

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY 2015 IBC AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

- A: GENERAL NOTES
 - ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
 - NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
 - CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
 - NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
 - DO NOT SCALE DRAWINGS. DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
 - VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
 - DEFINITIONS:
 1. **FURNISH:** SUPPLY, DELIVER TO AND UNLOAD AT PROJECT SITE READY FOR ASSEMBLY AND INCORPORATION INTO THE WORK.
 2. **INSTALL:** AT THE PROJECT SITE, UNPACK/UNGRATE ASSEMBLE, PLACE, ANCHOR, FINISH, PROTECT, CLEAN AND PERFORM ALL OTHER SIMILAR OPERATIONS REQUIRED TO FULLY AND PROPERLY INCORPORATE AN ITEM INTO THE WORK. LEGALLY DISPOSE OF OR RECYCLE PACKAGING AND EXTRA MATERIAL OFF-SITE.
 3. **PROJECT SITE:** THE SPACE AVAILABLE TO THE CONTRACTOR FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. THE EXTENT OF THE PROJECT SITE IS THE AREAS TO BE REMODELED AS INDICATED ON THE DRAWINGS, AND EXTENDS TO SUCH AREAS AS CONTAIN TERMINATIONS FOR POWER, DATA AND OTHER SERVICES.
 4. **OFF-SITE:** OUTSIDE THE PROPERTY IN WHICH THE PROJECT SITE IS LOCATED.
 5. **PROVIDE:** FURNISH AND INSTALL, AS DEFINED ABOVE.
 - WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.
 - THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.
 - ARCHITECT SHALL BE NAMED AS ADDITIONAL INSURED ON ALL REQUIRED INSURANCE POLICIES.
- B: MISCELLANEOUS AND DEMOLITION NOTES
 - DEFINITIONS:
 - 1.1. **DEMOLISH:** DISCONNECT FROM SERVICES, UNFASTEN, REMOVE, DISASSEMBLE AND LEGALLY DISPOSE OF OR RECYCLE OFF-SITE.
 - 1.2. **SALVAGE:** CAREFULLY, SO AS TO PRESERVE INTEGRITY AND USEFULNESS, DISCONNECT FROM SERVICES, UNFASTEN, REMOVE, DISASSEMBLE IF NECESSARY, AND STORE TEMPORARILY FOR REINCORPORATION INTO THE WORK OR FOR DELIVERY/TURN-OVER TO THE OWNER AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
 - 1.3. **SALVAGE IN PLACE:** PROTECT, RE-USE, CLEAN, RE-CONDITION IF NECESSARY, REFINISH IF INDICATED IN THE DRAWINGS, EXISTING INSTALLED ITEM/COMPONENT WITHOUT DISCONNECTING, UNFASTENING OR REMOVING FROM THE WORK.
 - BRING ANY UNFORESEEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
 - REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.
 - SEAL PENETRATIONS OF DUCTWORK, CONDUIT OR PIPES WITH UL APPROVED MATERIALS TO MAINTAIN THE FIRE RATING OF ASSEMBLIES.
 - APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METALS, FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
 - UNTIL PERMANENT LIGHTING IS IN PLACE AND ENERGIZED, PROVIDE AND MAINTAIN TEMPORARY LIGHTING IN THE PROJECT AREAS, TO ACHIEVE A MINIMUM LIGHTING LEVEL OF 2 WATTS PER S.F.
 - OWNER WILL CONTINUE TO OCCUPY AREAS ADJACENT TO THE PROJECT AREAS DURING THE CONSTRUCTION PERIOD. COORDINATE WITH OWNER TO MINIMIZE CONFLICT AND TO FACILITATE OWNER'S OPERATIONS. LIMIT CONDUCT OF ESPECIALLY NOISY OR DISRUPTIVE WORK TO ONLY THOSE TIMES MUTUALLY AGREED TO BY OWNER. REQUEST MUTUALLY AGREEABLE TIME FROM OWNER PRIOR TO CONDUCTING SUCH WORK, AND PROCEED WITH SUCH WORK ONLY AFTER RECEIVING OWNER'S EXPRESS PERMISSION TO DO SO.
 - CONTRACTOR TO RESTORE ALL DISTURBED GRADE AND LANDSCAPING TO ORIGINAL CONDITION.
- C: BIDDING NOTES
 - REFER TO THE JIC FRONT-END DOCUMENTS FOR THE ALLOWANCE THAT THE GENERAL CONTRACTOR IS TO PROVIDE AS PART OF HIS/HER BID FOR UNFORESEEN MISCELLANEOUS CONDITIONS. WHEN FIGURING THIS ALLOWANCE IN THE BID, CONTRACTOR IS TO INCLUDE ALL NECESSARY OVERHEAD AND PROFIT. THIS ALLOWANCE IS NOT FOR THE CONTRACTOR'S BENEFIT, AND IS ONLY AUTHORIZED TO CHARGE AGAINST THIS ALLOWANCE WHEN DIRECTED AND APPROVED BY JOLIET JUNIOR COLLEGE. THE CONTRACTOR WILL BE ALLOWED TO INVOICE FOR MATERIAL AND RAW LABOR COST ONLY.
 - CONSTRUCTION SCHEDULE:**
CONSTRUCTION START AND SUBSTANTIAL COMPLETION IN ACCORDANCE WITH JIC FRONT-END DOCUMENTS.
 - ALL LOUD AND DISRUPTIVE WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 10:00 PM AND 6:00 AM.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED TEMPORARY HEAT TO THE AREAS OF THE BUILDING FOR THE OWNER'S FULL USE, IF THE NEW HEATING SYSTEM IS NOT OPERATIONAL BY OCTOBER 1, 2020.

