

| AIR HANDLING UNITS | | |
|------------------------------|---------------|--------------------|
| MARK NUMBER | AHU 1 | AHU 2 (NOTE 1) |
| SYSTEM | OFFICE | SUITES |
| TYPE | | |
| CFM | 8000 CFM | 20,000 CFM |
| MIN OSA % | 1123 CFM | 100% OSA |
| EXT. STATIC PRESS ("H2O) | 1.5" | 2.0" |
| TOTAL STATIC PRESSURE ("H2O) | 3.14" | 4.22" |
| RPM | 2269 RPM | 1791 RPM |
| MOTOR H.P. | 6.36BHP/7.5HP | (2)9.38BHP/(2)10HP |
| SPEED CONTROLLER | VFD | VFD |
| CFM | 8000 CFM | 7000 CFM |
| EXT. STATIC PRESS ("H2O) | 0.75" | 1" |
| TOTAL STATIC PRESSURE ("H2O) | 0.82" | 1.05" |
| RPM | 986 RPM | 1194 RPM |
| MOTOR BHP/HP | 5.11BHP/7.5HP | 2BHP/3HP |
| SPEED CONTROLLER | VFD | VFD |
| PRE-FILTER TYPE | MERV 8 | MERV 8 |
| FINAL FILTER TYPE | - | MERV 10 |
| EAT, DB/WB (°F) | 76/60.7 °F | 88.7/65°F |
| LAT, DB/WB (°F) | 55.1/52.4°F | 53.4/51.0°F |
| SENSIBLE (MBH) | 166 MBH | 677.5 MBH |
| TOTAL (MBH) | 183.6 MBH | 777.4 MBH |
| A.P.D. ("W.G.) | 0.74" | 0.83" |
| CONDENSING UNIT | SEE CU-1 | SEE CU-2 |
| HEATING AIRFLOW | 4000 CFM | 20,000 CFM |
| EAT (°F) | 53° F | 17.8 °F |
| LAT (°F) | 75.6 °F | 56.5 °F |
| CAPACITY (MBH) | 86.7 MBH | 744 MBH |
| FLOW RATE (GPM) | 5.9 GPM | 50.1 GPM |
| EWI/LWT (°F) | 140/110 °F | 140/110 °F |
| A.P.D. ("W.G.) | 0.19" W.G. | 0.17" W.G. |
| FLUID PD, FT WG | 0.60 FT | 6.8 FT |
| POLYPROPYLENE GLYCOL (%) | 30% | 30% |
| 2-WAY OR 3-WAY CONTROL VALVE | 2-WAY | 3-WAY |
| ISOLATION TYPE | INTERNAL | INTERNAL |
| SMOKE DETECTOR | YES | YES |
| DESIGN WEIGHT (LBS) | 3500# | 9000# |
| BASIS OF DESIGN: DAIKIN | CAH017GDGC | CAH044GDGM |
| EMERGENCY POWER | NO | YES (NOTE 2) |

NOTES:
1. FUTURE CAPACITY. DAY 1 CAPACITY = 14,500 CFM
2. PROVIDE EMERGENCY POWER TO (1) OF (2) SUPPLY FANS ONLY.

| PUMPS | | |
|--------------------------|--------|--------|
| MARK NUMBER | P 6 | P 7 |
| SERVICE | B-3&4 | B-3&4 |
| TYPE | | |
| FLOW RATE (GPM) | 70 GPM | 70 GPM |
| HEAD (FT) | 65FT | 65FT |
| MOTOR HP | 3-HP | 3-HP |
| VFD | YES | YES |
| RPM | 1750 | 1750 |
| BASIS OF DESIGN (TACO) | KV1509 | KV1509 |
| POLYPROPYLENE GLYCOL (%) | 30% | |
| POWER V/PH | 208/3 | |

