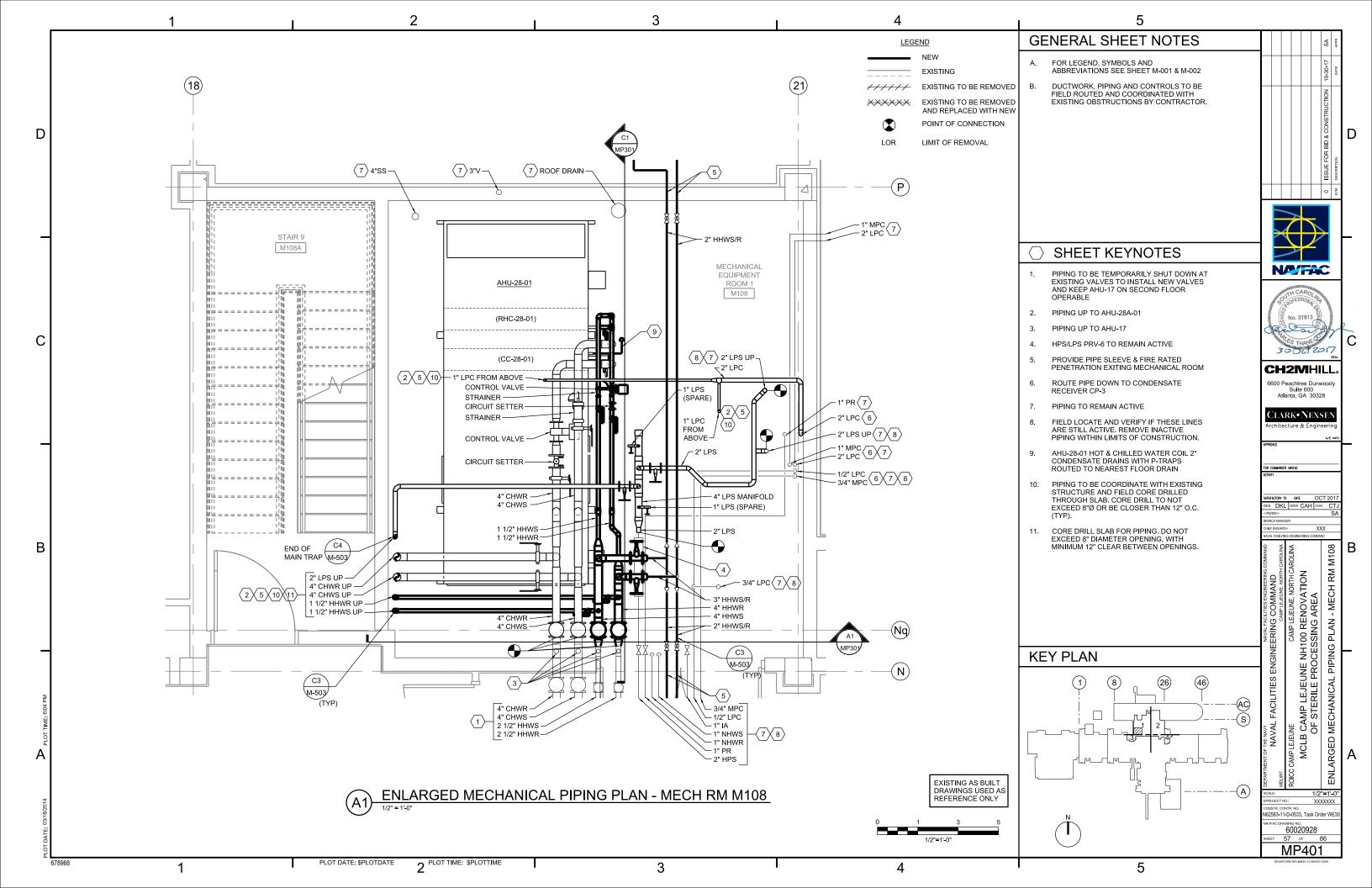
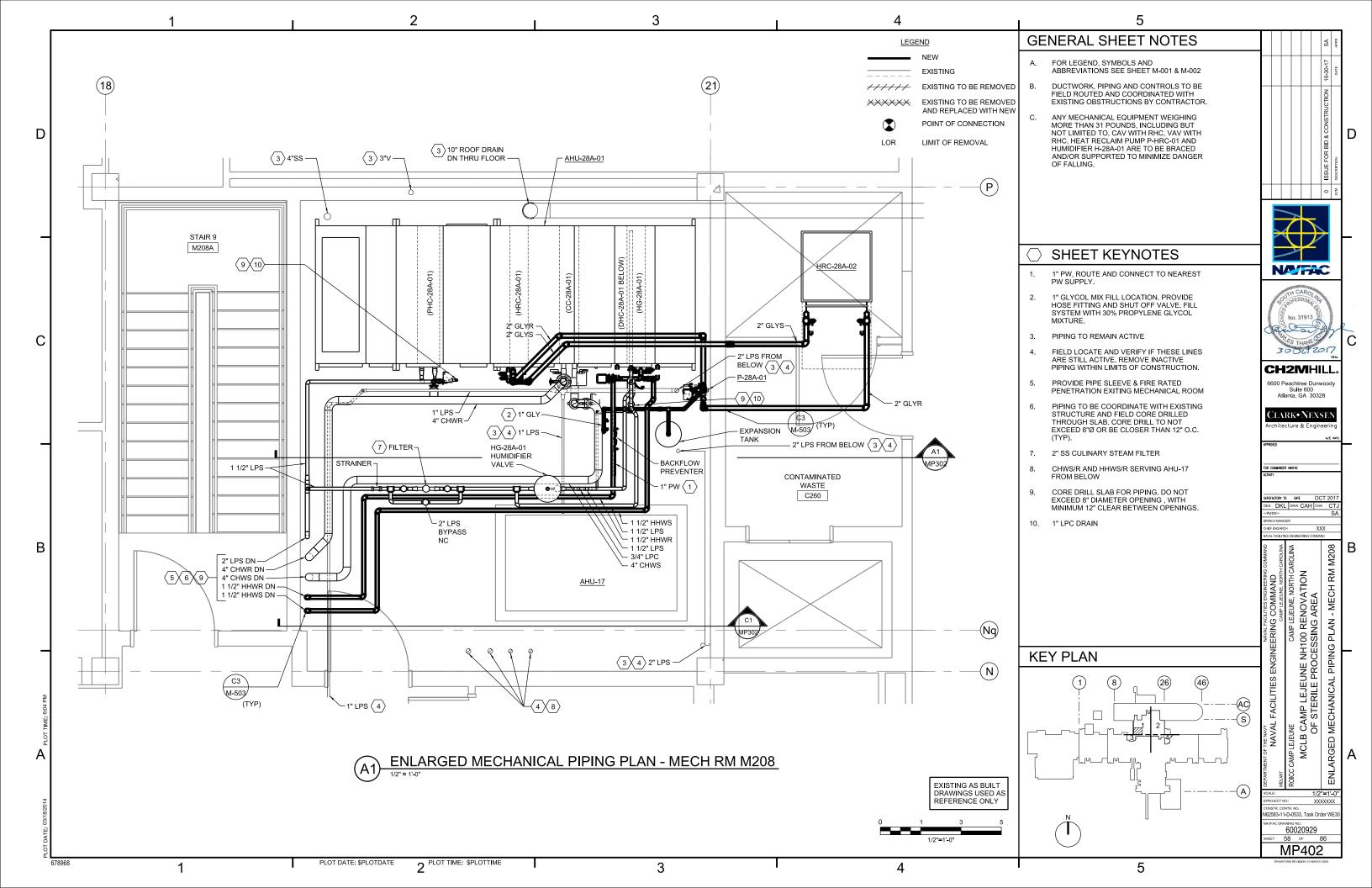
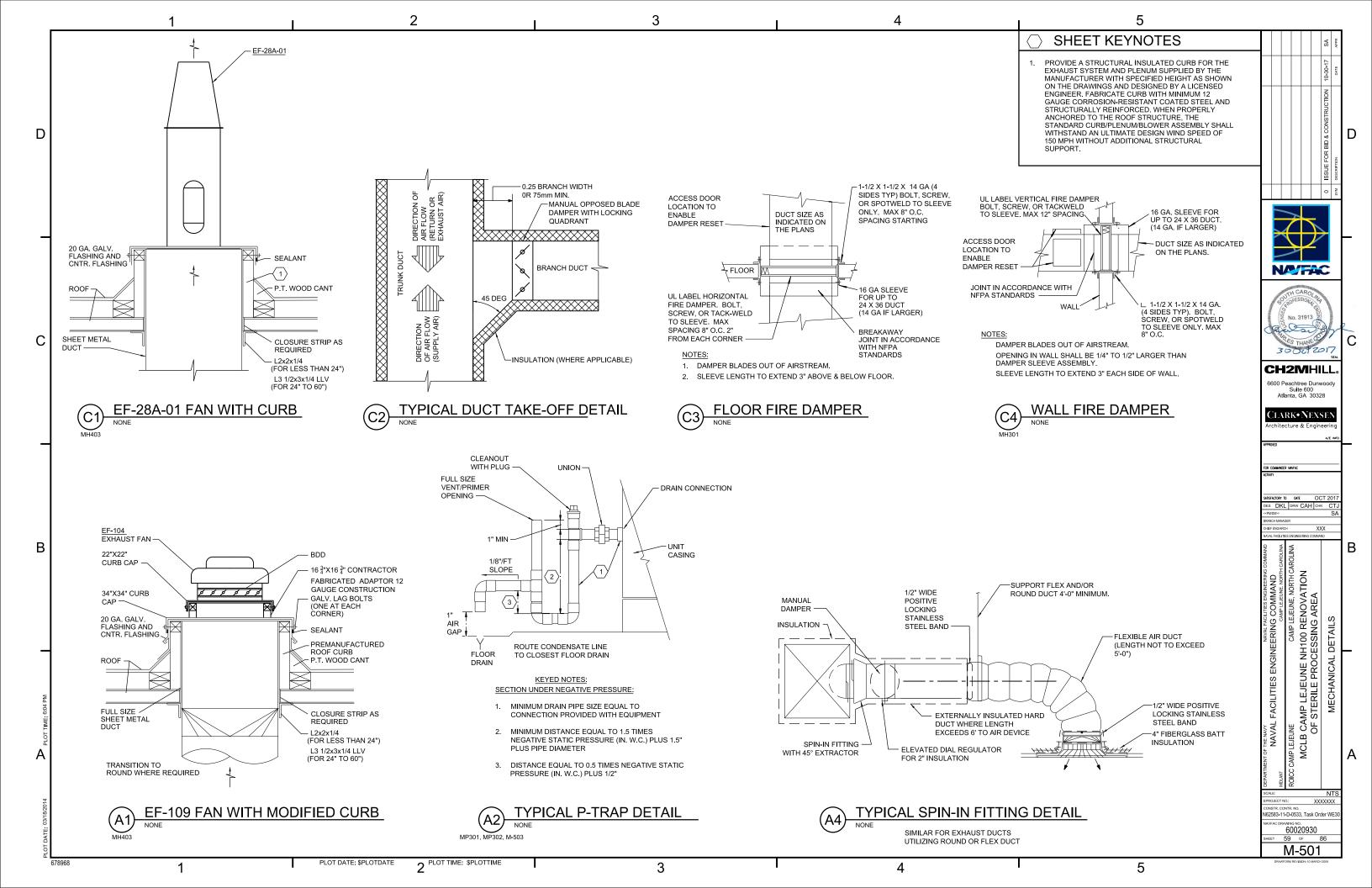
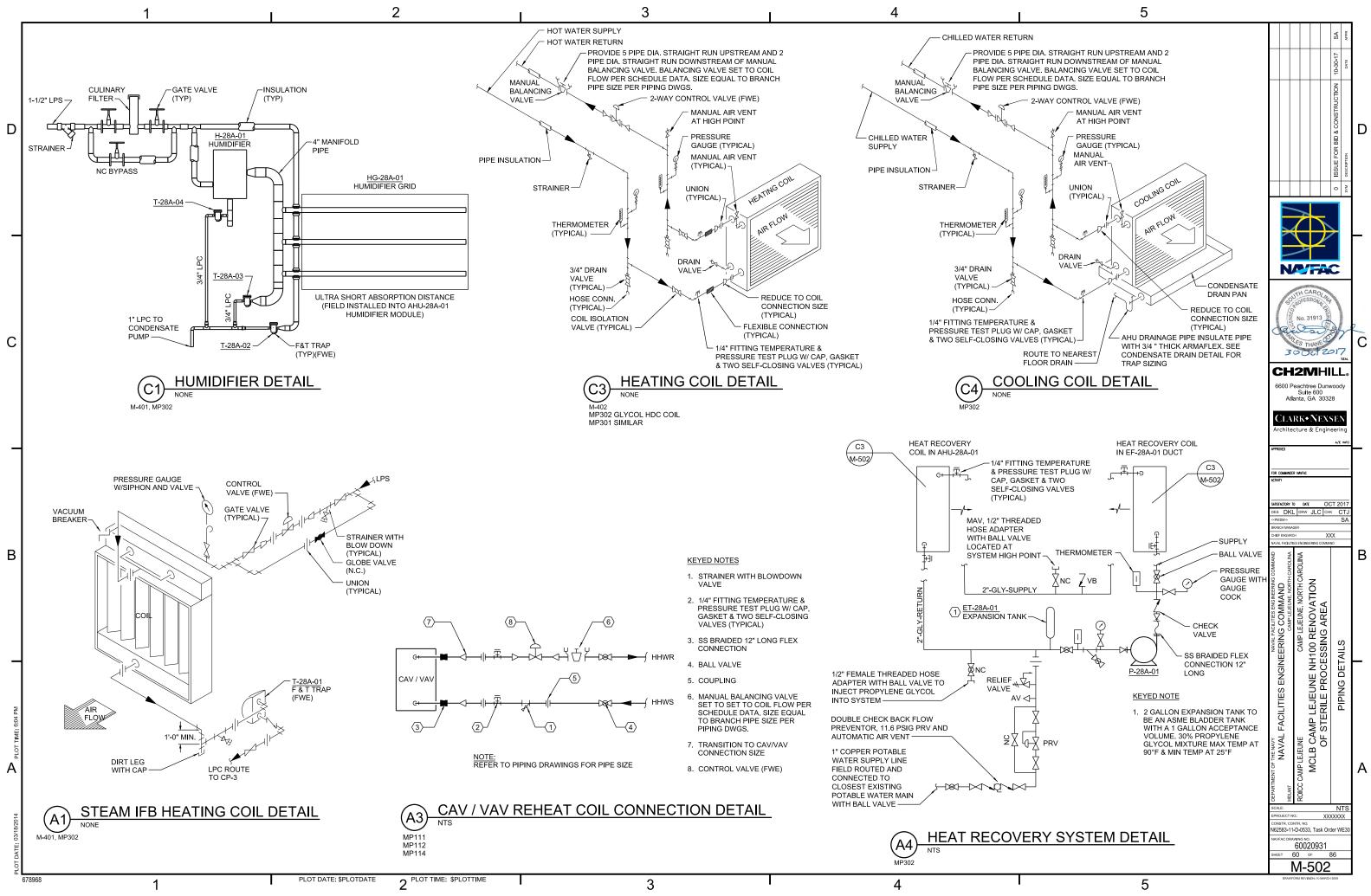


