							HYDRON	IIC MAKE-	-UP AIR	UNITS								
				SUPPLY FAN	ı	SUDDIV E	AN MOTOR		Н	EATING COIL			FILTERS	-	LECTRICAL			
UNIT	LOCATION	AREA SERVED		SOFFEI TAN		3077111	AN MOTOR	AIR :	SIDE	WATER	SIDE		TIETEKS	_	LECTRICAL		MANUFACTURER	NOTES
UNII	LOCATION	AREA SERVED	CFM	TYPE	BHP	HP	TYPE	EAT (F)	PD	EWT (F)	GPM	MBH	TYPE	VOLTS	PHASE	HZ	MODEL #	NOTES
			RPM	DISCH.	ESP	RPM	DRIVE	LAT (F)	(IN WC)	LWT (F)	PD (FT)		IIPE	VOLIS	FRASE	nz		
MAU-2	HVAC MEZZANINE	BOILER ROOM	2300 672	FC VERT.	0.584 —	0.75 -	ODP BELT	13 83.29	0.12	180 160	18.82 1.59	175.32	ANGLE	460	3	90	TRANE LPCAB06F	1,3,4,6
MAU-5	SLUDGE HANDLING	SLUDGE HANDLING	10000 642	FC HORIZ.	5.567 -	7.5 -	XP BELT	13 79.70	0.22	180 160	77.6 6.92	723.41	ANGLE	460	3	60	TRANE LPCAA17F	1,2,3,4,5,7
MAU-6	HEADWORKS	HEADWORKS	7500 725	FC HORIZ.	3.684 -	7.5 -	XP BELT	13 84.07	0.18	180 160	62.05 5.37	578.06	ANGLE	460	3	60	TRANE LPCAA14F	1,2,3,4,5,7

6. PROVIDE UNIT MOUNTED CONTROLLER W/ LCD SCREEN.
7. CONTROLLER MOUNTED IN LOCAL ATC PANEL.

NOTES:

1. SEE SPECIFICATION SECTION 15855.
2. PROVIDE COATINGS AS SCHEDULED IN SECTION 15500.
3. PROVIDE DIFFERENTIAL PRESSURE SENSORS ACROSS FILTERS.
4. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
5. PROVIDE A VARIABLE FREQUENCY DRIVE AS SPECIFIED IN SECTION 01174 AND LOCATE IN ELECTRICAL ROOM NO. 3.

					FANS										
					FAN						MOTOR				
FAN	LOCATION	AREA SERVED	CONFIGURATION	TYPE	DIAMETER	CFM	RPM	BHP	HP	TYPE	ELI	ECTRICAL		MANUFACTURER	NOTES
''"	200/111011	, we derived		ROTATION	ARRANGMENT	(HI)	(HI)	ESP	RPM	DRIVE	VOLTS	PHASE	HZ	MODEL #	110120
				DISCHARGE	CLASS	(LOW)	(LOW)	(IN WC)		511172	70210	110102			
EF-1	FITLER ROOM	FILTER ROOM	WALL	PROP - -	24.0 _ _	3250 - -	603 - -	0.15 0.1	1/4 1725	TEFC BELT	120	1	60	GREENHECK SBCE-3L24-4	1,2,3
EF-2	FILTER ROOM	FILTER ROOM	WALL	PROP - -	24.0 - -	3250 - -	603 - -	0.15 0.1	1/4 1725	TEFC BELT	120	1	60	GREENHECK SBCE-3L24-4	1,2,3
EF-3	FILTER ROOM	FILTER ROOM	WALL	PROP - -	36.0 - -	8500 - -	591 - -	0.38 0.1	1/2 1725	TEFC BELT	460	3	60	GREENHECK SBCE-3H36-5	1,2,3
EF-4	CHEMICAL STORAGE	CHEMICAL STORAGE	INLINE	CENTRIFUGAL - -	13.5 - -	1600 - -	1363 - -	0.36 0.50	1/2 1725	TEFC BELT	460	3	60	LOREN COOK 135SQIB	1,2
EF-5	STORAGE MEZZANINE	STORAGE MEZZANINE	WALL	PROP - -	20.0 _ _	2000	782 - -	0.216 0.20	1/3 1050	TEFC DIRECT	120	1	60	LOREN COOK 20S10D	1,2,3
EF-6	STORAGE MEZZANINE	STORAGE MEZZANINE	WALL	PROP - -	20.0 _ _	2000 - -	782 - -	0.216 0.2	1/3 1050	TEFC DIRECT	120	1	60	LOREN COOK 20S10D	1,2,3
EF-7	STORAGE MEZZANINE	STORAGE MEZZANINE	WALL	PROP - -	20.0 _ _	2000 - -	782 - -	0.216 0.2	1/3 1050	TEFC DIRECT	120	1	60	LOREN COOK 20S10D	1,2,3
EF-8	BLOWER ROOM	BLOWER ROOM	WALL	PROP - -	20.0 - -	2500 - -	846 - -	0.27 0.2	1/3 1050	TEFC DIRECT	120	1	60	LOREN COOK 20S10D	1,2,3
EF-9	BLOWER ROOM	BLOWER ROOM	WALL	PROP - -	20.0 - -	2500 - -	846 - -	0.27 0.2	1/3 1050	TEFC DIRECT	120	1	60	LOREN COOK 201S10D	1,2,3
EF-10	BLOWER ROOM	BLOWER ROOM	WALL	PROP - -	20.0 _ _	2500 - -	846 - -	0.27 0.2	1/3 1050	TEFC DIRECT	120	3	60	LOREN COOK 20S10D	1,2,3
EF-11	LABORATORY	LABORATORY	INLINE	CENTRUFUGAL - -	15.0 — —	1650 - -	1585 - -	0.60 1.0	3/4 1725	TEFC BELT	460	3	60	M.K. PLASTICS AXCL 1500	1,2
EF-12	STORAGE MEZZANINE	TOILETS	INLINE	CENTRIFUGAL - -	12.0 - -	790 - -	1179 - -	0.129 0.50	1/6 1140	TEFC BELT	115	1	60	LOREN COOK 120SQN-B	1,2

