

GENERAL NOTES

GENERAL

1. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL AND SPECIAL SYSTEMS SHALL BE COMPLETE IN ALL RESPECTS: OPERATIONAL, TESTED, ADJUSTED, CALIBRATED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
2. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
3. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST.
4. PERFORM ALL WORK IN COMPLIANCE WITH THE SPECIFICATIONS APPLICABLE CODES, ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION; THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE; IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
5. INSTALL ALL EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE EQUIPMENT MUST BE INSTALLED ABOVE AN INACCESSIBLE CEILING OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED AND THE LOCATION SHALL BE COORDINATED WITH THE ARCHITECT.
6. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT; CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
7. BEFORE INSTALLATION, COORDINATE THE WORK WITH OWNER-FURNISHED EQUIPMENT INCLUDING REQUIRED SERVICE CONNECTIONS, FACTORY START UPS, AND INSTALLATION OF FIELD DEVICES.
8. PROVIDE THE REQUIRED/SPECIFIED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING INTERIOR AND EXTERIOR WALLS OR FLOOR SLABS.
9. PROVIDE PIPING, CONDUIT, AND ALL OTHER ACCESSORIES AS REQUIRED FOR PROPER AND PROFESSIONAL SYSTEMS INSTALLATION.
10. TEST AND BALANCE ALL MECHANICAL AND ELECTRICAL SYSTEMS. PROVIDE ADDITIONAL TESTS AS REQUIRED BY THE SPECIFICATIONS.
11. DO NOT INSTALL PIPING OR DUCTWORK OVER ELECTRICAL PANELS, TRANSFORMERS, OR SPECIAL EQUIPMENT.
12. DO NOT INSTALL, IN STAIRWELLS OR STAIRWELL WALLS, PIPING, DUCTWORK, CONDUIT OR OTHER DEVICES OR EQUIPMENT NOT ASSOCIATED WITH OR SERVING THE RESPECTIVE STAIR.
13. PROVIDE PIPE EXPANSION COMPENSATION FOR THE VARIOUS PIPING SYSTEMS. SUBMIT ENGINEERED DETAILS FOR APPROVAL AND VERIFY INSTALLATION IS IN ACCORDANCE WITH CODE. THE CONTRACTOR'S CONSULTING ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT ON THE FINDINGS.
14. PROVIDE ADDITIONAL TRANSITIONS AND OFFSETS IN ALL PIPING, DUCTWORK OR CONDUIT FOR COORDINATION WITH BUILDING STRUCTURE AND CONSTRUCTION.

RENOVATION

1. THIS PROJECT INVOLVES THE RENOVATION OF AN EXISTING FACILITY; BEFORE SUBMITTING THE BID, CONTRACTORS SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH THE PROJECT IS TO BE COMPLETED.
2. CONTRACTORS SHALL BE HELD RESPONSIBLE FOR ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS.
3. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY DEVICE, APPURTENANCE, PIPE, WIRE OR CONDUIT TO BE REMOVED. MEP EQUIPMENT, UNITS, AND SYSTEMS NOT BEING REUSED, SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED HANGERS, SUPPORTS, BASES, PADS, PIPES, DUCTS, CONDUITS, WIRES, INSULATION, AND CONTROLS BACK TO THE POINT OF ORIGIN.
4. EQUIPMENT, PIPING, OR CONDUIT SHALL NOT BE ABANDONED IN-PLACE UNLESS SPECIFICALLY SO NOTED.
5. PROPERLY DISPOSE OF DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES, REGULATIONS, AND DEP STANDARDS; TURN OVER TO THE OWNER, EQUIPMENT SO INDICATED.
6. RELOCATE EXISTING EQUIPMENT, DEVICES, PIPING, WIRING, AND RELATED SYSTEMS AS REQUIRED FOR CONSTRUCTION PURPOSES. ALL EXISTING SYSTEMS SHALL BE FULLY OPERATIONAL, INCLUDING RECONNECTION TO SERVICES AND UPGRADED SYSTEMS. ALL RELOCATED EQUIPMENT SHALL BE PROTECTED DURING CONSTRUCTION.
7. PROVIDE TEMPORARY CONNECTIONS AND SYSTEM MODIFICATIONS AS REQUIRED FOR CONSTRUCTION AND PHASING PURPOSES.
8. INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHEN NECESSARY. COORDINATE WITH GENERAL CONTRACTOR/CONSTRUCTION MANAGER FOR PHASING REQUIREMENTS.
9. SYSTEMS REQUIRING TO REMAIN IN OPERATION DURING DEMOLITION AND RENOVATION SHALL BE CAREFULLY PROTECTED FROM DAMAGE AND CONTAMINATION BY THE CONSTRUCTION PROCESS.

MECHANICAL

1. PROVIDE AN AUTOMATIC TEMPERATURE CONTROL SYSTEM COMPLETE IN ALL REGARDS. ALL ZONES, AND SYSTEMS SHALL BE THERMOSTATICALLY CONTROLLED. REVIEW THE PLANS AND SPECIFICATIONS OF ALL MEP TRADES FOR A COMPLETE SCOPE OF THE WORK.
2. PIPING SHALL BE SUPPORTED FROM STRUCTURE ABOVE. TO MAXIMIZE HEAD ROOM, INSTALL PIPING TIGHT TO BOTTOM OF BEAMS WHEN RUNNING PERPENDICULAR TO BEAM; INSTALL PIPING TIGHT TO FLOOR SLAB WHEN RUNNING PARALLEL TO BEAM; PROVIDE ALL NECESSARY FITTINGS AND TRANSITIONS.
3. COORDINATE AND VERIFY LOCATIONS OF ALL ITEMS REQUIRING ACCESS WITH ARCHITECT IN FIELD, INCLUDING VALVES, VOLUME DAMPERS,
6. COORDINATE EXACT LOCATION OF UNDERGROUND UTILITIES (WATER, GAS, SANITARY, ETC.) EXITING OR ENTERING THE BUILDING, WITH THE SITE CONTRACTOR, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
7. ALL CONDENSATE PIPING SHALL BE PVC OR CPVC SCHEDULE 40.

ABBREVIATIONS

A/AMP	AMPERE	IN WG	INCHES OF WATER, GAUGE (PRESS.)
ACU	AIR CONDITIONING UNIT(S)	IW	INDIRECT WASTE
AD	ACCESS DOOR	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LAT	LEAVING AIR TEMPERATURE
AFG	ABOVE FINISHED GRADE	LBS/HR	POUNDS PER HOUR
AHU	AIR HANDLING UNIT	LF	LINEAR FEET
AMB	AMBIENT	LIQ	LIQUID
APD	AIR PRESSURE DROP	MBH	BTU PER HOUR (THOUSAND)
APPROX	APPROXIMATE	MD	MOTORIZED DAMPER
ATC	AUTOMATIC TEMPERATURE CONTR.	MECH	MECHANICAL
AVG	AVERAGE	MFR	MANUFACTURER
BHP	BRAKE HORSEPOWER	MIN	MINIMUM
BSMT	BASEMENT	N/A	NOT APPLICABLE
BTUH	BRITISH THERMAL UNITS/HOUR	N.C.	NORMALLY CLOSED
C	CONDENSATE	NEC	NATIONAL ELECTRICAL CODE
CC	COOLING COIL	NIC	NOT IN CONTRACT
CLG	CEILING	NORMALLY	OPEN
CO	CLEANOUT	NTS	NOT TO SCALE
CO2	CARBON DIOXIDE	OA	OUTSIDE AIR
COMP	COMPRESSOR	OD	OUTSIDE DIAMETER
COND	CONDENSER	ORD	OVERFLOW ROOF DRAIN
CP	CONDENSATE PUMP	PD	PRESSURE DROP
CPU	CENTRAL PROCESSING UNIT	PH / Ø	PHASE
CU	CONDENSING UNIT	PNL	PANELBOARD
CU FT	CUBIC FEET	PRESS	PRESSURE
dB	DECIBEL	PRV	PRESSURE REDUCING VALVE
D	DEPTH	PSI	POUNDS PER SQUARE INCH
DB	DRY BULB TEMPERATURE	RA	RETURN AIR
DEG or °	DEGREE	RD	ROOF DRAIN
DIA or Ø	DIAMETER	RH	RELATIVE HUMIDITY
DN	DOWN	RHC	REHEAT COIL
DP	DIFFERENTIAL PRESSURE	RHG	REFRIGERANT HOT GAS
DWG	DRAWING	RM	ROOM
DX	DIRECT EXPANSION	RPM	REVOLUTIONS PER MINUTE
EA	EXHAUST AIR	S&R	SUPPLY AND RETURN
EAT	ENTERING AIR TEMPERATURE	SA	SUPPLY AIR
EFF	EFFICIENCY	SP	STATIC PRESSURE
ELEC	ELECTRICAL	SPEC	SPECIFICATION
ELEV	ELEVATOR	SPK	SPRINKLER
EM	EMERGENCY	SQ	SQUARE
ESP	EXTERNAL STATIC PRESSURE	SS	STAINLESS STEEL
EVAP	EVAPORATOR	ST	STORM
EWB	ENTERING WET BULB TEMPERATURE	STD	STANDARD
EWT	ENTERING WATER TEMPERATURE	SUCT	SUCTION
EXH	EXHAUST	TAG	IDENTIFICATION OF EQUIPMENT
EXP	EXPANSION	TD	TEMPERATURE DIFFERENCE
F	FAHRENHEIT	TTEMP	TEMPERATURE
FCU	FAN COIL UNIT	TP	TRAP PRIMER
FD	FIRE DAMPER	TSP	TOTAL STATIC PRESSURE
FD	FLOOR DRAIN	T'STAT	THERMOSTAT
FFM	FEET PER MINUTE	TX	TRANSFORMER
FPS	FEET PER SECOND	TYP	TYPICAL
FS	FLOOR SINK	V	VENT
FT	FOOT OR FEET	V	VOLTAGE
GA	GAUGE	VAV	VARIABLE AIR VOLUME
GAL	GALLONS	VD	VOLUME DAMPER
GND	GROUND	VEL	VELOCITY
GPH	GALLONS PER HOUR	VFC	VARIABLE FREQUENCY CONTROLLER
GPM	GALLONS PER MINUTE	VIF	VERIFY IN FIELD
H	HEIGHT	VOL	VOLUME
HC	HEATING COIL	VTR	VENT THRU ROOF
H/C	HEATING/COOLING	W	WASTE
HD	HEAD	W	WATT
HP	HORSEPOWER	WB	WET BULB TEMPERATURE
HR	HOUR(S)	WI	WIDTH
HT	HEAT	WP	WEATHERPROOF
HZ	FREQUENCY (CYC, PER SEC.)	WPD	WATER PRESSURE DROP
IN	INCHES	WTR	WATER
		WWM	WELDED WIRE MESH

