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	<u>gener</u> 1.	RAL NOTES: DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS INTENDED THAT ALL COMPONENTS AND MATERIALS REQUIRED TO MAKE THE SYSTEMS COMPLETE, TESTED AND OPERATIONAL BE INSTALLED.
	2.	CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS BEFORE DEMOLITION AND CONSTRUCTION.
	3.	ALL MATERIALS, EQUIPMENT, METHODS OF INSTALLATION, REMOVALS AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
	4.	COMPLETELY COORDINATE WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTORS AND OWNERS WORK.
	5.	PROTECT ALL EXISTING BUILDING ELEMENTS AND SITE ELEMENTS TO REMAIN FROM ANY DAMAGE. CONTRACTOR SHALL RESTORE ALL EXISTING CONDITIONS AFFECTED BY DEMOLITION AND CONSTRUCTION TO ORIGINAL OR BETTER CONDITION.
	6.	WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES.
	7.	MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN MANUFACTURER'S EQUIPMENT CLEARANCES.
	8.	ALL EQUIPMENT PIPING, WIRING, INSULATION AND ANCILLARY MATERIALS INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
	9.	DO NOT SUPPORT EQUIPMENT FROM SUSPENDED CEILINGS. ALL SUPPORT SHALL COME FROM BUILDING STRUCTURE. SUPPORTS SHALL BE SELECTED AND INSTALLED TO PROVIDE A VIBRATION FREE INSTALLATION.
	10.	DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST ISSUES OF SMACNA STANDARDS.
	11.	PROVIDE PROPER ACCESS TO MATERIALS AND EQUIPMENT THAT REQUIRE INSPECTION, REPLACEMENT, REPAIR OR SERVICE SUCH AS COILS, DAMPERS, HEATERS, VALVES, ETC. IF PROPER ACCESS CANNOT BE PROVIDED, CONFER WITH THE ENGINEER AS TO THE BEST METHOD OF APPROACH TO MINIMIZE THE EFFECT OF THE REDUCED ACCESS WHICH MAY RESULT.
	12.	RELOCATE EXISTING DUCTING, PIPING, CONDUIT AND OTHER INTERFERENCES TO INSTALL NEW EQUIPMENT AND MATERIALS. OFFSETS IN PIPING AND DUCTS, DIVIDED DUCTS AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
EIH	13.	THOROUGHLY CLEAN ALL NEW DUCTWORK AFTER INSTALLATION.
	14.	NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS IN THE CONTRACT.
harge of	15.	ALL WORK SHOWN IS TO BE COMPLETED BY THIS CONTRACT UNLESS SPECIFICALLY INDICATED OTHERWISE.
In Cl	16.	FIRE STOP ALL NEW AND EXISTING SLEEVES THROUGH CONCRETE FLOORS AND FIRE RATED WALLS OR PARTITIONS WITH UL RATED ASSEMBLIES WITH EQUAL FIRE RATING. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE RATED FLOOR AND WALL ASEMBLIES.
Designed by RAD	17.	CONTRACTOR IS RESPONSIBLE FOR ALL OWNER COORDINATION AND PROCEDURES RELATED TO ISOLATING, SHUTTING DOWN, DRAINING, FILLING AND RESTARTING SYSTEMS, INCLUDING THOSE REQUIRED FOR RELOCATIONS, TO ALLOW FOR COMPLETION OF ALL DEMOLITION AND NEW WORK. INTERRUPTIONS TO EXISTING SERVICES AND SYSTEMS SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AND DURATION APPROVED BY THE OWNER. INCLUDE ALL PREMIUM TIME ASSOCIATED WITH INTERRUPTIONS. ALL SYSTEM INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER AND COORDINATED WITH OTHER CONTRACTORS. CONTRACTOR SHALL FURNISH ALL FLUIDS REQUIRED, INCLUDING GLYCOL FOR FILLING NEW SYSTEMS AND REFILLING EXISTING SYSTEMS.
RAD		
Drawn by		

ABBREVIATIONS:

