

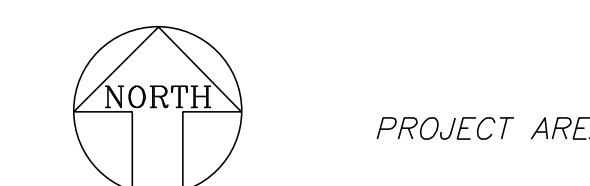
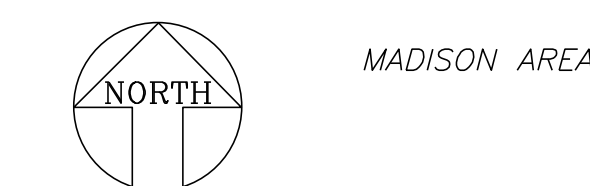
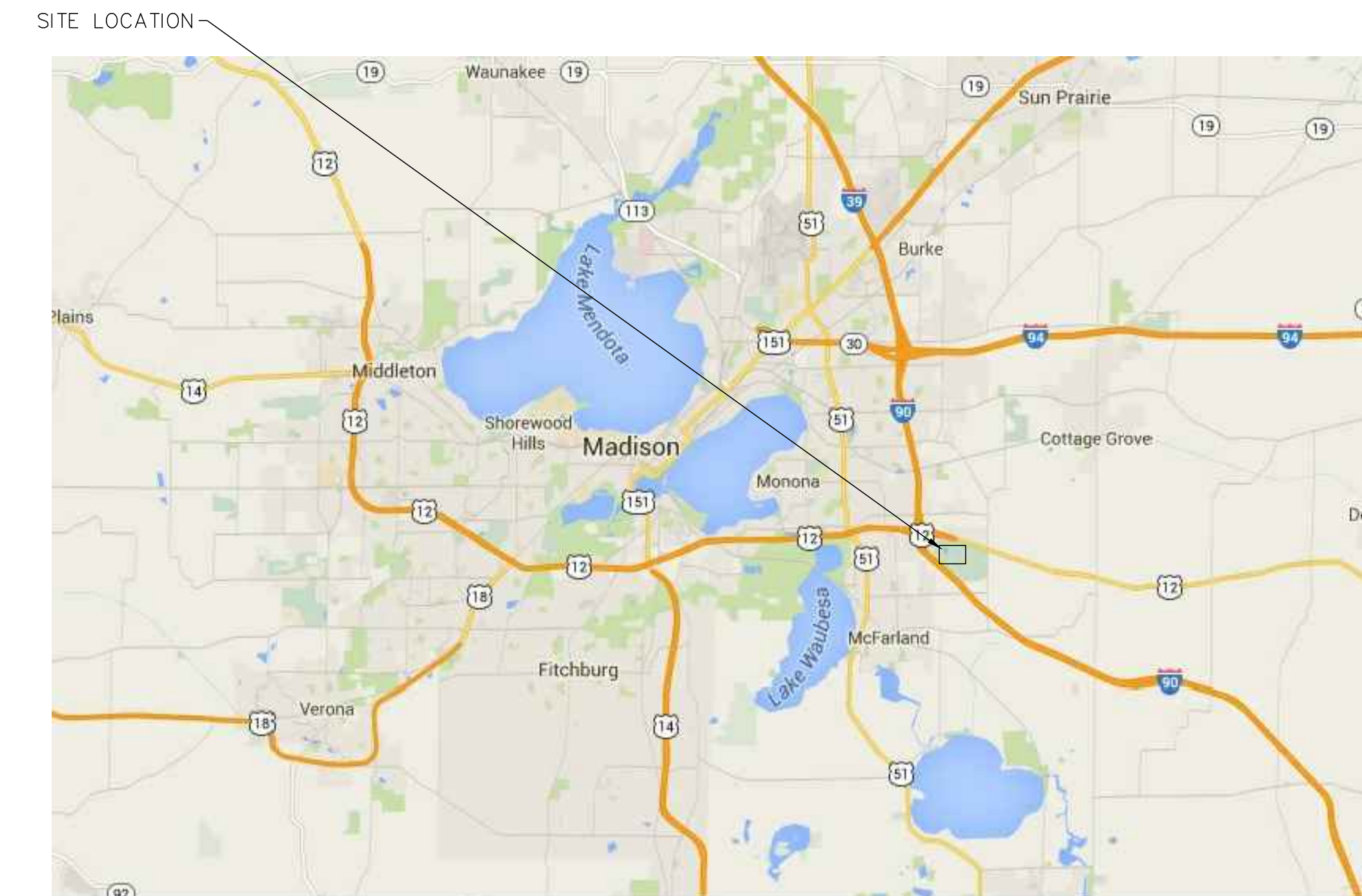
Yahara Hills Facility Improvements – HVAC Upgrade

Contract #7458

Yahara Hills Golf Course

6701 Hwy 12
Madison, WI 53718

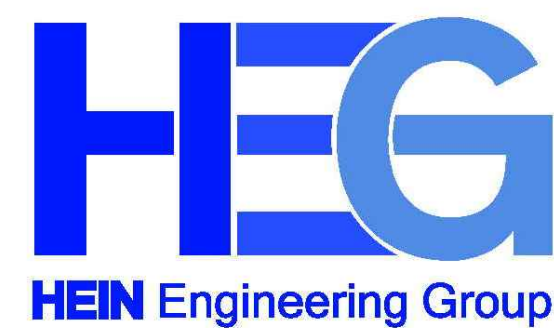
March 13, 2015



Sheet Index:

- TS-1 TITLE SHEET
- HD-1 HVAC DEMOLITION PLANS
- H-1 HVAC PLANS
- H-2 HVAC ENLARGED PLANS
- H-3 HVAC DETAILS & SCHEMATICS
- H-4 HVAC SCHEDULES
- ED-1 ELECTRICAL DEMOLITION PLANS
- E-1 ELECTRICAL PLANS & SCHEDULES

CONSULTING ENGINEERS:



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Madison, WI 53713
Phone: (608) 288-9260
email: hein@chorus.net

SUPERVISING ENGINEER:

MICHAEL HEIN, PE

Consultants



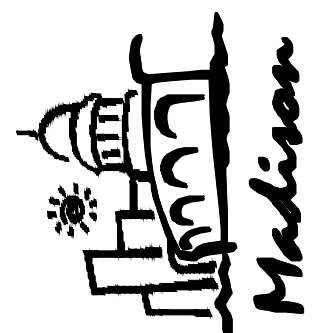
17 Applegate Court
Suite 200
Madison, WI 53713
Phone: (608) 288-9260
email: hein@chorus.net
Project No. H1403

Yahara Hills Facility Improvements - HVAC Upgrade

YAHARA HILLS GOLF COURSE

6701 Hwy 12

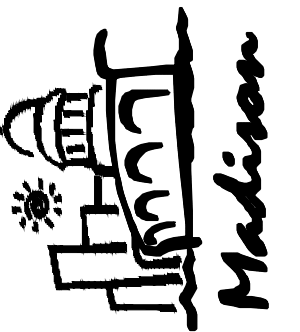
Madison, WI 53718



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TS-1



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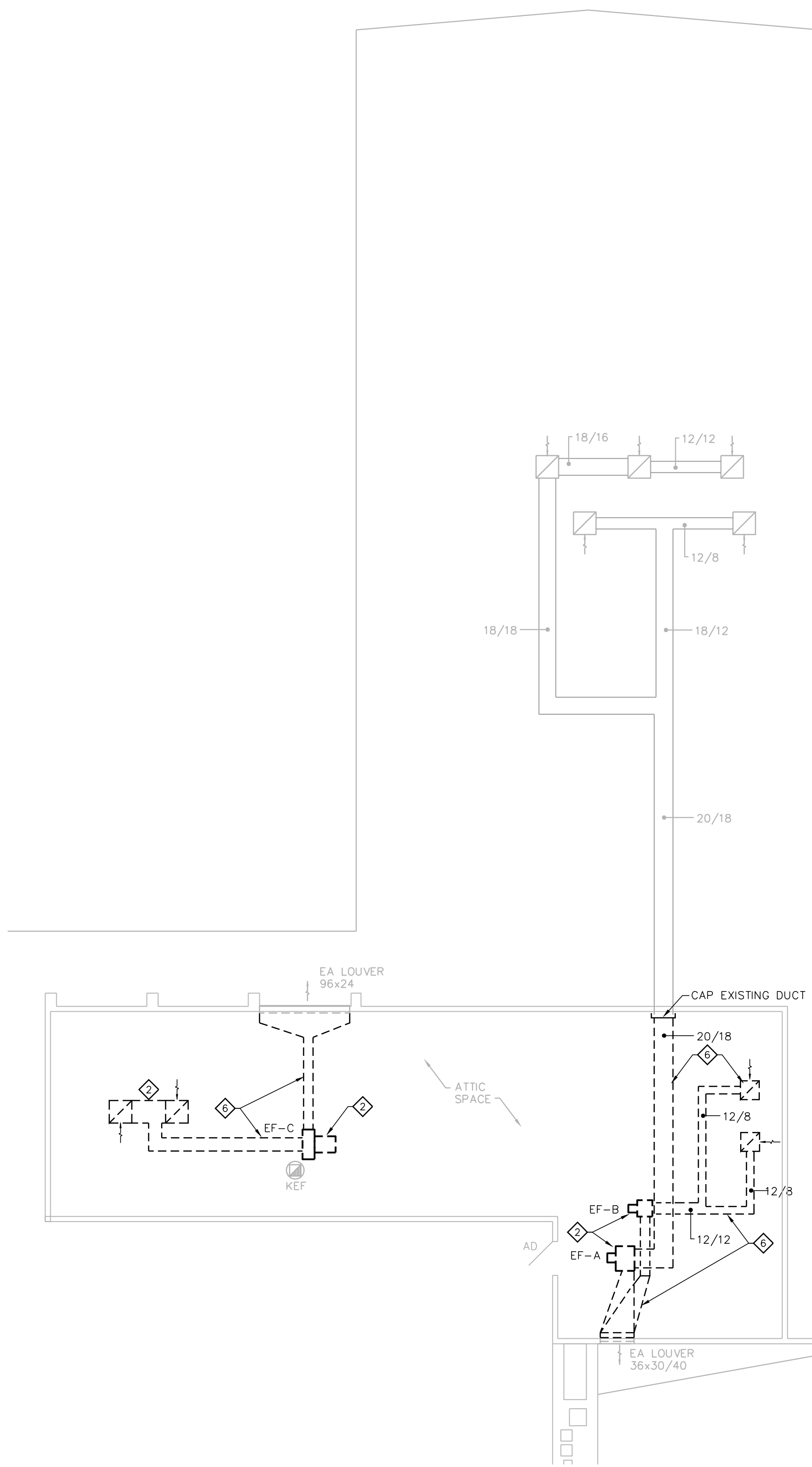
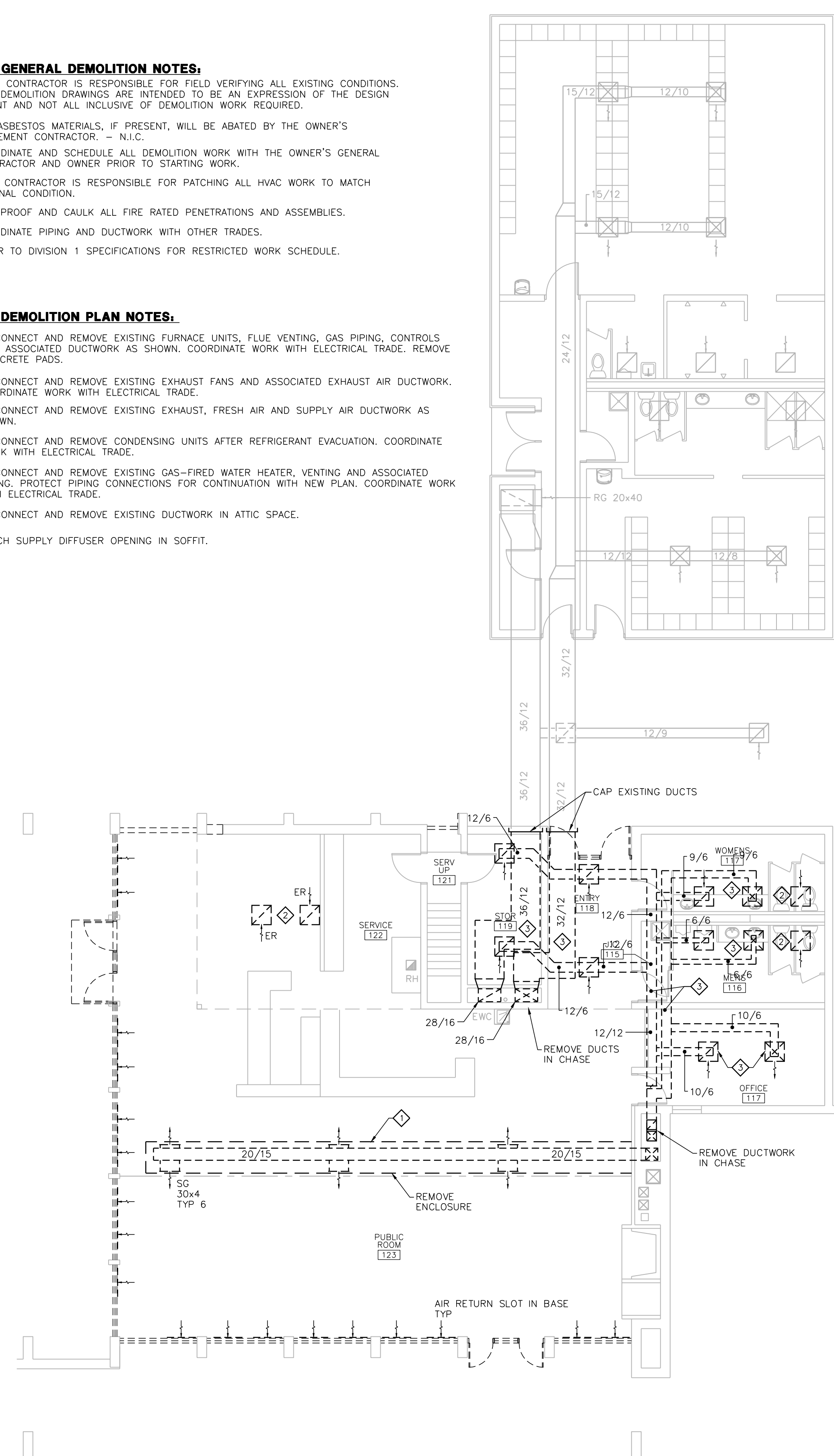
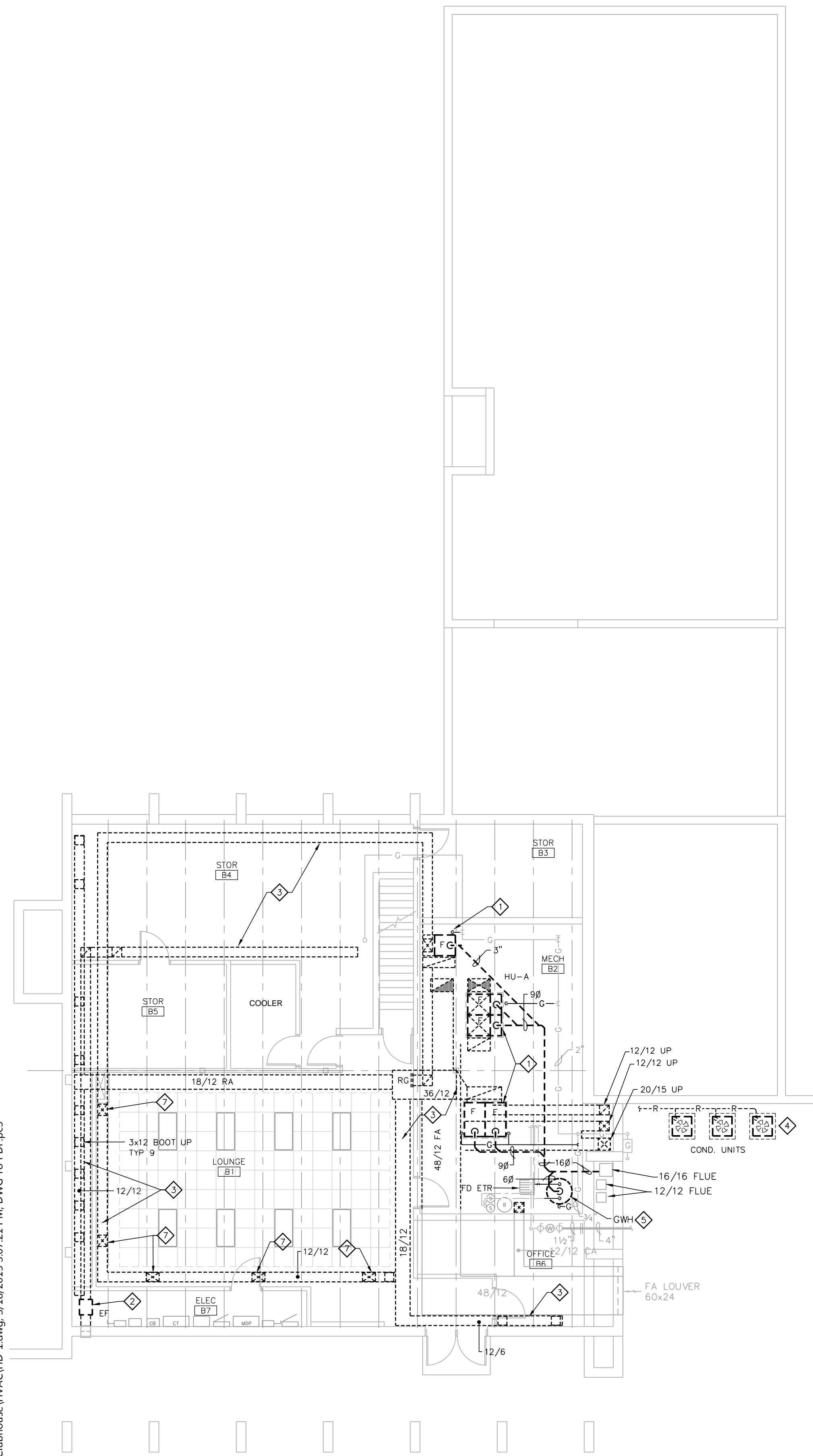
HD-1

HVAC GENERAL DEMOLITION NOTES:

- HVAC CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE DEMOLITION DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF DEMOLITION WORK REQUIRED.
- ALL ASBESTOS MATERIALS, IF PRESENT, WILL BE ABATED BY THE OWNER'S ABATEMENT CONTRACTOR. - N.I.C.
- COORDINATE AND SCHEDULE ALL DEMOLITION WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
- HVAC CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL HVAC WORK TO MATCH ORIGINAL CONDITION.
- FIRE PROOF AND CAULK ALL FIRE RATED PENETRATIONS AND ASSEMBLIES.
- COORDINATE PIPING AND DUCTWORK WITH OTHER TRADES.
- REFER TO DIVISION 1 SPECIFICATIONS FOR RESTRICTED WORK SCHEDULE.