HVAC SYMBOLS

	DIRECTION OF SUPPLY OR OUTDOOR AIRFLOW
	DIRECTION OF RETURN OR EXHAUST AIRFLOW
	DOOR UNDERCUT
	ROOM THERMOSTAT OR TEMPERATURE SENSOR
	CLEANOUT
	PIPE TEE DOWN
	IN-LINE EXPANSION COMPENSATOR
	STEEL PENETRATION/PIPE SLEEVE
	PIPE ELBOW UP OR PIPE TEE UP
	PIPE ELBOW DOWN
	PIPE CAP OR CAPPED END OF PIPE
	UNION
	PIPE GUIDES



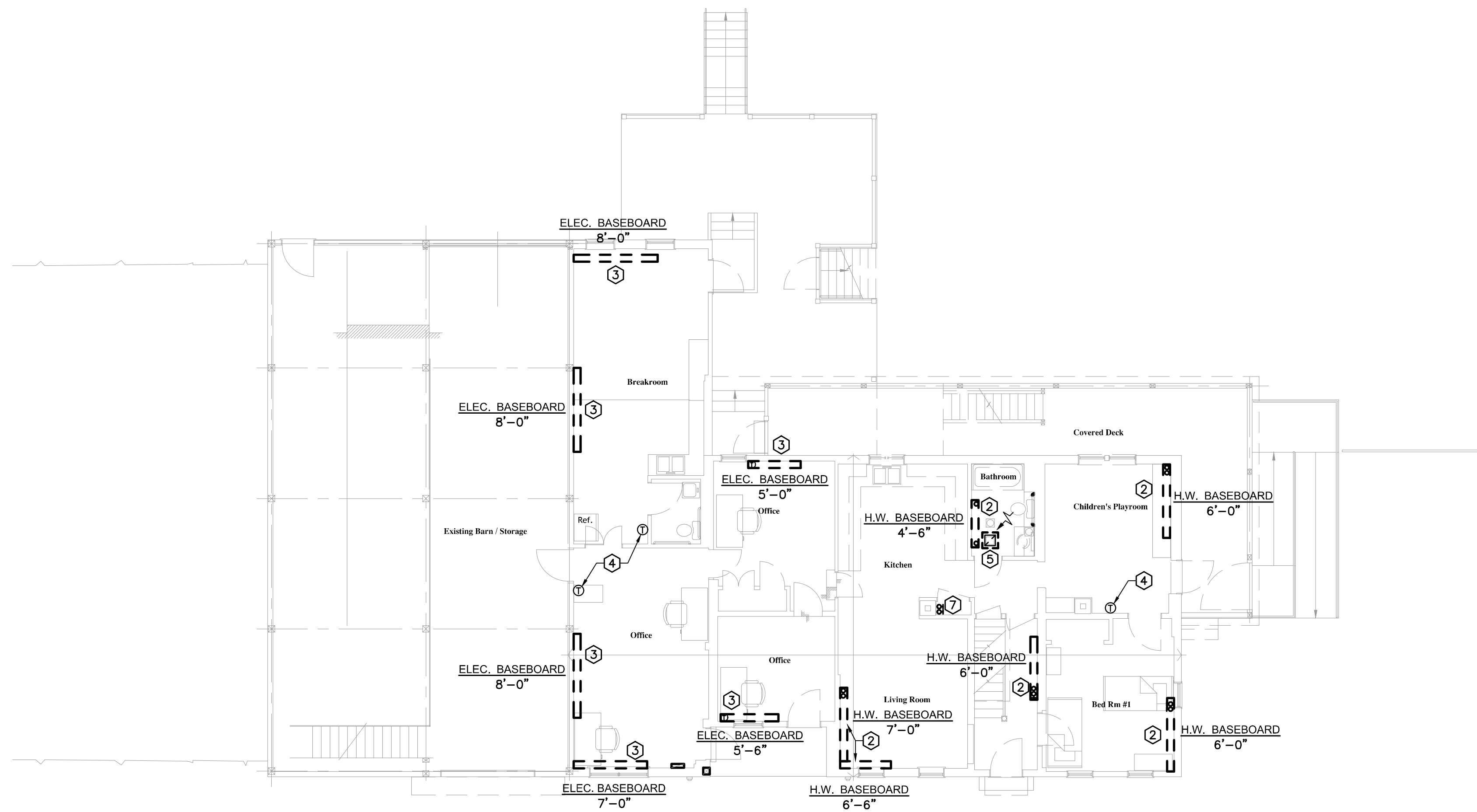
Fred Marzec - Architects, LLC
 Architects and Planners
 282 Franklin Street
 Norwalk, CT 06360
 Tel: (860) 887-5870 Fax: (860) 887-5874
 Email address: fred@fredmarzec.com

Danielson Domestic Violence Shelter
 Scheduled Renovations and Modernizations
 Killingly, CT.

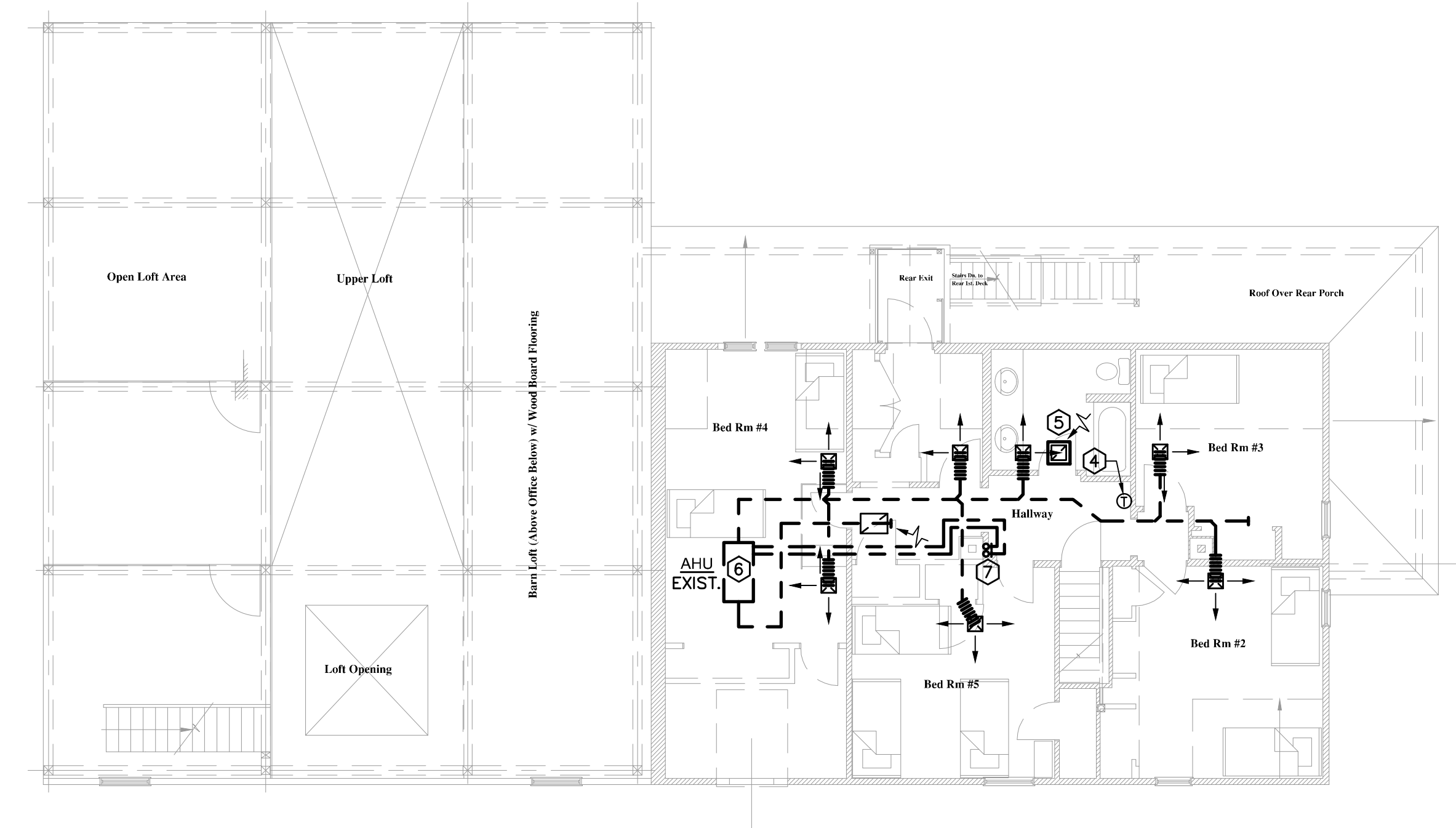
MECHANICAL LEGEND, SYMBOLS, AND ABBREVIATIONS

