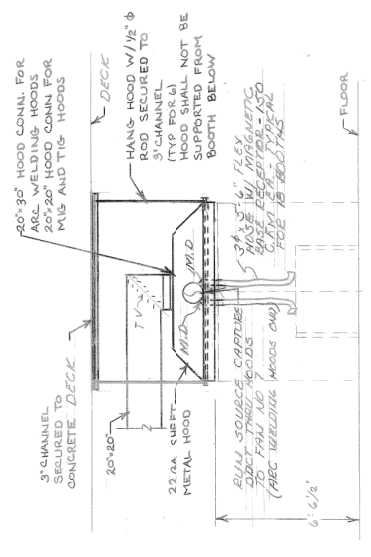


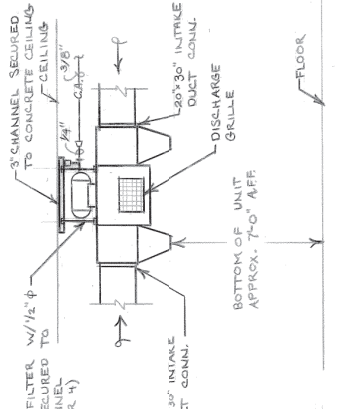
NO.	REVISION	DATE
△	AS-BUILT	5-14-83

DESIGNER	M.E.F.
ENGINEER	R.C.P.
DRAWN BY	M.E.F.
CHECKED BY	R.C.P.
DATE	JUNE 1, 1981

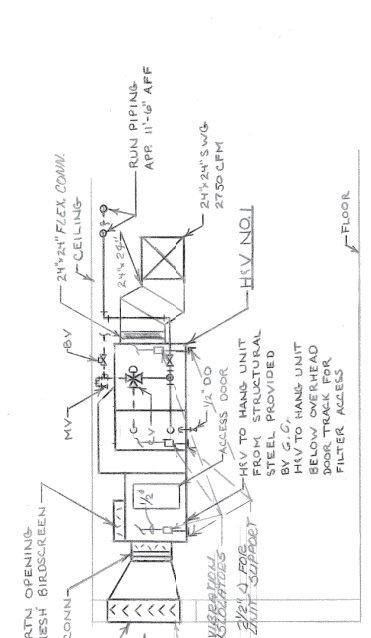
NDRETH
LOWER
LEVEL
PLAN



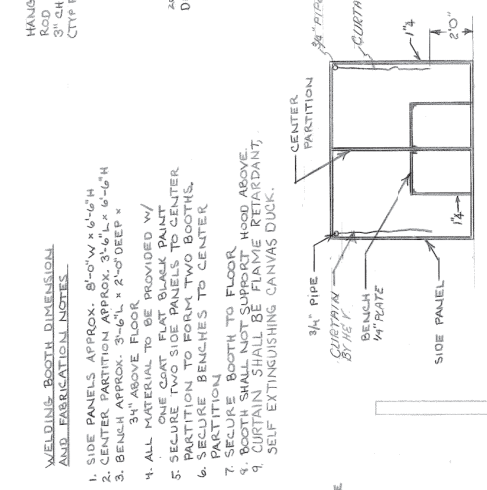
② DETAIL - WELDING HOOD RMI07
SCALE - 1/4" = 1'-0"



⑤ DETAIL - FILTER HANGING
SCALE - 1/4" = 1'-0"

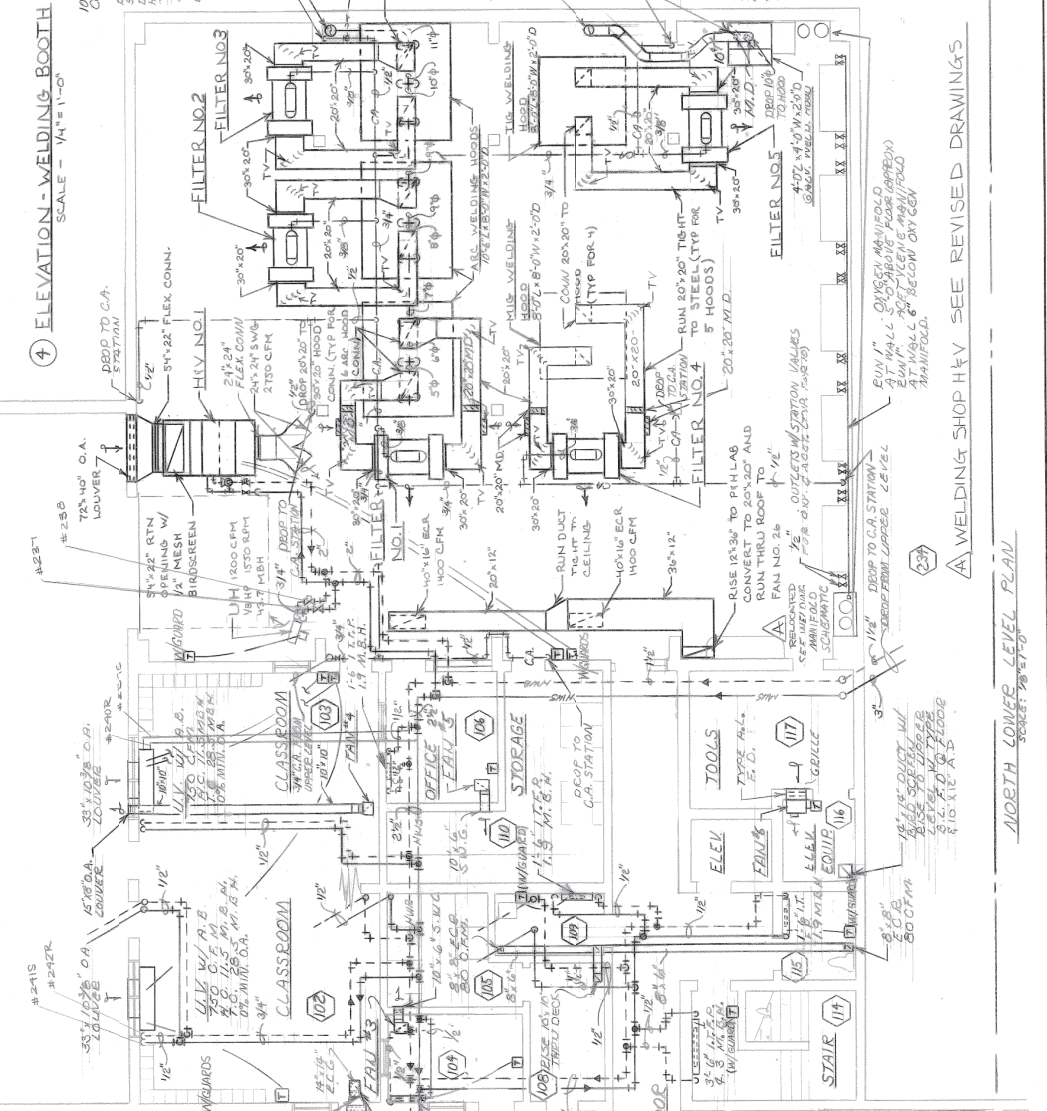


① DETAIL - HV N01
SCALE - 1/4" = 1'-0"



③ DETAIL - WELDING BOOTH FABRICATION
NO SCALE

- WELDING BOOTH DIMENSIONAL AND FABRICATION NOTES:**
1. SIDE PANELS APPROX. 8'-0" W. x 6'-6" H.
 2. CENTER PARTITION APPROX. 3'-4" x 2'-0" DEEP.
 3. BENCH APPROX. 3'-4" x 2'-0" DEEP.
 4. ALL MATERIAL TO BE PROVIDED W/ ONE COAT FLAT BLACK PAINT.
 5. SECURE TWO SIDE PANELS TO CENTER PARTITION.
 6. SECURE BENCHES TO CENTER PARTITION.
 7. SECURE BOOTH TO FLOOR.
 8. BOOTH SHALL NOT SUPPORT HOOD ABOVE.
 9. CURTAIN SHALL BE FLAME RETARDANT, SELF-EXTINGUISHING CANVAS DUCK.



