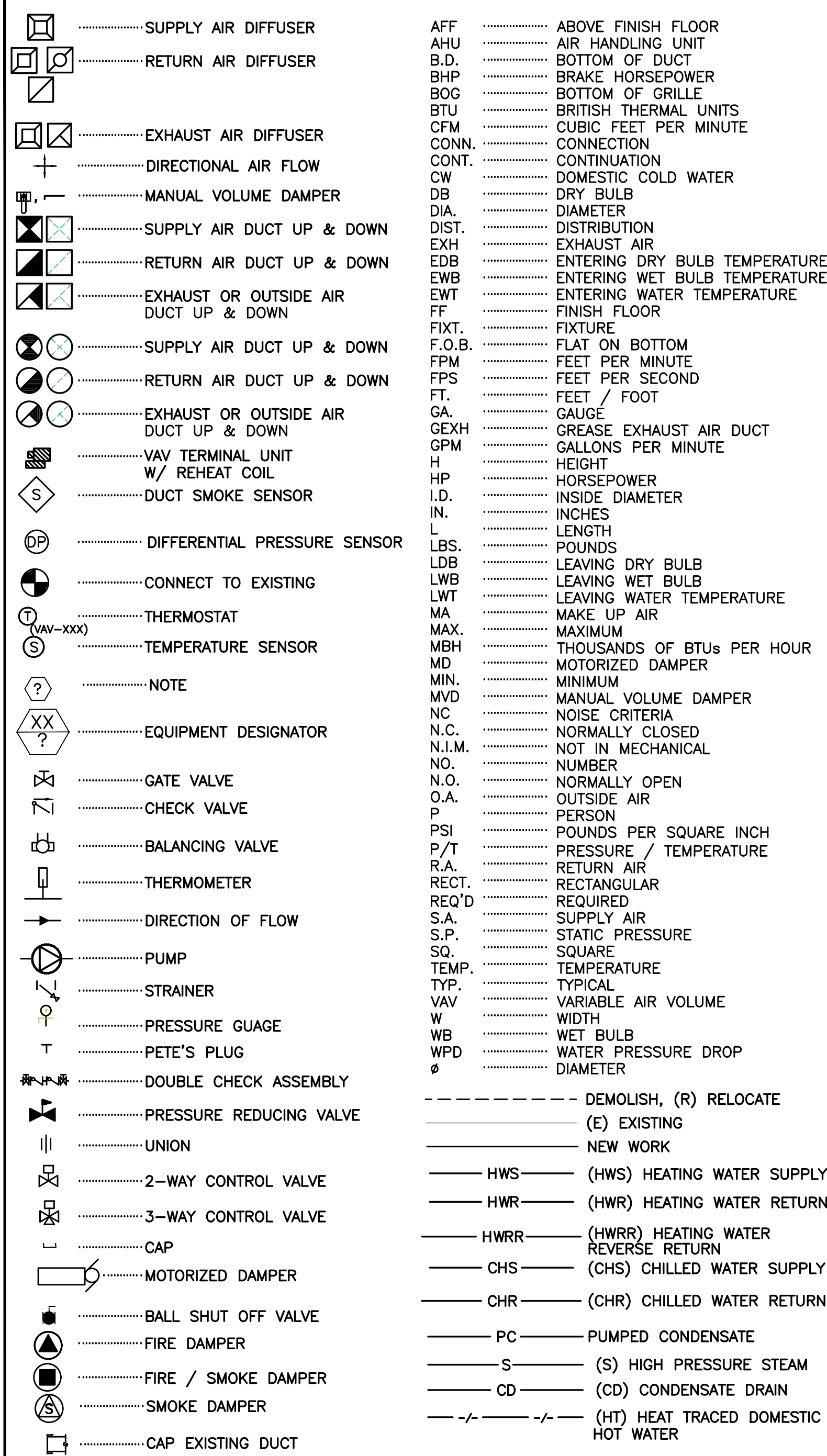
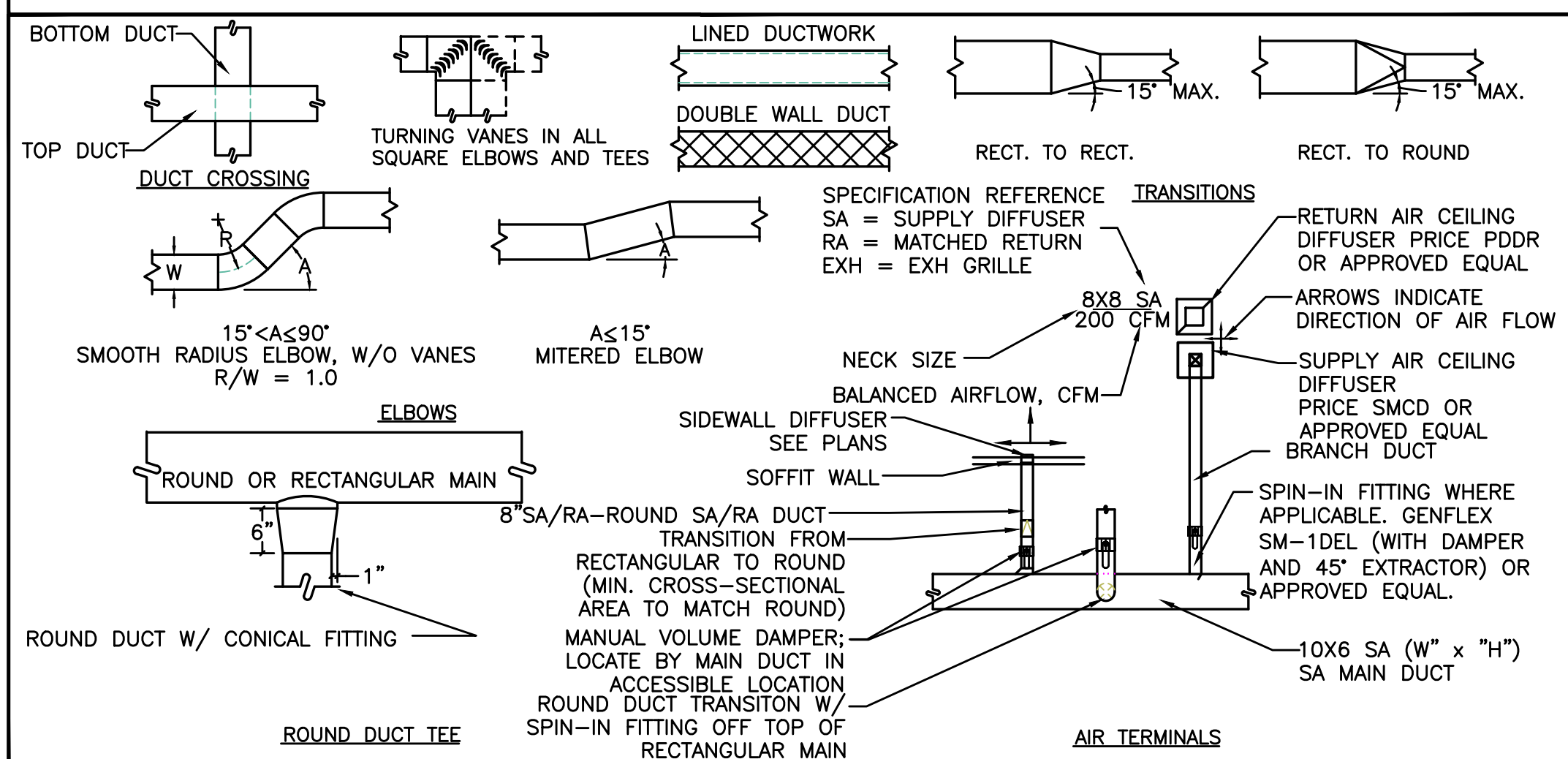


## MECHANICAL LEGEND



## AIR DISTRIBUTION DETAILS



**NOTE:**

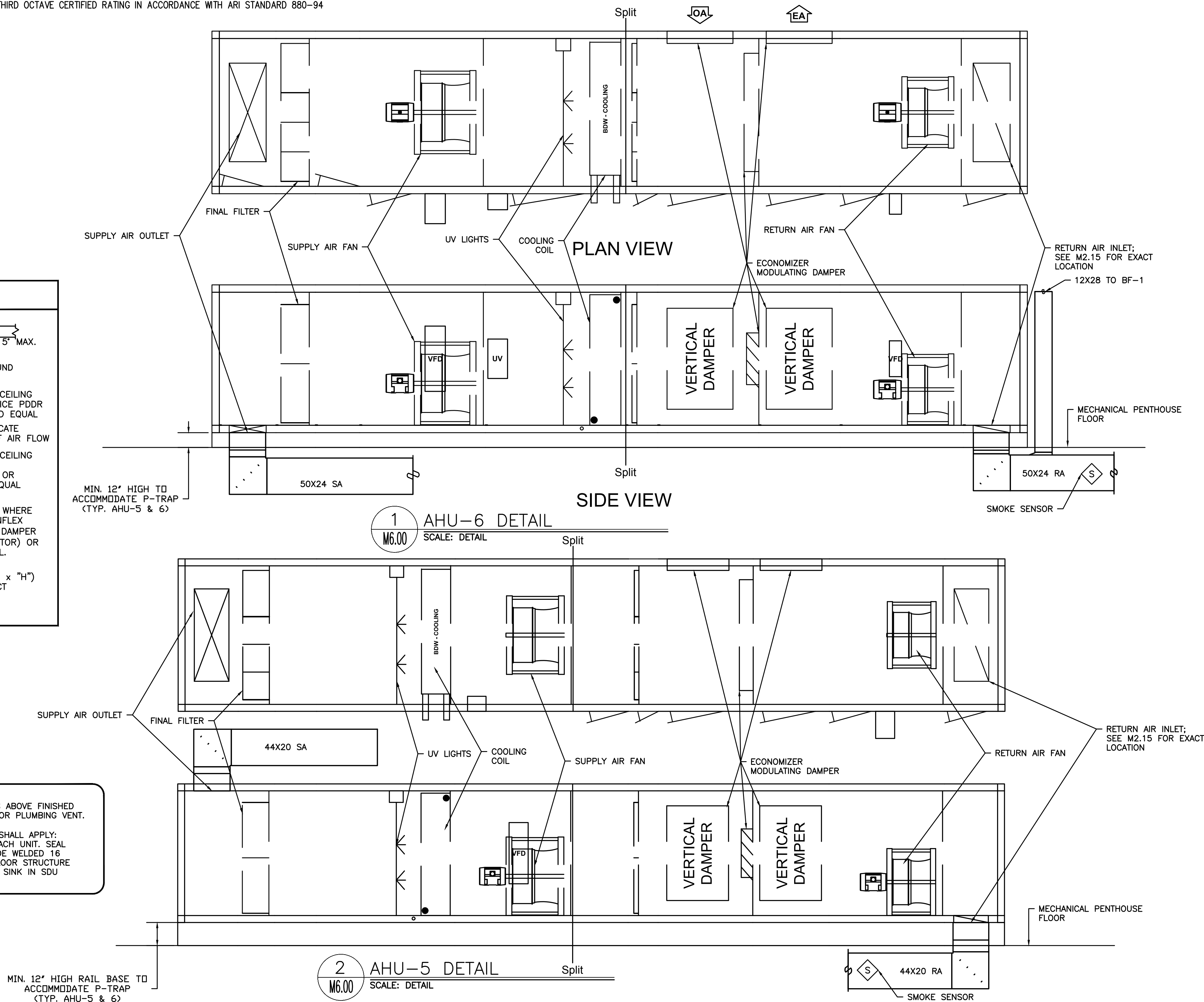
1. OUTSIDE AIR INTAKE LOUVER SHALL BE LOCATED MINIMUM OF 36 INCHES ABOVE FINISHED ROOF AND 25 FEET HORIZONTALLY FROM ANY EXHAUST OUTLET, FLUE VENT OR PLUMBING VENT.

2. IF 12" BASE RAIL, IS NOT APPROVED BY MANUFACTURER THE FOLLOWING SHALL APPLY: CORE DRILL CONCRETE FLOOR TO ACCOMMODATE CONDENSATE P-TRAP FOR EACH UNIT. SEAL PIPES THROUGH FLOOR PENETRATIONS WITH THUNDERLINK LINK-SEAL. PROVIDED WEELD 16 GAUGE STAINLESS STEEL DRIP PAN FASTENED TO THE UNDERSIDE OF THE FLOOR STRUCTURE ABOVE STERILE SUPPLY STORAGE . PIPE DRAIN TO DAYLIGHT OVER THE MCP SINK IN FLOOR JUNCTION 244.

VAV BOXES WITH HOT WATER REHEAT

	TYPE	ZONE SQ. FT.	MAX COOLING CFM	MAXIMUM HEATING CFM		INLET IN.	OUTLET IN.	SA INLET TEMP DEG. F	SA TEMP AT HEATING DEG. F	REHEAT COIL LOAD MBH	INLET WATER TEMP (F)	OUTLET WATER TEMP (F)	GPM	CONN. SIZE IN.	VALVE TYPE	MAX. STATIC LOSS *	MAX. DISCHARGE SOUND POWER LEVEL **	MAX. RADIATED SOUND POWER LEVEL **	CONTROL TYPE	
VAV-1	VAV	575	2020	2020	14	20X16		55	100	98.2	180	140	4.9	1	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-2	VAV	575	2020	2020	14	20X16		55	100	98.2	180	140	4.9	1	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-3	VAV	176	275	1288	55	12X8		55	100	13.4	180	140	2.0	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-4	VAV	904	835	835	6	14X13		55	100	40.6	180	140	2.0	3/4	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-5	VAV	1344	1200	1200	12	16X15		55	100	58.3	180	140	2.9	3/4	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-6	VAV	65	200	200	6	12X8		55	100	9.7	180	140	0.5	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
TOTAL		3639	6550	6550						318.3			15.9							
VAV-7	VAV	481	860	860	10	14X13		55	100	41.8	180	140	2.1	3/4	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-8	VAV	324	645	645	8	12X10		55	100	31.3	180	140	1.6	3/4	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-9	VAV	324	645	645	8	12X10		55	100	31.3	180	140	1.6	3/4	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-10	VAV	1286	1030	1030	12	16X15		55	100	50.1	180	140	2.5	3/4	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-11	VAV	803	880	880	10	14X13		55	100	42.8	180	140	2.1	3/4	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-12	VAV	234	250	250	6	12X8		55	100	12.2	180	140	0.6	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-13	VAV	2233	1760	1760	14	20X16		55	100	85.5	180	140	4.3	1	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-14	VAV	1020	1725	1725	14	20X16		55	100	83.8	180	140	4.2	1	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-15	VAV	523	540	540	8	12X10		55	100	26.2	180	140	1.3	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-16	VAV	360	345	345	6	12X8		55	100	16.8	180	140	0.8	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-17	VAV	170	385	385	6	12X8		55	100	18.7	180	140	0.9	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-18	VAV	260	390	390	6	12X8		55	100	19.0	180	140	0.9	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-19	VAV	180	400	400	6	12X8		55	100	19.4	180	140	1.0	1/2	3-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-20	VAV	91	150	150	4	12X8		55	100	7.3	180	140	0.4	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-21	VAV	121	225	225	6	12X8		55	100	10.9	180	140	0.5	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-22	VAV	121	110	110	4	12X8		55	100	5.3	180	140	0.3	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
VAV-23	VAV	130	215	215	6	12X8		55	100	10.4	180	140	0.5	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
TOTAL		8661	10555	10555						513.0			25.6							
(E)VAV-1	VAV	109	150	150	4	12X8		55	100	7.3	180	140	0.4	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-6	VAV	236	400	400	6	12X8		55	100	19.4	180	140	1.0	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-6	VAV	169	175	175	6	12X8		55	100	8.5	180	140	0.4	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-7	VAV	846	900	900	10	14X13		55	100	43.7	180	140	2.2	3/4	3-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-8	VAV	341	365	365	6	12X8		55	100	17.7	180	140	0.9	1/2	2-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-10	VAV	689	640	640	8	12X10		55	100	31.1	180	140	1.6	3/4	3-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-15	VAV	1328	1100	1100	12	16X15		55	100	53.5	180	140	2.7	3/4	3-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-16	VAV	2769	2085	2085	9	14X13		55	100	101.3	180	140	5.1	1	3-WAY CONTROL VALVE	0.75	67	59	DDC	
(E)VAV-17	VAV	553	510	510	9	14X13		55	100	24.8	180	140	1.2	1/2	3-WAY CONTROL VALVE	0.75	67	59	DDC	
TOTAL		7040	6325	6325						307.4			15.4							
VAV-19A	VAV	575	1740	----	14	20X16		----	----	----	----	----	----	----	△ 6	----	0.75	67	59	DDC
VAV-28A	VAV	575	1740	----	14	20X16		----	----	----	----	----	----	----	----	0.75	67	59	DDC	

