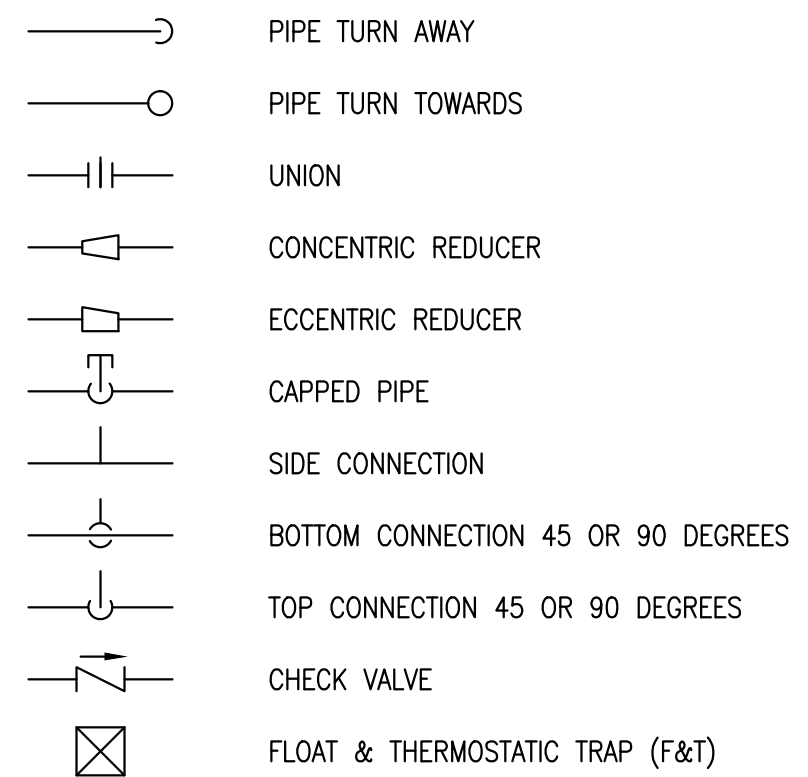
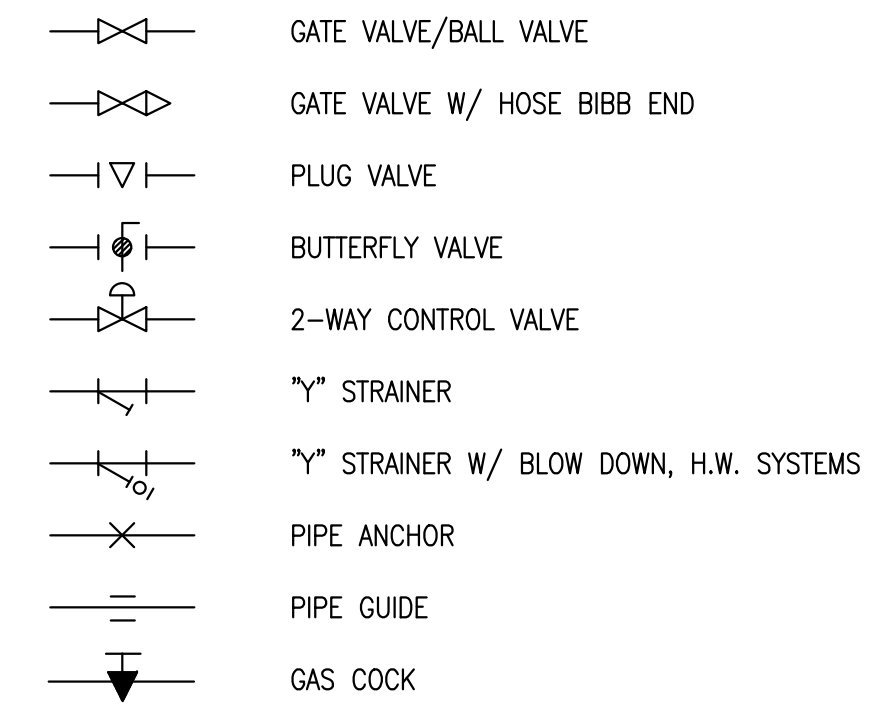
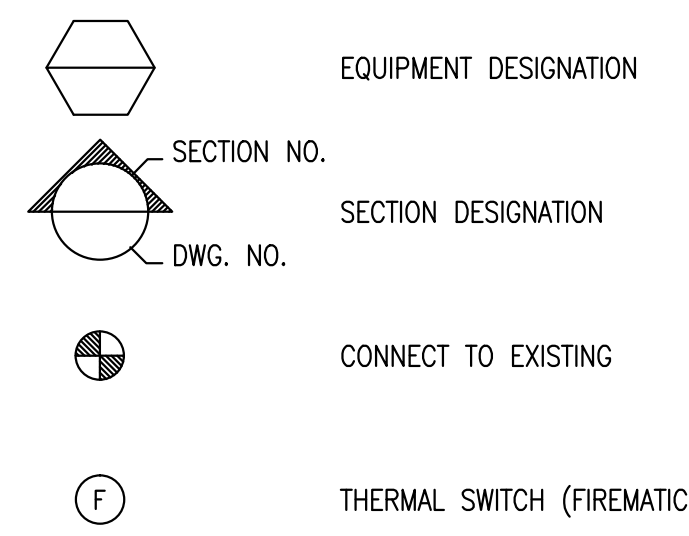
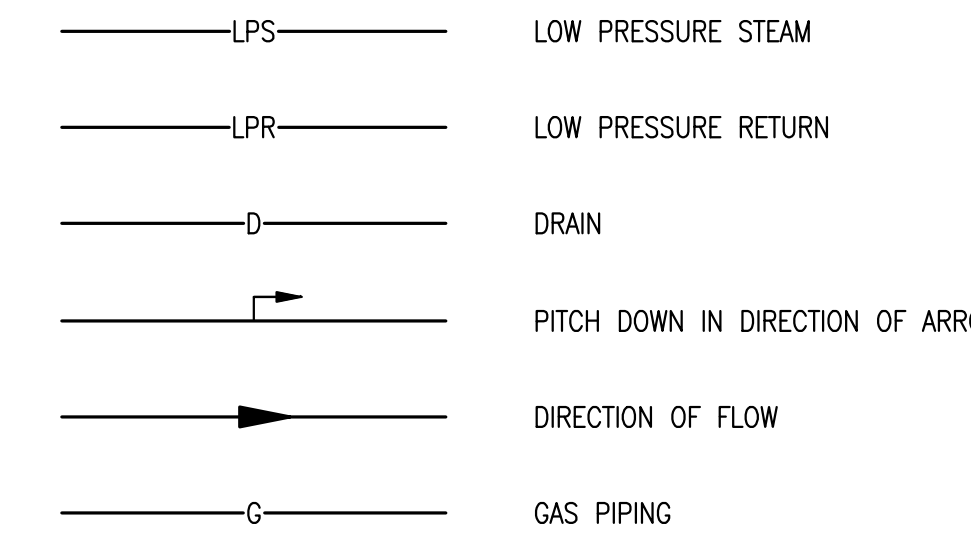


