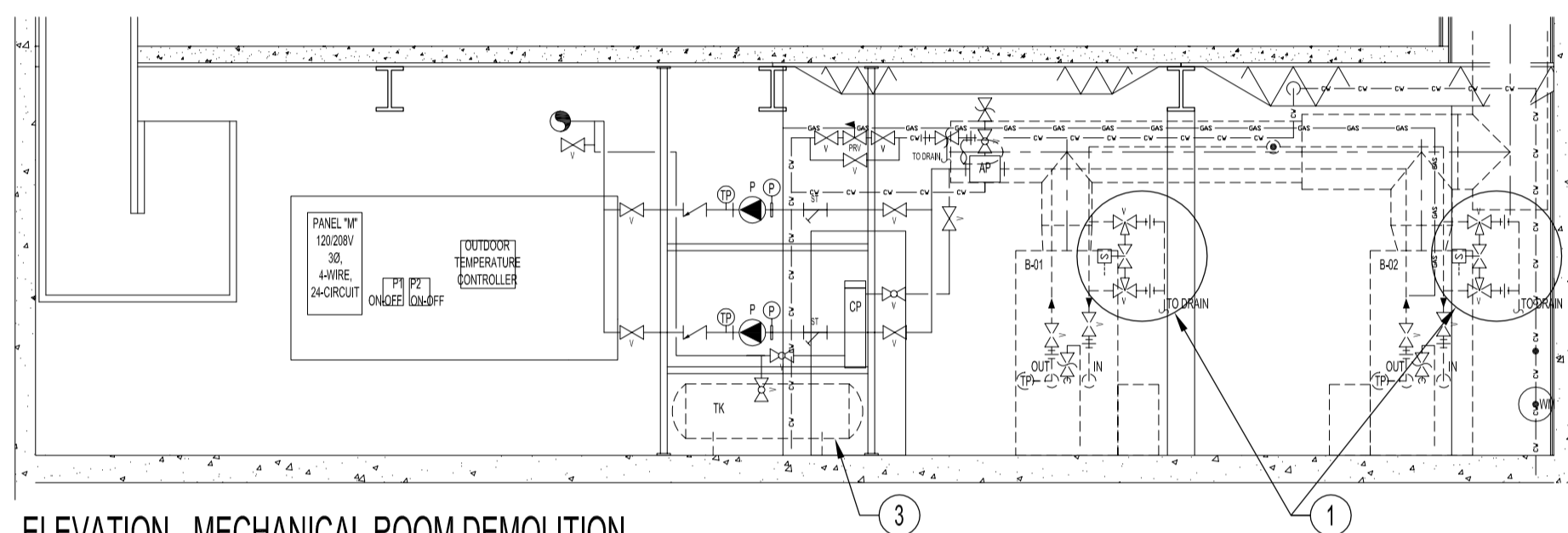
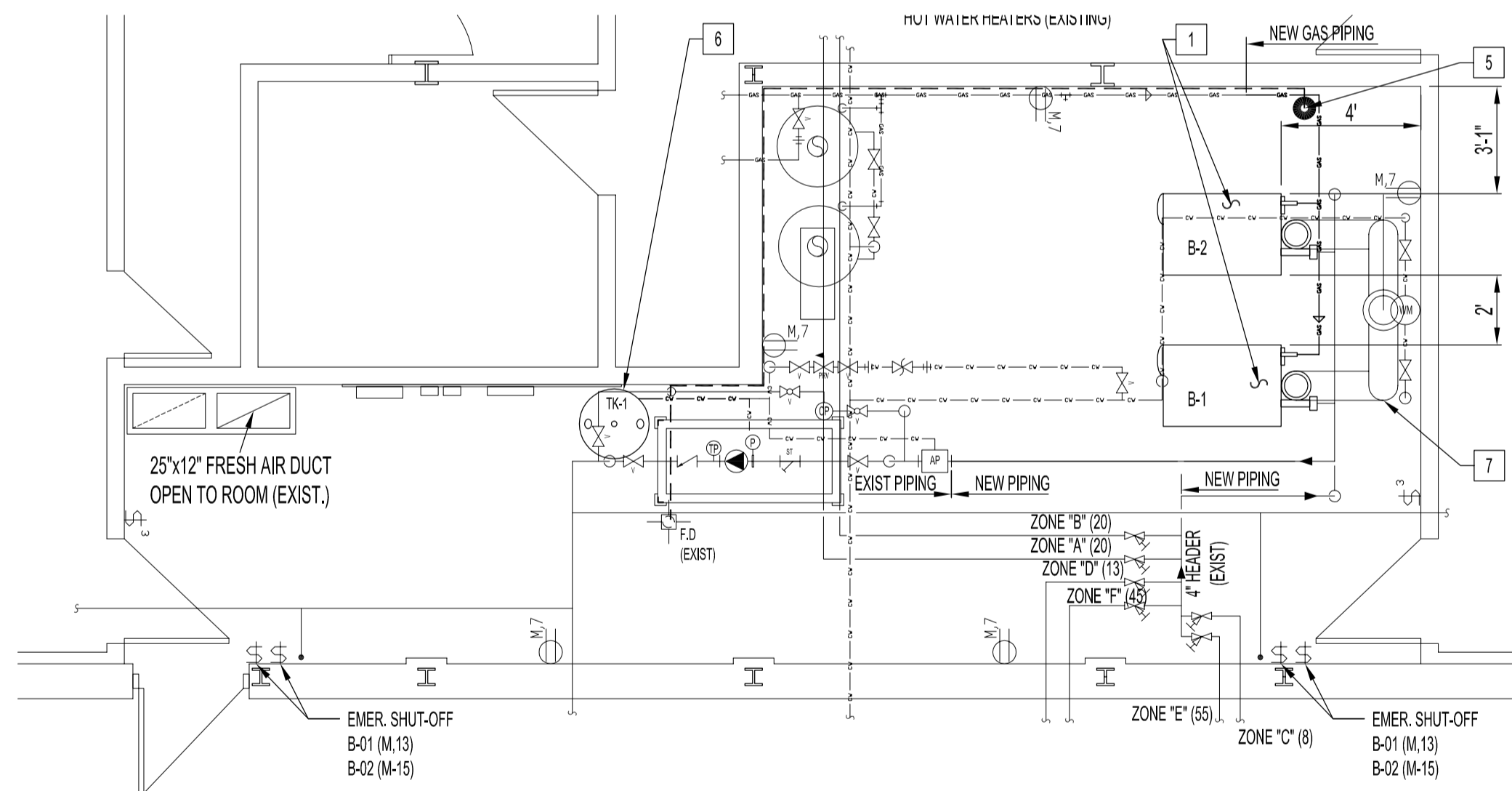


