

PLUMBING GENERAL CONDITIONS. 1. THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS... 2. ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. 3. THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES... 4. CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES... 5. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING... 6. ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS... 7. ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION... 8. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. 9. CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER. 10. PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY... 11. THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS... 12. SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY... 13. CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE... 14. THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE POSITION... 15. ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES... 16. ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS... 17. AS USED IN THE DRAWINGS FOR PLUMBING WORK, CERTAIN NON-TECHNICAL WORDS SHALL BE UNDERSTOOD TO HAVE SPECIFIC MEANINGS AS FOLLOWS REGARDLESS OF INDICATIONS TO THE CONTRARY...

PLUMBING GENERAL NOTES. 1. BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. 2. THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT... 3. DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK... 4. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS... 5. WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES... 6. UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE CEILING... 7. COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT... 8. ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE, NUMBER AND LOCATION... 9. UNLESS OTHERWISE NOTED, SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD... 10. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS... 11. DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS... 12. UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION... 13. ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE ACCESSIBILITY STANDARDS... 14. ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES... 15. PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES... 16. PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING... 17. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING. 18. ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT... 19. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR... 20. MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES... 21. CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK... 22. PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT... 23. PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION... 24. IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS... 25. PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING... 26. ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED... 27. PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS. 28. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT. 29. SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED... 30. ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES... 31. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE... 32. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION. 33. ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED. 34. MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE... 35. SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE... 36. HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION... 37. SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE... 38. SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER. 39. THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS... 40. FINAL ACCEPTANCE OF PLUMBING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING REQUIREMENTS... 41. UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED... 42. WHEN NATURAL GAS IS AVAILABLE, USE NATURAL GAS RANGES/OVENS & FURNACES IN SINGLE FAMILY & MULTI-FAMILY BUILDINGS...

ABBREVIATIONS. ABV ABOVE, AD AREA DRAIN, ADF ABOVE FINISH FLOOR, AFG ABOVE FINISH GRADE, AFP ACCESS PANEL, APPROX APPROXIMATE, AV ACID VENT, AW ACID WASTE, BAS BUILDING AUTOMATION SYSTEM, BFF BELOW FINISH FLOOR, BFP BACKFLOW PREVENTER, BLDG BUILDING, BT BATHTUB, CA COMPRESSED AIR, CD CONDENSATE, CLG CEILING, CO COMPANY, CLEANOUT, CW COLD WATER, DFU DRAINAGE FIXTURE UNITS, DIA DIAMETER, DN DOWN, DSP DOWNSPOUT, DWG DRAWING, CW COLD WATER, DSP DISPOSER, DWV DRAINAGE WASTE & VENT, EA EACH, ECO EXTERIOR CLEANOUT, ETR EXISTING TO REMAIN, EW EMERGENCY EYEWASH, ES EMERGENCY SHOWER, EWC ELECTRIC WATER COOLER, EWH ELECTRIC WATER HEATER, EX EXISTING, FD FLOOR DRAIN, FFE FINISHED FLOOR ELEVATION, FIXT FIXTURE, FLR FLOOR, FM FORCED MAIN, FS FLOOR SINK, G NATURAL GAS, GGO GRADE CLEANOUT, GD GROUNDWATER DRAIN TILE, GPF GALLONS PER FLUSH, GPM GALLONS PER MINUTE, GH GAS WATER HEATER, HW HOSE BIBB, HW HOT WATER, HWR HOT WATER RECIRCULATING, IE INVERT ELEVATION, IW INDIRECT WASTE, IPC INTERNATIONAL PLUMBING CODE, LAV LAVATORY, MAU MAKE-UP AIR UNIT, MAX MAXIMUM, MB MOP BASIN, MBH BRITISH THERMAL UNITS (x1000), MIN MINIMUM, MISC MISCELLANEOUS, NFWH NON-FREEZE WALL HYDRANT, NIC NOT IN CONTRACT, OD OVERFLOW ROOF DRAIN, OSD OPEN SITE DRAIN, PD PUMPED DISCHARGE, PDI PLUMBING & DRAINAGE INSTITUTE, PRV PRESSURE REDUCING VALVE, RD ROOM, RTU ROOF TOP UNIT, SAN SANITARY, SFU SUPPLY FIXTURE UNIT, ST STORMWATER, TP TRAP PRIMER VALVE, TPS TRAP PRIMING STATION, TW TEMPERED WATER, TYP TYPICAL, UNO UNLESS OTHERWISE NOTED, UR URINAL, V VENT, VB VACUUM BREAKER, VTR VENT THRU ROOF, W WASTE, WC WATER CLOSET, WCO WALL CLEANOUT, WH WALL HYDRANT, XR EXISTING RELOCATED. LAB/MEDICAL PROJECTS: O OXYGEN, MA MEDICAL AIR, LA LAB AIR, N NITROGEN, LN LIQUID NITROGEN, AR ARGON, HE HELIUM, SG SPECIAL GAS, LV LAB VACUUM, MV MEDICAL VACUUM, CO2 CARBON DIOXIDE, DI DEIONIZED WATER, ROS REVERSE OSMOSIS SUPPLY, ROR REVERSE OSMOSIS RETURN, LCW LAB COLD WATER, LHW LAB HOT WATER, LHWR LAB HOT WATER RECIRCULATING, VCW VIVARIUM COLD WATER, VHW VIVARIUM HOT WATER, NP NON-POTABLE.

SHEET NUMBERING LEGEND. DISCIPLINE: "PD" DEMO, "N" NEW WORK. PLAN TYPE: "1" FLOOR PLAN, "2" ENLARGED FLOOR ETC. P111A. FLOOR LEVEL: "0" LOWEST FLOOR, "1" NEXT FLOOR LEVEL ETC. SYSTEM TYPE: "0" FOR UNDERGROUND, "1" WATER & GAS, "2" DWV & STORM, "3" FIRE PROTECTION.

