

SUMMIT COUNTY CHILDREN SERVICES BOILER REPLACEMENT

264 S. ARLINGTON ST.
AKRON, OH 44306

DRAWING INDEX

GENERAL
G1.0 COVER SHEET

MECHANICAL
M1.1 SCHEDULES, SPECS AND DETAILS
M2.1 MECHANICAL FLOOR PLANS

OWNER
SUMMIT COUNTY CHILDREN SERVICES
264 S. ARLINGTON ST.
AKRON, OH 44306
summitkids.org

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BIDDING PRECAUTIONS

1. PRIOR TO SUBMITTING PROPOSALS, BIDDERS SHALL EXAMINE DRAWINGS AND SPECIFICATIONS AND CONDUCT A PERSONAL EXAMINATION OF THE SITE AND BECOME AWARE OF ALL EXISTING CONDITIONS AND LIMITATIONS AFFECTING THE WORK AND THEIR PROPOSAL.

GENERAL NOTES

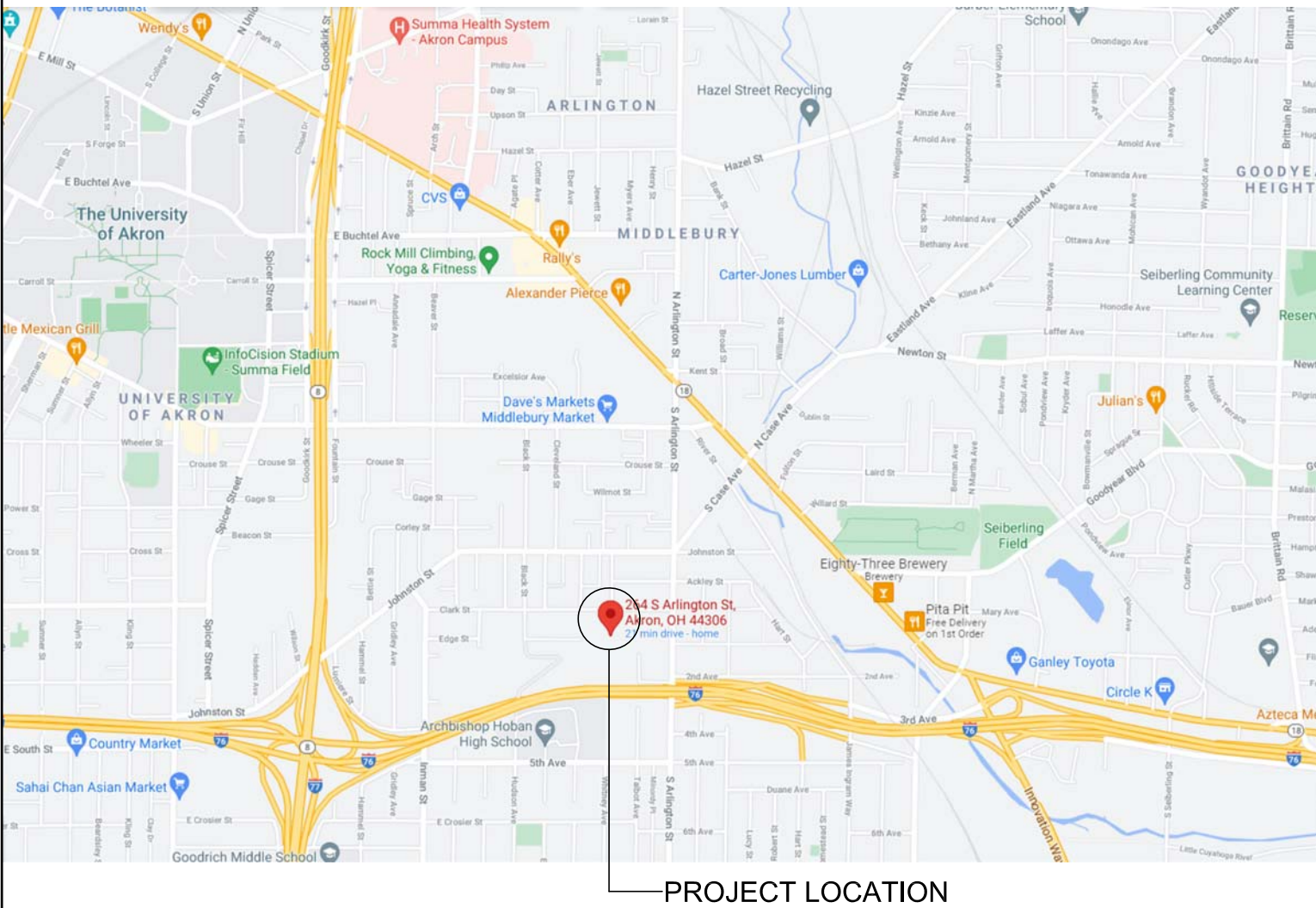
1. TO BE CONSTRUCTED UNDER 2011 OBC, LOCAL BUILDING INSPECTION DEPARTMENT MATERIALS AND CONSTRUCTION FOR SEWERAGE TO MEET LOCAL CODES, BUILDING MATERIALS AND CONSTRUCTION TO MEET LOCAL CODES AND THE OHIO BUILDING CODE. ALL PROPER PERMITS MUST BE OBTAINED FOR ALL CONSTRUCTION WORK (WHICH HAS BEEN APPROVED BY PROPER DEPARTMENTS) PRIOR TO ANY CONSTRUCTION. ALL CONTRACTORS, INCLUDING GENERAL HVAC, ELECTRICAL AND PLUMBING MUST BE LICENSED TO DO WORK WITHIN THE GOVERNING MUNICIPALITY.
2. ALL DIMENSIONS ARE CLEAR DISTANCE FROM FACE OF STUD TO FACE OF STUD AND/OR MASONRY WALL(S), UNLESS NOTED OTHERWISE.
3. THESE DESIGNS AND ALL ITEMS DEPICTED HEREIN, WHETHER IN WRITING OR GRAPHICALLY, AS INSTRUMENTS OF PROFESSIONAL SERVICE, MAY NOT BE ALTERED OR CHANGED, IN ANY WAY, WITHOUT THE PRIOR KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT. ANY CHANGE MADE WITHOUT THE ARCHITECT'S WRITTEN APPROVAL WILL VOID ALL SUCH DOCUMENTS AND INSTRUMENTS AND THE ARCHITECT WILL NOT BE PERSONALLY LIABLE FOR ANY DAMAGE, HARM OR LOSS CAUSED THEREBY.



SPECIAL INSPECTIONS

OBC SECTION	REQUIRED SPECIAL INSPECTIONS:	APPLICABLE	CONTINUOUS INSPECTION	PERIODIC INSPECTION
1 1704.2	Fabricators (Pre-fab off site; structural members)			
2 1704.3	Steel (Welding, thermal cutting or heat)			
3 1704.4	Concrete (4 or more stories / more than 10 psi)			
4 1704.5	Masonry (Engineered & Category 4 Occ.)			
5 1704.6	Wood (Pre-fab off-site work; structural wood members)			
6 1704.7	Soils (Soil conditions; bearing requirements)			
7 1704.8	Deep Driven Foundations (Piers) (Geo-tech & specs.)			
8 1704.9	Caissons (Piers) (Geo-tech & specs.)			
9 1704.10	Helical Foundations (Dimensions, depth & torque)			
10 1704.11	Vertical Foundation Elements (Category 4 Occ.)			
11 1704.12	Sprayed Fire-Resistant Materials (Wall, floor & roof)			
12 1704.13	Mastic & Intumescent Fire-Resistant Coatings (Design)			
13 1704.14	Exterior Insulation & Finish System (E.I.F.S.)			
14 1704.15	Special Cases (Alternative materials / methods)			
15 1704.16	Special Inspections for Smoke Control (Duct & pressure)			

OWNER IS RESPONSIBLE FOR SPECIAL INSPECTION PER OBC 1704.1 AND WILL COORDINATE WITH THE SUMMIT COUNTY BUILDING DEPARTMENT.



VICINITY MAP
SCALE: N.T.S.