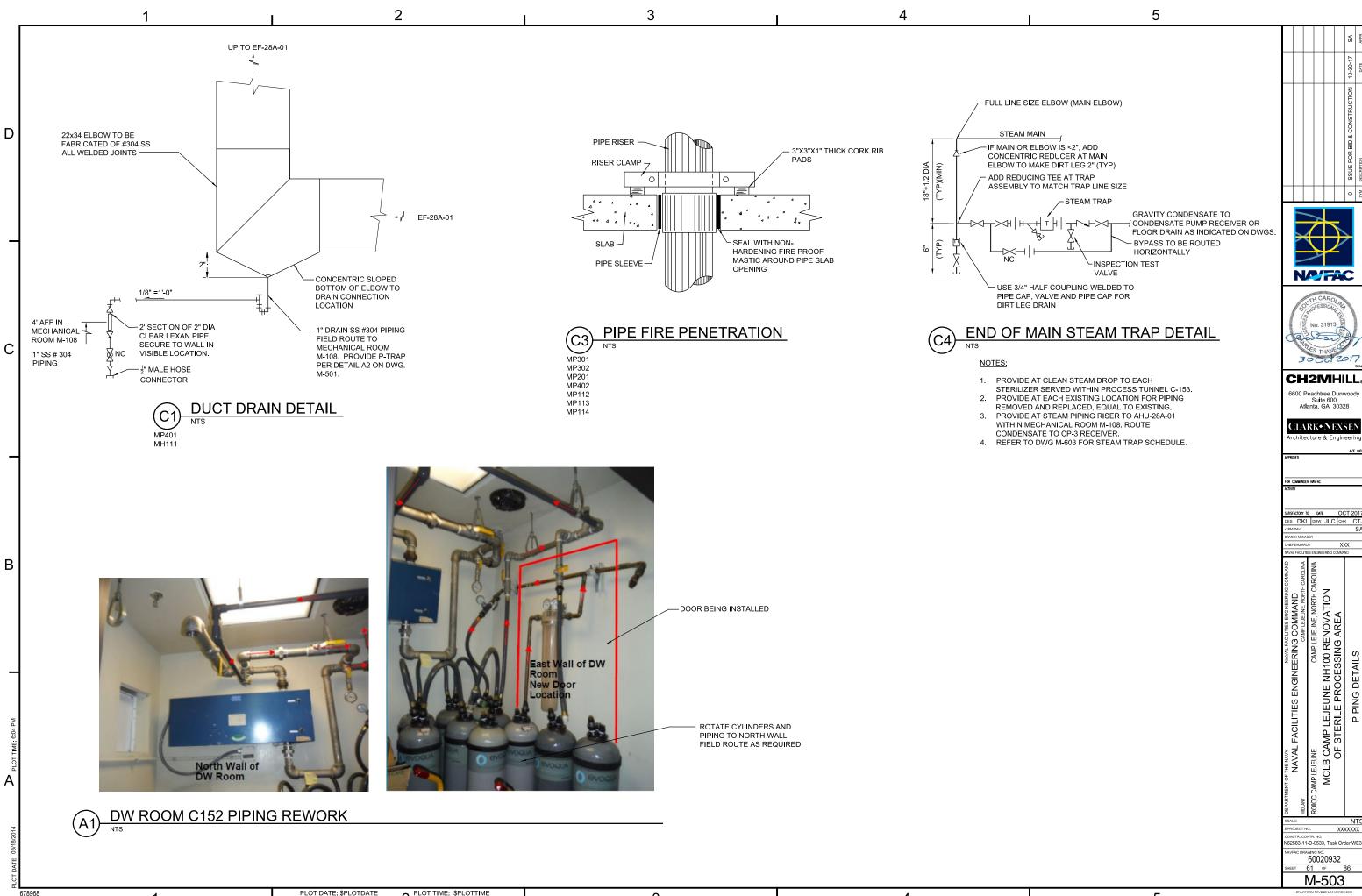
	5				_
GE	NERAL SHEET NOTES			SA	
А.	FOR LEGEND, SYMBOLS AND ABBREVIATIONS SEE SHEET M-001 & M-002			10-30-17 DATE	
В.	DUCTWORK, PIPING AND CONTROLS TO BE FIELD ROUTED AND COORDINATED WITH				
	EXISTING OBSTRUCTIONS BY CONTRACTOR.			& CONSTRUCTION	
				8 CON	D
				FOR BID	
				ISSUE FO	
				0 svm	
				> C	_
			TH CAROLN		
		Sundununun	No. 31913	ATTERNAL CONTRACTOR	
		CR	LES THANE	2	C
		ک	60ct 2	SEAL	
			Peachtree Duny Suite 600		
\bigcirc	SHEET KEYNOTES		anta, GA 3032		
1.	1" PW, ROUTE AND CONNECT TO NEAREST PW SUPPLY.		RK+ NEX	eering	
2.	1" GLYCOL MIX FILL LOCATION. PROVIDE HOSE FITTING AND SHUT OFF VALVE. FILL SYSTEM WITH 30% PROPYLENE GLYCOL MIXTURE.	APPROVED	er navfac	A/E INFO	-
3.	PIPING TO REMAIN ACTIVE	ACTINITY			
4.	FIELD LOCATE AND VERIFY IF THESE LINES ARE STILL ACTIVE. REMOVE INACTIVE PIPING WITHIN LIMITS OF CONSTRUCTION.	SATISFACTORY DES DK «PM/DM» BRANCH MANA	L DRW CAH CH	CT 2017 K CTJ SA	
5.	PROVIDE PIPE SLEEVE & FIRE RATED PENETRATION EXITING MECHANICAL ROOM	CHIEF ENG/AR		KX ND	
6.	PIPING TO BE COORDINATE WITH EXISTING STRUCTURE AND FIELD CORE DRILLED THROUGH SLAB. CORE DRILL TO NOT EXCEED 8"Ø OR BE CLOSER THAN 12" O.C. (TYP).	NAVAL FACILITIES ENGINEERING COMMAND ERING COMMAND CAMP LEJEUNE, NORTH CAROLINA	CAMP LEJEUNE, NORTH CAROLINA 00 RENOVATION SING AREA		В
7.	2" SS CULINARY STEAM FILTER	COMMAN AMP LEJEUNE, NG	NE, NOF VATI EA	4S	
8.	CHWS/R AND HHWS/R SERVING AHU-17 FROM BELOW			CTIO	
9.	PIPING TO AHU-28A-01	NAVAL FAC INEERING CC	CAMF 1100 F SSIN	U SE(
10.	AHU-28A-01 CHILLED WATER COIL AND HUMIDIFIER 2" CONDENSATE DRAINS WITH P-TRAPS ROUTED TO NEAREST FLOOR DRAIN.	ENG	WP LEJEUNE CAMP LEJEUNE, NORTH O MCLB CAMP LEJEUNE NH100 RENOVATION OF STERILE PROCESSING AREA	MECHANICAL PIPING SECTIONS	
11.	ROUTE PIPE DOWN TO CONDENSATE RECEIVER CP-3	CILITIES	MP LEJEI Sterile	ANIC/	
12.	CORE DRILL SLAB FOR PIPING, DO NOT EXCEED 8" DIAMETER OPENING, WITH	THE NAVY NAVAL FACIL	UNE CAMF OF ST	AECH	
	MINIMUM 12" CLEAR BETWEEN OPENINGS.	F THE NAY	CLB	~	
		DEPARTMENT OF THE NAVY NAVA MDLANT	ROICC CAMP LEJEUNE MCLB C/ OF		A
		DEPART SCATE:			
		CONSTR. CO N62583-11	ю.: XX	XXXXX	
		NAVFAC DR/	60020927	86	
			" MP302		1











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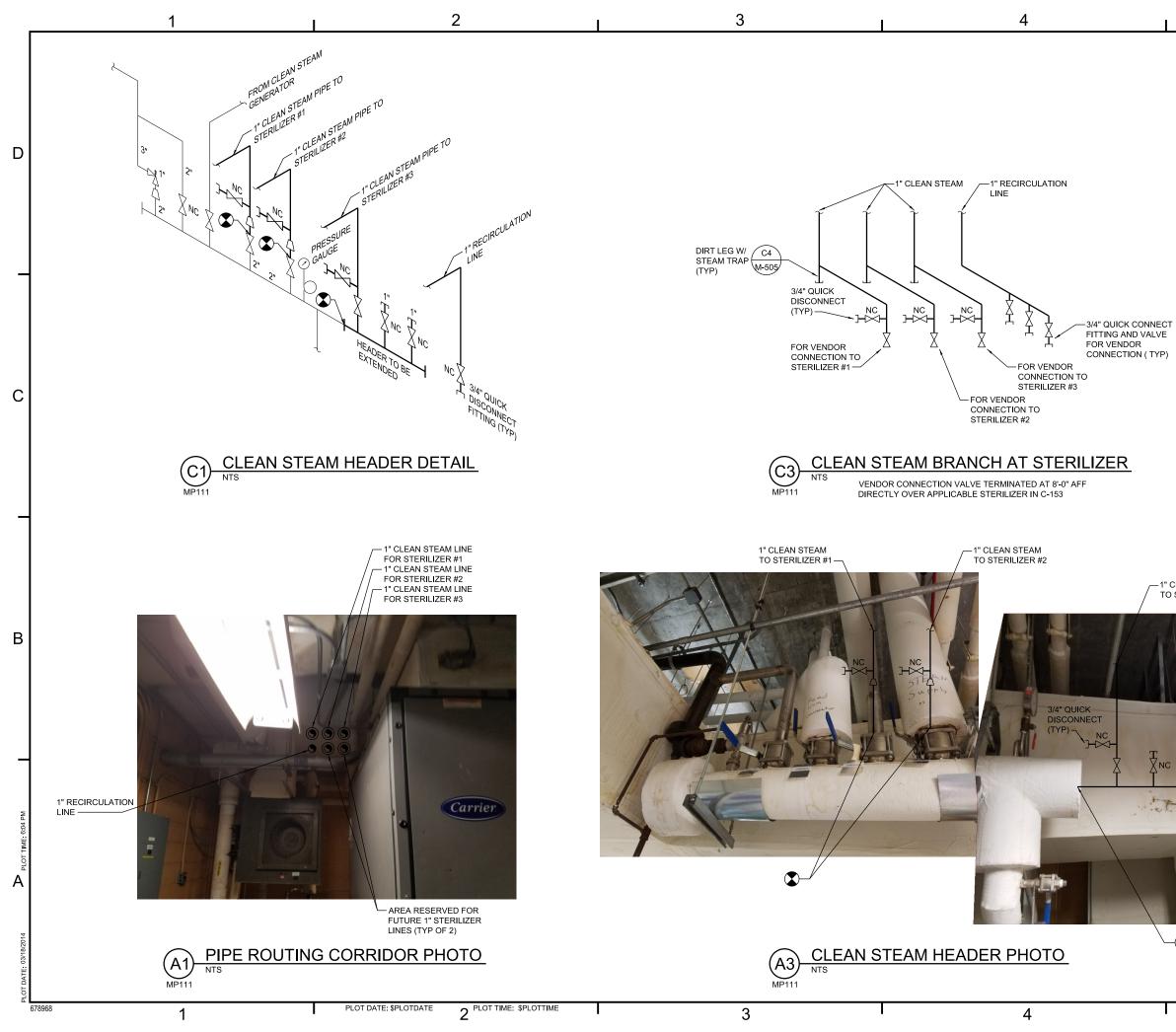


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TYP)	30 CH 6600 P Atta	No. 31913	voody 28
	For commander Activity	R NAVFAC	
- 1" CLEAN STEAM - 1" RECIRCULATION TO STERILIZER #3 LINE	SATISFACTORY TO DES DKL < <pmdm>> BRANCH MANAGO CHIEF ENGLARC</pmdm>	BRW CAH CHK	S
The The And		ROICC CAMP LEJEUNE CAMP LEJEUNE, NORTH CAROLINA MCLB CAMP LEJEUNE NH100 RENOVATION OF STERILE PROCESSING AREA	
EXTEND HEADER 36". FIELD VERIFY HEADER SIZE AND MATCH	NAVFAC DRA	NTR. NO. -D-0533, Task Ord WING NO. 60020933	
	ſ	M-504	36
I 5	DRAWFO	ORM REVISION: 10 MARCH	2009