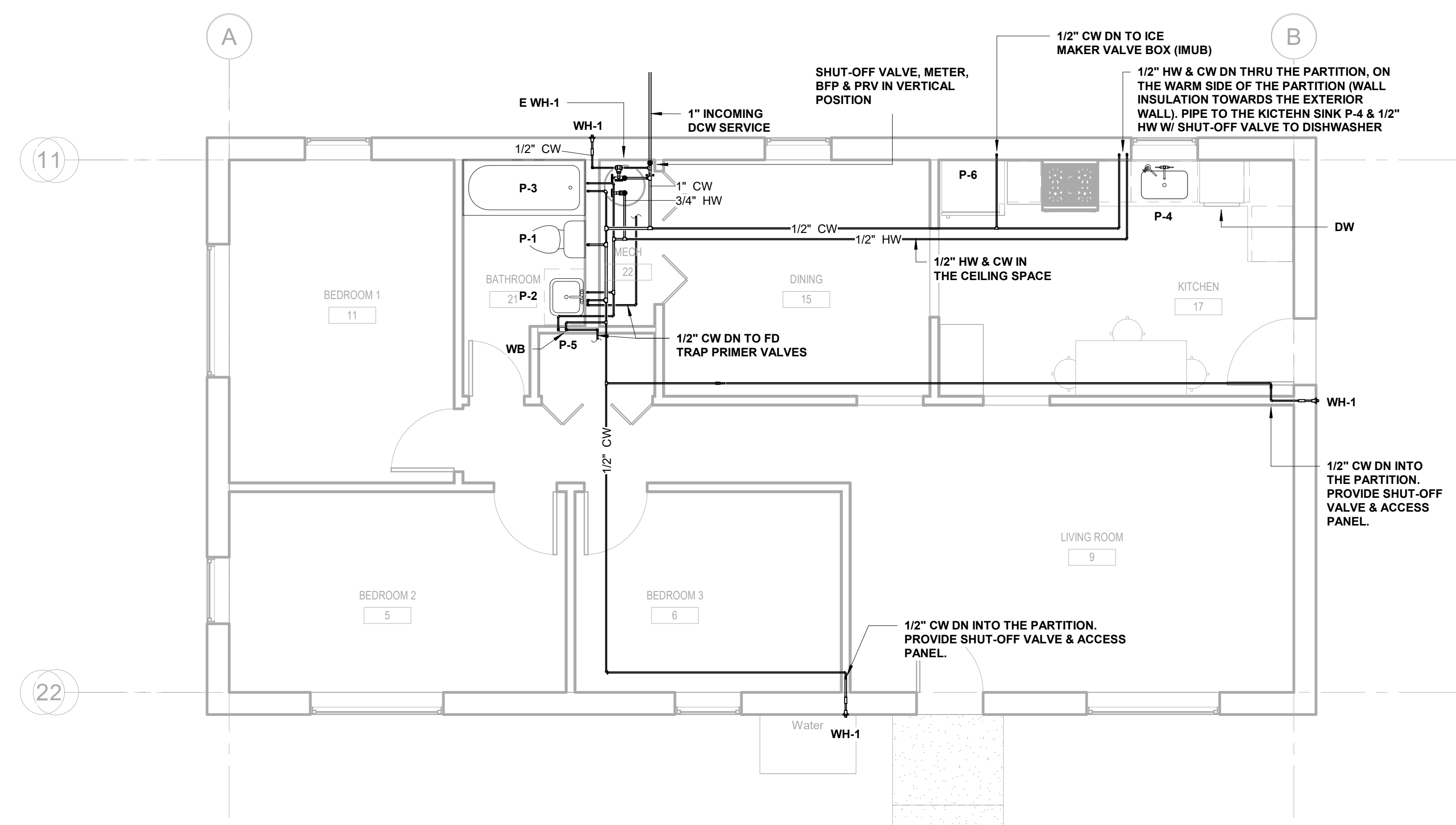
PLUMBING SYMBOLS. SYMBOL: DEMOLISH AND REMOVE, SOIL OR WASTE PIPING, STORM PIPING, OVERFLOW STORM PIPING, NON-POTABLE WATER PIPING, STORM PIPING BELOW SLAB, VENT PIPING, COLD WATER PIPING, COLD WATER PIPING (SINGLE LINE), HOT WATER PIPING, HOT WATER PIPING (SINGLE LINE), HOT WATER RECIRCULATING PIPING, HOT WATER RECIRCULATING PIPING (SINGLE LINE), GAS PIPING, FIRE PROTECTION PIPING, PIPE DOWN OR DROP, PIPE UP OR RISE/FLOOR CLEANOUT, CAPPED OR PLUGGED PIPE, UNION, WALL CLEANOUT, GATE VALVE, BALL VALVE, GLOBE VALVE, BUTTERFLY VALVE, GAS COCK, SHUTOFF VALVE IN RISE OR DROP, DOUBLE CHECK BACKFLOW PREVENTER, RPZ BACKFLOW PREVENTER, CHECK VALVE, BALANCING VALVE, OUTSIDE STEM & YOKE VALVE, PRESSURE GAGE W/ NEEDLE VALVE, THERMOMETER, TEMPERATURE & PRESSURE RELIEF VALVE, VACUUM BREAKER, WATER HAMMER ARRESTER, LETTER INDICATES PDI, HOSE BIBB, WALL HYDRANT, SOLENOID VALVE, STRAINER, PIPE GUIDE/SLEEVE, PIPE ANCHOR, RISER/DETAIL DESIGNATION, FLOW DIRECTION, CALL OUT DESIGNATION, FLOOR DRAIN, METER (GAS/WATER/FIRE), PUMP, PUMP, KEYNOTE TAG, LIMIT OF DEMOLITION.

DOUBLE SYMBOLS. GATE VALVE, BUTTERFLY VALVE, 3-WAY VALVE, GAS COCK VALVE, BALL VALVE, BALANCE VALVE, SHUT-OFF VALVE, BACKFLOW PREVENTER VALVE.

