

SCOPE OF WORK

THE SCOPE OF WORK SHALL BE AS OUTLINED IN THE DRAWINGS AND SPECIFICATIONS. IN SUMMARY, IT SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: PRE-TEST OF THE CHILLED AND HOT WATER FLOWS FOR ALL EXISTING AHU'S SHOWN ON DRAWINGS IN THE HISTORIC COURTHOUSE. EXTENSION OF CHILLED WATER PIPING SERVICE FROM THE JUDICIAL CENTER (ADJACENT BUILDING) INTO THE HISTORIC COURTHOUSE WITHOUT CHILLED WATER SERVICE INTERRUPTION TO THE HISTORIC COURTHOUSE. INSTALLATION OF NEW CHILLED WATER PIPING WITHIN THE HISTORIC COURTHOUSE INCLUDING DISCONNECTING AIR HANDLING UNITS FROM THE EXISTING HISTORIC COURTHOUSE SYSTEM AND CONNECTING THEM TO NEWLY INSTALLED PIPING. INTEGRATION OF CONTROLS AND SEQUENCING OF CHILLED WATER DISTRIBUTION. UPON ESTABLISHING CHILLED WATER SERVICE TO THE HISTORIC COURTHOUSE, DEMOLITION OF EXISTING CHILLERS AND COOLING TOWER AND ASSOCIATED APPURTENANCES ON THE ROOF/PENTHOUSE OF THE HISTORIC COURTHOUSE. DEMOLITION AND INSTALLATION OF HOT WATER PIPING IN THE HISTORIC COURTHOUSE. TESTING, ADJUSTING AND BALANCING OF CHILLED WATER AND HOT WATER FLOWS TO QUANTITIES OBTAINED IN THE PRE-TEST OR AS DIRECTED BY ENGINEER. COOLING FOR SERVER ROOM SHALL BE ESTABLISHED PRIOR TO ANY DEMOLITION WORK IN THE CHILLER PLANT. ADDITIONALLY, TEMPORARY COOLING 24/7 SHALL BE REQUIRED FOR THE SERVER ROOMS. COORDINATE WITH OWNER.

SHEET NUMBER	TITLE
COVER	COVER SHEET
A-1	ARCHITECTURAL PARTIAL FLOOR PLAN
A-2	WATERPROOFING DETAILS
A-3	MECHANICAL FIRST FLOOR SERVER ROOM PLAN
M-0	MECHANICAL BASEMENT DEMOLITION PLAN
MD-1	MECHANICAL FIRST FLOOR DEMOLITION PLAN
MD-2	MECHANICAL SECOND FLOOR DEMOLITION PLAN
MD-3	MECHANICAL THIRD FLOOR DEMOLITION PLAN
MD-4	MECHANICAL FIRST FLOOR DEMOLITION PLAN
MD-5	MECHANICAL SECOND FLOOR PLAN
M-1	MECHANICAL THIRD FLOOR PLAN
M-2	MECHANICAL FOURTH FLOOR PLAN
M-3	MECHANICAL FIFTH FLOOR PLAN
M-4	MECHANICAL ROOF/PENTHOUSE PLAN
M-5	MECHANICAL DETAILS
M-6	MECHANICAL SCHEDULES
M-9	MECHANICAL FLOW DIAGRAM (JUDICIAL CENTER)
M-10	MECHANICAL FLOW DIAGRAM (HC CHILLED WATER)
M-11	MECHANICAL FLOW DIAGRAM (HC HOT WATER)
M-12	MECHANICAL FLOW DIAGRAM (HC HEATING PLANT)
M-13	MECHANICAL CONTROLS
E-1	ELECTRICAL BASEMENT POWER PLAN
E-2	ELECTRICAL PARTIAL POWER PLANS
E-3	ELECTRICAL PARTIAL RISER
BOOK	PROJECT SPECIFICATIONS

REQUIRED SUBMITTALS	TITLE
PRIOR TO COMMENCEMENT OF THE WORK, SUBMITTALS SHALL BE REQUIRED FOR THE WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:	
	COMMON WORK RESULTS FOR HVAC
	METERS AND GAGES FOR HVAC PIPING
	GENERAL DUTY VALVES FOR HVAC PIPING
	HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT
	IDENTIFICATION FOR PIPING AND EQUIPMENT
	TESTING, ADJUSTING, AND BALANCING FOR HVAC
	HVAC INSULATION
	INSTRUMENTATION AND CONTROL FOR HVAC
	HYDRONIC PIPING
	231113
	LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
	230519
	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
	230522
	HVAC PIPING
	230529
	MECHANICAL PIPING FOR ELECTRICAL SYSTEMS
	230553
	IDENTIFICATION FOR ELECTRICAL SYSTEMS
	230553
	ENCLOSED SWITCHES AND CIRCUIT BREAKERS
	232816
	COMMUNICATIONS HORIZONTAL CABLING
	271500
	ARCHITECTURAL ELEMENTS AND WATERPROOFING PROJECT SCHEDULE (WITHIN 10 DAYS OF NTP)
	UI FIRESTOPPING DETAILS
	SHOP DRAWING SCHEDULE (WITHIN 30 DAYS OF NTP)
	SHOP DRAWINGS
	TESTING, ADJUSTING AND BALANCING

BUILDING CODE ANALYSIS

EXISTING BLDG	AREA OF EXISTING BLDG	AREA OF RENOVATION
BASEMENT FLOOR	22,830± SQ.FT.	10± SQ.FT.
1st FLOOR	22,830± SQ.FT.	10± SQ.FT.
2nd FLOOR	20,285± SQ.FT.	16± SQ.FT.
3rd FLOOR	20,285± SQ.FT.	95± SQ.FT.
ROOF/PENTHOUSE	20,285± SQ.FT.	95± SQ.FT.
TOTAL BLDG	109,960± SQ.FT.	61± SQ.FT.

CLAUDED ZONING: HISTORIC DISTRICT REQUIRED SETBACKS TO PROPERTY LINES: (P) N/A (R) N/A (L.S) N/A (R.S) N/A SQ.FT. CLASSIFICATION OF BUILDING BY OCCUPANCY: BUSINESS - 500 - LEVEL 2 ALTERATION CLASSIFICATION OF BUILDING BY CONSTRUCTION TYPE: III-B - LEVEL 2 ALTERATION PRESERVE OLD BUILDING: YES NO XXXX YEAR AND CODE IN EFFECT BY BUILDING DEPT.: 2007 FLORIDA BUILDING CODE 2007 EXISTING BUILDING FLOOR AREA PER FLOOR: 22,830± SQ.FT. 2007 IRC AND MECHANICAL & PLUMBING w/09 REVISIONS 2008 NEC 2009 NFPA 101 LIFE SAFETY CODE

BUILDING HEIGHT & AREA / AREA MODIFICATION (TABLE 903.2)

ALLOWABLE BUILDING HEIGHT NUMBER OF STORIES 4 / 5. ACTUAL BUILDING HEIGHT NUMBER OF STORIES 4 / 42.1 MAXIMUM ALLOWABLE FLOOR AREA 19,000 SQ.FT. ACTUAL FLOOR AREA PER FLOOR 22,830± SQ.FT. GENERAL OR OCCUPANCY AREA MODIFICATION CALCULATIONS USED: N/A

FIRE RESISTANCE RATING OF BUILDING COMPONENTS AND PERCENTAGE OF OPENINGS (TABLES 601 AND 602)

HORIZONTAL SEPARATION FROM PROPERTY LINES AND/OR BUILDINGS: (P) 30'± (R) 30'± (L.S) 30'± (R.S) 30'± FEET STRUCTURAL FRAME (INCLUDING COLUMNS, GIRDERS AND TRUSSES): 0 HR EXTERIOR BEARING WALL RATING REQUIREMENTS: 0 HR EXTERIOR NON-BEARING WALL RATING REQUIREMENTS: 0 HR INTERIOR BEARING WALL RATING REQUIREMENTS: 0 HR INTERIOR NON-BEARING WALL RATING REQUIREMENTS: 0 HR FLOOR CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS): 0 HR ROOF CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS): 0 HR EXIT ACCESS ENCLOSURES/CORRIDORS: 0 HR EXIT ENCLOSURES/STAIRS: 2 HR

DESIGN LOADS AND STRESSES

ROOF LIVE LOAD: 20 PPF PIPE DEAD LOAD: 100 PLF ROOF SLOPE: FLAT FLOOR LIVE LOAD: 50 CORRIDOR LIVE LOAD: 80 BALCONY AND DECK LIVE LOAD: 100 WIND LOAD: VELOCITY: 130 MPH WIND PRESSURE: 31 PBF WIND EXPOSURE CATEGORY: B IMPROVED PRESSURE COEFFICIENT: 0.85 ENCLOSURE CLASSIFICATION (OPEN, ENCLOSED, ENCLOSED INTERNAL PRESSURE COEFFICIENT: 0.85) NOTE: SOILS ANALYSIS IS NOT REQUIRED. SOIL BEARING CAPACITY: N/A PBF

MAXIMUM ALLOWABLE TRAVEL DISTANCE WITHIN ROOMS OR SPACES ALONG ROUTES OF EXIT ACCESS (805B.1) 300' BUSINESS OCCUPANCY w/ SPRINKLER SYSTEM



MANATEE COUNTY HISTORIC COURTHOUSE  
CHILLED WATER PIPING EXTENSION  
BID ALTERNATE #1

MANATEE COUNTY GOVERNMENT  
PROPERTY MANAGEMENT DEPARTMENT  
FRANK MONHART, PROJECT MANAGER  
941-742-5844

PLANS AND SPECIFICATIONS PREPARED BY:  
FORNEY ENGINEERING, INC.

PHASING PLAN

IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO LIMIT INTERRUPTION TO THE OWNER DURING THE DEMOLITION/CONSTRUCTION OF THE PROJECT. THE CONTRACTOR MAY DEVELOP AN ALTERNATE PHASING PLAN PROVIDED THE INTENT OF LIMITED INTERRUPTION IS MET.

ALL WORK IN THE OCCUPIED SPACES SHALL OCCUR ON NIGHTS AND WEEKENDS. THE CONTRACTOR SHALL PROVIDE A DUST TIGHT BARRIER FOR ALL WORK IN OCCUPIED SPACES.

THE FIRST PHASE OF THE PROJECT SHALL CONSIST OF INSTALLATION OF THE SPLIT SYSTEM IN THE FIRST FLOOR SERVER ROOM AS SHOWN ON DRAWINGS. COOLING FOR SERVER ROOM SHALL BE ESTABLISHED PRIOR TO ANY DEMOLITION WORK IN THE CHILLER PLANT. ADDITIONALLY, TEMPORARY COOLING 24/7 SHALL BE REQUIRED FOR THE COMPUTER ROOMS IN THE BUILDING. COORDINATE WITH OWNER. IT SHALL ALSO INCLUDE THE PRE-TESTING OF CHILLED AND HOT WATER FLOWS FOR ALL EXISTING AHU'S IN THE BUILDING.

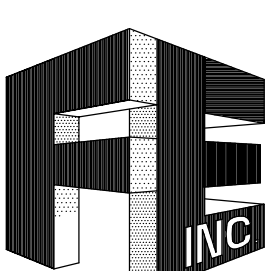
THE SECOND PHASE OF THE PROJECT SHALL CONSIST OF ROUTING CHILLED WATER PIPING INTO THE BASEMENT OF THE HISTORIC COURTHOUSE. ELECTRICAL CONDUIT SHALL BE ROUTED ALONG WITH THE CHILLED WATER PIPING IN THE TRENCH. THE WORK ON THE EXTERIOR OF THE BUILDING SHALL OCCUR AS QUICKLY AS POSSIBLE SO THAT PEDESTRIAN TRAFFIC MAY BE RESTORED IN THE COURTYARD.

THE THIRD PHASE OF THE PROJECT CONSISTS OF ESTABLISHING CHILLED WATER PIPING SERVICE TO THE COURTHOUSE. ROUTING CHILLED WATER PIPING THROUGHOUT THE BUILDING, DISCONNECTING AND RE-CONNECTING CHILLED WATER SERVICE TO THE HISTORIC COURTHOUSE. WORK IN THE OCCUPIED SPACES AS WELL AS PLANT SHUTDOWN SHALL OCCUR AFTER-HOURS. INSTALL DEHUMIDIFIERS ON SECOND FLOOR AS INDICATED. PRIOR TO DISCONNECTING CHILLED WATER SERVICE TO THE SECOND FLOOR.

THE FOURTH PHASE SHALL CONSIST OF DEMOLITION AND INSTALLATION OF HOT WATER PIPING THROUGHOUT THE BUILDING AND ASSOCIATED CONTROLS.

THE FINAL PHASE SHALL CONSIST OF THE REMOVAL OF REMAINING EXISTING EQUIPMENT SHOWN TO BE DEMOLISHED.

**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
BRADENTON, FLORIDA 34208

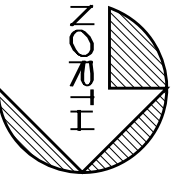


FORNEY ENGINEERING, INC.

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5213 FOURTH AVE. CIRCLE EAST, BRADENTON, FL. 34208 C.O.A. #4049  
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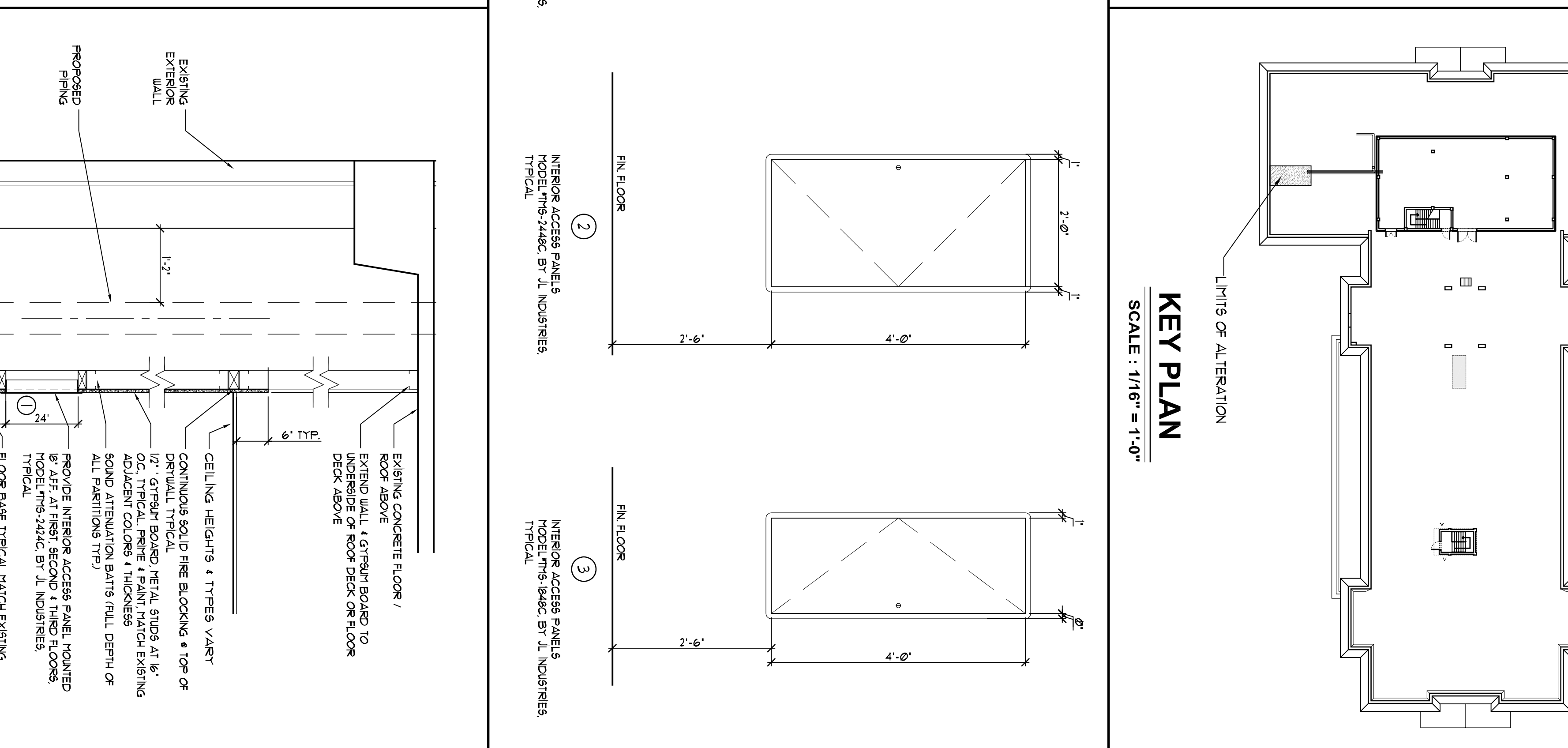
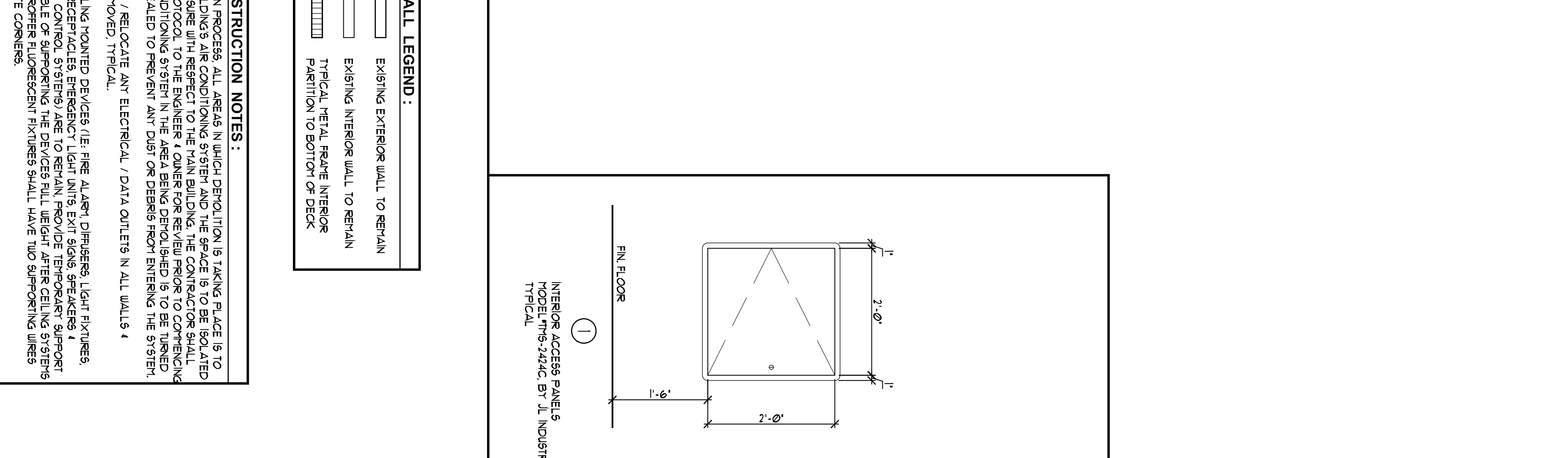
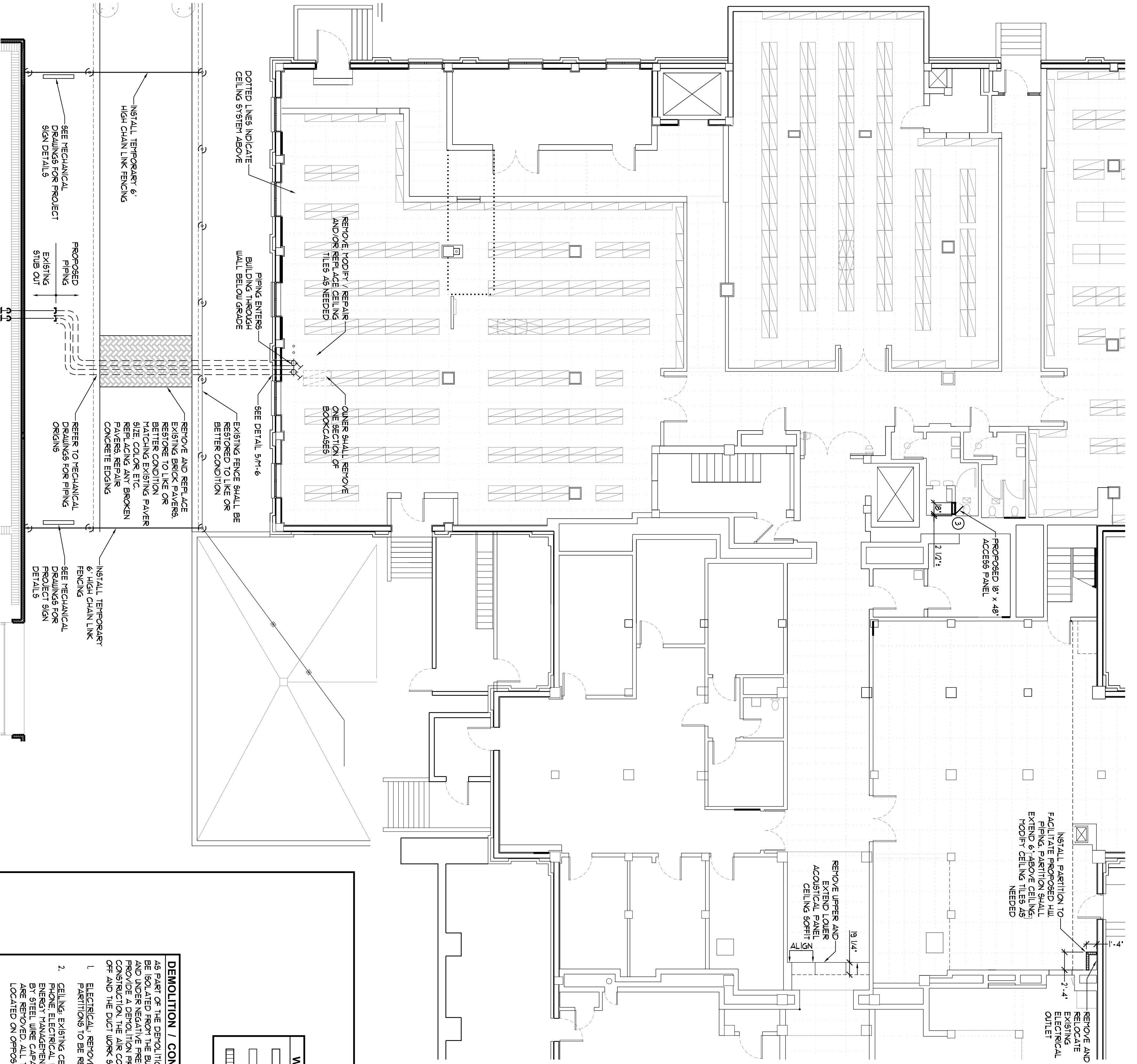
TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.  
BY: GEORGE L. URBANS P.E.  
DATE: \_\_\_\_\_  
S.E.A.L.

REV. # DATE  
JOB NO. : 04-1141  
DATE : 03-04-10  
DRAWN BY : KMS  
CHECKED BY : YWS  
SHEET NO. :  
**COVER**

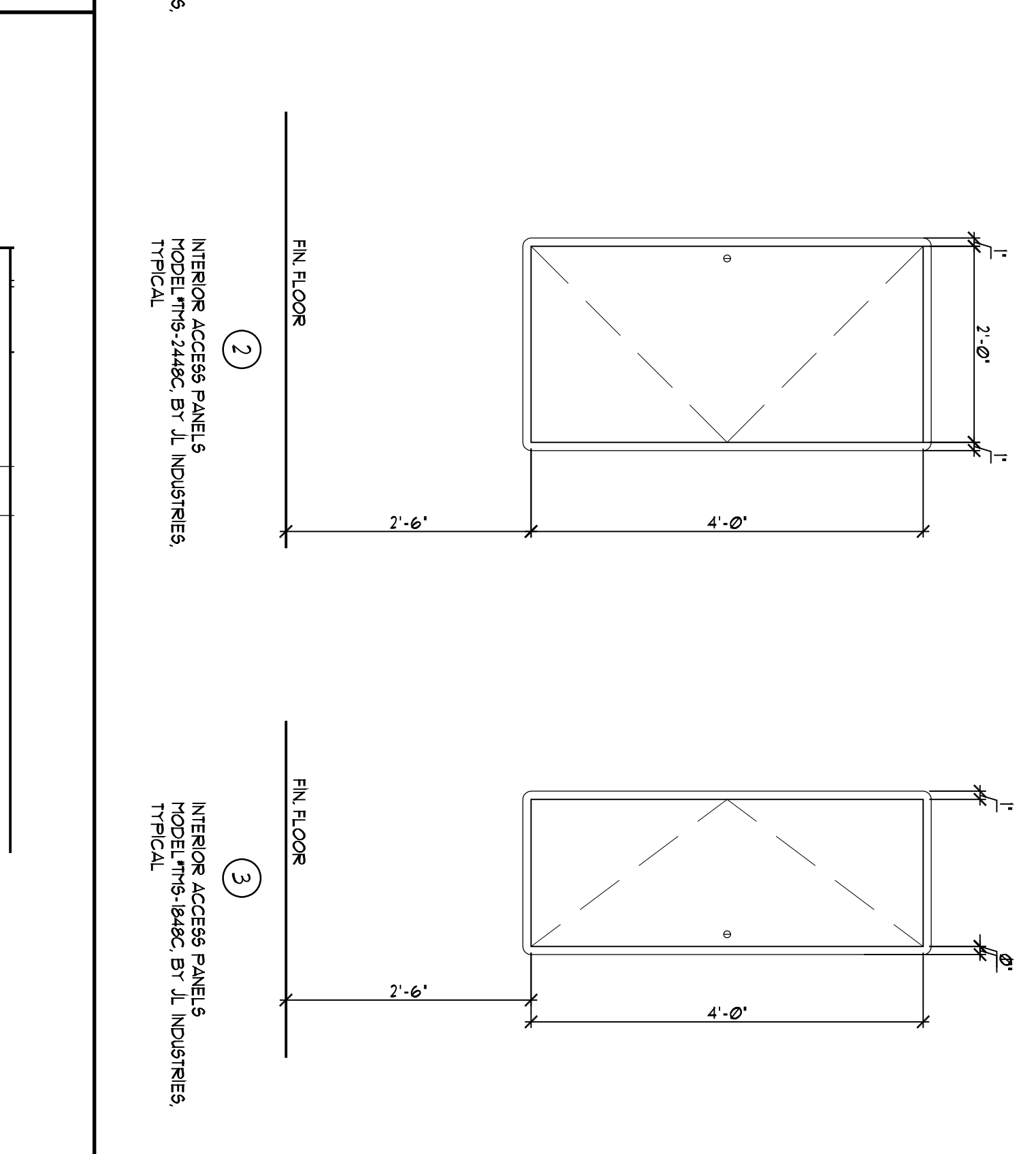


**PARTIAL BASEMENT FLOOR PLAN**

SCALE : 1/8" = 1'-0"



- DEMOLITION / CONSTRUCTION NOTES :**
1. AS PART OF THE DEMOLITION PROCESS, ALL AREAS IN WHICH DEMOLITION IS TAKING PLACE IS TO BE ISOLATED FROM THE BUILDING'S AIR CONDITIONING SYSTEM AND THE 9\"/>
  2. CEILING EXISTING CEILING MOUNTED DEVICES (IE FIRE ALARM CHIMBERS, LIGHT FIXTURES, ENERGY MANAGEMENT CONTROL SYSTEMS) ARE TO REMAIN PROVIDE TEMPORARY SUPPORT BY STEEL WIRE CAPABLE OF SUPPORTING THE DEVICES FULL WEIGHT AFTER CEILING SYSTEMS ARE REMOVED. ALL OTHER FLUORESCENT FIXTURES SHALL HAVE TWO SUPPORTING WIRING LOCATED ON OPPOSITE SIDES.
  3. FIRE PROTECTION: THE EXISTING FIRE SPRINKLER SYSTEM SHALL REMAIN INTACT / FULLY OPERATIONAL. WARNING: EXTREME CARE SHALL BE EXERCISED WHILE REMOVING ADJACENT CEILING SYSTEMS FROM AROUND FIRE SPRINKLER HEADS TO ENSURE THAT THE HEADS NOT ACTIVATED. CONTRACTOR SHALL LOCATE FIRE SPRINKLER EMERGENCY SHUT-OFF VALVES) PRIOR TO COMMENCING DEMOLITION.
  4. COUNTY EMPLOYEES SHALL BE OCCUPYING THE FIRST & THIRD FLOORS DURING MOST OF THE COUNTY WORKING HOURS COORDINATE WITH HISTORIC CONSTRUCTION PERSONNEL PRIOR TO COMMENCING CONSTRUCTION.

