ENE	RGY RECOVERY VE	NTIL	ATOF	RS											
MADIC	MODEL NO			SUPPLY	FAN				RETURN	FAN		CO	NTROLS	WT	DEMARKO
MARK	MODEL NO.	CFM	ESP	HP	MCA	VOLTS	CFM	ESP	HP	MCA	VOLTS	MCA	VOLTS	LBS	REMARKS
ERV-1	RENEWAIRE HE3XINV	2255	1.5"	5.0	35.9	208 3PH	2400	1.5"	5.0	35.9	208 3PH	4.0	120 1PH	750	SEE (1-7) BELOW
ERV-2	RENEWAIRE HE2XINH	1690	1.5"	2.0	15.0	208 3PH	1890	1.5"	2.0	15.0	208 3PH	4.0	120 1PH	450	SEE (1-7) BELOW ALTERNATE 1
IŚOLATION	T EXCHANGER SCHEDULE FOR PERFOI DAMPERS ON BOTH AIR STREAMS 5) C CUPIED MODE.			,					,						,

AIR-	TO-AIR HEAT EXCH	ANGERS	6												
MARK	MODEL NO.	TYPE	SUPP	LY (SUMN	ЛER)	EXHA	JST (SUM	MER)	SUPF	PLY (WINT	ER)	EXHA	UST (WIN	TER)	REMARKS
IVIARK	MODEL NO.	ITPE	CFM	EAT	LAT	CFM	EAT	LAT	CFM	EAT	LAT	CFM	EAT	LAT	KEWAKKS
ERV-1	RENEWAIRE G5 = J	FIXED PLATE ENTHALPIC	2255	95°F	80°F	2400	75°F	-	2255	-20°F	44°F	2400	70°F	-	NONE
ERV-2	RENEWAIRE G5 = J	FIXED PLATE ENTHALPIC	1690	95°F	80°F	1890	75°F	-	1690	-20°F	44°F	1890	70°F	-	ALTERNATE 1

VRV	' HEAT RECOVERY L	JNITS													4800 FT ELEVATION
MARK	MODEL NO.	NOMINAL	CONN	COC	OLING	HEA	TING	R	EFRIGER	ANT PIPIN	IG		ELECTRICAL	-	REMARKS
WARK	WODEL NO.	SIZE	RATIO	EAT	SMBH	EAT	HMBH	TYPE	LIQ	SUC	HI/LO	MCA	VOLTS	RUN A	KLIWIAKKS
HRU-1	DAIKIN REYQ168TTJU	14 TONS	126.8%	95° F	172.0	35° F	149.4	410A	3/4	1-1/8	7/8	61.9	208 3PH	41.8	SEE (1-6) BELOW
HRU-2	DAIKIN REYQ168TTJU	14 TONS	112.5%	95° F	164.8	35° F	147.8	410A	5/8	1-1/8	7/8	61.9	208 3PH	41.8	SEE (1-6) BELOW
STATIC FAN	A SINGLE BLDG-WIDE CONTROL SYSTE N FOR DUCTED EXHAUST 3) UNITS REC NTS OF THE SYSTEM														•