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COVER PAGE
PROJECT #: 8921
DATE: AUGUST 31, 2021
SUMMIT CO. CHILDREN SERVICES BOILER
264 S. ARLINGTON ST.
AKRON, OH 44306

G1.0
1 OF 1

PLUMBING SPECIFICATIONS

SCOPE OF WORK:

IN GENERAL, THE WORK CONSISTS OF FURNISHING AND INSTALLING THE EQUIPMENT, FIXTURES, SERVICES, AND ALL OTHER MATERIALS NECESSARY TO PROVIDE THE COMPLETE PLUMBING SYSTEMS AND ALL WORK IN CONNECTION WITH SUCH SYSTEMS - INCLUDING MATERIALS, LABOR, TRANSPORTATION, ETC. - COMPLETE IN EVERY RESPECT AND READY FOR USE.

MECHANICAL DRAWINGS AND SPECIFICATIONS ARE PART OF THE CONTRACT DOCUMENTS. THE PLUMBING CONTRACTOR SHALL REFER TO THESE DOCUMENTS AS PART OF THEIR COMPLETE SCOPE OF WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL WORK AS HEREIN DESCRIBED AND AS INDICATED ON THE DRAWINGS.

GENERAL REQUIREMENTS:

ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE 2017 OHIO PLUMBING CODE AND OTHER APPLICABLE REQUIREMENTS PER THE AUTHORITY HAVING JURISDICTION.

THE PLUMBING CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDERS, AVAILABLE CAPACITIES, PRESSURES, POINTS OF CONNECTION, INVERT DEPTHS, PIPE SIZES, METER LOCATIONS, ETC. SHALL ALL BE CONFIRMED, ANY CONFLICTS MUST BE BROUGHT TO THE GENERAL CONTRACTOR'S IMMEDIATE ATTENTION.

ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.

ALL MATERIALS AND EQUIPMENT PROVIDED SHALL BE WARRANTIED FOR ONE YEAR FROM DATE OF OWNER ACCEPTANCE.

ALL FIXTURES, DEVICES, AND ACCESSORIES SHALL BE NEW AND FREE OF DEFECTS. ALL MATERIALS SHALL BE CAREFULLY PROTECTED FOR THE DURATION OF CONSTRUCTION; DAMAGE AND DEFECTS SHALL BE REPAIRED AT THE PLUMBING CONTRACTOR'S EXPENSE.

ALL INSTALLATIONS TO BE COORDINATED WITH THE ARCHITECTURAL CONSTRAINTS AND OTHER TRADES INVOLVED LEAVING ACCESS FOR REPAIRS AND MAINTENANCE.

PROVIDE ACCESS PANELS FOR REPAIRABLE ITEMS INSTALLED IN INACCESSIBLE LOCATIONS.

PROVIDE SUBMITTALS FOR APPROVAL BY OWNER & DESIGNER BEFORE PURCHASING ANY EQUIPMENT OR PERFORMING ANY ROUGH-INS FOR THAT EQUIPMENT.

ALL EQUIPMENT AND SYSTEMS INDICATED ON SCHEDULE AND PLANS ARE BASIS OF DESIGN. ANY DEVIATIONS OR SUBSTITUTIONS TO BE APPROVED BY OWNER & DESIGNER.

INCLUDE COSTS FOR ALL PERMITS AND INSPECTIONS.

FOR WATER & GAS PIPING SYSTEMS, PROVIDE METHODS OF STRESS AND STRAIN RELIEF IN PIPING WITH ANCHORS AND EXPANSION COMPENSATION JOINTS. AVOID CREATING STRESS OR STRAIN TO BUILDING COMPONENTS.

DOMESTIC WATER PIPING SYSTEMS:

ALL COPPER DOMESTIC HOT AND COLD WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER COMPLYING WITH ASTM B 88 WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SHUTOFF VALVES TO BE 2-PIECE FULL PORT BRONZE BODY BALL TYPE WITH SOLDERED JOINTS. ALL JOINTS TO BE MADE WITH A LEAD FREE SOLDER CONFORMING TO ASTM B 32 AND A WATER SOLUBLE FLUX CONFORMING TO ASTM B 813. ALL CUT ENDS SHALL BE REAMED TO FULL INSIDE DIAMETER OF PIPE. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS TO DISSIMILAR METALS. PIPING SUPPORTS TO BE COPPER CLEVIS HANGERS WITH ALL THREAD ROD AND APPROPRIATE BUILDING ATTACHMENT TO MATCH SPECIFIC CONSTRUCTION. HANGER SPACING TO BE 10 FEET HORIZONTAL, 10 FEET VERTICAL FOR 1-1/2" AND LARGER, 6 FEET HORIZONTAL, 10 FEET VERTICAL FOR 1-1/4" AND SMALLER.

ALL DOMESTIC WATER DISTRIBUTION LINES MAY BE CHLORINATED POLYVINYL CHLORIDE (CPVC) TYPE IV GRADE I SDR-11. PROVIDE MFR-SPECIFIED FITTINGS AND SUPPORTS.

CPVC WATER PIPING SHALL CONFORM TO ASTM D 2846, ASTM F 441, ASTM F 442, OR CSA B137.6 AS SPECIFIED IN THE RELEVANT PLUMBING CODE.

ALL DOMESTIC WATER DISTRIBUTION LINES 1" OR SMALLER MAY BE CROSS-LINKED POLYETHYLENE (PEX), SIZES GREATER THAN 1" MUST BE APPROVED BY THE LOCAL AUTHORITY. PROVIDE MFR-SPECIFIED FITTINGS AND SUPPORTS.

PEX WATER PIPING SHALL CONFORM TO ASTM F 876, ASTM F 877, OR CSA B137.5 AS SPECIFIED IN THE RELEVANT PLUMBING CODE.

PROTECT ALL COPPER PIPING PASSING THROUGH CORNERS, WALLS, AND FLOORS WITH A PROTECTIVE SHEATHING OR WRAPPING THAT WILL WITHSTAND ANY REACTION FROM LIME AND ACID OF CONCRETE, CINDER, OR OTHER CORROSIVE MATERIAL.

ANY COPPER PIPE INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS, OR SIMILAR MEMBERS LESS THAN 1-1/2" FROM THE NEAREST EDGE OF THE MEMBER SHALL BE PROTECTED WITH STEEL PROTECTIVE SHIELD PLATES A MINIMUM OF 1/16" THICK AND SHALL EXTEND 2" ABOVE AND BELOW THE AREA OF PIPE PENETRATION.

HYDROSTATICALLY TEST ALL PIPING SYSTEMS AT 1.5 TIMES THE SYSTEM WORKING PRESSURE BUT NOT LESS THAN 100 PSI BEFORE COVERING WITH INSULATION. DISCONNECT ALL COILS AND EQUIPMENT WHILE CONDUCTING TEST. SYSTEM TO REMAIN PRESSURIZED FOR 24 HOUR PERIOD WITH LESS THAN 2% TOTAL DROP IN PRESSURE.

THE DOMESTIC WATER PIPING SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT POINTS OF OUTLET. THE SYSTEM SHALL BE TESTED FOR POTABILITY AFTER BEING ALLOWED TO STAND FOR 4 HOURS. IF BACTERIAL CONTAMINATION IS PRESENT, THE SYSTEM SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING AT LEAST 50 PPM OF CHLORINE AND ALLOWED TO STAND FOR 24 HOURS. FOLLOWING THE REQUIRED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM. THIS PROCEDURE SHALL BE REPEATED WHERE SHOWN BY A BACTERIOLOGICAL EXAMINATION THAT CONTAMINATION REMAINS PRESENT IN THE SYSTEM. PROVIDE A CERTIFIED TEST OF WATER SYSTEM POTABILITY AND PROVIDE A COPY TO THE OWNER / TENANT] BEFORE BUILDING OCCUPATION.

PROVIDE WATER HAMMER ARRESTORS - CONFORMING TO ASSE 1010 - AT ALL WATER BRANCHES WHICH INCLUDE QUICK-CLOSING VALVES (E.G. 1/4-TURN BALL VALVES OR FLUSH VALVES). PROVIDE ACCESS FOR MAINTENANCE.