\* - INCLUDING COIL, SOUND ATTENUATOR SECTION & VAV BOX  
\*\* - THIRD OCTAVE CERTIFIED RATING IN ACCORDANCE WITH ARI STANDARD 880-94



333 NW 5th Ave.  
Portland, OR 97209  
Phone: 503/224-4848  
Fax: 503/224-7116

## SLCH - ED and Surgery

## Samaritan Health Services: Lebanon Community Hospital

5525 N. Santiam Highway, Lebanon, OR 97355



ISSUE DATE: 06.05.2015

REVISIONS:

1	- ADD #1	05.28.2015
6	SAME DAY REV.	10-5-1
7	CCD # 05	4-14-17
8	CCD # 10	2-12-18

## MECHANICAL LEGEND AND SCHEDULES

## M6.00



VENTILATION AIR SCHEDULE																						
ROOM NUMBER AND NAME	AREA (SQ. FT.)	ROOM HEIGHT	OCCUPANT LOAD (SQ. FT./P)	NUMBER OF FIXTURES	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)*	OUTSIDE AIR FLOW RATE (CFM/SQ.FT)	OUTSIDE AIR REQUIRED (CFM) OMC5 2014	MIN. DESIGN OUTSIDE AIR (CFM) OAR	SUPPLY AIR (CFM)	OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	OSA AC/HR	SA AC/HR	EXH AC/HR	OSA AC/HR	SA AC/HR	EXH AC/HR	AIR SYSTEMS		
211 ORV#1	575	10	50		12	30	0	360	400	2020	0.20	1740	0	4.2	21.1	0.0	4.0	20.0		AHU-5	VAV-01	
215 ORV#2	575	10	50		12	30	0	360	400	2020	0.20	1740	0	4.2	21.1	0.0	4.0	20.0		AHU-5	VAV-02	
212 SUB STERILE	189	8	300		1	0	0.12	23	52	275	0.19	200	0	2.1	10.9	0.0	2.0	4.0		AHU-5	VAV-03	
208 CLEAN LINEN & SUPPLY	128	8.5	300		1	5	0.06	13	20	100	0.20	80	0	1.1	5.5	0.0	1.0	4.0		AHU-5	VAV-04	
210 ANESTH WORK AND SUPPLY	183	8.5	300		1	5	0.06	16	30	125	0.24	100	0	1.2	4.8	0.0	1.0	4.0		AHU-5	VAV-04	
216 STERILE SUPPLY	453	8.5	300		2	8.5	0.12	54	150	450	0.28	400	0	2.0	7.8	0.0	2.0	4.0		AHU-5	VAV-04	
209 SOLID WORK/HOLD	149	8.5	300		1	0	0.12	18	45	160	0.28	0	225	2.1	7.6	10.7	2.0		10.0	AHU-5	VAV-04	
217 CONTROL	98	10	50		2	5	0.06	16	27	125	0.22	0	0	1.7	7.7	0.0	1.0	4.0		AHU-5	VAV-05	
206 CORRIDOR	1140	10	0		0	0	0.12	137	200	1025	0.20	1700	0	1.1	5.4	0.0	1.0	4.0		AHU-5	VAV-05	
218 STAFF TLT	54	8	0		1	0	0	0	0	50	0.00	0	100	0.0	6.9	13.9			10.0	AHU-5	VAV-05	
213 AUTOCLAVE STERILIZER	35	8	300		1	1	0.12	0	4	20	0.10	0	250	0.3	42.9	53.6	2.0			AHU-5	VAV-06	
TOTAL	3579				1	32			1324	6590		5960	575									
CORRECTED TOTAL OUTDOOR AIR FRACTION										0.29												
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										1900												
OUTSIDE AIR DAMPER POSITION SHALL BE SET TO MINIMUM 25%																						
226 SAME DAY 3	135	9	100		2	15	0	30	40	215	0.19	205	0	2.0	10.6	0.0	2.0	6.0		AHU-6	VAV-07	
227 SAME DAY 4	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-07	
228 SAME DAY 5	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-07	
229 SAME DAY 6	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-08	
234 SAME DAY 7	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-08	
235 SAME DAY 8	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-08	
237 SAME DAY 9	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-09	
238 SAME DAY 10	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-09	
239 SAME DAY 11	108	9	100		2	15	0	30	35	215	0.16	205	0	2.2	13.3	0.0	2.0	6.0		AHU-6	VAV-09	
223.5 SAME DAY 12	130	9	100		2	15	0	30	40	215	0.19	205	0	2.1	11.0	0.0	2.0	6.0		AHU-6	VAV-09	
226.5 SAME DAY 13	130	9	100		2	15	0	30	40	215	0.19	205	0	2.1	11.0	0.0	2.0	6.0		AHU-6	VAV-09	
221E CORRIDOR	864	10	300		3	0	0.06	52	150	650	0.23	530	0	1.0	4.5	0.0	1.0	4.0		AHU-6	VAV-10	
244 SUO JANITOR	37	8	0	1	0	0	0	0	0	30	0.00	0	75	0.0	6.1	15.2			10.0	AHU-6	VAV-10	
243 PATIENT TOILET	48	8	0	1	0	0	0	0	0	50	0.00	0	0	0.0	6.1	15.2			10.0	AHU-6	VAV-10	
245 EQUIPMENT	140	8.5	300		1	0	0.12	17	42	135	0.31	130	0	2.1	6.8	0.0	2.0	6.0		AHU-6	VAV-10	
247 CLERK AND BREAKDOWN	85	8.5	100		1	5	0.06	10	10	75	0.13	70	0	0.8	6.2	0.0	2.0			AHU-6	VAV-10	
246 OFFICE	107	8.5	102		2	5	0.06	16	11	90	0.12	80	0	0.7	5.9	0.0	2.0			AHU-6	VAV-10	
219 PACU	803	9	150		6	15	0	90	270	880	0.31	800	0	2.2	4.5	0.0	2.0	6.0		AHU-6	VAV-11	
242 MINOR PROCEDURE	234	10	100		2	15	0	30	75	240	0.32	240	0	2.1	6.4	0.0	2.0	6.0		AHU-6	VAV-12	
236 NURSE STATION	178	9.5	100		2	5	0.06	21	30	150	0.20	0	0	1.1	5.3	0.0	1.0	4.0		AHU-6	VAV-13	
232 CLEAN LINEN SUPPLY	244	9	0	0	0	0	0.12	29	29	125	0.23	0	0	0.8	3.4	0.0	2.0			AHU-6	VAV-13	
233 STAFF TOILET	48	8	0	1	0	0	0	0	0	50	0.00	0	100	0.0	7.8	15.6			10.0	AHU-6	VAV-13	
230 PATIENT TOILET	61	8	0	1	0	0	0	0	0	50	0.00	0	100	0.0	6.1	12.3			10.0	AHU-6	VAV-13	
230 NOURISH	150	9	300		1	0	0.12	18	18	100	0.18	0	0	0.8	4.4	0.0	2.0			AHU-6	VAV-13	
231 MEDS	153	8	300		1	0	0.12	18	40	125	0.32	0	0	2.0	6.1	0.0	2.0	4.0		AHU-6	VAV-13	
225 NURSE STATION	158	9	100		2	5	0.06	19	27	150	0.18	0	0	1.1	6.3	0.0	1.0	4.0		AHU-6	VAV-13	
221 CORRIDOR	1092	10	300		4	0	0.06	66	190	1050	0.22	1250	0	1.0	4.7	0.0	1.0	4.0		AHU-6	VAV-13	
220 SOLID	155	8	100		2	15	0	19	160	460	0.26	0	225	2.0	12.7	10.0			10.0	AHU-6	VAV-13	
101 WAITING	1020	14.5	30		34	15	0.06	571	0	575	0.75	333	2100	0	2.3	7.0	0.0	2.0	6.0		AHU-6	VAV-14
104 RECEPTION	170	9	100		2	5	0.06	20	55	175	0.31	0	0	2.2	6.9	0.0	2.0	6.0		AHU-6	VAV-18	
111 FT EXAM ROOM 1	123	8.5	80		2	15	0	30	35	120	0.29	110	0	2.0	6.9	0.0	2.0	6.0		AHU-6	VAV-15	
112 FT EXAM ROOM 2	123	8.5	80		2	15	0	30	35	120	0.29	110	0	2.0	6.9	0.0	2.0	6.0		AHU-6	VAV-15	
113 TREATMENT	130	8.5	100		2	15	0	30	35	150	0.27	145	0	2.0	7.5	0.0	2.0	6.0		AHU-6	VAV-15	
147 SOLID UTILITY	48	8	300		1	0	0.12	6	15	50	0.30	0	100	2.3	7.8	15.6	2.0		10.0	AHU-6	VAV-16	
146 TREATMENT 15	182	8.5	100		2	15	0	30	55	175	0.31	105	0	2.1	6.8	0.0	2.0	6.0		AHU-6	VAV-16	
149 FAST TRACK # 3	128	8.5	80		2	15	0	30	40	120	0.33	105	0	2.2	6.6	0.0	2.0	6.0		AHU-6	VAV-16	
110 TRACE/ADMIN	170	9	100		4	0	0	60	60	40	0.21	0	405	0.1	15.1	16.7	3.0	15.0		AHU-6	VAV-17	
105 TRACE/ADMIN	90	9	50		2	15	0	30	40	215	0.19	0	265	3.0	15.9	19.6	3.0	15.0		AHU-6	VAV-16	
100 VESTIBULE	252	14	300		1	0	0.06	15	11	400	0.03	360	0	0.2	6.8	0.0				AHU-6	VAV-19	
108 PATIENT TOILET	54	9	0	1	0	0	0	0	0	50	0.00	0	100	0.0	6.2	12.3			10.0	AHU-6	VAV-20	
103 SECURITY	71	9	100		1	5	0.06	9	0	100	0.10	95	0	0.9	9.4	0.0			2.0	AHU-6	VAV-20	
223 SAME DAY 11	121	9	100		2	15	0	30	36	225	0.16	0	0	2.0	12.4	15.2	2.0	12.0		AHU-6	VAV-21	
224 SAME DAY 2	121	9	100		2	15	0	30	36	110	0.33	105	0	2.0	6.1	0.0	2.0	6.0		AHU-6	VAV-22	
TOTAL	8628				5	106			1642	2402		10405	8590	1785								
CORRECTED TOTAL OUTDOOR AIR FRACTION										0.33												
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										1900												
OUTSIDE AIR DAMPER POSITION SHALL BE SET TO MINIMUM 33%																						
134 TREATMENT 10	109	9	100		2	15	0	30	35	150	0.23	140	0	2.1	9.2	0.0	2.0	6.0		(E)RTU-1	(E)VAV-01	
130 ISOLATION ROOM	157	8	100		2	15	0	30	80	300	0.20	0	350	2.4	12.0	15.0	2.0	12.0		(E)RTU-1	(E)VAV-05	
129 JOLIE	82	8	0	1	0	0	0	0	0	100	0.12	0	0	1.0	16.3	16.3	2.0	12.0		(E)RTU-1	(E)VAV-06	
128 STRETCHER VESTIBULE	105	8	300		1	0	0.06	6	6	175	0.03	160	0	0.4	11.1	0.0				(E)RTU-1	(E)VAV-06	
115 TREATMENT 2	141	8.5	80		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
117 TREATMENT 3	141	8.5	80		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
118 TREATMENT ROOM 4	141	8.5	100		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
120 TREATMENT ROOM 5	141	8.5	100		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
123 TREATMENT ROOM 6	141	8.5	100		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
125 TREATMENT ROOM 7	141	8.5	100		2	15	0	30	40	150	0.27	140	0	2.0	7.5	0.0	2.0	6.0		(E)RTU-1	(E)VAV-07	
122 MEDS AND CLEAN UTILITY	160	9	300		1	0	0.12	19	50	165	0.30	0	0	2.1	6.9	0.0	2.0	4.0		(E)RTU-1	(E)VAV-08	
119 SITTING WORK	85	8.5	100		1	5	0.06	10	100	100	0.10	0	0	0.8	7.8	0.0	2.0			(E)RTU-1	(E)VAV-08	
127 DOCTOR WORK	91	9	100		1	5	0.06	10	13	100	0.10	0	0	0.7	8.3	0.0	2.0			(E)RTU-1	(E)VAV-08	
141 TREATMENT11/PSYCH HOLD	142	8.5	100		2	15	0	30	40	160	0.25	145	0	2.0	7.0	0.0	2.0	6.0		(E)RTU-1	(E)VAV-10	
142 TREATMENT12/PSYCH HOLD	145	8.5	100		2	15	0	30	42	160	0.26	145	0	2.0	7.8	0.0	2.0	6.0		(E)RTU-1	(E)VAV-10	
144 TREATMENT																						





AIR HANDLER UNIT			
MARK NUMBER		AHU** 5	AHU** 6
SYSTEM		SURGERY CENTER	ED CENTER
MIN OSA, CFM		1,900	3,240
FINAL FILTER TYPE		MERV 17	MERV 14
FINAL FILTER		99.97%	95%
ULTRA VIOLET LIGHTS*		YES	YES
TYPE		CHILLED WATER	
CFM		7,500	11,100
MAX. FACE VELOCITY (FPM)		500	500
ENTERING AIR TEMP DB/WB (°F)		75.5/61	79.5/63.7
LEAVING AIR TEMP DB/WB (°F)		49.3/48.5	50.9/50.1
CHILLED WATER EWT/LWT (°F)		45/55	45/55
GPM		50.9	85.5
MIN. SENSIBLE CAPACITY (MBH)		349	218
MIN. TOTAL CAPACITY (MBH)		430	256
MAX. AIR PRESSURE DROP, INCH. W.C.		0.65	0.66
MAX. WATER PRESSURE DROP, FT. W.C.		10.5	11.9
PRE FILTER TYPE		2"-30%	2"-30%
COOLING COIL	FAN TYPE	PLENUM	PLENUM
	CFM, EACH	7,500	11,100
	EXTERNAL STATIC PRESS (" H2O)	2.5	2.5
	FAN SIZE	245 SWSI	245 SWSI
	MOTOR H.P.	15	20
SUPPLY FAN	INTERLOCK WITH	RETURN	RETURN
	VFD	YES	YES
	ELECTRICAL CONNECTION, V/PH	460/3	460/3
	FAN TYPE	PLENUM	PLENUM
	CFM	7,500	11,100
RETURN FAN	EXTERNAL STATIC PRESSURE (" H2O)	1.5	1.5
	MOTOR H.P.	7.5	10
	INTERLOCK WITH	SUPPLY FAN	SUPPLY FAN
	VFD	YES	YES
	FAN SIZE	200 SWSI	222 SWSI
ELECTRICAL CONNECTION, V/PH		460/3	460/3
BASE RAIL HEIGHT TO ACCOMMODATE COIL P-TRAP, INCHES		12"	12"
ISOLATION TYPE		INT. SPRING	INT. SPRING
SMOKE DETECTOR		YES	YES
DESIGN WEIGHT (LBS)		7,500	8,000
BASIS OF DESIGN: YORK		SOLUTION	SOLUTION


\* PROVIDE UNIT WITH UV LIGHTS PREWIRED TO A SINGLE JUNCTION BOX ON EXTERIOR OF UNIT. UV LIGHTS TO BE SET TO OPERATE CONTINUOUSLY. PROVIDE SAFETY DISCONNECT ON UNIT ACCESS DOOR TO SHUT OFF LIGHTS WHENEVER ACCESS DOOR IS OPENED.





\*\* UNITS SHALL BE CERTIFIED AND LABELED FOR THE SEISMIC DESIGN CATEGORY RISK CATEGORY IV AND IMPORTANCE FACTOR  $I_p=1.5$ .

1. NOTE FOR AHU-5: SET SUPPLY AND RETURN FAN DRIVES FOR 6,550 CFM. BOTH DRIVES MUST HAVE CAPACITY FOR 7,500 CFM FOR FUTURE ADDED LOAD.

2. NOTE FOR AHU-6: SET SUPPLY AND RETURN FAN DRIVES FOR 9,810 CFM. BOTH DRIVES MUST HAVE CAPACITY FOR 11,100 CFM FOR FUTURE ADDED LOAD.

