

FAN COIL SCHEDULE

TAG	ROOM #	SERVING	MAKE & MODEL	FAN ARRANGE	CFM	GENERAL		TSP (IN.WC)	MOTOR (HP)	BRAKE (HP)	FAN RPM	MOTOR FULL LOAD AMPS	ELECTRICAL DATA		WEIGHT (LBS)	EAT DB/WB (DEG. F)	LAT DB/WB (DEG. F)	CHILLED WATER COIL			FLUID FLOW (GPM)	FLUID PD (FT.)	BELIMO VALVE	HEATING CFM	EAT DB/WB (DEG. F)	HOT WATER COIL			FLUID FLOW GPM	BELIMO VALVE	ACCESSORIES	
						OUTSIDE AIR	EXTERNAL ESP WC						MCA	MOCp				ELECTRICAL DATA V/PHZ	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)						EWTL/LWT (DEG.F)	SENSIBLE CAPACITY (BTUH)	EWTL/LWT (DEG.F)				
FC-1	114	MAKER'S SPACE	ENVIROTECH V20	1	1980	500	0.8	1.0	1.0	0.72	1305	4.0	5.0	15	208/1/60	467	80/67	57/55.8	60000	54500	44/57	9.10	12.0	B-218	1950	62	100	56000	150/120	4.20	B-213	CONDENSATE PUMP, LITTLE GIANT MODEL VCCA20ULS FILTER FRAME W/ 2" MERV 8 FILTER, BASE RAIL

MECHANICAL NOTES

1. SCOPE OF WORK: WORK INCLUDES THE FOLLOWING: FURNISH AND INSTALL ALL EQUIPMENT AND CONTROLS SHOWN ON THE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS AND DESCRIBED IN THESE NOTES, THE BOOK SPECIFICATIONS AND THE CONTRACT DOCUMENTS. WORK INCLUDES BUT IS NOT LIMITED TO: DUCTING, PIPING, AND CONTROLS. INSTALLATION OF A FAN COIL AND CONTROL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS. INCLUDED ARE ALL DEVICES NEEDED TO MAKE COMPLETE AND FUNCTIONAL SPACE CONDITIONING SYSTEMS AND CONTROLS. CONTRACTOR SHALL FURNISH AND INSTALL, MAKE OPERABLE, AND TEST ALL SYSTEMS AND MECHANICAL EQUIPMENT SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS AND CONTRACT DOCUMENTS. IN CONNECTION THEREWITH, CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL NECESSARY DEVICES, HARDWARE, AND SYSTEMS REQUIRED TO MAKE SAID EQUIPMENT PROPERLY AND SAFELY OPERABLE, INCLUDING BUT NOT LIMITED TO, MOUNTING HARDWARE, INSULATION, FILTERS, VIBRATION CONTROL DEVICES, DUCT SYSTEMS, CONTROL SYSTEMS, AND PATCHING AND PAINTING.

2. INTERPRETATION OF DRAWINGS, SPECIFICATIONS OR CONTRACT DOCUMENTS. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS; FINDS DISCREPANCIES, ERRORS OR OMISSIONS THEREIN; OR FINDS VARIANCES IN ANY OF THE CONTRACT DOCUMENTS WITH APPLICABLE RULES, REGULATIONS, ORDINANCES AND/OR LAWS, A WRITTEN REQUEST FOR AN INTERPRETATION OR CORRECTION THEREOF MAY BE SUBMITTED TO THE ENGINEER. IT IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE BIDDER TO SUBMIT SUCH REQUEST IN SUFFICIENT TIME FOR THE PREPARATION OF A RESPONSE THERETO AND DELIVERY OF SUCH RESPONSE TO ALL BIDDERS PRIOR TO THE SCHEDULED CLOSING FOR RECEIPT OF BID PROPOSALS. ANY REQUEST OF ANY BIDDER, PURSUANT TO THE FOREGOING SENTENCE THAT IS MADE LESS THAN SEVEN DAYS PRIOR TO THE SCHEDULED CLOSING DATE FOR THE RECEIPT OF BID PROPOSALS SHALL BE DEEMED UNTIMELY. ANY INTERPRETATION OR CORRECTION OF THE CONTRACT DOCUMENTS WILL BE MADE ONLY BY WRITTEN ADDENDUM DULY ISSUED BY THE OWNER OR THE ENGINEER. A COPY OF ANY SUCH ADDENDUM WILL BE MAILED OR OTHERWISE DELIVERED TO EACH BIDDER RECEIVING A SET OF THE CONTRACT DOCUMENTS. NO PERSON IS AUTHORIZED TO RENDER AN ORAL INTERPRETATION OR CORRECTION OF ANY PORTION OF THE CONTRACT DOCUMENTS TO ANY BIDDER, AND NO BIDDER IS AUTHORIZED TO RELY ON ANY SUCH ORAL INTERPRETATION OR CORRECTION. FAILURE TO REQUEST INTERPRETATION OR CLARIFICATION OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS PURSUANT TO THE FOREGOING SHALL BE DEEMED TO BE A WAIVER OF ANY DISCREPANCY, DEFECT, OR CONFLICT THEREIN.

3. DIMENSIONS: ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON WORKING DRAWINGS. ALL SIZES OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.

