

LIST OF DRAWINGS

COVER

ME1.1 BOILER ROOM - MECHANICAL AND ELECTRICAL  
DEMOLITION AND NEW WORK PART PLANS



CITY OF MERIDEN FIRE DEPARTMENT  
TRUCK COMPANY #1

BOILER REPLACEMENT

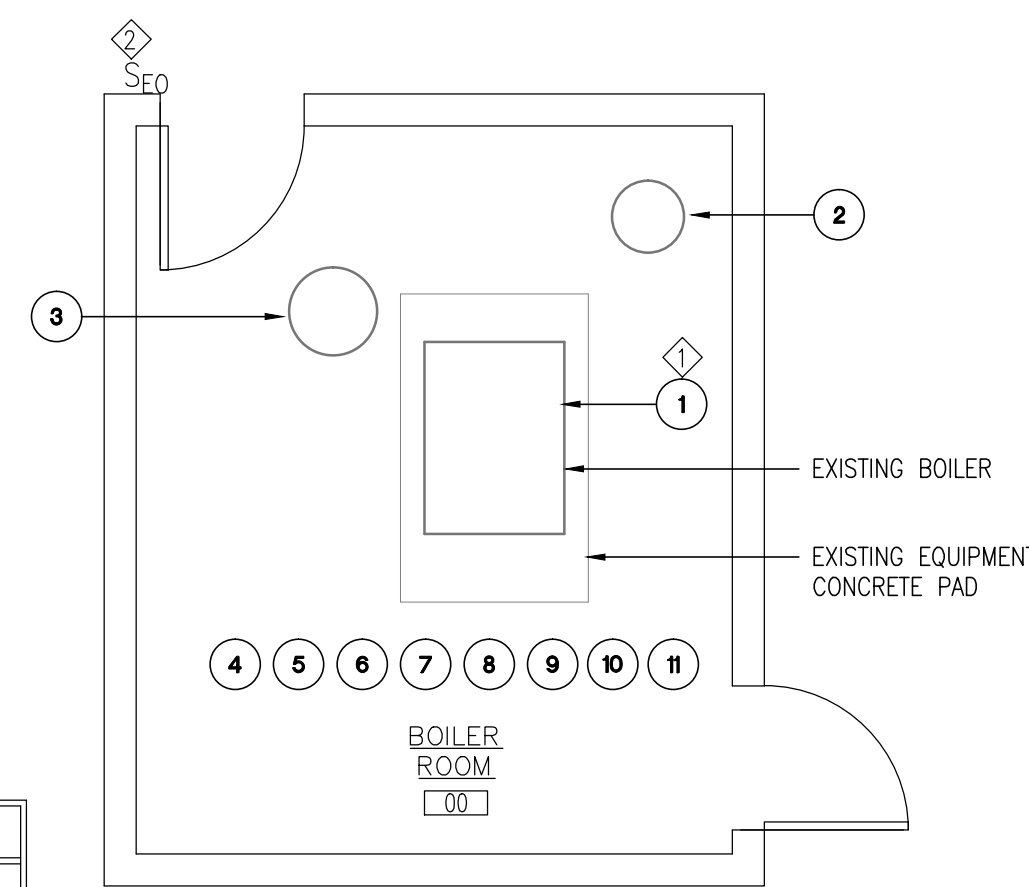
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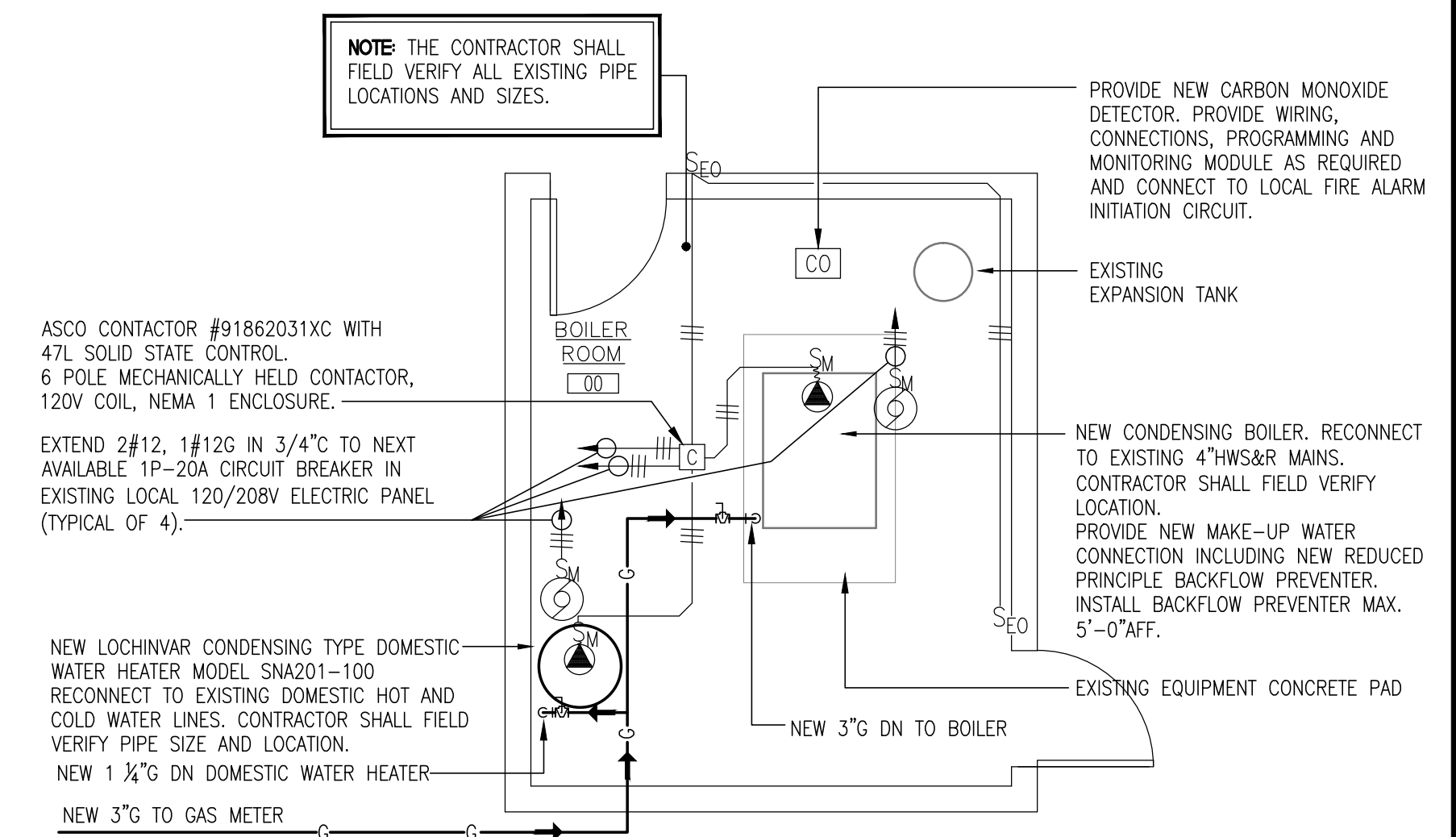
ELECTRICAL LEGEND	
SYMBOL/ABBREVIATION	DESCRIPTION
	SPECIAL EQUIPMENT POWER CONNECTION, EQUIPMENT AS DESIGNATED.
	MOTOR POWER CONNECTION, EQUIPMENT AS DESIGNATED.
	CONDUCTORS IN CONDUIT. CROSS LINES INDICATE NUMBER OF CONDUCTORS.
	FLEXIBLE WIRING AND CONNECTION TO EQUIPMENT.
	BRANCH CIRCUIT HOMERUN IN CONDUIT. CROSS LINES INDICATE NUMBER OF CONDUCTORS.
	3-WAY EMERGENCY SHUT OFF SWITCH, 60" AFF.
	MOTOR RATED SWITCH
	CARBON MONOXIDE DETECTOR.
A	AMPS.
AFF	ABOVE FINISHED FLOOR.
C	CONDUIT.
C/B	CIRCUIT BREAKER.
GND.	GROUND.
P	POLE.