| AIR FILTER SCHEDULE | | |
|---------------------|--|--|
| MARK NUMBER | AF 1 | |
| ROOM | PROCESS SUITES | |
| SYSTEM | EXHAUST | |
| MAKE/MODEL | CAMFIL FARR PHARMASEAL | |
| | PWMB1113-32P-12X-12X-TS-S-F-S-X-0-1 | |
| | PROVIDE WITH 2", 95% PRE-FILTER. FREUDENBERG | |
| | VLEDON MINI 95. | |

| EXHAUST FANS | | | | | | | | |
|---------------------|---------------------|----------------------|----------------------|--------------------|-------------------|----------------------|-------------------|---------------------|
| MARK NUMBER | EF 1 | EF 2 | EF 3 | EF 4 | EF 5A | EF 6A | EF 10A | EF 11 |
| TYPE | BSQ IN-LINE | BSQ IN-LINE | BSQ IN-LINE | BSQ IN-LINE | IN-LINE | BSQ IN-LINE | BSQ IN-LINE | CABINET |
| SYSTEM | MSC | GPCG 1 | NTS | SOLVENT STORAGE | (E)BLDG SUITE 8 | (E)BLDG SUITES 1&2 | (E)BLDG SUITE 5 | OFFICE BLDG |
| CFM | 2430 | 1755 | 2160 CFM | 500 CFM | 2025 | 2160 CFM | 1100 | 1100 |
| TOTAL SP. (IN H2O) | 2.25" | 1.5" | 1.75" | 0.50" | 4.0" | 1.75" | 1.20" | 0.50" |
| RPM | 1803 | 1610 | 1725 | 1355 | 3737 | 1725 | 1995 | 1218 |
| MOTOR HP | 2 | 1 | 1-1/2 | 1/4 | 3 | 1-1/2 | 3/4 | 398 WATTS |
| CONTROLLED BY | VFD | VFD | VFD | VFD | VFD | VFD | VFD | NONE |
| INTERLOCK WITH | | | | | | | | |
| WHEEL TYPE | B.I. | B.I. | B.I. | B.I. | | B.I. | B.I. | F.C. |
| BACKDRAFT DAMPER | YES | YES | YES | YES | YES | YES | YES | 2-POS CONTROL |
| ISOLATION | SPRING | SPRING | SPRING | SPRING | SPRING | SPRING | SPRING | SPRING |
| DESIGN WEIGHT (LBS) | 155 | 155 | 155 | 155 | 250 | 155 | 155 | 60 |
| BASIS OF DESIGN | GREENHECK BSQ-160HP | GREENHECK BSQ-140-10 | GREENHECK BSQ-140-15 | GREENHECK BSQ-90-4 | GREENHECK GE-9-II | GREENHECK BSQ-140-15 | GREENHECK BSQ-100 | GREENHECK CSP-A1410 |
| EMERGENCY POWER | YES | YES | YES | YES | YES | YES | YES | NO |

| BOILERS | |
|-------------------------------|-------------------------|
| MARK NUMBER | B 3 B 4 |
| SYSTEM | BUILDING HEAT |
| FUEL | NAT. GAS |
| GAS INPUT (MBH) | 1000 MBH |
| NET IBR OUTPUT (MBH) | 962 |
| ENT. WATER TEMP (°F) | 140 |
| LVG. WATER TEMP (°F) | 110 |
| FLOW (GPM) | 67 GPM |
| COMB.AIR INTAKE DIA./EXH VENT | 6"ø |
| POLYPROPYLENE GLYCOL (%) | 30% |
| TURN DOWN | 20:1 |
| THERMAL EFFICIENCY(%) | 96.2% |
| BOILER DESIGN WEIGHT (LBS) | 2000 |
| BOILER BASIS OF DESIGN | LOCHINVAR CREST FBM1001 |

