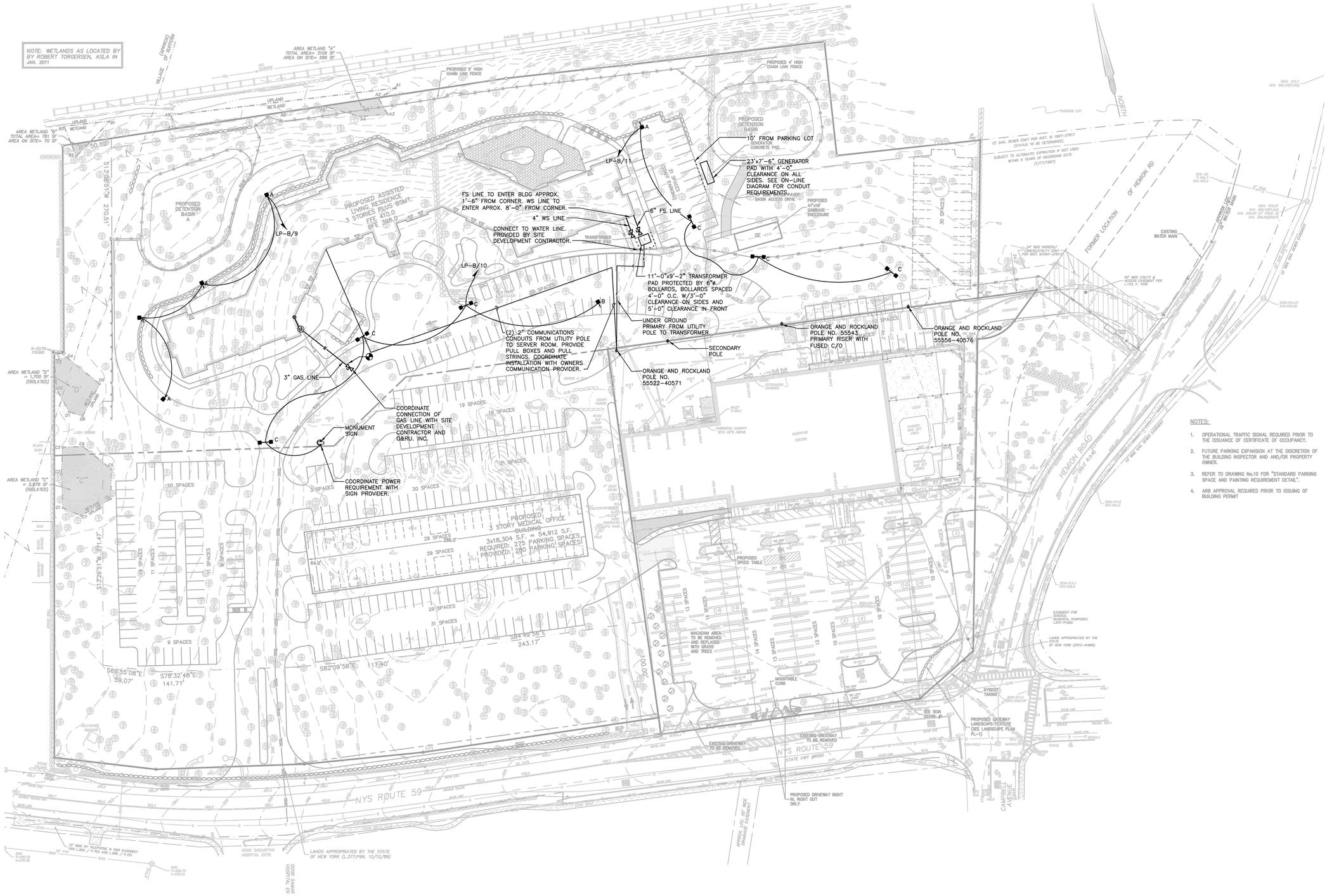


1 **MEP SITE PLAN**
SCALE: 1"=40'

NOTES:

1. OPERATIONAL TRAFFIC SIGNAL REQUIRED PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
2. FUTURE PARKING EXPANSION AT THE DISCRETION OF THE BUILDING INSPECTOR AND AND/OR PROPERTY OWNER.
3. REFER TO DRAWING No.10 FOR "STANDARD PARKING SPACE AND PAINTING REQUIREMENT DETAIL".
4. ARB APPROVAL REQUIRED PRIOR TO ISSUING OF BUILDING PERMIT

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MARK	DATE	DESCRIPTION
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ERIC D. FELLENZER, P.E.
STATE OF NEW YORK · LICENSED PROFESSIONAL ENGINEER
NY PROFESSIONAL ENGINEER NO. 073084-1
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PROJECT No:	DATE:	SCALE:	
FILB 1501	11/15/19	AS SHOWN	

CLIENT
Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

**Montebello Crossing,
250 Lafayette Avenue
(Route 59)
Village of Montebello
New York**

CONTRACT

STATUS
REGULATORY REVIEW

SHEET TITLE
**MEP:
SITE PLAN**

DRAWING No.
MEP.1

SHEET No.
OF

File Name: F:\2015\15-345 NEW ASSISTED LIVING RESIDENCE\MEP-1.dwg (Layout: MEP.1)
Date: Fri, Jan 24, 2020 - 9:26 AM (Name: srb)

GENERAL NOTES:

1. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL HVAC 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. ACCESS PANELS SHALL BE PROVIDED IN CEILINGS, WALLS, FLOORS, ETC., AS REQUIRED TO MAINTAIN ACCESSIBILITY TO VALVES, DAMPERS, TRAPS, COILS, ETC.
4. PROVIDE DUCT ACCESS DOORS AT ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND SMOKE DAMPERS.
5. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
6. ALL DUCTWORK PASSING THROUGH A FIRE RATED PARTITION SHALL BE PROVIDED WITH A FIRE DAMPER TO MAINTAIN THE FIRE RATING OF THE PARTITION.
7. LOCATIONS OF DIFFUSERS AND GRILLES ARE APPROXIMATE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS.
8. ALL BRANCHES AND TAKE-OFFS SHALL BE EQUIPPED WITH VOLUME CONTROL DAMPERS. DAMPERS TO BE OPPOSED BLADE TYPE, 4" MAX. BLADE HEIGHT. VOLUME DAMPERS TO BE LOCATED AS NEAR TO THE POINT OF TAKE-OFF AS PRACTICAL.
9. FLEXIBLE DUCT CONNECTIONS SHALL BE LIMITED TO A MAXIMUM LENGTH OF FIVE (5) FEET AND SUPPORTED AT MID-POINT.
10. ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE INSULATED.
11. PROVIDE SHUT-OFF VALVES AT ALL PIPING BRANCH TAKE-OFFS AND AT ALL CONNECTIONS TO EQUIPMENT.
12. PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS. PROVIDE MANUAL VENTS ON PIPING AT ALL HIGH POINTS.
13. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR.
14. ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
15. ALL REQUIRED CONTROL EQUIPMENT AND WIRING SHALL BE FURNISHED & INSTALLED BY THE HVAC CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EXPANSION LOOPS AS NECESSARY IN ALL SUPPLY AND RETURN PIPING TO PROTECT PIPES AND STRUCTURE FROM DAMAGE DUE TO THERMAL EXPANSION AND CONTRACTION IN PIPES.
17. 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.
18. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EXPANSION LOOPS AS NECESSARY IN ALL SUPPLY AND RETURN PIPING TO PROTECT PIPES AND STRUCTURE FROM DAMAGE DUE TO THERMAL EXPANSION AND CONTRACTION IN PIPES.
20. 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.
21. IT IS THE INTENTION THAT THESE SPECIFICATIONS, AND DRAWINGS ACCOMPANYING SAME, SHALL PROVIDE FOR THE FURNISHING AND INSTALLING OF THE () SYSTEMS COMPLETE AS SPECIFIED AND SHOWN. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY WORK CHANGES WHICH MAY BE EVIDENTLY NECESSARY TO COMPLETE THE INSTALLATION SHALL BE FURNISHED BY THIS CONTRACTOR.
22. IT IS THE INTENT AND PURPOSE OF THESE SPECIFICATIONS AND DRAWINGS TO INCLUDE AND PROVIDE FOR ALL MATERIALS, APPLIANCES AND LABOR TO PROPERLY COMPLETE AND LEAVE IN PERFECT WORKING CONDITION THE ENTIRE SYSTEM HEREINAFTER SPECIFIED. ANY MATERIAL, LABOR OR APPLIANCE NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS, BUT NECESSARY FOR A COMPLETE INSTALLATION MUST BE FURNISHED BY THIS CONTRACTOR.
23. 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.

HVAC LINE TYPES

- NEW EQUIPMENT / DUCT
- ATV — ATMOSPHERIC VENT
- BBD — BOILER BLOWDOWN
- BR — BRINE RETURN
- B — BRINE SUPPLY
- CHVR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- A — COMPRESSED AIR
- CD — CONDENSATE DRAIN
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- DTWR — DUAL TEMP. WATER RETURN
- DTWS — DUAL TEMP. WATER SUPPLY
- FILL — FILL LINE
- FOD — FUEL OIL DISCHARGE
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUPPLY
- FOV — FUEL OIL TANK VENT
- HPWR — HEAT PUMP WATER RETURN
- HPWS — HEAT PUMP WATER SUPPLY
- HPR — HIGH PRESSURE CONDENSATE
- HPS — HIGH PRESSURE STEAM
- HTWR — HIGH TEMP HOT WATER RETURN
- HTWS — HIGH TEMP HOT WATER SUPPLY
- H — HUMIDIFICATION LINE
- LPG — LP GAS SUPPLY
- LPR, LPC — LOW PRESSURE CONDENSATE RETURN
- LPS — LOW PRESSURE STEAM SUPPLY
- HWR — LOW TEMPERATURE HOT WATER RETURN
- HWS — LOW TEMPERATURE HOT WATER SUPPLY
- MU — MAKEUP WATER
- MPR — MEDIUM PRESSURE CONDENSATE
- MPS — MEDIUM PRESSURE STEAM
- MTWR — MEDIUM TEMP HOT WATER RETURN
- MTWS — MEDIUM TEMP HOT WATER SUPPLY
- G — NATURAL GAS LINE
- PC — PUMPED CONDENSATE
- RD — REFRIGERANT DISCHARGE
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- VAC — VACUUM LINE
- VPD — VACUUM PUMP DISCHARGE

GAS PIPING NOTES:

1. PLACEMENT OF GAS TRANSMISSION AND DISTRIBUTION LINES WITHIN CERTAIN DISTANCES OF SCHOOL BUILDINGS IS REGULATED BY THE PUBLIC SERVICE COMMISSION CODES, RULES & REGULATIONS NYCRR PART 255 AND BY THE FEDERAL DEPARTMENT OF TRANSPORTATION, PART 192.
2. GAS PRESSURE WITHIN BUILDING SHALL NOT EXCEED 1/2 PSIG. PRIOR TO CONNECTION TO GAS SERVICE. ALL INDOOR ABOVE GROUND GAS PIPING (NOT COATED OR WRAPPED) SHALL BE TESTED WITH AIR PRESSURE AT 15 PSIG FOR A PERIOD OF 1 HOUR WITH NO LOSS IN PRESSURE. ALL COATED OR WRAPPED GAS PIPING SHALL BE TESTED W/AIR PRESSURE AT 100 PSIG FOR A MINIMUM OF 1 HOUR WITH NO LOSS IN PRESSURE.
3. COORDINATE INSTALLATION AND FINAL CONNECTION OF GAS LINES WITH KITCHEN CONTRACTOR & G.C.
4. ALL GAS PIPING SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES, AS WELL AS NFPA-54.
5. GAS PIPING UNDER SLABS, AND CROSSING CORRIDORS SHALL HAVE GAS TIGHT VENTED SLEEVES. (VENTED DIRECTLY AND INDEPENDENTLY TO THE OUTDOORS).
6. RELIEF VALVES AND NORMALLY OPEN VENT VALVES SHALL BE VENTED DIRECTLY AND INDEPENDENTLY TO THE OUTDOORS.
7. PRESSURE REGULATING & OVER PRESSURE PROTECTION DEVICES LOCATED OUTSIDE SCHOOL BUILDINGS SHALL ENCLOSED IN A CABINET OR FENCED OUTSIDE AREA OF DURABLE STRUCTURAL MATERIALS WHICH WILL WITHSTAND ANY LOADS TO WHICH THEY MAY BE SUBJECTED.
8. ALL GAS PIPING 3"ø & LARGER SHALL HAVE WELDED FITTINGS & CONNECTIONS. ALL GAS PIPING 2½" & SMALLER SHALL HAVE GAS-TIGHT THREADED CONNECTIONS w/ THREAD SEALANT APPROVED FOR NATURAL GAS SERVICE.
9. CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR THE INSTALLATION OF THE NEW NATURAL GAS SERVICE TO BLDG. w/ LOCAL UTILITIES APPROXIMATELY THREE (3) WEEKS PRIOR TO START OF WORK. ALL GAS PIPING FROM MAIN UNDER STREET UP TO AND INCLUDING METER AT BLDG. SHALL BE BY UTILITY COMPANY. ALL TRENCHING, BEDDING & BACKFILL SHALL BE BY PLUMBING CONTRACTOR AS PER O&R REQUIREMENTS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GAS PIPING FROM CONNECTION OF METER OUTLET TO THROUGHOUT BLDG. AS PER PLANS, SPECIFICATIONS, NYS FUEL GAS CODE, NFPA-54, LOCAL CODES, AS WELL AS UTILITY COMPANY REQUIREMENTS. PLUMBING CONTRACTOR SHALL COORDINATE SCHEDULING REQUIREMENTS w/ SITE CONTRACTOR AS WELL. PLUMBING CONTRACTOR SHALL APPLY & OBTAIN ALL PERMITS REQUIRED & PAY ALL FEES.
10. ALL GAS PIPING PASSING THROUGH MASONRY WALLS SHALL BE SLEEVED w/ SCH. 80 PVC.
11. COORDINATE INSTALLATION OF GAS PIPING w/ALL OTHER TRADES PRIOR TO INSTALLATION.

DUCTWORK SYMBOLS

- AxB — DUCTWORK DOUBLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
- AxB — DUCTWORK SINGLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- RETURN AIR DUCT UP
- RETURN AIR DUCT DOWN
- EXHAUST AIR DUCT UP
- EXHAUST AIR DUCT DOWN
- FLEXIBLE DUCTWORK
- SUPPLY AIR FLOW
- RETURN/EXHAUST AIR FLOW
- VOLUME DAMPER
- MOTORIZED DAMPER w/ ACCESS DOOR
- FIRE DAMPER W/ ACCESS DOOR
- SUPPLY AIR TERMINAL
- RETURN/EXHAUST AIR TERMINAL
- EXHAUST AIR TERMINAL
- D — DROP DUCT
- R — RISE DUCT

PIPING SYMBOLS

- DIRECTION OF FLOW
- ANCHOR
- PIPE GUIDE
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- PIPE DOWN TURN
- PIPE RISE
- UNION
- DIRECTION OF PIPE PITCH (DOWN)

VALVE SYMBOLS

- GATE VALVE – THREADED/FLANGED
- GATE VALVE WITH 3/4" HOSE ADAPTER
- GLOBE VALVE – THREADED/FLANGED
- CHECK VALVE
- STRAINER
- WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
- STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR
- FLEXIBLE CONNECTION
- ANGLE GLOBE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- CONTROL VALVE (CV) – FLOAT-OPERATED
- MODULATING CONTROL VALVE
- MODULATING CONTROL BUTTERFLY VALVE
- TWO POSITION CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE
- THREE-WAY TWO POSITION CONTROL VALVE
- PRESSURE REGULATING VALVE
- PRESSURE REDUCING VALVE (PRV)
- TEMPERATURE & PRESSURE RELIEF VALVE
- SAFETY OR PRESSURE RELIEF VALVE
- AUTOMATIC BALANCING CONTROL VALVE
- WATER BALANCE DEVICE
- WATER FLOW MEASURING DEVICE
- CIRCUIT SETTER VALVE
- GATE VALVE WITH GLOBE-VALVED BYPASS
- TRIPLE DUTY VALVE
- WATER LEVEL CONTROLLER
- FLOW METER
- COMBINATION BALANCING AND SHUT-OFF VALVE
- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMPERATURE)
- PLUG VALVE
- LUBRICATED PLUG VALVE

GENERAL SYMBOLS

- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- POINT OF DISCONNECT
- INDICATES SECTION LETTER
- INDICATES DRAWING NUMBER WHERE LOCATED
- INDICATES TYPE OF AIR OUTLET
- INDICATES AIR FLOW REQUIREMENTS
- ADJUSTABLE ANGLE THERMOMETER
- DIAL THERMOMETER
- PRESSURE GAUGE WITH NEEDLE VALVE
- WALL MOUNT THERMOSTAT "A" DESIGNATES COMPONENT SERVED
- TEMPERATURE SENSOR
- PUMP
- DUCT SMOKE DETECTOR
- FAN SWITCH WITH PILOT LIGHT
- DOOR UNDERCUT (BY G.C.)
- LOUVERED DOOR (BY G.C.)

ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACT	ACOUSTIC CEILING TILE
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AF	AFTER FILTER
AFF	ABOVE FINISHED FLOOR
AFM	AIR FLOW MEASURING DEVICE
AHU	AIR HANDLING UNIT
A.L.D.	AUTOMATIC LOUVER DAMPER (PNEUMATIC)
AP	ACCESS PANEL
BDD	BACK DRAFT DAMPER
BG	BOTTOM GRILLE (WALL TYPE)
BR	BOTTOM REGISTER (WALL TYPE)
BTUH	BRITISH THERMAL UNITS/HOUR
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CLG	CEILING
CO	CLEAN OUT
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	DRAIN
Db	DRY BULB TEMPERATURE, °F
dB	DECIBELS
DN	DOWN
DP	DIFFERENTIAL PRESSURE
Dp	DEW POINT TEMPERATURE, °F
DS	DUCT SMOKE DETECTOR
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMP
E.C.	ELECTRICAL CONTRACTOR
ECC	ENGINEERING CONTROL CENTER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EGW	ETHYLENE GLYCOL-WATER SOLUTION
EMD	END OF MAIN DRIP (STEAM)
ERC	ENERGY RECOVERY COIL
ERP	ELECTRIC RADIANT CEILING PANEL
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
F.A.I.	FRESH AIR INTAKE
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLR	FLOOR
F.O.R.	FUEL OIL RETURN
F.O.S.	FUEL OIL SUPPLY
FPC	FIRE PROTECTION CONTRACTOR
F/SD	COMBINATION FIRE/SMOKE DAMPER
FTR	FIN TUBE RADIATION
G	NATURAL GAS PIPE
G.C.	GENERAL CONTRACTOR
GH	GRAVITY HOOD
GPM	GALLONS PER MINUTE
H.C.	HVAC CONTRACTOR
HF	HEPA FILTER
HP	HORSEPOWER
HRP	HYDRONIC RADIANT CEILING PANEL
HV	HEATING AND VENTILATING UNIT
IV	INLET VANES
LCD	LINEAR CEILING DIFFUSER
LFD	LAMINAR FLOW DIFFUSER
LF	LINEAR FEET
LPG	LP GAS PIPING
LPR	LOW PRESSURE STEAM CONDENSATE
LPS	LOW PRESSURE STEAM
LBS/HR	POUNDS PER HOUR
MB	MIXING BOX
MD	MOTORIZED DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MAX.	MAXIMUM
MBH	ONE THOUSAND BTUH
MIN.	MINIMUM
NOM.	NOMINAL
OA	OUTSIDE AIR
P	PUMP
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP (FEET OF WATER)
PF	PRE-FILTER
PGW	PROPYLENE GLYCOL-WATER SOLUTION
PH	PREHEAT
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE IN.
RA	RETURN AIR
RF	RETURN FAN
RHC	REHEAT COIL
Rh	RELATIVE HUMIDITY
RPZ	REDUCED PRESSURE ZONE
SA	SUPPLY AIR
SD	SMOKE DAMPER
Sp. Gr.	SPECIFIC GRAVITY
SH	STEAM HUMIDIFIER
SP	STATIC PRESSURE
SPD	SPLITTER DAMPER
SPS	STATIC PRESSURE SENSOR
S.S.	STAINLESS STEEL
TG	TOP GRILLE (WALL TYPE)
TR	TOP REGISTER (WALL TYPE)
TWU	THRU WALL UNIT
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	VALVE
VD	VOLUME DAMPER
VE	VOLUME EXTRACTOR
VI	VIBRATION ISOLATOR
VIF	VERIFY IN FIELD
Wb	WET BULB TEMPERATURE, °F
WFM	WATER FLOW MEASURING DEVICE
WMS	WIRE MESH SCREEN

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CLIENT
Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

**Montebello Crossing,
250 Lafayette Avenue
(Route 59)
Village of Montebello
New York**

CONTRACT

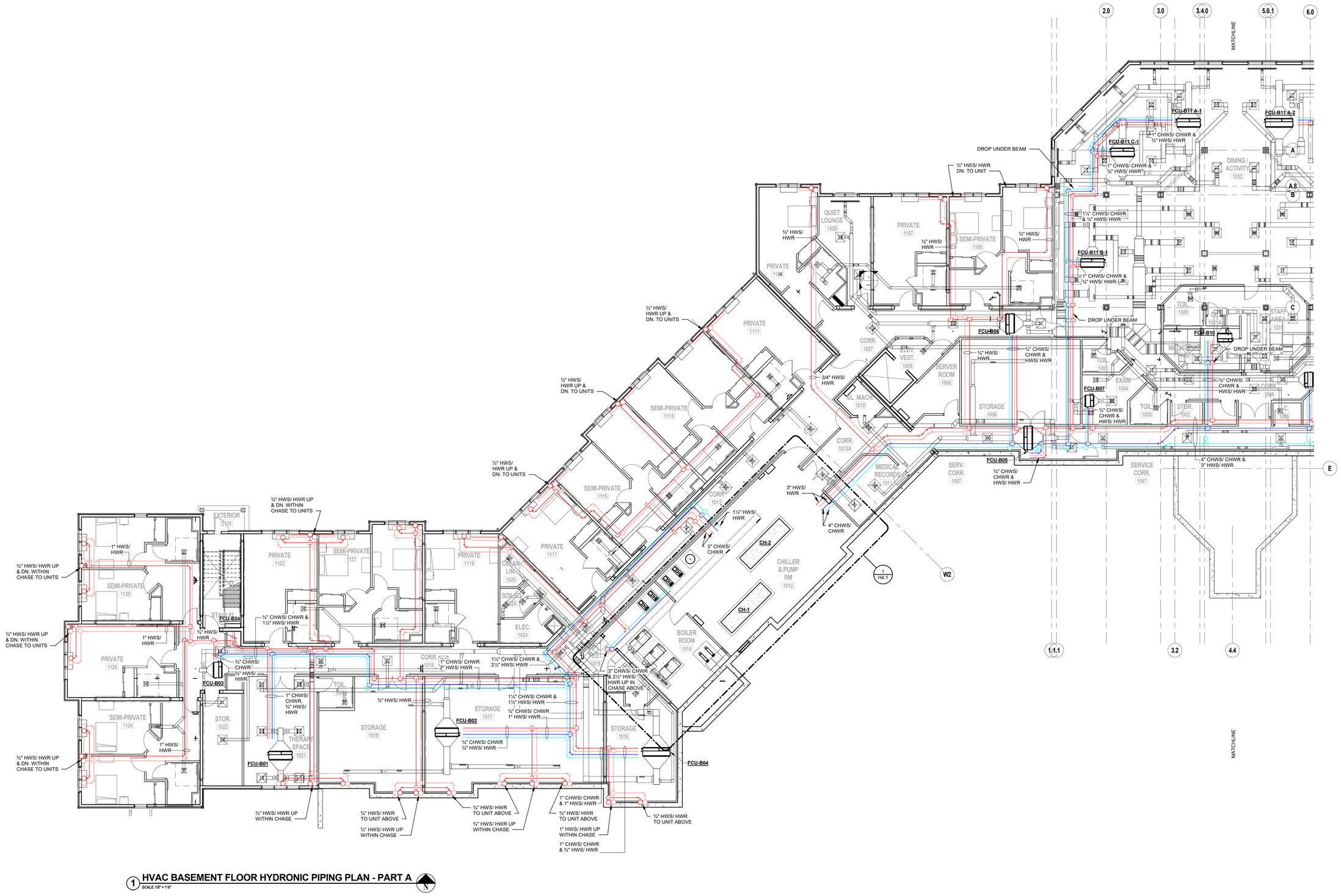
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REGULATORY REVIEW

SHEET TITLE
**HVAC:
SYMBOLS, ABBREVIATIONS
& NOTES**

DRAWING No.
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OF

File Name: F:\2015\15-345 NEW ASSISTED LIVING RESIDENCE\H0.1.dwg (Layout: Layout1)
Date: Fri, Jan 24, 2020 - 9:26 AM (Name: sxh)



1 HVAC BASEMENT FLOOR HYDRONIC PIPING PLAN - PART A

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

H2M architects + engineers

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CLIENT

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250 Lafayette Avenue
(Route 59)
Village of Montebello
New York**

CONTRACT

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SHEET TITLE

HVAC PARTIAL BASEMENT FLOOR HYDRONIC PIPING PLAN - AREA A

DRAWING No.