- ELECTRICAL DEMOLITION WORK SYMBOLS -

TAG	ACTION
	DISCONNECT AND REMOVE EXISTING BOILER BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
	DISCONNECT AND REMOVE EXISTING BOILER EMERGENCY SHUT-OFF SWITCH AND ALL ASSOCIATED WIRING.



**BOILER RM. PART PLAN - MECH AND ELECTRICAL DEMOLITION**  
SCALE: 1/4"=1'-0"



**BOILER RM. PART PLAN - MECH. AND ELECTRICAL NEW WORK**  
SCALE: 1/4"=1'-0"

**GENERAL DEMOLITION NOTES**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITY LINES INCLUDING ELECTRICAL, SEWER, WATER, GAS, TELEPHONE, ETC. THE DRAWINGS SHOW DIAGRAMMATICALLY THE APPROXIMATE LOCATION OF UTILITIES WHERE INFORMATION IS AVAILABLE, BUT THE DRAWINGS ARE NOT EXACT AS TO THE QUANTITY, EXTENT OR LOCATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ALL PHASES OF THE WORK TO LOCATE, IDENTIFY, AND PROTECT EXISTING UTILITIES. THE CONTRACTOR SHALL RECORD LOCATION OF AND REPAIR DAMAGE TO EXISTING UTILITIES WHICH ARE ENCOUNTERED AS A RESULT OF WORK UNDER THIS CONTRACT.

ANY EQUIPMENT REMOVED DURING DEMOLITION WORK MAY BE RETAINED BY THE OWNER AT HIS OPTION. ANY SUCH MATERIAL SHALL BE STORED IN THE BUILDING AT A LOCATION DESIGNATED BY THE OWNER. REMOVAL OF SUCH MATERIAL FROM THE JOB SITE SHALL BE THE OWNER'S RESPONSIBILITY.

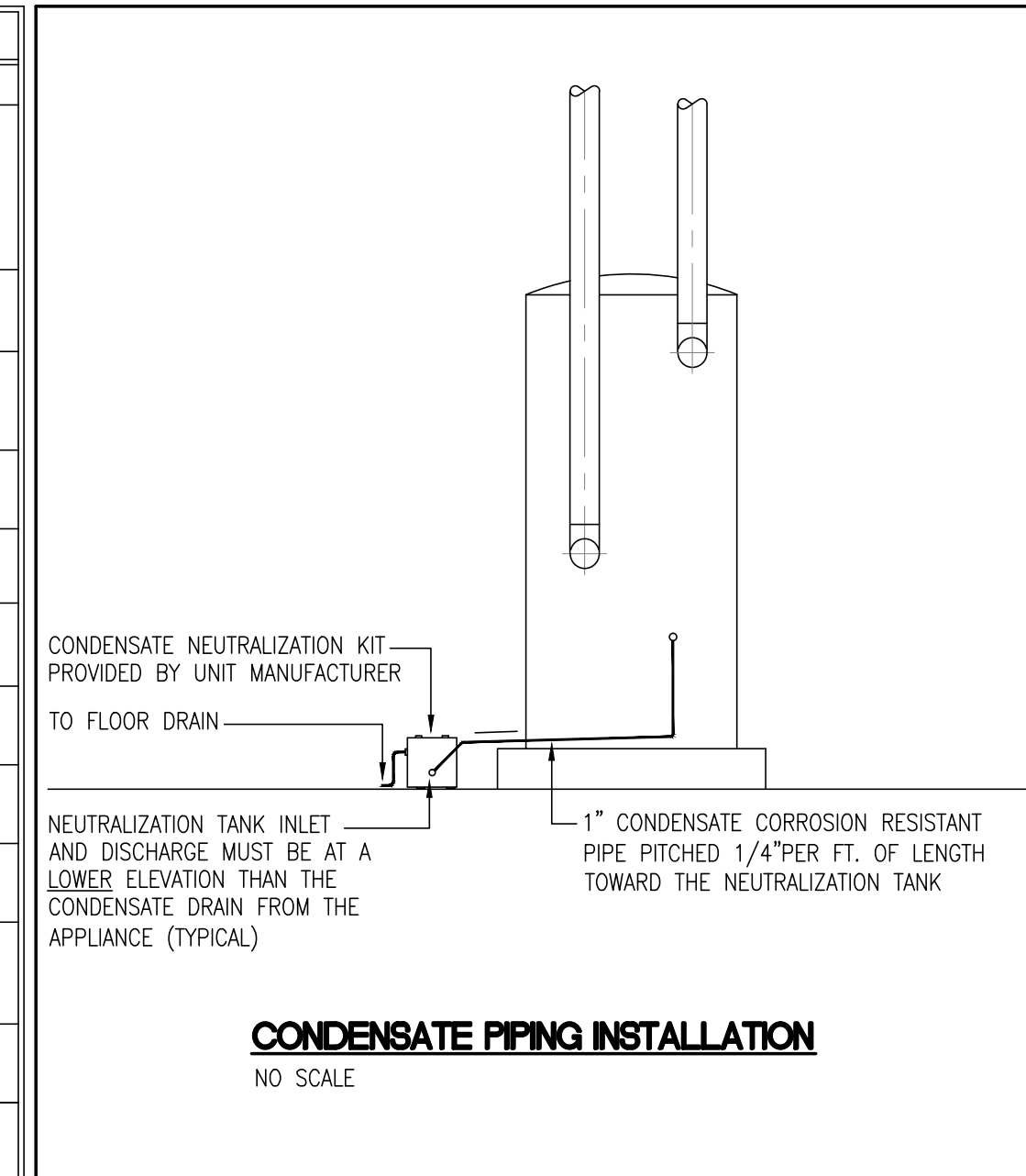
**REMOVE AND REPLACE ALL EXISTING PIPE INSULATION FOR ALL THE PIPES THAT WILL REMAIN IN THE BOILER ROOM. CONTRACTOR SHALL MEASURE, RECORD AND SUBMIT REPORT FOR ALL THE EXISTING PUMPS PRIOR TO ANY DEMOLITION. MEASURE AND RECORD FLOW AND PRESSURE.**

