

MECHANICAL LEGEND

PIPING

<p>— SIZE TYPE</p> <p>CWS CHILLED WATER SUPPLY CWR CHILLED WATER RETURN HWS HOT WATER SUPPLY HWR HOT WATER RETURN CTS COOLING TOWER WATER SUPPLY CTR COOLING TOWER WATER RETURN JWS JACKET WATER SUPPLY JWR JACKET WATER RETURN STM STEAM CR CONDENSATE RETURN LPS LOW PRESSURE STEAM PC PUMPED CONDENSATE ID INDIRECT DRAIN RV REFRIGERANT VENT GW GLYCOL WATER</p> <p>PITCH DOWN IN DIRECTION OF ARROW ANCHOR ALIGNMENT GUIDE EXPANSION JOINT FLEXIBLE HOSE (FLANGED ENDS) FLEXIBLE HOSE (SCREWED ENDS) FLEXIBLE PIPE CONNECTOR FLUID FLOW DIRECTION AIR ELIMINATOR TEST COCK</p> <p>PRESSURE GAGE WITH COCK VALVE AND BLIND FLANGE PIPE HEADER WITH BLIND FLANGE AUTOMATIC AIR VENT PIPE TURNING UP PIPE TURNING DOWN BOTTOM PIPE TAP 45° ELBOW ELECTRIC HEAT TRACE THERMOWELL WITH THERMOMETER</p> <p>FLOW CONTROL BALL VALVE FLOW CONTROL VALVE SIGHT GLASS FLOW METER CONCENTRIC REDUCER ECCENTRIC REDUCER STRAP-ON SENSOR WELD CAP CAPPED PIPE/OUTLET PLUGGED PIPE/OUTLET PLUG VALVE BALL VALVE BUTTERFLY VALVE SOLENOID VALVE MOTOR OPERATED CONTROL VALVE THREE-WAY CONTROL VALVE UNION STRAINER WITH BLOWDOWN VALVE BALANCING VALVE GATE VALVE ANGLE VALVE GLOBE VALVE CHECK VALVE PRESSURE REDUCING VALVE PRESSURE RELIEF OR SAFETY VALVE THERMOMETER PUMP CIRCULATING PUMP PETE'S PLUG</p>	<p>— SIZE TYPE</p> <p>CWS CHILLED WATER SUPPLY CWR CHILLED WATER RETURN HWS HOT WATER SUPPLY HWR HOT WATER RETURN CTS COOLING TOWER WATER SUPPLY CTR COOLING TOWER WATER RETURN JWS JACKET WATER SUPPLY JWR JACKET WATER RETURN STM STEAM CR CONDENSATE RETURN LPS LOW PRESSURE STEAM PC PUMPED CONDENSATE ID INDIRECT DRAIN RV REFRIGERANT VENT GW GLYCOL WATER</p> <p>PITCH DOWN IN DIRECTION OF ARROW ANCHOR ALIGNMENT GUIDE EXPANSION JOINT FLEXIBLE HOSE (FLANGED ENDS) FLEXIBLE HOSE (SCREWED ENDS) FLEXIBLE PIPE CONNECTOR FLUID FLOW DIRECTION AIR ELIMINATOR TEST COCK</p> <p>PRESSURE GAGE WITH COCK VALVE AND BLIND FLANGE PIPE HEADER WITH BLIND FLANGE AUTOMATIC AIR VENT PIPE TURNING UP PIPE TURNING DOWN BOTTOM PIPE TAP 45° ELBOW ELECTRIC HEAT TRACE THERMOWELL WITH THERMOMETER</p> <p>FLOW CONTROL BALL VALVE FLOW CONTROL VALVE SIGHT GLASS FLOW METER CONCENTRIC REDUCER ECCENTRIC REDUCER STRAP-ON SENSOR WELD CAP CAPPED PIPE/OUTLET PLUGGED PIPE/OUTLET PLUG VALVE BALL VALVE BUTTERFLY VALVE SOLENOID VALVE MOTOR OPERATED CONTROL VALVE THREE-WAY CONTROL VALVE UNION STRAINER WITH BLOWDOWN VALVE BALANCING VALVE GATE VALVE ANGLE VALVE GLOBE VALVE CHECK VALVE PRESSURE REDUCING VALVE PRESSURE RELIEF OR SAFETY VALVE THERMOMETER PUMP CIRCULATING PUMP PETE'S PLUG</p>
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DUCTWORK