∠ - ANGLE AAD - AUTOMATIC AIR DAMPER ALUM - ALUMINUM BLDG - BUILDING **BSMT - BASEMENT** BOT - BOTTOM CFM - CUBIC FEET PER MINUTE CJ - CONTROL JOINT CL - CENTER LINE CLG - CEILING CLR - CLEAR CMU - CONCRETE MASONRY UNITS CONC - CONCRETE **CONST - CONSTRUCTION DEMO - DEMOLISH, DEMOLITION** DN - DOWN EA - EACH EC - ELECTRICAL CONTRACTOR ELEC - ELECTRICAL ELEV - ELEVATION EQUIP - EQUIPMENT E.S.P - EXTERNAL STATIC PRESSURE EX, EXIST - EXISTING FIN FLR - FINISHED FLOOR FLA - FULL LOAD AMPS FPM - FEET PER MINUTE FTG - FOOTING GA - GAUGE GALV - GALVANIZED GC - GENERAL CONTRACTOR

ABBREVIATIONS (CONT.):

HP - HORSE POWER HZ - HERTZ **INSUL - INSULATION** INV - INVERT MANUF - MANUFACTURER MAX - MAXIMUM MC - MECHANICAL CONTRACTOR MIN - MINIMUM MTL - METAL NAT - NATURAL NTS - NOT TO SCALE OD - OUTSIDE DIAMETER PLAS - PLASTIC **RD - ROOF DRAIN** SAN - SANITARY SHT - SHEET SIM - SIMILAR SS - STAINLESS STEEL STL - STEEL T/ - TOP OF T&B - TOP AND BOTTOM TEMP - TEMPERED TYP - TYPICAL VIF - VERIFY IN FIELD W.G - WATER GAUGE



ALL AROUND -

GASKET APPLIED

EXHAUST DUCTWORK -

TO UNDERSIDE -

Ü

LEGEND		LEGEND		
	SLOPE DN IN DIRECTION OF ARROW		GLOBE VALVE	
/	BREAK	Ā	TRIPLE DUTY VALVE	
·//////	PIPING/EQUIPMENT TO BE REMOVE	D ⊗	BALANCE VALVE	
	LIMIT OF REMOVAL	[]]	BALL VALVE W/ HOSE CONNECTION, CAP AND CHAIN	
\bigcirc	CONNECTION POINT TO EXISTING	K	PRESSURE REDUCING VALVE	
	- TEE RISE	逮	SAFETY RELIEF VALVE	
	TEE DROP	T T	TEMPERATURE SENSOR	
~	PIPE RISE	\bigcirc	PUMP	
C	PIPE DROP	Ŕ	CONTROL VALVE, 3-WAY, MODULATING	
	DIRECTION OF FLOW		VOLUME DAMPER	
C	CAP		FIRE DAMPER	1 YPICAL GAS
=	UNION	\bowtie	SUPPLY DUCT SECTION UP	SCALE: NOT TO SCALE
\triangleleft	CONCENTRIC REDUCER	Ķ	SUPPLY DUCT SECTION DOWN	
	FLANGED CONNECTION		RET/EXH DUT SECTION UP	
\sim	FLEXIBLE CONNECTION	Ę	RET/EXH DUT SECTION DOWN	PRE-FABRICATED VE
	BUTTERFLY VALVE	Ţ.Þ.	45° BRANCH DUCT CONNECTION	CONCENTRIC VENT -
	PRESSURE GAUGE	\boxtimes	NEW SUPPLY DIFFUSER, REGISTER OR GRILLE (WITH CFM)	S.S. PIPE CLAMP ——
Ψ	THERMOMETER		NEW RETURN/EXHAUST REGISTER	FLEXIBLE RUBBER FLASHING BOOT ——
	MANUAL AIR VENT		OR GRILLE (WITH CFM)	
<u>ک</u>			THERMOSTAT (ARROW INDICATES DEVICE)	L
	STRAINER	—HWS—	HOT WATER SUPPLY PIPING	
	SWING CHECK VALVE	—HWR—	HOT WATER RETURN PIPING	SEAL WEATHERTIG
	BALL VALVE			
\bowtie	GATE VALVE		N	
	PRE LOR APP BIRE	FABRICATED BRICK EN COOK MODEL B ROVED EQUAL WIT O SCREEN	VENT. VS OR H - EXHAUST DUCT	2 TYPI SCALE: N
	S	EAL WEATHER TIGH		
	E	XTERIOR FACE BRIG	CK INSULATED FIRE STOP (TYP)	
		3	BRICK VENT DETAIL SCALE: NOT TO SCALE	AIR FLOW
		/	POWER VENT WITH DISCONNECT SWITCH	
Rainer Ith .owdown All valve				

5 EXHAUST FAN DETAIL SCALE: NOT TO SCALE

NOTES:

- PRE-FAB CURB WITH BLOCKING

_PROVIDED BY CONTRACT 1B,

INSTALLED BY CONTRACT 1A

-BACKDRAFT DAMPER

- INSTALLATION.