NOTES:

1. SEE SPECIFICATION SECTION 15860.

2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.

3. PROVIDE WALL COLLAR, MOTORIZED DISCHARGE SHUTTER, AND INLET GUARD.

							GAS FIRE	D MAKE-UP	AIR UNITS							
			SUPPL	Y FAN	SUPPLY F.	AN MOTOR		HEATER			FILTERS		ELECTRICAL	-		
UNIT	LOCATION	AREA SERVED	CFM	BHP	HP	TYPE	FUEL	INPUT MBH	CONTROL	EAT (F)	TYPE	VOLTS	PHASE	HZ	MANUFACTURER MODEL #	NOTES
			RPM	ESP	RPM	DRIVE	INLET PRESS.	OUTPUT MBH	TURNDOWN	LAT (F)	IIFE	VOLIS	FHASE	ΠZ		
MAU-1	FILTER ROOM	FILTER ROOM	15000 940	15.0 3/4	15 1725	TEFC BELT	NATURAL GAS 5" W.C.	500 400	STAGED 16:1	40 65	2" ANGLE	460	3	60	GREENHECK IGX-120-H32	1,2,3,4,5,7
MAU-3	FILTER ROOM	CHEMICAL ROOM	1500 1075	0.5 1/2	1/2 1725	TEFC BELT	NATURAL GAS 5" W.C.	100 80	STAGED 8:1	13 62	2" ANGLE	460	3	60	GREENHECK IG-109-H10	1,2,3,4,6,7
MAU-4	HVAC ME77ANINE	TRUCK BAYS	6000 1050	4.6 3/4	5 1725	TEFC BELT	NATURAL GAS	400 320	STAGED 8:1	13 62	2" ANGLE	460	3	60	GREENHECK IG-115-H30	1,2,3,4,6,7

NOTES:
SEE SPECIFICATION SECTION 15855.
PROVIDE TYPE 409 STAINLESS STEEL HEAT EXCHANGER.
PROVIDE REMOTE CONTROL PANEL SUPPLIED BY UNIT MANUFACTURER.
PROVIDE VERTICAL SEPARATED COMBUSTION CONCENTRIC VENTING KIT.
PROVIDE FILTER/MINING BOX W/ OUTSIDE AND RETURN AIR DAMPERS,
MODULATING DAMPER MOTER AND REMOTE POTENTIOMETER.
PROVIDE V-BANK FILTER SECTION AND INLET DAMPER.
PROVIDE INUDSTRIAL MAKEUP AIR TEMPERATURE CONTROL WITH
MANUAL HEATING SWITCH AND ROOM OVERRIDE.

RECORD DRAWING
THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON A COMBINATION OF INFORMATION PROVIDED BY OTHERS AND BY COM. THEREFORE, THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. TO THE BEST OF THE
ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY

THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF ALL THE INFORMATION. TO THE BEST OF THE ENGINEER'S BELIEF AND KNOWLEDGE, THE INCLUDED RECORD INFORMATION IS REASONABLY ACCURATE.