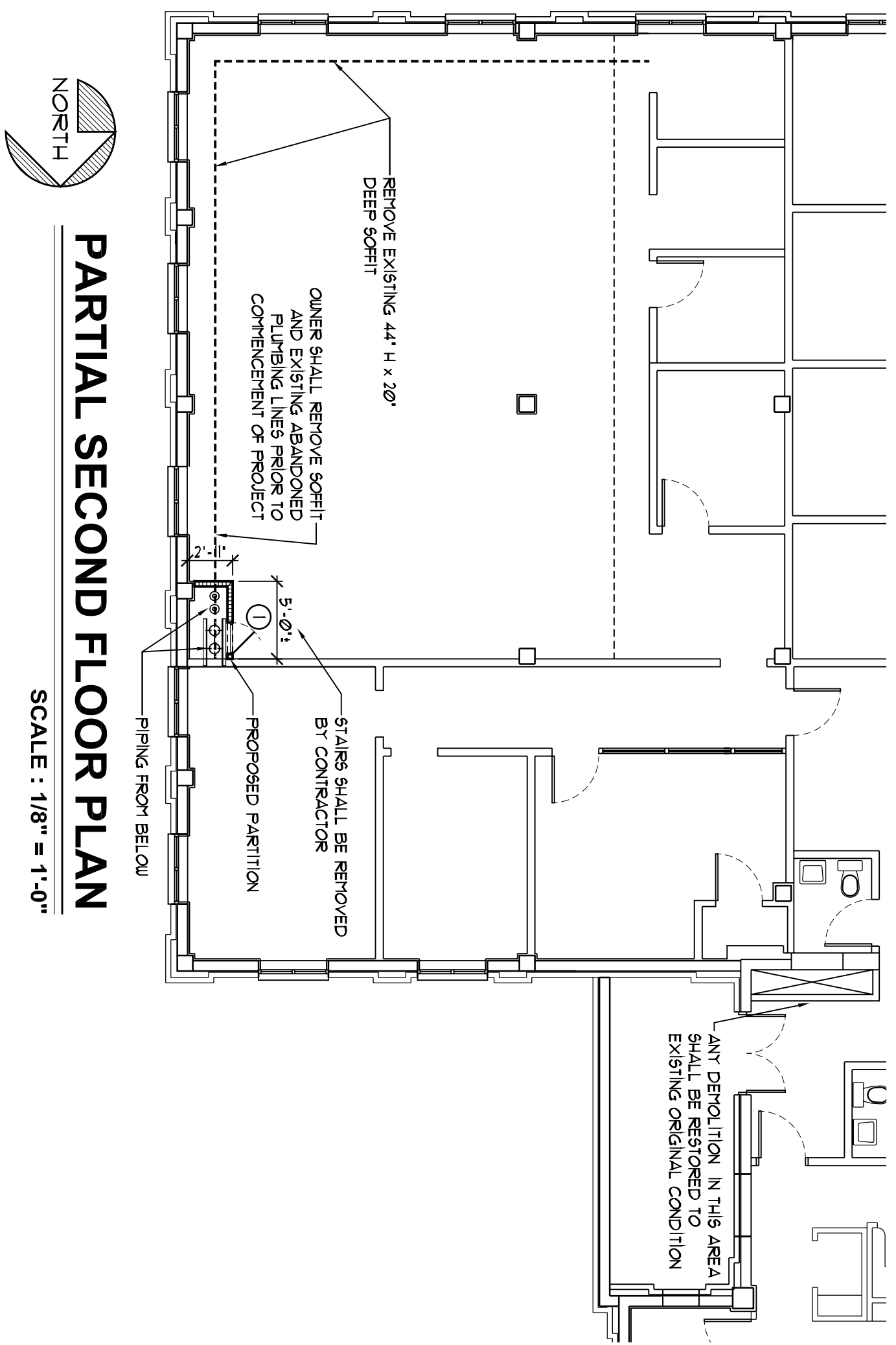


**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
BRADENTON, FLORIDA 34208

**JERRY N. ZOLLER ARCHITECT / PLANNER** AIA  
P.A.

914 14th STREET W. BRADENTON, FL. 34205 phone 748-4465 fl. reg. 5926

JOB NO. : 04344  
DATE : 03-04-10  
DRAWN BY : DAB  
CHECKED BY : JZ  
SHEET NO. : A-1

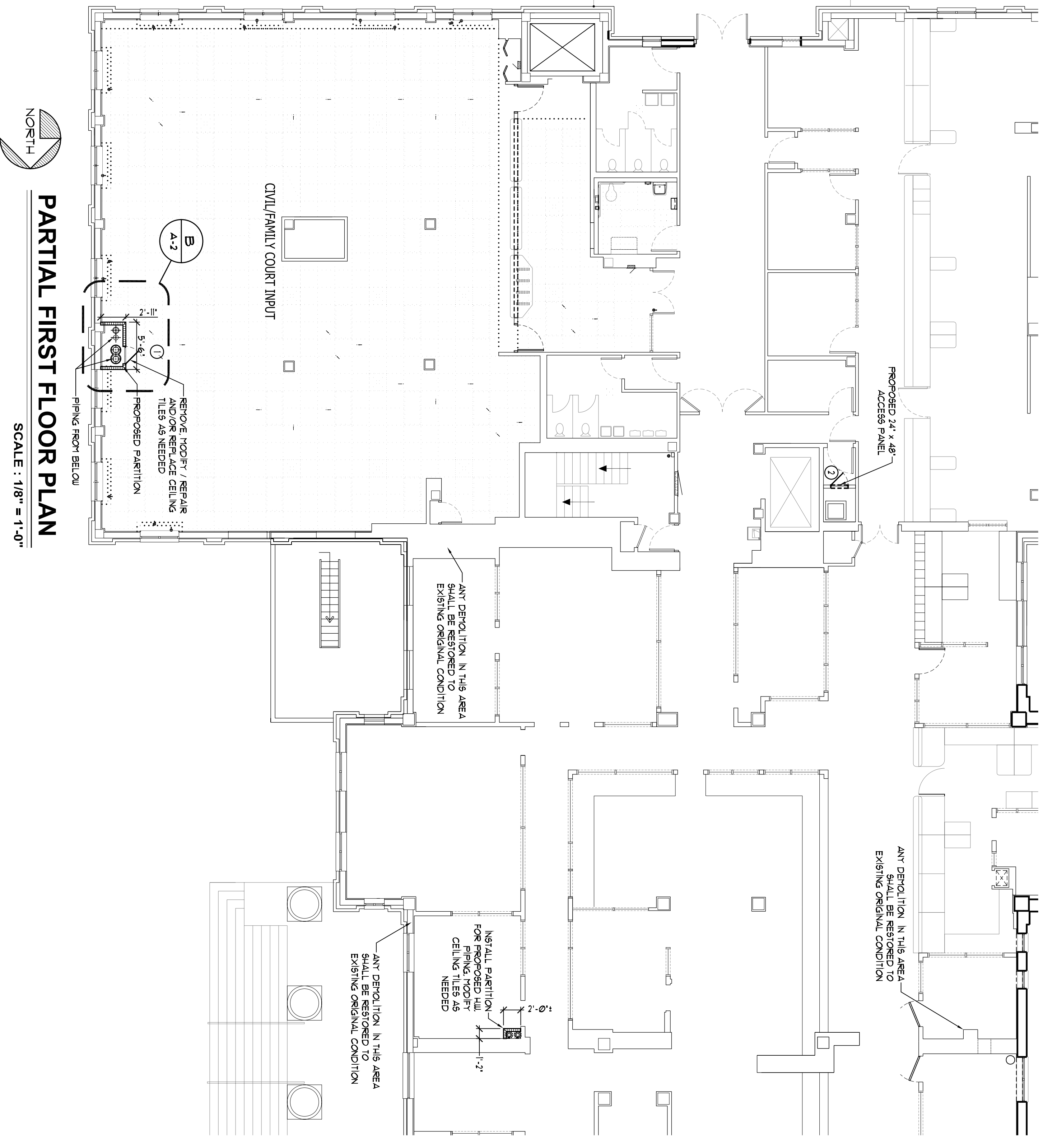


**PARTIAL SECOND FLOOR PLAN**  
SCALE : 1/8" = 1'-0"

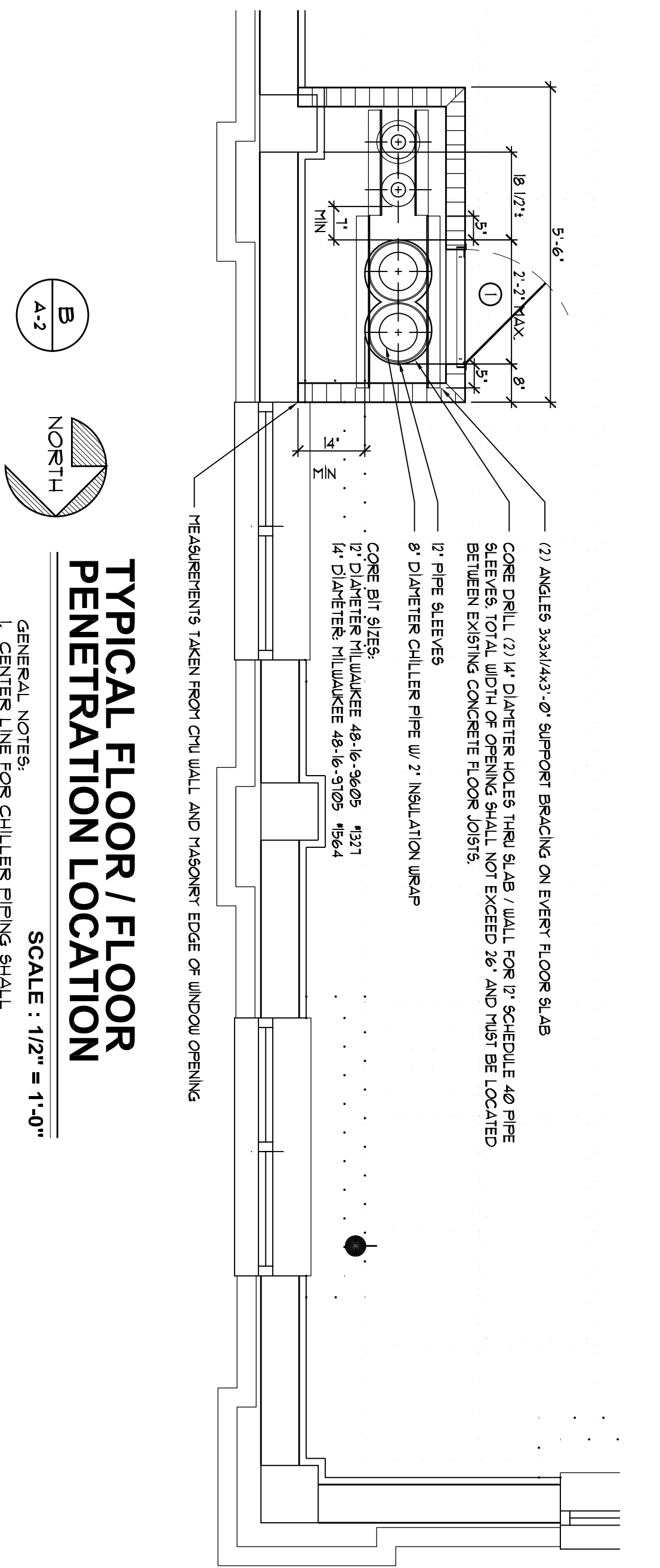
**WALL LEGEND :**

[Symbol]	EXISTING EXTERIOR WALL TO REMAIN
[Symbol]	EXISTING INTERIOR WALL TO REMAIN
[Symbol]	TYPICAL METAL BRACE INTERIOR PARTITION TO BOTTOM OF DECK

- DEMOLITION / CONSTRUCTION NOTES :**
1. ELECTRICAL REMOVE / RELOCATE ANY ELECTRICAL / DATA OUTLETS IN ALL WALLS & PARTITIONS TO BE REMOVED. TYPICAL.
  2. CEILING EXISTING CEILING MOUNTED DEVICES (IE FIRE ALARM DRIPPERS, LIGHT FIXTURES, PHONE ELECTRICAL RECEPTACLES, EMERGENCY LIGHT UNITS, EXIT SIGNS, SPEAKERS, & ENERGY MANAGEMENT CONTROL SYSTEMS) ARE TO REMAIN. PROVIDE TEMPORARY SUPPORT BY STEEL WIRE CAPABLE OF SUPPORTING THE DEVICES FULL WEIGHT AFTER CEILING SYSTEMS ARE REMOVED. ALL MECHANICAL/FLUORESCENT FIXTURES SHALL HAVE TWO SUPPORTING WIRES LOCATED ON OPPOSITE CORNERS.
  3. FIRE PROTECTION: THE EXISTING FIRE SPRINKLER SYSTEM SHALL REMAIN INTACT & FULLY OPERATIONAL.  
WARNING: EXTENSIVE CARE SHALL BE EXERCISED WHILE REMOVING ADJACENT CEILING SYSTEMS FROM AROUND FIRE SPRINKLER HEADS TO INSURE THAT THEY ARE NOT ACTIVATED. CONTRACTOR SHALL LOCATE FIRE SPRINKLER EMERGENCY SHUT-OFF VALVE(S) PRIOR TO COMMENCING DEMOLITION.
  4. COUNTY ENGINEERS SHALL BE OCCUPYING THE FIRST & THIRD FLOORS DURING AND THROUGH DEMOLITION WORK. CONTRACTOR SHALL MAINTAIN PROPER CONSTRUCTION CORROSIOSUE PROTECTION PRIOR TO COMMENCING CONSTRUCTION.

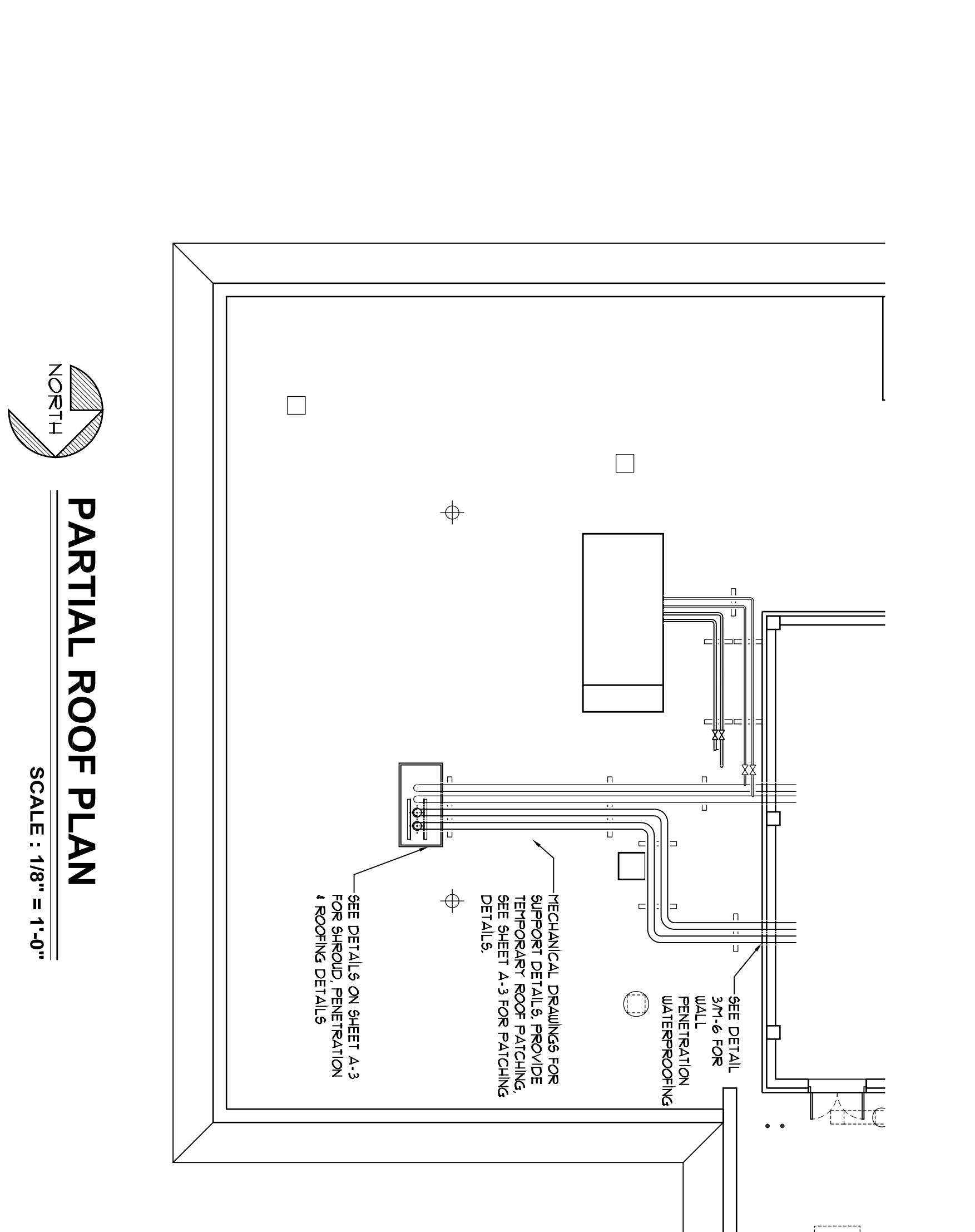


**PARTIAL FIRST FLOOR PLAN**  
SCALE : 1/8" = 1'-0"

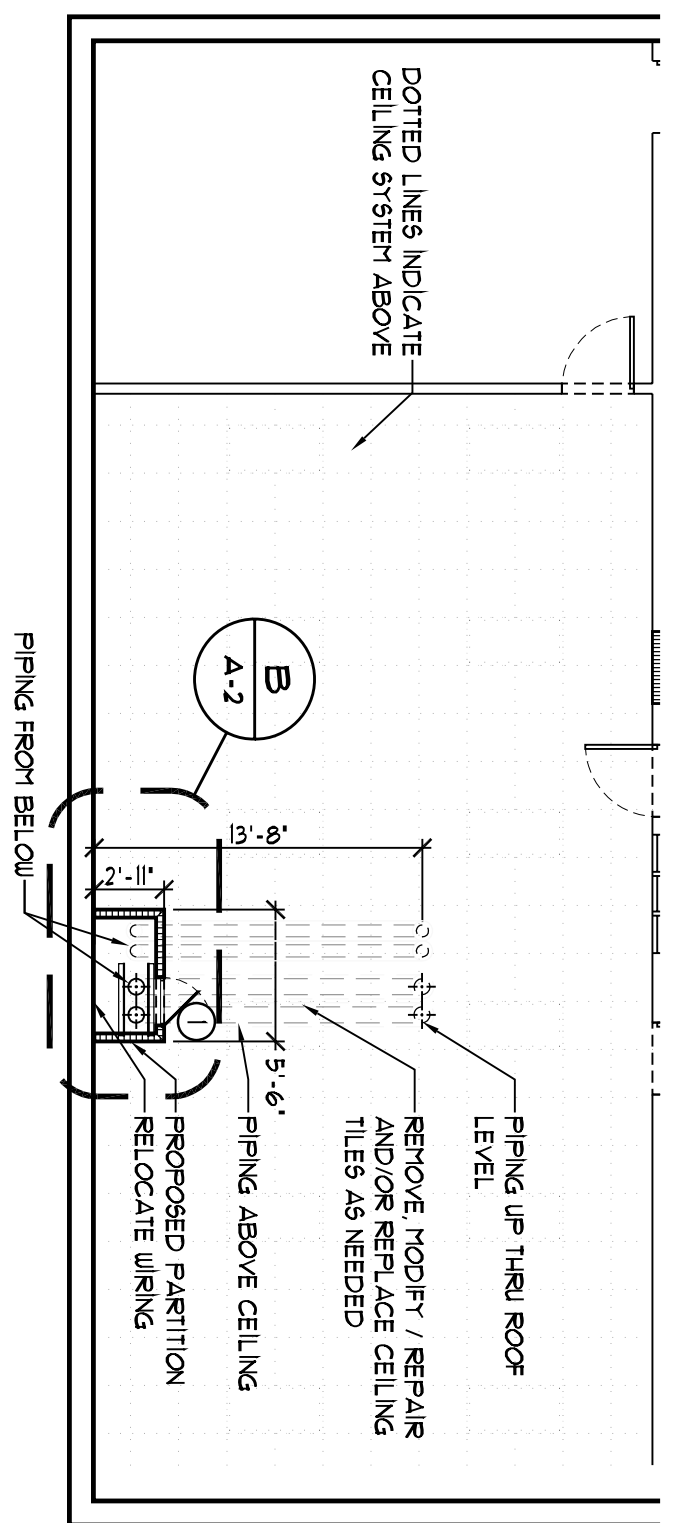


**TYPICAL FLOOR / FLOOR PENETRATION LOCATION**  
SCALE : 1/2" = 1'-0"

- GENERAL NOTES:**
1. CENTER LINE FOR CULLER PIPING SHALL BE LOCATED FROM LASTEREST SHEET THRU 3RD FLOOR AND BE OFFSET ABOVE 3RD FLOOR FINISHED CEILING.



**PARTIAL ROOF PLAN**  
SCALE : 1/8" = 1'-0"



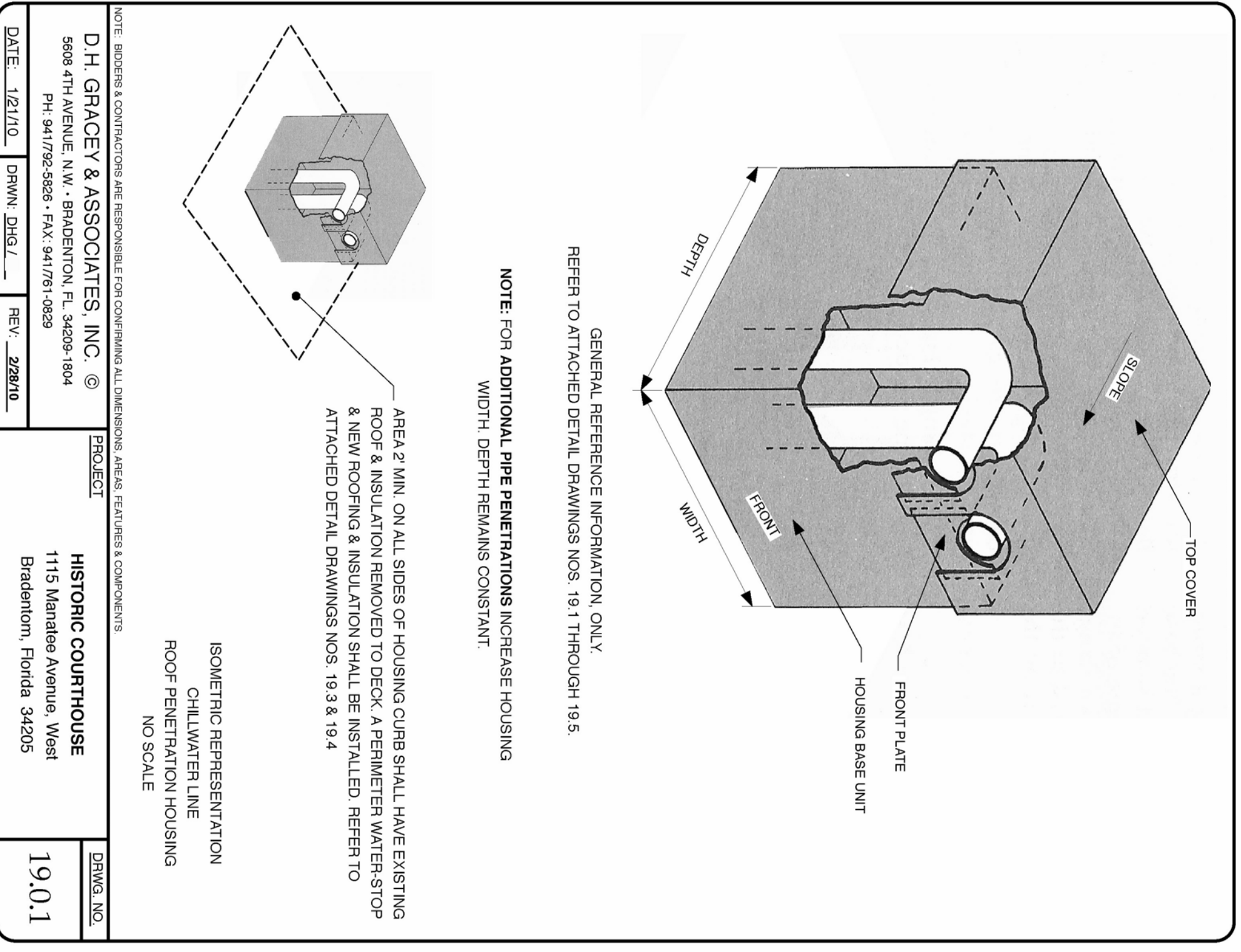
**PARTIAL THIRD FLOOR PLAN**  
SCALE : 1/8" = 1'-0"

**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
BRADENTON, FLORIDA 34208

**JERRY N. ZOLLER ARCHITECT / PLANNER** AIA  
AIA C00857 P.A.

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JOB NO. : 04844	DATE : 03-04-10
DRAWN BY : DAB	CHECKED BY : JZ
SHEET NO. : A-2	
REV #	DATE



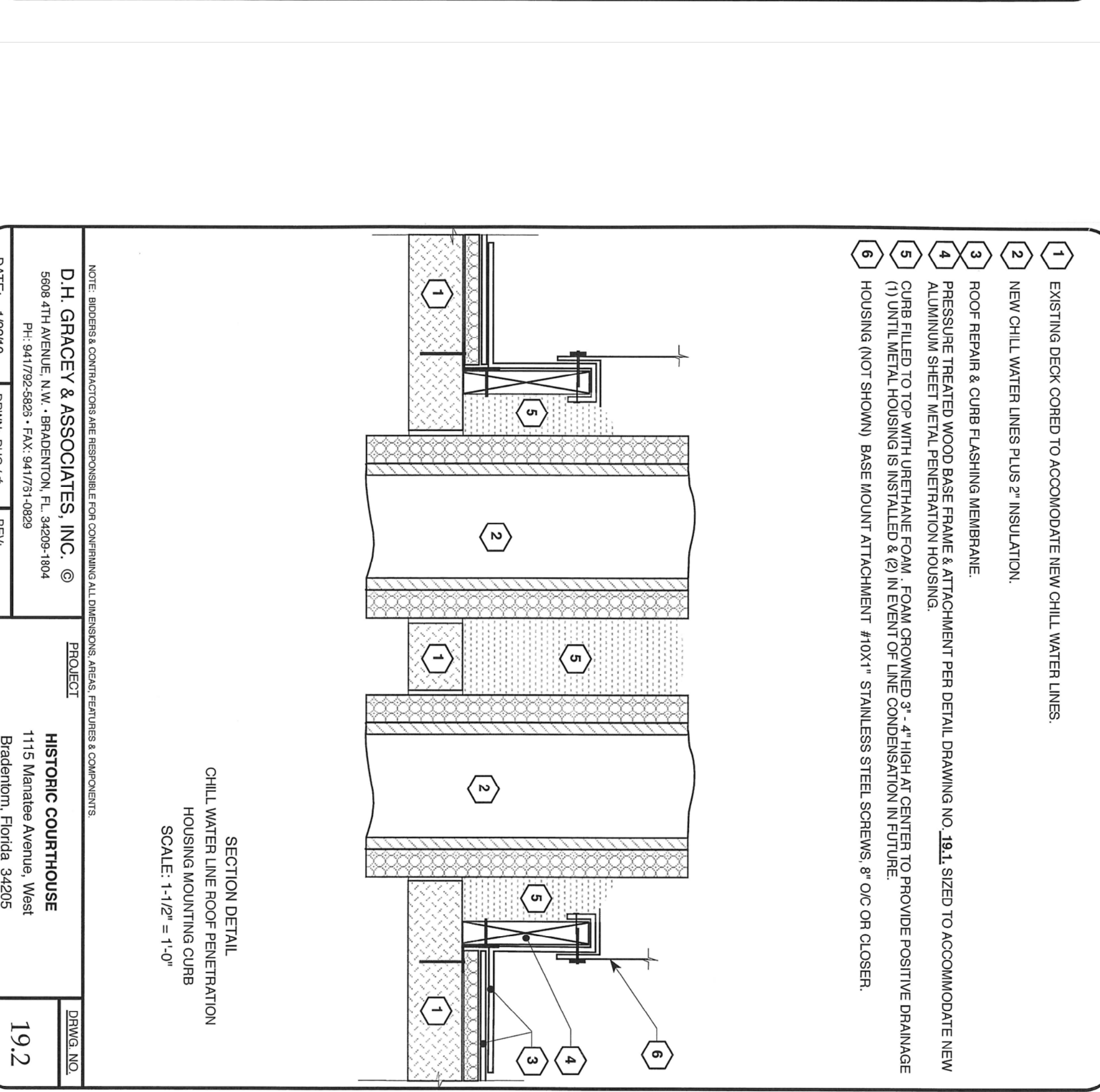
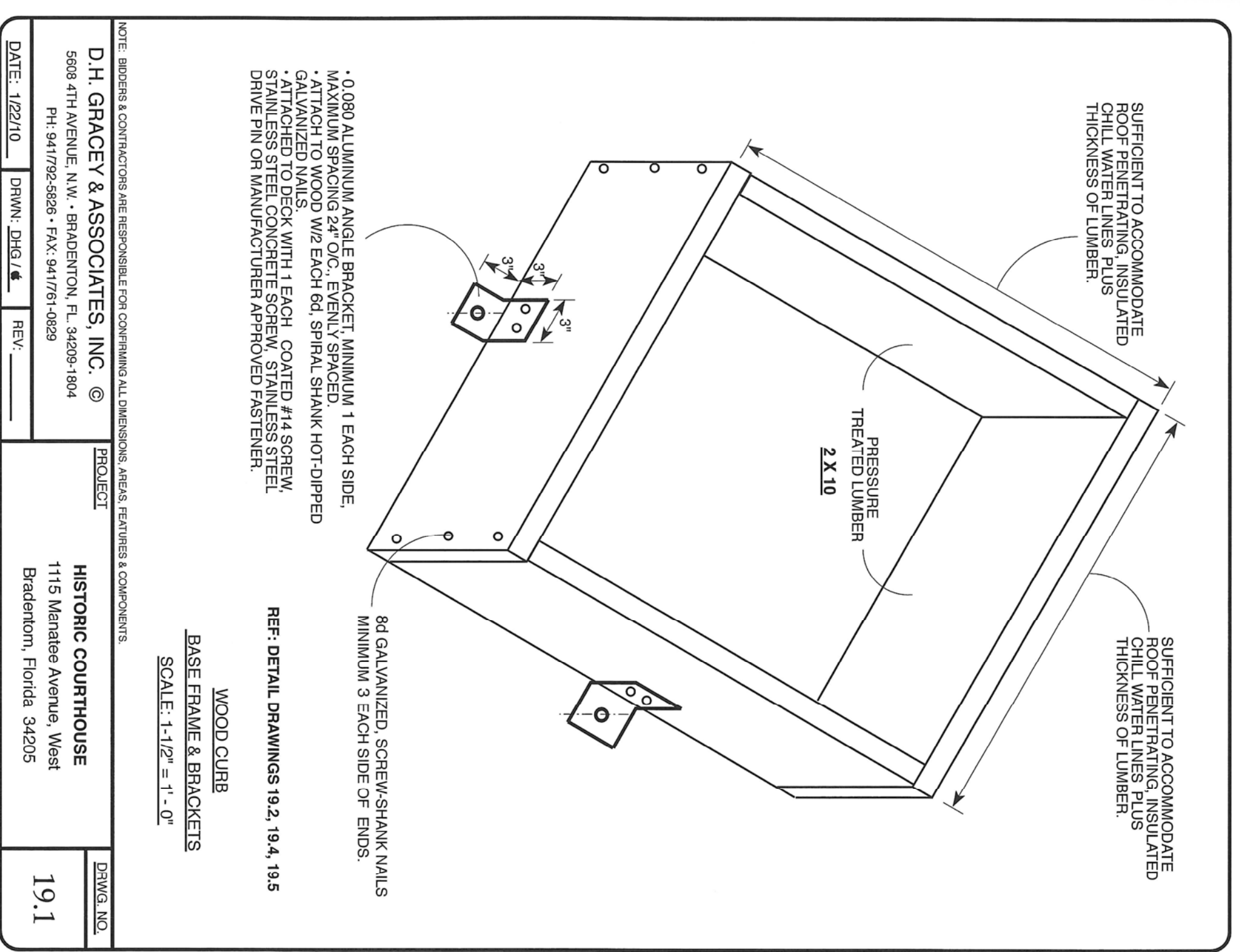
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PH: 941/792-5828 - FAX: 941/791-0829

PROJECT: HISTORIC COURTHOUSE  
1115 Manatee Avenue, West  
Bradenton, Florida 34205