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DATE:	DEC 23RD, 2019

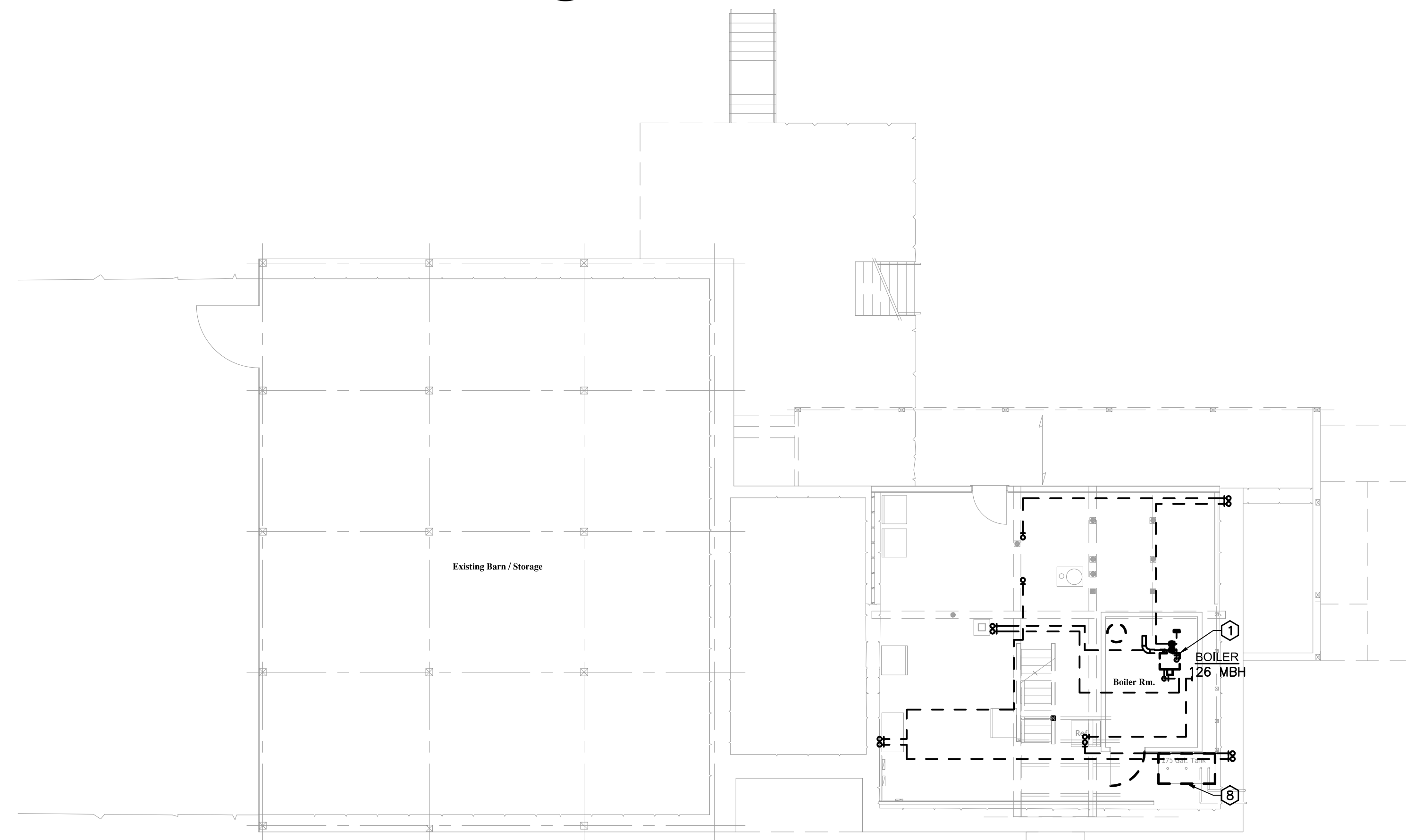
M-0



2 MECHANICAL DEMOLITION FIRST FLOOR PLAN
 MD-1 SCALE: 1/8" = 1'-0"



3 MECHANICAL DEMOLITION SECOND FLOOR PLAN
 MD-1 SCALE: 1/8" = 1'-0"



1 MECHANICAL DEMOLITION BASEMENT PLAN
 MD-1 SCALE: 1/8" = 1'-0"

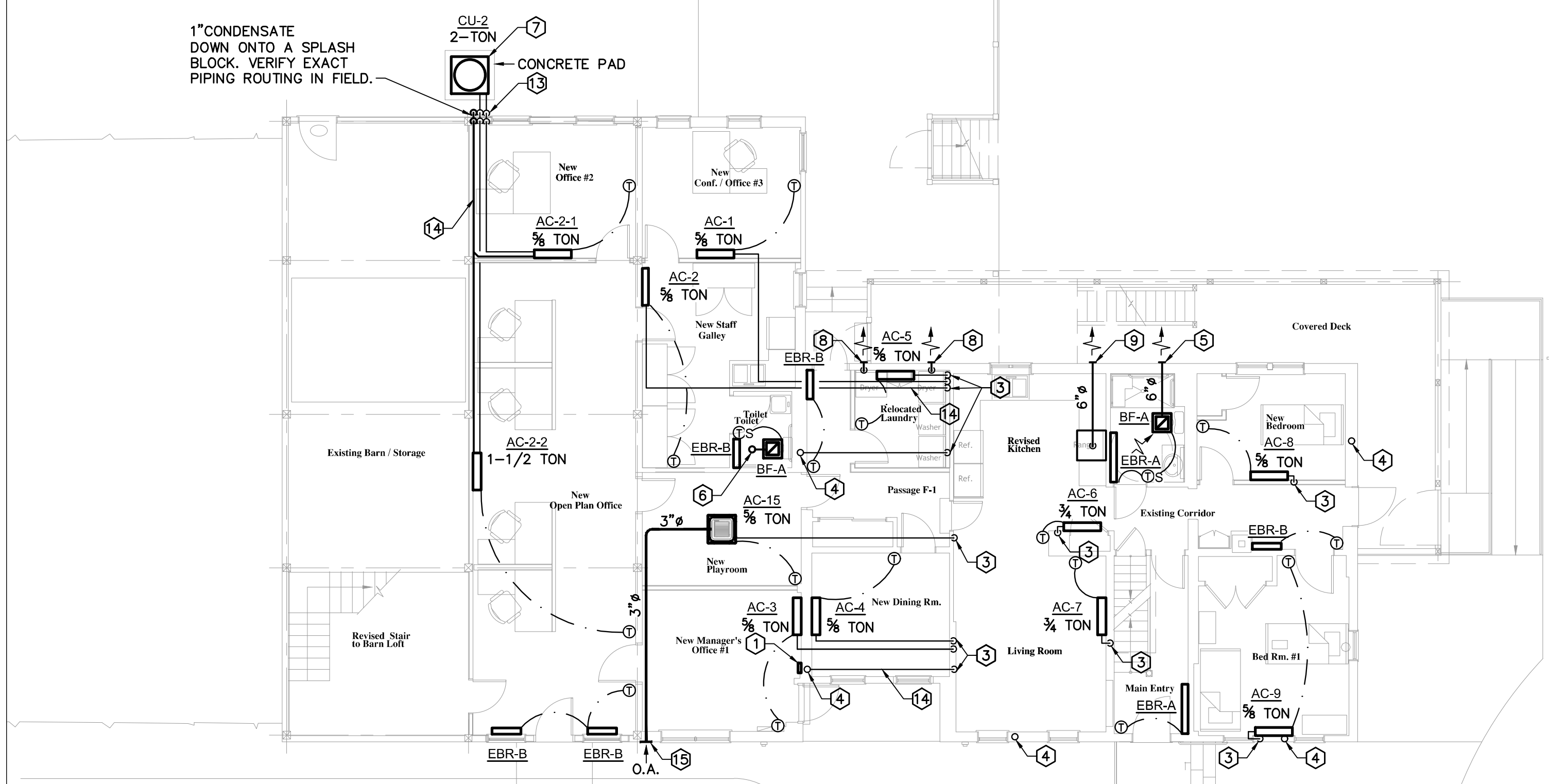
LEGEND	
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED

GENERAL NOTES

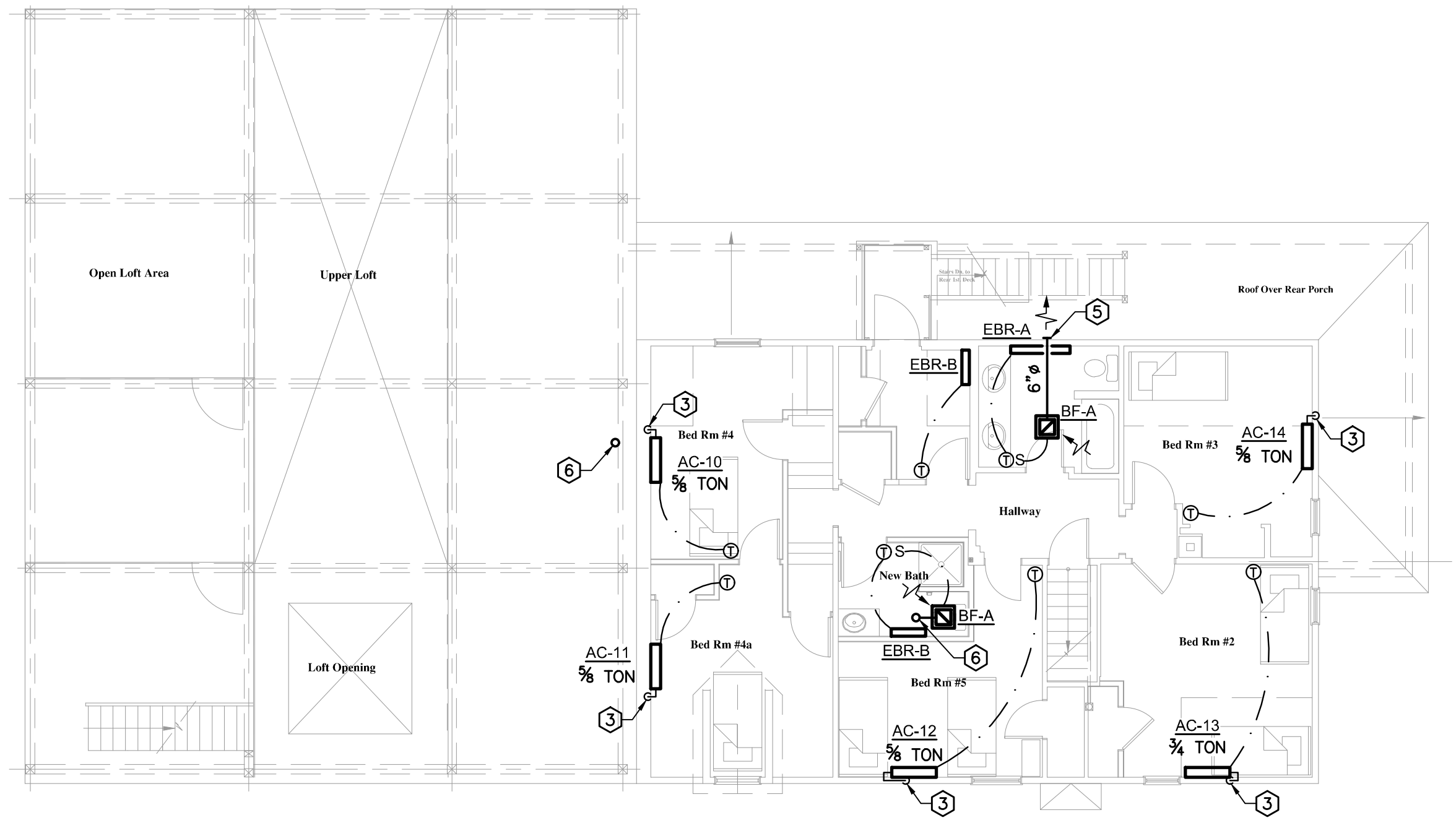
- REMOVE ALL EXISTING HYDRONIC PIPING. VERIFY EXACT EXTENT OF WORK IN FIELD.