			UNIT	F.A	١N		COOLING	<u> </u>	HEA ⁻	TING	PIP	ING	ELE	CTRICAL	OSA	
MARK	MODEL NO.	SYSTEM	CONFIG	SCFM	ESP	EDB	EWB	SMBH	EAT	НМВН	LIQ	GAS	MCA	VOLTS	CFM	REMARKS
FC-1	DAIKIN FXMQ30PBVJU	HRU-1	CEILING CONCEALED	1100	0.55"	76° F	65° F	19.8	62° F	39.6	3/8"	5/8"	2.8	208 1PH	300	SEE (1-8) BELOW
FC-2	DAIKIN FXMQ18PBVJU	HRU-1	CEILING CONCEALED	635	0.55"	76° F	65° F	12.9	62° F	23.3	1/4"	1/2"	1.6	208 1PH	140	SEE (1-8) BELOW
FC-3	DAIKIN FXMQ18PBVJU	HRU-1	CEILING CONCEALED	635	0.55"	76° F	65° F	12.9	62° F	23.3	1/4"	1/2"	1.6	208 1PH	140	SEE (1-8) BELOW
FC-4	DAIKIN FXMQ18PBVJU	HRU-1	CEILING CONCEALED	635	0.55"	76° F	65° F	12.9	62° F	23.3	1/4"	1/2"	1.6	208 1PH	140	SEE (1-8) BELOW
FC-5	DAIKIN FXMQ18PBVJU	HRU-1	CEILING CONCEALED	635	0.55"	76° F	65° F	12.9	62° F	23.3	1/4"	1/2"	1.6	208 1PH	140	SEE (1-8) BELOW
FC-6	DAIKIN FXMQ12PBVJU	HRU-1	CEILING CONCEALED	450	0.55"	76° F	65° F	8.1	62° F	15.8	1/4"	1/2"	1.4	208 1PH	170	SEE (1-8) BELOW
FC-7	DAIKIN FXMQ24PBVJU	HRU-1	CEILING CONCEALED	690	0.55"	76° F	65° F	15.7	62° F	31.4	3/8"	5/8"	1.8	208 1PH	280	SEE (1-8) BELOW
FC-8	DAIKIN FXMQ24PBVJU	HRU-1	CEILING CONCEALED	690	0.55"	76° F	65° F	15.7	62° F	31.4	3/8"	5/8"	1.8	208 1PH	220	SEE (1-8) BELOW
FC-9	DAIKIN FXMQ24PBVJU	HRU-1	CEILING CONCEALED	690	0.55"	76° F	65° F	15.7	62° F	31.4	3/8"	5/8"	1.8	208 1PH	280	SEE (1-8) BELOW
FC-10	DAIKIN FXMQ24PBVJU	HRU-1	CEILING CONCEALED	690	0.55"	76° F	65° F	15.7	62° F	31.4	3/8"	5/8"	1.8	208 1PH	220	SEE (1-8) BELOW
FC-11	DAIKIN FXMQ12PBVJU	HRU-1	CEILING CONCEALED	450	0.55"	76° F	65° F	8.1	62° F	15.8	3/8"	5/8"	1.4	208 1PH	225	SEE (1-8) BELOW
FC-12	DAIKIN FXMQ48PBVJU	HRU-2	CEILING CONCEALED	1380	0.55"	76° F	65° F	30.1	62° F	62.9	3/8"	5/8"	3.4	208 1PH	520	SEE (1-8) BELOW ALTERNATE 1
FC-13	DAIKIN FXMQ15PBVJU	HRU-2	CEILING CONCEALED	560	0.55"	76° F	65° F	10.0	62° F	19.2	1/4"	1/2"	1.5	208 1PH	100	SEE (1-8) BELOW ALTERNATE 1
FC-14	DAIKIN FXMQ15PBVJU	HRU-2	CEILING CONCEALED	560	0.55"	76° F	65° F	10.0	62° F	19.2	1/4"	1/2"	1.5	208 1PH	100	SEE (1-8) BELOW ALTERNATE 1
FC-15	DAIKIN FXMQ24PBVJU	HRU-2	CEILING CONCEALED	690	0.55"	76° F	65° F	15.7	62° F	31.4	3/8"	5/8"	1.8	208 1PH	100	SEE (1-8) BELOW ALTERNATE 1
FC-16	DAIKIN FXMQ30PBVJU	HRU-2	CEILING CONCEALED	1100	0.55"	76° F	65° F	19.8	62° F	39.6	3/8"	5/8"	2.8	208 1PH	380	SEE (1-8) BELOW ALTERNATE 1
FC-17	DAIKIN FXMQ15PBVJU	HRU-2	CEILING CONCEALED	560	0.55"	76° F	65° F	10.0	62° F	19.2	1/4"	1/2"	1.5	208 1PH	100	SEE (1-8) BELOW ALTERNATE 1
FC-18	DAIKIN FXMQ12PBVJU	HRU-2	CEILING CONCEALED	450	0.55"	76° F	65° F	8.1	62° F	15.7	1/4"	1/2"	1.4	208 1PH	170	SEE (1-8) BELOW ALTERNATE 1
FC-19	DAIKIN FXMQ30PBVJU	HRU-2	CEILING CONCEALED	1100	0.55"	76° F	65° F	19.8	62° F	39.6	3/8"	5/8"	2.8	208 1PH	220	SEE (1-8) BELOW ALTERNATE 1

REI	FRIGE	ERANT I	BRANCH SELECTOR B	OXES	 }			4800 FT ELEVATION
MARK	SYSTEM	HEAT PUMP(S)	MODEL NO.	CONN. COOL'G MBH	CONN. HEAT'G MBH	VOLTS	MCA	REMARKS
BS-1	HRU-1	SUB-BASEMENT	DAIKIN BSQ36TVJ	22.2	31.4	208 1PH	0.1	BASE BID, FULL PORT BALL VALVES UP AND DOWN STREAM, SEE MFGR
BS-2	HRU-1	BASEMENT	DAIKIN BS6Q54TVJ	78.0	108.9	208 1PH	0.6	BASE BID, FULL PORT BALL VALVES UP AND DOWN STREAM, SEE MFGR
BS-3	HRU-1	1st FLOOR	DAIKIN BS6Q54TVJ	100.2	141.5	208 1PH	0.6	BASE BID, FULL PORT BALL VALVES UP AND DOWN STREAM, SEE MFGR
BS-4	HRU-2	2nd FLOOR	DAIKIN BS4Q54TVJ	100.3	140.9	208 1PH	0.4	ALTERNATE #1, FULL PORT BALL VALVES UP AND DOWN STREAM, SEE MFGR
BS-5	HRU-2	2nd FLOOR	DAIKIN BS4Q54TVJ	75.2	106.0	208 1PH	0.4	ALTERNATE #1, FULL PORT BALL VALVES UP AND DOWN STREAM, SEE MFGR