BY:CAMP DRESSER & McKEE Date:OCTOBER 2008

COMMISSION OF SECTION 7209, SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON UNLESS ACTION QUEET THE DIFECTION OF A LOCAL DRIVEN OF SECTION LAW FOR ANY PERSON UNLESS ACTION QUEET THE DIFECTION OF A LOCAL DRIVEN OF SECTION OF A LOCAL DRIVEN OF A LOCAL DRI

NO	'· L	DATE	DR	AWINGS WITH ALPHA RI	EVISIONS ARE PRELIMINA	NRY AND SHALL NOT BE USED FOR FINAL DESIGN WORK OR FABRICATION.	
KEV	' ·	ISSUE	DR	RAFTING	ENGINEERING	DESCRIPTION	
REV NO	,Γ	ICCLIE	DRAWN BY	CHECKED BY	APPROVED BY	DESCRIPTION	
1		1/08	ММ	DF		CLOUDS INDICATE VALUE ENGINEERING CHANGES	
2		10/08	EJL	TAL	TAL	REVISED FOR THE RECORD	
3		04/10	JJS			REVISED FOR THE RECORD	
	+						
	†						

		CAPACITY	WATE	R			ELEME	NTS		MANUFACTURER	
FTR	AREA SERVED	(MBH)	AVG. TEMP (F)	FLOW (GPM)	LENGTH	ROWS	TUBE DIA.	FINS/FOOT	FIN SIZE	MODEL #	NOTES
FTR-1A	COUNTY OFFICE (A-102)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-1B	COUNTY OFFICE (A-102)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-1C	COUNTY OFFICE (A-102)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-2A	COUNTY OFFICE (A-104)	5.1	170	5.0	3'-0"	2	.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-3A	CONTROL ROOM (A-108)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-3B	CONTROL ROOM (A-108)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-4A	OFFICE (A-117)	3.0	170	5.0	3'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-5A	CONFERENCE RM (A-105)	5.5	170	5.0	3'-0"	2	0.75	60	2.75"×4.25"	VULCAN - DV4	1,2,3
FTR-5B	CONFERENCE RM (A-105)	5.5	170	5.0	3'-0"	2	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-LA	LABORATORY (A-123)	7.3	170	5.0	4'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-LB	LABORATORY (A-123)	7.3	170	5.0	4'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-11A	LUNCH/STAFF RM (A-126)	7.3	170	5.0	4'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3
FTR-11B	LUNCH/STAFF RM (A-126)	7.3	170	5.0	4'-0"	1	0.75	60	2.75"x4.25"	VULCAN - DV4	1,2,3

WALL MOUNTED FINNED TUBE RADIATIORS - HOT WATER/GLYCOL

NOTES:

1. SEE SPECIFICATION SECTION 15550.

2. FINNED TUBES SHALL BE COPPER TUBES WITH ALUMINUM FINS

3. SPACED AT 60 FINS PER LINEAR FOOT.

4. SINGLE ROW FINNED TUBES SHALL BE MOUNTED 12" AFF. DOUBLE

5. ROW FINNED TUBES SHALL BE MOUNTED AT 12" AND 24" AFF.

CDM Camp Dresser & McKee NA Water Systems

ALL INFORMATION CONTAINED ON THIS DOCUMENT IS THE PROPERTY OF N.A. WATER SYSTEMS. THE DESIGN CONCEPTS AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO N.A. WATER SYSTEMS AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TRANSFERRED, AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TRANSFERRED AND ARE SUBMITTED. THE SUBMITTED IN CONFIDENCE AND ARE SUBMITTED.

DESIGNER D. FLAHERTY	DATE 12/06	SCALE AS NOTED	
CHECKER D. WERME	DATE 1/07	TITLE	DULES I
ENGINEER D. FLAHERTY	DATE 12/06		
MANAGER J. JACOBS	DATE 4/07		APO ADVANCED IENT PLANT PROJECT
FILENA		CLIENT ROCKLAND COUNTY	SEWER DISTRICT No. 1
HPRSH	000	CONTRACT NO.	DWG. H-16

											ENERG	Y RECOVE	ERY UNI	Γ										
				OA FAN	1	OA FAN	MOTOR		RA FAN		RA FAN	MOTOR		Е	NERGY REC	OVERY		FILTERS		ELECTRICA	٩L			
UNIT	LOCATION	AREA SERVED	CFM	BHP	ESP	HP	TYPE	CFM	BHP	ESP	HP	TYPE	0	A	R/	4	EFFECTIVENESS	TYPE	VOLTE	PHASE	117	MCV	MANUFACTURER MODEL #	NOTES
		SEITTED	RPM	CLASS	(IN WC)	RPM	DRIVE	RPM	CLASS	(IN WC)	RPM	DRIVE	EAT (F)	LAT (F)	EAT (F)	LAT (F)	PERCENT	ITPE	VOLTS	PHASE	ПД	MCA	model //	
ERU-1	BLOWER ROOM	BLOWER ROOM	2000 939	0.61	0.5	3/4 1725	TEFC BELT	2500 1088	1.18	0.25	1.5 1725	TEFC BELT	13	58	70	35	80	2" THICK 30%	460	3	60	6.65	LOREN COOK ERV-2500	SEE BELOW

NOTES:
1. PROVIDE RETURN AIR INTAKE HOOD.
2. UNIT SHALL BE DOUBLE WALL CONSTRUCTION.
3. PROVIDE FLEXIBLE CONNECTIONS ON ALL DUCT CONNECTIONS.
4. PROVIDE HEAT RECOVERY WHEEL ROTATION SENSOR AND DIRTY FILTER SENSORS.