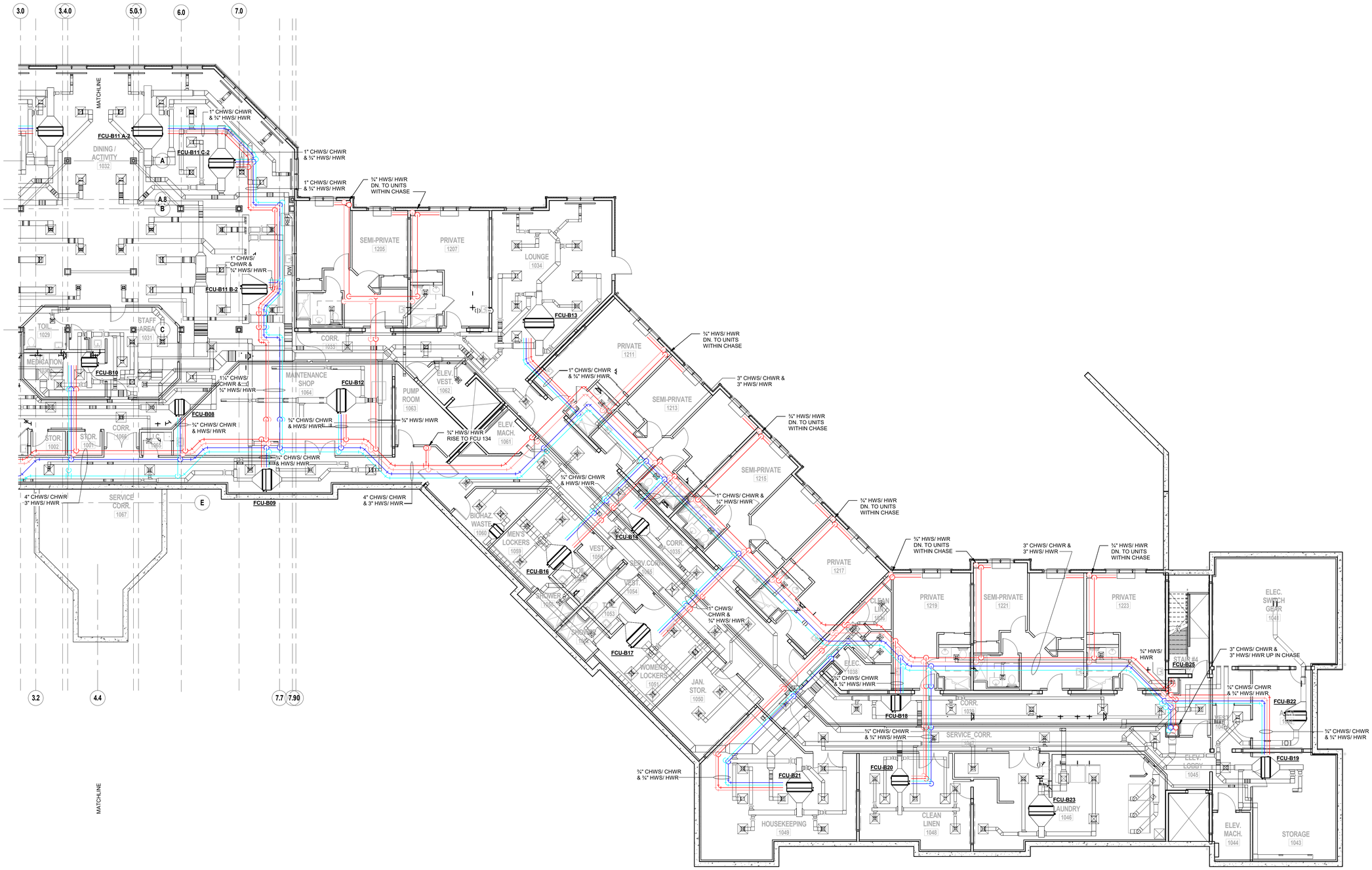
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1 HVAC BASEMENT FLOOR HYDRONIC PIPING PLAN - PART B

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

H2M architects + engineers

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Village of Montebello
New York**

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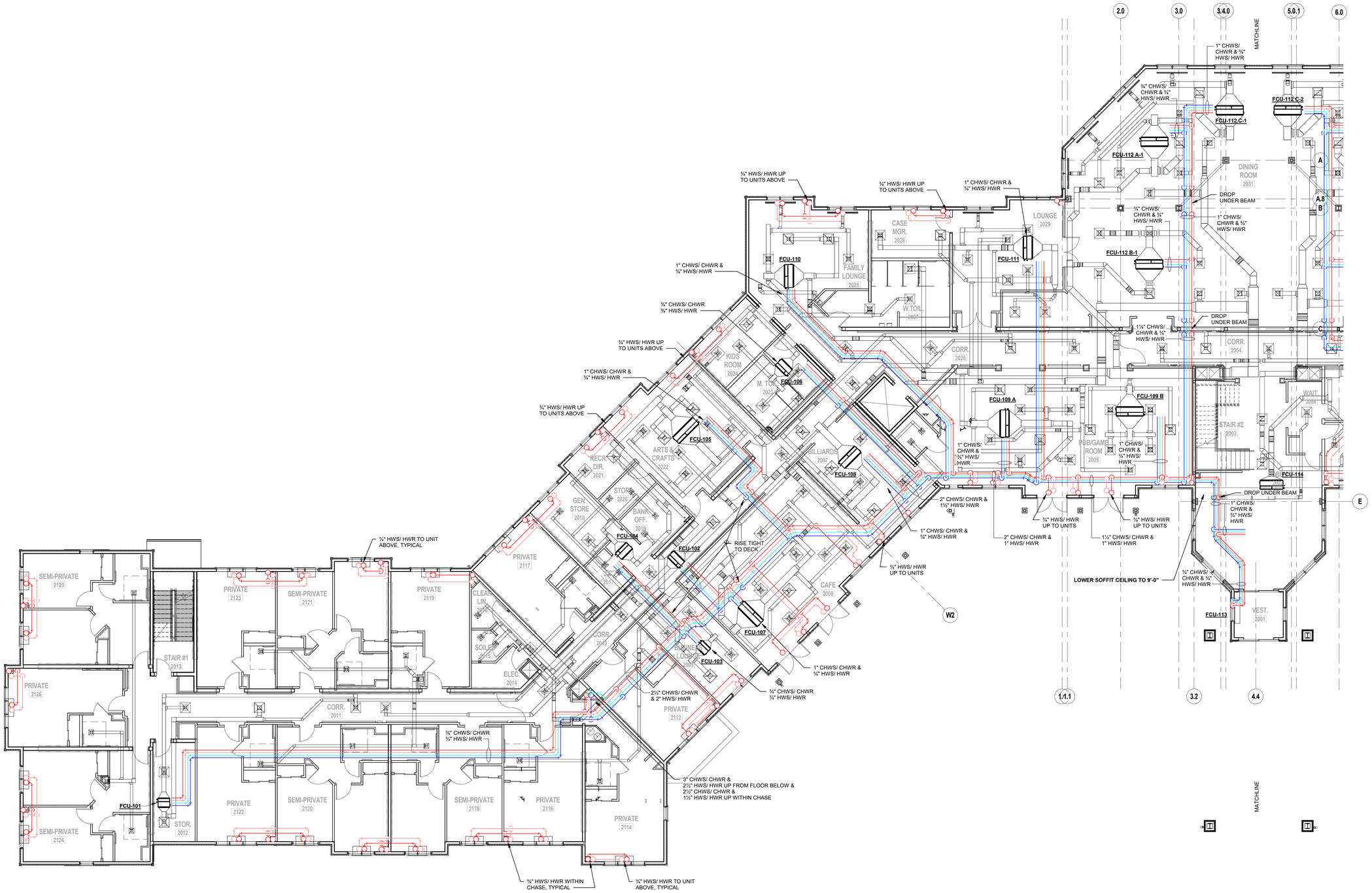
HVAC PARTIAL BASEMENT FLOOR HYDRONIC PIPING PLAN - AREA B

DRAWING No. **H1.0B**

SHEET No. OF

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1 **HVAC FIRST FLOOR HYDRONIC PIPING PLAN - PART A**
SCALE: 1/8" = 1'-0"

H 2 M architects + engineers

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Montebello Crossing, 250 Lafayette Avenue (Route 59) Village of Montebello New York

CONTRACT

STATUS

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SHEET TITLE

HVAC PARTIAL FIRST FLOOR HYDRONIC PIPING PLAN - AREA A

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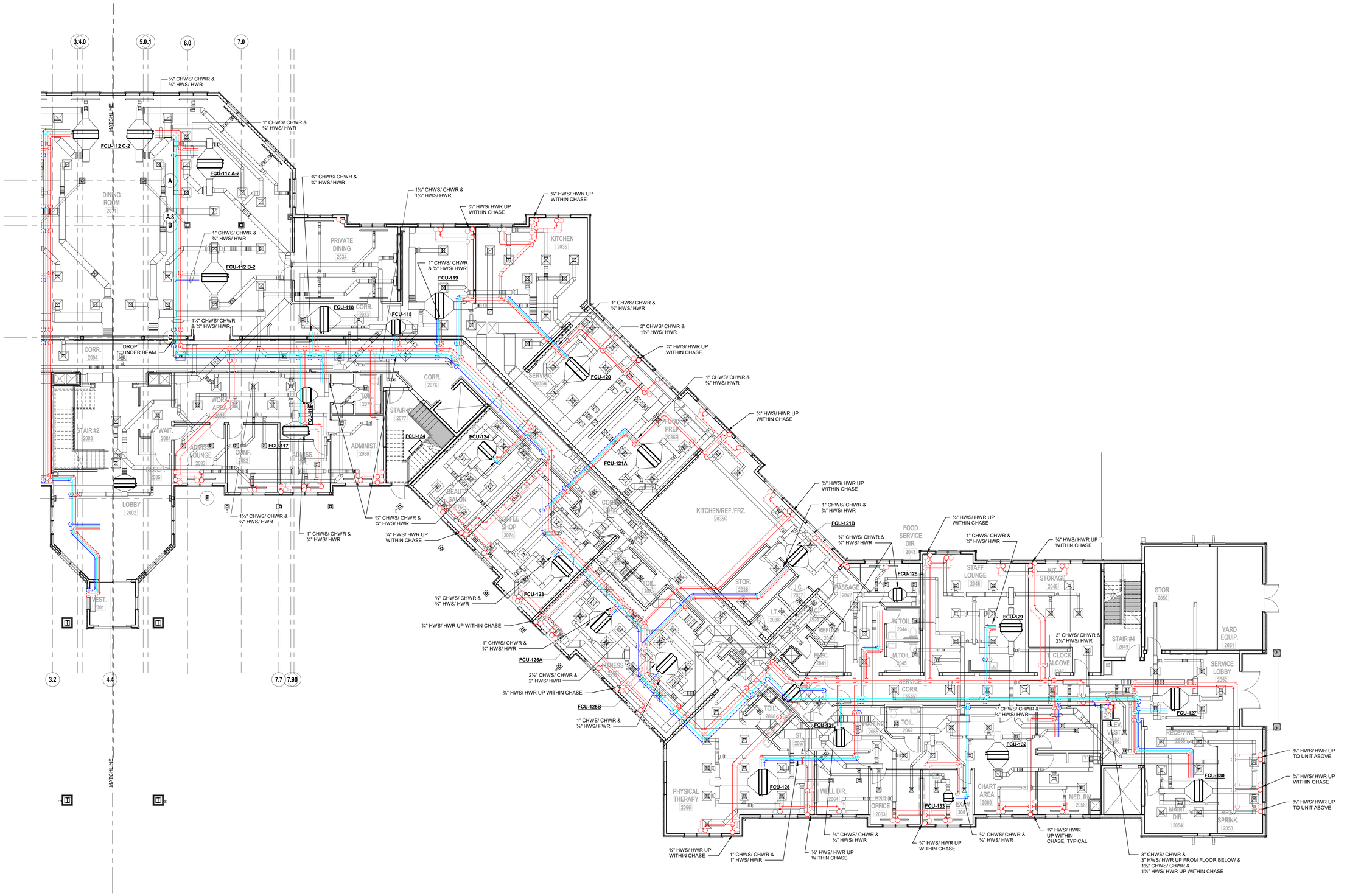
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1 HVAC FIRST FLOOR HYDRONIC PIPING PLAN - PART B
SCALE: 1/8" = 1'-0"

H2M architects + engineers

538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 · www.h2m.com

CONSULTANTS:
FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 855-320-8735 Project #: 15-345

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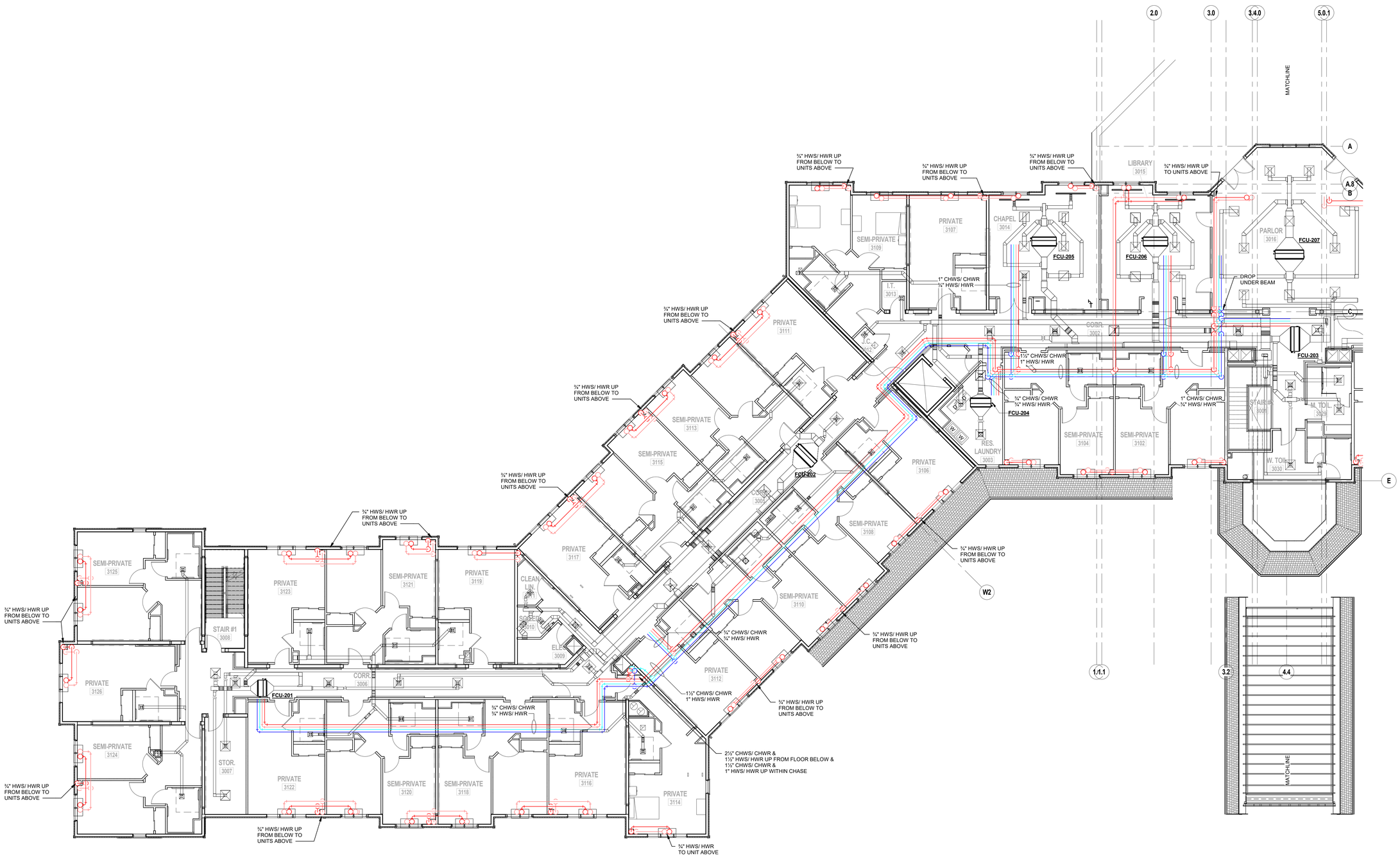
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SHEET TITLE
HVAC PARTIAL FIRST FLOOR HYDRONIC PIPING PLAN - AREA B

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1 HVAC SECOND FLOOR HYDRONIC PIPING PLAN - PART A

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

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SHEET TITLE

HVAC PARTIAL SECOND FLOOR HYDRONIC PIPING PLAN - AREA A

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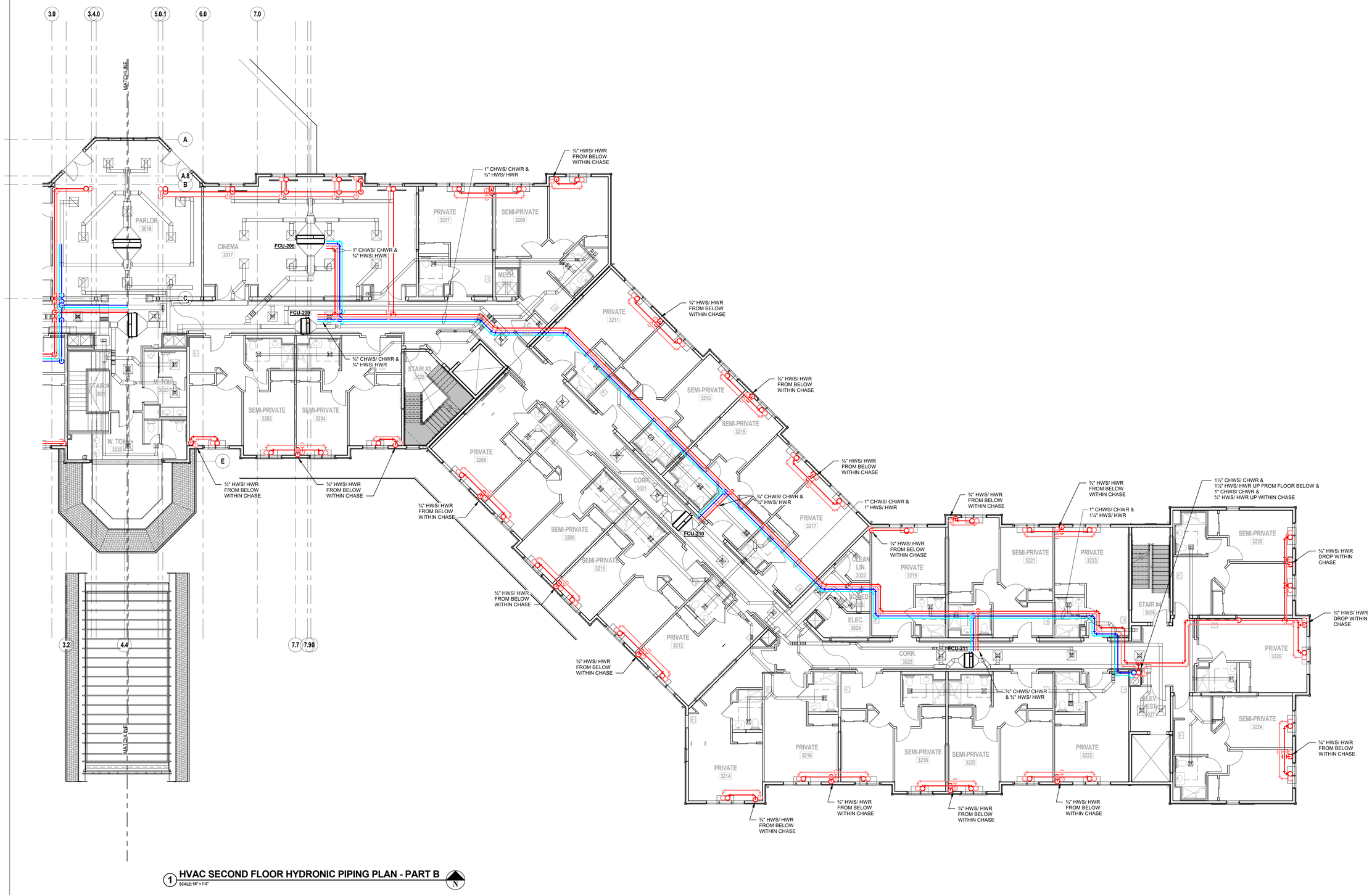
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1 **HVAC SECOND FLOOR HYDRONIC PIPING PLAN - PART B**
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CLIENT
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Braemar at Montebello Assisted Living Residence

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CONTRACT

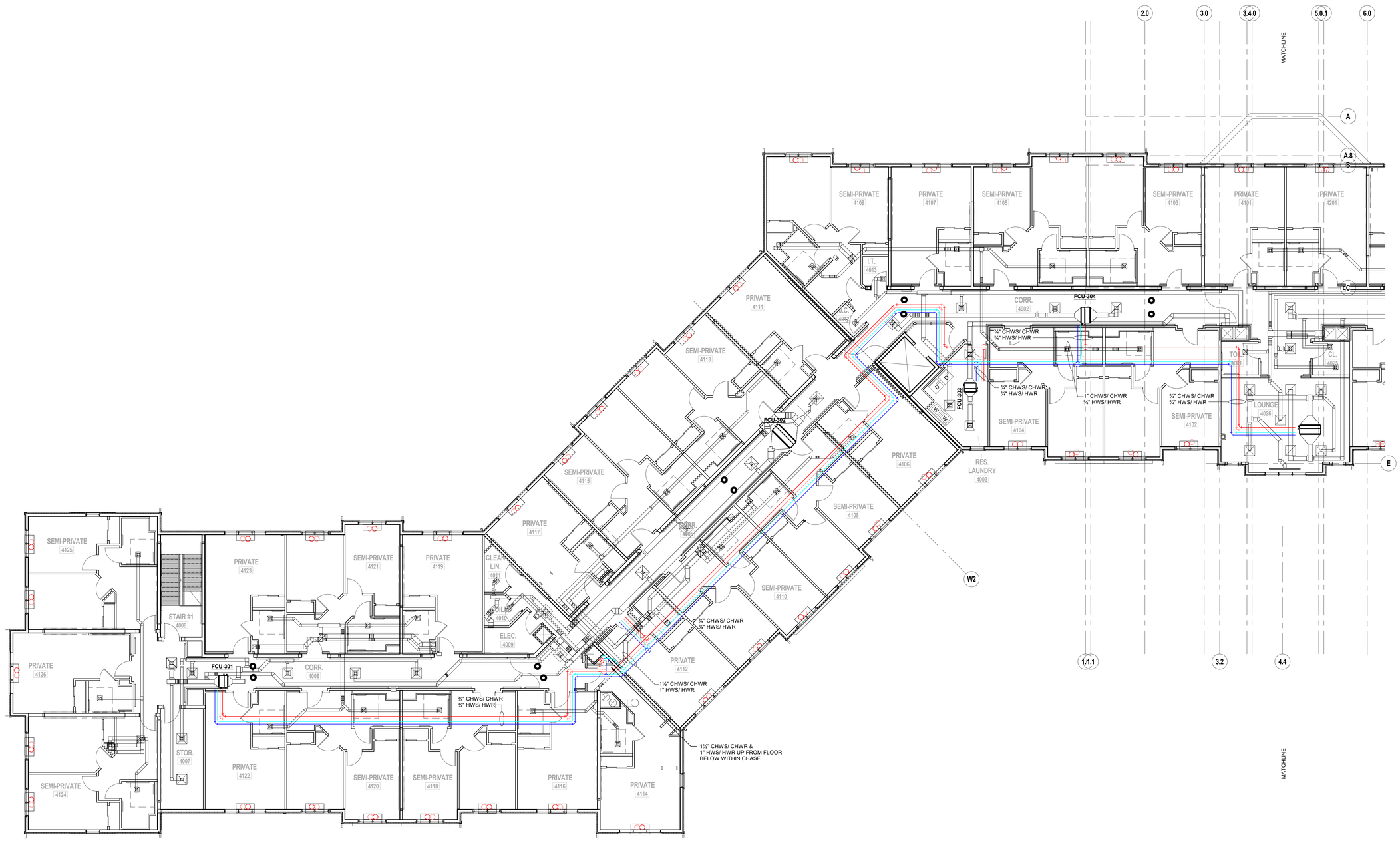
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SHEET TITLE
HVAC PARTIAL SECOND FLOOR HYDRONIC PIPING PLAN - AREA B