WA	STE WATER PUN	/IP											
MARK	MODEL NO.	FLOW	WPD	PUMP	FLUID		МОТС)R	PIPE	SIZE	AREA	CONTROL	REMARKS
IVIAIXIX	IVIODEL INO.	GPM	FT HD	TYPE	MEDIA	HP	RPM	VOLTS	SUC	DIS	SERVED	CONTROL	TLIMATING
SP-1	LIBERTY PUMPS SPAC-457	45	10	EFFLUENT	GREY WATER	1/2	-	120 1PH	-	2"	SUB BASEMENT	FLOAT SWITCH	SEE (1-5) BELOW
,	PRE-PACKAGED SYSTEM WITH VERTIC. I RINGS AS REQ'D TO MAKE FLUSH WIT					THYLE	NE PIT AN	D COVER 2) 3	-YEAR WA	ARRANTY	3) CHECK VA	ALVE AND SHUT	OFF VALVE BY MC 4) ADD

EXH	HAUST FANS											
MARK	MODEL NO.	AREA SERVED	ACFM	BLOWER ESP	RPM	DE DRIVE	SCRIPTION TYPE	HP	NOTOR VOLTS	DAMPER	CONTROL	REMARKS
			ACTIVI	ESF	Krivi	DIVIVE	IIFE	ПР	VOLIS			
EF-1	COOK GN-642	ELEVATOR ROOM	400	.25"	1500	DIRECT	INLINE	112W	120 1PH	BACK DRAFT	COOLING STAT	SEE (1-5) BELOW
1) SEAL ALI	L DUCT PENETRATIONS WITH A FIRE SA	FE CAULK 2) PREV	WIRED FAN	SPEED (CONTROL	LER 3) SI	JPPORT WITH VI	IBRATION	ISOLATION 4) PREWIREI	D DISCONNECT	5) 120V COOLING STAT

MARK	FIXTURE	MFGR, MODEL & DESCRIPTION		CONNI	ECTIONS		MOUNTING
IVIAIN	TIXTOIL	WII ON, MODEL & DECOMI TION	CW	HW	DRAIN	VENT	HEIGHT
WC-1	FLOOR MOUNT STD WATER CLOSET	KOHLER WELLCOMME MODEL K-4350-96, FLOOR MOUNT, 14.75" RIM HT, TOP SPUD, BISQUE OPEN FRONT SEAT. SLOAN ROYAL MODEL 111 SFSM FLUSHOMETER, BATTERY POWERED, SENSOR OPERATED, INFRARED UNIT, 1.6 GPF.	1"	-	4"	2"	15" RIM HT
WC-2	FLOOR MOUNT ADA WATER CLOSET	KOHLER HIGHLINE MODEL K-4405-96, FLOOR MOUNT, 17.125" RIM HT, TOP SPUD, BISQUE OPEN FRONT SEAT. SLOAN ROYAL MODEL 111 SFSM FLUSHOMETER, BATTERY POWERED, SENSOR OPERATED, INFRARED UNIT, 1.6 GPF.	1"	-	4"	2"	17.0" RIM HT
UR-1	WALL MOUNT STD URINAL	KOHLER DARFIELD MODEL K-5024-T-96, WALL HUNG, TOP SPUD, BISQUE, WITH STRAINER. SLOAN ROYAL MODEL 186 SFSM FLUSHOMETER, BATTERY POWERED, SENSOR OPERATED, INFRARED UNIT, 1.0 GPF.	3/4"	-	2"	1-1/2"	24" RIM HT
UR-2	WALL MOUNT ADA URINAL	KOHLER DARFIELD MODEL K-5024-T-96, WALL HUNG, TOP SPUD, BISQUE, WITH STRAINER. SLOAN ROYAL MODEL 186 SFSM FLUSHOMETER, BATTERY POWERED, SENSOR OPERATED, INFRARED UNIT, 1.0 GPF.	3/4"	-	2"	1-1/2"	15" RIM HT
LV-1	DOUBLE SINK CONSOLES ADA LAVATORY	RENOVATOR SUPPLY, INC ITEM ID #12106 WHITE GRADE A VITREOUS CHINA CONSOLE DOUBLE SINK SPINDLE LEG, WALL MOUNT, 8" CENTERS. KOHLER (2) ARTIFACTS FAUCET AND HANDLES, POLISHED CHROME, MODEL K-72760 AND K-98068-9M, WITH DEARBORN BRASS LAVGUARD INSULATION KIT AND CHROME OFFSET GRID STRAINER.	1/2"	1/2"	2"	1-1/2"	34" RIM HT
LV-2	WALL MOUNT ADA LAVATORY	AMERICAN STANDARD LUCERNE MODEL 0355.012, WALL-HUNG, 4" CENTERS, WITH BACKSPLASH. DELTA FAUCET MODEL 22C-541, SINGLE LEVER CENTERSET, OFFSET GRID DRAIN, WITH TRUEBRO LAVGUARD INSULATION KIT.	1/2"	1/2"	2"	1-1/2"	PER ARCHITECT
DF-1	ADA WATER COOLER	ELKAY MODEL EZSTL8WSLK, ELECTRIC COOLER, TWO LEVEL, BARRIER FREE FRONT/SIDE TOUCH CONTROLS, BOTTLE FILLING STATION. INSTALL SERVICE VALVE BENEATH CABINET.	1/2"	-	2"	1-1/2"	31" RIM HT
LT-1	LAUNDRY TUB	FIAT MODEL FL1, MOLDED STONE, SINGLE BASIN, STEEL ANGLE LEGS. FIAT FAUCET MODEL A-1, DECK TYPE. SOLIDS INTERCEPTOR Z1180	3/4"	3/4"	3"	1-1/2"	FLOOR
MB-1	MOP BASIN	FIAT MODEL MSB-2424, MOLDED STONE BASIN. DELTA FAUCET MODEL 28C2-383, WALL-MOUNT WITH INTEGRAL CHECK STOPS, VACUUM BREAKER, HOSE AND BRACKET.	3/4"	3/4"	3"	1-1/2"	FLOOR MOUNT