SPLIT SYSTEM COOLING ONLY			
TYPE	DUCT FREE SPLIT SYSTEM	DUCT FREE SPLIT SYSTEM	DUCT FREE SPLIT SYSTEM
SYSTEM	IT 156	FUTURE IT	
INDOOR UNIT MARK NUMBER			
OUTDOOR UNIT MARK NUMBER			
TYPE (INDOOR UNIT)	WALL-MOUNTED	WALL-MOUNTED	
NOMINAL CAPACITY (TON)	2.0	3.0	
CAPACITY RANGE, BTU/H	4,000-24,200	8,000-36,200	
CAPACITY RANGE, BTU/H AT ROOM T-RE 80°F/F	24,000	36,000	
REFRIGERANT TYPE	R-410A	R-410A	
DRY AIRFLOW (LOW/MED/HIGH)	494/571/654	520/620/780	
SEER	17.0	16.0	
MAX PIPING LENGTH (FT.)	131	80	
MAX PIPING ELEV. CHANGE	50	30	
CONDENSATE PUMP	YES	YES	
INDOOR UNIT DESIGN WEIGHT, LBS	27	40	
OUTDOOR UNIT DESIGN WEIGHT, LBS	119	147	
OUTDOOR UNIT MOUNTING KIT	STAND	STAND	
ELECTRICAL CONNECTION, V/PH	208/1	208/1	

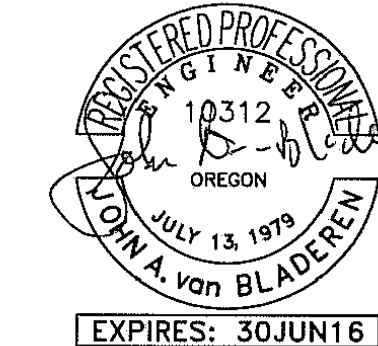
HEPA FILTER	
MARK NUMBER	
TYPE	DUCT
SYSTEM	WAITING 102
CFM	2,100
CFM PER FILTER	2,100
No. OF FILTERS WIDE/HIGH	1/1
HOUSING DIMENSIONS, INCHES	52X52
EFFICIENCY	99.97% @ 0.3 MICRON
FACE VELOCITY, FPM	500
BASIS OF DESIGN: CAMPF FARR	FILTRA 2000

SPLIT SYSTEM HEAT PUMP		
TYPE	WALL-MOUNTED	WALL-MOUNTED
SYSTEM	MECH. PENTHOUSE	MECH. PENTHOUSE
INDOOR UNIT MARK NUMBER	 IHP 2	 IHP 2
OUTDOOR UNIT MARK NUMBER	 OHP 1	 OHP 2
NOMINAL CAPACITY (TON)	3	3
COOLING CAPACITY RANGE, BTUH	10,900 - 34,000	10,900 - 34,000
HEATING CAPACITY RANGE, BTUH	14,000 - 36,000	14,000 - 36,000
DRY AIRFLOW (LOW/MED/HIGH)	412/530/630	412/530/630
REFRIGERANT TYPE	R-410A	R-410A
SEER	12	12
HSFP	9.0	9.0
MAX PIPING LENGTH (FT.)	164	164
MAX PIPING ELEV. CHANGE (FT.)	50	50
INDOOR UNIT DESIGN WT.	32	32
OUTDOOR UNIT DESIGN WT.	185	185
INDOOR UNIT MOUNTING KIT	YES (WALL)	YES (WALL)

<b>ELECTRIC HEATER</b>	
MARK NUMBER	EH 1 EH 2
TYPE	WALL MOUNTED
SYSTEM	SPRINKLER ROOMS
KW	0.5
CONTROLLED BY:	BUILT IN THERMOSTAT
V/PH	120/1
BASIS OF DESIGN:	QMARK WHT500

EXHAUST FANS		EF 2ED		EF 3ED		EF 4ED		EF 4SD		BF 1*	
MARK NUMBER											
TYPE	UTILITY	ROOF	UTILITY	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF
SYSTEM	SAME DAY 222	SOILED & TOILET RMS	TREATMENT 130	TRAGE/SOILED UTILITY	AUTOCLOAVE 213	WAITING/LOBBY					
CFM	275	700	475	1,000	250	2,100					
TOTAL SP. (IN H2O)	0.35	0.45	0.45	0.45	0.35	1.75					
FAN RPM	1,169	1,207	1,574	1,050	1,498	1,794					
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	BELT					
SOILED STATE CONTROLLER/ECM	---/YES	---/YES	---/YES	---/YES	YES/---	N/A					
MOTOR, HP	1/4	1/4	1/4	1/4	1/20	1-1/2					
CONTROLLED BY	DDC	DDC	DDC	DDC	DDC	DDC					
INTERLOCK WITH	AHU-6	AHU-6	(E)RTU-1	---	AHU-5	AHU-6					
2-POS. CONTROL/BACKDRAFT DAMPER	NO/YES	YES/YES	YES/YES	YES/YES	NO	YES/YES					
ISOLATION	YES	YES	YES	YES	YES	YES					
DESIGN WEIGHT (LBS)	35	40	35	43	25	140					
MAX. SONES	5.5	8.8	8.2	7.6	6.8	16.9					
BASIS OF DESIGN: GREENHECK	SFD-6-4A	G-121-A	SFD-6-4A	G-133-VG	G-080-D	BSO-140-15					

\* PROVIDE MOTOR WITH VFD.



EXPIRES: 30JUN16

333 NW 5th Ave.  
Portland, OR 97209  
Phone: 503/224-4848  
Fax: 503/224-7116

**SLCH - ED and Surgery**  
Samaritan Health Services: Lebanon Community Hospital



ISSUE DATE: 06.05.2015

REVISIONS:

① - ADD #1 05.28.2015

6 SAME DAY REV. 10-5-1

△ CCD #1 6-2-10

CCD # 05 4-14-1

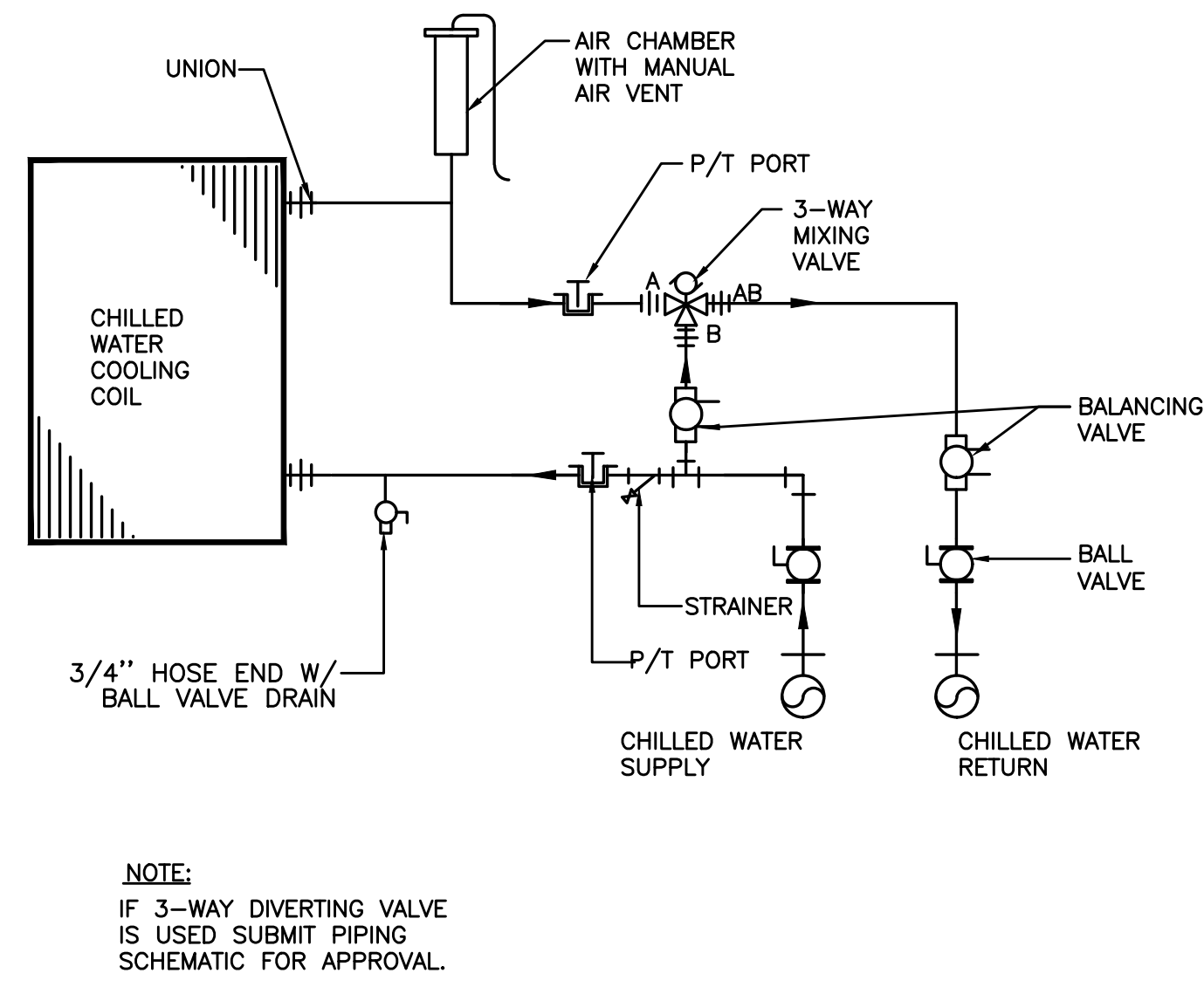
 $\Delta$  CCD # 10 2-12-10

Permit Set

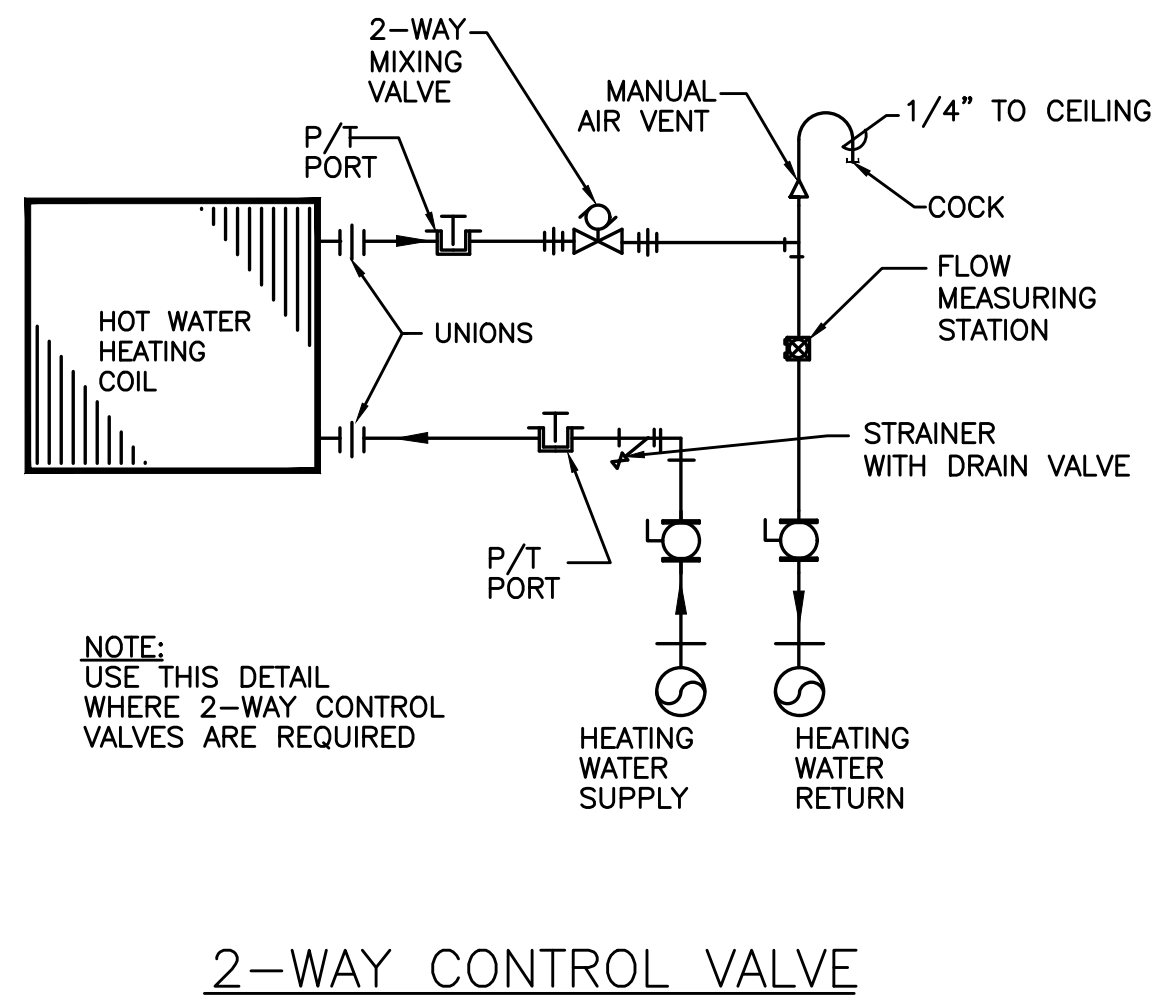
## MECHANICAL LEGEND AND SCHEDULES

## M6.01

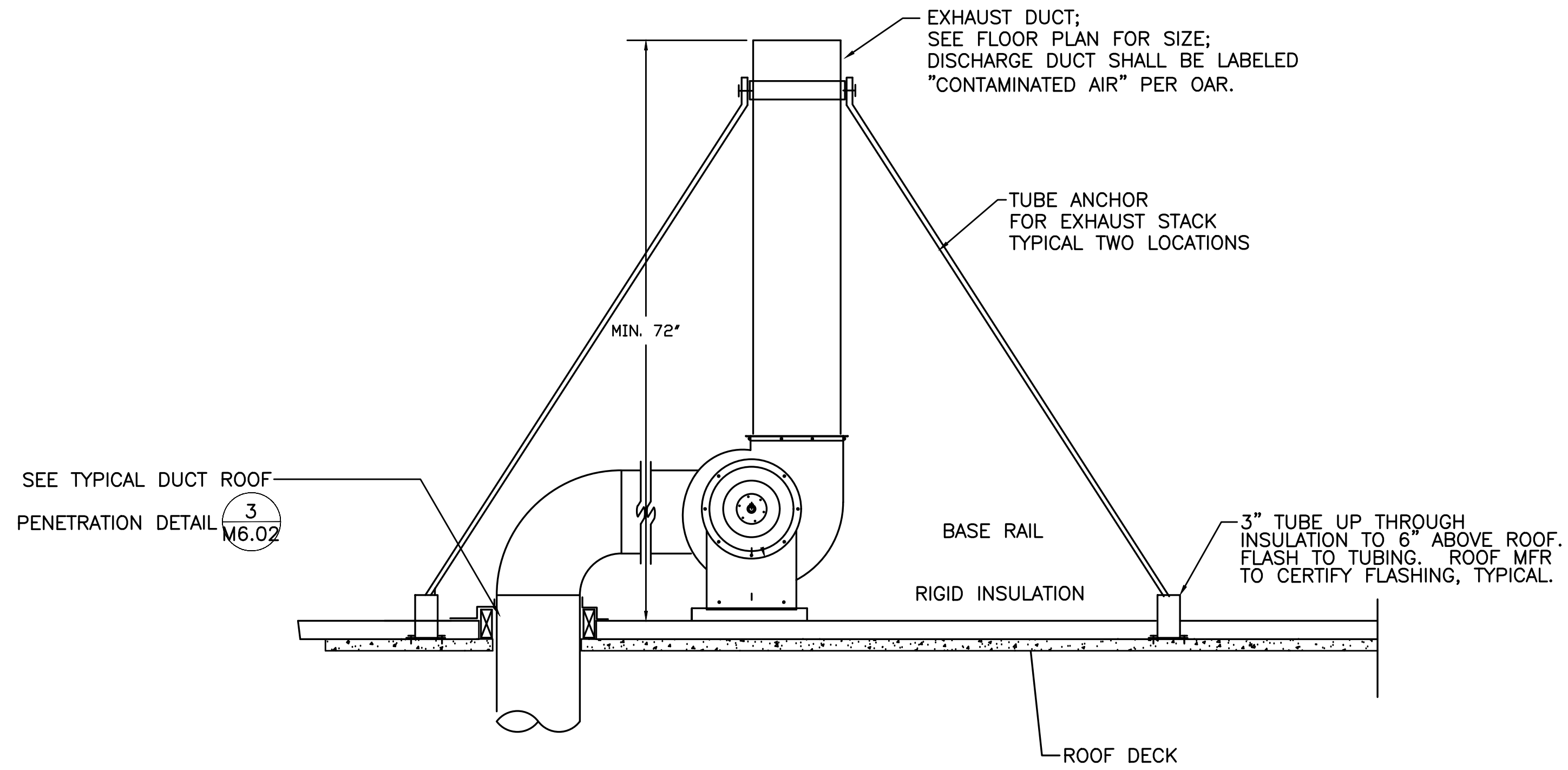




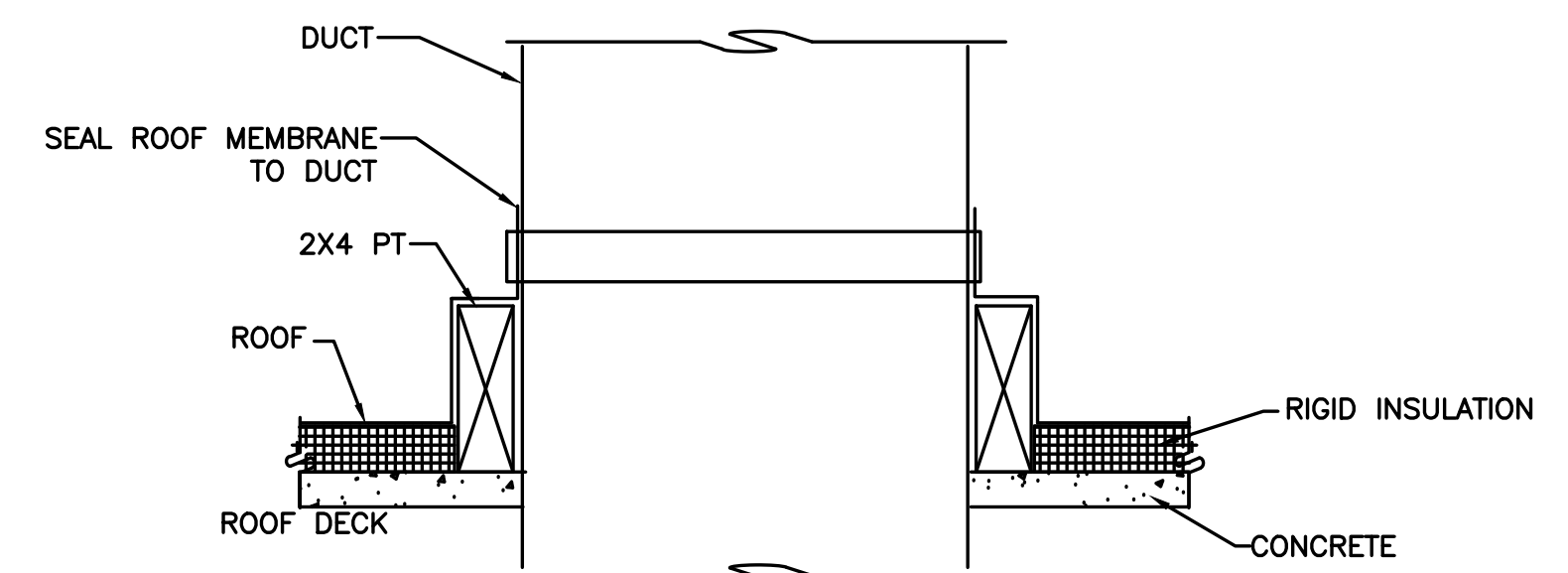
1 CHILLED WATER COIL DIAGRAM  
M6.02 NTS



