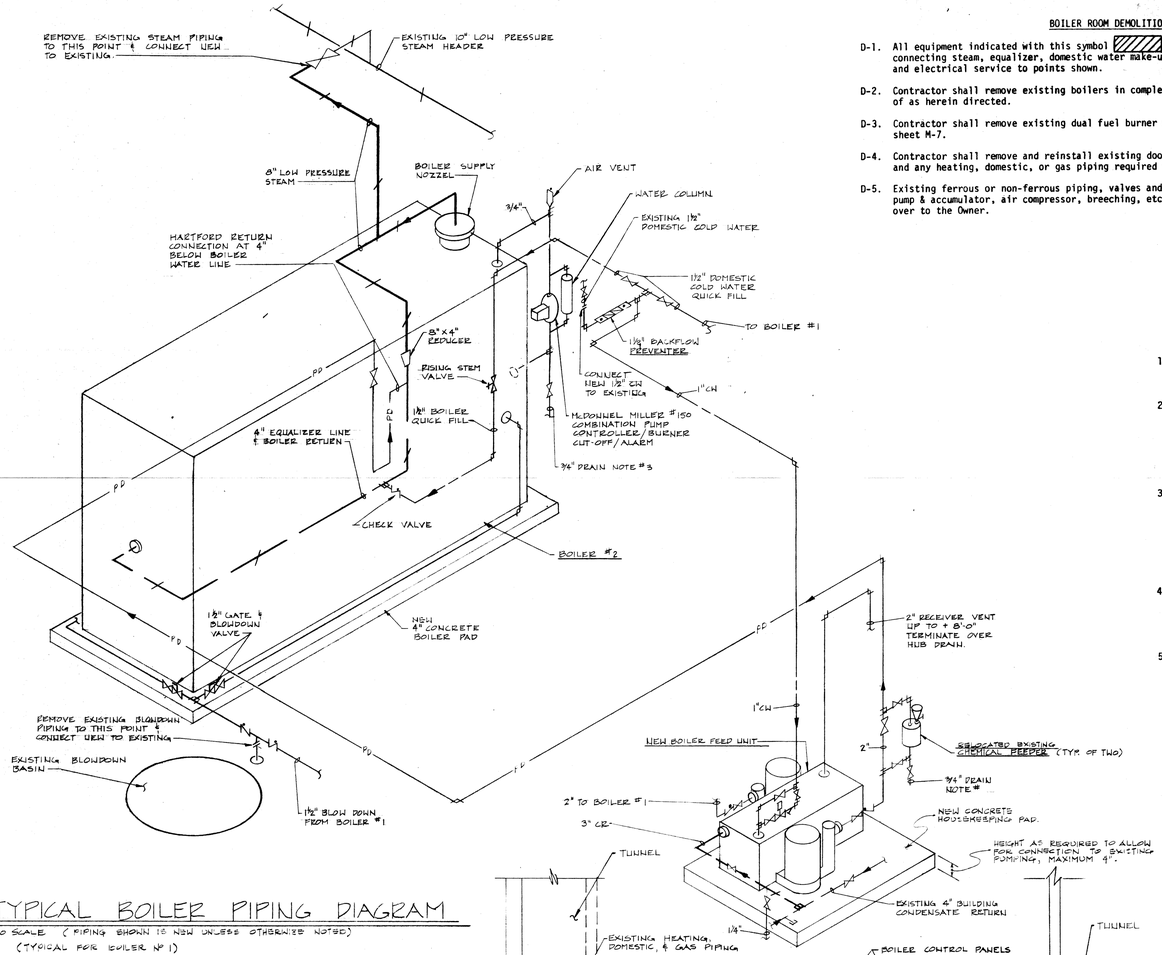


TYPICAL BOILER PIPING DIAGRAM

NO SCALE (PIPING SHOWN IS NEW UNLESS OTHERWISE NOTED)
(TYPICAL FOR BOILER Nº 1)

BOILER ROOM DEMOLITION NOTES

D-1. All equipment indicated with this symbol ▨ shall be completely removed including all connecting steam, equalizer, domestic water make-up, vacuum pump discharge, blow down piping and electrical service to points shown.

D-2. Contractor shall remove existing boilers in complete sections (Boiler #2 first) and dispose of as herein directed.

D-3. Contractor shall remove existing dual fuel burner and fuel train and reinstall as shown on sheet M-7.

D-4. Contractor shall remove and reinstall existing door, transom and frame, steel stair and railing, and any heating, domestic, or gas piping required to facilitate ingress of new boilers.

D-5. Existing ferrous or non-ferrous piping, valves and fittings, cast iron boiler sections, vacuum pump & accumulator, air compressor, breeching, etc. removed from boiler room shall be turned over to the Owner.