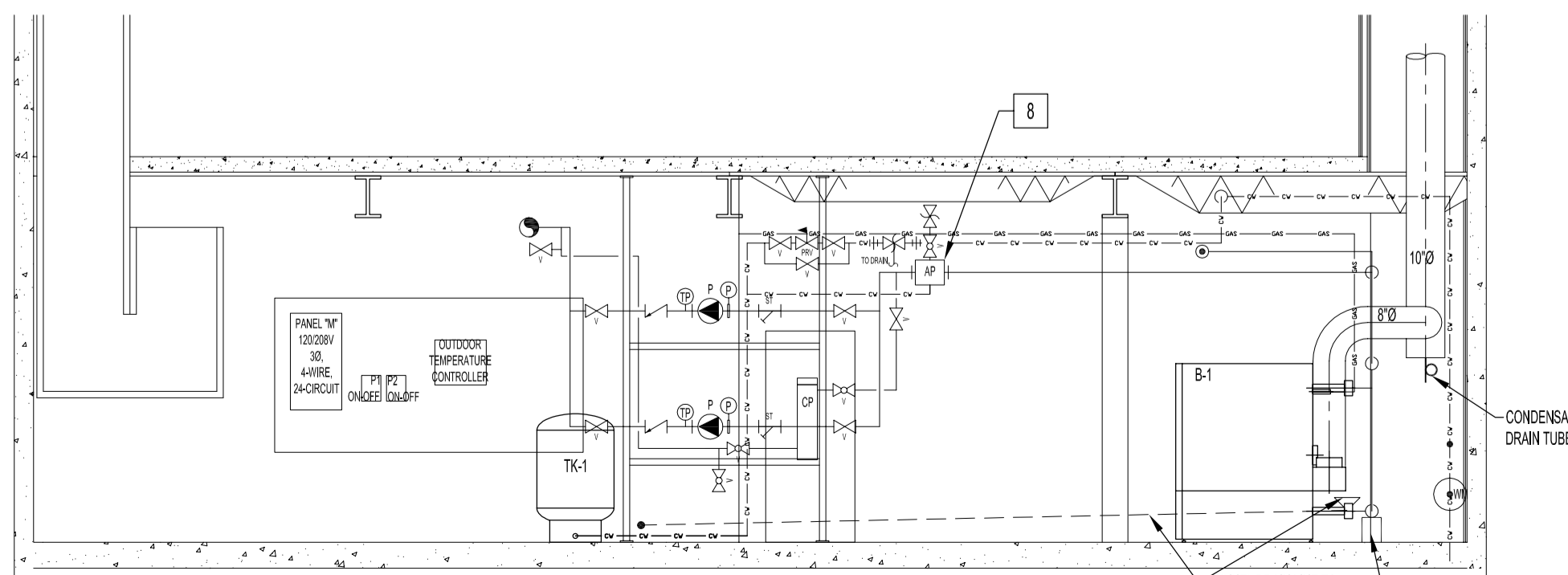
MECHANICAL ROOM FLOOR PLAN - DEMOLITION
SCALE: 1/4"=1'-0"