DATE: 1/27/10 DRAWN: DHD/L REV: 2/28/10

DWG. NO. 19.0.1



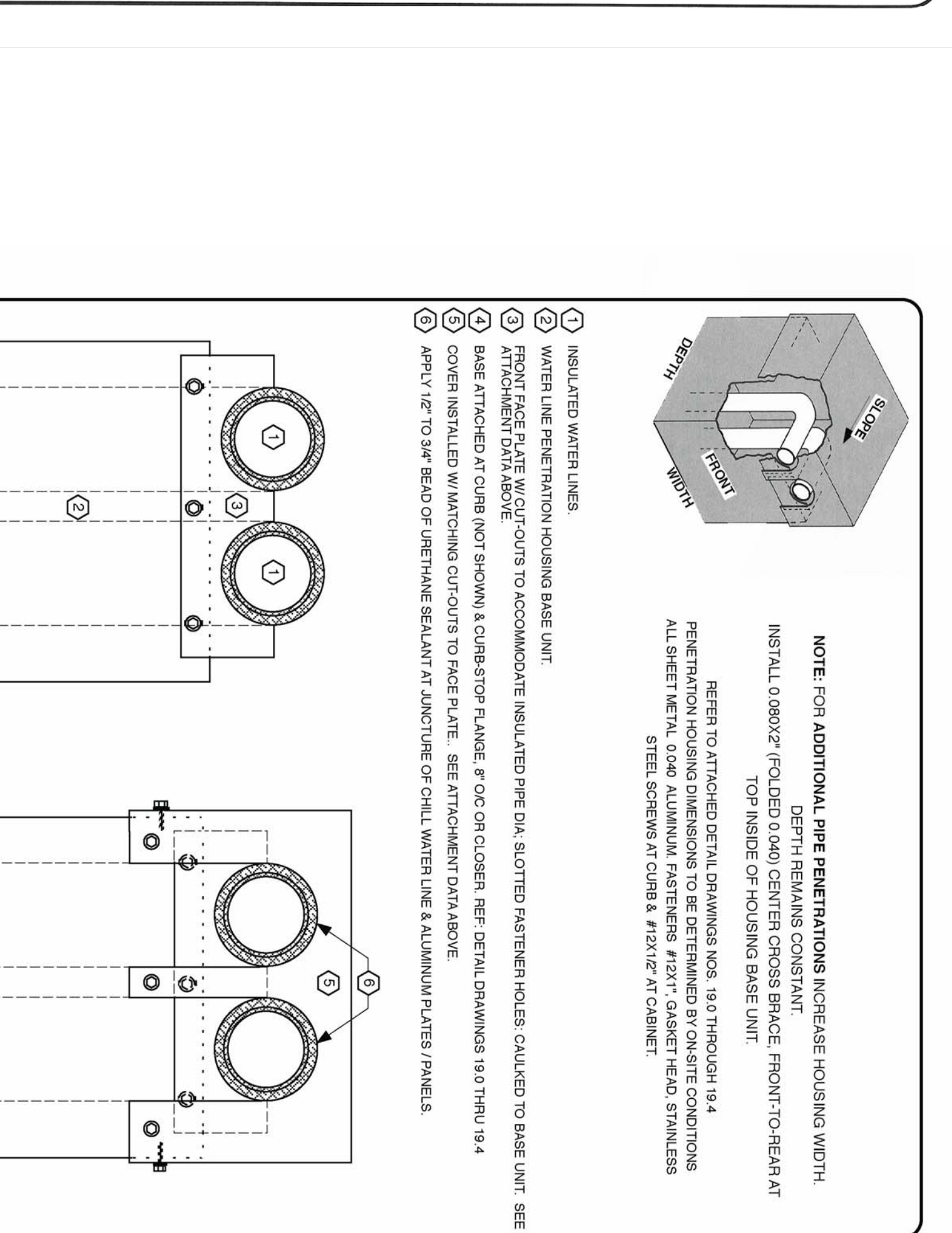
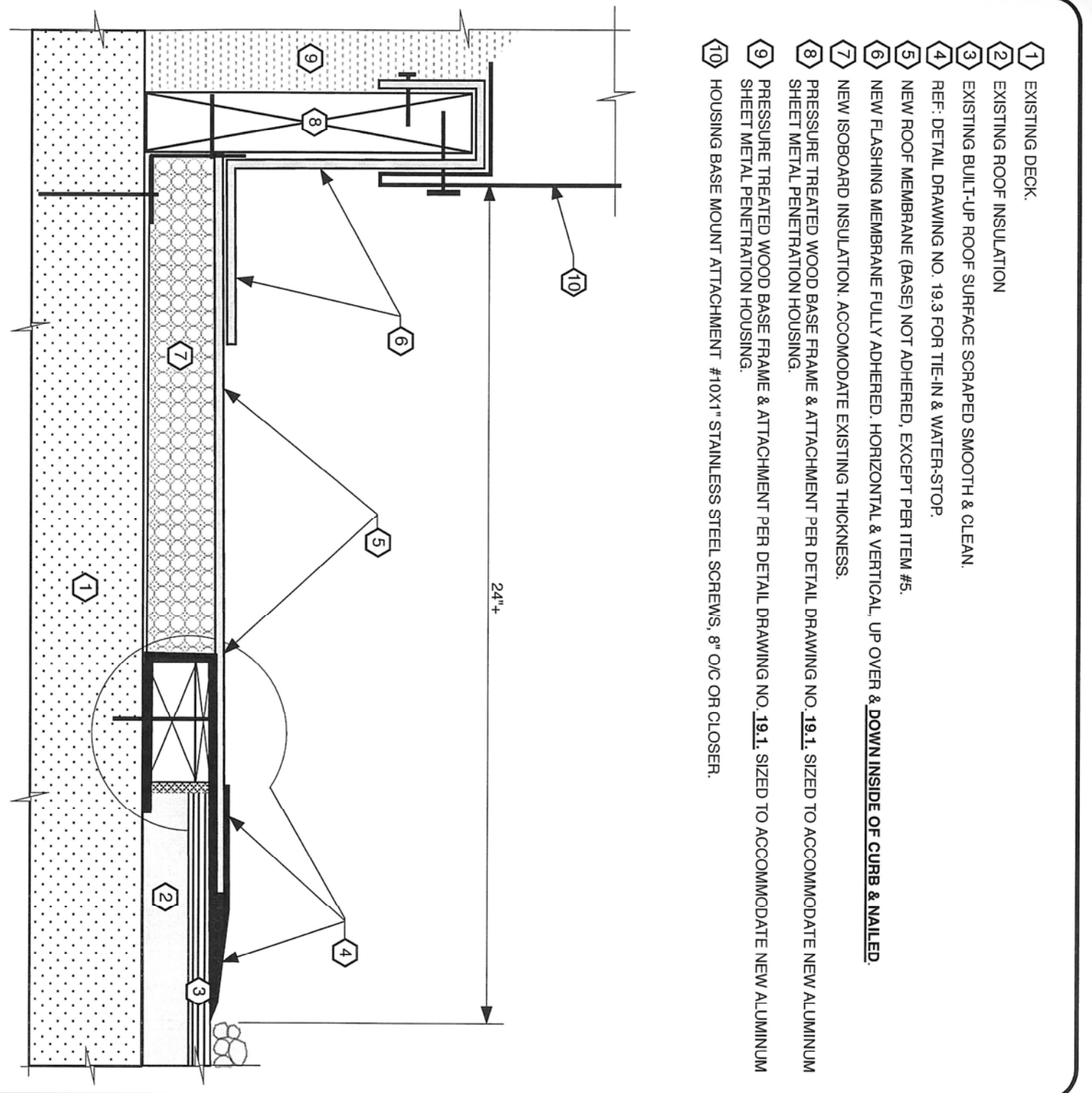
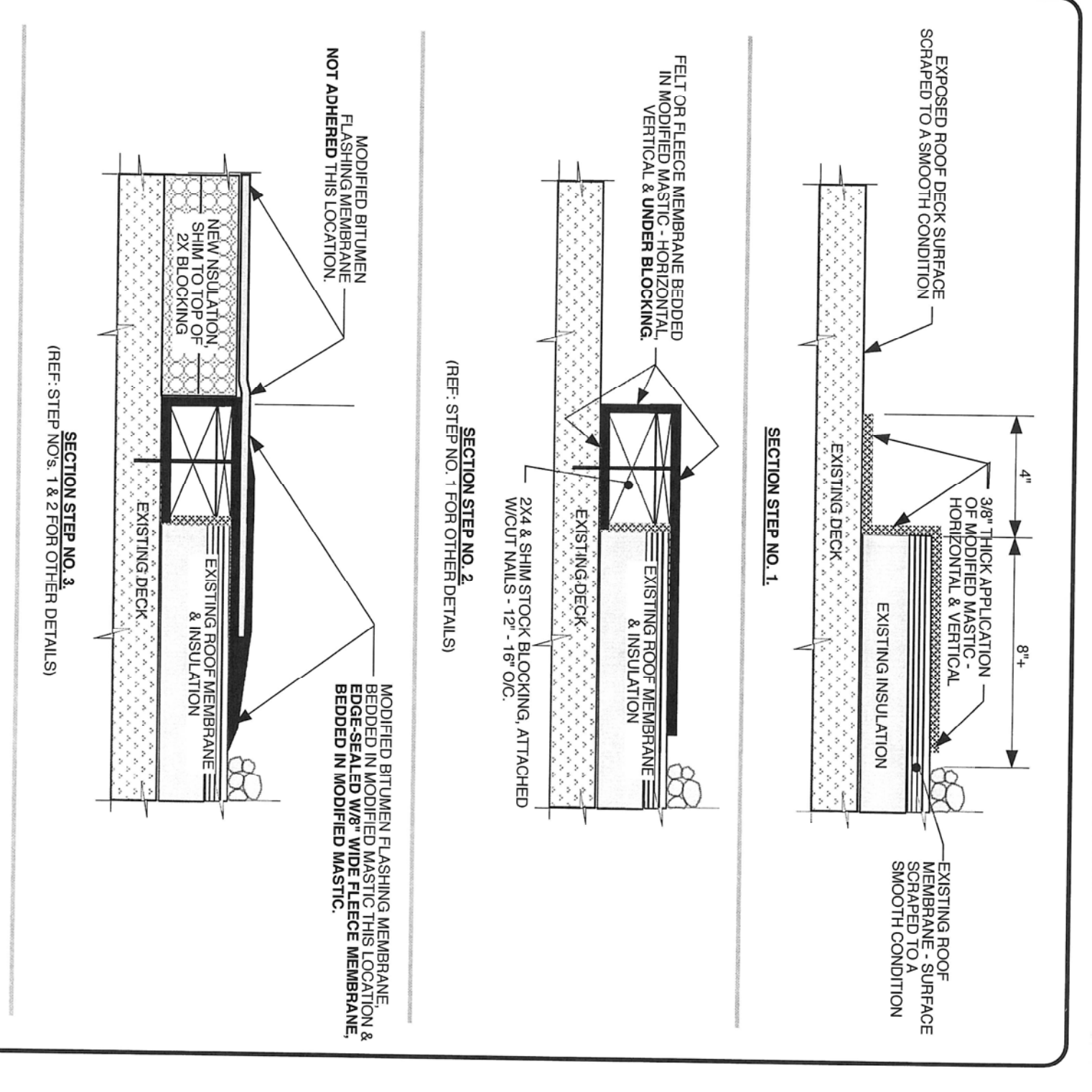
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DATE: 1/27/10 DRAWN: DHD/L REV: 2/28/10

DWG. NO. 19.3

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Bradenton, Florida 34205

DATE: 1/27/10 DRAWN: DHD/L REV: 2/28/10

DWG. NO. 19.4

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1115 Manatee Avenue, West  
Bradenton, Florida 34205

DATE: 1/27/10 DRAWN: DHD/L REV: 2/28/10

DWG. NO. 19.5

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PROJECT: HISTORIC COURTHOUSE  
1115 Manatee Avenue, West  
Bradenton, Florida 34205

DATE: 1/27/10 DRAWN: DHD/L REV: 2/28/10

DWG. NO. 19.5

JOB NO. :	84844
DATE :	03-04-10
DRAWN BY :	DAB
CHECKED BY :	JZ
SHEET NO. :	

REV. #	DATE

**MANATEE COUNTY  
HISTORIC COURTHOUSE  
CHILLED WATER PIPING  
BID ALTERNATE #1**

BRADENTON, FLORIDA 34208

**JERRY N. ZOLLER ARCHITECT / PLANNER** **AIA P.A.**

11414 14th STREET W. BRADENTON, FL. 34205 phone 748-4465 fl. reg. 5926

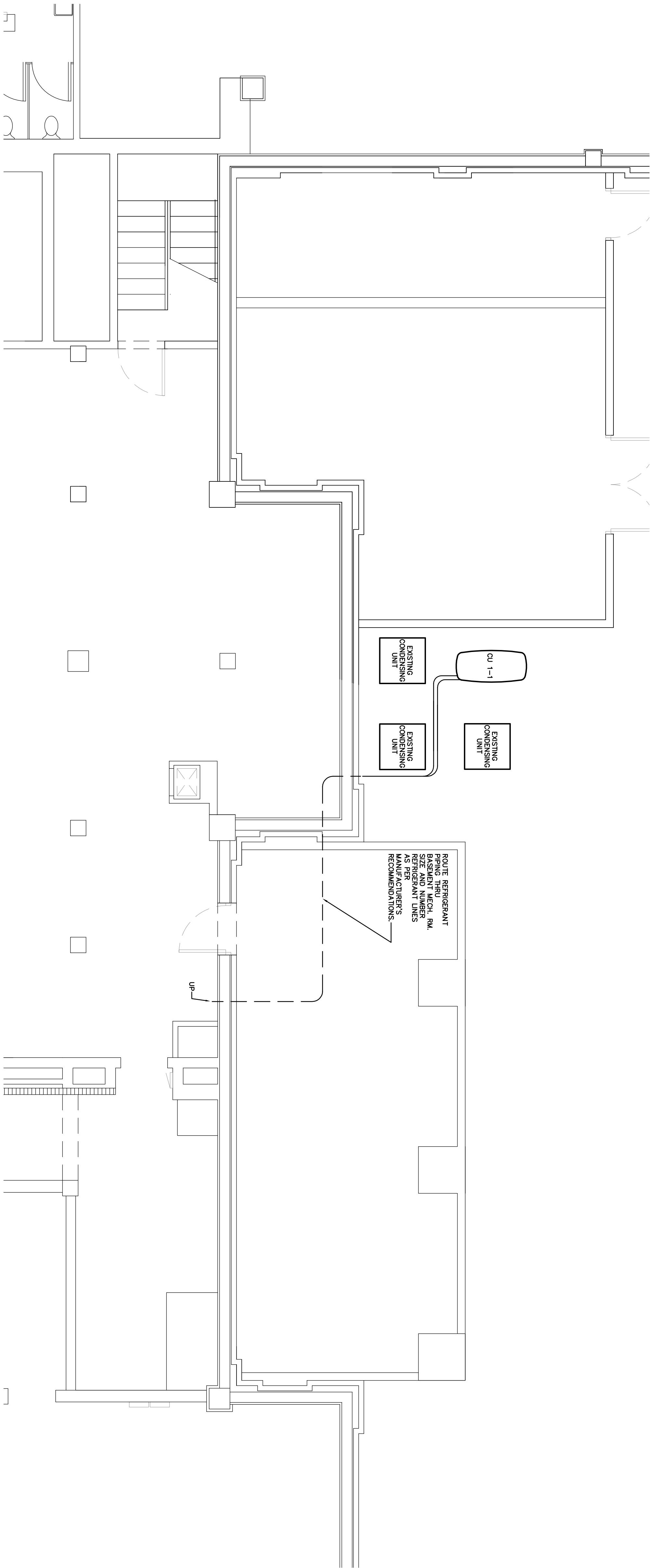
**MECHANICAL ABBREVIATIONS, SYMBOL LEGEND, AND GENERAL NOTES**

ABBREVIATIONS		DUCTWORK		PIPING		GENERAL NOTES	
AC	AIR CONDITIONING		SUPPLY DUCT (UP & DOWN)	—CWS—	CONDENSER WATER SUPPLY	1.	HVAC WORK CONSISTS OF PROVIDING AND INSTALLING AIR CONDITIONING SYSTEMS FOR A COMPLETE OPERATING SYSTEM AND AS INDICATED ON THE DRAWINGS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS FOR MECHANICAL SYSTEMS, TESTED, AND READY FOR OPERATION.
ADP	ACCESS DOOR		EXHAUST DUCT (UP & DOWN)	—CWR—	CHILLED WATER RETURN	2.	TEST AND BALANCE SHALL BE PROVIDED BY A COMPANY SPECIALIZING IN THE TESTING AND BALANCING OF HVAC SYSTEMS AS SUBCONTRACTOR TO THE HVAC CONTRACTOR. THE TEST AND BALANCE CONTRACTOR SHALL BE A MEMBER OF EITHER ASHRAE OR NEBB.
AFT	ABOVE FINISHED FLOOR		SUPPLY CEILING DIFFUSERS	—CWH—	CHILLED WATER RETURN	3.	ALL PIPING SUBJECT TO MECHANICAL EXPANSION AND/OR CONTRACTION THAT PRESENTS A SMOKE, FIRE, OR FIRE/SMOKE WALL, PARTITION, OR FLOOR SLAB SHALL BE SUITABLY SLEEVED AND FIRE SAFED.
AHU	AIR HANDLING UNIT		RETURN CEILING GRILLE	—RL—	REFRIGERANT LIQUID	4.	IDENTIFY THE LOCATION OF ALL FIRE AND BALANCING DAMPERS, IDENTIFICATION TAGS SHALL BE AFFIXED TO THE WALLS OR CEILING AND SHALL BE VISIBLE FROM THE OCCUPIED SPACE.
AI	AIR INPUT		RETURN WALL REGISTER OR GRILLE	—RS—	REFRIGERANT SUCION	5.	ALL PIPING ISOLATION SLEEVES TO PREVENT CONTACT OF DISSIMILAR METALS.
ALT	ALTERNATE		SIEVE WALL REGISTER OR GRILLE	—RSH—	REFRIGERANT HOT GAS	6.	INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS.
AMB	AMBIENT		RETURN WALL WITH DIFF. GRILLE	—RHW—	HOT WATER SUPPLY (HEATING)	7.	CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL NECESSARY ANGLES, CHANGES, ROOFS, UNSTRAIGHT FITS, AS MAY BE NECESSARY TO ADEQUATELY SUPPORT THE PIPING. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE MECHANICAL ARCHITECT THAT WILL NOT OVERLOAD THE BUILDING STRUCTURE SYSTEM.
AO	ACCESS PANEL		NEW DUCT WITH DIFF. GRILLE	—OS—	OPTICAL RETURN	8.	PENETRATIONS THROUGH FIRE RATED ASSEMBLIES: PENETRATIONS FOR PIPES, WALLS, PARTITIONS, AND CEILING SHALL BE MADE WITH FIRE RESISTANT PENETRATING FIRE STOP MATERIAL. FIRE STOP SEALANTS SHALL BE UL LISTED. APPLY FIRE STOP AS MANUFACTURED. THE FIRE RATING OF THE ASSEMBLY IN WHICH IT IS INSTALLED MUST MEET OR EXCEED THE FIRE RATING OF THE ASSEMBLY IN WHICH IT IS INSTALLED.
AP	ACCESS PANEL		NEW FLAT OVAL DUCT	—OR—	DATE VALVE	9.	ALL INSULATION SHALL BE FIRE RATED IN ACCORDANCE WITH ASHRAE 90A-92/98 SMOKE DEVELOPMENT AND FLAME SPREAD REQUIREMENTS. INSULATION "R" VALUES SHALL COMPLY WITH THE FLORIDA ENERGY CODE.
BFT	BELOW FINISHED FLOOR		EXISTING DUCT TO BE REMOVED	—P—	PIPE VALVE	10.	ALL ROOF ATTACHED EQUIPMENT AND APPURTENANCES INCLUDED IN THE SCOPE OF THIS PROJECT ARE REQUIRED TO BE SECURED TO THE UNDERLYING BUILDING STRUCTURE. ALL ROOF ATTACHED EQUIPMENT SHALL BE DESIGNED TO WITHSTAND 130 MPH WIND LOADS. THE ROOF ATTACHED EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATION AS FABRICATED ROOF CLIPS AND SHALL BE PROVIDED WITH EARTHQUAKE SEALS SHALL BE PROVIDED BY A LICENSED ROOFING CONTRACTOR.
BHP	BRAKE HORSE POWER		FLEXIBLE DUCTWORK (INSULATED)	—FV—	FLUG VALVE	11.	THESE DRAWINGS ARE SCHEDULED IN NATURE AND ARE NOT INTENDED TO SHOW ALL DETAILS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS.
BTU	BRITISH THERMAL UNIT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P2—	PRESSURE REDUCING VALVE	12.	UPON COMPLETION OF THE WORK UNDER THIS CONTRACT, THE CONTRACTOR SHALL REMOVE ALL TOOLS, APPLIANCES, SURPLUS MATERIALS, AND SCRAP.
CC	COOLING COIL		PRESSURE JACKET FITTING (ROUND TRUNK)	—P3—	2-WAY CONTROL VALVE	13.	WHEN CONFLICTS OCCUR IN SPECIFICATIONS OR IN THE DRAWINGS, OR BETWEEN OTHER, THE ITEMS OF GREATER QUANTITY OR HIGHER COST SHALL BE PROVIDED.
CFM	CUBIC FEET PER HOUR		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P4—	3-WAY MODULATING CONTROL VALVE	14.	CONTRACTOR SHALL COORDINATE ALL PIPING WITH STRUCTURAL AND ELECTRICAL SYSTEMS INCLUDING ROOF/FLOOR PENETRATIONS AND SHALL PROVIDE AND INSTALL ALL SLEEVES AND FLASHINGS TO AVOID CORROSION AND MAINTAIN EQUIPMENT ACCESS AND SERVICEABILITY.
CFM	CUBIC FEET PER MINUTE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P5—	2-WAY CONTROL VALVE	15.	PROVIDE A BLIND FLANGE FOR ALL PIPING SUBROUTS FOR FUTURE CONNECTIONS.
CH	CHILLER		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P6—	MANUAL AIR VENT		
CHM	CHILLED WATER RETURN		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P7—	SAFETY OR PRESSURE RELIEF VALVE		
CMS	CONDENSER WATER RETURN		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P8—	MANUAL AIR VENT		
DB	DRY BULB		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P9—	ANGLE GLOBE VALVE		
DDC	DIRECT DIGITAL CONTROL		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P10—	MOTOR OPERATED GLOBE VALVE		
DGS	DEGREE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P11—	MOTOR OPERATED GLOBE VALVE		
DET	DETAIL		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P12—	TEST PLUG (PRESSURE / TEMPERATURE)		
DG	DOOR GRILLE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P13—	OUTSIDE SCREW & YOKE (O S & Y)		
DI	DIGITAL INPUT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P14—	DIRECTION OF FLOW		
DA	DIAMETER		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P15—	PIPE ANCHOR		
DO	DIGITAL OUTPUT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P16—	PIPE GUIDE		
DP	DEW POINT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P17—	FLEX CONNECTION		
DWG	DRAWING		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P18—	EXPANSION JOINT		
DX	DIRECT EXPANSION		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P19—	REDUCER OR INCREASER		
EAT	ENTERING AIR TEMPERATURE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P20—	ECCENTRIC REDUCER		
EBR	ENERGY EFFICIENCY RATIO		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P21—	TOP CONNECTION, 45 OR 90 DEG.		
EF	EXHAUST FAN		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P22—	BOTTOM CONNECTION, 45 OR 90 DEG.		
ET	EXPANSION TANK		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P23—	SIZE CONNECTION		
E	ELEVATION		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P24—	CAPPED OUTLET		
EQUIP	EQUIPMENT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P25—	RISE OR DROP IN PIPE		
EMC	ELECTRIC WATER COOLER		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P26—	FLANGE		
ENT	ENTERING WATER TEMPERATURE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P27—	STRAINER		
EXIST	EXISTING		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P28—	TERMINATOR		
FOU	FAN COIL UNIT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P29—	PRESSURE GAGE		
FD	FLOOR DRAIN		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P30—	FLOW METER, VENTURI		
FL	FLOOR		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P31—	EXISTING PIPE TO BE REMOVED		
FP	FPS PER INCH		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P32—	REDUCED PRESSURE ZONE BACK FLOW PREVENTER		
FPF	FPS PER FOOT		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P33—			
FPM	FEET PER MINUTE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P34—			
GA	GAUGE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P35—			
GAL	GALLONS		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P36—			
GAV	GALVANIZED		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P37—			
GPH	GALLONS PER HOUR		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P38—			
GPM	GALLONS PER MINUTE		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P39—			
GR	GRAINS		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P40—			
H	HUMIDITY		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P41—			
HB	HIGE BBB		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P42—			
HC	HEATING COIL		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P43—			
HE	HEAT EXCHANGER		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P44—			
HP	HORSE POWER		PRESSURE JACKET FITTING (RECTANGULAR TRUNK)	—P45—			

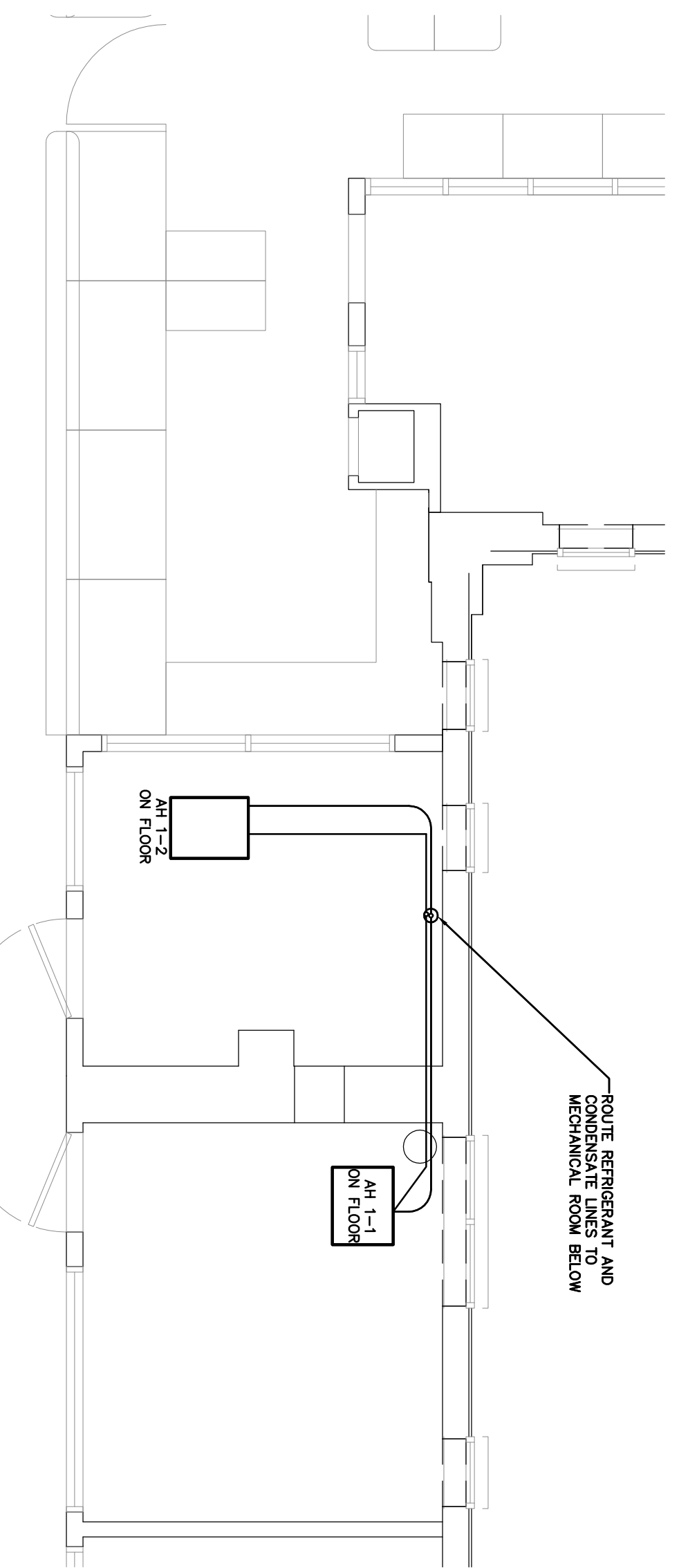
NOTE:  
THESE ARE STANDARD SYMBOLS AND MAY NOT ALL APPEAR ON THE PROJECT DRAWINGS, HOWEVER, WHEREVER THE SYMBOL APPEARS ON THE PROJECT DRAWINGS, THE ITEM SHALL BE PROVIDED AND INSTALLED.

**MECHANICAL LEGEND**  
SCALE: NO SCALE

<p><b>MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1</b> BRADENTON, FLORIDA 34208</p>	<p><b>FORNEY ENGINEERING, INC.</b> MECHANICAL &amp; ELECTRICAL CONSULTING ENGINEERS 5213 FOURTH AVE. CIRCLE EAST, BRADENTON, FL. 34208 C.O.A. #4049 PHONE (941) 748-5884 FAX (941) 747-6240 E-MAIL fei@forneyengineering.com COPYRIGHT 2009, FORNEY ENGINEERING, INC. ALL RIGHTS RESERVED</p>										
<p>BY: <u>GERARD T. VASBUN P.E.</u> DATE: _____</p>	<p>TO: THE BEST OF MY KNOWLEDGE, SKILL AND CARE, I HAVE PREPARED THESE DRAWINGS IN ACCORDANCE WITH THE MECHANICAL ARCHITECT'S REQUIREMENTS.</p>										
<p>JOB NO. : 09-2094 DATE : 03-04-10 DRAWN BY : RLJ CHECKED BY : GLA SHEET NO. : M-0</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>REV. #</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REV. #	DATE								
REV. #	DATE										



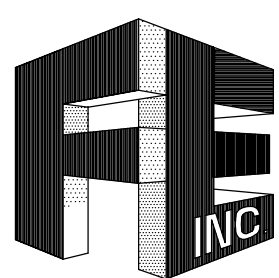
SERVER ROOM CONDENSING UNIT LOCATION  
SCALE: 1/4" = 1'-0"



SERVER ROOM AIR HANDLING UNIT LOCATION  
SCALE: 1/4" = 1'-0"

MECHANICAL FIRST FLOOR SERVER ROOM PLANS

SCALE: AS NOTED



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**MANATEE COUNTY  
HISTORIC COURTHOUSE  
CHILLED WATER PIPING  
BID ALTERNATE #1  
BRADENTON, FLORIDA 34208**

TO THE BEST OF MY KNOWLEDGE, SAID  
PLANS AND SPECIFICATIONS COMPLY  
WITH ALL APPLICABLE REGULATORY CODES.

By: GERARD T. FORNEY P.E.

DATE: 11/09

S.E.A.L.

REV. # \_\_\_\_\_ DATE \_\_\_\_\_


JOB NO. : 09-2084

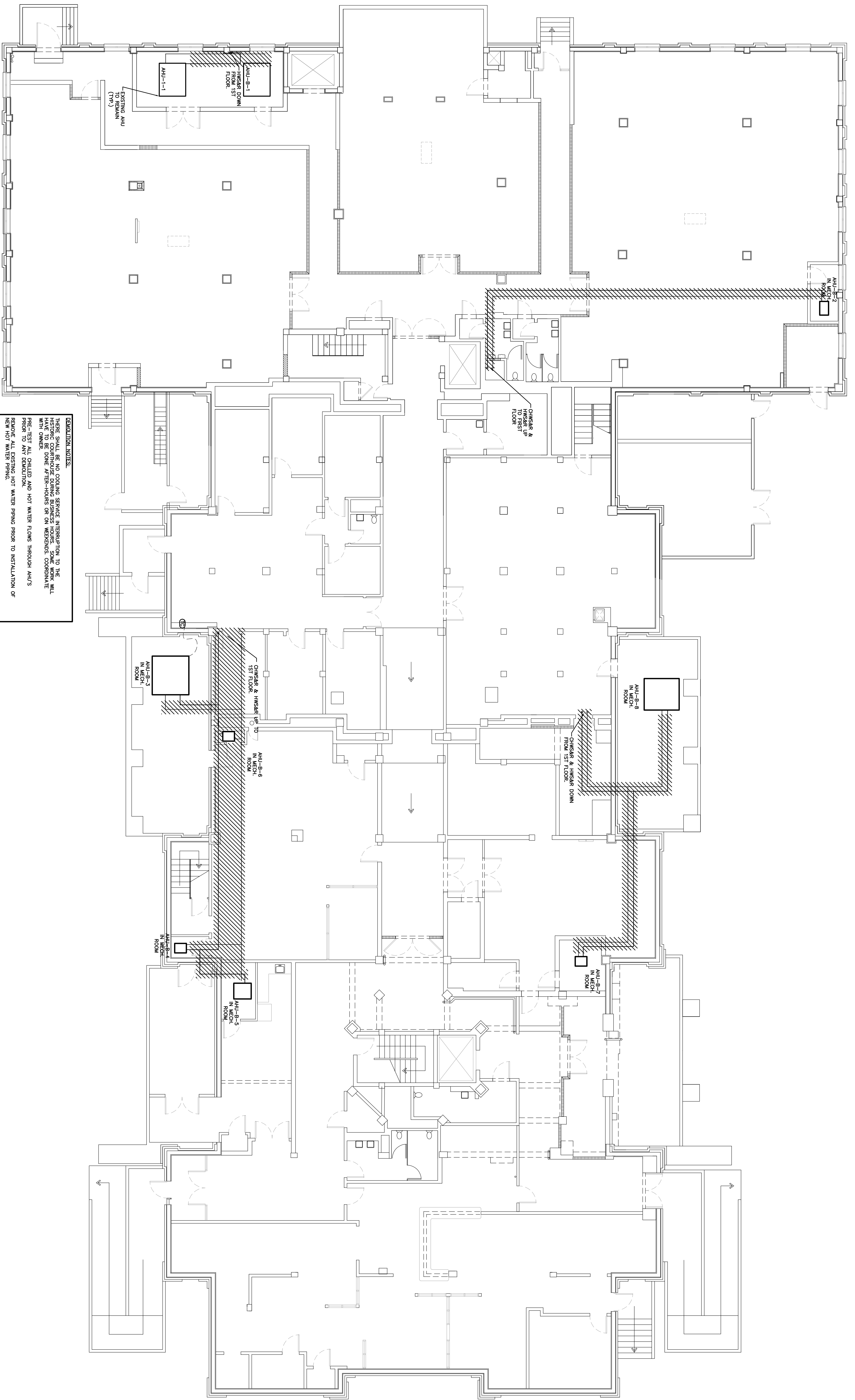
DATE : 09-04-10

DRAWN BY : RJA

CHECKED BY : GLA

SHEET NO. :

**M-0.1**



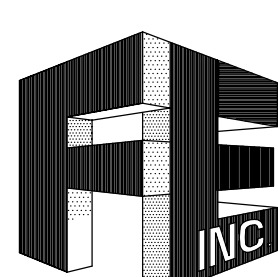
**DEMOLITION NOTES:**  
 THERE SHALL BE NO COOLING SERVICE INTERRUPTION TO THE HISTORIC COURTROOM DURING BUSINESS HOURS. SCOURING AND PRE-TREATMENT OF SURFACES SHALL BE COMPLETED PRIOR TO ANY DEMOLITION.  
 PRE-TEST ALL CHILLED AND HOT WATER FLOWS THROUGH AHU'S REMOVE ALL EXISTING HOT WATER PIPING PRIOR TO INSTALLATION OF NEW HOT WATER PIPING.  
 REMOVE ALL EXISTING CHILLED WATER PIPING AFTER INSTALLATION OF NEW CHILLED WATER PIPING.  
 AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SPARKING, MATERIALS, AND RUBBER FROM THE BUILDING AND MAINTAIN THE WORK AREA IN A CLEAN, ORDERLY AND ACCEPTABLE CONDITION.

MECHANICAL BASEMENT DEMOLITION PLAN

SCALE: 1/8"=1'-0"

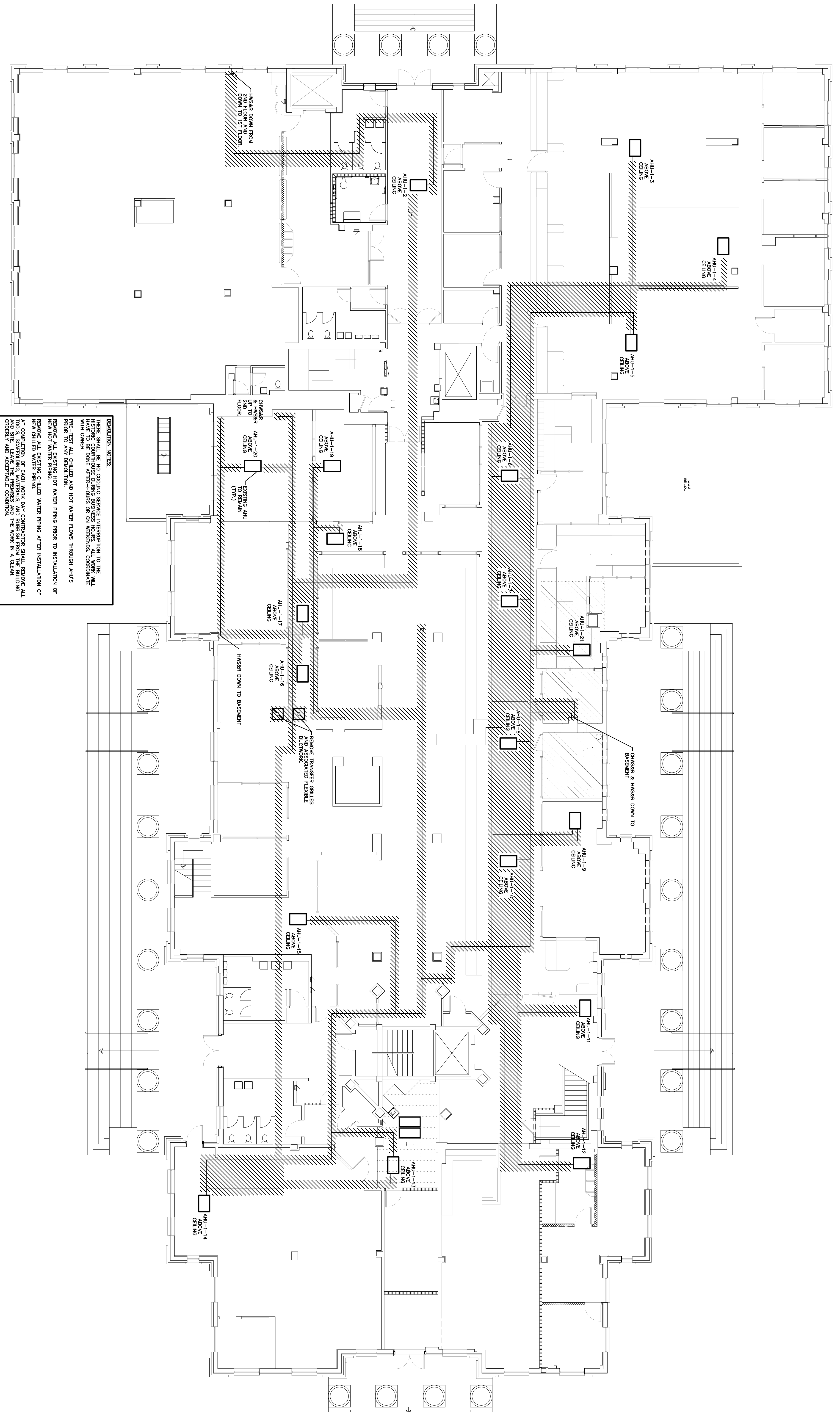


**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



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DATE: _____	BY: <u>GERARD T. LABRUS P.E.</u>	TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.
REV. # _____	DATE _____	
JOB NO.: 09-2084	DATE: 03-04-10	
DRAWN BY: RLK	CHECKED BY: GLA	
SHEET NO.: _____	MD-1	



**DEMOLITION NOTES:**  
 THERE SHALL BE NO COOLING SERVICE INTERRUPTION TO THE BUILDING. ALL DEMOLITION WORK SHALL BE COMPLETED AND ALL WORK SHALL HAVE TO BE DONE AFTER-HOURS OR ON WEEKENDS. COORDINATE WITH OWNER.  
 PRE-TEST ALL CHILLED AND HOT WATER FLOWS THROUGH AHU'S PRIOR TO ANY DEMOLITION.  
 REMOVE ALL EXISTING HOT WATER PIPING PRIOR TO INSTALLATION OF NEW HOT WATER PIPING.  
 REMOVE ALL EXISTING CHILLED WATER PIPING AFTER INSTALLATION OF NEW CHILLED WATER PIPING.  
 AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL AND SITE LEAVE THE PREMISES AND THE WORK IN A CLEAN, ORDERLY AND ACCEPTABLE CONDITION.