SINGLE LINE

<p>F FILTER</p> <p>C COOLING COIL</p> <p>H HEATING COIL</p> <p>L LOUVER</p> <p>M MOTORIZED PARALLEL BLADE DAMPER</p> <p>B BACKDRAFT DAMPER</p> <p>M MOTORIZED OPPOSED BLADE DAMPER</p> <p>E ELECTRIC HEATING COIL</p> <p>B BAROMETRIC DAMPER</p> <p>AFMS AIR FLOW MEASURING STATION</p> <p>HUMID HUMIDIFIER</p> <p>U UNIT HEATER</p> <p>M PROPELLER FAN</p> <p>F FAN</p> <p>FAN WITH VARIABLE INLET VANE DAMPER</p> <p>M MOTOR STARTER</p> <p>E EXHAUST/INTAKE HOOD</p> <p>R RIGID DUCTWORK</p> <p>F FLEXIBLE DUCTWORK</p>	<p>F FILTER</p> <p>C COOLING COIL</p> <p>H HEATING COIL</p> <p>L LOUVER</p> <p>M MOTORIZED PARALLEL BLADE DAMPER</p> <p>B BACKDRAFT DAMPER</p> <p>M MOTORIZED OPPOSED BLADE DAMPER</p> <p>E ELECTRIC HEATING COIL</p> <p>B BAROMETRIC DAMPER</p> <p>AFMS AIR FLOW MEASURING STATION</p> <p>HUMID HUMIDIFIER</p> <p>U UNIT HEATER</p> <p>M PROPELLER FAN</p> <p>F FAN</p> <p>FAN WITH VARIABLE INLET VANE DAMPER</p> <p>M MOTOR STARTER</p> <p>E EXHAUST/INTAKE HOOD</p> <p>R RIGID DUCTWORK</p> <p>F FLEXIBLE DUCTWORK</p>
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DOUBLE LINE

<p>PIPE OR ROUND DUCT CROSS SECTION</p> <p>RECTANGULAR DUCT (FIRST FIGURE IS SIDE SHOWN)</p> <p>LINED DUCT</p> <p>FLEXIBLE DUCT</p> <p>FLEXIBLE CONNECTION</p> <p>VD VOLUME DAMPER, CONTROL DAMPER</p> <p>FD FIRE DAMPER, SMOKE DAMPER</p> <p>FD/SD COMBINATION FIRE/SMOKE DAMPER</p> <p>TURNING VANES</p> <p>EXTRACTOR</p> <p>OUTSIDE AIR INTAKE (UP OR OUT)</p> <p>OUTSIDE AIR INTAKE (DOWN)</p> <p>SUPPLY DUCT (UP OR OUT) OR GRAPHIC DISPLAY ANNUNCIATOR PANEL</p> <p>SUPPLY DUCT (DOWN)</p> <p>RETURN OR EXHAUST DUCT (UP OR OUT)</p> <p>RETURN OR EXHAUST DUCT (DOWN)</p> <p>SIZE CFM SUPPLY REGISTER OR GRILLE</p> <p>SIZE CFM RETURN OR EXHAUST REGISTER OR GRILLE</p> <p>SIZE CFM OUTSIDE FRESH AIR INTAKE</p> <p>SIZE CFM ROUND CEILING DIFFUSER (SUPPLY)</p> <p>SIZE CFM SQUARE CEILING DIFFUSER (SUPPLY)</p> <p>SIZE CFM DOOR LOUVER</p> <p>DUCT RISE</p> <p>DUCT DROP</p> <p>TRANSITION-RECTANGULAR TO ROUND</p> <p>BD BACKDRAFT DAMPER</p> <p>SPD STATIC PRESSURE DAMPER</p> <p>VARIABLE VOLUME TERMINAL</p> <p>VARIABLE VOLUME TERMINAL WITH REHEAT</p> <p>FINNED TUBE RADIATION</p> <p>SD SPLITTER DAMPER</p>	<p>PIPE OR ROUND DUCT CROSS SECTION</p> <p>RECTANGULAR DUCT (FIRST FIGURE IS SIDE SHOWN)</p> <p>LINED DUCT</p> <p>FLEXIBLE DUCT</p> <p>FLEXIBLE CONNECTION</p> <p>VD VOLUME DAMPER, CONTROL DAMPER</p> <p>FD FIRE DAMPER, SMOKE DAMPER</p> <p>FD/SD COMBINATION FIRE/SMOKE DAMPER</p> <p>TURNING VANES</p> <p>EXTRACTOR</p> <p>OUTSIDE AIR INTAKE (UP OR OUT)</p> <p>OUTSIDE AIR INTAKE (DOWN)</p> <p>SUPPLY DUCT (UP OR OUT) OR GRAPHIC DISPLAY ANNUNCIATOR PANEL</p> <p>SUPPLY DUCT (DOWN)</p> <p>RETURN OR EXHAUST DUCT (UP OR OUT)</p> <p>RETURN OR EXHAUST DUCT (DOWN)</p> <p>SIZE CFM SUPPLY REGISTER OR GRILLE</p> <p>SIZE CFM RETURN OR EXHAUST REGISTER OR GRILLE</p> <p>SIZE CFM OUTSIDE FRESH AIR INTAKE</p> <p>SIZE CFM ROUND CEILING DIFFUSER (SUPPLY)</p> <p>SIZE CFM SQUARE CEILING DIFFUSER (SUPPLY)</p> <p>SIZE CFM DOOR LOUVER</p> <p>DUCT RISE</p> <p>DUCT DROP</p> <p>TRANSITION-RECTANGULAR TO ROUND</p> <p>BD BACKDRAFT DAMPER</p> <p>SPD STATIC PRESSURE DAMPER</p> <p>VARIABLE VOLUME TERMINAL</p> <p>VARIABLE VOLUME TERMINAL WITH REHEAT</p> <p>FINNED TUBE RADIATION</p> <p>SD SPLITTER DAMPER</p>
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INSTRUMENTATION