- DRAWING NOTES**
- REMOVE EXISTING HOT WATER BOILER AND ALL ASSOCIATED PIPING, SUPPORTS, CONTROLS, WIRING, AND FLUE VENTING.
 - REMOVE EXISTING HOT WATER BASEBOARD RADIATION AND ALL ASSOCIATED PIPING, SUPPORTS, AND CONTROLS.
 - REMOVE EXISTING ELECTRIC BASEBOARD RADIATION AND ALL ASSOCIATED WIRING, SUPPORTS, AND CONTROLS.
 - REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED CONTROLS, WIRING AND SUPPORTS.
 - REMOVE EXISTING TOILET EXHAUST FAN AND ALL ASSOCIATED DUCTWORK, WIRING, CONTROLS, AND SUPPORTS.
 - REMOVE EXISTING AIR HANDLING UNIT AND ALL ASSOCIATED DUCTWORK, PIPING, GRILLES, WIRING, CONTROLS, AND SUPPORTS. VERIFY AHU LOCATION IN FIELD.
 - REMOVE ALL EXISTING HOT WATER PIPING AND ALL ASSOCIATED SUPPORTS.
 - REMOVE EXISTING OIL TANK AND ALL ASSOCIATED PIPING AND SUPPORTS.

PROJECT NO.	2017-03.12
SCALE	1/8"=1'-0"
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DATE	DEC 23RD, 2019
MD-1	

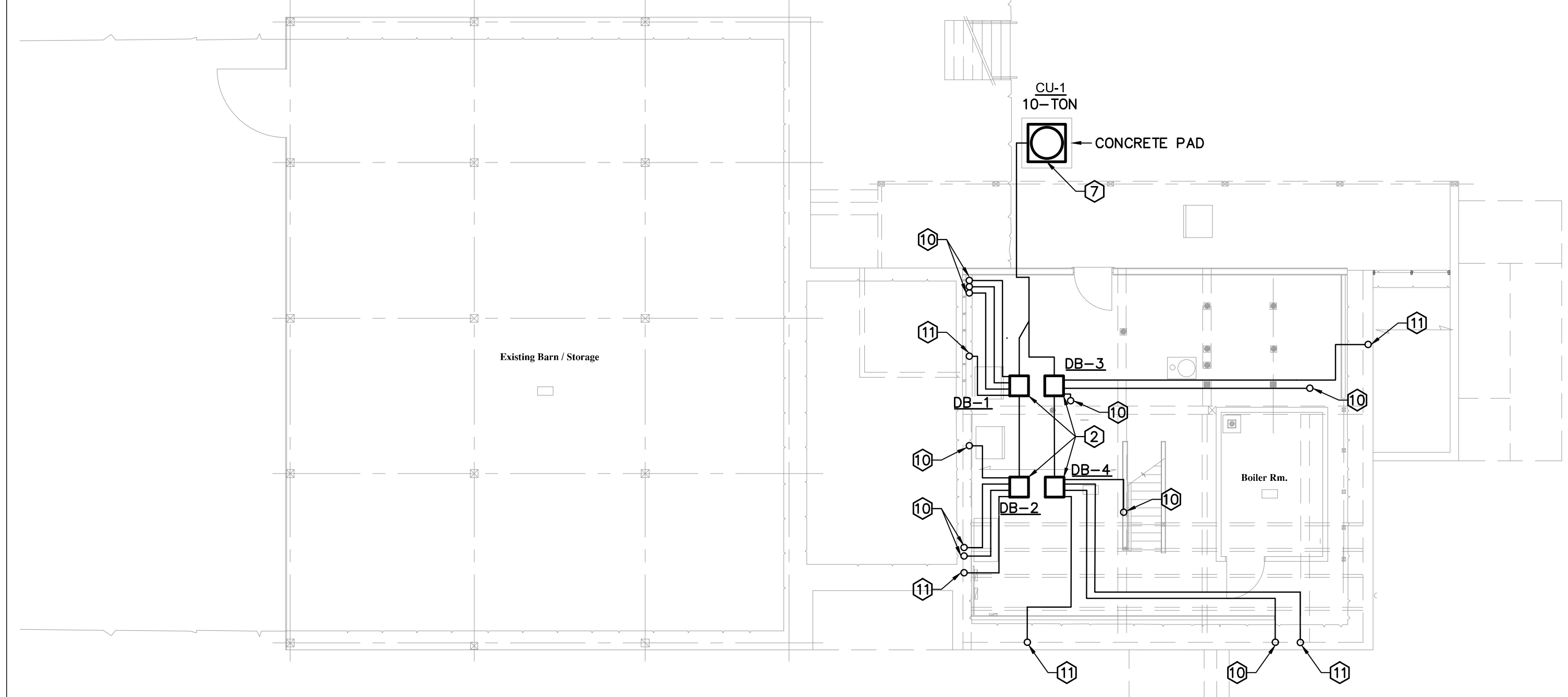


2 MECHANICAL 1ST FL PLAN
SCALE: 1/8" = 1'-0"

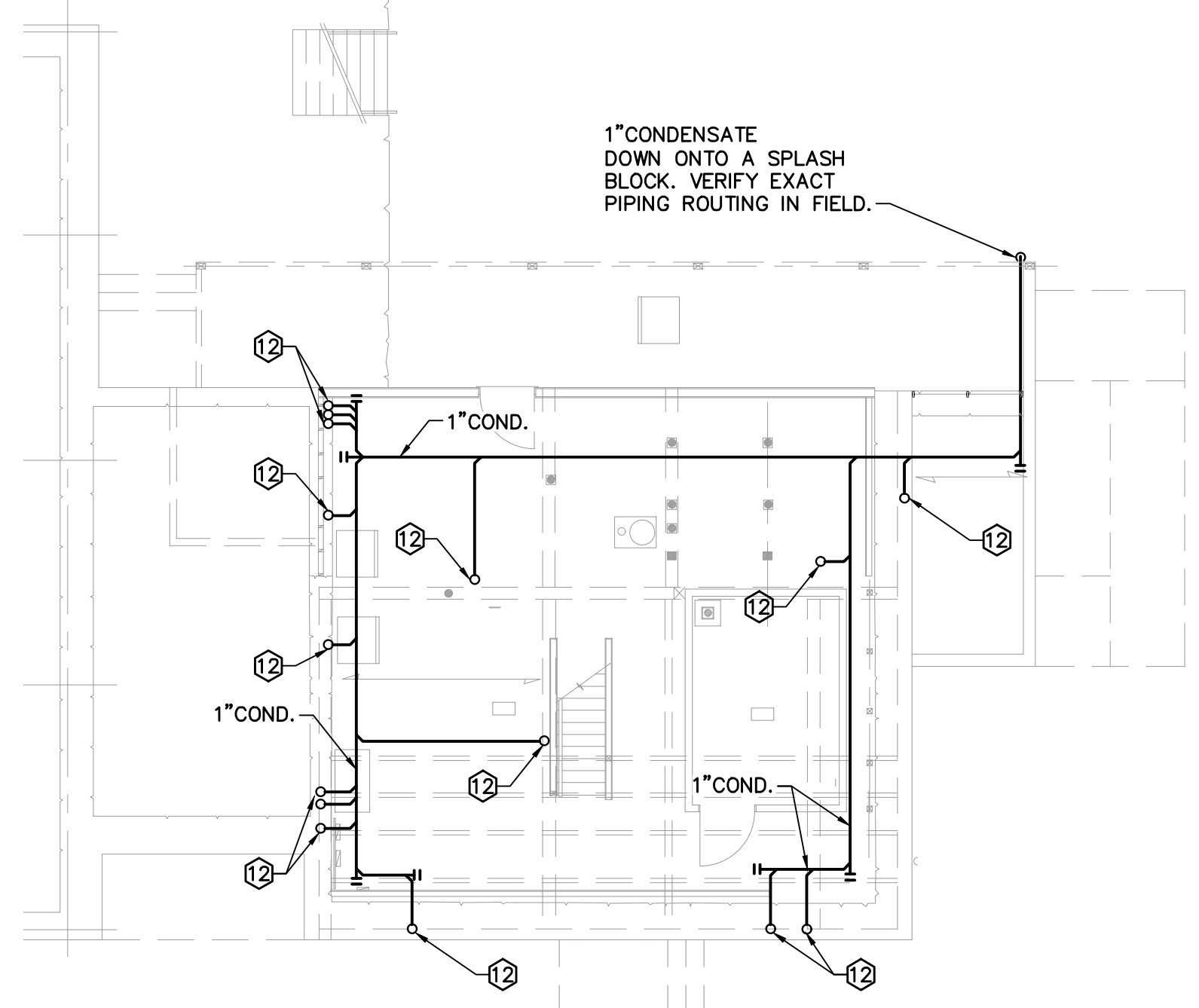


3 MECHANICAL 2ND FL PLAN
SCALE: 1/8" = 1'-0"

- GENERAL NOTES**
1. ALL REFRIGERANT PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.
 2. REFRIGERATION PIPING SHOWN ON THIS DRAWING DOESN'T REPRESENT SIZE OR NUMBER OF PIPES, IT SHOWS GENERAL ROUTING, FOR EXACT NUMBER & SIZE OF PIPES REFER TO MANUFACTURERS DIAGRAMS.
 3. ALL REFRIGERANT AND CONDENSATE PIPING SHALL BE INSTALLED IN CEILING AND WALL CAVITY, COORDINATE WITH ARCHITECT.
 4. CONDENSING UNIT SHALL BE MOUNTED ON CONCRETE PAD..
 5. ALL INDOOR UNITS SHALL BE WALL MOUNTED.
 6. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING BETWEEN ALL INDOOR AND OUTDOOR UNITS. ALL CONTROLS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.