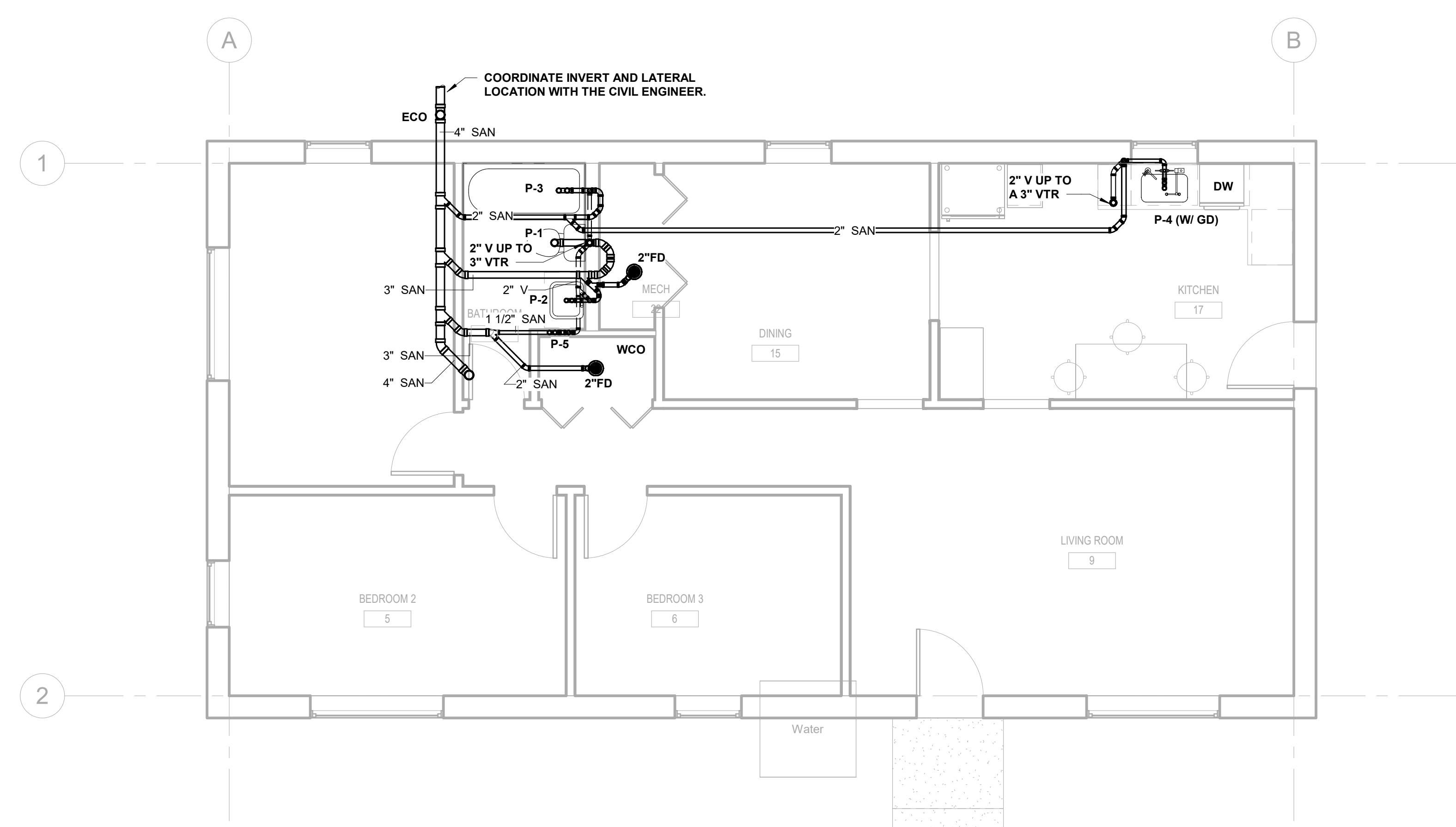
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REVISION: DESCRIPTION: BY: DATE: NIST FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - SINGLE FAMILY DETACHED HOME SINGLE STORY