5. PROVIDE UNIT MOUNTED CONTROLLER W/ LCD SCREEN.

										SPLI	T SYSTE	EM AIR	CONDITIONI	NG UNITS										
						Е	VAPORATOR L	JNIT – ACU							AIR COOL	ED COND	NSER -	ACC						
		EVA	PORATOR	FAN	EVAP. FA	N MOTOR	EV	APORATOR CO	DIL	ELECTRICAL			NOMINAL	AMBIENT		COMPR	ESSORS	EL	ECTRICAL					
UNIT	AREA SERVED	CFM	TYPE	BHP	HP	TYPE	EAT DB/WB	SUCTION TEMP.	SENSIBLE (MBH)	V/P/H	MIN. OUTSIDE AIR	WEIGHT (LBS)	CAPACITY (TONS)	TEMP. (*F)	NO. FANS	NUMBER	HP	MCA	V/P/H	EER	WEIGHT (LBS)	MFR.	MODEL #	NOTES
		RPM	DISCH.	ESP (IN WC)	RPM	DRIVE	LAT DB/WB	CIRCUITS	TOTAL (MBH)	\ \frac{\frac{1}{1}}{1} \ \frac{1}{1} \ \frac{1} \ \frac{1}{1} \ \frac{1} \ \fr	(CFM)	(250)	REFRIGERANT	MIN. OPERATING TEMP. (*F)	TYPE	TYPE		MCA	V/F/H		(250)			
ACU-1 ACC-1	ELECTRICAL RM. NO. 1	5200 727	CENT. TOP	1.7 0.5	3 1750	BELT	80/67 59.8/56.6	45 2	116 170	480/3/60	0	660	15 R-22	105 50	2 PROP	2 SCROLL	7.5 EA.	32.9	480/3/60	9.7	700	TRANE	2TWE180B4 2TTA180B4	1,2,5
ACU-2 ACC-2	ELECTRICAL RM. NO. 2	2500 622	CENT. FRONT	0.7 0.5	1.5 1725	- BELT	80/67 58.9/55.9	45 1	58.4 86.6	480/3/60	0	316	7.5 R-22	105 50	1 PROP	1 SCROLL	7.5	18.1	480/3/60	10.3	350	TRANE	2TWE090A1 2TTA090A4	1,2,3,4
ACU-3 ACC-3	ELECTRICAL RM. NO. 3	1400 727	CENT. TOP	0.4	0.5 1050	- DIRECT	80/67 60/57.4	45 1	29.8 41.0	230/1/60	0	150	3.5 R-22	105 0	1 PROP	1 SCROLL	-	13	230/3/60	13	225	TRANE	2TEC3F42B 2TTA3042A3	1,2,3,4

NOTES: SEE SPECIFICATION SECTION 15855. PROVIDE DIFFERENTIAL PRESSURE SENSORS ACROSS FILTERS, PRESSURE INDICATOR SHALL BE UNIT MOUNTED.

PROVIDE ANTI-SHORT CYCLE TIMER, EVAPORATOR DEFROST CONTROL, RUBBER ISOLATORS AND HARD START KIT.
 PROVIDE MANUFACTURER SUPPLIED SPACE THERMOSTAT.
 PROVIDE RELIATEL MICROPROCESSOR CONTROLS WITH SPACE THERMOSTAT.