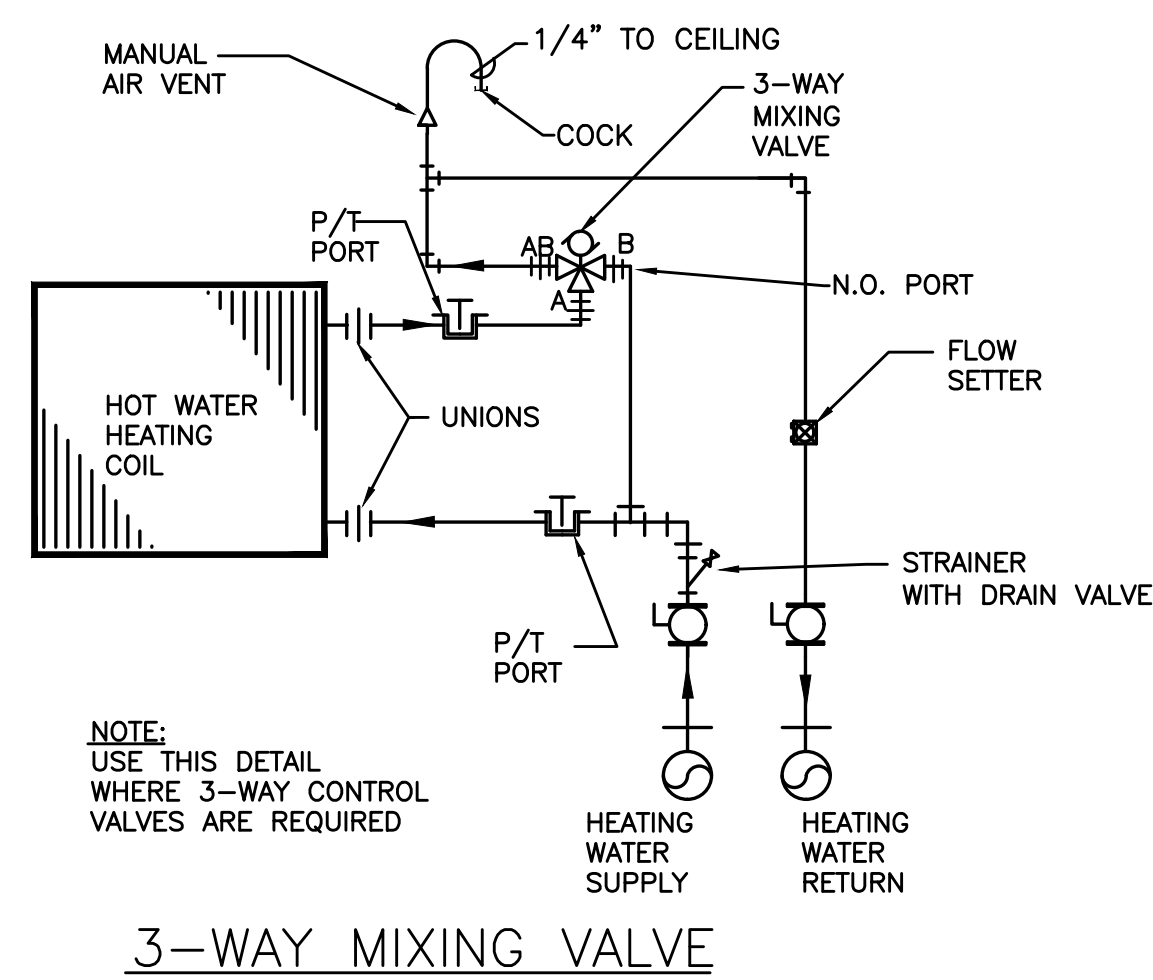
## 2-WAY CONTROL VALVE



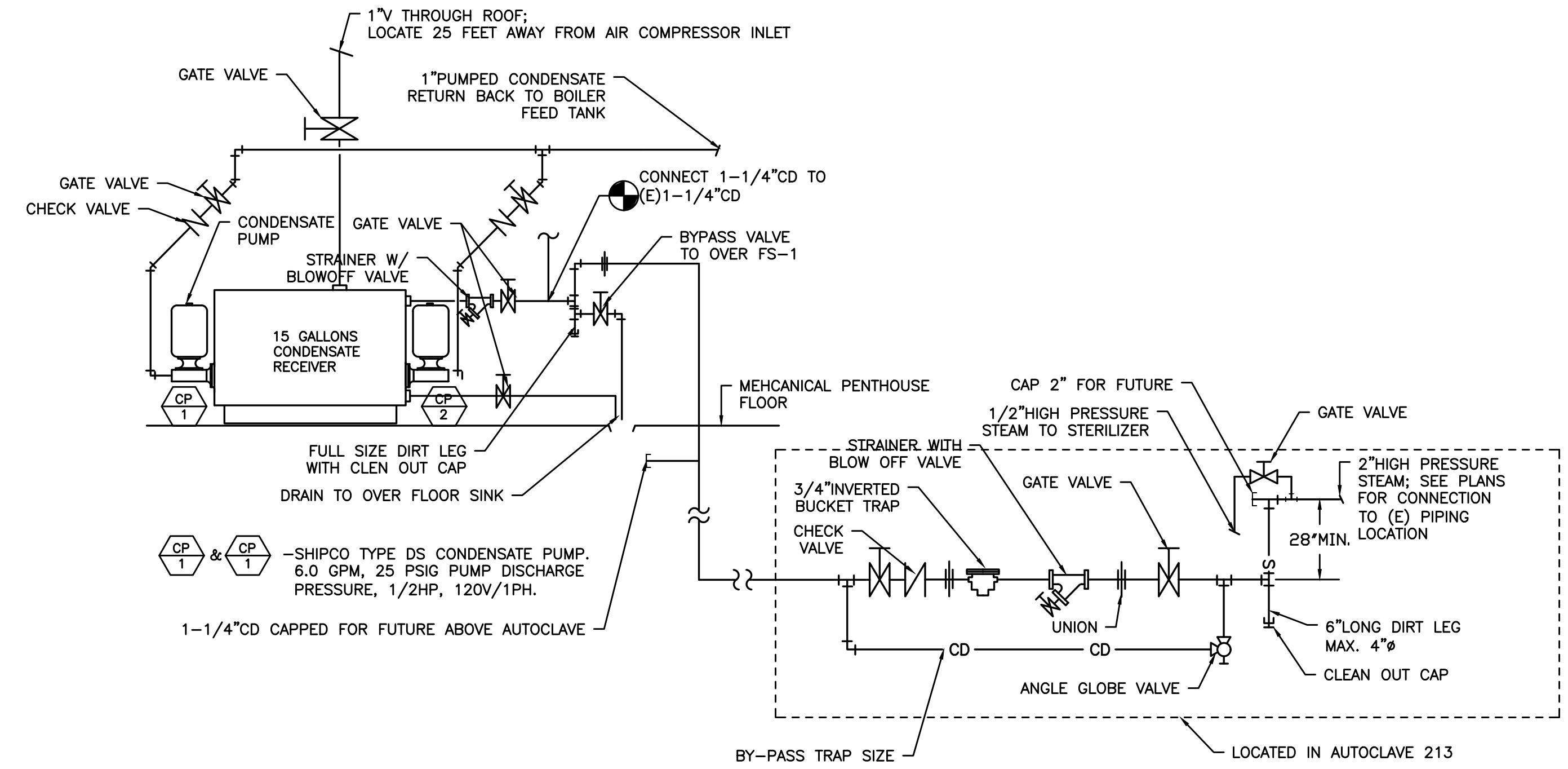
2 UTILITY SET EXHAUST FAN  
M6.02 SCALE: DETAIL



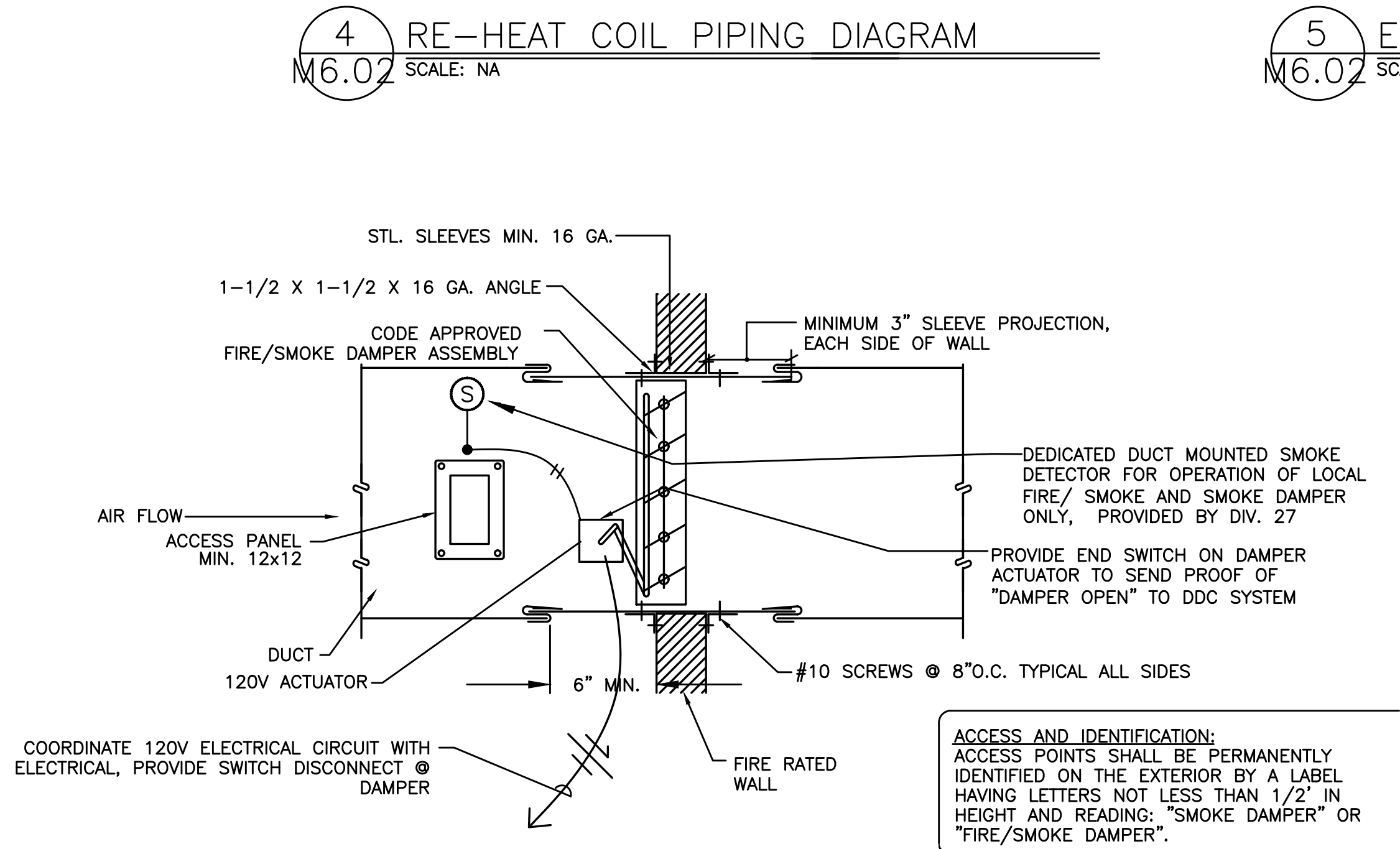
3 ROOF PENETRATION DETAIL  
M6.02 NONE



### 3-WAY MIXING VALVE



6 STERILIZER STEAM CONNECTION DETAIL  
M6.02 NO SCALE



7 FIRE/SMOKE AND SMOKE DAMPER WITH SMOKE DETECTOR DETAIL  
M6.02 SCALE: NA

NOTE:

PROVIDE ALL REQUIRED CONTROL  
WIRING TO ACCOMPLISH:  
FIRE/SMOKE DAMPER – FIRE/SMOKE  
DAMPER TO CLOSE UPON ACTIVATION  
OF LOCAL SMOKE DETECTOR (VIA FIRE ALARM)

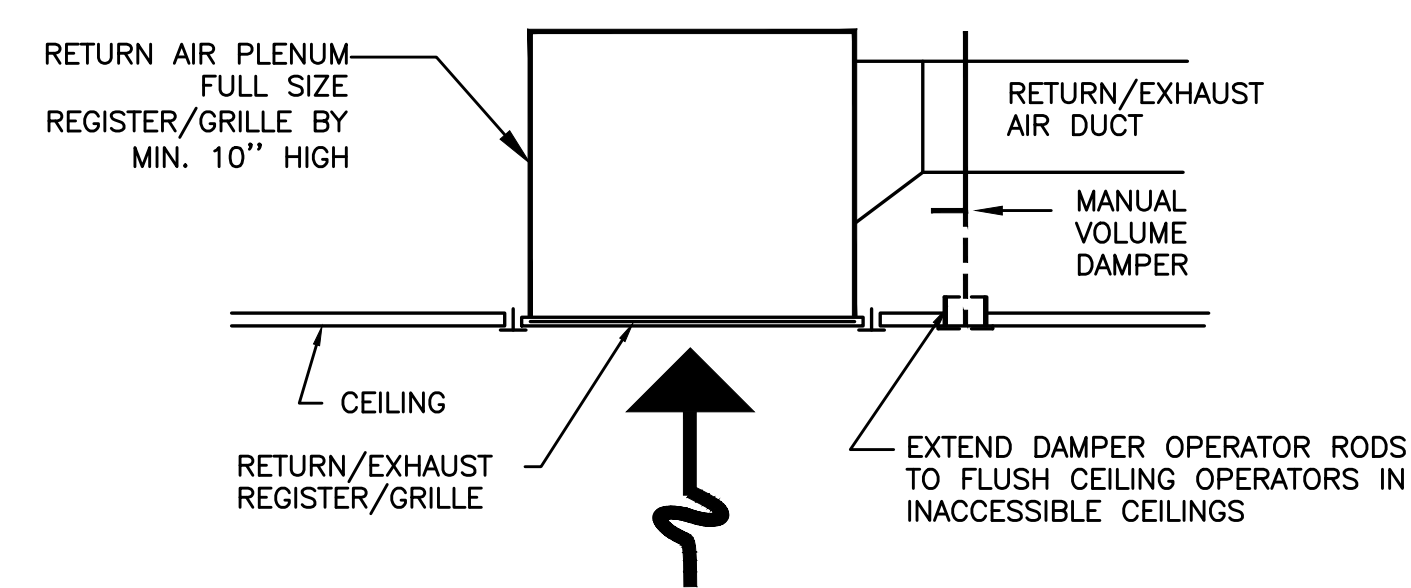
EXHAUST DUCTS/FANS - FIRE/SMOKE  
DAMPER TO CLOSE UPON SHUTDOWN OF  
ASSOCIATED EXHAUST FAN. (VIA DDC)