4. CODES AND STANDARDS: ALL WORK SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, THE 2022 CALIFORNIA ELECTRIC CODE, THE STATE OF CALIFORNIA, EQUIPMENT MANUFACTURER'S RECOMMENDED PROCEDURES, AND STANDARD CONSTRUCTION PRACTICES. NOTE: WHERE TWO OR MORE CODES CONFLICT, THE MOST RESTRICTIVE SHALL APPLY. NOTHING IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO APPLICABLE CODES.

5. SUBMITTALS REQUIRED: PRIOR TO ORDERING EQUIPMENT AND MATERIALS, CONTRACTOR SHALL FURNISH TO ENGINEER / OWNER SUBMITTALS AND SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE IN THIS PROJECT. ORDERING OF EQUIPMENT AND MATERIALS SHALL ONLY PROCEED AFTER SATISFACTORY REVIEW OF ALL SUBMITTALS BY CONTRACTOR / ENGINEER / OWNER. COPIES OF ALL OWNER'S MANUALS, WARRANTIES AND OTHER WRITTEN INFORMATION REGARDING SYSTEMS SHALL BE PRESENTED TO OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

6. CONSTRUCTION OBSERVATION: IN ADDITION TO THE REQUIREMENT FOR OBTAINING INSPECTIONS BY THE LOCAL JURISDICTION, CONTRACTOR SHALL NOTIFY ENGINEER AT APPROPRIATE TIMES DURING THE CONSTRUCTION PROCESS SO THAT ENGINEER CAN VISIT SITE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.

7. UNIT LOCATIONS: EQUIPMENT AND SYSTEM LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS AND EXISTING CONDITIONS IN THE FIELD, AND LOCATE UNITS AND DUCTWORK TO AVOID INTERFERENCE. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. ALLOW CLEARANCE FOR DUCTWORK AND PIPING. ALL CLEARANCES REQUIRED BY UNIT MANUFACTURER SHALL BE MAINTAINED. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH CODES AND THE RECOMMENDED INSTALLATION PROCEDURES PUBLISHED BY THE MANUFACTURER.

8. DUCTWORK & PIPING: CONTRACTOR SHALL INSTALL NEW DUCTWORK AND PIPING IN THE APPROXIMATE LOCATIONS SHOWN ON THE DRAWINGS. ALL DUCTWORK & PIPING SHALL BE SECURELY ANCHORED TO THE BUILDING IN AN APPROVED MANNER THAT WILL RENDER IT FREE FROM VIBRATION AND LATERAL MOVEMENT. CONTRACTOR SHALL PROVIDE WITHOUT COST TO THE OWNER ALL REQUIRED TRANSITIONS AND OFFSETS TO AVOID CONFLICTS WITH STRUCTURE AND OTHER TRADES.

9. MATERIALS - DUCTWORK: ALL NEW DUCTWORK FOR HVAC SYSTEMS SHALL BE GALVANIZED STEEL CONFORMING TO ASTM SPEC A525.

RECTANGULAR DUCTWORK SHALL BE MADE FROM GALVANIZED STEEL SHEETS. DUCT CONSTRUCTION, AND REINFORCING SHALL BE PER TABLES 6-1, 6-2, AND 6-3 OF THE CALIFORNIA MECHANICAL CODE. DUCTWORK SHALL BE OF THE FOLLOWING GAUGES: UP TO 12" - 26 GAUGE. 13"-30" - 24 GAUGE. CURVED ELBOWS SHALL HAVE CENTRALIZE RADIUS NOT LESS THAN THE WIDTH OF THE DUCT. WHERE ABRUPT TURNS AND ELBOWS ARE USED, TURNING VANES SHALL BE PROVIDED. TAKE-OFFS FROM MAIN DUCTS SHALL BE MADE WITH 45 DEGREE ANGLES WITH VOLUME DAMPERS WHERE SHOWN. ALL PANELS SHALL BE CROSS BROKEN TO ENSURE RIGIDITY.

INSTALL VOLUME DAMPERS AT LOCATIONS SHOWN.