**GENERAL MECHANICAL DEMOLITION WORK NOTES**

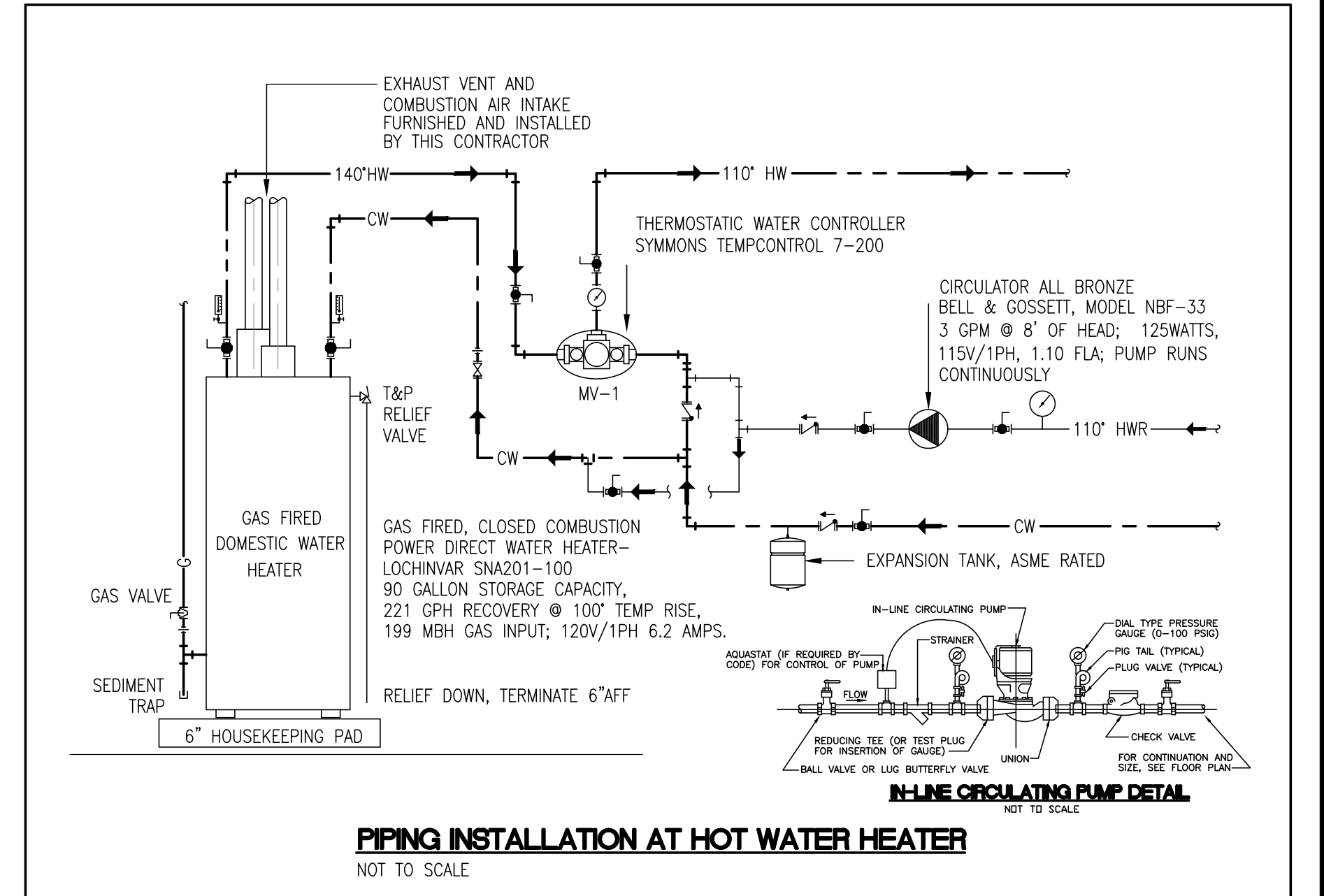
- 1 - THE SUBMITTING BID, VISIT THE SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUCTED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL DEMOLITION WORK REQUIRED.
- 2 - THE DEMOLITION DRAWINGS ARE INTENDED ONLY TO DEFINE THE GENERAL SCOPE OF DEMOLITION WORK AND TO ASSIST THE CONTRACTOR DURING BIDDING. THE DEMOLITION DRAWINGS MAY NOT SHOW EVERY ITEM WHICH MUST BE DISCONNECTED, REMOVED, OR RELOCATED IN ORDER TO FACILITATE NEW WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED WHETHER OR NOT SHOWN ON THE PLANS.
- 3 - COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER TO MINIMIZE INCONVENIENCE TO THE BUILDING OCCUPANTS. ALL SERVICES AND SYSTEMS SERVING OCCUPIED AREAS OF THE BUILDING SHALL BE MAINTAINED IN OPERATION DURING WORKING SHIFTS.
- 4 - CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY WORK REQUIRED TO KEEP THE BUILDING OCCUPIED DURING CONSTRUCTION, INCLUDING PROVIDING AN 80GAL ELECTRIC DOMESTIC WATER HEATER.
- 5 - REMOVE AND/OR RELOCATE ALL EXISTING MECHANICAL WORK AS NECESSARY FOR THE PERFORMANCE OF THE WORK OF THIS CONTRACT.
- 6 - REMOVE ALL DEMOLITION MATERIAL FROM THE JOB SITE UNLESS NOTED DIFFERENTLY.
- 7 - CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL EXISTING PIPING IN THE BOILER ROOM PRIOR TO ANY DEMOLITION
- 8 - CONTRACTOR SHALL REMOVE AND REPLACE EXISTING BOILER AND DOMESTIC WATER HEATER
- 9 - CONTRACTOR SHALL MEASURE AND RECORD EXISTING HW FLOWS PRIOR TO ANY DEMOLITION. WHEN STARTING THE NEW BOILER, CONTRACTOR SHALL RESTORE THE HW FLOWS TO THE RECORDED VALUES
- 10 - CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING PIPE INSULATION IN THE BOILER ROOM. CONTRACTOR SHALL PROVIDE NEW PIPE INSULATION FOR ALL NEW AND EXISTING PIPES IN THE MECHANICAL ROOM.