MECHANICAL 1ST FLOOR DEMOLITION PLAN

SCALE: 1/8"=1'-0"



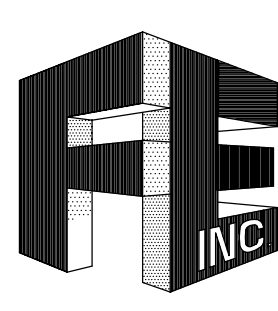
JOB NO. :	04-2084
DATE :	03-04-10
DRAWN BY :	RLA
CHECKED BY :	GLA
SHEET NO. :	MD-2

REV. #	DATE

BY: GERARD T. FORNEY P.E.  
 DATE: 1/10/09

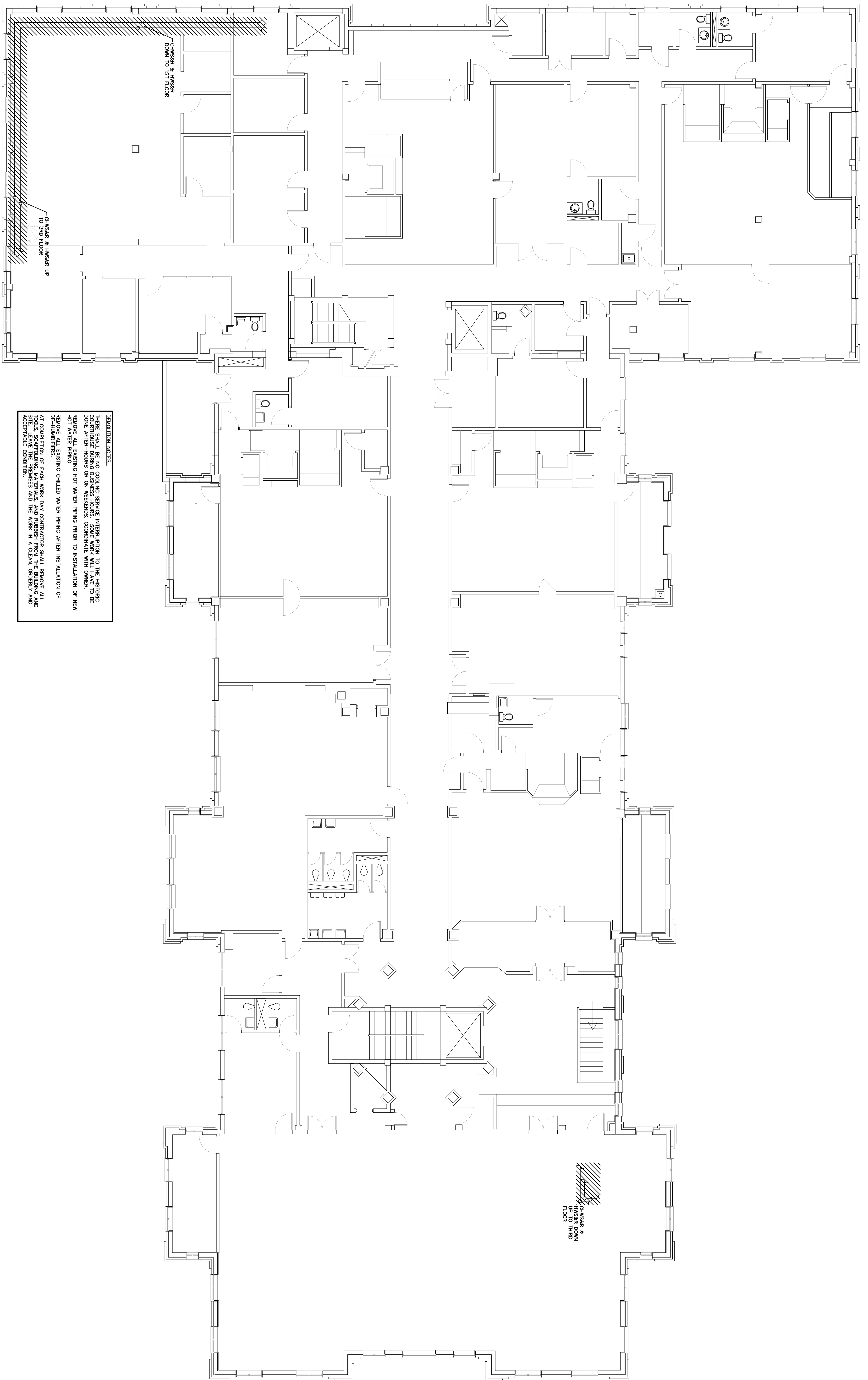
TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



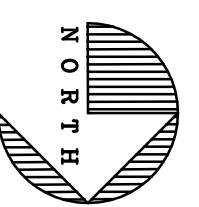
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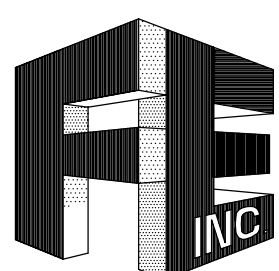


MECHANICAL 2ND FLOOR DEMOLITION PLAN

SCALE: 1/8"=1'-0"



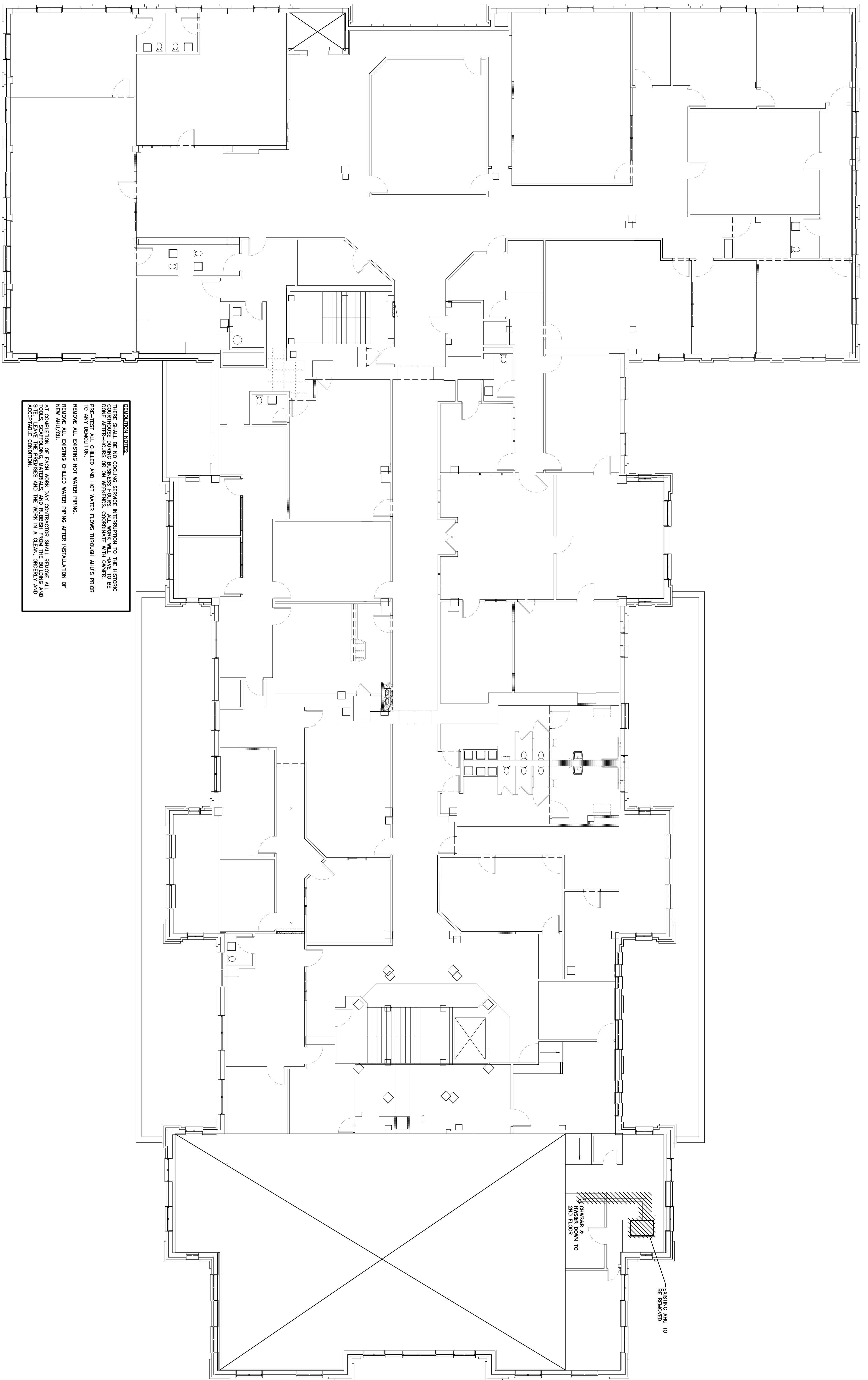
**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
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TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.
BY: <u>GERARD T. VERGARA P.E.</u>
DATE: <u>11/09</u>
S. E. A. L.
RR# # _____ DATE _____
JOB NO. : 09-2084
DATE : 09-04-10
DRAWN BY : RJA
CHECKED BY : GJA
SHEET No. :
<b>MD-3</b>

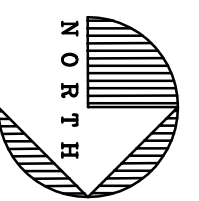


**DEMOLITION NOTES:**  
 THERE SHALL BE NO COOLING SERVICE INTERRUPTION TO THE HISTORIC COURTHOUSE DURING BUSINESS HOURS. ALL WORK WILL HAVE TO BE DONE AFTER-HOURS OR ON WEEKENDS. COORDINATE WITH OWNER.  
 PRE-TEST ALL CHILLED AND HOT WATER FLOWS THROUGH AHU'S PRIOR TO ANY DEMOLITION.  
 REMOVE ALL EXISTING HOT WATER PIPING.  
 REMOVE ALL EXISTING CHILLED WATER PIPING AFTER INSTALLATION OF NEW AHU/CU.  
 AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS AND RUBBISH FROM THE BUILDING AND SITE. LEAVE ONE PREMISES AND THE WORK IN A CLEAN, ORDERLY AND SAFE MANNER FOR OWNER'S OCCUPATION.

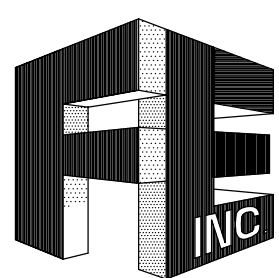
EXISTING AHU TO BE REMOVED  
 CHIMNEY & WIND TO BE REMOVED DOWN TO 2ND FLOOR

MECHANICAL 3RD FLOOR DEMOLITION PLAN

SCALE: 1/8"=1'-0"



**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



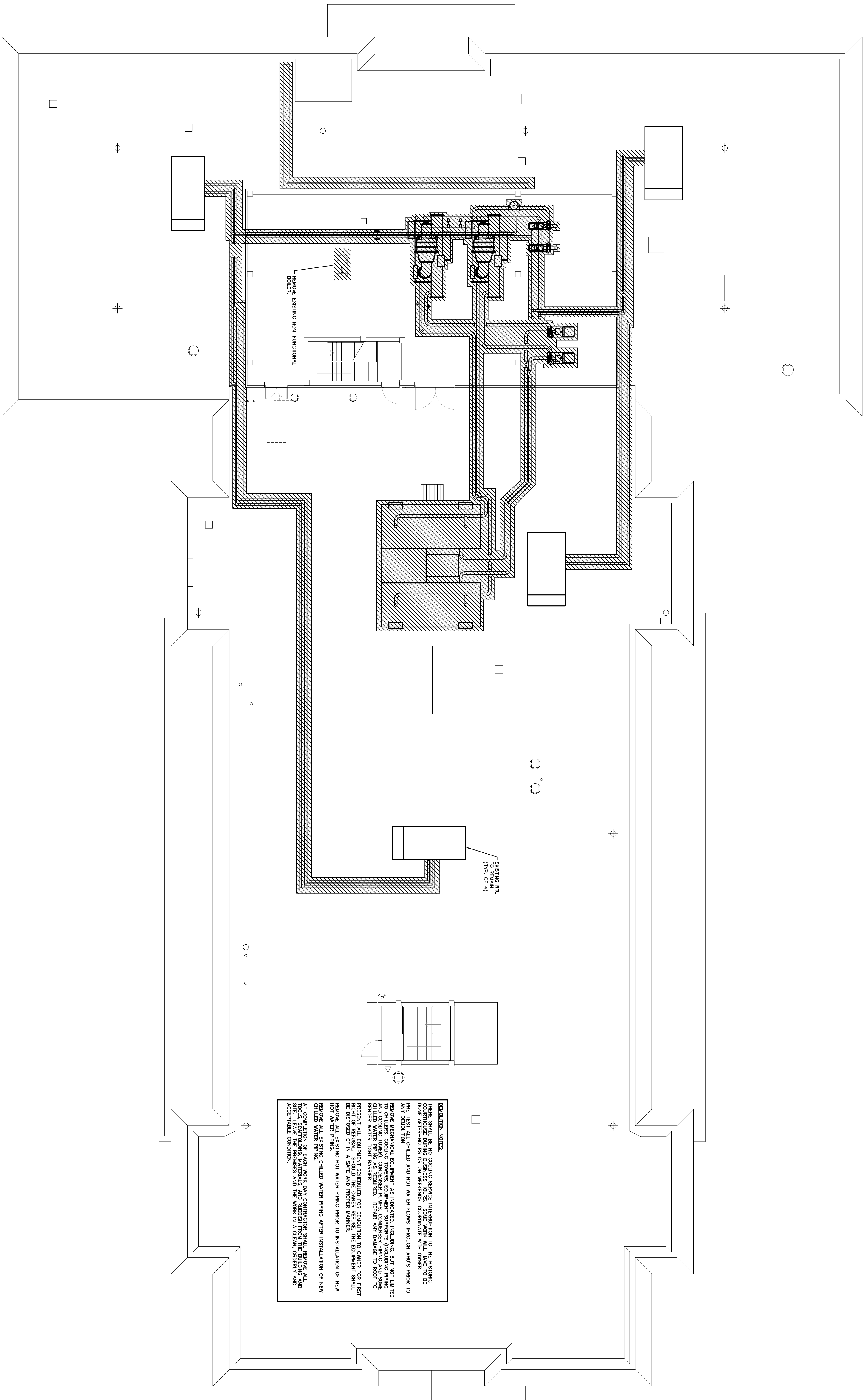
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TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.  
 BY: GERRARD T. FORNEYS P.E.  
 DATE: 11/08

REV. #	DATE

JOB NO. : 09-2084  
 DATE : 09-04-10  
 DRAWN BY : RLJA  
 CHECKED BY : GLA  
 SHEET NO. :  
**MD-4**



MECHANICAL ROOFTOP DEMOLITION PLAN

SCALE: 1/8"=1'-0"



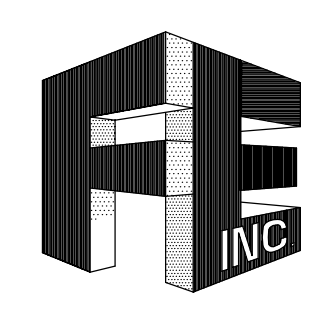
JOB NO. :	09-2004
DATE :	09-04-10
DRAWN BY :	RLA
CHECKED BY :	GLA
SHEET NO. :	MD-5

REV. #	DATE

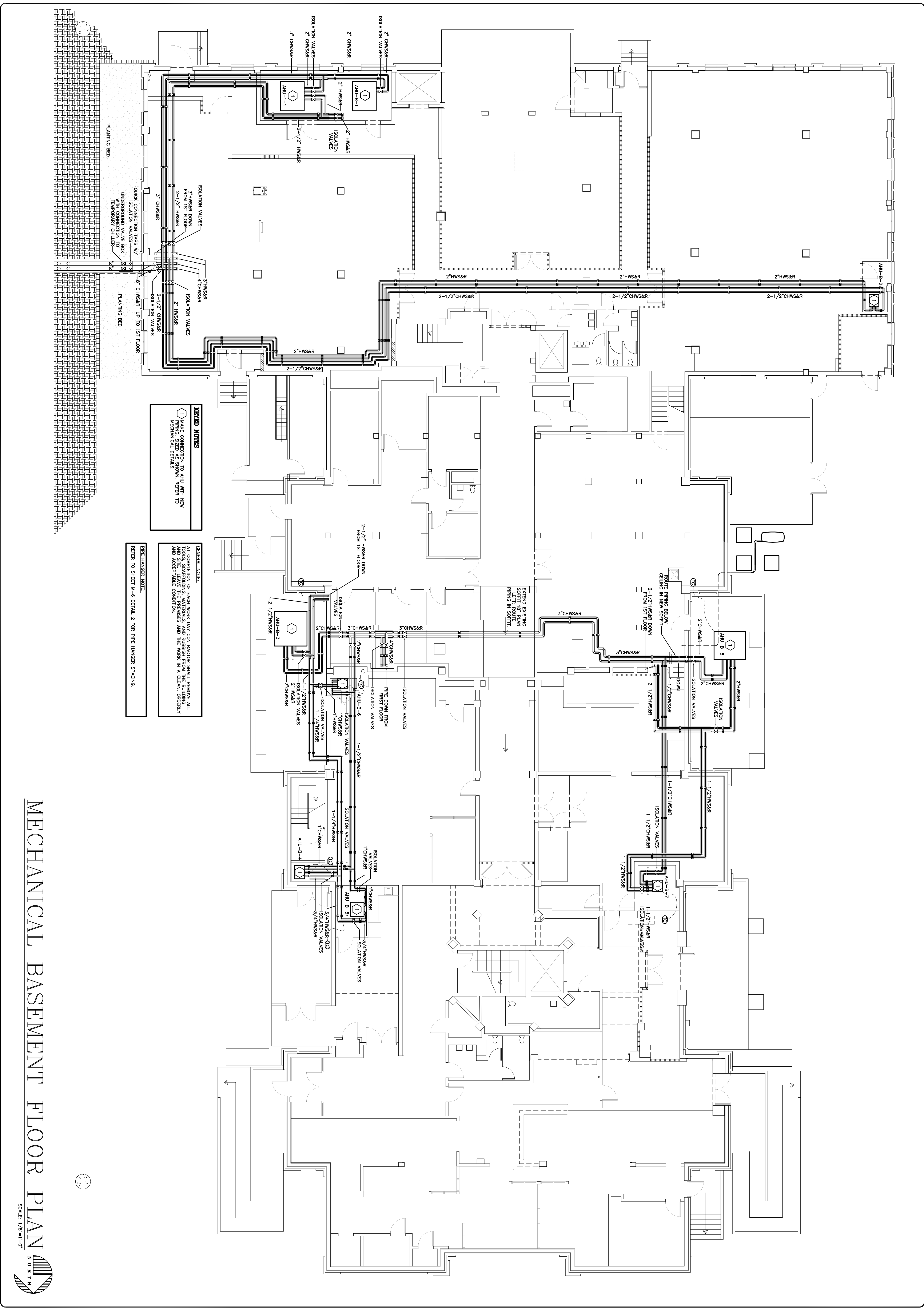
BY: GERARD T. VERBURG P.E.  
 DATE: 11/09

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



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**KEYED NOTES**

① MAKE CONNECTION TO AHU WITH NEW PIPING, SIZED AS SHOWN. REFER TO MECHANICAL DETAILS.

**GENERAL NOTE:**

AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS AND RUBBER FROM THE BUILDING AND ACCEPTABLE CONDITION.

**PIPE HANGER NOTE:**

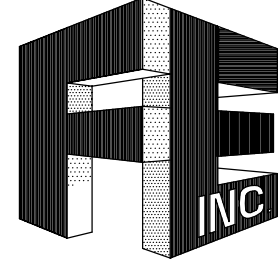
REFER TO SHEET M-6 DETAIL 2 FOR PIPE HANGER SPACING.

# MECHANICAL BASEMENT FLOOR PLAN

SCALE: 1/8"=1'-0"

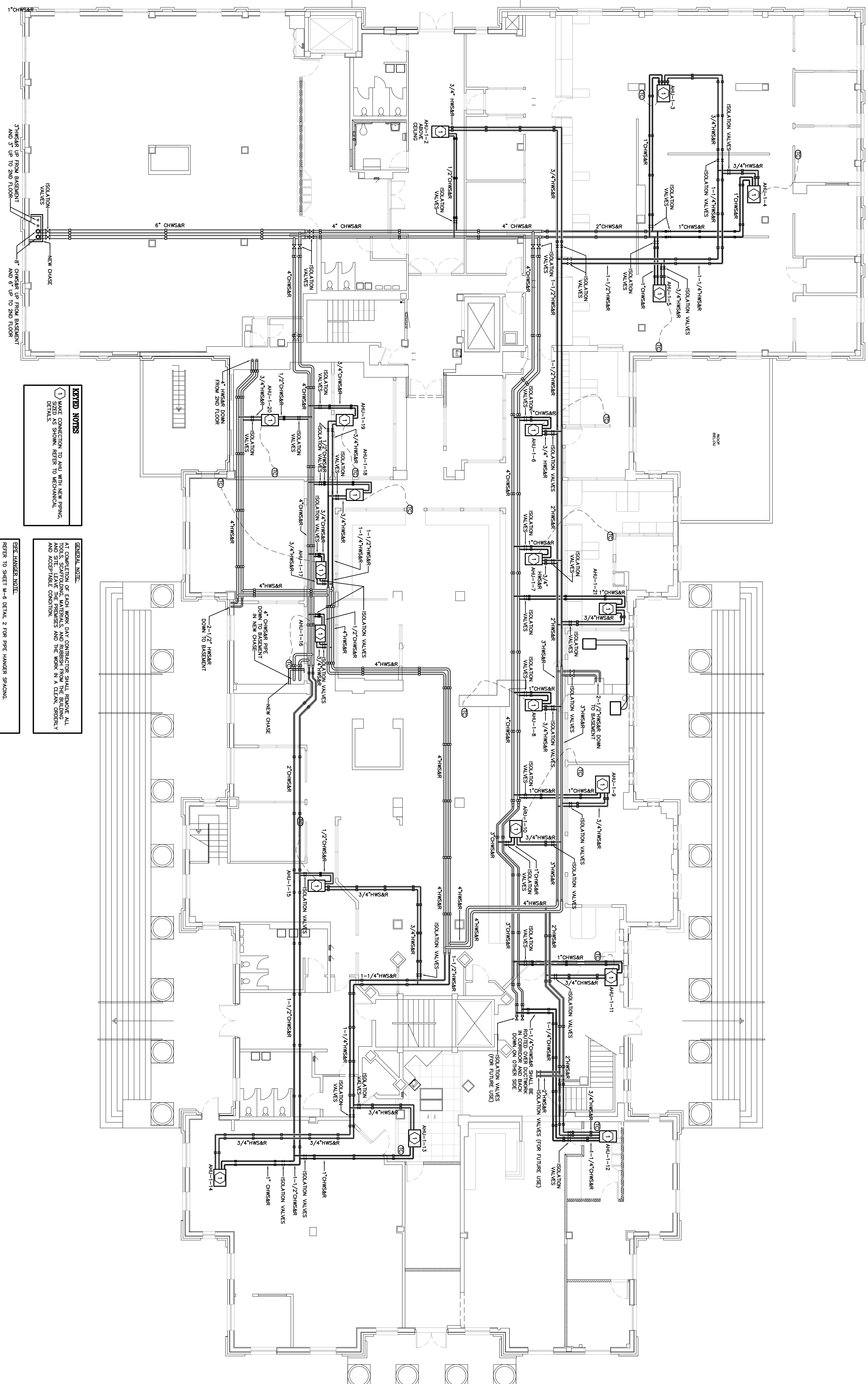


## MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1 BRADENTON, FLORIDA 34208



**FORNEY ENGINEERING, INC.**  
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TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.	DATE: 11/09
BY: <u>GERARD T. FABRIS P.E.</u>	
S. E. A. L.	
REV. #	DATE
JOB NO. : 09-2084	
DATE : 03-04-10	
DRAWN BY : RJA	
CHECKED BY : GLA	
SHEET NO. :	
<b>M-1</b>	



**LEGEND NOTES**

1 MAKE CONNECTION TO AHU WITH NEW PIPING. DETAILS SHOWN, REFER TO MECHANICAL.

**GENERAL NOTE:**  
 AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS AND RUBBERIS FROM THE BUILDING AND ACCEPTABLE CONDITION.

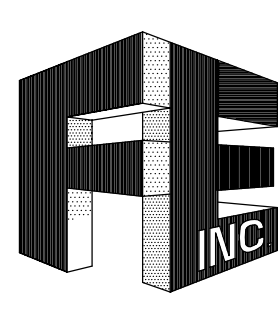
**PIPE HANGER NOTE:**  
 REFER TO SHEET M-4, DETAIL 2 FOR PIPE HANGER SPACING.

MECHANICAL 1ST FLOOR PLAN

SCALE: 1/8"=1'-0"

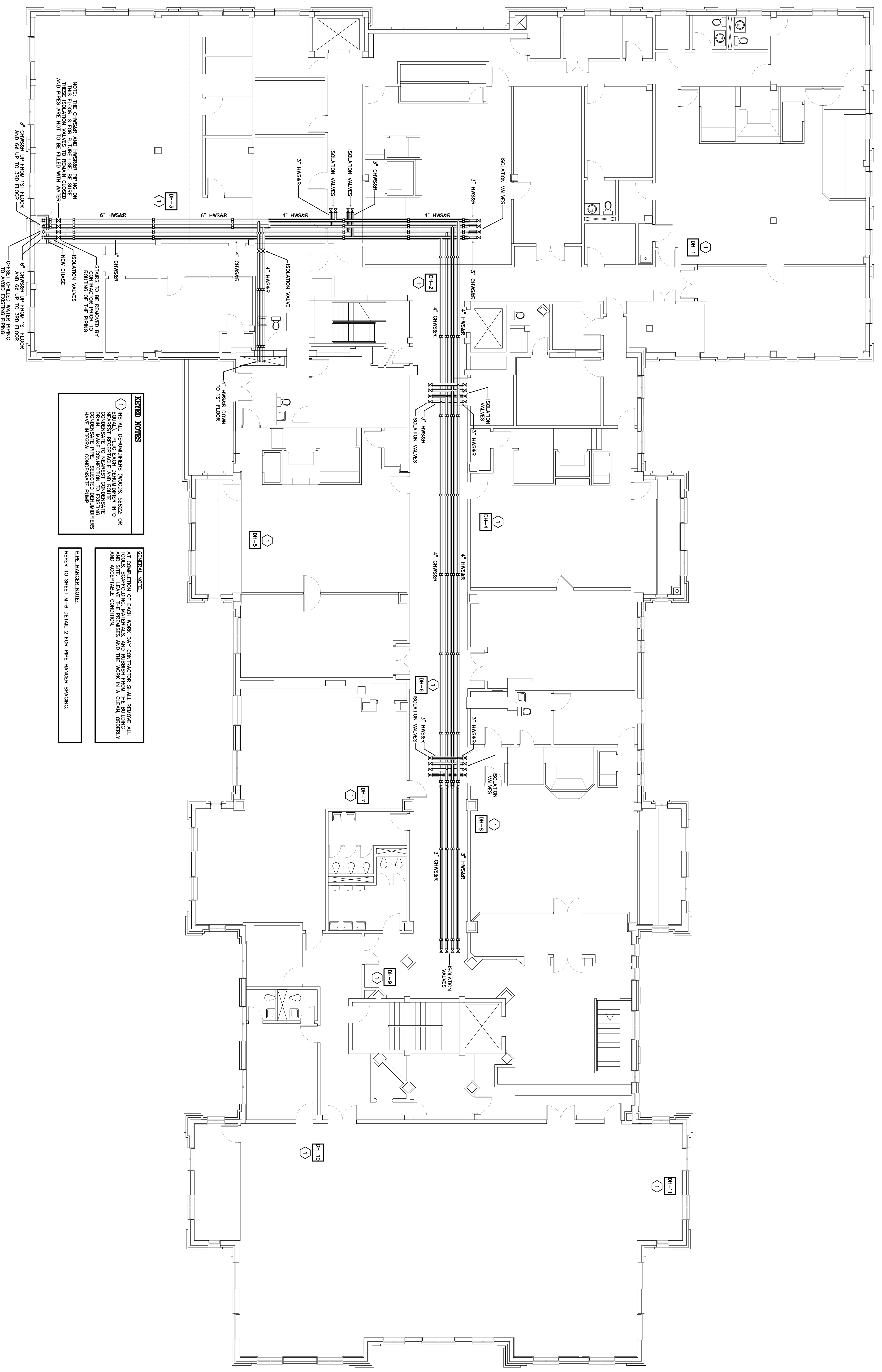


**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



**FORNEY ENGINEERING, INC.**  
 MECHANICAL & ELECTRICAL CONSULTING ENGINEERS  
 5213 FOURTH AVE. CIRCLE EAST, BRADENTON, FL. 34208 C.O.A. #4049  
 PHONE (941) 748-5884 FAX (941) 747-6240 E-MAIL fei@forneyengineering.com  
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TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE REGULATORY CODES.
By: <u>GERARD T. ASBURN P.E.</u>
DATE: <u>11/09</u>
S.F.A.L.
REV. # _____ DATE _____
JOB NO. : 09-2084
DATE : 03-04-10
DRAWN BY : RLK
CHECKED BY : GLA
SHEET No. : <b>M-2</b>



**KEYED NOTES**

① INSTALL DEAERATORS (MOORE, S222, OR EQUAL), PLUG EACH DEAERATOR INTO NEAREST RECEPTACLE AND ROUTE CONDENSATE FROM THE DEAERATOR TO DRAIN. MAKE CONNECTION TO EXISTING CONDENSATE PIPE. SELECTED DEAERATORS HAVE INTERNAL CONDENSATE PUMP.

**PIPE HANGER NOTE:**  
REFER TO SHEET M-6 DETAIL 2 FOR PIPE HANGER SPACING.

NOTE THE CHASER AND HANGER PIPING ON THESE ISOLATION VALVES TO REMAIN CLOSED AND PIPES ARE NOT TO BE FILLED WITH WATER.

3" CHWS&R UP FROM 1ST FLOOR AND 6\"/>

**GENERAL NOTE:**  
AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS, AND RUBBERISE FROM THE BUILDING AND SITE. LEAVE THE PREMISES AND THE WORK IN A CLEAN, ORDERLY AND ACCEPTABLE CONDITION.