					UNIT	HEATE	RS - I	AW TOH	TER/GL	YCOL							
			А	IR		WATER				FAN			EL	ECTRICAL.			
UNIT	AREA SERVED	CAPACITY (MBH)	FLOW (CFM)	ENT/LVG (F)	ENT/LVG (F)	FLOW (GPM)	PD (FT H20)	TYPE	DISCHAR GE	HP	RPM	MOTOR ENCLOSURE	VOLTS	PHASE	HZ	MANUFACTURER MODEL #	NOTES
UH-12	MECHANICAL ROOM	10	340	60/87.0	180/160	1.09	0.5	PROP	HORIZ.	1/60	1550	TEFC	120	1	60	MODINE HC-18	1,2,4
UH-14	BOILER ROOM	10	340	60/87.0	180/160	1.09	0.5	PROP	HORIZ.	1/60	1550	TEFC	120	1	60	MODINE HC-18	1,2,4
UH-15	STORAGE ROOM	10	340	60/87.0	180/160	1.09	0.5	PROP	HORIZ.	1/60	1550	TEFC	120	1	60	MODINE HC-18	1,2,4
UH-17	LARGE PARTS STORAGE	10	340	60/87.0	180/160	1.09	0.5	PROP	HORIZ.	1/60	1550	TEFC	120	1	60	MODINE HC-18	1,2,4
UH-21	BLOWER ROOM	20	730	60/85.1	180/160	2.17	0.4	PROP	HORIZ.	1/12	1550	TEFC	120	1	60	MODINE HC-47	1,2,4
UH-22	BLOWER ROOM	20	730	60/85.1	180/160	2.17	0.4	PROP	HORIZ.	1/12	1550	TEFC	120	1	60	MODINE HC-47	1,2,4
UH-23	SLUDGE TRUCK BAY	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-24	HEADWORKS	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-25	HEADWORKS	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-26	SLUDGE TRUCK BAY	42	1200	60/92.3	180/160	4.67	0.4	PROP	VERT.	1/6	1150	XP	120	1	60	TRANE 102-P	1,2,3,4,5
UH-27	SLUDGE TRUCK BAY	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-28	SLUDGE TRUCK BAY	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-29	HEADWORKS	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-30	SLUDGE HANDLING	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-31	SLUDGE HANDLING	29	1100	60/84.2	180/160	3.30	0.21	PROP	HORIZ.	1/8	1550	XP	120	1	60	TRANE 70-S	1,2,3,4,5
UH-32	MAINTENANCE OFFICE	10	340	60/87.0	180/160	1.09	0.5	PROP	HORIZ.	1/60	1550	TEFC	120	1	60	MODINE HC-18	1,2,4

NOTES:

1. SEE SPECIFICATION SECTION 15550.

2. PROVIDE UNIT WITH MANUFACTURER'S STANDARD CORROSION RESISTANT COATING.

3. HEATING COILS SHALL BE CONSTRUCTED OF 0.049" THICK CUPRO-NICKEL TUBES AND ALUMINUM FINS.

4. PROVIDE AND MOUNT WALL THERMOSTAT TO BE WIRED BY ELECTRICAL CONTRACTOR.

5. PROVIDE OSHA FAN GUARD.

					UN	IIT HEATERS	– F	LECTR	ıc					
		0.101.0007		AIR		III TILATLINS	FAN	LLCTI	10	EL	ECTRICAL			
UNIT	AREA SERVED	CAPACITY (KW)	FLOW (CFM)	ENT/LVG (F)	TYPE	DISCHARGE	HP	RPM	MOTOR ENCLOSURE	VOLTS	PHASE	HZ	MANUFACTURER MODEL #	NOTES
EUH-1	ELECTRIC RM. 1	7.5	850	60/88	PR0P	HORIZ.	1/15	1725	TEFC	480	3	60	CHROMALOX LUH-07-43-32	1,2,3
EUH-2	ELECTRIC RM. 2	4.0	380	60/93	PR0P	HORIZ.	1/35	1550	TEFC	480	3	60	CHROMALOX KUH-04-43-32	1,2,3
EUH-3	ELECTRIC RM. 3	4.0	380	60/93	PR0P	HORIZ.	1/35	1550	TEFC	480	3	60	CHROMALOX KUH-04-43-32	1,2,3
EUH-4	CHEMICAL ROOM	7.5	590	60/97	PROP	HORIZ.	1/15	1050	TEFC	480	3	60	CHROMALOX HD3D-750	1,2,3
EUH-5	CHEMICAL ROOM	7.5	590	60/97	PROP	HORIZ.	1/15	1050	TEFC	480	3	60	CHROMALOX HD3D-750	1,2,3

NOTES:

1. PROVIDE MFR'S UNIT MOUNTED THERMOSTAT AND CONTROLS.
2. SEE SPECIFICATION SECTION 15550.
3. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.