④ ELEVATION - WELDING BOOTH
SCALE - 1/4" = 1'-0"



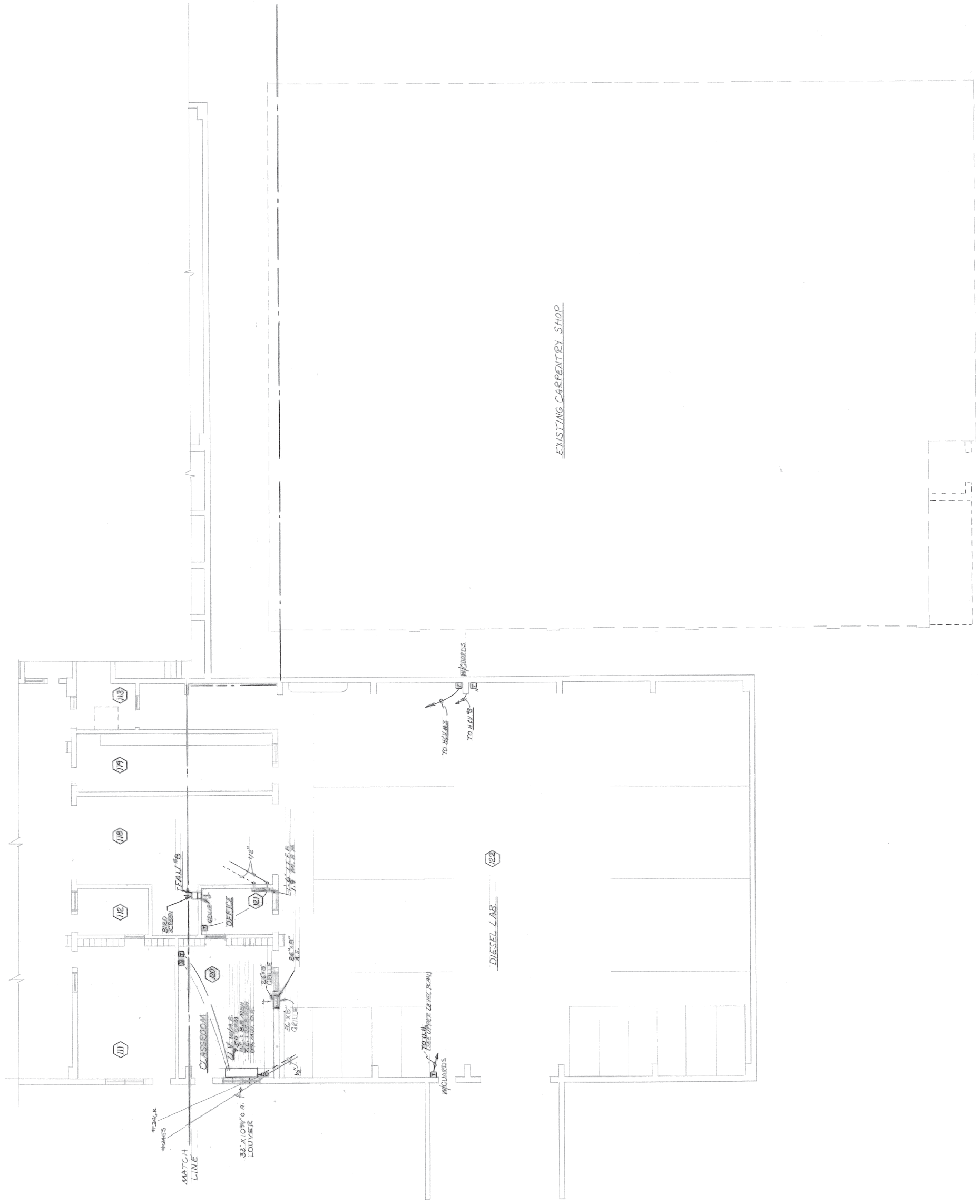
ADD ALT BID NO. 9 - WELDING LAB. VENT.
SHALL INCLUDE THE FOLLOWING:

1. FILTER N01 THRU N05 AND ASSOCIATED DUCTS TO THE HOODS
2. COMPRESSED AIR PIPING IN WELDING LAB. THERE ARE WELDING HOODS, MIG HOOD, FLEX DUCTS & VACUUM IN BASE RECEPTORS
3. ARC WELDING BOOTHS, MIC BOOTHS, 4 TIG BOOTHS
4. EXHAUST FAN N07 & ASSO. DUCTS
5. EXHAUST FAN N02 & ASSO. DUCTS
6. EXHAUST FAN N027 & ASSO. DUCTS
7. OXY-ACET. MANIFOLD PIPING

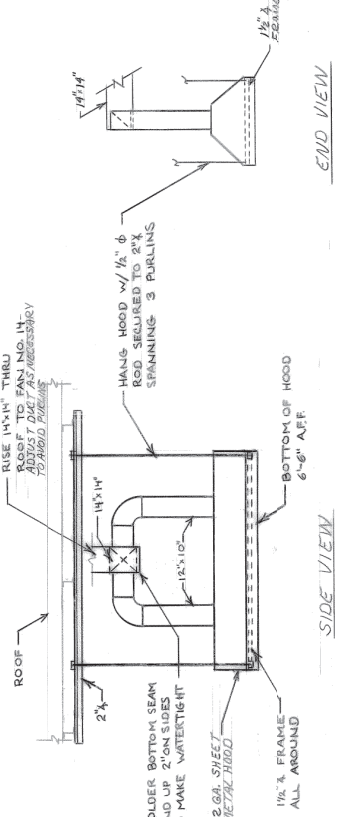


⑦ WELDING SHOP HV1
SEE REVISED DRAWINGS

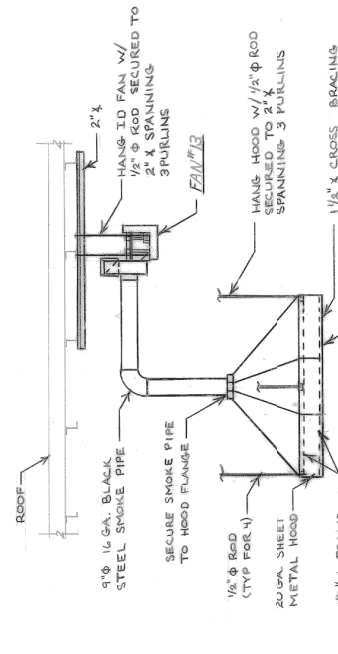
⑧ WELDING MANIFOLD SCHEMATIC
NO SCALE



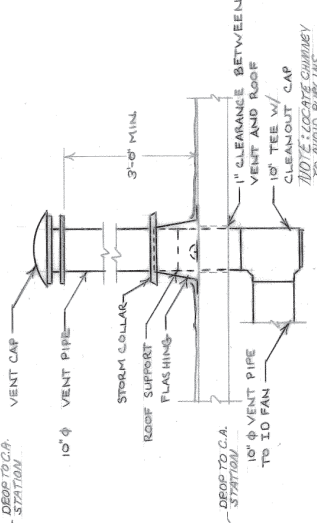
SOUTH LOWER LEVEL PLAN
 SCALE: 1/8" = 1'-0"