SUPPLY OR RETURN DUCTS/FANS - FIRE/SMOKE  
DAMPER TO CLOSE UPON SHUTDOWN OF  
ASSOCIATED AIR HANDLING UNIT. (VIA DDC)

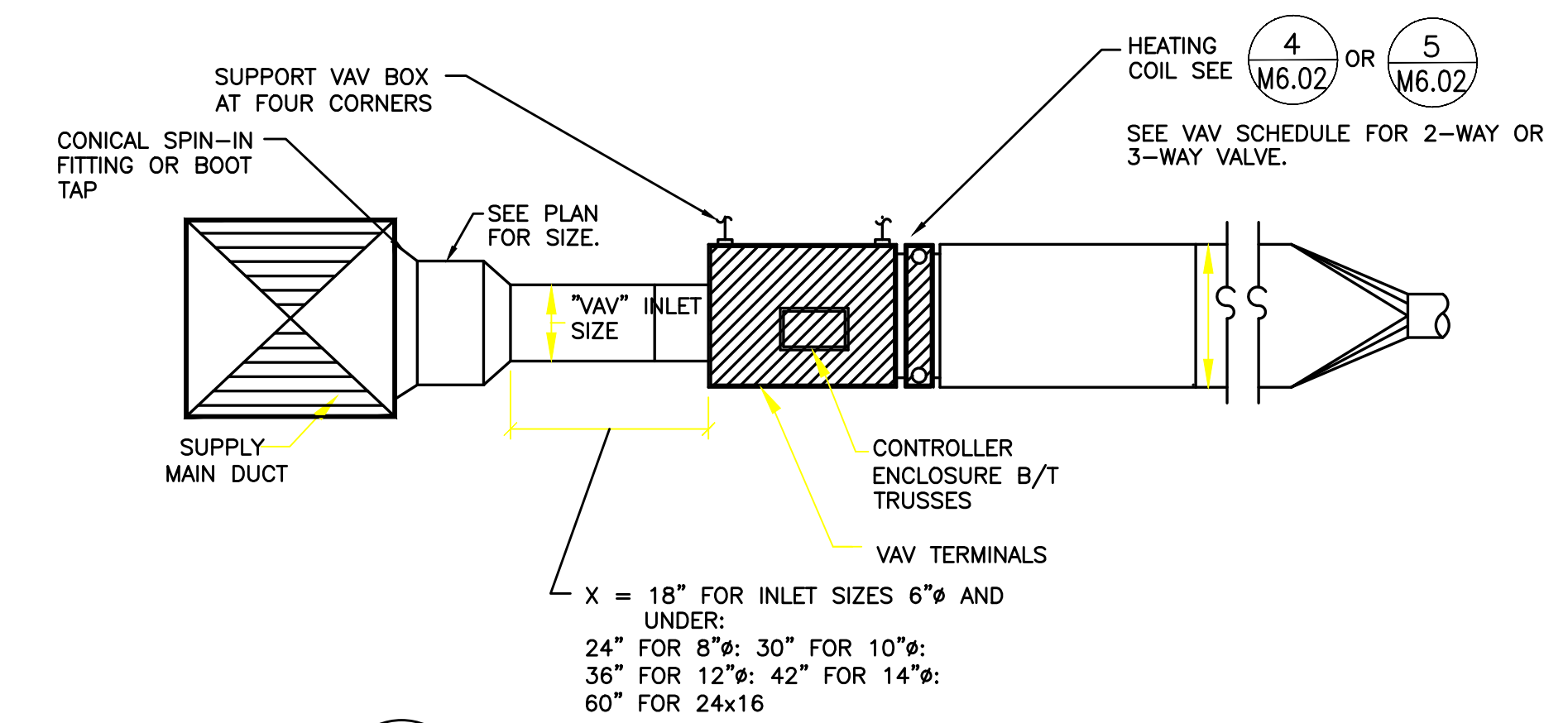
AHU's OR EXHAUST FANS: - AIR HANDLING UNITS  
TO SHUT DOWN UPON LOSS OF "PROOF OF OPEN"  
SIGNAL FROM DAMPER END SWITCH (VIA DDC)

GENERAL NOTES:

PROVIDE ACCESS IN CEILING OR WALL  
FOR DAMPER AND SMOKE DETECTOR  
SEE ELECTRICAL FOR  
WIRING INSTALLATION



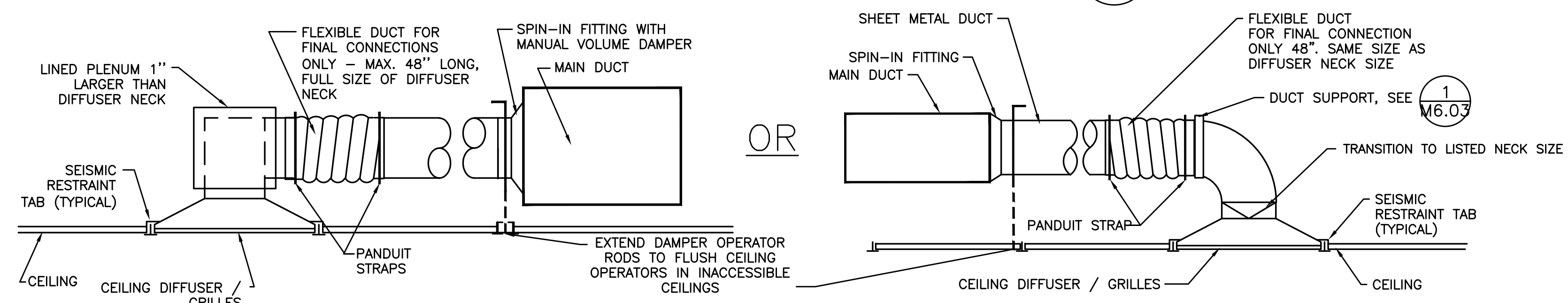
6 RETURN AIR DIFFUSER/GRILLE  
M6.02 SCALE: NA



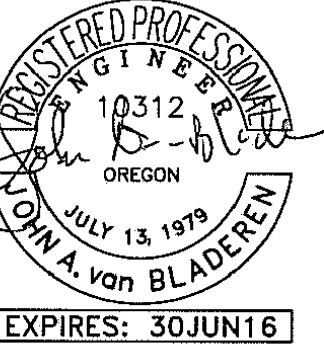
60" FOR 24x16

8 TYPICAL VAV BOX DETAIL

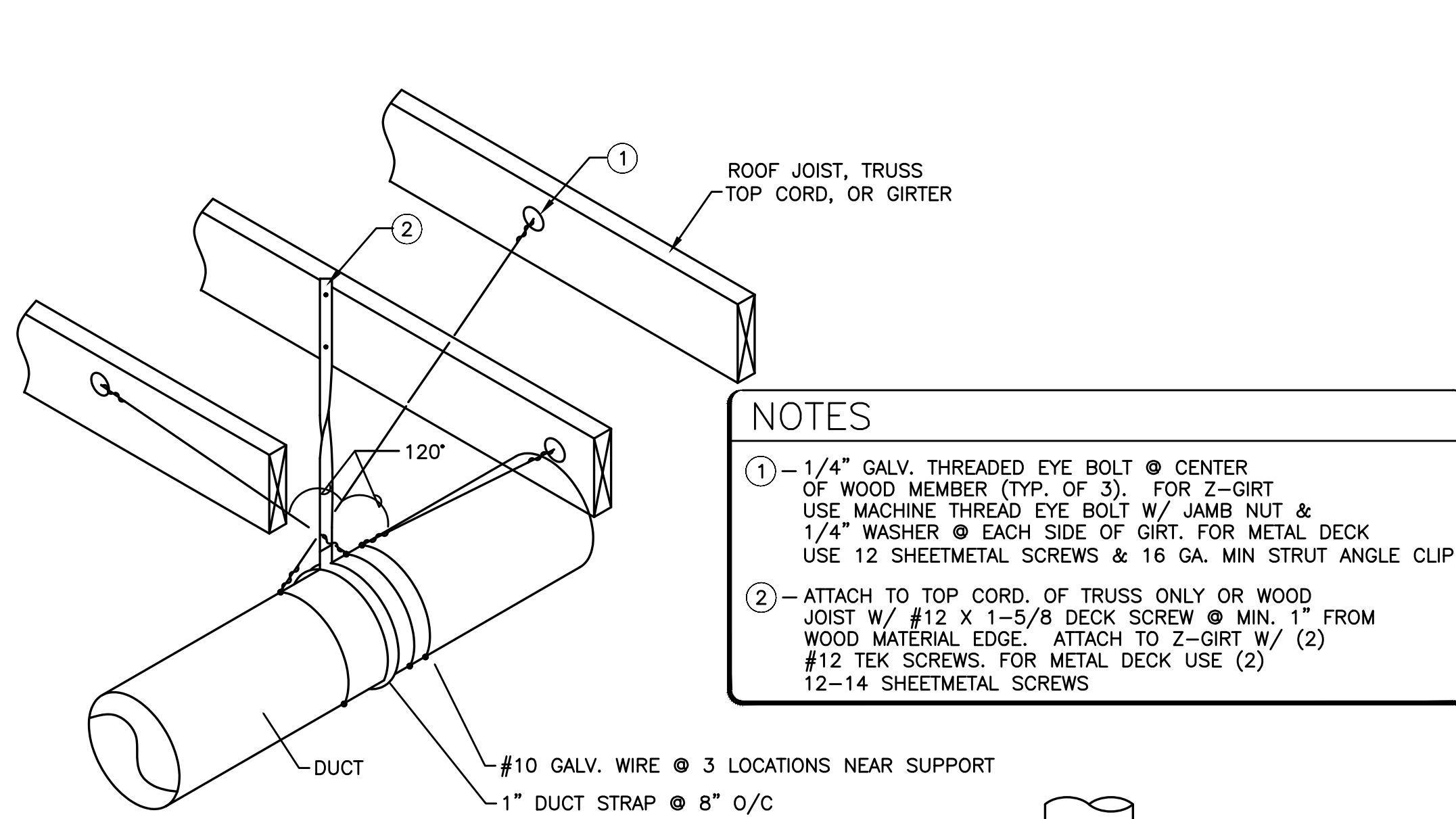
M6.02 SCALE: NA



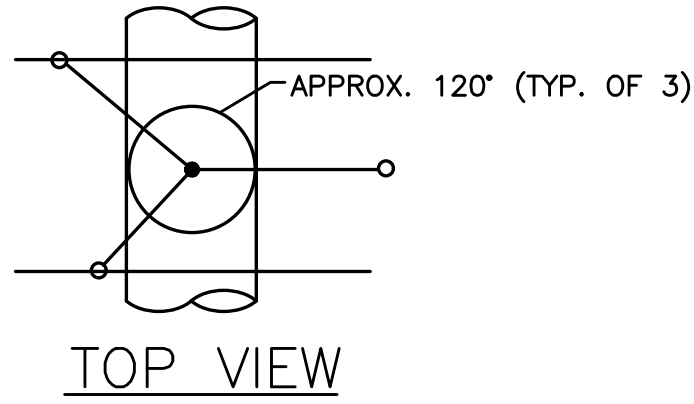
8 SUPPLY DIFFUSER TYPICAL DETAIL  
M6.02 SCALE: NA





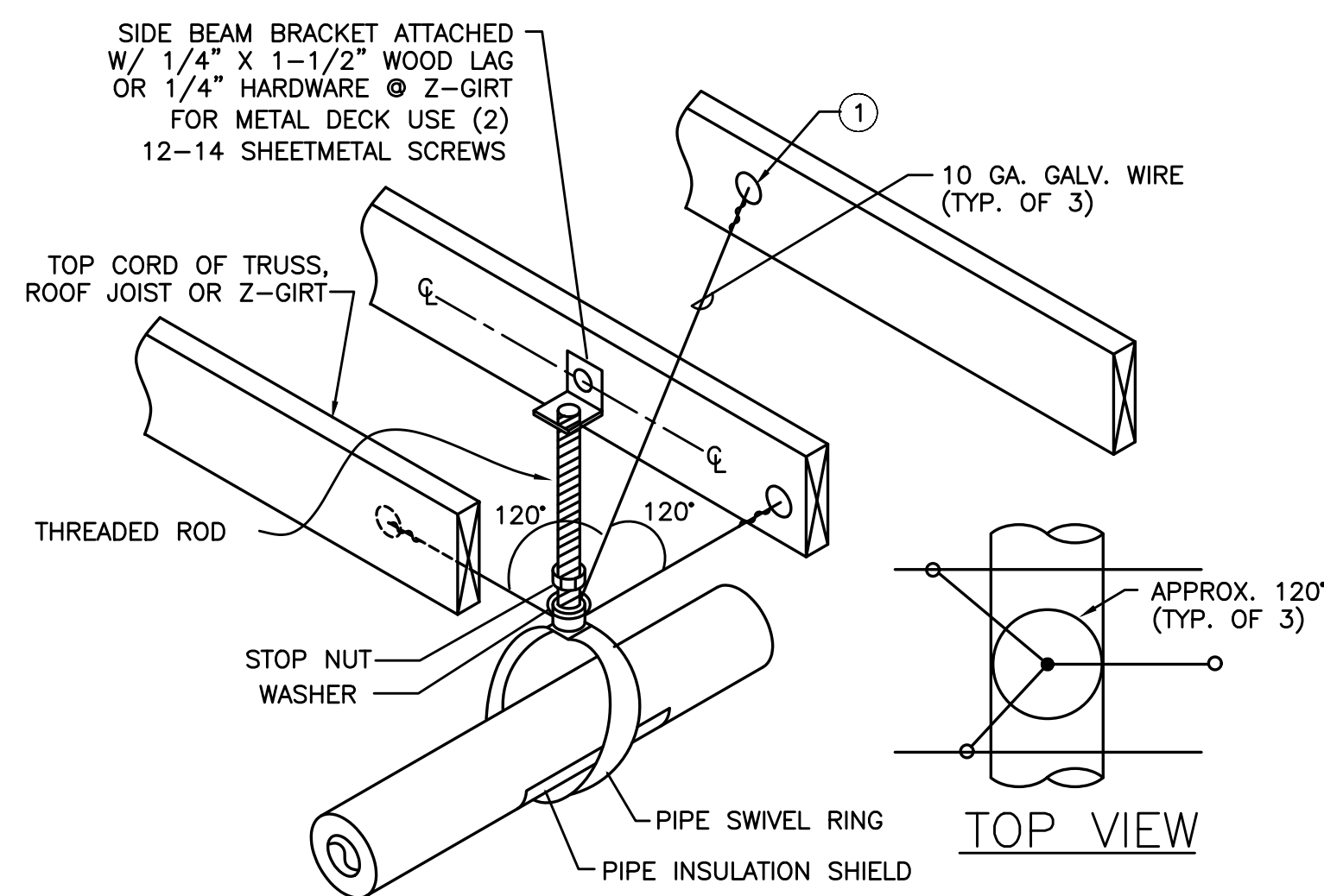


- FOR SHEETMETAL DUCTS 11" TO 27" IN DIAMETER & ALL SQUARE OR RECTANGULAR DUCTS (STRAP ALONE IS SUFFICIENT FOR DUCTS SMALLER THAN 11" IN DIAMETER)
- STRAP INTERVAL MAY BE DECREASED (LESS THAN 96" O/C TO REDUCE THE NEED FOR WIRE TIES AS DETAILED. CONSULT ENGINEER OR SMACNA STANDARDS