DRAWING No.
H1.2B

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1 **HVAC THIRD FLOOR HYDRONIC PIPING PLAN - PART A**
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Braemar at Montebello Assisted Living Residence

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New York**

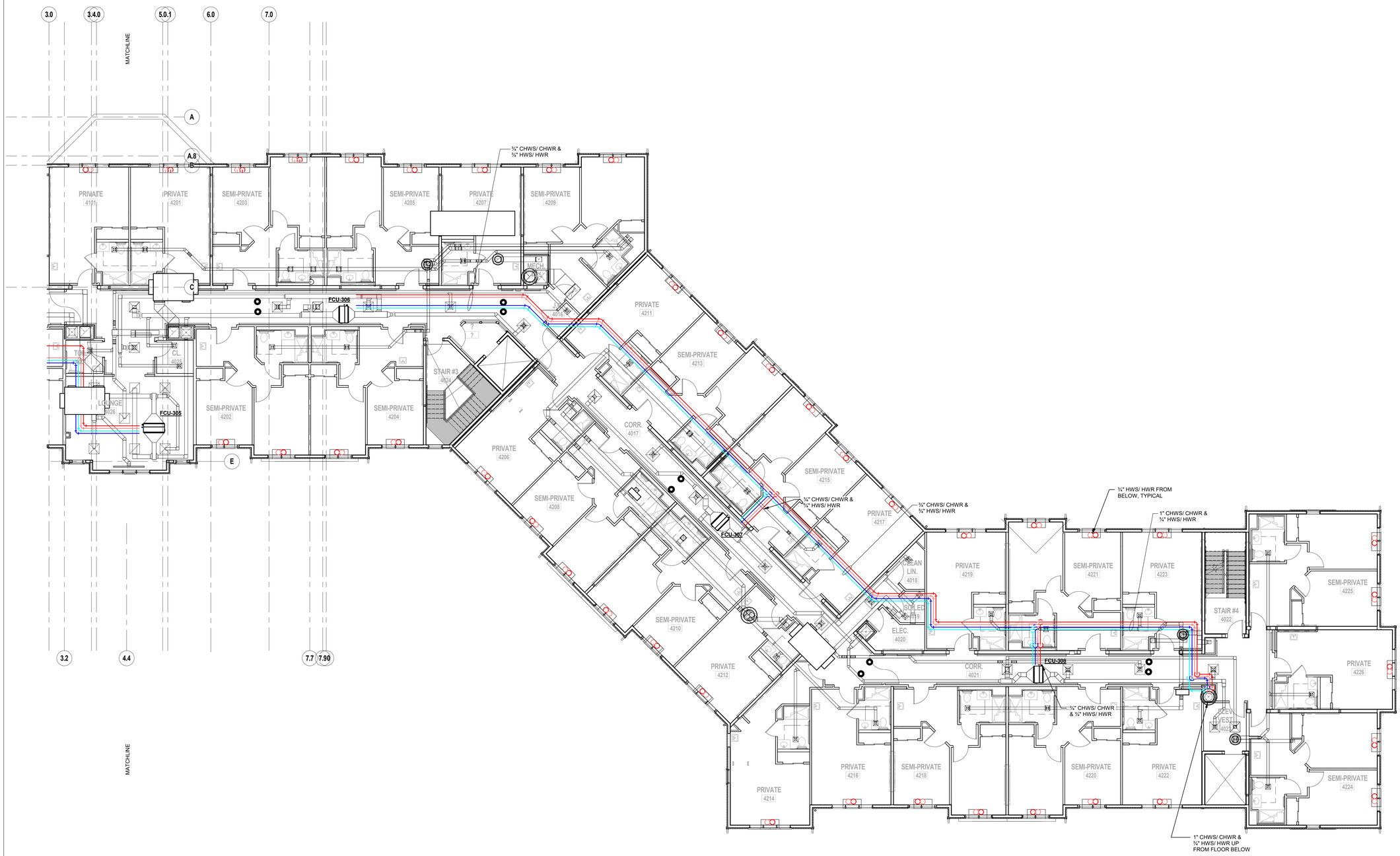
CONTRACT

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SHEET TITLE
HVAC PARTIAL THIRD FLOOR HYDRONIC PIPING PLAN - AREA A

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1 HVAC THIRD FLOOR HYDRONIC PIPING PLAN - PART B

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

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SHEET TITLE

HVAC PARTIAL THIRD FLOOR HYDRONIC PIPING PLAN - AREA B

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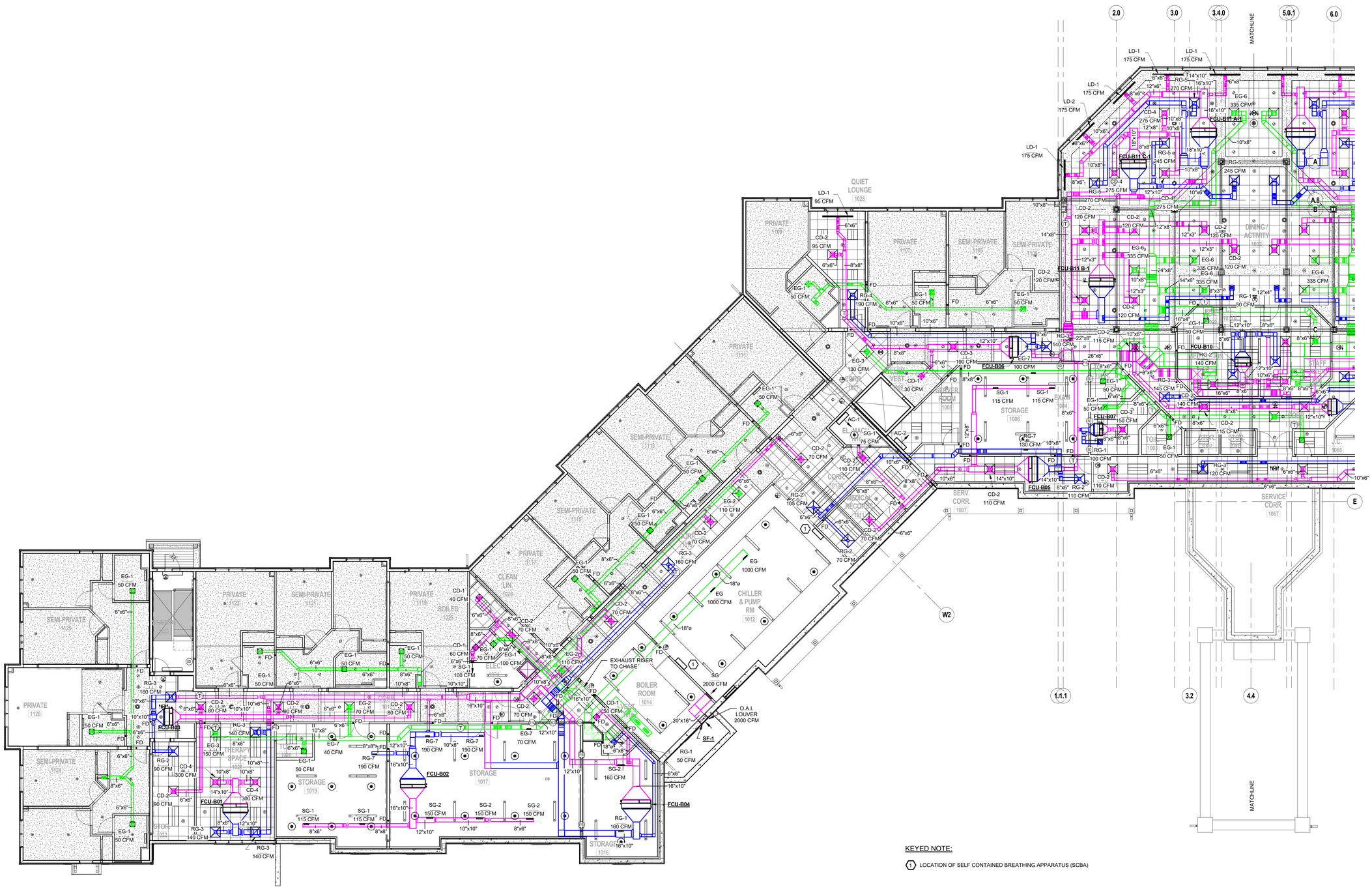
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KEYED NOTE:

1. LOCATION OF SELF CONTAINED BREATHING APPARATUS (SCBA)

1 HVAC BASEMENT FLOOR DUCT & DIFFUSER PLAN - AREA A

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

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SHEET TITLE

HVAC PARTIAL BASEMENT FLOOR DUCT & DIFFUSER PLAN - AREA A

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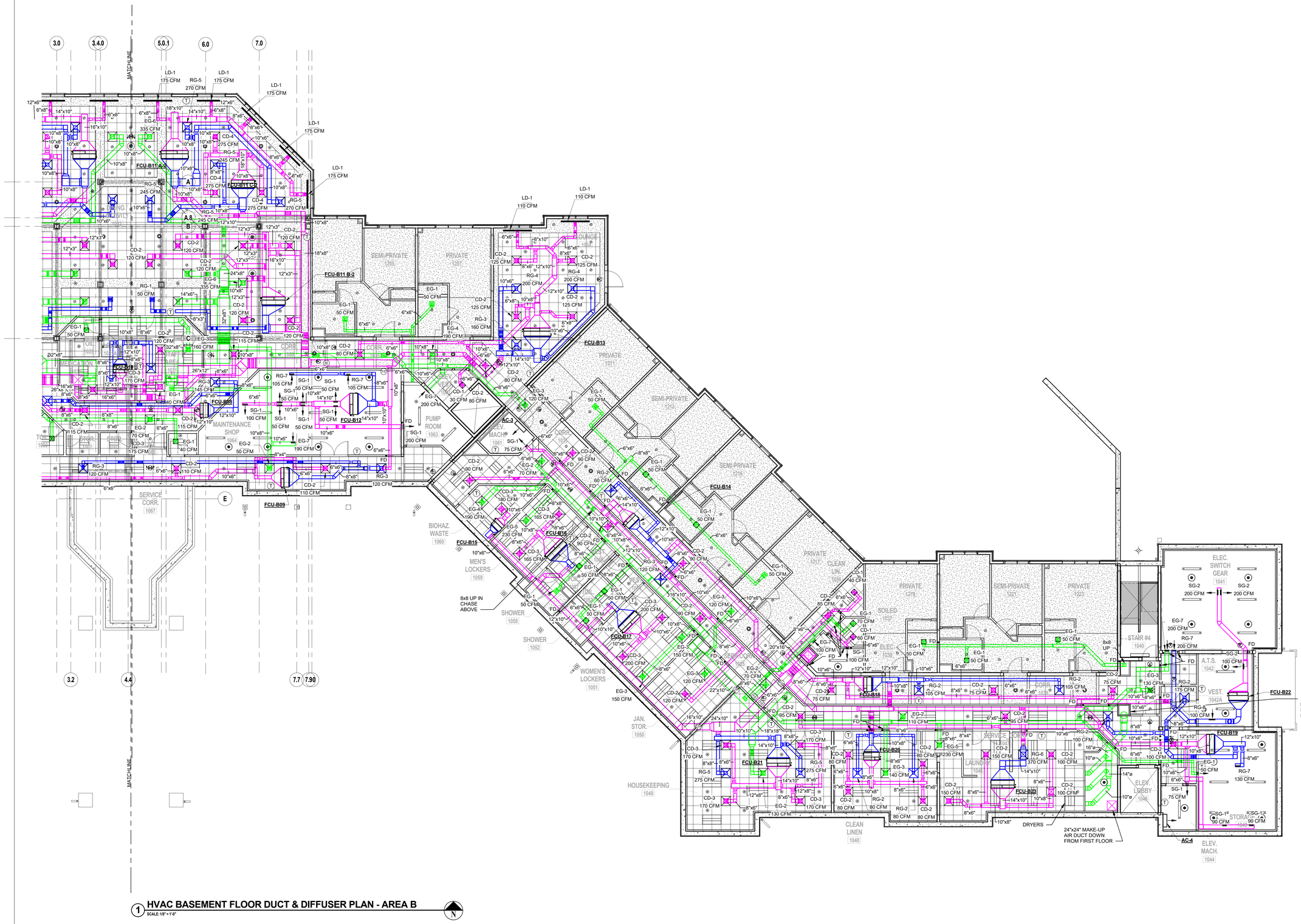
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1 **HVAC BASEMENT FLOOR DUCT & DIFFUSER PLAN - AREA B**
SCALE: 1/8" = 1'-0"

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Braemar at Montebello Assisted Living Residence

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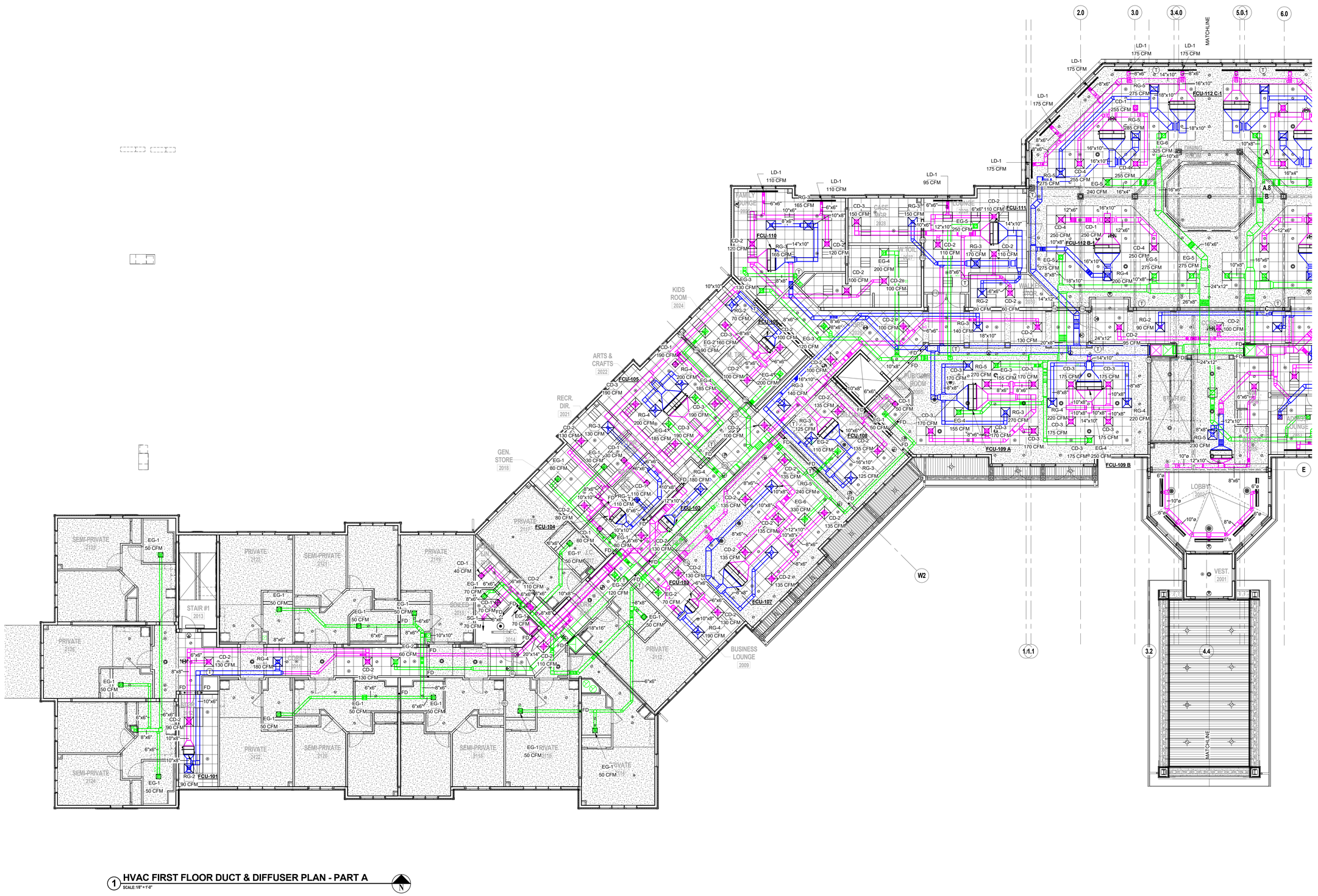
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HVAC PARTIAL BASEMENT FLOOR DUCT & DIFFUSER PLAN - AREA B

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1 **HVAC FIRST FLOOR DUCT & DIFFUSER PLAN - PART A**
SCALE: 1/8" = 1'-0"

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NY PROFESSIONAL ENGINEER
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Braemar at Montebello Assisted Living Residence

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250 Lafayette Avenue
(Route 59)
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New York**

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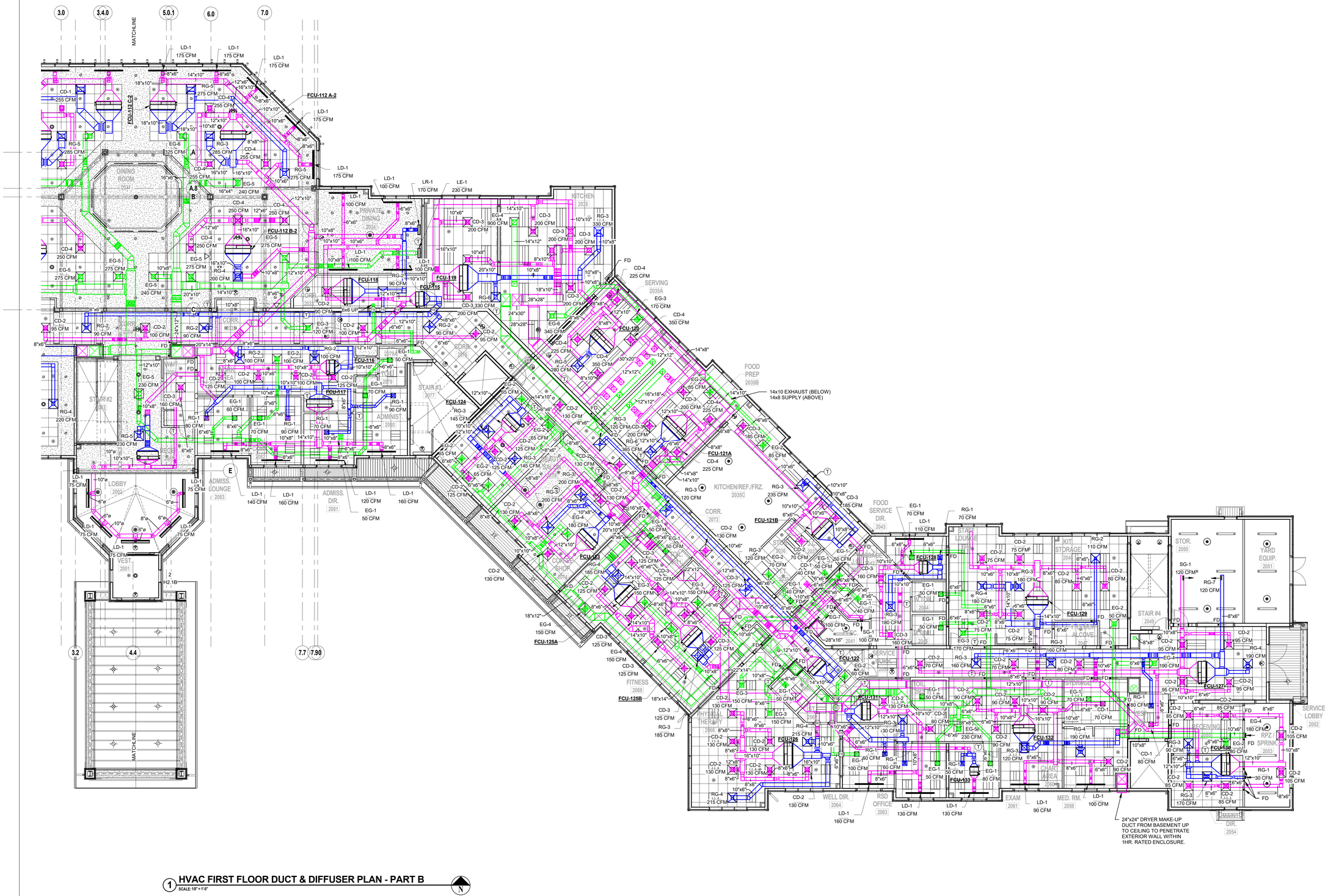
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SHEET TITLE
HVAC PARTIAL FIRST FLOOR DUCT & DIFFUSER PLAN - AREA A

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1 HVAC FIRST FLOOR DUCT & DIFFUSER PLAN - PART B

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

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HVAC PARTIAL FIRST FLOOR DUCT & DIFFUSER PLAN - AREA B

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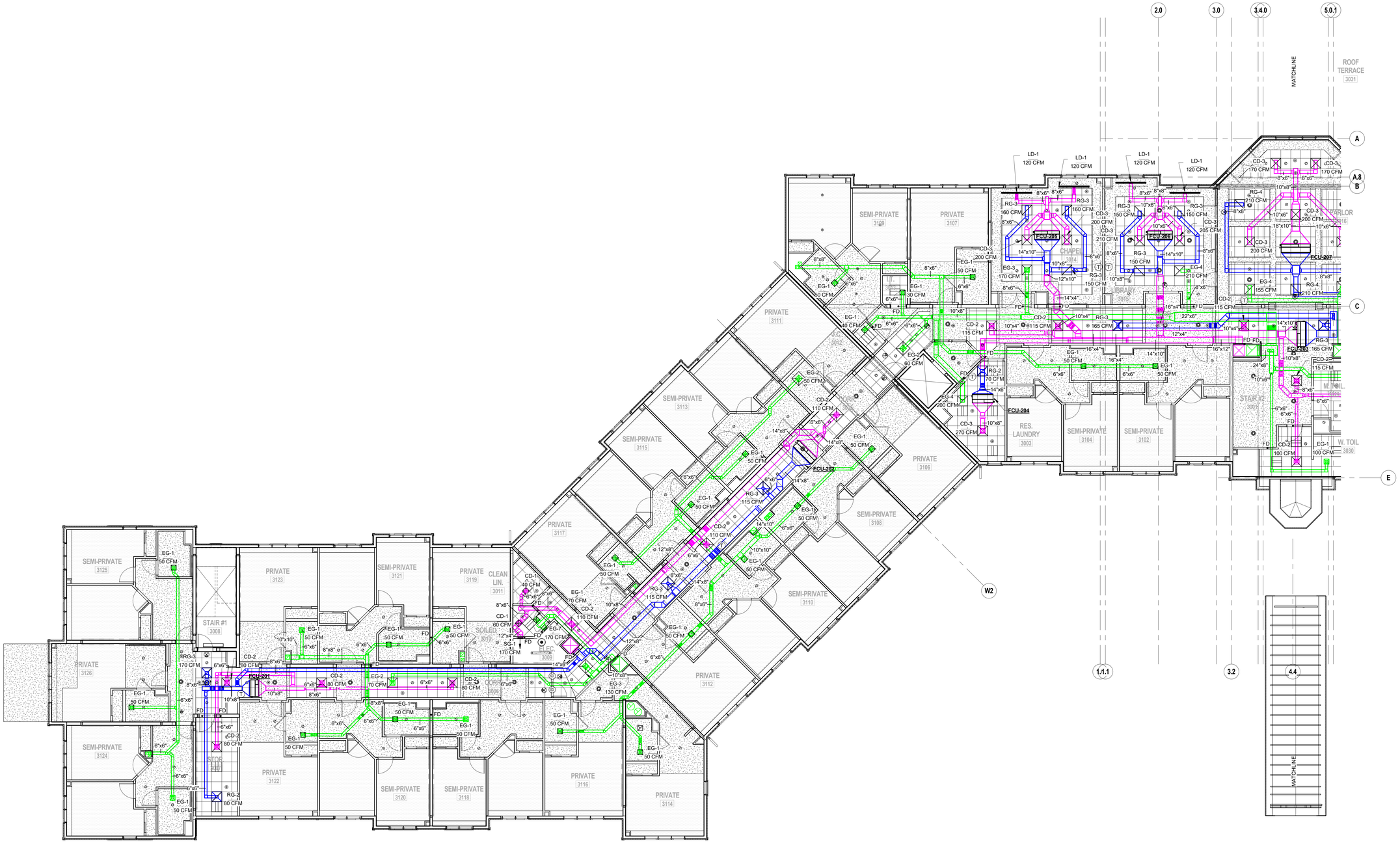
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1 HVAC SECOND FLOOR DUCT & DIFFUSER PLAN - PART A