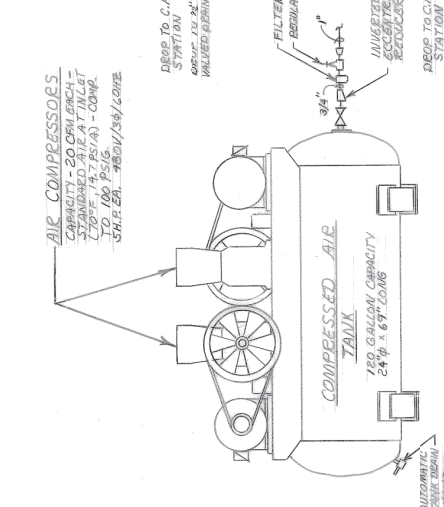
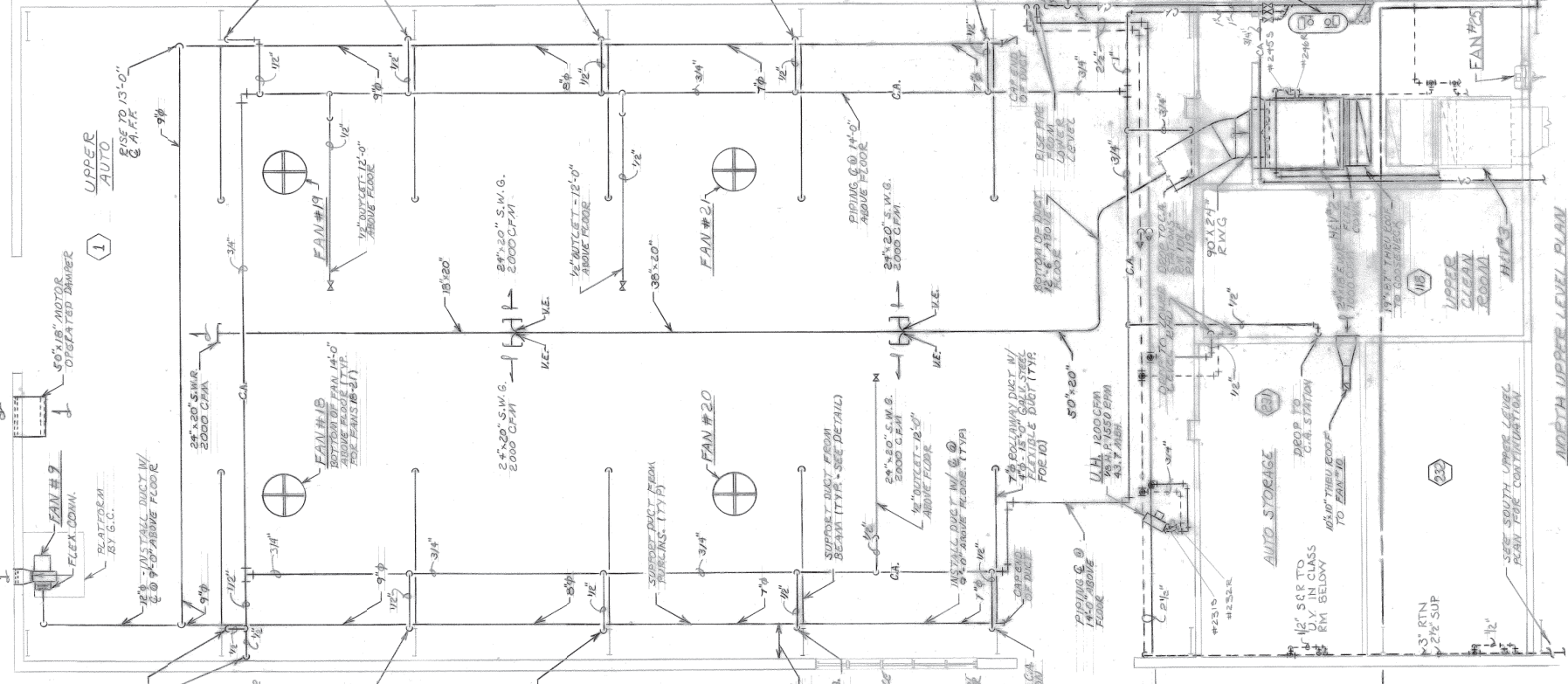
(12) DETAIL - WELDING HOOD - RM. 228
 SCALE - 1/4" = 1'-0"



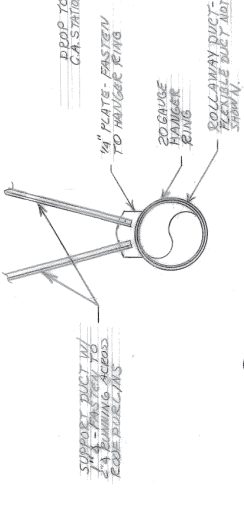
(11) DETAIL - OIL BURNER TEST HOOD
 SCALE - 1/4" = 1'-0"



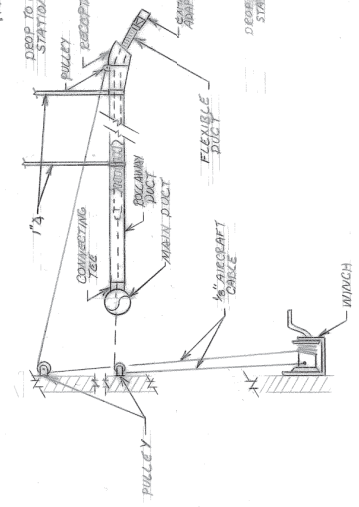
(13) DETAIL - OIL BURNER TEST HOOD CHIMNEY
 SCALE - 1/4" = 1'-0"



(8) DETAIL - AIR COMPRESSORS
 NO SCALE



(9) SECTION 'A-A'
 NO SCALE



(10) DETAIL - CO EXHAUST SYSTEM COMPONENTS -
 AUTO LAB & DISSEC. LAB
 NO SCALE

(6) PLAN - N.E.V. ABOVE CLASSROOM 219
 SCALE 1/8" = 1'-0"

(4) ELEVATION - CO EXHAUST IN AUTO LAB
 SCALE 1/8" = 1'-0"

(5) ELEVATION - HV #4
 SCALE 1/8" = 1'-0"

(7) ELEVATION - HV #3
 SCALE 1/8" = 1'-0"

