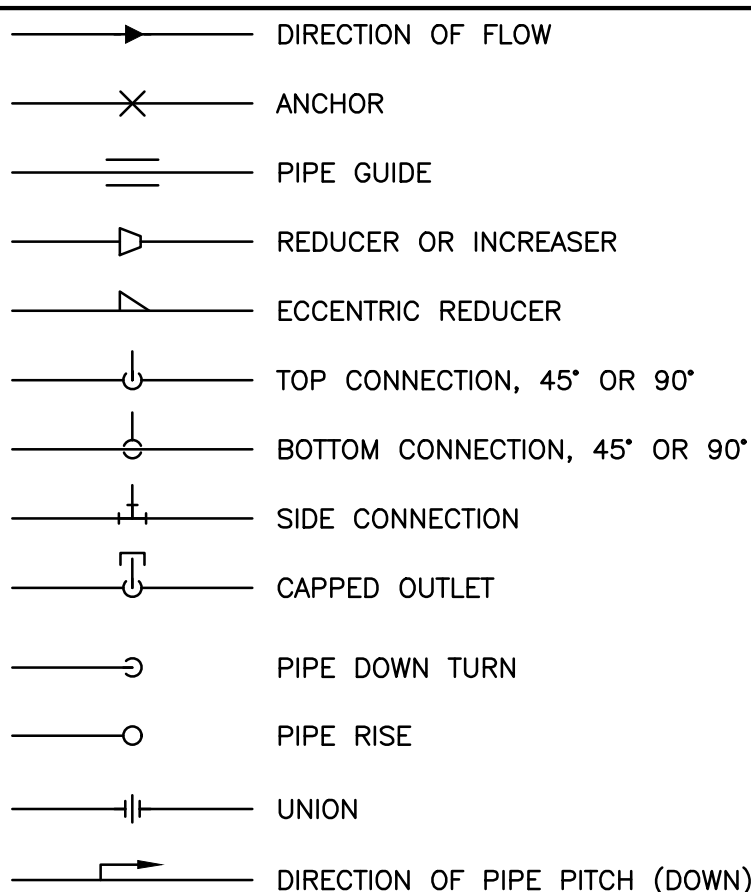
MEDICAL GAS NOTES:

1. ALL MEDICAL GAS PIPING SHALL BE BRAZED.
2. THE MINIMUM PIPE SIZE ALLOWED FOR MEDICAL VACUUM IS ¼". ALL OTHER MEDICAL GAS PIPING AT MINIMUM IS ALLOWED TO BE ½".
3. ALL POSITIVE PRESSURE ANALOG GAUGES SHALL BE INSTALLED SUCH THAT THE STANDARD OPERATING PRESSURE FALLS WITHIN THE MIDDLE THIRD COMPARED TO THE TOTAL RANGE ON THE GAUGE.
4. CONTRACTOR SHALL INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE.
5. CONTRACTOR SHALL INSTALL MEDICAL GAS PIPING WITH 1 PERCENT SLOPE DOWNWARD IN DIRECTION OF FLOW.
6. CONTRACTOR SHALL INSTALL SHUTOFF VALVE AT EACH CONNECTION TO AND FROM MEDICAL GAS EQUIPMENT AND SPECIALTIES.
7. CONTRACTOR SHALL INSTALL CHECK VALVES TO MAINTAIN CORRECT DIRECTION OF MEDICAL GAS FLOW TO AND FROM MEDICAL GAS EQUIPMENT.
8. CONTRACTOR SHALL INSTALL IDENTIFYING LABELS AND DEVICES FOR MEDICAL GAS PIPING SYSTEMS ACCORDING TO NFPA 99. USE THE FOLLOWING OR SIMILAR CAPTIONS AND COLOR-CODING FOR PIPING PRODUCTS WHERE REQUIRED BY NFPA 99:
 - A. MEDICAL AIR: BLACK LETTERS ON YELLOW BACKGROUND.
9. "HOT" TAPS OR SIMILAR VALVE TYPES OF PROHIBITED IN USE FOR MEDICAL GAS SYSTEMS.
10. AFTER CONSTRUCTION, HEAVY INTERMITTENT PURGING SHALL BE DONE TO REMOVE PARTICULATE MATTER FROM PIPE.
11. PRIOR TO PUTTING THE SYSTEM INTO SERVICE, TESTING SHALL BE CONDUCTED BY A PARTY TECHNICALLY COMPETENT AND EXPERIENCED IN THE FIELD OF MEDICAL GAS AND VACUUM PIPELINE TESTING AND MEETING THE REQUIREMENTS OF ASSE 6030. TESTING SHALL BE PERFORMED BY A PARTY OTHER THAN THE INSTALLING CONTRACTOR.

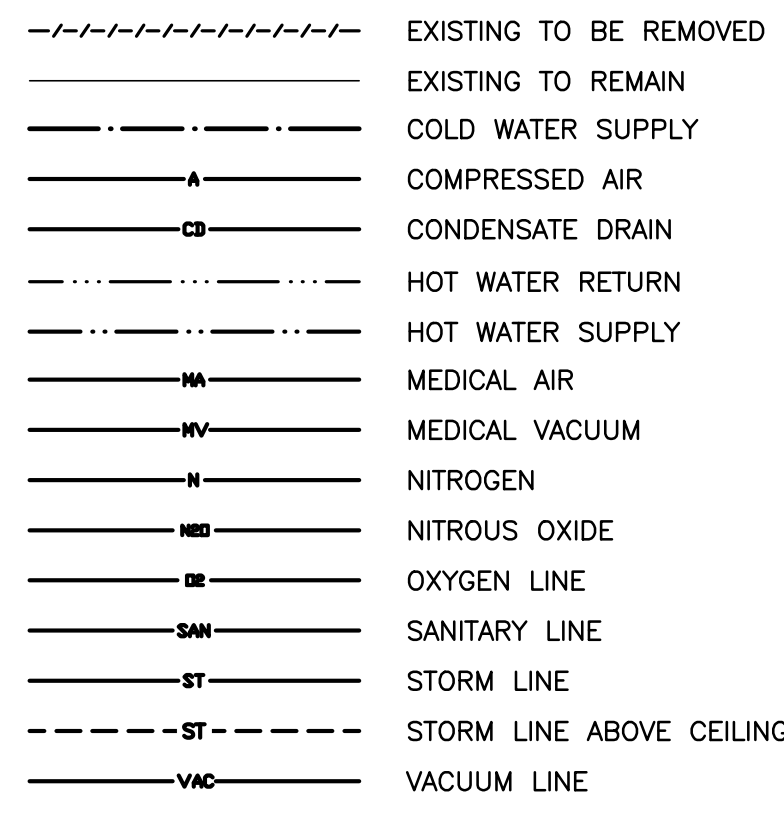
LEGEND AND SCHEDULE OF PLUMBING EQUIPMENT

TAG	MANUFACTURER	CATALOG #	DESCRIPTION
WC-1	KOHLER	K-96057	"HIGHCLIFF ULTRA" ELONGATED, 1.28 GPF SIPHON JET FLUSHING ACTION WATER CLOSET, VITREOUS CHINA, WHITE FINISH, FLOOR MOUNTED TOP SPUD. MEETS ASME A112.19.2 AND ADA COMPLIANT. PROVIDE WITH KOHLER "STRONGHOLD" K-4371-CA ELONGATED SEAT. PROVIDE WITH ROYAL "111 ESS-1.28" HARDWIRED SENSOR-OPERATED FLUSHOMETER WITH TRUE MECHANICAL OVERRIDE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
WC-2	KOHLER	K-96057-L	"HIGHCLIFF ULTRA" ELONGATED, 1.28 GPF SIPHON JET FLUSHING ACTION WATER CLOSET, VITREOUS CHINA, WHITE FINISH, FLOOR MOUNTED TOP SPUD, BEDPAN LUGS. MEETS ASME A112.19.2 AND ADA COMPLIANT. PROVIDE WITH BIG JOHN 4W 1200 LB RATED TOILET SEAT. PROVIDE WITH ROYAL "111 ESS-1.28" HARDWIRED SENSOR-OPERATED FLUSHOMETER WITH TRUE MECHANICAL OVERRIDE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
LV-1	TOTO	LT307	WALL-HUNG 20-7/8" X 18" LAVATORY, VITREOUS CHINA, WHITE FINISH. PROVIDE WITH ZURN "12312E" UNIVERSAL CONCEALED ARM CARRIER. MEETS ASME A112.19.2 AND ADA COMPLIANT. PROVIDE WITH SLOAN EAF-200 0.5 GPM, LAMINAR FLOW, HARDWIRED SENSOR-OPERATED FAUCET. PROVIDE WITH THERMOSTATIC MIXING VALVE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
S-1	TOTO	LT307.4	WALL-HUNG 20-7/8" X 18" LAVATORY, VITREOUS CHINA, WHITE FINISH. PROVIDE WITH WATTS "WCA-411-D" BACK TO BACK CONCEALED ARM CARRIER. MEETS ASME A112.19.2 AND ADA COMPLIANT. PROVIDE WITH ELKAY LK406GN04T4 1.5 GPM GOOSENECK FAUCET, 4" CENTERSET WITH 4" WRISTBLADE HANDLES. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
S-2	JUST MFG.	SL-17519-A-GR	17-1/2" X 19" DROP-IN, 304 STAINLESS STEEL SEAMLESS DIE-DRAWN SINK, FAUCET HOLES 8" CENTERSET. MEETS ASME A112.19.2 AND ADA COMPLIANT. PROVIDE WITH ELKAY LK810GN05T4 2.2 GPM GOOSENECK FAUCET, 8" CENTERSET WITH 4" WRISTBLADE HANDLES. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
S-3	KOHLER	K-6676	"TYRRELL" FLUSHING RIM SERVICE SINK, FLOOR MOUNTED TOP-SPUD. PROVIDE WITH ZURN Z842D6-LSI-5X1 WALL-MOUNTED SERVICE SINK FAUCET, 6" WRIST BLADE HANDLES. PROVIDE WITH SLOAN ROYAL 117 MANUAL FLUSHOMETER. PROVIDE T&S MODEL 8-0676 BEDPAN WASHER WITH FOOR PEDAL OPERATION AND BUILT IN VACUUM BREAKER. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
DF-1	ELKAY	LZ5TL8W5LK	ELKAY E2H20 BOTTLE FILLING STATION VERSATILE BI LEVEL ADA COOLER, FILTERED 8 GPH STAINLESS, 50 °F DRINKING WATER, 115V/60HZ, 7.5KVA. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
SH-1	MOEN	8342EP15	PRESSURE BALANCING SHOWER MIXING VALVE TRIM KIT, 2.5 GPM. WALL-MOUNTED SHOWER HEAD WITH ADDITIONAL HANDHELD SHOWERHEAD ON A 69" METAL HOSE AND 30" SLIDE BAR. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
SH-2	MOEN	8342EP15	PRESSURE BALANCING SHOWER MIXING VALVE WITH HANDHELD SHOWER KIT, 2.5 GPM. PROVIDE WITH ONLY HANDHELD SHOWER HEAD INSTALLED ON SLIDE BAR, 69" METAL HOSE. PROVIDE WITH ALL OTHER HARDWARE FOR A COMPLETE INSTALLATION.
NFWH-1	ZURN	Z1300	NON-FREEZE WALL HYDRANT, AUTOMATIC DRAINING, ANTI-SIPHON. BRONZE CASING WITH ALL BRONZE INTERIOR PARTS. COORDINATE FINAL LOCATIONS WITH ARCHITECT AND OWNER. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
FD-1	ZURN	ZN415C	GENERAL PURPOSE, DURA-COATED CAST IRON BODY FLOOR DRAIN. TYPE C, NICKEL BRONZE 6" Ø STRAINER. COORDINATE PIPE SIZE WITH FLOOR PLANS. PROVIDE WITH 1/2" TRAP PRIMER CONNECTION. PROVIDE WITH PRECISION PLUMBING PR-500 TRAP PRIMER WITH AIR GAP FITTING. LOCATE IN CONCEALED SPACE WITH ACCESS DOOR IF REQUIRED. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
RD-1	ZURN	Z164	COMBINATION PRIMARY AND OVERFLOW ROOF DRAIN ASSEMBLY, LOW SILHOUETTE DOMES WITH TOP DECK PLATE. DURA-COATED CAST IRON BODIES. PROVIDE CAST IRON DOME CONSTRUCTION. COORDINATE PIPE SIZES WITH DRAWINGS. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
RD-2	ZURN	Z121	PRIMARY ROOF DRAIN ASSEMBLY, LOW SILHOUETTE DOME WITH TOP DECK PLATE. DURA-COATED CAST IRON BODY. PROVIDE CAST IRON DOME CONSTRUCTION. COORDINATE PIPE SIZES WITH DRAWINGS. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
ODS	ZURN	Z199	OVERFLOW ROOF DRAINAGE DOWNSPOUT NOZZLE. ALL NICKEL BRONZE BODY. COORDINATE PIPE SIZES WITH DRAWINGS. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
TD-1	QUICKDRAIN USA	PLD40-N	18 GAUGE, 40" X 3", 316L STAINLESS STEEL "PROLINE" TRENCH DRAIN. SLOPED BODY WITH 2" Ø NO-HUB COUPLING. COORDINATE INSTALLATION DEPTH WITH FLOORING. PROVIDE ADA COMPLIANT LINES COVER. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
PTS-1	SWISSLOG	PTS-202	6-INCH, RECESSED PNEUMATIC TUBE STATION FOR TRANSLOGIC SYSTEM. NEXUS CONTROL PANEL WITH INTUITIVE TOUCH SCREEN CONTROLS. INTEGRATED STORAGE RACK FOR 4 EMPTY CARRIERS. STANDARD LOAD OF 7 POUNDS, MAX CAPACITY OF 15 POUNDS. 120V, 60 HZ, SINGLE PHASE. 240 POUND UNIT WEIGHT. TIE INTO EXISTING PNEUMATIC SYSTEM CONTROLS AS NECESSARY. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
EW-1	STINGRAY	S2230S5	STAINLESS STEEL, CORROSION RESISTANT, EMERGENCY EYEWASH WITH INTEGRATED MIXING VALVE. PROVIDE ALL HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
MS-1	ZURN	Z5850-RG	FLOOR MOUNTED MOP SINK TO BE COMPLETE WITH VINYL-COATED RIM GUARD AND FAUCET MODEL JP1996-5F WITH VACUUM BREAKER AND WALL BRACE. PROVIDE ALL HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.