STANDARD ABBREVIATIONS

<ul style="list-style-type: none"> AT - ANCHOR BOLT ABR - ABRASIVE AT-(1) - ACOUSTIC TILE CEILING (TYPE) AF - ABOVE FINISH FLOOR AFG - ABOVE FINISH GRADE ACOUS - ACOUSTIC ADD'N - ADDITION ADD'L - ADDITIONAL ADJ - ADJACENT ADJT - ADJUSTABLE AL - ALUMINUM ALT - ALTERNATE ANCH - ANCHOR AP - ACCESS PANEL APPROX - APPROXIMATE ASPH - ASPHALT AUTO - AUTOMATIC AVG - AVERAGE BSMT - BASEMENT BD - BOARD BITUM - BITUMINOUS/BITUMASTIC BLDG - BUILDING BLK'G - BLOCKING (WOOD) BM - BEAM B.M. - BENCH MARK BT STL PL - BENT STEEL PLATE BRG - BEARING BRKT - BRACKET BRK - BRICK BTM - BOTTOM BTWN - BETWEEN CJ - CONSTRUCTION/CONTRACTION JOINT CAB - CABINET CEM PL-(1) - CEMENT PLASTER (TYPE) CT PAV-(1) - CERAMIC PAVEMENT TILE (TYPE) CIP - CAST-IN-PLACE CONCRETE CLG - CEILING CLR - CLEAR CO - CLEAN OUT CMU - CONCRETE MASONRY UNIT COL - COLUMN COMB - COMBINATION COMP - COMPRESSIBLE COMP'D - COMPACTED CONC - CONCRETE CONC OPNG - CONCRETE OPENING COND - CONDITION CONT - CONTINUOUS CONTR - CONTRACT (OR) CPT-(1) - CARPET (TYPE) CT-(1) - CERAMIC TILE (TYPE) CTR - COUNTER CTR SK - COUNTER SINK CTS - CENTER(S) CUH - CABINET UNIT HEATER CUV - CABINET UNIT VENTILATOR DIA - DIAMETER DIM - DIMENSION DN - DOWN DR - DOOR DWG'S - DRAWINGS DTL - DETAIL DWL'S - DOWELS EJ - EACH EL - EXPANSION JOINT EL - ELEVATION ELEC - ELECTRIC/ELECTRICAL ELEC CONTR - ELECTRICAL CONTRACTOR ELEV - ELEVATOR EMBED - EMBEDMENT EMER - EMERGENCY EP PNT - EPOXY PAINT EQ - EQUAL EW - EACH WAY EW - ELECTRIC WATER COOLER EW - ELECTRIC WATER HEATER ER-(26) - EXHIBIT RAIL (LENGTH) EXIST - EXISTING 	<ul style="list-style-type: none"> EXP CONST - EXPANSION FTD - EXPOSED CONSTRUCTION FDN - FOUNDATION FE - FIRE EXTINGUISHER FEC - FIRE EXTINGUISHER CABINET FHC - FIRE HOSE CABINET FIN - FINISH FLR - FLOOR FRT - FIRE RETARDANT TREATED (RATED) FUR CHN'L - FURRING CHANNEL FTG - FOOTING GA - GAUGE GALV - GALVANIZED GEN CONTR - GENERAL CONTRACTOR GC - GENERAL CONTRACTOR GL - GLASS GYP DB-(1) - GYPSUM WALL BOARD (DRYWALL)(TYPE) GYP PL-(1) - GYPSUM PLASTER (TYPE) H - HIGH HD - HEAVY DUTY HD - HARD HONR - HARDENER HD WD-(1) - HARD WOOD (TYPE) HDWRE - HARDWARE HGT - HEIGHT HM - HOLLOW METAL HP - HIGH POINT HORIZ - HORIZONTAL HTG - HEATING HTG - HEATING/VENTILATING/AIR CONDITIONING HVAC - HEATING/VENTILATING/AIR CONDITIONING ID - INSIDE DIAMETER INCL - INCLUDE (D) INSUL - INSULATION OR INSULATING JD - JOINT KD - KNOCK DOWN L - LONG LAM - LAMINATED LAV - LAVATORY LH - LEFT HAND LP - LOW POINT LGT WGT - LIGHTWEIGHT LL - LIVE LOAD LLH - LONG LEG HORIZONTAL LLV - LONG LEG VERTICAL LVR - LOUVER MO - MASONRY OPENING MT - METAL THRESHOLD MAS'Y - MASONRY MATL - MATERIAL MAX - MAXIMUM MB-(16) - MARKERBOARD- (LENGTH) MECH - MECHANICAL CONTRACTOR MFR - MANUFACTURER MIN - MINIMUM MISC - MISCELLANEOUS MSB - MOP SERVICE BASIN (SINK) MT(D) - MOUNT(ED) METL - METAL NIC - NOT IN CONTRACT NOM - NOMINAL NTS - NOT TO SCALE NO - NUMBER OVERALL - OVERALL OC - ON CENTER OD - OUTSIDE DIAMETER OF - OUTSIDE FACE OPN'G - OPENING OPP - OPPOSITE OPP HD - OPPOSITE HAND PSF - POUNDS PER SQUARE FOOT PSI - POUNDS PER SQUARE INCH PT - PRESSURE TREATED PTN - PARTITION PAVT - PAVEMENT PC - PIECE PFM - PERMANENT FLOOR MAT 	<ul style="list-style-type: none"> PL - PLATE PL LAM - PLASTIC LAMINATE PI - PLASTER PLB'G - PLUMBING PLB'G CONTR - PLUMBING CONTRACTOR PLYWD - PLYWOOD PNT - PAINT PVC - POLYVINYL CHLORIDE PL-(1) - GYPSUM PLASTER (TYPE) R OR RAD - RADIUS R - RISER RD - ROOF DRAIN RO - ROUGH OPENING RF (1) - RUBBER FLOORING (TYPE) RH - RIGHT HAND REF - REFERENCE REINF - REINFORCING REQ'D - REQUIRED RM - ROOM SF - SQUARE FOOT SI - SQUARE INCH SK - SINK SS - STAINLESS STEEL SSK - SERVICE SINK SQ - SQUARE SCHED - SCHEDULE SEAL/HDNR - SEALER/HARDENER SEC - SECTION SHT - SHEET SIM - SIMILAR SOG - SLAB ON GRADE SPEC - SPECIFICATION(S) SPC'G - SPACING SPK'R - SPEAKER STN - STN STD - STANDARD STD WGT - STANDARD WEIGHT STL - STEEL STRUCT - STRUCTURAL OR STRUCTURE SUSP - SUSPEND(ED) SYM - SYMMETRICAL T - TREAD T&G - TONGUE AND GROOVE T/B - TOP OF BEAM T/C - TOP OF CURB T/F - TOP OF FOUNDATION T/S - TOP OF SLAB T/STL - TOP OF STEEL T/W - TOP OF WALL TB (4) - TACKBOARD (LENGTH) TOM - TOP OF MASONRY TYP - TYPICAL UNO - UNLESS NOTED OTHERWISE VBC - MECHANICAL VBS - MECHANICAL CONTRACTOR VCT - VINYL COMPOSITION TILE VEN PL (1) - VENEER PLASTER (TYPE) VERT - VERTICAL W - WIDE OR WIDTH W/ - WITH W/O - WITHOUT WCG - WALL CORNER GUARD WD - WOOD WDN - WINDOW WGT - WEIGHT WP - WATER PROOF WWF - WELDED WIRE FABRIC WSB - WALL SERVICE BASIN
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THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT.

DETAIL NUMBER DRAWING NUMBER	8 A12.24
DETAIL NUMBER DRAWING NUMBER	23 A7.19
DETAIL NUMBER DRAWING NUMBER	2 A9.19 5
DETAIL NUMBER DRAWING NUMBER	1 A6.05
COLUMN NUMBER	26
LOCATION ELEVATION	1/1ST FLR 100'-0"
ROOM NUMBER	204
DOOR NO. NEW DOOR NO. EXISTING	203.2 203.1X
NOMINAL THICKNESS CONSTRUCTION TYPE SPECIAL CONDITION	1/2"
KEYNOTE IDENTIFICATION	15.211
WINDOW TYPE IDENTIFICATION	⊗
TOILET ACCESSORY IDENTIFICATION	A
SPOT ELEVATION	1/1ST FLR 100'-0"
	CONCRETE
	BRICK MASONRY IN PLAN
	CONCRETE MASONRY IN PLAN (RUNNING BOND)
	CONCRETE MASONRY IN PLAN (STACK BOND)
	STONE MASONRY IN PLAN
	RAKED JOINT IN PLAN CTRL./EXP. JOINT IN PLAN
	BRICK MASONRY IN SECTION DETAIL
	CONCRETE MASONRY IN SECTION DETAIL
	STONE MASONRY IN SECTION DETAIL
	STEEL IN SECTION DETAIL
	DISCONTINUOUS WOOD BLOCKING IN SECTION
	CONTINUOUS WOOD BLOCKING IN SECTION
	FINISHED WOOD IN SECTION DETAIL
	RIGID BOARD INSULATION
	RIGID BOARD INSULATION (ROOFING)
	BATT INSULATION
	GYPSUM BOARD
	ACOUSTICAL CEILING PANEL
	BITUMINOUS CONCRETE (ASPHALT) PAVING IN SECTION
	AGGREGATE BALLAST, FILL OR BACKFILL IN SECTION
	UNDISTURBED EARTH
	EARTH BACKFILL

DRAFTING SYMBOLS AND MATERIALS LEGEND



PROJECT

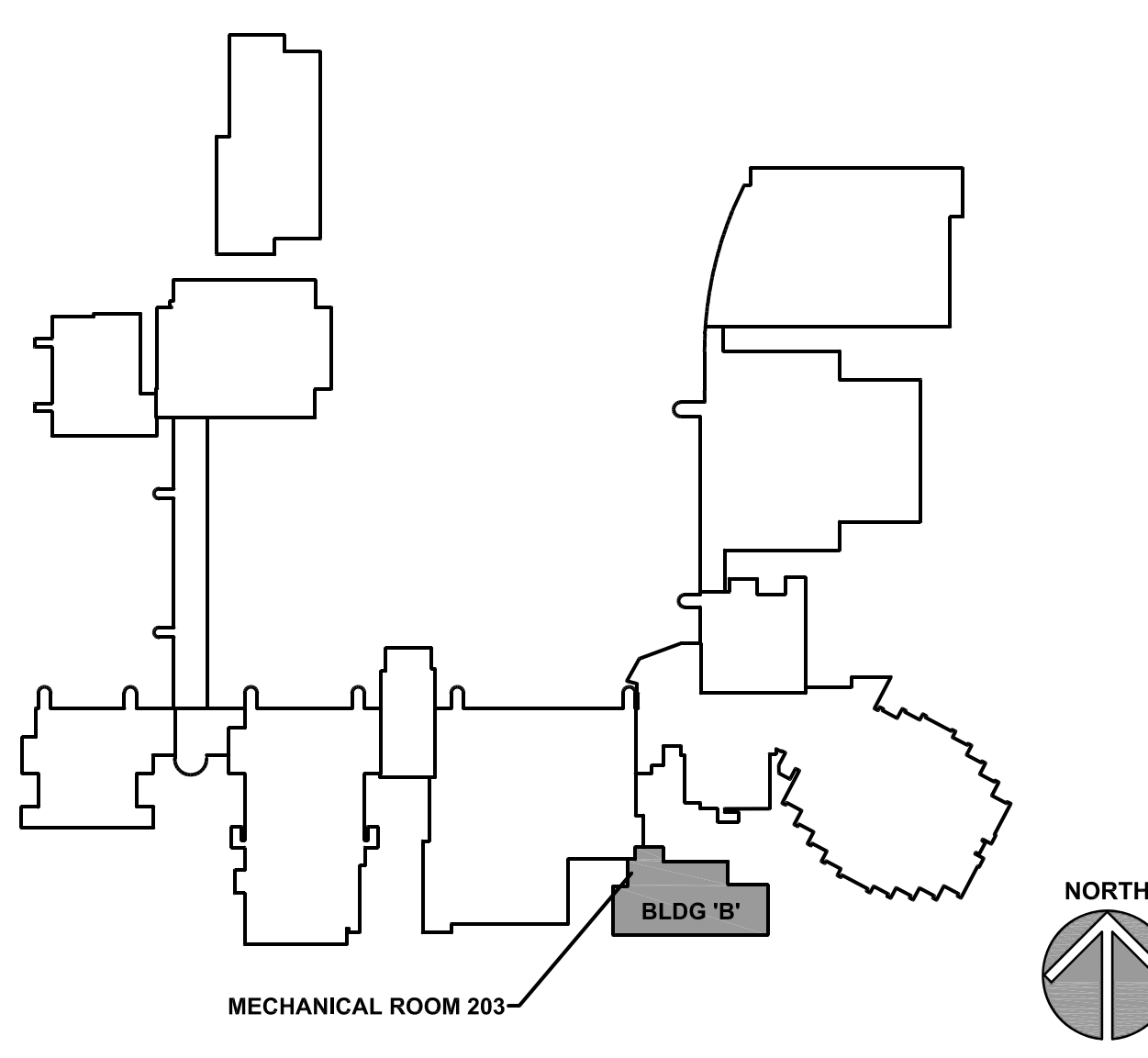
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SEALS & CERTIFICATES