BOILER ROOM MECHANICAL EQUIPMENT SCHEDULE

1. New Heating System Boiler #1 & 2:
Bryan Model L-64-S, or an approved equal. Gross output rating 3440 MBH., 102 boiler horsepower, water tube, 520 square feet heating surface.

2. New Heating System Burner #1 & 2:
Industrial Combustion Model GLG, or an approved equal, combination gas-oil burner, gas capacity, 4200 cubic feet per hour of 0.6 specific gravity, 1000 BTU cubic foot natural gas at a maximum manifold pressure of 6" water column. Oil capacity: 30 gallons per hour with a heat content of 140,000 BTU per gallon. Burner Motor Data: 2 HP, 208 volts, 3 phase, 60 hertz.

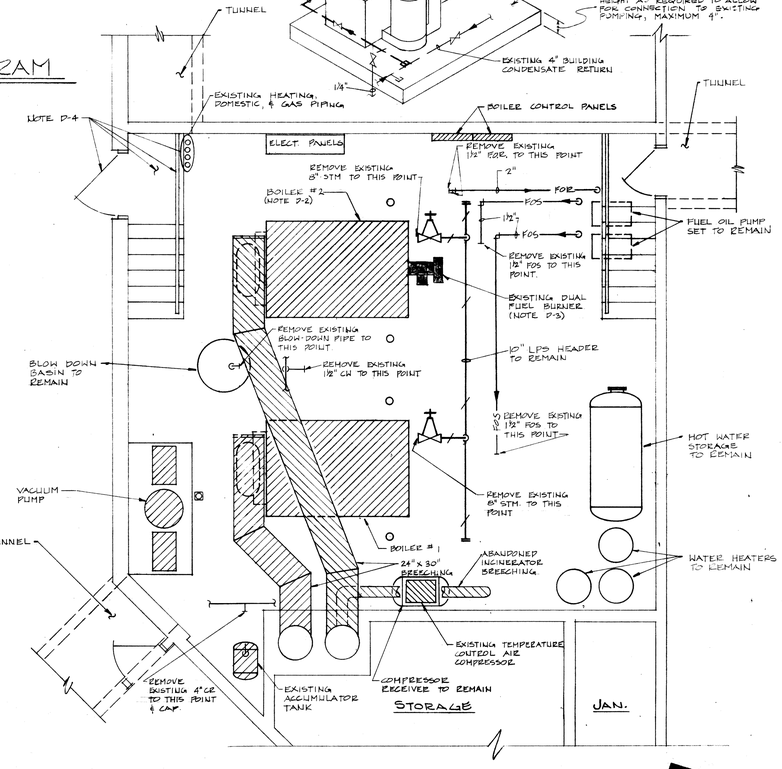
3. New Boiler Feed Unit:
Domestic Model 152CM duplex unit or an approved equal. The unit shall be rated 15,000 square feet EDR 22.5 GPM, 20 PSI discharge pressure, maximum inlet height: 14 inches to centerline. Motor data: (2) 1/2 HP, 3500 RPM, 208 volts, 3 phase, 60 hertz; receiver capacity 52 gallons. Provide unit with factory mounted control panel, make up water solenoid valve with 3 valve bypass, and inlet basket strainer.

4. New Temperature Control Air Compressor and Aftercooler:
(Reuse existing receiver) Compressor motor: 2 horsepower (minimum), 208 volts, 3 phase, 60 hertz. Aftercooler motor: 1/5 HP, 115 volts, 1 phase, 60 hertz. Compressor and aftercooler sized by Johnson Controls, furnished and installed by the Contractor.