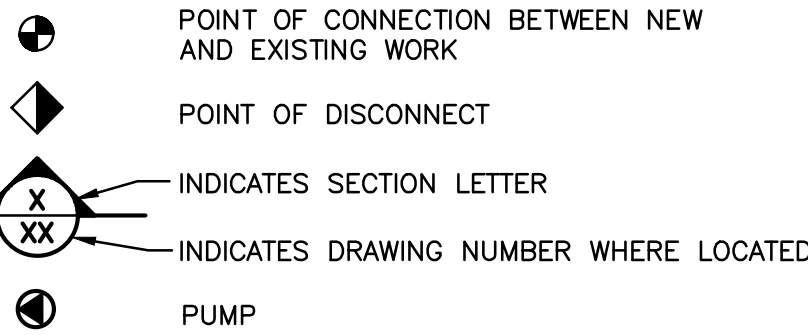
PIPING SYMBOLS



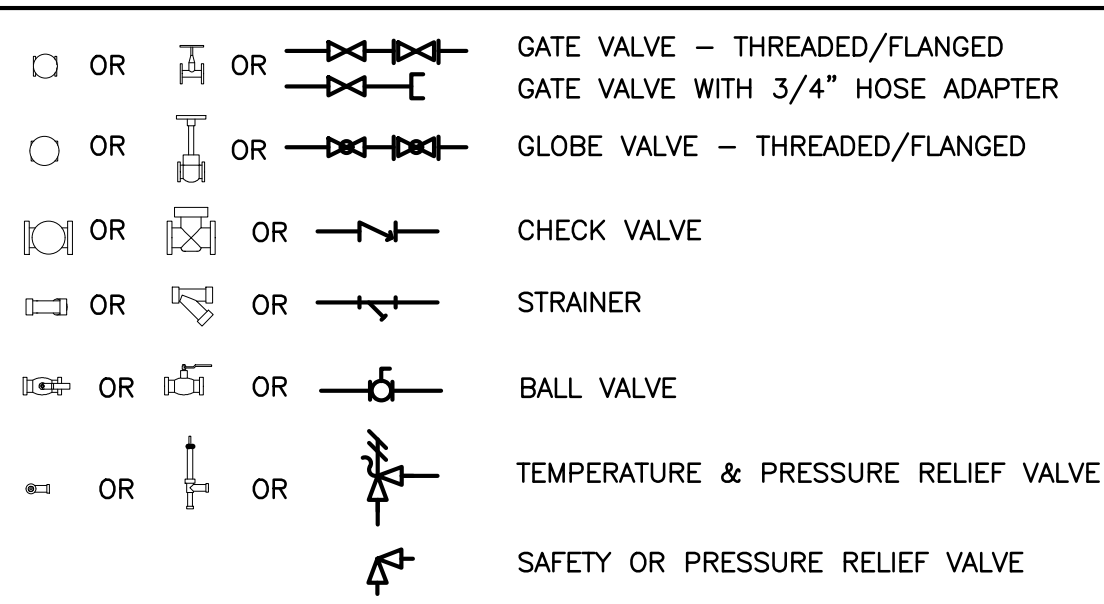
PLUMBING LINE TYPES



GENERAL SYMBOLS



VALVE SYMBOLS



SCHEDULE OF EQUIPMENT SERVICE PROVISIONS

FIXTURE DESIGNATION	DRAIN	VENT	WATER SUPPLY	
			CW	HW
WC-1 & 2	4"	2"	1"	---
LV-1	1½"	1½"	½"	½"
DF-1	1½"	1½"	½"	---
MS-1	3"	1½"	½"	½"
HB-1	---	---	½"	---
S-1	1½"	1½"	½"	½"
S-2	1½"	1½"	½"	½"
S-3	4"	2"	1½"	½"
SH-1,2	2"	1½"	½"	½"
NFWH-1	---	---	½"	---
TD-1	3"	2"	---	---
TD-1	2"	1½"	---	---

ABBREVIATIONS

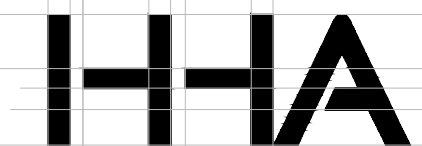
A	MEDICAL AIR
ACT	ACOUSTIC CEILING TILE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
ALC	AUTOMATIC LOGIC CORPORATION
AP	ACCESS PANEL
AW	ACID WASTE PIPE
BTUH	BRITISH THERMAL UNITS/HOUR
CLG	CEILING
CO	CLEAN OUT
CP	CONDENSATE PUMP
CW	DOMESTIC COLD WATER
DIA	DIAMETER
D	DRAIN
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
DP	DIFFERENTIAL PRESSURE
E.C.	ELECTRICAL CONTRACTOR
ECC	ENGINEERING CONTROL CENTER
END	END OF MAIN DRIP (STEAM)
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLR	FLOOR
FPC	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
G.SAN	"GREASE LOADED" SANITARY DRAINAGE PIPE
H.C.	HVAC CONTRACTOR
HP	HORSE POWER
HTWS	HIGH TEMP. HOT WATER RETURN PIPE (140°F)
HW	DOMESTIC HOT WATER PIPE (120°F)
HWR	DOMESTIC HOT WATER RETURN PIPE (120°F)
LBS/HR	POUNDS PER HOUR
LF	LINEAR FEET
MAX.	MAXIMUM
MBH	ONE THOUSAND BTUH
MEH	MECHANICAL EQUIPMENT ROOM
MIN.	MINIMUM
MV	MEDICAL VACUUM
NOM.	NOMINAL
O	OXYGEN
P	PUMP
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE IN.
SAN	SANITARY DRAINAGE PIPE
S.S.	STAINLESS STEEL
ST	STORM DRAINAGE PIPE
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
V	VENT PIPE
V	VIBRATION ISOLATOR
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
WCO	WALL CLEAN OUT
WF	WATER FILTER
WFM	WATER FLOW MEASURING DEVICE
WH	WATER HEATER
WSFU	WATER SUPPLY FIXTURE UNIT

DELETE IN DEDUCT ALTERNATES 3 & 5

Revisions:	Date:

CONSULTANT

HYMAN HAYES ASSOCIATES



800 TROY SCHNECTADY ROAD, STE 103 LARAWAY, NY 12110 (518) 452-3407 www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III ENGINEERING LLP

FE PROJECT NO: 19-181

www.fellip.com

22 Mulberry St., Suite 2A, Middletown, NY 10940 1-845-343-1481; fx 855-320-8735

181 Church St., Suite 100, Poughkeepsie, NY 12601 1-845-454-9704; fx 855-320-8735

STAMP

JOHN D. FELLENNER, P.E.

NY PROFESSIONAL ENGINEER NO. 069373-1

Office of Construction and Facilities Management



U.S. Department of Veterans Affairs

Drawing Title

PLUMBING: SYMBOLS, ABBREVIATIONS + NOTES

Approved: Project Director

Phase

100% FOR BID

FULLY SPRINKLERED

Project Title

STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT

Location ALBANY, NY

Issue Date

MARCH 18, 2022

Checked

JDF

Drawn

SRB

Project Number

528-809

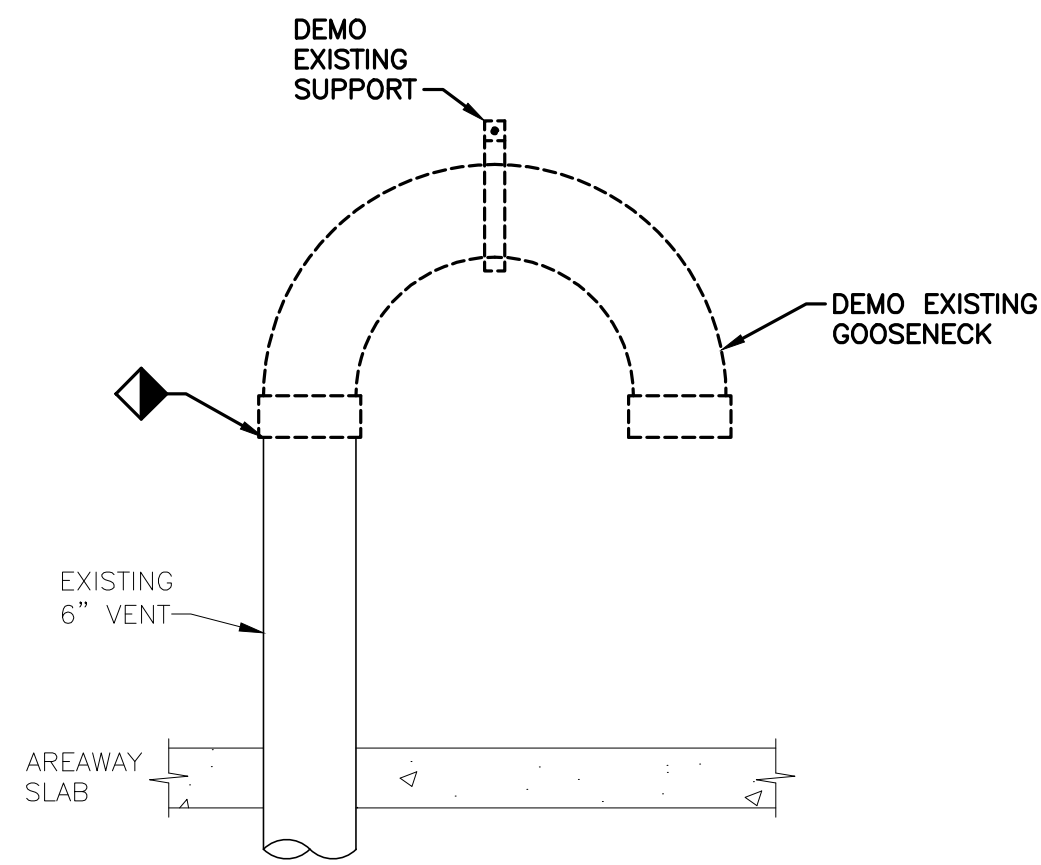
Building Number

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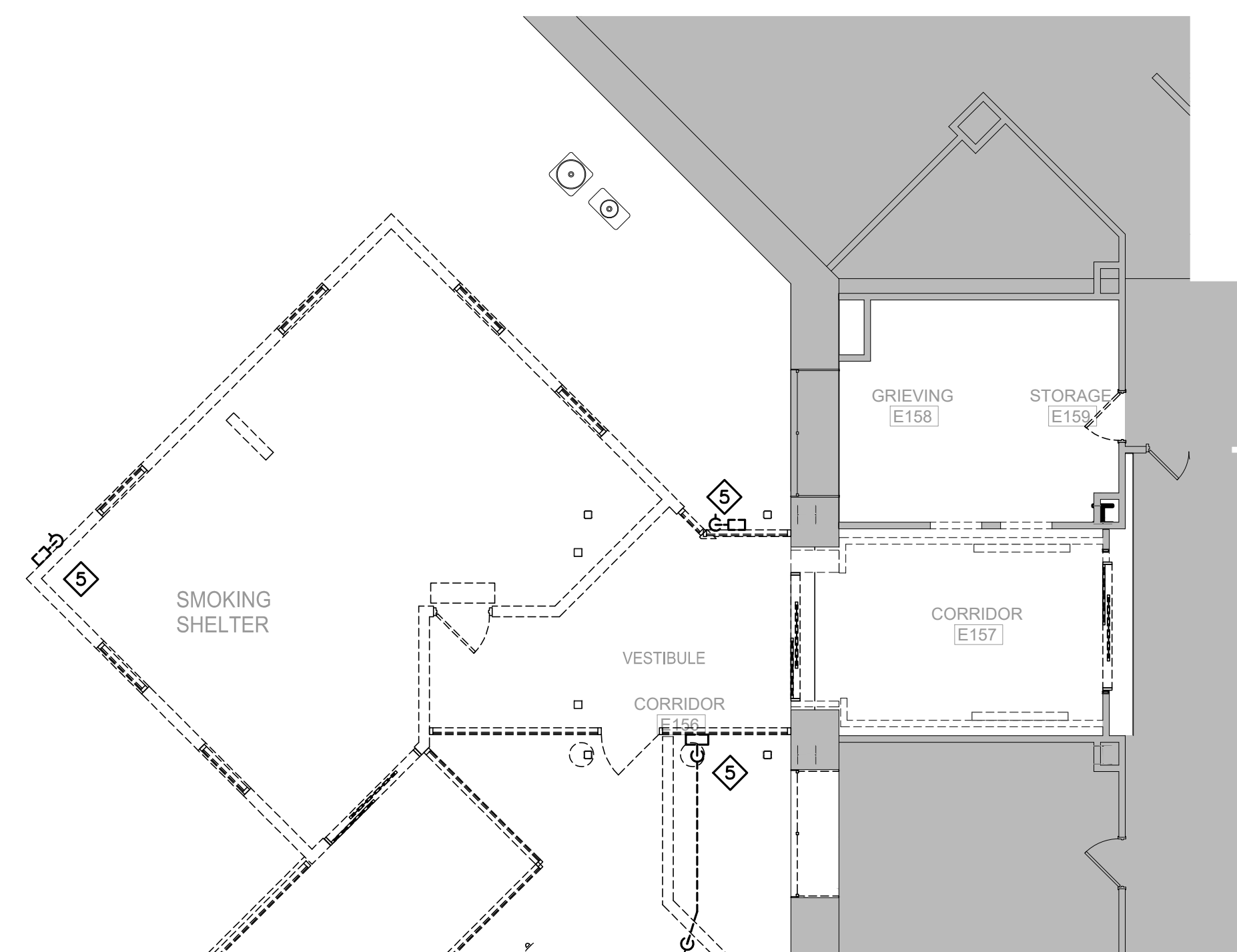
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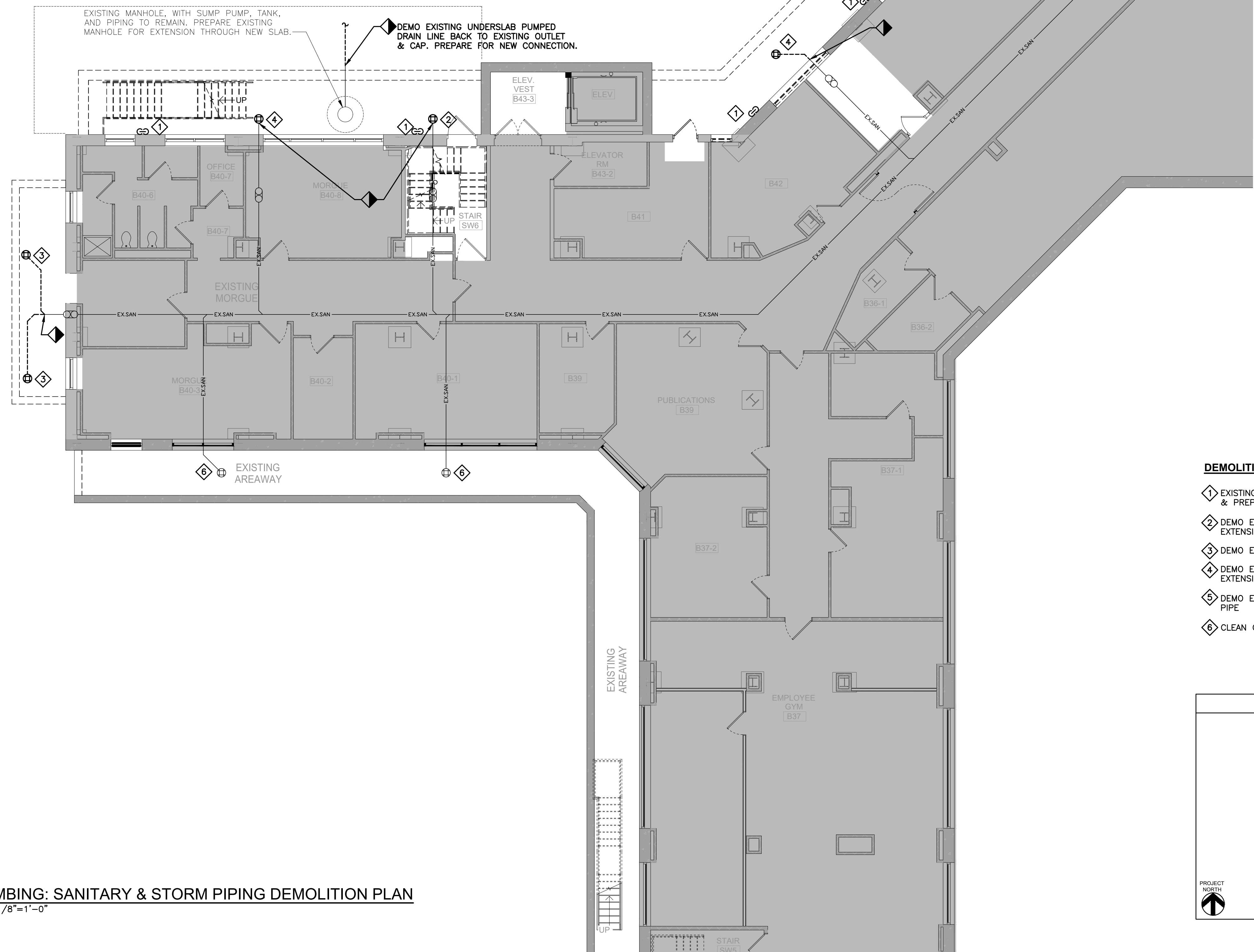
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3 DEMOLITION AREAWAY VENT CONNECTION DETAIL
N.T.S.