PLUMBING COVERSHEET P002 SH. No. DWG. P002 OF

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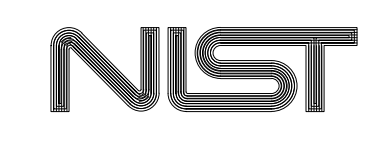


1 PLUMBING FLOOR PLAN - WATER SUPPLY
1/4" = 1'-0"



2 PLUMBING FLOOR PLAN - SANITARY
1/4" = 1'-0"

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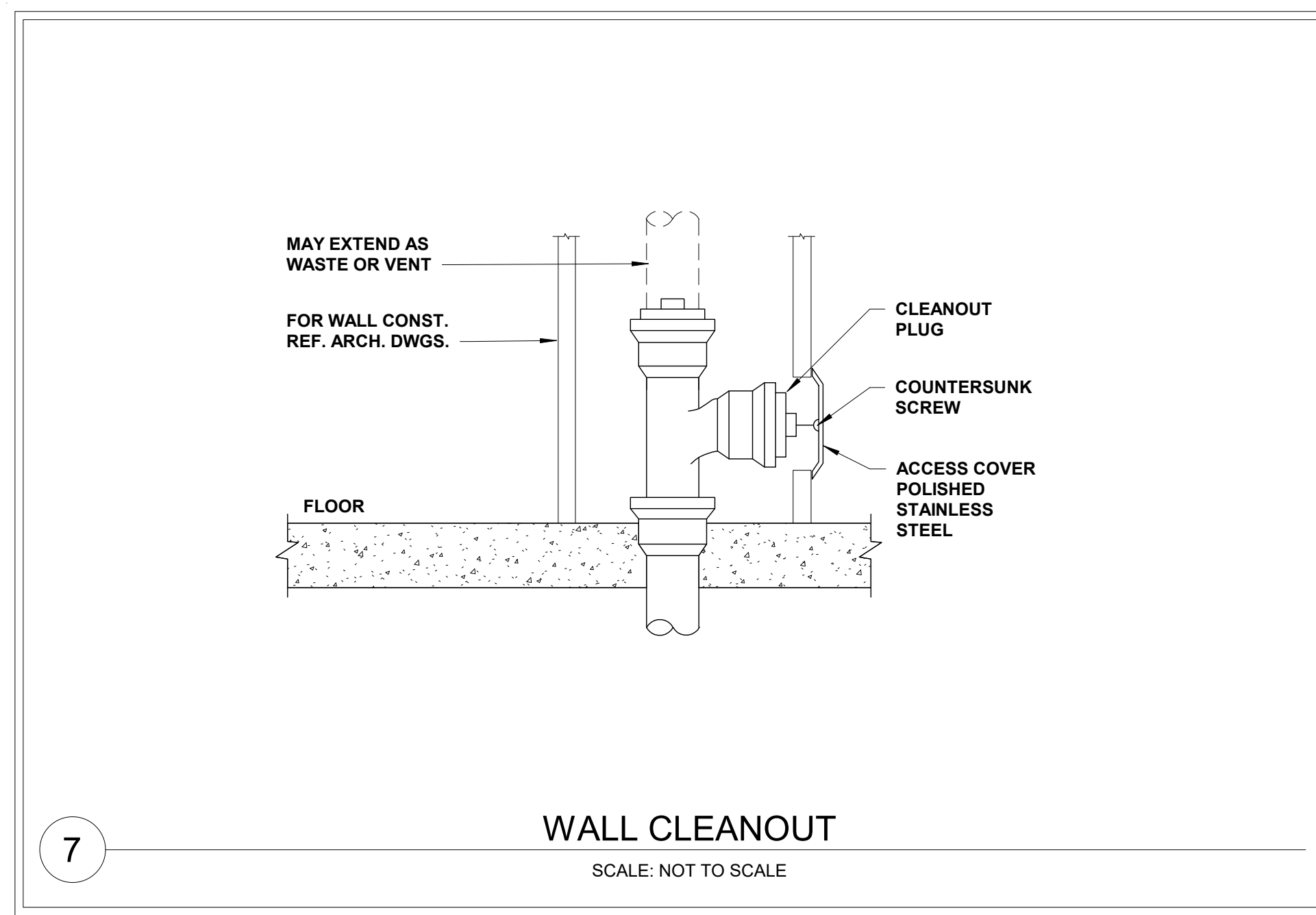
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SINGLE STORY
PLUMBING FLOOR PLAN

P101

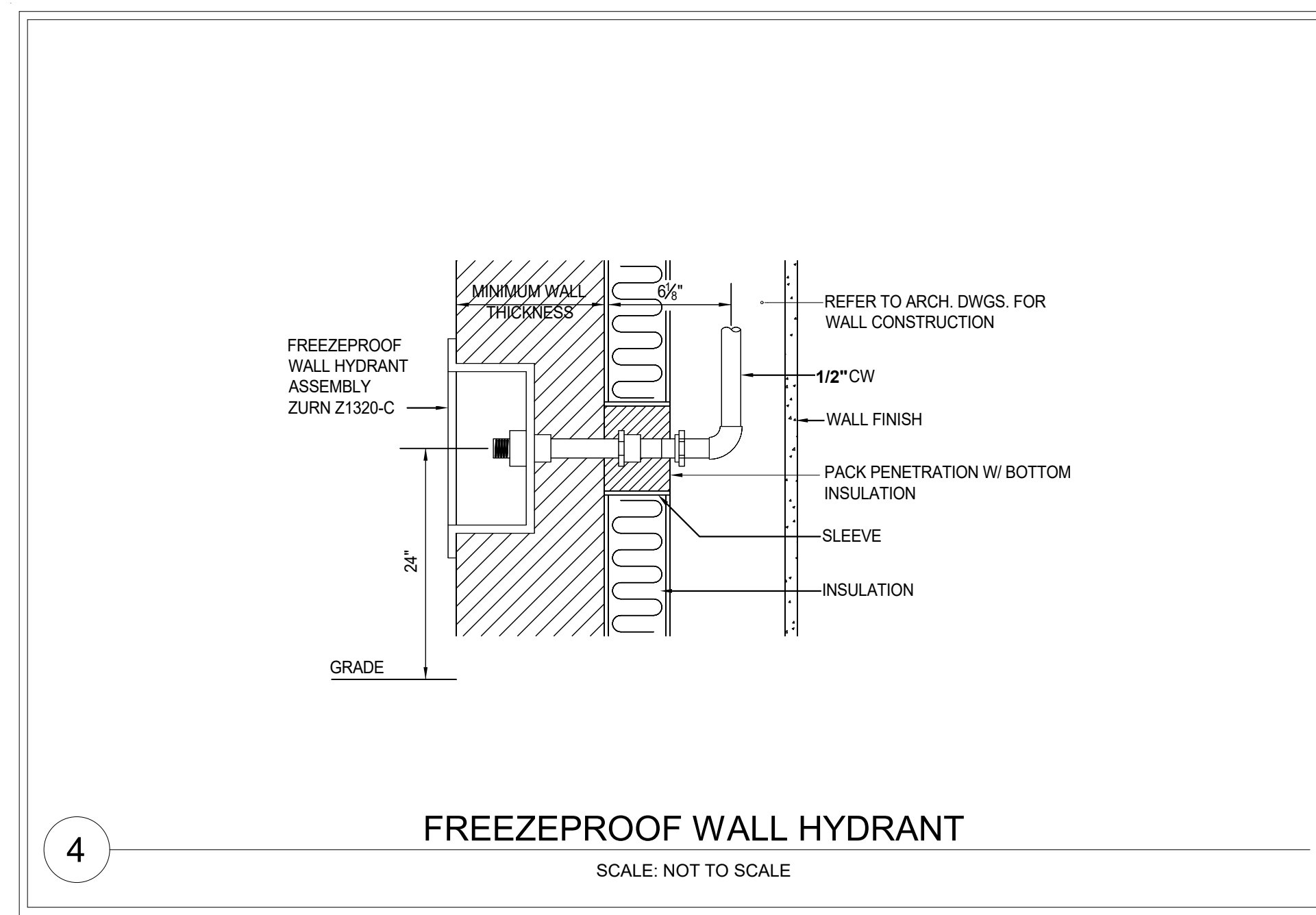