	ENTE DE	MEOD MODEL & RECORDITION		CONNE	ECTIONS		MOUNTIN
MARK	FIXTURE	MFGR, MODEL & DESCRIPTION	CW	HW	DRAIN	VENT	HEIGHT
FD	FLOOR DRAIN	JAY R SMITH SERIES 2005, ROUND TOP, WITH FLASHING COLLAR AND NICKEL BRONZE ADJUSTABLE STRAINER. PRECISE LOCATIONS AS PER ARCHITECT. (2" SIZE U.N.O.)	-	-	2"	1-1/2"	FLOOR
FS	FLOOR SINK	JAY R SMITH SERIES 3420, ACID RESISTANT COATED, 6" DEEP, 12" SQUARE TOP WITH 1/2 ARC GRATE. PRECISE LOCATIONS AS PER ARCHITECT. (3" SIZE U.N.O.)	-	-	3"	1-1/2"	FLOOR
WH	WALL HYDRANT	JAY R SMITH SERIES 5609QT, RECESSED, QUARTER-TURN, NON-FREEZE, WITH VACUUM BREAKER AND LOOSE KEY STOP. COLOR BY ARCHITECT	3/4"	-	-	-	EXISTIN LOCATIO
SS	SPRINKLER SUPPLY	WOODFORD MODEL 32, COMBINATION CASTING, FREEZELESS, WITH LOOSE KEY STOP. SLEEVE EXTERIOR WALL AND CAULK SEAL PENETRATION.	1"	-	-	-	12" AFC
FCO	FLOOR CLEAN-OUT	JAY R SMITH 4020 SERIES, ROUND ADJUSTABLE NICKEL BRONZE TOP.	-	-	LINE	-	FLOOR
wco	WALL CLEAN-OUT	JAY R SMITH 4530 SERIES, NO-HUB TEE WITH STAINLESS STEEL COVER.	-	-	LINE	-	18" AF
GCO	EXTERIOR CLEAN-OUT	JAY R SMITH 4220 SERIES, ROUND CONCRETE ENCASED CAST IRON COVER.	-	-	LINE	-	GRAD
НВ	HOSE BIBB	JAY R SMITH SERIES 5673, WITH ANTI-SIPHON VACUUM BREAKER. SECURE FIRMLY WITHIN WALL OR EXPOSED ON WALL WITH UNI-STRUT.	3/4"	-	-	-	24" AF
LV	TEMP LIMITING VALVE	POWERS E480 UNDER-LAV OR LM495 WITH LINE SIZE CONNECTIONS FOR GROUPS. ASSE 1070, LEAD-FREE, ALL SINKS AND LAVATORIES (SHOWN OR NOT) UNLESS NOTED OTHERWISE.	VARIES	VARIES	-	-	UNDER S
TS	TRAP SEAL	JAY R SMITH SERIES 2692, ASSE 1072, BARRIER TYPE, FLOOR DRAIN TRAP SEALER. ALL FLOOR DRAINS UNLESS NOTED OTHERWISE.	VARIES	VARIES	-	-	PER MF
SA	SHOCK ARRESTOR	PRECISION PLUMBING PRODUCTS SC SERIES, COPPER WITH BRASS PISTON, SIZED AND INSTALLED PER MFGR. PROVIDE ACCESS DOORS WHERE REQ'D.	VARIES	VARIES	-	-	PER MF
AC	APPLIANCE CONNECTION	GUY GREY MODEL MIB-1, WHITE POWDER COAT METAL BOX WITH BOTTOM OR TOP 1/4 TURN SERVICE STOP AS REQ'D. CONFIRM INSTALLATION HEIGHT.	1/2"	-	-	-	PER MF
AD	ACCESS DOOR	PRECISION PLUMBING PRODUCTS D OR F SERIES, PRIMED STEEL WITH CYLINDER LOCK, 12/12 MIN SIZE, FIRE-RATED WHERE REQ'D. GIVE TO GC FOR INSTALLATION IN WALLS OR CEILINGS FOR ACCESS TO DEVICES AS NEEDED (WHETHER SHOWN OR NOT).	-	-	-	-	FIELD LOC