BASEMENT HVAC PIPING DEMOLITION PLAN SCALE: 3/16" = 1'-0"

IT IS A EDUC SPECI UNLE DIREC ENGI ARCHI AN ITTE SIS ALT SHAL INCLU FOLLC OF SU DESC	VIOLATIOI ATION L/ AL PROVI SS THEY / TION OF A NEER, AI ITECT, OR I ERED, THE MINANY AMP OF / ERED, THE L STAMF JDE THE N WED BY T JCH ALTE RIPTION	N OF THE NEW YC AW, ARTICLE 14 SIONS, FOR ANY ARE ACTING UN A LICENSED PROF RCHITECT, LAN ALICENSED PROF ALICENSED PROF ALICENSED PROF THE DOCUME NOTATION "ALT HEIR SIGNATURE, RATION, AND A OF THE ALTE	DRK STATE 45 §7209 PERSON, IDER THE ESSIONAL IDSCAPE TO ALTER I BEARING ESSIONAL ESS
	CONTRACT 1B - MECHANICAL CONSTRUCTION	BASEMENT HVAC DEMOLITION PLAN	CITY OF MIDDLETOWN ORANGE COUNTY, NEW YORK
443 Electronics Parkway	Liverpool, NY 13088	SI	Barton & Loguidice, D.P.C.
NY Date Scale Shee	as EXP. AUG e AS et Num	0F NEW 10 0 J. HOR 0 089099 0 FESSIONAL 11/30/ UST, 202 SHOWN aber 1100	2025 4

GENERAL NOTES:

- 1. REMOVE ALL EXISTING HOT WATER SUPPLY AND RETURN PIPING, VALVES AND INSULATION IN THE BASEMENT COMPLETE.
- 2. REMOVE EXISTING BOILER VENTING COMPLETE. EXISTING CHIMNEY BEING REMOVED IN CONTRACT 1A.

3/16" = 1'-0"







	IT IS A EDUC SPECI UNLE DIREC ENGI ARCH AN IT THE S IS ALT INCLU FOLLC OF SU DESC	VIOLATION CATION LA IAL PROVIS SS THEY A TION OF A NEER, AR ITECT, OR L EM IN ANY ERED, THE L STAMP JDE THE N DWED BY TH JCH ALTEF CRIPTION RE	I OF THE NEW YOF W, ARTICLE 14 IONS, FOR ANY F RE ACTING UND LICENSED PROFE CHITECT, LANI AND SURVEYOR, T UCENSED PROFE ALTERING PROFE THE DOCUMEI OTATION "ALTE IEIR SIGNATURE, T ATION, AND A S OF THE ALTER VISIONS 31/23 ADD.	K STATE §7209 ERSON, /ER THE SIONAL SIONAL SIONAL SIONAL IT AND RED BY" HE DATE PECIFIC ATION. 2
SAT SAT STAT SUPPLY REMOVE SUPPLY DIFFUSER OR RETURN DIFFUSER IN ITS ENTRIETY.		CONTRACT 1B - MECHANICAL CONSTRUCTION	SECOND FLOOR HVAC DEMOLITION PLAN	CITY OF MIDDLETOWN
USER	443 Electronics Parkway	Liverpool, NY 13088	OF NEW LORY	Barton & Loguidice, D.P.C.
3/16" = 1'-0"	NY Date Scal Shee	ect Num	2089099 211/30/2 11/30/2 JST, 2024 SHOWN ber 1102 nber .008.00	025



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GENERAL NOTES:

1. REMOVE EXISTING DUCTWORK AND DUCTWORK INSULATION DOWN THROUGH ROOF UNLESS SPECIFICALLY SHOWN TO REMAIN.

<u>KEY NOTES:</u>

1 EXISTING GAS LINE TO BE DISCONNECTED FROM EXISTING ROOFTOP UNITS AND RECONNECTED TO NEW ROOFTOP UNITS.

IT IS A EDUC SPECI UNLE DIREC ENGI ARCHI AN ITE SHAL INCLU FOLLC OF SU DESC	VIOLATIO ATION LA AL PROVI SS THEY, TION OF A NEER, AI TECT, OR EMIN ANY TAMP OF, IN I	N OF THE NEW YOR AW, ARTICLE 145 SIONS, FOR ANY P ARE ACTING UND A LICENSED PROFES RCHITECT, LAND LAND SURVEYOR, TO (WAY. IF AN ITEM B A LICENSED PROFES P THE DOCUMEN NOTATION "ALTEF HEIR SIGNATURE, TH RATION, AND A SI I OF THE ALTER/	K STATE §7209 ERSON, ER THE SIONAL ISCAPE D ALTER EARING SIONAL IT AND RED BY HE DATE PECIFIC ATION. MUCH
CITY OF MIDDLETOWN	CONTRACT 1B - MECHANICAL CONSTRUCTION	ROOF HVAC DEMOLITION PLAN	ITY OF MIDDLETOWN
443 Electronics Parkway	Liverpool, NY 13088		Barton & Loguidice, D.P.C.
NY	S EXP	C J. HOR C J. HOR C J. HOR POFESSIONAL 11/30/20	* 43
Date	AUG	UST, 2024	
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CITY OF MIDDLETOWN	CONTRACT 1B - MECHANICAL CONSTRUCTION	BASEMENT HVAC PIPING PLAN	CITY OF MIDDLETOWN
443 Electronics Parkway	Liverpool, NY 13088		Barton & Loguidice, D.P.C.
NY Date Scale Shee Proje	S EXP. AUG AUG AS et Num Poct Nu 753	OF NEW 100 S J. HOR 0 089099 00FESSIONALE 11/30/2 UST, 2024 SHOWN 1104 mber 1104 mber 0.008.00	2025 4 01

<u>KEY NOTES:</u>

- (1) CORE DRILL THROUGH CEILING TO FLOOR ABOVE TO ACCOMODATE NEW PIPING. FIRE CAULK PENETRATIONS.
- (2) NEW BOILERS ARE FLOOR MOUTNED. PROVIDE 6" CONCRETE EQUIPMENT PAD BELOW BOILERS.
- ③ COORDINATE NEW COLD WATER MAKE-UP CONNECTION FOR BOILER SYSTEM WITH CONTRACT 1C.

3/16" = 1'-0"





	ROOFTOP UNIT SCHEDULE															
ITEM	SUPPLY AIR (CFM)	MIN. OUTSIDE AIR (CFM)	EXTERNAL STATIC (IN W.C.)	FAN DRIVE	Fan Motor HP	TOTAL COOLING CAP. (MBH)	SENSIBLE COOLING CAP. (MBH)	COOLING EAT (°F db/wb)	COOLING LAT (°F db/wb)	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	AIR TEMP RISE (°F db)	VOLTS	PHASE	MCA (AMPS)	DESIGN EQUIPMENT
RTU-1	3430	750	1.614	DIRECT	3.00	120	97.1	81.9/67.3	55.98/57.85	150	121.5	31.37	208	3	60.0	TRANE MODEL YHC120F
RTU-2	960	200	.75	DIRECT	0.75	36.58	27.30	82.5/67.6	56.16/55.14	60	48	46.5	208	3	24	TRANE MODEL YHC037E
RTU-3	1280	570	1.00	DIRECT	1.0	50.81	34.22	80.5/68.1	55.74/55.22	60	49	35.7	208	3	30	TRANE MODEL YHC047E
RTU-4	975	400	1.00	DIRECT	0.75	36.00	27.27	81.2/66.5	55.03/54.17	60	48	45.8	208	3	24	TRANE MODEL YHC037E
RTU-5	1495	450	1.00	DIRECT	1.0	54.06	39.37	83.4/68.8	59.02/57.39	80	64	43.5	208	3	30	TRANE MODEL YHC047E
RTU-6	1555	250	1.00	DIRECT	1.0	51.89	41.10	81.0/65.5	56.53/54.24	80	64	38.4	208	3	30	TRANE MODEL YHC047E

NOTES:

1. PROVIDE SMOKE DETECTOR AND CO₂ SENSOR IN RETURN DUCT MAIN, WITH ASSOCIATED WIRING AND CONTROLS.

2. PROVIDE ECONOMIZER FOR 100% OUTSIDE AIR MODE WITH DIFFERENTIAL ENTHALPY CONTROL AND TRANSMITTER, AND POWER EXHAUST.

3. PROVIDE WITH R410A TYPE REFRIGERANT, CRANKCASE HEATER AND LOW AMBIENT CONTROL.

4. PROVIDE MANUFACTURER SUPPLIED 24" ADAPTER CURB.

VARIABLE AIR VOLUME (VAV) SCHEDULE																
	10220				VAV	BOX					HOT WA	TER REH	EAT COIL			
TAG	UNIT	AREA SERVED	ZONE	MAX CFM	MIN. CFM	NECK SIZE (IN)	MAX AIR PD (IN WC)	LOAD (MBH)	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	FLOW RATE (GPM)	MAX WATER PD (FT H2O)	COIL ROWS	DESIGN BASIS
VAV-1	RTU-1	112	1	2000	570	12	0.69	31.71	150	130	55	106.3	3.18	0.56	2	TRANE VCWF12
VAV-2	RTU-1	102, 202, 205	2	850	150	8	0.66	8.86	150	130	55	108.38	0.87	0.07	2	TRANE VCWF08
VAV-3	RTU-1	103, 104, 105, 110, 111	3	580	105	8	0.36	6.43	150	130	55	111.44	0.64	0.04	2	TRANE VCWF08
VAV-4	RTU-3	113, 117, 118	4	530	105	8	0.31	6.43	150	130	55	111.44	0.64	0.04	2	TRANE VCWF08
VAV-5	RTU-3	122, 123, 124, 126	5	290	75	5	0.19	5.38	150	130	55	121.14	0.54	0.20	2	TRANE VCWF05
VAV-6	RTU-3	127, 128, 129, 130, 131, 132	6	460	150	6	0.53	9.22	150	130	55	111.69	0.92	0.52	2	TRANE VCWF06
VAV-7	RTU-4	134, 135	7	200	50	4	0.10	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04
VAV-8	RTU-4	133, 140, 142	8	400	225	6	0.43	12.2	150	130	55	104.99	1.22	0.86	2	TRANE VCWF06
VAV-9	RTU-4	136	9	200	50	4	0.10	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04
VAV-10	RTU-4	137	10	175	50	4	0.09	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04
VAV-11	RTU-5	203, 204, 206, 208	11	425	150	6	0.47	9.22	150	130	55	111.69	0.92	0.52	2	TRANE VCWF06
VAV-12	RTU-5	207	12	650	275	8	0.43	13.67	150	130	55	100.85	1.37	0.16	2	TRANE VCWF08
VAV-13	RTU-5	209, 210, 211, 212	13	420	75	6	0.46	5.38	150	130	55	121.14	0.54	0.20	2	TRANE VCWF08
VAV-14	RTU-6	215, 218	14	255	50	5	0.16	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF05
VAV-15	RTU-6	214	15	125	50	4	0.06	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04
VAV-16	RTU-6	213, 220	16	800	125	8	0.60	7.47	150	130	55	110.10	0.75	0.05	2	TRANE VCWF08
VAV-17	RTU-6	216	17	200	50	4	0.10	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04
VAV-18	RTU-6	217	18	175	50	4	0.09	3.98	150	134.06	55	128.39	0.50	0.18	2	TRANE VCWF04

NOTES:

1. PROVIDE INSULATED ACCESS DOOR WITHIN UNIT FOR INSPECTION AND SERVICE OF DAMPER

2.FURNISH AND INSTALL VAV UNIT, REHEAT COIL, PIPING, VALVES, ALL CONTROL EQUIPMENT (INCLUDING ACTUATOR, SENSORS & LOW VOLTAGE WIRING), AND SUPPORTS. 3. PROVIDED UNIT MOUNTED DISCONNECT

	DIFFUSER AND GRILLE SCHEDULE												
TYPE	DESCRIPTION	MAX SONES	BLOW PATTERN	FACE SIZE (IN)	NECK SIZE (IN)	AIR FLOW (CFM)	BASIS OF DESIGN						
SD-1	SUPPLY DIFFUSER	-	4-WAY	12 x 12	4Ø	0-70	TITUS TMS						
SD-2	SUPPLY DIFFUSER	19	4-WAY	24 x 24	6Ø	0-180	TITUS TMS						
SG-1	SUPPLY GRILLE	22	4-₩AY	14 x 14	12 x 12	0-500	TITUS 300RL						
RG-1	EGGCRATE RETURN GRILLE	20	-	24 x 24	-	0-650	TITUS 50F						
EG-1 EXHAUST GRILLE 19 - 10 x 8 8 x 6 0-175 TITUS													

REMARKS:

BALANCE ALL DUCT BRANCHES TO CFM VALUE SHOWN. 1.