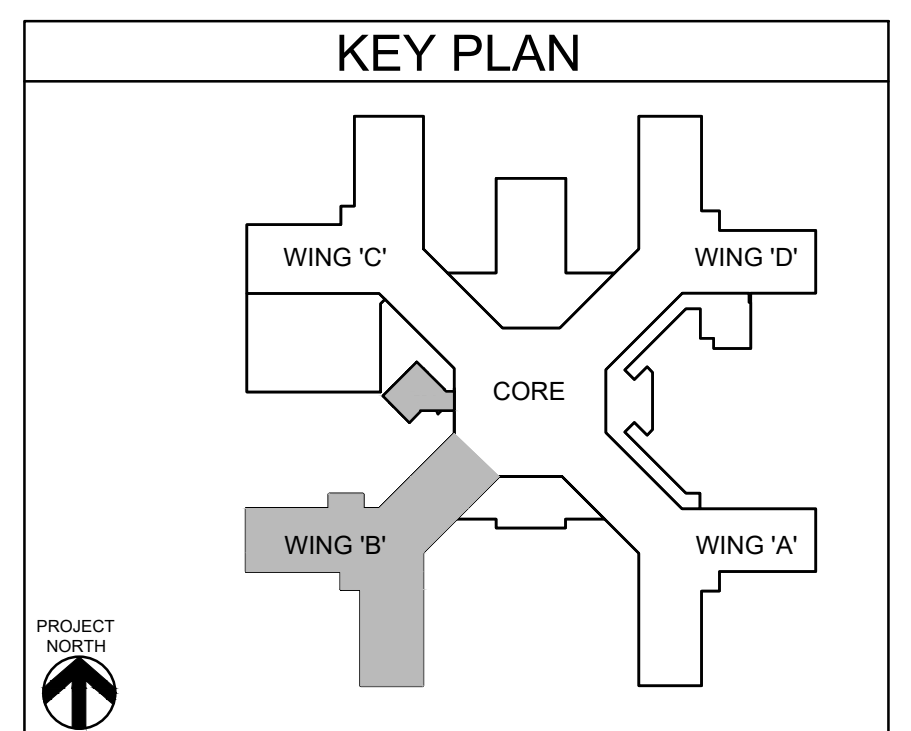


2 PLUMBING SMOKING SHELTER SANITARY & STORM DEMO PLAN
SCALE: 1/8"=1'-0"



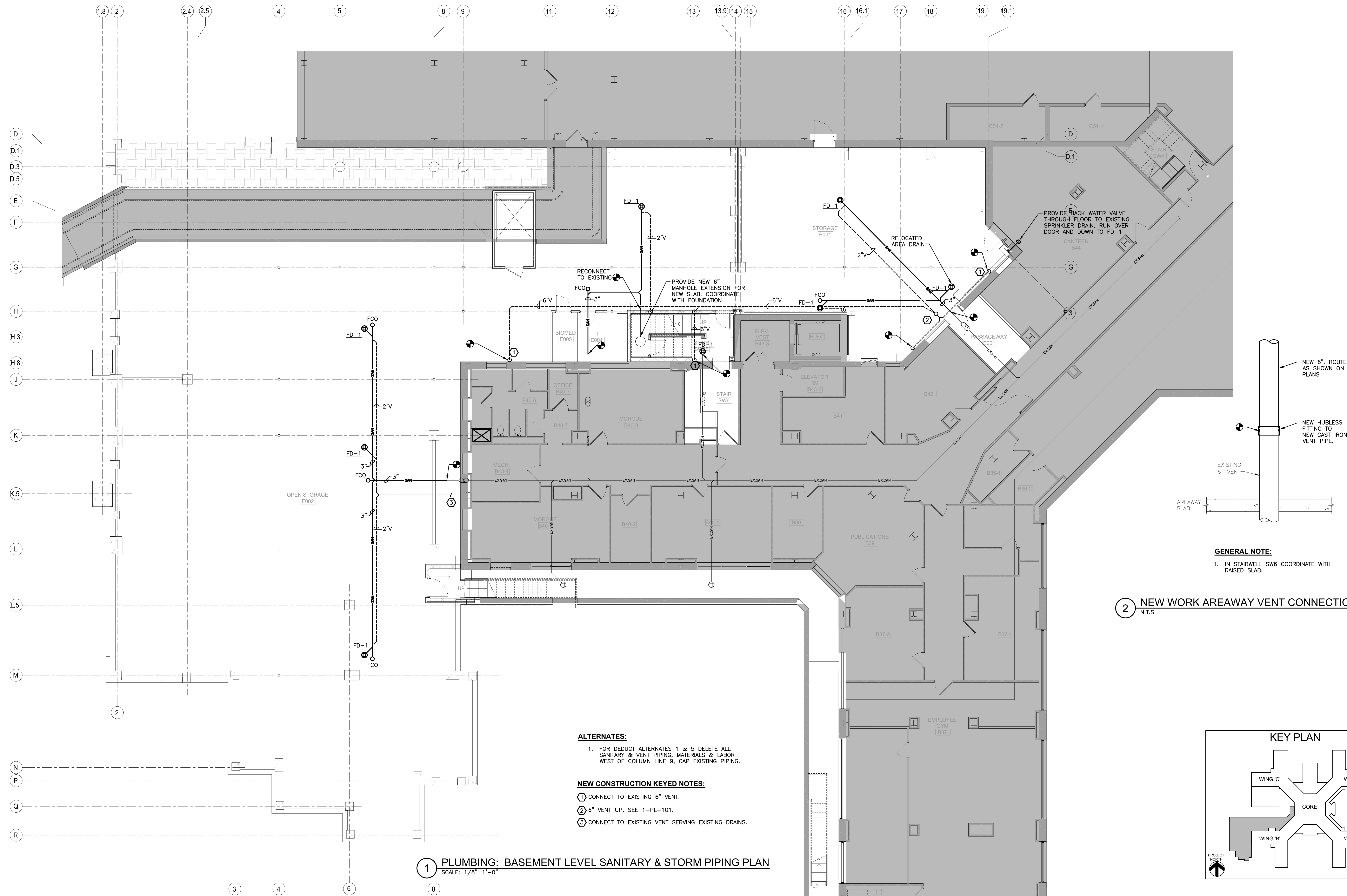
1 PLUMBING: SANITARY & STORM PIPING DEMOLITION PLAN
SCALE: 1/8"=1'-0"

- DEMOLITION KEYED NOTES:**
- 1 EXISTING 6"V TO REMAIN. DEMO EXISTING GOOSENECK & PREPARE FOR NEW CONNECTION.
 - 2 DEMO EXISTING AREA DRAIN GRATE. PREPARE FOR 6" EXTENSION THROUGH NEW SLAB.
 - 3 DEMO EXISTING AREA DRAIN AND CAP PIPING BELOW.
 - 4 DEMO EXISTING AREA DRAIN. PREPARE FOR EXTENSION TO NEW DRAIN LOCATION.
 - 5 DEMO EXISTING ROOF LEADER AND ASSOCIATED 3" PIPE.
 - 6 CLEAN OUT/UN-CLOG EXISTING AREAWAY DRAINS.



		<div>CONSULTANT</div> <div><div>HYMAN HAYES ASSOCIATES</div><div>I-H-A</div><div>800 TROY SCHENECTADY ROAD, STE 103 LATAM, NY 12110 (518) 452-3470 www.hymanhayes.com</div></div>	<div>ARCHITECT/ENGINEER OF RECORD</div> <div><div>FELLENZER III ENGINEERING LLP</div><div>FE PROJECT NO: 19-181</div><div>22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735</div><div>181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; fx 855-320-8735</div></div>	<div>STAMP</div> <div>JOHN D. FELLENER, P.E.</div> <div>NY PROFESSIONAL ENGINEER NO. 069373-1</div>	<div>Office of Construction and Facilities Management</div> <div>VA U.S. Department of Veterans Affairs</div>	<div>Drawing Title</div> <div>PLUMBING: BASEMENT LEVEL SANITARY + STORM PIPING DEMOLITION PLAN</div>	<div>Phase</div> <div>100% FOR BID</div>	<div>Project Title</div> <div>STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT</div>	<div>Project Number</div> <div>528-809</div>	
							<div>Building Number</div> <div>1</div>			
							<div>Drawing Number</div> <div>1-PD-100</div>			
<div>Revisions:</div>	<div>Date:</div>					<div>Approved: Project Director</div>	<div>Location</div> <div>ALBANY, NY</div>	<div>Issue Date</div> <div>MARCH 18, 2022</div>	<div>Checked</div> <div>JDF</div>	<div>Drawn</div> <div>SRB</div>

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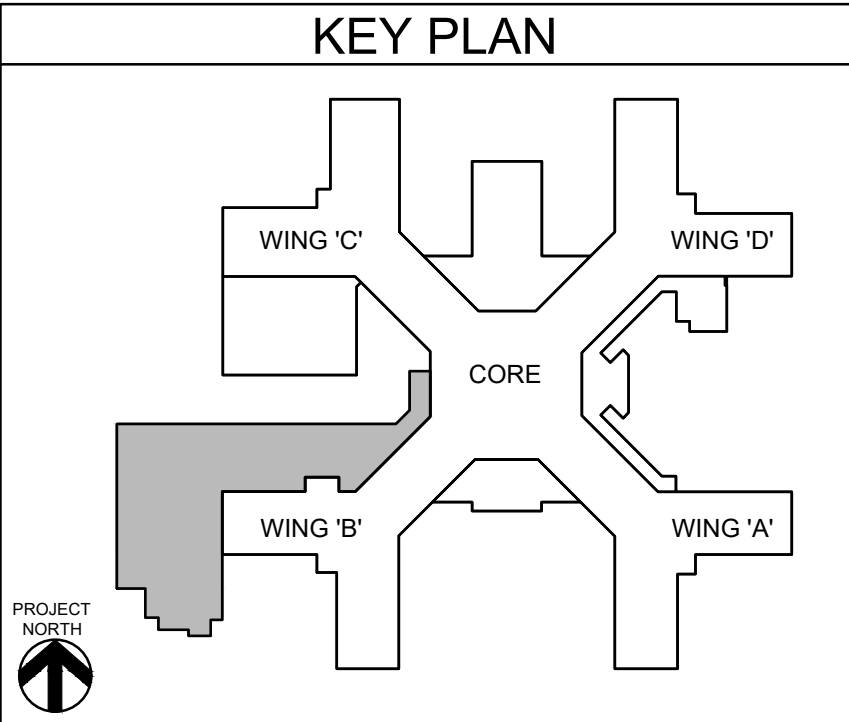


ALTERNATES:
1. FOR DEDUCT ALTERNATES 1 & 5 DELETE ALL SANITARY & VENT PIPING, MATERIALS & LABOR WEST OF COLUMN LINE 9, CAP EXISTING PIPING.

NEW CONSTRUCTION KEYED NOTES:
① CONNECT TO EXISTING 6" VENT.
② 6" VENT UP. SEE 1-PL-101.
③ CONNECT TO EXISTING VENT SERVING EXISTING DRAINS.