1 MECHANICAL BASEMENT PLAN
SCALE: 1/8" = 1'-0"



4 BASEMENT CONDENSATE DRAIN PLAN
SCALE: 1/8" = 1'-0"

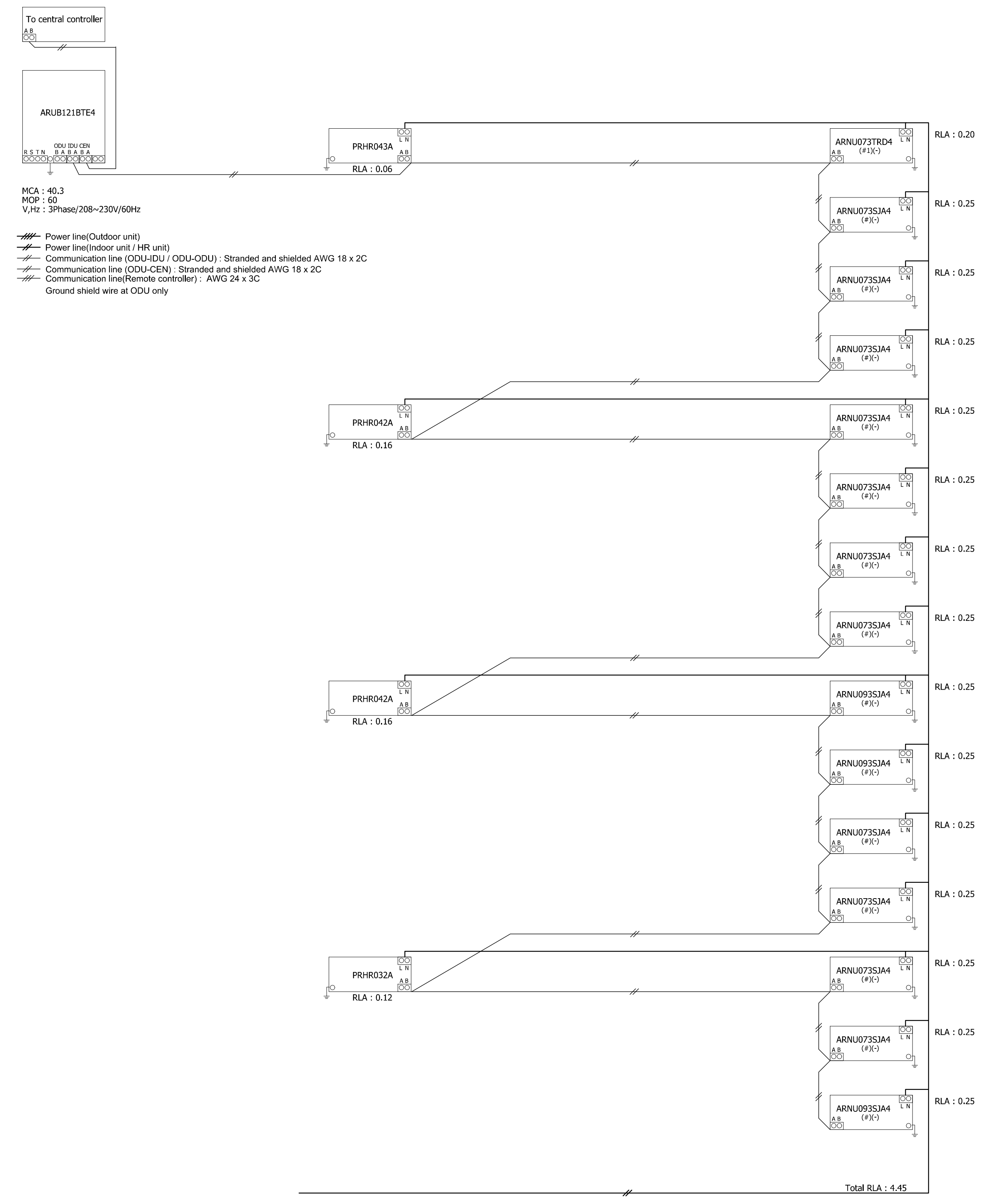
- DRAWING NOTES**
- 1 WALL MOUNTED LG "AC SMART IV" TOUCH HEAD END CONTROL PANEL MODEL # PACS4B000, PROVIDE 24V TRANSFORMER. COORDINATE EXACT PANEL LOCATION WITH OWNER.
 - 2 REFRIGERANT DISTRIBUTION PANEL.
 - 3 RUN REFRIGERANT PIPING (L&G) AND CONDENSATE DRAIN IN WALL CAVITY DOWN TO BASEMENT
 - 4 REFRIGERANT PIPING (L&G) AND CONDENSATE DRAIN UP AND DOWN IN WALL CAVITY.
 - 5 PROVIDE TOILET EXHAUST WALL CAP AS MANUFACTURED BY BROAN MODEL # 843BL, COORDINATE DUCT SIZE IN FIELD.
 - 6 PROVIDE TOILET EXHAUST ROOF CAP AS MANUFACTURED BY BROAN MODEL #634M, COORDINATE DUCT SIZE IN FIELD.
 - 7 VERIFY EXACT CONDENSING UNIT LOCATION IN FIELD.
 - 8 PROVIDE 4" DRYER VENT DUCT WITH WALL MOUNTED CAP AND BACK-DRAFT DAMPER.
 - 9 PROVIDE 6" KITCHEN HOOD VENT DUCT WITH WALL MOUNTED CAP AND BACK-DRAFT DAMPER.
 - 10 REFRIGERANT PIPING (L&G) AND CONDENSATE DRAIN FROM 1ST. FLOOR IN WALL CAVITY.
 - 11 REFRIGERANT PIPING (L&G) AND CONDENSATE DRAIN FROM 2ND. FLOOR IN WALL CAVITY.
 - 12 3/4" CONDENSATE DRAIN FROM ACU UNIT ABOVE.
 - 13 REFRIGERANT PIPING (L&G) DOWN IN WALL CAVITY, AND OVER TO CONDENSING UNIT.
 - 14 RUN ALL PIPING UP ABOVE THE CEILING, VERIFY EXACT ROUTING IN FIELD, COORDINATE WITH ARCHITECT.
 - 15 FURNISH AND INSTALL OUTSIDE AIR INTAKE LOUVER FOR 50 CFM, SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

Danielson Domestic Violence Shelter
Scheduled Renovations and Modernizations
Killingly, CT.

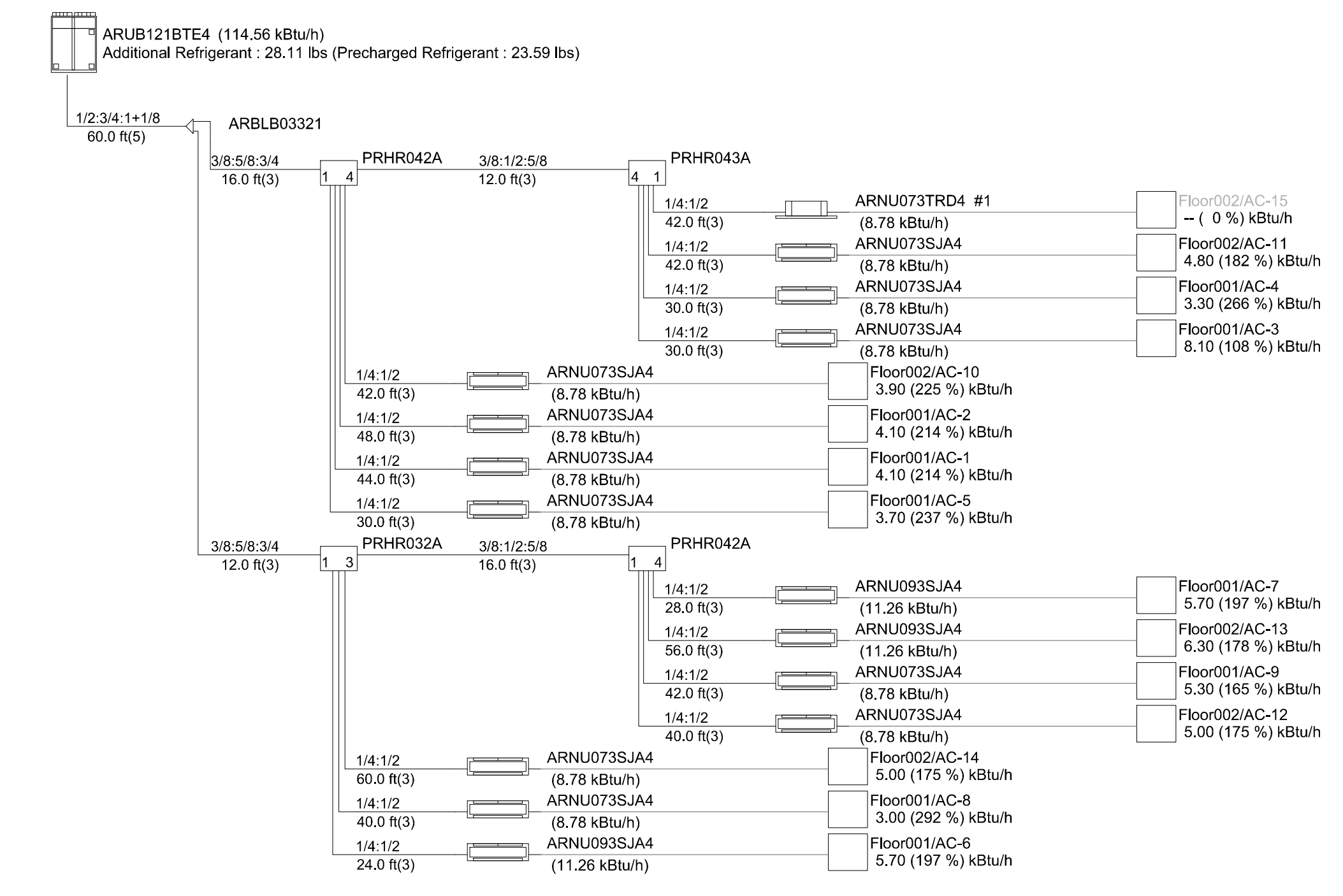
MECHANICAL RISERS

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M-2



Note :
Power wiring, breaker size, and disconnects shall follow local code or NEC.
Multi-frame outdoor unit models require a separate power connection for each frame.
Refer to the most current submittal sheets for applicable electrical data.

