

| | |
|--------|---------------------------|
| ABV | ABOVE |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE GRADE |
| AHAP | AS HIGH AS POSSIBLE |
| AHU | AIR HANDLING UNIT |
| BLOG | BUILDING |
| BSMT | BASEMENT |
| BTWN | BETWEEN |
| CAB | CABINET |
| CG | CEILING GRILLE |
| CLG | CEILING |
| CONC | CONCRETE |
| COND | CONDENSATE |
| CONN | CONNECTION |
| CONT | CONTINUATION |
| CONTR | CONTRACTOR |
| CU | CONDENSING UNIT |
| DBJ | DUCT BETWEEN JOISTS |
| DA | DIAMETER |
| DOAU | DIRECT OUTDOOR AIR UNIT |
| DN | DOWN |
| DRWG | DRAWING |
| EA | EACH |
| EL | EXHAUST FAN |
| EH | ELECTRICAL HEATER |
| ELEV | ELEVATION |
| ELEC | ELECTRICAL |
| ENT | ENTERING |
| EX | EXHAUST REGISTER |
| EXIST | EXISTING |
| FAI | FRESH AIR INTAKE |
| FD | FLOOR DRAIN |
| FD | FIRE & SMOKE DAMPER |
| FLEX | FLEXIBLE |
| FLR | FLOOR |
| GA | GAUGE |
| GEN | GENERAL |
| GC | GENERAL CONTRACTOR |
| HWR | HIGH WALL REGISTER |
| HVAC | HEATING, VENTILATING, A/C |
| IN | INCH |
| INSUL | INSULATION |
| LD | LINEAR DIFFUSER |
| MAX | MAXIMUM |
| MD | MOTORIZED DAMPER |
| MECH | MECHANICAL |
| MFR | MEDIUM |
| MIN | MINIMUM |
| MTD | MOUNTED |
| NTS | NOT TO SCALE |
| OA | OUTSIDE AIR |
| OPG | OPENING |
| PD | PRESSURE DROP |
| PRV | POWER ROOF VENTILATOR |
| RAG | RETURN AIR GRILLE |
| RD | ROOF DRAIN |
| REF | REFERENCE |
| REFRIG | REFRIGERATION |
| REG | REGISTER |
| REQD | REQUIRED |
| RET | RETURN |
| SD | SMOKE DETECTOR |
| SF | SUPPLY FAN |
| SHT | SHEET |
| SP | STATIC PRESSURE |
| SUP | SUPPLY |
| T/TC | TEMPERATURE CONTROL |
| TEMP | TEMPERATURE |
| VD | VOLUME DAMPER |
| VIB | VIBRATION |
| VRF | VARIABLE REFRIGERANT FLOW |
| W/ | WITH |