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2015 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284

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"G" SERIES
"M" SERIES

ELECTRICAL ENGINEER'S SEAL
"G" SERIES
"E" SERIES

ARCHITECT'S SEAL
"G" SERIES
"M" SERIES

INDEX OF DRAWINGS

G100	COVER SHEET, GENERAL NOTES, SYMBOLS, & DRAWING INDEX
M320	MEZZANINE MECHANICAL ROOM 203 PLANS
M410	MECHANICAL SCHEDULES AND DETAILS

BUILDING CODE DATA

2015 INTERNATIONAL BUILDING CODE
2014 ILLINOIS STATE PLUMBING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FUEL AND GAS CODE
2018 INTERNATIONAL ENERGY CODE
2015 INTERNATIONAL FIRE PREVENTION CODE
2018 IL ACCESSIBILITY CODE
2014 NATIONAL ELECTRIC CODE
LOCAL AMENDMENTS TO THE ABOVE CODES



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ISSUED
01/15/20
BID DOCUMENTS

JOB NO. 19-292-1279
DRAWN BWG
CHECKED DDW
APPROVED DDW

SHEET TITLE
COVER SHEET,
GENERAL NOTES,
SYMBOLS AND
DRAWING INDEX

SHEET NUMBER

G100

KEYNOTES

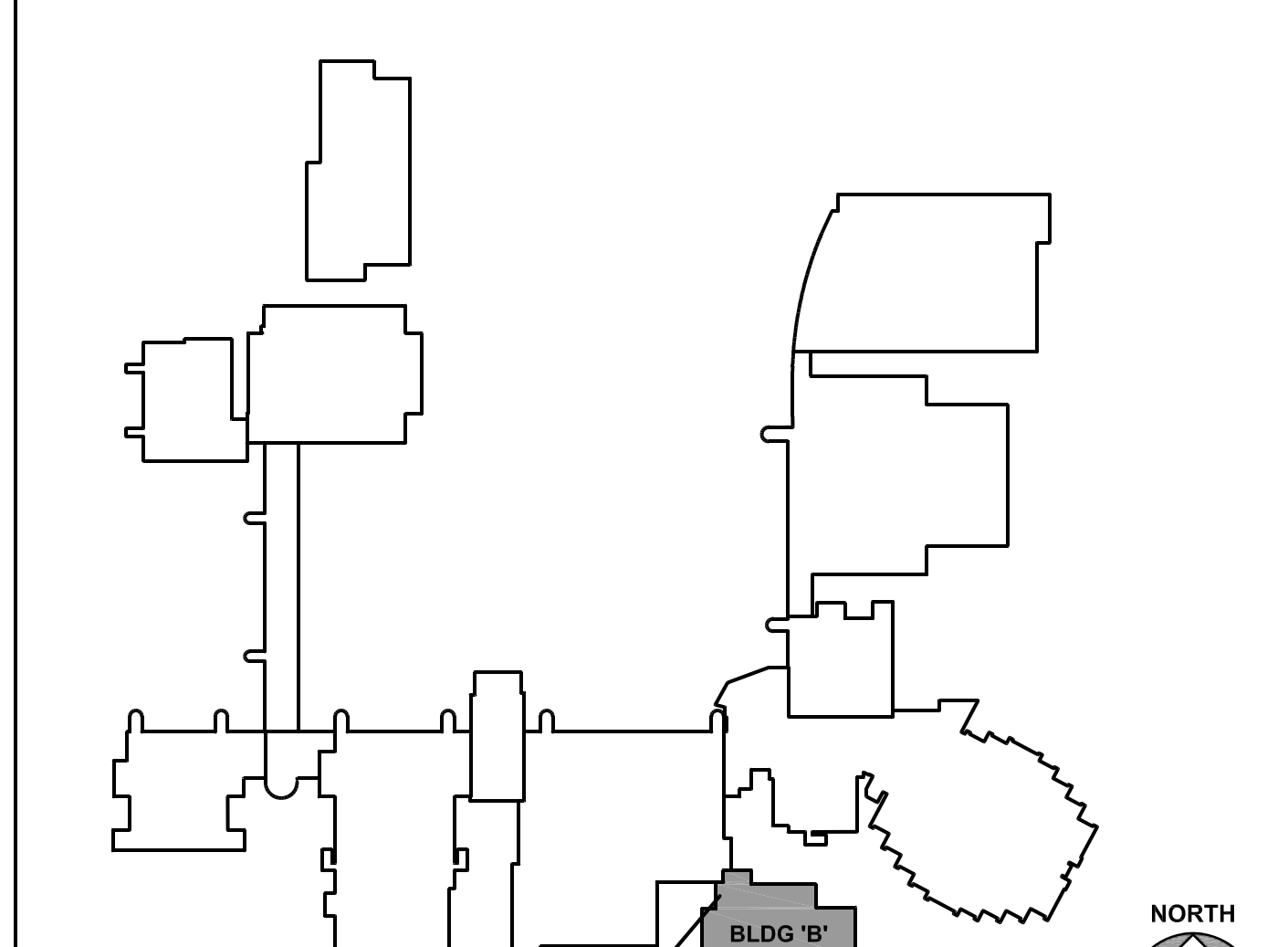
KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 2.442 DEMOLISH PORTION OF EXISTING EXTERIOR WALL CONSTRUCTION: EIFS/STUCCO—GLAD CONCRETE MASONRY; TO ENLARGE EXISTING LOUVER ROUGH OPENING TO APPROXIMATELY 40" IN WIDTH, MAINTAIN EXISTING OPENING HEIGHT.
- 2.753 ENLARGE EXISTING OPENING THROUGH ROOF DECK AND ROOFING SYSTEM TO ACCOMMODATE SIZE OF NEW BOILER FLUE, ALLOWING 1" CLEARANCE BETWEEN NEW FLUE AND EDGE OF OPENING.
- 2.754 DEMOLISH EXISTING ROOFING AND CORE HOLE THROUGH EXISTING ROOF DECK TO ACCOMMODATE NEW BOILER INTAKE PIPE.
- 2.489 DEMOLISH EXISTING WALL LOUVER.
- 4.201 MASONRY ASSEMBLY: PATCH EXISTING MASONRY AT SAWCUT END TO PROVIDE SMOOTH, EVEN SURFACE FOR ANCHORING JAMB OF LOUVER.
- 5.550 MISCELLANEOUS METAL FABRICATION: STEEL LINTEL; (2) 3/8" X 3/8" X 5/16"; PRIMED; LENGTH SUFFICIENT TO PROVIDE 4" MIN. BEARING AT EACH END.
- 7.538 ROOFING ASSEMBLY: FLASH BOILER FLUE THROUGH EXISTING EPDM ROOFING SYSTEM IN ACCORDANCE WITH NRCA 2015 ROOFING MANUAL DETAIL EPDM-18.
- 7.539 ROOFING ASSEMBLY: FLASH BOILER INTAKE THROUGH EXISTING EPDM ROOFING SYSTEM IN ACCORDANCE WITH NRCA 2015 ROOFING MANUAL DETAILS EPDM-19 OR EPDM-19A.
- 7.925 JOINT SEALANT AND BACKER ROD: PROVIDE AT ENTIRE PERIMETER OF LOUVER; NON-SAG, NON-STAINING SILICONE; WHITE COLOR.
- 8.910 WALL LOUVER: SIZE TO FIT OPENING (APPROX. 40" X 84"); WHITE COLOR TO MATCH EXISTING; PROVIDE COMPLETE WITH INSECT SCREEN AND SILL PAN FLASHING.
- 23.100 DEMOLISH BOILER, EXHAUST VENT AND ASSOCIATED PIPING. PROVIDE TEMPORARY CAP ON ROOF OPENING UNTIL NEW BOILER VENT IS INSTALLED.
- 23.101 DEMOLISH GAS PIPE AND SPECIALTIES BACK TO LOCATION SHOWN AND CAP.
- 23.102 DEMOLISH PUMPS AND SPECIALTIES.
- 23.103 DEMOLISH DAMPERS AND ASSOCIATED DUCTWORK.
- 23.200 PROVIDE NEW BOILER EXHAUST VENT UP THROUGH ROOF. MODIFY EXISTING OPENING AS REQUIRED FOR NEW EXHAUST VENT. TERMINATE MINIMUM 48 INCHES ABOVE ROOF WITH VELOCITY CONE. BOILER MANUFACTURER SHALL APPROVE VENT CONFIGURATION.
- 23.201 PROVIDE NEW BOILER DIRECT VENT COMBUSTION AIR PIPE UP THROUGH ROOF. TERMINATE WITH GOOSENECK 24 INCHES ABOVE ROOF. BOILER MANUFACTURER SHALL APPROVE COMBUSTION AIR CONFIGURATION.
- 23.202 PROVIDE NEW DIRT/AIR SEPARATOR. RECONNECT TO EXISTING MAKE-UP-WATER AND EXPANSION TANK.
- 23.203 PROVIDE NEW HOT WATER SUPPLY/RETURN PIPE CONNECTIONS TO EXISTING UNIT HEATER.
- 23.204 PROVIDE NEW SYSTEM PIPING CONNECTIONS TO EXISTING FILTER AND POT FEEDER.
- 23.205 PROVIDE GAS PRESSURE REGULATOR FOR NEW BOILER. VERIFY REGULATOR MANUFACTURER IS ACCEPTABLE TO BOILER MANUFACTURER. PROVIDE PRESSURE GAUGE TAP UPSTREAM AND DOWNSTREAM OF REGULATOR FOR TESTING.
- 23.208 PROVIDE 12 X 12 INCH DUCTWORK CONNECTION TO LOUVER AND CONTROL DAMPER. TERMINATE DUCTWORK WITH ELBOW UP.
- 23.209 PROVIDE INSULATED BLANK-OFF PANEL AND SEAL AIR TIGHT FOR UNUSED SECTION OF DAMPER.
- 23.301 DEMOLISH JCI DYN100 AND PROVIDE NEW DDC CONTROLLER MEETING CAMPUS STANDARD. PROVIDE ALL EXISTING POINTS TO REMAIN AND ADD NEW BOILER AND PUMP POINTS.
- 23.302 DEMOLISH PNEUMATIC ACTUATORS. DEMOLISH ALL ABANDONED PNEUMATIC TUBING BACK TO NEXT ACTIVE SECTION AND CAP.
- 23.303 PROVIDE NEW NETWORK CONTROL ENGINE (NAE) AND IOM MODULE AS REQUIRED FOR POINTS. TRANSFER POINTS FROM DYN100 REQUIRED TO NEW CONTROLLER (FIELD VERIFY POINTS). PROVIDE ALL SENSORS, COMPONENTS AND INTERFACE TO NEW BOILER, PUMPS, DAMPERS, ETC.
- 23.304 PROVIDE PUSH BUTTON EMERGENCY GAS SHUT OFF SWITCH TO SHUT DOWN BOILER AND WATER HEATER. PROVIDE RED SIGNAGE WITH DESCRIPTION OF SWITCH.
- 23.305 PROVIDE TWO POSITION DAMPER ACTUATOR. DAMPER SHALL OPEN WHEN WATER HEATER IS ENERGIZED. OTHERWISE DAMPER SHALL REMAIN CLOSED.
- 26.100 DISCONNECT AND PROTECT CIRCUIT TO BOILER INDICATED TO BE DEMOLISHED AND REPLACED (CKT P1-27). EXTEND BRANCH CIRCUIT TO NEW BOILER AND PROVIDE NEW EQUIPMENT CONNECTION.
- 26.110 DISCONNECT AND PROTECT CIRCUIT TO PUMPS INDICATED TO BE DEMOLISHED AND REPLACED (CKT MDP1-11). EXTEND BRANCH CIRCUIT TO NEW PUMPS AND PROVIDE NEW EQUIPMENT CONNECTION.
- 26.111 DISCONNECT COMBINATION STARTER FOR PUMPS. PROVIDE NEW NON-FUSED DISCONNECT (30 AMP/3 POLE, NEMA 1 ENCLOSURE). NOTE: NEW PUMPS WILL HAVE INTEGRAL DRIVES.
- 26.130 DISCONNECT, PROTECT AND REINSTALL LIGHT FIXTURE AFFECTED BY CONSTRUCTION ACTIVITIES. INCLUDE RELOCATION OF LIGHT FIXTURE TO WITHIN 5 FEET OF EXISTING LOCATION.