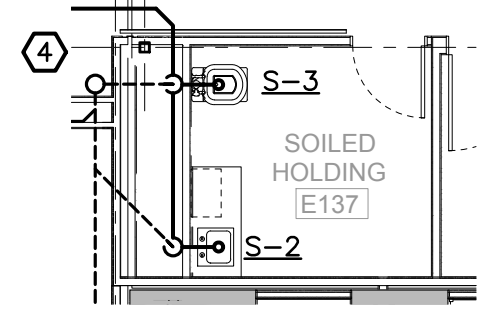
1 PLUMBING: BASEMENT LEVEL SANITARY & STORM PIPING PLAN
SCALE: 1/8"=1'-0"

2 NEW WORK AREAWAY VENT CONNECTION DETAIL
N.T.S.



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		HYMAN HAYES ASSOCIATES		FELLENZER III ENGINEERING LLP		JOHN D. FELLENER, P.E.		U.S. Department of Veterans Affairs		PLUMBING: BASEMENT LEVEL SANITARY + STORM PIPING PLAN		100% FOR BID		STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT		528-809	
		800 TROY SCHNEIDERSTADT ROAD, STE 103 LATHAM, NY 12110 (518) 452-3470 www.hymanhayes.com		FE PROJECT NO: 19-181		NY PROFESSIONAL ENGINEER NO. 069373-1				Approved: Project Director		FULLY SPRINKLERED		Location		Building Number	
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		Revisions:		Date:										Issue Date		Checked	
														MARCH 18, 2022		JDF	
																SRB	
																1-PL-100	

SANITARY AND DOMESTIC FIXTURE UNITS CALCULATIONS							
Plumbing Fixture	DFU	CW WSFU	HW WSFU	Quantity	Total DFU	Total CW WSFU	Total HW WSFU
Private Water Closet (FV)	4	6	0	9	36	54	0
Public Water Closet (FV)	4	10	0	1	4	10	0
Public Lavatory	1	1.5	1.5	24	24	36	36
Private Lavatory	1	1.5	1.5	11	11	16.5	16.5
Service Sink	2	3	3	1	2	3	3
Service Sink (FV)	4	10	0	1	4	10	0
Drinking Fountain	0.5	0.25	0	1	0.5	0.25	0
Shower/Private	2	1	1	5	10	5	5
Floor Drains	2	0	0	15	30	0	0
					121.5	134.75	60.5

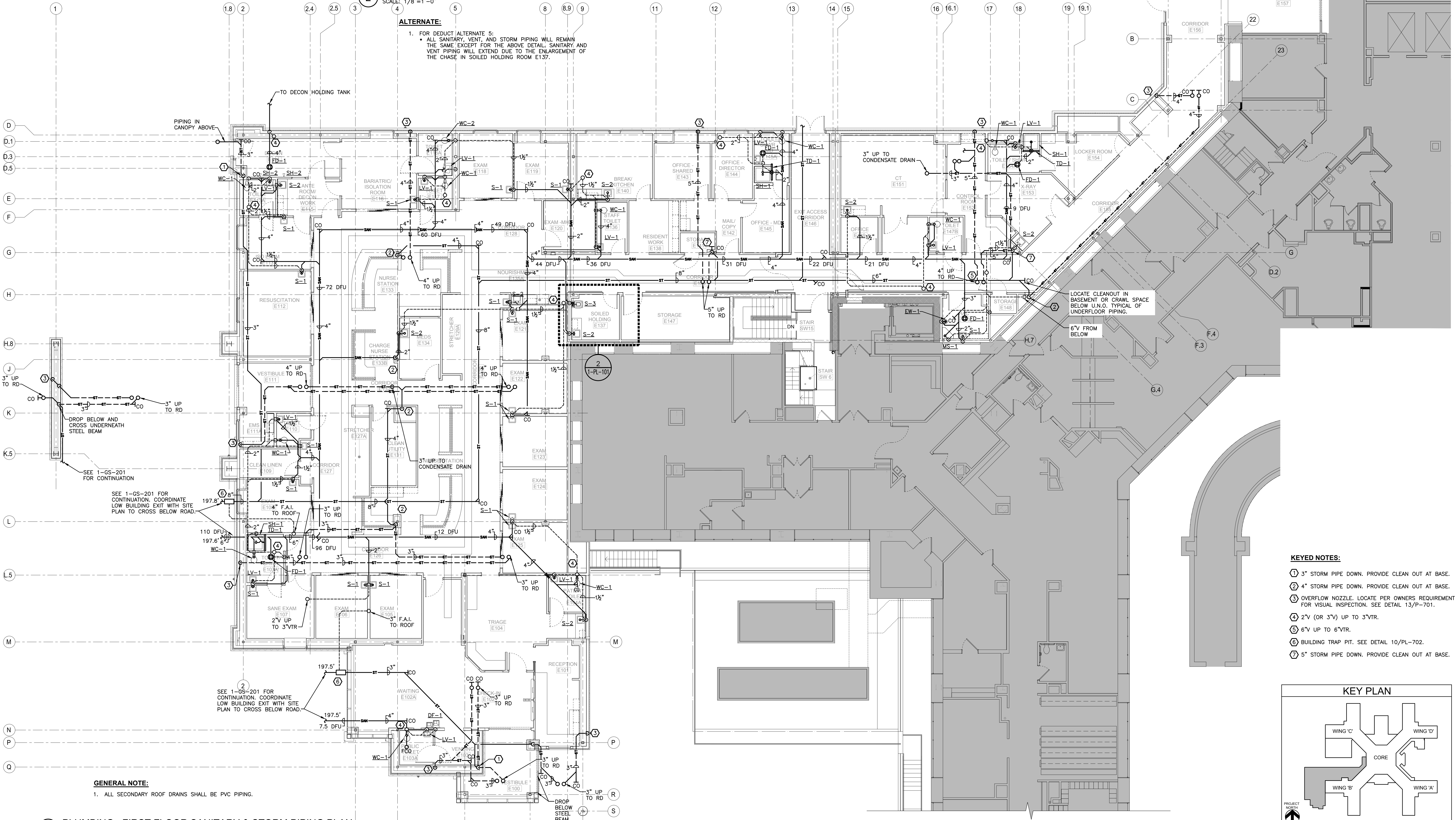


PLUMBING: DEDUCT ALTERNATE
(SLAB ON GRADE) FIRST FLOOR SANITARY PLAN

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

ALTERNATE:

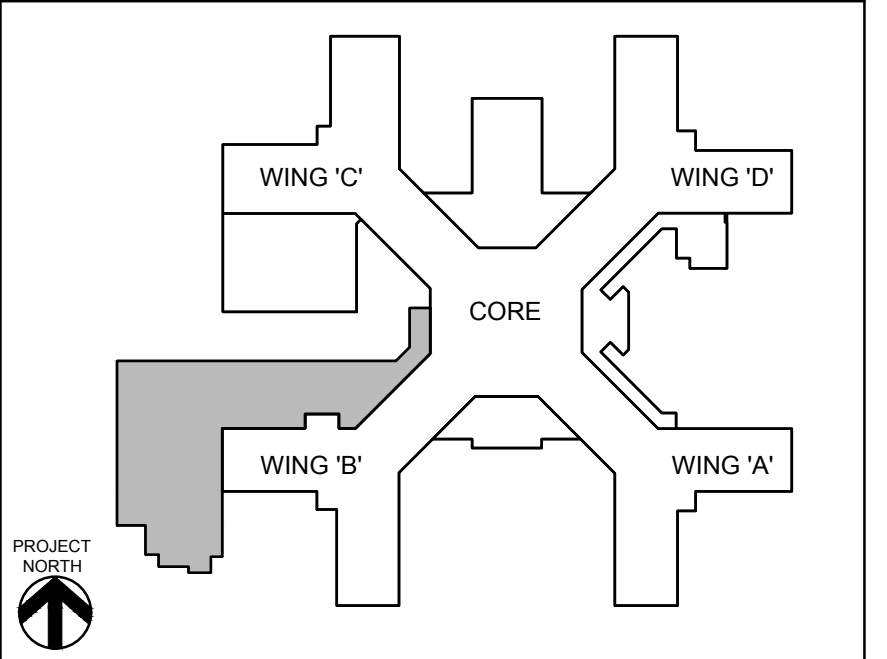
1. FOR DEDUCT ALTERNATE 5:
- ALL SANITARY, VENT, AND STORM PIPING WILL REMAIN THE SAME EXCEPT FOR THE ABOVE DETAIL. SANITARY AND VENT PIPING WILL EXTEND DUE TO THE ENLARGEMENT OF THE CHASE IN SOILED HOLDING ROOM E137.



KEYED NOTES:

- ① 3" STORM PIPE DOWN. PROVIDE CLEAN OUT AT BASE.
- ② 4" STORM PIPE DOWN. PROVIDE CLEAN OUT AT BASE.
- ③ OVERFLOW NOZZLE. LOCATE PER OWNERS REQUIREMENT FOR VISUAL INSPECTION. SEE DETAIL 13/P-701.
- ④ 2"V (OR 3"V) UP TO 3"VTR.
- ⑤ 6"V UP TO 6"VTR.
- ⑥ BUILDING TRAP PIT. SEE DETAIL 10/PL-702.
- ⑦ 5" STORM PIPE DOWN. PROVIDE CLEAN OUT AT BASE.

KEY PLAN



GENERAL NOTE:

1. ALL SECONDARY ROOF DRAINS SHALL BE PVC PIPING.

1 PLUMBING: FIRST FLOOR SANITARY & STORM PIPING PLAN

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

[illegible]


CONSULTANT

HYMAN
HAYES
ASSOCIATES

HH-A

800 TROY-SCHENECTADY
ROAD, STE 103
LATHAM, NY 12110
(518) 452-3470

ARCHITECT/ENGINEER OF RECORD

FELLENZER 
ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; fx 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704; fx 855-320-8735

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JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

Office of
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Management

VA | U.S. Department
of Veterans Affairs

Drawing Title

PLUMBING:
FIRST FLOOR SANITARY + STORM PIPING
PLAN

Approved: Project Director

	Phase
1	Phase 1
2	Phase 2
3	Phase 3
4	Phase 4
5	Phase 5
6	Phase 6
7	Phase 7
8	Phase 8
9	Phase 9
10	Phase 10
11	Phase 11
12	Phase 12
13	Phase 13
14	Phase 14
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94	Phase 94
95	Phase 95
96	Phase 96
97	Phase 97
98	Phase 98
99	Phase 99
100	Phase 100

100% FOR BID

FULLY SPRINKLERED

	Project Title
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STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location	ALBANY, NY
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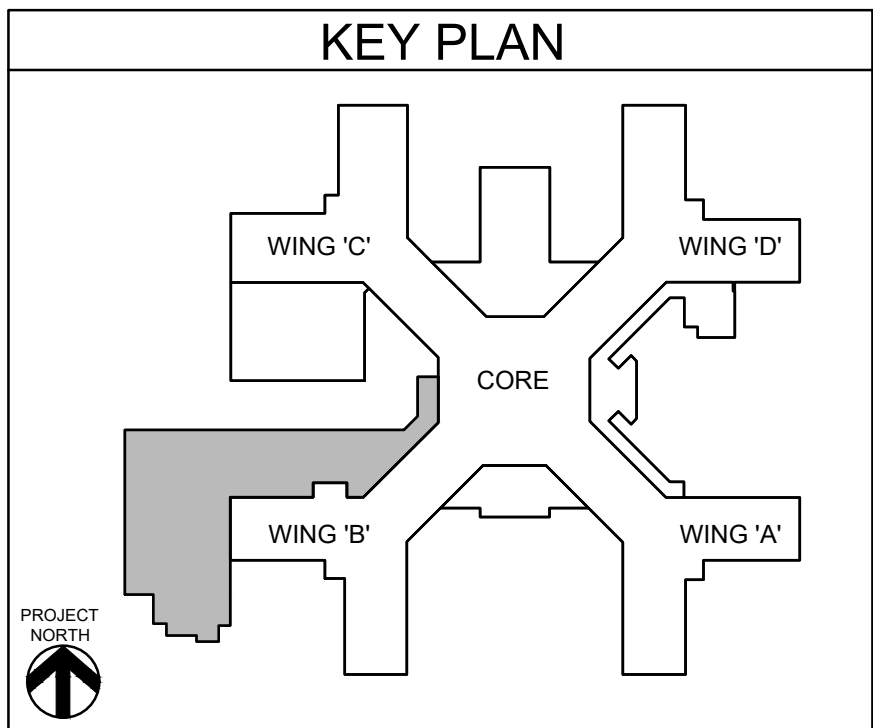
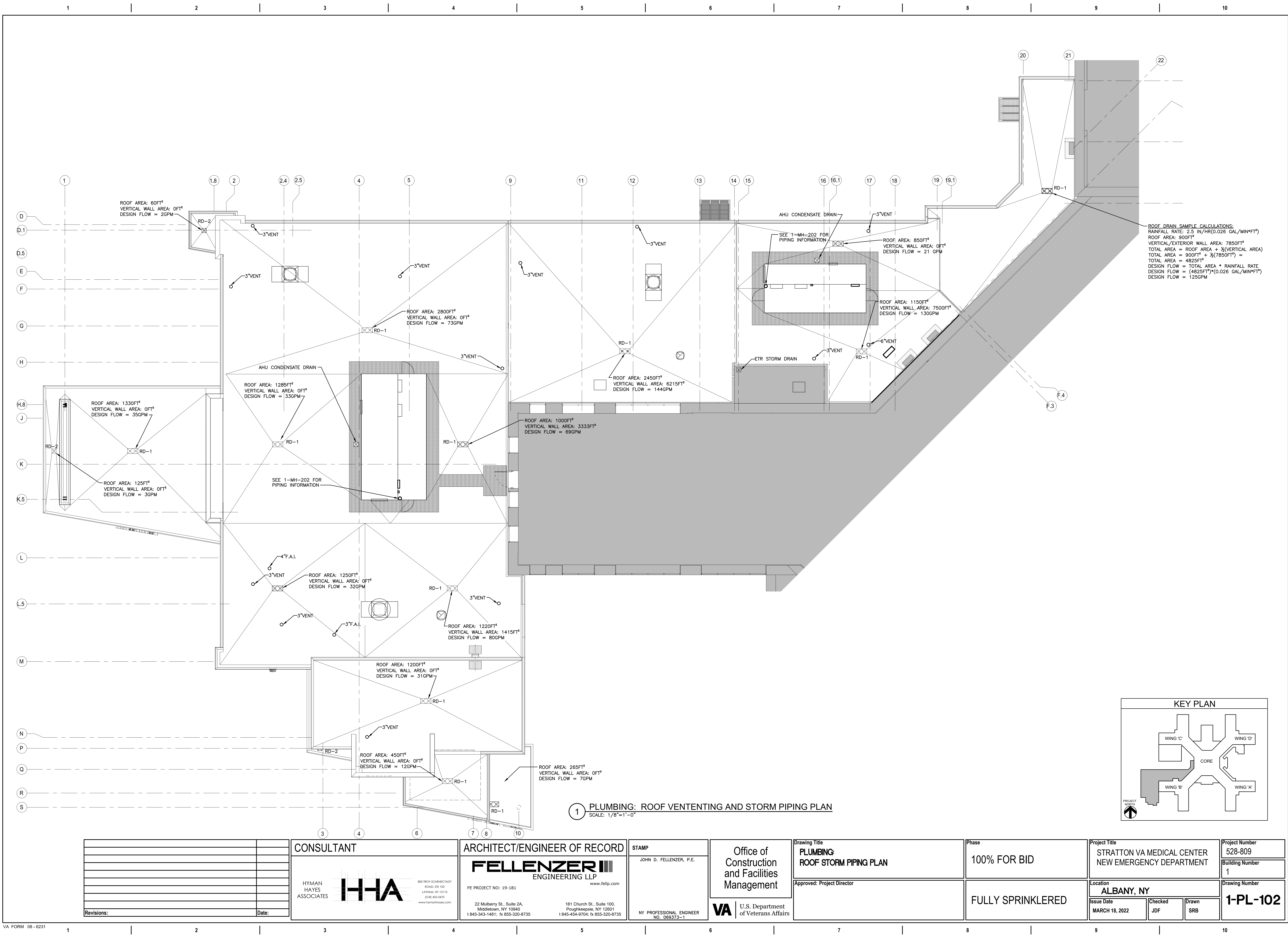
Issue Date
MARCH 18, 2022