10. DUCT INSULATION: ALL NEW DUCTING AT MECHANICAL CLOSET SHALL BE LINED.

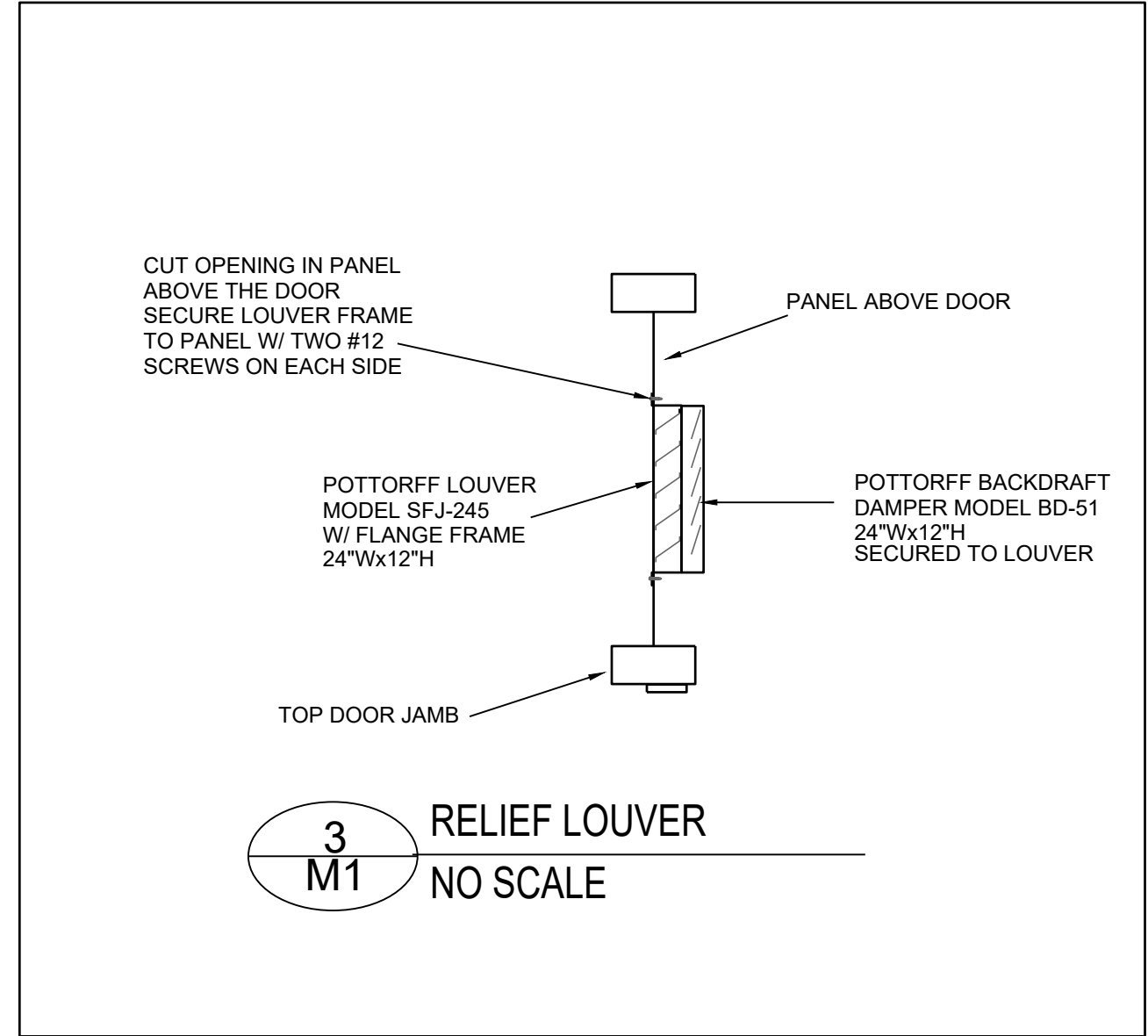
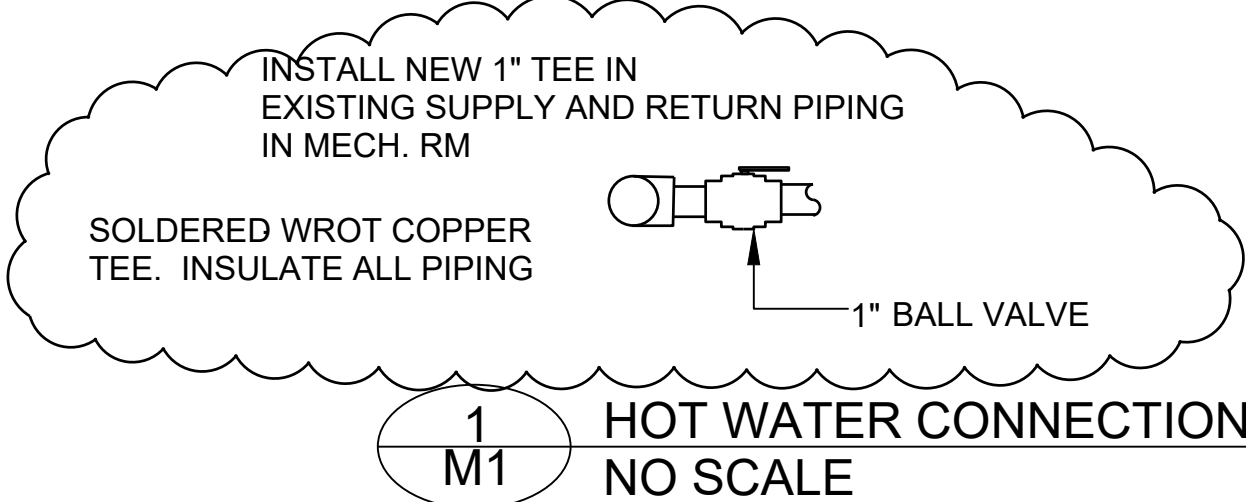
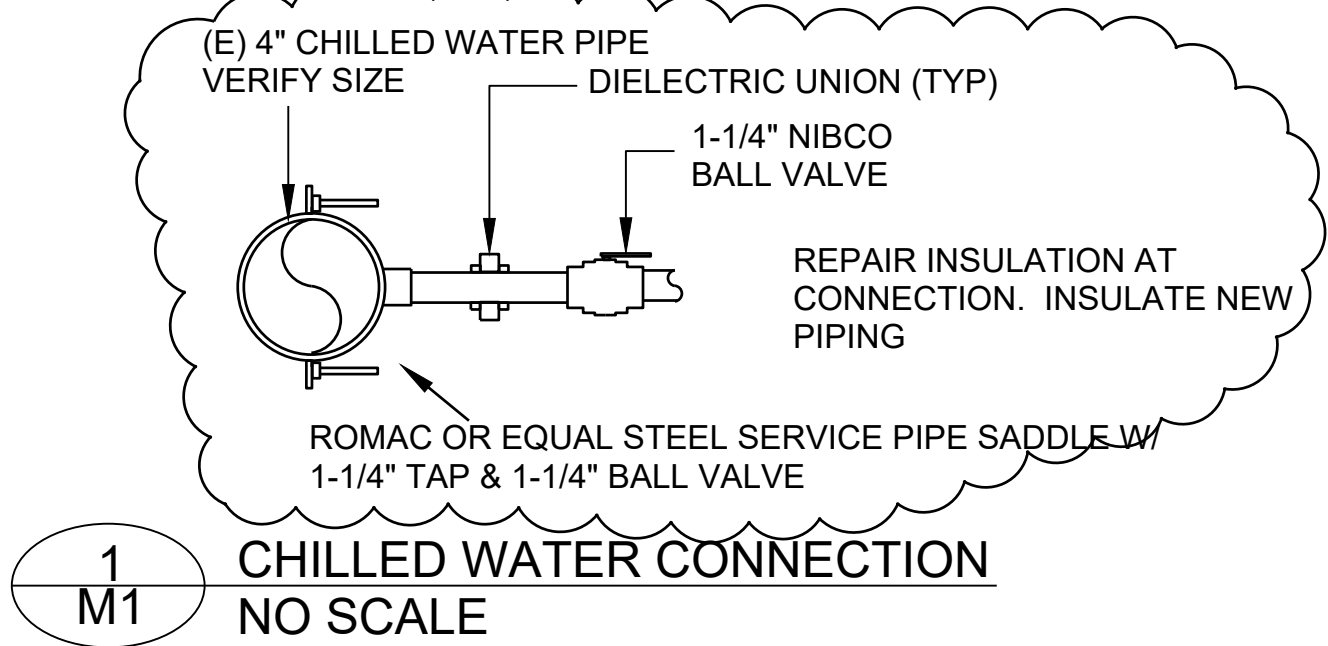
11. BALANCING: FOLLOWING INSTALLATION, CONTRACTOR SHALL START UP AND BALANCE ALL HVAC SYSTEMS TO CONFORM TO AIR VOLUMES INDICATED ON PLANS. COPIES OF BALANCING RECORDS SHALL BE FURNISHED TO BUILDING OWNER AND PROJECT ENGINEER.