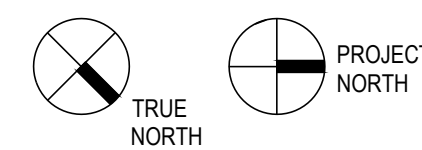
HVAC DEMOLITION PLAN NOTES:

- ◇ DISCONNECT AND REMOVE EXISTING FURNACE UNITS, FLUE VENTING, GAS PIPING, CONTROLS AND ASSOCIATED DUCTWORK AS SHOWN. COORDINATE WORK WITH ELECTRICAL TRADE. REMOVE CONCRETE PADS.
- ◇ DISCONNECT AND REMOVE EXISTING EXHAUST FANS AND ASSOCIATED EXHAUST AIR DUCTWORK. COORDINATE WORK WITH ELECTRICAL TRADE.
- ◇ DISCONNECT AND REMOVE EXISTING EXHAUST, FRESH AIR AND SUPPLY AIR DUCTWORK AS SHOWN.
- ◇ DISCONNECT AND REMOVE CONDENSING UNITS AFTER REFRIGERANT EVACUATION. COORDINATE WORK WITH ELECTRICAL TRADE.
- ◇ DISCONNECT AND REMOVE EXISTING GAS-FIRED WATER HEATER, VENTING AND ASSOCIATED PIPING. PROTECT PIPING CONNECTIONS FOR CONTINUATION WITH NEW PLAN. COORDINATE WORK WITH ELECTRICAL TRADE.
- ◇ DISCONNECT AND REMOVE EXISTING DUCTWORK IN ATTIC SPACE.
- ◇ PATCH SUPPLY DIFFUSER OPENING IN SOFFIT.



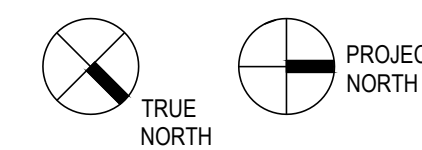
LOWER LEVEL PLAN - HVAC DEMOLITION

1/8" = 1'-0"



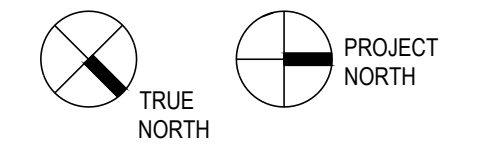
MAIN FLOOR PLAN - HVAC DEMOLITION

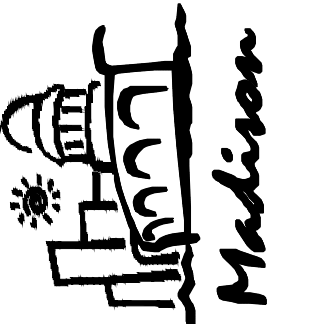
1/8" = 1'-0"



PARTIAL ATTIC PLAN - HVAC DEMOLITION

1/8" = 1'-0"

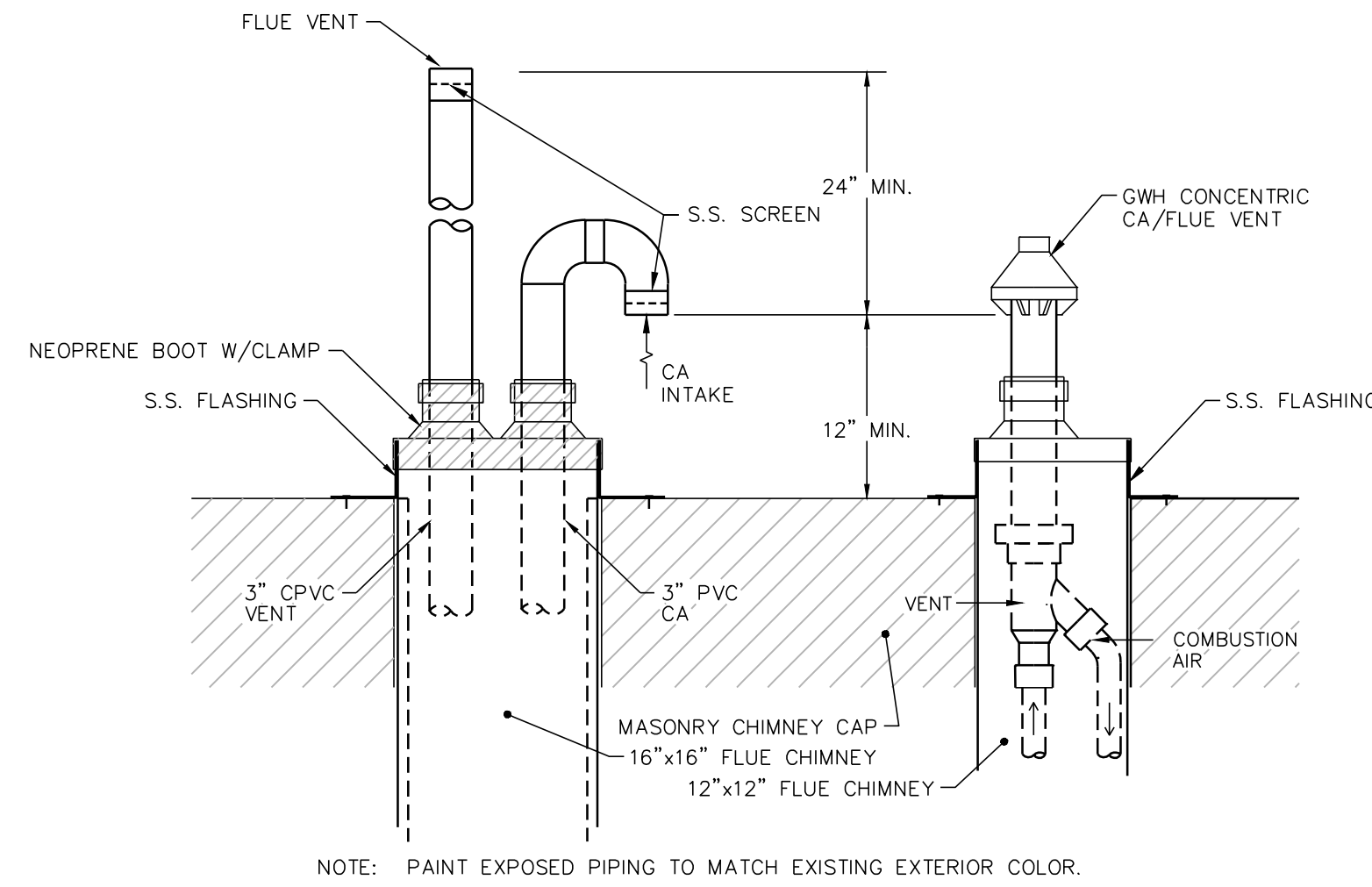




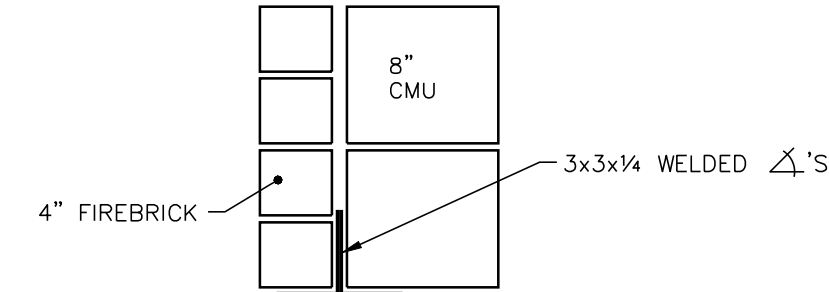
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1 BOILER FLUE/COMBUSTION AIR & WATER HEATER CONCENTRIC VENT TERMINATION DETAIL
NTS



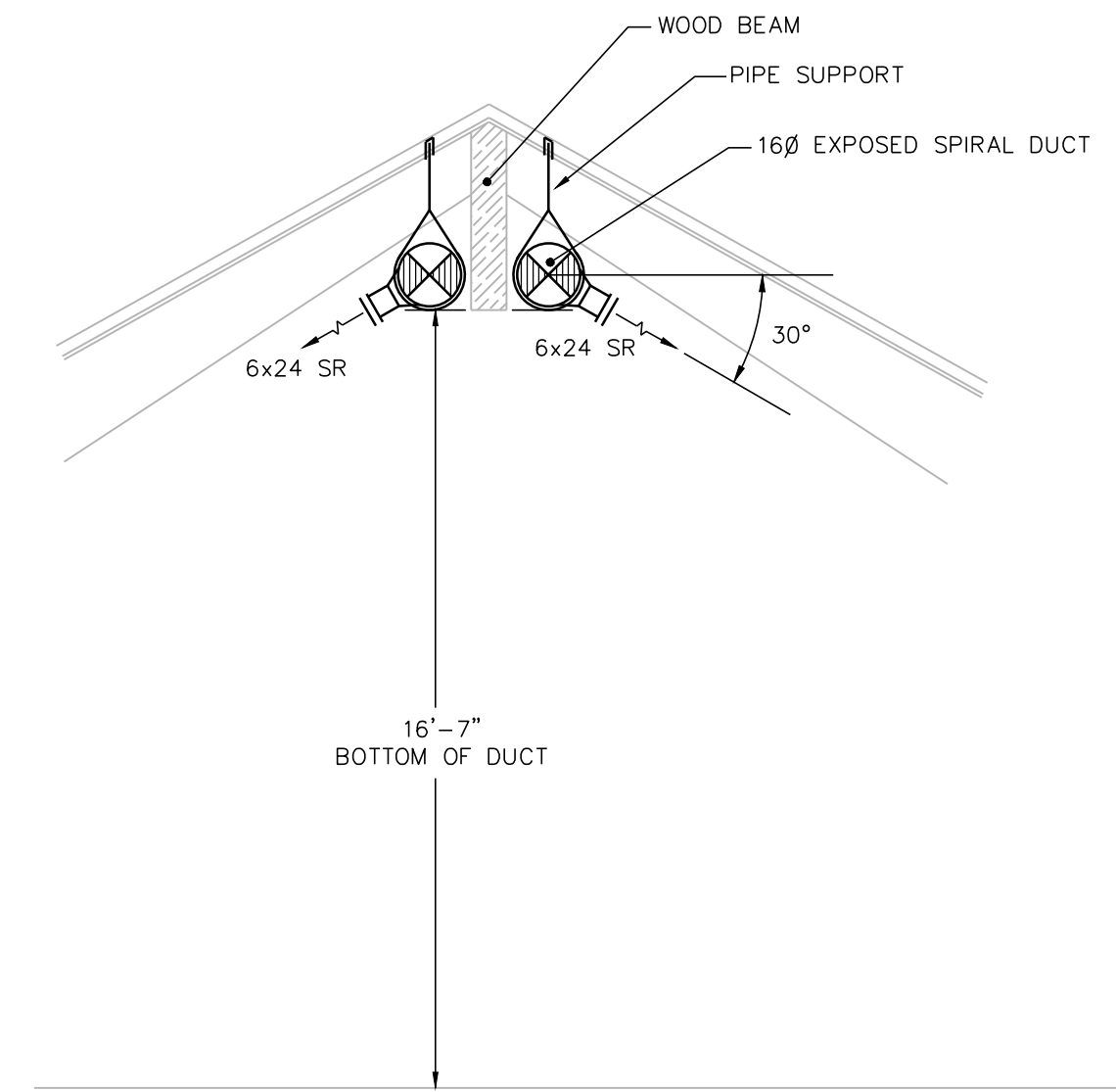
2 TYPICAL MASONRY LINTEL
NTS

HVAC GENERAL NOTES:

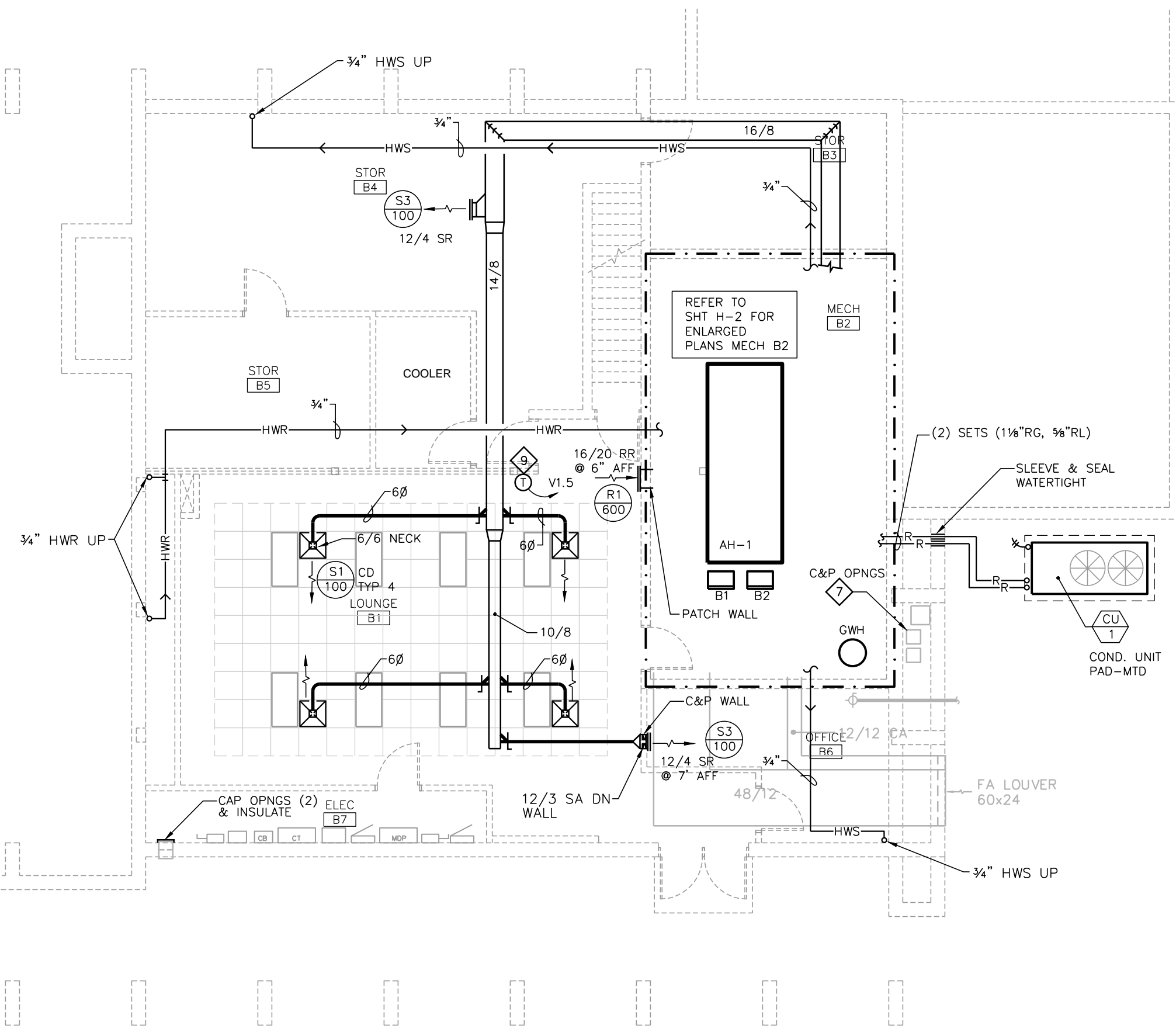
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- ALL ASBESTOS MATERIALS, IF PRESENT, WILL BE ABATED BY THE OWNER'S ABATEMENT CONTRACTOR. - N.I.C.
- COORDINATE AND SCHEDULE ALL HVAC WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
- HVAC CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL HVAC WORK TO MATCH ORIGINAL CONDITION.
- COORDINATE PIPING AND DUCTWORK ROUTING WITH OTHER TRADES.
- ALL FINISH PAINTING BY OWNER.
- ALL MASONRY FINISH BRICK WORK BY OWNER; CMU MASONRY WORK AND LINTELS BY HVAC CONTRACTOR.

HVAC PLAN NOTES:

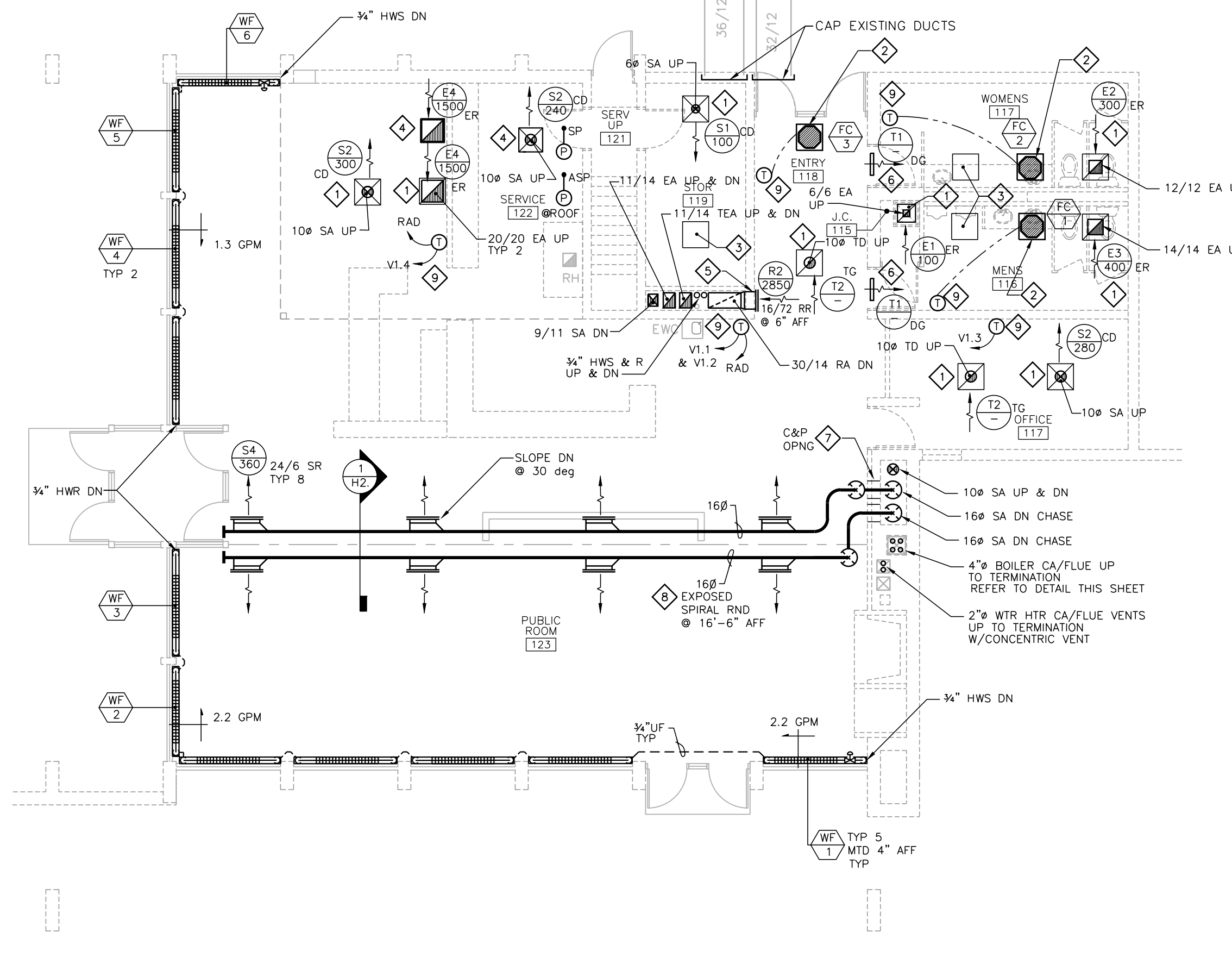
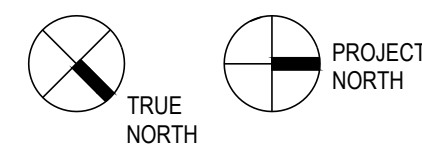
- INSTALL NEW REGISTER/GRILLE AT EXISTING CEILING OPENING. PATCH OPENING AS REQUIRED TO MATCH EXISTING CEILING.
- INSTALL NEW FAN COIL AT EXISTING CEILING OPENING.
- PATCH EXISTING CEILING OPENING TO MATCH EXISTING.
- CUT AND PATCH NEW CEILING OPENING.
- CUT AND PATCH NEW RETURN AIR OPENING. PROVIDE NEW MASONRY LINTEL.
- CUT AND PATCH WOOD DOORS FOR NEW DOOR GRILLES.
- CUT AND PATCH EXISTING WALL FOR NEW SUPPLY AIR ROUND DUCT OPENINGS. PROVIDE NEW MASONRY LINTEL. ENLARGE WALL OPENING AS REQUIRED TO REMOVE AND INSTALL DUCTWORK.
- SHOP PAINT EXPOSED SPIRAL ROUND DUCT, SUPPORTS AND RELATED. FINISH COLOR SELECTION TO BE PROVIDED BY OWNER.
- CUT AND PATCH WALL TO INSTALL CONCEALED CONTROL WIRING TO WALL SENSORS.