- ALL WORK SHALL BE IN ACCORDANCE WITH S.M.A.C.N.A. STANDARDS AND ALL OTHER AUTHORITIES HAVING JURISDICTION (AHJ).
- ALL DUCT DIMENSIONS ARE INSIDE CLEAR UNLESS OTHERWISE NOTED.
- DUCT LAYOUT DRAWINGS ARE SCHEMATIC. THE CONTRACTOR SHALL PREPARE COMPLETE DETAILED AND COORDINATED SHOP DRAWINGS SHOWING ALL HUNG CEILING ELEVATIONS, BREAK POINTS AND STARTING POINTS, DUCTWORK WITH DIMENSIONED GRILLES, DIFFUSERS, AND REGISTERS. PIPING AND AIR CONDITIONING UNITS SHALL ALSO BE INCLUDED.
- NOTIFY GENERAL CONTRACTOR OF ANY CONFLICTS BETWEEN DUCTWORK AND THE WORK OF ALL OTHER TRADES PRIOR TO BEGINNING WORK IN THE AREA CONTAINING THE CONFLICT. FAILURE TO NOTIFY WILL RESULT IN THE MECHANICAL CONTRACTOR TAKING FULL RESPONSIBILITY FOR RESOLVING THE CONFLICT(S).
- REFER TO SPECIFICATIONS FOR DUCT INSULATION.
- REFER TO THE ARCHITECTURAL PLANS FOR ALL BUILDING DIMENSIONS.
- ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET-METAL. ALL SUPPLY AND RETURN PLENUMS AND DUCTWORK WITHIN 15' (FIFTEEN FEET) OF AIR CONDITIONING UNITS SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER.
- ALL BRANCH DUCTS SHALL BE PROVIDED WITH VOLUME DAMPERS --- PROVIDE CABLE OPERATED DAMPERS IN ALL INACCESSIBLE AREAS
- FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLS REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
- METAL PORTION OF DUCTWORK VISIBLE BEHIND ALL GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED MATTE BLACK.
- FIRE DAMPERS SHALL HAVE THE SAME RATING AS THE ASSEMBLY IN WHICH THEY ARE LOCATED AND SHALL BE PROVIDED WITH ACCESS DOORS WHERE INACCESSIBLE.
- INSULATED FLEXIBLE DUCT MAY BE USED UP TO A MAXIMUM OF 2'-0" FROM ALL CEILING DIFFUSERS AND LINEAR DIFFUSERS.
- ALL THERMOSTATS SHALL BE INSTALLED WITH LOCKING COVERS IN COMMON AREAS SUBMIT CATALOG CUT FOR APPROVAL.
- IN EACH GUESTROOM PROVIDE REMOTE THERMOSTAT AT LOCATION TO BE DETERMINED BY OWNER. MOUNT AT 54" ABOVE FLOOR EXCEPT IN MOBILITY-HANDICAP GUESTROOMS MOUNT AT 48" ABOVE FLOOR.
- FINAL LOCATIONS OF ALL THERMOSTATS, DIFFUSER GRILLES ETC. MUST BE APPROVED BY ARCHITECT. FAILURE TO OBTAIN WRITTEN APPROVAL MAY SUBJECT THE CONTRACTOR TO RELOCATION AT HIS EXPENSE.

| MARK | MODEL | COOLING | HEATING | O.A. HEATER | AUXILIARY HEATING |
|--------|------------------------------|---------|---------|---------------|-------------------|
| PTAC-1 | AMANA DIGI-AIR PMH093G25ELRX | 9.0 MBH | 8.3 MBH | 0.2 KW @ 208v | 2.5 KW @ 208v |

- NOTES:
- FURNISH ALL UNITS WITH AUXILIARY DRAIN KIT, ELECTRIC SUB-BASE, INSULATED WALL SLEEVE, REMOTE THERMOSTAT, AND FRONT DESK INTERFACE.
 - REFER TO PLUMBING DRAWINGS FOR ROUTING OF CONDENSATE.

31 THRU-WALL HEAT PUMPS ("PTACs")

| MARK | SERVICE | TYPE | MODEL | KW | REMARKS |
|-------|---------------------|-------------------------|----------------------------------|------|---------|
| EUH-1 | UTILITY | UNIT HEATER | TRANE UHEC-03-1-A-A | 3.0 | |
| EW-1 | STAIRS & VESTIBULES | PANEL CONVECTOR | DIMPLEX PPC-2000 | 1.5 | |
| EH1 | MISC | BASEBOARD HEATER | QMARK QMKC-2504W | 1.0 | |
| DBC | MISC | DRAFT BARRIER CONVECTOR | QMARK SLODB-N-100-B-20-S-C-1-+-T | 1, 2 | |

- NOTES:
- SEE ELECTRICAL PLANS FOR LOCATIONS AND LENGTHS OF UNITS
 - POWER DENSITY = 100 WATTS PER FOOT

32 ELECTRIC HEAT

| CONDENSING UNITS | | | | | | | | | | |
|------------------|--------------------|-----------------|----------------------|-------------------------|-------------|--------------|---------|--------------|---|--|
| CU TAG | MODEL (MITSUBISHI) | NOMINAL TONNAGE | TOTAL COOLING (BTUH) | HEATING CAP.@17F (BTUH) | SYSTEM (KW) | V/PH/HZ | MCA | WEIGHT (LBS) | NOTES | |
| CU-1 | PUHY-HP192TSJMU-A | 16 | 192,000 | 216,000 | 18 | 208-230/3/60 | 74 + 74 | 1170 | MOUNTING CURB, COIL GUARDS, SERVICE VALVES | |
| CU-2 | PUMY-P36NHMU | 3 | 36,000 | 40,000 | 4 | 208-230/1/60 | 26 | 290 | LOW AMBIENT COOLING TO -20 DEG F, COIL GUARDS, SERVICE VALVES | |