12. DUCT SUPPORTS AND HANGERS: DUCT SUPPORTS SHALL BE PER THE 2016 CALIFORNIA MECHANICAL CODE. RECTANGULAR DUCTS WITH A MAXIMUM SIZE NOT EXCEEDING 30" AND ALL ROUND DUCTS SHALL BE SUPPORTED WITH ONE INCH WIDE 18 GAUGE HANGER STRAPS. SUPPORTS SHALL BE LOCATED ON TWO OPPOSITE SIDES OF THE DUCT. SHALL BE METAL SCREWED TO THE SIDES AND BOTTOM OF THE DUCT. SHALL BE SPACED AT NOT MORE THAN 7'-8" ON CENTERS AND SHALL BE Laterally BRACED. SECURE STRAPS TO STRUCTURAL FRAMING PER SMACNA STDS. FOR SEISMIC LEVEL "A".

13. CLEANUP: EVERY DAY, AND AFTER ALL WORK HAS BEEN COMPLETED, CONTRACTOR SHALL CLEAN ENTIRE JOB-SITE OF ALL DEBRIS ASSOCIATED WITH MECHANICAL SYSTEMS. EXPOSED PARTS WHICH ARE TO BE PAINTED SHALL BE THOROUGHLY CLEANED READY FOR PAINTING.

14. WIRING: ALL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH NEC REQTS. ALL WIRING SHALL BE IN CONDUIT. ALL INTERIOR LOW VOLTAGE AND CONTROL WIRING SHALL BE IN WIREMOLD AND IN FAN ROOMS SHALL BE IN CONDUIT. EXPOSED CONDUIT SHALL BE INSTALLED IN A SQUARE, PLUMB, AND LEVEL MANNER WITH THOUGHT GIVEN TO THE FINAL APPEARANCES. PROVIDE TO ENGINEER SHOP DRAWING FOR CONTROL TRANSFORMER CONFIGURATIONS DETAILING CIRCUITS TO BE USED, LOAD CALCULATIONS, WIRE SIZES, AND LOCATIONS. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE AND ELECTRICAL SPECIFICATIONS. ALL TRANSFORMERS SHALL BE PROTECTED BY PROPERLY SIZED CIRCUIT BREAKER OR FUSE(S). ALL TRANSFORMERS SHALL HAVE RESETABLE BREAKER ON THE LOAD SIDE. ALL LOW VOLTAGE CONTROL & COMMUNICATIONS WIRING SHALL BE DONE ACCORDING TO MANUFACTURERS INSTALLATION MANUAL. PROVIDE SUBMITTALS ON WIRE AND ENCLOSURES.