1 DUCT SUPPORT

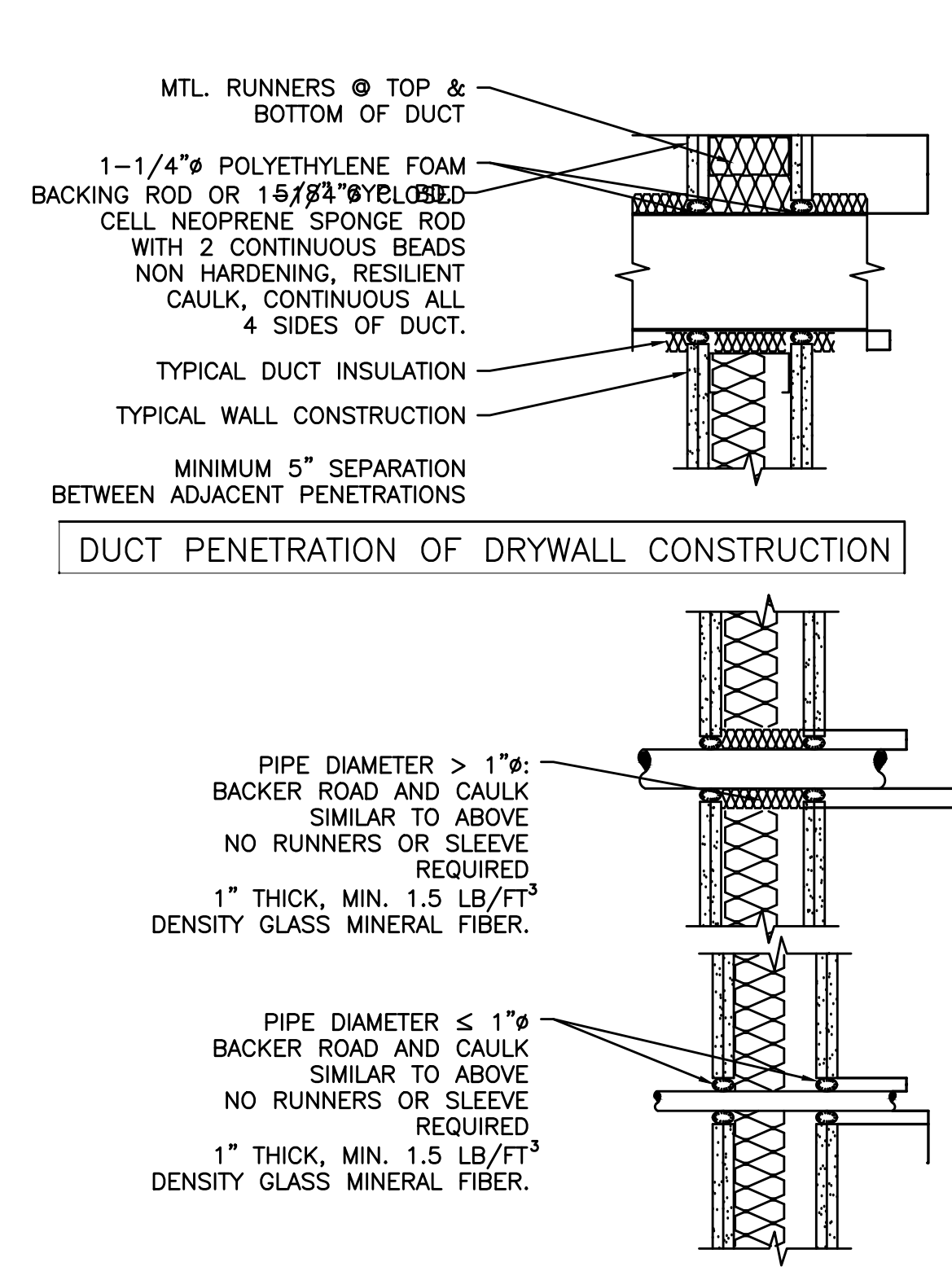
M6.03 SCALE: NA



- NOTES
- ① - 1/4" GALV. THREADED EYE BOLT @ CENTER OF WOOD MEMBER (TYP. OF 3). FOR 2 GIRT USE MACHINE THREAD EYE BOLT W/ JAMB NUT & 1/4" WASHER @ EACH SIDE OF GIRT USE 12 SHEETMETAL SCREWS & 16 GA. MIN. 16 GA. MIN STRUT ANGLE CLIP
- FOR SINGLE 1-1/2" TO 3" STEEL LINES
  - FOR SINGLE 2" COPPER LINES

2 PIPE SUPPORT

M6.03 SCALE: NA

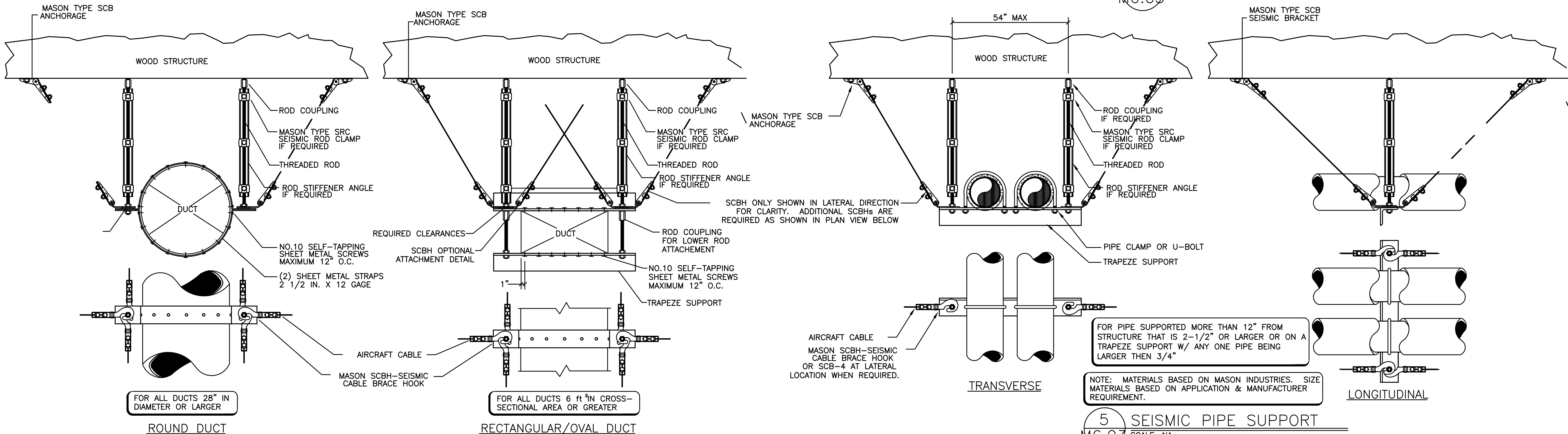


PIPE/CONDUIT PENETRATION DRYWALL CONSTRUCTION TO BE APPLIED TO WALLS WITH STC ≥ 49

SEE ARCHITECTURAL DRAWINGS FOR ACOUSTICALLY IMPORTANT WALLS (WALL TYPES). SEAL PENETRATIONS IN THOSE WALLS PER THESE DETAILS