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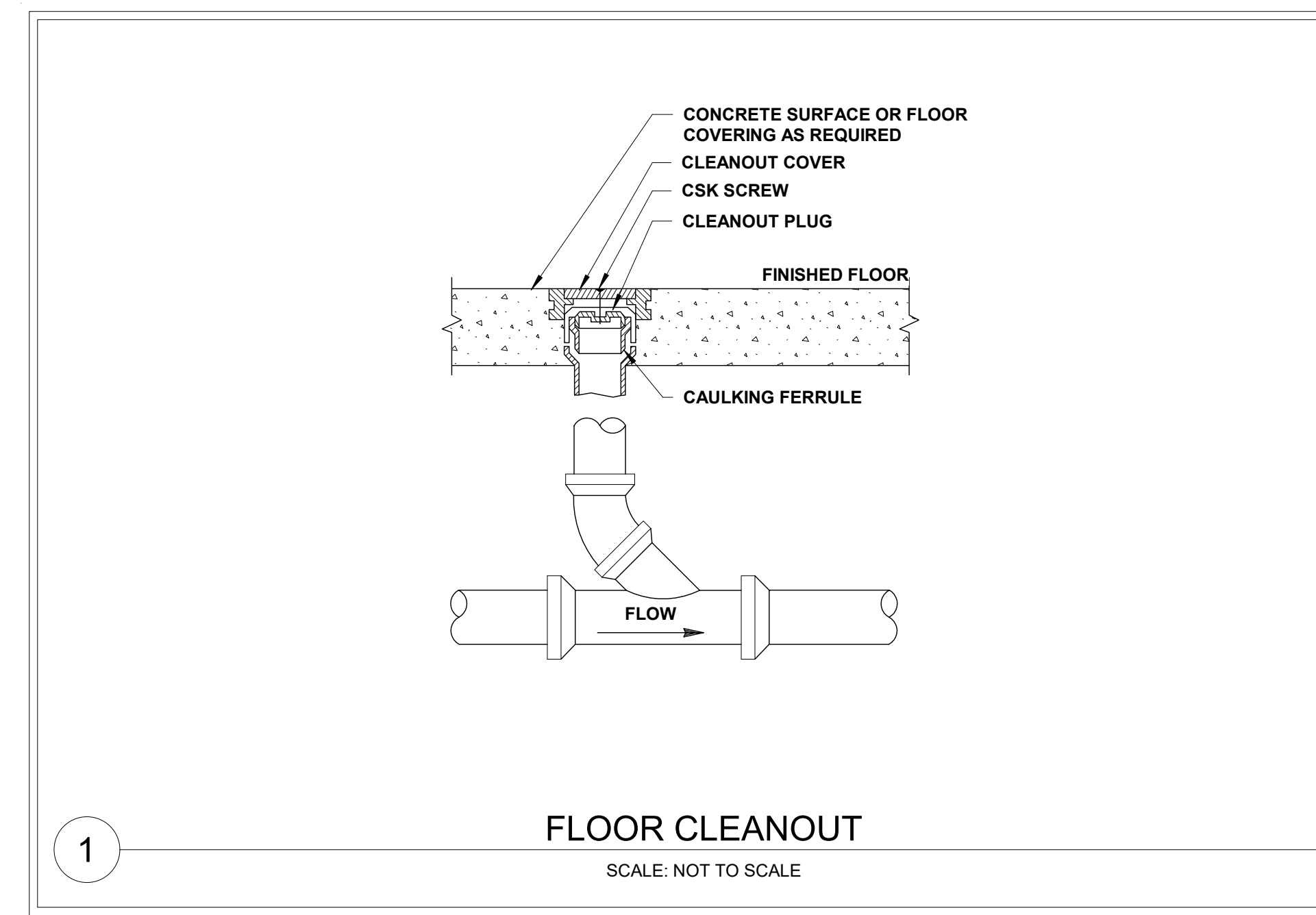
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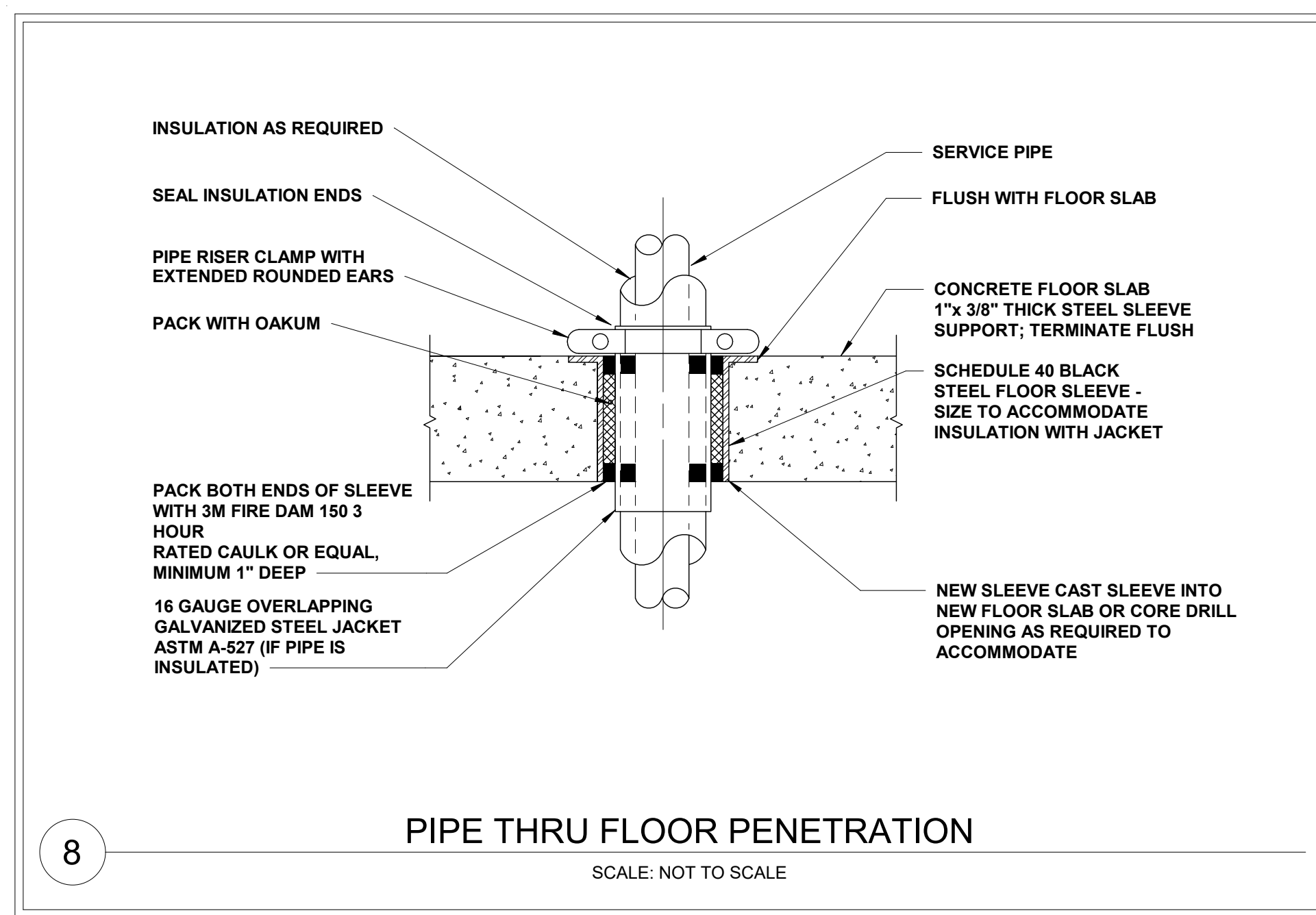
WALL CLEANOUT
SCALE: NOT TO SCALE