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	Drawing Number
	1 of 1

Drawn
SRB

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1 PLUMBING: ROOF VENTENTING AND STORM PIPING PLAN
SCALE: 1/8"=1'-0"

Revisions:	Date:

CONSULTANT

HYMAN
HAYES
ASSOCIATES

H-HA

800 TROY SCHENECTADY
ROAD, STE 103
LATAMAH, NY 12110
(518) 452-2470
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III
ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; fx 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704; fx 855-320-8735

www.fellip.com

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JOHN D. FELLENZER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

Office of
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and Facilities
Management

VA U.S. Department
of Veterans Affairs

Drawing Title
**PLUMBING:
ROOF STORM PIPING PLAN**

Approved: Project Director

Phase
100% FOR BID

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Project Title
STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location
ALBANY, NY

Issue Date
MARCH 18, 2022

Checked
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Drawn
SRB

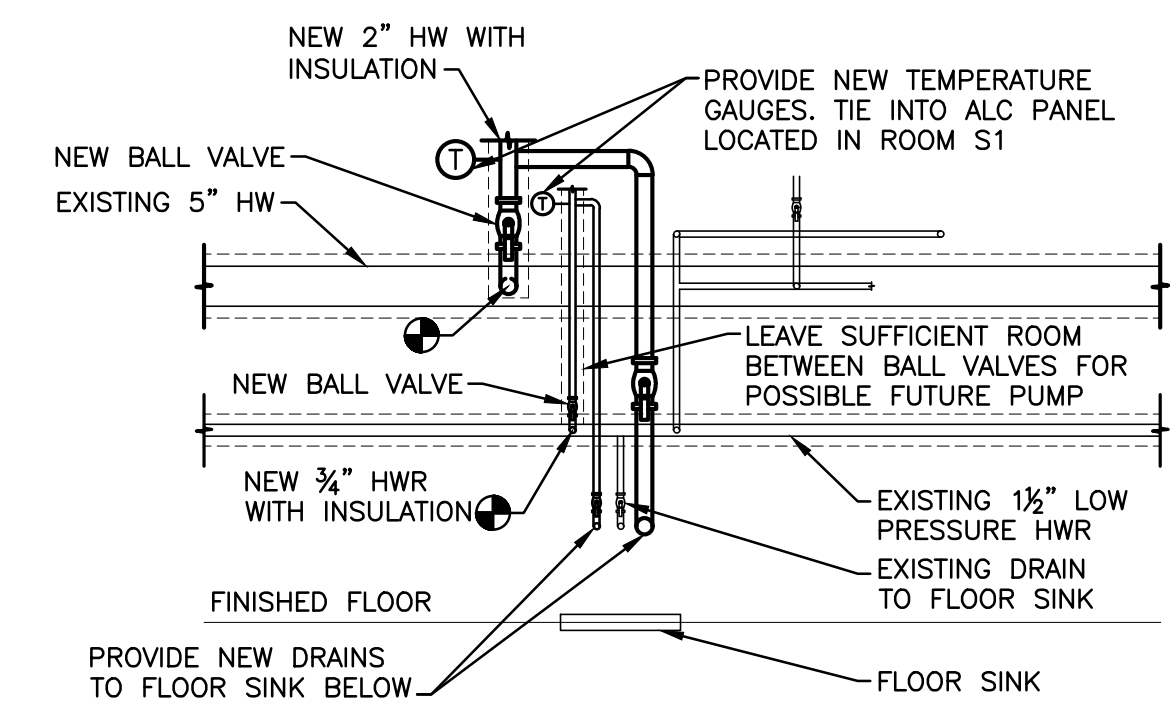
Project Number
528-809

Building Number
1

Drawing Number
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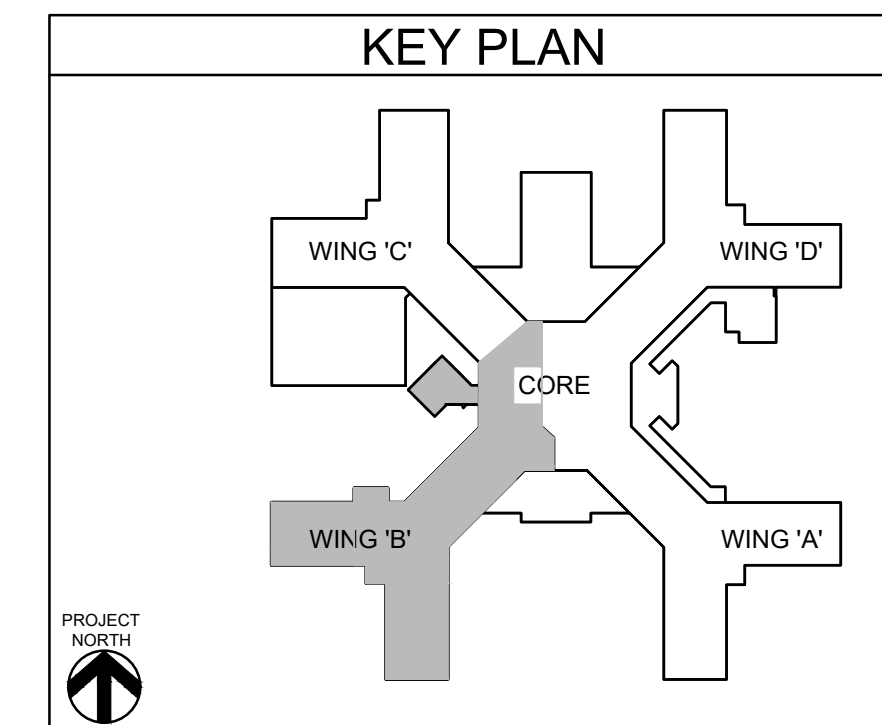


2 HW & HWR CONNECTION POINTS ELEVATION
SCALE: 1/2"=1'-0"

GENERAL NOTE:

1. ALL PIPE LABELING FOR NEW PIPING SHALL INCLUDE "ED" DESIGNATION ON THE LABEL.

1 PLUMBING: SUB-BASEMENT LEVEL DOMESTIC WATER AND MEDICAL GAS PIPING PLAN
SCALE: 1/8"=1'-0"



Revisions:	Date:

CONSULTANT
HYMAN HAYES ASSOCIATES
H-HA
800 TROY SCHNECTADY ROAD, STE 103 LATHAM, NY 12110 (518) 452-3470 www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD
FELLENZER III
ENGINEERING LLP
FE PROJECT NO: 19-181
22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735
181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; fx 855-320-8735
www.fellip.com

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JOHN D. FELLENER, P.E.
NY PROFESSIONAL ENGINEER NO. 069373-1

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VA U.S. Department of Veterans Affairs

Drawing Title PLUMBING: SUB-BASEMENT LEVEL DOMESTIC WATER + GAS PIPING PLAN
Approved: Project Director

Phase 100% FOR BID
FULLY SPRINKLERED

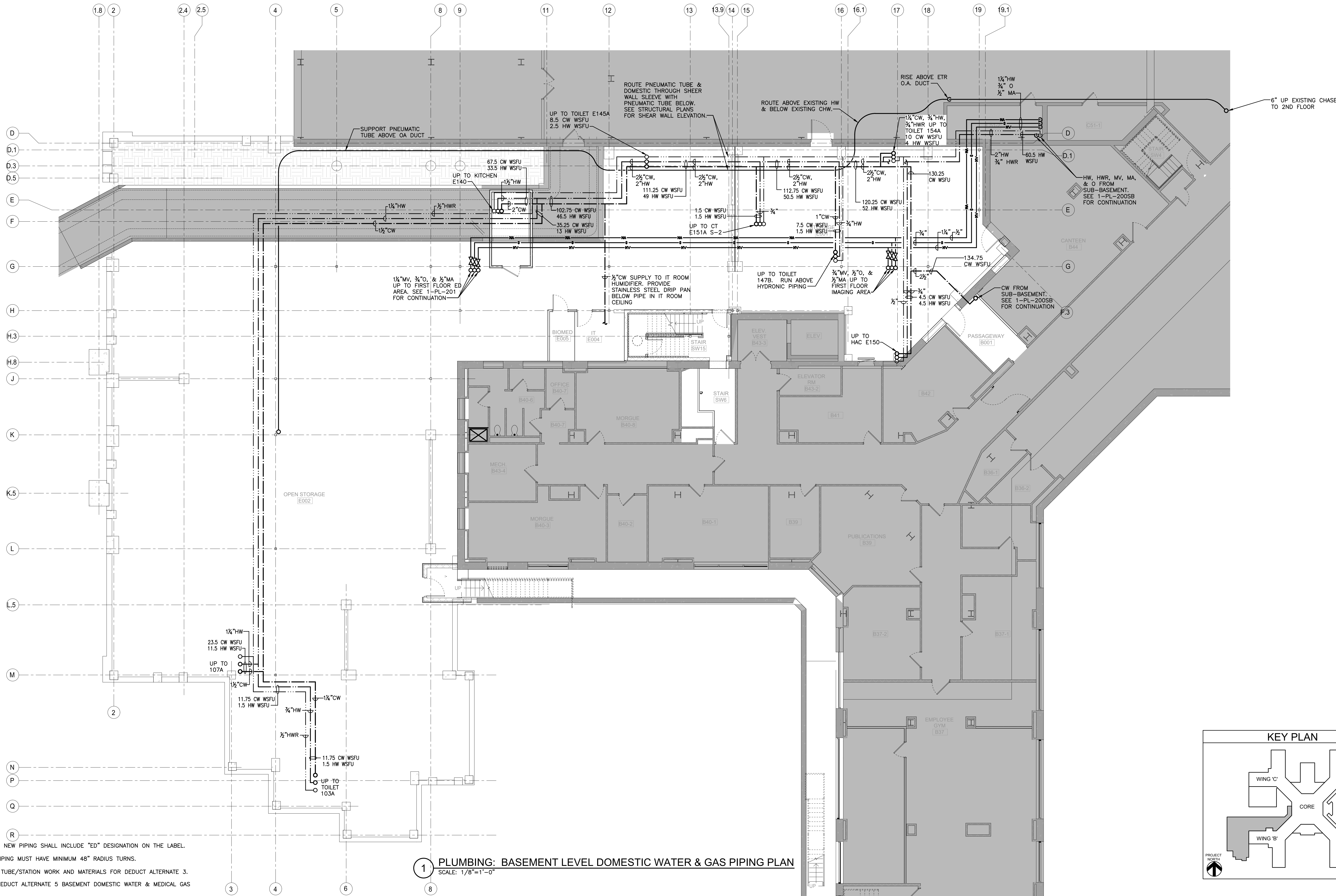
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Location ALBANY, NY
Issue Date MARCH 18, 2022
Checked JDF
Drawn SRB

Project Number 528-809
Building Number 1
Drawing Number 1-PL-200-SB

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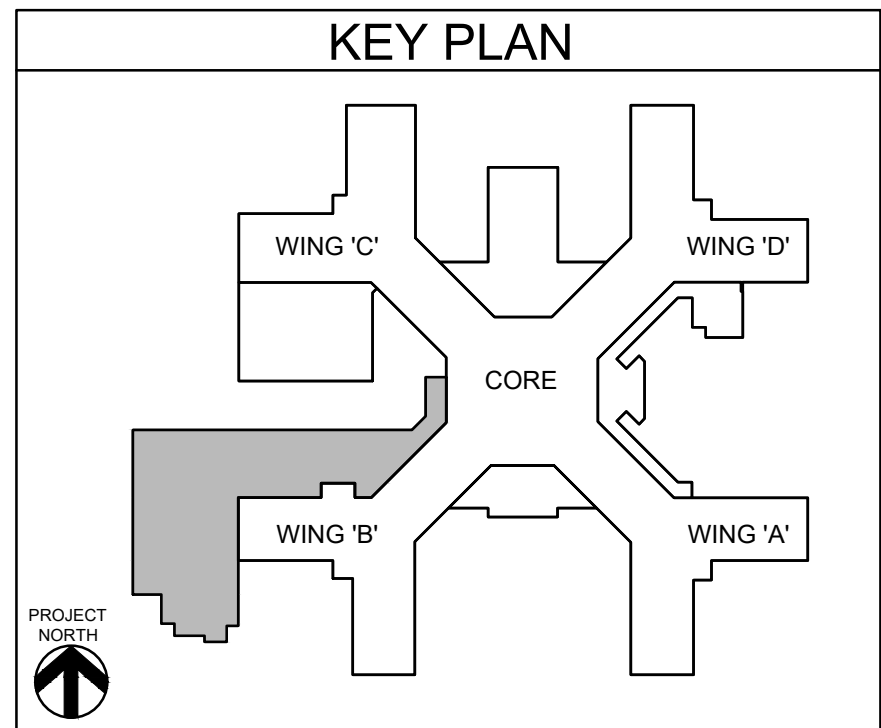
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- GENERAL NOTES:**
1. ALL PIPE LABELING FOR NEW PIPING SHALL INCLUDE "ED" DESIGNATION ON THE LABEL.
 2. ALL PNEUMATIC TUBE PIPING MUST HAVE MINIMUM 48" RADIUS TURNS.
 3. DELETE ALL PNEUMATIC TUBE/STATION WORK AND MATERIALS FOR DEDUCT ALTERNATE 3.
 4. SEE 1-PL-200A FOR DEDUCT ALTERNATE 5 BASEMENT DOMESTIC WATER & MEDICAL GAS PIPING PLAN.