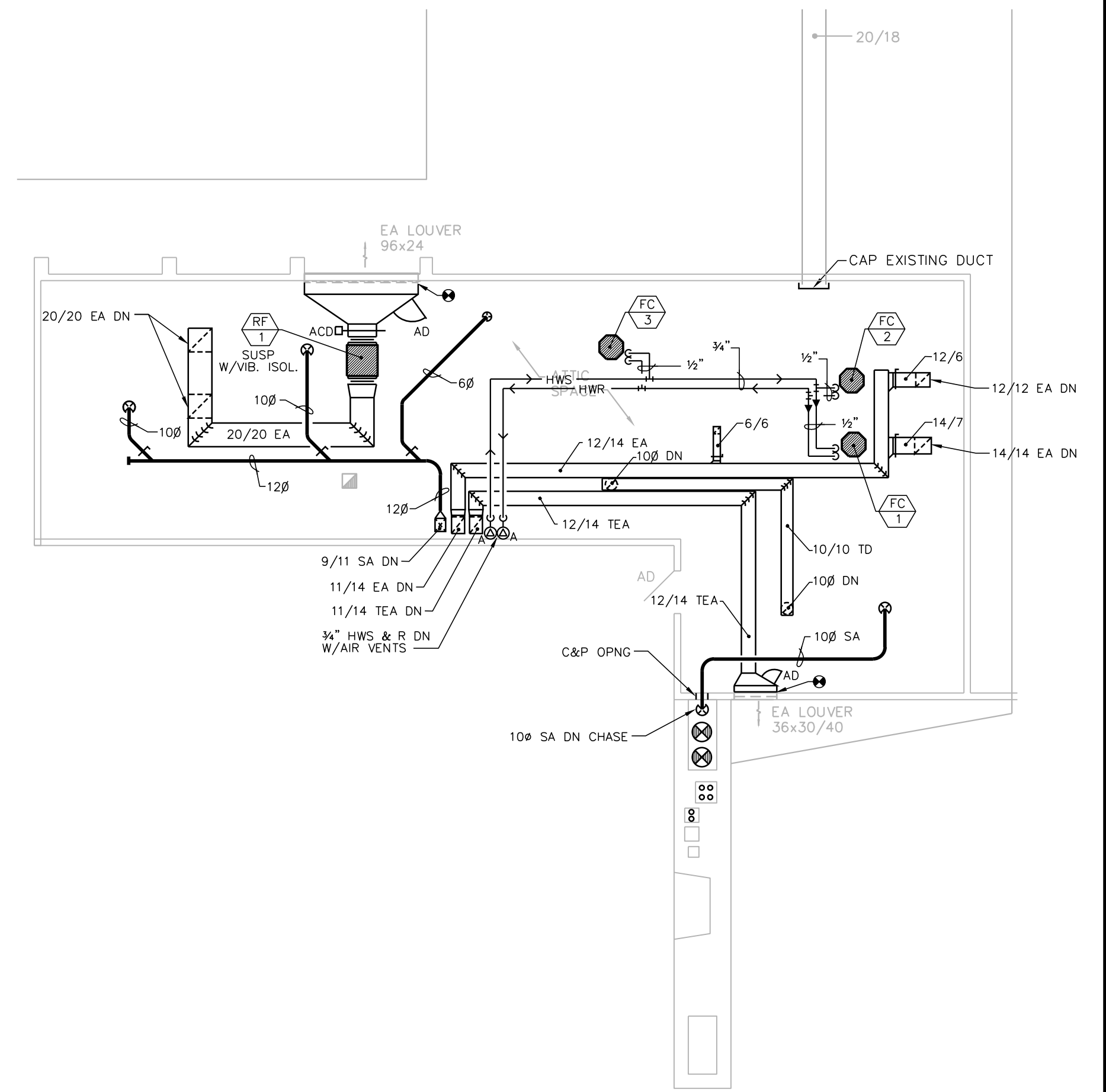
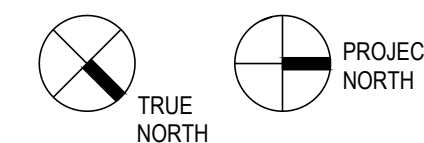
PARTIAL BLDG SECTION - HVAC
1/4" = 1'-0"



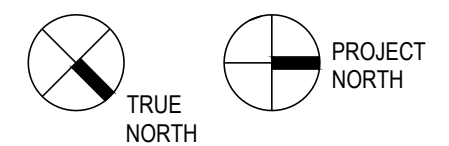
LOWER LEVEL PLAN - HVAC
1/8" = 1'-0"

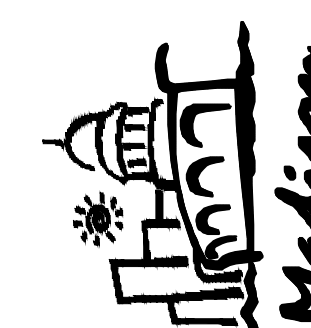


MAIN FLOOR PLAN - HVAC
1/8" = 1'-0"



PARTIAL ATTIC PLAN - HVAC
1/8" = 1'-0"





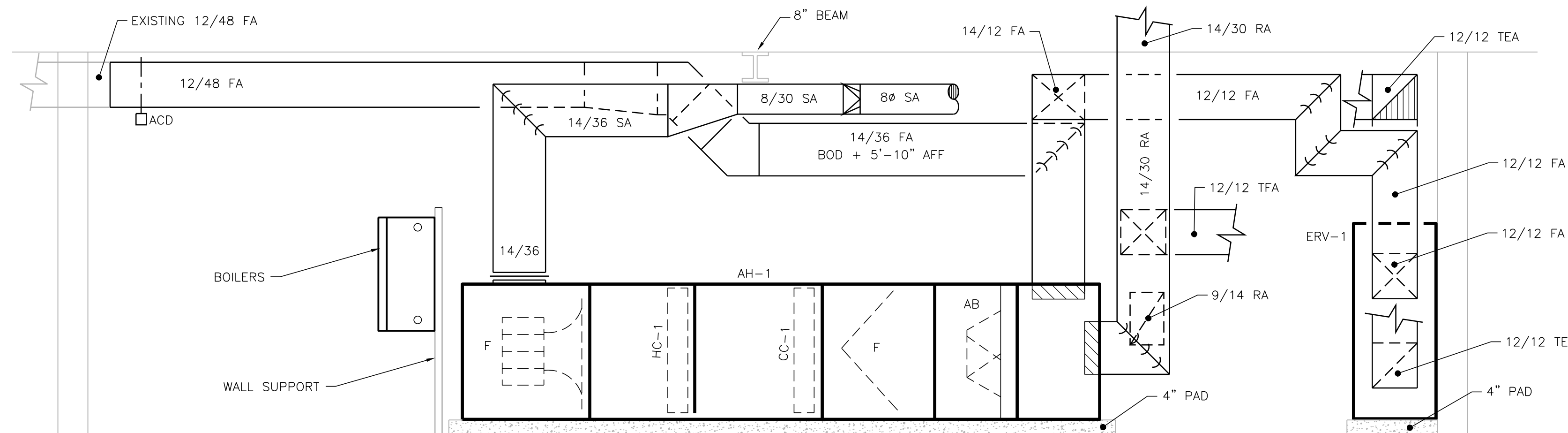
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HVAC GENERAL NOTES:

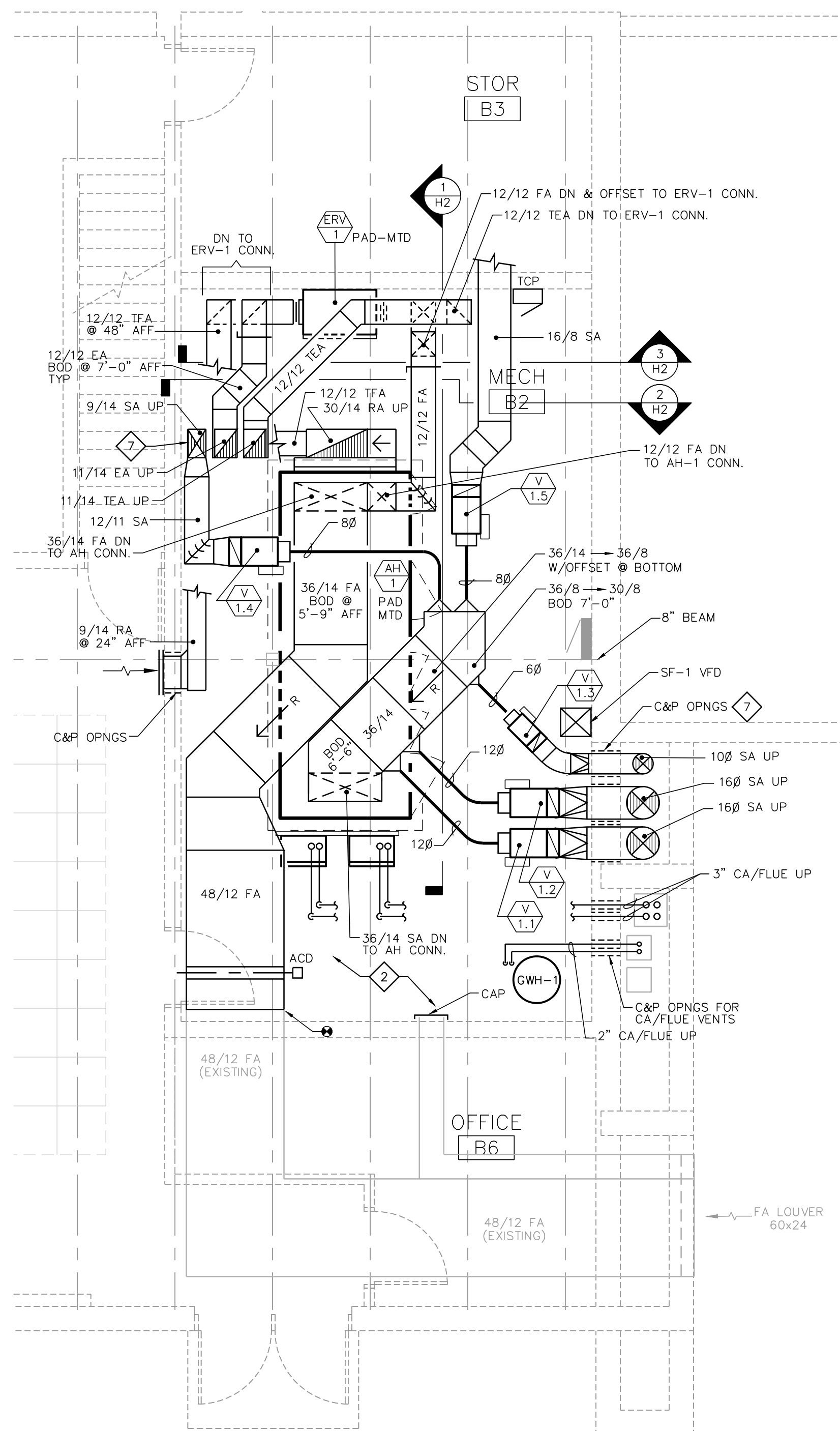
1. HVAC CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE HVAC DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF HVAC WORK REQUIRED.
2. ALL ASBESTOS MATERIALS, IF PRESENT, WILL BE ABATED BY THE OWNER'S ABATEMENT CONTRACTOR - N.I.C.
3. COORDINATE AND SCHEDULE ALL HVAC WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
4. HVAC CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL HVAC WORK TO MATCH ORIGINAL CONDITION.
5. COORDINATE PIPING AND DUCTWORK ROUTING WITH OTHER TRADES.
6. ALL FINISH PAINTING BY OWNER.
7. ALL MASONRY FINISH BRICK WORK BY OWNER; CMU MASONRY WORK AND LINTELS BY HVAC CONTRACTOR.

HVAC PLAN NOTES:

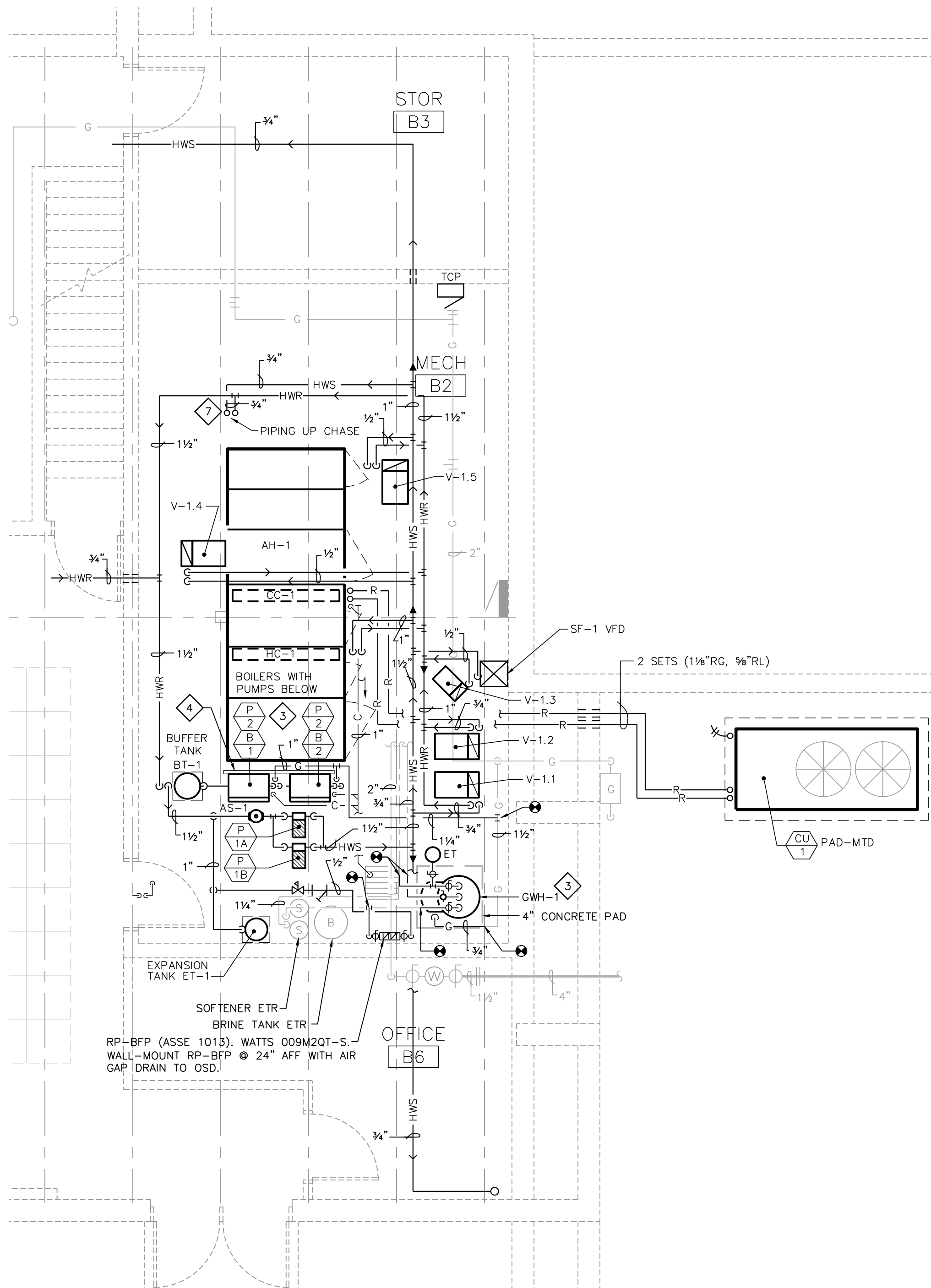
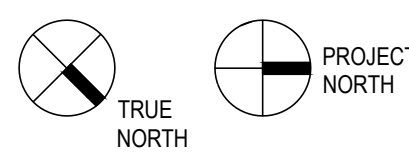
1. REMOVE CHASE WALL TO REMOVE EXISTING DUCTWORK AND INSTALL NEW DUCTWORK AS SHOWN. PATCH WALL UPON COMPLETION.
2. NOTE: MECH B2 IS NOT FIRE RATED, GAS-FIRED EQUIPMENT < 400 MBH.
3. EXTEND CONDENSATE DRAINS FROM BOILERS AND WATER HEATER WITH NEUTRALIZING CANNISTER TO EXISTING FLOOR DRAIN.
4. INSTALL PAINTED 3/4" PLYWOOD BACKBOARD WITH UNIT-STRUT SUPPORTS FROM FLR TO CLG TO MOUNT BOILERS. SECURE BOTTOM TO PAD.
5. PAD-MOUNT ALL NEW FLOOR-MTD EQUIPMENT.
6. COORDINATE PIPING & DUCTWORK ROUTING TO MAINTAIN 7'-0" MIN. CEILING HEIGHTS.
7. COORDINATE DUCT & PIPING ROUTING UP EXISTING CHASE OPENING WITH FIELD LOCATION. ENLARGE OPENING, AS REQUIRED.