(1) UPPER AUTO

(2) BOILER SET-UPS

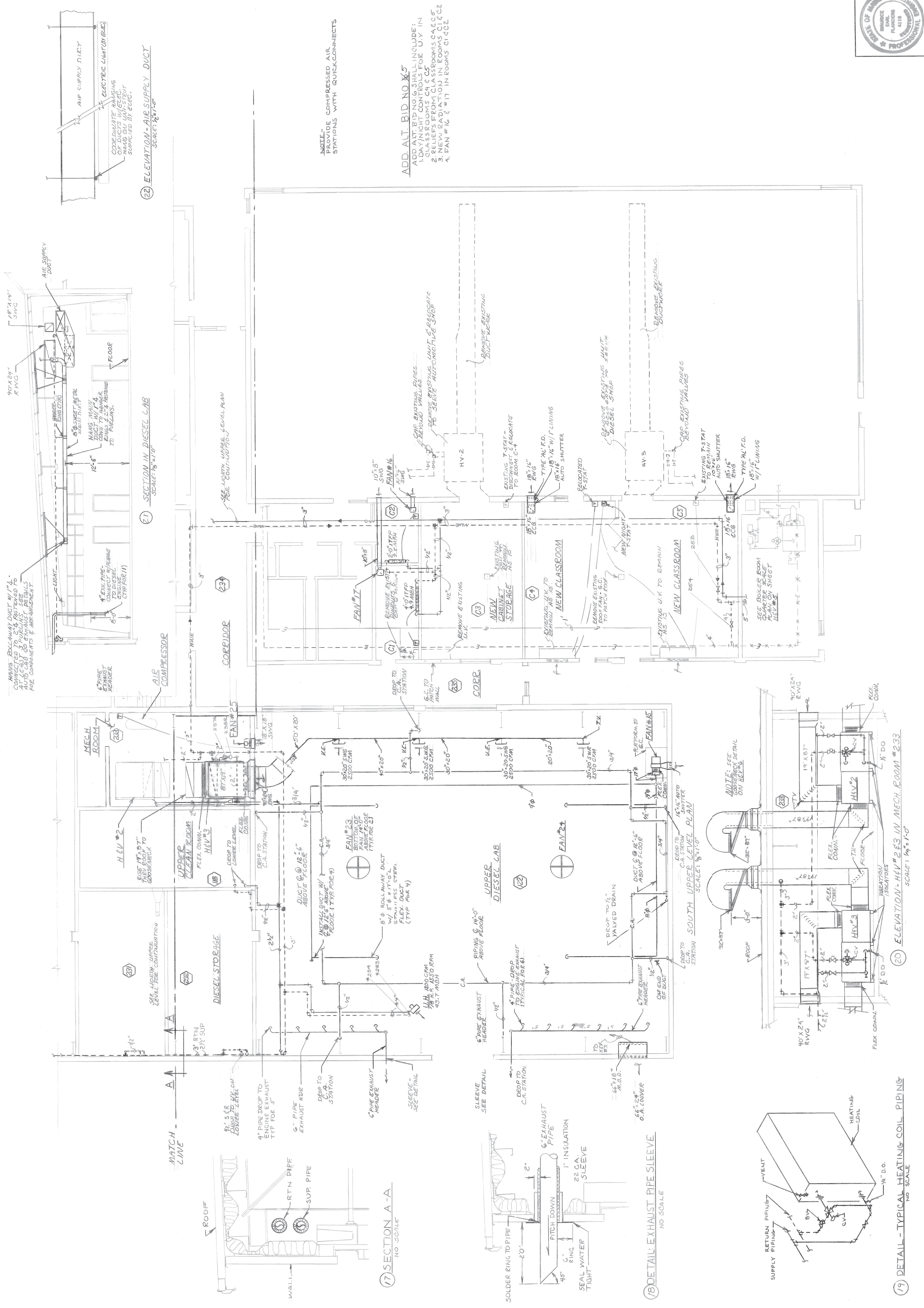
(3) HEATING/PLUMBING LAB

(4) EQUIP. STORAGE

(5) AUTO STORAGE

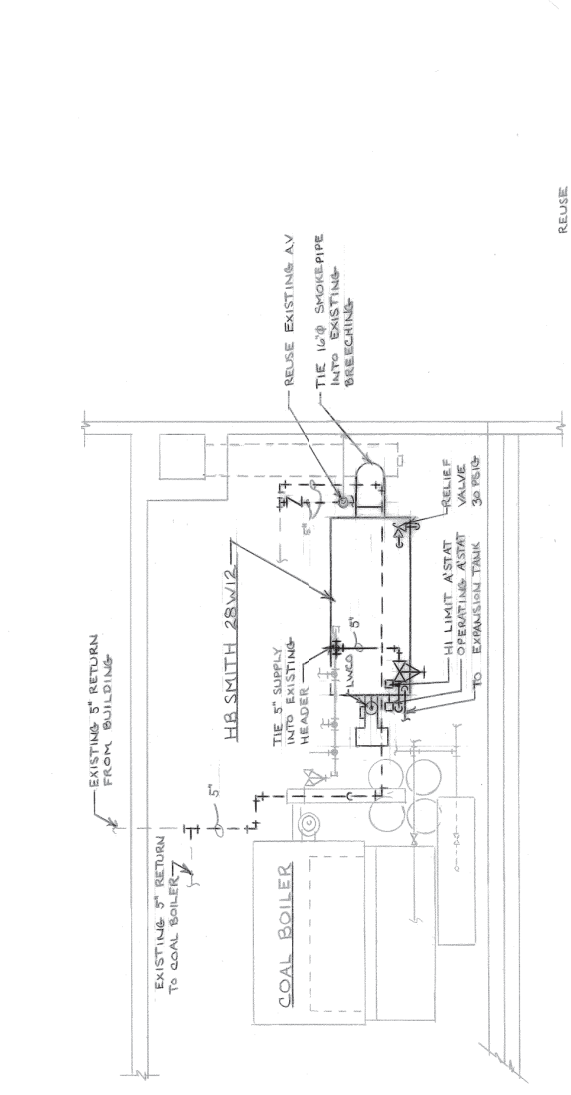
DESIGNER	RHB
ENGINEER	RHB
DRAWN BY	MEF
CHECKED BY	MEF
DATE	JUNE 1, 1980

SOUTH
 UPPER
 LEVEL
 PLAN

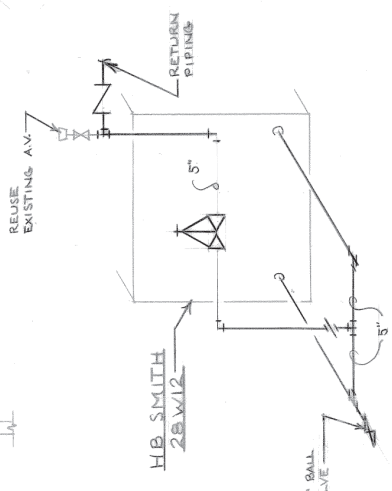


DESIGNER	RHB
ENGINEER	RCP
DRAWN BY	MEF
CHECKED BY	MEF
DATE	JUNE 1961

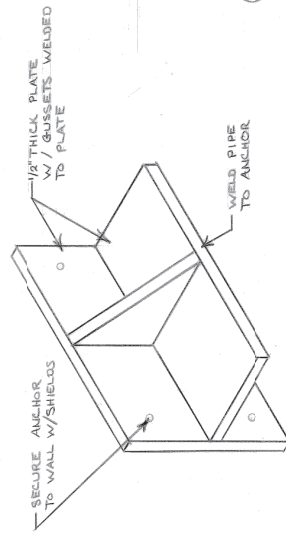
BOILER ROOM PLAN AND DETAILS



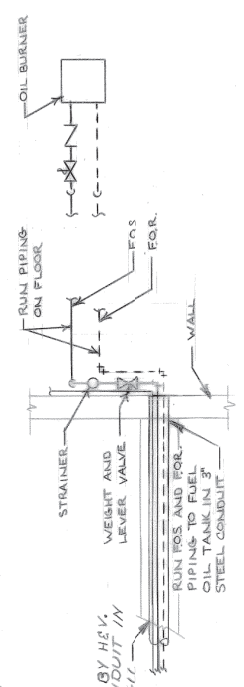
25 ADDITIVE ALTERNATE BID NO. 6
 SCALE - 1/4" = 1'-0"



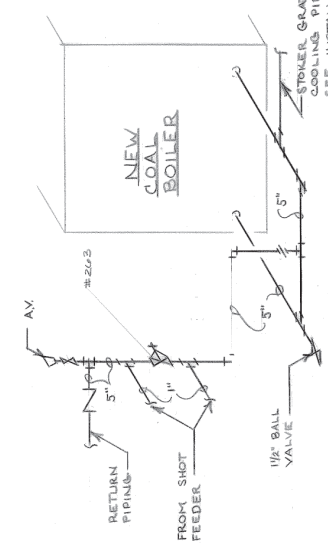
26 DETAIL - PIPE ANCHOR
 NO SCALE



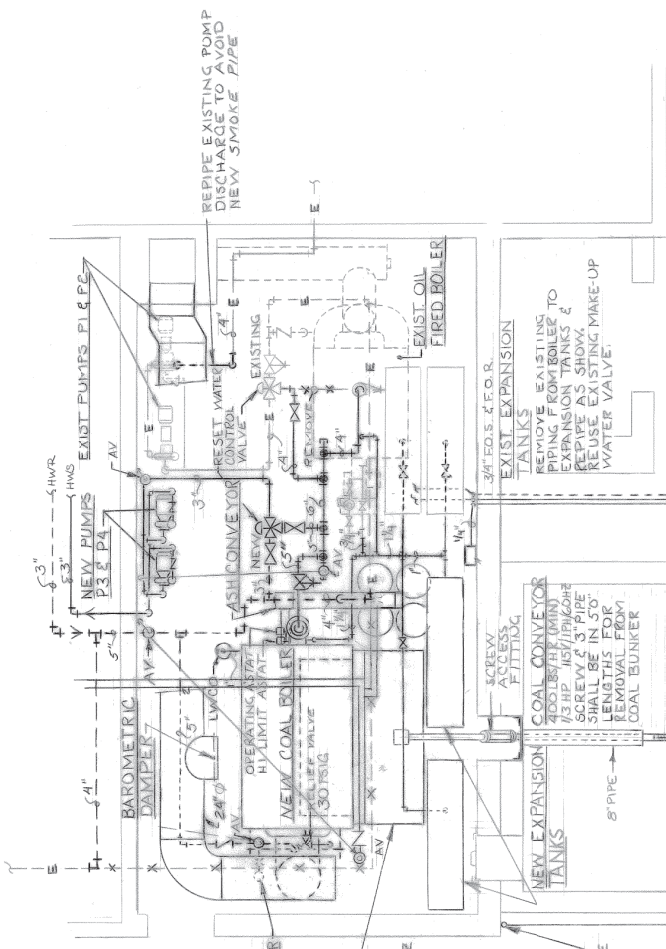
27 DETAIL - HB SMITH 2BWI2 RETURN YOKE
 NO SCALE