						UNIT	HEATERS	— GA	\S						
		INPUT	OUTPUT		AIR			FAN			EL	ECTRICAL		MANUFACTURER	
UNIT	AREA SERVED	CAPACITY (MBH)	CAPACITY (MBH)	FLOW (CFM)	TEMP RISE (F)	TYPE	DISCHARGE	HP	RPM	MOTOR ENCLOSURE	VOLTS	PHASE	HZ	MODEL #	NOTES
GUH-1	FILTER ROOM	60.0	49.8	769	60	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-60	1,2,3
GUH-2	FILTER ROOM	125.0	99.6	1537	60	PROP	HORIZ.	0.25	1050	TEFC	120	1	60	REZNOR UDAS-125	1,2,3
GUH-3	FILTER ROOM	125.0	99.6	1537	60	PROP	HORIZ.	0.25	1050	TEFC	120	1	60	REZNOR UDAS-125	1,2,3
GUH-4	FILTER ROOM	125.0	99.6	1537	60	PROP	HORIZ.	0.25	1050	TEFC	120	1	60	REZNOR UDAS-125	1,2,3
GUH-5	FILTER ROOM	125.0	99.6	1537	60	PROP	HORIZ.	0.25	1050	TEFC	120	1	60	REZNOR UDAS-125	1,2,3
GUH-6	FILTER ROOM	60.0	49.8	769	60	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-60	1,2,3
GUH-7	STORAGE MEZZANINE	45.0	37.4	629	55	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-45	1,2,3
GUH-8	STORAGE MEZZANINE	45.0	37.4	629	55	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-45	1,2,3
GUH-9	VEHICLE GARAGE	45.0	37.4	629	55	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-45	1,2,3
GUH-10	VEHICLE GARAGE	45.0	37.4	629	55	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-45	1,2,3
GUH-11	VEHICLE GARAGE	45.0	37.4	629	55	PROP	HORIZ.	0.06	1550	TEFC	120	1	60	REZNOR UDAS-45	1,2,3

NOTES:

1. SEE SPECIFICATION SECTION 15550.

2. PROVIDE UNIT WITH MANUFACTURER'S STANDARD CORROSION RESISTANT COATING.

3. PROVIDE AND MOUNT WALL THERMOSTAT TO BE WIRED BY ELECTRICAL CONTRACTOR.

RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED
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BY-CAMP DRESSER & MCKEE Date-OCTOBER 2008
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N	<u>-</u> v.l	ISSUE	DR	AFTING	ENGINEERING	DESCRIPTION
R RE	٦.,	100115	DRAWN BY	CHECKED BY	APPROVED BY	DESCRIPTION
	1	1/08	ММ	DF	JJ	CLOUDS INDICATE VALUE ENGINEERING CHANGES
	2	10/08	EJL	TAL	TAL	REVISED FOR THE RECORD
	3	04/10	JJS			REVISED FOR THE RECORD
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NA Water Systems

CDM Camp Dresser & McKee

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DESIGNER D. FLAHERTY	DATE 12/06	SCALE AS NOTED	
CHECKER D. WERME	DATE 1/07	TITLE	DULES II
ENGINEER D. FLAHERTY	DATE 12/06		
MANAGER J. JACOBS	DATE 4/07		MAPO ADVANCED MENT PLANT PROJECT
FILENA		CLIENT ROCKLAND COUNT	Y SEWER DISTRICT No. 1
HPRSH	100	CONTRACT ₀₁ -H	DWG. H-17

NO.

																	AIR HAN	IDLING	UNITS													
					SUPPL	Y FAN		SUPPLY FAI	N MOTOR			HEATING	COIL				COC	DLING COI	IL			RETUR	N FAN		RETURN FAN	MOTOR	ELE	CTRICAL				
UNIT	LOCATION	AREA SERVED	MIN. OA	CFM	TYPE	BHP	ESP	HP	TYPE	EAT (F)	PD	EWT (F)	GPM	PERCENT	MBH	TYPE	EAT DB/WB	SUCTION	CIDCUITO	SENS. MBH	CFM	TYPE	BHP	ESP	HP	TYPE	VOLTS	DUACE	117	MODULES	MANUFACTURER MODEL #	NOTES
		OLIVILO	0.1.1.	RPM	DISCH.	CLASS	(IN WC)	RPM	DRIVE	LAT (F)	(IN WC)	LWT (F)	PD (FT)	GLYCOL	мвп	TIPE	LAT DB/WB	TEMP.	CIRCUITS	TOTAL MBH	RPM	DISCH.	CLASS	(IN WC)	RPM	DRIVE	VULIS	PHASE	П			
AHU-1	MEZZANINE	ADMIN AREA	840	6000 888	DC HORIZ.	4.868 -	2.00	5.00 1800	TEFC BELT	63.15 78.00	0.04	180 160	10.9 0.11	40	96.63	DX	81.4/66.8 55.0/54.2	45*F	2	174 233	6000 1226	FC HORIZ.	2.96 -	2.00	3.0 1800	TEFC BELT	460	3	60	RF-EC-AF-HC- CC-SF	TRANE M-SEIRES SIZE 21	1,2,3,4,5,6,7,8,10
AHU-2	MEZZANINE	LAB	1600	1600 1866	FC HORIZ.	1.688	1.00	2.00	TEFC BELT	13.00 72.00	0.16	180 160	11.0 14.9	40	102.4	DX	89.0/73.0 55.0/54.9	45*F	2	59 98	_	=	_	-		_	460	3	60	IN-AF-CD- SF-HC	REZNOR AHDA SIZE 30	1,2,3,4,5,6,7,8,9