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

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CONTRACT

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HVAC PARTIAL SECOND FLOOR DUCT & DIFFUSER PLAN - AREA A

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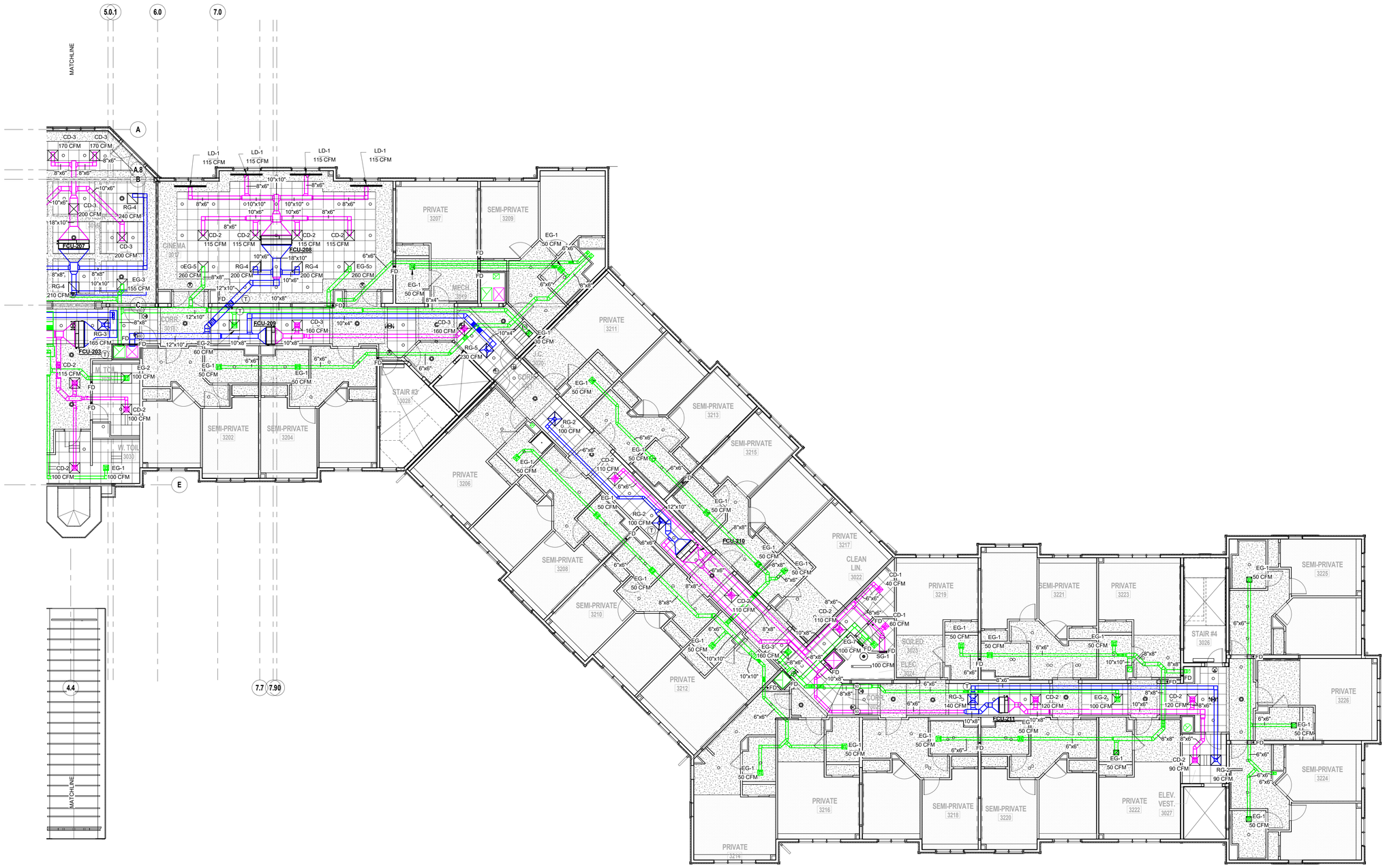
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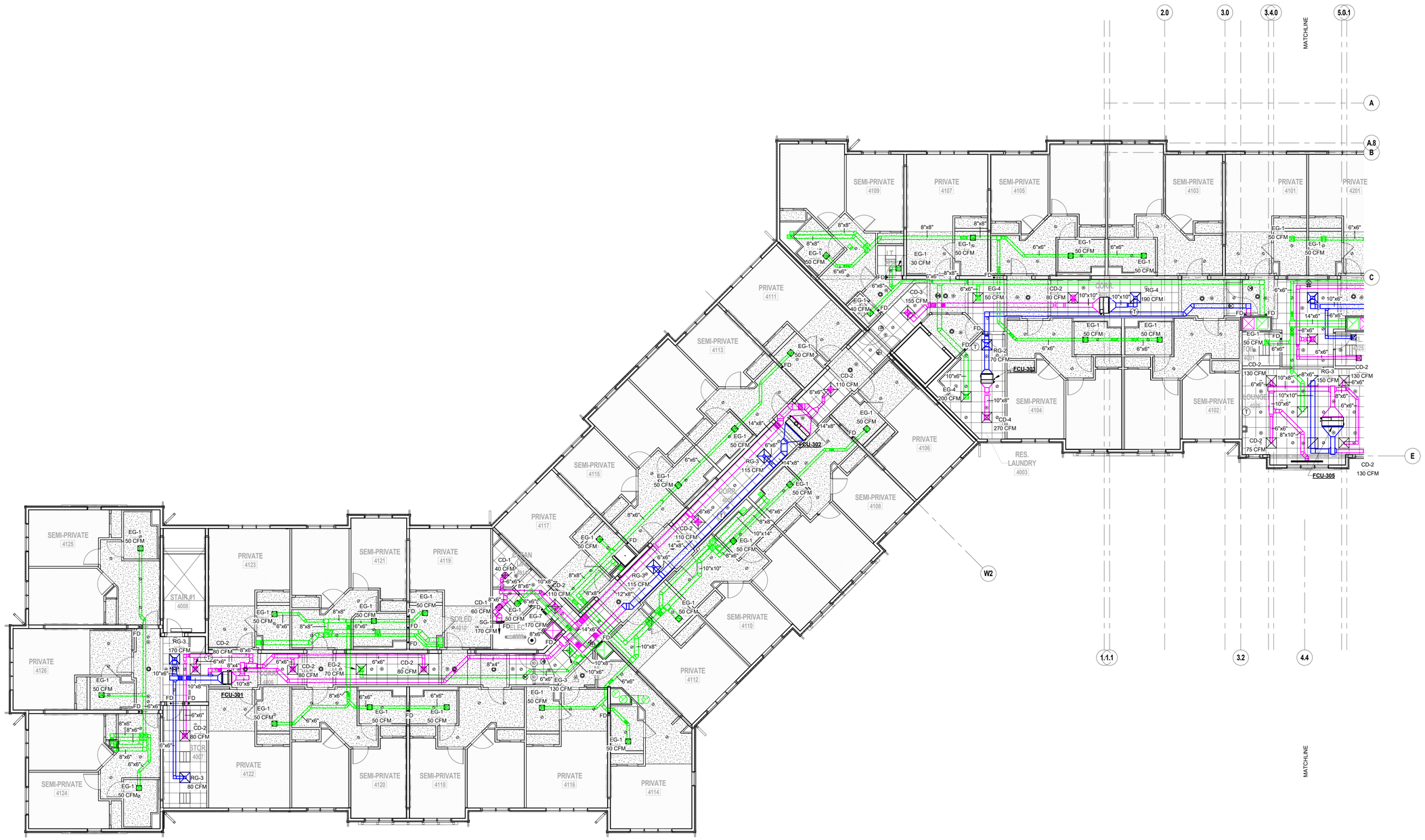
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HVAC PARTIAL SECOND FLOOR DUCT & DIFFUSER PLAN - AREA B

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1 HVAC THIRD FLOOR DUCT & DIFFUSER PLAN - PART A

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CONTRACT

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Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

**Montebello Crossing,
250 Lafayette Avenue
(Route 59)
Village of Montebello
New York**

CONTRACT

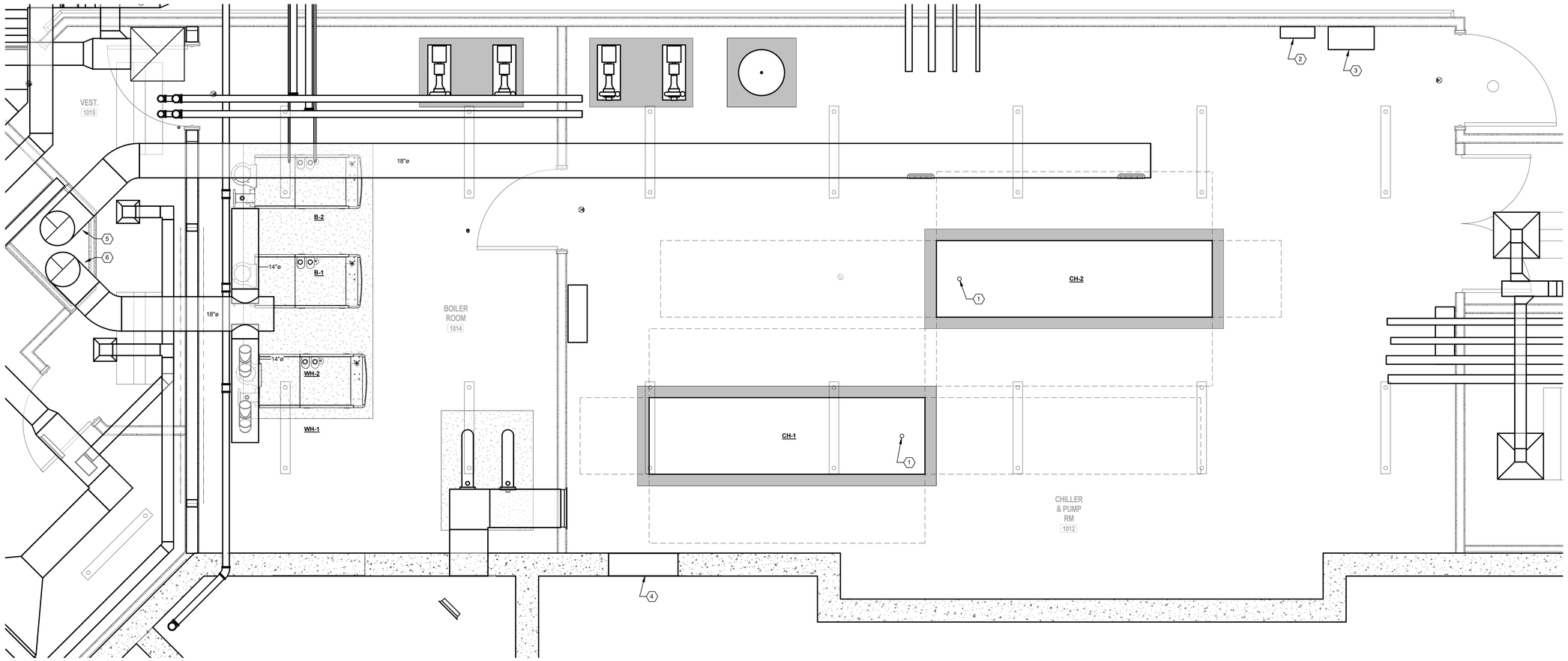
STATUS
REGULATORY REVIEW

SHEET TITLE
HVAC PARTIAL THIRD FLOOR DUCT & DIFFUSER PLAN - AREA B

DRAWING No.
H2.3B

SHEET No.
OF

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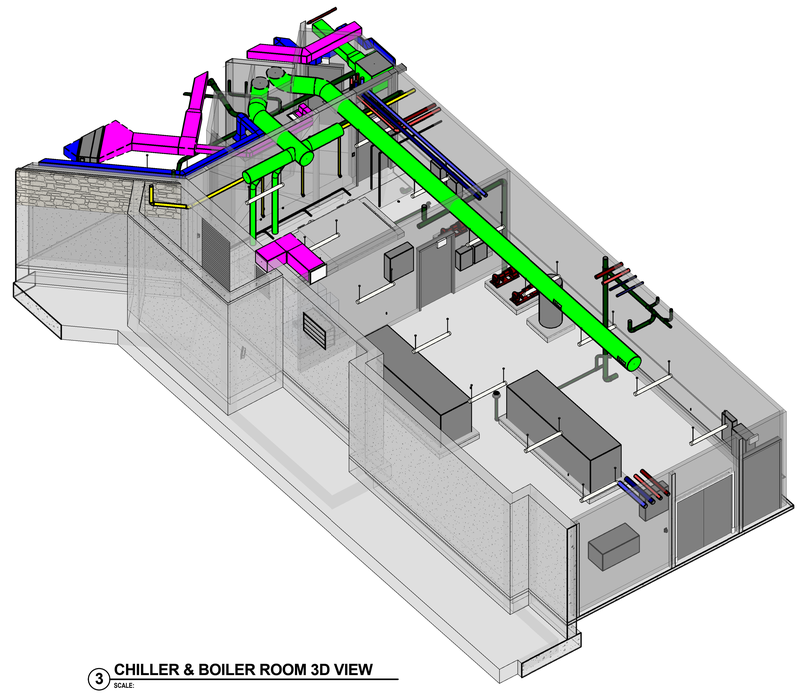


KEYED NOTES:

1. LOCATION OF REFRIGERANT VAPOR DETECTOR, SURFACE MOUNTED TO HOUSEKEEPING PAD BELOW CHILLER.
2. LOCATION OF REFRIGERANT LEAK MOUNTING PANEL. PANEL TO ENERGIZE EXHAUST PURGE SYSTEM UPON DETECTION OF A REFRIGERANT LEAK VIA VAPOR DETECTION.
3. LOCATION OF SELF-CONTAINED BREATHING APPARATUS (SCBA). MUST BE ACCESSIBLE AND NEAR ENTRANCE DOOR.
4. REFRIGERANT PURGE MAKE-UP AIR MOTORIZED DAMPER. INTERLOCK DAMPER TO ROOF EXHAUST FAN AND REFRIGERANT LEAK DETECTION SYSTEM.
5. 18"Ø REFRIGERANT PURGE DUCT TO EXHAUST FAN ON ROOF. INTERLOCK EXHAUST FAN TO REFRIGERANT LEAK DETECTION SYSTEM.
6. 18"Ø FLUE FROM BOILERS AND HOT WATER HEATERS TO BE ROUTED THROUGH CHASE TO TERMINATION CAP ON ROOF.

1 HVAC BOILER & CHILLER ROOM ENLARGED PLAN

SCALE: 1/2" = 1'-0"



3 CHILLER & BOILER ROOM 3D VIEW

SCALE:

H2M architects + engineers

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Melville, NY 11747
631.756.8000 · www.h2m.com

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HVAC BOILER & CHILLER ROOM ENLARGED PLAN

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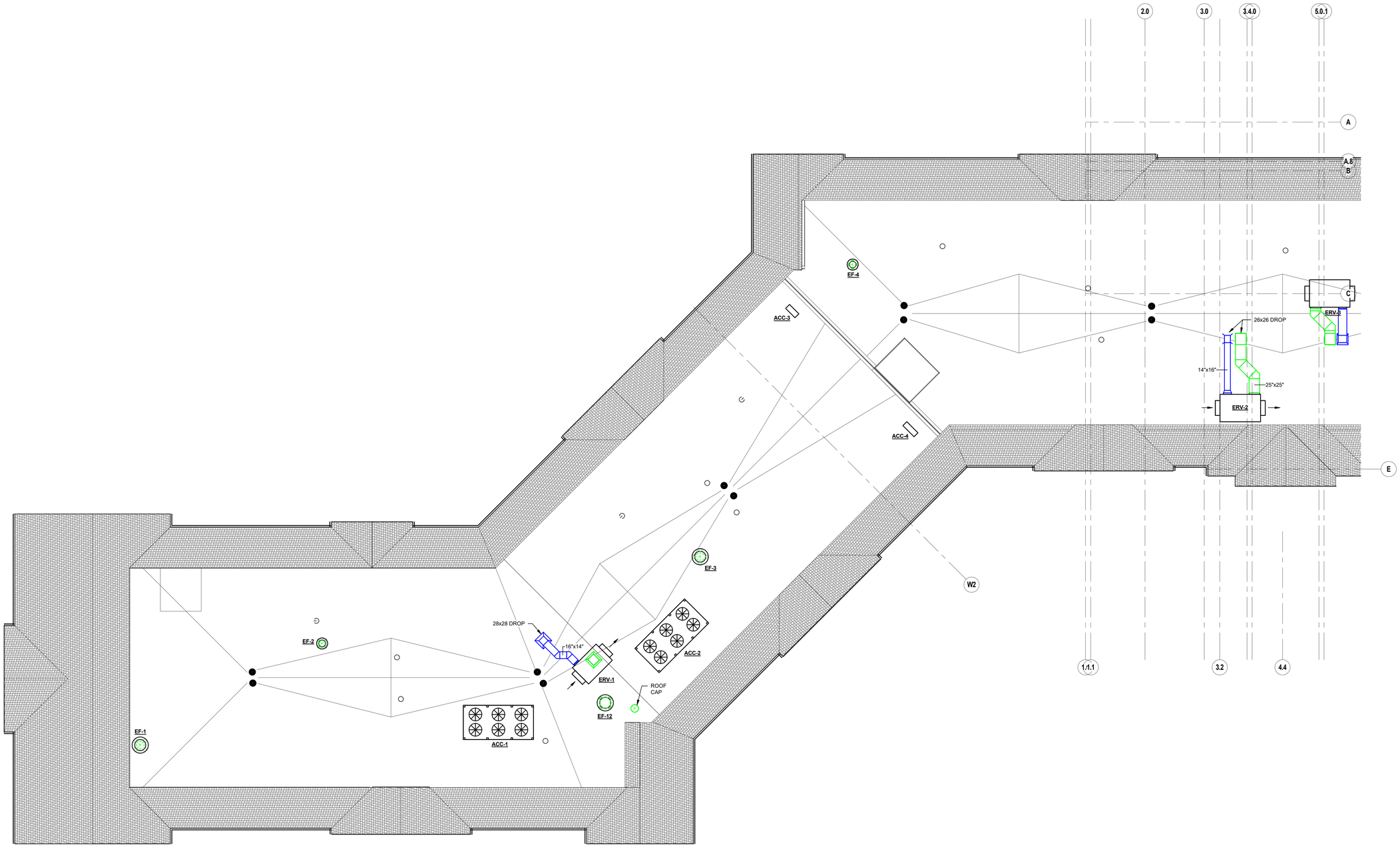
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1 HVAC ROOF PLAN - PART A
SCALE: 1/8" = 1'-0"

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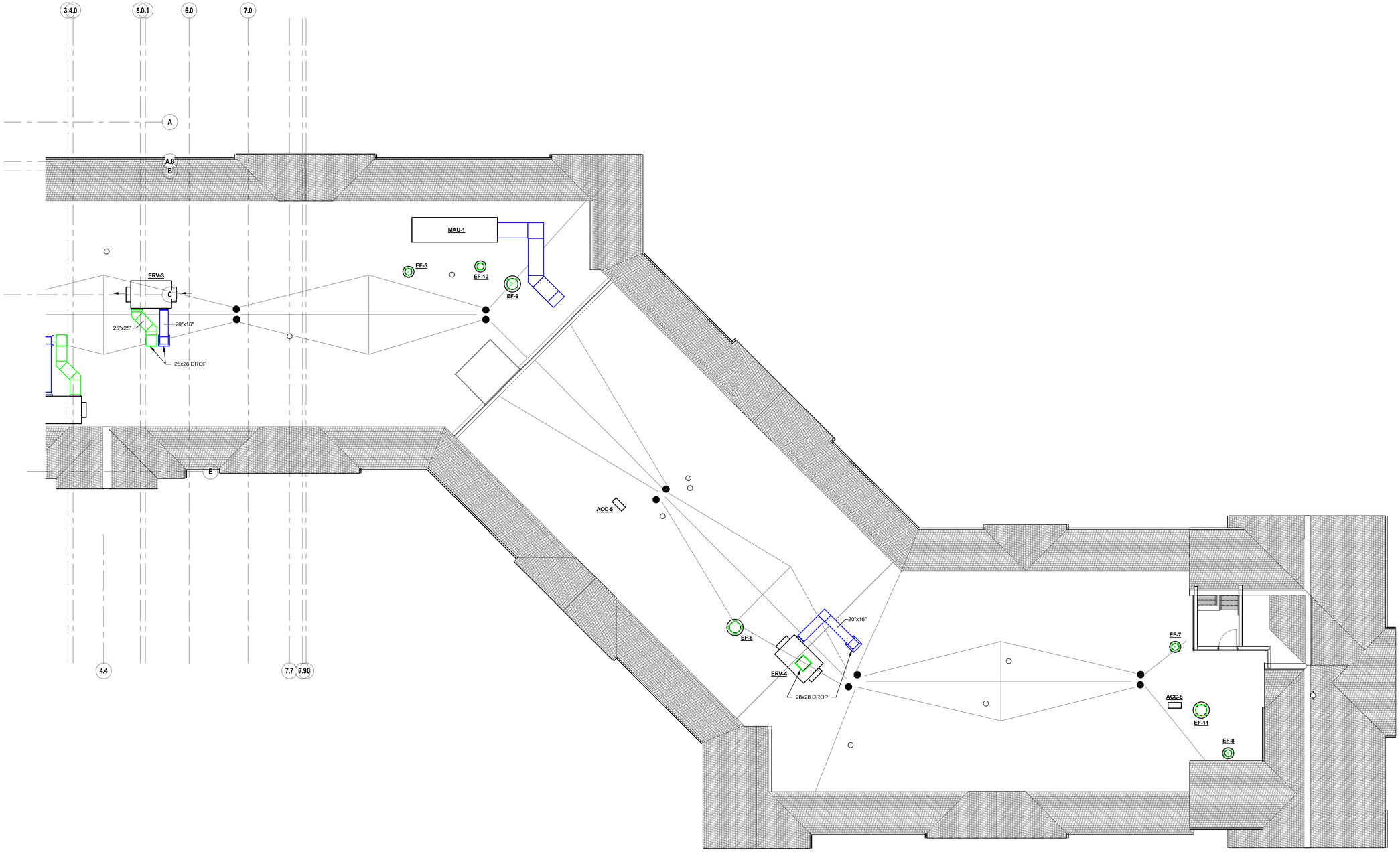
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DRAWING No.
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SHEET No.
OF

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

N

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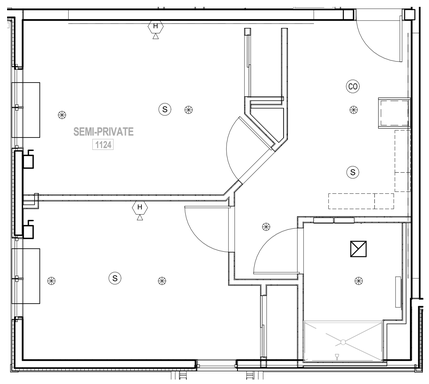
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HVAC ROOF PLAN - AREA B

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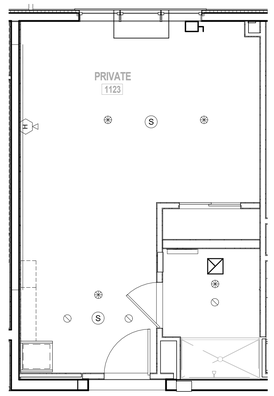
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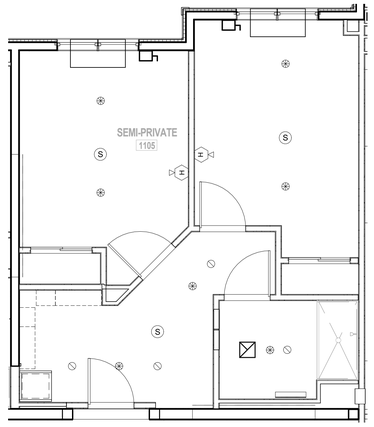
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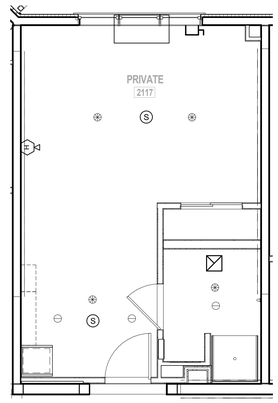
1 TYPICAL TYPE 1 - SEMI-PRIVATE HVAC PLAN
SCALE: 1/4" = 1'-0"