- MECHANICAL DEMOLITION WORK SYMBOLS -

TAG	ACTION
①	EXISTING HEATING BOILER WITH ASSOCIATED PIPING, VALVES AND ACCESSORIES SHALL BE REMOVED. CAP HOT WATER SUPPLY AND RETURN PIPING FOR FUTURE CONNECTION. EXISTING CONCRETE PAD SHALL REMAIN. REMOVE EXISTING BREACHING. CLEAN EXISTING CHIMNEY. PATCH TO MATCH REMAINING OPENING. PROVIDE STAINLESS STEEL DOUBLE PITCHED, REINFORCED CAP AT TOP OF THE EXISTING CHIMNEY
②	EXISTING EXPANSION TANK SHALL REMAIN
③	EXISTING DOMESTIC INDIRECT WATER HEATER AND ASSOCIATED PIPING SHALL BE REPLACED.
④	EXISTING COLD WATER PIPE SHALL REMAIN
⑤	EXISTING CIRCULATING PUMPS SHALL REMAIN.
⑥	EXISTING FLOOR DRAIN SHALL REMAIN. PROVIDE NEW STRAINER.
⑦	EXISTING GAS PIPE SHALL BE REMOVED TO GAS METER. REWORK THE GAS METER. COORDINATE WITH GAS COMPANY. PROVIDE NEW EMERGENCY GAS SHUT-OFF VALVE
⑧	EXISTING AIR SEPARATOR AND ASSOCIATED PIPING FOR THE HEATING SYSTEM SHALL REMAIN
⑨	EXISTING BOILER CONTROLS AND ASSOCIATED ACCESSORIES SHALL BE REMOVED.
⑩	REMOVE AND REPLACE ALL PIPE INSULATION IN THE MECHANICAL ROOM. PROVIDE NEW INSULATION FOR ALL NEW AND EXISTING PIPES IN THE MECHANICAL ROOM. CONTRACTOR SHALL FIELD VERIFY PIPE SIZES AND LENGTH.
⑪	EXISTING COMBUSTION AIR LOUVER SHALL BE BLANKED-OFF