<p>MEASURED VARIABLE (TEMPERATURE) MODIFIER (HIGH) INSTRUMENT FUNCTION (SENSOR) INSTRUMENT IDENTIFICATION NUMBER</p> <p>P = PRESSURE V = VALVE 3 = THIRD PRESSURE INSTRUMENT a = SUBLETTER REQUIRED WHEN MORE THAN ONE VALVE IS OPERATED BY CONTROLLER L = LOW MODIFIER (IF REQUIRED)</p> <p>XX LOCALLY MOUNTED INSTRUMENT</p> <p>XX MOUNTED ON MAIN CONTROL PANEL</p> <p>XX MOUNTED BEHIND MAIN CONTROL PANEL</p> <p>XX MOUNTED ON LOCAL CONTROL PANEL</p> <p>CD CONTROL DAMPER FI FLOW INDICATOR FM FLOW METER FS FLOW SWITCH FZ FREEZSTAT GS GAS SENSOR HS HUMIDITY SENSOR LS LEVEL SWITCH PDI PRESSURE DIFFERENTIAL INDICATOR PI PRESSURE INDICATOR PS PRESSURE SENSOR OR PRESSURE SWITCH S SMOKE DETECTOR T THERMOSTAT TC TEMPERATURE CONTROLLER TI TEMPERATURE INDICATOR TIC TEMPERATURE INDICATING CONTROLLER TS TEMPERATURE SENSOR VS VIBRATION SWITCH</p> <p>◇ DDCP INTERFACE</p> <p>X DDCP DATA INPUT/OUTPUT DI DIGITAL INPUT TO DDCP DO DIGITAL OUTPUT FROM DDCP AI ANALOG INPUT TO DDCP AO ANALOG OUTPUT FROM DDCP</p> <p>— IA INSTRUMENT AIR LINE — — — ELECTRICAL CONDUIT AND WIRING</p>	<p>MEASURED VARIABLE (TEMPERATURE) MODIFIER (HIGH) INSTRUMENT FUNCTION (SENSOR) INSTRUMENT IDENTIFICATION NUMBER</p> <p>P = PRESSURE V = VALVE 3 = THIRD PRESSURE INSTRUMENT a = SUBLETTER REQUIRED WHEN MORE THAN ONE VALVE IS OPERATED BY CONTROLLER L = LOW MODIFIER (IF REQUIRED)</p> <p>XX LOCALLY MOUNTED INSTRUMENT</p> <p>XX MOUNTED ON MAIN CONTROL PANEL</p> <p>XX MOUNTED BEHIND MAIN CONTROL PANEL</p> <p>XX MOUNTED ON LOCAL CONTROL PANEL</p> <p>CD CONTROL DAMPER FI FLOW INDICATOR FM FLOW METER FS FLOW SWITCH FZ FREEZSTAT GS GAS SENSOR HS HUMIDITY SENSOR LS LEVEL SWITCH PDI PRESSURE DIFFERENTIAL INDICATOR PI PRESSURE INDICATOR PS PRESSURE SENSOR OR PRESSURE SWITCH S SMOKE DETECTOR T THERMOSTAT TC TEMPERATURE CONTROLLER TI TEMPERATURE INDICATOR TIC TEMPERATURE INDICATING CONTROLLER TS TEMPERATURE SENSOR VS VIBRATION SWITCH</p> <p>◇ DDCP INTERFACE</p> <p>X DDCP DATA INPUT/OUTPUT DI DIGITAL INPUT TO DDCP DO DIGITAL OUTPUT FROM DDCP AI ANALOG INPUT TO DDCP AO ANALOG OUTPUT FROM DDCP</p> <p>— IA INSTRUMENT AIR LINE — — — ELECTRICAL CONDUIT AND WIRING</p>
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EQUIPMENT