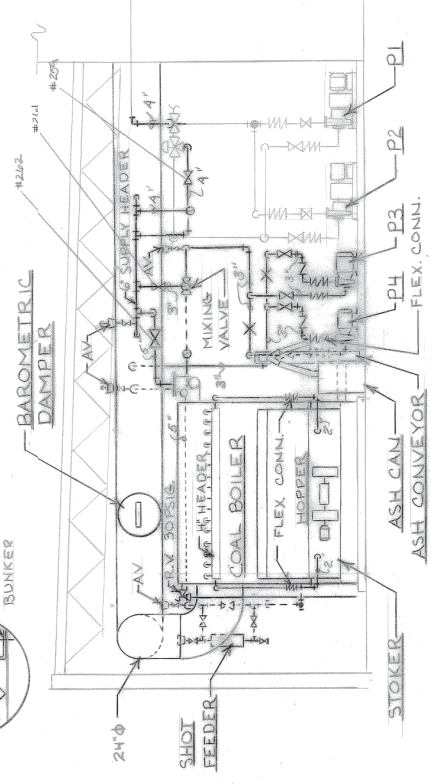
28 DETAIL - WATER COOLED GRATE PIPING
 NO SCALE



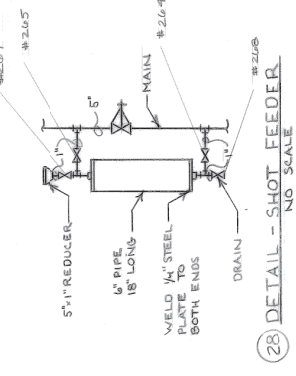
29 DETAIL - EXPANSION TANKS
 NO SCALE



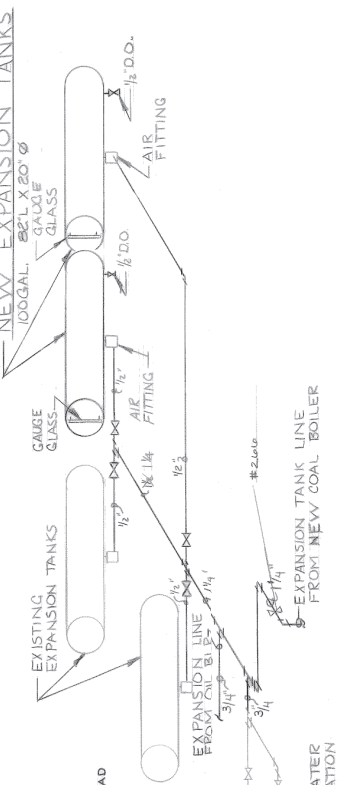
23 ELEVATION - BOILER ROOM
 SCALE - 1/4" = 1'-0"



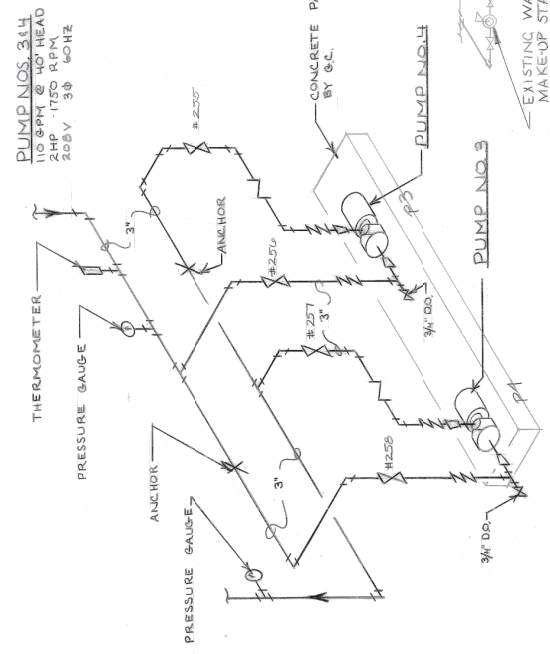
24 ELEVATION - BOILER ROOM
 SCALE - 1/4" = 1'-0"



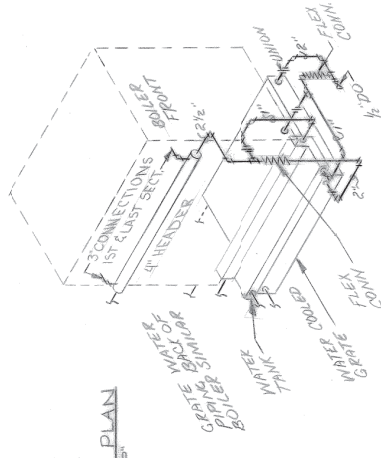
28 DETAIL - SHOT FEEDER
 NO SCALE



32 SCHEMATIC PIPING DETAIL - EXPANSION TANKS
 NO SCALE



31 SCHEMATIC PIPING DETAIL - PUMP NOS. 3 & 4
 NO SCALE



BOILER ROOM PLAN
 SCALE - 1/4" = 1'-0"