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											А	IR F	IANDL	ING U	INIT SCHI	EDULI	E																
								I SECTI	ON (AHU	J-28-01 OI	NLY)								ENT	THALPY	ECONON	MIZER M	IXING BOX S	SECTION	AHU-28-01	ONLY)	_						
		NIT NATION	AIRFL	I DI	РМ	RET BHP	URN FAN E.S.P.	I.S.P		.S.P.	VOLTAGE	POW			CONTROL		SECTION 8-01 ONLY	っ -					DE AIR CFM	RETU		CONOMIZE	R						
	AHU-	-28A-01	(CFI	IVI)	IA	NA	(IN H2O) NA	(IN H2 NA	, ,	H2O) ` NA	NA	(HI 	P)	NA	NA		NA			NA			NA	AIR C		DAMPER	_						
D	AHU	-28-01	750	00 19	65	4.2	1.5	0.50		2	460/60/3	5	5	1750	VFD	WITH MA	ARINE LIGI	HT		YES			CFM MIN CFM MAX	3025 CF 7,500 CFN		0 CFM MIN 500 CFM M/							
																Α	R HAN	NDLI	IG UI	NIT S	SCHE	DULE	E (CON	TINUE	D)								
	INTA	AKE SECT	ION (AHU-28A-	01 ONLY	.)									(COMBINA	ATION FILT	TER SEC	TION								BLANK		INTE		ACE AND		
	OA	<u>م</u>					BLANK SECTION				FILTER	२	ER A (MEF		CLEAN PD DI					FILTE	R		ILTER B (ME			MEAN PD	SECTION (AHU-28A-0			OTAL PACITY	EAT L		.V. A.
+	AUTON DAMF	PER C	FM .	AIR CFM	DAMP	ER	WITH UV UNI	т	FLAT	R TYPE	SIZES	; IN			(INH2O) (II	IH2O)	(INH2O)	CFM	TYPE	SIZES	s			(INH2O)	(INH2O)	(INH2O)	ONLY)		(B	TUH)	FDB F		PM) (IN
	YE		925 CFM	NO	NO		AND MARINI LIGHT WITH UV UNI		PANEL		FED -	2		30	0.16	1.00	0.58	7,925	PLEATEI	:D -	12	2	90	0.88	1.50	1.19	LIGHT/GFI	7,9	125 12	4,961	26.9 4	1.5 45	i0 0
	NA	1 4	NA	NA	NA		AND MARINI LIGHT/GFI	∃ 9,500	PANEL		red -	2		30	0.20	1.00	0.60	9,500	PLEATEI	D -	4		90	0.50	1.50	1.00	NA	N		NA	NAN	NA NA	A N
с											204.04.00	<u></u>				HANI	DLING	UNI	r scł	HEDU	JLE (0	CON	TINUED))					0.000	D 14/4 TE			
\sim				SUMMER				ATREC		NTER	28A-01 ONL	Y) (30	1% PROP	YLENE G		COIL DA								SENSIBLE	ΤΟΤΑΙ				CHILLE				
	CFM	TOTAL CAPACITY (BTUH)		AT L /FWB FDE		°F	-WT SENSIE °F CAPAC (BTUH			LAT DB/FWB		°F		AX F.V. FPM)	MAX A.P.D. (INH2O)	FLOW RATE (GPM)	MAX W.P.D. (FTH2O)		ows M		BLANK	SECTIO			CAPACITY (BTUH)	/ EAT FDB/FWB	LAT E FDB/FWB	°F	LWT °F	MAX F (FPM		(A.P.D. F IH2O)	FLOW RA (GPM)
	7,925	46,808	84/	78.6 78.6	6/77.3	-	- 126,53	2 2	6.9	42.6	-	- 7	7,925	495	0.24	30	12.8	6		9	WITH MARINE	UV AND LIGHT/(257,627	772,450	78.6/77.3	48.4/48.2	42	54	472	1	1.29	128
	NA	NA	N	IA I	A	NA	NA NA	1	NA	NA	NA N	A	NA	NA	NA	NA	NA	NA			WITH UV MARINE			246,240	422,370	78/66.8	54/53.8	42	54	472	0	0.83	71
																Al	R HAN	IDLIN	G UN	NIT S	CHE	DULE	(CONT	INUE	D)								
						НОТ	WATER COIL	. (FIRST	STAGE H	HEATING	DEHUMIDI	FYING	i)					ł		FIER GRI	10/1								SUP	PLY FA		N SECTION	NC
			CFM	TOTAL CAPACITY (BTUH)		LAT I (HUMI OVERI		LWT °F	MAX F.V (FPM)	/ MAX A.P.D (INH20	D. RATE	W.F	P.D. M	N MAX NS FPI		CFM		TYPE		ISPERSI CAPACIT #/HR		ORST SE EAT B/FWB	LAT FDB/FWB/%	SE	ANK CTION	AIRFLOW (CFM)	TYPE	F	RPM	внр	E.S.P. (INH2O)	I.S.P. (INH2O	T.S.F) (INH2
в			7,925	98,429	41.5	53.	0 180	160	495	0.09	9 11	1.	.3 1	6	WITH UV UN AND MARIN LIGHT/GFI		ABS DISTAN	RA SHOR ORBTIO CE MULI	N IPLE	126	48.	5/35.6	49.5/45/70	.5 AND	UV UNIT MARINE HT/GFI	7,925	DIRECT DRIN PLENUM FA CLASS II		,930	12.9	2.5	5	7.5
	WITH U AND M LIGH	IARINE 5	5,025	86,832	52.0	68.	0 180	160	494	0.16	i 9	5	5 1	10	WITH UV UN AND MARIN LIGHT/GFI			NA		NA		NA	NA		NA	9500	AF CLASS I	I 1	792	11.4	2.5	3	5.5
			Δ.Ι		או וחו		INIT SCH			CONT					<u>R</u> E 1	MARKS						#304 ST	AINLESS ST		3								
	<u> </u>						HU-28A-01 OI					<i>)</i>		_	2. 3. 4.	PRC PRC	VIDE ULT	RAVIOL NTENAN	ET UNIT:	S WITHI	N AHU W ARINE LI	/HERE I GHTS W	NDICATED (HERE INDIC	ON SCHEE	ULE TO E SCHEDUL	E (INTERL	IOLD GROWI OCKED TO A ND QUANTIT	TOĠG	GLE LIGH	HT SWIT			
4					FI	_TER C							REMARK	s	٦.	4 2	SETS OF SETS OF	MERV 8 MERV 1	FILTERS 4	s	OLLAN			TORER	DETERN								
	TYPE	FILTER		DEPTH IN	I EFFI	CIENC	Y CLEAN PD (INH2O)	(INH20		EAN PD NH2O)					5. 6. 7.	HUN HEA AUT	T RECLAI	RID TO M COIL ⁻ MOKE E	BE PRO TO BE TO AMPER	ovided S To be pr Rs indic/	ROVIDED	SEPAR ONTI	ATELY AND ROL DIAGRA	FIELD INS	TALLED IN	N BLANK SE DED BY AHI	Y CONTRACT ECTION BY CO U MANUFACT	ONTR.	र				
E: 6:04 PM	HEPA	-		12	9	5	0.99	2.80		1.50	WITH MARI LIGHT/GF		1 THRU ^ 15	2,	8. 9.		LOCKABLI VARIABLE	E DISCC	NNECT ENCY D	SWITCH	ł FD)		/IDED WITH				. APPLICABLE E	COD	ES AND	STAND	ARDS		
PLOT TIM	NA	NA		NA	N	A	NA	NA		NA	WITH MAR LIGHT		2,3,4,7,8, 10,11,13,1 5				LOCKABLI CONTROL INTEGRAL	E DISCC TRANS CONTF	NNECT FORMEF	SWITCH	I INTIRE U WIRED, F	NIT PREPRO	OGRAMMED	DDC BAS	ED CONTR	ROLS PER S	EQUENCES						
A															10		ACCESSO AHU CON	RIES WI	THIN EA PIGTAILS	ACH MOE S FOR ST	DULE SC TEAM, HI	HEDULI EATING	ED ARE TO I HOT WATEI	BE FACTC R, CHILLE	RY WIRED	O WITH CAE AND HUMIE	NCE FUNCTIO BLING CONNE DIFIER AUTOM M TRAPS AR		NS INCL CONTF	UDING ROL VAL	HUMIDIFI VES ARE	IER E TO BE F	PROVIDI
															10		STÉAM CO HEATING CHILLED V	ONTROL HOT WA WATER (VALVES	S TO BE ONTROL Y	SIZED F VALVES ES TO BI	OR INDI TO BE S E SIZED	CATED FLO SIZED FOR I FOR INDIC	W AND PF NDICATEI ATED FLO	RESSURE V FLOW AN W AND WI	WITH A 5 P ND WITH A TH A 10 FT	SIG MAXIMUN 10 FT WG MA WG MAXIMU	1 LOS XIMUI M LOS	S M LOSS SS.				
3/18/2014															11	AHU	PROVIDE	WITH ST	FEAM TR	RAPS AS SEMBLE	S REQUIF D INTO S	RED, SIZ SECTION	ED BY MAN	UFACTUR	ER TO ME	ET INTENT	L MODULE T	SCHE	DULES (
DATE: 0:															12 13 14	AHU AHU	-28A-01 IS	S A CON A VARIA	STANT V BLE VOL		UNIT W	ITH PER	RMANCE V	E VALUÉS									
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											10-30-17 DATE	
											ISSUE FOR BID & CONSTRUCTION DESCRIPTION	
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											FOR BI	
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			RE-HEAT CO			ONL	Y)	BLANK SECTION			0 SYM	
	=.V. PM)	A.P.D (INH2C		SUME 5	ROWS	FA(Bነ	IZONTAL CE AND (PASS MPER	(AHU-28A-01 ONLY)		\bigcirc	≻	_
4	150	0.08	13	35	1		YES	WITH MARINE LIGHT/GFI			C	
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									ARBURALINIANIA	No. 31913	APPENDING THE PARTY OF THE PART	
									(F)	RES THANE	and the second second	C
D.	FLO	W RATE	MAX						1		917 SEAL	
)	(G	iPM)	W.P.D. (FTH2O)	MIN ROV	VS MA	K FPI				Peachtree Dun Suite 600		
		128	18.7	8	1	0				lanta, GA 303		
		71	16	6	1	2				RK• NEX		
]	APPROVED		A/E INFO	-
									FOR COMMANE ACTIVITY	IER NAVFAC		
СТ	ION			FAN	MOTOF	2		BLANK	SATISFACTORY	TO DATE O	CT 2017	
5.P 120		T.S.P. INH2O)	VOLTAGE	POWEF (HP)			ONTROL	SECTION	DES DK < <pm dm="">> BRANCH MAN</pm>	L DRW CAH CF		
		,		. ,					CHIEF ENGIAF NAVAL FACILI		XX ND	
5		7.5	460/60/3	15	1750)	VFD	WITH MARINE LIGHT/GFI	COMMAND	ROLINA		В
3		5.5	460/60/3	15	1750)	VFD	NA	NAVAL FACILITIES ENGINEERING COMMAND ERING COMMAND CAMP LEJEUNE, NOTH CAROLINA	WP LEJEUNE CAMP LEJEUNE, NORTH CAROLINA MCLB CAMP LEJEUNE NH100 RENOVATION OF STERILE PROCESSING AREA		
									THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND CAMPLEERING NO	UNE CAMP LEJEUNE, N CAMP LEJEUNE NH100 RENOVA OF STERILE PROCESSING AREA	ES	
	HOUI VITH		CONDUITS	6.						CAMP LE DO RE SING	EDUL	
									GINEE	NH10 CES	MECHANICAL SCHEDULES	_
									N EN	EUNE PRC	ICAL	
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									, L FAC	E SAMP F STE	MEC	
			LED 3Y ECMS.						DEPARTMENT OF THE NAVY NAVA	ROICC CAMP LEJEUNE MCLB C/ OF		
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FА	CTUF	ΚEK							DEPART MDLANT	ROIC(
			/E AND STE					2"x50").	EPROJECT CONSTR. C		NTS XXXXX der WE30	
-							,	,	NAVFAC DR	AWING NO. 60020934		
									SHEET	M-601	86	
					E				DRAW	FORM REVISION: 10 MARC	H 2009	

VARIABLE VOLUME (VAV) BOX SCHEDULE

	V.	ARIABLE		או⊏ (v	AV) BUX	SCHEDU			
ZONE	LEVEL 1 AREA	INLET SIZE	V	AV CFM F	RANGE		HEATING CO	JIL	
VAV-28 -	SERVED	IN DIA	MAX SA CFM	MIN SA CFM	HEATING CFM	HEATING COIL BTUH	HHW EWT/LWT	HHW GPM	REMARKS
01	C107 OFFICES	8	545	136	273	9712	180/160	1.0	1 THRU 16
02	C100C EAST CORRIDORS	14	2150	538	1075	38313	180/160	3.8	1 THRU 16
03	C148 REF CASE MANAGEMENT	10	1085	271	543	19335	180/160	1.9	1 THRU 16
05	C-130 OFFICE	4	140	45	70	2495	180/160	0.2	1 THRU 16
04	N129 EL ROOM	8	570	570	570	20315	180/160	2.0	1 THRU 16
06	C166 WEST CORRIDORS	10	950	238	475	16929	180/160	1.7	1 THRU 16
07	C132 SUITABILITY SCREENING	4	170	45	85	3029	180/160	0.3	1 THRU 16
08	C134 INFECTION CONTROL	4	105	45	53	1871	180/160	0.2	1 THRU 16
09	C130 CMD EVAL	5	225	60	113	4010	180/160	0.4	1 THRU 16
10	C128 PHYSICAL READINESS	5	190	60	95	3386	180/160	0.3	1 THRU 16
11	C158 LINEN	8	705	176	353	12563	180/160	1.3	1 THRU 16
12	C164 HOUSEKEEPING	6	300	75	150	5346	180/160	0.5	1 THRU 16
13	C160 DICTORATE RESOURCE MANAGEMENT	14	1645	430	823	29314	180/160	2.9	1 THRU 16
14	C169B BREAK ROOM	4	95	24	48	1693	180/160	0.2	1 THRU 16
15	C167 MID	5	200	60	100	3564	180/160	0.4	1 THRU 16
16	C165 CONFERENCE	5	180	60	90	3208	180/160	0.3	1 THRU 16
17	C157 INTERIOR CORRIDOR	6	350	88	175	6237	180/160	0.6	1 THRU 16

REMARKS

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BOX CONTROLS TO BE FURNISHED TO PROVIDE THE INTENT OF THE SEQUENCE OF OPERATION ON DWG. MI601 THRU 604 INCLUDING REMOTE DEVICES. MINIMUM PRESSURE NEEDED TO OPERATE IS 0.02" WG.

PROVIDE WITH HHW MODULATING CONTROL VALVE FOR FLOW INDICATED WITH A 10 FT. MAX HEAD 2.

LOSS. REFER TO VALVE SCHEDULES ON DWG. M-603. BOX TO BE 1" FIBERGLASS INSULATION WITH SOLID METAL LINER, 1.5# DENSITY, R-VALUE = 4.1 3.

- MEETING REQUIREMENTS OF NFPA90A AND UL181. FACTORY MOUNTED DDC CONTROLS AND ACTUATOR, INCLUDING PROGRAMMING FURNISHED BY BOX 9 MANUFACTURER.
- FACTORY MOUNTED NEMA 1 CONTROLS ENCLOSURE, ASSEMBLY ETL CERTIFIED TO UL181. FACTORY MOUNTED DISCONNECT SWITCH. 10
- FACTORY MOUNTED MULT-POINT PRIMARY AIRFLOW SENSOR.
- RECTANGULAR DISCHARGE OPENING WITH SLIP AND DRIVE CLEAT DUCT CONNECTION. REHEAT COIL PERFORMANCE RATED AND CERTIFIED IN ACCORDANCE WITH THE CURRENT EDITION 14 OF AHRI STANDARD 410.
- FACTORY FURNISH HANGER BRACKET SHIPPED LOOSE FOR FIELD INSTALLATION BY CONTRACTOR. RE-HEATING COILS ARE 1 ROW, MULTI-CIRCUIT AND 10 FPI (MINIMUM). WPD NOT TO EXCEED 2' WG AND 15 APD NOT TO EXCEED 0.20" WG, EAT = 68°F.