PROVIDE CONDENSATE NEUTRALIZER KITS FOR ALL GAS-FUELED EQUIPMENT WHICH PRODUCE CONDENSATE (E.G. FURNACES & WATER HEATERS). OUTDOOR EQUIPMENT DOES NOT REQUIRE NEUTRALIZATION.

NATURAL GAS PIPING SYSTEMS:

ALL NATURAL GAS WORK SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE 2015, AS ADOPTED BY THE STATE OF OHIO.

ALL NATURAL GAS PIPING 3" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL THREAD AND COUPLING COMPLYING WITH ASTM A 53 WITH 150 LB WALLEABLE IRON THREADED JOINT FITTINGS. ALL THREADED JOINTS SHALL CONFORM TO ASME B 1.20.1 WITH PIPE-JOINT COMPOUND OR TAPE APPLIED ON THE MALE THREADS ONLY.

ALL NATURAL GAS PIPING 4" AND LARGER SHALL BE SCHEDULE 40 BLACK STEEL WITH LISTED COMPRESSION FITTINGS TYPE VIEGA "MEGAPRESS-G", OR EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

SHUTOFF VALVES 2" AND SMALLER TO BE BRONZE BODY LUBRICATED PLUG COCKS WITH THREADED ENDS. SHUTOFF VALVES LARGER THAN 2" TO BE DUCTILE IRON LUBRICATED PLUG COCKS WITH 150 LB FLANGED ENDS. PROVIDE FLANGE GASKETS COMPATIBLE WITH NATURAL GAS SYSTEMS. ALL CUT ENDS SHALL BE REAMED TO FULL INSIDE DIAMETER OF PIPE. PIPING SUPPORTS TO BE STEEL CLEVIS HANGERS WITH ALL THREAD ROD AND APPROPRIATE BUILDING ATTACHMENT TO MATCH SPECIFIC CONSTRUCTION. HANGER SPACING TO BE 12 FEET HORIZONTAL, 15 FEET VERTICAL.

ALL EQUIPMENT AND APPLIANCES SHALL BE PROVIDED WITH GAS CONNECTIONS SUPPLYING THE MANUFACTURER'S RECOMMENDED OPERATING PRESSURE. PROVIDE REGULATORS AS NECESSARY TO COMPLY. VENT ALL REGULATORS TO BUILDING EXTERIOR.

PRIOR TO ACCEPTANCE AND INITIAL OPERATION, ALL GAS PIPING INSTALLATIONS SHALL BE INSPECTED AND PRESSURE-TESTED TO DETERMINE THAT THE MATERIALS, DESIGN, FABRICATION, AND INSTALLATION PRACTICES COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL FUEL GAS CODE.

PRIOR TO OPERATING ANY GAS-FIRED APPLIANCES, TEST FOR LEAKS AND PURGE IN ACCORDANCE WITH IFGC 406.7.2. TEST ALL LOW PRESSURE PIPING SYSTEMS AT 1.5 TIMES THE SYSTEM WORKING PRESSURE BUT NOT LESS THAN 3 PSIG. DISCONNECT ALL EQUIPMENT WHILE CONDUCTING TEST. SYSTEM TO REMAIN PRESSURIZED FOR 24 HOUR PERIOD WITH LESS THAN 2% TOTAL DROP IN PRESSURE OR AS REQUIRED BY LOCAL GAS COMPANY.

INSULATION SYSTEMS:

PIPE INSULATION 1/2" OR LESS SHALL BE CLOSED-CELL FOAM INSULATION.

PIPING INSULATION 3/4" OR MORE SHALL BE FIBERGLASS WITH ALL-SERVICE JACKET FINISH.

PIPE TYPE	PIPE INSULATION REQUIREMENTS	INSULATION THICKNESS
COLD (COPPER)	1/2" TO 1-1/2"	1/2"
COLD (COPPER)	2" OR LARGER	1"

***INSULATION IS REQUIRED BY ENERGY CODE AND MAY NOT BE OMITTED FOR ANY REASON.

COPPER COLD WATER PIPE INSULATION MAY BE OMITTED WHERE INSTALLED IN A SPACE WHICH WILL NOT BECOME WARM OR HUMID ENOUGH FOR PIPES TO CONDENSE.

DO NOT COVER PIPING SYSTEMS BEFORE PIPE HAS BEEN HYDROSTATICALLY TESTED.

MECHANICAL SPECIFICATIONS

SCOPE OF WORK:

IN GENERAL, THE WORK CONSISTS OF FURNISHING AND INSTALLING THE EQUIPMENT, DEVICES, AND ALL OTHER MATERIALS NECESSARY TO PROVIDE THE COMPLETE MECHANICAL SYSTEMS AND ALL WORK IN CONNECTION WITH SUCH SYSTEMS - INCLUDING MATERIALS, LABOR, TRANSPORTATION, ETC. - COMPLETE IN EVERY RESPECT AND READY FOR USE.

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IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL WORK AS HEREIN DESCRIBED AND AS INDICATED ON THE DRAWINGS.

GENERAL REQUIREMENTS:

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ALL MATERIALS AND EQUIPMENT PROVIDED TO BE WARRANTIED FOR ONE YEAR FROM DATE OF OWNER ACCEPTANCE.

ALL MATERIALS INSTALLED TO BE NEW AND FREE OF DEFECTS.

ALL INSTALLATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL CONSTRAINTS AND OTHER TRADES INVOLVED LEAVING ACCESS FOR REPAIRS AND MAINTENANCE.

PROVIDE ACCESS PANELS FOR REPAIRABLE ITEMS INSTALLED IN INACCESSIBLE LOCATIONS.

PROVIDE SUBMITTALS FOR APPROVAL BY OWNER BEFORE PURCHASING ANY EQUIPMENT.

ALL EQUIPMENT AND SYSTEMS INDICATED ON SCHEDULE AND PLANS IS BASIS OF DESIGN. ANY DEVIATIONS OR SUBSTITUTIONS TO BE APPROVED BY ENGINEER AND OWNER.

INCLUDE COSTS FOR ALL PERMITS AND INSPECTIONS.

FLUE SYSTEMS:

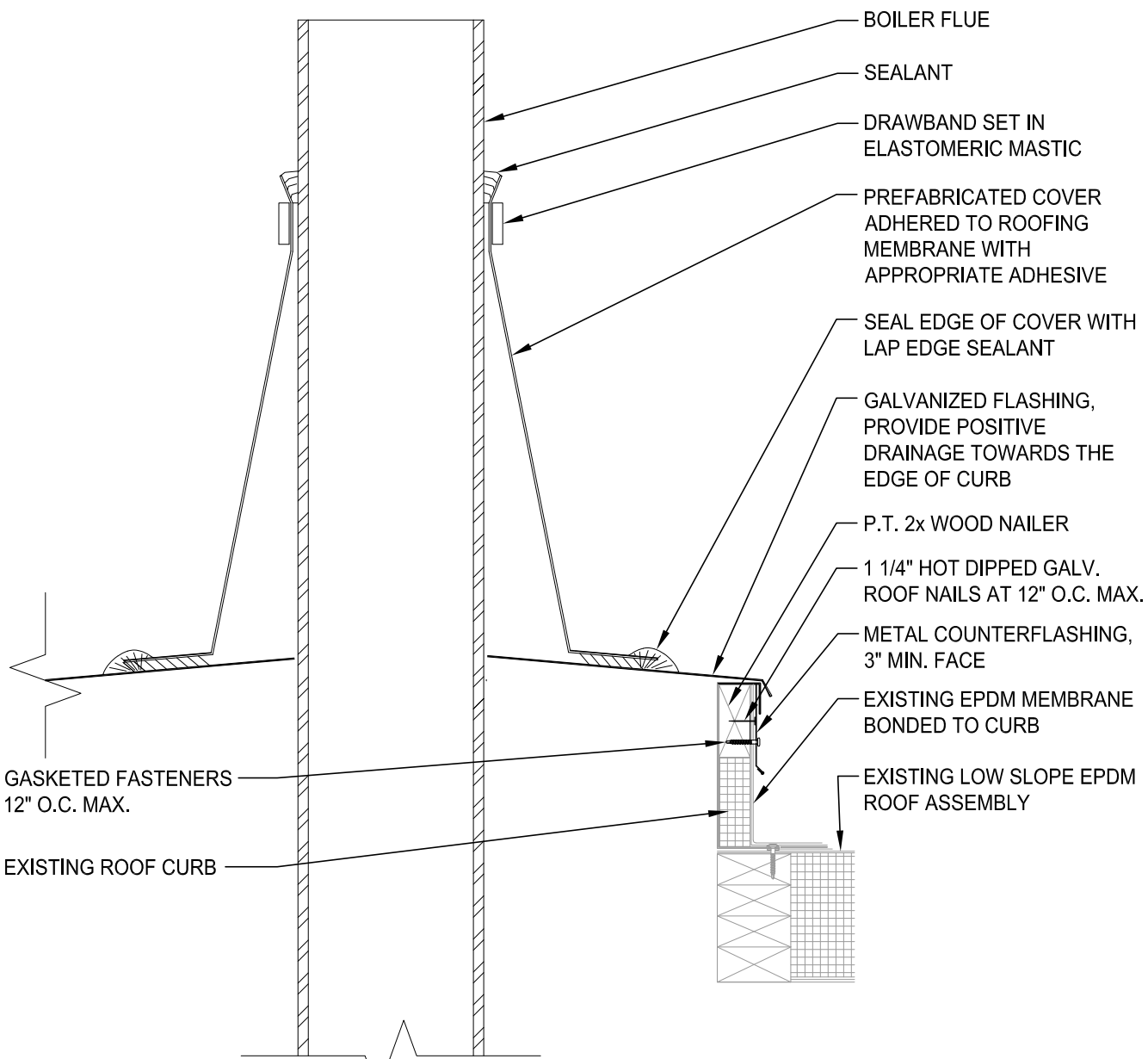
POLYPROPYLENE CONFORMING TO UL-1738 AND IS CERTIFIED FOR USE UP TO AND INCLUDING 230°F.