ELEVATION - MECHANICAL ROOM DEMOLITION
SCALE: 1/4"=1'-0"



MECHANICAL ROOM FLOOR PLAN - RENOVATION
SCALE: 1/4"=1'-0"



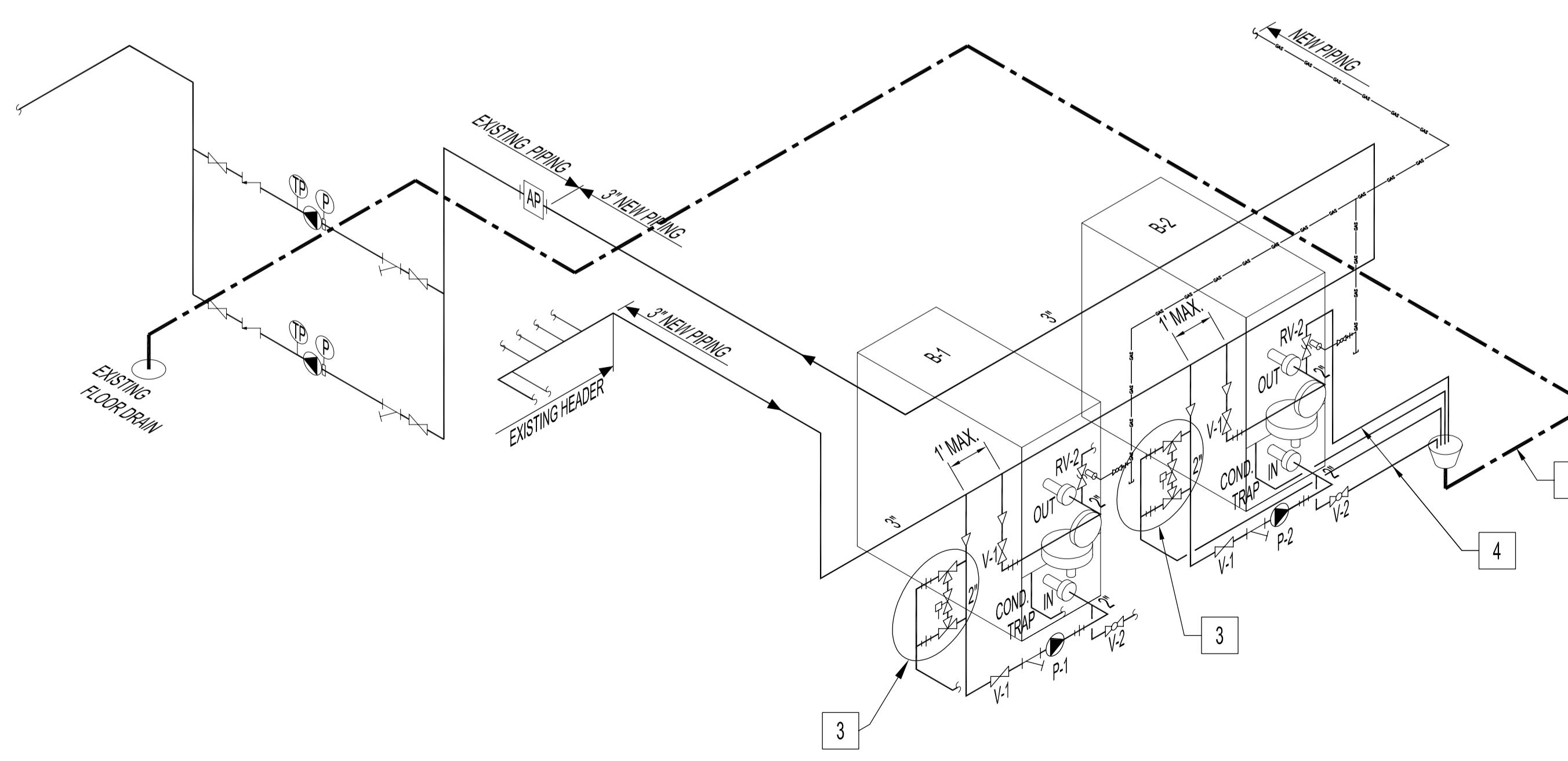
ELEVATION - MECHANICAL ROOM RENOVATION
SCALE: 1/4"=1'-0"