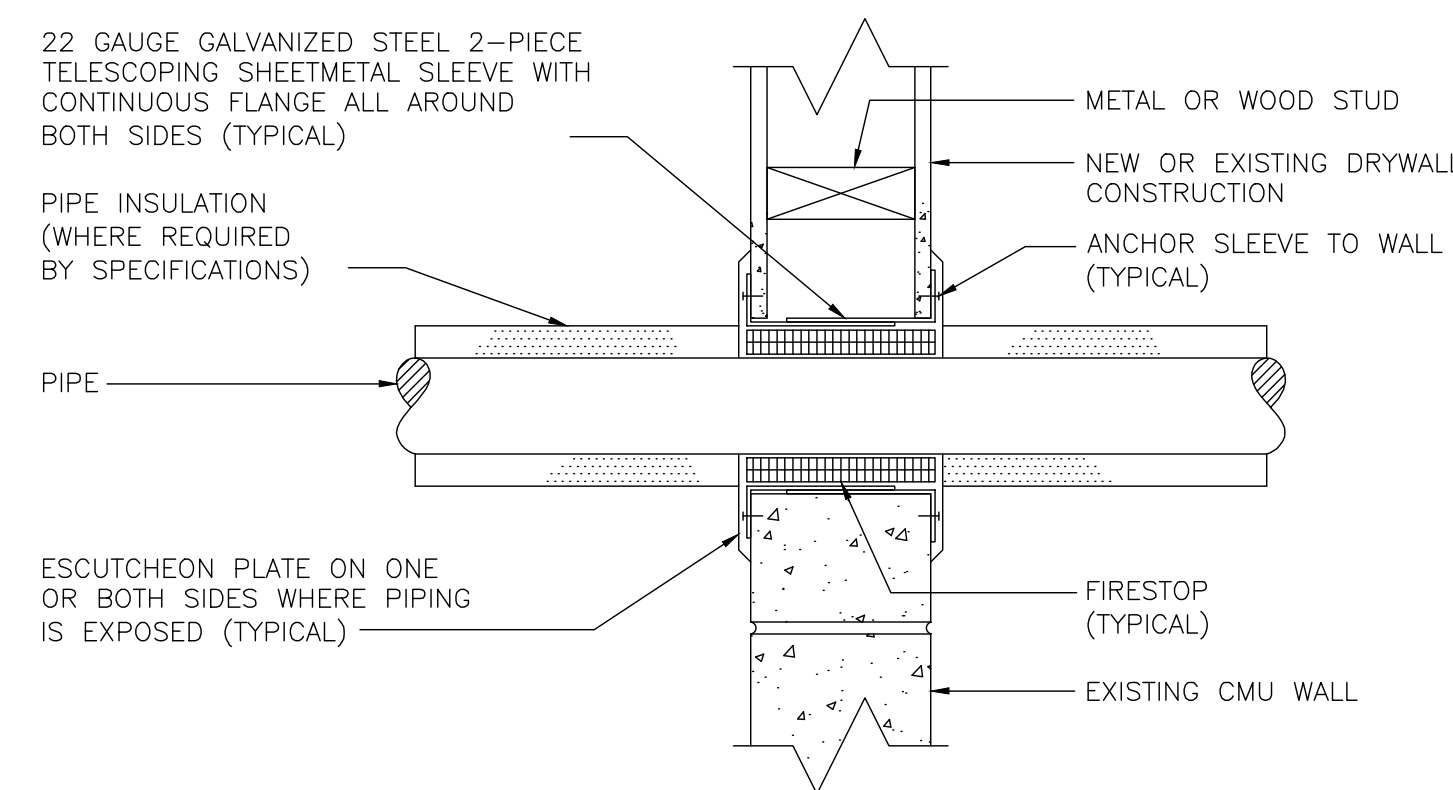


AIR CONDITIONING UNIT SCHEDULE (HEAT PUMP)								
EVAPORATOR								
TAG	MFR	MODEL	TONS	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	CFM	MAX SOUND LEVEL dB(a)	
ACU-2-1	LG	LMNO79HVT	5/8	7,000	8,100	254/204/148	35/31/26	
ACU-2-2	LG	LMN249HVT	1 1/2	24,000	25,600	597/452/367	46/41/36	
EVAPORATOR ELECTRICAL								
TAG	RATED AMPS	VOLTS/PHASE	WEIGHT (LBS)	REMARKS				
ACU-2-1	0.4	208/1	20					
ACU-2-2	0.4	208/1	26					
GENERAL NOTES/ACCESSORIES:								
1. ACCEPTABLE MANUFACTURERS BY: MITSUBISHI & SAMSUNG. 2. EACH ACU UNIT SHALL HAVE DEDICATED WALL MOUNTED PROGRAMMABLE THERMOSTAT MODEL PREMTB10U. 3. PROVIDE 24V CONTROLS TRANSFORMER. 4. PROVIDE DRAIN PAN UL LISTED LEVEL SENSOR. 5. PROVIDE CONDENSATE PUMP AS MANUFACTURED BY ASPEN MODEL #B3939 (ASP-MW-UNI) 2.9GPH@0FT, 1.2GPH@33' OF HEAD, 208V/1P, SAME COLOR AS ACU UNITS. 6. PROVIDE 3-POLE DISCONNECT SWITCH. 7. ALL UNITS SHALL BE WALL MOUNTED. 8. HEATING DOWN TO -13°F AMBIENT.								
CONDENSING UNIT								
TAG	MFR	MODEL	AMBIENT TEMP (°F)	TONS	COOLING (BTUH)	HEATING (BTUH)	AHRI EER (95F)	AHRI HSPF
CU-2	LG	LMU240HHV	95	2	30,000	31,200	13.50	10.70
CONDENSING UNIT ELECTRICAL								
TAG	COMPRESSOR	REFRIGERANT	MCA	MCB	VOLTS/PHASE	WEIGHT (LBS)	REMARKS	
CU-2	SCROLL	R410A	19	30	208/3	155		
GENERAL NOTES/ACCESSORIES:								
1. ACCEPTABLE MANUFACTURERS BY: MITSUBISHI & SAMSUNG. 2. PROVIDE LOW AMBIENT BAFFLE KIT 3. HAIL GUARD KIT 4. HIPOR (HIGH PRESSURE OIL RETURN) 5. SPLIT COIL DEFROST 6. NIGHT QUIET OPERATION 7. FAULT DETECTION AND DIAGNOSIS 8. PROVIDE CONCRETE PAD 9. ALL REFRIGERANT PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS.								