HEATING WATER PIPING:

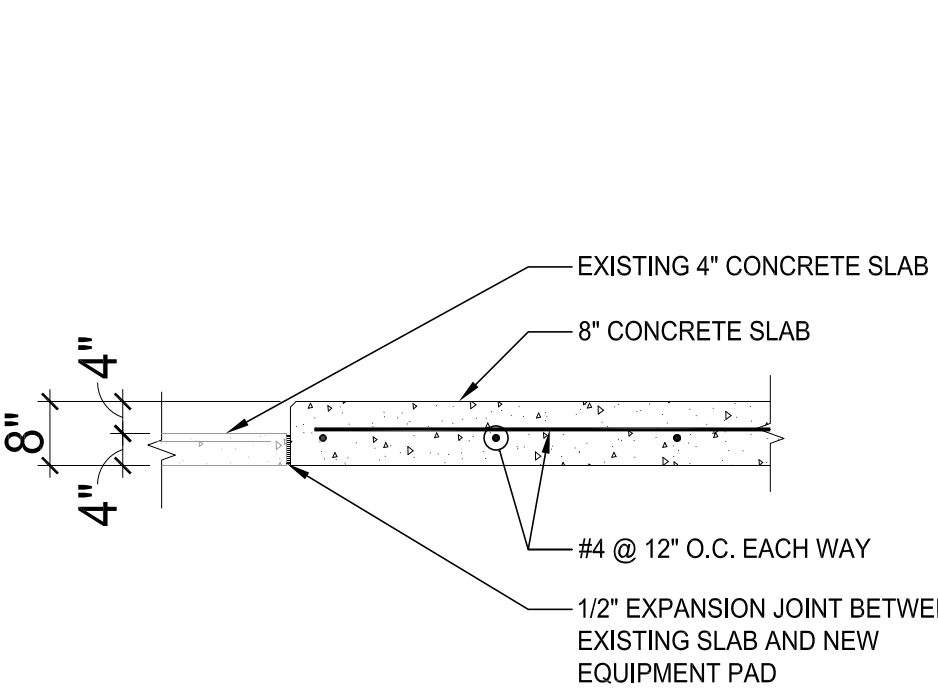
PIPE/GROOVED (STANDARD/LIGHTWALL): CARBON STEEL, A-53B TYPE E OR S, OR A-106B - ROLL OR CUT GROOVED-ENDS AS APPROPRIATE TO PIPE MATERIAL, WALL THICKNESS, PRESSURES, SIZE AND METHOD OF JOINING. PIPE ENDS TO BE GROOVED IN ACCORDANCE WITH VICTAULOID CURRENT LISTED STANDARDS CONFORMING TO ANSI/AWWA C-406.

INSULATION SYSTEMS:

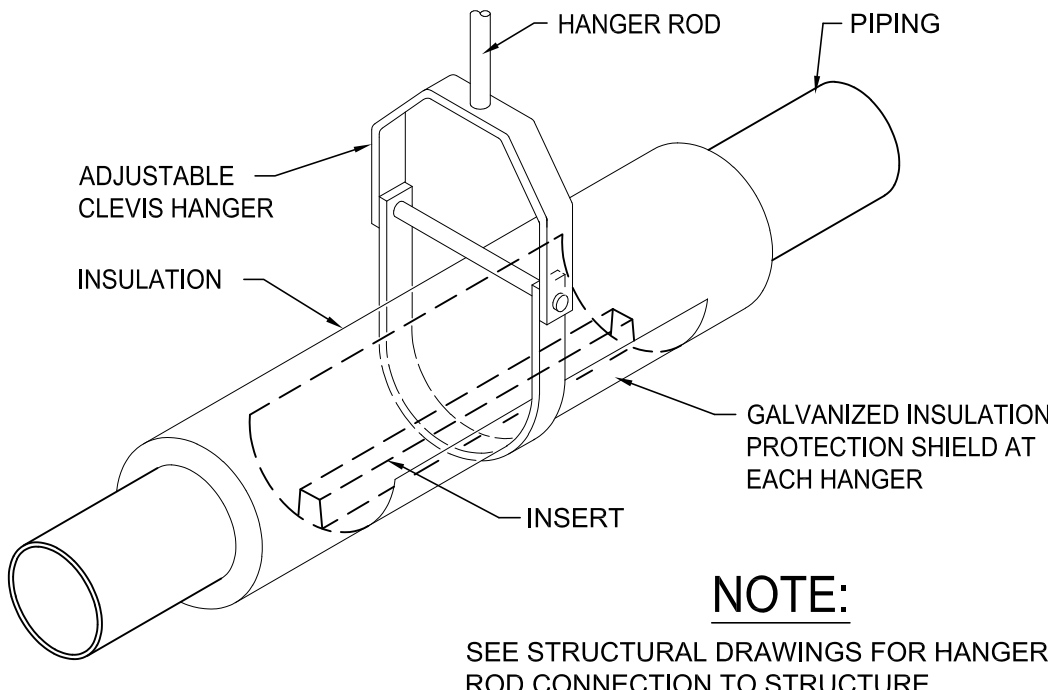
DO NOT COVER PIPING SYSTEMS BEFORE PIPE HAS BEEN HYDROSTATICALLY TESTED.



5 DETAIL FLUE PENETRATION AT EXISTING ROOF CURB NOT TO SCALE



4 DETAIL EQUIPMENT PAD NOT TO SCALE



2 DETAIL PIPE HANGER & INSULATION NOT TO SCALE

SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—G—	NATURAL GAS	■	FLOOR DRAIN
-----	COLD WATER	1 1/2"	BALL VALVE
-----	HEATING WATER	1 1/2"	UNION
-----	HEATING WATER RETURN	G-2	DROP TO BELOW
		ETR	EXISTING TO REMAIN

GENERAL NOTES

1. ALL CONSTRUCTION TO BE CODE COMPLIANT WITH OHIO MECHANICAL AND PLUMBING CODE 2017. ALL CONTRACTORS UTILIZED IN CONSTRUCTION SHALL BE STATE CERTIFIED FOR THE WORK THEY ARE TO PERFORM.