DEMOLITION NOTES

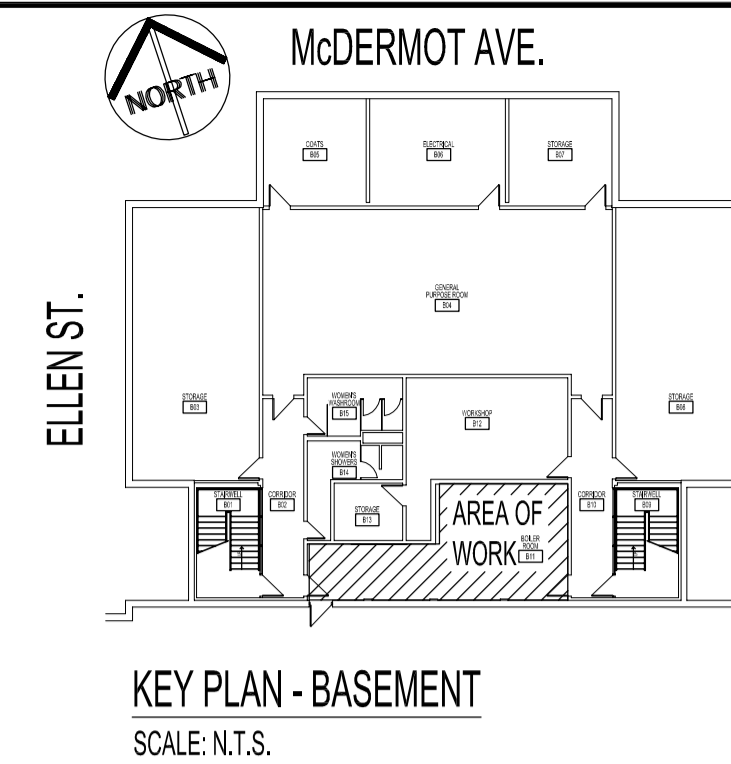
- 1 PRIOR TO BOILER REPLACEMENT, FLUSH EXISTING HEATING SYSTEM WITH EXPANSION TANK & BOILERS ISOLATED FROM THE FLUSHING PROCEDURE. (DO NOT FLUSH THROUGH THE EXPANSION TANKS & BOILERS).
- 2 REMOVE & DISPOSE OLD BOILERS. DISCONNECT OR CUT PIPING & WIRING FROM BOILERS FROM POINTS SHOWN AS "X" ON MECHANICAL ROOM FLOOR PLAN - DEMOLITION. RETAIN LOW-WATER CUT-OUT SPOOL ASSEMBLY, GAUGES & REUSABLE COMPONENTS FOR NEW BOILER INSTALLATION. ADVISE IF COMPONENTS CANNOT BE REUSE DUE TO CONDITION OR CODE REGULATIONS.
- 3 REMOVE & DISPOSE OLD EXPANSION TANK. DISCONNECT FROM POINT SHOWN AS "X" ON MECHANICAL ROOM FLOOR PLAN - DEMOLITION.
- 4 REMOVE & DISPOSE EXISTING CHIMNEY ASSEMBLY FROM MECHANICAL ROOM TO RAIN CAP OUTSIDE.
- 5 NATURAL GAS LINE NEW CONNECTION POINT.

