6. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING AND HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70°F, AND COOLING AT A TEMPERATURE NOT LESS THAN 78°F. 7. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE. B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN. C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES. PROVIDE AND INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTS. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS. CHILLED WATER SYSTEM GENERAL NOTES MECHANICAL GENERAL NOTES CODES, RULES AND REGULATIONS - DESIGN OF SYSTEM A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES. ALL MATERIALS SHALL COMPLY WITH EXISTING CENTER STANDARDS. ALL CHILLED WATER PIPING SHALL BE BLACK SCHEDULE 40 STEEL PIPE CONFORMING TO ASTM A53 OR A120 WITH ANSI/ASTM B16.3 MALLEABLE IRON FITTINGS AND SCREWED JOINTS. SHOP PRIME ALL MISCELLANEOUS INTERIOR BRACKETS AND HANGERS UNLESS GALVANIZED OR STAINLESS STEEL. REFER TO DETAILS OR GUIDELINES FOR MECHANICAL CONSTRUCTION REQUIRMENTS. INSTALL IN FULL ACCORDANCE WITH PROPER CODES AND GUIDELINES. B) SUPPORT: UP TO 10" DUCT SAME GAGE AS GAL. STEEL QUCT, 1" WIDE OR (NO. 18 GAGE GAL. STEEL WIRE) ON 10 FT. CENTERS, AND UP TO 40" SAME GAGE AS GAL. STEEL DUCT, 1" WIDE OR (NO. 8 GAGE GAL. STEEL WIRE) TIED TO 1" GAL. STEEL BAND AROUND DUCT ON 10 FT. CENTERS. C) HANGER: UP TO 36" DUCT 1/4" ROUND ROD OR 1" X 1" X 1/8" ANGLE. THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND FEES. CHILLED WATER PIPING SHALL BE INSULATED WITH INSULATION HAVING A CONDUCTIVITY (k) NOT EXCEEDING 0.27 BTU PER IN./H-SF-F WITH JACKET WITH VAPOR BARRIER. THICKNESS SHALL BE 1" FOR PIPE SIZES LESS THAN 1-1/2" AND 1-1/2" FOR PIPE SIZES 1-1/2" THROUGH 4". all valves shall be of same manufacturer as existing in center. All valves in insulated lines shall have extended stems beyond insulation. MODULATING CHILLED WATER CONTROL VALVES SHALL BE OF SAME MANUFACTURER AS EXISTING AT CENTER. COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTUAL) REFLECTED CEILING PLAN. ALL EXTERIOR BRACKETS, CLAMPS, AND HANGERS SHALL BE HOT DIPPED GALVANIZED. COAT ALL CUT ENDS AND WELDS WITH "ZRC" COLD GALVANIZING COMPOUND. ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM. FLEXIBLE DUCTS TO BE GLASS-FLEX 8'-0", MAXIMUM IN LENGTH, WHERE APPLICABLE. DUCTWORK CONSTRUCTION DETAILS: A) MATERIAL: GAL. SHEET METAL GAGE 26 FOR UP TO 14" TO 23"0 DUCT. ALL EQUIPMENT AND APPLIANCES ARE LISTED PRODUCTS, AND WILL BE INSTALLED ACCORDING TO THEIR LISTING, AND ALL LISTING INFORMATION WILL BE AVAILABLE FOR INSPECTION. THE PROJECT SHALL BE AIR BALANCED AND A COPY OF THE FINAL REPORT SHALL BE PRESENTED TO THE TENANT AND OWNER. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT IF REQUIRED. PROVIDE FIRE DAMPER OR SMOKE/FIRE DAMPER WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & VOLUME DAMPERS. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE. PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT DSA INTAKE. CH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 M SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF. THE SMOKE TECTOR SHALL BE INSTALLED IN THE MAIN SUPPLY AIR DUCT DOWNSTREAM THE FILTERS OR THEY MAY BE INSTALLED IN EACH ROOM OR SPACE SERVED THE SUPPLY AIR DUCT. DETECTORS SHALL ALSO BE INSTALLED IN THE MAIN TURN DUCT (IF REQ'D. BY THE LOCAL CODE) AHEAD OF OSA INTAKE. SEE DE FOR EXEMPTIONS AND LOCAL AUTHORITY FOR CODE INTERPRETATION, OR INDICATED ON PLAN. ORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS FFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE CHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON JOB SITE BEFORE INSTALLATION. COLOR AS DIRECTED BY OWNER. & GAGE 24 FOR UP COND. DRAIN PAN IN AHU CABINET 3/4" OVERFLOW LINE TERMINATED THRU CEILING. W/ESCUTCHEON PLATE REFRIGERANT SUCTION LINE REFRIGERANT LIQUID LINE EPOXY COATED WEATHERPROOF HOOD WITH ROOF CURB ACCU (INSTALLED ON ROO) SEE PLAN) REFRIGERANT COIL IN AIR HANDLING UNIT 12 REFRIGERANT SCALE: NO SCALE 4 8" FLEX DUCT ROOFTOP KITCHEN HOOD SUPPLY 13 SUPPLY FAN AS SCHEDULED SLOT DIFFUSER DETAIL SCALE: NO SCALE TO CHILLER CHILLED WATER PIPING DIAGRAM SCALE NO SCALE ____ 2" TO <u>AHU-2</u> 2" TO BE REPLACED WITH NEW 2 1/2" CHS, CHR NEW 2 1/2" CHS, CHR NEAREST EXHAUST FAN OR PLUMBING VENT To second level DUCT ADAPTER PLATE WELDED TO DUCT COLUMN **PIPING** STANDARD NOMINAL 14" HIGH GALVANIZED INSULATED ROOF CURB - FULL SIZE CONDENSATE DRAIN WITH STATIC PRESSURE. TRAP, ROUTE TO APPROVED CONDENSATE DRAIN. -SEE PLAN FOR PIPE ROUTING 4"X6" TREATED WOOD BI REMOTE BULB SOLENOID VALVE EXPANSION VALVE VIBRATION ISOLATORS SUPPLY DUCT. FULL SIZE OF FAN OPENING -DINING TYPE 'M' SLOT DIFFUSER IN SLOPED CEILING 1 1/4" TO REMAIN TO EXISTING DETAI TO FIRST LEVEL -1" WASHABLI ALUMINUM FILTERS PLENUM INSULATION -ADJUST AIRFLOW FOR HORIZONTAL DISCHARGE OWER LEVEL FAN S AS REQUIRED 9 (4) SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION (MIN. R-6) AS SPECIFIED AND 1" THICK 1-1/2 LB LINER FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM. (5) SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION (MIN. R-6) AS SPECIFIED AND 1" THICK 1-1/2 LB LINER 10'-0" UPSTREAM OF ROOF TOP UNIT TO RETURN AIR INLET. ③ PREINSULATED FLEXIBLE DUCTWORK WITH R-6 INSULATION AS SPECIFIED ② EXTERNAL INSULATION (MIN. R-6) ON BACK PAN OF AIR DEVICE. (1) SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION (MIN. 10 ROOFTOP SCALE: NO SCALE .64 .8 .8 SCALE: NONE MANUAL VENT \ominus DUCT LINER SCALE: NO SCALE **EXHAUST** WATER KITCHEN HOOD AIR HANDLING **►**E ROOF MOUNTED EXHAUST FAN AIR COOLING 3/4" VALVED AND CAPPED DRAIN PETE'S PLUG (TYPICAL) \bigcirc INSULATION SYSTEMS BALANCE VALVE SUPPLY AIR DUCTWORK REDUCER (TYP.) \ominus VENTED CURB EXTENSIONWELDED EXHAUST DUCT B & G CIRCUIT SETTER ROOF CURB 2 HR. RATED ENCLOSURE FOR DUCTS ABOVE CEILING MODULATING THREE CONTROL VALVE ROOF UPBLAST ROOF EXHAUSTER **EXHAUST** COL Θ R-6) AS SPECIFIED. DETAIL DETAIL RETURN FAN COVER BACK OF DIFFUSER WITH EXTERNAL DUCTWORK INSULATION — € $\boldsymbol{\sigma}$ ∞ Ω 1.5 X "D" MINIMUM (SEE NOTE) FILTER SECTION AUXILIARY DRAIN PAN R/A DUCT SCALE: NONE SUPPORT AS REQUIRED — PIPE HANGER DETAIL SCALE: NONE GALV. ANGLE OR -UNISTRUT TRAPEZE FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER AIR O/A DUCT **HANDLING** OA DUCT TO WALL LOUVER ======== ANCH DUCT DUCT TAP - END BEARING ELGEN MODEL E-104 DIFFUSER (REF. GRILLE SCH.) INSULATED PIPE DETAIL NYLON DUCT CLAMP RAISE OPERATOR TO ALLOW FOR INSULATION LOCKING QUADRANT OPERATOR-ELGEN MODEL RP-4C 22 GA. GALV. DAMPER CONTINUOUS DAMPER FLEXIBLE DUCTWORK EXTERNAL INSULATION END BEARING ELGEN MODEL E-101 - SQUARE TO ROUND TRANSITION INSULATED FLEXIBLE DUCTWORK STAINLESS STEEL CLAMP (1 EA. FOR FLEX. DUCT & 1 EA. FOR INSULATION) MAINTAINED PRO ADAPTER FOR FLEXIBLE DUCT. - GALV. ALL THREAD ROD SIZE PER STRUCTURAL ENGINEER'S RECOMMENDATIONS INSULATION M STRUCTURE DS AND DN ISOLATORS. I A MINIMUM FULL SIZE DRAIN LINE TO VAIN FLEX CONN. (TYPICAL) TURNING INOT BE PROVIDE S SMOKE DETECTOR ROH POP S/A DUCT Y AIR -CEILING ROOF PIPE 2" AND SMALLER, SADDLE TO BE 12" LONG. PIPE 2-1/2" AND LARGER, SADDLE TO BE 18" LONG. ANCHORS SHALL BE GALVANIZED WHERE EXPOSED OUTSIDE. SIZE 1-1/4 4 2 2-1/2 \mathcal{C} DUCT BOOT TO DIFFUSER-PIPE WITH INSULATION \rightarrow UNISTRUT P-3000H-ROOF CONDENSATE DRAIN SUPPORT SCALE: NONE SPECIAL NOTE ALL VOLUME DAMPERS THAT ARE NOT ACCESSIBLE SHALL HAVE EXTENDED ROD ASSEMBLIES THROUGH CEILING OR HAVE ACCESS PANELS INSTALLED AT EACH DAMPER. CONDENSATE RIGID DUCT TAP TO SHOW SUPPORT SPACING (FEET) SCH. 40 14"MIN. **CURB** -S.A. DIFFUSER VOLUME CONTROL-9"MIN. $\dot{\Diamond}$ THREADED TEE, EXTENDED NECK & CAP FOR CLEANING TRAP. TYPICAL FOR ALL AIR HANDLING UNITS. - SECURE W/ APPROVED ANCHORS TO MATCH WALL CONSTRUCTION -REFERENCE SPECIFICATIONS FOR INSULATION REQUIREMENTS AHU (SEE PLANS FOR LOCATION) **DRAIN PIPING** 22 GA. GALVANIZED SADDLE 22 GA. GALVANIZED SADDLE 22 GA. GALVANIZED SADDLE THREADED ROD SUSPENDED FROM STRUCTURE ——— Qο PIPE CLAMP PIPE HANGER SPECIAL NOTE ALL ROOFING WORK SHALL BE BY LANDLORD'S ROOFING CONTRACTOR. ALL CHARGES BY LANDLORD'S ROOFING CONTRACTOR SHALL BE INCLUDED IN BID SUBMITTED. INSULATION "W" -UNIT COUNTER FLASHING TREATED WOOD NAILER ROOFING ASSEMBLY (EXISTING) FIBEROUS CANT RIGID INSULATION ROOFING FELT WELDED ALUM.CURB ĭ Z PROVIDE 4" MINIMUM TRAP SIZE 1" DEEPER THAN AHU TOTAL STATIC PRESSURE ш SHEETMETAL DUCT MOUNTED SEE PLANS FOR PIPE ROUTING AIR **AHU** PIPE WITH INSULATION FLOW -PIPE WITH INSULATION PIPE HANGER MECHANICAL DETAILS SHEET NAME ISSUE 11-30-10 GUADALUPANA RESTAURANT PROJECT NAME CONSULTANTS PROJECT NUMBER PROJECT ADDRESS HOLSTE & ASSOCIATES MEP Engineers 20 WATERWAY THE WOODLANDS, TEXAS TARREI **M2.00** MADALUPAL 9575 Katy Frwy., #200 Houston, Texas 77024 tel: 713.722.7071 fax: 713.722.7072

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