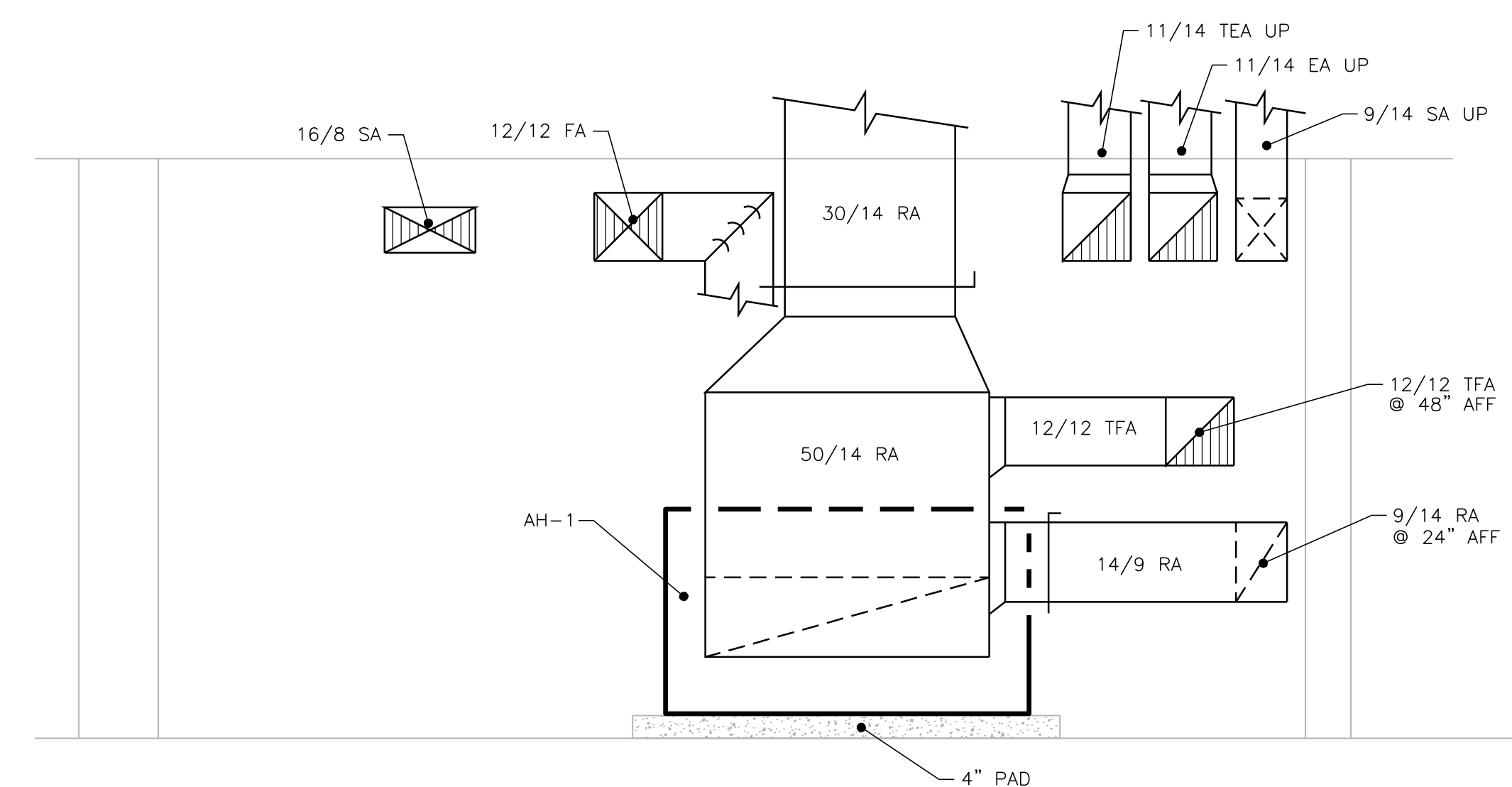
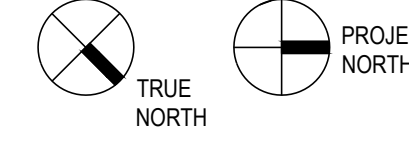
1 MECH ROOM B2 PLAN - ELEVATION
1/2" = 1'-0"



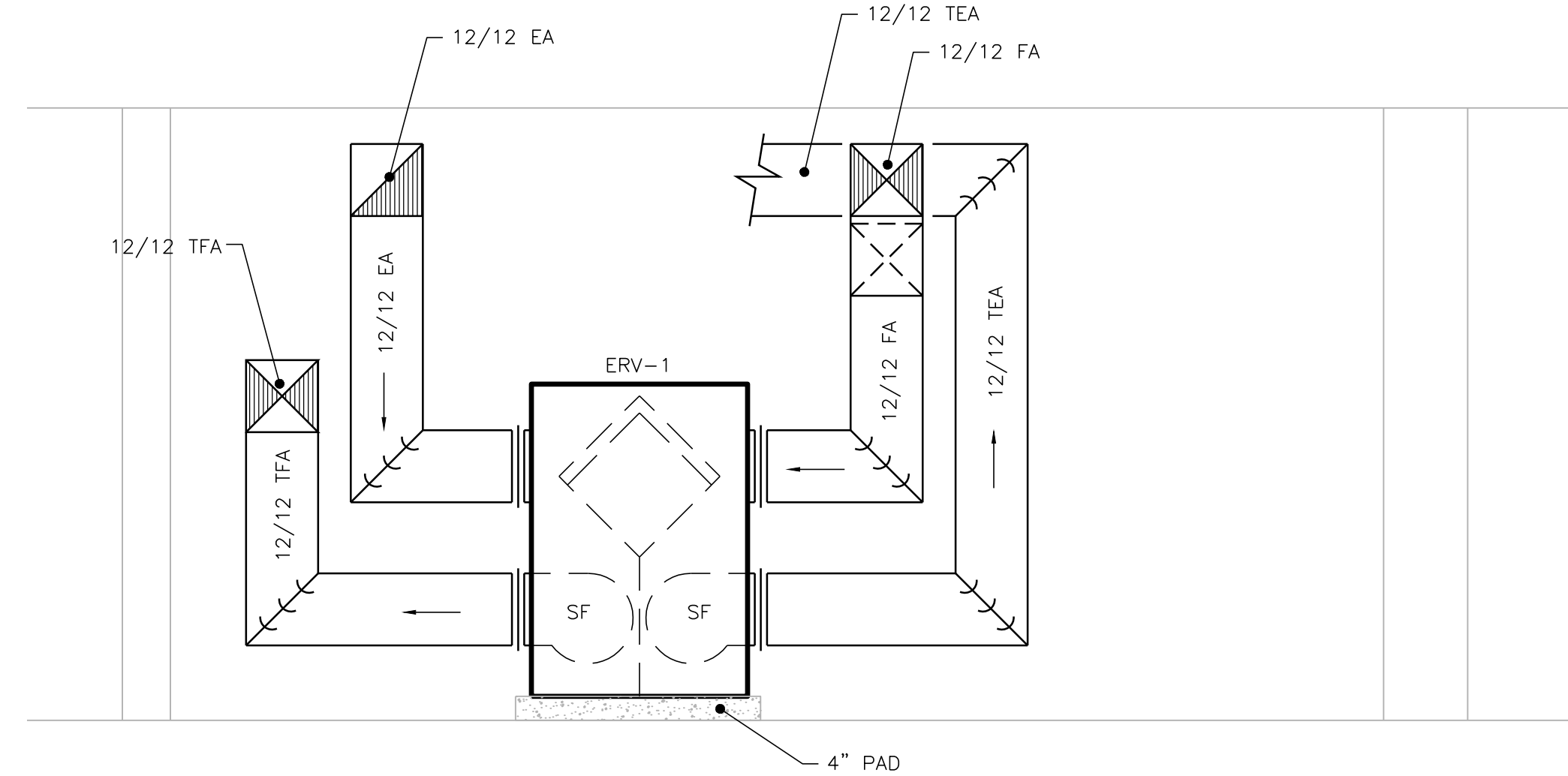
MECH ROOM B2 PLAN - HVAC DUCTWORK
1/4" = 1'-0"



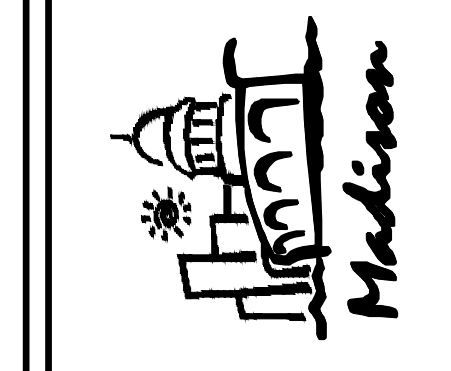
MECH ROOM B2 PLAN - HVAC PIPING
1/4" = 1'-0"



2 AH-1 ELEVATION - WEST
1/2" = 1'-0"

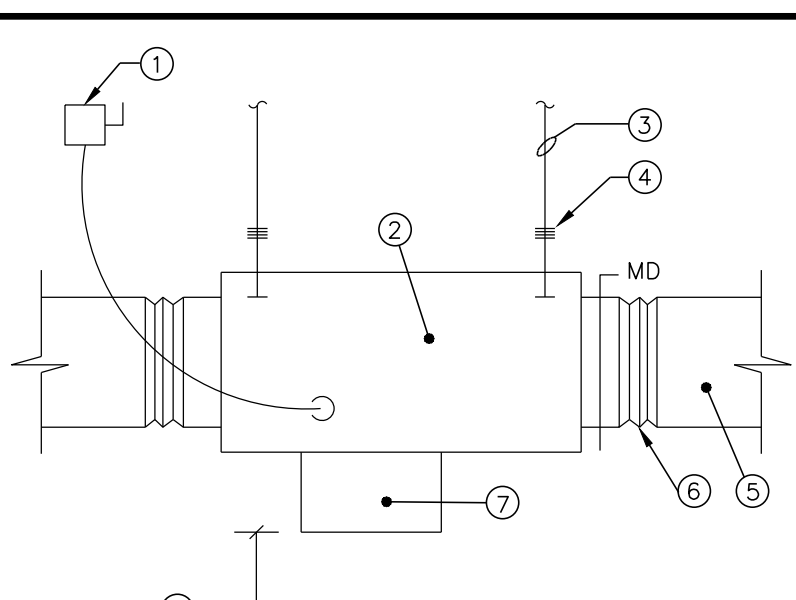
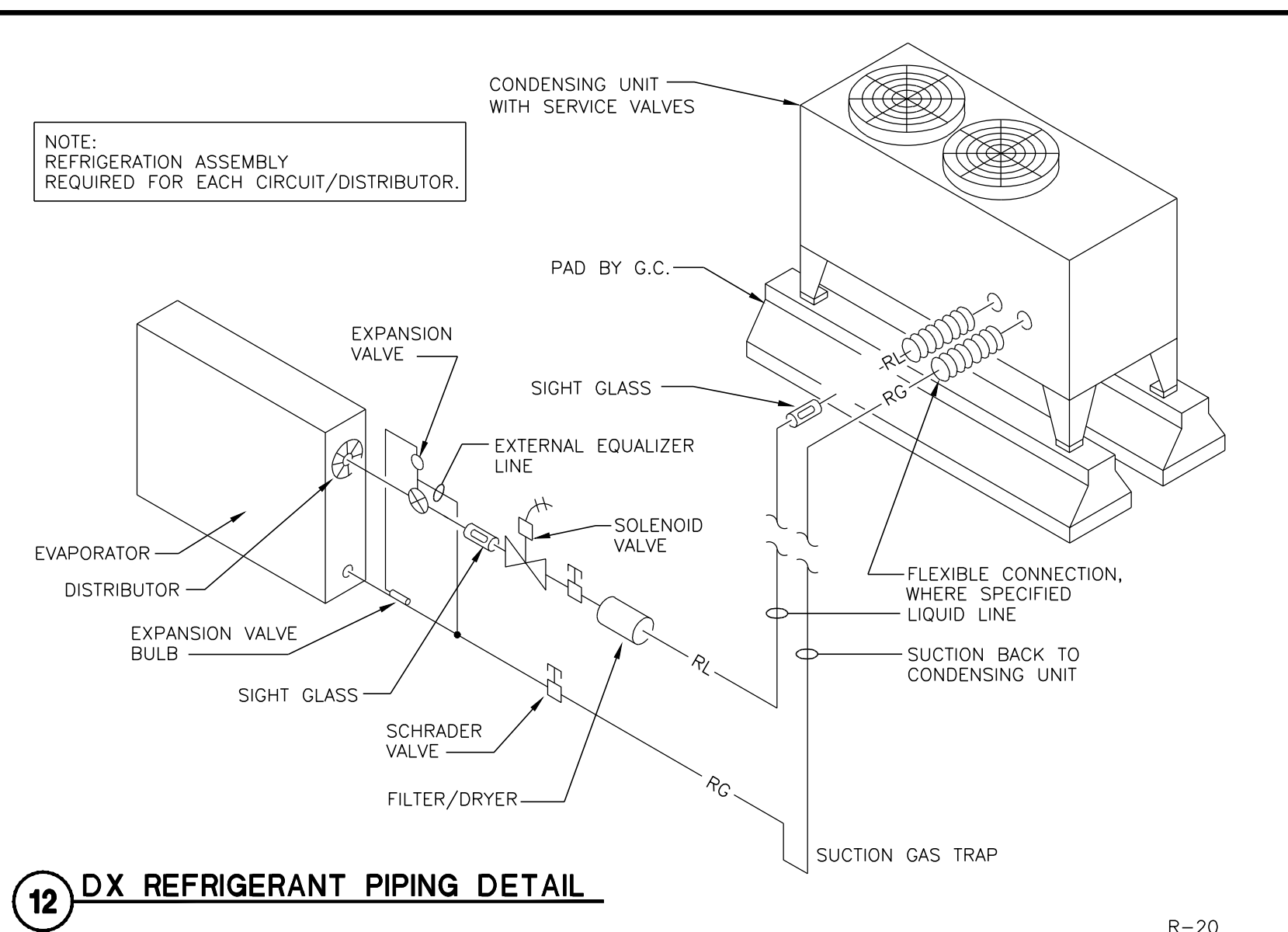
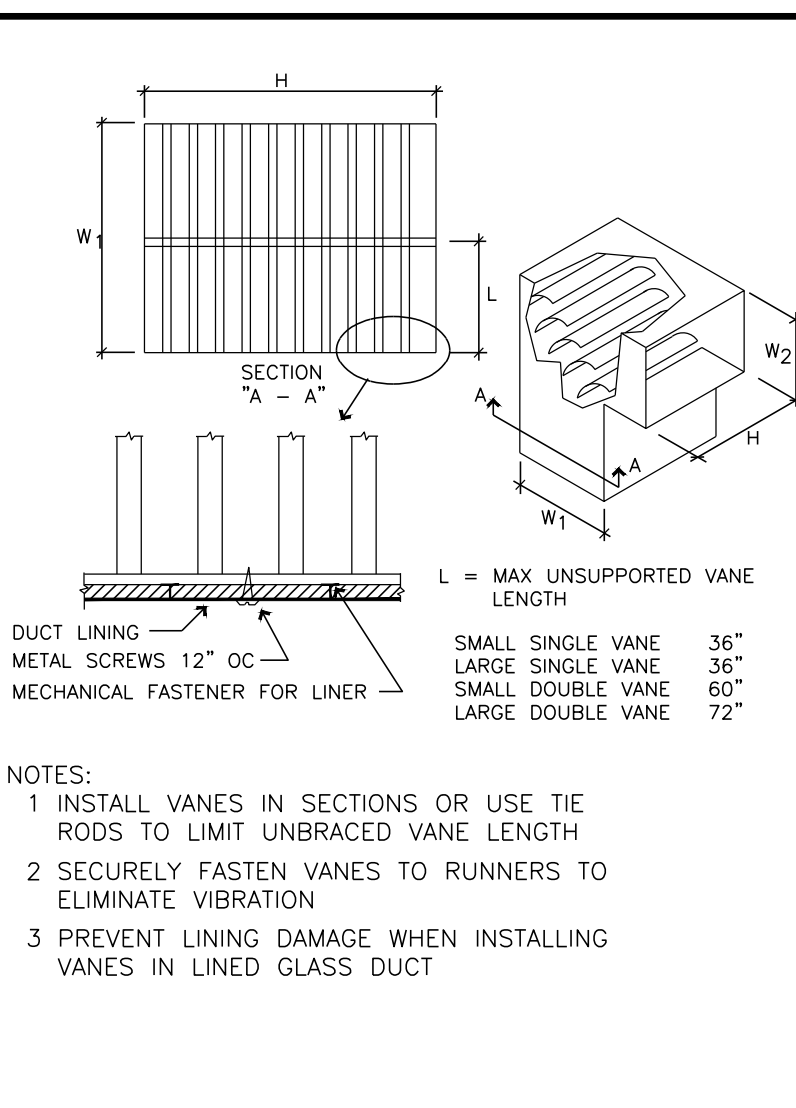
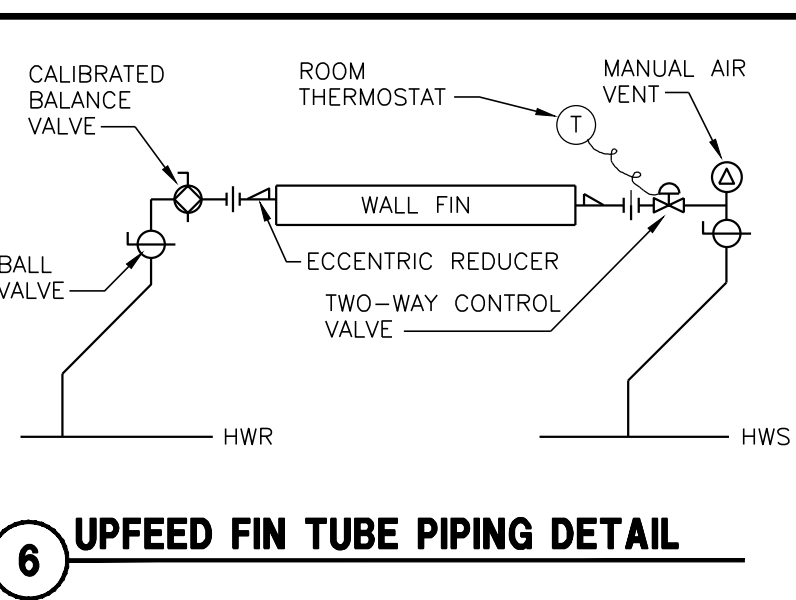
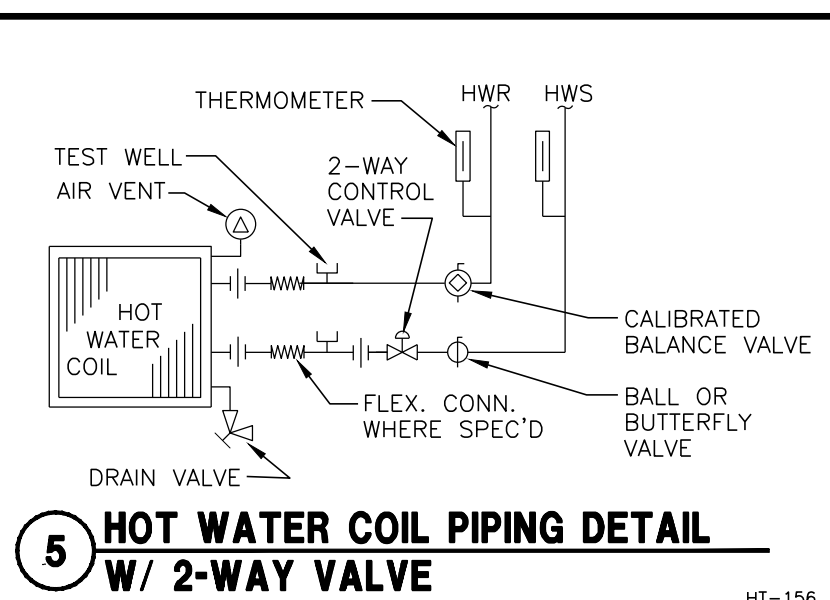
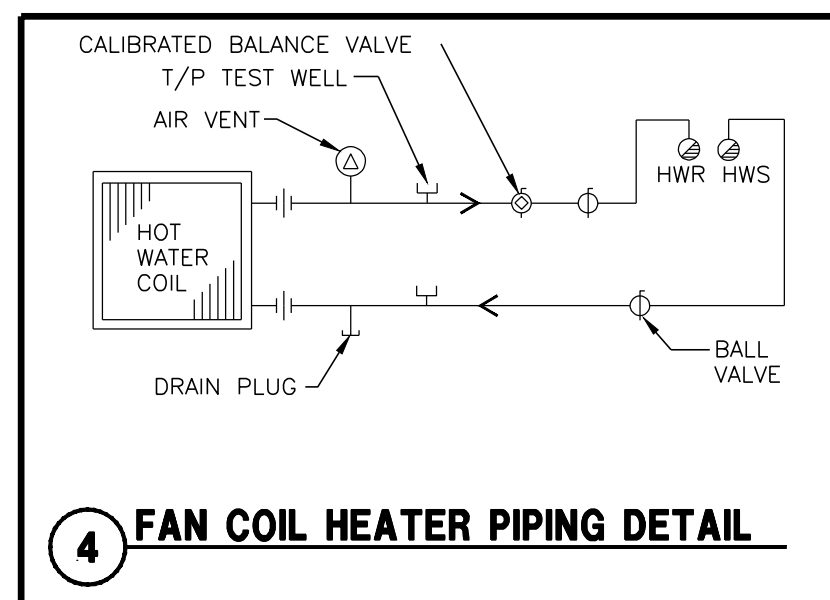


3 ERV-1 ELEVATION / MECH B2
1/2" = 1'-0"



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CONTROL POINTS

DIGITAL OUTPUTS -- DO

- DO-1 SF-1 START/STOP
- DO-2 ERV-1 START/STOP SF
- DO-3 ERV-1 START/STOP EF
- DO-4 CU-2 ENABLE/DISABLE
- DO-5 ERV-1 TEA
- DO-6 ERV-1 TEA
- DO-7 RF-1 START/STOP