29 DETAIL - WATER COOLED GRATE PIPING
 NO SCALE

33 DETAIL - COAL BOILER RETURN YOKE
 NO SCALE



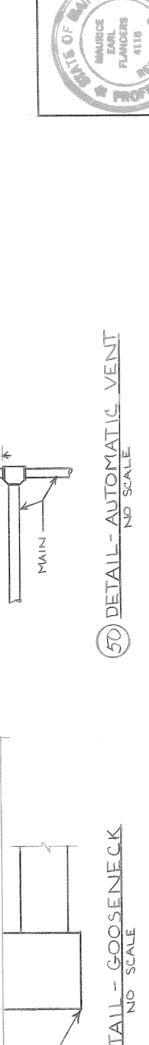
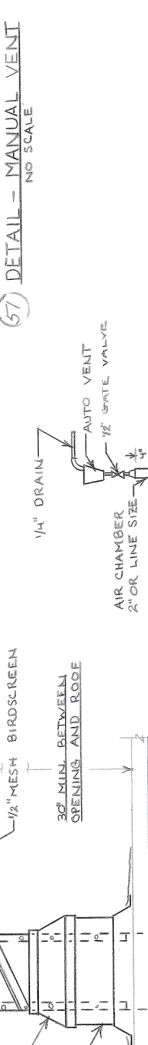
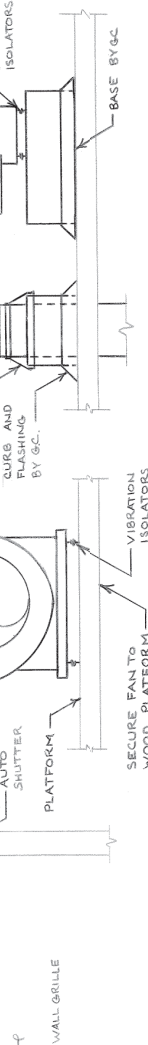
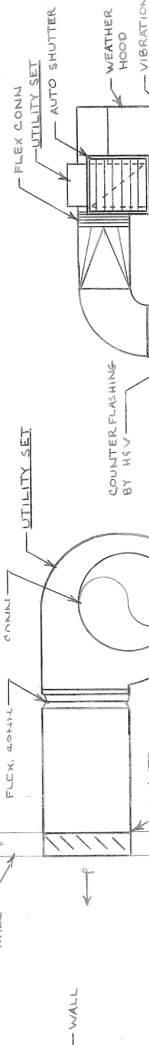
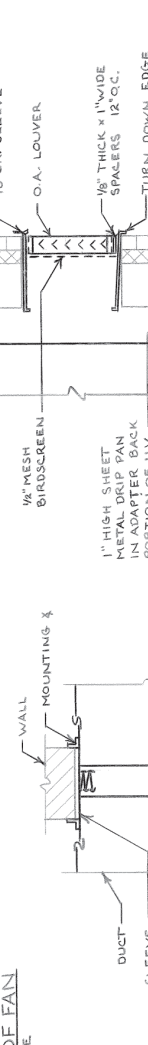
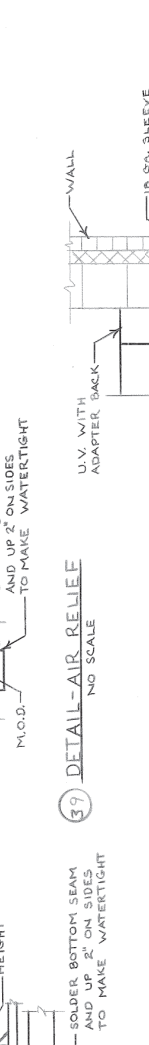
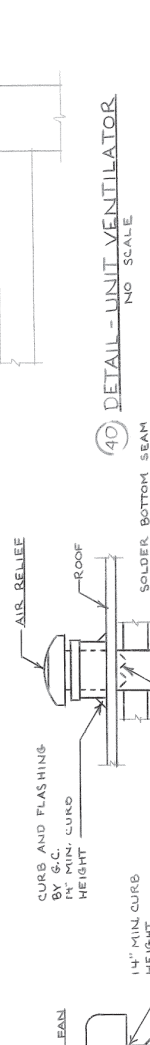
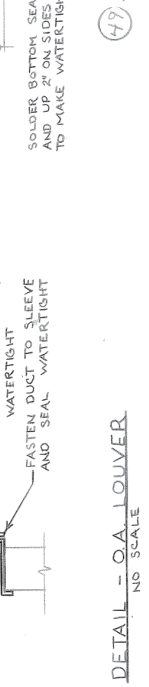
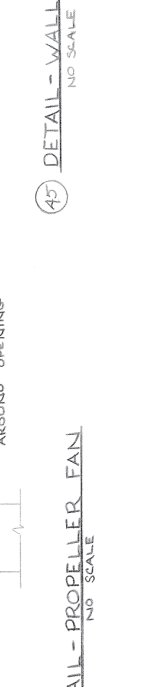
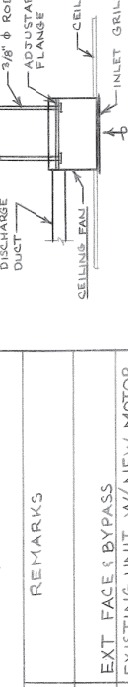
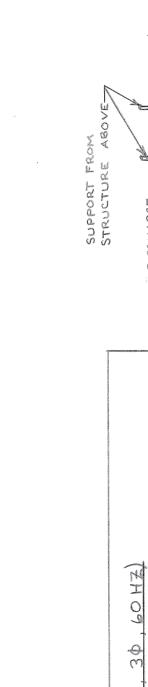
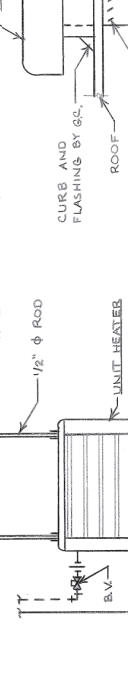
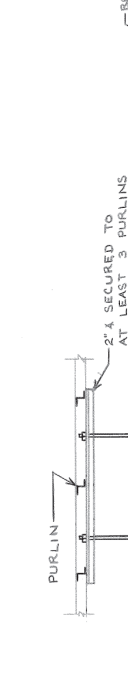
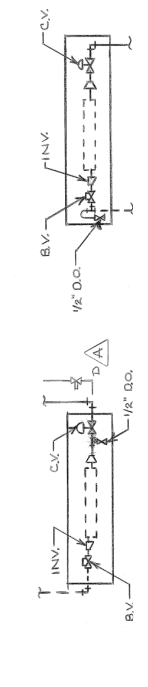
FAN SCHEDULE

FAN NO.	SERVES	CFM	SR	RPM	HP	VOLT	TYPE	REMARKS
1	RM112	140	1/8	930	1/6	120	WALL	
2	RM119	375	1/8	1050	1/6	120	WALL	
3	RM104	140	1/8	930	1/6	120	CEILING	
4	RM103	250	3/8	1050	1/6	120	CEILING	
5	RM106	140	1/8	930	1/6	120	CEILING	
6	RM116	800	1/4	1050	1/2	120	WALL	
7	RM107	3500	5	—	5	480-3Φ	UTILITY	BI
8	RM121	1400	1/8	930	1/6	120	WALL	BI ASPHALTUM
9	RM101	2200	3/4	2530	3	480-3Φ	UTILITY	BI ASPHALTUM
10	RM118	1000	1/4	1530	1/6	120	ROOF	
11	RM222	140	1/8	930	1/6	120	CEILING	
12	TOILETS	280	1/2	1100	1/6	120	ROOF	
13	RM228	1200	1/2	1074	1/4	120	ID FAN	
14	RM228	1950	3/8	950	1/4	120	ROOF	
15	RM122	1875	3	2235	1 1/2	480-3Φ	UTILITY	BI ASPHALTUM
16	RM C-2	140	1/8	930	1/6	120	CEILING	
17	RM C-1	250	3/8	1050	1/6	120	CEILING	
18-24	RM 101, 122, 228	18000	0	215	1/6	120	HEAT	TWO SPEED
25	RM233	1410	1/8	1140	1/8	120	PROP.	
26	RM107	2790	3/8	925	1/2	120	ROOF	
27	RM 107	1600	2	2136	1	480-3Φ	UTILITY	BI

HEATING AND VENTILATING UNIT SCHEDULE
 (MOTORS 480V 3Φ 60HZ)

UNIT NO.	SERVES	CFM	ESP	KPM	HP	COIL CAPACITY		OUTLET VEL. (FPM)	COIL FACE VEL. (FPM)	REMARKS	
						EAT.	LWT.				
1	RM107	5500	.25	624	2	-30°F	80°F	210°F	170°F	470	EXT FACE & BYPASS
2	RM101	10000	.35	878	5	42°F	80°F	210°F	170°F	615	EXISTING UNIT W/ NEW MOTOR
3	RM122	10000	.30	815	5	42°F	80°F	210°F	170°F	615	EXISTING UNIT W/ NEW MOTOR
4	RM228	6300	.15	449	2	42°F	80°F	210°F	170°F	456	