4) COORDINATE RIM ELEVATIONS AND MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS AND REQUEST WRITTEN CLARIFICATION WHERE SPECIFICATIONS DIFFER

MARK	MODEL NO.	WATTS	TYPE	ACFM	RISE	STAGES	VOLTS	SIZE	CONTROL	MOUNTING HEIGHT	REMARKS
ERV-EH-1	RENEWAIRE EK-SERIES	10 kW	DUCT HEATER	2255	15° F	TWO	208 3PH	20/14	DUCT STAT	SUPPLY DUCT	SEE (1-5) BELOW
ERV-EH-2	RENEWAIRE EK-SERIES	8 kW	DUCT HEATER	1600	15° F	TWO	208 3PH	20/12	DUCT STAT	SUPPLY DUCT	SEE (1-5) BELOW ALTERNATE 1
UH-1	RAYWALL UH SERIES	30 kW	UNIT HEATER	1350	70° F	TWO	208 3PH	24/17	T-STAT	CEILING	SEE (5-9) BELOW
UH-2	RAYWALL UH SERIES	30 kW	UNIT HEATER	1350	70° F	TWO	208 3PH	24/17	T-STAT	CEILING	SEE (5-9) BELOW
UH-3	RAYWALL UH SERIES	30 kW	UNIT HEATER	1350	70° F	TWO	208 3PH	24/17	T-STAT	CEILING	SEE (5-9) BELOW
UH-4	RAYWALL UH SERIES	3300	UNIT HEATER	400	26° F	SINGLE	208 3PH	20/11	T-STAT	CEILING	SEE (5-9) BELOW
EH-3	RAYWALL AFA SERIES	2250	WALL HEATER	175	-	SINGLE	208 1PH	14/20	INTEGRAL STAT	12-IN AFF	SEE (10-13)(15) BELOW
EH-4	OUELLET ODI SERIES	1250	DRAFT BARRIER	-	-	SINGLE	208 1PH	8 FT	INTEGRAL STAT	FLOOR	SEE (13-18) BELOW

GRII	LLES, REGISTERS, A	ND DIFF	USERS	5				
MARK	MODEL NO.	TYPE	THROW	FRAME	FINISH	MOUNT	DAMPER	REMARKS
S1	KRUEGER AF5880	SUPPLY REGISTER	4-WAY	ALUM	WHITE	SURFACE	OBDE	3/4" SPACING, DOUBLE DEFLECTION, VERTICAL FRONT BLADES, PAINT INSIDE OF SUPPLY DUCTS BLACK,
S 3	KRUEGER SHRPLQ	CEILING DIFFUSER	4-WAY	ALUM	WHITE	SURFACE	NONE	24x24 SURFACE MOUNT PANEL, 1 SLOT, MUD RING
R1	KRUEGER AFC S85	RETURN GRILLE	N/A	ALUM	WHITE	SURFACE	NONE	3/4" SPACING AND 30° DEFLECTION, FILTER FRAME MOUNTING, 1/4 TURN FASTENER, 1" FILTERS, PAINT INSIDES OF RETURN DUCT BLACK
(R2)	KRUEGER EG10	RETURN GRILLE	N/A	ALUM	WHITE	T-BAR	NONE	FILTER FRAME MOUNTING, 1/4 TURN FASTENER, 1" FILTERS, PAINT INSIDES OF RETURN DUCT BLACK
E1	KRUEGER AFC S85	EXHAUST REGISTER	N/A	ALUM	WHITE	SURFACE	OBDE	3/4" SPACING AND 30° DEFLECTION, FILTER FRAME MOUNTING, 1/4 TURN FASTENER, 1" FILTERS, PAINT INSIDES OF RETURN DUCT BLACK
(T1)	KRUEGER AFC S85	TRANSFER GRILLE	N/A	ALUM	WHITE	SURFACE	OBDE	MOUNT DIRECTLY TO DUCT
BRANCH DU	UCT SIZES: 1) FULLSIZE PLENUM BOXES	S TO GRILLES A	ND REGISTER	RS 2) 50-125 C	CFM = 6"Ø 3)	125-250 CFM =	= 8"Ø 4) 250-40	00 CFM = 10"Ø 5) 400-650 CFM = 12"Ø