AIR DEVICES SCHEDULE

DESIGNATION	SERVICE	MODULE SIZE	NECK SIZE	BLOW PATTERN	MATERIAL	FINISH	REMARKS							
LD-1	SUPPLY AIR	CONTINUOUS	-	1 WAY	ALUMINUM	WHITE	1, 3, 7, 8, 9							
CD-1	SUPPLY AIR	24" X 24"	6" DIA	4 WAY	ALUMINUM	WHITE	1,3, 7							
CD-2	SUPPLY AIR	24" X 24"	8" DIA	4 WAY	ALUMINUM	WHITE	1,3, 7							
CD-3	SUPPLY AIR	24" X 24"	10" DIA	4 WAY	ALUMINUM	WHITE	1,3, 7							
CD-4	SUPPLY AIR	48" X 12"	6" DIA	4 WAY	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
CD-5	SUPPLY AIR	48" X 24"	8" DIA	4 WAY	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
CD-6	SUPPLY AIR	48" X 24"	10" DIA	4 WAY	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
CD-7	SUPPLY AIR	48" X 24"	12" DIA	4 WAY	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
TG-1	TRANSFER AIR	12" X 12"	12" X 12"	-	ALUMINUM	WHITE	1,3, 7							
TG-2	TRANSFER AIR	12" X 12"	12" X 12"	-	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 7							
WTG-1	WALL TRANSFER AIR	12" X 12"	12" X 12"	-	STAINLESS STEEL	STAINLESS STEEL	2, 5, 7							
WTG-2	WALL TRANSFER AIR	12" X 12"	12" X 12"	-	ALUMINUM	WHITE	1, 7							
WTG-3	WALL TRANSFER AIR	18" X 18"	18" X 18"	-	STAINLESS STEEL	STAINLESS STEEL	2, 5, 7							
EG-1	EXHAUST AIR	12" X 12"	12" X 12"	-	ALUMINUM	WHITE	1,3, 7							
EG-2	EXHAUST AIR	24" X 24"	6" DIA	-	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
EG-3	NA	12" X 12"	12" X 12"	-	ALUMINUM	WHITE	1, 7, 10							
EG-4	EXHAUST AIR	12" X 12"	12" X 12"	-	STAINLESS STEEL	STAINLESS STEEL	2, 5, 6, 7, 1							
EG-5	EXHAUST AIR	24" X 24"	8" DIA	-	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
EG-6	EXHAUST AIR	24" X 24"	10" DIA	-	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
EG-7	EXHAUST AIR	24" X 24"	12" DIA	-	STAINLESS STEEL	STAINLESS STEEL	2, 4, 5, 6, 7							
68	1			PLOT	DATE: \$PLOTDATE	2 PLOT TIME: \$PLC	DTTIME							

CONSTANT VOLUME (CAV) BOX SCHEDULE

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	LEVEL 1 CSS ZONE		INLET SIZE		HEATING	6 COIL		
ZONE CAV-28A -	SERVED	CFM	IN DIA	HEATING COIL BTUH	COIL EAT/LAT	HHW EWT/LWT	HHW GPM	REMARKS
01	AIRLOCK MISC	880	10	14,256	53/68	180/160	1.4	1 THRU 12
02	STERILE WORK ROOM	1085	12	17,577	53/68	180/160	1.8	1 THRU 12
03	STERILE STORAGE	1270	12	20,574	53/68	180/160	2.1	1 THRU 12
04	CLEAN WORK ROOM	2295	16	37,179	53/68	180/160	3.7	1 THRU 12
05	DECONTAMINATION	2050	16	33,210	53/68	180/160	3.3	1 THRU 12
06	ENDOSCOPIC	345	7	5,589	53/68	180/160	0.6	1 THRU 12
OF OPERAT OPERATE IS BOX TO BE MEETING R PROVIDE W FACTORY M	1" FIBERGLASS INSULAT EQUIREMENTS OF NFPA /ITH MODULATING CONT /OUNTED NEMA 1 CONT	UDING RE 10N WITH 90A AND U ROL DAMP ROLS ENCL	MOTE DEVIC SOLID METAI L181. ER TO MAINT	CES. MINIMUN L LINER, 1.5# FAIN FLOW IN	<i>I</i> PRESSURE DENSITY, R- ¹ IDICATED.	NEEDED TO		
FACTORY N RECTANGU	NOUNTED DISCONNECT S NOUNTED MULT-POINT P LAR DISCHARGE OPENIN	RIMARY AI NG WITH SI	IP AND DRIV	E CLEAT DU				
	DIL PERFORMANCE RATE ANDARD 410	D AND CEI	RTIFIED IN A	CCORDANCE	WITH THE C	URRENT EDI	TION	

FACTORY FURNISH HANGER BRACKET SHIPPED LOOSE FOR FIELD INSTALLATION BY CONTRACTOR. RE-HEATING COILS ARE 1 ROW, MULTI-CIRCUIT AND 10 FPI (MINIMUM). WPD NOT TO EXCEED 2.0' WG 10

AND APD NOT TO EXCEED 0.20" WG, EAT = 53°F PROVIDE WITH HHW MODULATING CONTROL VALVE FOR FLOW INDICATED WITH A 10 FT. MAX HEAD LOSS. REFER TO VALVE SCHEDULE ON DWG. M-603. 11

12. FACTORY MOUNTED DDC CONTROLS AND ACTUATORS, INCLUDING PROGRAMMING FURNISHED BY BOX MANUFACTURER

	EXHAUST FAN SCHEDULE																			
				PERFC	RMANCE					FAN DAT	A					MOT	OR DATA	١		
DESIGNATION	LOCATION			BYPASS VOLUME (CFM)		EXTERNAL SP (IN WG)	TOTAL SP (IN WG)	FAN RPM				EFFECTIVE PLUME HEIGHT (FT)	SPEED		VOLTS	HERTZ	PHASE	ENCLOSURE	RPM	REMARKS
EF-28A-01	ROOF	LABORATORY UPBLAST	7,070	0	7,070	3.0	3	1,740	6.6	22.75	3,450	32	10	7.5	460	60	3	TEFC	1,770	1 THRU 14
EF-109	ROOF	GENERAL EXHAUST	1,420	0	1,420	1.5	2	1,583	-	14.63	-	-	-	3/4	460	60	3	TEFC	1,725	4, 15, 16, 17, 18, 19

REMARKS:

18

- NEMA PREMIUM EFFICIENT MOTOR-MEET NEMA TABLE 12-12
- MOTOR VFD RATED WITH SHAFT GROUNDING PROTECTION

MOTOR WITH SHAFT GROUNDING MOTOR WITH CLASS F OR GREATER INSULATION

MOTOR DUTY-INDUSTRAL

MOTOR WITH GREASABLE BEARINGS

- FAN COATED WITH LABCOAT, CONCTETE GRAY-RAL 7023, ENTIRE UNIT
- SWITCH-NEMA-3R, TOGGLE, FOR INDOOR OR OUTDOOR, MOUNTED AND WIREDUL/cUL-705-"POWER VENTILATORS"

SHAFT MATERIAL - TURNED AND POLISHED STEEL WITH PROTECTIVE COATING

10

FAN PANEL MATERIAL-COATED STEEL ROOF CURB-CURB, COATED STEEL, 12" HEIGHT, 1 IN. INSULATION. 11

FACTORY VIBRATION TEST, 0.08 IN/SEC, PEAK, FILTER-IN AS MEASURED AT THE FAN RPM.

EXTENDED LUBE LINES-NYLON

- 13 REMOTE MOUNTED VARIABLE FREQUENCY DRIVE WITH LOCKABLE DISCONNECT SWITCH. 14
- NEMA-1 TOGGLE SWITCH, SHIPPED WITH UNIT.

15 JUNCTION BOX MOUNTED AND WIRED 16. 17.

- **BIRD SCREEN ALUMINUM**
- DAMPER SHIPPED LOOSE, GRAVITY OPERATED NOT COATED. EXISTING CURB TO BE RE-USED. 19.

REMARKS

DEVICE INTENDED FOR STANDARD NON-CLEAN ROOM INSTALLATION DEVICE INTENDED FOR CLEAN ROOM INSTALLATION

3

- BORDER FOR ACOUSTICAL TILE LAYIN GRID 4.
- BORDER FOR EPOXY COATED CLEAN ROOM LAYIN CEILING. PROVIDE WITH GASKETED SEALS AND CLIP DOWN MECHANISM DEVICE TO BE FABRICATED OF #304 STAINLESS STEEL. 33% PERFORATED FACE
- DEVICED TO HAVE SEALED 2" FIBERGLASS INSULATION BLANKET OVER TOP TO AVOID CONDENSATION
- DEVICE PROVIDED WITH MANUAL BALANCING DAMPER ACCESSIBLE THRU FACE REFER TO DWGS FOR LENGTH OF LINEAR DIFFUSER AND ACTIVE SECTIONS. LINEAR TO HAVE 2 @ 1" SLOTS. UNACTIVE SECTIONS TO HAVE 51% FREE AREA PERFORATED SHIELDS ACTIVE SECTIONS OF LINEAR DIFFUSERS TO HAVE INSULATED BOOT AND ROUND DUCT
- CONNECTION
- 10. SURFACE MOUNT DEVICES

ZONE AMS- EXH-28A-	LEVEL 1 CSS ZONE SERVED	CAV CFM	INLET SIZE IN DIA	REMARKS
01	CART WASH	150	4	1 THRU 9
02	STERILE STORAGE	1140	14	1 THRU 9
03	STERILE WORK ROOM	830	14	1 THRU 9
04	STERILIZER TUNNEL	300	7	1 THRU 9
05	DIRTY CART AND MATERIAL	1035	14	1 THRU 9
06	CLEAN WORK ROOM	1620	20	1 THRU 9
07	SANITIZER TUNNEL	300	7	1 THRU 9
08	DECONTAMINATION	1500	15	1 THRU 9
09	ENDOSCOPIC	345	10	1 THRU 9

REMARKS:

- 2. INDICATED

- CERTIFIED TO UL181.
- 8
- 9.

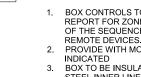
4

- 3 STEEL INNER LINER

ZONE LEV AMS-CLE 01 то END

TRN-28A-

02



REMARKS:

STEEL INNER LINER BOX MANUFACTURER TO BE SAME AS CONSTANT VOLUME BOXES. FACTORY MOUNTED NEMA 1 CONTROLS ENCLOSURE, ASSEMBLY ETL CERTIFIED TO UL 181

FACTORY MOUNTED MULT-POINT PRIMARY AIRFLOW SENSOR. FACTORY FURNISH HANGER BRACKET SHIPPED LOOSE FOR FIELD

INSTALLATION BY MC. 9.

TRANSFER CONSTANT VOLUME AIR MONITORING **STATION (AMS) BOX SCHEDULE**

LEVEL 1 CSS ZONE SERVED	VAV CFM RANGE	INLET SIZE IN DIA	REMARKS
CLEAN WORK TO AIRLOCK	100	4	1 THRU 8
ENDOSCOPIC CLEAN TO DIRTY	25	4	1 THRU 8

BOX CONTROLS TO BE PRECISION QUALITY TO CONTROL, MONITOR AND REPORT FOR ZONE COMMISSIONING. FURNISHED TO PROVIDE THE INTENT OF THE SEQUENCE OF OPERATION ON DWG. MI601 THRU 604 INCLUDING

PROVIDE WITH MODULATING CONTROL DAMPER TO MAINTAIN FLOW

BOX TO BE INSULATED DOUBLE WALL CONSTRUCTION, #304 STAINLESS

FACTORY MOUNTED DISCONNECT SWITCH.

FACTORY MOUNTED DDC CONTROLS AND ACTUATOR, INCLUDING PROGRAMMING FURNISHED BY BOX MANUFACTURER.

EXHAUST CONSTANT VOLUME AIR MONITORING STATION (AMS) BOX SCHEDULE

BOX CONTROLS TO BE PRECISION QUALITY TO CONTROL, MONITOR AND REPORT FOR ZONE COMMISSIONING, FURNISH TO PROVIDE THE INTENT OF THE SEQUENCE OF OPERATION ON DWG. MI601 THRU 604 INCLUDING REMOTE DEVICES. MINIMUM PRESSURE NEEDED TO OPERATE IS 0.02" WG. PROVIDE WITH MODULATING CONTROL DAMPER TO MAINTAIN FLOW

BOX TO BE INSULATED DOUBLE WALL CONSTRUCTION, #304 STAINLESS

BOX MANUFACTURER TO BE SAME AS CONSTANT VOLUME BOXES. FACTORY MOUNTED NEMA 1 CONTROLS ENCLOSURE, ASSEMBLY ETL

FACTORY MOUNTED DISCONNECT SWITCH. FACTORY MOUNTED MULT-POINT PRIMARY AIRFLOW SENSOR. FACTORY FURNISH HANGER BRACKET SHIPPED LOOSE FOR FIELD

INSTALLATION BY CONTRACTOR. FACTORY MOUNTED DDC CONTROLS AND ACTUATOR, INCLUDING PROGRAMMING FURNISHED BY BOX MANUFACTUREF



3

	HEAT RECOVERY SYSTEM PUMP SCHEDULE													
					PUMP DAT	4 (30% PRC	PYLENE	GLYCOL)						
PUMP DESIGNATION	PUMP LOCATION	GPM	PUMP SPEED RPM	SUCTION SIZE IN	DISCHARGE SIZE IN	IMPELLER DIA IN		TOTAL HEAD FT	VOLTS/PH/HZ	CONTROLS	REMARKS			
P-28A-01 DUCT RISER	MECH RM SECOND FLOOR	30	2,950	1.5	1.5	4	1	40	230/1/60	VFD	1 THRU 3			

REMARKS: D

2.

PUMP TO HAVE INTEGRAL VFD WITH ECM MOTOR AND CONTROLS TO MAINTAIN FLOW RATE DEFINED

1

PUMP LOCATED IN SECOND FLOOR MECHANICAL ROOM

PUMP TO BE INTERLOCKED WITH AHU-28A-01 AND EF-28A-01 OPERATION. BAS TO ENABLE AND MONITOR PUMP OPERATION. 3.

HUMIDIFIER SCHEDULE ACTUAL REQUIRED INCOMING CFM AT EAT EAT LAT LAH OPERATION Fdb %RH Fdb %RH DESIGNATION LOCATION CAPACITY CAPACITY STEAM REMARKS (LBS/HR) (LBS/HR) PSIG H-28A-01 AHU-28A-01 7.925 48.5 48.5 49.5 71 1 THRU 6 126 15 -

REMARKS:

PROVIDE WITH HIGH LIMIT HUMIDITY SENSOR PROVIDE STAINLESS STEEL ULTRA SHORT DISTANCE MULTIPLE ROWDISPERSION GRID PROVIDE WITH A 2" STAINLESS STEEL CULINARY STEAM FILTER RATED AT MICRON FOR EACH HUMIDIFIER

PROVIDE WITH INTEGRAL PRESSURE REDUCING VALVE AND STEAM CONTROL VALVE SELECTED FOR FLOW WITH A MAX LOSS OF 5 PSIG. REFER TO VALVE SCHEDULES ON M-603. 4

WINTER

35

PROVIDE WITH STEAM TRAPS AS REQUIRED, SIZED BY MANUFACTURER TO MEET INTENT. HUMIDIFIER GRID TO BE FIELD INSTALLED IN AHU-28A-01 HUMIDIFIER MODULE. 6

						HEAT	REC	OVEF	RY S	YSTEM (COIL SC	CHEDUL	.E							
			COIL DATA (30% PROPYLENE GLYCOL)								SUMN	1ER				V	/INTER			
COIL LOCATED IN	COIL DESIGNATION	CFM	MAX F.V. (FT/MIN)	MAX A.P.D. (INH2O)	FLOW RATE (GPM)	MAX W.P.D. (FTH2O)	MIN ROWS	MAX FPI	CFM	TOTAL CAPACITY (BTUH)	EAT FDB/FWB	LAT FDB/FWB	EWT °F	LWT °F	SENSIBLE CAPACITY (BTUH)	EAT FDB/FWB	LAT FDB/FWB	EWT °F	LWT °F	REMARKS
AHU-28A-01	HRC-28A-01	7,925	325	0.24	30	10.8	6	9	7,925	46,808	84/78.6	78.6/77.3	-	-	126,532	26.9	42.6	-	-	1
EF-28A-01 DUCT RISER	HRC-28A-02	7,520	696	0.91	30	12.8	6	9	7,520	46,808	68	75.1	-	-	126,532	68/58	51.6/50.3	-	-	2

REMARKS

С

В

64" X 36" COIL TO BE FIELD INSTALLED INSIDE HEAT RECLAIM MODULE OF AHU-28A-01

30" X 30" COIL TO BE LOCATED IN THE EXHAUST DUCT RISER FOR EF-28A-01 ON SECOND FLOOR 2.