| INDOOR(FANCOIL) UNITS | | | | | | | | | | | | |
|-----------------------|---------------|--------------------|-----------------|-----------|---------|----------------|----------------|--------------|------|------|---------------------------|-------|
| TAG | SERVICE | MODEL (MITSUBISHI) | NOMINAL TONNAGE | TOTAL CFM | COOLING | HEATING | | V/PH/HZ | MCA | MOCP | CONNECTED TO OUTDOOR UNIT | NOTES |
| | | | | | | HEATING (BTUH) | AUXILIARY HEAT | | | | | |
| FC-1 | OFFICE | PMFY-P06NBMU-E | 0.5 | 230-307 | 6000 | 6700 | | 208-230/1/60 | 0.25 | 15 | CU-1 | 1, 2 |
| FC-2 | BREAKROOM | PMFY-P08NBMU-E | 0.75 | 258-328 | 8000 | 9000 | | 208-230/1/60 | 0.25 | 15 | CU-1 | 1, 2 |
| FC-3 | LAUNDRY | PLEFY-P24NBMU-E | 2.0 | 530-700 | 24,000 | 27,000 | | 208-230/1/60 | 0.5 | 15 | CU-1 | 1, 2 |
| FC-4 | OFFICE | PMFY-P06NBMU-E | 0.5 | 230-307 | 6000 | 6700 | | 208-230/1/60 | 0.2 | 15 | CU-1 | 1, 2 |
| FC-5 | OFFICES | PEFY-P24NHMU-E | 2.0 | 477-631 | 24,000 | 27,000 | | 208-230/1/60 | 1.0 | 15 | CU-1 | 1, 2 |
| FC-6 | DATA | PKFY-P12NHMU-E | 1.0 | 320-390 | 12,000 | 13,500 | | 208-230/1/60 | 0.2 | 15 | CU-2 | 1, 2 |
| FC-7 | LOUNGE | PVFY-P36NAMU-E | 3.0 | 770-1100 | 36,000 | 40,000 | | 208-230/1/60 | 2.5 | 20 | CU-1 | 1, 2 |
| FC-8 | KITCHEN | PEFY-P30NMAU-E | 2.5 | 512-742 | 30,000 | 34,000 | | 208-230/1/60 | 1.2 | 20 | CU-2 | 1, 2 |
| FC-10 | MEETING | PVFY-P30E0A | 2.5 | 637-886 | 30,000 | 34,000 | | 208-230/1/60 | 2.5 | 20 | CU-1 | 1, 2 |
| FC-9 | LOUNGE | PVFY-P30E0A | 2.5 | 637-886 | 30,000 | 34,000 | | 208-230/1/60 | 2.5 | 20 | CU-1 | 1, 2 |
| FC-11 | EXERCISE | PEFY-P30NMAU-E | 2.5 | 512-742 | 30,000 | 34,000 | | 208-230/1/60 | 1.2 | 20 | CU-1 | 1, 2 |
| FC-12 | STAIR TOWER | PKFY-P18NHMU-E | 1.5 | 320-405 | 15,000 | 17,000 | | 208-230/1/60 | 0.3 | 20 | CU-1 | 1, 2 |
| FC-13 | STAIR TOWER | PKFY-P18NHMU-E | 1.5 | 320-405 | 15,000 | 17,000 | | 208-230/1/60 | 0.3 | 20 | CU-1 | 1, 2 |
| FC-14 | COLLABORATION | PMFY-P15NBMU-E | 1.25 | 270-380 | 15,000 | 17,000 | | 208-230/1/60 | 0.3 | 20 | CU-1 | 1, 2 |

- NOTES:
- OWNER WILL SUPPLY COLD PLASMA GENERATOR PHENOMNAL-AIRE D-12-2 FOR INSTALLATION BY HVAC CONTRACTOR.
 - PROVIDE INTEGRAL CONDENSATE PUMP AND WALL MOUNT 7-DAY PROGRAMMABLE T-STAT (NO REMOTE)