ELE	VATOR PUMP											
MADK	MODEL NO	FLOW	WPD	PUMP	FLUID		MOTO	OR	PIPE	SIZE	CONTROL	REMARKS
MARK	MODEL NO.	GPM	FT HD	TYPE	MEDIA	HP	RPM	VOLTAGE	SUC	DIS	CONTROL	KLIVIANNO
EP-1	LIBERTY ELV-280	50	14	ELEVATOR SUMP	WASTE WATER	0.50	1750	120 1PH	N/A	1.5"	FLOAT SWITCH	SEE (1-4) BELOW
,	CKAGED ELEVATOR SUMP PUMP SYSTE								TH AUXILIA	RY CONTA	CTS 2) MOUNT C	CONTROL PANEL AND ALARM IN

GENERAL MECHANICAL NOTES

- CONTRACTORS SHALL COMPLY WITH ALL STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES.
- 2. MATERIALS SHALL CONFORM TO STANDARDS PRESCRIBED IN LOCALLY ADOPTED CODES AND BE APPROVED FOR USE BY THE AUTHORITY HAVING JURISDICTION.
- EQUIPMENT SHALL BE LISTED, LABELED, AND INSTALLED IN ACCORDANCE WITH THE MFGR'S INSTALLATION INSTRUCTIONS.
- SECURE AND PAY FOR ALL PERMITS, FEES, TAXES, INSPECTIONS, AND UTILITY COSTS. CONNECTIONS TO UTILITIES SHALL BE IN ACCORDANCE WITH THE LOCAL UTILITY.
- CONTRACTORS ARE TO EXAMINE THE SITE AND DOCUMENTS OF OTHER TRADES AND BECOME FAMILIAR WITH THE FULL SCOPE OF WORK PRIOR TO FABRICATING MATERIALS.
- DRAWINGS ARE DIAGRAMMATIC REPRESENTING GENERAL ARRANGEMENT OF THE WORK. ALL DIMENSIONS SHALL BE VERIFIED ON THE JOB SITE.
 SCHEMATIC DIAGRAMS DENOTE EQUIPMENT RELATIONSHIPS ONLY. SEE FLOOR PLANS
- FOR MAJOR EQUIPMENT LOCATIONS.

 CONTRACTORS SHALL BE RESPONSIBLE FOR EXACT FITTING COUNTS, LENGTH OF MATERIAL, OFFSETS REQUIRED, CLEARANCES, AND AN ORGANIZED FIELD INSTALLATION.
- DUCT SIZES SHOWN AND NOTED ON THE DRAWINGS INDICATE CLEAR INSIDE DIMENSIONS UNLESS NOTED OTHERWISE.



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DESIGN COND	ITIONS	4800 FT ELEVATION
SUNDANCE, WY	INSIDE	OUTSIDE
SUMMER	75° F	95° F
WINTER	70° F	-10° F