		(CONTR	ROL VA	LVE SCHEDULE			
CONTROL VALVE DESIGNATION	ASSOCIATED COIL	UTILITY SERVICE	FLOW GPM	FLOW #/HR	MAXIMUM PRESSURE DROP ALLOWABLE PSIG	VALVE BODY SIZE IN.	ACTUATOR	REMARKS
CV-28A-01	PHC-28A-01	STEAM	-	135	5.0	1-1/4	YES	1,2,3
CV-28A-02	CC-28A-01	CHW	128	-	4.3	3	YES	3, 4
CV-28A-03	NOT USED	-	-	-	-	-	-	-
CV-28A-04	DHC-28A-01	ннw	11.0	-	4.3	1	YES	3, 4
CV-28A-05	CAV-28A-01	HHW	1.4	-	4.3	3/4	YES	3, 4
CV-28A-06	CAV-28A-02	ннพ	1.8	-	4.3	3/4	YES	3, 4
CV-28A-07	CAV-28A-03	ннพ	2.1	-	4.3	3/4	YES	3, 4
CV-28A-08	CAV-28A-04	ннพ	3.7	-	4.3	1	YES	3, 4
CV-28A-09	CAV-28A-05	ннพ	3.3	-	4.3	1	YES	3, 4
CV-28A-10	CAV-28A-06	ннw	0.6	-	4.3	3/4	YES	3, 4
CV-28-01	CC-28-01	CHW	84.0	-	4.3	3	YES	3, 4
CV-28-02	CC-28-01	ннw	9.0	-	4.3	3	YES	3, 4
CV-28-03	VAV-28-01	ннพ	1.0	-	4.3	3/4	YES	3, 4
CV-28-04	VAV-28-02	ннw	3.8	-	4.3	1	YES	3, 4
CV-28-05	VAV-28-03	ннw	1.9	-	4.3	1	YES	3, 4
CV-28-06	VAV-28-04	ннพ	0.2	-	4.3	3/4	YES	3, 4
CV-28-07	VAV-28-05	ннw	2.0	-	4.3	1	YES	3, 4
CV-28-08	VAV-28-06	ннw	1.7	-	4.3	3/4	YES	3, 4
CV-28-09	VAV-28-07	ннw	0.3	-	4.3	3/4	YES	3, 4
CV-28-10	VAV-28-08	ннw	0.2	-	4.3	3/4	YES	3, 4
CV-28-11	VAV-28-09	ннw	0.4	-	4.3	3/4	YES	3, 4
CV-28-12	VAV-28-10	HHW	0.3	-	4.3	3/4	YES	3, 4
CV-28-13	VAV-28-11	ннw	1.3	-	4.3	3/4	YES	3, 4
CV-28-14	VAV-28-12	ннw	0.5	-	4.3	3/4	YES	3, 4
CV-28-15	VAV-28-13	ннw	2.9	-	4.3	1	YES	3, 4
CV-28-16	VAV-28-14	ннw	0.2	-	4.3	3/4	YES	3, 4
CV-28-17	VAV-28-15	ннw	0.4	-	4.3	3/4	YES	3, 4
CV-28-18	VAV-28-16	ннw	0.3	-	4.3	3/4	YES	3, 4
CV-28-19	VAV-28-17	HHW	0.6	-	4.3	3/4	YES	3, 4

AREA	AIR CONE	DITIONING	HEAT	HUMIDIFICATION	ROOM
	°Fdb	% RH	°Fdb	% RH	PRESSURE
DIRTY MATERIAL STAGING	68	50	68	35	-
DIRTY CART STAGING	68	50	68	35	-
DECONTAMINATION	68	50	68	35	-
ENDOSCOPE ROOMS	68	50	68	35	+/-
CLEAN WORK AREA	68	50	68	35	+

50

68

INDOOR DESIGN CONDITIONS SCHEDULE

SUMMER

ORIENTATION

PRE

STERILE WORK AREA

68

		STEA	I TRAP SCH	EDULE				
STEAM TRAP DESIGNATION	SERVICE	CONDENSATE LOAD #/HR	TRAP CAPACITY CONDENSATE #/HR	STEAM PRESSURE PSIG	SAFETY FACTOR	TRAP SIZE "	ORIFICE SIZE "	REMARKS
T-28A-01	IFB PRE-HEAT COIL	135	202.5	20	1.5	3/4	0.235	1,3
T-28A-02	HUMIDIFIER END OF MAIN	-	9.0	20	2	1/2	0.188	2,3
T-28A-03	HUMIDIFIER END OF MAIN	-	9.0	20	2	1/2	0.188	2,3
T-28A-04	HUMIDIFIER END OF MAIN	-	9.0	20	2	1/2	0.188	2,3
T-28A-05	END OF MAIN	-	22.1	20	2	1/2	0.188	2
T-CLEAN STEAM-06	END OF MAIN	-	36.0	55	2	1/2	0.125	2,4
T-CLEAN STEAM-07	END OF MAIN	-	36.0	55	2	1/2	0.125	2,4
T-CLEAN STEAM-08	END OF MAIN	-	36.0	55	2	1/2	0.125	2,4

REMARKS:

F&T TRAP

BUCKET TRAP

FURNISHED WITH EQUIPMENT (FWE) CLEAN STEAM

4

678968

3.

4

REMARKS:

Α

FURNISHED WITH EQUIPMENT (FWE)

1

20 PSIG STEAM SERVICE PRESSURE REFER TO SEQUENCE OF OPERATION. VALVE IS ON/OFF ACTUATION.

REFER TO SEQUENCE OF OPERATION. VALVE IS MODULATING TYPE

3

- F								1 1111		
	STERILE STORAGE	6	8 50	68	35		++	1.	HEAT REC	CL
	SPD ANCILLARY ARE	EAS 6	8 50	68	35		+	2.	PROVIDE AUTOMAT	
	ADMINISTRATIVE AR	REAS 7	8 50	68	x		+			
-	+ ROOM EXHAUS	GEND: ST, RETURN OR ST, RETURN OR ST, RETURN OR	BOTH IS 10	6 LESS THA	AN SUPPLY	,				
ſ			ST	EAM TR		IEDULE				
	STEAM TRAP DESIGNATION	SERVICE	CONDENS LOAD #/H	AIE CON	CAPACITY IDENSATE #/HR	STEAM PRESSURE PSIG	SAFETY FACTOR	TRAP SIZE "	ORIFICE SIZE "	R
	T-28A-01	IFB PRE-HEAT COIL	135		202.5	20	1.5	3/4	0.235	
	T-28A-02	HUMIDIFIER END OF MAIN	-		9.0	20	2	1/2	0.188	
	T-28A-03	HUMIDIFIER END OF MAIN	-		9.0	20	2	1/2	0.188	
	T-28A-04	HUMIDIFIER END OF MAIN	-		9.0	20	2	1/2	0.188	
	T-28A-05	END OF MAIN	-		22.1	20	2	1/2	0.188	
- F							1	1		

5

OUTSIDE DESIGN	CON	DITIO	NS SCH	IEDULE
	SUN	1MER	WINTER	
SITE	°FDB	°FWB	°FDB	REMARKS
CAMP LEJEUNE, NC	91	77	26.9	1
CAMP LEJEUNE, NC	84	78.6	26.9	1

REMARKS:

WEATHER POINTS DIRECTED BY BASE ENGINEER TO 1. DETERMINE WORST COIL CONDITION

VCY SCH	EDULE		
DAYS	WEEK	ENDS	
UN- OCUPPIED	OCUPPIED	UN- OCUPPIED	REMARKS
18-5	8-16	16-8	2,3
-	0-23	-	1

AHU-28A-01 IS DEDICATED TO STERILIZATION AND OPERATES 24/7 TO MAINTAIN TEMPERATURE, HUMIDITY AND PRESSURIZATION. AHU-028 IS DEDICATED TO GENERAL HOSPITAL

CORRIDORS/LEGAL/MANPOWER/FISCAL/ACCOUNTING.

THERE IS NO ESTABLISHED SETUP/SETBACK FOR UNOCCUPIED PERIODS. WE RECOMMEND THAT THERE BE ONE ADDED TO ALLOW A 5°F RISE/FALL AND MANUAL

ABILITY TO OVERRIDE AND RETURN TO NORMAL OCCUPIED OPERATION IF AN AREA

IS UTILIZED DURING UNOCCUPIED PERIODS.

EXPA

OCCUPANCY WEEKDAYS

OCUPPIED

5-18

0-23

JCI

SYSTEM

CONTROLLER

NAE-3

NAE-3

TANK

DESIGNATION

UNIT

AHU-28-01

AHU-28A-01

REMARKS:

1.

2.

3.

++

EXPANS	SION TAN	K SCHED	ULE		
TANK SERVICE	TYPE	TANK VOLUME GALLONS	TANK ACCEPTANCE VOLUME GALLONS	TANK CHARGE PRESSURE PSIG	REMARKS
HEATING COOLING	DIAPHRAGM	2	1	11.6	1,2

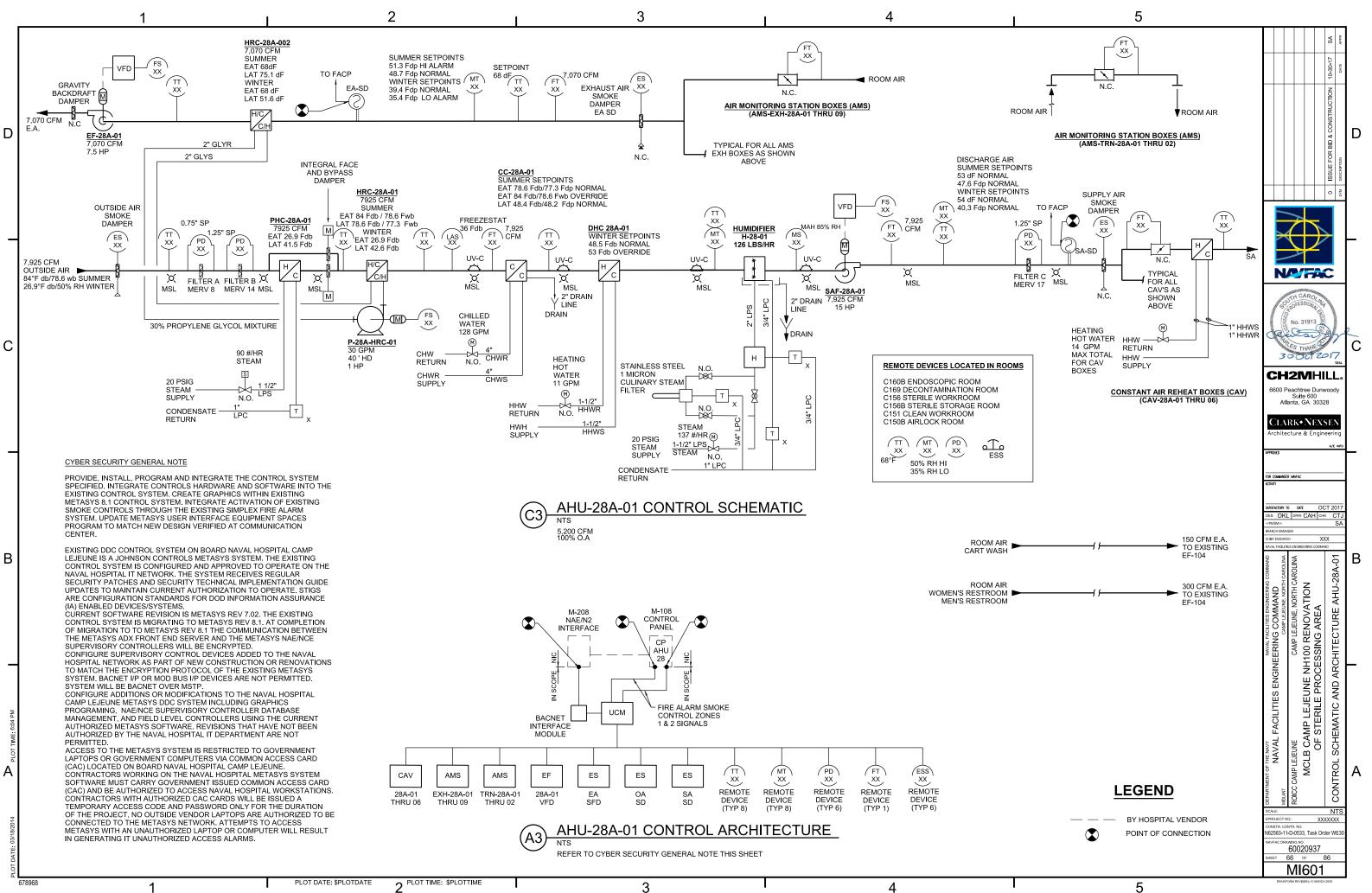
LAIM SYSTEM UTILIZES 30% PROPYLENE GLYCOL