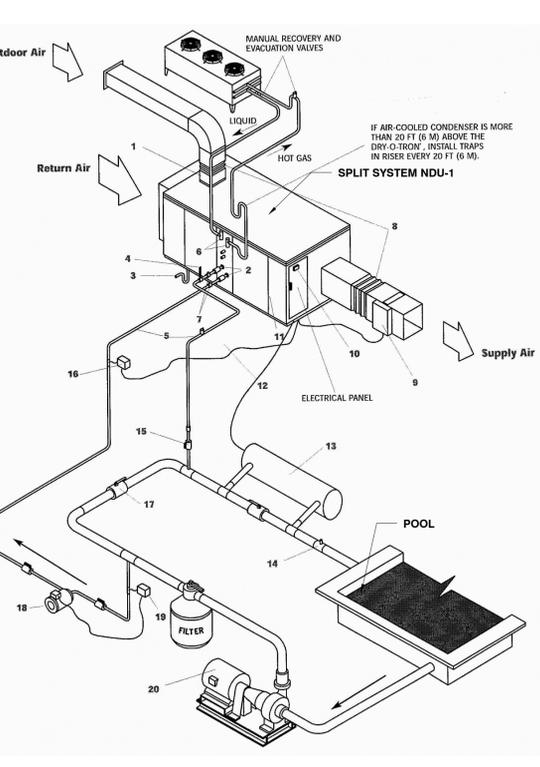
42 HVAC SPLIT SYSTEMS SCHEDULE

13 HVAC ABBREVIATIONS

| | |
|--|----------------------------------|
| | CEILING SUPPLY DIFFUSER |
| | RETURN AIR GRILL |
| | EXHAUST FAN |
| | HIGH WALL DIFFUSER |
| | LINEAR CEILING DIFFUSER |
| | TRANSFER GRILL |
| | SIDE WALL REGISTER OR GRILLE |
| | RECTANGULAR DUCT - WIDTH x DEPTH |
| | ROUND DUCT - DIAMETER |
| | PIPE RISE UP |
| | PIPING DOWN OR DROP |
| | DUCT TRANSITION - CONCENTRIC |
| | DUCT TRANSITION - ECCENTRIC |
| | DUCT TRANSITION - RECT TO RND |
| | MANUAL VOLUME DAMPER |
| | CARBON DIOXIDE SENSOR |
| | THERMOSTAT |
| | SMOKE & FIRE DAMPER |

23 HVAC NOTES

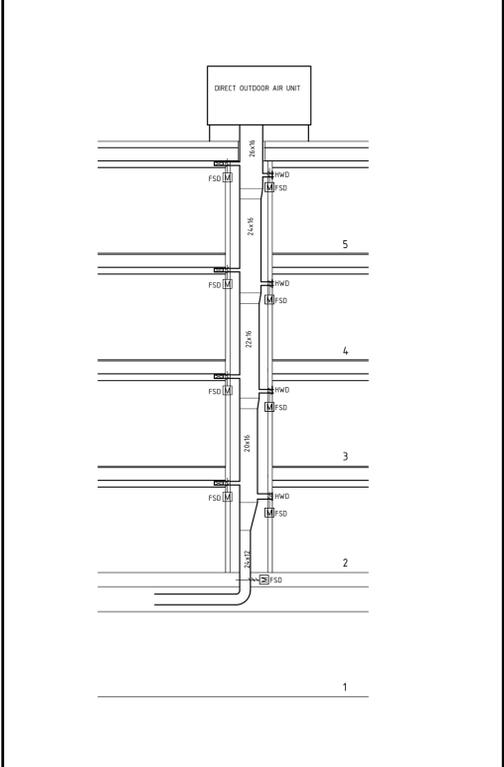
- OUTDOOR AIR FILTER & MANUAL DAMPER
 - POOL WATER ISOLATION VALVES
 - P-TRP & CONDENSATE RETURN
 - WATER FLOW METER
 - POOL WATER CONNECTION
 - AIR CONDITIONING PRESSURE/TEMPERATURE PORTS
 - FLEXIBLE DUCT CONNECTION
 - DUCT HEATER
 - OPERATOR PANEL REFRIGERANT ACCESS VALVES
 - AUXILIARY WATER HEATER
 - AUTOMATIC CHEMICAL FEEDER
 - THROTTLING BALL VALVE
 - WATER PRESSURE SWITCH
 - BYPASS VALVE
 - SECONDARY CIRCULATING PUMP
 - WATER PRESSURE SWITCH
 - MAIN FILTER PUMP
- A NATATORIUM ENVIRONMENTAL CONTROL SYSTEM CONTRACTOR
 B POOL CONTRACTOR
 C PLUMBING CONTRACTOR
 D HVAC CONTRACTOR