RENOVATION NOTES:

- SEE DEMOLITION NOTE 1 PRIOR TO BOILER REPLACEMENT.
- 1 SUPPLY & INSTALL NEW BOILERS (B-1 & B-2) AS SHOWN. INSTALL AS PER DIVISION 15, DIVISION 16 & MANUFACTURERS' INSTALLATION MANUALS WITH ALL REQUIRED COMPONENTS FOR A FULLY-FUNCTIONAL SYSTEM. A DEDICATED EARTH GROUND (GREEN WIRE) IS REQUIRED. DO NOT GROUND THROUGH THE CONDUIT. MAINTAIN PROPER POLARITY.
 - 2 SUPPLY & INSTALL NEW PUMPS (P-1 & P-2) WITH NEW GALVANIZED STEEL FRAME SUPPORTS FASTENED SECURELY TO FLOOR. PUMP INSTALLATION SHALL BE PROPERLY ALIGNED WITH PIPING AND VIBRATION SHALL BE MINIMIZED DURING OPERATION. INSTALL AS PER DIVISION 15, DIVISION 16 & MANUFACTURERS' INSTALLATION MANUALS WITH ALL REQUIRES COMPONENTS FOR A FULLY-FUNCTIONAL SYSTEM.
 - 3 REINSTALL EXISTING LOW-WATER CUT-OUT SPOOL ASSEMBLY AS SHOWN. SUPPLY & INSTALL NEW COPPER DRAIN LINES TO NEW DRAIN FUNNEL ON NORTH WALL.
 - 4 SUPPLY & INSTALL NEW 3/4" COPPER DRAIN LINES FOR BOILER RELIEF VALVE, CONDENSATE TRAP & BLOWDOWN VALVE. TYPICAL FOR BOTH BOILERS.
 - 5 SUPPLY & INSTALL NEW 2-1/2" O.D. HARD DRAWN SEAMLESS COPPER TUBE DRAIN LINE WITH 8" DIAMETER FUNNEL AGAINST WALL @ 1/4" TO FOOT SLOPE TO EXISTING FLOOR DRAIN.
 - 6 SUPPLY & INSTALL NEW EXPANSION TANK (TK-1) AS SHOWN. INSTALL AS PER DIVISION 15 & MANUFACTURERS' INSTALLATION MANUALS WITH ALL REQUIRES COMPONENTS FOR A FULLY-FUNCTIONAL SYSTEM. CHECK PRE CHARGE USING AN CALIBRATED PRESSURE GAUGE AT THE CHARGING VALVE. PRESSURE SHALL BE WITHIN 3 LBS. OF THE SYSTEM PRESSURE DEPENDING ON THE AMBIENT TEMPERATURE.
 - 7 SUPPLY & INSTALL COMPLETE CATEGORY IV STAINLESS STEEL GAS VENT SYSTEM FROM MECHANICAL ROOM TO RAIN CAP OUTSIDE. BOILER 8" VENTS SHALL BE CONNECTED TO 10" MAIN VENT. CONNECT CONDENSATE DRAIN TUBE TO NEW DRAIN FUNNEL ON NORTH WALL. CHIMNEY SHALL BE A MINIMUM OF 4 FEET ABOVE STRUCTURES WITHIN 10 FEET. PENETRATIONS THROUGH ROOF SHALL BE WEATHER-TIGHT SEALED & RIGIDLY SUPPORTED AS PER DIVISION 7 & LATEST ROOFING PRACTICES & STANDARDS. INSTALL AS PER DIVISION 15 & MANUFACTURERS' INSTALLATION MANUALS WITH ALL REQUIRES COMPONENTS FOR A FULLY-FUNCTIONAL SYSTEM. HEAT-FAB CATEGORY IV MODEL "SAF-T" VENT CI PLUS DOUBLE WALL ONE INCH AIR SPACE AL29-4C STAINLESS STEEL GAS VENT SYSTEM.
 - 8 EVALUATE EXISTING AIR PURGER (AP) OPERATING CONDITION AND ADVISE IF STILL OPERABLE WITH NEW SYSTEM.



SCHEMATIC - BOILER PIPING RENOVATION
SCALE: N.T.S.



KEY PLAN - BASEMENT
SCALE: N.T.S.