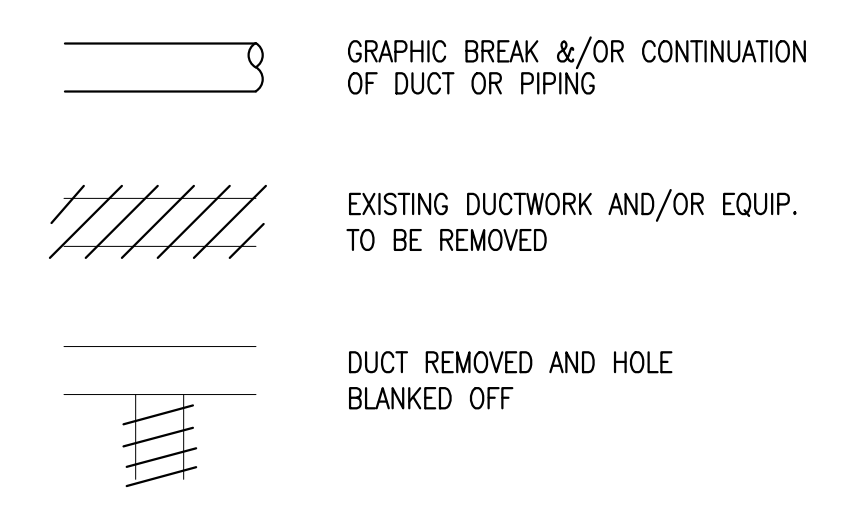
**GENERAL**



**PIPING**



**SHEETMETAL**



**ABBREVIATIONS**

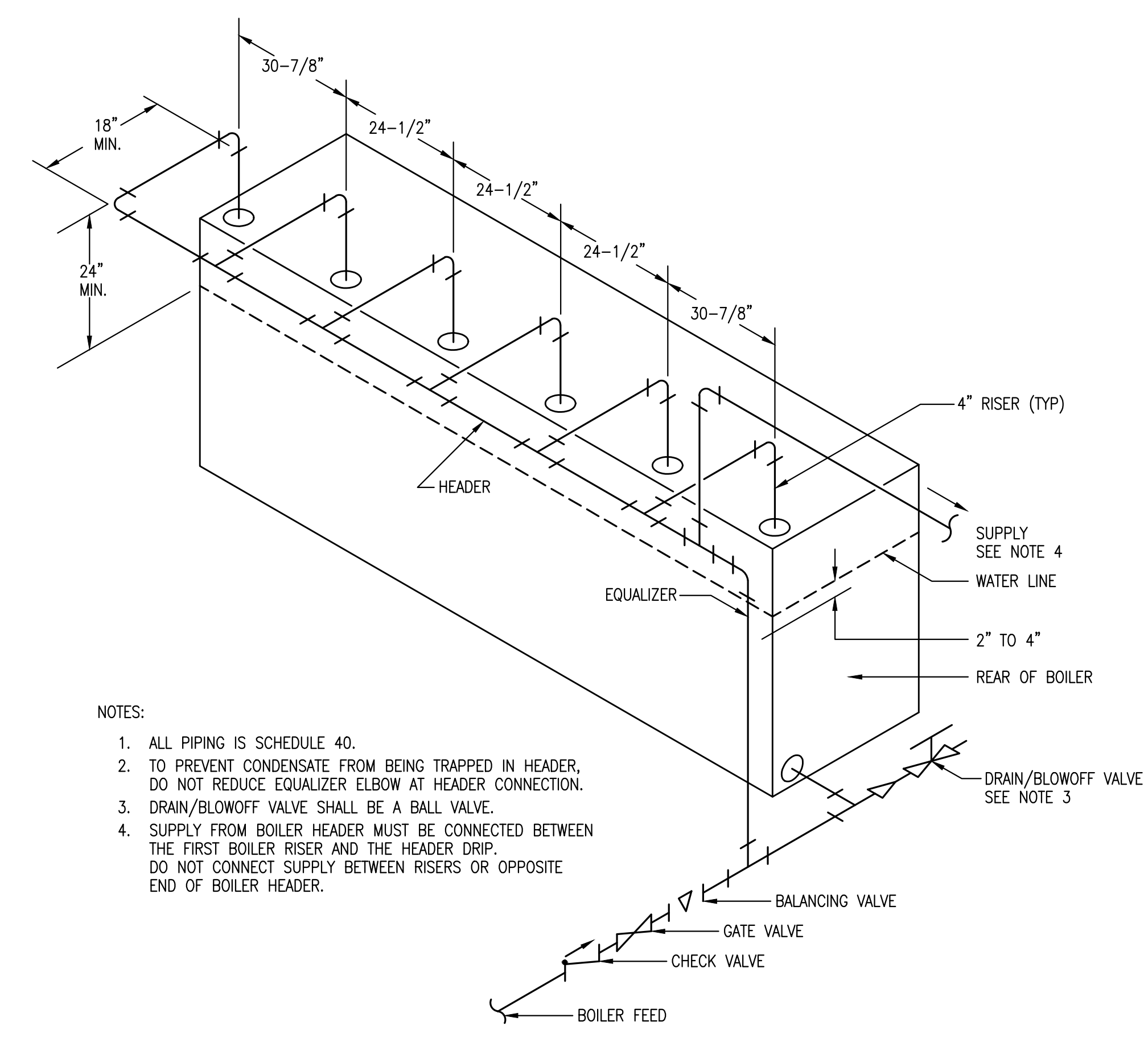
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
B	BOILER	MIN	MINIMUM
CO	CLEAN OUT	P	PUMP
EC	ELECTRICAL CONTRACTOR	PC	PLUMBING CONTRACTOR
EWT	ENTERING WATER TEMP. DEGREES F.	PD	PRESSURE DROP (FEET OF WATER)
GPM	GALLONS PER MINUTE	WB	WET BULB TEMP. DEGREES F.
HVAC	HEATING, VENTILATING & AIR CONDITIONING CONTRACTOR		