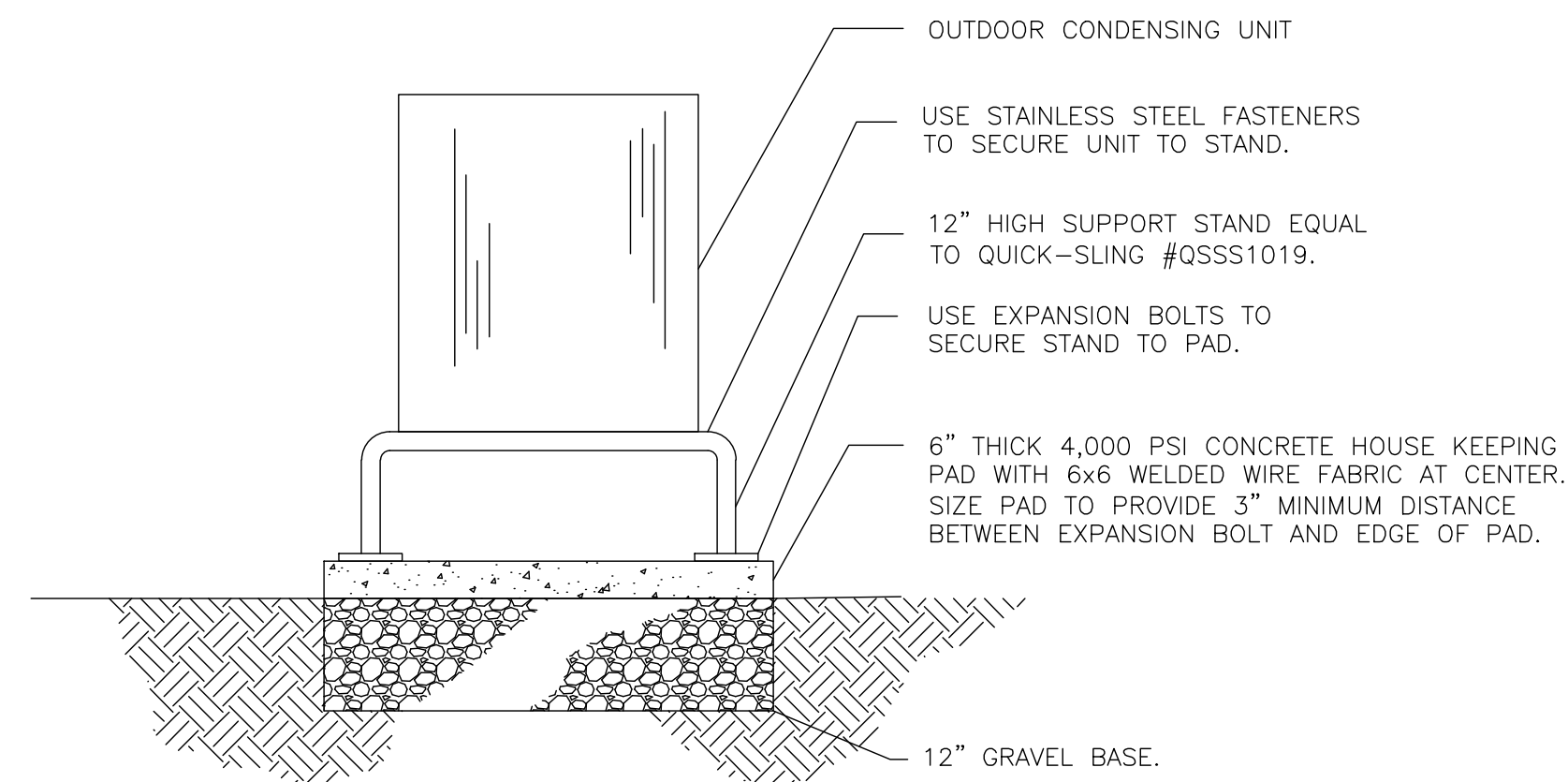
AIR CONDITIONING UNIT SCHEDULE (VRF WITH HEAT RECOVERY)								
EVAPORATOR								
TAG	MFR	MODEL	TONS	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	CFM	MAX SOUND LEVEL dB(a)	
ACU-A	LG	ARNU073SBL4	5/8	7,500	8,500	247/230/194	32/30/28	
ACU-B	LG	ARNU093SBL4	3/4	9,600	10,900	290/247/194	34/31/30	
ACU-C	LG	ARNU-53TRD4	5/8	7,500	8,500	265/247/212	29/27/26	
EVAPORATOR ELECTRICAL								
TAG	RATED AMPS	VOLTS/PHASE	SERVING ACU-#	WEIGHT (LBS)	REMARKS			
ACU-A	0.16	208/1	ACU-1,2,3,4,5,8,9,10,11,12,14	22	WALL MOUNTED			
ACU-B	0.16	208/1	ACU-6,7,13	22	WALL MOUNTED			
ACU-C	0.20	208/1	ACU-15	36	CEILING MTD. CASSETTE, 4-WAY BLOW			
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CONDENSING UNIT								
TAG	MFR	MODEL	AMBIENT TEMP (°F)	TONS	COOLING (BTUH)	HEATING (BTUH)	AHRI IEER	AHRI COP (@47F)
CU-1	LG	ARUB121BTE4	95	10	120,000	135,000	26.25	3.72
CONDENSING UNIT ELECTRICAL								
TAG	COMPRESSOR	REFRIGERANT	MCA	MCB	VOLTS/PHASE	WEIGHT (LBS)	REMARKS	
CU-1	SCROLL	R410A	40.3	60	208/3	540		
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BATH FAN/LIGHT SCHEDULE							
(BASED ON PANASONIC)							
TAG	MODEL	CFM	ESP (IN. WC.)	SONES	WATTS	VOLTS/Ø	NOTES
BF-A	FV-05-11VKS1	80	0.10	<0.3	6.0	120/1	SEE BELOW
GENERAL NOTES/ACCESSORIES:							
1. PROVIDE THE FOLLOWING ACCESSORIES FOR FANS IN FULL BATHROOMS: A. MODEL FV-CSVK1 PLUG'N PLAY CONDENSATION SENSOR. 2. EACH FAN SHALL HAVE THE FOLLOWING FEATURES: A. GALVANIZED STEEL HOUSING. B. PERMANENTLY LUBRICATED DC MOTOR, RATED FOR CONTINUOUS OPERATION. C. BUILT-IN MULTI-SPEED CONTROL WITH TIME DELAY. D. REMOVABLE BLOWER ASSEMBLY WITH DYNAMICALLY BALANCED CENTRIFUGAL BLOWER WHEEL. E. POLYMERIC GRILLE WITH ENCLOSED LIGHT REFLECTOR. F. TWO 7 WATT GU24 BASE LED LAMPS (INCLUDED). G. BUILT-IN BACKDRAFT DAMPER AND INTEGRAL DUAL 4" OR 6" DIAMETER DUCT ADAPTER. 3. FAN SHALL BE UL LISTED, HVI CERTIFIED AND ENERGY STAR QUALIFIED. 4. FAN SHALL HAVE 3-YEAR WARRANTY. 5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. 6. CONTRACTOR SHALL SET MINIMUM SPEED TO PROVIDE 30 CFM CONTINUOUS VENTILATION (IN APARTMENTS ONLY). 7. PROVIDE TERMINATION VENT CAPS AS MANUFACTURED BY BROAN A. MODEL # 843BL FOR WALL MOUNTED. B. MODEL # 634M FOR ROOF MOUNTED.							

ELECTRIC BASEBOARD RADIATION SCHEDULE							
TAG	MFR	MODEL	TOTAL BTUH	TOTAL WATTS	DIMENSIONS (INCHES)		
					LENGTH	DEPTH	HEIGHT
EBR-A	Q-MARK	CBD1008	3,413	1000	46"	3"	8 3/8"
EBR-B	Q-MARK	CBD508	1,706	500	28"	3"	8 3/8"
TAG	VOLTS/PHASE	REMARKS					
EBR-A	208/1						
EBR-B	208/1						
GENERAL NOTES/ACCESSORIES:							
1. ACCEPTABLE MANUFACTURERS BY: INDEECO, MARKEL, & BERKO 2. PROVIDE WALL MOUNTED T'STAT. 3. COORDINATE COLOR SELECTION WITH ARCHITECT.							



DETAIL - PIPE SLEEVE
NOT TO SCALE



GRADE MOUNTED VRF CONDENSING UNIT DETAIL
NOT TO SCALE



Fred Marzec - Architects, LLC
Architects and Planners
282 Franklin Street
Norwich, CT 06360
Tel: (860) 887-5870 Fax: (860) 887-5874
Email address: fred@fredmarzec.com

Danielson Domestic Violence Shelter
Scheduled Renovations and Modernizations
Killingly, CT.

PROJECT NO.: 2017-03.12	
SCALE: N.T.S.	M-3
DRAWN BY: DS	
CHECKED BY: DS	
DATE: DEC 23RD, 2019	

SPECIFICATIONS

GENERAL

- WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.
- IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.
- ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.
- WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.
- PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACTS GENERAL CONDITIONS AND IN COORDINATION WITH ALL OTHER TRADES. ALL WORK SHALL BE DONE IN CONFORMANCE AND PROVISIONS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND LAWS.
- VISIT SITE, CHECK FACILITIES AND CONDITIONS AND MAKE ALL NECESSARY OBSERVATIONS AND MEASUREMENTS. NOTE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND TAKE ALL ITEMS INTO CONSIDERATION IN BID.
- SYSTEMS ARE TO BE COMPLETE AND WORKABLE IN ALL RESPECTS, PLACED IN OPERATION AND PROPERLY ADJUSTED.
- EACH CONTRACTOR SHALL PROVIDE HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY.
- CONTRACTOR SHALL PROTECT NEW WORK, EXISTING WORK AND ADJACENT PROPERTY AGAINST WEATHER.
- CONTRACTOR SHALL PROTECT HIS WORK, MATERIALS, APPARATUS AND FIXTURES FROM DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR MUST CONFIRM ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD PRIOR TO STARTING WORK.
- ARRANGE FOR AND OBTAIN OWNER'S AND INSURANCE REPRESENTATIVE'S PERMISSION FOR ANY SERVICE SHUTDOWNS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKERS.
- NO PIPING, DUCTWORK, WIRING, ETC. SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR AND OBTAIN A WRITTEN APPROVAL IDENTIFYING THE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.
- DURING CONSTRUCTION THE CONTRACTOR MAY UNCOVER AN EXISTING CONDITION THAT WILL HAVE TO BE MODIFIED. ANY SUCH WORK WHICH COMES UNDER THE JURISDICTION OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR WITHOUT EXTRA COST TO THE OWNER, AS THOUGH FULLY DETAILED ON PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.
- CODES, PERMITS, STANDARDS AND REGULATIONS
 - CONFORM TO ALL APPLICABLE CODES (LOCAL, STATE, NATIONAL CODES, NFPA, OSHA, ETC.). GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND APPLICABLE STANDARDS.
 - OBTAIN PERMITS AND PAY ALL FEES ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

CODES AND STANDARDS:

- 2015 INTERNATIONAL BUILDING CODE
- 2018 CONNECTICUT STATE BUILDING CODE ERRATA
- 2015 INTERNATIONAL EXISTING BUILDING CODE
- 2015 INTERNATIONAL PLUMBING CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE
- 2017 NATIONAL ELECTRICAL CODE (NFPA 70)
- ICC/ANSI A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

- WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIALS, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.
- THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER AND CONTROL WIRING REQUIRED FOR ALL EQUIPMENT OPERATION NOT SPECIFICALLY PROVIDED BY OTHERS BUT REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THIS CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION BY OTHERS. COORDINATE REQUIREMENTS.

ALTERATION WORK AND DEMOLITION

- ALL EQUIPMENT, DUCTWORK, PIPING, CONTROL DEVICES ETC... TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, DUCTWORK, PIPING, CONTROL DEVICES, ETC... SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.
- UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL DUCTWORK PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND/OR BYPASSED SUCH THAT UPON COMPLETION OF WORK ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.
- NO DEAD ENDS SHALL BE LEFT ON ANY DUCTWORK PIPING SYSTEMS UPON COMPLETION OF WORK.
- EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.
- ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.
- ALL EXISTING EXPOSED, UNNECESSARY DUCTWORK AND PIPING NOT RELATE TO NEW WORK SHALL BE COMPLETELY REMOVED.
- RE-ROUTE OR REMOVE ALL EXISTING DUCTWORK, PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS.

BASE EQUIPMENT MATERIALS AND SUBSTITUTIONS.

- ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS AND UL LABELED.
- BASE BID MANUFACTURERS ARE INCLUDED IN THE SPECIFICATIONS OR LISTED IN SCHEDULES ON THE DRAWINGS. ALL OTHER MANUFACTURERS ARE CONSIDERED A SUBSTITUTION.
- THE NAME OR MAKE OF ANY ARTICLE, DEVICE, MATERIAL, FORM OF CONSTRUCTION, FIXTURE, ETC. STATED IN THIS SPECIFICATIONS, WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED, SHALL BE KNOWN AS A "STANDARD".
- ALL PROPOSALS SHALL BE BASED ON "STANDARDS" SPECIFIED.
- THE EQUIPMENT SCHEDULES ON THE DRAWINGS INDICATE MANUFACTURERS EQUIPMENT MODEL NUMBERS THAT THIS DESIGN HAS BEEN BASED ON. THE USE OF OTHER MANUFACTURERS' EQUIPMENT THAT IS LISTED AS ACCEPTABLE ALTERNATES THAT ENTAILS GENERAL TRADES, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC. REVISIONS IS THIS CONTRACTOR'S RESPONSIBILITY. ANY ADDITIONAL COST OF SUCH CHANGES SHALL BE PAID BY THE CONTRACTOR SUBMITTING THE ACCEPTABLE ALTERNATES WHICH NECESSITATES CHANGES IN INSTALLING SUCH SUBMITTED ALTERNATE EQUIPMENT, EVEN THOUGH SUCH COSTS MAY BE PART OF ANOTHER DIVISION OF WORK.
- SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE OWNER. IF A SUBSTITUTION IS SUBMITTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EVALUATE IT AND CERTIFY THAT THE SUBSTITUTION IS EQUIVALENT IN ALL RESPECTS TO THE BASE SPECIFICATIONS.
- IF SUBSTITUTIONS ARE APPROVED, NOTIFY ALL OTHER CONTRACTORS, SUBCONTRACTORS, ETC. AFFECTED BY THE SUBSTITUTION AND FULLY COORDINATE WITH THEM. ANY COSTS RESULTING FROM SUBSTITUTION, WHETHER BY THIS CONTRACTOR OR OTHERS, SHALL BE THE RESPONSIBILITY OF AND PAID FOR BY THE SUBSTITUTING CONTRACTOR. APPROVED SHOP DRAWINGS DO NOT ABSOLVE THIS CONTRACTOR FROM THIS RESPONSIBILITY.
- ALL EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFIRM THESE REQUIREMENTS PRIOR TO STARTING WORK.

WARRANTY

- FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR (1) YEAR FROM DATE OF ACCEPTANCE.
- EXTEND ALL MANUFACTURERS' WARRANTIES TO OWNER, INCLUDING FIVE YEAR (5) COMPRESSOR AND TEN (10) YEAR HEAT EXCHANGER EXTENDED WARRANTY ON NEW HVAC EQUIPMENT.
- REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.

SHOP DRAWING SUBMITTALS

- SUBMIT SHOP DRAWINGS FOR MECHANICAL SYSTEMS, INCLUDING BUT NOT LIMITED TO SHEET METAL, WITH ADEQUATE DETAILS AND SCALES TO CLEARLY INDICATE THE OPERATING CHARACTERISTICS OF EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON THE CONSTRUCTION DOCUMENTS.
- SHEET METAL DRAWINGS SHALL BE FULLY DIMENSIONED AND COORDINATED BASED ON FIELD VERIFIED BUILDING CLEARANCES AND ARCHITECTURAL CEILING LAYOUTS. INDICATE STRUCTURAL, LIGHTING, DUCTWORK AND PIPING AT ALL CRITICAL LOCATIONS.
- CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWING PRIOR TO SUBMITTAL FOR REVIEW. SHOP DRAWINGS WILL NOT BE REVIEWED BY THE ENGINEER UNLESS THE CONTRACTOR'S APPROVAL IS NOTED. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.
- SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.
- WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR THE VARIATIONS.
- EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT THE EQUIPMENT SPECIFIED HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON THE DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

AS-BUILT DRAWINGS

- PROVIDE A COMPLETE SET OF AS-BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF MECHANICAL SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.
- PROVIDE "AS-BUILT DRAWINGS" INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK. INDICATE THE FOLLOWING INSTALLED CONDITIONS:
 - INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND THE WORK INSTALLED.
- EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.
- APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.
- CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.
- SUBMIT FOR REVIEW BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.
- SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

EQUIPMENT

- MECHANICAL CONTRACTOR TO FURNISH ALL HVAC EQUIPMENT INDICATED AND/OR SCHEDULED ON THE DRAWINGS COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES.
- INSTALL COMPLETE SYSTEMS AND PLACE IN PROPER OPERATION PER MANUFACTURER'S RECOMMENDATIONS, LUBRICATE AND ADJUST AS REQUIRED. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING.

HVAC SYSTEMS AND EQUIPMENT

- GENERAL
 - FURNISH ALL EQUIPMENT, MATERIALS, LABOR, TOOLS, ETC., FOR THE COMPLETE HVAC SYSTEM.
 - INSTALL IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PLACE IN SATISFACTORY OPERATION.
 - CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THEIR WORK. SUBMISSION OF A BID ON THIS PROJECT SHALL BE CONSTRUED AS HAVING SUCH KNOWLEDGE.
 - VERIFY EXACT CONDITIONS IN FIELD AND COORDINATE WITH THESE DRAWINGS AND OTHER TRADES BEFORE BEGINNING NEW WORK.
 - DETERMINE EXACT LOCATIONS FOR ALL EQUIPMENT, PIPING, CONDUITS AND DUCTWORK IN FIELD.
 - COORDINATE WORK OF THIS CONTRACT WITH OTHER TRADES. CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. ARCHITECT'S RESOLUTION TO CONFLICTS SHALL BE FINAL.
 - ANY DISCREPANCIES BETWEEN WHAT IS SHOWN ON DRAWINGS OR SPECIFIED AND THE ACTUAL CONDITIONS IN THE FIELD SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.
 - BUILDING AND SURFACES DAMAGED DURING INSTALLATION SHALL BE REPAIRED, REPLACED, AND/OR RESTORED TO ORIGINAL CONDITION AFTER COMPLETION OF WORK AND BEFORE ACCEPTANCE BY OWNER.

HANGERS AND SUPPORT

- SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL MECHANICAL EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE AND FEDERAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.
- PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT DUCTWORK, PIPING EQUIPMENT AND TO KEEP IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC... ARE SUPPORTED FROM CONCRETE CONSTRUCTION. DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS, AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED. HANGERS IN CONTACT WITH COPPER OR BRASS PIPE SHALL BE DIELECTRIC, COMPATIBLE WITH COPPER AND BRASS ALLOY OR PROVIDED WITH FELT SLEEVE.
- PROVIDE ADDITIONAL SUPPORT FOR DUCTWORK, PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT.
- BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2-1/2 INCHES AND LARGER, 1 BEAM CLAMPS SHALL BE FORGED STEEL. "C" CLAMPS ARE NOT TO BE USED.
- PROVIDE AND INSTALL EXPANSION COMPENSATION FOR ALL PIPING. SUBMIT PLANS, CALCULATIONS AND EQUIPMENT DATA.

COOLING COIL CONDENSATE PIPING

- ALL CONDENSATE DRAIN PIPING SHALL BE PVC OR TYPE DWV COPPER WITH WROUGHT COPPER FITTINGS SOLDERED WITH 95-5 WIRE SOLDER. PITCH PIPING A MINIMUM 1" PER 10 FT. OF RUN. PROVIDE CLEANOUTS AT CHANGES IN DIRECTION AND PROVIDE 4" DEEP TRAP AT AIR HANDLING UNIT(S). CONDENSATE PIPING AND ALL FITTINGS SHALL BE INSULATED WITH 1" FIBERGLASS INSULATION COVERED WITH A KRAFT PAPER AND ALUMINUM FOIL ALL PURPOSE JACKET.

REFRIGERANT PIPING

- REFRIGERANT PIPING:
 - REFRIGERANT PIPING SHALL BE ACR TYPE WITH WROUGHT COPPER, SILVER BRAZED FITTINGS.
 - CONDENSATE DRAIN PIPING:
 - ALL CONDENSATE DRAIN PIPING SHALL BE TYPE DWV COPPER WITH WROUGHT COPPER FITTINGS SOLDERED WITH 95-5 WIRE SOLDER. PITCH PIPING MINIMUM 1" PER 10 FT. OF RUN. PROVIDE CLEANOUTS AT CHANGES IN DIRECTION AND PROVIDE 4" DEEP TRAP AT AIR HANDLING EQUIPMENT.
 - PIPING INSULATION:
 - ALL CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH JOHNS MANVILLE MICRO-LOK FIBER GLASS INSULATION FINISHED WITH AN ALL SERVICE JACKET. FITTINGS SHALL BE COVERED WITH JOHNS MANVILLE ZESTON 2000 PVC FITTING COVERS.
 - REFRIGERANT LIQUID AND VAPOR PIPING SHALL BE INSULATED WITH ARMAFLEX II, INSUL-TUBR, OR RUBATEX R-180-FS TUBING INSULATION. OUTDOOR SECTION OF INSULATION SHALL BE COATED WITH ULTRAVIOLET AND WEATHER RESISTANT PAINT.
 - INSULATION THICKNESS SHALL MEET THE REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE REFERENCED HEREIN AND THE MANUFACTURERS RECOMMENDATIONS.
 - PIPING INSTALLATION:
 - INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL MECHANICAL CODE REFERENCED HERE IN, ASHRAE STANDARD 15; SAFETY CODE FOR MECHANICAL REFRIGERATION, CURRENT EDITION AND THE MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
 - ROUTE PIPING IN AN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. SLEEVE PIPING PASSING THROUGH PARTITIONS, WALLS AND FLOORS. SLOPE CONDENSATE DRAIN PIPING AS INDICATED HEREIN.

ADA ACCESSIBILITY

- INSTALL THERMOSTATS & DDC TEMPERATURE SENSORS AT MOUNTING HEIGHT AS REQUIRED BY ICC/ANSI A117.1-2003 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.
- COORDINATE LOCATION AND ELEVATION WITH LIGHT SWITCHES, ETC.



Fred Marzec - Architects, LLC
Architects and Planners
282 Franklin Street
Norwich, CT 06360
Tel: (860) 887-5870 Fax: (860) 887-5874
Email address: fred@fredmarzec.com

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Scheduled Renovations and Modernizations
Killingly, CT.

MECHANICAL SPECIFICATIONS

PROJECT NO:	2017-03.12
SCALE:	N.T.S.
DRAWN BY:	DS
CHECKED BY:	DS
DATE:	DEC 23RD, 2019

M-4