EQUIPMENT & FIXTURE SCHEDULE

NOTE: THE SPECIFIED EQUIPMENT AND DEVICES ON THESE PLANS ARE FOR BASIS-OF-DESIGN ONLY; VALUE-ENGINEERED ALTERNATES AND EQUIVALENT SUBMITTALS ARE ALLOWED. EQUIVALENT SUBMITTALS ARE ALLOWABLE ONLY IF THEY ARE OF EQUAL OR GREATER PERFORMANCE, APPEARANCE, WARRANTY, ETC. ANY CHANGES WHICH AFFECT COST MUST BE ACCOMPANIED BY A PRELIMINARY QUOTE OF ANY CREDITS/ADDS. ALL EQUIVALENT AND ALTERNATE SUBMITTALS MUST BE APPROVED BY THE ENGINEER & OWNER.

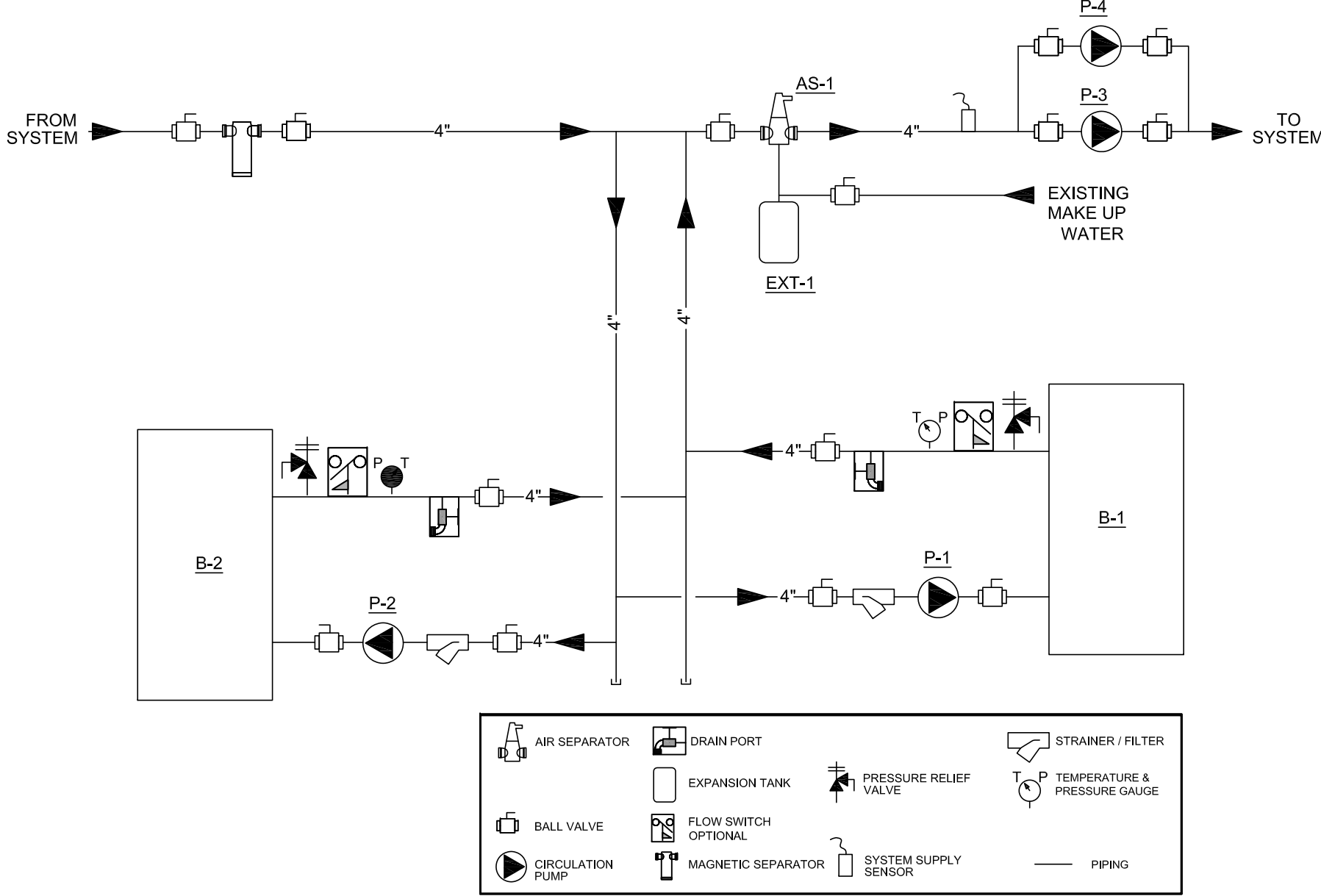
TAG	DESCRIPTION
B-1 & 2	BOILER LOCHINVAR "FBN1751" 1750 MBH, 1684 MBH OUTPUT, 120V/1/60, 13 MCA, 8"Ø FLUE, 8"Ø COMBUSTION AIR, PROVIDE WITH CONDENSATE NEUTRALIZATION KIT, PROVIDE WITH ROOM AIR BOX, 2458 LBS.

P-1 & 2	BOILER PUMPS MAGNA3 "65-150" 168 GPM, 13.8 FT HEAD, 208V/1/60, 1.5 HP, 6.1 MCA.
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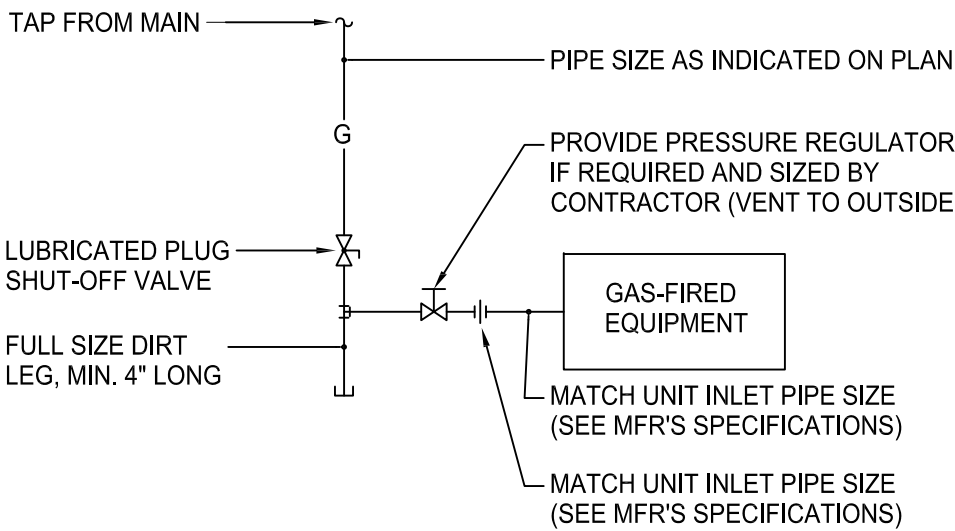
P-3 & 4	SYSTEM PUMPS GRUNDFOS "17-30957-130268-1742P" 210 GPM, 77 FT HEAD, 480V/3/60, 7.5 HP, 1800 RPM.
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AS-1	AIR SEPARATOR CALEFFI "NA546M" 4" INLET/ OUTLET, 210 GPM.
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EXT-1	EXPANSION TANK - EXISTING TO REMAIN TACO "CAX350-3" 92 GAL. TANK VOLUME, 43 GAL. ACCEPTANCE VOLUME, 125 PSI MAX, 240 F MAX, 330 LBS
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3 DETAIL FLOW DIAGRAM NOT TO SCALE



1 DETAIL GAS CONNECTION NOT TO SCALE

NATURAL GAS SYSTEM

NATURAL GAS DESIGN AND SIZING REFLECTS AN EXISTING A LOW-PRESSURE SYSTEM 14" W.C. WITH 3" W.C. PRESSURE DROP). WHERE NECESSARY, PROVIDE APPLIANCE REGULATORS TO MATCH THE MFR'S RECOMMENDED INLET PRESSURES FOR ALL LOADS. CONFIRM LINE SIZING - AND ADAPT IF NECESSARY - BASED ON ACTUAL EXISTING SERVICE PRESSURE. TOTAL BUILDING LOAD WILL DECREASE FROM 6411 CFH TO 5911 CFH WITH A TOTAL EQUIVALENT LENGTH TO REMAIN UNCHANGED. CONFIRM DEMAND WITH SELECTED NATURAL GAS EQUIPMENT AND LENGTH WITH PIPING INSTALLATION.