3 ACOUSTIC PENETRATION DETAIL

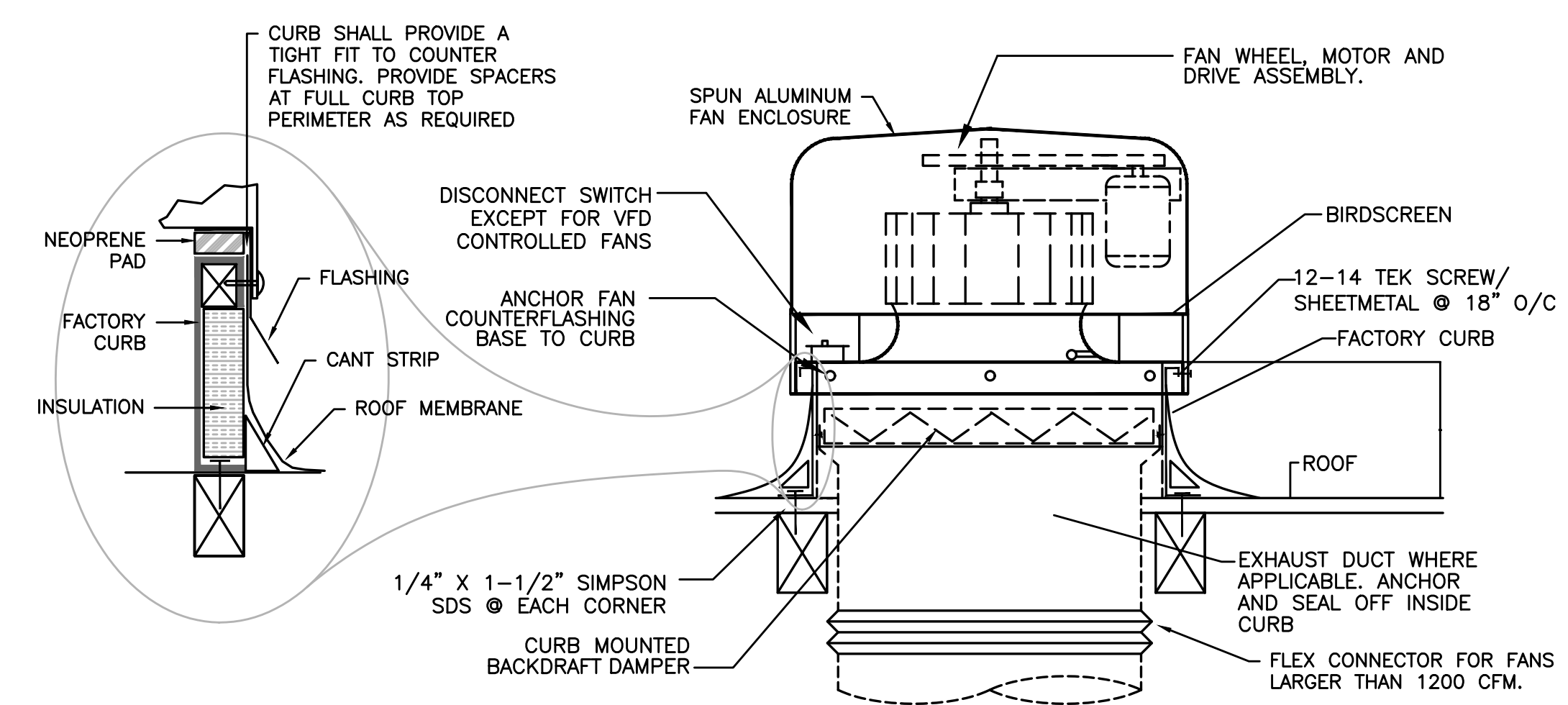
M6.03 SCALE: NA



NOTE: MATERIALS BASED ON MASON INDUSTRIES. SIZE MATERIALS

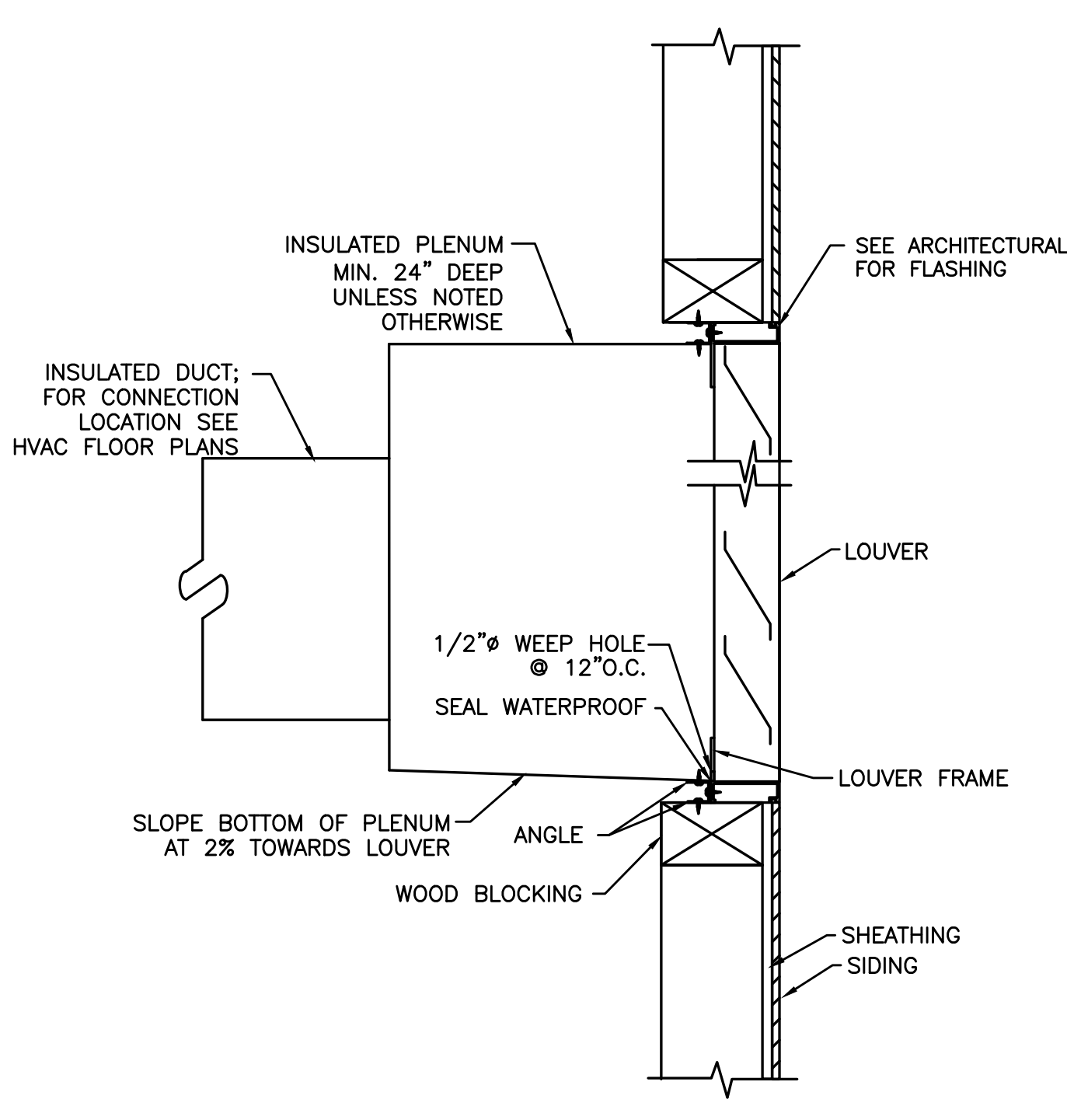
4 SEISMIC DUCT SUPPORT

M6.03 SCALE: NA



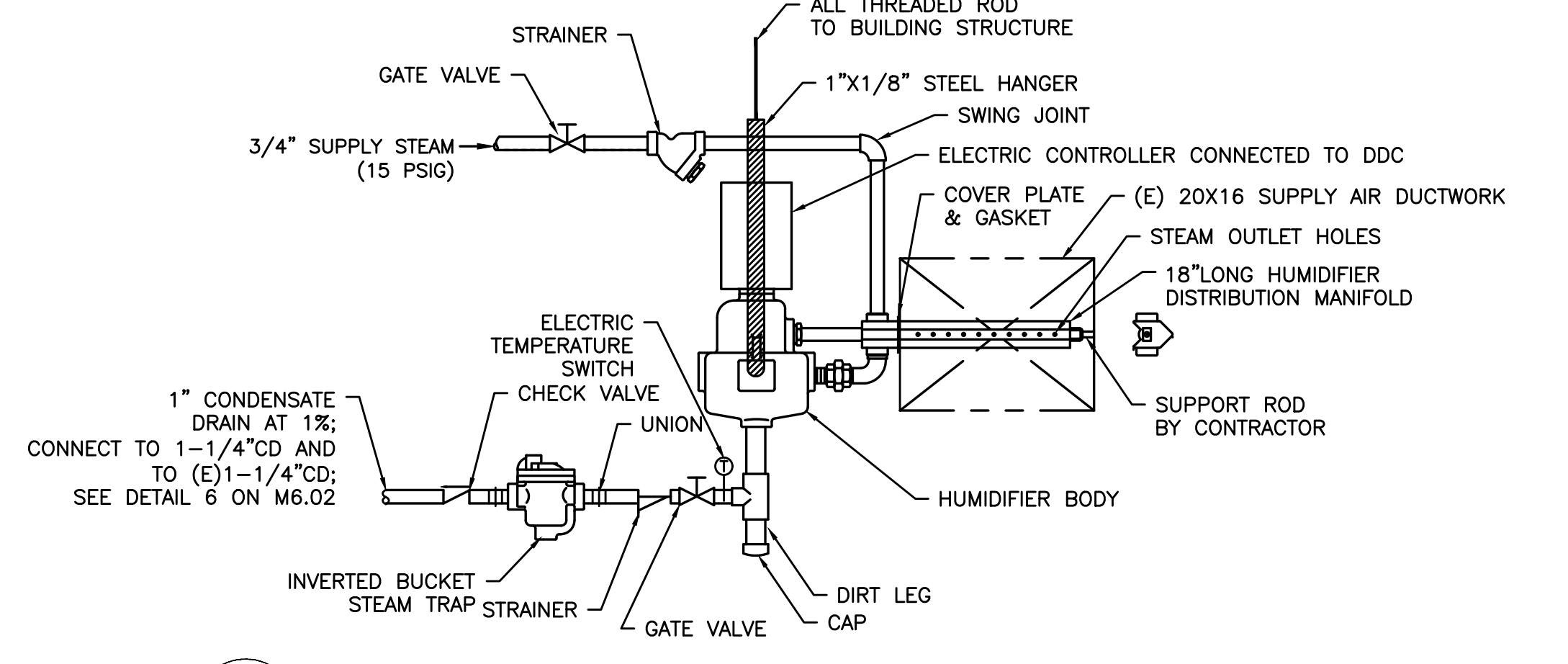
6 ROOF MOUNTED EXHAUST FAN

M6.03 SCALE: DETAIL



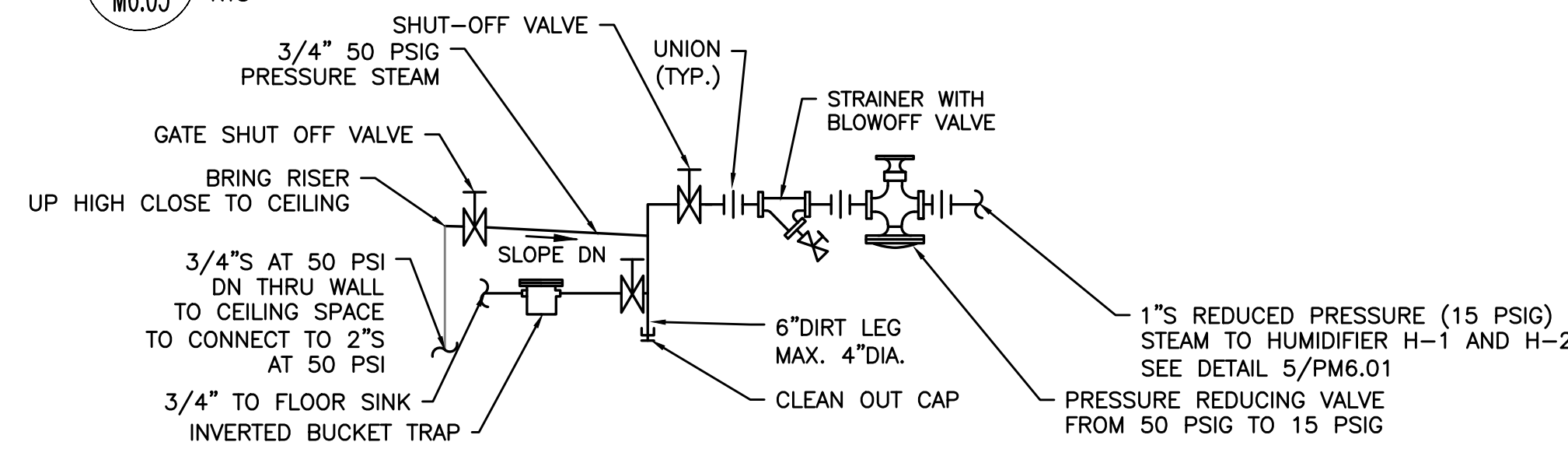
7 OSA AND RELIEF PLENUM DETAIL

M6.03 NTS



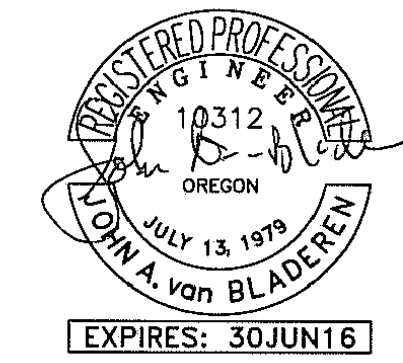
8 STEAM HUMIDIFIER DETAIL

M6.03 NTS



9 STEAM PRESSURE REDUCING VALVE DETAIL

M6.03 NTS





GENERAL CONTROLS					
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
OUTSIDE AIR TEMPERATURE		X			
OUTSIDE AIR PRESSURE		X			
FIRE ALARM	X				X
STERILE CORE PRESSURE SENSOR		X			X
HUMIDITY SENSOR, PER OR		X			X
EMERGENCY POWER STATUS	X				

CONTROLS FOR EACH AIR HANDLING UNIT

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
SUPPLY FAN START/STOP			X		
RETURN FAN START/STOP			X		
SUPPLY FAN VFD				X	X
RETURN FAN VFD				X	X
SUPPLY FAN STATUS	X				X
RETURN FAN STATUS	X				X
MIXED/EXHAUST AIR DAMPER				X	
OUTSIDE AIR DAMPER				X	
TEMP LOW LIMIT SENSOR (FREEZE-STAT)	X				X
MIXED AIR TEMP		X			X
SUPPLY AIR TEMP		X			
RETURN AIR TEMP		X			
OSA AIRFLOW MEASUREMENT STATION		X			
CHILLED WATER CONTROL VALVE				X	
CHS TEMPERATURE		X			
CHR TEMPERATURE		X			
SPACE STATIC PRESSURE		X			
DUCT STATIC PRESSURE & 2/3's DOWN DUCT		X			
HIGH STATIC SHUT DOWN	X				X
FILTER DIFFERENTIAL PRESSURE SENSOR (EACH BANK)		X			X
SMOKE DETECTOR		X			

CONTROLS FOR VAV BOX, EACH

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
SPACE TEMP		X			
AIR FLOW		X			
DAMPER POSITION				X	
HEATING VALVE				X	
DISCHARGE AIR TEMP		X			

CONTROLS FOR OR ROOM

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
SPACE TEMP		X			
AIR FLOW		X			
VAV DAMPER POSITION				X	
HEATING VALVE				X	
DISCHARGE AIR TEMP		X			
RETURN DAMPER AIR FLOW		X			
RETURN DAMPER POSITION				X	
DIFFERENTIAL AIR PRESSURE (OR & HALLWAY)		X			
OCCUPANCY SENSOR	X				
INCORRECT PRESSURE ALARM			X		X
OCCUPIED / SAFE OPERATING CONDITIONS			X		
HUMIDITY SENSOR		X			X

CONTROLS FOR VAV BOX SERVING SAME DAY 222 AND TREATMENT 130

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
SPACE TEMP		X			
AIR FLOW		X			
DAMPER POSITION				X	
HEATING VALVE				X	
DISCHARGE AIR TEMP		X			
DIFFERENTIAL AIR PRESSURE (ROOM & HALLWAY)		X			
INCORRECT PRESSURE ALARM			X		X

CONTROLS FOR EXHAUST/BOOSTER FANS

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
FAN START/STOP			X		
FAN STATUS	X				X
BOOSTER FAN VFD (ONLY FOR BF-1)				X	X

MEDICAL GAS MASTER ALARMS

POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
MEDICAL AIR HIGH PRESSURE		X			X
MEDICAL AIR LOW PRESSURE		X			X
MEDICAL AIR DEW POINT HIGH	X				X
MEDICAL AIR SYSTEM FAULT	X				X
MEDICAL AIR LAG COMPRESSOR ON	X				X
CYLINDER GAS CONTENTS LOW (TYP 3)		X			X
CYLINDER CHANGE OVER IN USE (TYP 3)	X				X

CONTROLS FOR FIRE/SMOKE AND SMOKE DAMPER

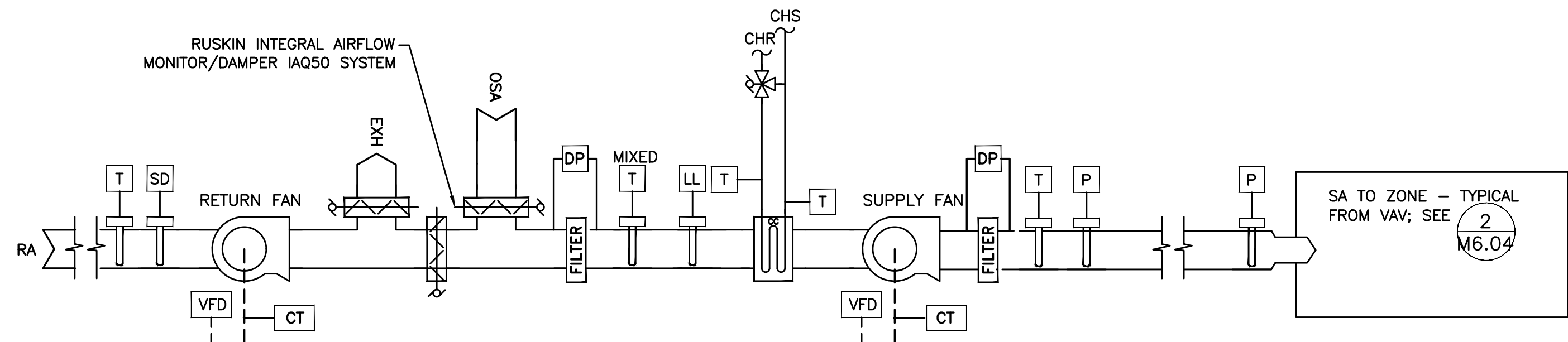
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
DAMPER SMOKE DETECTOR					X
DAMPER END SWITCH	X				
DAMPER RELAY CONTACTS			X		
DAMPER SMOKE DETECTOR	X				X

CONTROLS FOR DUCTLESS SPLIT SYSTEMS AC-1, HP-1 & 2

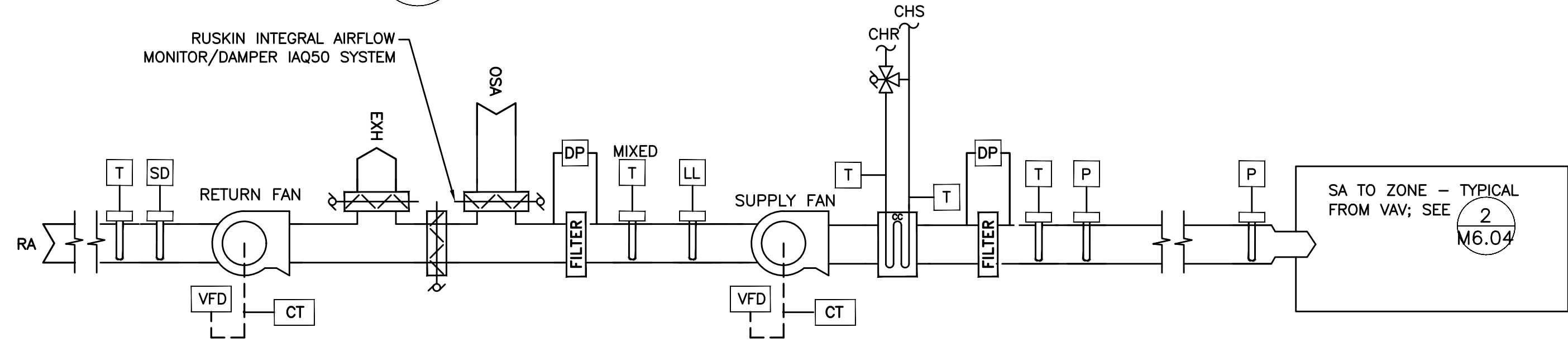
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
UNIT START/STOP			X		
UNIT STATUS				X	X
SPACE TEMP		X			X

CONTROLS FOR BOOSTER FANS BF-1

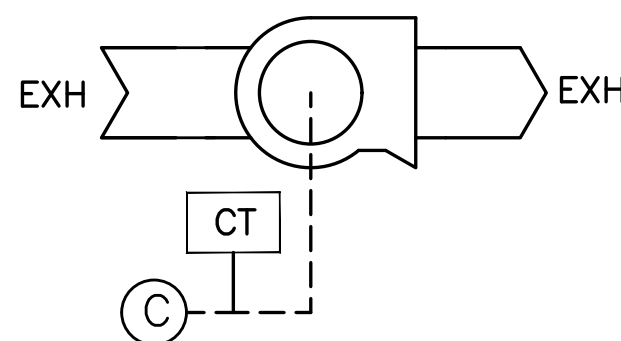
POINT DESCRIPTION	INPUT		OUTPUT		ALARM
	DIGITAL	ANALOG	DIGITAL	ANALOG	
FAN START/STOP			X		
FAN STATUS	X				X
EXHAUST FAN VFD				X	X
DUCT STATIC PRESSURE		X			X
FILTER DIFFERENTIAL PRESSURE SENSOR (EACH BANK)		X			X



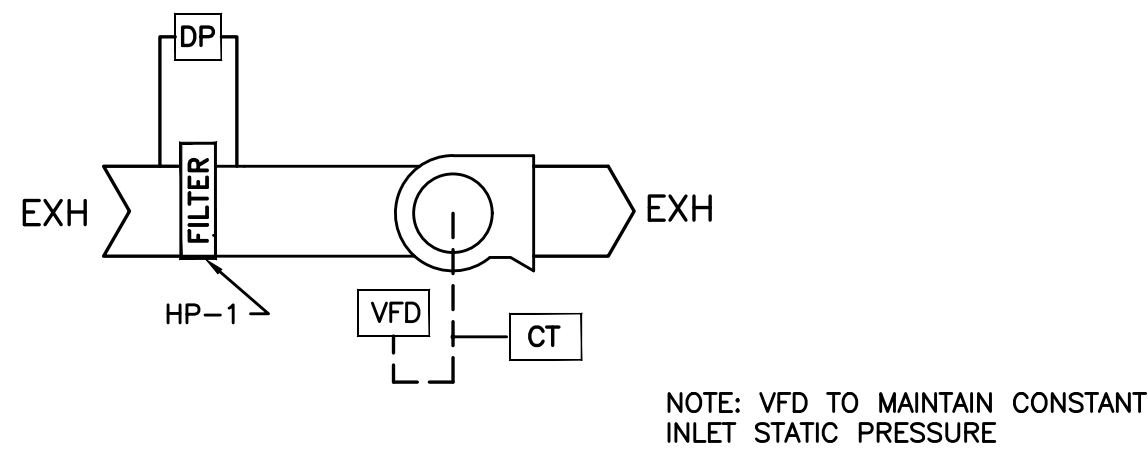
1 AHU-6 UNIT DIAGRAM  
M6.04 NOT TO SCALE



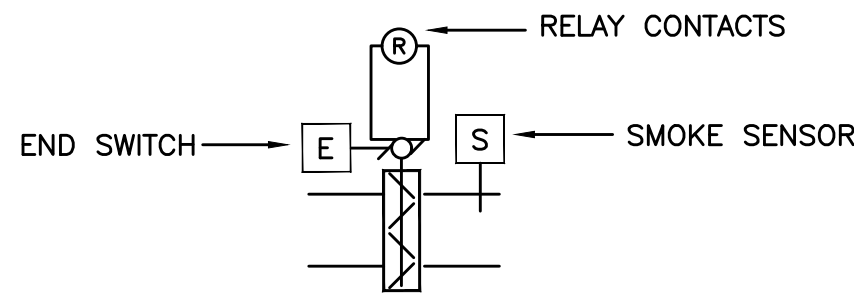
3 AHU-5 UNIT DIAGRAM  
M6.04 NOT TO SCALE