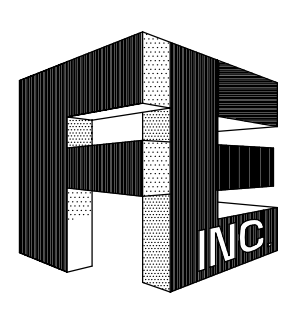
# MECHANICAL 2ND FLOOR PLAN

SCALE: 1/8"=1'-0"



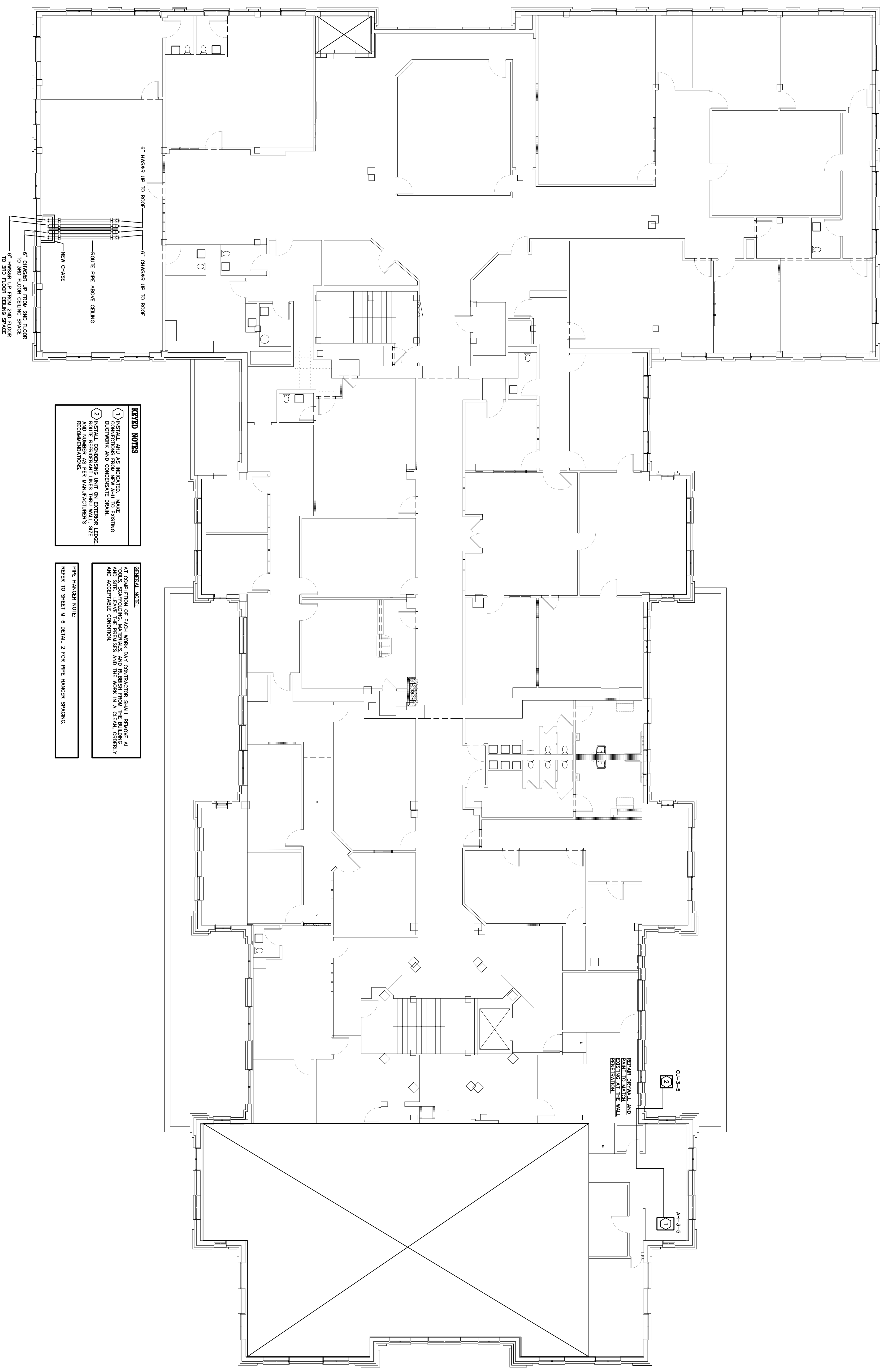
## MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1

BRADENTON, FLORIDA 34208



**FORNEY ENGINEERING, INC.**  
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BY: <u>GERARD T. LEBLANC, P.E.</u>	TO THE BEST OF MY KNOWLEDGE, SKILL AND CAPABILITY, I HAVE PREPARED THESE PLANS AND SPECIFICATIONS CORRECTLY AND ACCORDING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. DATE: _____ S. R. A. L. RBY: # _____ DATE: _____
CHECKED BY: <u>GLA</u>	
DATE: _____	
DATE: _____	
DATE: _____	
JOB NO.: <u>09-2084</u>	
DATE: <u>09-04-10</u>	
DRAWN BY: <u>RLA</u>	
CHECKED BY: <u>GLA</u>	
SHEET NO.: <u>M-3</u>	



**KEYED NOTES**

- 1 INSTALL AHU AS INDICATED. MAKE CONNECTIONS FROM NEW AHU TO EXISTING DUCTWORK AND CONDENSATE DRAIN.
- 2 INSTALL CONDENSING UNIT ON EXTERIOR LEAVE ROUTE REFRIGERANT LINES FROM WALL SIZE RECOMMENDATIONS.

**GENERAL NOTE:**  
 AT COMPLETION OF EACH WORK DAY CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS, AND RUBBERISE FROM THE BUILDING AND SITE. LEAVE THE PREMISES AND THE WORK IN A CLEAN, ORDERLY AND ACCEPTABLE CONDITION.

**PIPE HANGER NOTE:**  
 REFER TO SHEET M-6 DETAIL 2 FOR PIPE HANGER SPACING.

6" HANGAR UP TO ROOF

6" HANGAR UP TO ROOF

6" HANGAR UP FROM 2ND FLOOR TO 3RD FLOOR CEILING SPACE

6" HANGAR UP FROM 2ND FLOOR TO 3RD FLOOR CEILING SPACE

NEW CHASE

ROUTE PIPE ABOVE CEILING

01-3-5  
 2  
 REPAIR ABRASION AND PAINT TO MATCH EXISTING AT THE WALL ENCLOSURE.

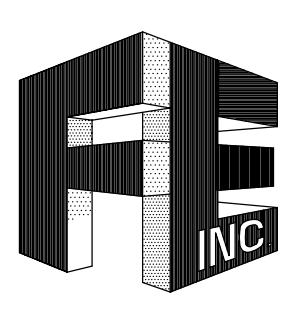
01-3-5  
 1

MECHANICAL 3RD FLOOR PLAN

SCALE: 1/8"=1'-0"

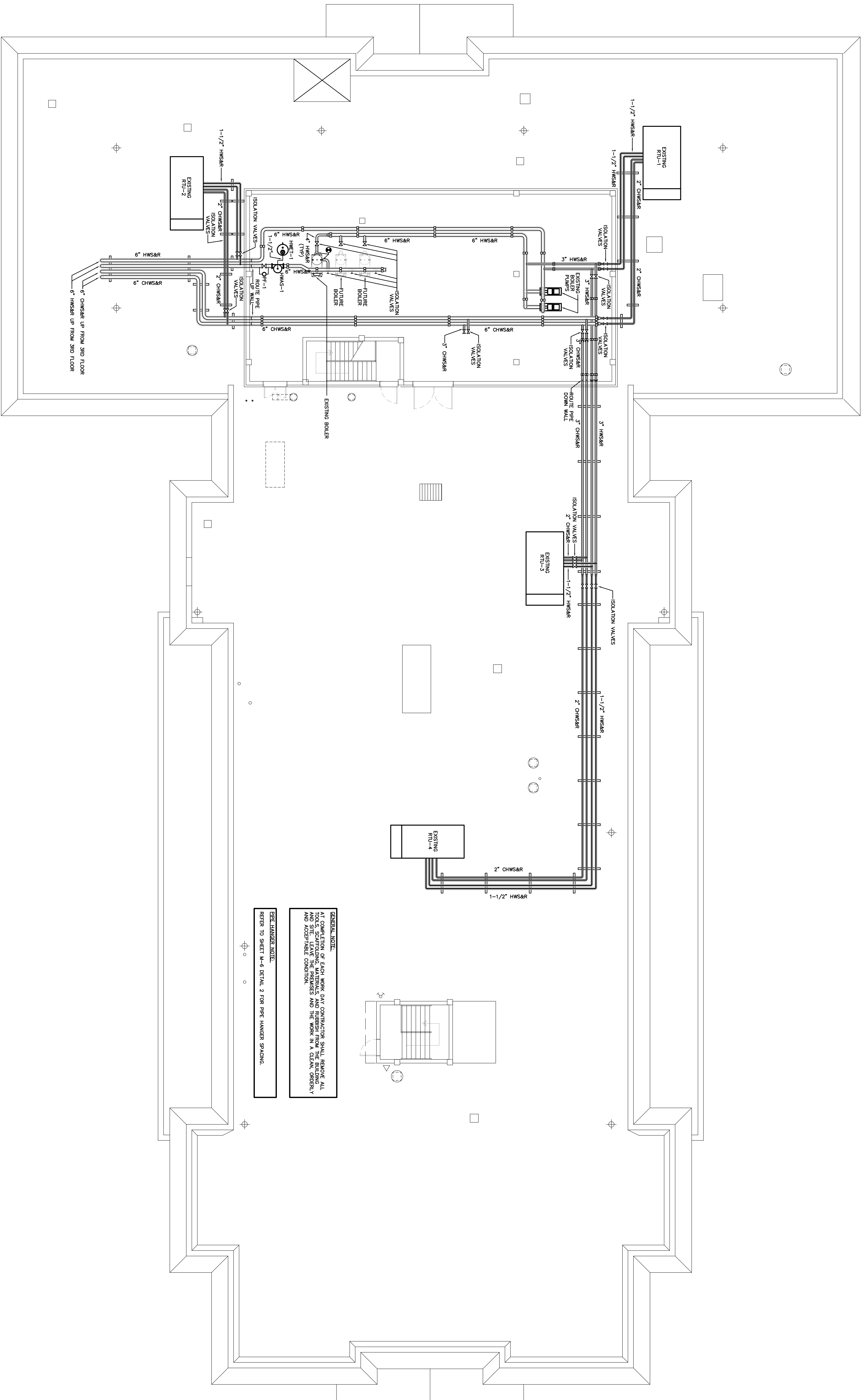


**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



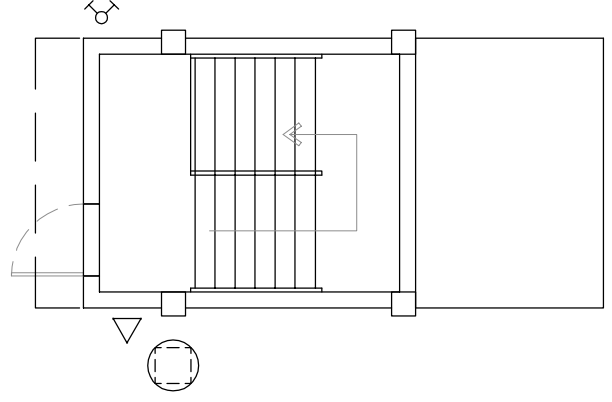
**FORNEY ENGINEERING, INC.**  
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BY: GERARD T. FORNEY P.E. 1/1/09	DATE: _____
REV. #	DATE
JOB NO. : 09-2084	
DATE : 09-04-10	
DRAWN BY : RJA	
CHECKED BY : GLA	
SHEET NO. :	
<b>M-4</b>	



**GENERAL NOTE:**  
 AT COMPLETION OF FLOOR WORK, THE CONTRACTOR SHALL REMOVE ALL TOOLS, SCAFFOLDING, MATERIALS, AND RUBBERS FROM THE BUILDING AND SITE. LEAVE THE PREMISES AND THE WORK IN A CLEAN, ORDERLY AND ACCEPTABLE CONDITION.

**PIPE HANGER NOTE:**  
 REFER TO SHEET M-6 DETAIL 2 FOR PIPE HANGER SPACING.



MECHANICAL ROOFTOP PLAN

SCALE: 1/8"=1'-0"



JOB NO. :	04-2004
DATE :	03-04-10
DRAWN BY :	RLA
CHECKED BY :	GLA
SHEET NO. :	M-5

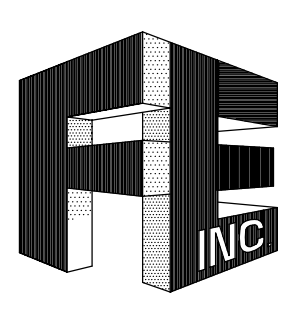
REV. #	DATE

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

By: GERARD T. FORNEY P.E.  
 11/09

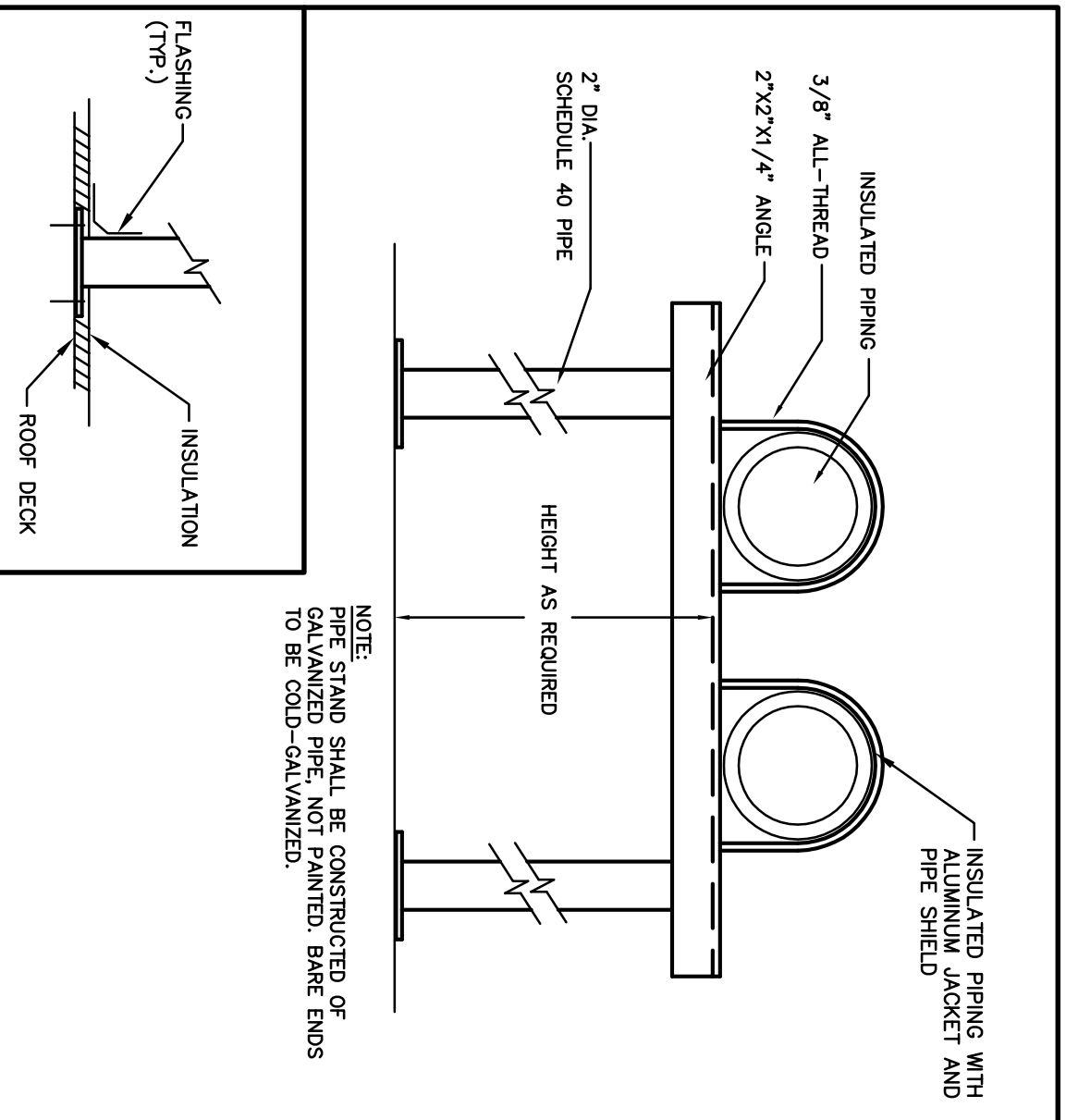
DATE: \_\_\_\_\_

**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**

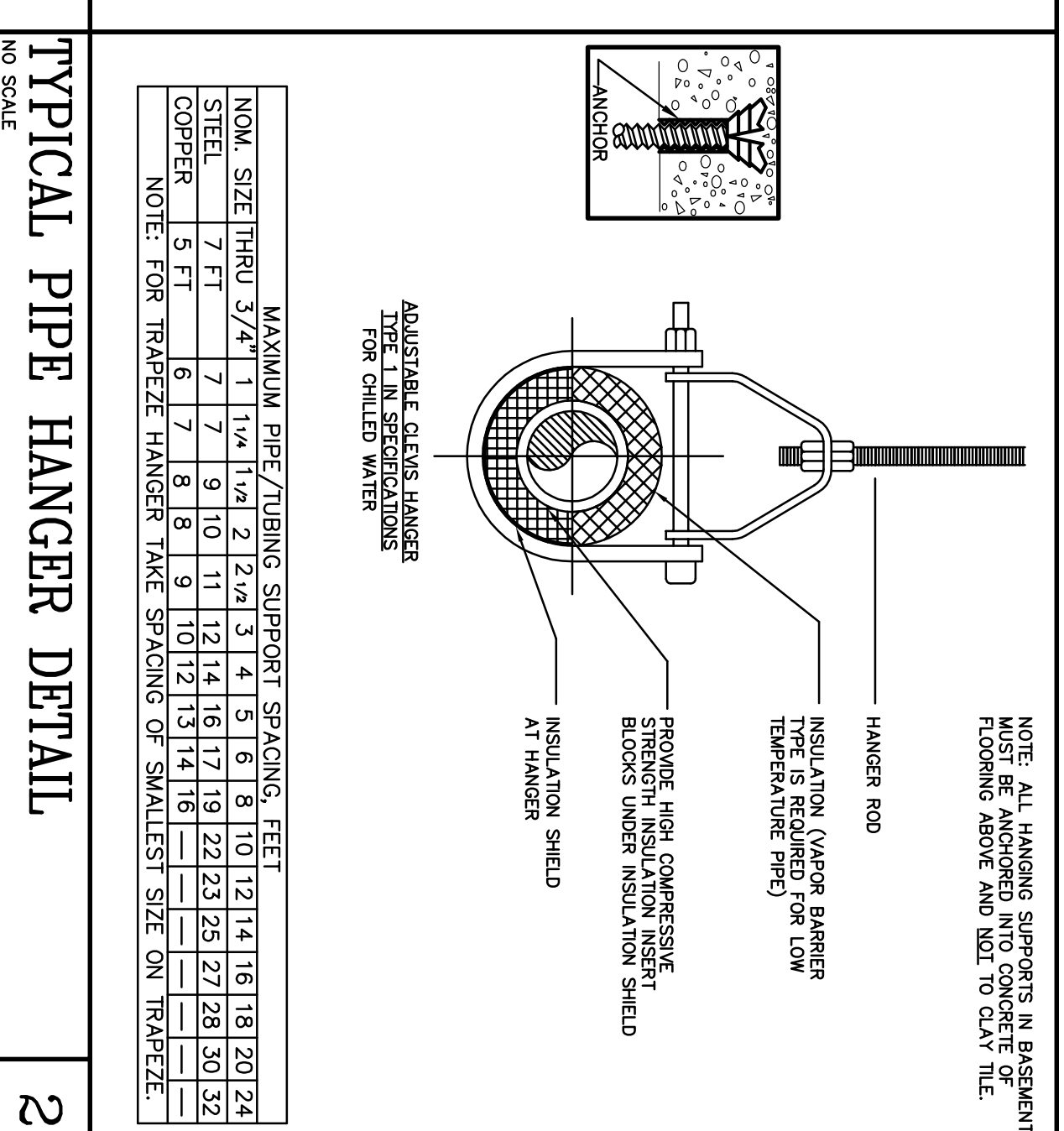


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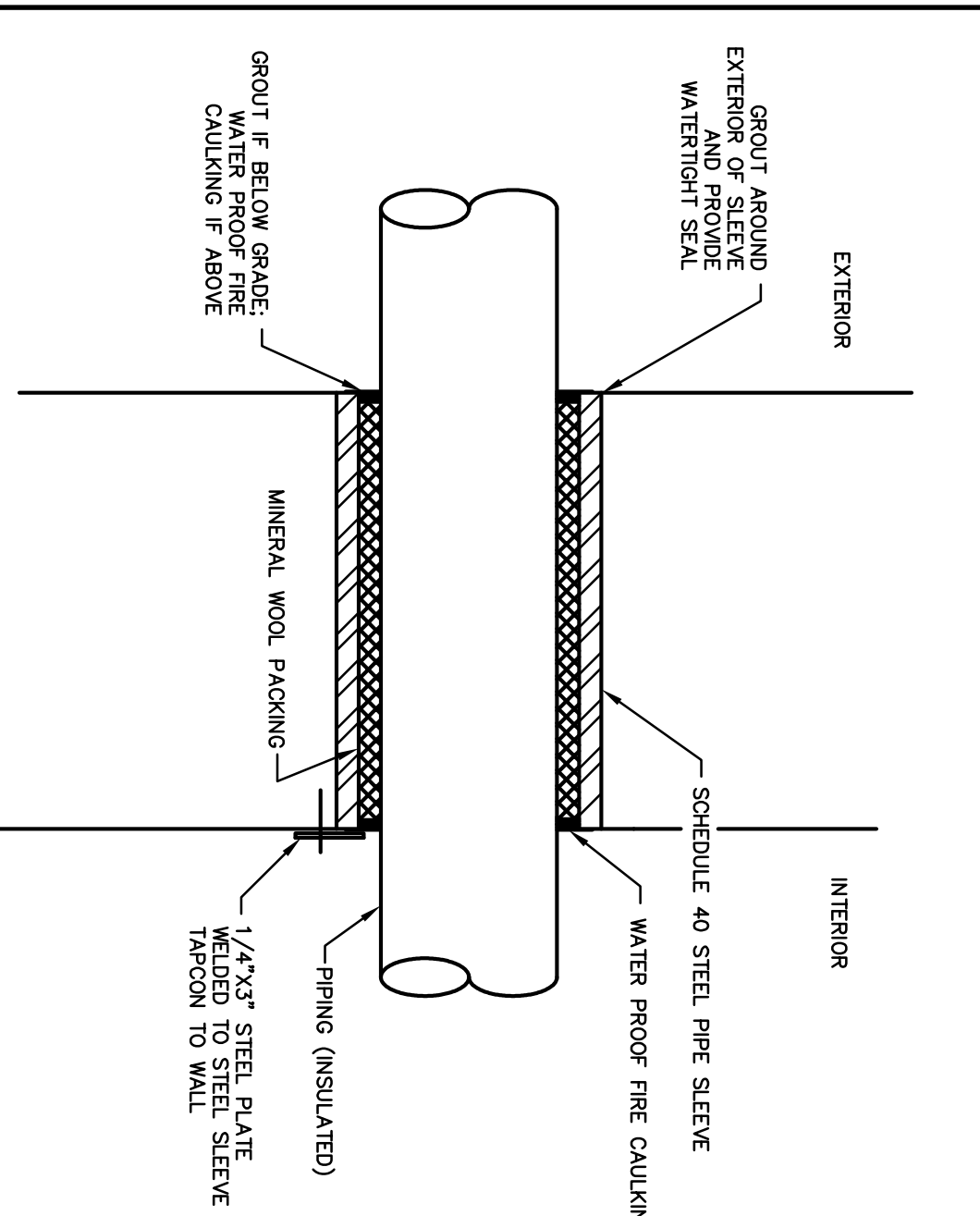




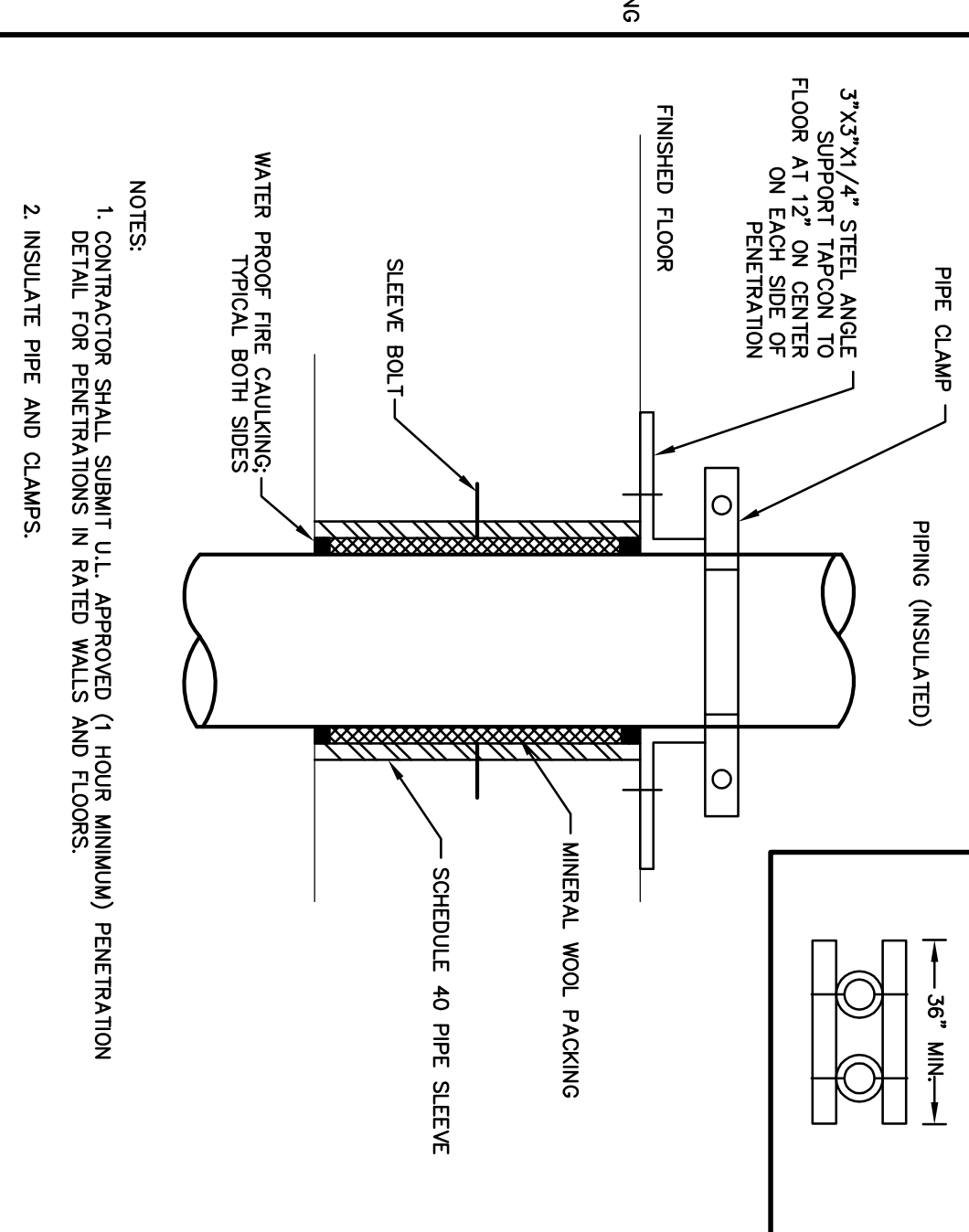
**ROOFTOP PIPING DETAIL**  
NO SCALE



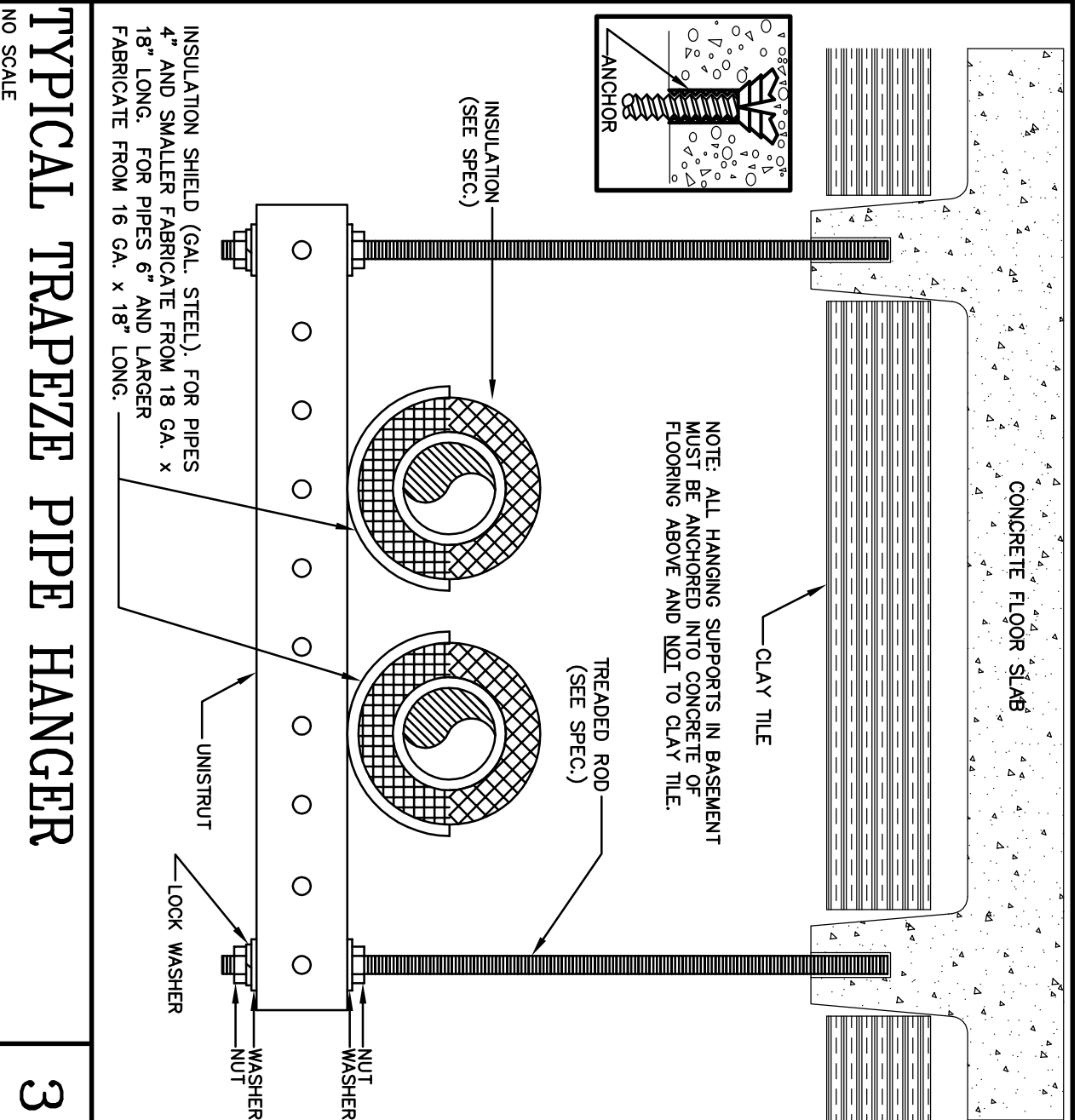
**TYPICAL PIPE HANGER DETAIL**  
NO SCALE



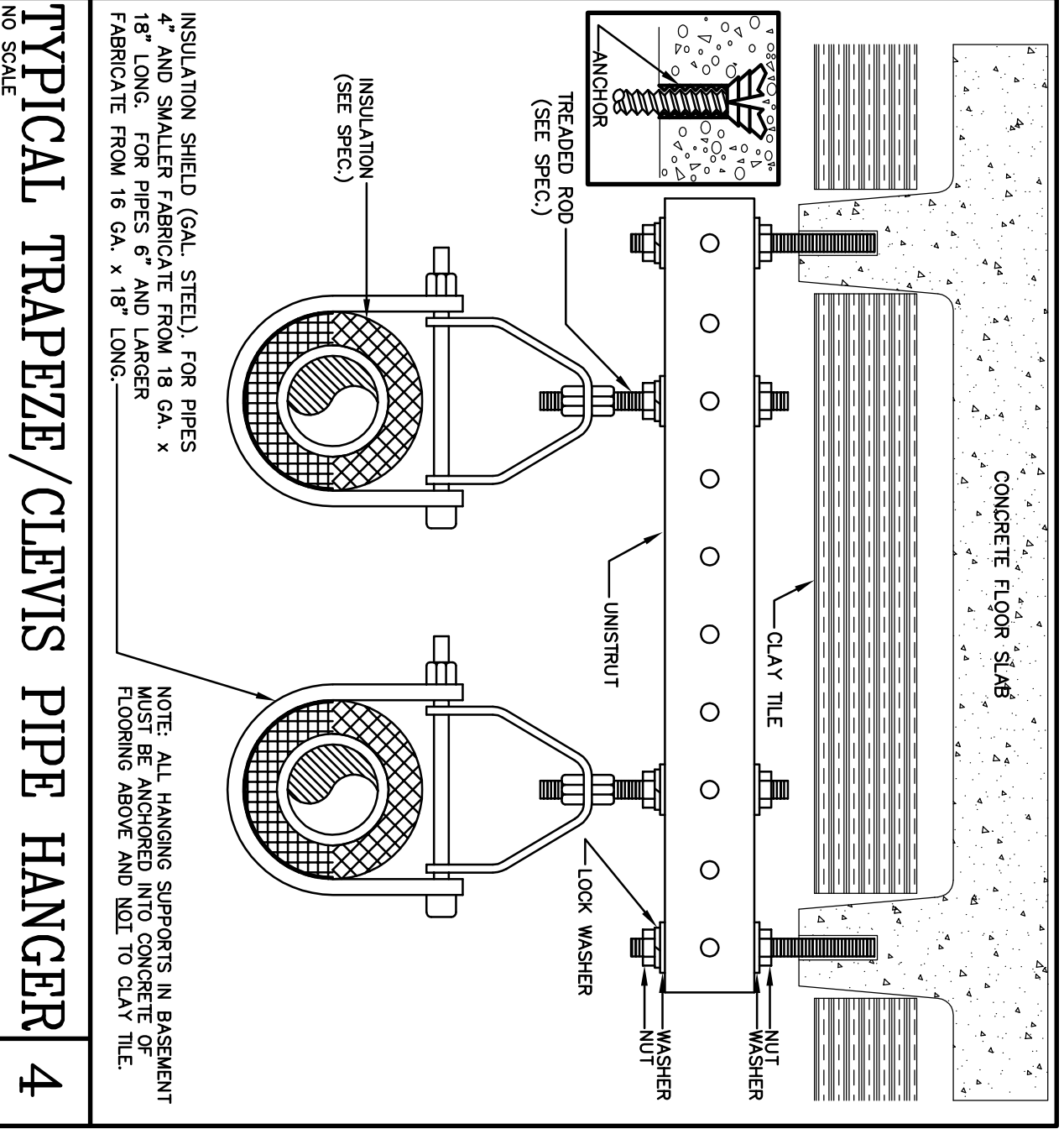
**PIPE WALL PENETRATION DETAIL**  
NO SCALE



