



FAN COIL UNITS																				
SYMBOL	MANUFACTURER	MODEL	FAN MOTOR				CHILLED WATER COOLING					HOT WATER HEATING								REMARKS
			CFM	HP	PH	VOLTS	E.A.T. D.B./W.B.	E.W.T. DEG. F.	GPM	TOT. MBH	SENS. MBH	P.D. IN FT.	E.A.T. DEG. F.	E.W.T. DEG. F.	GPM	TOTAL MBH	P.D. IN. W.G.			
FCU-1	DAIKIN	FCVS102	200	1/8	1	115	80/67	45	1.2	5888	4820	0.58	72	170	0.5	6373	0.57	1.2,3,4,5,7,8,9,10		
FCU-2	DAIKIN	FCVH106	600	1/4	1	115	80/67	45	3.6	19092	13930	2.81	72	170	1.6	19046	7.63	1,2,3,4,6,7,8,9,10		

- REMARKS:
- UNITS TO BE PROVIDED WITH STAND-ALONE WALL MOUNTED DIGITAL THERMOSTATS WITH TEMPERATURE DISPLAY. THERMOSTATS TO BE PROVIDED WITH BACnet CARD FOR FUTURE BAS CONTROLS. PROGRAMMABLE, LOCKING FIELD SETPOINTS, LOCKING ADJUSTABLE RANGE, FULL LOCKOUT, MODULATING CONTROL VALVES AND ECM VARIABLE SPEED FAN. SIMILAR TO DAIKIN MIT-FA-005 OR EQUIVALENT.
 - UNITS TO BE PROVIDED WITH METAL WALL PLATE WITH RETURN GRILLE TO FULLY CONCEAL UNIT IN WALL.
 - UNIT PIPE HANDING TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO ORDERING UNITS.
 - UNIT TO BE FACTOR PIPED WITH STRAINER, MODULATING CONTROL VALVE, AUTOMATIC BALANCING VALVE, ISOLATION BALL VALVE, UNION AT COIL CONNECTIONS.
 - VERTICAL SURFACE MOUNTED UNIT.
 - VERTICAL CONCEALED/DUCTED UNIT WITH WALL PLATE AND RETURN GRILLE.
 - UNITS TO BE PROVIDED WITH 2 & 3 WAY MODULATING CONTROL VALVES SEE FLOW DIAGRAM FOR VALVING CONFIGURATIONS.
 - UNITS TO BE PROVIDED WITH VARIABLE SPEED ECM FAN MOTORS.
 - THERMOSTAT SETUP AND UNIT STARTUP TO BE INCLUDED IN PROJECT.
 - PROVIDE CONDENSATE SWITCH WITH INTERLOCK, AND PROVIDE ALL ACCESSORIES NEEDED TO HAVE A PROPERLY FUNCTIONING STAND-ALONE UNIT.

MISC. SCHEDULES:

AIR SEPARATOR:

AS-1: AMTROL AIR SEPARATOR WITH STRAINER, MODEL NO. 4-AS OR EQUAL, CENTRIFUGAL TYPE, 4" FLANGED CONNECTIONS, ASME RATED, 125PSI.

EXPANSION TANK:

ET-1: AMTROL L-SERIES, MODEL NO. 800L OR EQUAL, 211GAL. TANK VOLUME, VERTICAL BLADDER STYLE, PRECHARGED AT 55PSI, ASME RATED.

AUTOMATIC AIR VENTS:

AAV: WATTS SERIES DUOVENT, 1/4" OR EQUAL.

TRANSFER GRILLES:

TG-1: PRICE; 535 OR EQUAL, 14"x8", 0.69SQFT CORE AREA, 45DEG DEFLECTION, 1/2" BLADE SPACING, STEEL CONSTRUCTION, WHITE FACTORY APPLIED PAINT.

EXHAUST FANS:

EF-1: BROAN MODEL 668.

CONDENSING BOILERS																					
SYMBOL	MANUFACTURER	MODEL	CONFIGURATION	GAS (NAT.)				ELECTRICAL				HYDRONIC								MAXS. WORKING PRESS. PSI	REMARKS
				INPUT MBH	OUTPUT (HILO) MBH	TURNDOWN	GAS CONNECTION	MAX/MIN GAS PRESSURE IN W.C.	MCA	FLA	PH	VOLTS	E.W.T.	L.W.T.	CAP. GAL	INLET/OUTLET CONNECTION	FLOW RATE	FT. HD			
B-1	LOCHINVAR	FBN-2001	CONDENSING FIRE TUBE	1.999	1.923/76	25:1	1-1/2"	14/4	16	13	1	120	140	170	111	4"	25 / 160	14.5	160		
B-2	LOCHINVAR	FBN-2001	CONDENSING FIRE TUBE	1.999	1.923/76	25:1	1-1/2"	14/4	16	13	1	120	140	170	111	4"	25 / 160	14.5	160		

- REMARKS:
- UNITS TO BE PROVIDED STANDALONE CONTROL WITH CASCADE SEQUENCES AND BACnet MSTP INTERFACE, LEADLAG EFFICIENCY OPTIMIZATION, AND CASCADE REDUNDANCY. TOUCHSCREEN CONTROL PANEL INTEGRAL TO UNIT.
 - BOILER SHALL ANTICIPATE SYSTEM LOAD CHANGES VIA 0-10VDC SIGNAL FROM THE VFD AND BOILER LOW VOLTAGE CONTACTS.
 - PROVIDE BP-1 & 2; ECM PUMP SHALL BE PROVIDED WITH EACH BOILER AND CONTROLLED VIA A 0-10VDC(FIELD WIRE) SIGNAL TO MAINTAIN 30DEG. DELTA T. MANUFACTURER TO PROVIDE IN-LINE BOILER PUMP WITH PUMP MOUNTED VFD. SIMILAR TO LOCHINVAR MODEL MAGA 3, 50-150. 115V/5.6A; 2" CONNECTIONS.
 - PROVIDE PRESSURE RELIEF VALVE FOR HYDRONIC SYSTEM PRESSURE OF 60PSI.
 - UNIT TO DIRECT VENT BOTH COMBUSTION AIR AND FLUE. CPVC OR AL29-4C STAINLESS VENT ONLY.
 - PROVIDE CONDENSATE NEUTRALIZATION KIT FOR BOILER DRAINS.
 - BOILER MUST BE LOW NOX.
 - BOILER SHALL BE OF SINGLE BURNER AND SINGLE HEAT EXCHANGER DESIGN.
 - PROVIDE ULTRA HIGH TURNDOWN GAS REGULATOR ON EACH INCOMING BOILER GAS LINE SIZED PER NFCC.
 - PRIMARY-SECONDARY PIPING CONFIGURATION.
 - PROVIDE FACTORY TRAINED START-UP AND OWNERS TRAINING.
 - PROVIDE COMBUSTION AIR FILTER.

SCHEDULES
 NORSE COMMONS/HALL MEP
 RENOVATION

REVISIONS		
#	DESCRIPTION	DATE

NKU # NKU-30-2021
 DATE: 03/01/2021
 SF JOB# 20536
 DRAWN: CMR
 CHECKED: GGC
 SHEET

ME112