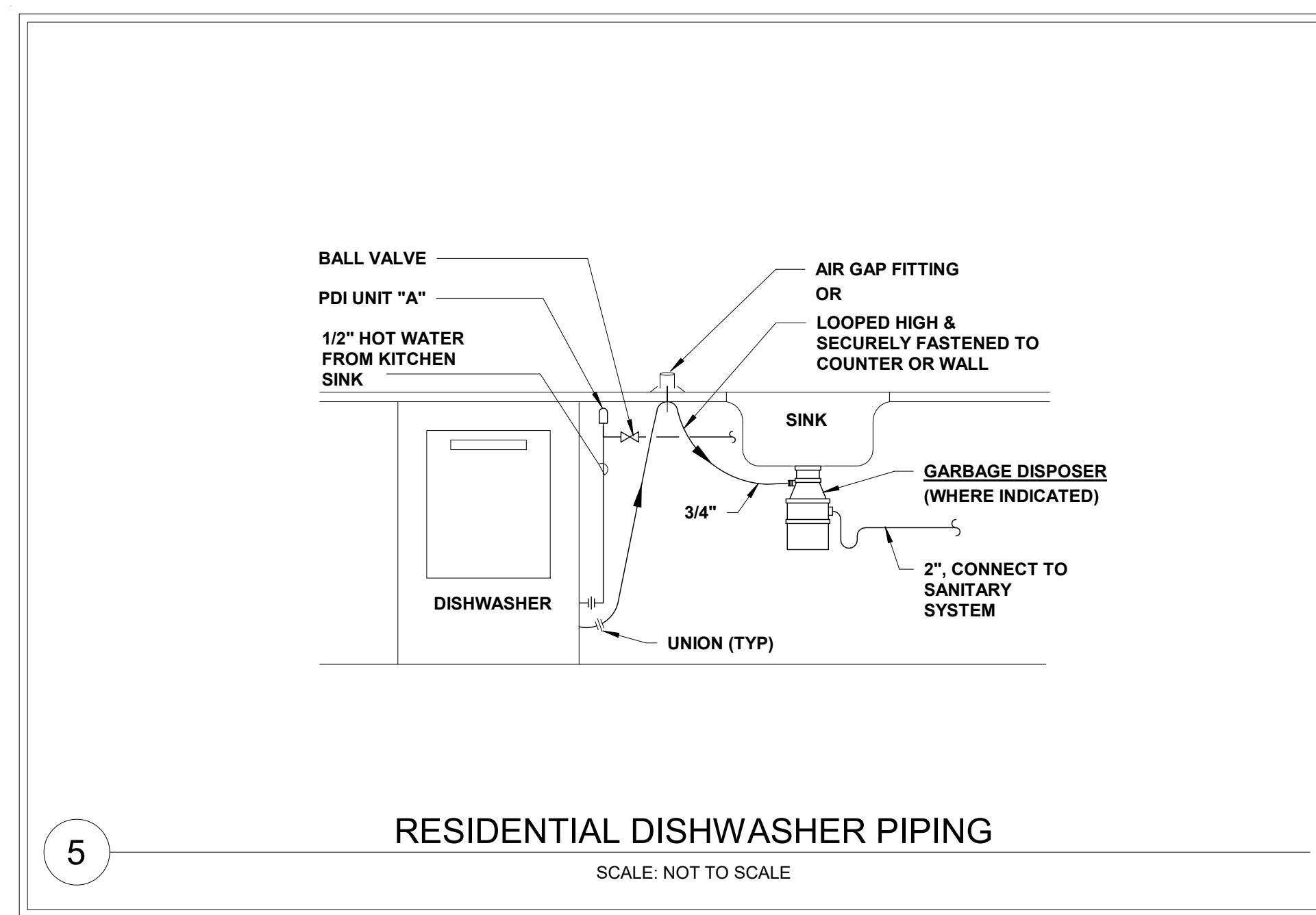
FREEZEPROOF WALL HYDRANT
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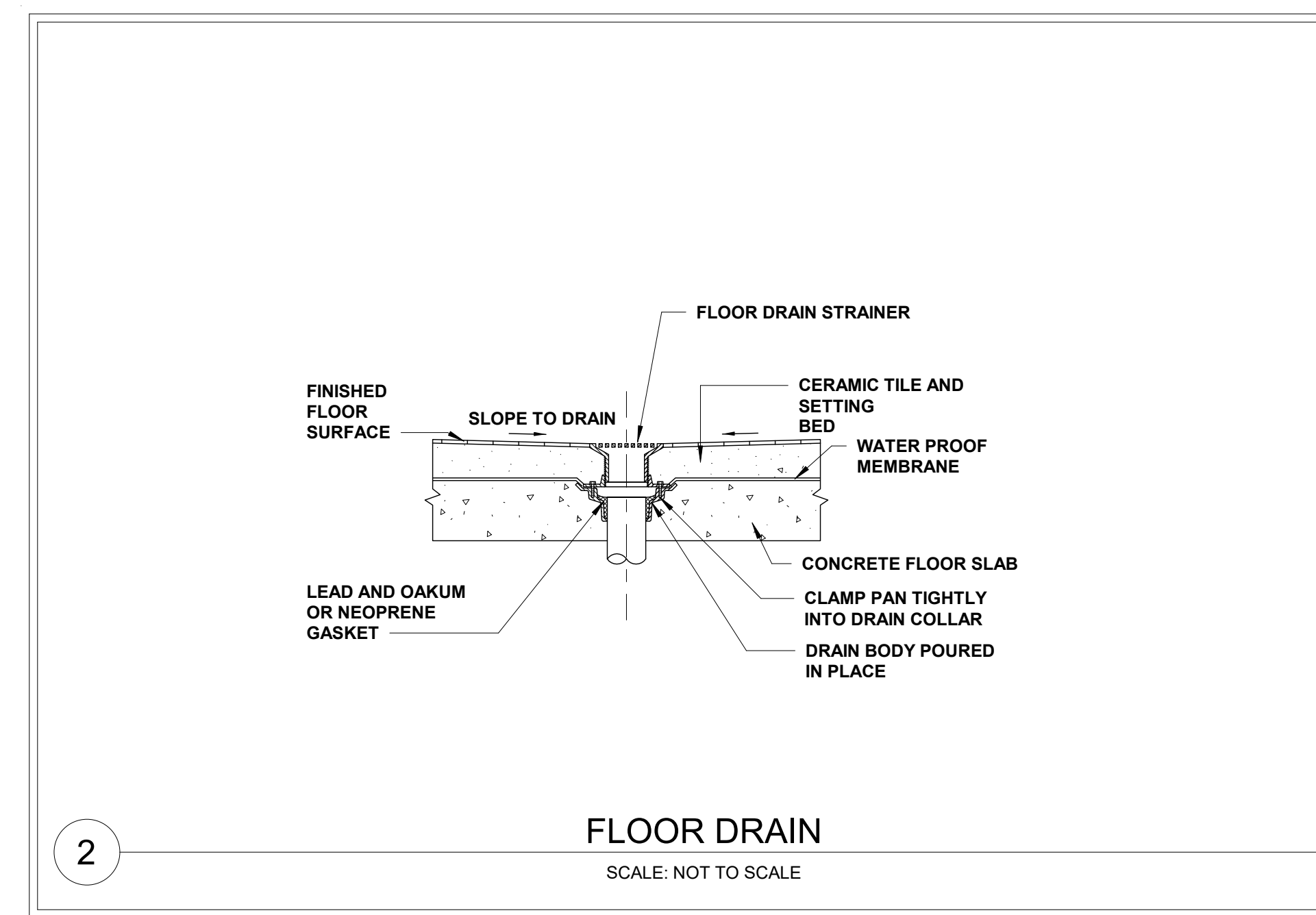
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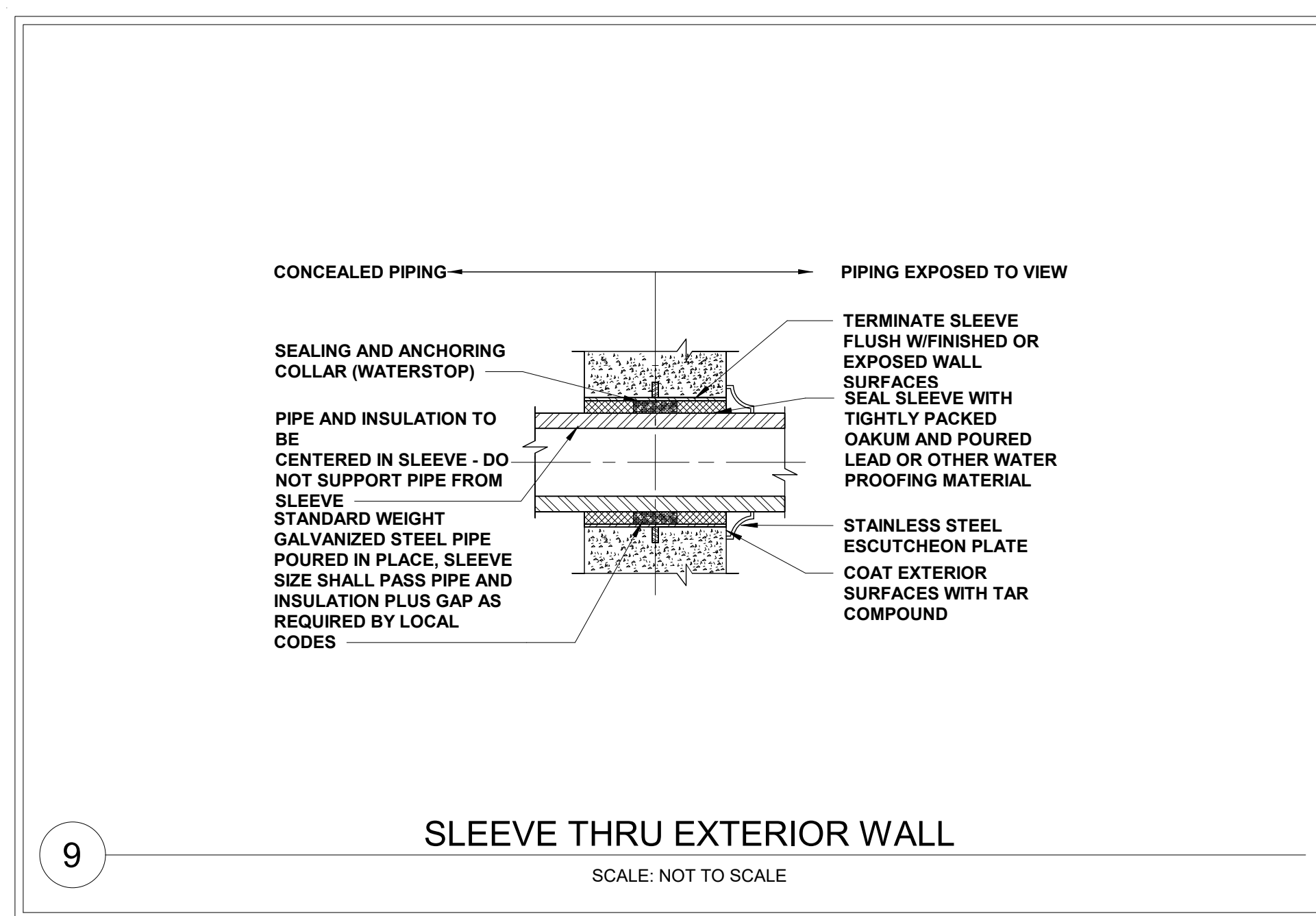