**DRAWING LIST**

ME-1	LEGEND, GENERAL NOTES, DETAILS & SCHEDULES
ME-2	BOILER ROOM DEMOLITION & RENOVATION PART PLANS

**GENERAL MECHANICAL NOTES**  
APPLICABLE TO ALL DRAWINGS

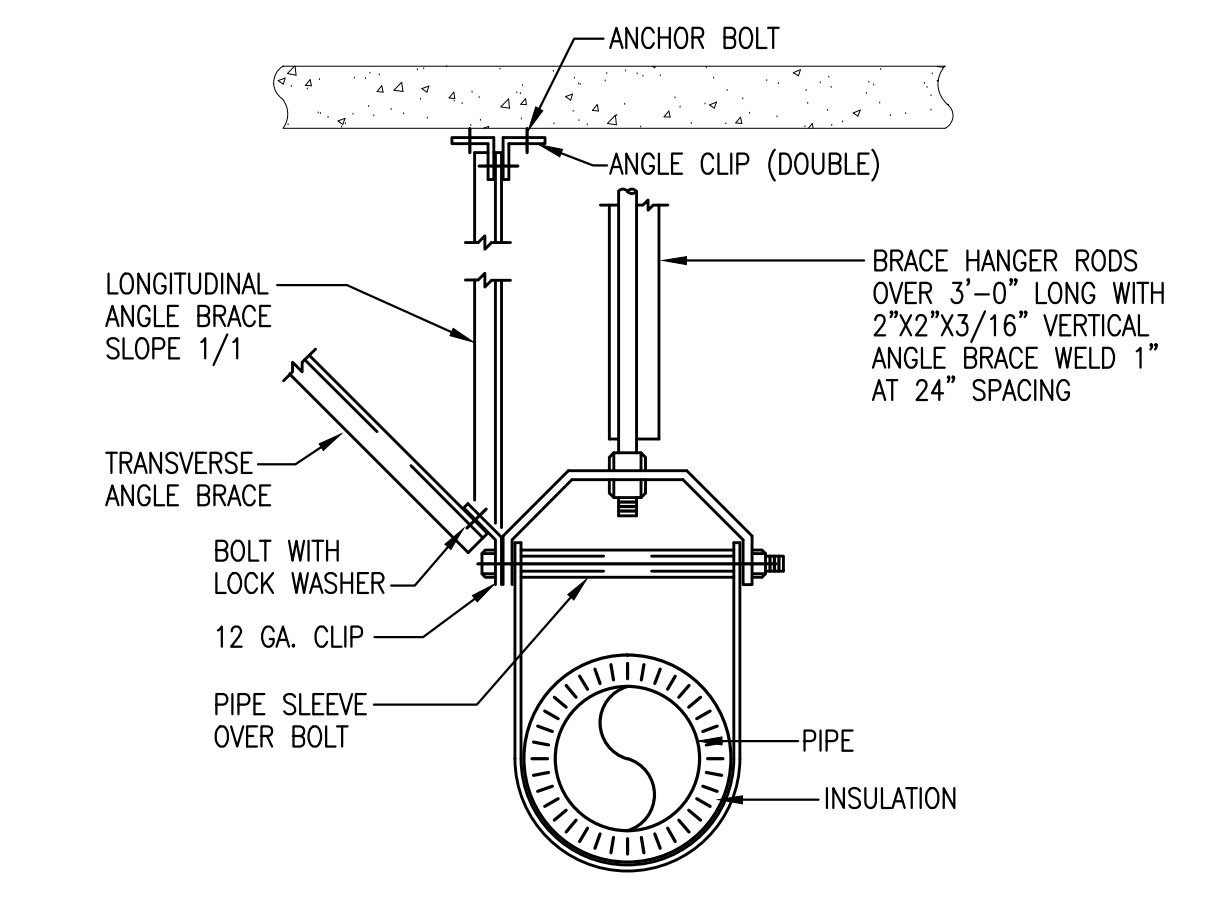
- PARTICULAR ATTENTION SHOULD BE PAID TO ADDITIONAL NOTES SHOWN ON THE INDIVIDUAL DRAWINGS.
- THE DUCTWORK AND PIPING SYSTEMS SHOWN ON THE DRAWINGS ARE SHOWN DIAGRAMMATICALLY WITHOUT EVERY OFFSET AND TRANSITION REQUIRED TO INSTALL THE WORK. OBVIOUS OFFSETS AND TRANSITIONS, AS RELATED TO HVAC, ARE SHOWN WHERE POSSIBLE WITHOUT AFFECTING THE CLARITY OF THE DRAWINGS.
- ALL MATERIALS INSTALLED IN THIS WORK SHALL BE NEW UNLESS SPECIFICALLY NOTED FOR RE-USE.
- ALL WORK PERFORMED SHALL BE GUARANTEED FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER, UNLESS SUCH DEFECTS ARE CLEARLY THE RESULT OF MISUSE OF EQUIPMENT BY PERSONS NOT UNDER THE CONTROL OF THE SUBCONTRACTOR.
- THE HVAC SUBCONTRACTOR SHALL OBTAIN INSTALLATION INSTRUCTIONS ON EACH PIECE OF EQUIPMENT TO BE FURNISHED WHICH THE HVAC SUBCONTRACTOR IS REQUIRED TO INSTALL OR TO WHICH FINAL CONNECTIONS ARE TO BE MADE UNDER THE HVAC CONTRACT. THE HVAC SUBCONTRACTOR SHALL INSTALL AND MAKE FINAL CONNECTIONS PER THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. THE CONTRACTOR SHALL DEMONSTRATE TO THE OWNER THAT THE INSTALLED EQUIPMENT OPERATES AS DESIGNED.
- ALL WORK UNDER THIS SECTION SHALL BE COORDINATED WITH ALL OTHER TRADES BEFORE INSTALLATION IS MADE.
- COORDINATE ALL MOTORS, STARTERS, DISCONNECT AND SMOKE DETECTOR REQUIREMENTS WITH ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT REQUIRING SAME.
- THE HVAC CONTRACTOR SHALL FURNISH ALL SUPPLEMENTAL SUPPORT STEEL REQUIRED FOR THE INSTALLATION OF HVAC EQUIPMENT, UNLESS OTHERWISE INDICATED.
- THE HVAC CONTRACTOR SHALL FIELD MEASURE ALL DUCT RUNS PRIOR TO FABRICATING DUCTWORK. FURNISH AND INSTALL ALL DUCT TRANSITIONS, ELBOWS, FITTINGS AND OFFSETS REQUIRED TO ACCOMMODATE FIELD CONDITIONS.
- THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING AND STAGING REQUIRED FOR THE INSTALLATION OF THE HVAC SYSTEMS.