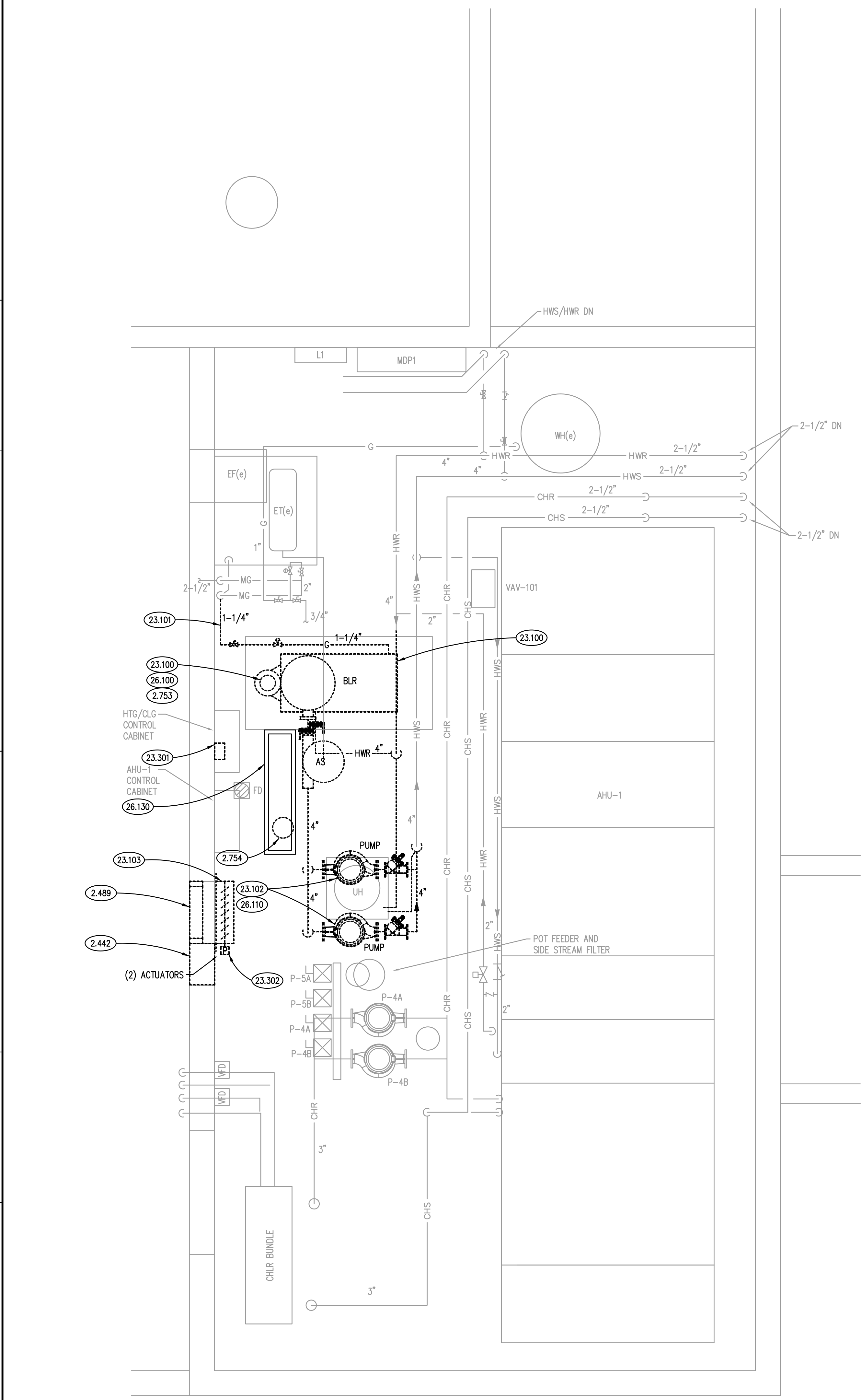
GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. ALL PIPING AND DUCTWORK IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DRIPS AND RISERS. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
3. ALL EXISTING DUCTWORK IS INSULATED WITH A ONE INCH DUCT LINER. ALL DIMENSIONS SHOWN ARE NET INSIDE DIMENSIONS.
4. ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
5. THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' DEADBAND.
6. GENERALLY, SMALL DIAMETER PIPE RUNS FROM DRIPS, CONDENSATE PANS AND OTHER SERVICES ARE NOT SHOWN BUT MUST BE PROVIDED.
7. SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
8. DO NOT CUT THROUGH STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
9. KEYNOTES 7.538 AND 7.539 ARE ASSOCIATED WITH RE-ROOFING WORK BY OWNER. COORDINATE WITH OWNER'S ROOFING CONTRACTOR REGARDING THE INSTALLATION SCHEDULE FOR THE NEW ROOFING SYSTEM. IF THE WORK OF THESE KEYNOTES OCCURS AFTER THE INSTALLATION OF THE NEW ROOFING SYSTEM, CONTRACT WITH THE INSTALLING CONTRACTOR TO PERFORM THIS WORK AND ENSURE THAT WORK IS PERFORMED IN SUCH A WAY THAT IT DOES NOT VOID THE NEW ROOFING SYSTEM WARRANTY.
10. KEYNOTES 23.301-23.305 ARE ASSOCIATED WITH WORK BY OWNER (TEMPERATURE CONTROLS). COORDINATE WITH OWNER'S CONTRACTOR FOR INSTALLATION OF CONTROL COMPONENTS AND CORRECT CONTROL INTERFACE ON EQUIPMENT.