| SPLIT SYSTEM | | | | |
|---------------------------------|------------------------|------------------------|------------------------|------------------------|
| TYPE | DUCT FREE SPLIT SYSTEM | DUCT FREE SPLIT SYSTEM | DUCT FREE SPLIT SYSTEM | DUCT FREE SPLIT SYSTEM |
| SYSTEM | I.T. ROOM | ELECT. ROOM | API STORAGE | CONF ROOM 110 |
| | COOLING ONLY | COOLING ONLY | HEAT PUMP | HEAT PUMP |
| INDOOR UNIT MARK NUMBER | IAC 1 | IAC 2 | IHP 1 | IHP 2 |
| OUTDOOR UNIT MARK NUMBER | OAC 1 | OAC 2 | OHP 1 | OHP 2 |
| TYPE (INDOOR UNIT) | WALL MOUNT | WALL MOUNT | WALL MOUNT | WALL MOUNT |
| NOMINAL CAPACITY (TON) | 2 | 2 | 1 | 2 |
| NOMINAL COOLING CAPACITY, BTU/H | 24,000 | 24,000 | 12,000 | 22,000 |
| NOMINAL HEATING CAPACITY, BTU/H | 12,000 | 12,000 | 22,000 | 22,000 |
| REFRIGERANT TYPE | R410A | R410A | R410A | R410A |
| DRY AIRFLOW (LOW/MED/HIGH) | 420/604/745 | 420/604/745 | 420/604/745 | 420/604/745 |
| SEER/HSPF | 15.0 | 15.0 | 15.0/8.2 | 15.0/8.2 |
| MAX PIPING LENGTH (FT.) | 98.4 | 98.4 | 98.4 | 98.4 |
| MAX PIPING ELEV. CHANGE | 65.6 | 65.6 | 65.6 | 65.6 |
| CONDENSATE PUMP "LITTLE GIANT" | YES | YES | YES | YES |
| INDOOR UNIT DESIGN WEIGHT, LBS | 26 | 26 | 26 | 26 |
| OUTDOOR UNIT DESIGN WEIGHT, LBS | 97 | 97 | 97 | 97 |
| OUTDOOR UNIT MOUNTING KIT | WALL MOUNT | WALL MOUNT | WALL MOUNT | WALL MOUNT |
| BASIS OF DESIGN: DAIKIN | FTR24NMJU/TRN24NMJU | FTR24NMJU/TRN24NMJU | FTR12NMJU/TRN12NMJU | FTR24NMJU/TRN24NMJU |

NOTE:
1. PROVIDE WITH CRANKCASE HEATER, TXV, LOW AMBIENT CONTROL, WINTER START CONTROL, HI-LOW PRESSURE SWITCH, WIND BAFFLE AND ISOLATION RELAY.
2. PROVIDE WALL MOUNTED THERMOSTAT, IAC-1, 2, 3 TO BE CONTROLLED BY A T-STAT IN GAMING. IAC-4 & 5 BY A T-STAT IN STORE SERVER ROOM.

| HEATING WATER COIL | | |
|-------------------------------|------------|---------|
| MARK NUMBER | HC 8.1 | HC 8.2 |
| TYPE | SUITE 1 | SUITE 5 |
| SYSTEM | 1020 | 800 |
| CFM | 55 | 55 |
| ENTERING AIR TEMP (°F.) | 85 | 85 |
| LEAVING AIR TEMP (°F.) | 160 | 160 |
| ENTERING WATER TEMP. (°F.) | 120 | 120 |
| LEAVING WATER TEMP (°F.) | 33.5 | 25.9 |
| TOTAL CAPACITY (MBH) | 1.8 | 1.4 |
| FLOW RATE (GPM) | 21X16 | 19.5X12 |
| FACE DIMENSION ("WX"L) | 437 | 492 |
| FACE VELOCITY (FPM) | 2 | 1 |
| MIN ROWS | 7 | 13 |
| MAX FINS/INCH | 0.14 | 0.15 |
| MAX AIR PRESS DROP ("H2O) | 3.6FT | 3.6FT |
| MAX WATER PRESS DROP (FT H2O) | 30% | 30% |
| POLYPROPYLENE (%) | (E)BOILERS | |
| SERVED BY | | |