NOTES:

- ALL PIPING IS SCHEDULE 40.
- TO PREVENT CONDENSATE FROM BEING TRAPPED IN HEADER, DO NOT REDUCE EQUALIZER ELBOW AT HEADER CONNECTION.
- DRAIN/BLOWOFF VALVE SHALL BE A BALL VALVE.
- SUPPLY FROM BOILER HEADER MUST BE CONNECTED BETWEEN THE FIRST BOILER RISER AND THE HEADER DRIP. DO NOT CONNECT SUPPLY BETWEEN RISERS OR OPPOSITE END OF BOILER HEADER.

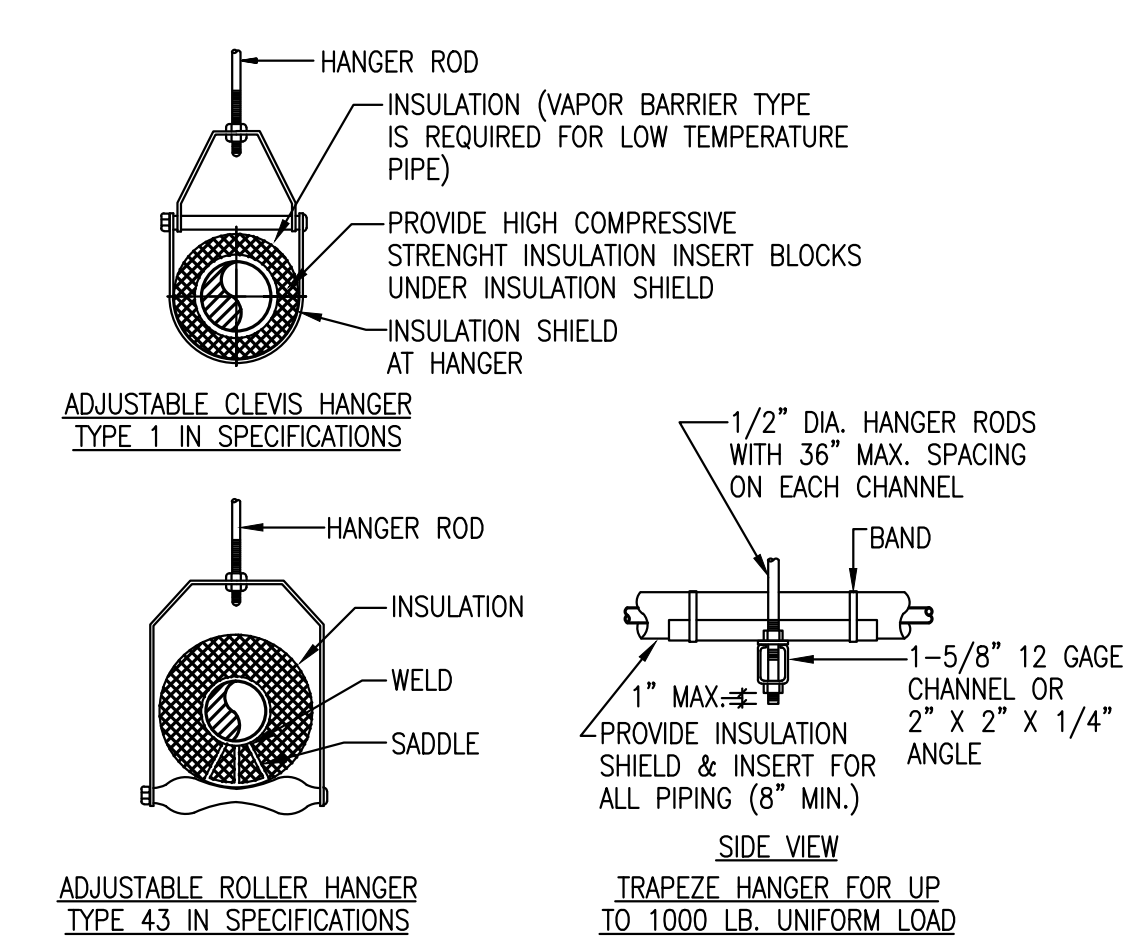
**STEAM BOILER PIPING DETAIL**  
N.T.S.