ANALOG OUTPUTS -- AO

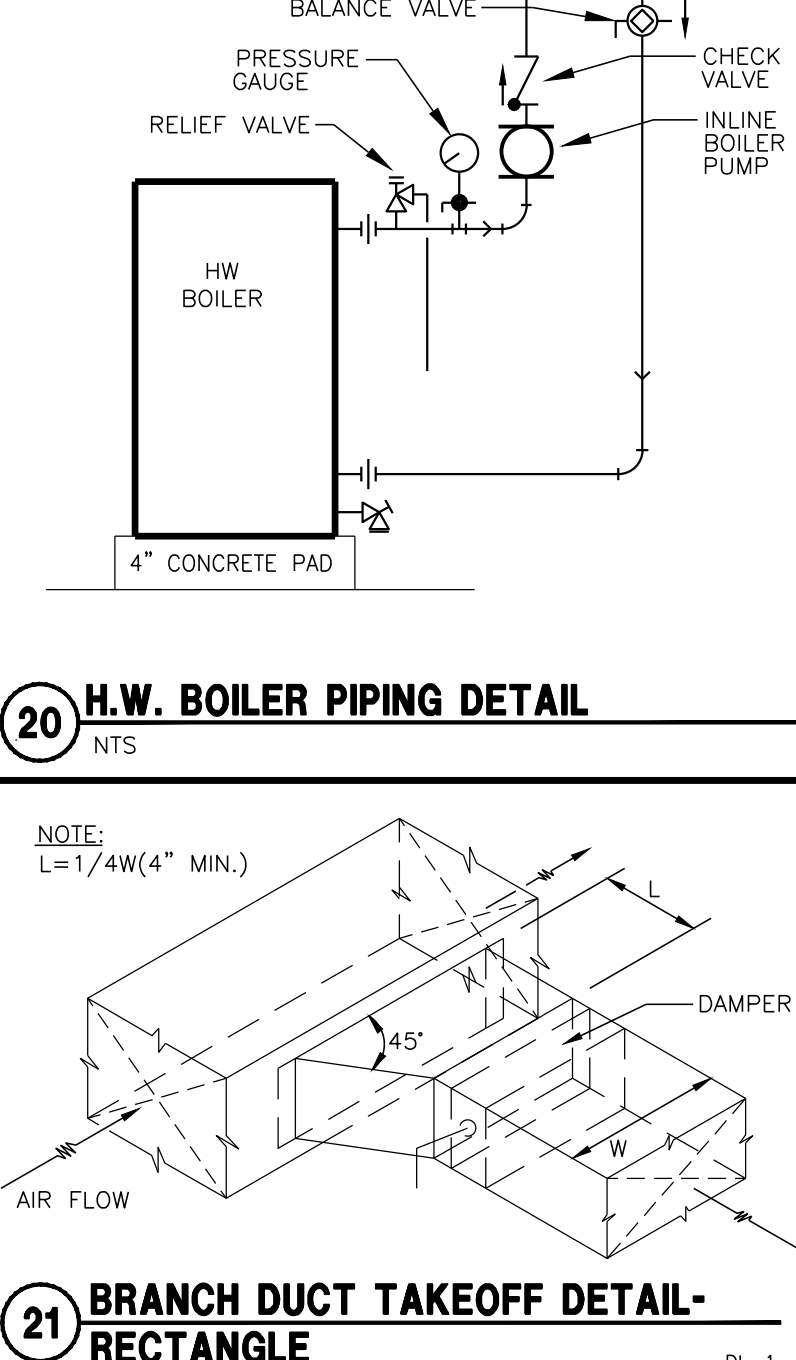
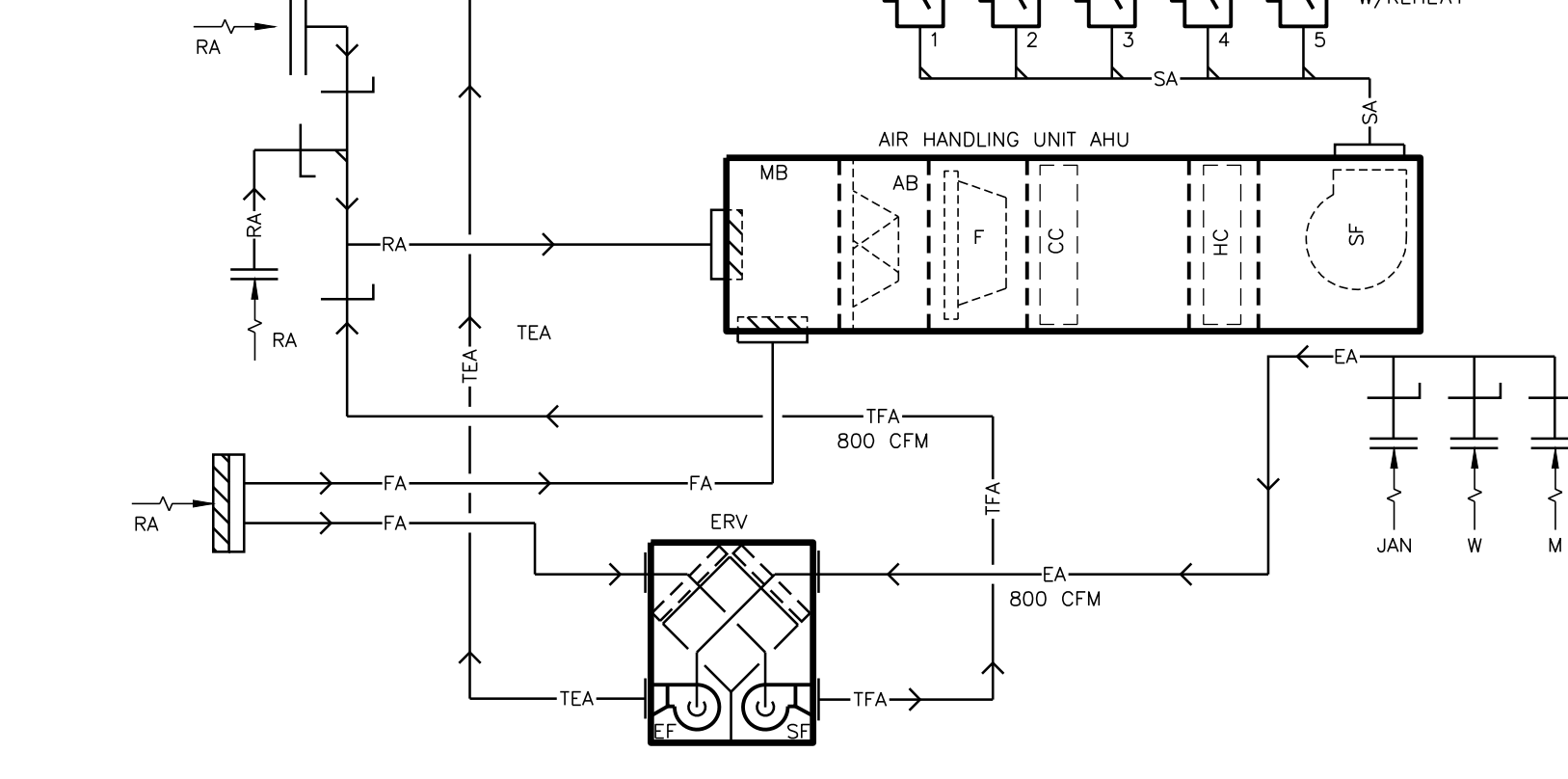
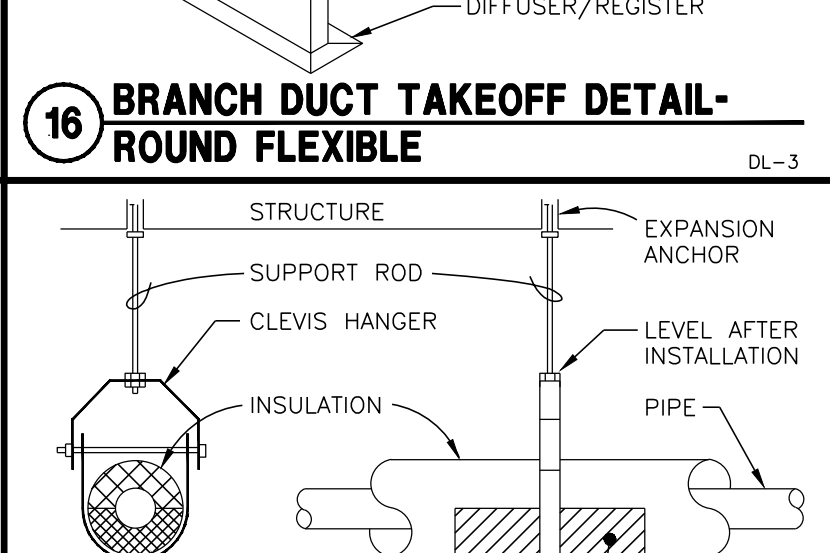
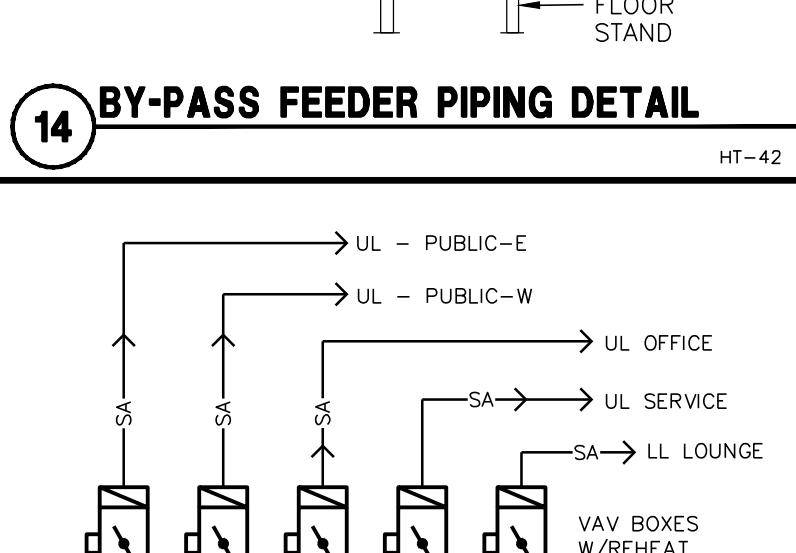
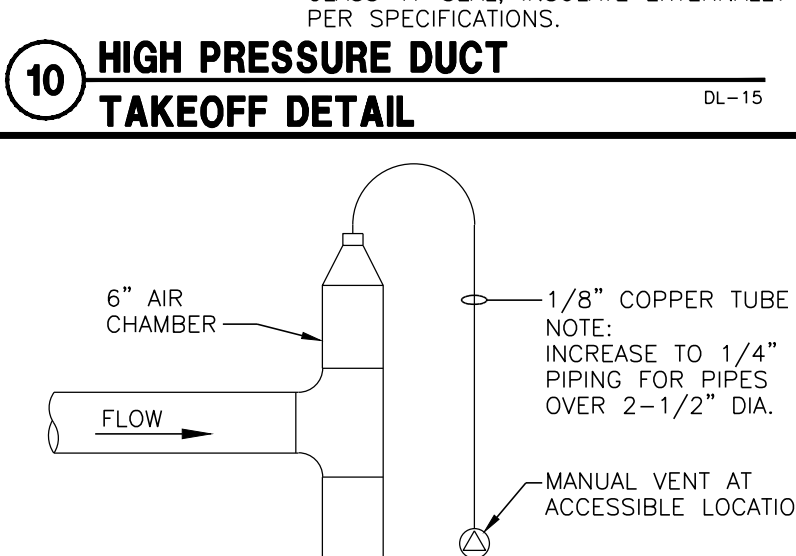
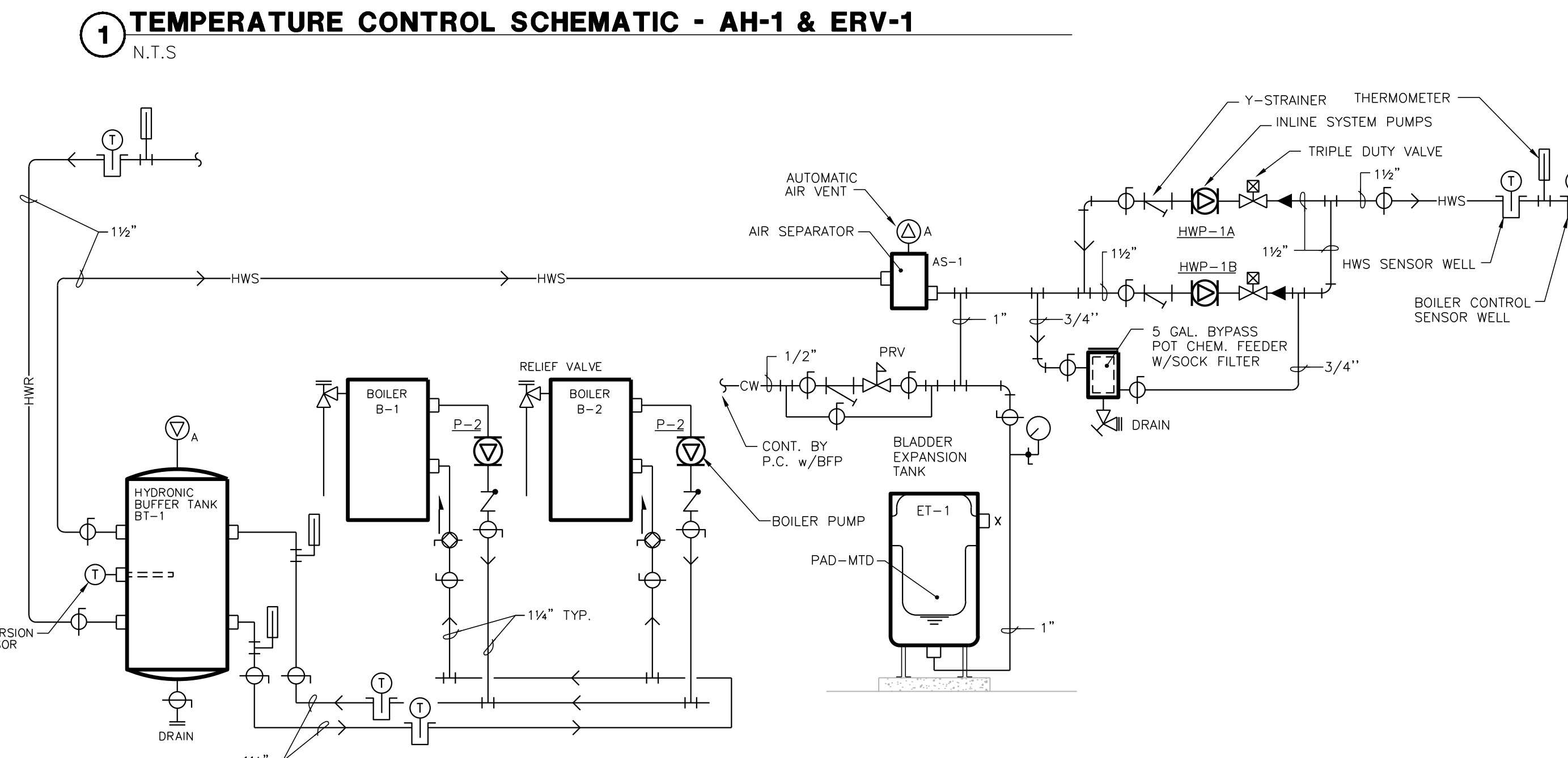
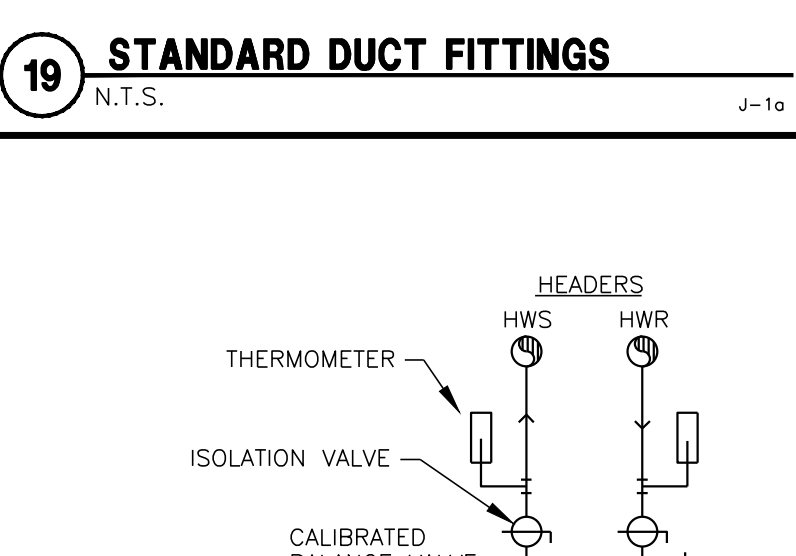
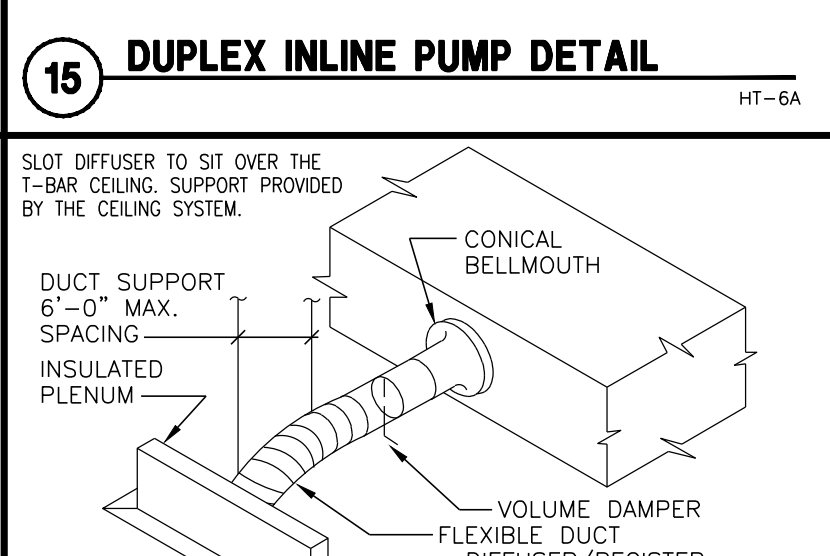
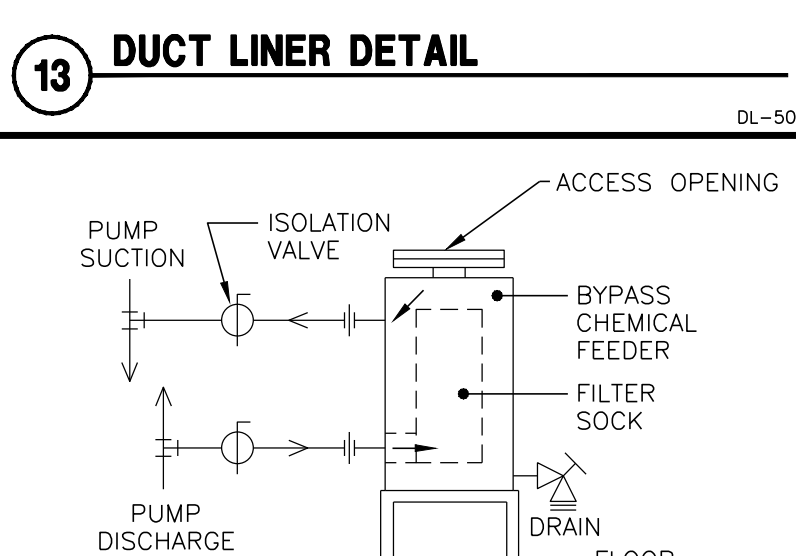
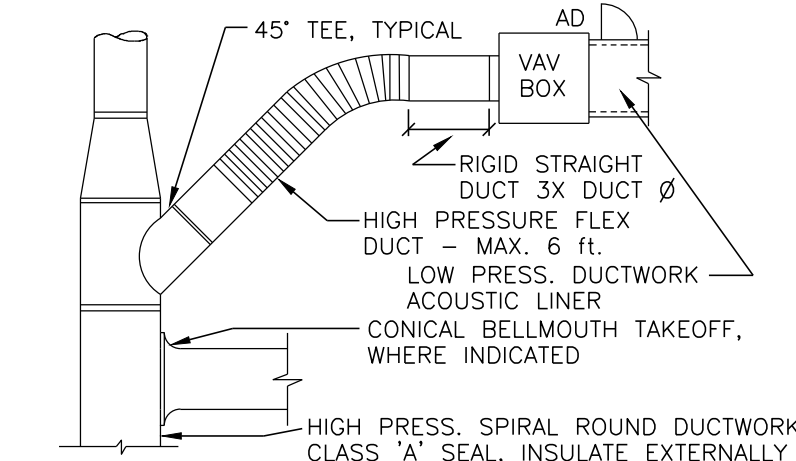
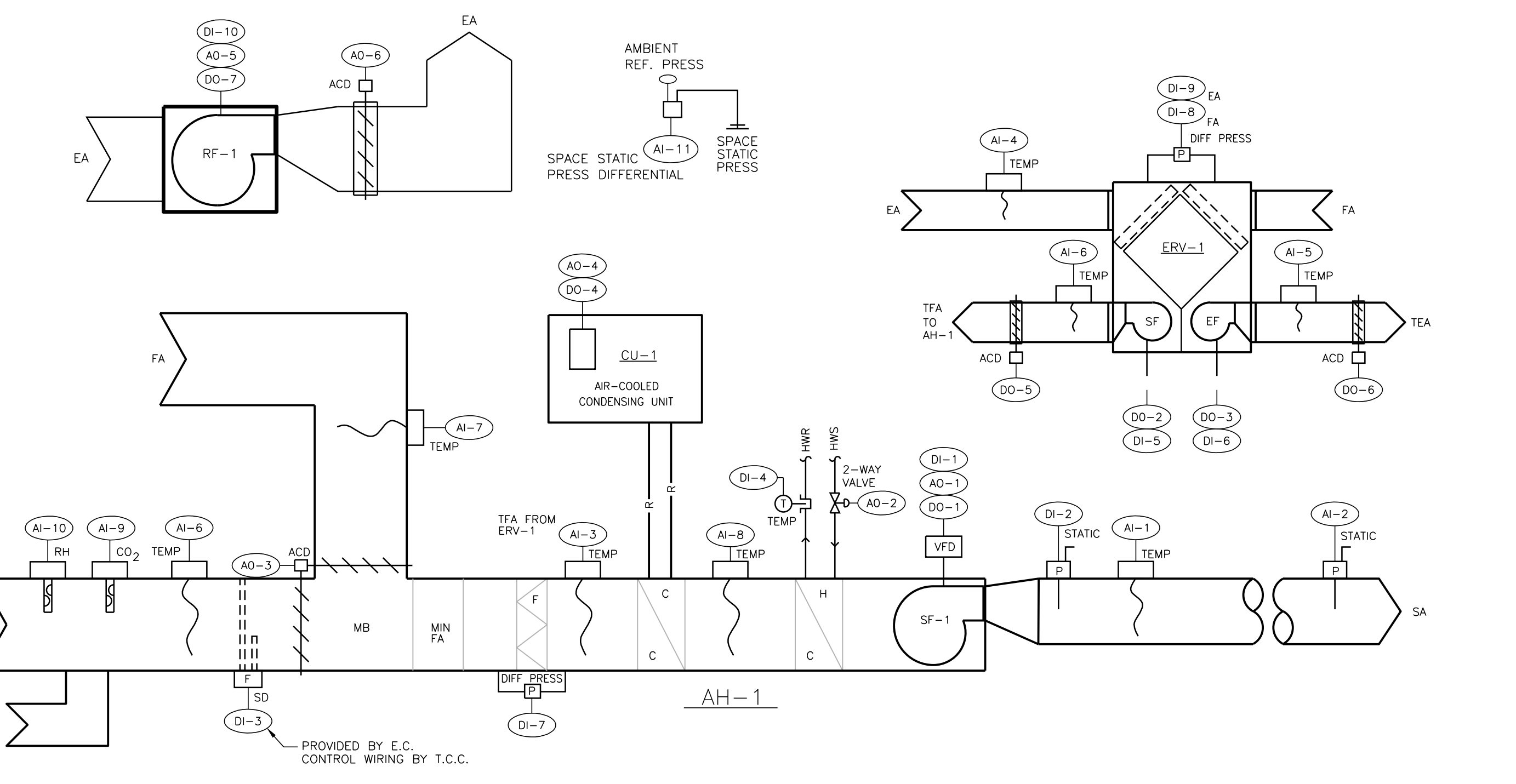
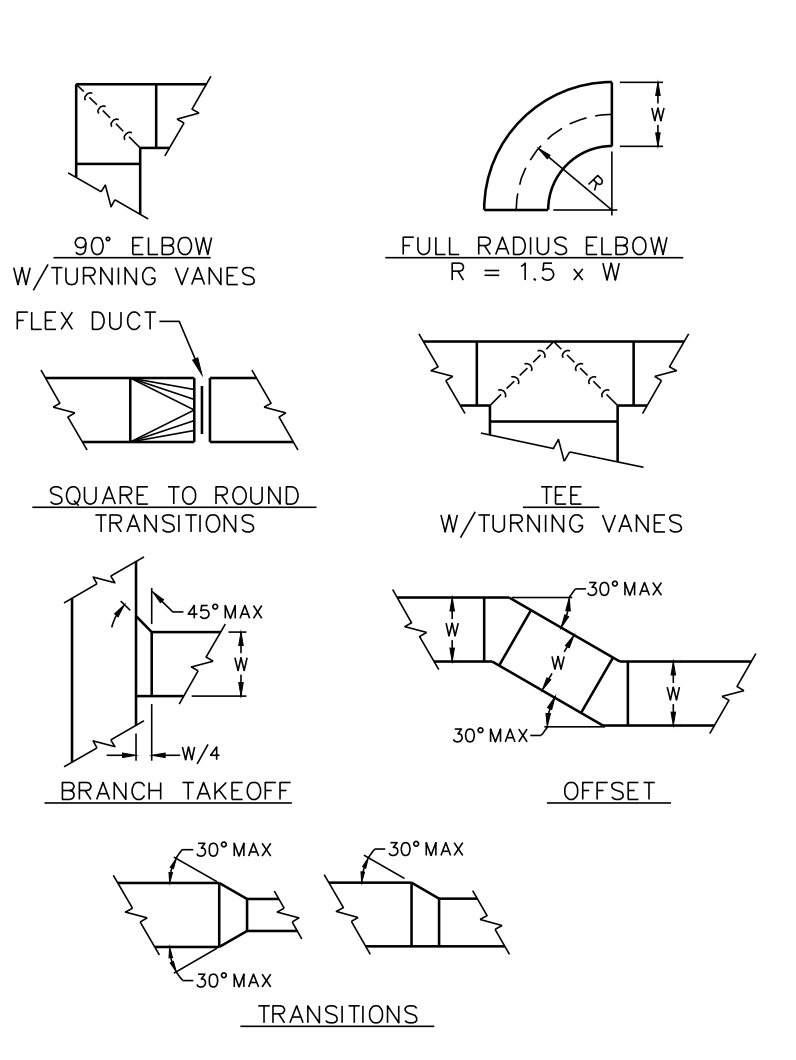
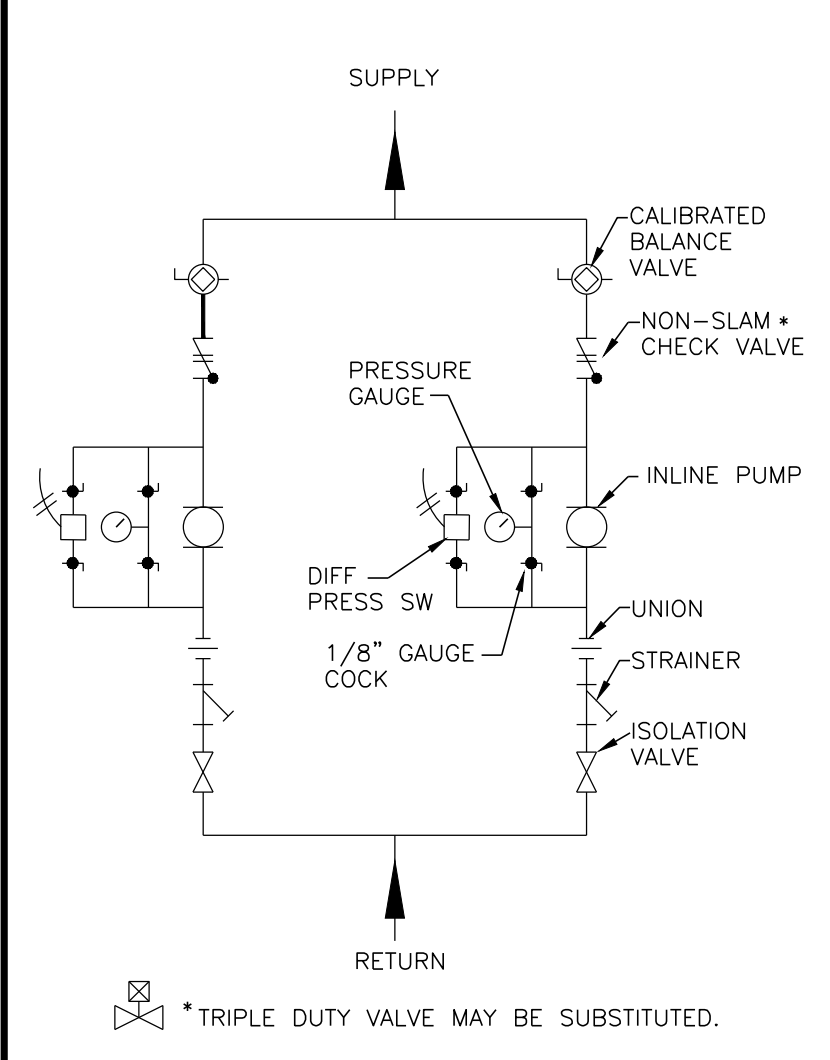
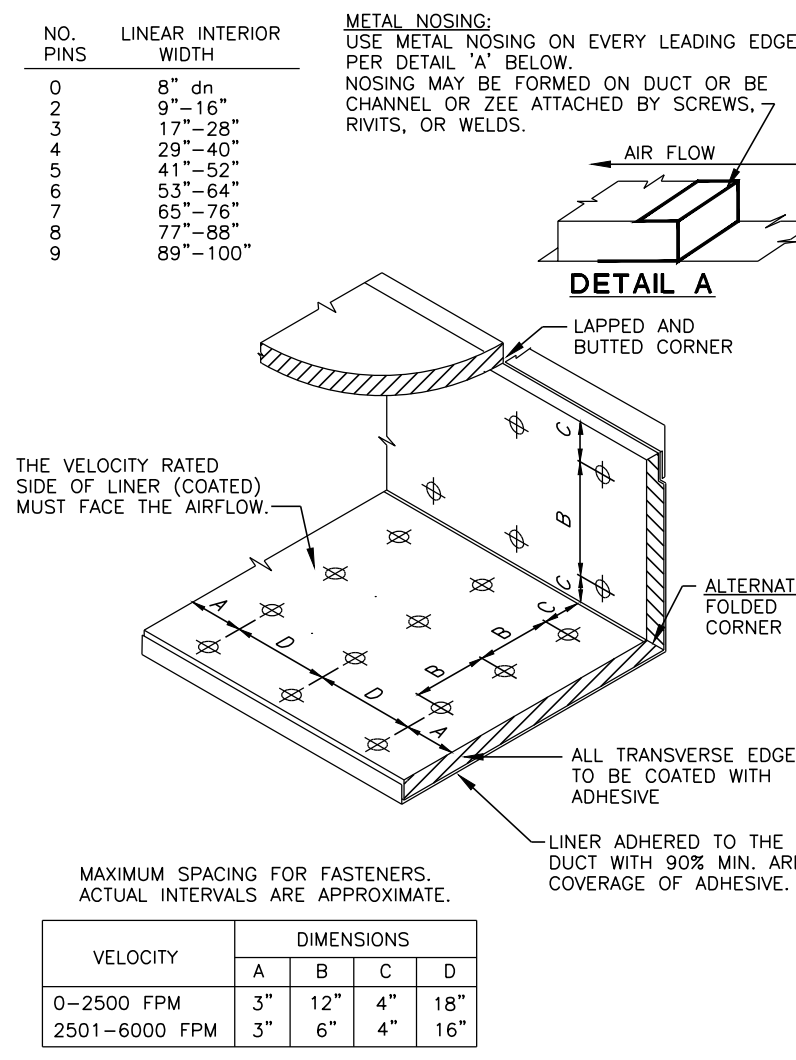
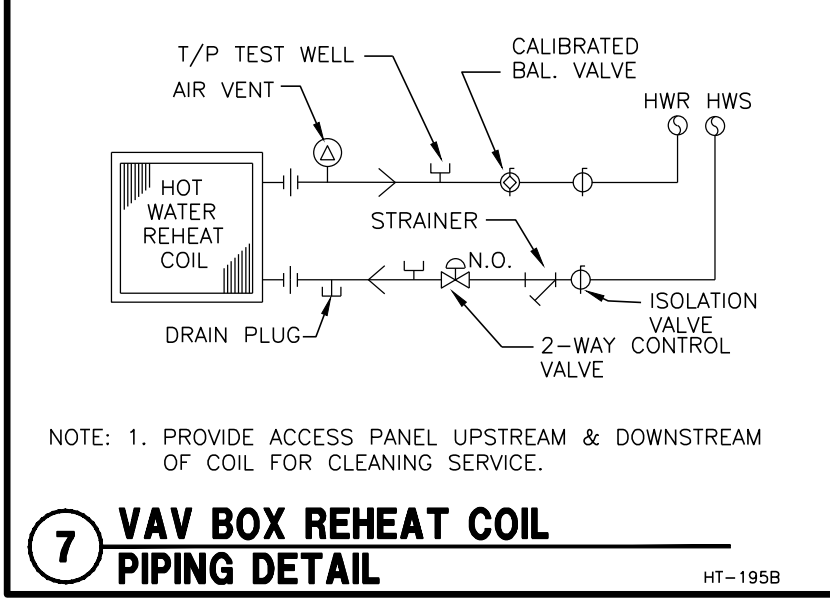
- AO-1 SF-1 VFD SPEED
- AO-2 HTG. 2-WAY VALVE
- AO-3 MA DAMPERS
- AO-4 CU-2 MODULATING COMPRESSOR CAP.
- AO-5 RF-1 ECM MOTOR SPEED
- AO-6 EA RELIEF DAMPER