BLDG GAS LOAD:	NOT APPLICABLE
	NOT ALL LIONDE

ABBR	IDENTIFICATION	ABBR	IDENTIFICATION	ABBR	IDENTIFICATION	ABBR	IDENTIFICATION
ABV	ABOVE	EA	EXHAUST AIR	IAQ	INDOOR AIR QUALITY	RH	RELATIVE HUMIDITY
ACH	AIR CHANGES PER HOUR	EAT	ENTERING AIR TEMP	LWT	LEAVING WATER TEMP	RPM	REVOLUTIONS PER MINUTE
AD	ACCESS DOOR	EER	ENERGY EFF RATING	MAT	MIXED AIR TEMP	RTU	ROOFTOP UNIT
ADJ	ADJUSTABLE	EFF	EFFICIENCY	MBH	THOUSAND BTU PER HOUR	SA	SUPPLY AIR
AFF	ABOVE FINISHED FLOOR	EC	ELECTRICAL CONTRACTOR	MFGR	MANUFACTURER	SAT	SUPPLY AIR TEMP
AFG	ABOVE FINISHED GRADE	EXT'G	EXISTING	MC	MECHANICAL CONTRACTOR	SCFM	CFM AT SEA LEVEL
AHU	AIR HANDLING UNIT	ESP	EXTERNAL STATIC PRESS	MCA	MIN CIRCUIT AMPACITY	SMBH	SENSIBLE MBH
APD	AIR PRESSURE DROP	EWT	ENTERING WATER TEMP	MAX	MAXIMUM	STAT	THERMOSTAT
AV	AIR VENT	FLA	FULL LOAD AMPS	MIN	MINIMUM	STD	STANDARD
ACFM	CFM AT ALTITUDE	FLR	FLOOR	NA	NOT APPLICABLE	TBD	TO BE DETERMINED
BFC	BELOW FINISHED CEILING	FFE	FINISHED FLOOR ELEV	NC	NOISE CRITERIA	TEMP	TEMPERATURE
BLDG	BUILDING	FPI	FINS PER INCH	NIC	NOT IN CONTRACT	THRU	THROUGH
BLW	BELOW	FPM	FEET PER MINUTE	OA	OUTSIDE AIR	TSP	TOTAL STATIC PRESSURE
BTU	BRITISH THERMAL UNIT	GAL	GALLONS	OAT	OUTSIDE AIR TEMP	TYP	TYPICAL
BTUH	BTU PER HOUR	GC	GENERAL CONTRACTOR	OD	OUTSIDE DIAMETER	TD	TRANSFER DUCT
BTM	BOTTOM	GPH	GALLONS PER HOUR	PC	PLUMBING CONTRACTOR	UCD	UNDERCUT DOOR
CFM	CUBIC FEET PER MINUTE	GPM	GALLONS PER MINUTE	PSI	LBS PER SQUARE INCH	UNO	UNLESS NOTED OTHERWISE
CLG	CEILING	HMBH	HEATING MBH	PSIA	PSI ABSOLUTUE	VAV	VARIABLE AIR VOLUME
CTE	CONNECTION TO EXT'G	HT	HEIGHT	PSIG	PSI GUAGE	VSD	VARIABLE SPEED DRIVE
DDC	DIRECT DIGITAL CONTROL	ID	INSIDE DIAMETER	RA	RETURN AIR	WPD	WATER PRESSURE DROP
DIA	DIAMETER	LBS	POUNDS	REQ'D	REQUIRED	WT	WEIGHT

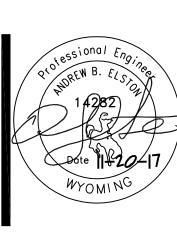
SYMBOL	IDENTIFICATION	SYMBOL	IDENTIFICATION	SYMBOL	IDENTIFICATION
— w —	- WATER SERVICE	—— FP ——	- FIRE PROTECTION	—— G ——	NATURAL GAS LINE
	- COLD WATER (CW)		HOT WATER (HW)		RECIRC WATER (RW)
	ROOF DRAINS (RD)	—— OD ——	OVERFLOW DRAINS (OD)	0	VENT THRU ROOF (VTR)
	WASTE CLEAN OUT (CO)		SANITARY BLDG WASTE	v	SANITARY SEWER VENT
	FLOOR CLEAN OUT (FCO)	—	FLOOR DRAIN (FD)	P	PERFORATED DRAIN
	WALL CLEAN OUT (WCO)		FLOOR SINK (FS)	c	CONDENSATE DRAIN
· ·	PIPE ELBOW DOWN		PIPE TEE DOWN	──	GAS COCK/SHUT-OFF
)	PIPE ELBOW UP		PIPE TEE UP		DRAIN VALVE
— нws ——	- HEATING WATER SUPPLY	CWS	- CHILLED WATER SUPPLY	—— RL ——	LIQUID REFRIGERANT
— HWR ——	- HEATING WATER RETURN	CWR	- CHILLED WATER RETURN	RS	REFRIGERANT HOT GAS
\longrightarrow	- SHUT-OFF VALVE	——XXI——	- BALL VALVE	─── ₩──	BUTTERFLY VALVE
── ∤\$ ─ ─	- CHECK VALVE	——⊗—	- BALANCING VALVE		STRAINER
\longrightarrow	- PIPE OR DUCT REDUCER	—N	- BACKFLOW DEVICE	<u> —М </u>	FLEXIBLE CONNECTION
<u> —</u> н	- PIPING UNION		T&P TEST PLUG	$\stackrel{\smile}{\sim}$	VENTURI FLOW DEVICE
X	- PIPING ANCHORS	- =	- PIPING GUIDES		EXPANSION JOINT
—ℜ—	2-WAY CONTROL VALVE	——————————————————————————————————————	- 3-WAY CONTROL VALVE	── ₩	PRESS REDUCING VALVE
<u> </u>	TEMPERATURE GAUGE	<i>──</i>	PRESSURE GAUGE		CONTROLS DEVICE
Ā □	RELIEF VALVE	~ <u>~</u>	AIR VENT(S)	─── ⋝──	TRIPLE DUTY VALVE
	CONNECTION TO EXIST'G	©	CO2 SENSOR	——————————————————————————————————————	FIRE DAMPER
T	ROOM THERMOSTAT	P	PRESSURE SENSOR	\$	SMOKE DAMPER
M	MOTOR OPERATED DAMPER	o	OCCUPANCY SENSOR	 \$	FIRE/SMOKE DAMPER
\bowtie	SUPPLY DUCT		RETURN DUCT		EXHAUST DUCT
\longrightarrow	DUCT ELBOW UP		DUCT ELBOW DOWN	<u> </u>	TURNING VANES
	ACOUSTICALLY LINED DUCT		FLEXIBLE CONNECTION		INSULATED DUCT
	NECK SIZE OF AIR DEVICE		VOLUME DAMPER		- LINED SOUND BOOT
	TYPE OF AIR DEVICE	人	— CONICAL SPIN-IN	∠'′	- RETURN GRILLE