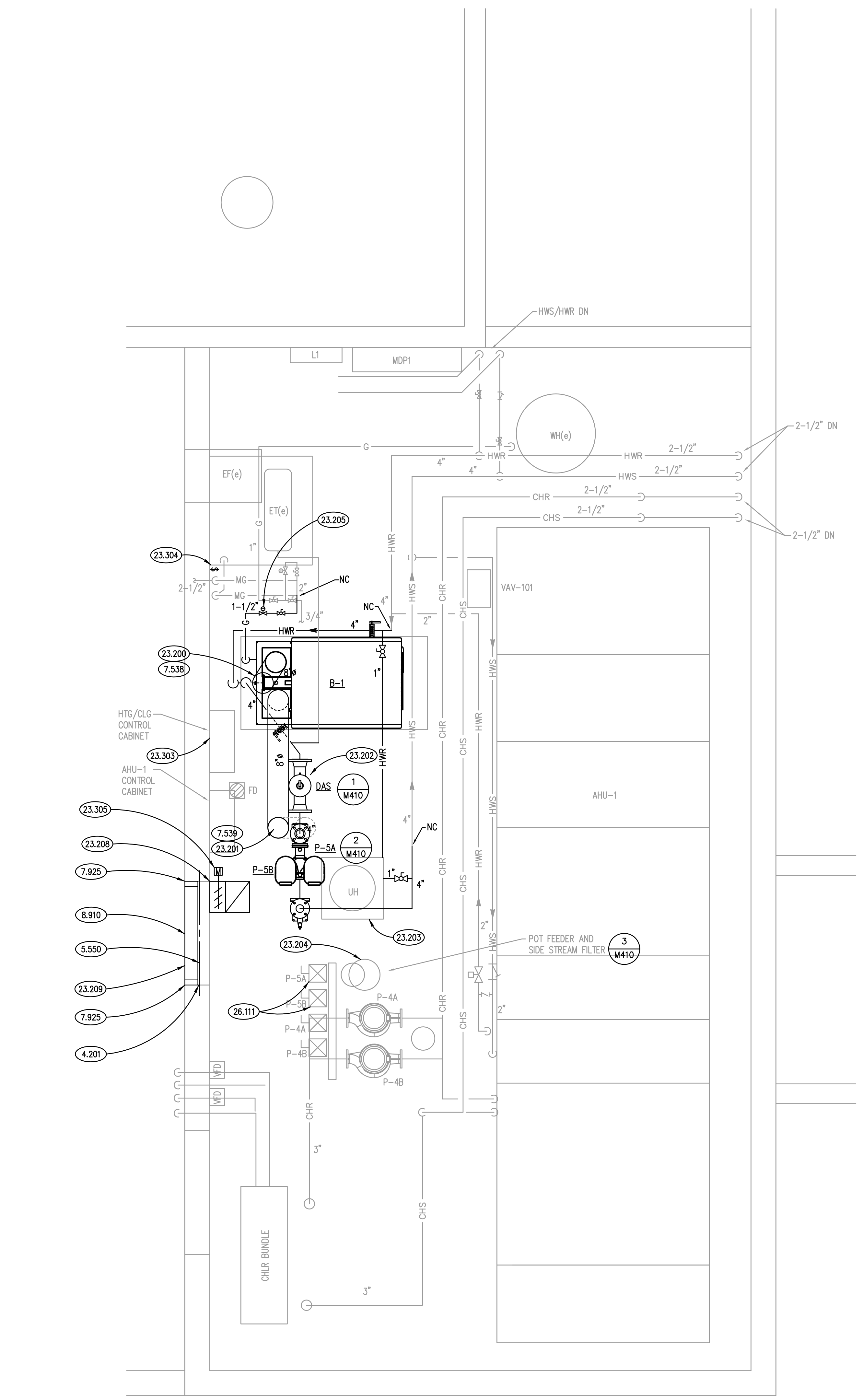
KEY PLAN



ISSUED	
01/15/20	ISSUED
19-292-1279	JOB NO.
BWG	DRAWN
DDW	CHECKED
DDW	APPROVED
SHEET TITLE	
MEZZANINE MECHANICAL ROOM 203 PLANS	
SHEET NUMBER	
M320	