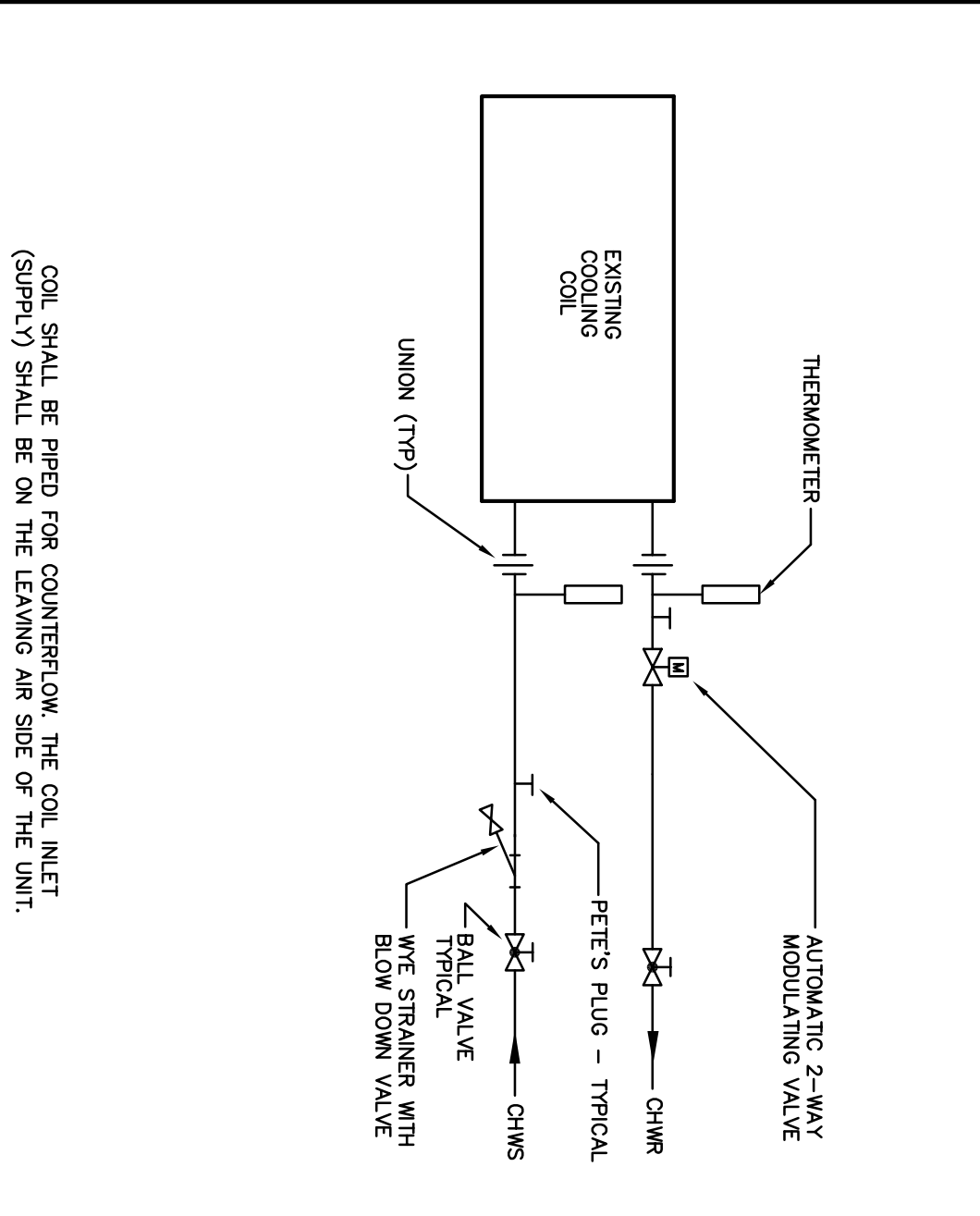
**WATER TIGHT SLEEVE DETAIL**  
NO SCALE



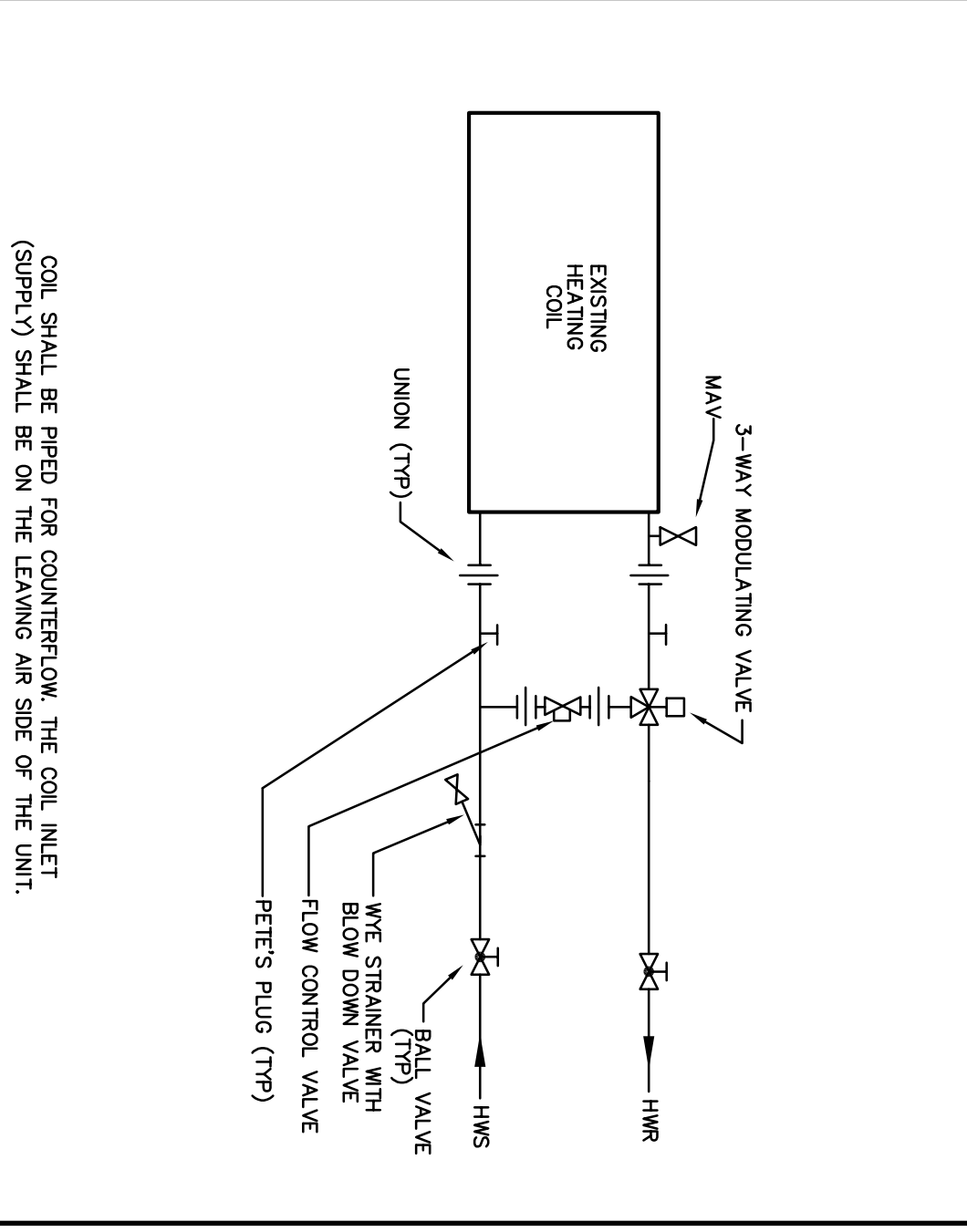
**TYPICAL TRAPEZE PIPE HANGER**  
NO SCALE



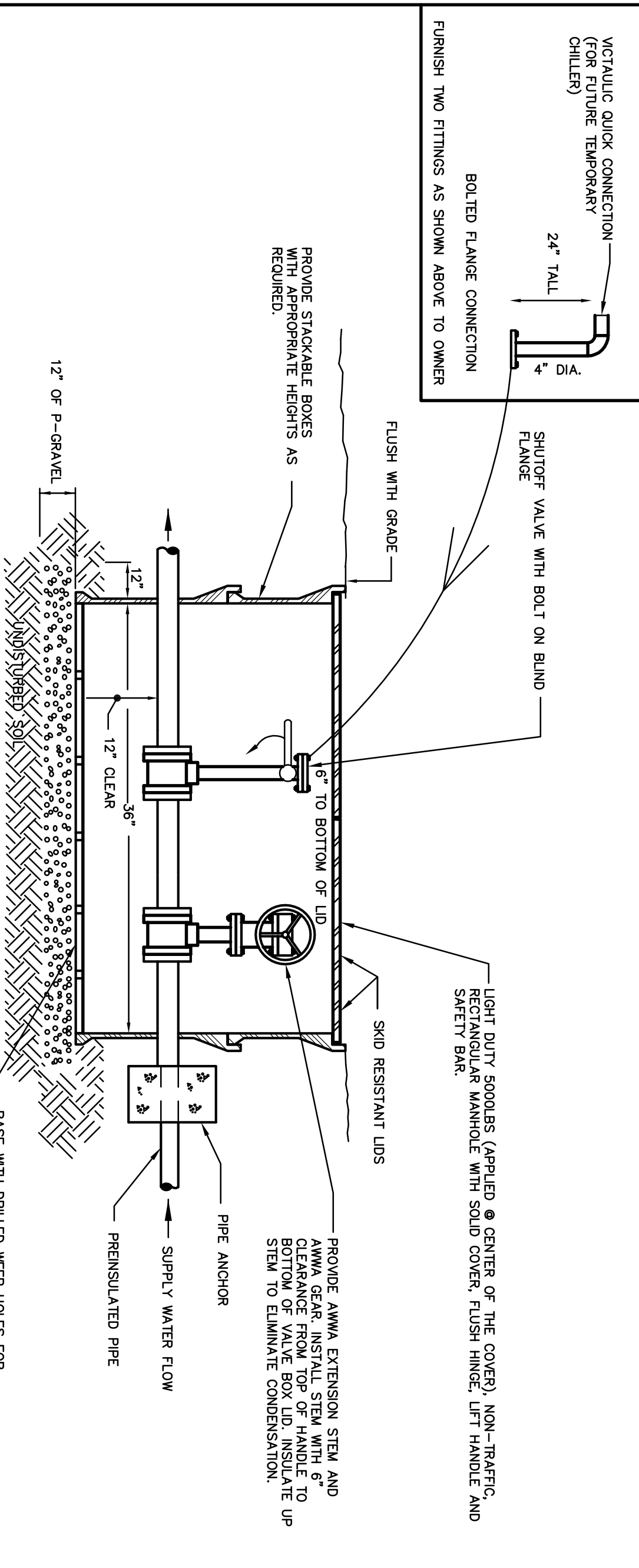
**TYPICAL TRAPEZE/CLEVIS PIPE HANGER**  
NO SCALE



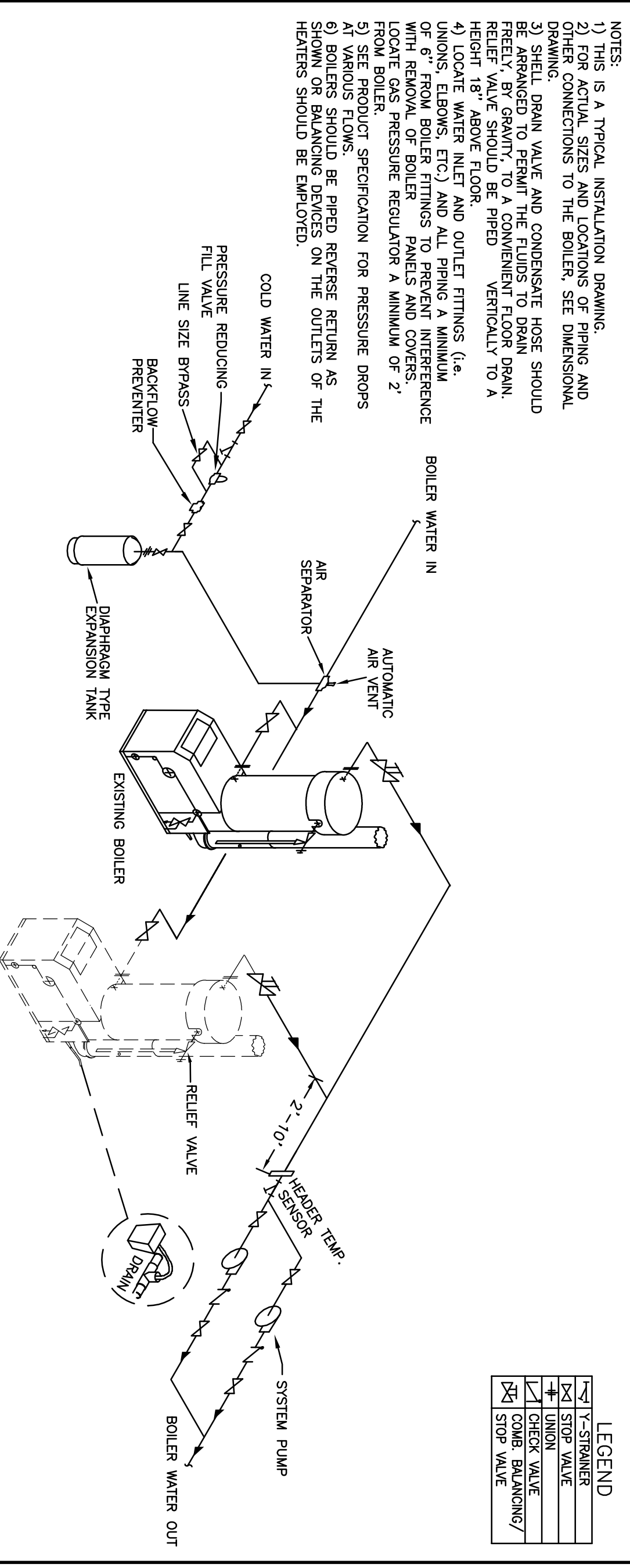
**CHILLED WATER COIL PIPING DIAGRAM**  
NO SCALE



**HOT WATER COIL PIPING DETAIL**  
NO SCALE

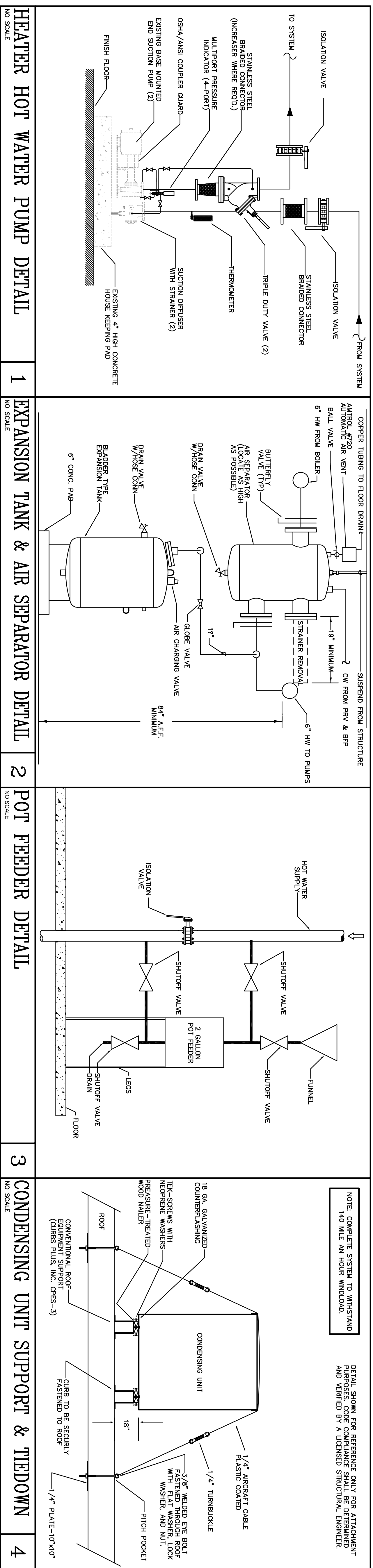


**VALVE BOX DETAIL**  
NO SCALE



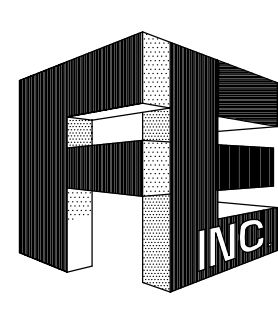
**GAS FIRED BOILER MULTIPLE UNIT INSTALLATION**  
NO SCALE

**MECHANICAL DETAILS**  
SCALE: NO SCALE



NOTE: COMPLETE SYSTEM TO WHISTAND PURPOSES. CODE COMPLIANCE SHALL BE DETERMINED AND VERIFIED BY A LICENSED STRUCTURAL ENGINEER.

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**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
BRADENTON, FLORIDA 34208

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.  
By: GERARD T. LEBLANC P.E.  
DATE: 11/09

REV. #	DATE

JOB NO. : 09-2084  
DATE : 09-04-10  
DRAWN BY : RLJA  
CHECKED BY : GLA  
SHEET No. :  
**M-7**

**MECHANICAL DETAILS**

SCALE: NO SCALE

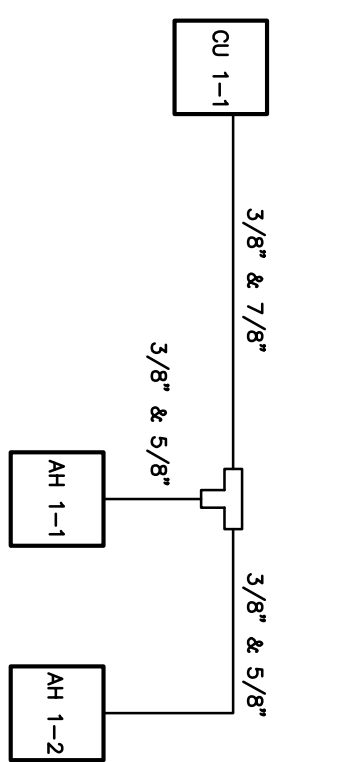
SPLIT SYSTEM AC SCHEDULE

MARK	ZONE NAME	MARK	MARK
AH-3-5	NORTH OFFICE	AH-3-5	
	TOTAL CAPACITY (BTUH)	19400	
	SENSIBLE CAPACITY (BTUH)	13630	
	LATENT CAPACITY (BTUH)	5870	
	TOTAL AIR (CFM)	525	
	OUTSIDE AIR (CFM)	60	
	ENTERING AIR DB 210/240 (DB/WB)	75/63	
	EXTERNAL STATIC PRESS. (IN. W.C.)	.5	
	BLOWER MOTOR (HP)	1/2	
	BLOWS/FINS PER FOOT	3.7/69	
	ELECTRIC HEAT (KW/2000)/CFM	3.6/295	
	MCA / MOP	27/30	
	ELECTRICAL SERVICE (V/PH/Hz)	208/1/60	
	FILTER (TYPE)	PLEATED	
	WEIGHT (LBS)	118	
	BLOWER MODEL NO.	4TEEX31A1	
	COND. UNIT MODEL NO.	CU-3-5	
	OUTDOOR TEMP AIR 210/240 (DBG F)	95	
	COND. ELECTRICAL (V/PH/Hz)	208/1/60	
	COND. ELECTRICAL (V/PH/Hz)	208/1/60	
	CONDENSER FANS (NO./FLA)	1/2,2	
	COMPRESSOR (NO./RLA)	1/6,2	
	MCA / MOP	11/15	
	MIN SER/FEER	14/---	
	WEIGHT (LBS)	216	
	COND. UNIT MODEL NO.	4TR02DA1	
	MANUFACTURER	TRANE	

ALL AIR HANDLING UNITS TO HAVE FACTORY MOUNTED DISCONNECTS.  
 ALL MANUFACTURERS TO BE LISTED IN THE 2009 ASHRAE HANDBOOK.  
 GUIDE FOR LONG LINE PIPING TO BE SIZED IN ACCORDANCE WITH MANUFACTURERS  
 NOTE: INTERSTATE SPLIT SYSTEM INTO A/C CONTROLS.

SPLIT SYSTEM AC SCHEDULE

MARK	MARK	MARK	MARK
AH-1-1	54,000	54,000	
	TOTAL CAPACITY (BTUH)	54,000	
	SENSIBLE CAPACITY (BTUH)	54,000	
	LATENT CAPACITY (BTUH)	0	
	TOTAL AIR (CFM)	1570	
	OUTSIDE AIR (CFM)	1570	
	ENTERING AIR DB 210/240 (DB/WB)	75/63	
	EXTERNAL STATIC PRESS. (IN. W.C.)	0.5	
	BLOWER MOTOR (KW)	0.41	
	BLOWS/FINS PER FOOT	60,000	
	HEATING CAPACITY (BTUH)	3,553/15	
	MCA / MOP	3.553/15	
	ELECTRICAL SERVICE (V/PH/Hz)	208/1/60	
	FILTER (TYPE)	1" PLEATED	
	WEIGHT (LBS)	170	
	BLOWER MODEL NO.	PVTY-H4FC00A	
	COND. UNIT MODEL NO.	CU-1-1	
	OUTDOOR TEMP AIR 210/240 (DBG F)	95	
	COND. ELECTRICAL (V/PH/Hz)	208/1/60	
	MCA / MOP	41/50	
	MIN SER/FEER	> 15.0	
	COMPRESSOR TYPE	INVERTER SCROLL	
	COND. UNIT MODEL NO.	PVTY-P10THMU-A	
	MANUFACTURER	MITSUBISHI	



NOTES:  
 1. SIZE AND NUMBER REFRIGERANT LINES AS PER MANUFACTURER'S RECOMMENDATIONS.  
 2. ACCEPTABLE MANUFACTURERS ARE: MITSUBISHI, LG AND DAIKIN.

AIR SEPARATOR SCHEDULE

MARK	MANUFACTURER	MODEL	GPM	NOTES
HMS-1	AMTROL	AS-6	575	UNIT SHALL HAVE STAINLESS STEEL STRAINER WITH 3/16" PERFORATIONS

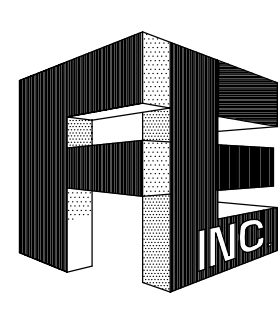
EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL	VOLUME (GAL)	ACCEPT. VOLUME (GAL)	NOTES
HMT-1	AMTROL	AX-80V	44.4	23.0	

POT FEEDER SCHEDULE

MARK	MANUFACTURER	MODEL	GALLONS	NOTES
PF-1	VECTOR INDUSTRIES	FA 500	2.0	CAST IRON FUNNEL WITH EPOXY COATING

**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
 BRADENTON, FLORIDA 34208



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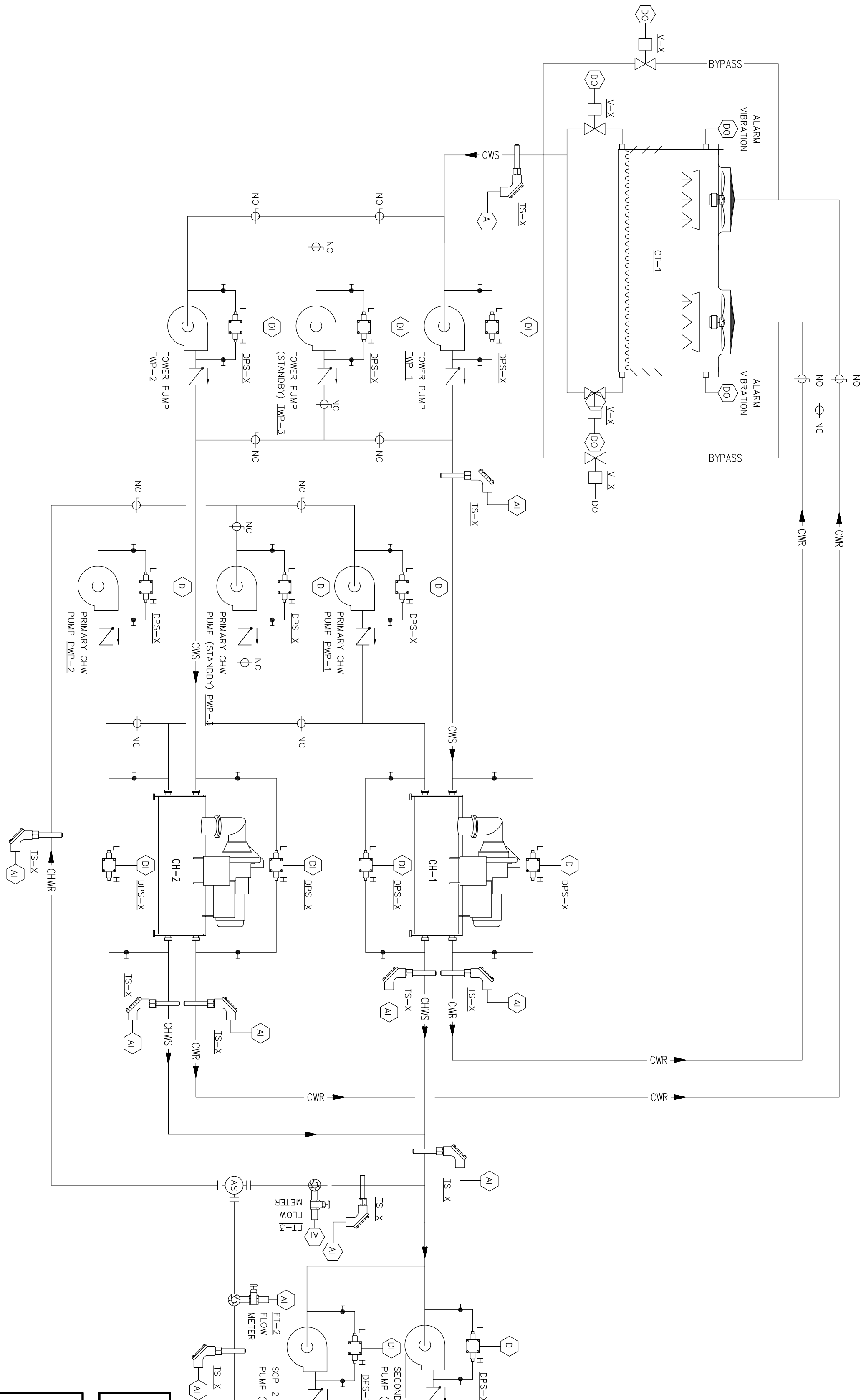
MECHANICAL SCHEDULES

SCALE: NO SCALE

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.  
 BY: GERARD T. FORNEY P.E.  
 DATE: \_\_\_\_\_

REV. #	DATE

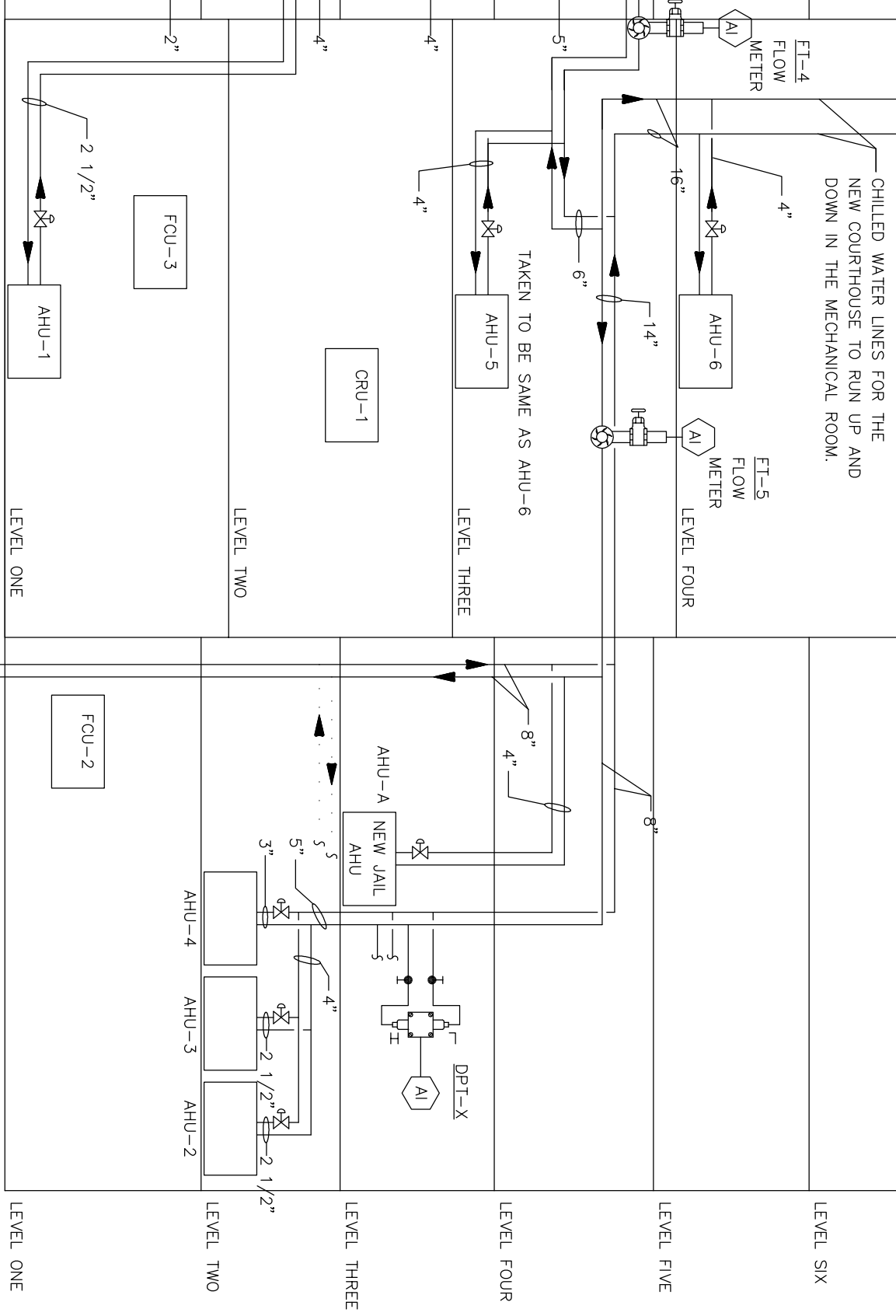
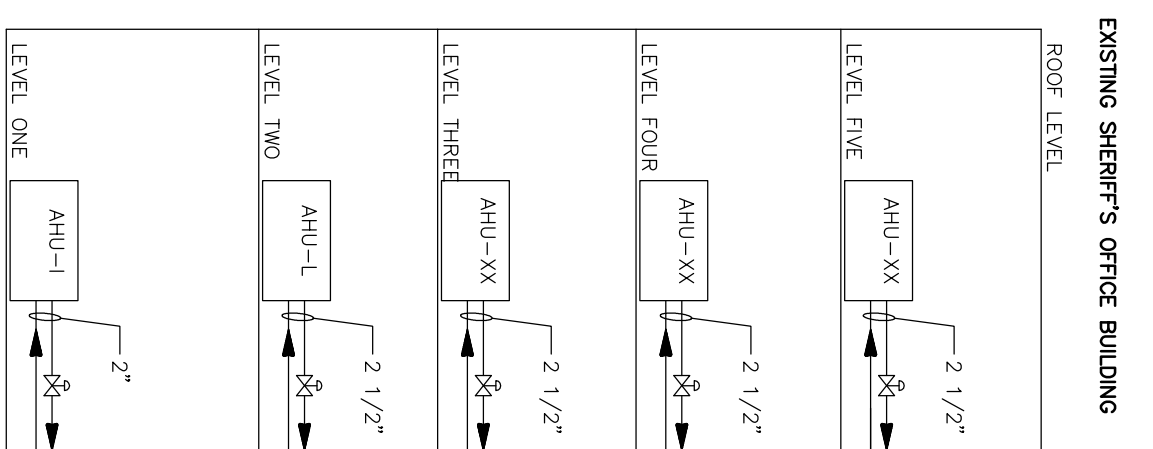
JOB NO. : 09-2084  
 DATE : 09-04-10  
 DRAWN BY : RLJ  
 CHECKED BY : GLA  
 SHEET NO. :



NOTE: INFORMATION RELAYING TO THE NEW SHERIFF'S OFFICE BUILDING DRAWINGS DATED 08/11/09 IS BASED ON AUTOMATED LOGIC CONTROLS PROVIDED BY MANATEE COUNTY GOVERNMENT.

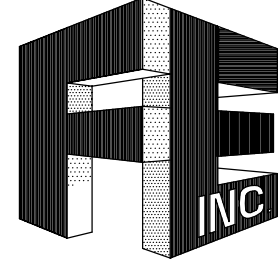
EXISTING CONTROL SYSTEM IS AUTOMATED LOGIC CONTROLS. NEW HISTORIC COURTHOUSE AND EXISTING HISTORIC COURTHOUSE CONTROLS INTO THE EXISTING CONTROL SYSTEM. AUTOMATED LOGIC CONTROLS NO ALTERNATES ARE ACCEPTABLE.

SEQUENCE OF OPERATION:  
 IN ADDITION TO THEIR CURRENT OPERATION, EXISTING SECONDARY PUMPS IN ADDITIONAL CENTER (SP-1 AND SP-2) SHALL BE OPERATED IN ADDITION TO THE EXISTING HISTORIC COURTHOUSE LOOP DIFFERENTIAL PRESSURE AT SETPOINT.



# MECHANICAL FLOW DIAGRAM

SCALE: NO SCALE



**FORNEY ENGINEERING, INC.**  
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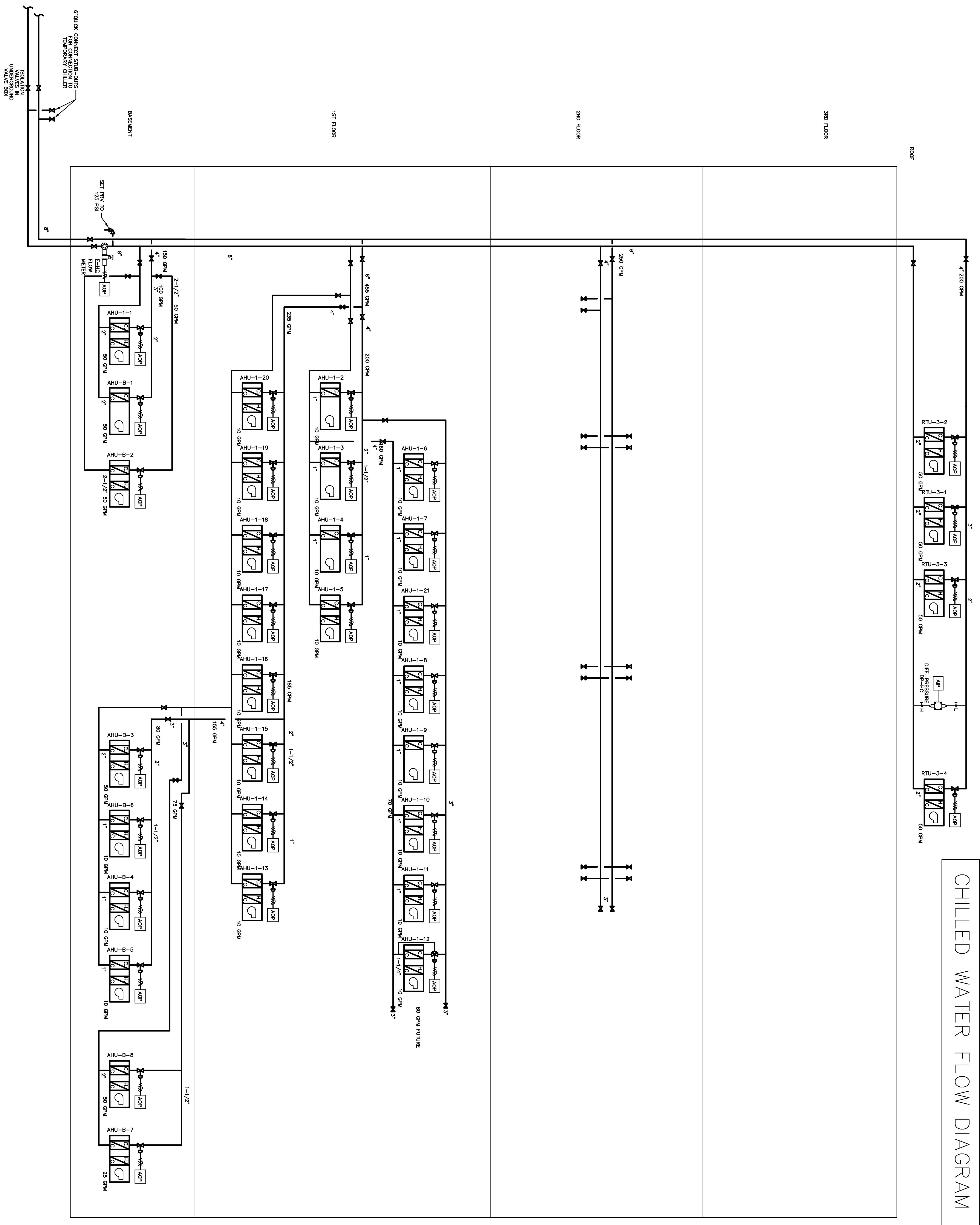
## MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1 BRADENTON, FLORIDA 34208

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

BY: GERARD T. VASQUEZ P.E.  
 DATE: \_\_\_\_\_  
 S. E. A. L.

REV#	DATE

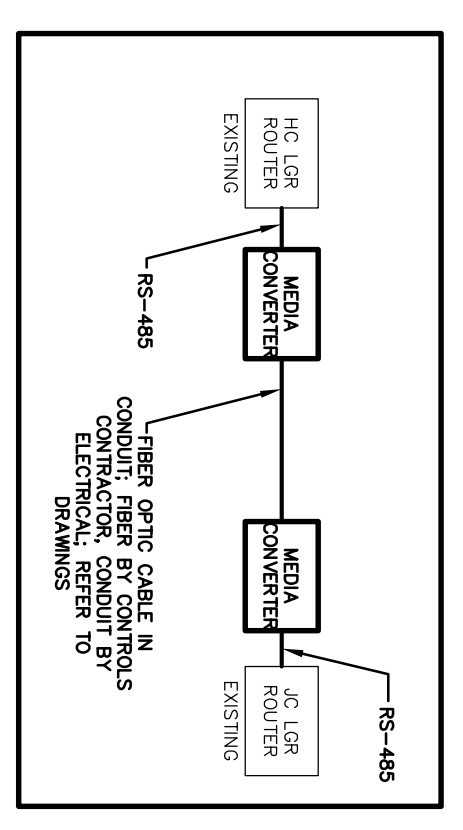
JOB NO. : 09-2084  
 DATE : 03-04-10  
 DRAWN BY : RLJA  
 CHECKED BY : GLA  
 SHEET NO. :  
**M-9**



6" QUICK CONNECT STRAIGHTS TEMPORARILY CHILLER  
 1/2" AIR IN VALVES IN VALVE ROW

NOTES:  
 PROVIDE SWITCH FOR TEMPORARY CHILLER CONNECTION. IN THE EVENT THAT THE TEMPORARY CHILLER IS CONNECTED AND THE SWITCH IS NOT OPERATIONAL, THE CHILLER WILL GO INTO ALL 2-WAY CHILLED WATER VALVES IN THE HISTORIC COURTHOUSE TO IF THE FLOW METER AT HISTORIC COURTHOUSE SENSORS LOW % GPM ACH. WITH THE % PLANT DISABLED, SEND PRIORITY 1 ALARM TO BMS (POSSIBLE LEAK IN SYSTEM).

(LOCATE OCCUPIES TO BMS. PUSH-BUTTONS ON FIRST AND THIRD FLOORS. FINAL ALL HVAC SYSTEMS IN THE SHALL GO INTO OCCUPIED MODE IF PUSH-BUTTON IS ACTIVATED. SEND PRIORITY 1 ALARM TO BMS (POSSIBLE LEAK IN SYSTEM).)



MECHANICAL CHILLED WATER FLOW DIAGRAM – HISTORIC COURTHOUSE INTERIOR

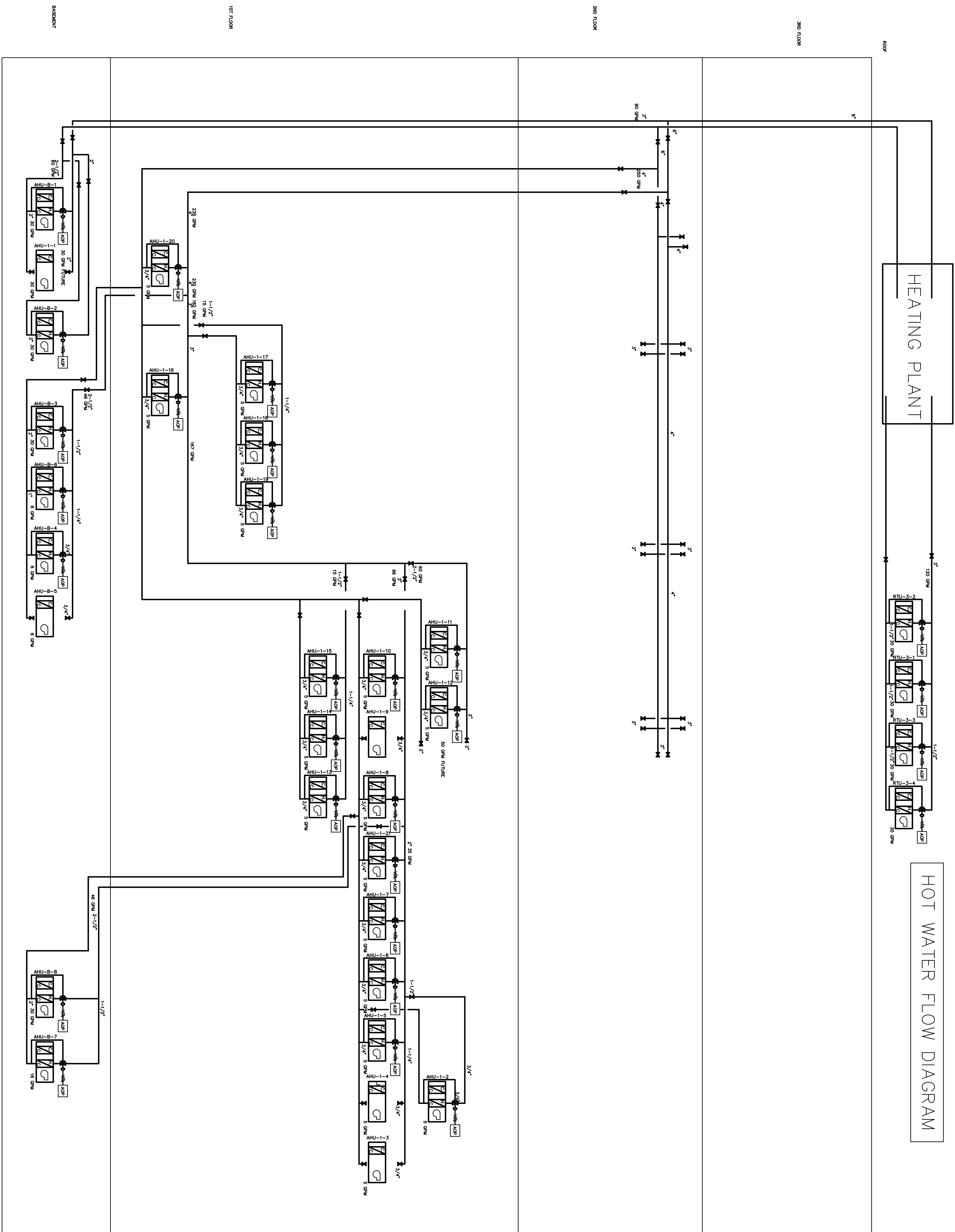
SCALE: NO SCALE

BY: GERARD T. LABRUS F.E.	DATE: 11/08
DATE: _____	S. F. A. L.
REV: # _____	DATE: _____
JOB NO.: 09-2004	
DATE: 03-04-10	
DRAWN BY: RJA	
CHECKED BY: GLA	
SHEET NO.:	
<b>M-10</b>	

**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
 BRADENTON, FLORIDA 34208

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

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MECHANICAL HOT WATER FLOW DIAGRAM - HISTORIC COURTHOUSE INTERIOR

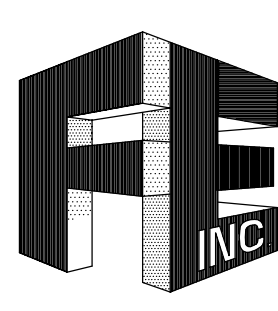
SCALE: NO SCALE

REV. #	DATE

BY: GERARD T. FABRIS P.E.  
 DATE: 11/08

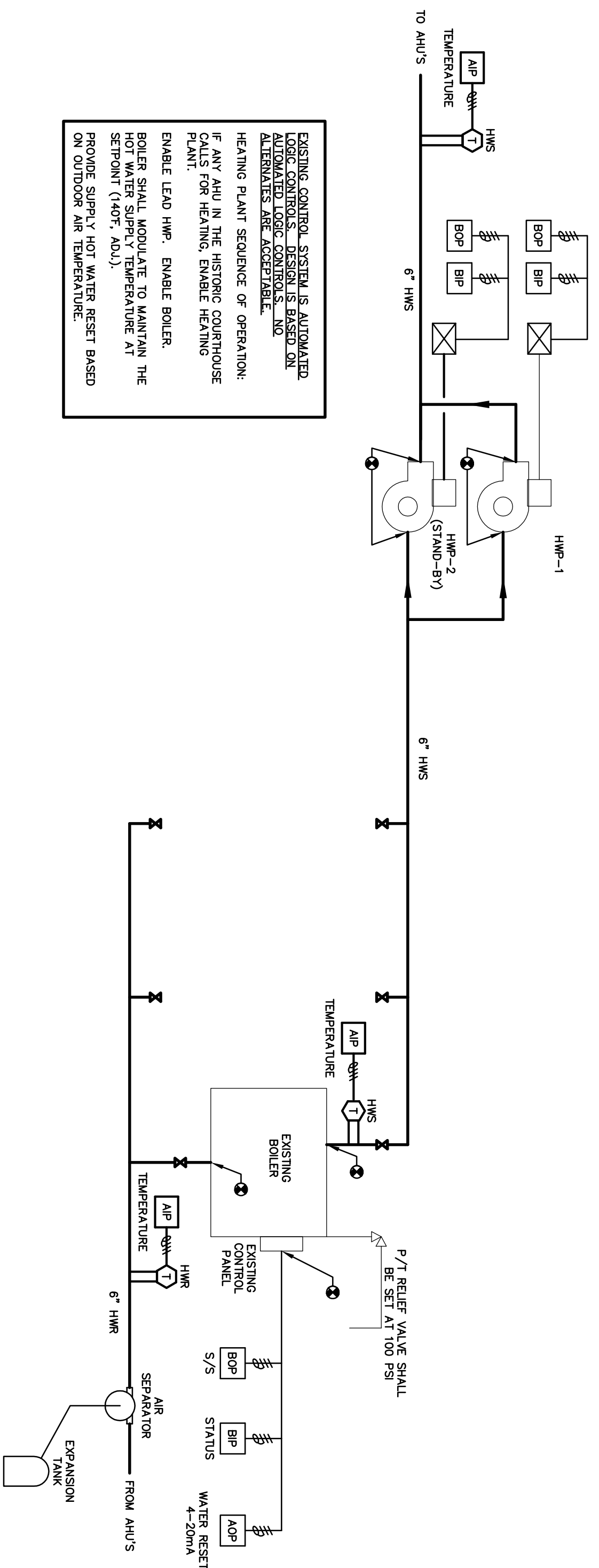
TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE BUILDING CODES.

**MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208**



**FORNEY ENGINEERING, INC.**  
 MECHANICAL & ELECTRICAL CONSULTING ENGINEERS  
 5213 FOURTH AVE. CIRCLE EAST, BRADENTON, FL. 34208 C.O.A. #4049  
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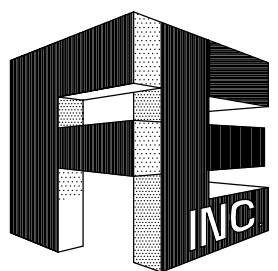
JOB NO. : 09-2084  
 DATE : 03-04-10  
 DRAWN BY : RJA  
 CHECKED BY : GLA  
 SHEET NO. :  
**M-11**



EXISTING CONTROL SYSTEM IS AUTOMATED  
 AUTOMATED LOGIC CONTROLS AND  
 ALTERNATES ARE ACCEPTABLE.  
 HEATING PLANT SEQUENCE OF OPERATION:  
 IF ANY AHU IN THE HISTORIC COURTHOUSE  
 CALLS FOR HEATING, ENABLE HEATING  
 PLANT.  
 ENABLE LEAD HWP, ENABLE BOILER.  
 BOILER SHALL MODULATE TO MAINTAIN THE  
 HOT WATER SUPPLY TEMPERATURE AT  
 SETPOINT (140F-ADJ.)  
 PROVIDE SUPPLY HOT WATER RESET BASED  
 ON OUTDOOR AIR TEMPERATURE.

MECHANICAL HEATING PLANT FLOW DIAGRAM

SCALE: NO SCALE



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MANATEE COUNTY  
 HISTORIC COURTHOUSE  
 CHILLED WATER PIPING  
 BID ALTERNATE #1  
 BRADENTON, FLORIDA 34208

TO THE BEST OF MY KNOWLEDGE, SAID  
 PLANS AND SPECIFICATIONS COMPLY  
 WITH ALL APPLICABLE REGULATORY CODES.

By: GERARDO T. VASQUEZ P.E.

1/1/09

DATE: \_\_\_\_\_

S.F.A.L.

REV. # \_\_\_\_\_ DATE \_\_\_\_\_


JOB NO. : 09-2084

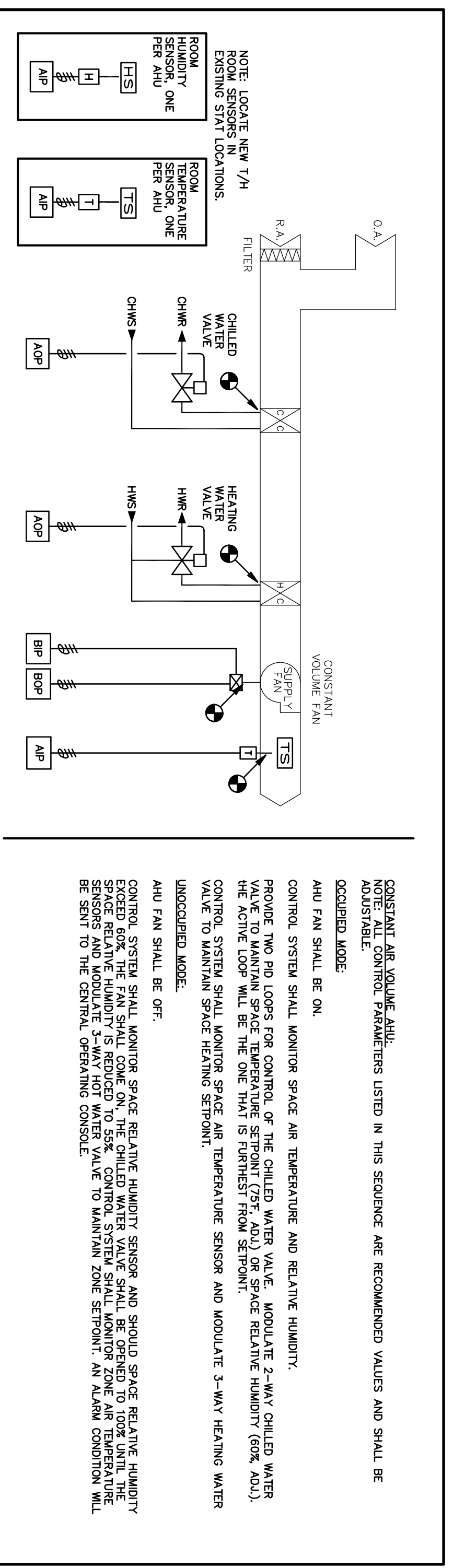
DATE : 03-04-10

DRAWN BY : RJA

CHECKED BY : GLA

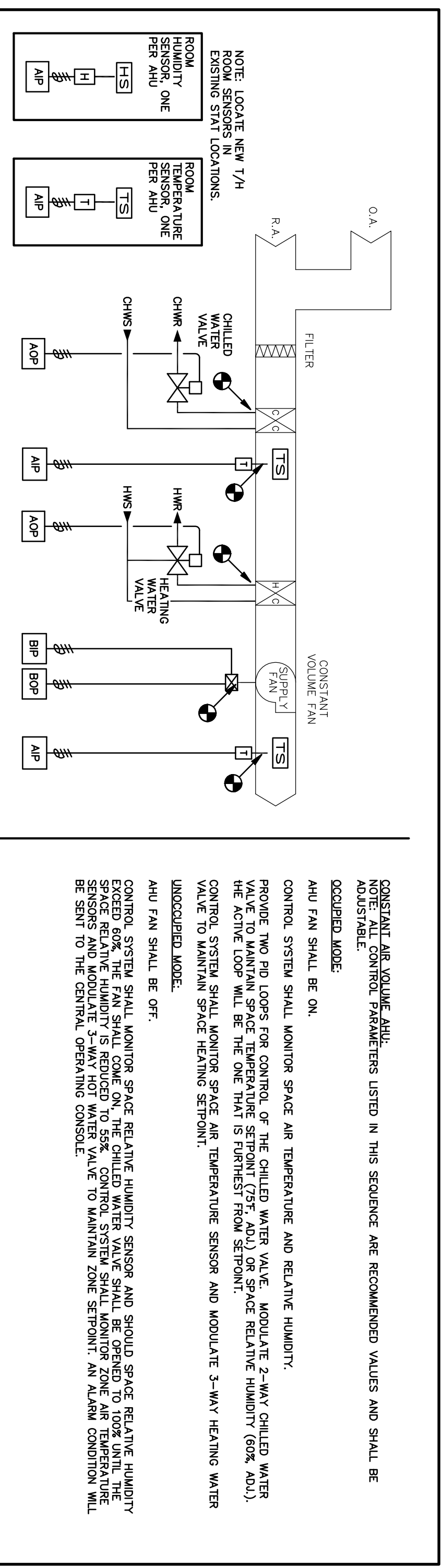
SHEET NO. :

M-12



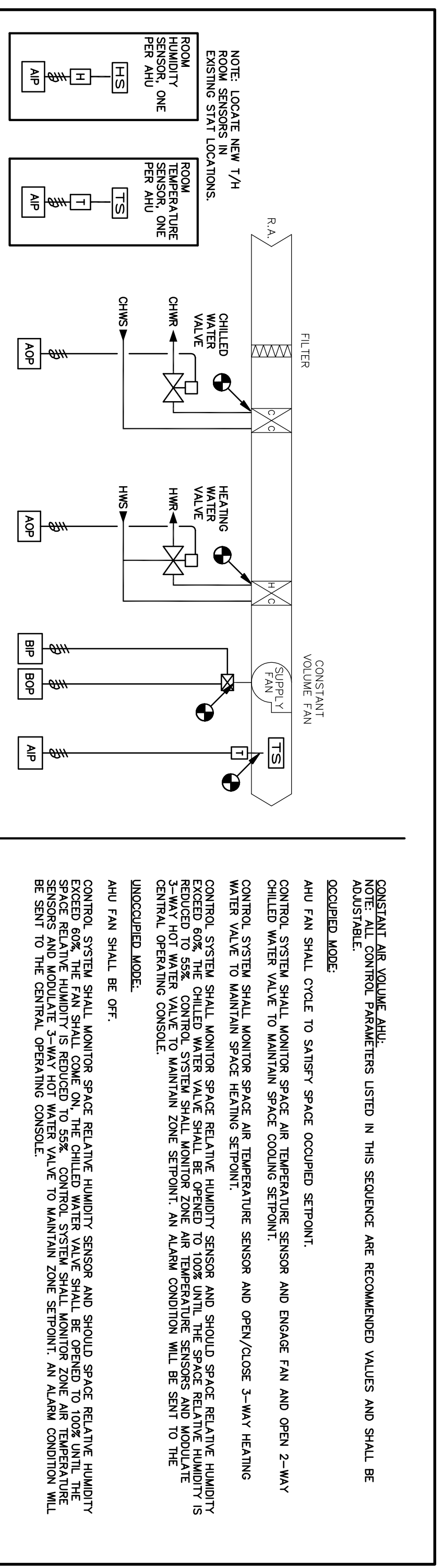
**CONTROL SCHEMATIC: CONSTANT VOLUME FAN COIL UNITS**

1



**CONTROL SCHEMATIC: CONSTANT VOLUME AHU**

2

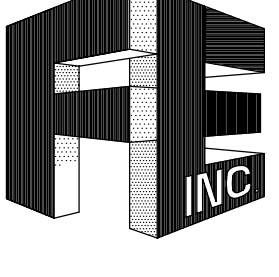


**CONTROL SCHEMATIC: CONSTANT VOLUME AHU (NO O/A)**

3

MECHANICAL CONTROLS SCHEMATICS

SCALE: NO SCALE



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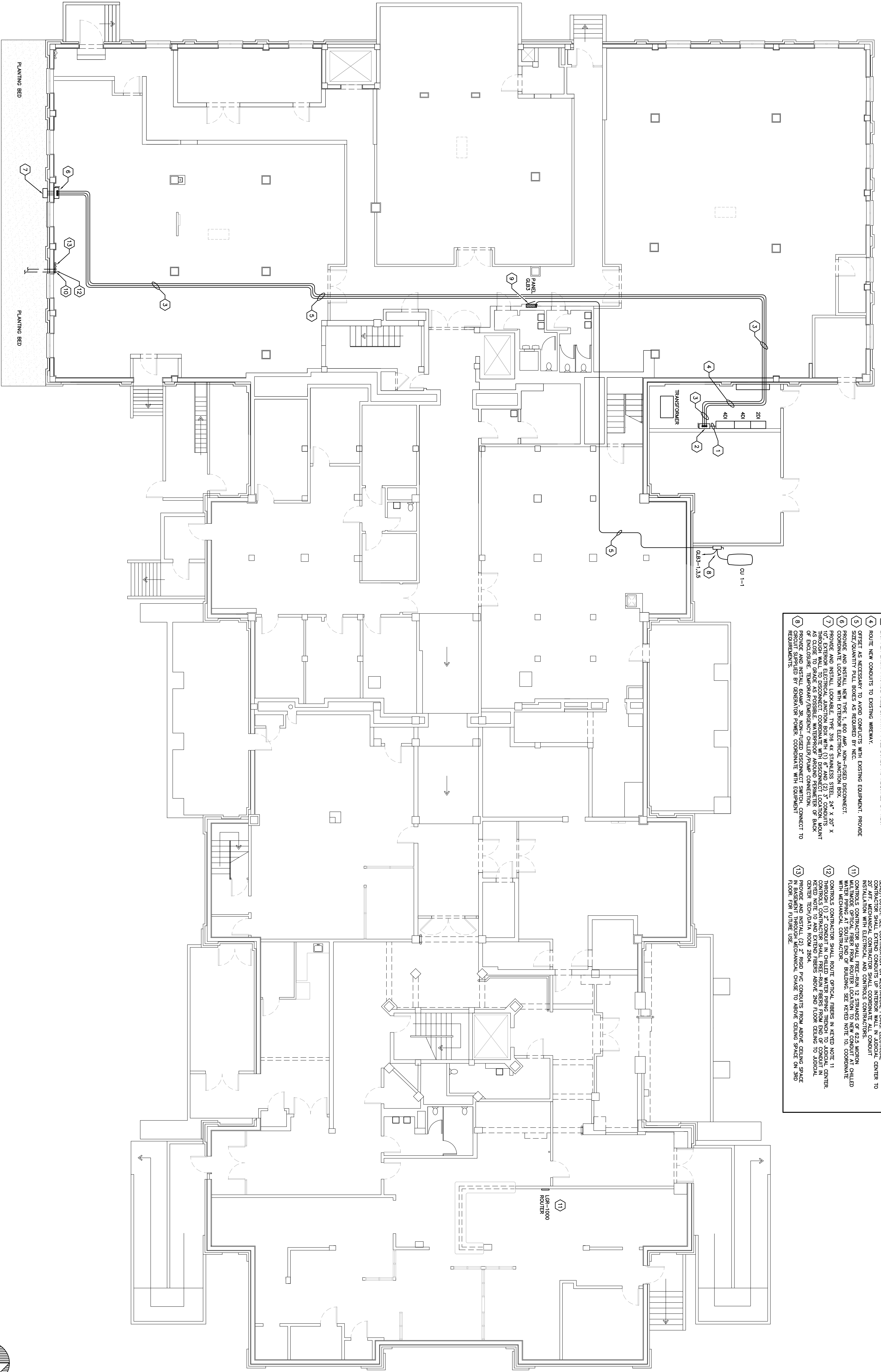
**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1 BRADENTON, FLORIDA 34208**

TO THE BEST OF MY KNOWLEDGE, SAID DRAWING AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE REGULATORY CODES.  
 BY: GERRARD T. LEBLANC, P.E.  
 DATE: 07/20/09

REV. #	DATE

JOB NO. : 09-2094  
 DATE : 09-04-10  
 DRAWN BY : RLJ  
 CHECKED BY : GLA  
 SHEET NO. :  
**M-13**





KEYED NOTES

- 1 PROVIDE AND INSTALL (3) SETS 2" C. WITH (2) 3/4" (1) 3/8" N. AND (1) #1 CU E.C. PER EACH. CONNECT TO MAIN DISTRIBUTION PANEL, 400" BUS.
- 2 PROVIDE AND INSTALL NEW TYPE 1, 600A FUSED DISCONNECT/ENCLOSED CIRCUIT BREAKER AT EACH SET. PROVIDE AND INSTALL (2) SETS 2" C. WITH (2) 3/4" (1) 3/8" N. AND (1) #1 CU E.C. PER EACH. PROVIDE SIZE/QUANTITY PULL BOXES AS REQUIRED BY NEC.
- 3 PROVIDE AND INSTALL (2) SETS 2" C. WITH (2) 3/4" (1) 3/8" N. AND (1) #1 CU E.C. PER EACH. PROVIDE SIZE/QUANTITY PULL BOXES AS REQUIRED BY NEC.
- 4 ROUTE NEW CONDUITS TO EXISTING WREATH.
- 5 PROVIDE AND INSTALL NEW TYPE 1, 600 AMP, NON-FUSED DISCONNECT. PROVIDE AND INSTALL LOCKABLE, TYPE 316, 4X STAINLESS STEEL, 24" X 20" X 10" EXTERIOR ELECTRICAL JUNCTION BOX WITH (1) 2" AND (2) 3" CONDUITS THROUGH SLAB/ROOFER. SEE CONTINUATION ON MECHANICAL PLANS. ELECTRICAL CONTRACTOR SHALL EXTEND CONDUITS UP INTERIOR WALL IN JUDICIAL CENTER TO MECHANICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT INSTALLATION WITH MECHANICAL CONTRACTOR.
- 6 PROVIDE AND INSTALL LOCKABLE, TYPE 316, 4X STAINLESS STEEL, 24" X 20" X 10" EXTERIOR ELECTRICAL JUNCTION BOX WITH (1) 2" AND (2) 3" CONDUITS THROUGH SLAB/ROOFER. SEE CONTINUATION ON MECHANICAL PLANS. ELECTRICAL CONTRACTOR SHALL EXTEND CONDUITS UP INTERIOR WALL IN JUDICIAL CENTER TO MECHANICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT INSTALLATION WITH MECHANICAL CONTRACTOR.
- 7 PROVIDE AND INSTALL 600AMP, 3R, NON-FUSED DISCONNECT SWITCH. CONNECT TO TRANSFORMER.
- 8 PROVIDE AND INSTALL 600AMP, 3R, NON-FUSED DISCONNECT SWITCH. CONNECT TO TRANSFORMER.
- 9 PROVIDE AND INSTALL NEW 50AMP, 3-POLE, TYPE HACR CIRCUIT BREAKER AT EACH SET. PROVIDE AND INSTALL (2) SETS 2" C. WITH (2) 3/4" (1) 3/8" N. AND (1) #1 CU E.C. PER EACH. PROVIDE SIZE/QUANTITY PULL BOXES AS REQUIRED BY NEC.
- 10 MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE BASEMENT CEILING THROUGH CHILLED WATER PIPING SLAB/ROOFER. SEE CONTINUATION ON MECHANICAL PLANS. ELECTRICAL CONTRACTOR SHALL EXTEND CONDUITS UP INTERIOR WALL IN JUDICIAL CENTER TO MECHANICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT INSTALLATION WITH MECHANICAL CONTRACTOR.
- 11 MULTIMODE OPTICAL FIBER FROM ROUTER LOCATION TO NEW CONDUIT AT CHILLED WATER PIPING TRENCH TO JUDICIAL CENTER. SEE KEYED NOTE 10. COORDINATE WITH MECHANICAL CONTRACTOR.
- 12 THROUGH (1) 2" CONDUIT IN CHILLED WATER PIPING TRENCH TO JUDICIAL CENTER, PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER.
- 13 PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER. PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE TO JUDICIAL CENTER.