REVISIONS

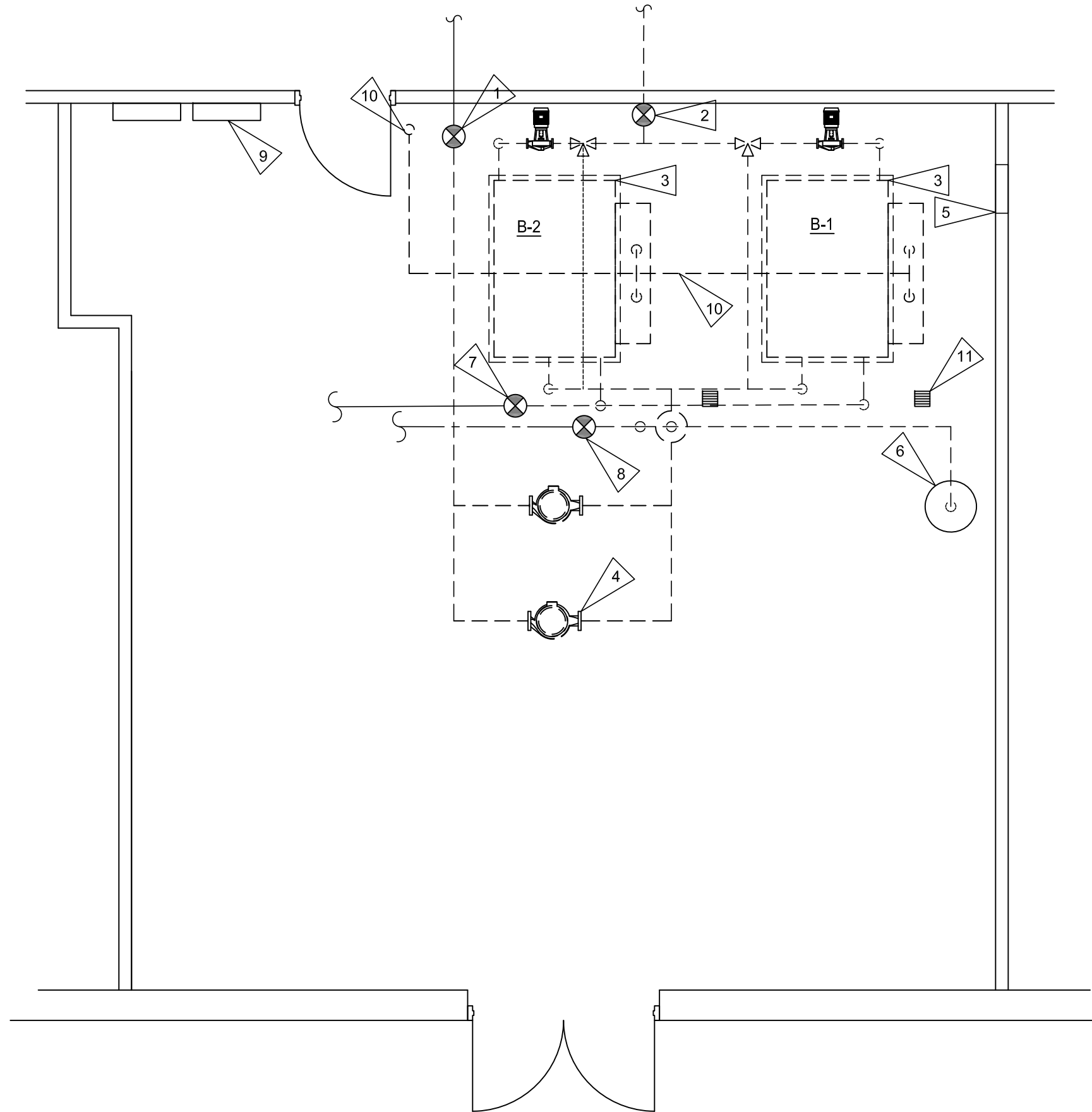
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HVAC PLAN, SPECS, & DETAILS