<p>— EQUIPMENT DESIGNATION — SYMBOL — NUMBER</p> <p>AC AIR COMPRESSOR ACC AIR COOLED CONDENSING UNIT ACU AIR CONDITIONING UNIT AHU AIR HANDLING UNIT AS AIR SEPARATOR B BOILER BP BOOSTER PUMP CC COOLING COIL CRU COMPUTER ROOM UNIT CU CONDENSING UNIT CV CENTRAL VACUUM EDH ELECTRIC DUCT HEATER EF EXHAUST FAN EH ELECTRIC HEATER EHC ELECTRIC HEATING COIL EWC ELECTRIC WATER COOLER EWH ELECTRIC WATER HEATER F FILTER FC FAN COIL UNIT FCV FLOW CONTROL VALVE FP FIRE PUMP FTR FINNED TUBE RADIATOR HC HEATING COIL HP HEAT PUMP HU HUMIDIFIER JP JOCKEY PUMP P PUMP PTAC PACKAGE TERMINAL AIR CONDITIONER RF RETURN FAN RTAC ROOF TOP AIR CONDITIONING UNIT SAC SELF CONTAINED AIR CONDITIONING UNIT SF SUPPLY FAN SP SUMP PUMP TK TANK UH UNIT HEATER VAV VARIABLE AIR VOLUME TERMINAL UNIT</p>	<p>— EQUIPMENT DESIGNATION — SYMBOL — NUMBER</p> <p>AC AIR COMPRESSOR ACC AIR COOLED CONDENSING UNIT ACU AIR CONDITIONING UNIT AHU AIR HANDLING UNIT AS AIR SEPARATOR B BOILER BP BOOSTER PUMP CC COOLING COIL CRU COMPUTER ROOM UNIT CU CONDENSING UNIT CV CENTRAL VACUUM EDH ELECTRIC DUCT HEATER EF EXHAUST FAN EH ELECTRIC HEATER EHC ELECTRIC HEATING COIL EWC ELECTRIC WATER COOLER EWH ELECTRIC WATER HEATER F FILTER FC FAN COIL UNIT FCV FLOW CONTROL VALVE FP FIRE PUMP FTR FINNED TUBE RADIATOR HC HEATING COIL HP HEAT PUMP HU HUMIDIFIER JP JOCKEY PUMP P PUMP PTAC PACKAGE TERMINAL AIR CONDITIONER RF RETURN FAN RTAC ROOF TOP AIR CONDITIONING UNIT SAC SELF CONTAINED AIR CONDITIONING UNIT SF SUPPLY FAN SP SUMP PUMP TK TANK UH UNIT HEATER VAV VARIABLE AIR VOLUME TERMINAL UNIT</p>
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G05

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION SOUTHWEST REGION FORT WORTH, TEXAS	
LOW ACTIVITY LEVEL AIRPORT TRAFFIC CONTROL TOWER	
LEGEND MECHANICAL (ADDISON AIRPORT) TEXAS	
SUBMITTED: <i>[Signature]</i> SYSTEMS ENGINEER, ANI-630	APPROVED: <i>[Signature]</i> MANAGER INFRASTRUCTURE PLATFORM, ANI-630
DESIGNED: F. SCHWALL REVIEWED: D. PFUNDT ORIG. DFT.: J. MILLER FACILITY:	ISSUED BY: AIRWAY FACILITIES DIVISION DATE: 06-22-01 DRAWING NUMBER: ADS-ATCT- G05



DAVID M. PFUNDT
79568
REGISTERED PROFESSIONAL ENGINEER
6-22-01



PARSONS

DALLAS, TX