NOTES:

1. SEE SPECIFICATION SECTION 15855.
2. PROVIDE DIFFERENTIAL PRESSURE SENSORS ACROSS FILTERS.
3. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
4. PROVIDE SPACER AND ACCESS SECTIONS AS RECOMMENDED BY THE MANUFACTURER.
5. EACH AHU SHALL INCLUDE ALL THE MODULES LISTED.
6. THE MODULES SHALL BE ARRANGED IN THE ORDER LISTED WITH THE FIRST MODULE LISTED AT UNIT INTAKE AND THE LAST MODULE LISTED AT THE UNIT DISCHARGE.
7. UNITS SHALL BE DOUBLE WALL CONSTRUCTION.
8. UNITS SHALL HAVE INTERNAL VIBRATION ISOLATION.
9. PROVIDE MANUFACTURER OPTIONS: AR8, BN10, CL51, RC28.
10. PROVIDE UNIT MOUNTED CONTROLLER W/ LCD SCREEN.

MODULE ABBREVIATIONS

AF ANGLE FILTERS HC HEATING COIL

EC ECONOMIZER IN INTAKE

CD COOLING/DEHUMIDIFICATION RF RETURN FAN

COILS SF SUPPLY FAN

							BOI	LERS								
			CAPACITY	HE	ATING FLUI)				BURNE	R					
UNIT	SERVICE	TYPE	GROSS OUTPUT MBH I=B=R OUTPUT MBH	ENT/LVG (F)	FLOW (GPM)	PERCENT GLYCOL	INPUT CFH	FUEL TYPE	MIN. PRESS. (IN H20)	HP	VOLTS	PHASE	HZ	MANUFACTURER MODEL #	MANUFACTURER MODEL #	NOTES
B-1	HOT WATER/ GLYCOL	CAST IRON	1342 1167	180/160	145	40	1674	NATURAL GAS	5.8	1	460	3	60	GORDON PIATT R8.2-G	BURNHAM V909A-W-G	1
B-2	HOT WATER/ GLYCOL	CAST IRON	1342 1167	180/160	145	40	1674	NATURAL GAS	5.8	1	460	3	60	GORDON PIATT R8.2-G	BURNHAM V909A-W-G	1

NOTES:
1. SEE SPECIFICATION SECTION 15555.

			DIREC	CT EXP	ANSION	AIR C	OOLE	D CONDE	NSING	UNITS			
				AIR COOL	ED CONDE	NSER -	ACC						
		NOMINAL	AMBIENT		COMPR	ESSORS	EL	ECTRICAL					
UNIT	UNIT SERVED	CAPACITY (TONS)	TEMP. (*F)	NO. FANS	NUMBER	НР	MCA	V/P/H	EER	WEIGHT (LBS)	MFR.	MODEL #	NOTES
		REFRIGERANT	MIN. OPERATING TEMP. (*F)	TYPE	TYPE	ni-	MICA	V) F / 11		(===)			
ACC-4	AHU-1	20 R-22	105 50	2 DIRECT	2 SCROLL	2	44.0	460/3/60	10.9	1720	TRANE	RAUCC204BA00A	
ACC-5	AHU-2	10 R-22	105 50	1 DIRECT	2 SCROLL	5	23.9	460/3/60	10.3	427	TRANE	TTA120B400AA	

						PUM	/IPS					
UNIT I.D.	LOCATION	SERVICE	TYPE		FLUID				MOTOR		MANUFACTURER	REMARKS
UNII I.D.	LUCATION	SERVICE	MOUNTING	GPM	HEAD 'H20	% GLYC	TYPE	HP	RPM	ELEC. V/PH/HZ	MODEL #	KEMAKKS
P-1	BOILER ROOM	HEATING ADMINISTRATION	CENTRIFUGAL INLINE	84	36.8	40	ODP	2.0	1750	460/3/60	BELL & GOSSETT SERIES 80: 2x2x7	1
P-3	BOILER ROOM	HEATING HEADWORKS	CENTRIFUGAL INLINE	176	46.6	40	ODP	5.0	1750	460/3/60	BELL & GOSSETT SERIES 80: 2.5x2.5x9.5B	1
P-4	BOILER ROOM	HEATING MAINTENANCE	CENTRIFUGAL INLINE	4.36	11.5	40	ODP	0.12	3000	120/1/60	BELL & GOSSETT NBF-18S	1
P-B1	BOILER ROOM	HEATING B-1	CENTRIFUGAL INLINE	150	-	40	ODP	0.5	1750	460/3/60	BELL & GOSSETT SERIES 60: 2x2x5.25	1,2
P-B2	BOILER ROOM	HEATING B-2	CENTRIFUGAL INLINE	150	-	40	ODP	0.5	1750	460/3/60	BELL & GOSSETT SERIES 60: 2x2x5.25	1,2
P-ACU-1	BLOWER ROOM	ACU-1 CONDENSATE PUMP	CENTRIFUGAL INLINE	0.4	15	40	ODP	1/30	-	120/1/60	LITTLE GIANT CURP-20ULS-577425	1