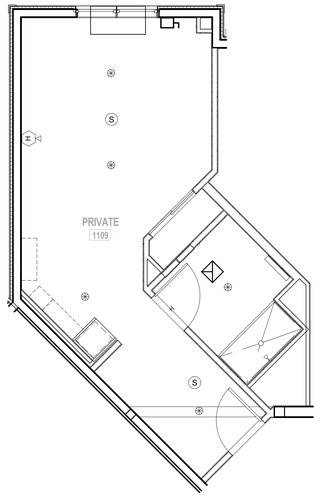
2 TYPICAL TYPE 2 - PRIVATE HVAC PLAN
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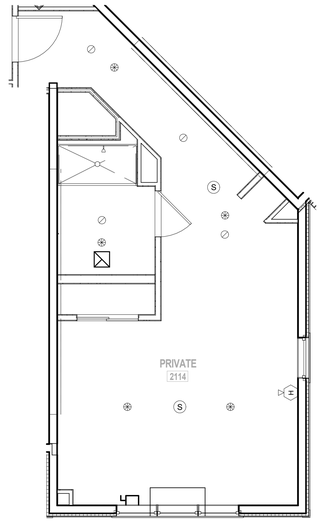
3 TYPICAL TYPE 3 - SEMI-PRIVATE HVAC PLAN
SCALE: 1/4" = 1'-0"



4 TYPICAL TYPE 4 - PRIVATE HVAC PLAN
SCALE: 1/4" = 1'-0"



5 TYPICAL TYPE 5 - PRIVATE HVAC PLAN
SCALE: 1/4" = 1'-0"



6 TYPICAL TYPE 6 - PRIVATE HVAC PLAN
SCALE: 1/4" = 1'-0"

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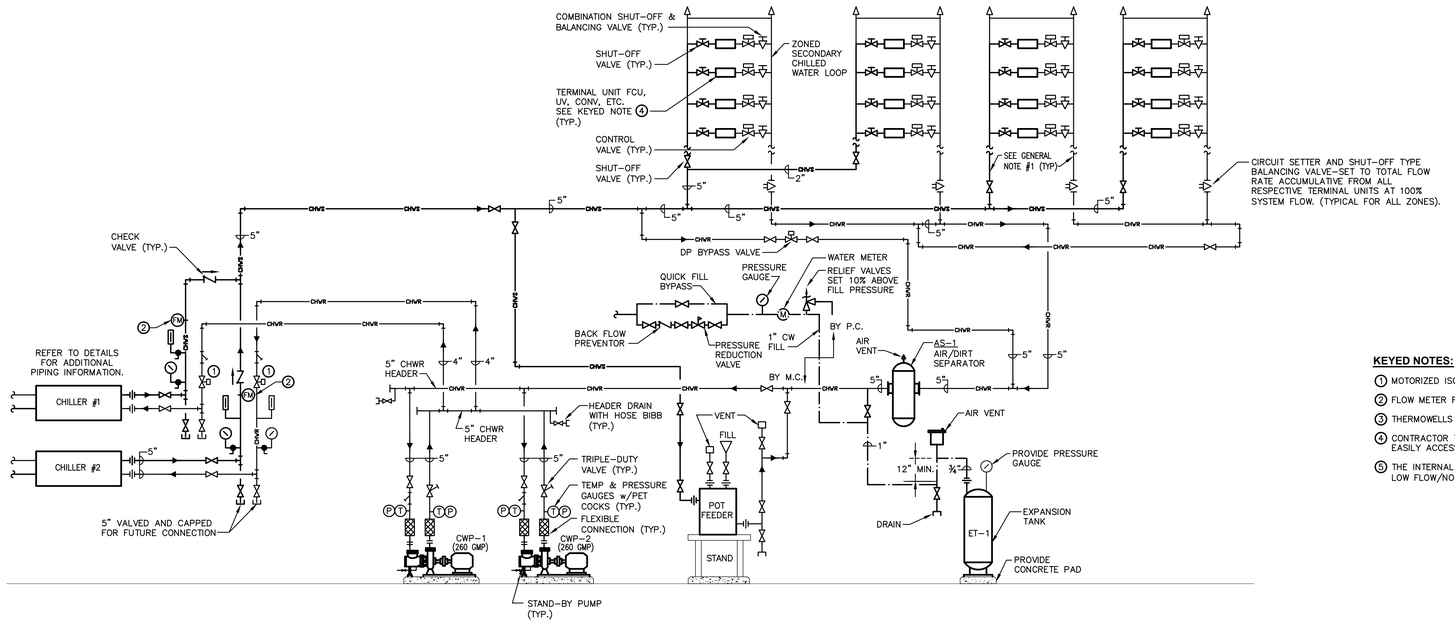
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SHEET TITLE
HVAC ENLARGED SUITE LAYOUTS

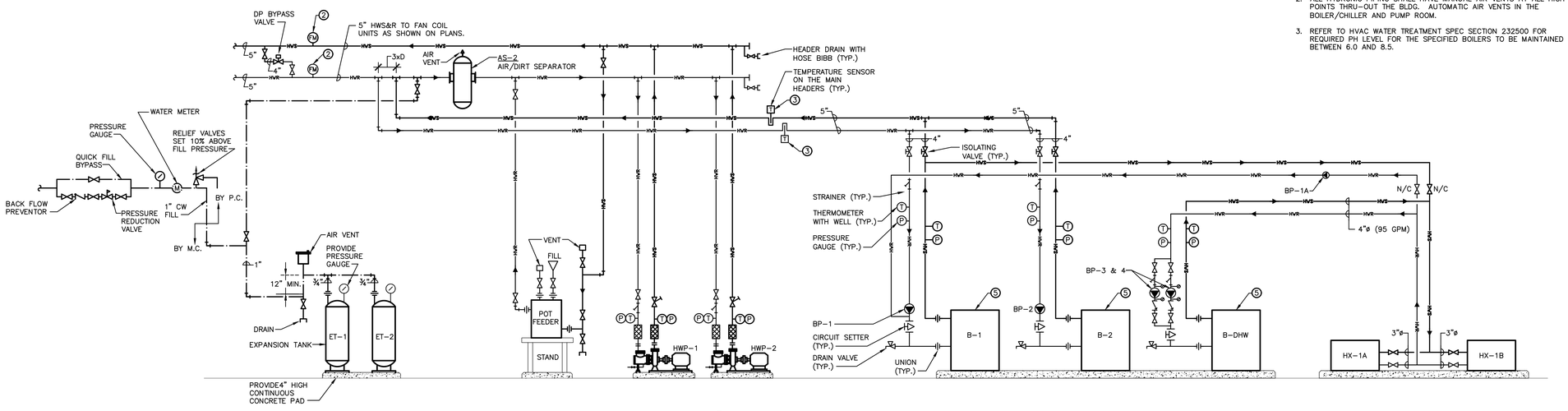
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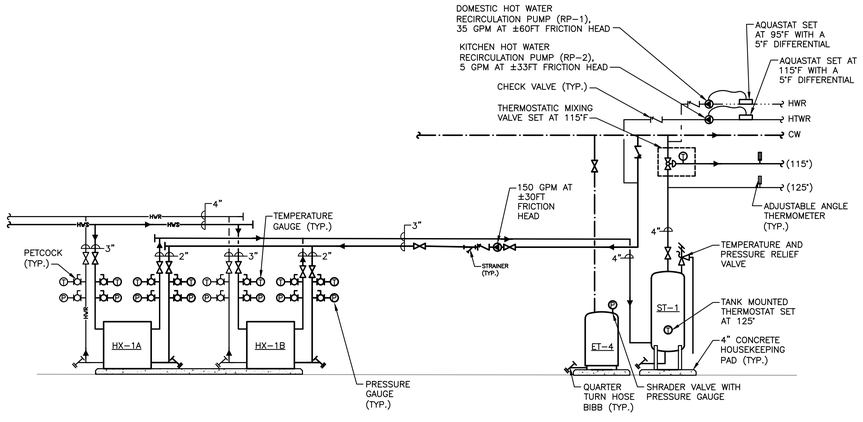
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1 CHILLER PIPING SCHEMATIC
N.T.S.



2 HOT WATER PIPING SCHEMATIC
N.T.S.



3 DOMESTIC WATER HEATING SCHEMATIC
N.T.S.

KEYED NOTES:

1. MOTORIZED ISOLATION VALVE (BUTTERFLY) FOR CHILLERS CH-1 & CH-2.
2. FLOW METER FURNISHED AND INSTALLED BY HVAC CONTRACTOR.
3. THERMOWELLS FURNISHED & INSTALLED BY HVAC CONTRACTOR.
4. CONTRACTOR TO MAKE SURE ALL CONTROL VALVES ARE INSTALLED IN A EASILY ACCESSIBLE MANOR FOR MAINTENANCE AND SERVICE.
5. THE INTERNAL BOILER CONTROLS SHALL PROTECT THE BOILER AGAINST LOW FLOW/NO FLOW.

GENERAL NOTES:

1. REFER TO FLOOR PLAN FOR PIPE SIZES TO CHILLED AND HOT WATER RISERS TO EACH ZONE.
2. ALL HYDRONIC PIPING SHALL HAVE MANUAL AIR VENTS AT ALL HIGH POINTS THRU-OUT THE BLDG. AUTOMATIC AIR VENTS IN THE BOILER/CHILLER AND PUMP ROOM.
3. REFER TO HVAC WATER TREATMENT SPEC SECTION 232500 FOR REQUIRED PH LEVEL FOR THE SPECIFIED BOILERS TO BE MAINTAINED BETWEEN 6.0 AND 8.5.

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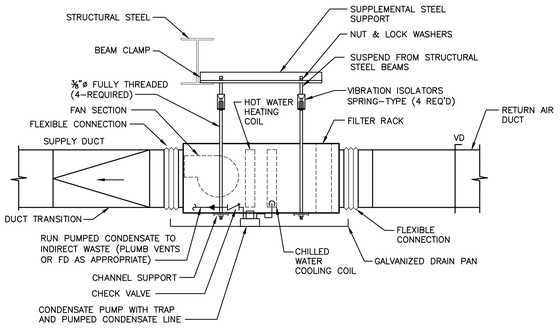
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SHEET TITLE
HVAC: DETAILS

DRAWING No.
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SHEET No.
OF

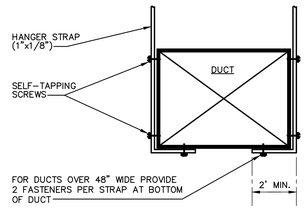
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Date: Fri, Jan 24, 2020 - 9:26 AM (Name: sr0)



NOTES:

1. TYPICAL FOR INDOOR HORIZONTAL FAN COILS.
2. ALL ANCHORS, CLAMPS, BOLTS, CHANNELS, ETC., SHALL BE RATED TO SUPPORT THE OPERATING WEIGHT OF THE SUSPENDED EQUIPMENT.
3. PROVIDE LEAK DETECTOR CABLE AND LOCATION SYSTEM IN OVERFLOW PAN WITH UNIT SHUT DOWN CAPABILITY.

1 HORIZONTAL FAN COIL UNIT DETAIL
N.T.S.



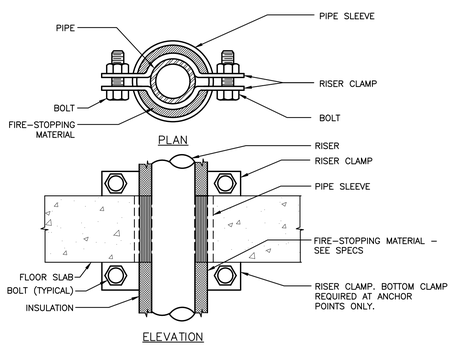
NOTES:

1. PROVIDE BRACING TO LIMIT THE AMPLITUDE OF WALL VIBRATION AND WALL DEFLECTION TO SPECIFIED MAXIMUMS.
2. MINIMUM DUCT SUPPORT REQUIREMENTS:

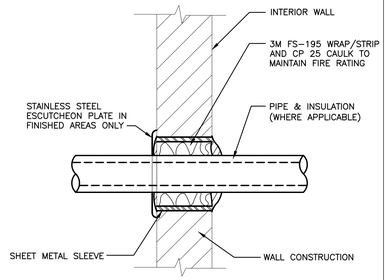
DUCT SIZE (SQ. FT.)	HANGER SIZE (IN.xGA.)	MAX. SPACING (FT.)
<2	1"x20 GA.	8
2<x≤4	1"x20 GA.	8
4<x≤10	1"x20 GA.	6
10<x	1"x18 GA.	4

3. ALL INTERIOR BLACK IRON EXHAUST DUCTWORK SHALL BE SUPPORTED AT 6FT. INTERVALS MIN.

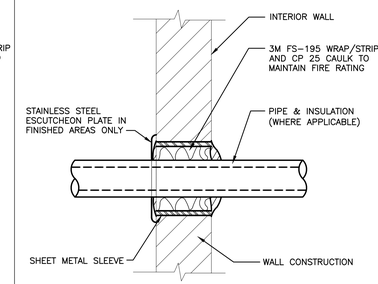
2 DUCT HANGERS/REINFORCEMENT
N.T.S.



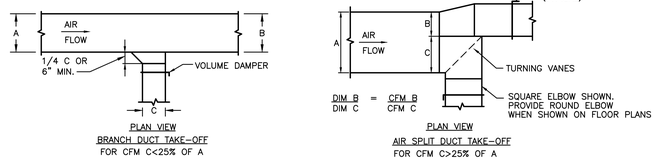
3 SUPPORT/ANCHOR FOR PIPE RISERS
N.T.S.



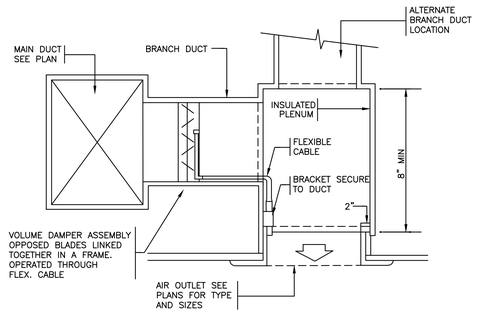
4 RATED WALL PENETRATION DETAIL
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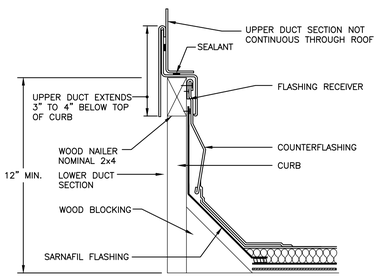
5 RATED WALL PENETRATION DETAIL
N.T.S.



6 SUPPLY DUCTWORK TAKE-OFFS
N.T.S.

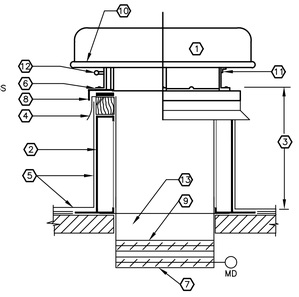


7 LINEAR DIFFUSER DETAIL
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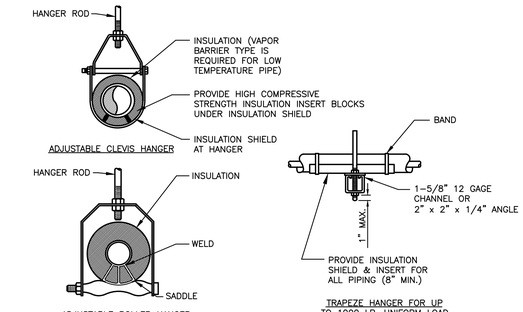


8 DUCT PENETRATION OF ROOF
N.T.S.

1. GRV (RELIEF)
2. PREFABRICATED CURB
3. 1'–6"
4. FLASHING
5. ROOFING – REFER TO ARCH. DRAWINGS
6. GASKET
7. MOTORIZED DAMPER
8. FASTEN AS PER MANUFACTURER WRITTEN RECOMMENDATIONS
9. GRAVITY RELIEF DAMPER
10. BIRD SCREEN
11. LATCH
12. HINGE
13. DUCT COLLAR SAME SIZE AS ROOF OPENING

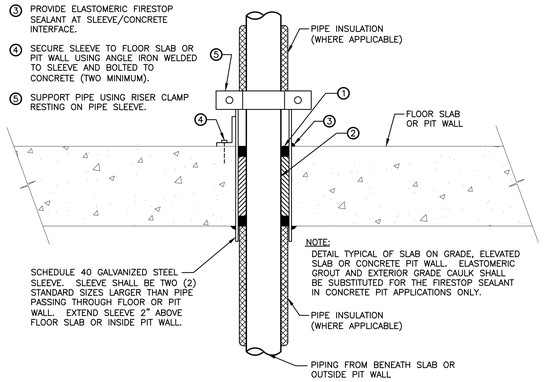


9 GRAVITY ROOF VENT DETAIL
N.T.S.

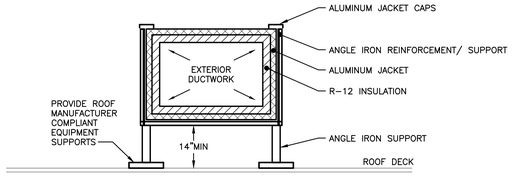


INDIVIDUAL PIPE HANGER ROD & SPACING SCHEDULE										
NOMINAL PIPE DIAMETER (IN.)	3/4	1	1 1/2	2	2 1/2	3	4	5	6	–
HANGER ROD SIZE (IN.)	3/8	3/8	3/8	3/8	1/2	1/2	5/8	5/8	7/8	–
MAXIMUM SUPPORT SPACING (FT.)										
STEEL PIPE	6	7	9	10	11	12	14	16	17	–
COPPER TUBE	6	6	8	9	10	10	12	14	14	–
NOTE: TRAPEZE HANGER SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF SAFETY OF 5 FOR CENTER OF SPAN CONCENTRATED LOAD										

10 TYPICAL PIPE HANGERS
N.T.S.



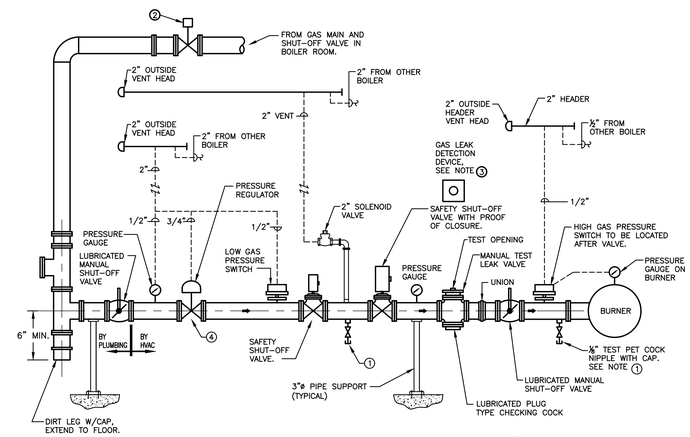
11 TYPICAL PIPING CONCRETE PENETRATION DETAIL
N.T.S.



NOTES:

1. SEAL ALL DUCTWALL PENETRATIONS AT POINTS OF SUPPORT ATTACHMENT AND REINFORCEMENT ATTACHMENT.
2. WATERPROOF ALL SEAMS AND JOINTS IN DUCTS.

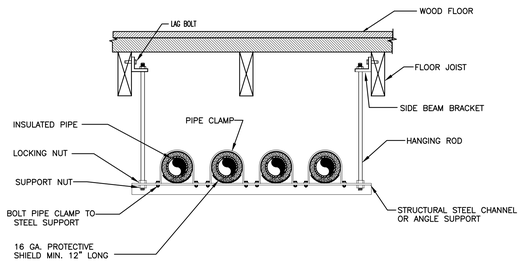
12 EXTERIOR INSULATED DUCTWORK DETAIL
N.T.S.



13 GAS TRAIN SCHEMATIC
N.T.S.

NOTES:

1. PROVIDE TEST COCKS IN ACCORDANCE WITH A.S.M.E. CODE.
2. AUTOMATIC GAS SHUTOFF VALVE & ACTUATOR BY PLUMBING CONTRACTOR. HVAC CONTRACTOR IS RESPONSIBLE FOR POWER & CONTROL WIRING.
3. GAS LEAK DETECTION DEVICE LOCATED ADJACENT TO GAS TRAIN SUPPORTED ±18" A.F.F. AS PER MANUFACTURERS RECOMMENDATIONS.
4. REGULATORS WITH INTEGRAL CONTROL REQUIRE AT LEAST FIVE (5) PIPE DIAMETERS OF STRAIGHT PIPE ON THE OUTLET SIDE UNINTERRUPTED WITH FITTINGS, ELBOWS, ETC. FOR PROPER REGULATION AND PERFORMANCE.
5. EXCEPT NORMALLY OPEN VENT VALVE, GAS VENTS MAY BE COMBINED.
6. NORMALLY OPEN VENT VALVE MUST BE PIPED OUTSIDE DIRECTLY.
7. VENT PIPING FROM PILOT SYSTEM AND MAIN BURNER SYSTEM CANNOT BE COMBINED.
8. ALL GAS VENTS SHALL TERMINATE A MIN. OF 3' ABOVE ROOF AND SHALL BE EQUIPPED WITH WEATHER PROOF VENT CAPS OR FITTINGS. VENTS ARE TO TERMINATE AT LEAST 2' LATERALLY FROM ANY BUILDING OPENING, WINDOW OR DOOR.
9. THE VENT OUTLET SHALL NOT BE LOCATED UNDER A WINDOW, OVERHANG, PROJECTION OR ANY OPENING LEADING BACK INTO THE BUILDING.



PIPE HANGER ROD AND SPACING SCHEDULE										
NOMINAL PIPE OR TUBE SIZE – INCHES	3/4	7/8	1	1 1/2	2	2 1/2	–	–	–	–
HANGER ROD SIZES INCHES	3/8	3/8	3/8	3/8	3/8	1/2	–	–	–	–
MAX. SPACING BETWEEN PIPE SUPPORTS – FEET	6	–	7	9	10	11	–	–	–	–
MAX. SPACING BETWEEN CU. TUBE SUPPORTS – FT.	6	6	6	8	9	10	–	–	–	–
NOTES: TRAPEZE HANGER SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF 5 FOR CENTER OF SPAN CONCENTRATED LOAD										

14 TYPICAL TRAPEZE HANGER SUPPORT DETAIL
N.T.S.

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:
FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 855-320-8735 Project #: 15-345

MARK	DATE	DESCRIPTION
	01/24/20	FINAL BID / PERMIT

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084–1
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DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
PMC	SRB	EDF	MDF
PROJECT No: FILB 1501	DATE: 11/15/19		SCALE: AS SHOWN

CLIENT
Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

Montebello Crossing, 250 Lafayette Avenue (Route 59) Village of Montebello New York

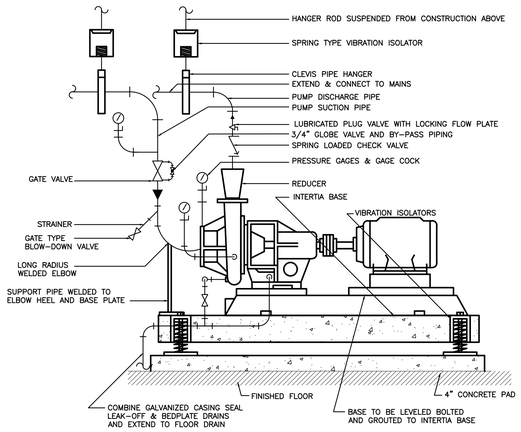
CONTRACT

STATUS
REGULATORY REVIEW

SHEET TITLE
HVAC: DETAILS

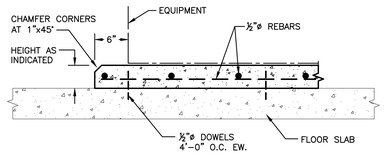
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SHEET No. OF

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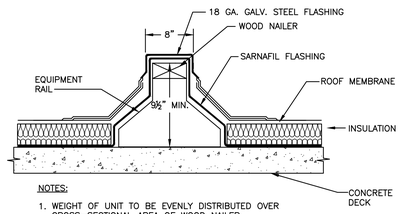


NOTES:
1. INTERTIA BASE HEIGHTS SHALL BE AS FOLLOWS: UP TO 15HP=6", 20-50HP=8", 60-100HP=10", OVER 100HP=12".