EQUIPMENT SCHEDULE:

- B-1, B-2 MODULATING CONDENSING HOT WATER BOILER, QTY: 2, PATTERSON-KELLEY MODEL MACH C-1050, INPUT: 1,050,000 BTU/HR, OUTPUT: 987,000 BTU/HR, AUXILIARIES INCLUDED: PRESSURE/TEMPERATURE, LOW WATER CUT-OUT, ASME RELIEF VALVE SET 50 PSIG, MANUAL RESET HIGH LIMIT CONTROL, & DIAGNOSTIC ANNUNCIATOR. 120V/1PH/60Hz.
- P-1, P-2 BOILER LOOP PUMP, QTY: 2, GRUNDFOS MODEL UPS 50-80/4 IN-LINE CIRCULATOR PUMP WITH 2" FLANGE SET, 115V/1PH/60Hz.
- TK-1 BLADDER EXPANSION TANK, TO BE PAINTED ENAMEL GREY, FLOFAB MODEL BT 200V VERTICAL ASME SECTION VIII, DIV. 1, CSA B.51, 53 GALLONS, 1" NPT BOTTOM SYSTEM CONNECTION, CW CHARGING VALVE.
- V-1 GATE VALVE, SUPPLY & INSTALL TO SUIT LINE SIZE. CLASS 125
- FLOOR DRAIN (EXISTING)
- FULL-PORT BALL VALVE, SIZE 3/4" MINIMUM, 600CWP/150 SWP.
- BALANCING VALVE (EXISTING) SHOWN WITH USGPM FLOWRATE IN BRACKETS.
- RV-2 RELIEF VALVE, SEE B-1 & B-2.

NOTES :
THIS DRAWING SHALL NOT BE SCALED.
REFER TO PROJECT SPECIFICATION FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL VISIT THE SITE AND SATISFY ONESELF ALL DIMENSIONS, DATUM, AND DETAILED INFORMATION SHOWN ARE CORRECT.

ALL OPENINGS THROUGH FIRE ASSEMBLIES ARE TO BE FIRE STOPPED AND SEALED WITH ULC APPROVED FIRE STOPPING TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION, AND PROVIDE A SMOKE-TIGHT BARRIER.

ALL PRODUCTS AND MATERIALS TO BE USED AND INSTALLED SHALL CONFORM WITH MANUFACTURER'S SPECIFICATIONS & APPLICABLE CODES.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH AND MAKE GOOD ALL EXISTING CONSTRUCTION AFFECTED BY THE REMOVAL OF ALL ITEMS FORMING THE PART OF THE RENOVATION WORK.

LAYOUT SHOWN IS SCHEMATIC ONLY. LAYOUT MAY NOT REFLECT THE TRUE LAYOUT. ALL ROUTINGS SHALL RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES. GROUP SAME SERVICES, WHERE POSSIBLE, TO RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES. ALL ROUTINGS SHALL RUN AS HIGH AS POSSIBLE AT THE BASEMENT CEILING LEVEL.

DO NOT PASS ROUTINGS THROUGH STRUCTURAL MEMBERS WITHOUT CONSULTING THE CONTRACT ADMINISTRATOR.

FLUSH THE HEATING SYSTEM TO REMOVE ANY DEBRIS FROM RENOVATION BEFORE FILLING THE BOILERS. FLUSH THE SYSTEM WITHOUT THE BOILERS CONNECTED. CHEMICALS USE FOR FLUSHING OR ADDED TO THE SYSTEM INCLUDING GLYCOL SHALL BE APPROVED BY THE CHEMICAL MANUFACTURER FOR USE IN ALUMINUM BOILERS. PETROLEUM BASED CLEANING OR SEALING COMPOUNDS SHALL NOT BE USED IN THE BOILER SYSTEM.

THE HYDRONIC SYSTEM SHALL BE MAINTAINED BETWEEN 6.0 TO 8.5 pH TO PREVENT DAMAGE TO THE BOILERS.

ORIGINAL STAMPED BY: DOUG PALEY, P.ENG
DATE: 2006.10.03

NO.	REVISION/DESCRIPTION	BY	DATE
SEALS			

DRAWN BY	DATE	CHECKED BY	APPROVED
DTA	20061003	USER APPROVAL	

CITY OF WINNIPEG
PLANNING, PROPERTY & DEVELOPMENT DEPARTMENT
CIVIC ACCOMMODATIONS DIVISION
300 - 65 GARRY ST. R3C 4K4

PROJECT
FIRE STATION No. 1
BOILER REPLACEMENT

65 ELLEN STREET
SHEET TITLE

MECHANICAL ROOM FLOOR PLAN
MECHANICAL
DEMOLITION & RENOVATION

SCALE	PROJECT NO.	SHEET NO.
AS SHOWN	2005-085	M1