5. New Backflow Preventer
Hersey, Watts, or an approved equal - see specifications.

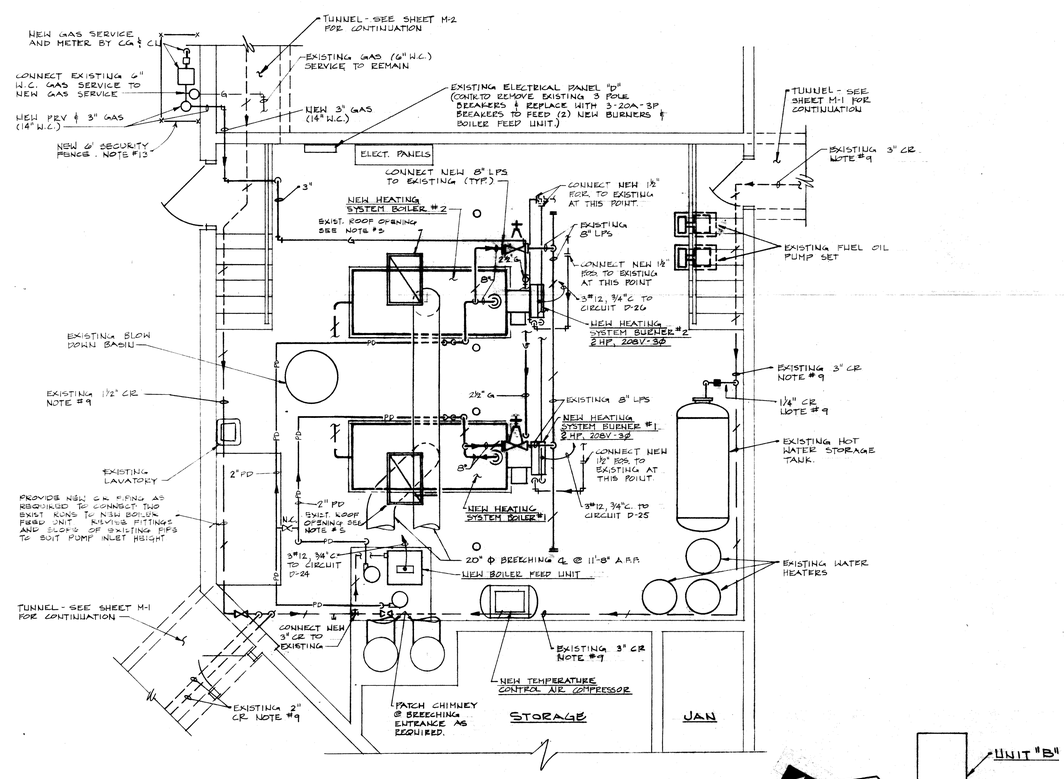
PLAN NOTES

1. All work shown is new and by the Contractor unless otherwise noted.
2. Contractor shall verify all existing conditions at the job site.
3. All pressure relief valves, blowdown valves, drain valves, etc. shall have a drain line, full size of outlet, run to nearest floor drain or sump pit.
4. The Contractor shall assume all costs not borne by the local gas utility to provide a complete gas service for the boilers.
5. 24" x 30" opposed blade motorized combustion air damper by Temperature Control Contractor. Damper shall be controlled by a relay furnished by the burner supplier in the Heating System Burner control cabinet. Contractor shall furnish remote wall switch to override relay for summer ventilation.
6. All valves, thermometers, gauges, feeders, fittings, etc., noted on boilers, and pumps, are typical for all boilers and pumps.
7. All existing and new overhead gate valves on supply heating mains, 4" and larger, and over 8'-0" above finished floor shall be chain operated. All heating system and domestic cold water valves 4" and larger shall be completely reconditioned per specifications or replaced at the Contractor's option.
8. All horizontal piping within the boiler room shall be suspended on rubber-in-shear hangers (see specifications).
9. All condensate return piping (CR) shown is existing and shall be insulated as shown in the specifications unless otherwise noted.
10. All existing steam, domestic hot and cold water piping within the boiler room where insulation is missing, loose, or damaged shall be reinsulated as per specifications unless otherwise noted. Insulate all new piping.
11. Contractor shall paint all wall and ceiling surfaces in the boiler room including doors and steel stairs. Colors to be as selected by Owner. Paint all new and existing piping, pipe hangers, supports, tanks, receivers, fuel oil pumps, etc. Piping, tanks and pumps shall be color coded and piping identified as per specifications. Electrical conduit and temperature control tubing shall be painted to match walls. Electrical panels and new equipment shall not be painted.
12. Contractor shall patch and repair existing chimney masonry within the Boiler Room as required and directed by the Engineer.
13. Provide new 6 foot woven wire chain link fence, No. 9 gauge with 4 foot wide gate with locking hasp and approved lock. Provide with all accessories as required by Gas Utility. Provide minimum 24" clearance around meter and piping.



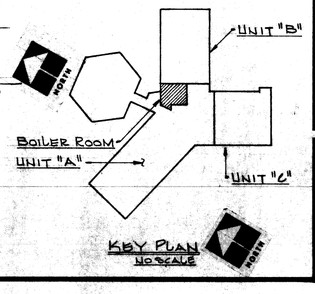
MECHANICAL BOILER ROOM DEMOLITION LAYOUT

SCALE: 1/4" = 1'-0"



MECHANICAL BOILER ROOM LAYOUT

SCALE: 1/4" = 1'-0"



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BOILER ROOM LAYOUTS, DETAILS & SCHEDULES

METROPOLITAN SCHOOL DISTRICT OF LAWRENCE TOWNSHIP
CRESTVIEW ELEMENTARY SCHOOL

NO.	DATE	REVISIONS DESCRIPTION

COMM. NO.	8121
DATE	11-30-81
DRAWN BY	SJOE
CHECKED BY	EES

JOHN N. OBERLIES JR. ENGINEER No. 13968 STATE OF INDIANA PROFESSIONAL ENGINEER
CERTIFIED BY

SHEET
M-3
OF 13