1 VERTICAL SPLIT CASE, END-SUCTION WATER PUMP INSTALLATIONS
N.T.S.

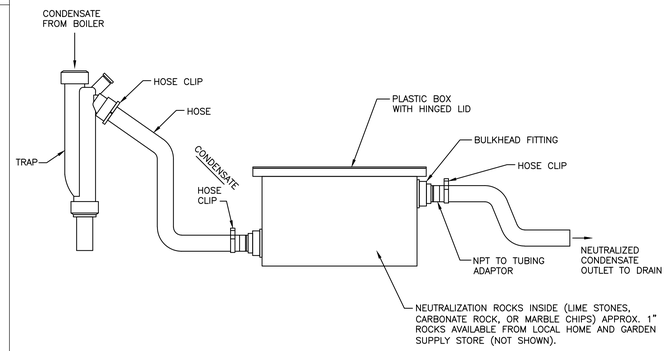


2 CONCRETE PAD DETAIL
N.T.S.

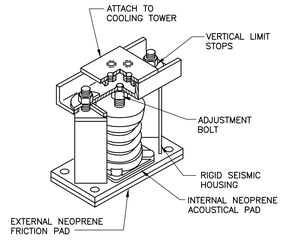


NOTES:
1. WEIGHT OF UNIT TO BE EVENLY DISTRIBUTED OVER CROSS-SECTIONAL AREA OF WOOD NAILER.
2. RAIL SHALL BE FASTENED TO STRUCTURE PER MANUFACTURER RECOMMENDATIONS.
3. VIBRATION ISOLATORS SHALL BE FASTENED TO EQUIPMENT RAIL AND MECHANICAL EQUIPMENT.
4. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ROOFING WORK.
5. EQUIPMENT RAIL SHALL BE "ROOF PRODUCTS & SYSTEMS" MODEL ER-4A, OR EQUIVALENT.

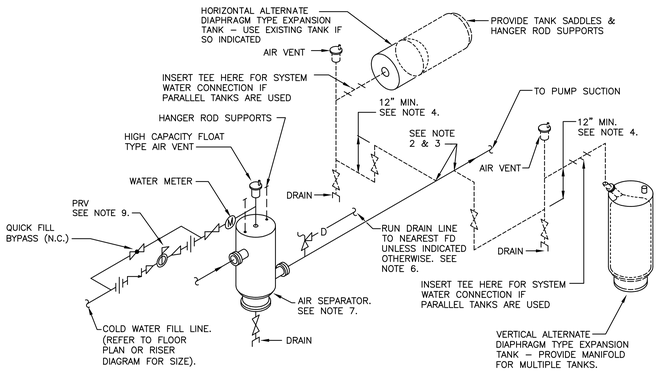
3 ROOF EQUIPMENT RAIL DETAIL
N.T.S.



4 CONDENSATE NEUTRALIZATION BOX (TYPICAL FOR EACH BOILER)
N.T.S.

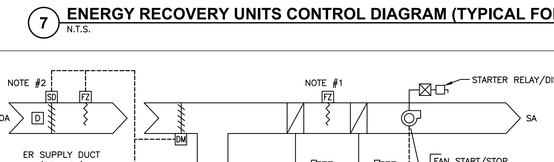


5 RESTRAINED SPRING MOUNT
N.T.S. BASED ON "MASON" SLR



NOTES:
1. DETAIL IS TYPICAL FOR CONNECTIONS TO THE DUAL TEMPERATURE WATER SYSTEM AND THE ENERGY RECOVERY SYSTEM.
2. DASHED PIPING SHOWS BOTH HORIZONTAL AND VERTICAL DIAPHRAGM TYPE EXPANSION TANKS. PROVIDE ONLY THE DASHED PIPING FOR TYPE OF TANK FURNISHED.
3. CONNECT TO SIDE OF MAIN TO PREVENT AIR OR DEBRIS FROM ENTERING PIPE TO TANK. TOP OR BOTTOM CONNECTION NOT PERMITTED.
4. PROVIDE 12" MINIMUM DROP ANTI-THERMOSYPHON LOOP TO PREVENT GRAVITY HEATING OF TANK.
5. SEE EXPANSION TANK SYSTEM SCHEDULE FOR COMPONENT SIZES.
6. RELIEF VALVE FOR CHILLED WATER IS SHOWN. OMIT WHEN RELIEF VALVE IS SHOWN ON CONVERTER OR BOILER DETAIL & SYSTEM IS USED ONLY FOR HOT WATER HEATING. COMBINATION HEATING & COOLING SYSTEMS WILL REQUIRE THE RELIEF VALVE.
7. PROVIDE STRAINER IN AIR SEPARATOR.
8. FOR HOT WATER SYSTEMS 2" AND SMALLER AND ALL CHILLED WATER SYSTEMS USE IN-LINE AIR PURGER IN LIEU OF AIR SEPARATOR.
9. PRESSURE REDUCING VALVE, 10-30 PSI RANGE, SET AT 10% ABOVE FILL PRESSURE SPECIFIED.

6 AIR CONTROL & PIPING CONNECTIONS FOR WATER SYSTEMS DIAPHRAGM TYPE EXPANSION TANK
N.T.S.



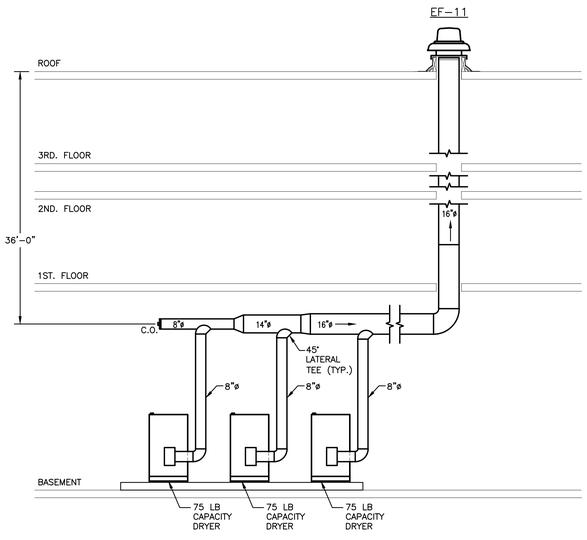
NOTES:
1. ATC TO INTERFACE WITH UNIT MANUFACTURERS FURNISHED ENERGY WHEEL CONTROLS.
2. 24V DUCT SMOKE DAMPER FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY DIV. 26000 AND DUCT SMOKE DETECTOR FURNISHED, INSTALLED AND WIRED BY DIV. 26000.
3. AIR FLOW MEASUREMENT STATION FURNISHED BY UNIT MANUFACTURER WITH OUTPUT SIGNAL INTERFACE CAPABILITY TO ATC.
4. FURNISHED BY UNIT MANUFACTURER.
5. CONTROLLER PROVIDED BY ATC.
6. CONTRACTOR SHALL REFER TO EQUIPMENT SCHEDULE SHEET & FLOOR PLANS FOR QUANTITIES OF UNITS.
7. ALL CONTROL WIRING BY HVAC.

7 ENERGY RECOVERY UNITS CONTROL DIAGRAM (TYPICAL FOR ERV-1 THRU ERV-4)
N.T.S.

T ROOM OR AREA THERMOSTAT/SENSOR PROVIDED BY ATC.

NOTES:
1. TERMINAL UNIT MOUNTED FREEZESTAT IS REQUIRED FOR UNITS SUPPLIED WITH OUTSIDE AIR, NOT DUCTED THROUGH AN ER UNIT.
2. 24V DUCT SMOKE DAMPER FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR, WIRED BY DIV. 260000 AND DUCT SMOKE DETECTOR FURNISHED, INSTALLED AND WIRED BY DIV. 260000.
3. CONTROLLER PROVIDED BY ATC.
4. CONTRACTOR SHALL REFER TO EQUIPMENT SCHEDULE SHEET & FLOOR PLANS FOR QUANTITIES OF UNITS.
5. ALL CONTROL WIRING BY HVAC.

8 FAN COIL UNITS CONTROL DIAGRAM (TYPICAL)
N.T.S.



9 LAUNDRY ROOM DRYER DETAIL
N.T.S.

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
631.756.8000 • www.h2m.com

CONSULTANTS:
FELLENZER ENGINEERING LLP
www.fellp.com
22 Mulberry St., Suite 2A,
Middletown, NY 10940
t 845-343-1481 fx 855-320-8735 Project #: 15-345

MARK	DATE	DESCRIPTION
	01/24/20	FINAL BID / PERMIT

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1
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FILB 1501	11/15/19	AS SHOWN	

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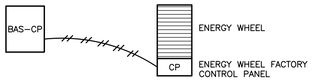
CONTRACT

STATUS
REGULATORY REVIEW

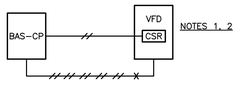
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HVAC: DETAILS

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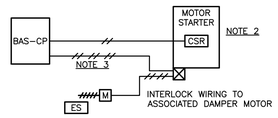
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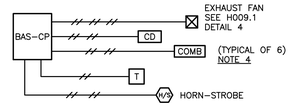
1 TYPICAL ER UNITS & ENERGY WHEELS
N.T.S.



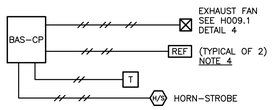
2 CONTROL WIRING FOR VFD's, UNIT OR WALL MOUNTED, FOR PUMPS, FANS, ER, AHU
N.T.S.



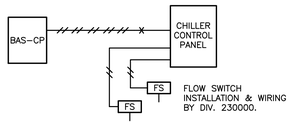
3 CONTROL WIRING TYPICAL FOR MOTOR STARTERS, FANS, PUMPS, ETC.
N.T.S.



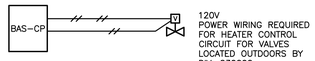
4 BOILER ROOM VENTILATION
N.T.S.



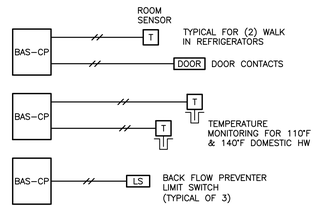
5 CHILLER ROOM VENTILATION
N.T.S.



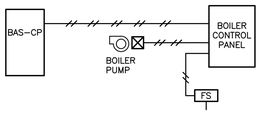
6 CONTROL WIRING FOR CHILLERS - TYPICAL FOR EACH CHILLER
N.T.S.



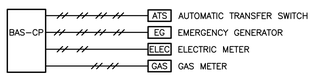
7 BUTTERFLY ISOLATION CONTROL VALVES - QTY. AS INDICATED
N.T.S.



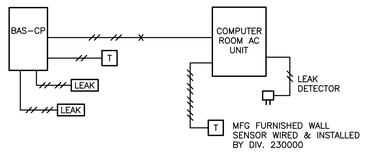
8 MISC. CONTROLS & MONITORING
N.T.S.



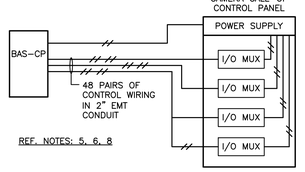
9 BOILER CONTROL WIRING
N.T.S.
TYPICAL OF (6)



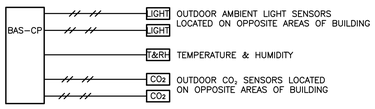
10 ELECTRICAL EQUIPMENT & UTILITY MONITORING
N.T.S.



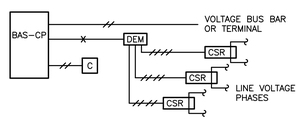
11 I/T ROOM MONITORING
N.T.S.



12 CAMERA CALL-UP CONTROLS
N.T.S.

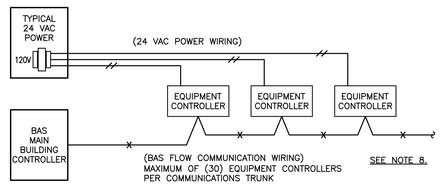


13 EXTERIOR BAS SENSOR
N.T.S.



14 EXTERIOR LIGHTING CONTROLS
N.T.S.

TYPICAL FOR (12) LOCATIONS OR AS INDICATED ON "E" DRAWINGS.



15 COMMUNICATION & LOW VOLTAGE POWER WIRING FOR UNIT VENTILATOR, FAN-COIL UNIT & ER UNIT CONTROLLERS
N.T.S.

SYSTEM DESCRIPTION	INPUTS					OUTPUTS					SYSTEM FEATURES					
	ANALOG			DIGITAL		ANALOG		DIGITAL			ALARMS			PROGRAMS		
PTAC UNITS	TEMPERATURE	PPM OR PRESSURE	% OPEN	STATUS	ON/OFF	DIFFERENTIAL PRESSURE	PID MODULATION	MODULATING	FLOATING	START/STOP	SETPOINT	DIFFERENTIAL PRESSURE	STATUS	SAFETIES	TEMPERATURE	OCCUPIED/UNOCCUPIED WITH OVERRIDE	ALARM, POINT & CONTROL SEQUENCE	WARMUP/PRE–COOL
SPACE TEMPERATURE	●										●				●			
FAN MOTOR				●	●					●			●			●	●	●
HW VALVE				●				●		●						●	●	●
CHW VALVE									●									
MIXED AIR DAMPER			●				●	●								●	●	●
FACE & BYPASS DAMPER			●				●		●					●		●	●	●
SUPPLY AIR TEMP.	●																	
SETPOINT ADJUST	●																	
TIME OVERRIDE					●													
FREEZE STAT				●	●										●	●	●	●
FILTER SENSORS						●					●	●	●					

SYSTEM DESCRIPTION	INPUTS				OUTPUTS				SYSTEM FEATURES					
	ANALOG			DISCRETE	ANALOG	DISCRETE			ALARMS			PROGRAMS		
FAN COIL UNITS	TEMPERATURE	PPM	% OPEN	STATUS	PID MODULATION	% HUMIDITY	OPEN/CLOSE OR ON/OFF	SETPOINT	ENABLE/DISABLE	STATUS	SAFETIES	TEMPERATURE	OCCUPIED/UNOCCUPIED WITH OVERRIDE	WARMUP/PRE–COOL
SPACE TEMPERATURE	●							●				●	●	
FAN MOTOR				●			●			●			●	●
COOLING & HTG CONTROL VALVES			●		●		●						●	●
DAMPERS							●						●	●
OUTSIDE AIR/FACE & BYPASS	●		●		●		●	●			●	●	●	●
COOLING	●								●				●	●
FILTER SENSORS										●				
DISCHARGE AIR TEMP	●							●				●	●	

SYSTEM DESCRIPTION	INPUTS				OUTPUTS	SYSTEM FEATURES						
	ANALOG		DISCRETE		DISCRETE	ALARMS					PROGRAMS	
PUMPS HOT WATER & CHILLED WATER	DIFFERENTIAL PRESS.	WATER TEMP.	STATUS		START/STOP	PUMP FAILURE	HIGH DIFF. PRESS	HIGH CHW TEMP	RUNNING IN HAND		DIFF PRESS SETPOINT	
MOTOR – CV			●		●	●			●			
MOTOR – VFD			●		●	●			●			
SYSTEM PRESSURE–VFD	●						●				●	
SYSTEM TEMPERATURE		●						●				

SYSTEM DESCRIPTION	INPUTS		OUTPUTS		SYSTEM FEATURES	
	ANALOG	DISCRETE	ANALOG	DISCRETE	ALARMS	PROGRAMS
ALL EXHAUST FANS	% SPEED	STATUS	% SPEED	ON/OFF	STATUS	OCCUPIED/UNOCCUPIED WITH OVERRIDE
FAN MOTOR	●	●	●	●	●	●
DAMPERS		●		●		●

CONTROLS WIRING LEGEND

- CONTROL WIRING PAIR, TWISTED PAIR OR MULTI–CONDUCTOR CABLE
- 24 AWG TWISTED, SHIELDED, LOW–CAPACITANCE BAS COMMUNICATION WIRING
- CSR — SPLIT CORE CURRENT SENSOR
- X — CONTROL DEVICE OR SENSOR WIRED AND INSTALLED, INCLUDING 24VAC POWER WIRING. "X" CAN INDICATE;
  - T–TEMPERATURE
  - CO –CARBON MONOXIDE
  - COMB – COMBUSTIBLE GAS SENSOR
  - REF – REFRIGERANT LEAK SENSOR
  - LS – LIMIT SWITCH, LEVEL SWITCH
  - FS – FLOW SWITCH
  - ES – END SWITCH
  - LEAK – LEAK SENSOR OR LEAK MODULE
  - CO2 – CARBON DIOXIDE SENSOR
- MOTOR STARTER OR MOTOR START CIRCUIT
- VFD — VARIABLE FREQUENCY DRIVE
- M — DAMPER MOTOR
- CONTROL VALVE
- C — CONTACTOR
- BAS–CP — BUILDING AUTOMATION SYSTEM CONTROL PANEL, MOUNTED BY DIVISION 230900 WITH BAS COMMUNICATION WIRING BY 230900.

BAS NOTES, BAS CONTROLS WIRING AND INSTALLATION NOTES

1. FIRE–ALARM AND FREEZE–STAT SAFETIES MUCH BE WIRING IN VFD AND MOTOR STARTER FOR ALARM SHUT–DOWN
2. LOW –VOLTAGE CONTROL RELAYS ARE REQUIRED FOR ANY MOTOR CONTROL CIRCUIT ABOVE 24V
3. MULTIPLE PAIRS OF CONTROL WIRING ARE REQUIRED WHEN CONTROLLING MULTI–SPEED FANS
4. INSTALL AND WIRE SENSORS IN QUANTITIES LISTED AND AS INDICATED ON THE PROJECT PLANS. IF TOTAL QUANTITY NOT INDICATED ON DRAWINGS, LOCATION SHALL BE DETERMINED BY FIELD DIRECTIVE
5. PANEL LOCATIONS CAN BE IN CLOSE PROXIMITY, LESS THAN 10 FEET. COORDINATE PANEL LOCATIONS IN THE FIELD WITH DISTRICT I/T PERSONNEL. DIVISION 230900 SHALL PROVIDE "I/O MUX" COMM. BOARDS FOR INTERFACE WITH DISTRICT CAMERA SYSTEM. PROVIDE MOXA E2210 ETHERNET I/O OR APPROVED EQUAL.
6. THE CAMERA CALL–UP CONTROL PANEL SHALL BE ASSEMBLED AND INSTALLED BY DIVISION 230900.
7. ALL WIRING TYPES AND INSTALLATION MATERIALS MUST BE IN ACCORDANCE WITH SIEMENS BAS WIRING DIAGRAMS, INSTALLATIONS INSTRUCTIONS UTILIZING SPECIFIC CONTROL WIRING TYPES AS INDICATED, IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
8. 24V LOW VOLTAGE POWER PANELS PROVIDED AND INSTALLED BY DIVISION 230900. 120V POWER TO THESE PANELS (OR LOW VOLTAGE CONTROLS TRANSFORMERS) CAN BE SLAVED FROM ADJACENT 120V POWER WITHIN THE CLOSEST BAS CONTROL PANEL OR SLAVED FROM THE CONTROLLED MECHANICAL EQUIPMENT POWER.
9. THE FOLLOWING LOW VOLTAGE CONTROL WIRING SHALL BE PROVIDED BY DIVISION 230900
   a. AIR CURTAIN DOOR SWITCH
   b. BACK–FLOW PREVENTER ASSEMBLY FLOW SWITCH
   c. BOILER FLOW SWITCH
   d. NON–CHEMICAL TREATMENT CABLE (CAN BE ROUTED EXPOSED IN MER – NO CONDUIT REQUIRED), WIRING OF FLOW SWITCH, CONDUCTIVITY PROBE, PH PROBE AND VALVE (EQUIPMENT FURNISHED BY OTHERS)
   e. COMPUTER ROOM, I/T ROOM AND TELCO ROOM AC UNIT THERMOSTAT WIRING
   f. DRY–COOLER INTERCONNECTING LOW–VOLTAGE CONTROL WIRING TO INDOOR UNIT
10. THE FOLLOWING SIEMENS CONTROLS EQUIPMENT AND SERVICES SHALL BE PROVIDED BY THE DIVISION 230000 CONTRACTOR;
    a. BAS BUILDING CONTROLLERS, CHILLER AND BOILER PLANT CONTROLLERS
    b. AHU CONTROLLERS
    c. CONTROLS SOFTWARE
    d. INTEGRATION DRIVERS TO 3RD PARTY CONTROL SYSTEMS
    e. INTEGRATION DRIVERS TO SIEMENS SIPASS SECURITY AND XLS FIRE ALARM SYSTEMS
    f. BAS CONTROL PANELS AND POWER SUPPLIES
    g. EQUIPMENT CONTROLLERS FOR PTAC UNITS, FAN–COIL UNITS, ER UNITS
    h. ALL TEMPERATURE SENSORS, WALL THERMOSTATS, THERMO–WELLS
    i. FREEZESTATS, FILTER ALARM SWITCHES, FLOW SWITCHES
    j. ALL CO2 SENSORS, RELATIVE HUMIDITY SENSORS
    k. ALL CONTROL VALVES AND VALVE ACTUATORS
    l. AIR DIFFERENTIAL PRESSURE SENSORS
    m. EXTERIOR LIGHTING CONTROL AND SENSING MODULES, DEMS
    n. ALL DAMPER MOTORS AND DAMPER END SWITCHES
    o. WIRING DIAGRAMS AND EQUIPMENT SUBMITTALS
    p. PROGRAMMING OF BAS CONTROLLERS AND SOFTWARE AND GRAPHICS AND CUSTOMER TRAINING
    q. WARRANTY OF ALL PROVIDED FOR DEFECTIVE CONTROLS EQUIPMENT, PROVIDED TO THE DIVISION 230900, 230000 CONTRACTOR FOR INSTALLATION, WIRING, POINT–TO–POINT VERIFICATION AND RE–COMMISSIONING
11. EQUIPMENT AND SERVICES PROVIDED BY THE DIVISION 230900 AND 230000 CONTRACTORS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING;
    a. FLOW METERS AND LIQUID DIFFERENTIAL PRESSURE SENSORS
    b. BOILER ROOM COMBUSTIBLE GAS SENSORS AND CARBON MONOXIDE SENSORS
    c. REFRIGERANT LEAK SENSORS
    d. MER HORN–STROBES
    e. OUTDOOR LIGHT LEVEL SENSORS
    f. DUCT AND FAN INLET AIR FLOW MEASURING STATIONS, CONTROL DAMPERS, FIRE/SMOKE DAMPER ASSEMBLIES.
    g. CURRENT SENSING RELAYS, CONTROLS TRANSFORMERS, CONTROL RELAYS AND BASES, 1900 BOXES
    h. LEAK DETECTION SYSTEM FOR I/T ROOM
    i. ALL OTHER REQUIRED CONTROLS EQUIPMENT NOT LISTED IN NOTE 10.
    j. ELECTRICAL INSTALLATION LABOR, WIRING, CONDUIT. MISC. INSTALLATION MATERIALS, ELECTRICAL MATERIALS, MOUNTING AND FASTENING MATERIALS, INSTALLATION TOOLS, FIRE–STOPPING MTLS, ETC.
    k. POINT–TO–POINT VERIFICATION AND SEQUENCE OF OPERATIONS COMMISSIONING OF BAS SYSTEM IN ACCORDANCE WITH THE PROJECT DOCUMENTS
    l. ON–SITE SUPERVISION, COORDINATION, PROJECT MANAGEMENT AND CUSTOMER TRAINING AS REQUIRED TO MEET REQUIREMENTS OUTLINED IN THE PROJECT DOCUMENTS
    m. WARRANTY FOR INSTALLATION, REPLACEMENT, RE–WIRING, POINT–TO–POINT VERIFICATION AND RE–COMMISSIONING OF DEFECTIVE CONTROLS EQUIPMENT AS REQUIRED TO MEET REQUIREMENTS OUTLINED IN THE PROJECT DOCUMENTS.