15. COORDINATION DURING CONSTRUCTION: THE CONTRACTOR SHALL COORDINATE ANY NECESSARY CHANGES IN WORK SCHEDULING WITH THE COLLEGE TO MINIMIZE THE DISRUPTION. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY HIS WORK TO BUILDING(S) AND EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

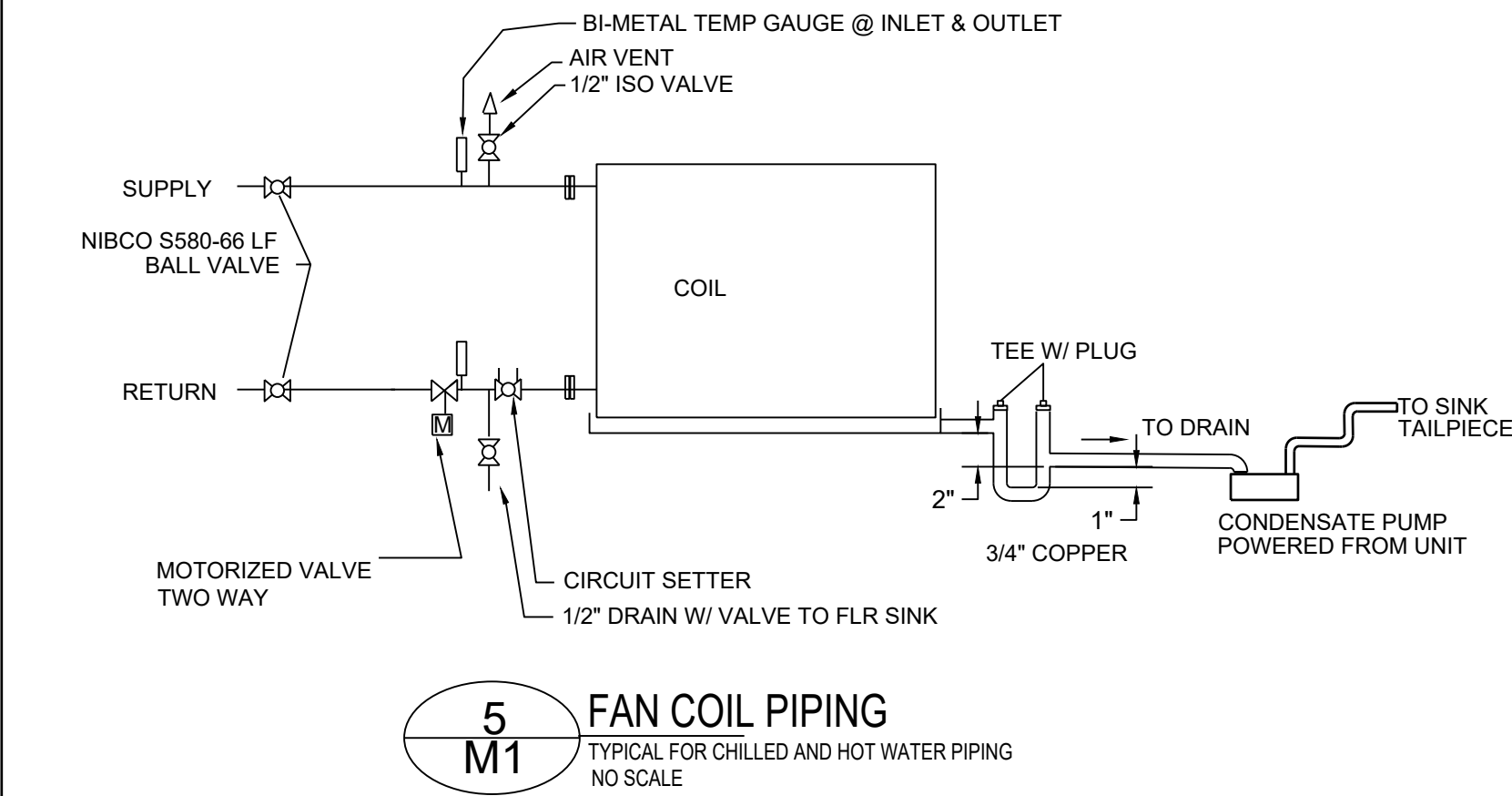
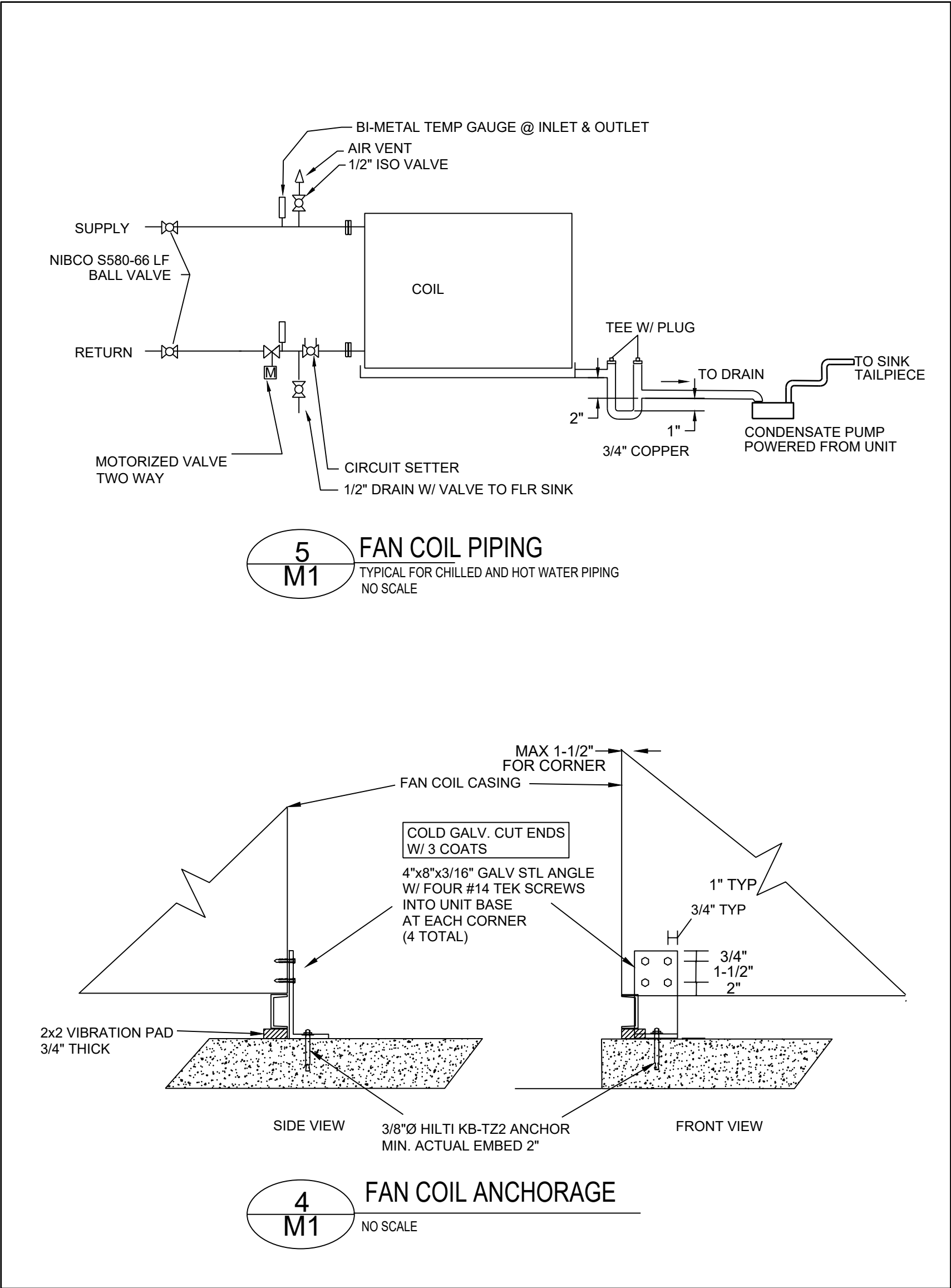