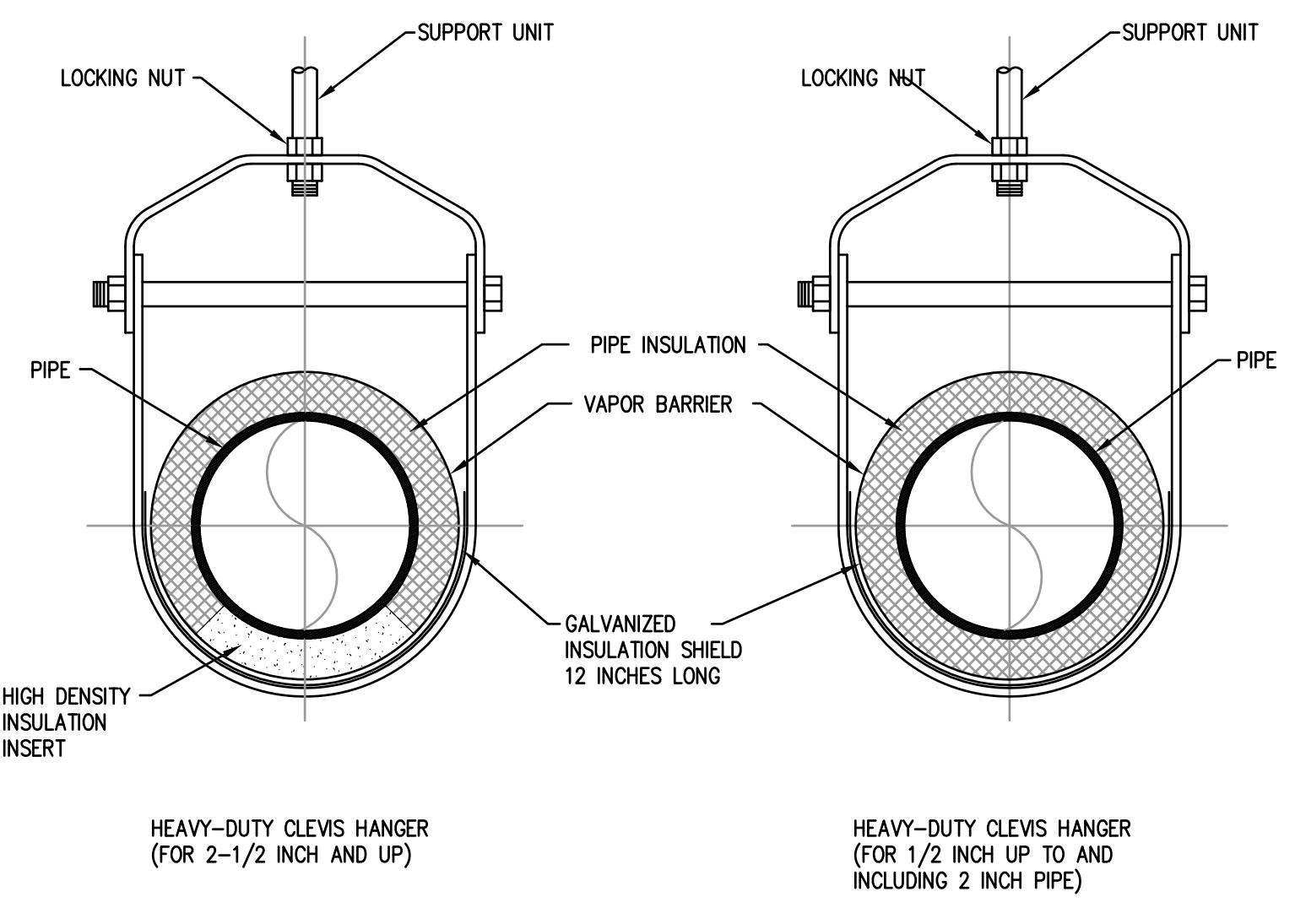


MEZZANINE MECHANICAL ROOM 203 DEMOLITION ④
SCALE: 1/2" = 1'-0"

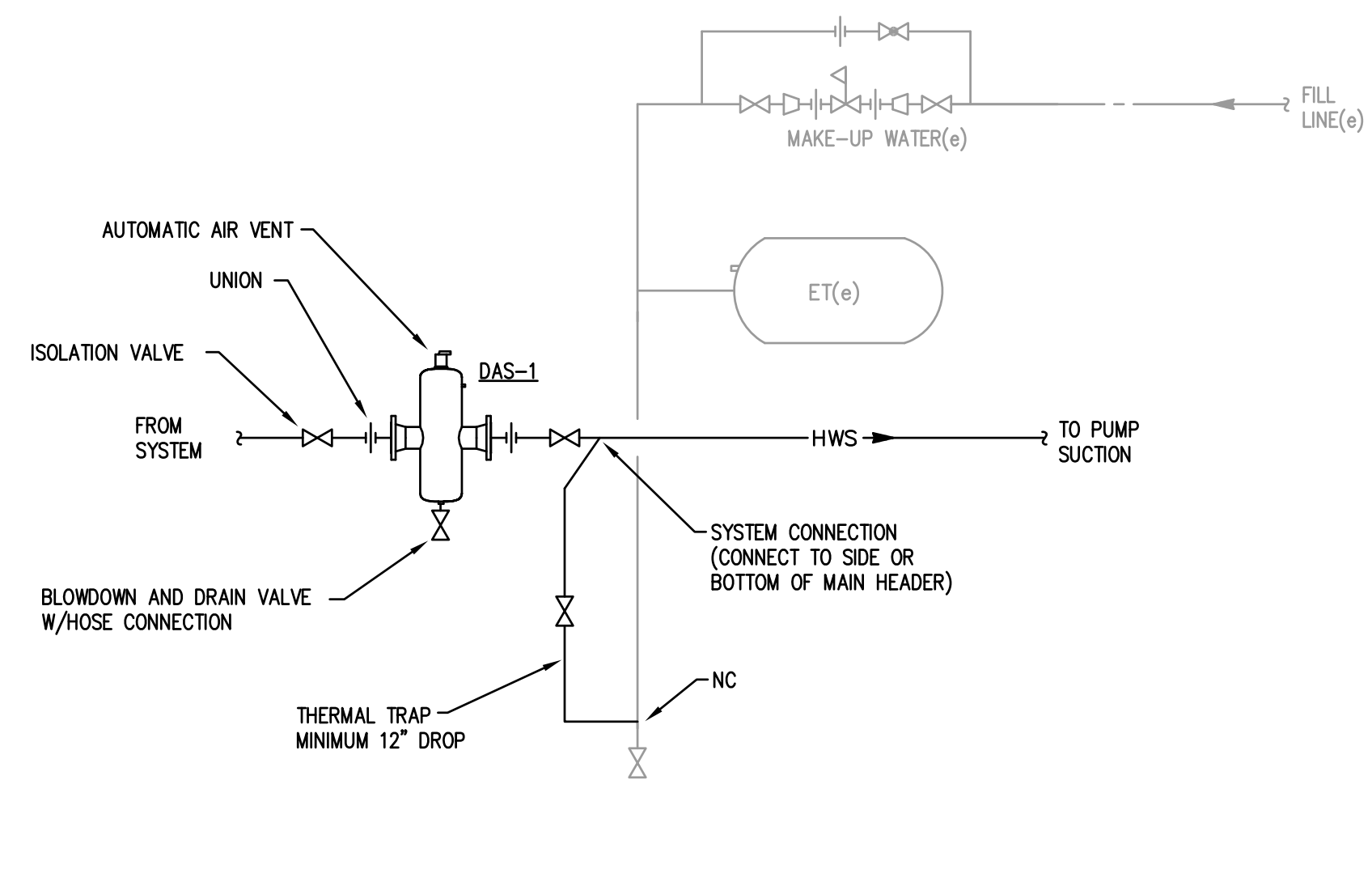


MEZZANINE MECHANICAL ROOM 203 ②
SCALE: 1/2" = 1'-0"