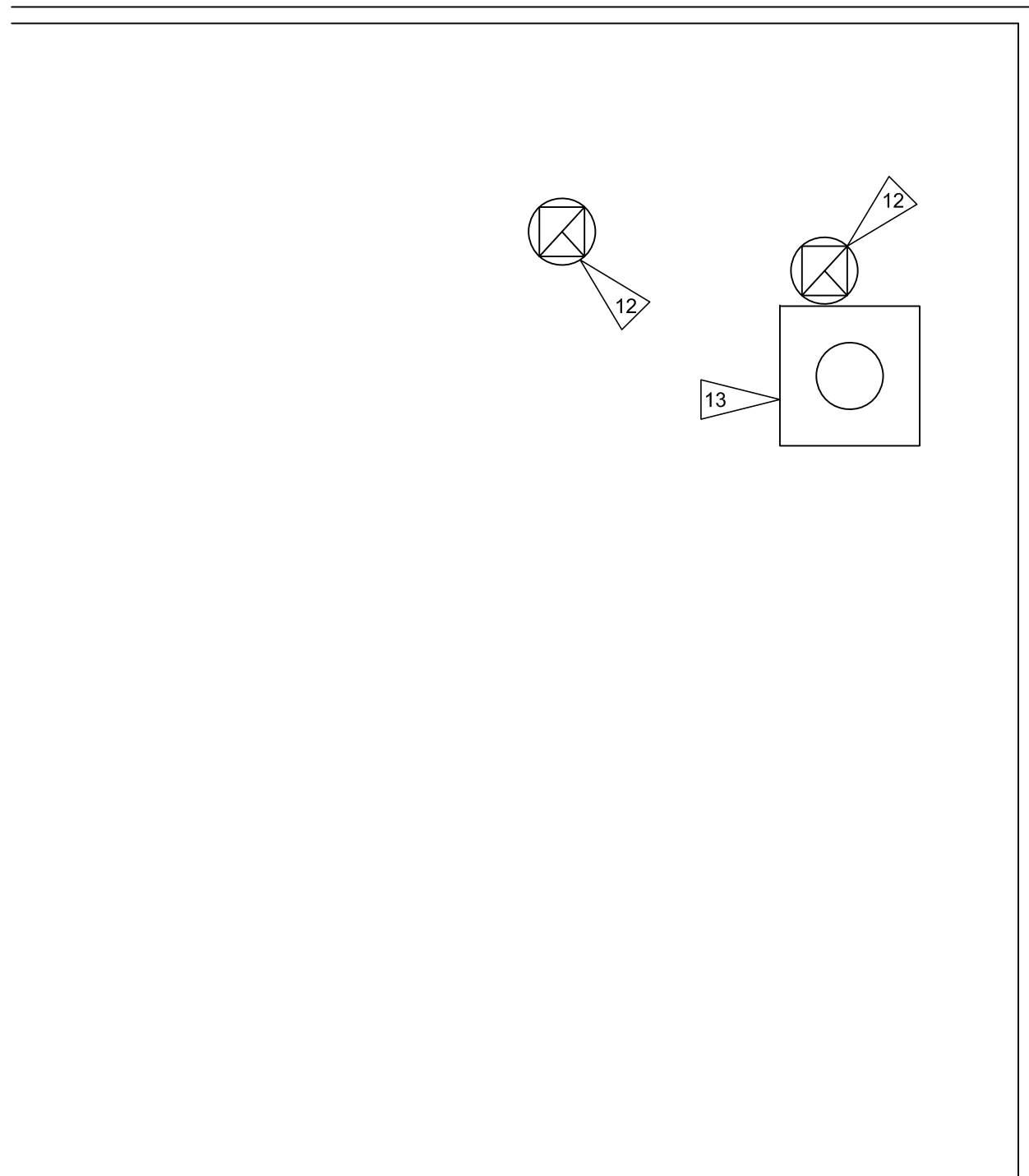
PROJECT #: 8921 DATE: AUGUST 31, 2021

SUMMIT CO. CHILDREN SERVICES BOILER

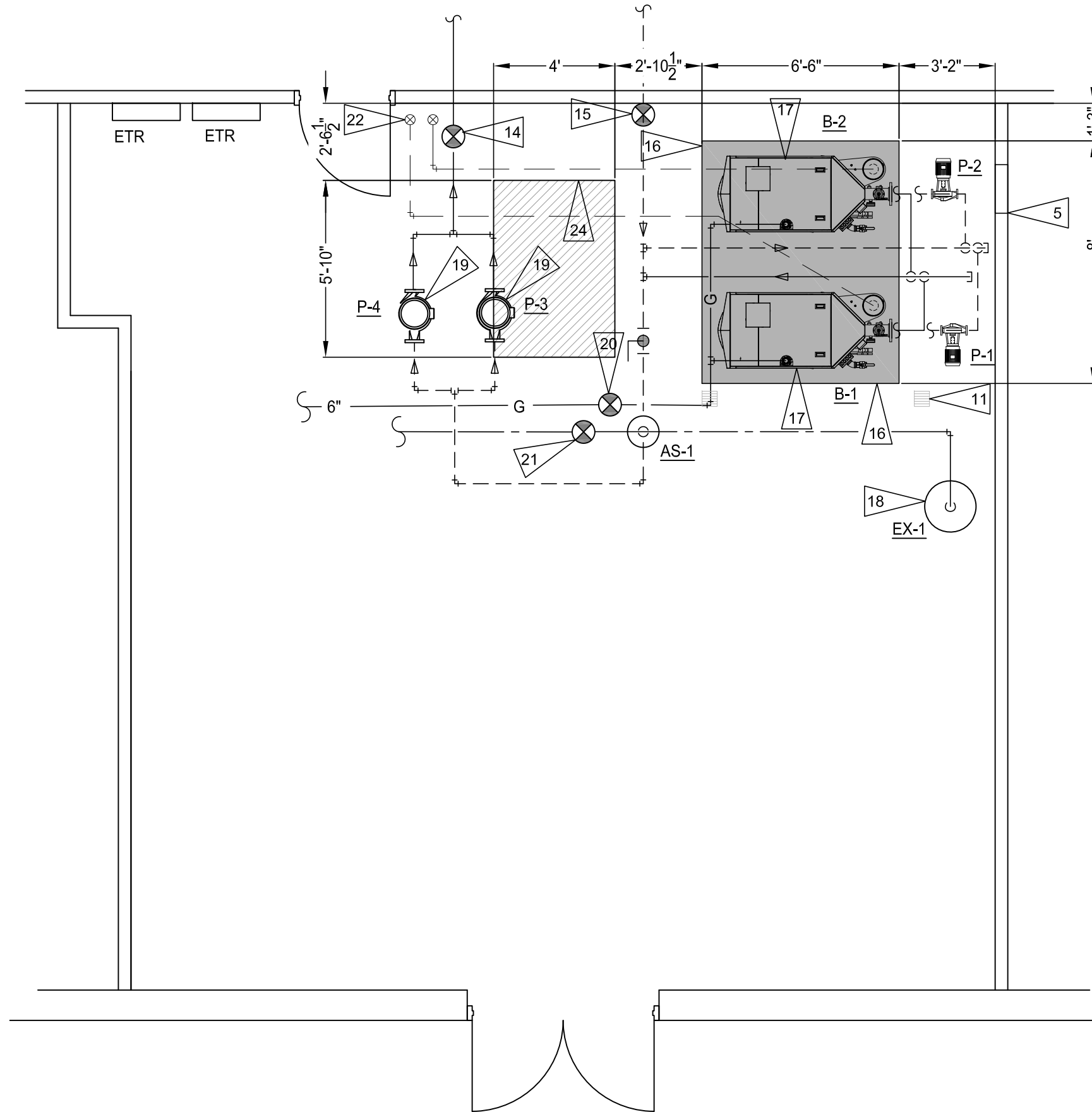
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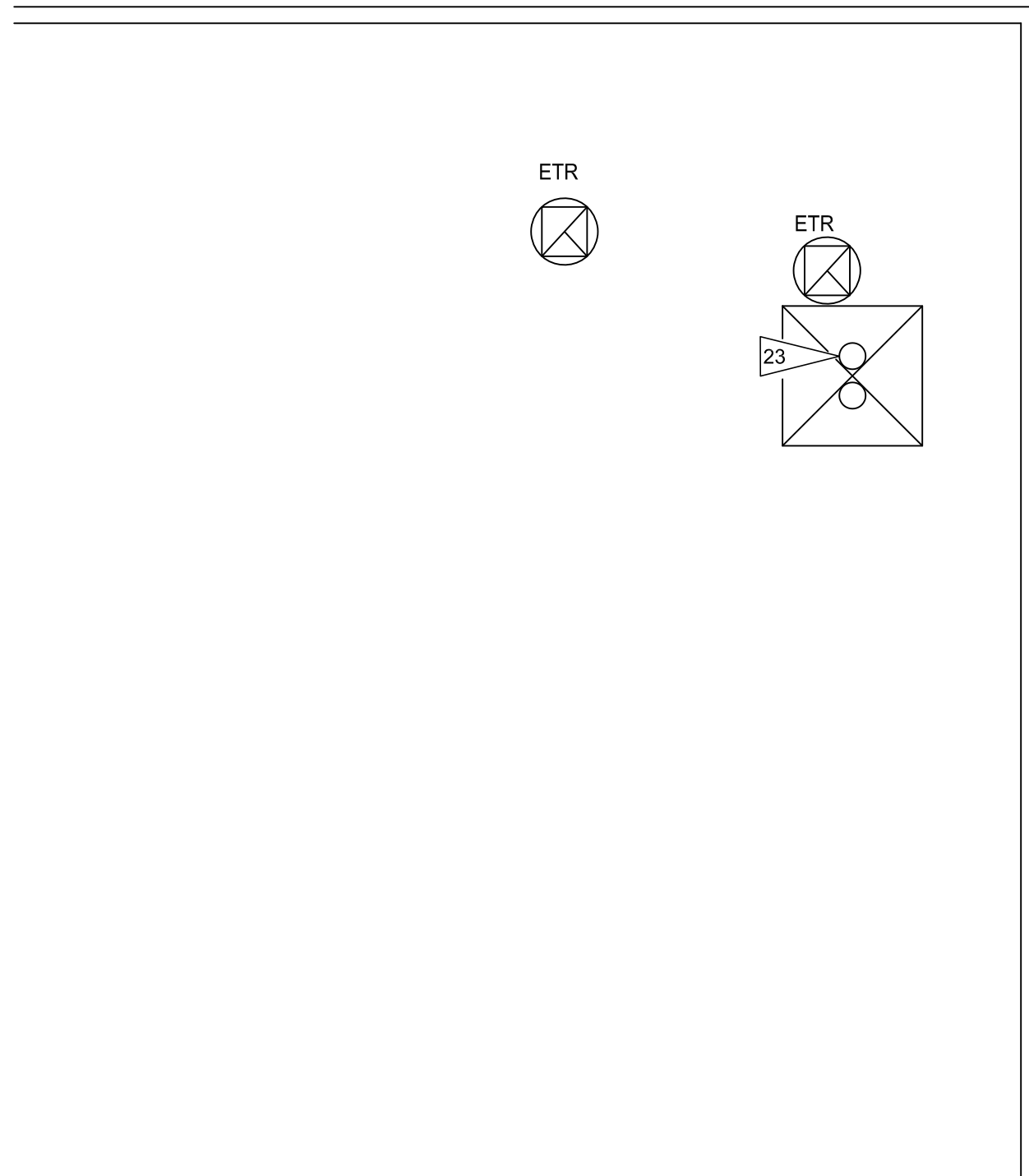
1 PLAN MECHANICAL ROOM DEMOLITION
SCALE: 1/4" = 1'-0"