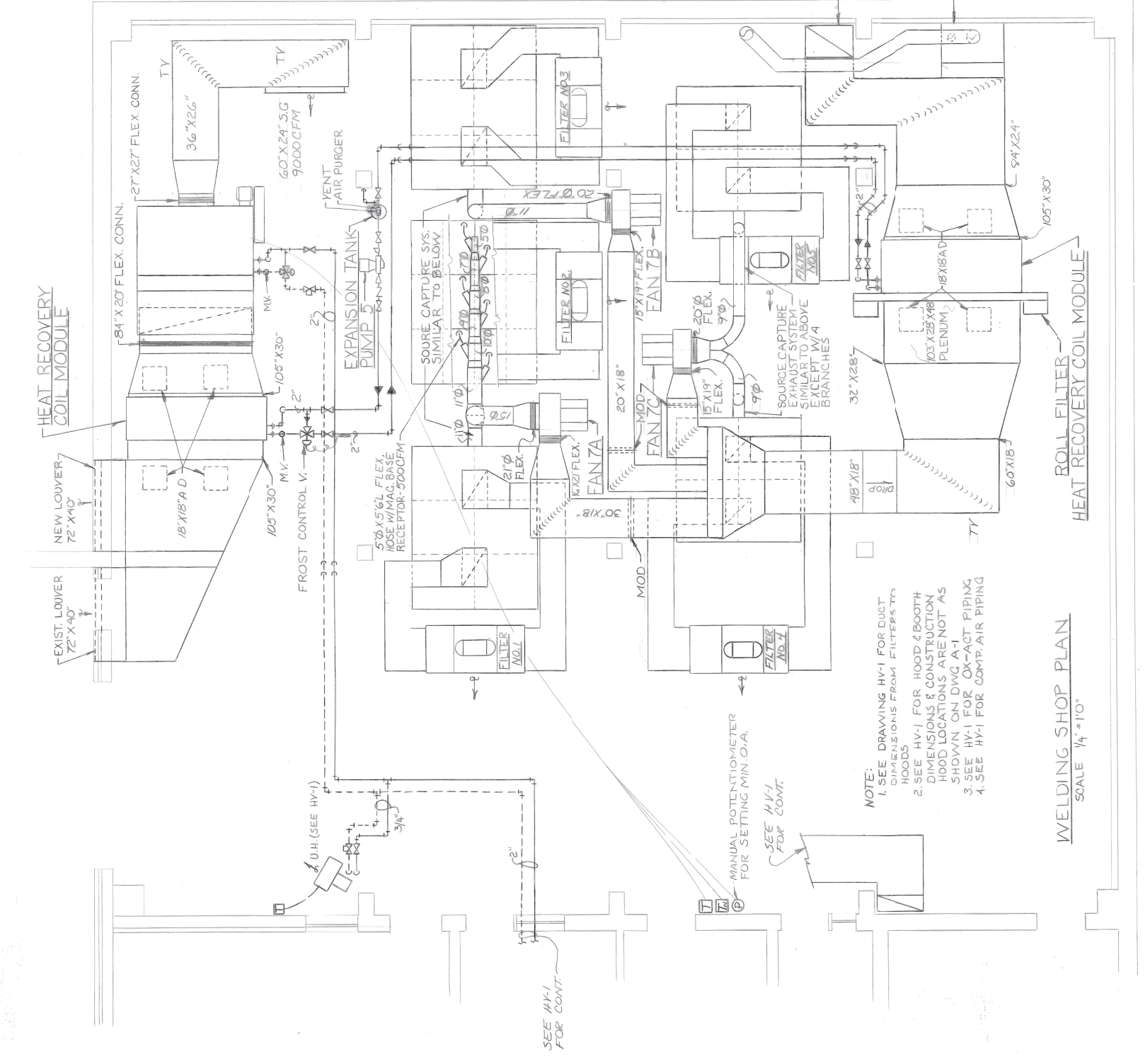
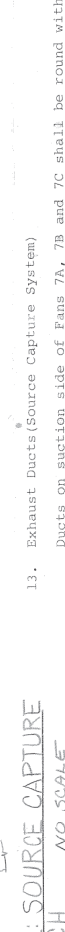
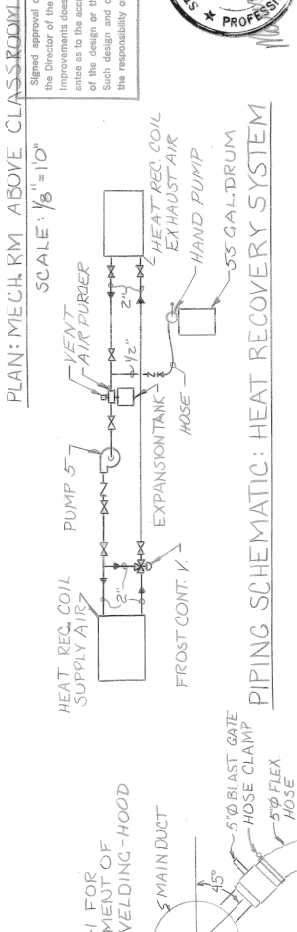
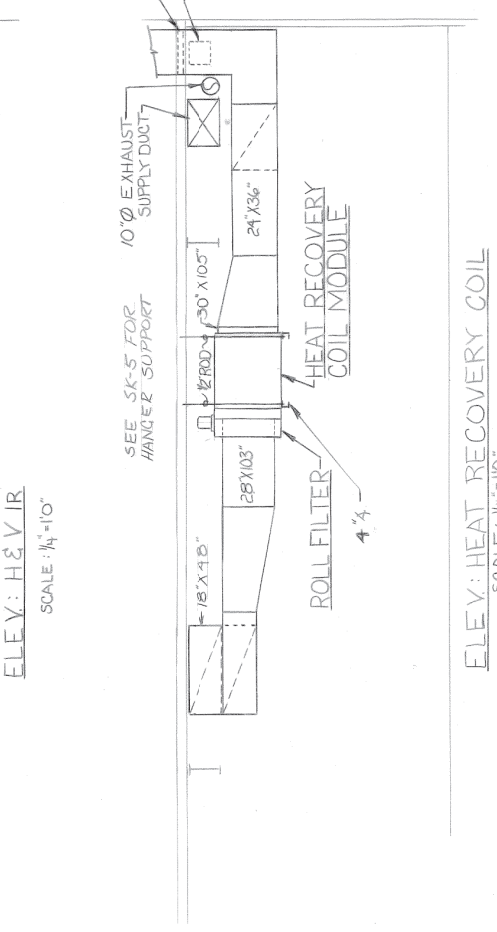
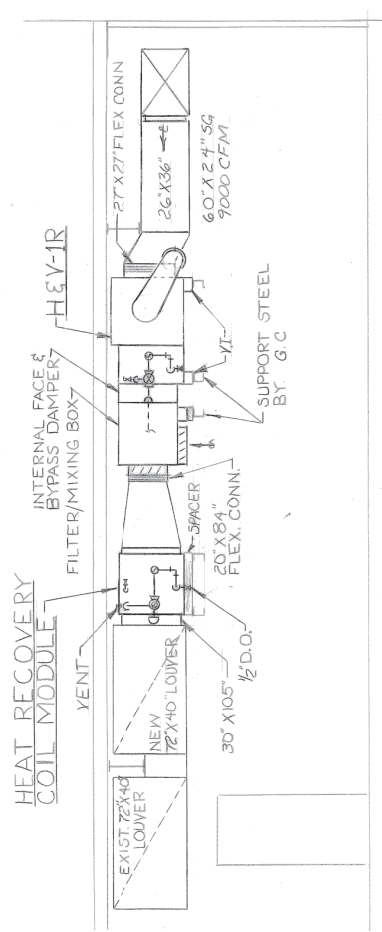
- ABBREVIATIONS**
- ACET ACETYLENE
 - AV AUTOMATIC VENT
 - BV BALANCING VALVE
 - CV CONTROL VALVE
 - DO DRAW OFF
 - EAT ENTERING AIR TEMP
 - ECR EXHAUST CEILING REGISTER
 - ESP EXTERNAL STATIC PRESSURE
 - EWG EXHAUST WALL GRILLE
 - EWR EXHAUST WALL REGISTER
 - EWT ENTERING WATER TEMP
 - FLEX FLEXIBLE CONNECTION
 - FOR FUEL OIL RETURN
 - FOS FUEL OIL SUPPLY
 - FD FIRE DAMPER
 - GC GENERAL CONTRACTOR
 - HC HEATING CAPACITY
 - HV HEATING AND VENTILATING
 - INV INVERTED REDUCER
 - ID INDUCED DRAFT
 - ITFP ONE TIER FINNED PIPE
 - LAT LEAVING AIR TEMP
 - LWCO LOW WATER CUT OFF
 - LWT LEAVING WATER TEMP
 - MD MANUAL DAMPER
 - MOD MOTOR OPERATED DAMPER
 - MV MANUAL VENT
 - OA OUTSIDE AIR
 - OC ON CENTER
 - OSBY OUTSIDE SCREW & YOKE
 - OXY OXYGEN
 - RWG RETURN WALL GRILLE
 - SP STATIC PRESSURE
 - SWG SUPPLY WALL GRILLE
 - SWR SUPPLY WALL REGISTER
 - TC TOTAL CAPACITY
 - TV TURNING VANES
 - UH UNIT HEATER
 - UV UNIT VENTILATOR
 - VE VOLUME EXTRACTOR
 - CA COMPRESSED AIR
 - BI BACKWARD INCLINED
 - AS AUTO SHUTTER
- SYMBOLS**
- HOT WATER SUPPLY PIPING
 - - - HOT WATER RETURN PIPING
 - E- EXISTING HOT WATER SUPPLY PIPING
 - E- EXISTING HOT WATER RETURN PIPING
 - PIPING TO BE REMOVED
 - D- DRAIN PIPING
 - G- OIL GAUGE LINE
 - >C- DROP IN LINE
 - >R- RISE IN LINE
 - >45- DROP FROM MAIN 45°
 - >45- DROP INTO MAIN 45°
 - FOS- FUEL OIL SUPPLY PIPING
 - FOR- FUEL OIL RETURN PIPING
 - X- GATE VALVE
 - X- GLOBE VALVE
 - X- CONTROL VALVE (2 WAY)
 - X- CONTROL VALVE (3 WAY)
 - X- CHECK VALVE
 - X- BALANCING VALVE
 - X- RELIEF VALVE
 - X- FUSIBLE VALVE
 - X- WATER MAKE UP VALVE
 - O- THERMOMETER
 - X- ANCHOR
 - D- INVERTED REDUCER
 - D- REDUCING COUPLING
 - D- PRESSURE GAUGE
 - D- THERMOSTAT
 - D- NIGHT THERMOSTAT
 - |O- UNION
 - O- CROSS SECTION OF PIPE
 - NW- FLEXIBLE PIPE CONNECTION
 - NW- FLEXIBLE DUCT CONNECTION
 - NW- DUCT W/LINING
 - X- SUPPLY DUCT SECTION
 - X- EXHAUST DUCT SECTION
 - CA- COMPRESSED AIR PIPING