DIGITAL INPUTS -- DI

- DI-1 SF-1 STATUS
- DI-2 AH-1 HIGH STATIC LIMIT ALARM
- DI-3 AH-1 SA SMOKE ALARM
- DI-4 HC-1 HWR TEMP FREEZE STAT
- DI-5 ERV-1 SF STATUS
- DI-6 ERV-1 EF STATUS
- DI-7 AH-1 FILTER STATUS
- DI-8 ERV-1 FILTER STATUS FA
- DI-9 ERV-1 FILTER STATUS EA
- DI-10 RF-1 STATUS

ANALOG INPUTS -- AI

- AI-1 AH-1 SA TEMP
- AI-2 AH-1 SA DUCT STATIC
- AI-3 AH-1 MA TEMP
- AI-4 ERV-1 EA TEMP
- AI-5 ERV-1 TEA TEMP
- AI-6 AH-1 FA TEMP
- AI-7 AH-1 CC LA TEMP
- AI-8 RA CO2
- AI-9 RA RH
- AI-10 SPACE STATIC PRESS. DIFF.
- AI-11





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Yahara Hills Facility Improvements - HVAC Upgrade

YAHARA HILLS GOLF COURSE
6701 Hwy 12
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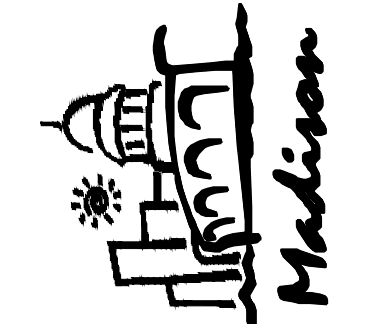


Table with columns: DATE, ISSUED FOR, CONSTRUCTION, DRAWN BY, CHECKED BY, JOB NO. (MH H1403)

HOT WATER FINNED TUBE RADIATION - SCHEDULE. Table with columns: GENERAL TAG, SERVICE, MANUFACTURER, MODEL NO., ELEMENT, TUBE/FIN SIZE, FPF, METAL TUBE/FIN, ROWS, LENGTH, CAP. MBH, GPM, ENCLOSURE TYPE, WIDTH, HEIGHT, LENGTH.

VARIABLE AIR VOLUME TERMINALS SCHEDULE. Table with columns: GENERAL TAG, SERVICE, MANUFACTURER, MODEL NO., CONNECTIONS ARR., SIZE, INLET, OUTLET, MIN. CFM, MAX. CFM, UNIT APD, VAV ACTUATOR, VAV CONTROL, HW HEATING COIL, EAT, CAP. MBH, GPM, EWT, WPD, REMARKS.

ENERGY RECOVERY VENTILATOR SCHEDULE. Table with columns: GENERAL TAG, SERVICE, MANUFACTURER, MODEL NO., ARRANGEMENT, TYPE, SERVICE, CONSTRUCTION, EXHAUST AIR, FRESH AIR, VAV, COOLING MODE, REMARKS.

NEW AIR HANDLING UNIT SCHEDULE. Table with columns: GENERAL TAG, LOCATION, SERVICE, MANUFACTURER, MODEL/SIZE, ARRANGEMENT, DRIVE ISOLATION, WEIGHT, SUPPLY FAN, EXT. SP, Q.A.S., O.V. VELOCITY, EXTERNAL S.P., TOTAL S.P., MOTOR HP, VOLTAGE/PULSE, FAN WHEEL, SYSTEM TYPE, HW HTG. COIL, AIR, LAT, APD, FV, MCOOP UNIT, SENSIBLE CAP, SUCTION TEMP, AIR BLENDER, FACE AREA, APD, FILTER BOX, FILTER MEDIA, FILTER APD, SIZES, NET AREA, REMARKS.

HVAC SYMBOL SCHEDULE. Table with columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Lists symbols for various HVAC components like piping, valves, dampers, and sensors.

HOT WATER BOILER SCHEDULE. Table with columns: TAG, MANUFACTURER, MODEL NO., TYPE, FUEL, INPUT, OUTPUT, EFF, FLUE VENT, COND. DRN, GAS, REMARKS.

FAN COIL SCHEDULE. Table with columns: GENERAL TAG, SERVICE, MANUFACTURER, MODEL NO., TYPE, LOCATION, SERVICE, FAN, ESP, MIN. FA, COOLING, EAT, HEATING, HEATING CAP, LAT, WATER FLOW, WPD, DIMENSIONS, UNIT RECESS, UNIT WT, FILTER, CONNECTIONS, ELECTRICAL, MCOOP, REMARKS.

HOT WATER SPECIALTIES SCHEDULE. Table with columns: TAG, SERVICE, MANUFACTURER, MODEL NO., CAPACITY, REMARKS.

EXHAUST FANS SCHEDULE. Table with columns: TAG, SERVICE, MANUFACTURER, MODEL NO., TYPE, AREA SERVED, CFM, ESP, RPM, MOUNTING, DRIVE, SONES, ELECTRICAL, MOTOR HP, FAN F.L.A., VOLTAGE/PULSE, CONTROL, REMARKS.

AIR-COOLED CONDENSING UNITS SCHEDULE. Table with columns: GENERAL TAG, SERVICE, MANUFACTURER, MODEL NO., NOMINAL TONS CAP., AMBIENT TEMP, SUCTION TEMP, CAPACITY, NO. CAPACITY STEPS, AIR FLOW, NO. COND. FANS, NO. CIRCUITS, NO. COMPRESSORS, REFRIGERANT, REF. LINE SIZE, EER, IPLV, VOLTAGE/PULSE, COMPRESSORS, COND. FAN, FLA, MCA, MCOOP, REMARKS.