PIPE SIZE	ANGLE BRACE	BOLT TO ANGLE	ANGLE CLIP	ANCHOR BOLT OR INSERT
2-1/2"	2"x2" 16 GA.	3/8"	3"x3"x1/4"	3/8"
3"-4"	2-1/2"x2-1/2" 16 GA.	3/8"	3"x3"x1/4"	1/2"
5"-6"	2-1/2"x2-1/2" 16 GA.	1/2"	5"x3"x1/2"	3/4"
8"	3"x3" 12 GA.	5/8"	2-5"x3"x1/2"	2-5/8"
10"	3"x3" 12 GA.	3/4"	2-5"x3"x1/2"	2-3/4"

\* 1 5/8 X 1 5/8 X 12 GAGE CHANNEL MAY BE USED.

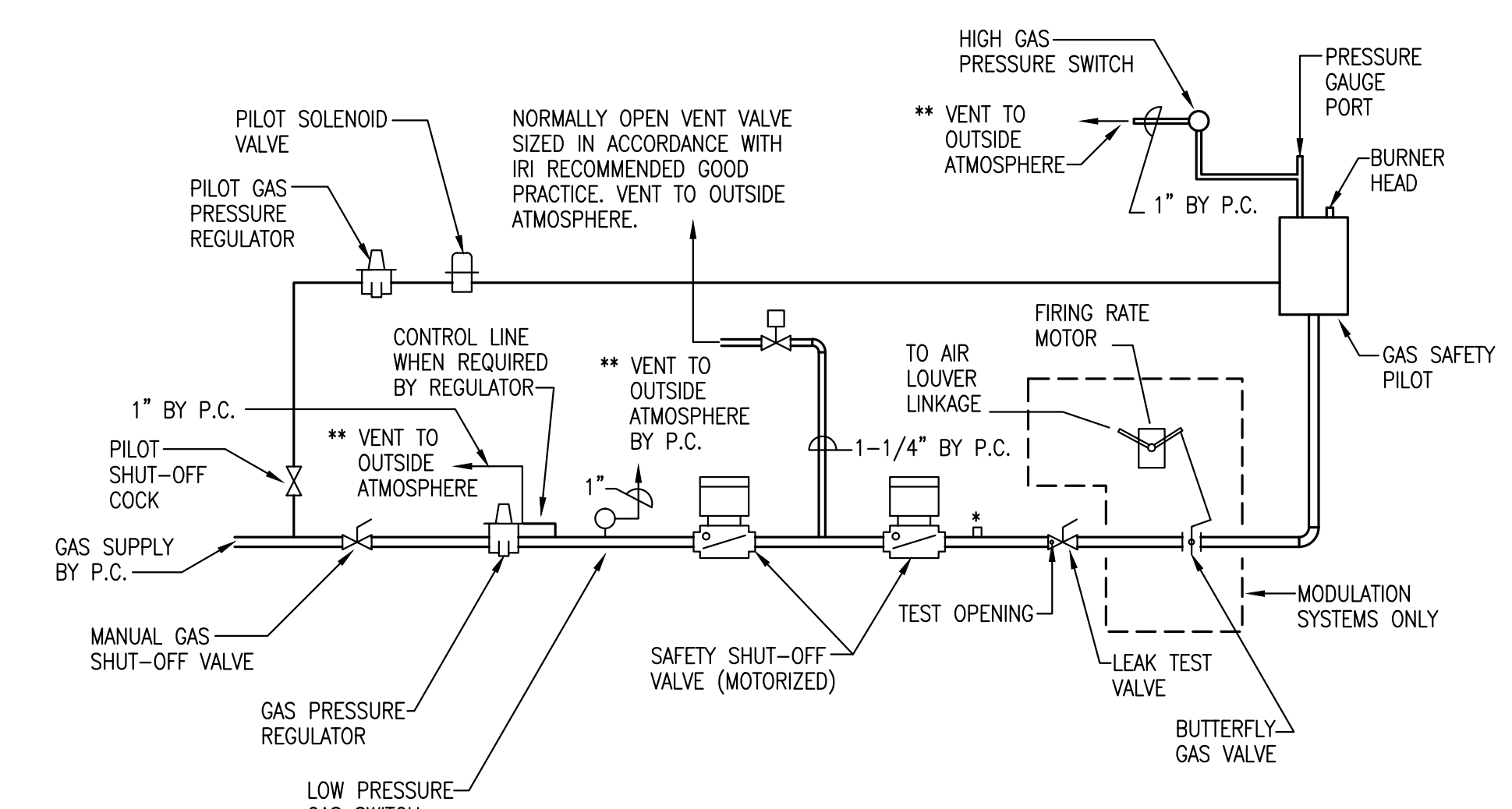
**TYPICAL SEISMIC BRACING FOR PIPE DETAIL**  
N.T.S.



MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET																	
NDK. SIZE	THRU 3/4"	1	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
PIPE	8 FT	8	8	10	10	10	12	12	20	20	20	20	27	28	30	32	
TUBING	6 FT	6	6	8	8	8	8	10	10	10	10	10	-	-	-	-	-

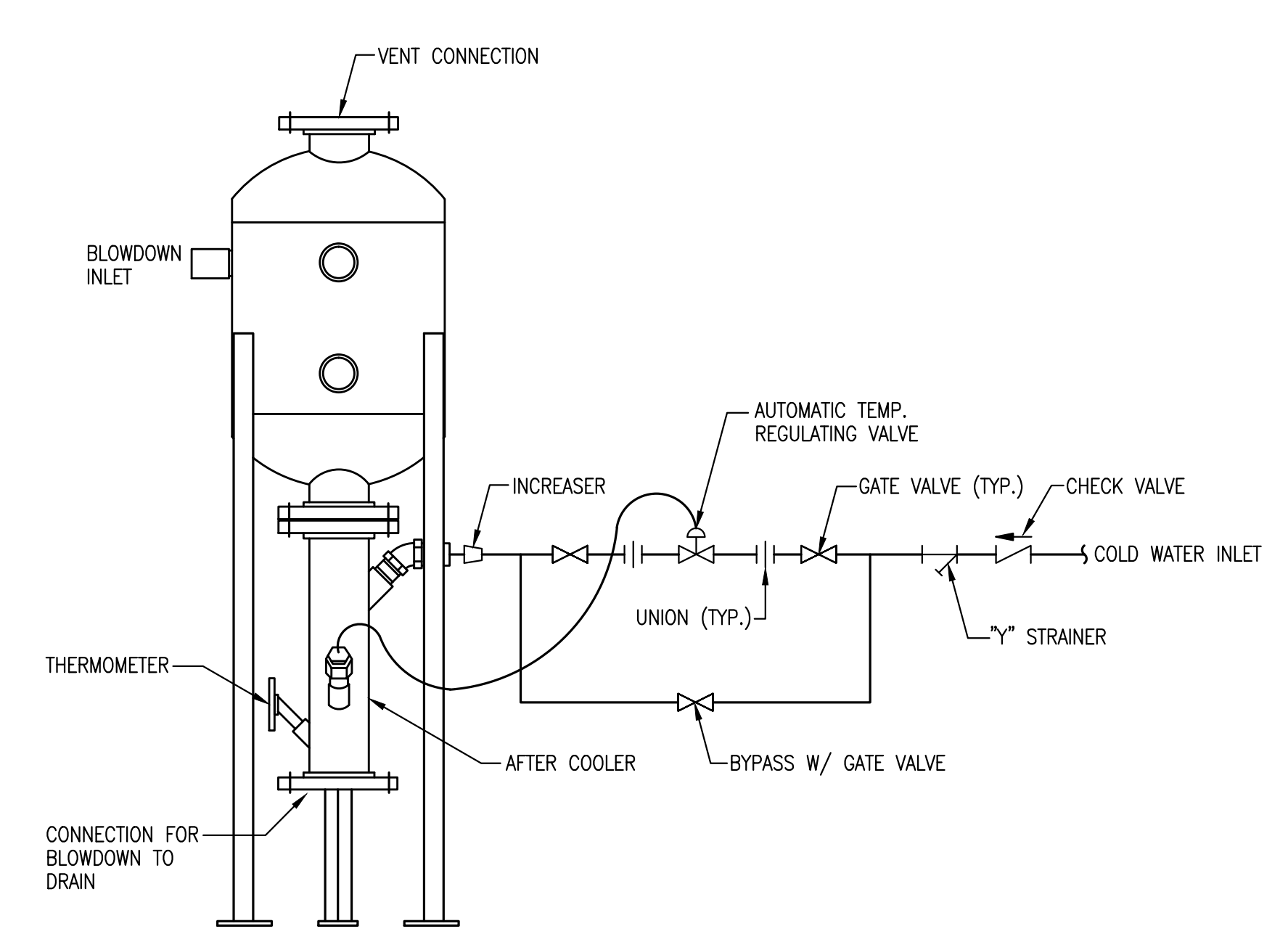
NOTE: FOR TRAPEZOID HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZOID

**TYPICAL PIPE HANGERS**  
N.T.S.



- TEST OPENING IF NOT IN VALVE BODIES.
- ALL VENT LINES MUST BE SIZED, LOCATED, PROTECTED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL OR GOVERNING CODES OR IF NOT APPLICABLE, THE BURNER INSTALLATION INSTRUCTION MANUAL.

**TYPICAL GAS PIPING DETAIL**  
N.T.S.



**BLOWDOWN SEPARATOR DETAIL**  
N.T.S.

**D·R·A**  
Drumme  
Rosane  
Anderson,  
Inc.  
Planning  
Architecture  
Interior Design  
235 Bear Hill Road  
4th Floor  
Waltham, MA  
02451  
617-964-1700  
fax 617-969-1701  
info@draws.com

**HIGH SCHOOL  
BOILER  
REPLACEMENT  
PROJECT**

Town of Arlington,  
Massachusetts

GRIFFITH & VARY, INC.  
Consulting Engineers  
12 Kendrick Road  
Wareham, MA 02571  
508-295-0050 (T)  
508-295-0003 (F)  
www.griffithandvary.com