| AIR CONDENSER - COMPRESSOR | | |
|----------------------------|-----------|------------|
| MARK NUMBER | CU 1 | CU 2 |
| NOMINAL TONS | 20 TONS | 70 TONS |
| LOW AMBIENT CONTROL | YES | YES |
| EER | 13 EER | 10.6 EER |
| COMPRESSOR | 2 (NOTE1) | 6 (NOTE 1) |
| REFRIGERANT | R-410 | R-410 |
| DESIGN WEIGHT (LBS) | 1825 # | 3530 # |
| BASIS OF DESIGN | RCS015D | RCS072D |
| EMERGENCY POWER | NO | NO |

NOTE:
1. AT LEAST ONE COMPRESSOR IS DIGITAL.

| ELECTRIC HEATER | |
|------------------------|---------------------|
| MARK NUMBER | EH 1 |
| TYPE | WALL** |
| SYSTEM | STAR 160 |
| KW (120V) | 1.5 |
| CONTROLLED BY: | BUILT IN THERMOSTAT |
| SWITCH LOCATION | --- |
| DESIGN WEIGHT (LBS) | 10 |
| BASIS OF DESIGN: QMARK | CWH115 |
| ELECTRICAL CONNECTION | 120V |

| EXPANSTION TANK | |
|----------------------|---------|
| MARK NUMBER | ET 1 |
| SYSTEM | B-3/B-4 |
| TANK VOLUME | 55.7 |
| ACCEPTANCE VOLUME | 22.6 |
| WEIGHT | 167 |
| BASIS OF DESIGN: B&G | D-100V |

** MOUNT ON WALL @ 6" A.F.F.

| OXES WITH HOT WATER REHEAT - AHU-2 (PROCESS SUITES) | | | | | | | | | | | | | | | | | | |
|---|----------------------|------|-----------------|--------------------------|--------------|------------|----------------------|---------------------------|----------------------|----------------------|-----------------------|-------------|----------------|---------------------|--------------------|-------------------------------------|------------------------------------|--------------|
| MARK NO. | ROOM NAMES | TYPE | MAX COOLING CFM | MAXIMUM HEATING CFM 100% | INLET IN. | OUTLET IN. | SA INLET TEMP DEG. F | SA TEMP AT HEATING DEG. F | REHEAT COIL LOAD MBH | INLET WATER TEMP (F) | OUTLET WATER TEMP (F) | GPM | CONN. SIZE IN. | VALVE TYPE | MAX. STATIC LOSS * | MAX. DISCHARGE SOUND POWER LEVEL ** | MAX. RADIATED SOUND POWER LEVEL ** | CONTROL TYPE |
| VAV-1 | MSC | VAV | 1350 | 1350 | 12 | 16X15 | 55 | 85 | 43.7 | 140 | 110 | 2.9 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-2 | GPCG 1 | VAV | 1080 | 1080 | 12 | 16X15 | 55 | 85 | 35.0 | 140 | 110 | 2.3 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-3 | NTS | VAV | 1480 | 1480 | 12 | 16X15 | 55 | 85 | 48.0 | 140 | 110 | 3.2 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-4 | SOLVENT STORAGE | VAV | 1800 | 1800 | 14 | 20X16 | 55 | 85 | 58.3 | 140 | 110 | 3.9 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-5 | OPEN BAY (1ST FLOOR) | VAV | 2070 | 2070 | 14 | 20X16 | 55 | 85 | 67.1 | 140 | 110 | 4.5 | 1 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-6 | MEZZANINE | VAV | 2500 | 2500 | 16 | 24X18 | 55 | 85 | 81.0 | 140 | 110 | 5.4 | 1 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-7 | MEZZANINE | VAV | 2500 | 2500 | 16 | 24X18 | 55 | 85 | 81.0 | 140 | 110 | 5.4 | 1 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-8 | FUTURE R SOLVENT | VAV | 2300 | 2300 | 16 | 24X18 | 55 | 85 | 74.5 | 140 | 110 | 5.0 | 1 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-9 | FUTURE SECONDARY DRY | VAV | 720 | 720 | 10 | 14X13 | 55 | 85 | 23.3 | 140 | 110 | 1.6 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-10 | FUTURE FLEX 1 | VAV | 900 | 900 | 10 | 14X13 | 55 | 85 | 29.2 | 140 | 110 | 1.9 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-11 | FUTURE FLEX 2 | VAV | 900 | 900 | 10 | 14X13 | 55 | 85 | 29.2 | 140 | 110 | 1.9 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| | | | TOTAL | 17600 | 17600 | | | | 570.2 | | | 38.0 | | | | | | |