GAS-FIRED WATER HEATER SCHEDULE. Table with columns: TAG, MAN, MODEL NO., TYPE, STORAGE, INPUT, OUTPUT, EFF, GAS, WATER, ELECTRICAL, REMARKS.

PUMP SCHEDULE. Table with columns: TAG, SERVICE, MANUFACTURER, MODEL NO., TYPE, LOCATION, SERVICE, GPM, TDH, BHP, EFFICIENCY, SUCTION I.D., OUTLET I.D., MOTOR, VOLTAGE/PULSE, FLA, REMARKS.

EXHAUST FANS SCHEDULE. Table with columns: TAG, SERVICE, MANUFACTURER, MODEL NO., TYPE, AREA SERVED, CFM, ESP, RPM, MOUNTING, DRIVE, SONES, ELECTRICAL, MOTOR HP, FAN F.L.A., VOLTAGE/PULSE, CONTROL, REMARKS.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE. Table with columns: TAG, MFR, MODEL, SIZE, MOUNTING, SERVICE, CFM, REMARKS.

HVAC SYMBOL SCHEDULE. Table with columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Lists symbols for various HVAC components like piping, valves, dampers, and sensors.

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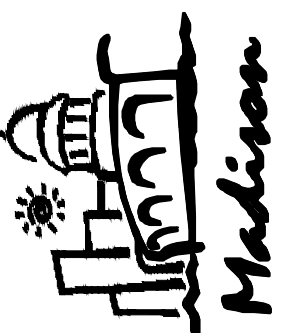
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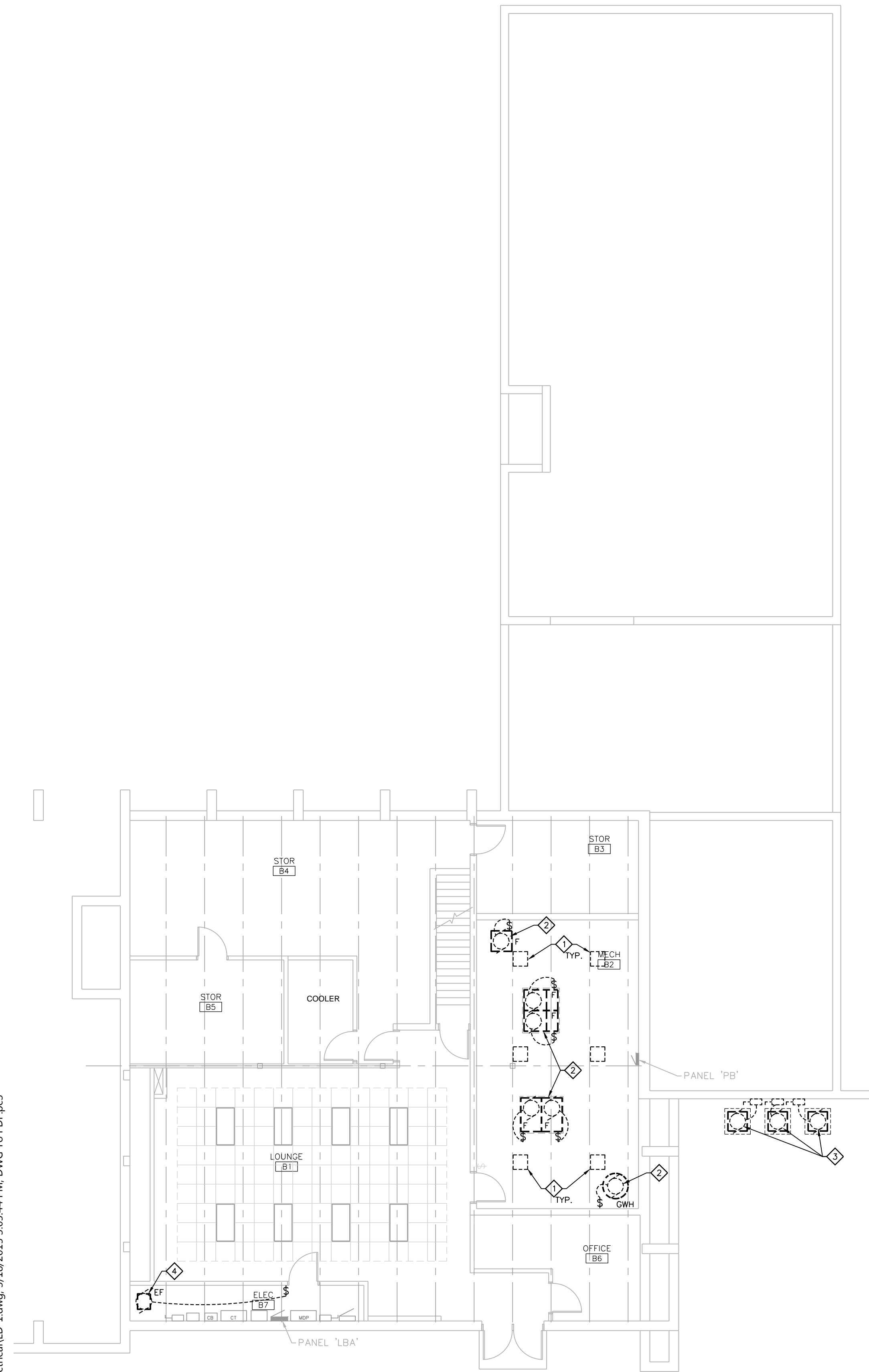
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ISSUED FOR:	CONSTRUCTION
DATE:	3-18-15
DRAWN BY:	JJ
CHECKED BY:	MH
JOB NO:	H1403

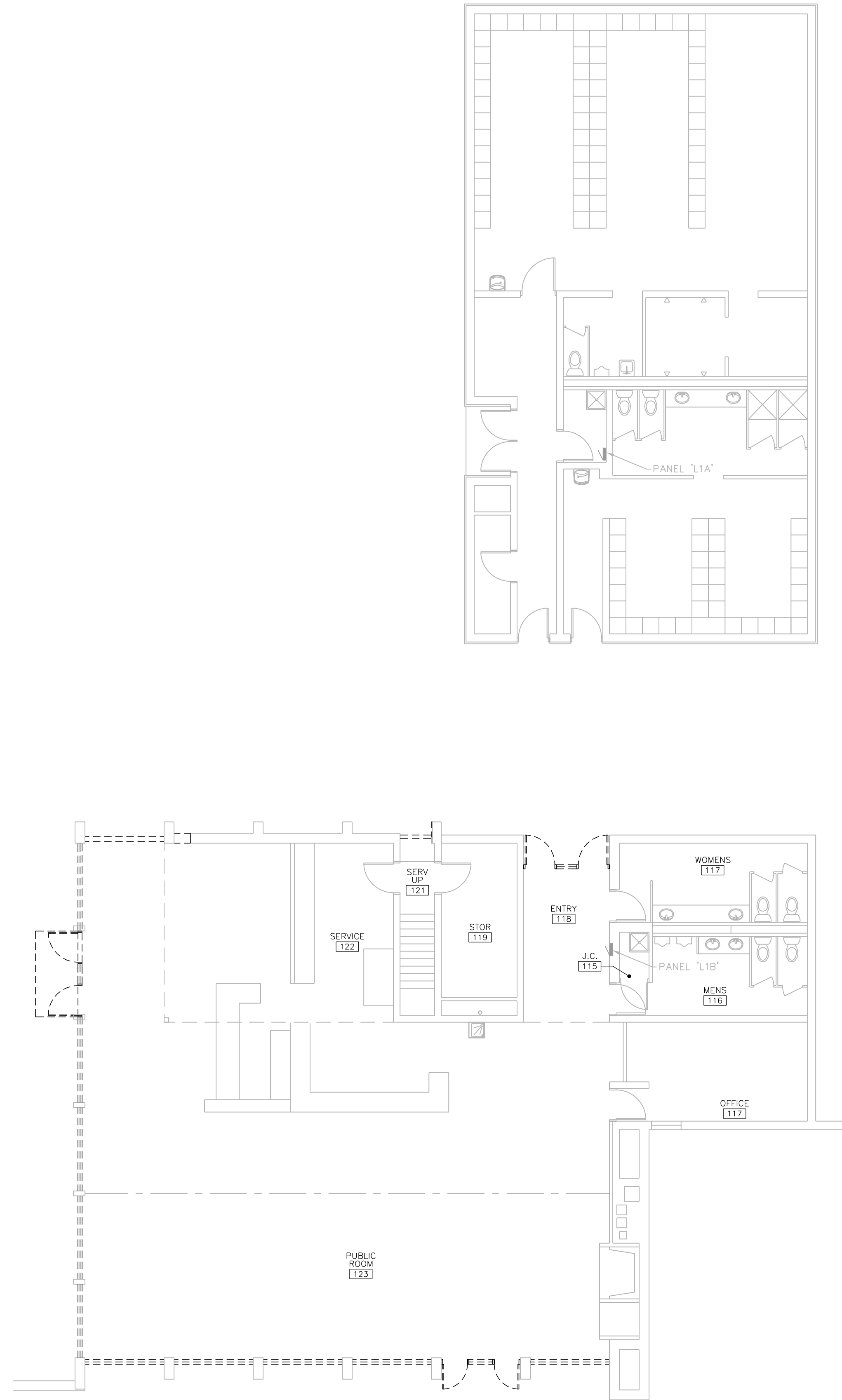
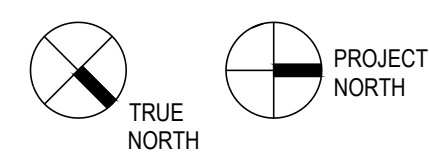
Sheet Number

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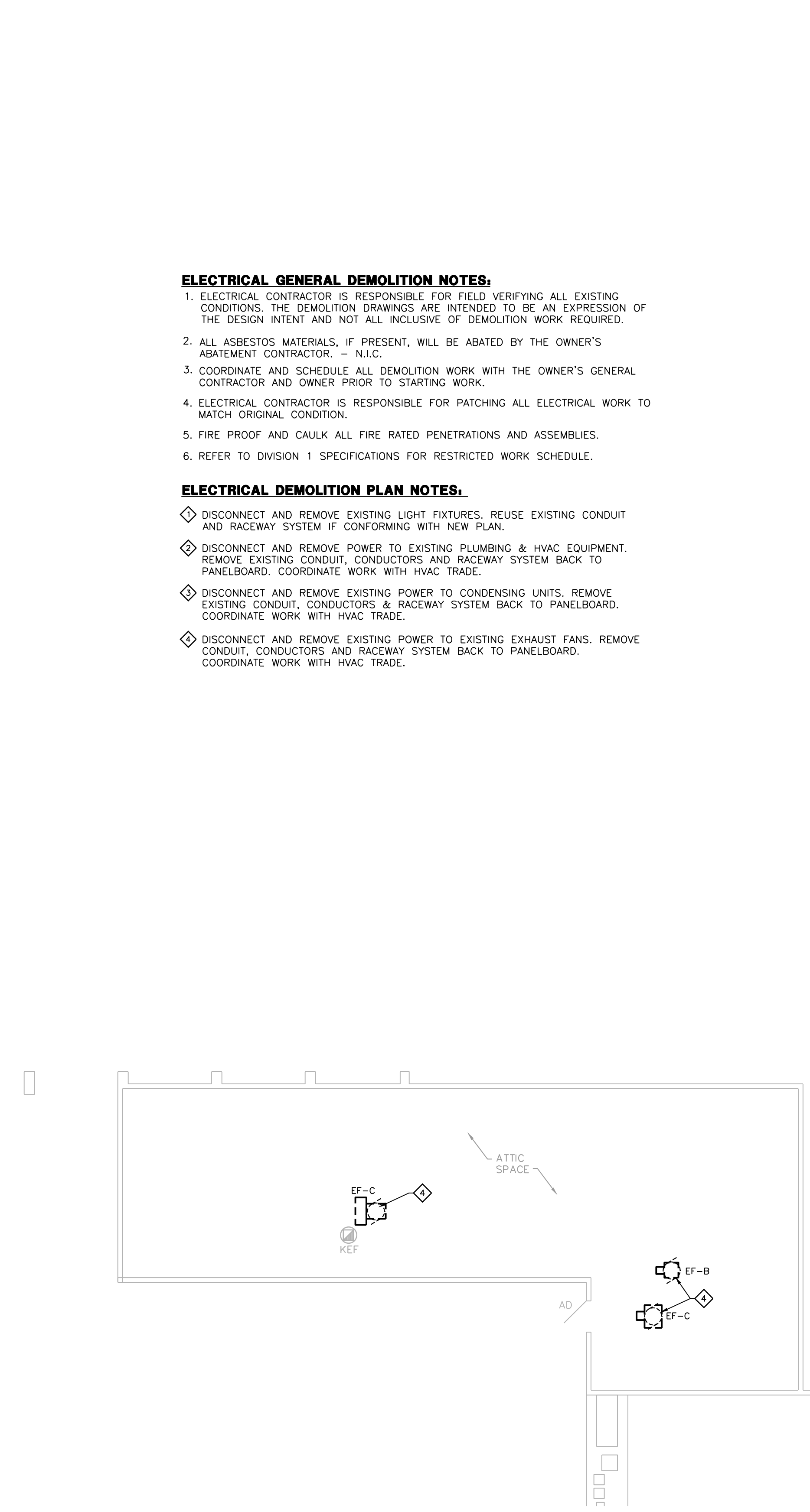
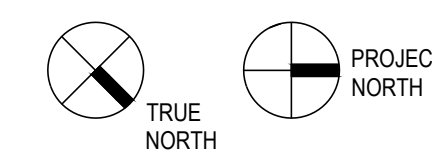
LOWER LEVEL PLAN - ELECTRICAL DEMOLITION

1/8" = 1'-0"



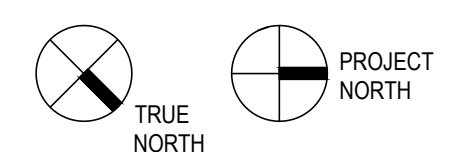
MAIN FLOOR PLAN - ELECTRICAL DEMOLITION

1/8" = 1'-0"



PARTIAL ATTIC PLAN - ELECTRICAL DEMOLITION

1/8" = 1'-0"

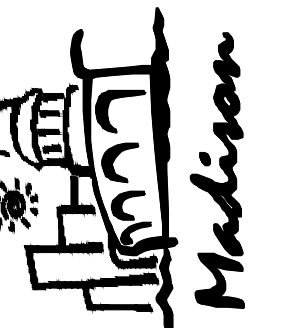


ELECTRICAL GENERAL DEMOLITION NOTES:

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE DEMOLITION DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF DEMOLITION WORK REQUIRED.
2. ALL ASBESTOS MATERIALS, IF PRESENT, WILL BE ABATED BY THE OWNER'S ABATEMENT CONTRACTOR. - N.I.C.
3. COORDINATE AND SCHEDULE ALL DEMOLITION WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
4. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL ELECTRICAL WORK TO MATCH ORIGINAL CONDITION.
5. FIRE PROOF AND CAULK ALL FIRE RATED PENETRATIONS AND ASSEMBLIES.
6. REFER TO DIVISION 1 SPECIFICATIONS FOR RESTRICTED WORK SCHEDULE.

ELECTRICAL DEMOLITION PLAN NOTES:

- ◇ DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES. REUSE EXISTING CONDUIT AND RACEWAY SYSTEM IF CONFORMING WITH NEW PLAN.
- ◇ DISCONNECT AND REMOVE POWER TO EXISTING PLUMBING & HVAC EQUIPMENT. REMOVE EXISTING CONDUIT, CONDUCTORS AND RACEWAY SYSTEM BACK TO PANELBOARD. COORDINATE WORK WITH HVAC TRADE.
- ◇ DISCONNECT AND REMOVE EXISTING POWER TO CONDENSING UNITS. REMOVE EXISTING CONDUIT, CONDUCTORS & RACEWAY SYSTEM BACK TO PANELBOARD. COORDINATE WORK WITH HVAC TRADE.
- ◇ DISCONNECT AND REMOVE EXISTING POWER TO EXISTING EXHAUST FANS. REMOVE CONDUIT, CONDUCTORS AND RACEWAY SYSTEM BACK TO PANELBOARD. COORDINATE WORK WITH HVAC TRADE.



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CHECKED BY:	ZB
PROJECT NO.:	H1403

Sheet Number

11-1

LIGHTING FIXTURE SCHEDULE									
TAG	NO.	TYPE	LAMPS	DESCRIPTION	MOUNTING	MFGR. & MODEL	REMARKS		
D	2	F	32	F32T8/B41	PENDANT/ CABLE	LITHONIA - W18-232-MVOLT-BPNP-ZAC72/ZAC72	(1)(2) 2L 4FT SURFACE WRAP		
LAMP ABBREVIATIONS: LED=LIGHT EMITTING DIODE F=FLUORESCENT TH=TUNGSTEN HALOGEN CF=COMPACT FLUORESCENT IN=INCANDESCENT HPS=HIGH PRESSURE SODIUM MH=METAL HALIDE									
REMARKS: (1) HIGH PERFORMANCE T8 LAMP/BALLAST SYSTEM-CEE APPROVED. (2) CONTRACTOR TO INSTALL PENDANT FIXTURE WITH CABLE SUPPORTS & POWER FEED AS CONFIGURED ON DRAWINGS WITH REQUIRED FITTINGS. ALL FIXTURE VOLTAGES ARE 120 VOLT UNLESS INDICATED OTHERWISE.									

ELECTRICAL GENERAL NOTES:

- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS. THE ELECTRICAL DRAWINGS ARE INTENDED TO BE AN EXPRESSION OF THE DESIGN INTENT AND NOT ALL INCLUSIVE OF ELECTRICAL WORK REQUIRED.
- ALL ASBESTOS MATERIALS, IF PRESENT, WILL BE ABATED BY THE OWNER'S ABATEMENT CONTRACTOR. - N.I.C.
- COORDINATE AND SCHEDULE ALL ELECTRICAL WORK WITH THE OWNER'S GENERAL CONTRACTOR AND OWNER PRIOR TO STARTING WORK.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PATCHING ALL ELECTRICAL WORK TO MATCH ORIGINAL CONDITION.
- COORDINATE CONDUIT ROUTING WITH OTHER TRADES.

ELECTRICAL PLAN NOTES:

- VFD BY HVAC; WIRED TO MOTOR BY ELECTRICAL TRADE.
- SUSPEND LIGHTS BELOW DUCTWORK AND PIPING. COORDINATE FINAL PLACEMENT AND MOUNTING HEIGHT WITH OWNER.
- EXTEND NEW MOTOR CIRCUITS TO EXISTING PANEL 'PB' WITH SCHEDULED CIRCUIT BREAKERS. PROVIDE DEDICATED RECEPTACLE CIRCUIT.
- EXTEND POWER TO CONDENSING UNIT CU-1 TO EXISTING MDP PANEL AS SCHEDULED.
- PROVIDE NEW DUCT-MOUNTED SMOKE DETECTOR AT RETURN AIR DUCTWORK. DETECTOR TO BE STANDALONE 24-VOLT ADDRESSIBLE PHOTOELECTRIC WITH SAMPLING TUBES AND REMOTE TEST STATION. PROVIDE AUXILIARY CONTACT FOR HVAC CONTROLS. COORDINATE WORK WITH HVAC CONTRACTOR.
- PROVIDE 20-AMP 120-VOLT CIRCUIT TO NEW TEMPERATURE CONTROL PANEL.