ELECTRICAL BASEMENT POWER PLAN

SCALE: 1/8"=1'-0"

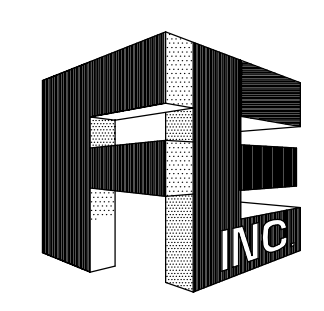


JOB NO. : 09-2004  
 DATE : 03-04-10  
 DRAWN BY : PJP  
 CHECKED BY : PJP  
 SHEET NO. : E-1

REV. #	DATE

DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
 BRADENTON, FLORIDA 34208

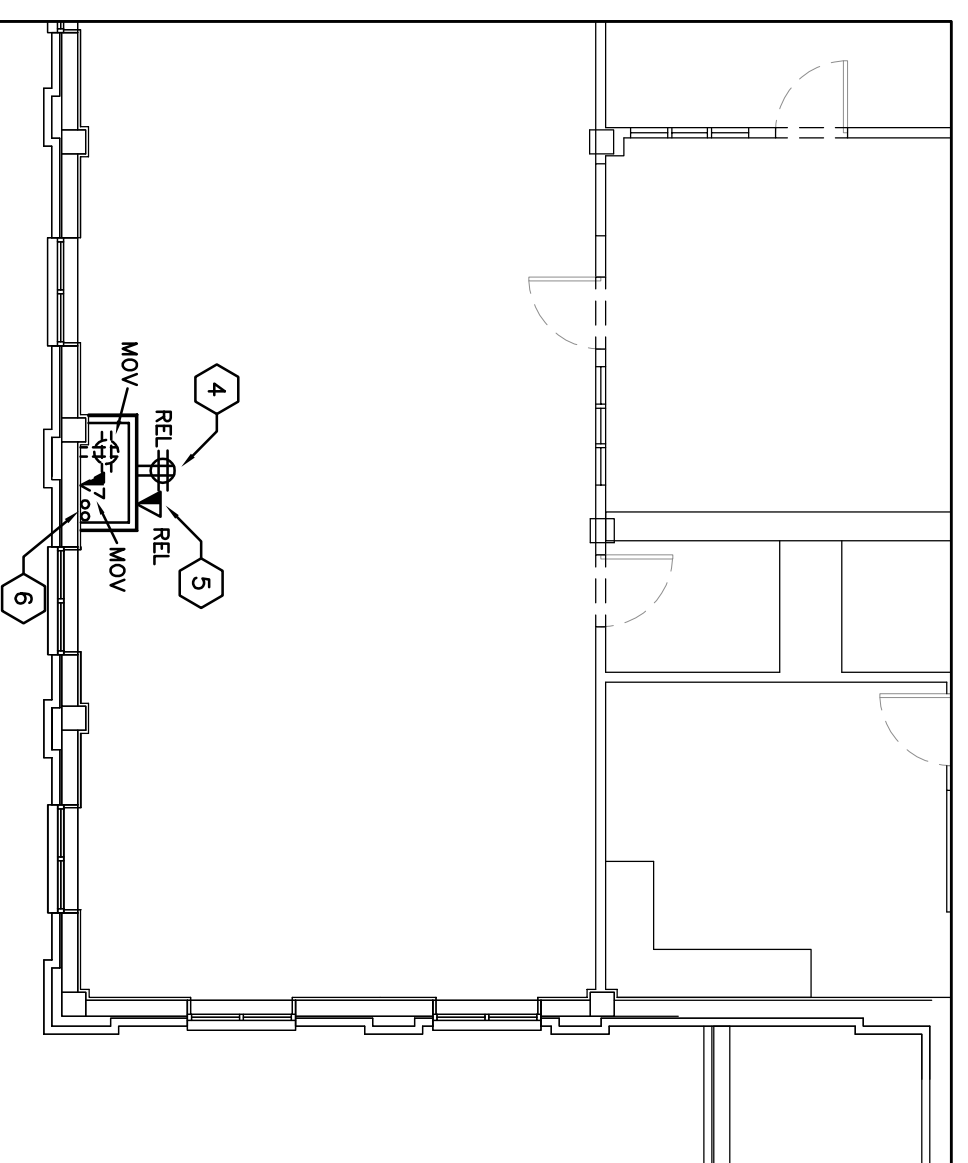
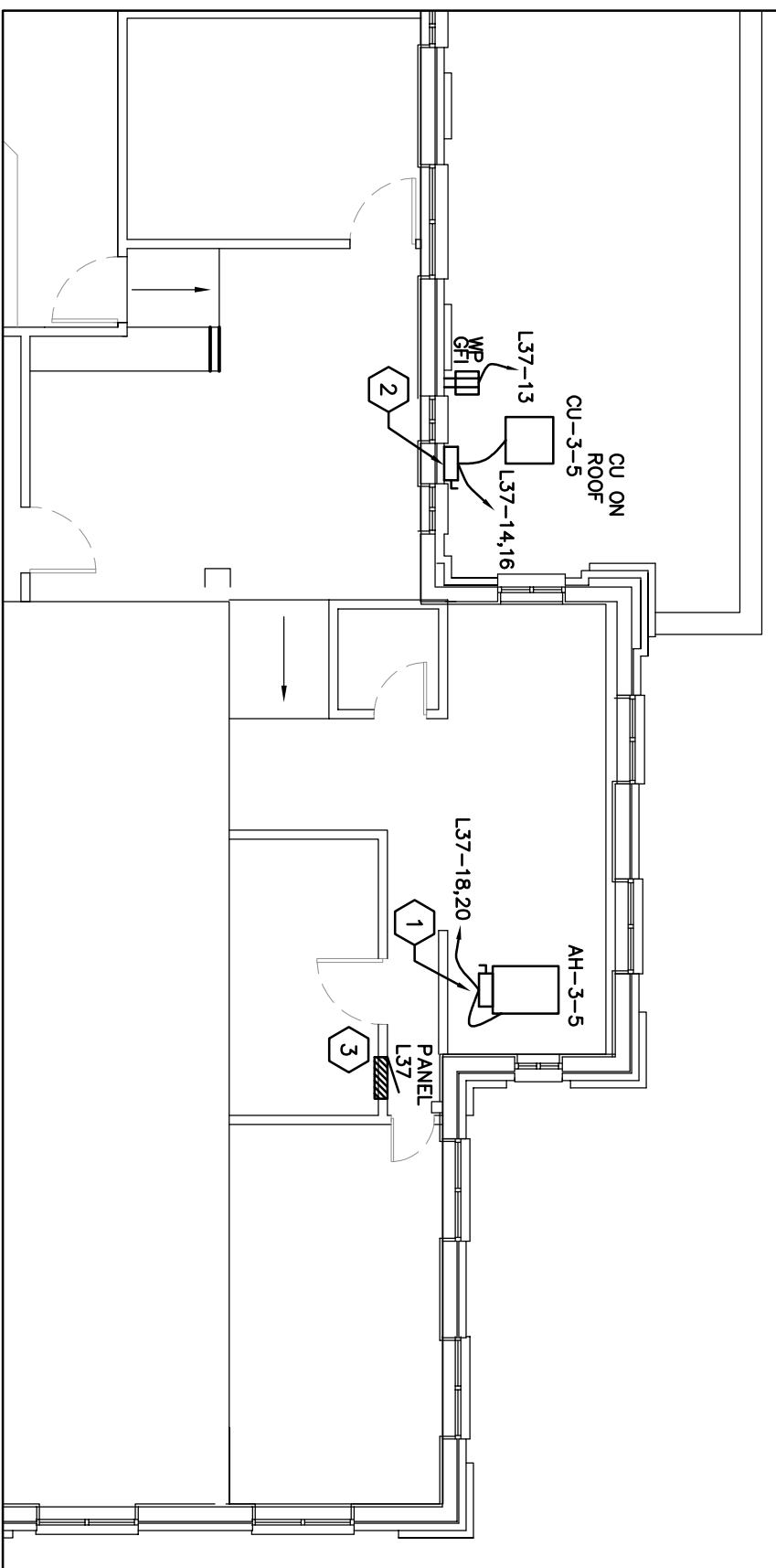


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- KEYED NOTES**
- 1 PROVIDE AND INSTALL NEW 30AMP, TYPE 1, NON-FUSED DISCONNECT SWITCH, COORDINATE WITH EQUIPMENT REQUIREMENTS.
  - 2 PROVIDE AND INSTALL NEW 30AMP, TYPE 1, NON-FUSED DISCONNECT SWITCH, COORDINATE WITH EQUIPMENT REQUIREMENTS.
  - 3 PROVIDE AND INSTALL NEW 20 AMP, 2-POLE, TYPE HACR CIRCUIT BREAKER AT SCHEDULES 159 AND 161, SEE PANEL.

**SYMBOL LEGEND**

- 20 AMP GFCI TYPE DUPLEX RECEPTACLE, RECESS MOUNT 18" AFF TO CENTER OF BACKBOX. 18" INDICATES MEASUREMENT WHILE IN USE EXCEPT:
- DISCONNECT SWITCH, PROVIDE DISCONNECT SWITCH AS INDICATED ON THE PLANS AND SCHEDULES FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH EQUIPMENT REQUIREMENTS. FRAME SIZE AND FINISH OF THE ACTUAL EQUIPMENT TO BE INSTALLED.



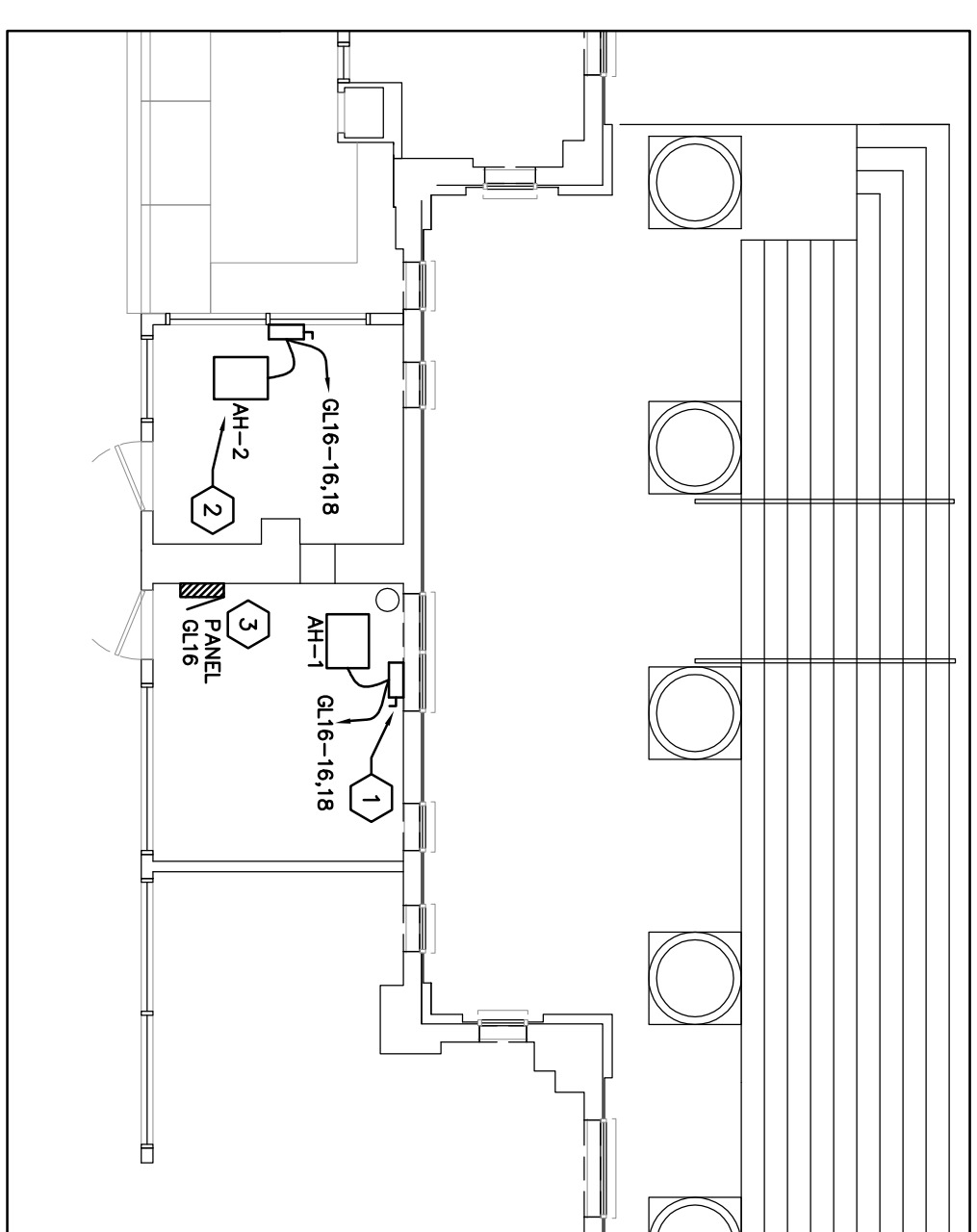
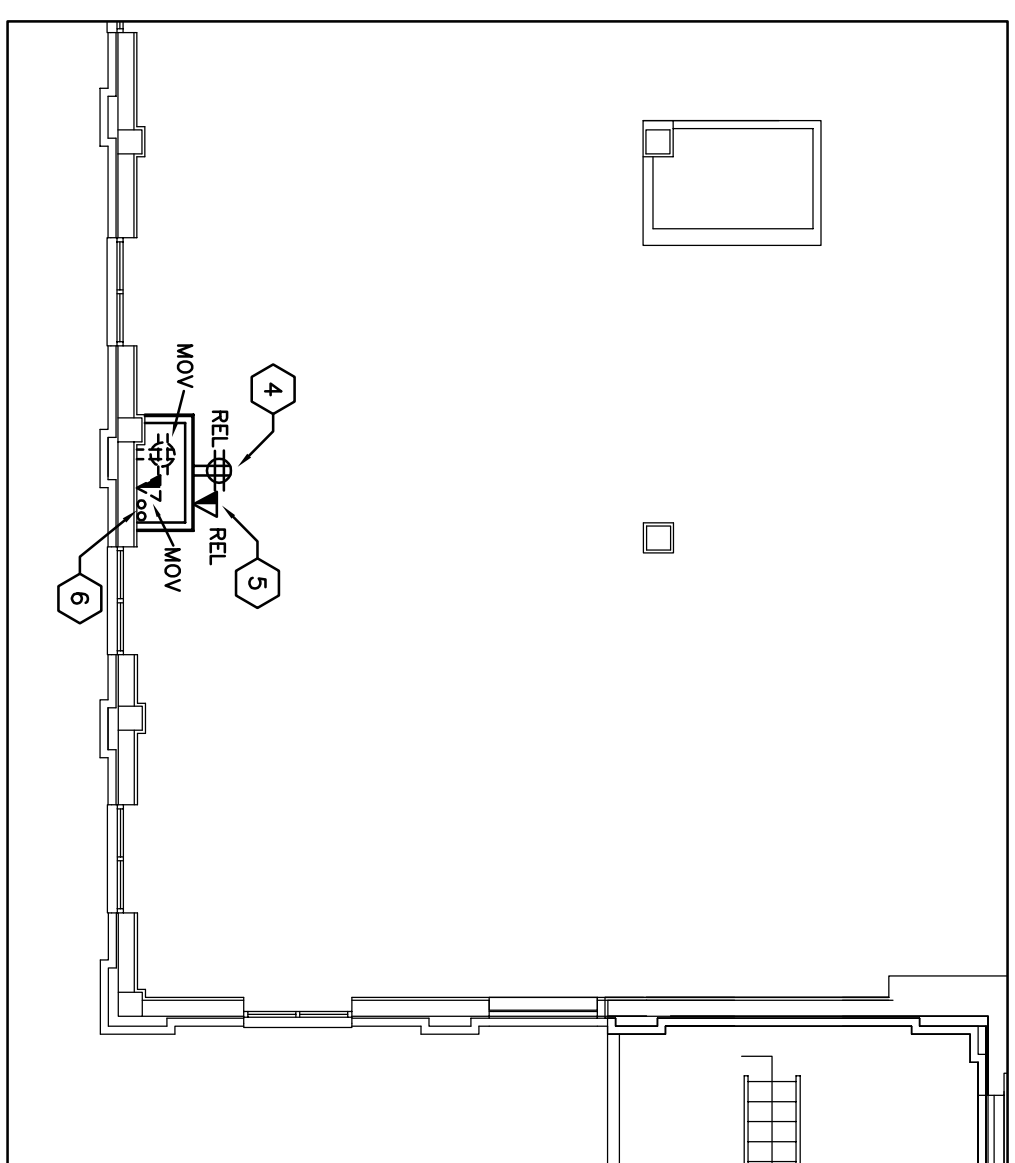
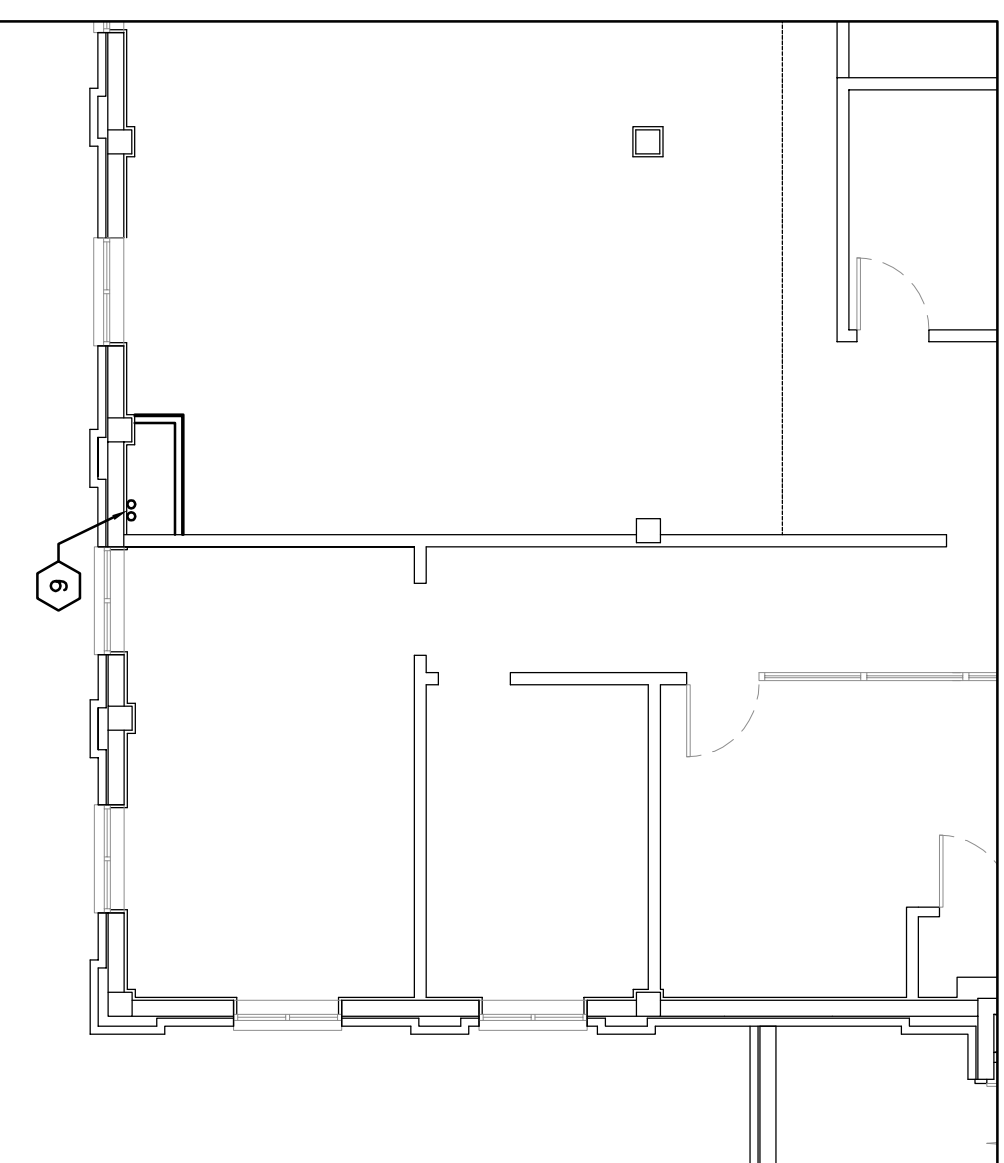
- KEYED NOTES**
- 1 PROVIDE AND INSTALL NEW 30AMP, TYPE 1, NON-FUSED DISCONNECT SWITCH, COORDINATE WITH EQUIPMENT REQUIREMENTS.
  - 2 PROVIDE AND INSTALL NEW 30AMP, TYPE 1, NON-FUSED DISCONNECT SWITCH, COORDINATE WITH EQUIPMENT REQUIREMENTS.
  - 3 PROVIDE AND INSTALL NEW 15 AMP, 2-POLE, TYPE HACR CIRCUIT BREAKER AT SPACES 1618 IN EXISTING TO REMAIN SCHEDULES 151 PANEL, Q416.
  - 4 RELOCATE EXISTING 20AMP RECEPTACLE FROM OLD LOCATION TO NEW LOCATION FROM JUNCTION BOX TO NEW LOCATION.
  - 5 RELOCATE DATA OUTLET TO NEW LOCATION AS SHOWN. PULL BACK CABLE TO LOCATION BOX ABOVE CEILING. EXTEND CABLE FROM JUNCTION BOX TO NEW LOCATION.
  - 6 PROVIDE AND INSTALL (2) 2" RIGID PVC CONDUITS FROM ABOVE CEILING SPACE IN BASEMENT THROUGH MECHANICAL CHASE TO ABOVE CEILING SPACE ON 3RD FLOOR FOR FUTURE USE.

**GENERAL NOTES**

- MOV: EXISTING DEVICE TO BE RE-LOCATED  
REL: RE-LOCATED POSITION OF EXISTING DEVICE

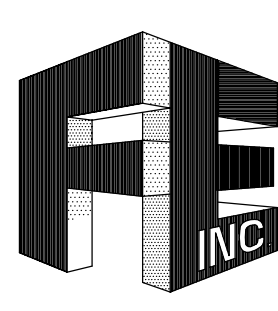
**SYMBOL LEGEND**

- 20 AMP DOUBLE DUPLEX (QUAD) RECEPTACLE WITH COMMON COVER PLATE.  
RECESS MOUNT 18" AFF TO CENTER OF BACKBOX.
- DISCONNECT SWITCH, PROVIDE DISCONNECT SWITCH AS INDICATED ON THE PLANS AND SCHEDULES FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH EQUIPMENT REQUIREMENTS. FRAME SIZE AND FINISH OF THE ACTUAL EQUIPMENT TO BE INSTALLED.
- COMMUNICATIONS OUTLET, RECESS MOUNT 18" AFF TO CENTER OF BACKBOX. UNO. PROVIDE 2-GANG BACKBOX WITH SINGLE GANG OPENING AND (1) 3/4" CONDUIT WITH BUSINESS AND PULL STRING STUBBED INTO ACCESSIBLE CEILING SPACE ABOVE BACKBOX.



**ELECTRICAL POWER PARTIAL FLOOR PLANS**

SCALE: 1/8"=1'-0"



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**MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1**  
BRADENTON, FLORIDA 34208

TO THE BEST OF MY KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH ALL APPLICABLE REGULATORY CODES.

By: PHILIP TERRELL P.E.  
DATE: \_\_\_\_\_

REV#	DATE

JOB NO. : 09-2084  
DATE : 03-04-10  
DRAWN BY : PJP  
CHECKED BY : PJP  
SHEET NO. :  
**E-2**

PANELBOARD DESIGNATION: GLB3 - BASEMENT									
VOLTAGE: 120/208V		3-4W		MAINS RATING: 100		AMPS MAIN CB TRIP RATING: -		AMPS	
SURFACE		MCOB		FLUSH		MLO		INTERTRIPPING RATING	
SERVICES		CB SIZE		LOAD VA		CB SIZE		SERVICES	
CU		CU		VA		VA		SERVICES	
NEW FLOOR SERVER ROOM	30	1200	1	1	2	108	30	PANEL GA	
	30	1200	2	2	1032				
SPACE	30	1200	5	5	36				
SPACE	30	1200	7	7	10				
SPACE	30	1200	9	9	12				
SECURITY PANEL	30	1200	11	11	14				
SECURITY PANEL	30	1200	15	15	18				
SPACE	30	1200	19	19	22				
SPACE	30	1200	21	21	24				
UNMARKED	30	1200	23	23	26				
UNMARKED	30	1200	25	25	28				
UNMARKED	30	1200	27	27	30				
UNMARKED	30	1200	29	29	32				
UNMARKED	30	1200	31	31	34				
UNMARKED	30	1200	33	33	36				
UNMARKED	30	1200	35	35	38				
UNMARKED	30	1200	37	37	40				
UNMARKED	30	1200	39	39	42				
UNMARKED	30	1200	41	41	44				
CONNECTED	1394 KVA		ABC		EST. DEMAND: 139 KVA				

PANELBOARD DESIGNATION: GL16 - FIRST FLOOR SERVER ROOM									
VOLTAGE: 208/208V		1P/3W		MAINS RATING: 125		AMPS MAIN CB TRIP RATING: -		AMPS	
SURFACE		MCOB		FLUSH		MLO		INTERTRIPPING RATING	
SERVICES		CB SIZE		LOAD VA		CB SIZE		SERVICES	
CU		CU		VA		VA		SERVICES	
RECEIPT	30	1200	1	1	2	1200	30	RECEIPT	
RECEIPT	30	1200	3	3	4	1200	30	RECEIPT	
RECEIPT	30	1200	5	5	6	1200	30	RECEIPT	
RECEIPT	30	1200	7	7	8	1200	30	RECEIPT	
RECEIPT	30	1200	9	9	10	1200	30	RECEIPT	
RECEIPT	30	1200	11	11	12	1200	30	RECEIPT	
RECEIPT	30	1200	13	13	14	1200	30	RECEIPT	
RECEIPT	30	1200	15	15	16	590	15	AH-1, AH-2	
RECEIPT	30	1200	17	17	18	590	15	AH-1, AH-2	
CONNECTED	20.4 KVA		A B		EST. DEMAND: 20.4 KVA				

PANELBOARD DESIGNATION: L37 - THIRD FLOOR									
VOLTAGE: 120/208V		3-4W		MAINS RATING: 100		AMPS MAIN CB TRIP RATING: -		AMPS	
SURFACE		MCOB		FLUSH		MLO		INTERTRIPPING RATING	
SERVICES		CB SIZE		LOAD VA		CB SIZE		SERVICES	
CU		CU		VA		VA		SERVICES	
LIGHTS	20	504	1	1	2	720	20	RECEPTS	
LIGHTS	20	372	3	3	4	720	20	RECEPTS	
LIGHTS	20	372	5	5	6	720	20	RECEPTS	
RECEPTS	20	72	7	7	8	720	20	RECEPTS	
RECEPTS	20	72	9	9	10	720	20	RECEPTS	
RECEPTS	20	111	11	11	12	500	20	RECEPTS	
RECEPT (ETR)	20	180	13	13	14	1144	20	CL-3-5	
RECEPT (ETR)	20	15	15	15	16	1144	20	CL-3-5	
SPACE	20	17	17	17	18	2898	30	AH-1-5	
SPACE	20	19	19	19	20	2898	30	AH-1-5	
CONNECTED	1394 KVA		ABC		EST. DEMAND: 139 KVA				

- PANEL SCHEDULE NOTES:
1. REMOVE ELECTRICAL SERVICE TO DEVALISED MAIN MARK BREAKER AS SPACE.
  2. PROVIDE NEW 20A/3POLE BREAKER AT SPACE 1416 FOR CU ON ROOF.
  3. PROVIDE NEW 20A/3POLE BREAKER AT SPACE 1418 FOR CU ON ROOF.
  4. USE EXISTING 20A/3POLE BREAKER AT SPACE 13 FOR RECEPTAGE.
  5. PROVIDE UPDATED PANEL SCHEDULE.

# PANEL SCHEDULES

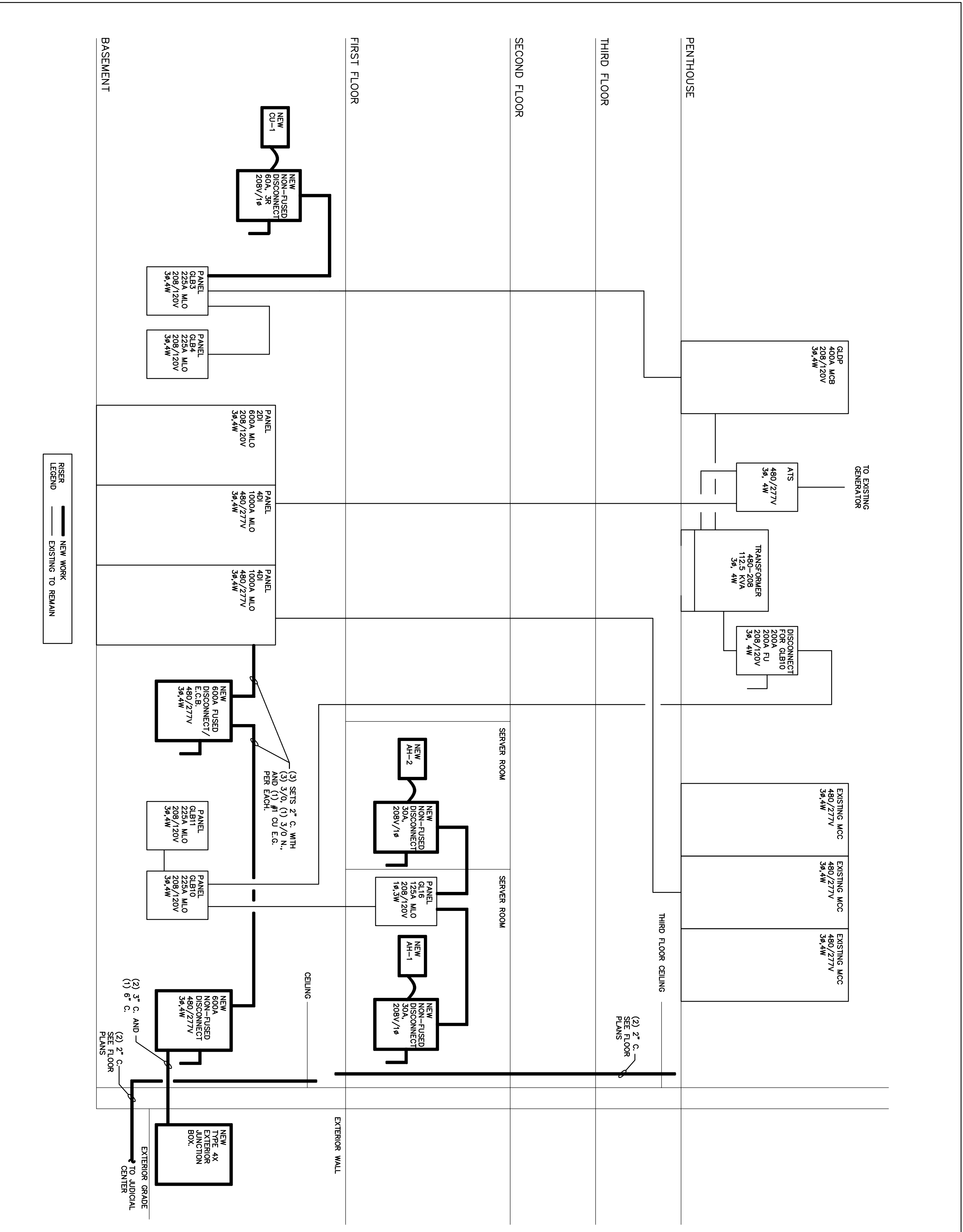
NO SCALE

D/C #	SIZE	PHASE	NEMA	FUSE	VOLT.	SERVICES	COMMENTS
1	60A	3	3R	NON-F	208	CU T-1	MOUNT ON WALL NEAR UNIT
2	30A	2	1	NON-F	208	AH-1	MOUNT ON UNIT
3	30A	2	1	NON-F	208	AH-2	MOUNT ON UNIT
4	30A	2	1	NON-F	208	CU-3-5	MOUNT ON WALL NEAR UNIT
5	30A	2	1	NON-F	208	AH-3-5	MOUNT ON UNIT

NOTES:  
 1. ALL CONNECTIONS TO DISCONNECT SHALL BE FLEXIBLE SHALL BE FLEXIBLE.  
 2. PROVIDE POLE TO DISCONNECT NEUTRAL WHERE REQUIRED.

# DISCONNECT SCHEDULE

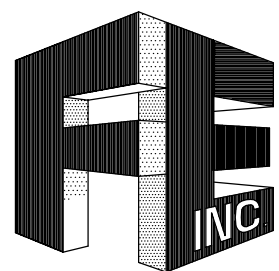
NO SCALE



# PARTIAL ELECTRICAL RISER

NO SCALE

## MANATEE COUNTY HISTORIC COURTHOUSE CHILLED WATER PIPING BID ALTERNATE #1 BRADENTON, FLORIDA 34208



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BY: S. F. A. L. FIELD REPRESENTATIVE  
 DATE: 08/20/09

JOB NO.: 09-2084  
 DATE: 08-04-10  
 DRAWN BY: P.F.  
 CHECKED BY: P.F.  
 SHEET NO.: **E-3**