**CONDENSATE PIPING INSTALLATION**  
NO SCALE

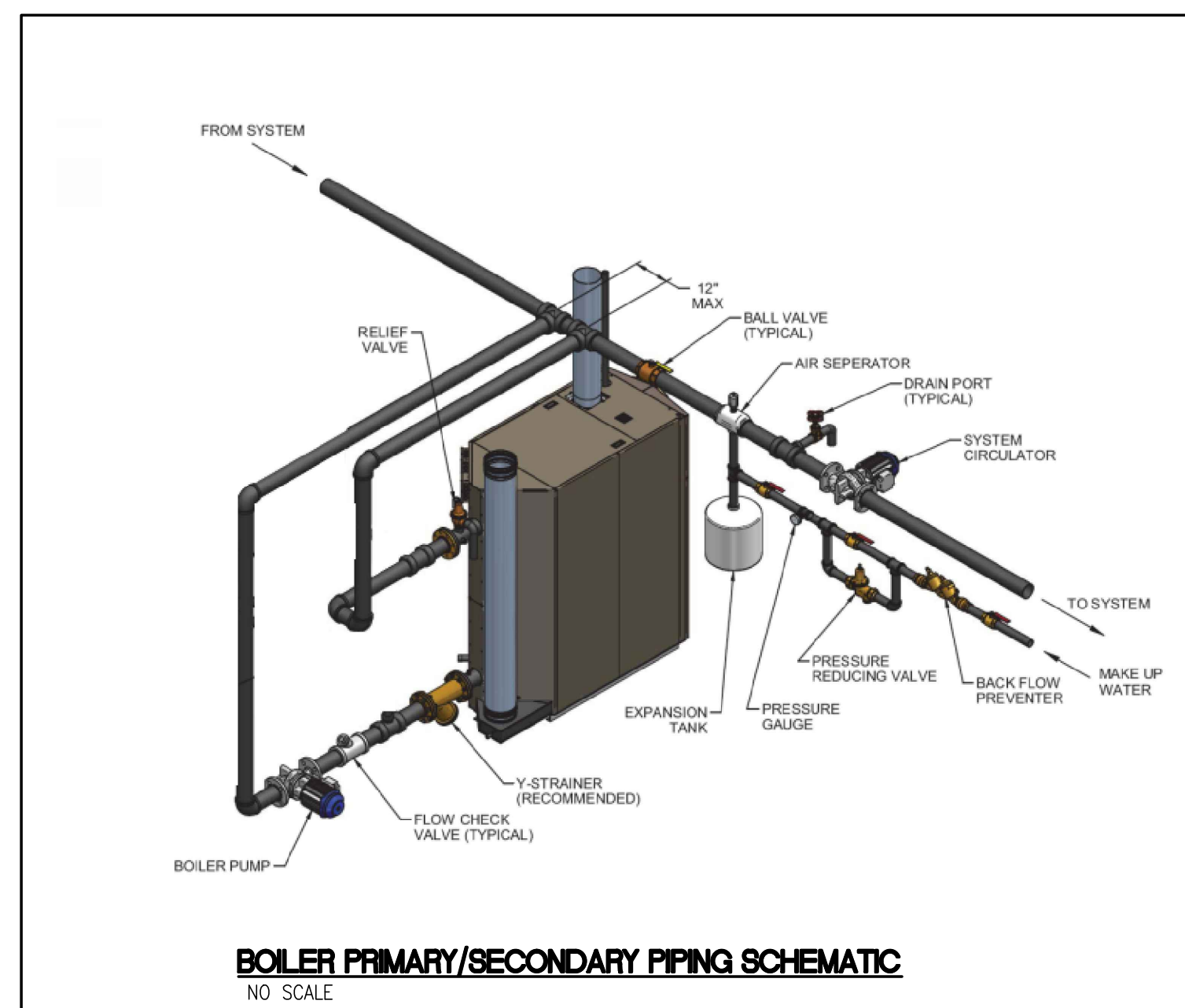


**PIPING INSTALLATION AT HOT WATER HEATER**  
NOT TO SCALE

GAS FIRED, HOT WATER BOILER SCHEDULE											(NATURAL GAS min. PRESSURE 4" w.c.)					
TAG	LOCATION	MANUF.	MODEL	WATER FLOW (MIN/MAX) (GPM)	GALLON CAPACITY (GAL)	FUEL	INPUT (MIN/MAX) (MBH)	PRESSURE (MIN/MAX)	THERMAL EFFICIENCY	VOLTAGE	PHASE	TOTAL AMPS	GROSS OUTPUT (MBH)	VENT SIZE (DIA)	AIR INTAKE (DIA)	REMARKS
B-1	BOILER RM	LOCHINVAR	FBN1751	25-350	106	NATURAL GAS	70/1750	4"WC MIN/14"WC MAX	96.2%	120	1	10	1443	8"	8"	1,2,3,4,5,6,7

**REMARKS:**

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. POWER WIRING AND RACEWAY BY DIVISION 26
3. DISCONNECT, MOTOR STARTERS AND CONTROLS BY DIVISION 23
4. UNIT MANUFACTURER SHALL PROVIDE LOCK-UP STYLE REGULATOR. REGULATOR SHALL BE INDEPENDENTLY VENTED TO OUTSIDE.