NOTES:

1. SEE SPECIFICATION SECTION 15541.
2. PROVIDED AS PART OF RETURN TEMPERATURE CONTROL SYSTEM WITH BOILERS.

					VARIA	BLE A	IR VOL	UME TE	ERMINAL	.S					
	AREA		COOLING	TURNDOWN	FAN	FAN		HEATING		INLET	FAN	ACCOL		MFR	
VAV #	SERVED	TYPE	CFM	CFM	CFM	HP	MBH	GPM	COIL PD (FT)	DIA.	SIZE	DISCHARGE (NC)	RADIATED (NC)	MODEL #	NOTES
VAV-1	COUNTY OFFICE/STORAGE	VAVT	575	100	475	1/8	14.3	0.84	0.68	8	02	15	32	TRANE VPWF	1,2,3
VAV-2	COUNTY OFFICE	VAVT	300	100	300	1/8	12.2	1.33	0.35	5	02	15	27	TRANE VPWF	1,2,3
VAV-3	LOBBY	VAVB	600	100	-	-	ı	-	-	8	-	15	17	TRANE VCCF	1,2,3
VAV-4	LOBBY	VAVB	450	160	-	-	ı	-	-	6	-	15	15	TRANE VCCF	1,2,3
VAV-5	KITCHEN/AV STOR. COATS/CONF. ROOMS	VAVT	1225	130	470	1/3	15.0	1.63	1.59	10	04	17	32	TRANE VPWF	1,2,3
VAV-6	CONTROL ROOM	VAVB	600	200	-	-	-	-	-	8	-	15	17	TRANE VCCF	1,2,3
VAV-7	ELEC. ROOM	VAVB	250	50	-	-	-	-	-	5	-	17	16	TRANE VCCF	1,2,3
VAV-8	EAST CORRIDOR	VAVB	200	75	-	-	ı	-	-	5	-	19	17	TRANE VCCF	1,2,3
VAV-9	FILES/PLAN	VAVB	230	0	-	-	1	-	-	5	-	17	16	TRANE VCCF	1,2,3
VAV-10	OFFICE	VAVB	200	150	-	-	6.5	0.66	1.02	6	-	26	25	TRANE VCWF	1,2,3
VAV-11	LUNCH/STAFF ROOM	VAVT	500	275	225	1/8	12.5	1.06	1.00	8	02	15	27	TRANE VPWF	1,2,3
VAV-12	WEST CORRIDOR	VAVB	200	150	-	-	-	-	-	5	-	16	15	TRANE VCCF	1,2,3
VAV-13	MENS LOCKER/SHOWER	VAVB	235	235	-	-	7.7	0.66	1.01	5	-	30	25	TRANE VCWF	1,2,3
VAV-14	WOMENS LOCKER/SHOWER	VAVB	95	95	-	-	5.2	0.54	0.72	4	-	31	26	TRANE VCWF	1,2,3

NOTES:

1. SEE SPECIFICATION SECTION 15890.

2. PROVIDE W/ ROOM TEMPERATURE SENSOR.

3. PRIVIDE FLEXIBLE DUCT CONNECTIONS

						CEILING FAN	15						
	UNIT I.D.	LOCATION	SERVICE	AREA COVERAGE (SQ.FT.)	MAX CFM	BLADE SWEEP (INCHES)	RPM	V/PH/HZ	FLA	WATTS	WEIGHT LBS	MANUFACTURER MODEL #	NOTES
Ī	CF-1	FILTER ROOM	FILTER ROOM	3025	25500	56	265	120/1/60	1.0	110	24	LEADING EDGE	

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NA Water Systems

CDM Camp Dresser & McKee

	DESIGNER D. FLAHERTY	DATE 12/06	SCALE AS NOTED
e	CHECKER D. WERME	DATE 1/07	TITLE SCHEDULES III
	ENGINEER D. FLAHERTY	DATE 12/06	
E	MANAGER J. JACOBS	DATE 4/07	PROJECT WESTERN RAMAPO ADVANCED WASTEWATER TREATMENT PLANT PROJECT
3 :	FILENAN		CLIENT ROCKLAND COUNTY SEWER DISTRICT No. 1

DWG. H-18

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