1 PLUMBING: BASEMENT LEVEL DOMESTIC WATER & GAS PIPING PLAN
SCALE: 1/8"=1'-0"



Revisions:	Date:

CONSULTANT

HYMAN HAYES ASSOCIATES

H-HA

800 TROY SCHENECTADY ROAD, STE 103
LATAM, NY 12110
(518) 452-3470
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III

ENGINEERING LLP

FE PROJECT NO: 19-181

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; fx 855-320-8735

181 Church St., Suite 100,
Poughkeepsie, NY 12601
t 845-454-9704; fx 855-320-8735

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JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
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Office of
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Drawing Title

**PLUMBING:
BASEMENT LEVEL DOMESTIC WATER + GAS
PIPING PLAN**

Approved: Project Director

Phase

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Project Title

STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location

ALBANY, NY

Issue Date

MARCH 18, 2022

Checked

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SRB

Project Number

528-809

Building Number

1

Drawing Number

1-PL-200

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VA FORM 08-6231

GENERAL NOTES:
1. ALL PIPE LABELING FOR NEW PIPING SHALL INCLUDE "ED" DESIGNATION ON THE LABEL.

1 PLUMBING: BASEMENT LEVEL DOMESTIC WATER & GAS PIPING PLAN
SCALE: 1/8"=1'-0"

ALTERNATE:

- FOR DEDUCT ALTERNATE 5:
 - DELETE ALL PNEUMATIC TUBE/STATION WORK AND MATERIALS.
 - DELETE THE 1 1/4"HW, 1 1/2"CW AND 3/4"HWR DOMESTIC WATER LINE BRANCHES SHOWN ON 1-PL-200 LEFT OF COLUMN LINE 9.
 - INCREASE SIZE OF THE DOMESTIC COLD AND HOT WATER RISERS TO KITCHEN E140, EAST OF COLUMN LINE 9, TO 2 1/2" AND 2" RESPECTIVELY.
 - MEDICAL GAS PIPING REMAINS THE SAME AS BASE BID SHOWN ON 1-PL-200.
 - SEE 1-PL-201A FOR FIRST FLOOR CONTINUATION OF DOMESTIC WATER AND MEDICAL GAS PIPING FOR DEDUCT ALTERNATE 5.

Revisions:	Date:

CONSULTANT
HYMAN HAYES ASSOCIATES
H-HA
800 TROY SCHNEIDER ROAD, STE 103 LAIRDALE, NY 12110 (518) 452-2400 www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD
FELLENZER III ENGINEERING LLP
FE PROJECT NO: 19-181
22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; f 855-320-8735
181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; f 855-320-8735

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JOHN D. FELLENER, P.E.
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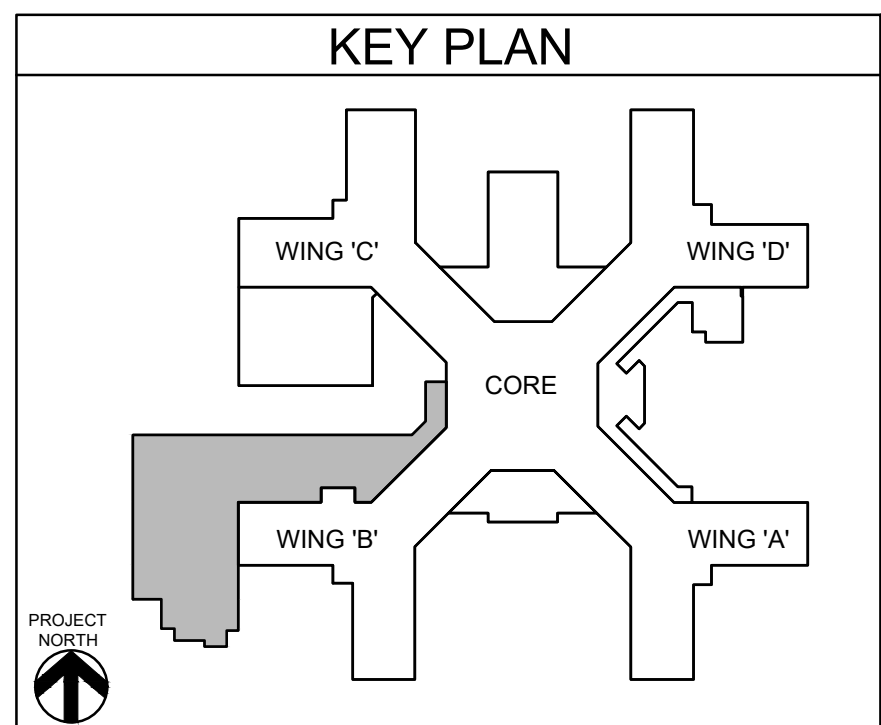
Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title
PLUMBING: BASEMENT LEVEL DOMESTIC WATER + GAS PIPING PLAN - DEDUCT ALTERNATE 5 (SLAB ON GRADE)
Approved: Project Director

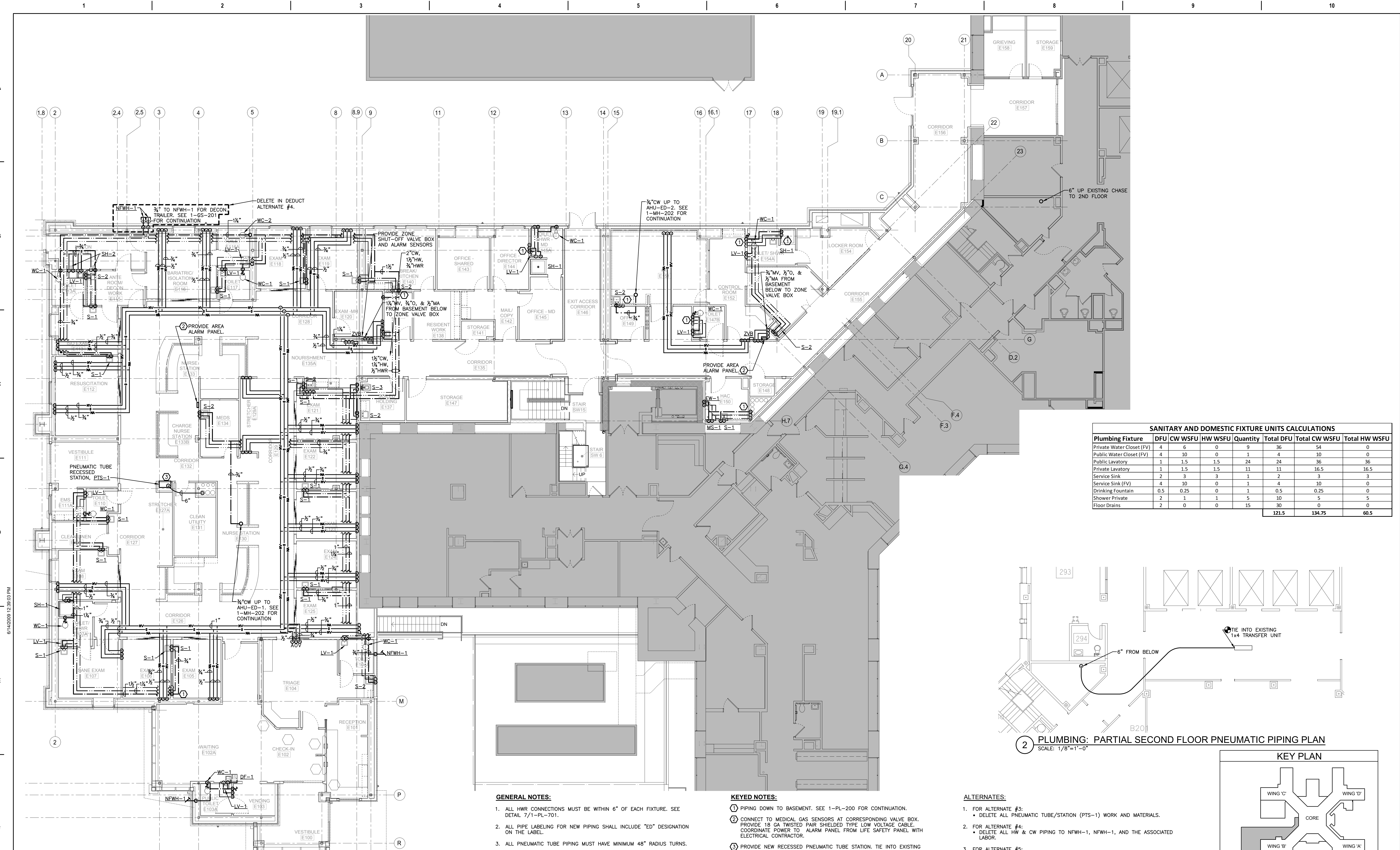
Phase
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Project Title
STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT
Location
ALBANY, NY
Issue Date
MARCH 18, 2022
Checked
JDF
Drawn
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Project Number
528-809
Building Number
1
Drawing Number
1-PL-200B

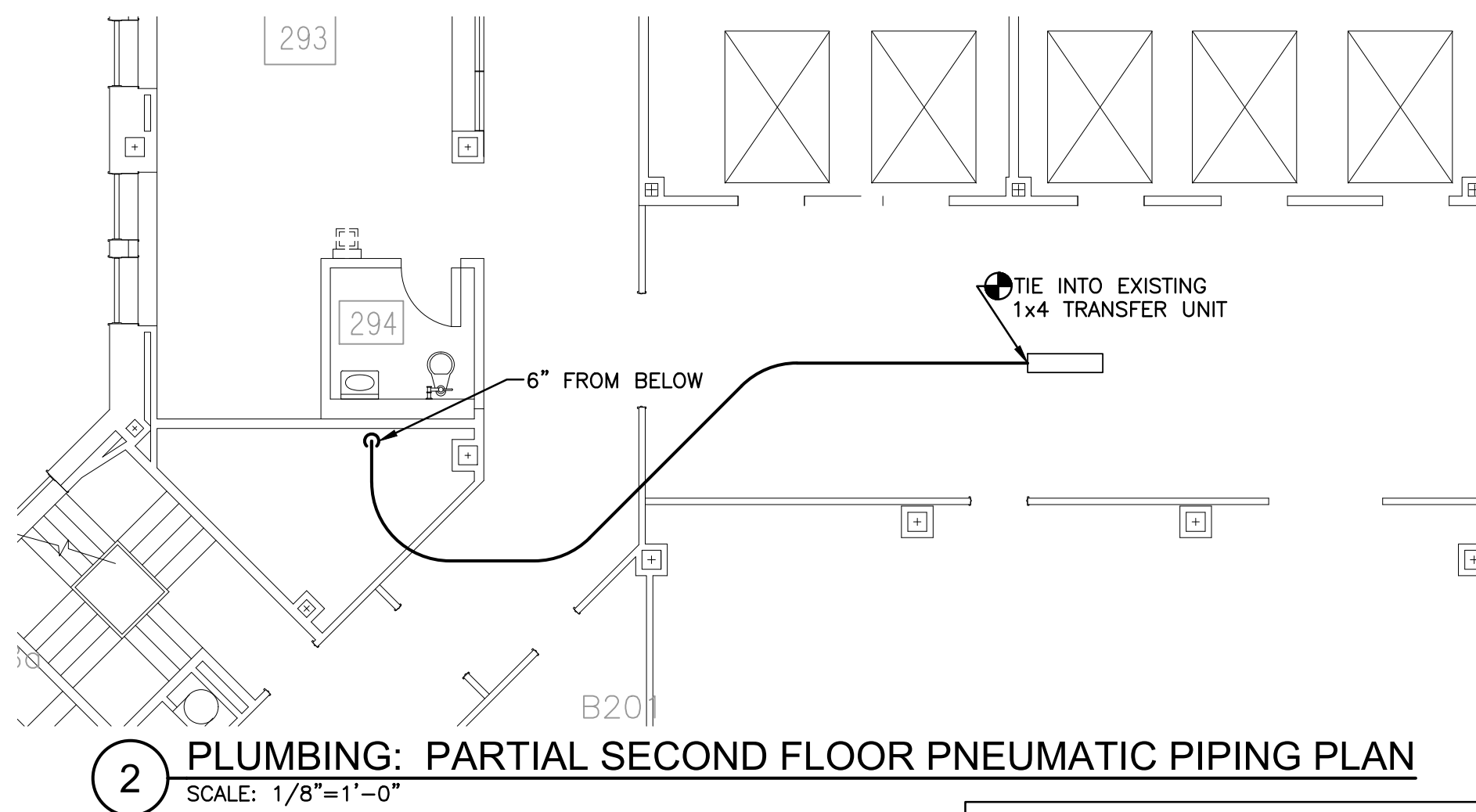


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1 PLUMBING: FIRST FLOOR DOMESTIC WATER AND MEDICAL GAS PIPING PLAN
SCALE: 1/8"=1'-0"