3 PLAN MECHANICAL ROOF DEMOLITION
SCALE: 1/4" = 1'-0"



2 PLAN MECHANICAL ROOM NEW WORK
SCALE: 1/4" = 1'-0"



4 PLAN MECHANICAL ROOF NEW WORK
SCALE: 1/4" = 1'-0"

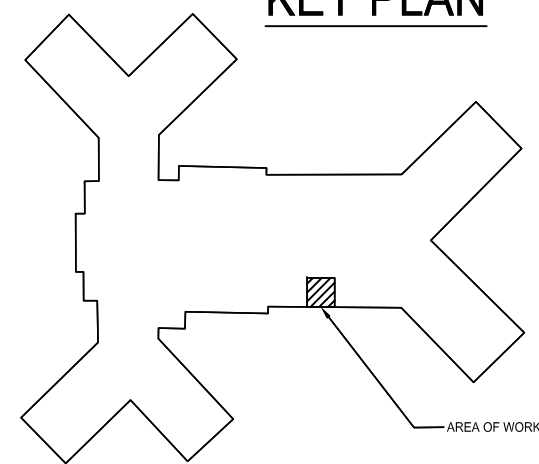
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE CODE-COMPLIANT WITH **OHIO MECHANICAL CODE 2017**. ALL CONTRACTORS UTILIZED IN CONSTRUCTION SHALL BE STATE-CERTIFIED FOR THE WORK THEY ARE TO PERFORM.
- PIPE ROUTINGS ARE DIAGRAMMATIC, TO DEMONSTRATE DESIGN-INTENT ONLY. CONTRACTORS SHALL COORDINATE WITH FIELD-CONDITIONS AND ALL OTHER TRADES TO PREVENT CONFLICTS.
- ALL CONSTRUCTION SHALL BE CODE-COMPLIANT WITH **OHIO PLUMBING CODE 2017**. ALL CONTRACTORS UTILIZED IN CONSTRUCTION SHALL BE STATE-CERTIFIED FOR THE WORK THEY ARE TO PERFORM.
- PLUMBING ROUTINGS ARE SHOWN DIAGRAMMATIC IN NATURE. INSTALL TO MATCH FIELD CONDITIONS AND AVOID OBSTRUCTIONS, COORDINATE WITH STRUCTURE AND ALL OTHER TRADES.
- PROVIDE MEANS OF ACCESS TO ALL SHUT-OFFS, BALANCE VALVES, AND ANY EQUIPMENT, FIXTURES, OR DEVICES REQUIRING MAINTENANCE.

FLAG NOTES

- REMOVE EXISTING 4" HWS PIPING BACK TO POINTS INDICATED FOR RECONNECTION AND EXTENSION UNDER NEW WORK.
- REMOVE EXISTING 4" HWR PIPING BACK TO POINTS INDICATED FOR RECONNECTION AND EXTENSION UNDER NEW WORK.
- REMOVE EXISTING BOILER AND ASSOCIATED ACCESSORIES. REMOVE EXISTING CONCRETE EQUIPMENT PAD.
- REMOVE EXISTING PUMPS AND ALL ASSOCIATED ACCESSORIES. (TYPICAL OF 2)
- EXISTING COMBUSTION AIR OPENINGS TO REMAIN AND BE REUSED.
- EXISTING EXPANSION TANK TO REMAIN AND BE REUSED.
- REMOVE NATURAL GAS PIPING AND ASSOCIATED GAS TRAIN FROM BOILERS BACK TO POINTS INDICATED FOR RECONNECTION AND EXTENSION UNDER NEW WORK.
- REMOVE MAKEUP WATER PIPING BACK TO PRESSURE REDUCER AND BACKFLOW PREVENTOR FOR RECONNECTION UNDER NEW WORK.
- EXISTING CONTROLS EQUIPMENT TO REMAIN AND BE REUSED. COORDINATE WITH CONTROLS OWNER.
- REMOVE EXISTING FLUE DUCTWORK AND ALL ASSOCIATED ACCESSORIES FROM BOILERS UP THROUGH ROOF. PATCH AND REPAIR ROOF AS NECESSARY TO NOT VOID WARRANTY. COORDINATE WITH OWNER PRIOR TO PERFORMING WORK.
- EXISTING FLOOR DRAINS TO REMAIN. (TYPICAL OF 2)
- EXISTING EXHAUST FANS TO REMAIN.
- REMOVE EXISTING BOILER FLUE ROOF PENETRATIONS AND ALL ASSOCIATED ACCESSORIES. EXISTING ROOF CURB TO REMAIN AND BE REUSED. PATCH AND REPAIR ROOF AS NECESSARY TO NOT VOID WARRANTY. COORDINATE WITH OWNER PRIOR TO PERFORMING WORK.
- TIE INTO 4" HWS PIPING BACK TO POINTS INDICATED FOR RECONNECTION AND EXTENSION UNDER NEW WORK.
- TIE INTO 4" HWR PIPING BACK TO POINTS INDICATED FOR RECONNECTION AND EXTENSION UNDER NEW WORK.
- REMOVE CONCRETE PAD AND FLOOR TO ACCOMMODATE NEW PAD DIMENSIONS. PROVIDE NEW 8" CONCRETE EQUIPMENT PAD, SEE DETAIL 4/M1.1.
- NEW HEATING WATER BOILERS. MAINTAIN ALL MANUFACTURER REQUIRED CLEARANCES. SEE DETAIL 3 ON SHEET M1.1 FOR PIPING DETAILS.
- TIE NEW MAKEUP PIPING INTO EXISTING EXPANSION TANK.
- NEW HEATING WATER SUPPLY PUMPS, SEE DETAIL 3 ON SHEET M1.1 FOR DETAILS. MOUNT AT 9'-0" A.F.F.
- TIE INTO EXISTING 6" NATURAL GAS PIPING AND EXTEND TO BOILERS AS INDICATED. IF REGULATOR IS REQUIRED MAINTAIN A MINIMUM OF 10 EQUIVALENT FEET FROM THE BOILER CONNECTION
- TIE INTO MAKEUP WATER PIPING AFTER BACKFLOW PREVENTOR AND EXTEND AS INDICATED.
- EXTEND 8" FLUES UP FROM BOILERS TO EXISTING ROOF PENETRATION. ROUTE FLUE TIGHT TO STRUCTURE. (TYPICAL OF 2)
- ROUTE 8" FLUES UP THROUGH EXISTING CURB AND TERMINATE PER MANUFACTURERS RECOMMENDATIONS.
- INFILL SLAB WHERE EXISTING EQUIPMENT PAD WAS REMOVED. PROVIDE 12" LONG #4 REBAR DOWELS AT 24" O.C. EMBED BARS INTO EXISTING SLAB 6" MIN. WITH EPOXY EMBEDMENT. NEW 4" CONCRETE INFILL SLAB TO BE FLUSH WITH EXISTING CONCRETE. PROVIDE 6X6-W2.1XW2.1 WWF CENTERED WITHIN SLAB OVER 15ML VAPOR BARRIER OVER (MIN.) 4" COMPACTED GRANULAR FILL.

KEY PLAN

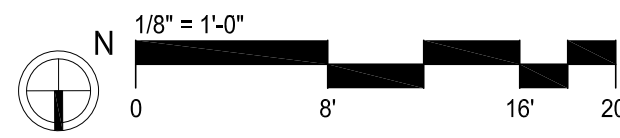


PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
G	NATURAL GAS	C-2	DROP DOWN
I	BALL VALVE	X	CONNECT TO EXISTING

NATURAL GAS SYSTEM

NATURAL GAS DESIGN AND SIZING REFLECTS A LOW-PRESSURE SYSTEM 1/4" W.C. WITH 3" W.C. PRESSURE DROP. WHERE NECESSARY, PROVIDE APPLIANCE REGULATORS TO MATCH THE MFR'S RECOMMENDED INLET PRESSURES FOR ALL LOADS. CONFIRM LINE SIZING - AND ADAPT IF NECESSARY - BASED ON ACTUAL EXISTING SERVICE PRESSURE. TOTAL BUILDING LOAD IS 700 CFH WITH A TOTAL EQUIVALENT LENGTH OF 300'. CONFIRM DEMAND WITH SELECTED NATURAL GAS EQUIPMENT AND LENGTH WITH PIPING INSTALLATION.



REVISIONS

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HVAC PLAN, SPECS, & DETAILS

PROJECT #: 8921 DATE: AUGUST 31, 2021

SUMMIT CO. CHILDREN SERVICES BOILER

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M2.1
2 OF 2