* - INCLUDING COIL, SOUND ATTENUATOR SECTION & VAV BOX
** - THIRD OCTAVE CERTIFIED RATING IN ACCORDANCE WITH ARI STANDARD 880-94

| WITH HOT WATER REHEAT - AHU-1(OFFICE) | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|------|-----------------|--------------------|---------------------|-------------|----------------------|---------------------------------|-----------|------------|----------------------|---------------------------|----------------------|----------------------|-----------------------|-----|----------------|---------------------|--------------------|-------------------------------------|------------------------------------|--------------|
| MARK NO. | TYPE | MAX COOLING CFM | 20% OF COOLING CFM | MIN VENTILATION CFM | MIN 300 CFM | MAXIMUM DEADBAND CFM | MAXIMUM HEATING CFM 50% or VENT | INLET IN. | OUTLET IN. | SA INLET TEMP DEG. F | SA TEMP AT HEATING DEG. F | REHEAT COIL LOAD MBH | INLET WATER TEMP (F) | OUTLET WATER TEMP (F) | GPM | CONN. SIZE IN. | VALVE TYPE | MAX. STATIC LOSS * | MAX. DISCHARGE SOUND POWER LEVEL ** | MAX. RADIATED SOUND POWER LEVEL ** | CONTROL TYPE |
| VAV-1 | VAV | 440 | 88 | 41 | 0 | 88 | 220 | 8 | 12X10 | 55 | 100 | 10.7 | 140 | 110 | 0.7 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-2 | VAV | 230 | 46 | 61 | 115 | 115 | 115 | 6 | 12X8 | 55 | 100 | 5.6 | 140 | 110 | 0.4 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-3 | VAV | 520 | 104 | 45 | 0 | 104 | 260 | 8 | 12X10 | 55 | 100 | 12.6 | 140 | 110 | 0.8 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-4 | VAV | 295 | 59 | 61 | 148 | 148 | 148 | 6 | 12X8 | 55 | 100 | 7.2 | 140 | 110 | 0.5 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-5 | VAV | 780 | 156 | 46 | 0 | 156 | 390 | 10 | 14X13 | 55 | 100 | 19.0 | 140 | 110 | 1.3 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-6 | VAV | 550 | 110 | 41 | 0 | 110 | 275 | 8 | 12X10 | 55 | 100 | 13.4 | 140 | 110 | 0.9 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-7 | VAV | 500 | 100 | 98 | 0 | 100 | 250 | 8 | 12X10 | 55 | 100 | 12.2 | 140 | 110 | 0.8 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-8 | VAV | 500 | 100 | 60 | 0 | 100 | 250 | 8 | 12X10 | 55 | 100 | 12.2 | 140 | 110 | 0.8 | 1/2 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-9 | VAV | 1260 | 252 | 22 | 0 | 252 | 630 | 12 | 16X15 | 55 | 100 | 30.6 | 140 | 110 | 2.0 | 3/4 | 2-WAY CONTROL VALVE | 0.75 | 67 | 59 | DDC |
| VAV-10 | VAV | 855 | 171 | 20 | 0 | 171 | 428 | 10 | 14X13 | 55 | 100 | 20.8 | 140 | | | | | | | | |