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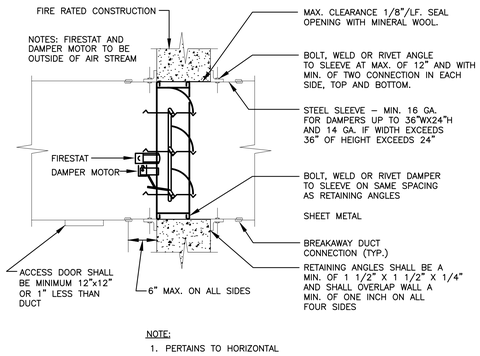
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HVAC: DETAILS

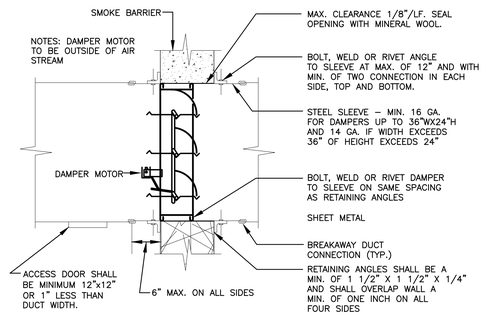
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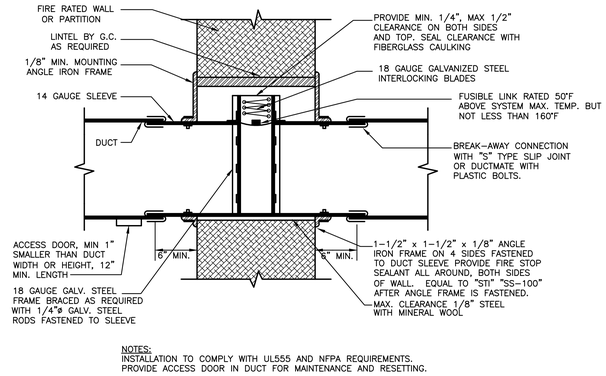


1 COMBINATION: FIRE & SMOKE DAMPER DETAIL
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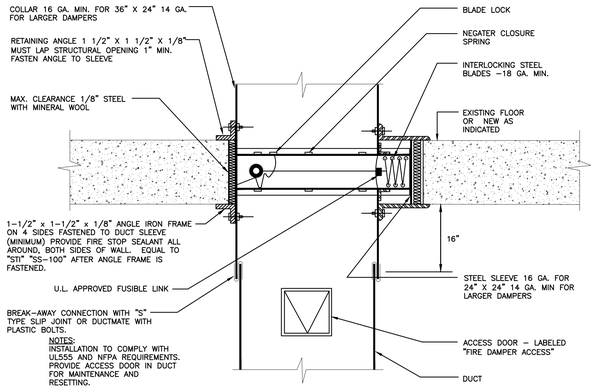


2 SMOKE DAMPER DETAIL
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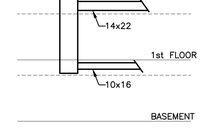
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1. PERTAINS TO HORIZONTAL



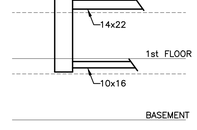
3 TYPE-B SHUTTER TYPE FIRE DAMPER FOR LOW PRESSURE SYSTEMS DETAIL
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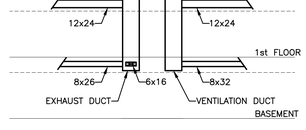
4 TYPE-B HORIZONTAL FIRE DAMPER FOR LOW PRESSURE SYSTEMS DETAIL
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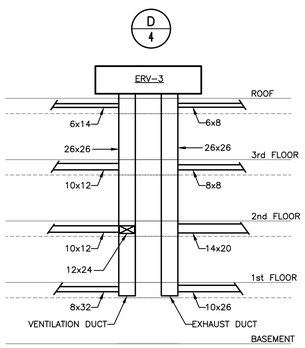
5 ERV-1 VENTILATION RISER DIAGRAM
N.T.S.



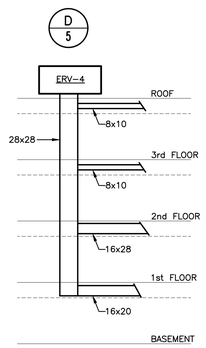
6 ERV-1 EXHAUST RISER DIAGRAM
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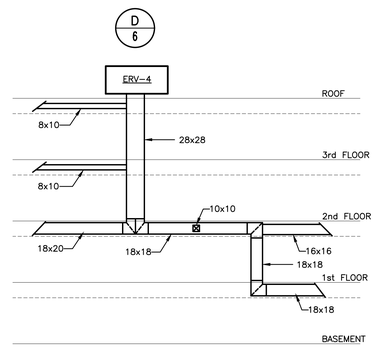
7 ERV-2 VENTILATION/EXHAUST RISER DIAGRAM
N.T.S.



8 ERV-3 VENTILATION/EXHAUST RISER DIAGRAM
N.T.S.



9 ERV-4 VENTILATION RISER DIAGRAM
N.T.S.



10 ERV-4 EXHAUST RISER DIAGRAM
N.T.S.

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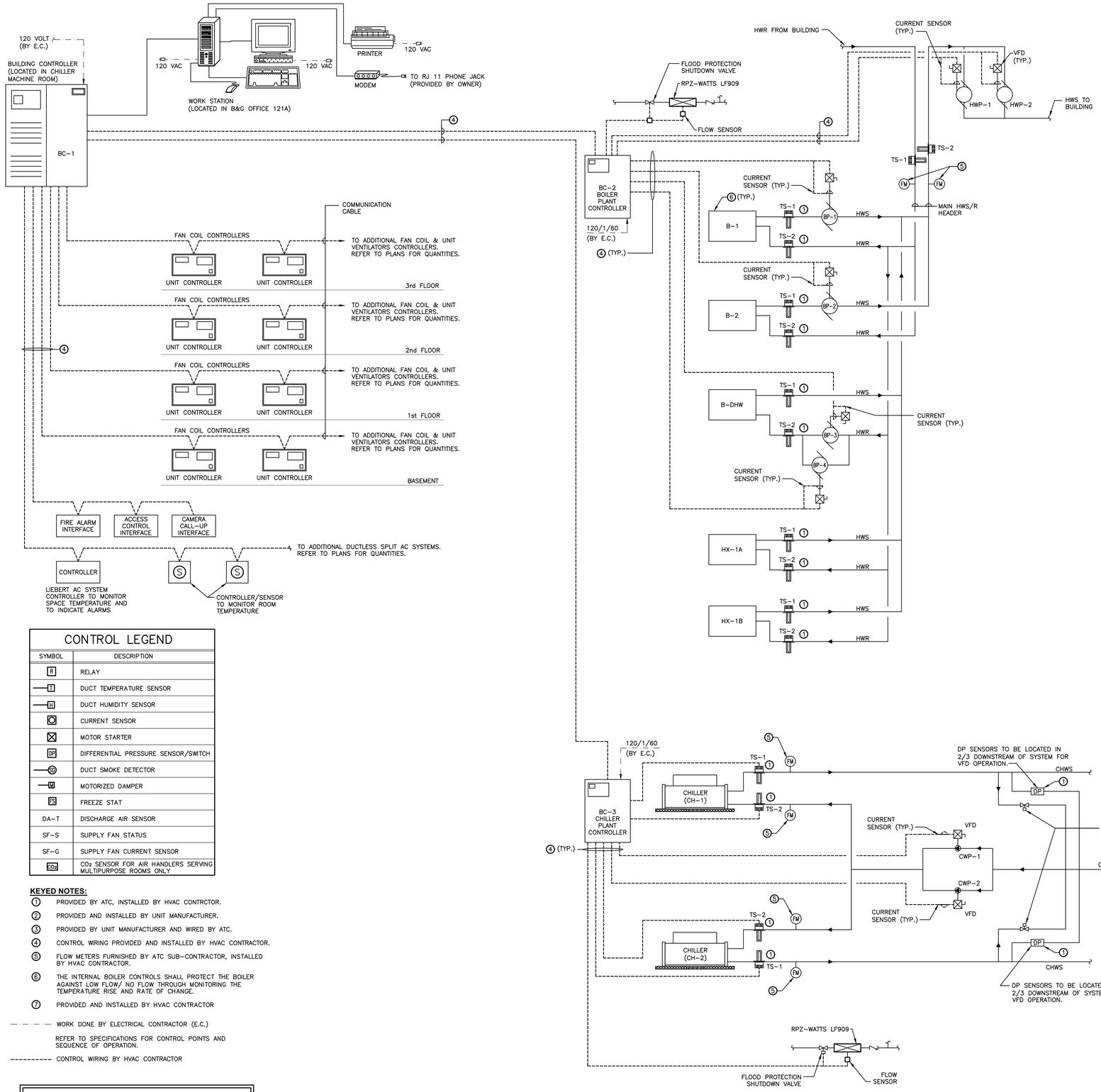
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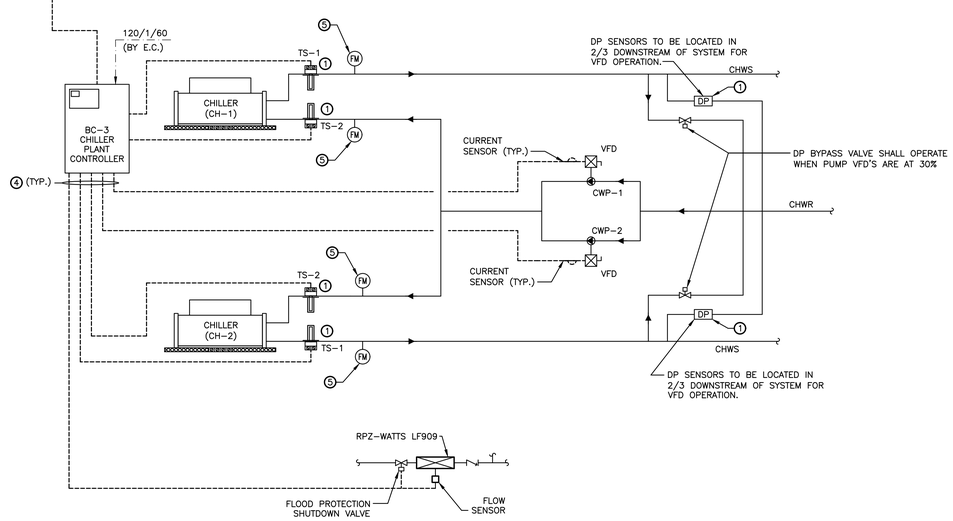
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SHEET TITLE
**HVAC:
DETAILS**

DRAWING No. **H7.5**
SHEET No. OF

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1 SYSTEM ARCHITECTURE ONE-LINE DIAGRAM
N.T.S.

CONTROL LEGEND

SYMBOL	DESCRIPTION
R	RELAY
T	DUCT TEMPERATURE SENSOR
H	DUCT HUMIDITY SENSOR
	CURRENT SENSOR
	MOTOR STARTER
DP	DIFFERENTIAL PRESSURE SENSOR/SWITCH
SD	DUCT SMOKE DETECTOR
M	MOTORIZED DAMPER
FS	FREEZE STAT
DA-T	DISCHARGE AIR SENSOR
SF-S	SUPPLY FAN STATUS
SF-G	SUPPLY FAN CURRENT SENSOR
CO_2	CO_2 SENSOR FOR AIR HANDLERS SERVING MULTIPURPOSE ROOMS ONLY

KEYED NOTES:

1. PROVIDED BY ATC, INSTALLED BY HVAC CONTRCTOR.
2. PROVIDED AND INSTALLED BY UNIT MANUFACTURER.
3. PROVIDED BY UNIT MANUFACTURER AND WIRED BY ATC.
4. CONTROL WIRING PROVIDED AND INSTALLED BY HVAC CONTRACTOR.
5. FLOW METERS FURNISHED BY ATC SUB-CONTRACTOR, INSTALLED BY HVAC CONTRACTOR.
6. THE INTERNAL BOILER CONTROLS SHALL PROTECT THE BOILER AGAINST LOW FLOW/ NO FLOW THROUGH MONITORING THE TEMPERATURE RISE AND RATE OF CHANGE.
7. PROVIDED AND INSTALLED BY HVAC CONTRACTOR

— · — · — · — WORK DONE BY ELECTRICAL CONTRACTOR (E.C.)

REFER TO SPECIFICATIONS FOR CONTROL POINTS AND SEQUENCE OF OPERATION.

---------- CONTROL WIRING BY HVAC CONTRACTOR

GENERAL NOTE:

1. SKETCHES ARE SCHEMATIC REPRESENTATIONS ONLY. ATC TO PROVIDE CONTROL AND MONITORING POINTS AND SEQUENCES AS OUTLINED IN DIV. 250000, 230900 AND 230993.

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PUMP SCHEDULE

MANUFACTURER AS INDICATED OR APPROVED EQUAL

UNIT NO.	LOCATION	SYSTEM	CIRCULATING FLUID					MOTOR HP (WATTS)	MOTOR RPM	MOTOR SPEED	IMPELLER DIAMETER (IN.)	MIN. EFF. (%)	ELECTRICAL DATA VOLT/PH	MANUFACTURER	MODEL NO.	REMARKS
			FLUID	SPEC. GRAVITY	TEMP. (°F)	GPM	HEAD (FT.)									
CWP-1	BASEMENT MER	CHILLED WATER	PLAIN WATER	1.0	44	340	36	5	1750	VFD	6.875	84	460/3	B & G	SERIES 1510 3AD	1, 2
CWP-2	BASEMENT MER	CHILLED WATER	PLAIN WATER	1.0	44	340	36	5	1750	VFD	6.875	84	460/3	B & G	SERIES 1510 3AD	1, 2
HWP-1	BASEMENT MER	HOT WATER	PLAIN WATER	1.0	180	206	34	3	1750	VFD	6.625	80	460/3	B & G	SERIES 1510 2.5 AC-ES	1, 2
HWP-2	BASEMENT MER	HOT WATER	PLAIN WATER	1.0	180	206	34	3	1750	VFD	6.625	80	460/3	B & G	SERIES 1510 2.5 AC-ES	1, 2
BP-1	BASEMENT MER	BOILER #1	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-2	BASEMENT MER	BOILER #2	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-3	BASEMENT MER	BOILER DHW	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-4	BASEMENT MER	BOILER DHW	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
RP-1	BASEMENT MER	DOMESTIC HOT WATER	PLAIN WATER	1.0	110	14.6	15	1/8	1725	CV	–	65	120/1	TACO	0011 BF	1, 2, 3
RP-2	BASEMENT MER	KITCHEN HOT WATER	PLAIN WATER	1.0	140	11.2	15	1/8	1725	CV	–	65	120/1	TACO	0011 BF	1, 2, 3

NOTES:

1. IMPELLER DIAMETER INDICATED IS APPROXIMATE. FINAL IMPELLER DIAMETER TO BE DETERMINED BY PUMP MFTR. CONTRACTOR SHALL TRIM IMPELLER AFTER INITIAL FLOW BALANCING TO ACHIEVE OPTIMAL PUMP PERFORMANCE.
2. COORDINATE MOTOR REQ. WITH E.C.. E.C. TO FURNISH AND INSTALL MOTOR STARTERS.
3. DOMESTIC HOT WATER RECIRCULATION PUMPS SHALL BE OF BRONZE CONSTRUCTION.

BOILER SCHEDULE

BASED ON "AERCO"

UNIT TAG	LOCATION	BOILER TYPE	HEATING MEDIUM	FUEL	GAS PRESSURE		VENTING CATEGORY	VENTING SYSTEM		VENT DIA. (IN.)	BURNER INPUT (MBH)	GROSS OUTPUT (MBH)	THERMAL EFFICIENCY (%)	RELIEF VALVE (PSI)	ELECTRICAL DATA		WATER CONTENT (GAL)	WEIGHT (LBS)	MODEL	REMARKS
					MIN. (IN. WC)	DESIGN (IN. WC)		FIRING	BOILER STACK						BURNER CIRCUIT	CIRCUIT CONTROL				
B-1 & B-2	BASEMENT BOILER RM.	CONDENSING FIRE-TUBE	HOT WATER	NAT. GAS	4.0	7.0	IV	FORCED DRAFT	POSITIVE DRAFT	8	2,790	2,850	95	50	208/3	120/1	55	2,580	BMK3000	1-3
B-DHW	BASEMENT BOILER RM.	CONDENSING FIRE-TUBE	HOT WATER	NAT. GAS	4.0	7.0	IV	FORCED DRAFT	POSITIVE DRAFT	8	2,790	2,850	95	50	208/3	120/1	55	2,580	BMK3000	1-3

NOTES:

1. FURNISH ALL BOILERS WITH NEUTRALIZATION AND DRAIN KIT.
2. FURNISH WITH CATEGORY IV POSITIVE PRESSURE GAS VENT, DOUBLE WALL CONSTRUCTION WITH A 1" AIR SPACE. INNER WALL SHALL BE AL29-4C STAINLESS STEEL. OUTER WALL SHALL BE ALUMINIZED STEEL. METAL-FAB CORR/GUARD OR EQUIVALENT. DRAIN PIPING SHALL BE ROUTED TO ASSOCIATED NEUTRALIZATION DRAIN KIT AND TERMINATE TO NEAREST FLOOR DRAIN.
3. REFER TO SEQUENCE OF OPERATION FOR DETAILS ON SYSTEM CONTROLS.
4. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. COMBUSTION BLOWERS ARE VARIABLE SPEED WITH LINKAGELESS FUEL AIR CONTROL.

REFRIGERATION MACHINE SCHEDULE

"McQUAY" AS STANDARD OR APPROVED EQUAL

UNIT NO.	LOCATION	TYPE	CAPACITY TONS	EER	REF.	NO. UNLOADING STEPS	EVAPORATOR					ELECTRICAL DATA				UNIT WEIGHT LBS.	MODEL NO.	REMARKS
							FLUID	GPM	EWT (°F)	LWT (°F)	P.D. (FT)	VOLTS/ PHASE	ELECT. INPUT (KW)	MOCP	MCA			
CH-1	BASEMENT MER	SCROLL	78.3	15.8	R-410a	4	PLAIN WATER	170	54	44	10.2	460/3	313	150	131	2,649	WGZ-0800DA	1-4
CH-2	BASEMENT MER	SCROLL	78.3	15.8	R-410a	4	PLAIN WATER	170	54	44	10.2	460/3	313	150	131	2,649	WGZ-0800DA	1-4

NOTES:

1. FURNISH WITH WYE-DELTA START OPTION.
2. CONTROL TRANSFORMER SHALL BE FURNISHED WITH THE CHILLER.
3. VIBRATION ISOLATORS PROVIDED BY MANUFACTURER AND INSTALLED BY HVAC CONTRACTOR.
4. FLOW SWITCH PROVIDED BY MANUFACTURER AND INSTALLED BY HVAC CONTRACTOR.

Return/Exhaust Grill Schedule

Symbol	CFM Range	Neck Size (In.)	Nom. Face Size (In.)	Blade Deflection	Blade Spacing	Finish	Manufacturer & Model No.	Remarks
RG-1	0-110	6x6	12x12	35º	3/4	White	Titus 350R	----
RG-2	0-110	6x6	24x24	35º	3/4	White	Titus 350R	----
RG-3	111-170	8x6	24x24	35º	3/4	White	Titus 350R	----
RG-4	171-220	10x6	24x24	35º	3/4	White	Titus 350R	----
RG-5	221-320	10x8	24x24	35º	3/4	White	Titus 350R	----
RG-6	321-425	10x10	24x24	35º	3/4	White	Titus 350R	----
EG-1	0-110	6x6	12x12	35º	3/4	White	Titus 350R	----
EG-2	0-110	6x6	24x24	35º	3/4	White	Titus 350R	----
EG-3	111-170	8x6	24x24	35º	3/4	White	Titus 350R	----
EG-4	171-220	10x6	24x24	35º	3/4	White	Titus 350R	----
EG-5	221-320	10x8	24x24	35º	3/4	White	Titus 350R	----
EG-6	321-425	10x10	24x24	35º	3/4	White	Titus 350R	----

Diffuser Schedule

Symbol	CFM Range	Neck Dia (In.)	Nom. Face Size (In.)	Finish	Manufacturer & Model	Accessories	Remarks
CD-1	0-110	6	12x12	White	Titus TMS	None	----
CD-2	0-140	6	24x24	White	Titus TMS	None	----
CD-3	141-220	8	24x24	White	Titus TMS	None	----
CD-4	221-320	10	24x24	White	Titus TMS	None	----
SG-1	0-110	6x6	6x6	White	Titus 350R	None	----
SG-2	111-180	8x6	8x6	White	Titus 350R	None	----

Linear Diffuser/Grille Schedule

Symbol	CFM/LF (CFM)	Nom. Face Size (in.)	No. Slots	Slot Width (in.)	Finish	Manufacturer & Model No.	Remarks
LCD-1	15-30 (90-180)	72	3	0.5	White	Titus ML-37	----
LRG-1	85-120 (160-240)	24	6	0.5	White	Titus ML-37	----
LEG-1	85-120 (160-240)	24	6	0.5	White	Titus ML-37	----

Energy Recovery Ventilator Schedule

Unit No.	CFM		Supply Fan Data			Exhaust Fan Data			Media Type	Wheel Face Area (ft^2/side)	Summer Operation					Winter Operation					Volt/Phase	Amps	MCA	MOCP	Manufacuture & Model	Weight (lbs)
	R.A.	S.A.	ESP (in. w.c.)	Motor HP	Motor RPM	ESP in. w.c.	Motor HP	Motor RPM			O.A. (ºF) DB/WB	R.A. (ºF) DB/WB	E.A. (ºF) DB/WB	S.A. (ºF) DB/WB	Tot Eff. (%)	En. Rec. (MBH)	O.A. (ºF) DB/WB	R.A. (ºF) DB/WB	E.A. (ºF) DB/WB	S.A. (ºF) DB/WB	Tot Eff. (%)	En Rec. (MBH)					
ERV-1	3470	3470	1	2	1725	1	3	1725	Alumnium	5.00	92.0/74.0	75.0/62.5	87.0/70.9	80.0/66.2	0.71	57.4	12.0/10.4	70/58.5	28.9/28.2	53.1/47.8	0.71	131.0	460/3	11.2	14.1	15	Semco FV-4000	1150
ERV-2	5725	5725	1	5	1725	1	5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.2/71.0	79.8/66.1	0.72	103.4	12.0/10.4	70/58.5	28.4/27.7	53.6/48.2	0.72	240.4	460/3	19.8	24.8	30	Semco FV-7500	1800
ERV-3	5475	5475	1	5	1725	1	5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.3/71.1	79.7/66.0	0.72	103.1	12.0/10.4	70/58.5	28.0/27.2	54.0/48.5	0.72	235.7	460/3	19.8	24.8	30	Semco FV-7501	1800
ERV-4	7100	7100	1	7.5	1725	1	7.5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.0/70.9	80.0/66.2	0.70	106.0	12.0/10.4	70/58.5	29.2/28.4	52.8/47.6	0.70	245.5	460/3	29.0	36.3	45	Semco FV-7502	1800

Expansion Tank Schedule

Unit No.	System and/or Service	Type	Approx. System Volume (Gal)	System Temperature Range		Initial Pressure in Tank (PSI)	Max Operating Pressure (PSI)	Fill Pressure at Tank		Min. Volume Tank (Gal)	Min. Bladder Volume (Gal)	Make-Up Water Fill Size (in.)	Manufacturer & Model	Remarks
				Min. (ºF)	Max. (ºF)			Relief Valve (PSI)	At Tank (PSI)					
ET-1	Chilled Water	Bladder	825	45	100	12	30	75	23	10	4.76	1	Bell & Gossett B-35LA	----
ET-2	Hot Water	Bladder	365	60	160	12	30	75	23	34	14.25	1	Bell & Gossett B-130LA	----

Packaged Terminal AC Unit Schedule

Unit No.	Typical Room Type	CFM		Cooling (MBH)		Cooling Air Data		Heating		Heating Air Data		Refrig.	Electrical Data				Weight (lbs)	EER	Manufacturer & Model	Remarks
		Total	Min. O.A.	Total	Sensible	EAT (ºF) DB/WB	LAT (ºF) DB/WB	Medium	Output (MBH)	(GPM)	EAT (ºF)	LAT (ºF)		Volt/PH	MCA	MOCP	Receptacle				
PTAC-1	Room 1 Room 3 Room 5 Room 7	310	25	7.0	6.0	95/75	64/61	Hot Water	14.8	0.6	70	90	R-410a	277/1	3.7	15	#7-20P	145	11.5	Applied Comfort NAWCO07L00E2	----
PTAC-2	Room 2 Room 4 Room 6	360	25	9.6	7.5	95/75	61/58	Hot Water	15.5	0.5	70	92	R-410a	277/1	5.7	15	#7-20P	145	11.3	Applied Comfort NAWCO09L00E2	----

Air Separator Schedule

Unit No.	System and/or Service	Type	Size (in.)	Max Flow (GPM)	Pressure Drop (Feet)	Manufacturer & Model	Remarks
AS-1	Chilled Water	Coalescing	5	383	0.43	Bell & Gossett CRSN-5F	----
AS-2	Hot Water	Coalescing	4	245	0.60	Bell & Gossett CRSN-4F	----

Chemical Pot Filter System

Unit No.	System and/or Service	Capacity (Gal)	Manufacturer & Model	Remarks
PF-1	Chilled Water	5.79	J.L. Wingert F-5HD	----
PF-2	Hot Water	5.79	J.L. Wingert F-5HD	----