CONTROLS
AUTOMATED LOGIC CONTROLLER
CONNECT TO (E) ALC NETWORK

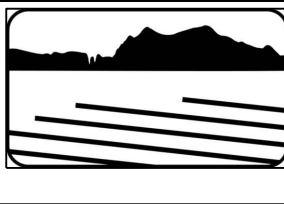
INPUT
THERMOSTAT (AI)
SUPPLY AIR TEMPERATURE (AI)

OUTPUT
FAN ON/OFF (DO)
CHILLED WATER VALVE POSITION (AO)
HOT WATER VALVE POSITION (AO)

INSTALL NEW ALC CONTROLLER IN ENCLOSURE. INSTALL NEW SENSORS AND CHILLED WATER VALVES WITH ALC CONTROL. INSTALL MOTOR STARTER W/ C



REV.	DATE	DESCRIPTION
1	3/17	ADDENDUM 1



AE Group
Mechanical Engineers
638 East Front Street
Ventura, California 93001
(805) 653-1722
hugh@aeengineers.com

MOORPARK COLLEGE

7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF
MAINTENANCE & OPERATIONS

7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE:
AS SHOWN

DATE:
12-12-24


BLDG. NO.

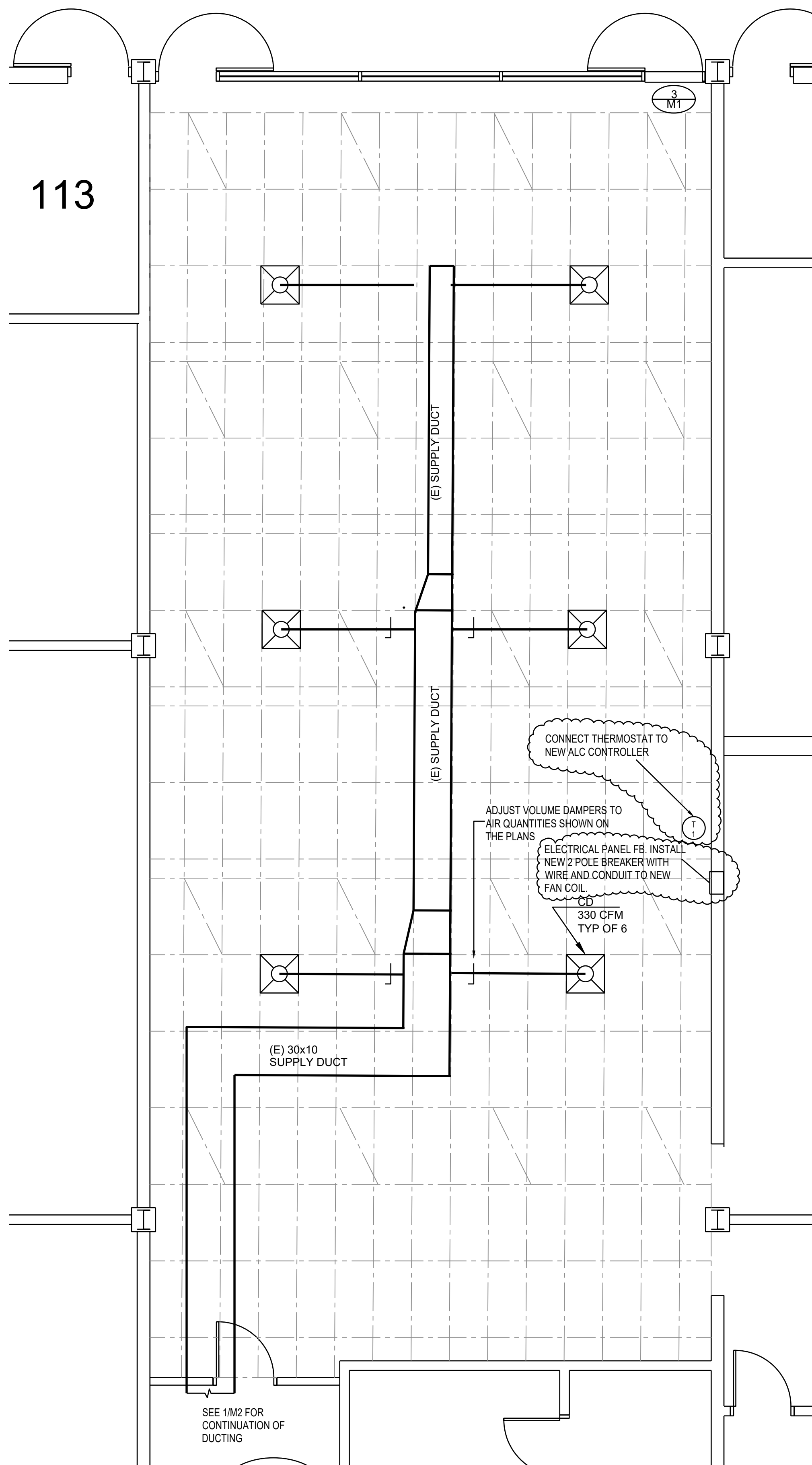
APPLIED ART BUILDING
COOLING TOWER REPLACEMENT