44 FAN SCHEDULE

| MARK | SERVICE | INSTALL LOCATION | MANUF. & MODEL | CFM | POWER | S.P. | SONES | VOLTS-PH | WEIGHT (LBS) | NOTES |
|------|-----------------------|------------------|----------------|-----|-------|--------|-------|----------|--------------|---------|
| EF-1 | GUEST BATH, MISC. | CEILING | COOK/GC-126 | 50 | 40W | 0.250" | 0.3 | 120 | 13 | 1 |
| EF-2 | MISCELLANEOUS | CEILING | COOK/GC-162 | 150 | 95W | 0.250" | 2.9 | 120 | 15 | 1 |
| EF-3 | EQUIPMENT ROOM | CEILING | COOK/GC-420 | 300 | 170W | 0.250" | 4.0 | 120 | 30 | 1,4 |
| EF-4 | MISCELLANEOUS | CEILING | COOK/GC-162 | 80 | 59W | 0.250" | 1.9 | 120 | 15 | 1, 3, 4 |
| EF-5 | TOILET EXHAUST STACKS | ROOF | COOK/120 REBE | 115 | 70W | 0.250" | 3.0 | 120 | 85 | 2, 3 |
| EF-6 | TOILET EXHAUST STACKS | ROOF | COOK/120 REBE | 170 | 70W | 0.250" | 3.0 | 120 | 85 | 2, 3 |
| EF-7 | TOILET EXHAUST STACKS | ROOF | COOK/125 REBE | 600 | 100W | 0.250" | 4.0 | 120 | 85 | 2, 3 |
| EF-8 | POOL | ROOF | COOK/120 REBE | 400 | 80W | 0.250" | 3.0 | 120 | 25 | 1, 2, 5 |
| EF-9 | POOL VEST. | CEILING | COOK/GC-126 | 50 | 40W | 0.250" | 0.3 | 120 | 13 | 3, 4 |

- NOTES:
- BACKDRAFT DAMPER
 - PREWIRED FAN SPEED CONTROLLER.
 - FAN TO RUN CONTINUOUSLY.
 - WALL CAP. MOUNT AT LEAST 10' ABOVE GRADE. PAINT TO MATCH ADJACENT EXTERIOR.
 - LINKED TO NDU. NORMALLY ON AT 25% --- ON AT 100% WHEN NDU IS RUNNING
- FAN MARK SUFFIXES ON PLANS:
 "a" INDICATES FAN IS TO BE CONTROLLED BY OCCUPANCY SENSOR WITH 10 MINUTE OVERRUN
 "b" INDICATES FAN IS TO BE CONTROLLED BY THERMOSTAT
 NO SUFFIX INDICATES LOCAL SWITCH CONTROL



64 DOAU DUCT SHAFT SCHEMATIC SECTION

14 LEGEND

24 NATATORIUM DEHUMIDIFIER (NDS) & POOL HEATER SCHEMATIC

44 FAN SCHEDULE

64 DOAU DUCT SHAFT SCHEMATIC SECTION



A NEW 108-ROOM COURTYARD BY MARIOTT HOTEL & SUITES

Turner Road
 Woodbury, New York
 location #12121

for

RAINBOW ENTERPRISES

4758 Highway 28
 Cooperstown, NY

REVISION DATES

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| DRAWING TITLE | |
| MECHANICAL SCHEDULES & NOTES | |
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