Exhaust Fan Schedule

Unit No.	System and/or Service	Location	Manufacturer & Model	Air Flow (CFM)	Total Static Pressure (in. w.c.)	Drive	Fan RPM	Nominal Power (HP)	Phase	Volt
EF-1	Dwelling Unit Bathroom	Roof	Twin Cities 090BE	600	0.5	Direct	1650	1/6	1	208
EF-2	Dwelling Unit Bathroom	Roof	Twin Cities 100BE	1050	0.75	Direct	1750	1/4	1	208
EF-3	Dwelling Unit Bathroom	Roof	Twin Cities 120BE	1400	0.75	Direct	1750	1/2	1	208
EF-4	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	650	0.75	Direct	1575	1/4	1	208
EF-5	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	700	0.5	Direct	1575	1/4	1	208
EF-6	Dwelling Unit Bathroom	Roof	Twin Cities 120BE	1200	0.5	Direct	1750	1/2	1	208
EF-7	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	750	0.5	Direct	1650	1/4	1	208
EF-8	Dwelling Unit Bathroom	Roof	Twin Cities 085BE	300	0.5	Direct	1425	1/6	1	208
EF-9	Kitchen Hood	Roof	Captive Aire DU300HFA	7200	1.5	Direct	753	7.5	3	208
EF-10	Kitchen Dishwasher	Roof	Captive Aire DU50HFA	900	0.7	Direct	1257	0.5	3	208
EF-11	Dryers	Roof	Twin Cities 130B	2400	0.25	Direct	1750	1/2	1	208
EF-12	Chiller Room	Roof	Twin Cities 130B	2000	0.25	Direct	1750	1/2	1	208

Air Cooled Condensing Unit Schedule

Unit No.	Service	Location	Capacity (MBH)	Comp. Qty.	Ref.	Electrical Data			Weight (lbs)	Manufacturer & Model No.	Remarks
						Volt/Phase	MCA	MOCP (Amps)			
ACC-1	CH-1	Roof	960	2	R-410A	460/3	21.9	30	1990	McQuay ACH080AD	----
ACC-2	CH-2	Roof	960	2	R-410A	460/3	21.9	30	1990	McQuay ACH080AD	----

Make Up Unit Schedule

Unit No.	Location	Manufacturer & Model No.	Fan CFM	Total ESP.	Fan RPM	Fan HP	Fan BHP	Furnace Input (MBH)	Furnace Output (MBH)	Efficiency	FLA	Volt/Phase	Remarks
MAU-1	Roof	Captive Aire A4-IBT	7200	1	917	10	2.803	676	540	80%	25.8	208/3	----

Heat Pump Split-System Schedule

Indoor Unit

Unit No.	Location	Airflow (CFM)		Total Cooling (MBH)	Heating (MBH)	Electrical Data			Weight (lbs)	Manufacturer & Model	Remarks
		Total	Min. O.A.			Volt/PH	MCA	MOCP			
AC-1	Room 1010	320	0	9.1	0.3	208/1	1	15	29	Mitsubishi PKA-A18HA6	----
AC-2	Room 1008	635	0	6.1	0.4	208/1	1	15	46	Mitsubishi PKA-A24HA6	----
AC-3	Room 1061	320	0	5.7	0.2	208/1	1	15	29	Mitsubishi PKA-A18HA6	----
AC-4	Room 1044	320	0	6.0	1.5	208/1	1	15	29	Mitsubishi PKA-A18HA6	----

Outdoor Condensing Unit

Unit No.	Location	Service	Capacity (MBH)	Refrig.	Electrical Data				Weight (lbs)	Manufacturer & Model	Remarks
					Volt/PH	MCA	MOCP	SEER			
ACC-3	Roof	AC-1	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle
ACC-4	Roof	AC-2	24	R-410A	208/1	18	30	17	75	Mitsubishi PUZ-A24NHA6	Include Wind Baffle
ACC-5	Roof	AC-3	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle
ACC-6	Roof	AC-4	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle

Supply Fan Schedule

Unit No.	System and/or Service	Location	Manufacturer & Model	Air Flow (CFM)	Total Static Pressure (in. w.c.)	Drive	Fan RPM	Nominal Power (HP)	Phase	Volt
SF-1	Chiller Room	Room 1014	Twin Cities 142A	2000	0.25	Direct	1700	1/3	1	115

H2M architects + engineers
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
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CONSULTANTS:
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22 Mulberry St., Suite 2A,
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MARK	DATE	DESCRIPTION
	01/24/20	FINAL BID / PERMIT

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1
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DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
PMC	SRB	EDF	MDF

PROJECT No: FILB 1501 | DATE: 11/15/19 | SCALE: AS SHOWN

CLIENT
Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

Montebello Crossing, 250 Lafayette Avenue (Route 59) Village of Montebello New York

CONTRACT

STATUS
REGULATORY REVIEW

SHEET TITLE
HVAC: SCHEDULES

DRAWING No. **H8.1** | SHEET No. OF

File Name: F:\2015\15-345 NEW ASSISTED LIVING RESIDENCE\H8.1.dwg (Layout: Layout1)
Date: Fri, Jan 24, 2020 - 9:27 AM (Name: sfb)

Fan Coil Unit Schedule

Unit No.	Location	CFM		Fan Data			Cooling (MBH)	Cooling Air Data		Cooling Coil Data				Heating (MBH)	Heating Air Data		Heating Coil Data				Filter Data		Electrical Data		Weight (lbs)	Manufacturer & Model	Remarks
		Total	Min. O.A	Drive	Motor HP	Motor Qty.	Total	EAT (ºF) DB/WB	LAT (ºF) DB/WB	Fluid	GPM	EWT (ºF)	LWT (ºF)		EAT (ºF)	LAT (ºF)	Fluid	GPM	EWT (ºF)	LWT (ºF)	Type	MERV	Volt/PH	MCA			
Basement																											
FCU B01	Room 1021	600	180	Direct	1/4	2	15.3	80/67	61/58	Plain Water	3.1	45	55	8.1	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	4.5	145	Titus TH8P50	----
FCU B02	Room 1017	680	110	Direct	1/4	2	10.9	80/67	60/58	Plain Water	2.3	45	55	20.5	70	111	Plain Water	1.4	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU B03	Room 1018	340	90	Direct	1/4	1	5.3	80/67	59/57	Plain Water	1.1	45	55	7.3	70	101	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU B04	Room 1016	730	360	Direct	1/4	2	16.8	80/67	56/55	Plain Water	3.5	45	55	22.6	70	113	Plain Water	1.5	160	130	1" Throw Away	7	120/1	4.5	159	Titus TH8P50	----
FCU B05	Room 1007	595	100	Direct	1/4	2	9.2	80/67	60/58	Plain Water	1.9	45	55	19.0	70	111	Plain Water	1.3	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU B06	Room 1027	410	130	Direct	1/4	1	9.0	80/67	59/57	Plain Water	1.8	45	55	8.6	70	100	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU B07	Room 1004	150	50	Direct	1/4	1	1.9	80/67	58/56	Plain Water	0.4	45	55	1.6	70	110	Plain Water	0.1	160	130	1" Throw Away	7	120/1	1.25	67	Titus TH8P20	----
FCU B08	Room 1066	460	170	Direct	1/4	1	6.7	80/67	59/57	Plain Water	1.4	45	55	7.8	70	100	Plain Water	0.5	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU B09	Room 1067	330	90	Direct	1/4	1	10.4	80/67	59/57	Plain Water	2.1	45	55	18.6	70	109	Plain Water	1.2	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU B10	Room 1030	480	210	Direct	1/4	1	9.5	80/67	59/57	Plain Water	2.0	45	55	6.6	70	100	Plain Water	0.4	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU B11A-1	Room 1032	875	335	Direct	1/4	2	38.3	80/67	55/54	Plain Water	3.9	45	55	15.1	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P60	----
FCU B11B-1	Room 1032	720	670	Direct	1/4	2	26.5	80/67	57/55	Plain Water	2.7	45	55	12.3	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	170	Titus TH8P50	----
FCU B11C-1	Room 1032	825	335	Direct	1/4	2	26.5	80/67	57/55	Plain Water	2.7	45	55	12.3	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	170	Titus TH8P50	----
FCU B11A-2	Room 1032	875	335	Direct	1/4	2	38.3	80/67	55/54	Plain Water	3.9	45	55	15.1	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P60	----
FCU B11B-2	Room 1032	720	670	Direct	1/4	2	26.5	80/67	57/55	Plain Water	2.7	45	55	12.3	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	170	Titus TH8P50	----
FCU B11C-2	Room 1032	825	335	Direct	1/4	2	26.5	80/67	57/55	Plain Water	2.7	45	55	12.3	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	170	Titus TH8P50	----
FCU B12	Room 1064	400	190	Direct	1/4	1	6.5	80/67	59/57	Plain Water	1.3	45	55	7.4	70	100	Plain Water	0.5	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU B13	Room 1034	910	310	Direct	1/4	2	28.1	80/67	62/59	Plain Water	5.7	45	55	19.6	70	96	Plain Water	1.3	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P60	----
FCU B14	Room 1035	645	390	Direct	1/4	1	12.7	80/67	59/57	Plain Water	2.1	45	55	15.3	70	100	Plain Water	1.0	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU B15	Room 1060	180	180	Direct	1/4	1	2.7	80/67	59/57	Plain Water	0.6	45	55	5.5	70	101	Plain Water	0.4	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU B16	Room 1059	330	330	Direct	1/4	1	10.4	80/67	58/56	Plain Water	2.1	45	55	11.2	70	110	Plain Water	0.8	160	130	1" Throw Away	7	120/1	2.12	86	Titus TH8P25	----
FCU B17	Room 1051	400	400	Direct	1/4	1	10.6	80/67	59/57	Plain Water	2.2	45	55	12.4	70	100	Plain Water	0.8	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU B18	Room 1039	510	300	Direct	1/4	1	17.0	80/67	59/57	Plain Water	3.5	45	55	10.0	70	100	Plain Water	0.7	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU B19	Room 1043	545	140	Direct	1/4	1	9.2	80/67	59/57	Plain Water	1.8	45	55	17.6	70	109	Plain Water	1.2	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU B20	Room 1048	320	160	Direct	1/4	1	4.4	80/67	59/57	Plain Water	0.9	45	55	9.0	70	101	Plain Water	0.6	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU B21	Room 1049	680	290	Direct	1/4	2	11.6	80/67	60/58	Plain Water	2.4	45	55	19.7	70	111	Plain Water	1.3	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU B22	Room 1042	500	200	Direct	1/4	1	17.3	80/68	59/57	Plain Water	3.5	45	55	19.4	70	109	Plain Water	1.3	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU B23	Room 1046	600	230	Direct	1/4	2	18.8	80/69	61/58	Plain Water	3.8	45	55	15.1	70	97	Plain Water	1.0	160	130	1" Throw Away	7	120/1	4.5	145	Titus TH8P50	----
FCU B24	Room 1023	200	0	Direct	1/4	1	----	----	----	----	----	----	----	7.8	70	97.3	Plain Water	0.4	160	130	1" Throw Away	7	120/1	0.87	99	Titus TVBF02	----
FCU B25	Room 1040	200	0	Direct	1/4	1	----	----	----	----	----	----	----	7.8	70	97.3	Plain Water	0.4	160	130	1" Throw Away	7	120/1	0.87	99	Titus TVBF02	----
First Floor																											
FCU 101	Room 2012	330	60	Direct	1/4	1	4.1	80/67	58/56	Plain Water	0.8	45	55	6.3	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	2.12	83	Titus TH8P25	----
FCU 102	Room 2010	460	280	Direct	1/4	1	10.2	80/67	59/57	Plain Water	2.0	45	55	8.7	70	109	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU 103	Room 2009	260	70	Direct	1/4	1	8.6	80/67	59/57	Plain Water	1.8	45	55	4.4	70	101	Plain Water	0.3	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU 104	Room 2010	410	170	Direct	1/4	1	12.9	80/67	59/57	Plain Water	2.6	45	55	10.7	70	100	Plain Water	0.7	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU 105	Room 2022	770	370	Direct	1/4	2	22.5	80/67	62/59	Plain Water	4.6	45	55	12.5	70	96	Plain Water	0.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 106	Room 2023	360	290	Direct	1/4	1	14.3	80/67	59/57	Plain Water	2.9	45	55	10.3	70	100	Plain Water	0.7	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 107	Room 2008	810	330	Direct	1/4	2	25.2	80/67	57/56	Plain Water	5.2	45	55	15.6	70	97	Plain Water	1.0	160	130	1" Throw Away	7	120/1	5.85	180	Titus TH8P60	----
FCU 108	Room 2007	810	280	Direct	1/4	2	17.8	80/67	62/59	Plain Water	3.6	45	55	14.3	70	96	Plain Water	0.9	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 109A	Room 2005	850	310	Direct	1/4	2	22.9	80/67	62/59	Plain Water	4.6	45	55	12.2	70	96	Plain Water	0.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 109B	Room 2005	700	250	Direct	1/4	2	22.9	80/67	62/59	Plain Water	4.6	45	55	12.2	70	96	Plain Water	0.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 110	Room 2025	330	330	Direct	1/4	2	21.6	80/67	62/59	Plain Water	4.4	45	55	18.8	70	96	Plain Water	1.2	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 111	Room 2029	250	250	Direct	1/4	2	21.0	80/67	62/59	Plain Water	4.3	45	55	15.3	70	96	Plain Water	1.0	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 112A-1	Room 2031	875	325	Direct	1/4	2	38.0	80/67	55/54	Plain Water	3.9	45	55	14.7	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P60	----
FCU 112B-1	Room 2031	750	550	Direct	1/4	2	27.6	80/67	55/54	Plain Water	2.8	45	55	11.3	70	97	Plain Water	0.4	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P50	----
FCU 112C-1	Room 2031	765	480	Direct	1/4	2	26.2	80/67	57/55	Plain Water	2.7	45	55	12.0	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU 112A-2	Room 2031	875	325	Direct	1/4	2	38.0	80/67	55/54	Plain Water	3.9	45	55	14.7	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P60	----
FCU 112B-2	Room 2031	750	550	Direct	1/4	2	27.6	80/67	55/54	Plain Water	2.8	45	55	11.3	70	97	Plain Water	0.4	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P50	----
FCU 112C-2	Room 2031	675	480	Direct	1/4	2	26.2	80/67	57/55	Plain Water	2.7	45	55	12.0	70	99	Plain Water	0.4	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU 113	Room 2001	50	0	Direct	1/4	1	3.0	80/67	62/59	Plain Water	0.6	45	55	3.5	70	97	Plain Water	0.3	160	130	1" Throw Away	7	120/1	0.87	99	Titus TVBF02	----
FCU 114	Room 2002	500	230	Direct	1/4	1	21.0	80/67	55/54	Plain Water	4.2	45	55	17.5	70	99	Plain Water	1.2	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU 115	Room 2033	480	120	Direct	1/4	1	8.2	80/67	59/57	Plain Water	1.6	45	55	9.3	70	109	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU 116	Room 2078	450	150	Direct	1/4	1	11.5	80/67	59/57	Plain Water	2.4	45	55	5.4	70	100	Plain Water	0.4	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU 117	Room 2078	580	250	Direct	1/4	2	23.2	80/67	62/59	Plain Water	4.7	45	55	17.8	70	96	Plain Water	1.2	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 118	Room 2033	400	230	Direct	1/4	1	15.4	80/67	55/54	Plain Water	3.1	45	55	9.5	70	99	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU 119	Room 2035	1000	340	Direct	1/4	2	25.6	80/67	57/56	Plain Water	5.3	45	55	23.8	70	97	Plain Water	1.6	160	130	1" Throw Away	7	120/1	5.85	180	Titus TH8P60	----
FCU 120	Room 2035A	450	170	Direct	1/4	2	33.6	80/67	55/54	Plain Water	6.8	45	55	27.4	70	97	Plain Water	1.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P60	----
FCU 121A	Room 2035B	450	85	Direct	1/4	2	31.3	80/67	57/56	Plain Water	6.0	45	55	24.8	70	97	Plain Water	1.7	160	130	1" Throw Away	7	120/1	5.85	180	Titus TH8P60	----
FCU 121B	Room 2035B	440	205	Direct	1/4	2	31.3	80/67	57/56	Plain Water	6.0	45	55	24.8	70	97	Plain Water	1.7	160	130	1" Throw Away	7	120/1	5.85	180	Titus TH8P60	----
FCU 122	Room 2073	610	310	Direct	1/4	2	11.8	80/67	60/58	Plain Water	2.5	45	55	11.2	70	111	Plain Water	0.8	160	130	1" Throw Away	7	120/1	4.5	152	Titus TH8P50	----
FCU 123	Room 2074	500	180	Direct	1/4	1	18.1	80/67	59/57	Plain Water	3.7	45	55	9.3	70	100	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 124	Room 2075	550	260	Direct	1/4	1	16.2	80/67	59/57	Plain Water	3.3	45	55	8.2	70	100	Plain Water	0.5	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 125A	Room 2069	500	315	Direct	1/4	2	19.1	80/67	61/58	Plain Water	3.9	45	55	10.8	70	97	Plain Water	0.7	160	130	1" Throw Away	7	120/1	4.5	145	Titus TH8P50	----
FCU 125B	Room 2069	500	315	Direct	1/4	2	19.1	80/67	61/58	Plain Water	3.9	45	55	10.8	70	97	Plain Water	0.7	160	130	1" Throw Away	7	120/1	4.5	145	Titus TH8P50	----
FCU 126	Room 2066	780	350	Direct	1/4	2	26.6	80/67	57/55	Plain Water	5.4	45	55	21.5	70	99	Plain Water	1.4	160	130	1" Throw Away	7	120/1	4.5	170	Titus TH8P50	----
FCU 127	Room 2052	800	190	Direct	1/4	2	12.9	80/67	61/58	Plain Water	2.6	45	55	16.1	70	97	Plain Water	1.0	160	130	1" Throw Away	7	120/1	4.5	145	Titus TH8P50	----
FCU 128	Room 2043	430	210	Direct	1/4	1	9.5	80/67	59/57	Plain Water	2.0	45	55	9.2	70	100	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU 129	Room 2046	690	220	Direct	1/4	2	21.1	80/67	62/59	Plain Water	4.3	45	55	15.5	70	96	Plain Water	1.0	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 130	Room 2054	550	260	Direct	1/4	2	18.3	80/67	56/55	Plain Water	3.8	45	55	18.5	70	111	Plain Water	1.3	160	130	1" Throw Away	7	120/1	4.5	159	Titus TH8P50	----
FCU 131	Room 2065	470	200	Direct	1/4	1	15.7	80/67	59/57	Plain Water	3.2	45	55	11.7	70	100	Plain Water	0.8	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 132	Room 2060	710	300	Direct	1/4	2	20.1	80/67	62/59	Plain Water	4.1	45	55	13.8	70	96	Plain Water	0.9	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 133	Room 2061	130	80	Direct	1/4	1	5.2	80/67	52/51	Plain Water	1.1	45	55	5.2	70	110	Plain Water	0.3	160	130	1" Throw Away	7	120/1	1.25	70	Titus TH8P20	----
FCU 134	Room 2077	200	0	Direct	1/4	1	----	----	----	----	----	----	----	7.8	70	97.3	Plain Water	0.4	160	130	1" Throw Away	7	120/1	0.87	99	Titus TVBF02	----

Fan Coil Unit Schedule

Unit No.	Location	CFM		Fan Data			Cooling (MBH)	Cooling Air Data		Cooling Coil Data				Heating (MBH)	Heating Air Data		Heating Coil Data				Filter Data		Electrical Data		Weight (lbs)	Manufacturer & Model	Remarks
		Total	Min. O.A	Drive	Motor HP	Motor Qty.	Total	T (ºF) DB/W	(ºF) DB/W	Fluid	GPM	EWT (ºF)	LWT (ºF)		EAT (ºF)	LAT (ºF)	Fluid	GPM	EWT (ºF)	LWT (ºF)	Type	MERV	Volt/PH	MCA			
Second Floor																											
FCU 201	Room 3006	320	70	Direct	1/4	1	10.2	80/67	59/57	Plain Water	2.1	45	55	18.2	70	121	Plain Water	1.2	160	130	1" Throw Away	7	120/1	2.12	98	Titus TH8P30	----
FCU 202	Room 3005	500	270	Direct	1/4	1	22.2	80/67	55/54	Plain Water	4.5	45	55	23.6	70	109	Plain Water	1.6	160	130	1" Throw Away	7	120/1	3.5	126	Titus TH8P40	----
FCU 203	Room 3002	660	330	Direct	1/4	2	16.8	80/67	56/55	Plain Water	3.5	45	55	22.6	70	113	Plain Water	1.5	160	130	1" Throw Away	7	120/1	4.5	159	Titus TH8P50	----
FCU 204	Room 3003	270	200	Direct	1/4	1	14.2	80/67	59/57	Plain Water	2.9	45	55	11.6	70	100	Plain Water	1.0	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 205	Room 3014	640	170	Direct	1/4	2	22.5	80/67	62/59	Plain Water	4.6	45	55	12.5	70	96	Plain Water	0.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 206	Room 3015	660	210	Direct	1/4	2	22.5	80/67	62/59	Plain Water	4.6	45	55	12.5	70	96	Plain Water	0.8	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P50	----
FCU 207	Room 3016	940	310	Direct	1/4	2	28.1	80/67	62/59	Plain Water	5.7	45	55	19.6	70	96	Plain Water	1.3	160	130	1" Throw Away	7	120/1	5.85	172	Titus TH8P60	----
FCU 208	Room 3017	920	520	Direct	1/4	2	38.0	80/67	55/54	Plain Water	3.9	45	55	14.7	70	97	Plain Water	0.5	160	130	1" Throw Away	7	120/1	5.85	183	Titus TH8P60	----
FCU 209	Room 3018	320	90	Direct	1/4	1	10.2	80/67	59/57	Plain Water	2.1	45	55	18.2	70	121	Plain Water	1.2	160	130	1" Throw Away	7	120/1	2.12	98	Titus TH8P30	----
FCU 210	Room 3021	500	270	Direct	1/4	1	10.2	80/67	59/57	Plain Water	2.0	45	55	8.7	70	109	Plain Water	0.6	160	130	1" Throw Away	7	120/1	3.5	121	Titus TH8P40	----
FCU 211	Room 3025	330	70	Direct	1/4	1	9.0	80/67	58/56	Plain Water	1.8	45	55	7.7	70	99	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	83	Titus TH8P25	----
Third Floor																											
FCU 301	Room 4006	320	70	Direct	1/4	1	7.0	80/67	59/57	Plain Water	1.4	45	55	8.4	70	101	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU 302	Room 4005	500	270	Direct	1/4	1	14.2	80/67	59/57	Plain Water	2.9	45	55	11.6	70	100	Plain Water	1.0	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 303	Room 4003	310	120	Direct	1/4	1	9.0	80/67	58/56	Plain Water	1.8	45	55	7.7	70	99	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	83	Titus TH8P25	----
FCU 304	Room 4002	270	200	Direct	1/4	1	6.5	80/67	59/57	Plain Water	1.3	45	55	4.9	70	101	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----
FCU 305	Room 4026	430	130	Direct	1/4	1	15.4	80/67	59/57	Plain Water	3.2	45	55	12.9	70	100	Plain Water	1.1	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU 306	Room 4014	570	160	Direct	1/4	1	10.4	80/67	59/57	Plain Water	2.1	45	55	11.0	70	100	Plain Water	0.7	160	130	1" Throw Away	7	120/1	3.5	116	Titus TH8P40	----
FCU 307	Room 4017	500	270	Direct	1/4	1	13.8	80/67	59/57	Plain Water	2.8	45	55	11.1	70	100	Plain Water	1.0	160	130	1" Throw Away	7	120/1	3.5	112	Titus TH8P40	----
FCU 308	Room 4021	320	70	Direct	1/4	1	6.4	80/67	59/57	Plain Water	1.3	45	55	6.9	70	101	Plain Water	0.5	160	130	1" Throw Away	7	120/1	2.12	94	Titus TH8P30	----

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Project #: 15-345

MARK	DATE	DESCRIPTION
	01/24/20	FINAL BID / PERMIT

ERIC D. FELLENZER, P.E.

NY PROFESSIONAL ENGINEER
NO. 073084-1

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PROJECT No:	DATE:	SCALE:
FILB 1501	11/15/19	AS SHOWN

CLIENT

Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

**Montebello Crossing,
250 Lafayette Avenue
(Route 59)
Village of Montebello
New York**

CONTRACT

STATUS

REGULATORY REVIEW

SHEET TITLE

**HVAC:
SCHEDULES**

DRAWING No.

H8.2

SHEET No.

OF

File Name: F:\2015\15-345 NEW ASSISTED LIVING RESIDENCE\H8.2.dwg (Layout: Layout1)
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