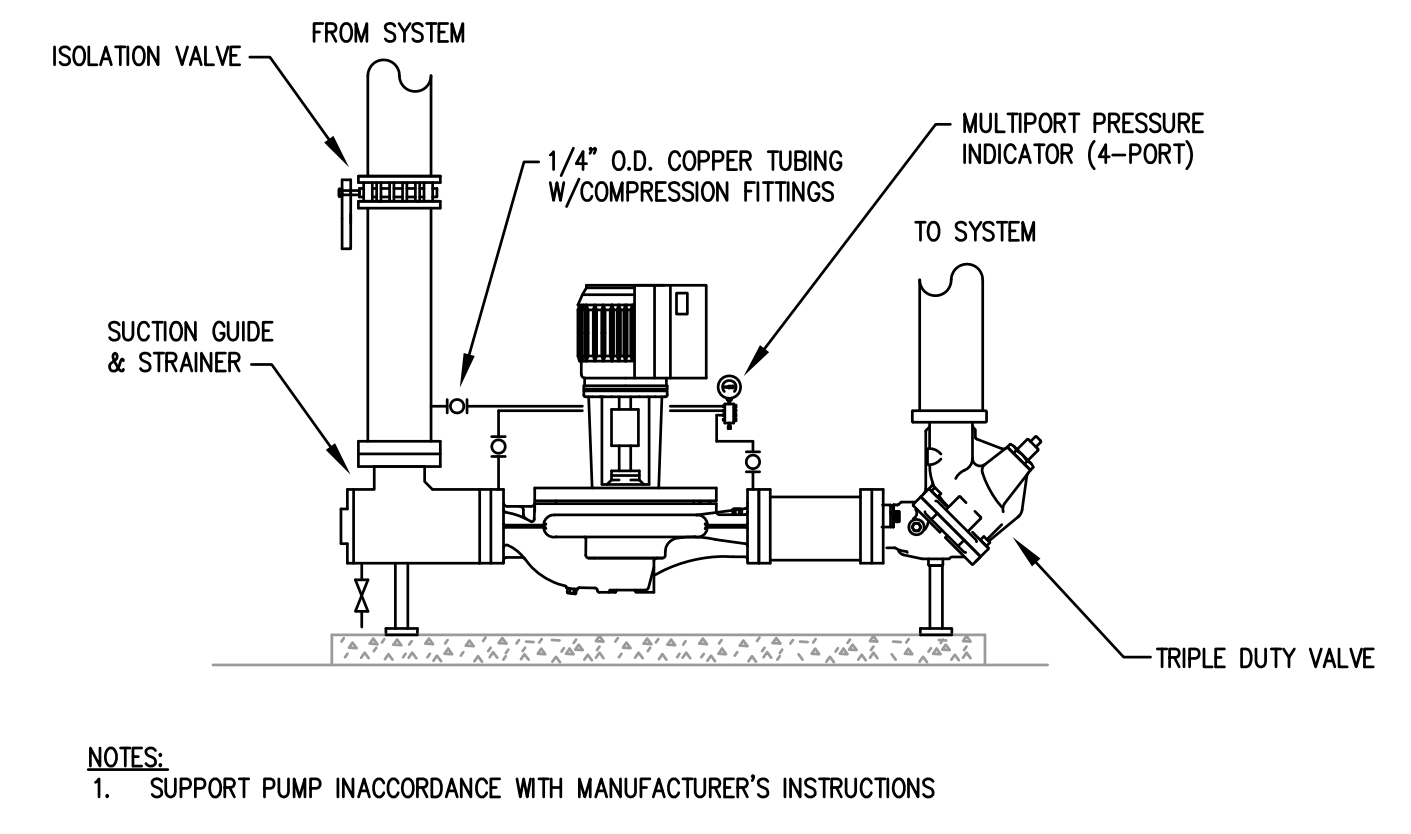
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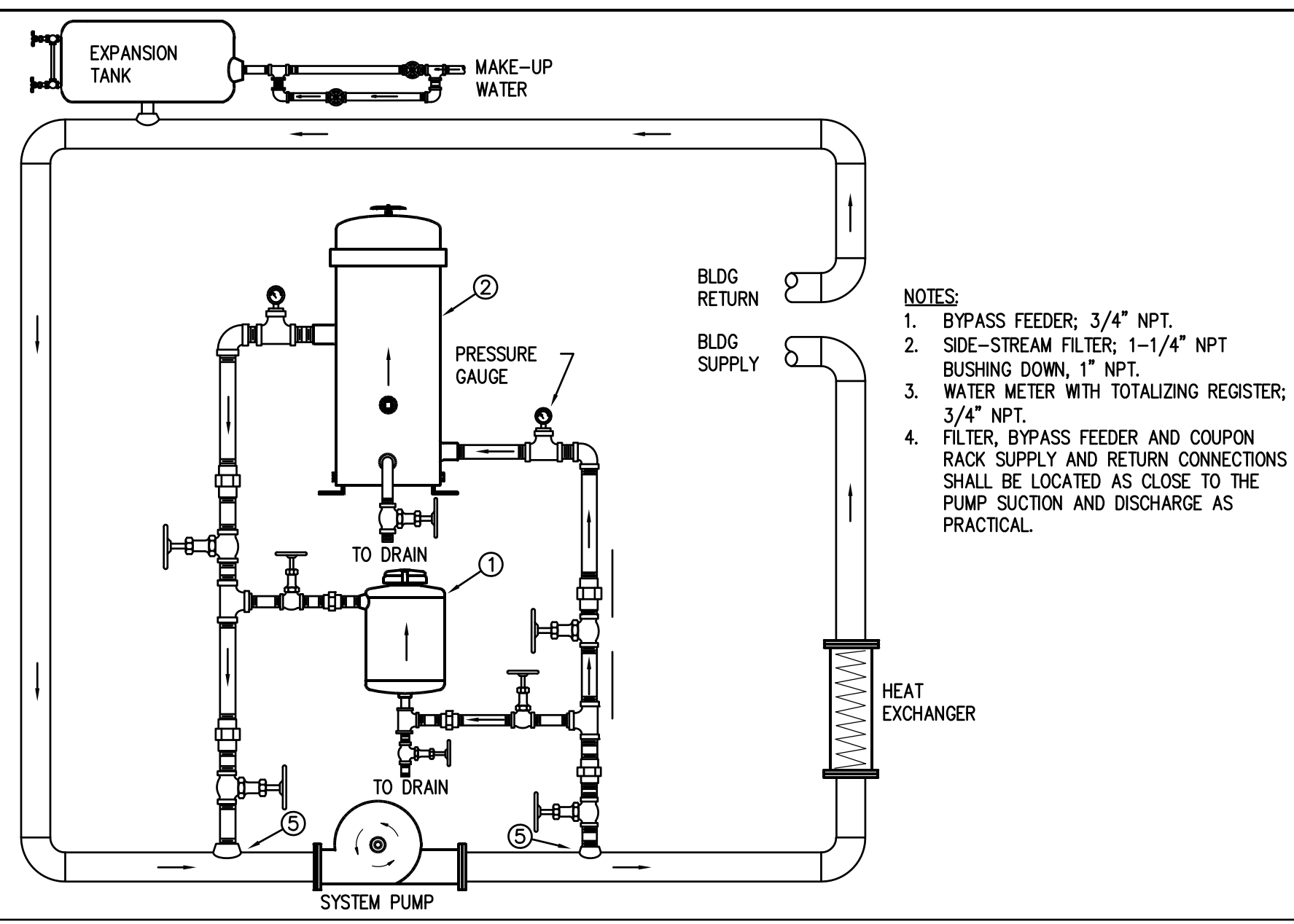
PIPE HANGER DETAILS
SCALE: NTS 0



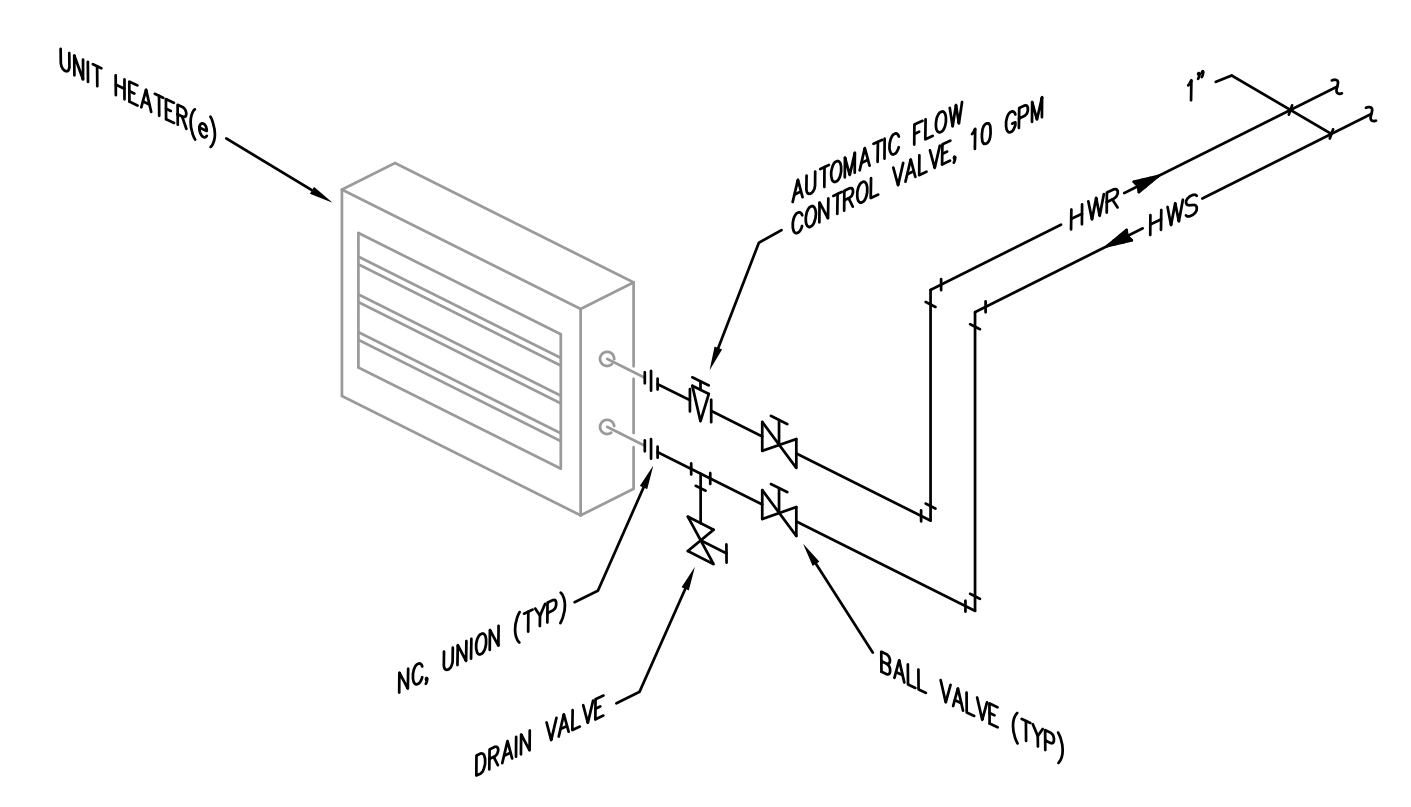
AIR SEPARATOR & EXPANSION TANK DETAIL
SCALE: NTS 1



VERTICAL IN-LINE PUMP DETAIL
SCALE: NTS 2



CLOSED CHEMICAL TREATMENT DETAIL
SCALE: NTS 3



UNIT HEATER PIPING DETAIL
SCALE: NTS 4

BOILER SCHEDULE

MARK	TYPE	WATER FLOW RATE (GPM)	MAX PRESS DROP (FT)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	EWI / LWT (°F)	ELECTRICAL (V/PH/Hz)	AHRI MINIMUM EFFICIENCY	MODEL	NOTES
B-1	FIRE TUBE	165	2.0	1500	1320	180 / 164	120/1/60	95	CFC-E 1500	1

NOTES
1. MODEL BASED ON CLEAVER BROOKS.