NOTES AND SCHEDULE

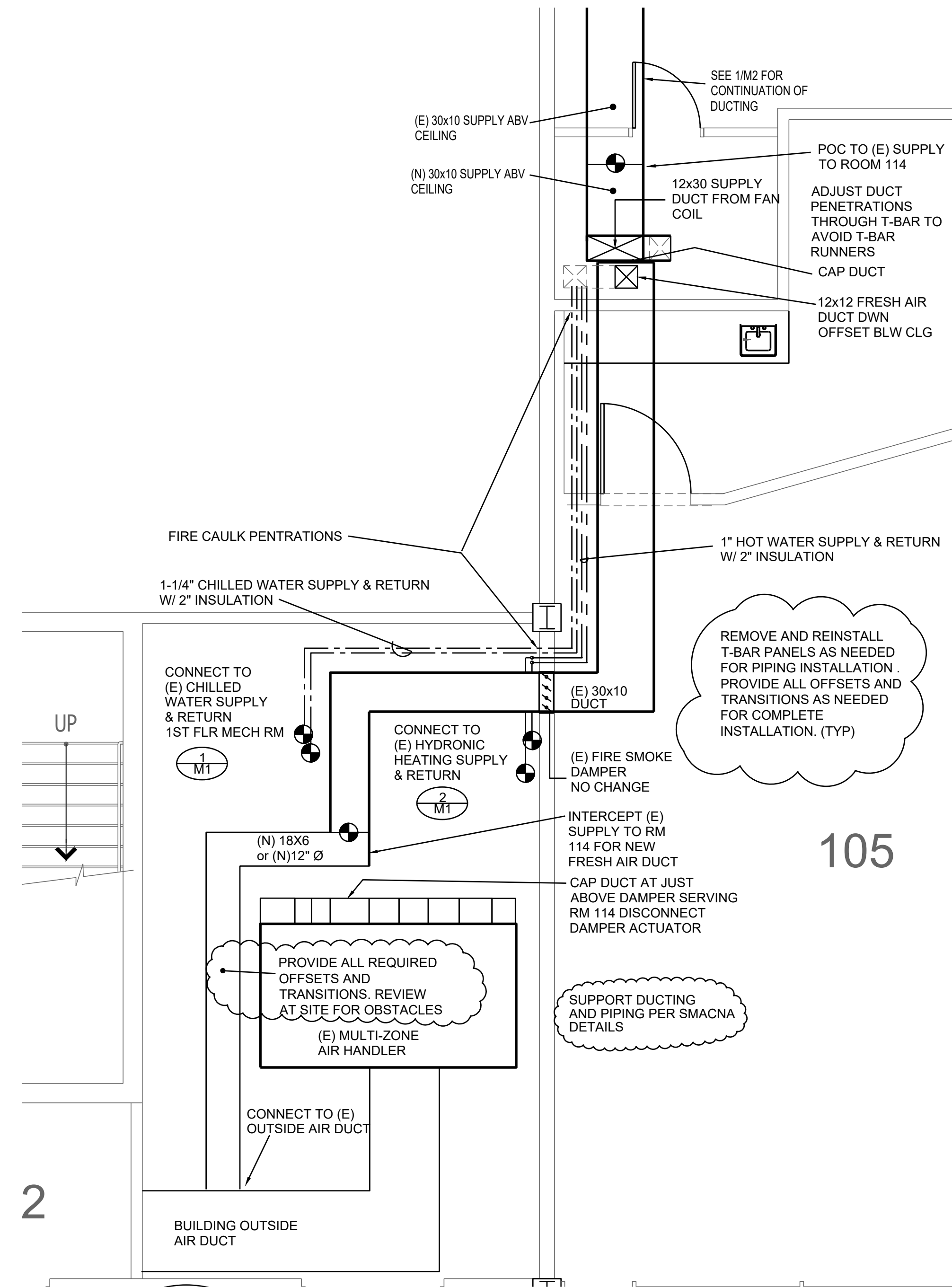
SHEET NO.
M1

1 OF 4

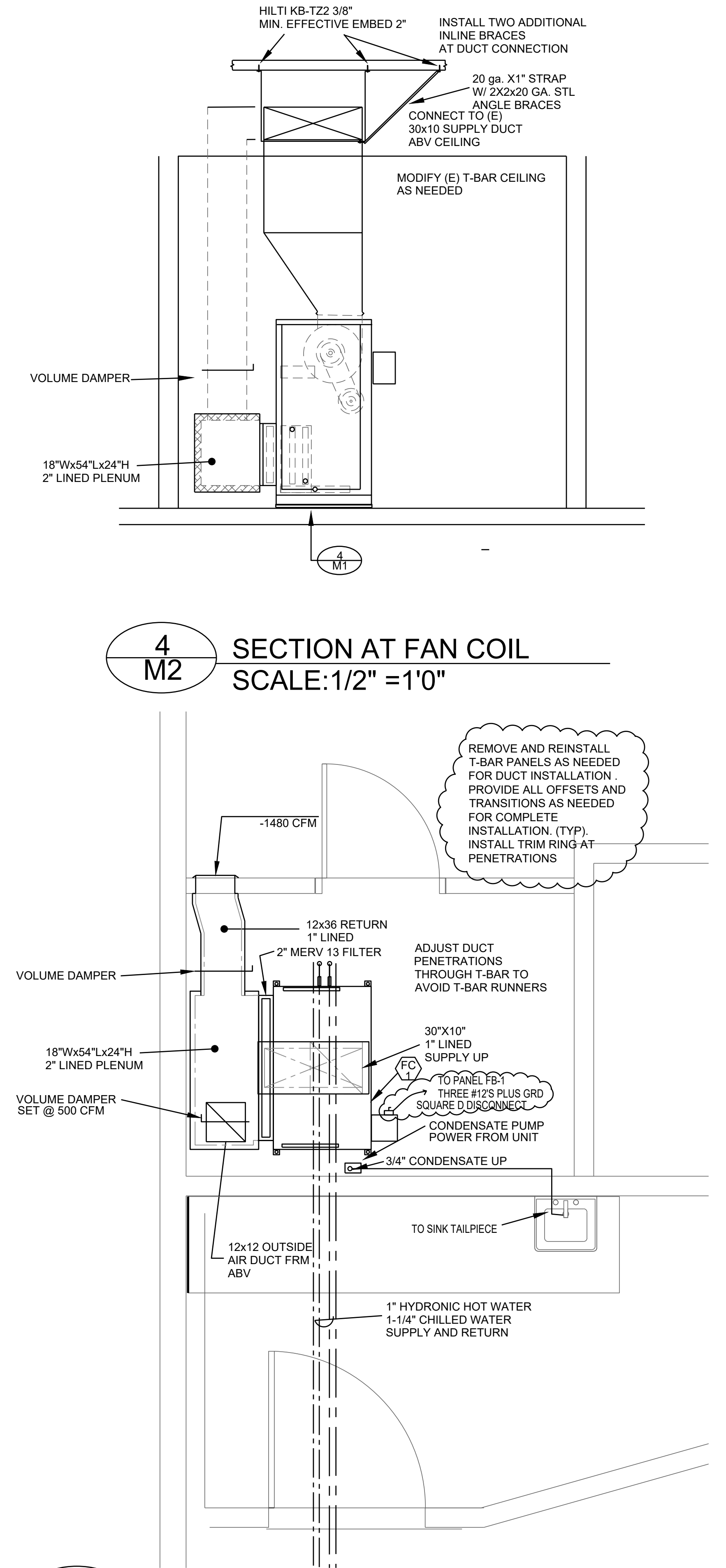




1
M2 CLASSROOM 114 FLOOR PLAN
SCALE: 1/4" = 1'0"



2
M2 MECHANICAL ROOM PLAN
SCALE: 1/4" = 1'0"



3
M2 CLOSET MECHANICAL PLAN
SCALE: 1/2" = 1'0"

REV.	DATE	ADDENDUM
1	3/17	ADDENDUM 1



MOORPARK COLLEGE
7075 CAMPUS ROAD, MOORPARK, CALIFORNIA 93021
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

DEPARTMENT OF
MAINTENANCE & OPERATIONS
7075 CAMPUS RD.
MOORPARK, CA. 93021
PHONE: (805) 378-1454 FAX: (805) 378-1593

SCALE:
AS SHOWN
DATE:
12-12-24
BLDG. NO.

APPLIED ART BUILDING
COOLING TOWER REPLACEMENT
NOTES AND SCHEDULE

SHEET NO.
M2
1 OF 4