SANITARY AND DOMESTIC FIXTURE UNITS CALCULATIONS						
Plumbing Fixture	DFU	CW WSFU	HW WSFU	Quantity	Total DFU	Total CW WSFU
Private Water Closet (FV)	4	6	0	9	36	54
Public Water Closet (FV)	4	10	0	1	4	10
Public Lavatory	1	1.5	1.5	24	24	36
Private Lavatory	1	1.5	1.5	11	11	16.5
Service Sink	2	3	3	1	2	3
Service Sink (FV)	4	10	0	1	4	10
Drinking Fountain	0.5	0.25	0	1	0.5	0.25
Shower Private	2	1	1	5	10	5
Floor Drains	2	0	0	15	30	0
					121.5	134.75
						60.5



2 PLUMBING: PARTIAL SECOND FLOOR PNEUMATIC PIPING PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

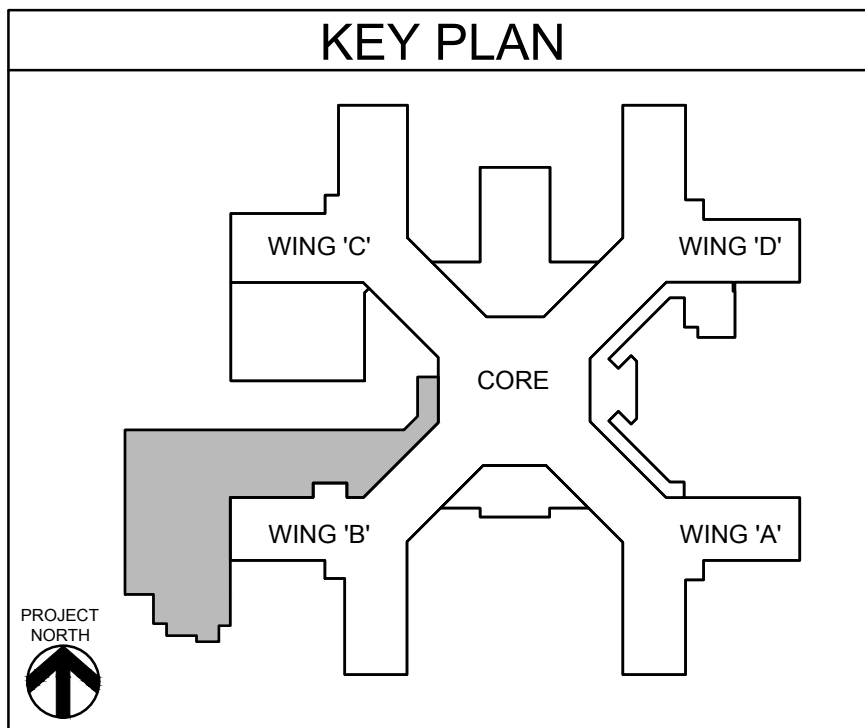
- ALL HWR CONNECTIONS MUST BE WITHIN 6" OF EACH FIXTURE. SEE DETAIL 7/1-PL-701.
- ALL PIPE LABELING FOR NEW PIPING SHALL INCLUDE "ED" DESIGNATION ON THE LABEL.
- ALL PNEUMATIC TUBE PIPING MUST HAVE MINIMUM 48" RADIUS TURNS.

KEYED NOTES:

- 1 PIPING DOWN TO BASEMENT. SEE 1-PL-200 FOR CONTINUATION.
- 2 CONNECT TO MEDICAL GAS SENSORS AT CORRESPONDING VALVE BOX. PROVIDE 18 GA TWISTED PAIR SHIELDED TYPE LOW VOLTAGE CABLE. COORDINATE POWER TO ALARM PANEL FROM LIFE SAFETY PANEL WITH ELECTRICAL CONTRACTOR.
- 3 PROVIDE NEW RECESSED PNEUMATIC TUBE STATION. TIE INTO EXISTING COMMUNICATIONS AND CONTROLS TO TIE INTO 3B CLINICAL LABS.

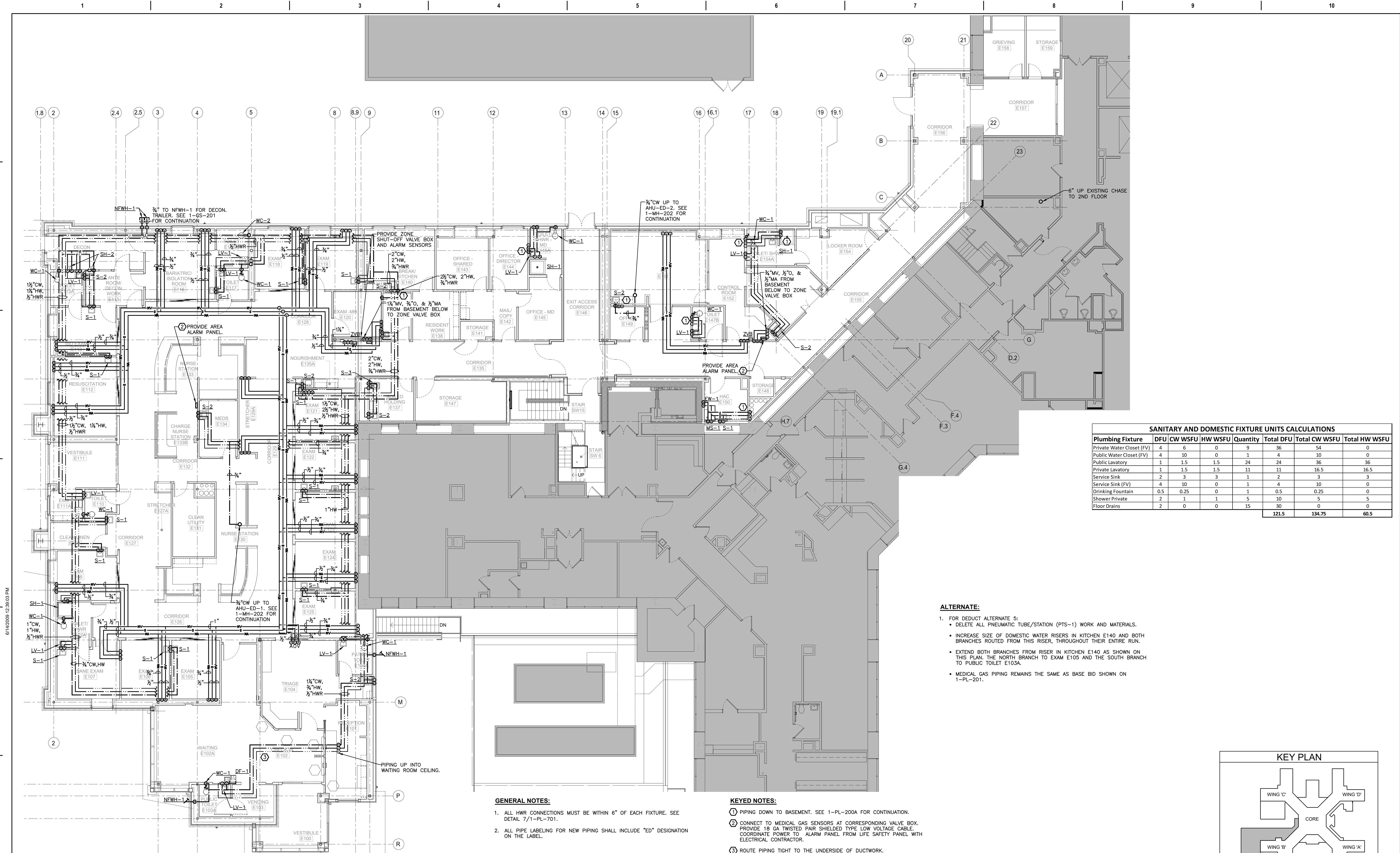
ALTERNATES:

- FOR ALTERNATE #3:
 - DELETE ALL PNEUMATIC TUBE/STATION (PTS-1) WORK AND MATERIALS.
- FOR ALTERNATE #4:
 - DELETE ALL HW & CW PIPING TO NFWH-1, NFWH-1, AND THE ASSOCIATED LABOR.
- FOR ALTERNATE #5:
 - SEE 1-PL-201A FOR DEDUCT ALTERNATE 5 FIRST FLOOR DOMESTIC WATER AND MEDICAL GAS PIPING PLAN.



CONSULTANT		ARCHITECT/ENGINEER OF RECORD		STAMP		Office of Construction and Facilities Management		Drawing Title		Phase		Project Title		Project Number	
HYMAN HAYES ASSOCIATES		FELLENZER III ENGINEERING LLP		JOHN D. FELLENER, P.E.		Office of Construction and Facilities Management		PLUMBING: FIRST FLOOR DOMESTIC WATER + GAS PIPING PLAN		100% FOR BID		STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT		528-809	
Revisions:		FE PROJECT NO: 19-181		NY PROFESSIONAL ENGINEER NO. 069373-1		Approved: Project Director		Fully Sprinklered		FULLY SPRINKLERED		Location		Drawing Number	
Date:		22 Mulberry St., Suite 2A, Middletown, NY 10940		181 Church St., Suite 100, Poughkeepsie, NY 12601		VA U.S. Department of Veterans Affairs		Issue Date		Checked		Drawn		1-PL-201	
		1845-343-1481; fx 855-320-8735		1845-454-9704; fx 855-320-8735				MARCH 18, 2022		JDF		SRB			

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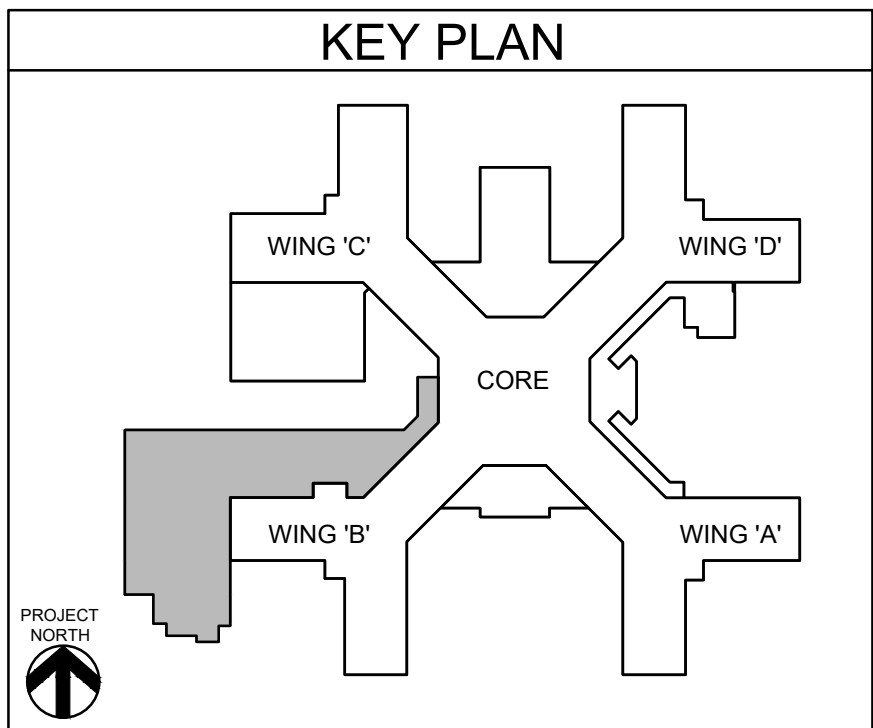
SANITARY AND DOMESTIC FIXTURE UNITS CALCULATIONS						
Plumbing Fixture	DFU	CW WSFU	HW WSFU	Quantity	Total DFU	Total CW WSFU
Private Water Closet (FV)	4	6	0	9	36	54
Public Water Closet (FV)	4	10	0	1	4	10
Public Lavatory	1	1.5	1.5	24	24	36
Private Lavatory	1	1.5	1.5	11	11	16.5
Service Sink	2	3	3	1	2	3
Service Sink (FV)	4	10	0	1	4	10
Drinking Fountain	0.5	0.25	0	1	0.5	0.25
Shower Private	2	1	1	5	10	5
Floor Drains	2	0	0	15	30	0
					121.5	134.75
						60.5

- ALTERNATE:**
- FOR DEDUCT ALTERNATE 5:
 - DELETE ALL PNEUMATIC TUBE/STATION (PTS-1) WORK AND MATERIALS.
 - INCREASE SIZE OF DOMESTIC WATER RISERS IN KITCHEN E140 AND BOTH BRANCHES ROUTED FROM THIS RISER, THROUGHOUT THEIR ENTIRE RUN.
 - EXTEND BOTH BRANCHES FROM RISER IN KITCHEN E140 AS SHOWN ON THIS PLAN, THE NORTH BRANCH TO EXAM E105 AND THE SOUTH BRANCH TO PUBLIC TOILET E103A.
 - MEDICAL GAS PIPING REMAINS THE SAME AS BASE BID SHOWN ON 1-PL-201.

- GENERAL NOTES:**
- ALL HWR CONNECTIONS MUST BE WITHIN 6" OF EACH FIXTURE. SEE DETAIL 7/1-PL-701.
 - ALL PIPE LABELING FOR NEW PIPING SHALL INCLUDE "ED" DESIGNATION ON THE LABEL.