PUMP SCHEDULE

MARK	WATER FLOW RATE (GPM)	HEAD (FT)	TYPE	MOTOR POWER (HP)	ELECTRICAL (V/PH/Hz)	MOTOR SPEED (RPM)	SERVICE	MODEL	NOTES
P-5A	109	55	VERT INLINE	3	460/3/60	2847	HEATING	4372 0205H	1, 2, 3
P-5B	109	55	VERT INLINE	3	460/3/60	2847	HEATING	4372 0205H	1, 2, 3

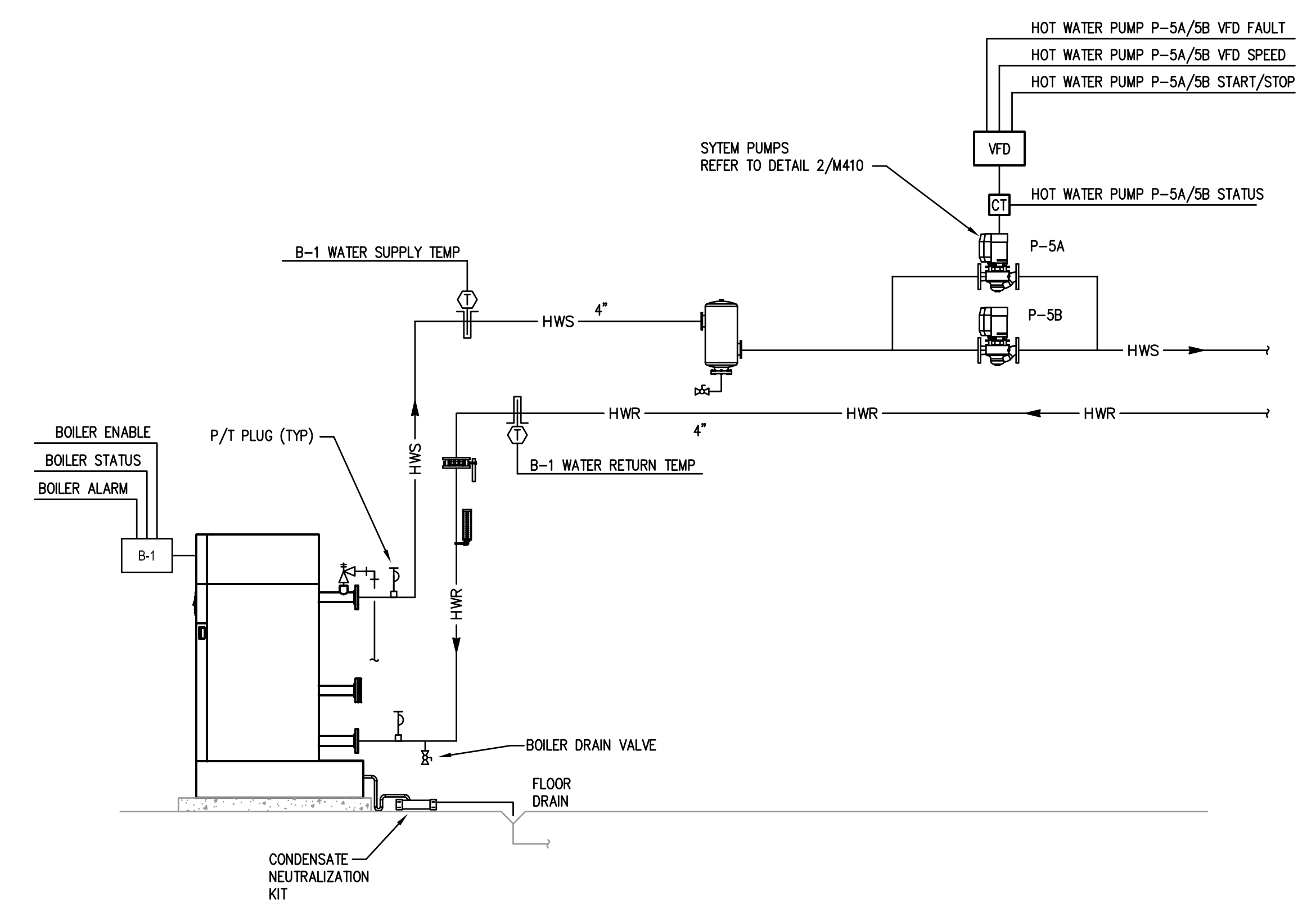
NOTES
1. MODEL BASED ON ARMSTRONG DESIGN ENVELOPE TANGO PUMPS.
2. SENSORLESS VARIABLE SPEED CONTROL.
3. PUMPS SHALL HAVE ECM MOTORS AND OPERATE IN PARALLEL WITH A TOTAL SYSTEM FLOW OF 165 GPM @ 55 FT HD. MINIMUM EFFICIENCY AT DESIGN = 74%.

DIRT/AIR SEPARATOR SCHEDULE

MARK	WATER FLOW RATE (GPM)	MAX WPD (FT)	INLET / OUTLET SIZE (IN)	MAX WORKING PRESSURE (PSIG)	MODEL	NOTES
DAS-1	165	1.0	4	125	VD400	1

NOTES
1. MODEL BASED ON SPIROTHERM.

BOILER PIPING AND CONTROL SCHEMATIC (CONTROLS BY OWNER)



BOILER (B-1, B-2):
THE BOILER CONTROLLER SHALL CONTROL THE OPERATION OF THE BOILER. THE BOILER SHALL BE ENABLED WHEN THE OUTSIDE AIR TEMPERATURE FALLS BELOW 60 DEGREES F (ADJ).
THE BOILER SHALL THEN MODULATE THEIR FIRING RATE TO MAINTAIN THE HEATING WATER TEMPERATURE SETPOINT.
THE HEATING WATER TEMPERATURE SHALL BE RESET BASED ON OUTDOOR AIR TEMPERATURE. THE WATER TEMPERATURE SHALL BE 180 DEGREES F WHEN THE OUTDOOR AIR TEMPERATURE IS 0 DEGREES F. THE WATER TEMPERATURE SHALL BE 140 DEGREES F WHEN THE OUTDOOR AIR TEMPERATURE IS 60 DEGREES F. TEMPERATURE RESET CURVES AND SETPOINTS SHALL BE ADJUSTABLE.
AN ALARM SHALL BE GENERATED IF THERE IS A BOILER ALARM OR A LOW WATER LEVEL ALARM.

PUMP (P-5A, P-5B):
THE HEATING WATER PUMPS SHALL OPERATE IN A PARALLEL SEQUENCE. IF ONE PUMP FAILS THE SECOND PUMP WILL CONTINUE TO OPERATE.
UPON A CALL FOR HEAT THE PUMPS SHALL BE ENERGIZED. THE PUMP SPEED SHALL MODULATE TO MEET SYSTEM DEMAND BASED ON SENSORLESS SYSTEM PRESSURE CONTROL.
AN ALARM SHALL BE GENERATED UPON A PUMP OR A VFD FAULT STATUS.

BOILER PLANT	HARDWARE			SOFTWARE			
	AI	AO	BI	BO	SCHED	TREND	ALARM
BOILER ENABLE (B-1)							
BOILER STATUS (B-1)			X		X		X
BOILER ALARM (B-1)			X				X
HOT WATER PUMP START/STOP (P-5A, P-5B)					X		
HOT WATER PUMP STATUS (P-5A, P-5B)				X			
HOT WATER PUMP VFD FAULT (P-5A, P-5B)			X				X
HOT WATER PUMP VFD SPEED (P-5A, P-5B)			X				X
BUILDING HOT WATER SETPOINT			X				
BOILER SUPPLY WATER TEMPERATURE (B-1)	X					X	
BOILER RETURN WATER TEMPERATURE (B-1)	X					X	
OUTSIDE AIR TEMPERATURE	X						
GAS KILL SWITCH STATUS			X				X
COMBUSTION AIR DAMPER STATUS			X				X

NOTE: ALL ADDITIONAL POINTS AVAILABLE FROM BOILER AND PUMP CONTROLLERS SHALL BE INTERFACED IN A TABLE FORMAT.

ISSUED	DESCRIPTION
01/15/20	ISSUED

JOB NO.	19-292-1279
DRAWN	BDW
CHECKED	DDW
APPROVED	DDW

SHEET TITLE

MECHANICAL SCHEDULES AND DETAILS

SHEET NUMBER

M410