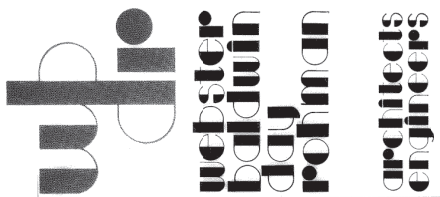
DESIGNER	MEF
ENGINEER	MEF
DRAWN BY	MEF
CHECKED BY	
DATE	1/22/82

REVISED WELDING SHOP VENTILATION

Approved At: *[Signature]*
 Director, Bureau of Fabric Improvements
 3-16-82



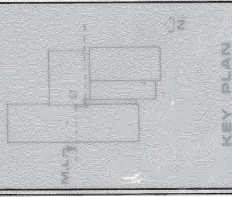
- NOTE:**
- SEE DRAWING HV-1 FOR DUCT DIMENSIONS FROM FILTERS TO HOODS
 - SEE HV-1 FOR HOOD & BOOTH DIMENSIONS & CONSTRUCTION HOOD LOCATIONS ARE NOT AS SHOWN ON DWG A-1
 - SEE HV-1 FOR OX-ACT PIPING
 - SEE HV-1 FOR COMP AIR PIPING
- MATERIAL**
- H & V - IR:
 9000 CFM, 1 1/2" E.S.P., 710 RPM, 7 1/2 HP, 480 V/3 PH
 Heating Coil: E.A.T. 17 0°F, L.A.T. 80°F, E.W.T. = 210°F, L.W.T. = 170°F
 Equal to: Trane Fan & Blower No. 200 SWSI BCV, Class II, Arrangement 10 Fan.
 Box with low leak dampers and vibration isolators.
 - Heat Recovery Coil Modules (2):
 9000 CFM, 0.75" W.G. Max. air pressure drop, 37 gpm of 50% glycol water
 Heating Coil: E.A.T. 17 0°F, L.A.T. 80°F, E.W.T. = 210°F, L.W.T. = 170°F
 Exhaust Coil: E.A.T. 70°F, L.A.T. 20°F, E.W.T. = 210°F, L.W.T. = 170°F
 Supply Coil: E.A.T. = -30°F, 9000 CFM, F.V. = 440 FPM
 Equal to: Trane No. 21 coil module with six row type 'W' coil.
 - Frost Control Valve:
 Equal to Powers No. 11 3-way mixing valve with 10°F to 60°F set point range.
 - Roll Filter:
 Equal to Trane RF-21 with automatic pressure drop filter media control advance. Direct connect to exhaust coil module inlet. Provide spare roll of filter media.
 Exhaust Fan 7A:
 6000 CFM, 6" W.G. - E.S.P., 2160 RPM, 10 HP, 480V/3 PH.
 Equal to: Twin City Fan & Blower No. 182 SWSI, BGV, Class I, Arrangement 10 Fan.
 - Exhaust Fan 7B:
 3000 CFM, 5" W.G.-E.S.P., 2020 RPM, 5 HP, 480V/3 PH.
 Equal to: Twin City Fan & Blower No. 182 SWSI, BGV, Class I, Arrangement 10 Fan.
 - Exhaust Fan 7C:
 4000 CFM, 5" W.G. - E.S.P., 2100 RPM, 5 HP, 480V/3 PH.
 Equal to: Trane Fan & Blower No. 7, provide new belts and pulleys to exhaust blower fan room.
 - Expansion Tank:
 Equal to Amtrol, Extrol MOD. 30 with 2" mod. 446 air purger and #700 vent.
 - Relief Valve:
 Equal to B & G No. 750, 30 PSIG, CAP = 750 MBH.
 - Flexible Hose & Receptor:
 As specified in Section 1562.37, Para. T except 5" in diameter.
 - Blast gate:
 A blast gate shall be installed in each source capture branch duct as shown in detail. Equal to Car-Mon Products BG-5.
 - Pump No. 5:
 40 GPM @ 30 ft. HD. 1750 RPM, 3/4 HP, 480V/3 HP
 Equal to: Bell & Gossett Series 60, 1 1/4".
 - Temperature Control:
 A. Provide motor operated dampers in the discharge duct of Fans 7A, 7B and 7C where shown on the revised plan of the welding shop. Dampers shall be low leak design allowing no more than 15 CFM/FT leakage at 1" W.G. Damper shall open when its respective fan starts.
 B. H & V-IR shall be controlled as specified in Section 1562.39 C.6., except a manual potentiometer shall be provided to set the minimum outside air of the unit. Locate potentiometer on wall next to thermostats.
 - Insulation:
 Heat recovery piping shall be insulated with 1" fiberglass insulation as specified in Section 1562.34. All butt ends shall be covered with 4" straps of same jacket material. All joints shall be vapor sealed with mastic. Fittings and valves shall be covered with insulation and sealed with mastic.
 - Exhaust Ducts (Source Capture System)
 Ducts on suction side of Fans 7A, 7B and 7C shall be round with all joints soldered air tight. Ducts on discharge side of fans shall have all joints sealed air tight, including joints on discharge side of coil module.



1494

N.M.V.T. SHOP

PRESQUE ISLE MAINE



NO. REVISION DATE

AS-EU-1-63

DESIGNER ENGINEER GWA
DRAWN BY TJS/MS
CHECKED BY GWA/VYS
DATE: JUNE 11, 1981

ELECTRICAL SITE PLAN, RISER DIAGRAM, PANEL BOARD SCHEDULE



PANEL BOARD	BRANCH CIRCUIT BREAKERS	FEEDERS	WIRE	CONDUIT	FEEDER	REMARKS	NOTES
P-1-C	24	2	20	1/2"	1/2"	2	XHHW 1/4" (1)(2)(3)
L-1-D	17	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(4)
L-2-E	7	5	20	1/2"	1/2"	5	XHHW 1/4" (1)(2)(5)
P-2-F	17	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
P-1-G	28	2	20	1/2"	1/2"	2	XHHW 1/4" (1)(2)(3)
P-1-H	7	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(4)
P-2-J	4	2	20	1/2"	1/2"	2	XHHW 1/4" (1)(2)(3)
P-1-W	8	0	20	1/2"	1/2"	0	XHHW 1/4" (1)(2)(3)
LP	18	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
SP	10	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
NP-PP	8	7	20	1/2"	1/2"	7	XHHW 1/4" (1)(2)(3)
BUS-SUBWAY	0	6	20	1/2"	1/2"	6	XHHW 1/4" (1)(2)(3)
P-2-L	1	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
P-2-M	1	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
P-2-N	1	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
P-2-O	1	1	20	1/2"	1/2"	1	XHHW 1/4" (1)(2)(3)
MD-B	5	0	20	1/2"	1/2"	0	XHHW 1/4" (1)(2)(3)
MD-A	2	0	20	1/2"	1/2"	0	XHHW 1/4" (1)(2)(3)

- 1. Top Feed.
- 2. Min gutters 6" sides and depth, 8" top and bottom.
- 3. Branch breakers minimum 30,000 AIC Type THBB.
- 4. Branch breakers minimum 10,000 AIC Type TED.
- 5. Bottom feed.
- 6. Min gutters 6" depth, 8" sides, 10" top and bottom.
- 7. Existing EPE Panelboard. Remove existing feeder and refer to MD-B.
- 8. Add new 2720 Branch Breaker to match existing.
- 9. Existing panelboard to be replaced and re-located. Remove all unused wiring.
- 10. Re-feed existing emergency shut-off contactor from MD-B and remove existing feeder.
- 11. Single phase panelboards for student use. minimum gutters 4" sides and depth, 6" top and bottom. Tabs to be solid galvanized.