REFER TO PLANS FOR QUANTITIES, AIR FLOW. ALL BRANCH DUCT CONNECTING DIFFUSER TO MAIN SHALL BE THE SAME SIZE AS THE DIFFUSER NECK. VERIFY MOUNTING FRAME. REFER TO REFLECTED CEILING PLAN FOR LOCATIONS AND CEILING TYPE. COORDINATE WITH OTHER CEILING MOUNTED EQUIPMENT.

PROVIDE WITH OPPOSED BLADE DAMPER, ADJUSTABLE WITHOUT DISASSEMBLY. 4.

PROVIDE FACTORY SUPPLIED PLENUM FOR LINEAR DIFFUSER. 5.

BOILER (B) SCHEDULE														
	LOCATION		ΝΑΧΙΝΛΙΙΝΛ	OUTPUT AT		WATER			RELIEF					
TAG		FUEL	INPUT (MBH)	MAX. CAPACITY (MBH)	FLOW RATE (GPM)	ENT./LVG. TEMP. (°F)	WATER CONTENT (GAL)	COMBUSTION EFFICIENCY	VALVE SETTING (PSI)	PHASE/ HZ	FULL LOAD AMPS	DESIGN EQUIPMENT		
B-1	BASEMENT	NG	110	101	7.5	120/150	2.5	95.1%	30	120/1	15	WEIL MCLAIN EVG-110		
B-2	BASEMENT	NG	110	101	7.5	120/150	2.5	95.1%	30	120/1	15	WEIL MCLAIN EVG-110		

NOTES: 1. PROVIDE COMPLETE WITH LOW-WATER CUTOFF, MANUAL RESET HIGH LIMIT AQUASTAT, PRESSURE/TEMPERATURE GAUGE AND DRAIN VALVE.

2. PROVIDE COMPLETE WITH ASME COMPLIANT PRESSURE RELIEF VALVE DESIGNED FOR THE BOILER OUTPUT CAPACITY.

3. PROVIDE DISCONNECT WITH THERMAL OVERLOAD PROTECTION.

4. HVAC CONTRACT SHALL FURNISH AND INSTALL UNIT AND ALL CONTROL EQUIPMENT, INCLUDING SENSORS, LOW VOLTAGE WIRING AND CONDUIT. LINE VOLTAGE WIRING (120V AND ABOVE) BY ELECTRICAL CONTRACT.

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	PUMP SCHEDULE										
ТАС		MOTOR			PUMP		FLOW	HEAD	TVDE		
TAG	SERVICE	HP	VOLTS	PHASE	RPM	FLOID	(GPM)	(FT WC)	TIFL		
BP-1	BOILER B-1	1/8	115	1	3250	WATER	7.2	10	INLINE	TACO ECM OO15e	
BP-2	BOILER B-2	1/8	115	1	3250	WATER	7.2	10	INLINE	TACO ECM OO15e	
P-1	HOT WATER LOOP	1/2	115	1	1725	WATER	18	20	INLINE (CLOSE COUPLED)	BELL & GOSSETT e-90 1.25AAB	
P-2	HOT WATER LOOP	1/2	115	1	1725	WATER	18	20	INLINE (CLOSE COUPLED)	BELL & GOSSETT e-90 1.25AAB	

NOTES:

PROVIDE WITH COMBINATION MOTOR STARTER/DISCONNECT AND INTERLOCK OPERATION WITH ASSOCIATED BOILER. 1.

RATED FOR 125PSI MAXIMUM WORKING PRESSURE AND 225°F MAXIMUM OPERATING TEMPERATURE. 2.

FURNISH AND INSTALL UNIT AND ALL CONTROL EQUIPMENT, INCLUDING SENSORS , LOW VOLTAGE WIRING AND CONDUIT. 3.

EXPANSION TANK (ET) SCHEDULE										
TAG	CONN. SIZE (IN)	SYSTEM	TANK TYPE	TANK VOLUME (GAL)	TANK ACCEPTANCE (GAL)	CHARGE PRESSURE (PSIG)	ORIENTATION	BASIS OF DESIGN		
ET-1	3/4	HOT WATER	BLADDER	10	10	12	VERTICAL, FLOOR MOUNTED	BELL & GOSSETT B-35		

NOTES:

1. TANK SHALL BE STEEL CONSTRUCTION WITH HEAVY DUTY BUTYL RUBBER DIAPHRAGM & FORGED STEEL CONNECTION FITTINGS. 2. EXPANSION TANK TO BE DESIGNED, CONSTRUCTED AND STAMPED PER ASME SECTION VIII, DIVISION 1. 3. TANK SHALL BE RATED FOR MAXIMUM WORKING PRESSURE OF 125 PSIG AND MAXIMUM WORKING TEMPERATURE OF 240°F.