WAT	WATER HEATERS													
MARK	MODEL NO.	STORAGE	FUEL	INPUT	RECOVERY GPH			SI	SIZE SET		PIPE	VENTING	VOLTAGE	REMARKS
IVI) U U C	WOBEL NO.	01010102	1011	1141 01	RISE	1st HR	2nd HR	DIA	HT	POINT	CONN	1 72111110	V021/102	
WH-1	BRADFORD WHITE RE250	50 GAL	ELEC	4.5 KW	90° F	71	21	22"	48"	130° F	0.75"	N/A	208 1PH	SEE (1-7) BELOW
	WITH BALL VALVE ISOLATION AND DIEL (6) PIPE RELIEF VALVE TO THE FLOOR												4) ASME RELII	EF VALVE 5) SIX-YEAR

N	DON	MESTIC EXPANSION	TANKS												
	MARK	MODEL NO.	SYSTEM VOLUME	TANK VOLUME	EXP WATER	TANK TYPE	FLUID MEDIA	SI. DIA	ZE HT	TE MIN	MP MAX	PRES FILL	SURE	SUPPORT	REMARKS
	ET-1	AMTROL THERMEXTROL ST-12	150 GAL	4.4 GAL	3.2 GAL	DIAPHRAM	DOMESTIC WATER	12"	16"	40°F	140°F	65 PSI	100 PSI	WALL	SEE (1-2) BELOW
\neg	1) 150 PSIG	ASME AND NSF APPROVED 2) BRACKE	T TO WALL W	ITH UNI-STR	UT IN ACCES	SSIBLE LOCAT	TON(S)								

MARK	MODEL NO.	FLOW	WPD	PUMP TYPE	FLUID	MOTOR			PIPE SIZE		AREA	CONTROL	DEMARKS
WARK		GPM	FT HD		MEDIA	HP	RPM	VOLTS	SUC	DIS	SERVED	CONTROL	REMARKS
RP-1	TACO 0013	6	30	WET ROTOR	DOMESTIC WATER	1/8	3250	120 1PH	0.75"	0.75"	DHW RECIRC	TIMER KIT	SEE (1-6) BELOW

DON	MESTIC BOOSTER PL	JMP											
MARK	MODEL NO.	FLOW DUTY PUMP FLUID MOTOR GPM HEAD TYPE MEDIA HP RPM VOLTS S		PIPE SIZE AREA SUC DIS SERVED		-	CONTROL	REMARKS					
		OI W		STAINLESS	DOMESTIC	111	KFIVI	VOLIS	300	DI3	BOOSTER	PRESSURE	
BP-1	ARMSTRONG N130	60	80 psig	WET ROTOR	WATER	5	3600	208 3PH	2.0"	2.0"	PUMP	SWITCH	SEE (1-6) BELOW
,	NATE DISCHARGE AND SUCTION ORIEN 6) FIELD LOCATE CONTROL PANEL FOR	,			CH WITH HOA 3) AUTO	MATIC SW	ITCH OVER 4) INCOMIN	IG CITY P	RESSURE OF	50 PISG 5) PUM	IP FLANGES TO MATCH



Tateline (CHITECTS) in Casper, WY 7.263.3617 fax

Ingineering
Design
Desi

PROJECT NUMBER 16-022 / 17040

DATE 11/20/2017

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SHEET TITLE
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