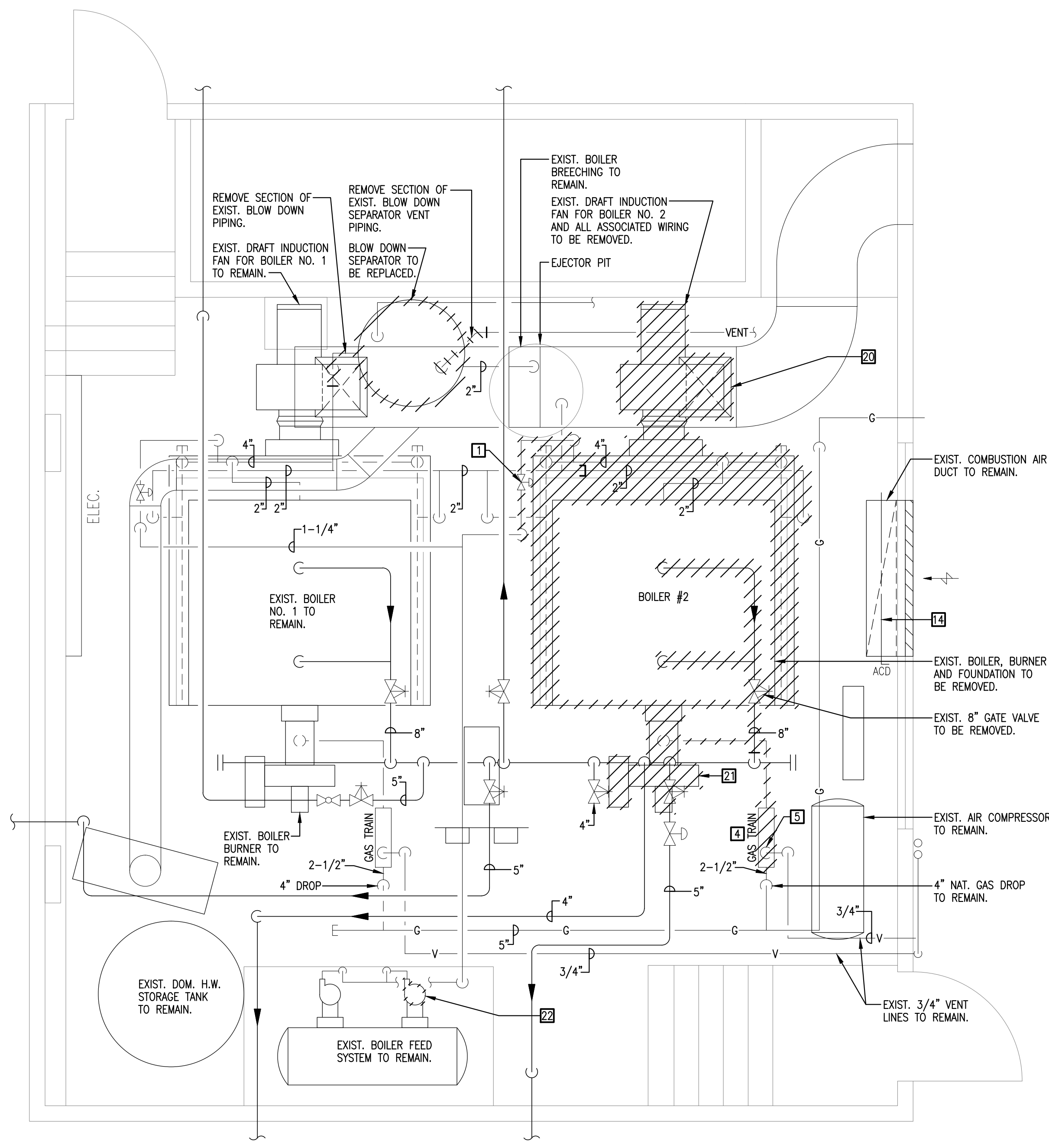
**LEGEND,  
GENERAL NOTES,  
DETAILS &  
SCHEDULES**

Scale: NONE  
Job No.: 0000.00  
Drawn By: JAJ  
Date: 10/16/13

**ME-1**

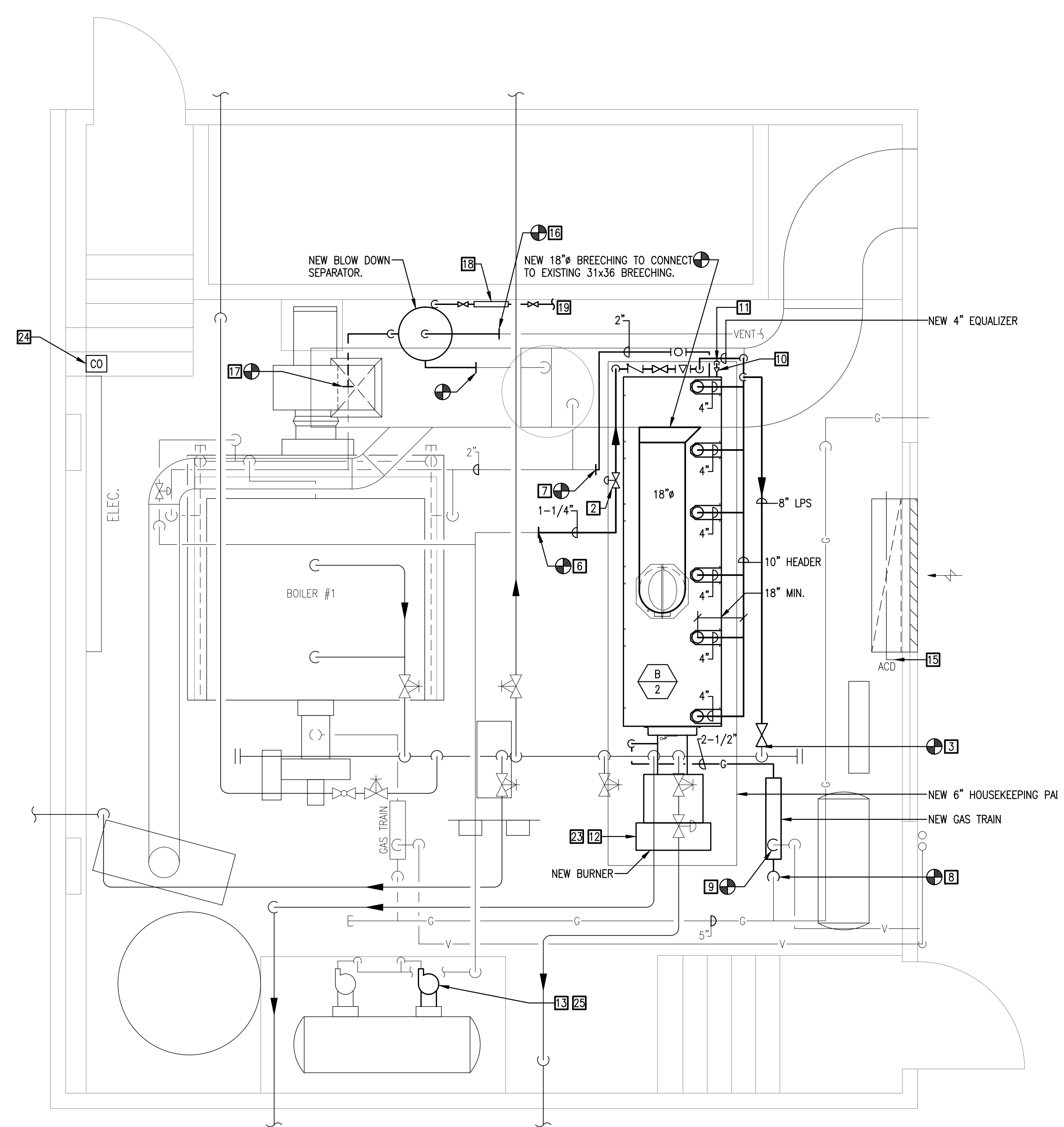
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**BOILER ROOM DEMOLITION PART PLAN**  
 SCALE: 3/8"=1'-0"