EXHAUST FAN SCHEDULE											
TAG	AREA SERVED		CEM	E.S.P.			MOTOR				ΝΟΤΕς
IAU		LOCATION	CLIN	(IN W.G.)	DIVIVE		WATTS	VOLTS	PHASE		
EF-1	119, 120, 121	ROOF	150	.35	DIRECT	850	13	115	1	GREENHECK G-070-D	1,3,4
EF-2	127, 128, 129	ROOF	375	.35	DIRECT	850	13	115	1	GREENHECK G-095-VG	1,3,4
EF-3	108, 109	ROOF	100	.25	DIRECT	1,550	13	115	1	GREENHECK G-060-D	1,3,4
EF-4	138	CEILING	50	.25	DIRECT	850	13	115	1	GREENHECK SP-A70	1,2,4
EF-5	139	CEILING	90	.25	DIRECT	950	17	115	1	GREENHECK SP-A70	1,2,4
EF-6	140	CEILING	50	.25	DIRECT	850	13	115	1	GREENHECK SP-A70	1,2,4
EF-7	142	CEILING	50	.25	DIRECT	850	13	115	1	GREENHECK SP-A70	1,2,4
EF-8	203	CEILING	110	.25	DIRECT	1,100	21	115	1	GREENHECK SP-A70	1,2,4
EF-9	204	CEILING	170	.25	DIRECT	1,400	48	115	1	GREENHECK SP-A70	1,2,4
EF-10	211	CEILING	50	.25	DIRECT	850	13	115	1	GREENHECK SP-A70	1,2,4
EF-11	220	CEILING	50	.25	DIRECT	850	13	115	1	GREENHECK SP-A70	1,2,4

NOTES:

1. PROVIDE COMBINATION STARTER/DISCONNECT SWITCH WITH THERMAL OVERLOAD PROTECTION.

2. PROVIDE BACKDRAFT DAMPER, ALUMINUM BIRD SCREEN, WALL COLLAR, MOTORIZED SHUTTER AND SHUTTER GAURD. 3. PROVIDE BACKDRAFT DAMPER, ALUMINUM BIRD SCREEN AND MANUFACTURERS ROOF CURB.

4. FAN SHALL RUN CONTINUOUSLY WHILE BUILDING IS OCCUPIED.

	ELECTRIC UNIT HEATER (UH) SCHEDULE											
TAG	LOCATION	MOUNTING TYPE	CAPACITY (KW)	VOLTS	PHASE	FULL LOAD AMPS	AIR FLOW (CFM)	DESIGN EQUIPMENT				
UH-1	BASEMENT	CEILING	3	208	1	14.4	380	MODINE HER 30				
UH-2	BASEMENT	CEILING	5	208	1	24.5	380	MODINE HER 50				
UH-2	BASEMENT	CEILING	5	208	1	24.5	380	MODINE HER 50				

<u>NOTES:</u>

1. FURNISH WITH FUSED DISCONNECT SWITCH.

2. PROVIDE MOUNTING BRACKETS AND SUPPORTS AS NECESSARY, FINISH TO MATCH UNIT HOUSING. 3. PROVIDE UNIT MOUNTED THERMOSTAT.

CABINET UNIT HEATER (CUH) SCHEDULE											
ТАС	AIR FLOW	CAP.		TEMP.	NO. OF	ELEC.					
TAG	(CFM)	(BTUH)	NVV	RISE (°F)	FANS	VOLTS	PHASE	DASIS OF DESIGN			
CUH-1	100	6,820	4.8	50	1	208	1	QMARK LFK488F			
CUH-2	100	5,115	4.8	50	1	208	1	QMARK LFK488F			
CUH-2	100	5,115	4.8	50	1	208	1	QMARK LFK488F			
NOTES											

1. PROVIDE UNIT MOUNTED TAMPERPROOF THERMOSTAT AND DISCONNECT SWITCH. 2. PROVIDE WITH UNIT MOUNTED DAY/NIGHT RELAY AND SURFACE MOUNTING ADAPTER.

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