5. BOILER MANUFACTURER SHALL SELECT, FURNISHED AND INSTALL HI/LOW GAS PRESSURE SWITCH, LOW WATER CUT OFF-MANUAL RESET, HIGH LIMIT-MANUAL RESET, CIRCULATING PUMP AND CONDENSATE NEUTRALIZATION TANK. THIS CONTRACTOR SHALL PIPE CONDENSATE TO FLOOR DRAIN.
6. BOILER MANUFACTURER SHALL PROVIDE BOILER CONTROLS INCLUDING OUTDOOR AIR TEMPERATURE SENSOR FOR OUTDOOR REST. THIS CONTRACTOR SHALL INSTALL CONTROLS FURNISHED BY THE BOILER MANUFACTURER
7. BOILER MANUFACTURER SHALL PROVIDE SIDE WALL VENT TERMINATION KIT. THIS CONTRACTOR SHALL PROVIDE BOILER VENT PIPES AND VENT THE BOILER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.



**BOILER PRIMARY/SECONDARY PIPING SCHEMATIC**  
NO SCALE

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TITLE  
**BOILER ROOM  
MECHANICAL AND  
ELECTRICAL  
DEMOLITION and  
NEW WORK PART  
PLANS**

DATE 5/29/2020

DWG. NO.  
**ME1.1**