POTABLE RATED DOUBLE CHECK BACKFLOW PREVENTER, PRV STATION,



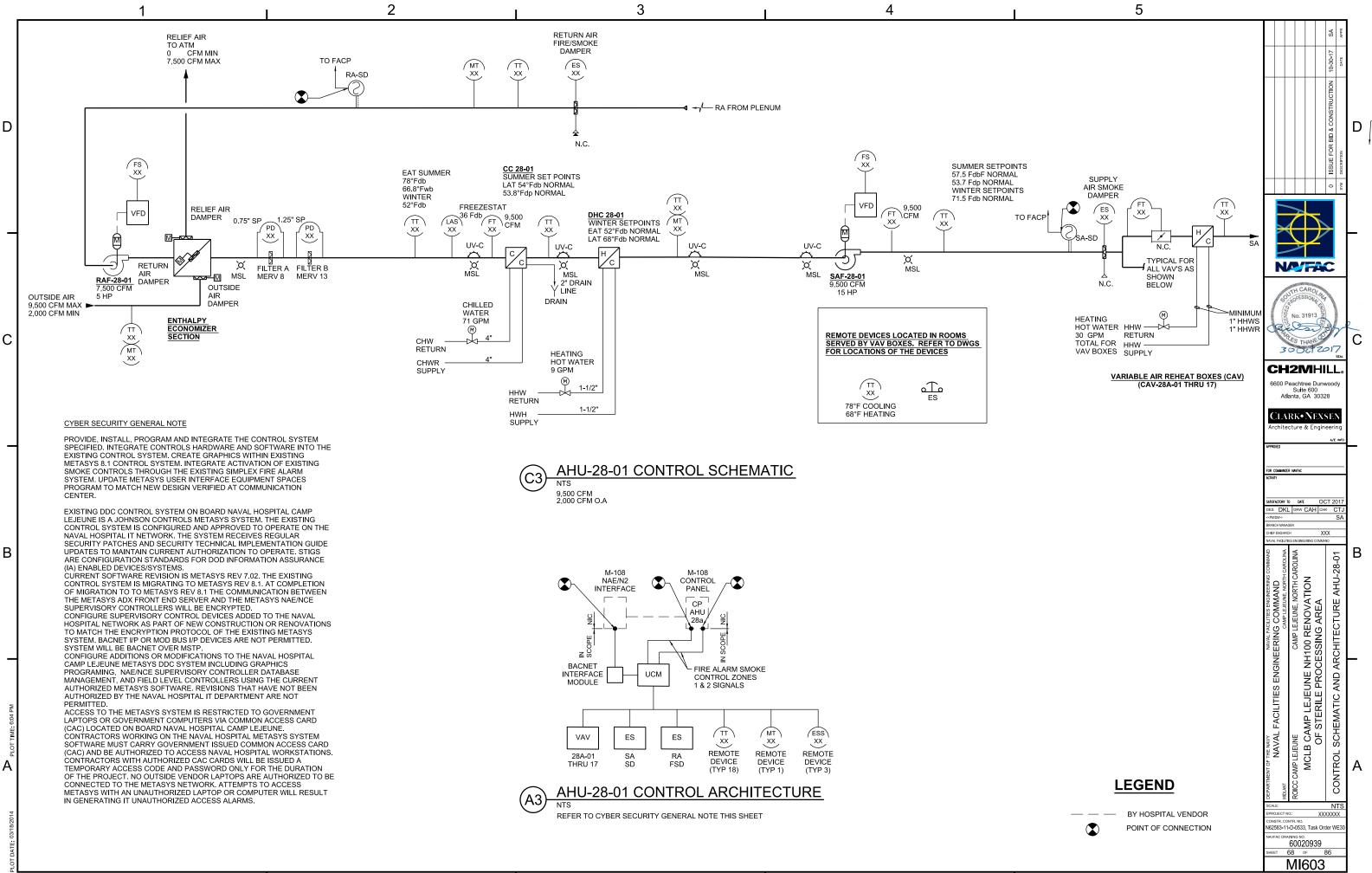
HEATIN ET-28A-01 HORIZONTAL COOLIN REMARKS:

C AIR VENT AND RELIEF VALVE



	1		2			3			4	
	ISTANT VOLUME AIR HANDLING L	JNIT	(AHU-28A-01) SEQUENCE OF OPE	RA	TION				AHU-28A-01 BAC	NET
	SUPPLY FAN (SAF-28A-01) HAND-OFF-AUTO (HOA) OPERATION: AN HOA SWITCH SHALL BE PROVIDED AS PART OF THE VFD FOR THE FAN.		b. IN HIGH HUMIDITY OVERRIDE THE CHILLED WATER VALVE SHALL BE MODULATED OPEN TO PROVIDE ADDITIONAL MOISTURE		DAMPER. OPEN THE EF-28A-01 EXHAUST AIR DUCT SMOKE DAMPER AND START THE EF-28A-01 FAN AT FULL SPEED.		CONTROL SYSTEM PANEL AFTEF FROM ATFP SECURITY. LOW LEA DAMPERS IN OA/RA/EA AND RELI	KAGE	Point Description	Ar Ir
	WHEN IN THE HAND MODE, THE FAN SHALL BE		REMOVAL. UPON SATISFYING THE SET		d. SYSTEM SHALL RETURN TO NORMAL OPERATION POSITIONS AFTER THE SMOKE		BE SHUT, SEALING TIGHT. IF DUE	TO AN	AHU-28A-01 CONTROL PANEL	
	STARTED, IN THE OFF MODE THE FAN SHALL BE OFF. IN THE AUTO MODE, THE FAN SHALL BE		POINTS, THE OVERIDE SHALL BE RELEASED AND CHILLED WATER VALVE CONTROL		CONTROL PROGRAM IS RESET MANUALLY		ATTEMPT TO INTRODUCE A FOR SUBSTANCE INTO INTAKE/EXHAU		TIME OF DAY/DAY OF WEEK SCHEDULE FROM BAS	
	STARTED AND STOPPED THRU THE EMCS. A		RETURNED TO NORMAL OPERATION.		FROM THE BAS CONTROL CONSOLE.		OPENINGS, THE EXPOSED SURF	ACES ARE TO	OCCUPPIED/UNOCCUPIED SETUP/SETBACK	
	POWER FAIL RESTART TIME DELAY WILL BE PROVIDE FOR THE VFD IN BOTH THE HAND AND	8.	HOT WATER COIL VALVE CONTROL(DHC-28A-01):	15.	FREEZESTAT: WHEN A FREEZE CONDITION		BE THOROUGHLY DECONTAMINA TO UNIT RE-START.	TED PRIOR	CONTROL FROM BAS EXTERNAL START/STOP COMMAND FROM BAS	
	AUTO MODES, TO STAGGER THE RESTART OF	0.	WHEN THE UNIT STATUS IS OFF, THE RE-HEAT		OCCURS AT THE FREEZESTAT , THE UNIT SHALI	-			UV-C DISINFECTING MODULE START/STOP	
	EACH UNIT AFTER A POWER FAILURE TO PREVENT CREATING A SPIKE IN THE ELECTRICAL		HOT WATER VALVE SHALL BE CLOSED. WHEN THE UNIT STATUS IS ON, THE HOT WATER VALVE		BE STOPPED THROUGH A HARD WIRE INTERLOCK, AN ALARM SHALL BE GENERATED I	21.	. EXHAUST AIR AND TRANSFER AI	R	MSL SERVICE LIGHT FIXTURES BACNET INTERFACE MODULE	
	DEMAND UPON ACTIVATION, SAFETIES SHALL		SHALL BE CONTROLLED AS DESCRIBED BELOW.		THE EMCS AND DISPLAYED AT THE OWS. ON A	•	MONITORING STATIONS CONTRO UNIT STATUS IS OFF, THE DAMPE		SYSTEM GRAPHICS	
	STOP THE SUPPLY FAN IN THE HAND AND AUTO		a. THE EMCS SHALL MODULATE THE RE-HEAT		FREEZE ALARM SIGNAL, THE EMCS SHALL FULL OPEN THE PRE-HEAT STEAM VALVE. THE SAF	Y	WHEN THE AHU UNIT STATUS IS		AHU-28A-01 PREHEAT COIL SECTION HEATING COIL DISCHARGE TEMPERATURE	-
	MODES.		HOT WATER VALVE THE EMCS SHALL MODULATE THE HOT WATER VALVE TO		SHALL BE DE-ENERGIZED. THE CHILLED WATER		DAMPER SHALL BE CONTROLLED) AS	HOT WATER CONTROL VALVE POSITION	
2.	EXHAUST FAN (EF-28A-01) HAND-OFF-AUTO (HOA)		MAINTAIN THE DISCHARGE TEMPERATURE		VALVE, HEATING HOT WATER VALVES AND OUTDOOR AIR DAMPER CLOSE. THE		DESCRIBED BELOW. a. THE BAS SHALL MODULATE		(OPEN/CLOSED) BYPASS DAMPER POSITION (MODULATING)	
	OPERATION: AN HOA SWITCH SHALL BE PROVIDED AS PART OF THE VFD FOR THE FAN,		RESET SETPOINT BASED ON THE EXHAUST AIR AND SPACE TEMPERATURE.		FREEZESTAT SHALL BE SET AT 36°F (MANUALLY		TO MAINTAIN THE AIR FLO		FACE DAMPER POSITION (MODULATING)	
	WHEN IN THE HAND MODE, THE FAN SHALL BE	0			ADJUSTABLE) AND MUST BE MANUALLY RESET AT THE FREEZESTAT.				AHU-28A-01 HEAT RECLAIM COIL SECTION	_
	STARTED, IN THE OFF MODE, THE FAN SHALL BE OFF, IN THE AUTO MODE, THE FAN SHALL BE	9.	STEAM HUMIDIFIER (H-28A-01): THEM BAS SHALL MONITOR THE SPACE HUMIDITY AND SUPPLY AIR		AT THE FREEZESTAT.	22.	EXISTING EXHAUST FANS TO RE	MAIN AS	COIL DISCHARGE TEMPERATURE COIL INLET TEMPERATURE	
	STARTED AND STOPPED THROUGH THE EMCS.		DEW POINT. SPACE SHALL BE 68°F/35%	16.	DIRTY FILTER ALARM: DIFFERENTIAL PRESSURE		PRESENTLY CONTROLLED.		HRC WATER PUMP OPERATION	
	SAFTIES SHALL STOP THE EXHAUST FAN IN THE HAND AND AUTO MODE .		RH/39.4°Fdp MINIMUM. IF HIGH LIMIT HUMIDITY SENSOR IS SATISFIED (SET AT 85% RH)		SWITCHES SHALL MONITOR THE PRESSURE DROP AT THE FILTERS. WHEN THE PRESSURE		EF-109, 1,420 CFM (MISC)		AHU-28A-01 COOLING COIL SECTION	
			ADJUSTABLE, THE STEAM CONTROL VALVE		EXCEEDS AN ADJUSTABLE LIMIT, AN ALARM		EF -104 300 CFM (CART WA	,	SUPPLY AIR FLOW CFM	
3.	SUPPLY FAN AUTOMATIC MODE START/STOP CONTROL: WHEN THE UNIT IS STARTED, A		SHALL MODULATE TO ADD STEAM TO AIR STREAM TO MEET DEMAND BASED ON		SIGNAL WILL BE SENT. PRESSURE DIFFERENCE	23.	SPACE PRESSURIZATION IS DEP AIR BALANCE	ENDENT ON	COOLING COIL DISCHARGE TEMPERATURE	
	COMMAND SHALL BE SENT TO THE FAN'S VFD		FURTHEST FROM SPACE HUMIDITY SENSOR		INDICATORS, LOCATED THE FILTERS, SHALL INDICATE THE DIFFERENTIAL PRESSURE		CFN	1 PRESSURE	CHILLED WATER CONTROL VALVE POSITION (MODULATING)	
	CAUSING THE SUPPLY FAN TO START, WHEN THE EMCS SENDS A STOP SIGNAL TO THE FAN VFD		SETPOINT.		ACROSS THE FILTERS.		-DECONTAMINATION SIDE -109		DISCHARGE AIR RESET BASED ON OA TEMPERATURE	
	THE FAN SHALL STOP SIGNAL TO THE FAN VED	10.	DISCHARGE AIR SET POINT RESET BASED ON IF	17.	FAN AND PUMPS STATUS: THE CURRENT RELAY	9	-CLEAN SIDE +10° -AIR LOCK 0		DISCHARGE AIR RESET BASED ON RA	
	UNIT SHOULD FAIL, THE BAS SHALL SEND A STOP SIGNAL TO THE FAN VFD STARTER AND		SPACE TEMPERATURE IS DEVIATING FROM SETPOINT, DISCHARGE TEMPERATURE TO BE		SHALL BE USED TO MONITOR THE STATUS OF		-CORRIDOR 0	+0.01" +0.00"	ENTHALPY AHU-28A-01 DEHUMIDIFYING COIL SECTION	<u> </u>
	GENERATE AN ALARM AT THE OWS.		RESET. TEMPERATURE CONTROL SHALL BE		THE FAN AND PUMPS. IF THE STATUS INDICATE DOES NOT MATCH COMMANDED OUTPUT FOR	C			HEATING COIL DISCHARGE TEMPERATURE	
	a. SCHEDULE START: AT THE SCHEDULED		RESTRICTED SUCH THAT THE SUPPLY AIR		FAN AND PUMPS, AN ALARM SHALL BE	24.			HEATING COIL DISCHARGE MOISTURE	
	OCCUPANCY TIME THE UNIT SHALL START AND RUN IN THE OCCUPIED MODE.		TEMPERATURE SHALL NEVER FALL BELOW 53°F OR RISE ABOVE 57°F. IF SPACE TEMPERATURE		GENERATED.		INDICATED TO ISOLATE AHU AS WITH AHU AND/OR WITHIN THE		HOT WATER CONTROL VALVE POSITION (MODULATING)	
			AND HUMIDITY DO NOT MEET SET POINTS	18.	FAILURE MODE: UPON LOSS OF CONTROL		ROOM ARE TO BE LOW LEAKAG		DISCHARGE AIR RESET BASED ON OA TEMPERATURE	
Ι.	EXHAUST FAN AUTOMATIC MODE START/STOP CONTROL: WHEN THE SUPPLY FAN IS OFF, THE		DURING RESET, THE RESET OVERRIDE IS TO BE RELEASED.		SIGNAL OR ELECTRIC POWER THE CONTROL		SEALS TO TIGHTLY SHUT OFF A ANY CONTAMINATION FROM CF		DISCHARGE AIR RESET BASED ON EA/RA	