- KEYED NOTES:**
- 1 RELOCATE EXISTING BOILER FEEDWATER CONTROL VALVE. ATC CONTRACTOR SHALL EXTEND WIRING AS REQUIRED TO SUIT NEW LOCATION.
  - 2 NEW LOCATION OF EXISTING BOILER FEEDWATER CONTROL VALVE.
  - 3 CONNECT NEW 8" LPS WITH BOILER ISOLATION GATE VALVE TO EXISTING STEAM HEADER.
  - 4 REMOVE EXISTING GAS TRAIN AND PIPING BACK TO GAS COCK. CONTRACTOR SHALL ALSO REMOVE GAS PILOT PIPING.
  - 5 DISCONNECT 3/4" VENT LINE FROM GAS TRAIN REGULATOR.
  - 6 CONNECT NEW 1-1/4" BOILER TO EXISTING.
  - 7 CONNECT NEW 2" BOILER BLOWDOWN PIPING TO EXISTING.
  - 8 CONNECT NEW GAS TRAIN TO EXISTING 4" GAS COCK IN PIPING DROP.
  - 9 CONNECT EXISTING 3/4" VENT LINE TO NEW GAS TRAIN.
  - 10 NEW A.S.M.E. SAFETY VALVE (15 PSI). FURNISH W/ BOILER.
  - 11 SAFETY/RELIEF VALVE PIPING TO TERMINATE 12" AFF.
  - 12 NEW BOILER BURNER, FURNISHED BY BOILER MANUFACTURER AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CONTROL WIRING, INTERLOCKS AND CONNECTIONS TO BMS/ATC SYSTEMS.
  - 13 OVERHAUL EXISTING BOILER FEED PUMP.
  - 14 REPLACE EXISTING COMBUSTION AIR DAMPER AND ACTUATOR WITH NEW.
  - 15 FURNISH & INSTALL NEW COMBUSTION AIR DAMPER AND ACTUATOR IN EXISTING COMBUSTION AIR DUCT. INTERLOCK DAMPER OPERATION WITH EXISTING DOM. HOT WATER HEATER, EXISTING BOILER AND NEW BOILER SUCH THAT DAMPER OPENS UPON A CALL FOR EQUIPMENT OPERATIONS. DAMPER SHALL PROVE OPEN FOR EQUIPMENT TO FIRE.
  - 16 CONNECT NEW VENT FROM BLOW DOWN SEPARATOR TO EXISTING VENT.
  - 17 EXTEND EXISTING BLOW DOWN PIPING TO NEW BLOW DOWN SEPARATOR.
  - 18 NEW 3/4" RPB-3 (SEE DETAIL ON DWG. ME-1) MOUNTED ON WALL.
  - 19 CONNECT NEW 3/4" TO NEAREST EXISTING DOMESTIC WATER SOURCE.
  - 20 DISCONNECT EXISTING FAN. PULL CIRCUIT BACK TO SOURCE AND MAKE SAFE. LABEL EXISTING CIRCUIT BREAKER AS SPARE.
  - 21 DISCONNECT EXISTING BURNER. PULL CIRCUIT BACK TO SOURCE AND MAKE SAFE. LABEL EXISTING CIRCUIT BREAKER AS SPARE.
  - 22 DISCONNECT EXISTING PUMP. MAINTAIN CIRCUIT FOR RECONNECTION.
  - 23 CONNECT NEW BURNER AND CONTROL PANEL TO EXISTING SPARE 50/3 CIRCUIT BREAKER FOUND IN PANELBOARD PERE. CIRCUIT SHALL BE 3#8+1#10G-3/4"C.
  - 24 PROVIDE LOCAL SELF CONTAINED CARBON MONOXIDE DETECTOR MOUNTED 24" ABOVE BOTTOM STEP. EQUAL TO KIDDE #900-0120. CONNECT TO NEAREST AVAILABLE RECEPTACLE CIRCUIT AS REQUIRED.
  - 25 RECONNECT PUMP AS REQUIRED.



**BOILER ROOM RENOVATION PART PLAN**  
 SCALE: 3/8"=1'-0"

**BOILER ROOM  
 DEMOLITION &  
 RENOVATION  
 PART PLANS**

Scale: 1/4"=1'-0"  
 Job No.: 0000.00  
 Drawn By: JAJ  
 Date: 10/16/13

**ME-2**