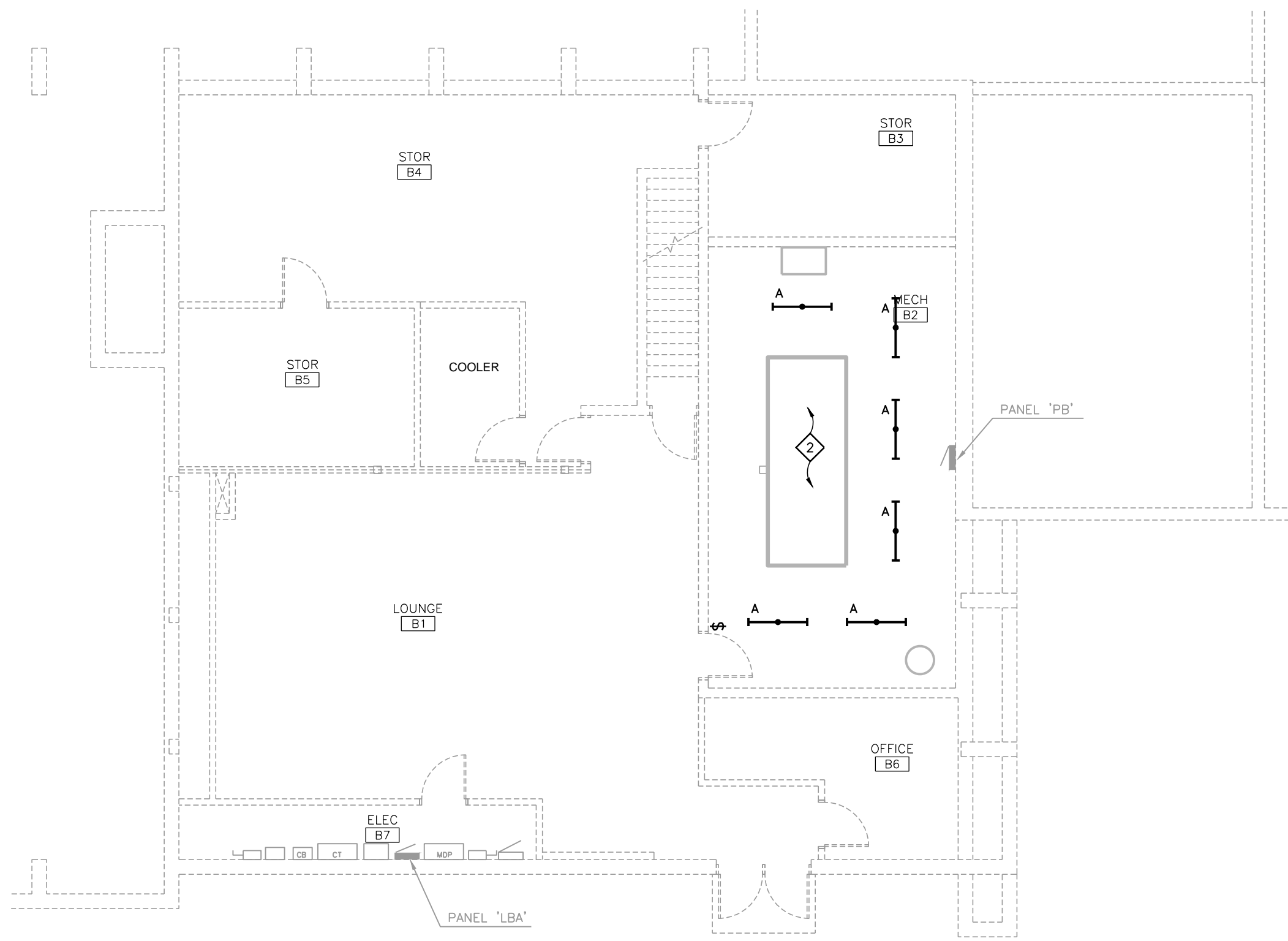
ELECTRICAL MOTOR/EQUIPMENT SCHEDULE									
TAG	1	2	3	4	5	6	7	8	9
PANEL NO.	EXISTING PB	EXISTING PB	EXISTING PB	EXISTING PB	EXISTING MDP	EXISTING PB	EXISTING PB	EXISTING PB	EXISTING PB
CIRCUIT	-	-	-	-	-	-	-	-	-
BREAKER	35	20	15	15	80	20	15	15	15
POLE	3	1	2	2	3	1	2	1	1
WIRING NO.	① 3+G (#10)	2+G (#12)	2+G (#12)	2+G (#12)	3+G (#8)	2+G (#12)	2+G (#12)	2+G (#12)	2+G (#12)
TYPE	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU
SIZE	#8	#12	#12	#12	#4	#12	#12	#12	#12
COND.	3/4"	1/2"	1/2"	1/2"	1"	1/2"	1/2"	1/2"	1/2"
ELECTRICAL HP (KW)	5	3/4	FRAC	2 @ 3/4	(20.5)	(0.70)	1/2	FRAC	FRAC
VOLT	208	115	208	208	208	115	208	115	115
PHASE	3	1	1	1	3	1	1	1	1
FLA (MCA)	17.5 (21.9)	10.6 (13.3)	0.65 (0.80)	10.2 (11.5)	57 (6.3)	6.0 (7.5)	2.0 (2.5)	1.4 (1.8)	5.0 (6.2)
STARTER TYPE	W/VFD	RELAY	W/UNIT	W/UNIT	W/UNIT	W/UNIT	RELAY	@ BOILER	W/UNIT
SIZE	-	-	-	-	-	-	-	-	-
BY	T.C.C.	T.C.C.	H.C.	H.C.	H.C.	H.C.	T.C.C.	H.C.	H.C.
CONTROL TYPE	BAS	BAS	STAT	BAS	BAS	BOILER CTRL PNL	BAS	BOILER INTERLOCK	AQUASTAT
BY	T.C.C.	T.C.C.	H.C.	H.C.	H.C.	H.C.	T.C.C.	H.C.	H.C.
DISCONNECT TYPE	W/VFD	W/UNIT	T.S.	W/UNIT	NEMA 3R HD	T.S.	NEMA 1 M.S.	NEMA 1 M.S.	T.S.
SIZE	60	20	15	15	100	15	15	15	15
FUSE	③	-	-	-	-	-	TU	TU	-
BY	T.C.C.	H.C.	E.C.	-	E.C.	E.C.	E.C.	E.C.	E.C.
REMARKS	AIR HANDLING UNIT SF-1 ②	RELIEF FAN RF-1	FAN COIL FC-1,2&3	ENERGY RECOVERY VENTILATOR ERV-1	AIR-COOLED CONDENSING UNIT CU-1	BOILER B-1&2 ③	HW PUMPS P-1A&1B	BOILER PUMP P-2	DOMESTIC HOT WATER HEATER DHW-1

E.C. = ELECTRICAL CONTRACTOR
H.C. = HVAC CONTRACTOR
P.C. = PLUMBING CONTRACTOR
T.C.C. = TEMPERATURE CONTROLS CONTRACTOR
G.C. = GENERAL CONTRACTOR
HGA = HAND-OFF-AUTO SWITCH
BAS = BUILDING AUTOMATION SYSTEM

F.T.S. = FUSED TOGGLE SWITCH
FVNR = FULL VOLTAGE NON-REVERSING
COMB S/D = COMBINATION STARTER/DISCONNECT
MAG. = MAGNETIC STARTER
T.S. = TOGGLE SWITCH
H.D. = HEAVY DUTY
M.S. = MANUAL STARTER

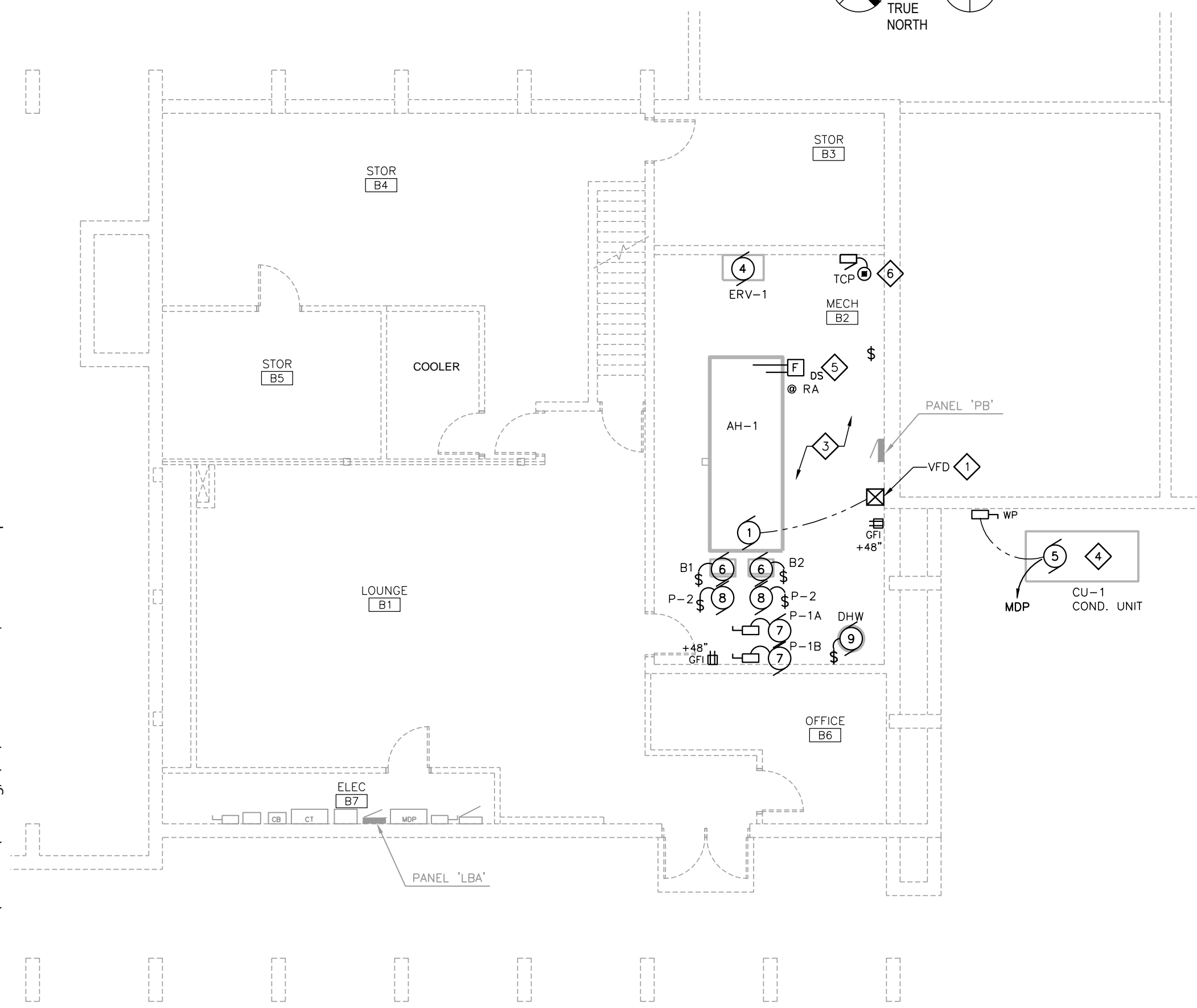
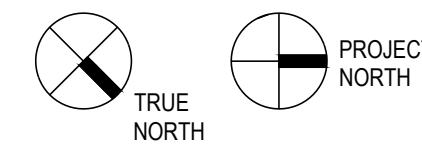
GD = GENERAL DUTY
PL = PILOT LIGHT
T.U. = THERMAL UNIT
F.V. = FIELD VERIFY

① PROVIDE GREEN WIRE GROUND TO ALL MOTORS AND EQUIPMENT PER NEC 250-95.
② WIRE NEW VFD FROM LOCATION INDICATED TO SUPPLY FAN MOTOR SF-1. COORDINATE VFD INSTALLATION WITH T.C.C.
③ POWER BOILER PUMPS P-2 THRU BOILER RELAY AND BOILER POWER SUPPLY.



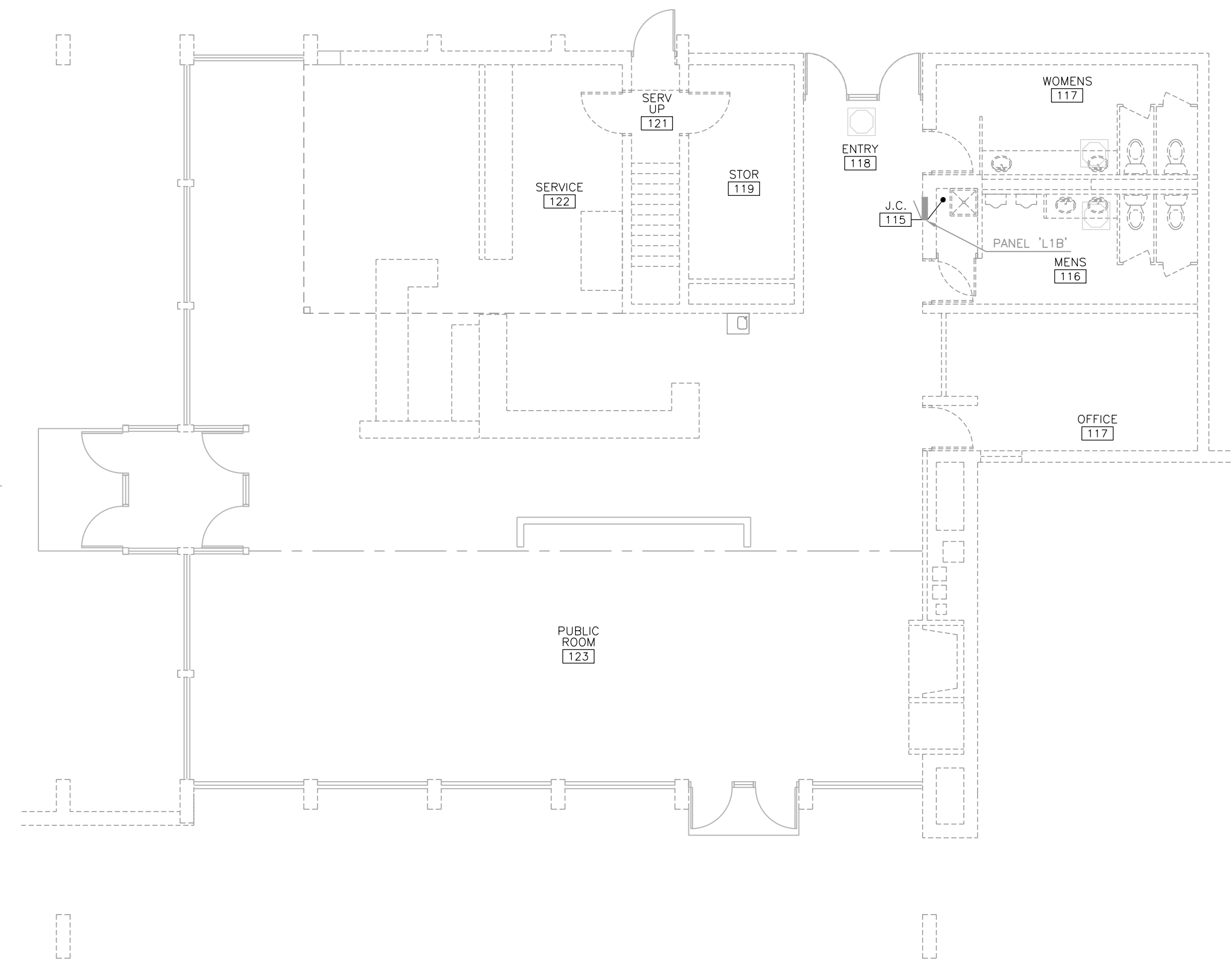
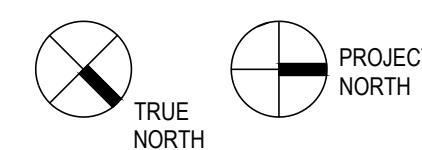
LOWER LEVEL PLAN - ELECTRICAL LIGHTING

1/8" = 1'-0"



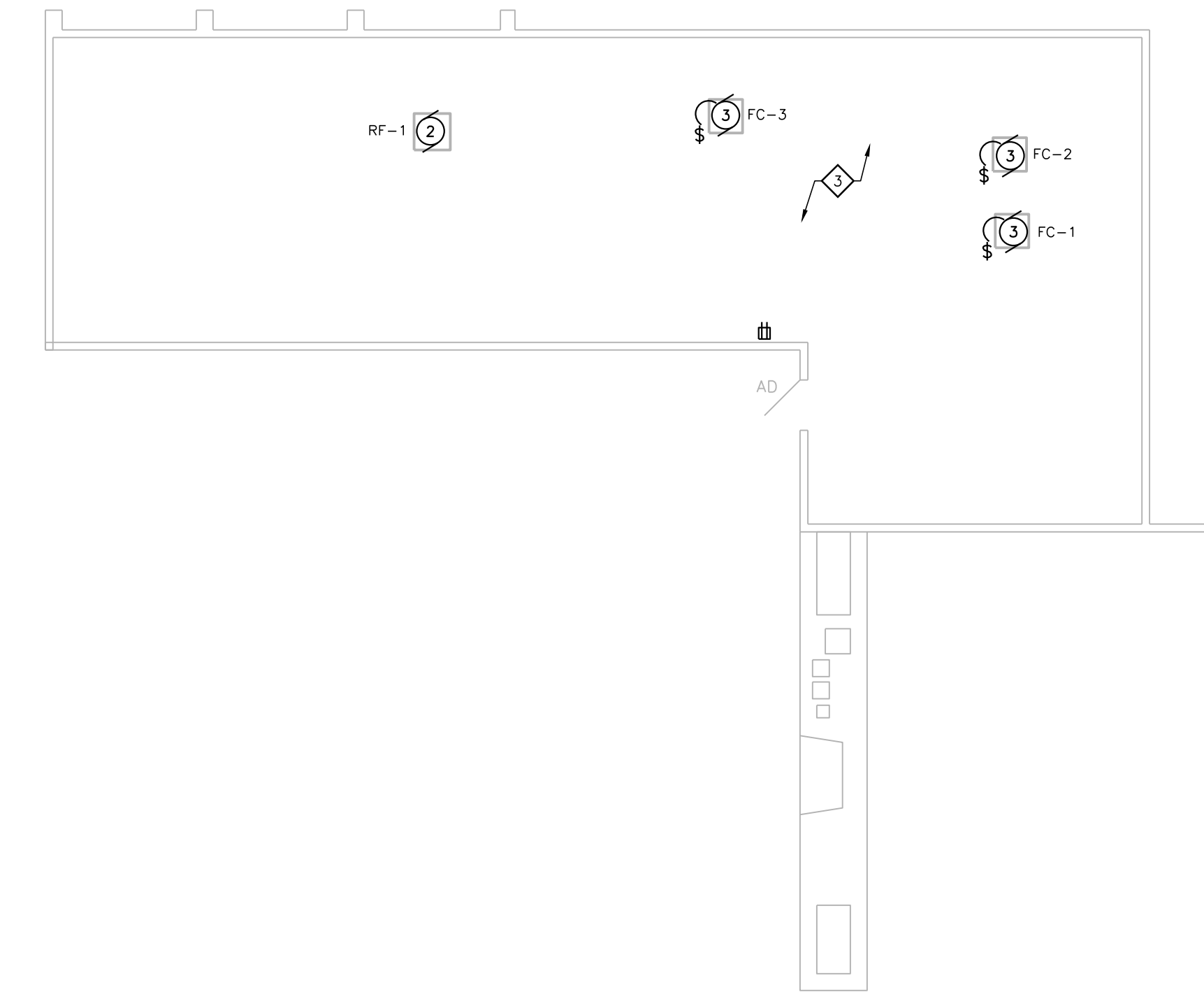
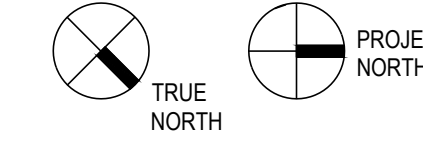
LOWER LEVEL PLAN - ELECTRICAL POWER/LV

1/8" = 1'-0"



MAIN FLOOR PLAN - ELECTRICAL

1/8" = 1'-0"



PARTIAL ATTIC PLAN - ELECTRICAL

1/8" = 1'-0"