	ASSOCIATED EXHAUST FAN SHALL BE OFF.				DEVICES SHALL FAIL AS DEFINED BY THIS DWG.	•	BOUNDARY.			
	WHEN THE SUPPLY FAN IS ON, THE EXHAUST FAN SHALL BE STARTED BY THE EMCS. FAN	11.	CONSTANT AIR VOLUME BOX (CAV) DAMPER & HOT WATER REHEAT COIL VALVE CONTROL:	19.	ADDITIONAL MONITORING AND REPORTING: IN				AHU-28A-01 SUPPLY AIR FAN SUPPLY AIR FAN START/STOP AND STATUS	
	SPEED SHALL BE VARIED TO ASSURE 7,520 CFM IS EXHAUSTED BASED ON SUMMARIZING THE		WHEN THE UNIT STATUS IS OFF, THE RE-HEAT HOT WATER VALVE SHALL BE CLOSED. WHEN		ADDITION TO THE POINTS MENTIONED IN THESE	25.	 CONTRACTOR IS RESPONSIBLE FUNCTION OF THE SYSTEMS T 		SUPPLY AIR FAN VFD SUPPLY AIR TEMPERATURE	
	AMS-EXH STATIONS.		THE UNIT STATUS IS ON, THE RE-HEAT HOT		SEQUENCES PROVIDE THE ADDITIONAL MONITORING POINTS FOR REPORTING.		INTENT OF THESE SEQUENCES			-
	STEAM IFB PRE-HEAT COIL VALVE		WATER VALVE AND DAMPER SHALL BE CONTROLLED AS DESCRIBED AS DESCRIBED		a. MONITOR AND REPORT THE AHU OUTSIDE		POINTS INDICATED ON DWG. M	601.	AHU-28A-01 ALARM POINTS	
	CONTROL(PHC-28A-01). WHEN THE UNIT STATUS		BELOW.		AIR TEMPERATURE, HUMIDITY AND CFM b. MONITOR AND REPORT EXHAUST AIR	26.	. REFER TO SHEET MI601 FOR C	BER SECURITY	CLOGGED FILTER SWITCH (FILTER A) CLOGGED FILTER SWITCH (FILTER A)	
	IS OFF, THE PRE-HEAT VALVE SHALL BE CLOSED. WHEN THE UNIT STATUS IS ON, THE PRE-HEAT		a. THE EMCS SHALL MODULATE THE RE-HEAT HOT WATER VALVE THE EMCS SHALL		TEMPERATURE, HUMIDITY AND CFM		MECHANICAL GENERAL NOTE.		CLOGGED FILTER SWITCH (FILTER C)	
	STEAM VALVE SHALL BE CONTROLLED AS		MODULATE THE RE-HEAT HOT WATER VALVE		c. MONITOR AND REPORT SUPPLY AIR TEMPERATURE, HUMIDITY AND CFM				FREEZESTAT LOW DISCHARGE AIR TEMPERATURE	-
	DESCRIBED AS DESCRIBED BELOW a. THE STEAM PHC IS FOR EMERGENCY USE		TO MAINTAIN THE SPACE TEMPERATURE. b. THE BAS SHALL MODULATE THE DAMPER TO		d. MONITOR AND REPORT INDIVIDUAL SUPPLY				LOW DISCHARGE AIR MOISTURE HIGH DISCHARGE AIR MOISTURE	
	ONLY. IF THE HEAT RECOVERY SYSTEM		MAINTAIN THE DISCHARGE AIR FLOW SET		AIR TEMPERATURE, HUMIDITY AND CFM OF CAV-28A-01 THRU 06				LOW DISCHARGE AIR TEMPERATURE	
	FAILS, IS MANUALLY TURNED OFF, OR IF THE HRC IS NOT ABLE TO REACH SET POINT AND		POINT.		e. MONITOR AND REPORT INDIVIDUAL				HIGH DISCHARGE AIR TEMPERATURE	
	THE OUTSIDE ARE TEMPERATURE FALLS	12.	ULTRAVIOLET LIGHT CONTROL (UV-C): THE EMCS		TRANSFER AIR CFM OF AMS-TRN-28A-01 & 02				OUTSIDE AIR TEMPERATURE	
	BELOW 50 F (ADJUSTABLE). THE STEAM PHC SHALL BE ENABLED.		SHALL TURN ON THE ULTRAVIOLET LIGHT ASSEMBLY WHEN THE UNIT IS IN ENERGIZED. UV		f. MONITOR AND REPORT INDIVIDUAL EXHAUS AIR CFM OF AMS -EXH-28A-01 THRU 09	I			EXHAUST AIR TEMPERATURE	
	b. THE EMCS SHALL OPEN FULLY THE		LIGHT SHALL OPERATE 15 MINUTES EVERY HOUR		g. MONITOR AND REPORT ROOM				EXHAUST AIR SMOKE DAMPER SUPPLY AIR SMOKE DAMPER	
	PRE-HEAT STEAM VALVE OUTSIDE AIR TEMPERATURE FALLS BELOW		OF OPERATION.		TEMPERATURE,HUMIDITY AND PRESSURIZATION FOR				FIRE ALARM SMOKE CONTROL 1	
	50°F(ADJUSTABLE). THE EMCS SHALL	13.	MAINTENANCE SERVICE LIGHTS (MSL):MARINE		1. ENDOSCOPIC ROOMS				FIRE ALARM SMOKE CONTROL 2 RETURN/EXHAUST AIR TEMPERATURE	
	MODULATE THE INTERGRAL FACE AND BYBASS DAMPERS TO MAINTAIN THE		TYPE FIXTURES ARE MANUALLY OPERATED BY A TOGGLE SWITCH AT THE UNIT EXTERIOR.		2. DECONTAMINATION ROOM				RETURN/EXHAUST AIR MOISTURE	
	DISCHARGE TEMPERATURE RESET				3. CLEAN WORK ROOM 4. STERILE WORK ROOM				RETURN/EXHAUST AIRFLOW SPACE DIFFERENTIAL PRESSURE MONITORING	
	SETPOINT BASED ON THE EXHAUST AIR TEMPERATURE.	14.	FIRE ALARM SHUTDOWN CONTROL: SMOKE CONTROL SEQUENCE. SMOKE CONTROL		4. STERILE WORK ROOM 5. STERILE STORAGE ROOM				EMERGENCY STOP SWITCH	
			SEQUENCE OF OPERATION SHALL TAKE PRIORITY		h. SUMMARIZE CAV SUBTOTALS TO PROVIDE				CAV-28A-01 THRU 06, AMS-TRN-28A-01 THR SPACE TEMPERATURE	10 02
	HEAT RECOVERY SYSTEM HRC-28A-01, HRC-28A 02 P-28A-HRC-01:THE BAS SHALL ENERGIZE THE		OVER TEMPERATURE CONTROL SEQUENCE OF OPERATION (EXCEPT FREEZE PROTECTION). WHEN		AHU-28A SUPPLY AIR FLOW RATE. SAF-28A-0 TO HAVE SPEED VARIED TO ASSURE 5.200	1			USER TEMPERATURE ADJUSTMENT	
	"RUN AROUND COIL" SYSTEM PUMP P-28A-HRC-01		SMOKE MODE IS INITIATED BY ONE OR MORE OF THE		CFM SUPPLY AIR IS PROVIDED TO CSS				USER OVERRIDE OCCUPPIED MODE SUPPLY AIR TEMPERATURE	
	HAND-OFF AUTO (HOA) OPERATION. THE PUMP SHALL OPERATE SIMULTANEOUSLY WITH		VARIOUS SMOKE DETECTORS OR THERMAL DETECTORS, SMOKE REMOVAL SEQUENCE SHALL BE		CONTINUOUSLY .				AIR FLOW CFM	
	AHU-28A & EF-E8A-01. 30 % PROPYLENE GLYCOL		AS INDICATED AS BELOW.		I. SUMMARIZE AMS-EHS-28A AIR MONITORS EXHAUST FLOW RATE. EF-28A-01 TO HAVE				DAMPER POSITION HOT WATER CONTROL VALVE POSITION	
	SHALL BE CIRCULATED THROUGH COILS TO TRANSFER HEAT FROM THE EXHAUST STREAM		 SMOKE CONTROL ACTION INITIATED BY ANY DEVICE SHALL SIGNAL THE COMMUNICATION 		SPEED VARIED TO ASSURE 7,520 CFM				EF-28A-01 EXHAUST AIR FAN	
	TO PRE-CONDITIONED OUTSIDE AIR STREAM.		CENTER TO STOP OR START THE FANS, OPEN OR CLOSE DAMPERS.		EXHAUST AIR IS EXHAUSTED FROM CSS. j. MONITOR OPERATION OF THE HEAT RECLAIN	Л			EXHAUST AIR FAN START/STOP AND STATUS EXHAUST AIR FAN VFD	
	CHILLED WATER VALVE CONTROL(CC-28A-01):		b. SMOKE CONTROL SEQUENCE ALARM # 1		SYSTEM. SOUND ALARM ON ANY FAILURE OF				EXHAUST AIR FAN VED EXHAUST AIR FLOW CFM	
	WHEN THE UNIT STATUS IS OFF, THE CHILLED		INITIATED BY SMOKE CONTROL ZONES (1B1, 1B2, 1D1, 2D2, 1G2): STOP EF-28A-01 FAN AND		IF SET POINTS ARE NOT MET. k. REPORT TO OWS WHEN OVERRIDE				AHU-28-01 BACNET CONTROL SYSTEM POI	NTS
	WATER VALVE SHALL BE CLOSED, WHEN THE UNIT STATUS IS ON, THE CHILLED WATER VALVE		CLOSE THE EXHAUST AIR DUCT SMOKE		SEQUENCE ARE IN OPERATION:					
	SHALL BE MODULATED AS DESCRIBED AS		DAMPER. OPEN AHU-28A-01 OUTSIDE AIR SMOKE DAMPER, OPEN AHU-28A-01 SUPPLY		1. DE-HUMIDIFICATION ROUTINE				PROVIDE ABILITY TO CALCULATE ENTHALPY US	
	BELOW. a. THE EMCS SHALL MODULATE THE CHILLED		AIR DUCT SMOKE DAMPER AND START AHU-28A-01 SUPPLY AIR FAN AT FULL SPEED.		2. IFB PHC ROUTINE				2 PROVIDE FRONT END GRAPHICS SHOWING AIR 3 PROVIDE OCCUPANCY SCHEDULE INCLUDING S	
									4 PROVIDE TIMER SEQUENCE TO OPERATE DISN	
	WATER VALVE TO MAINTAIN THE DISCHARGE		c. SMOKE CONTROL SEQUENCE ALARM # 2	20.	EMERGENCY STOP SWITCHES WILL BE					
	AIR TEMPERATURE RESET SET POINT BASED		INITIATED BY SMOKE CONTROL ZONE (1D1):	20.	LOCATED PER THIS DWG. UPON ACTIVATION				AS INDICATED 5 PROVIDE MANUAL ON/OFF SWITCHES OUTSIDE	OF E
				20.						