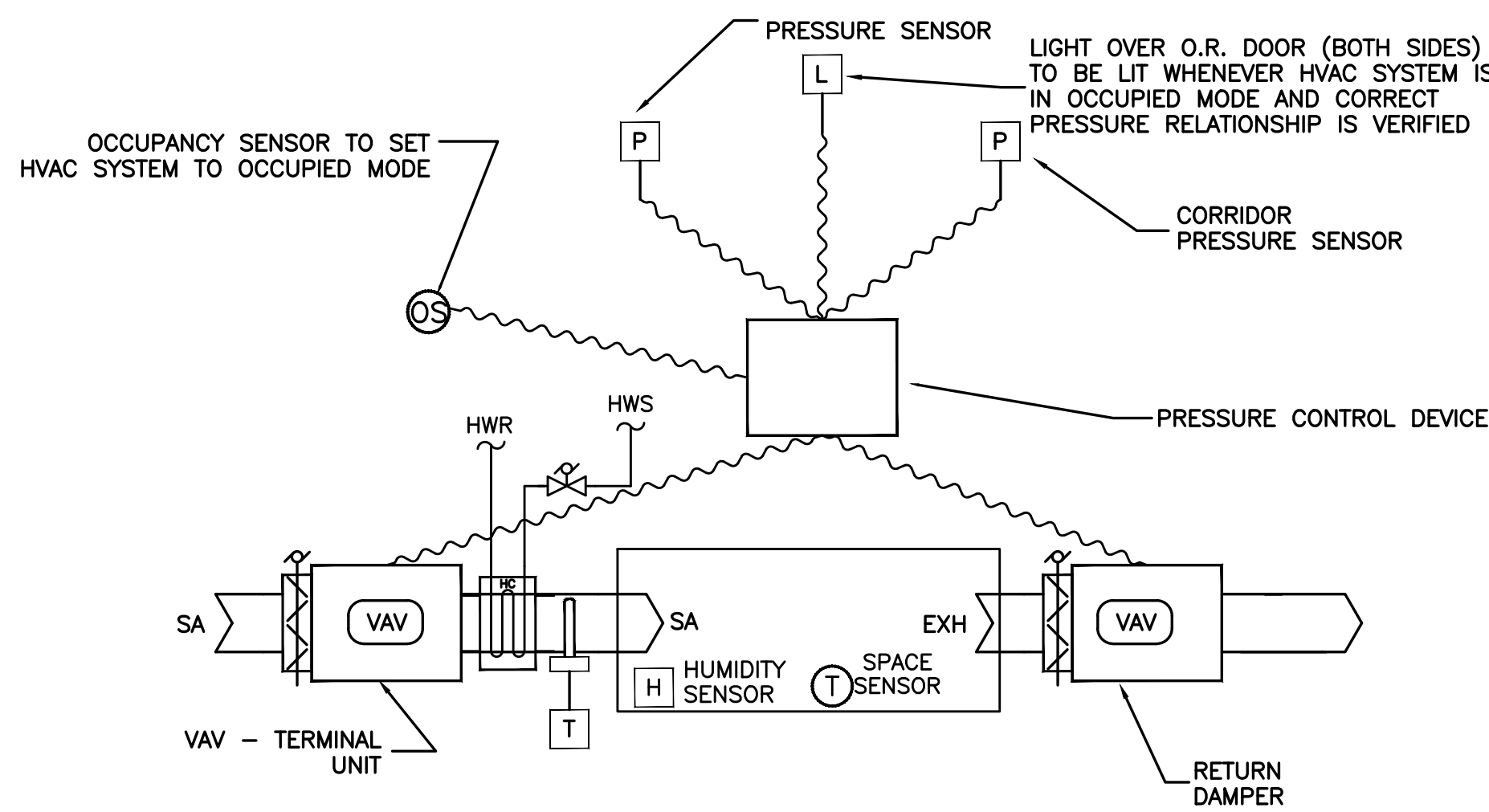
5 EXHAUST FAN DIAGRAM  
M6.04 NTS



8 BOOSTER FAN BF-1 DIAGRAM  
M6.04 NTS



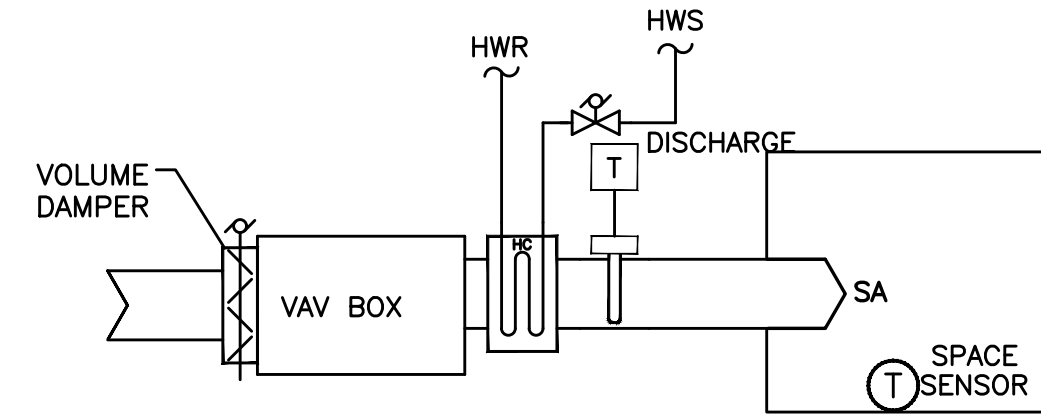
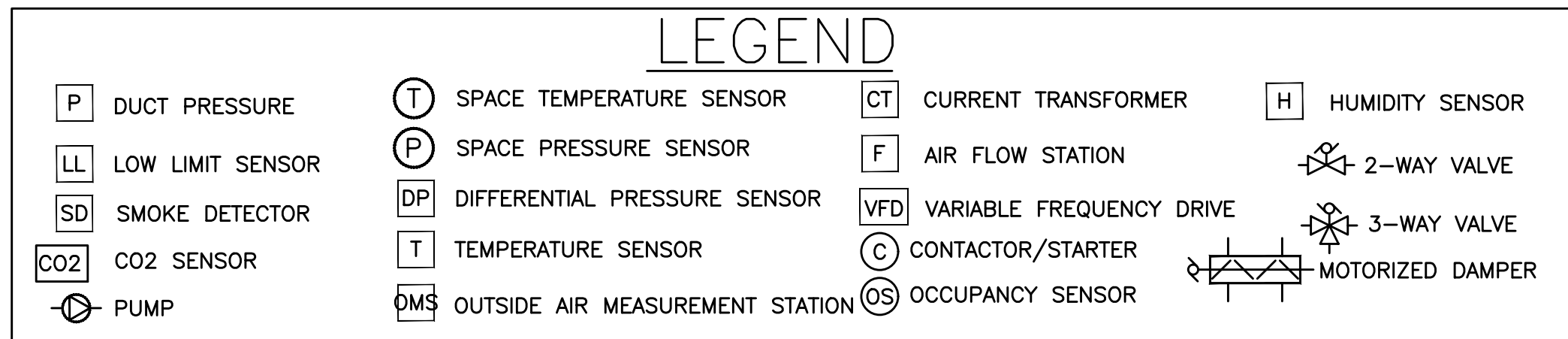
6 FIRE/SMOKE, SMOKE DAMPER CONTROL  
M6.04 DIAGRAM



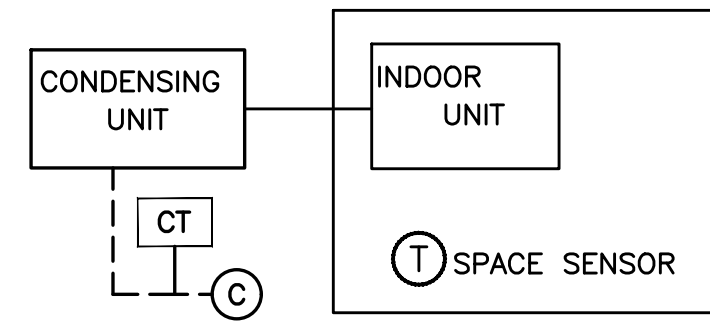
9 OPERATING ROOM CONTROL DIAGRAM  
M6.04 DIAGRAM

GENERAL NOTES:

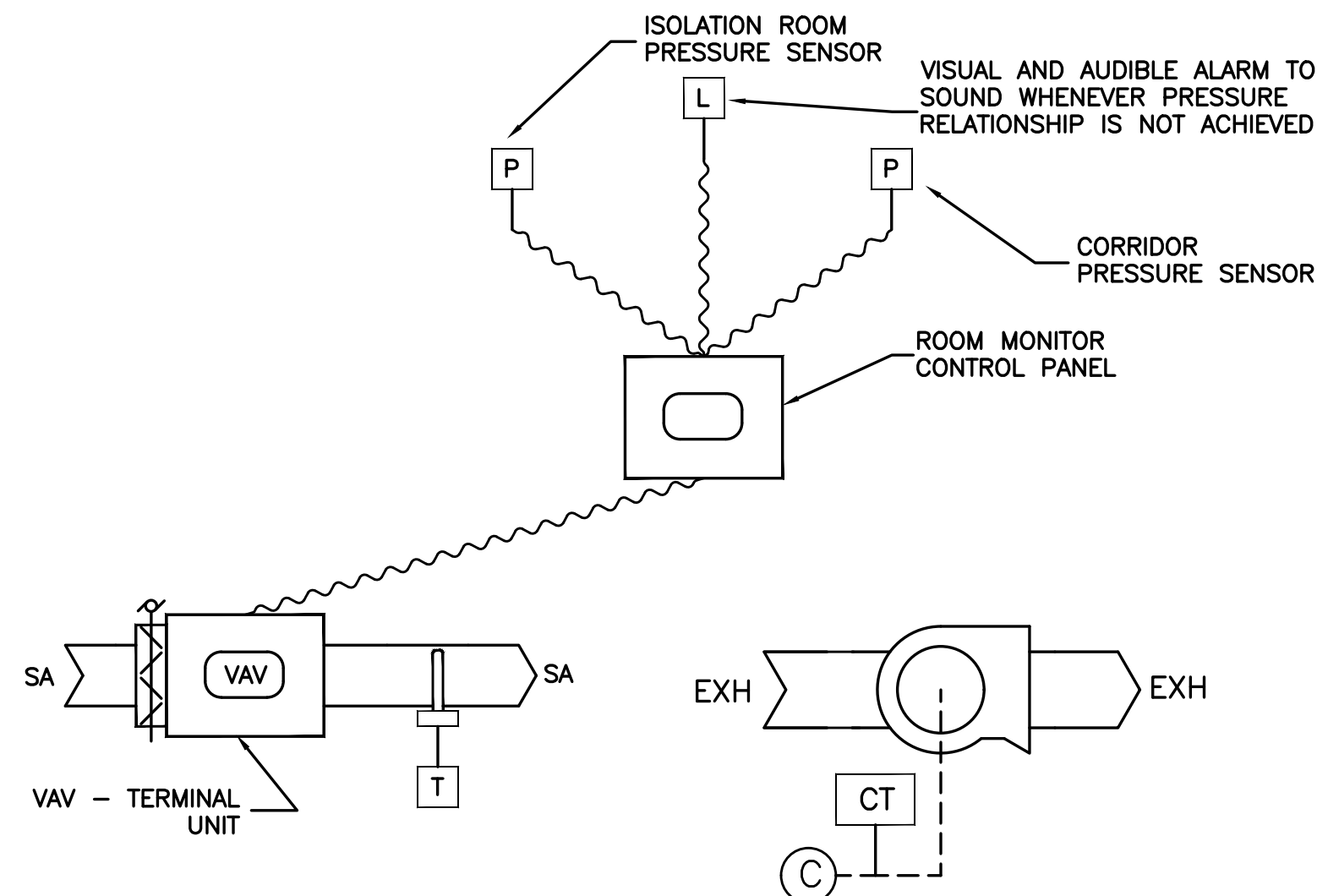
- AIR BALANCING CALIBRATION NUMBERS FOR VAV BOX AIR FLOWS NEED TO BE INCLUDED IN THE CONTROLS AS BUILTS.
- INSTALL SMOKE DETECTOR IN RETURN AIR DUCT SYSTEM IN ACCORDANCE WITH OMSC 606.



2 VAV BOX CONTROL DIAGRAM  
M6.04 NTS



4 DUCTLESS SPLIT SYSTEM  
M6.04 NTS



7 SAME DAY 222 AND TREATMENT 130 ROOM CONTROL DIAGRAM  
M6.04 DIAGRAM

EQUIPMENT ABBREVIATIONS:

- P - PUMP
- FP - FUEL PUMP
- SP - SUMP PUMP
- BP - BOOSTER PUMP
- HWP - HEATING WATER PUMP
- CHP - CHILLED WATER PUMP
- CHRP - CHILLED WATER RISER PUMP
- CWP - CONDENSING WATER PUMP
- CSP - COOLING TOWER SUMP PUMP
- HWRP - DOMESTIC HOT WATER RECIRCULATION
- VFD - VARIABLE FREQUENCY DRIVE
- CT - CONTACTOR
- CC - CONTROL COMPRESSOR
- CH - CHILLER
- CT - COOLING TOWER
- B - BOILER
- EF - EXHAUST FAN
- RF - RETURN/RELIEF FAN
- AH - AIR HANDLER
- MZ - MULTIZONE AIR HANDLER
- HP - HEAT PUMP
- VAV - VARIABLE AIR VOLUME DAMPER BOX
- AD - AREA DAMPER
- SD - SMOKE DAMPER
- SFD - FIRE SMOKE COMBINATION DAMPER
- H - HUMIDIFIER
- V - VALVE
- WH - WATER HEATER
- BAS - BUILDING AUTOMATION SYSTEM

AIR FLOW ABBREVIATIONS:

- OSA - OUTSIDE AIR
- RA - RETURN AIR
- SA - SUPPLY AIR
- EXH - EXHAUSTED AIR

CONTROL SUBSCRIPTS AND SUPERSSCRIPTS:

- P - PNEUMATIC
- E - ELECTRIC

PLUMBING ABBREVIATIONS:

- CHS - CHILLED WATER SUPPLY
- CHR - CHILLED WATER RETURN
- CWS - CONDENSING WATER SUPPLY
- CWR - CONDENSING WATER RETURN
- HWS - HEATING WATER SUPPLY
- HWR - HEATING WATER RETURN
- HW - DOMESTIC HOT WATER
- CW - DOMESTIC COLD WATER
- GPM - GALLONS PER MINUTE
- DB - DOUBLE VALVE OPERATOR

SEQUENCE OF OPERATIONS

AHU-5 OPERATING ROOM FLOW CONTROL:

1. OPERATING ROOM SEQUENCE OF OPERATIONS. SUPPLY VAV BOX TO MODULATE TO MAINTAIN CONSTANT DESIGN FLOW RATE (2100 CFM) TO THE SPACE. RETURN AIR DAMPER TO MODULATE TO MAINTAIN POSITIVE PRESSURE IN THE ROOM FROM SIGNAL FROM DIFFERENTIAL PRESSURE SENSOR. DDC SYSTEM TO READ RETURN CFM TO PROVIDE VERIFICATION OF POSITIVE AIR FLOW TO THE SPACE. WHEN CORRECT SUPPLY AIR FLOW AND CORRECT PRESSURE RELATIONSHIPS HAVE BEEN VERIFIED OVERHEAD DOOR LIGHT (BOTH SIDES OF OR ROOM) SHOULD BE LIT AS VISUAL PROOF TO THE HOSPITAL STAFF THAT SYSTEM IS OPERATION CORRECTLY. DURING PERIODS OF NO OCCUPANCY, SUPPLY VAV BOX TO THROTTLE BACK TO 400 CFM AND RETURN AIR DAMPERS TO MODULATE TO STILL MAINTAIN POSITIVE PRESSURE IN THE OPERATING ROOM. WHEN OCCUPANCY SENSOR IN OR IS ACTIVATED, THE OR SHOULD RETURN TO THE NORMAL OCCUPIED SET POINTS.

AHU-5/OPERATING ROOM SMOKE CONTROL:

IF ANY SMOKE DETECTOR SERVING ANY AREA SERVED BY THE AHU-5 AIR HANDLER, DETECTS SMOKE, THE FIRE ALARM SYSTEM IS TO SEND A SIGNAL TO THE DDC SYSTEM, TELLING AHU-5 TO SWITCH TO 100% OUTSIDE AIR. THE SAME SEQUENCE IS TO APPLY IF THE UNIT SMOKE DETECTOR DETECTS SMOKE.

IF AN OR SMOKE DETECTOR DETECTS SMOKE, THE FIRE ALARM SYSTEM IS TO SEND A SIGNAL TO THE DDC SYSTEM TELLING THE DDC WHICH OR ROOM HAS DETECTED SMOKE. THE DDC SYSTEM IS TO SWITCH THAT PARTICULAR OPERATING ROOM TO EXHAUST MODE (NEGATIVE PRESSURE - SA = 1800 CFM AND EXH = 2020 CFM). THE REST OF THE OR ROOMS ARE TO OPERATE AS NORMAL.

ISOLATION SUITE PRESSURIZATION

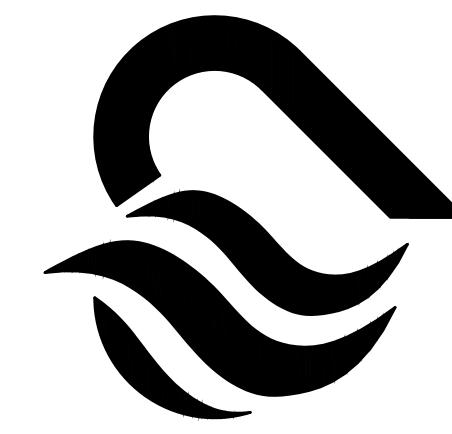
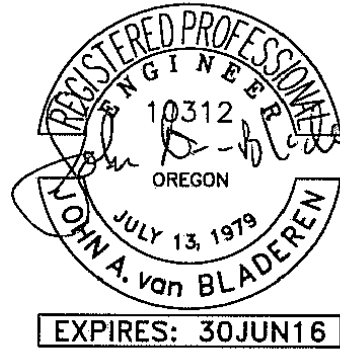
VAV BOX - TERMINAL UNIT TO MODULATE DAMPER TO MAINTAIN CONSTANT AIRFLOW TO ISOLATION ROOM, REGARDLESS OF PRESSURE CHANGES IN THE SUPPLY DUCT.

HEATING: TERMINAL UNIT CONTROLLER COMPARES SPACE HEATING SETPOINT AND MODULATES HOT WATER REHEAT COIL CONTROL VALVE AS REQUIRED TO MAINTAIN DESIRED HEATING SETPOINT.

ROOM PRESSURE: ISOLATION ROOM PRESSURE RELATIONSHIP TO BE SET BY WALL MOUNTED CONTROL MODULE. CONTROL MODULE TO HAVE THE FOLLOWING SETTINGS.

ISOLATION ROOM NEGATIVE PRESSURE - THE ISOLATION ROOM IS TO HAVE A NEGATIVE PRESSURE WHEN COMPARED TO THE CORRIDOR.

ALARM: WHEN THE PRESSURE RELATIONSHIPS ARE NOT MET BY THE HVAC SYSTEM A LOCAL VISUAL AND AUDIBLE ALARM IS TO BE SOUNDED.



- 06.17.2015
- SAME DAY REV. 10-5-15