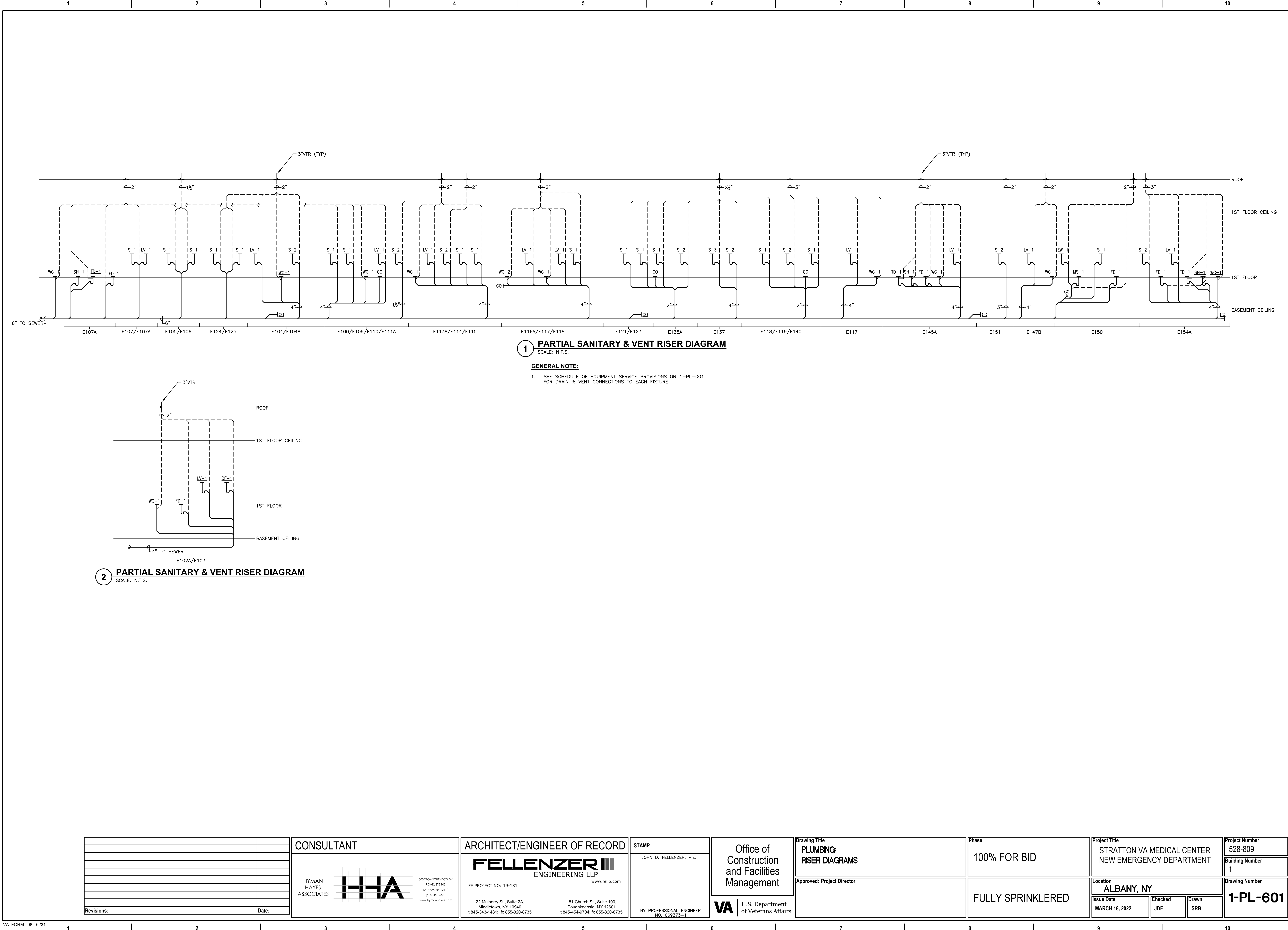
- KEYED NOTES:**
- ① PIPING DOWN TO BASEMENT. SEE 1-PL-200A FOR CONTINUATION.
 - ② CONNECT TO MEDICAL GAS SENSORS AT CORRESPONDING VALVE BOX. PROVIDE 18 GA TWISTED PAIR SHIELDED TYPE LOW VOLTAGE CABLE. COORDINATE POWER TO ALARM PANEL FROM LIFE SAFETY PANEL WITH ELECTRICAL CONTRACTOR.
 - ③ ROUTE PIPING TIGHT TO THE UNDERSIDE OF DUCTWORK.

① PLUMBING: FIRST FLOOR DOMESTIC WATER AND MEDICAL GAS PIPING PLAN
SCALE: 1/8"=1'-0"



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F:\2019\19-181 VA STRATTON, NEW EMERGENCY DEPT\PLUMBING\9) 1-PL-601.dwg 3-18-22 11:53:23 AM on 6/14/2025 12:36:03 PM



1 PARTIAL SANITARY & VENT RISER DIAGRAM
SCALE: N.T.S.


GENERAL NOTE:
1. SEE SCHEDULE OF EQUIPMENT SERVICE PROVISIONS ON 1-PL-001 FOR DRAIN & VENT CONNECTIONS TO EACH FIXTURE.

2 PARTIAL SANITARY & VENT RISER DIAGRAM
SCALE: N.T.S.

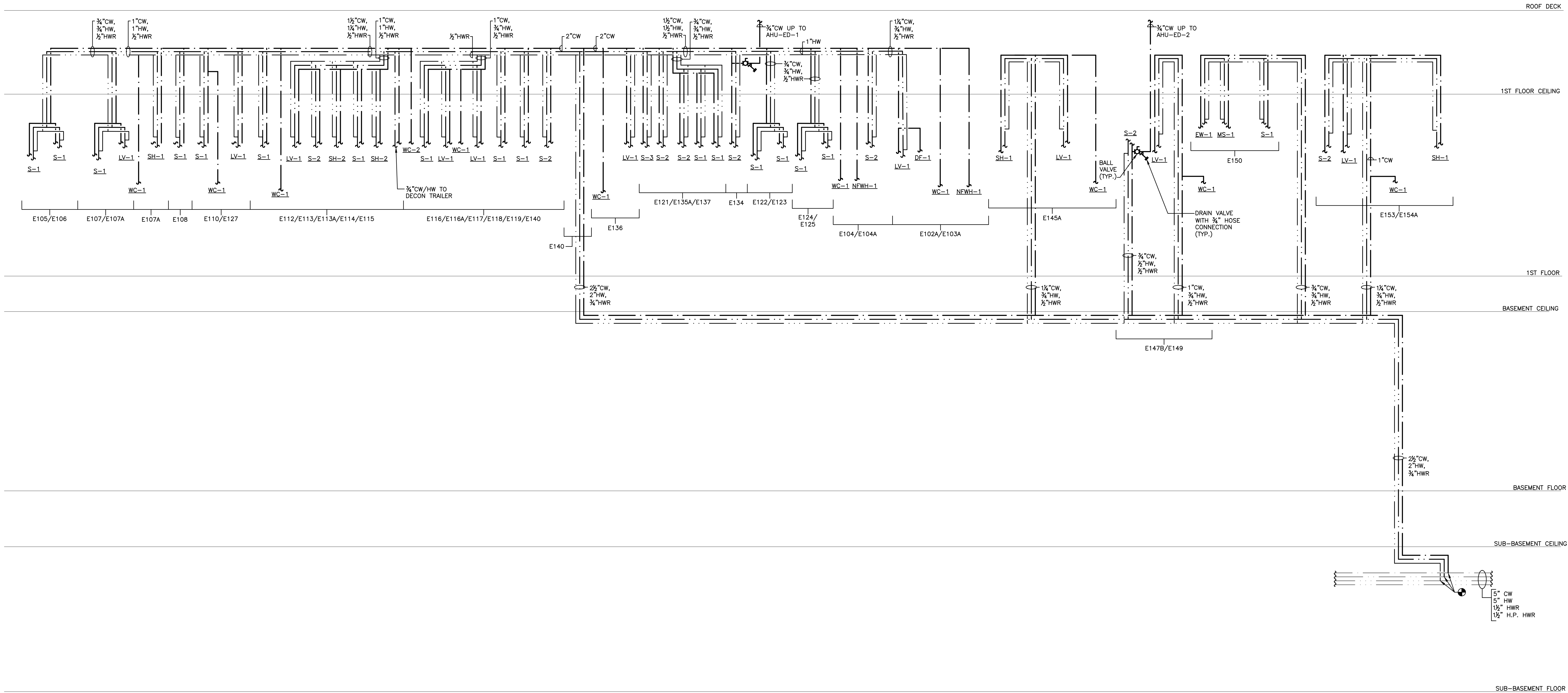
		<div>CONSULTANT</div> <div><div>HYMAN HAYES ASSOCIATES</div><div><div>H-HA</div><div>800 TROY SCHENECTADY ROAD, STE 103 LATHAM, NY 12110 (518) 452-3470 www.hymanhayes.com</div></div></div>	<div>ARCHITECT/ENGINEER OF RECORD</div> <div><div>FELLENZER III</div><div>ENGINEERING LLP</div><div>FE PROJECT NO: 19-181</div><div>22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735</div><div>181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-344-9704; fx 855-320-8735</div></div>	<div>STAMP</div> <div>JOHN D. FELLENER, P.E.</div> <div>NY PROFESSIONAL ENGINEER NO. 069373-1</div>	<div>Office of Construction and Facilities Management</div> <div>VA U.S. Department of Veterans Affairs</div>	<div>Drawing Title</div> <div>PLUMBING: RISER DIAGRAMS</div>	<div>Phase</div> <div>100% FOR BID</div>	<div>Project Title</div> <div>STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT</div>	<div>Project Number</div> <div>528-809</div>	
						<div>Building Number</div> <div>1</div>				
						<div>Drawing Number</div> <div>1-PL-601</div>				
<div>Revisions:</div>	<div>Date:</div>				<div>Approved: Project Director</div>	<div>FULLY SPRINKLERED</div>	<div>Location</div> <div>ALBANY, NY</div>	<div>Issue Date</div> <div>MARCH 18, 2022</div>	<div>Checked</div> <div>JDF</div>	<div>Drawn</div> <div>SRB</div>



1. SEE DETAIL 7/1-PL-701 FOR HWR CONNECTIONS TO EACH FIXTURE.
2. SEE SCHEDULE OF EQUIPMENT SERVICE PROVISIONS ON 1-PL-001 FOR CW & HW CONNECTIONS TO EACH FIXTURE.
3. SEE 1-PL-200 & 1-PL-201 FOR THIS RISERS CORRESPONDING FLOOR PLANS.
4. SEE 1-PL-602A FOR DEDUCT ALTERNATE 5 DOMESTIC WATER PIPING RISER DIAGRAM.

		<div>CONSULTANT</div> <div><div>HYMAN HAYES ASSOCIATES</div><div></div><div>800 TROY SCHENECTADY ROAD, STE 103 LAUREL, NY 12010 (518) 452-3470 www.hymanhayes.com</div></div>	<div>ARCHITECT/ENGINEER OF RECORD</div> <div><div>FELLENZER III</div><div>ENGINEERING LLP</div></div> <div>FE PROJECT NO.: 19-181</div> <div><div>22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481; fx 855-320-8735</div><div>181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704; fx 855-320-8735</div></div>	<div>STAMP</div> <div>JOHN D. FELLENER, P.E.</div> <div></div> <div>NY PROFESSIONAL ENGINEER NO. 069373-1</div>	<div>Office of Construction and Facilities Management</div> <div><div>VA</div><div>U.S. Department of Veterans Affairs</div></div>	Drawing Title	Project Title	Project Number
	PLUMBING: RISER DIAGRAMS					STRATTON VA MEDICAL CENTER NEW EMERGENCY DEPARTMENT	528-809	
	Approved: Project Director					100% FOR BID	Building Number 1	
						FULLY SPRINKLERED	Drawing Number 1-PL-602	
Revisions:	Date:	Location ALBANY, NY		Issue Date MARCH 18, 2022	Checked JDF	Drawn SRB		

F:\2019\19-181 VA STRATTON, NEW EMERGENCY DEPT\PLUMBING\9) 1-PL-602B (SLAB OPTION).dwg 3-18-22 11:53:28 AM oh
6/4/2025 12:36:53 PM



1 DOMESTIC WATER PIPING RISER DIAGRAM
N.T.S.

GENERAL NOTE:

- SEE DETAIL 7/1-PL-701 FOR HWR CONNECTIONS TO EACH FIXTURE.
- SEE SCHEDULE OF EQUIPMENT SERVICE PROVISIONS ON 1-PL-001 FOR CW & HW CONNECTIONS TO EACH FIXTURE.
- SEE 1-PL-200A & 1-PL-201A FOR THIS RISERS CORRESPONDING FLOOR PLANS.

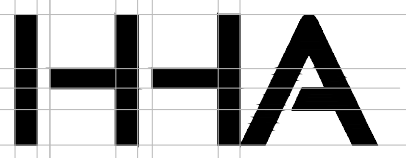
ALTERNATE:

- FOR DEDUCT ALTERNATE 5:
 - INCREASE SIZE OF DOMESTIC WATER RISER IN KITCHEN E140 AND BOTH BRANCHES ROUTED FROM THIS RISER, THROUGHOUT THEIR ENTIRE RUN.
 - SEE 1-PL-200A & 1-PL-201A FOR THIS RISERS CORRESPONDING FLOOR PLANS.

Revisions:	Date:

CONSULTANT

HYMAN HAYES ASSOCIATES



800 TROY SCHNECTADY ROAD, STE 103
LATHAM, NY 12110
(518) 452-3470
www.hymanhayes.com

ARCHITECT/ENGINEER OF RECORD

FELLENZER III

ENGINEERING LLP

FE PROJECT NO: 19-181

www.fellip.com

22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481; fx 855-320-8735

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Poughkeepsie, NY 12601
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STAMP

JOHN D. FELLENER, P.E.

NY PROFESSIONAL ENGINEER
NO. 069373-1

Office of Construction and Facilities Management

 U.S. Department of Veterans Affairs

Drawing Title

PLUMBING:
RISER DIAGRAMS - DEDUCT ALTERNATE 5
(SLAB ON GRADE)

Approved: Project Director

Phase

100% FOR BID

FULLY SPRINKLERED

Project Title

STRATTON VA MEDICAL CENTER
NEW EMERGENCY DEPARTMENT

Location

ALBANY, NY

Issue Date

MARCH 18, 2022

Checked

JDF

Drawn

SRB

Project Number

528-809

Building Number

1

Drawing Number

1-PL-602B



NOTE:
PROVIDE AN ADDITIONAL 16 GAGE GALVANIZED
STEEL PLATE 12"x16" [300x400mm] SECURED
TO A MINIMUM OF 2 STUDS FOR A FOOT PEDAL.

NOTE: LINEAR TRENCH DRAIN AT SHOWER ENTRANCE IS AN ACCEPTABLE OPTION.

A detailed cross-sectional diagram of a locking mechanism. A horizontal 'ARM' is attached to a 'FRONT LEVELING SCREW' on the left. The arm extends through a 'LOCKING DEVICE' and a 'LOCKING COUPLING' to a 'SLEEVE' on the right. The sleeve is mounted on a 'SUPPORT UPRIGHT'. An 'ESCUICHEON' is located between the locking device and the sleeve. The entire assembly is positioned against a 'FINISHED WALL'. A 'REAR LEVELING CREW' is also indicated near the front leveling screw.

NOTE:

1. HWR CONNECTION MUST BE WITHIN 6" OF THE STOP SERVING THE FIXTURE.

NOTE:
INSTALL PER MANUFACTURER'S REQUIREMENTS

1-PL-701