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TING MODULES (UV-C) EVERY 15 MINUTES PER 1 HOUR OF OPERATING TIME EACH AHU ACCESS DOOR CONTROLLING A MARINE SERVICE LIGHT INSIDE ET INTERFACE MODULE COMMUNICATING ALL POINTS REQUIRED FOR BAS TO A REQUIRED FOR BAS TO STORE AND CREATE TRENDING REPORTS FOR MIGO2	NDLING U	NIT/CAV/AM	S/EF AND AL						å			
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TINTERFACE MODULE COMMUNICATING ALL POINTS REQUIRED FOR BAS TO	EACH AH	U ACCESS E	DOOR CONT	ROLLING A M	ARINE SEF	RVICE LIGHT I	INSIDE		AWING N	40.	ier WE30	
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	VA	RIABLE VOLUME AIR HANDLING	UNI	(AHU-28-01) SEQUENCE OF OPE	RAT	ION						
	1.	SUPPLY FAN (SAF-28-01) HAND-OFF-AUTO (HOA) OPERATION: AN HOA SWITCH SHALL BE		NEVER FALL BELOW 54°F OR RISE ABOVE 58°F. IF SPACE TEMPERATURE AND HUMIDITY	13	FREEZESTAT: WHEN A FREEZE CONDITION OCCURS AT THE FREEZESTAT , THE UNIT		AHU-28-01 BAC	NET DDO	CONT	ROL SY	S
		PROVIDED AS PART OF THE VFD STARTER FOR THE FAN. WHEN IN THE HAND MODE, THE FAN SHALL BE STARTED, IN THE OFF MODE		DO NOT MEET SET POINT DURING RESET, THE RESET OVERRIDE IS TO BE RELOCATED.		SHALL BE STOPPED THROUGH A HARD WIRE INTERLOCK, AN ALARM SHALL BE GENERATED IN THE EMCS AND		Point Description	Analog Input	Binary Input	Analog Output	
		THE FAN SHALL BE OFF. IN THE AUTO MODE,	8.	WHEN BAS CALCULATES THAT THE ENTHALPY		DISPLAYED AT THE OWS. ON A FREEZE		-28-01 CONTROL PANEL				+
		THE FAN SHALL BE STARTED AND STOPPED		OF THE OUTSIDE IS BELOW THE COOLING		ALARM SIGNAL, THE EMCS SHALL	АПС	TIME OF DAY/DAY OF WEEK SCHEDULE				+
		THRU THE EMCS. A POWER FAIL RESTART		COIL REQUIRED LAT DEW POINT OF (53.8°Fdp)		DE-ENERGIZE THE SAF/RAF. FULLY		FROM BAS	1		1	
D		TIME DELAY WILL BE PROVIDE FOR THE VFD IN BOTH THE HAND AND AUTO MODES. TO		THE UNIT MODE OF OPERATION WILL CHANGE TO ECONOMIZER MODE. OUTSIDE AIR,		CLOSE CHILLED WATER VALVE AND THE HEATING HOT WATER VALVES. ALL		OCCUPPIED/UNOCCUPIED SETUP/SETBACK				T
_		STAGGER THE RESTART OF EACH UNIT		RETURN AIR AND RELIEF AIR DAMPERS SHALL		DAMPERS RETURN TO CLOSED POSITION.		CONTROL FROM BAS	1		1	+
		AFTER A POWER FAILURE TO PREVENT		MODULATE TO MEET COOLING COIL SET		THE FREEZESTAT SHALL BE SET AT 36°F		EXTERNAL START/STOP COMMAND FROM BAS	1		1	
		CREATING A SPIKE IN THE ELECTRICAL DEMAND UPON ACTIVATION, SAFETIES SHALL		POINT. SET POINT SHALL BE ADJUSTED BASED ON DISCHARGE AIR RESET. IF SPACE		(MANUALLY ADJUSTABLE) AND MUST BE MANUALLY RESET AT THE FREEZESTAT.		UV-C DISINFECTING MODULE START/STOP				+
		STOP THE SUPPLY FAN IN THE HAND AND		TEMPERATURE OR RELATIVE HUMIDITY IS		MANUALLI RESELAT THE FREEZESTAT.		MSL SERVICE LIGHT FIXTURES				1
		AUTO MODES.		NOT MET, THE OVERRIDE SHALL BE	14.	DIRTY FILTER ALARM: DIFFERENTIAL		BACNET INTERFACE MODULE SYSTEM GRAPHICS				+
				RELEASED AND CHILLED WATER VALVE		PRESSURE SWITCHES SHALL MONITOR THE	АНІ	-28-01 RETURN AIR FAN				+
	2.	RETURN FAN (RAF-28-01) HAND-OFF-AUTO (HOA) OPERATION: AN HOA SWITCH SHALL BE		MODULATION RETURNED TO NORMAL.		PRESSURE DROP AT THE FILTERS. WHEN THE		RETURN AIR FAN START/STOP AND STATUS		1		т
		PROVIDED AS PART OF THE VFD FOR THE	9.	VARIABLE AIR VOLUME BOX (VAV) DAMPER &		PRESSURE EXCEEDS AN ADJUSTABLE LIMIT, AN ALARM SIGNAL WILL BE SENT. PRESSURE		RETURN AIR FAN VFD	1		1	t
		FAN, WHEN IN THE HAND MODE, THE FAN		HOT WATER REHEAT COIL VALVE CONTROL:		DIFFERENCE INDICATORS, LOCATED THE	ENT	HALPY ECONOMIZER SECTION				
		SHALL BE STARTED, IN THE OFF MODE, THE FAN SHALL BE OFF, IN THE AUTO MODE, THE		WHEN THE UNIT STATUS IS OFF, THE DAMPER & RE-HEAT HOT WATER VALVE SHALL BE		FILTERS, SHALL INDICATE THE DIFFERENTIAL		RELIEF AIR DAMPER (MODULATING)	1		1	1
		FAN SHALL BE STARTED AND STOPPED		CLOSED. WHEN THE UNIT STATUS IS ON, THE		PRESSURE ACROSS THE FILTERS.		RETURN AIR DAMPER (MODULATING) OUTSIDE AIR DAMPER (MODULATING)	1		1	+
		THROUGH THE EMCS. SAFETIES SHALL STOP		DAMPER & PRE-HEAT HOT WATER VALVE	45			ENTHALPY CONTROLLER	1		1	+
		THE EXHAUST FAN IN THE HAND AND AUTO		SHALL BE CONTROLLED AS DESCRIBED AS	10.	FAN STATUS: THE CURRENT RELAYS SHALL BE USED TO MONITOR THE STATUS OF THE	coc	LING COIL SECTION				
		MODE .		DESCRIBED BELOW. a. THE EMCS SHALL MODULATE THE		UNIT SUPPLY AND RETURN FANS. IF THE		MIXED AIR TEMPERATURE	1		1	T
	3.	SUPPLY FAN AUTOMATIC MODE START/STOP		RE-HEAT HOT WATER VALVE TO MAINTAIN		STATUS INDICATED DOES NOT MATCH			1		1	+
		CONTROL: WHEN THE UNIT IS STARTED, A		THE SPACE TEMPERATURE.		COMMANDED OUTPUT FOR A FAN, AN ALARM SHALL BE GENERATED.		COOLING COIL DISCHARGE TEMPERATURE CHILLED WATER CONTROL VALVE POSITION	1		1	+
		COMMAND SHALL BE SENT TO THE FAN'S VFD		b. THE BAS SHALL MODULATE THE DAMPER		STALL DE GENERATED.		(MODULATING)	1		1	
		STARTER CAUSING THE SUPPLY FAN TO START, WHEN THE EMCS SENDS A STOP		TO MAINTAIN DISCHARGE AIR TEMPERATURE & SPACE TEMPERATURE.	16.	FAILURE MODE: UPON LOSS OF CONTROL		DISCHARGE AIR RESET BASED ON OA				Τ
С		SIGNAL TO THE FAN VFD STARTER FAN,		- ON A FALL BELOW SPACE COOLING		SIGNAL OR ELECTRIC POWER THE CONTROL		TEMPERATURE DISCHARGE AIR RESET BASED ON RA	1		1	+
-		SHALL STOP. IN THE EVENT THAT THE UNIT		(75°F) SET POINT THE DAMPER		DEVICES SHALL FAIL AS DEFINED BY THIS		ENTHALPY	1		1	
		SHOULD FAIL, THE EMCS SHALL SEND A STOP SIGNAL TO THE FAN VFD STARTER AND		SHALL MODULATE TOWARDS BOX MINIMUM AIR FLOW.		DWG.	DEH	UMIDIFYING COIL SECTION				1
		GENERATE AN ALARM AT THE OWS.		- UPON A FURTHER DROP BELOW	17	ADDITIONAL MONITORING: IN ADDITION TO THE		HEATING COIL DISCHARGE TEMPERATURE	1		1	Τ
		a. SCHEDULE START: AT THE SCHEDULED		SPACE HEATING SET POINT (68°F)		POINTS MENTIONED IN THESE SEQUENCES		HEATING COIL DISCHARGE MOISTURE	1		1	+
		OCCUPANCY TIME THE UNIT SHALL		THE DAMPER SHALL REPOSITION TO		PROVIDE THE ADDITIONAL MONITORING		HOT WATER CONTROL VALVE POSITION (MODULATING)	1		1	
		START AND RUN IN THE OCCUPIED MODE.		50% AIR FLOW AND HEATING HOT WATER VALVE MODULATE TO MEET		POINTS AND REPORTS		DISCHARGE AIR RESET BASED ON OA				+
		MODE.		SET POINT.		a. MONITOR AND REPORT OUTSIDE AIR TEMPERATURE, HUMIDITY AND CFM		TEMPERATURE	1		1	_
	4.	RETURN FAN AUTOMATIC MODE START/STOP				b. SUMMARIZE VAV SUBTOTALS TO		DISCHARGE AIR RESET BASED ON RA ENTHALPY	1		1	
		CONTROL: WHEN THE SUPPLY FAN IS OFF, THE ASSOCIATED RETURN FAN SHALL BE	10.	ULTRAVIOLET LIGHT CONTROL (UV-C): THE EMCS SHALL TURN ON THE ULTRAVIOLET		PROVIDE	AHL	-28-01 SUPPLY AIR FAN	1		1	-
		OFF. WHEN THE SUPPLY FAN IS ON, THE		LIGHT ASSEMBLY WHEN THE UNIT IS IN		AHU-28 SUPPLY AIR FLOW RATE.	////	SUPPLY AIR FAN START/STOP AND STATUS		1		T
		RETURN FAN SHALL BE STARTED BY THE		ENERGIZED. UV LIGHT SHALL OPERATE 15		c. MONITOR AND REPORT ROOM		SUPPLY AIR FAN VFD	1		1	1
		EMCS. FAN SPEED SHALL BE VARIED TO		MINUTES EVERY HOUR OF OPERATION.		TEMPERATURE & HUMIDITY d. REPORT OUTSIDE AIR FLOW TO ASSURE		SUPPLY AIR TEMPERATURE	1		1	\downarrow
		ASSURE AIRFLOW BALANCE IS MET FOR MODE OF OPERATION.	11	MAINTENANCE SERVICE LIGHTS		2,000 CFM MINIMUM IS PROVIDED.	A 1 11		1		1	+
		NODE OF OF ERVITION.	• • •	(MSL):MARINE TYPE FIXTURES ARE			AHU	-28-01 ALARM POINTS CLOGGED FILTER SWITCH (FILTER A)				+
	5.	CHILLED WATER VALVE CONTROL (CC-28A-01):		MANUALLY OPERATED BY A TOGGLE SWITCH	18.	EMERGENCY STOP SWITCHES WILL BE		CLOGGED FILTER SWITCH (FILTER A)				+
		WHEN THE UNIT STATUS IS OFF, THE CHILLED WATER VALVE SHALL BE CLOSED, WHEN THE		AT THE UNIT EXTERIOR.		LOCATED PER THIS DWG. UPON ACTIVATION		FREEZESTAT				T
		UNIT STATUS IS ON, THE CHILLED WATER	12	FIRE ALARM SHUTDOWN CONTROL: FIRE		THE (ESS) SHALL DE-ENERGIZE THE ENTIRE SYSTEM AND PLACE UNIT IN ALARM. THESE		LOW DISCHARGE AIR TEMPERATURE			1	Ţ
		VALVE SHALL BE CONTROLLED AS		ALARM SHUTDOWN CONTROL: SMOKE		SWITCHES ARE MANUAL RESET ONLY AT MAIN		HIGH DISCHARGE AIR TEMPERATURE			1	╇
B		DESCRIBED AS BELOW.		CONTROL SEQUENCE. SMOKE CONTROL		CONTROL SYSTEM PANEL AFTER APPROVAL	AHU	AHU-28-01 REMOTE POINTS OUTSIDE AIR TEMPERATURE	1			+
		a. THE EMCS SHALL MODULATE THE CHILLED WATER VALVE TO MAINTAIN A		SEQUENCE OF OPERATION SHALL TAKE PRIORITY OVER TEMPERATURE CONTROL SEQUENCE OF		FROM ATFP SECURITY. LOW LEAKAGE DAMPERS IN OA/RA/EA AND RELIEF AIR SHALL		OUTSIDE AIR TEMPERATURE	1			+
		THE DISCHARGE AIR TEMPERATURE		OPERATION (EXCEPT FREEZE PROTECTION).		BE SHUT, SEALING TIGHT. IF DUE TO AN		RETURN AIR TEMPERATURE	1			T
		RESET SET POINT BASED ON THE POLLED		WHEN SMOKE MODE IS INITIATED BY ONE OR MORE OF THE VARIOUS SMOKE DETECTORS OR		ATTEMPT TO INTRODUCE A FOREIGN		RETURN AIR MOISTURE	1			\downarrow
		SPACE AIR TEMPERATURE TO SATISFY FURTHEST FROM SET POINT.		THERMAL DETECTORS, SMOKE REMOVAL		SUBSTANCE INTO INTAKE/EXHAUST OPENINGS,		RETURN AIR FIRE/SMOKE DAMPER SUPPLY AIR SMOKE DAMPER		1		+
				SEQUENCE SHALL BE AS INDICATED AS BELOW.		THE EXPOSED SURFACES ARE TO BE THOROUGHLY DECONTAMINATED PRIOR TO		FIRE ALARM SMOKE CONTROL 1		1		+
	6.	HOT WATER REHEAT COIL VALVE		a. SMOKE CONTROL ACTION INITIATED BY ANY DEVICE SHALL SIGNAL THE		UNIT RE-START.		FIRE ALARM SMOKE CONTROL 2		1		T
		CONTROL(DHC-28-01): WHEN THE UNIT STATUS IS OFF. THE PRE-HEAT HOT WATER		COMMUNICATION CENTER TO STOP OR				EMERGENCY STOP SWITCH	3		I	╇
		VALVE SHALL BE CLOSED. WHEN THE UNIT		START THE FANS, OPEN OR CLOSE	19.	EXISTING EXHAUST FANS TO REMAIN AS	VAV	-28-01 THRU 17	47			+
_		STATUS IS ON, THE HOT WATER VALVE SHALL		DAMPERS. b. SMOKE CONTROL SEQUENCE ALARM # 1		PRESENTLY CONTROLLED.		SPACE TEMPERATURE USER TEMPERATURE ADJUSTMENT	17 17		17	+
		BE CONTROLLED AS DESCRIBED AS		INITIATED BY SMOKE CONTROL ZONES (1B1,		EF-109		USER OVERRIDE OCCUPPIED MODE	11	17	17	+
		DESCRIBED BELOW. a. THE EMCS SHALL MODULATE THE		1B2, 1D1, 2D2, 1G2). STOP RAF-28A-01 FAN AND CLOSE THE RETURN AIR DUCT SMOKE		RO/DI)		SUPPLY AIR TEMPERATURE	17		17	1
		REHEAT HOT WATER VALVE THE EMCS		DAMPERS. CLOSE THE AHU-28-01 RELIEF		,		SUPPLY AIR FLOW CFM	17		17	+
_		SHALL MODULATE THE HOT WATER		AIR AND RETURN AIR DAMPERS. OPEN THE	20.	AUTOMATIC DAMPERS AND SMOKE DAMPERS		COOLING MODE AIR DAMPER POSITION	17 17		17	+
4 PN		VALVE TO MAINTAIN THE DISCHARGE		AHU-28-01 OUTSIDE AIR DAMPER. OPEN THE AHU-28-01 SUPPLY AIR DUCT SMOKE		INDICATED TO ISOLATE AHU ASSOCIATED WITH		HOT WATER CONTROL VALVE POSITION	17		17	+
. 6.0		TEMPERATURE RESET SETPOINT BASED ON THE POLLED SPACE AIR		DAMPER AND START SAF-28-01 SUPPLY AIR		AHU AND/OR WITHIN THE MECHANICAL ROOM						
IME		TEMPERATURE TO SATISFY FURTHEST		FAN AT FULL SPEED.		ARE TO BE LOW LEAKAGE TYPE WITH SEALS	514	TOTAL BACNET CONTROL SYSTEM P	OINTS FO	R AHU-28-	01	
OT T		FROM SET POINT.		c. SMOKE CONTROL SEQUENCE ALARM # 2 INITIATED BY SMOKE CONTROL ZONE (1D1):		TO TIGHTLY SHUT OFF AND PREVENT ANY CONTAMINATION FROM CROSSING THIS		NOTEO				4
, E	7.	DISCHARGE AIR SET POINT RESET BASED ON		STOP SAF-28-01 SUPPLY AIR FAN. CLOSE		BOUNDARY.	1	NOTES: PROVIDE ABILITY TO CALCULATE ENTHALPY	USING TEM	PERATURE	AND MOIST	UF
A	<i>'</i> .	SPACE AIR DEWPOINT SET POINT CONTROL:		AHU-28-01 OUTSIDE AIR DAMPER, RETURN AIR DAMPER AND SUPPLY AIR DUCT SMOKE				AND CONTROL ENTHALPY ECONOMIZER				
		THE EMCS SHALL HAVE DISCHARGE AIR		DAMPER AND SUPPLY AIR DUCT SMOKE DAMPER. OPEN THE AHU-28-01 RELIEF AIR	21.	CONTRACTOR IS RESPONSIBLE FOR FUNCTION	2	PROVIDE FRONT END GRAPHICS SHOWING				
		TEMPERATURE CONTROL BASED ON SPACE AIR TEMPERATURE RESET SCHEDULE WITH		DAMPER AND RETURN AIR DUCT SMOKE		OF THE SYSTEMS TO MEET THE INTENT OF	3	PROVIDE OCCUPANCY SCHEDULE INCLUDING PROVIDE TIMER SEQUENCE TO OPERATE DI				
		THE SPACE AIR SETPOINT OF 75°F. THERE		DAMPER. START RAF-28A-01 FAN AT FULL SPEED.		THESE SEQUENCES FROM THE TIE POINTS INDICATED ON DWG. MI603.		TIME AS INDICATED				
114		WILL BE A SHIFT IN THE DISCHARGE AIR		d. SYSTEM SHALL RETURN TO NORMAL			5	PROVIDE MANUAL ON/OFF SWITCHES OUTSI	DE OF EACH	AHU ACCES	SS DOOR C	1 0,
18/20		TEMPERATURE BASED ON THE OUTSIDE AIR		OPERATION POSITIONS AFTER THE SMOKE	22.	REFER TO SHEET MI603 FOR CYBER	6	EACH AHU SECTION AS INDICATED AHU-28-01 CONTROL SYSTEM TO PROVIDE E	BACNET INTE		DULE COM	MU
03/~		TEMPERATURE. ALSO TEMPERATURE CONTROL SHALL BE RESTRICTED SUCH THAT		CONTROL PROGRAM IS RESET MANUALLY FROM THE BAS CONTROL CONSOLE.		SECURITY MECHANICAL GENERAL NOTE.	ļ	TO CONTROL AND MONITOR SYSTEM INCLU				
ATE:		THE SUPPLY AIR TEMPERATURE SHALL						SYSTEM OPERATION AND PERFORMANCE				

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IOISTU	RE TO RESE	T DISCHAF	RGE AIR TEMP	ERATUR
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M-603 EVER	15 MINUTE	S PER 1 HC	UR OF OPER/	ATING
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