PIPE THRU FLOOR PENETRATION
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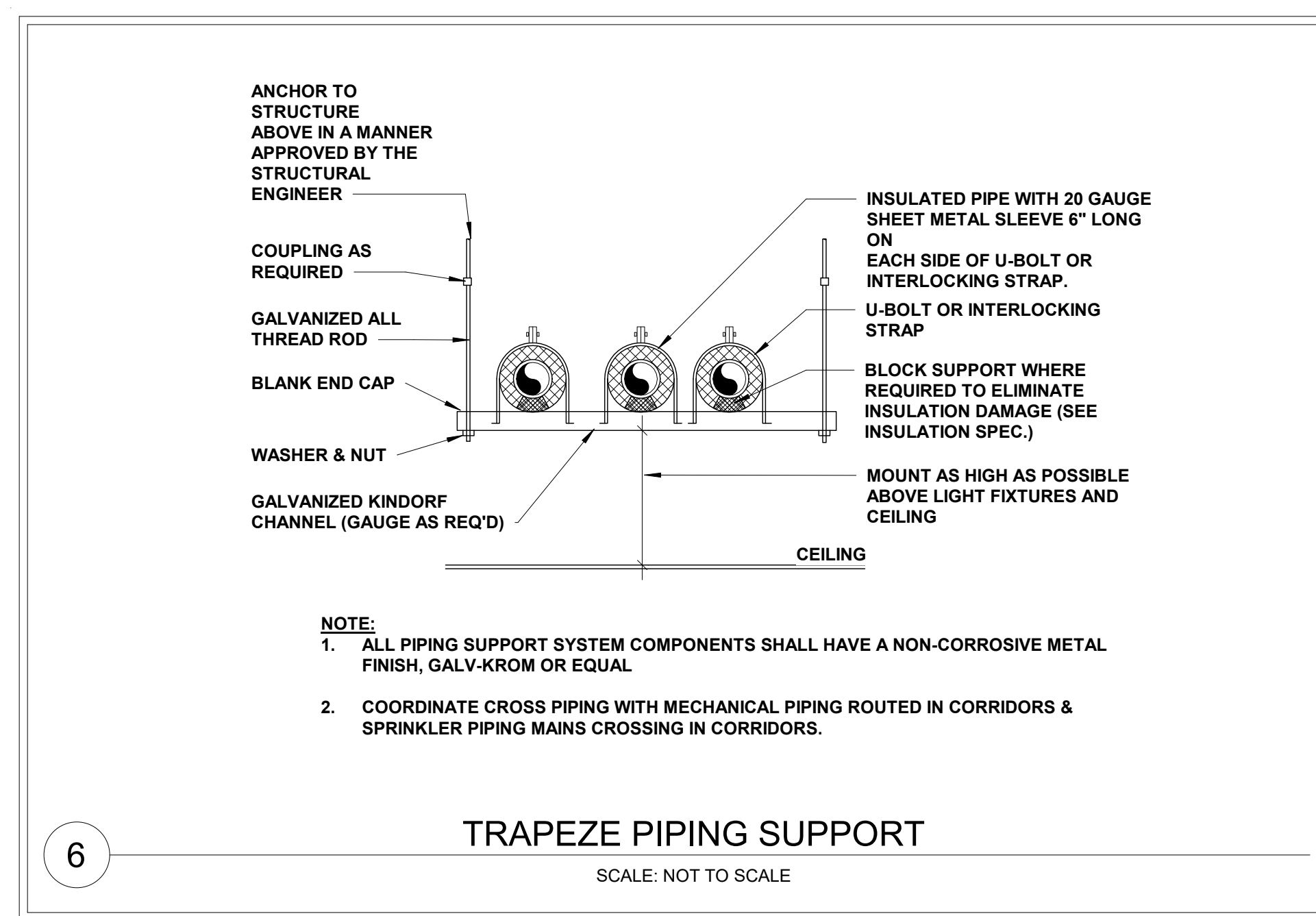
RESIDENTIAL DISHWASHER PIPING
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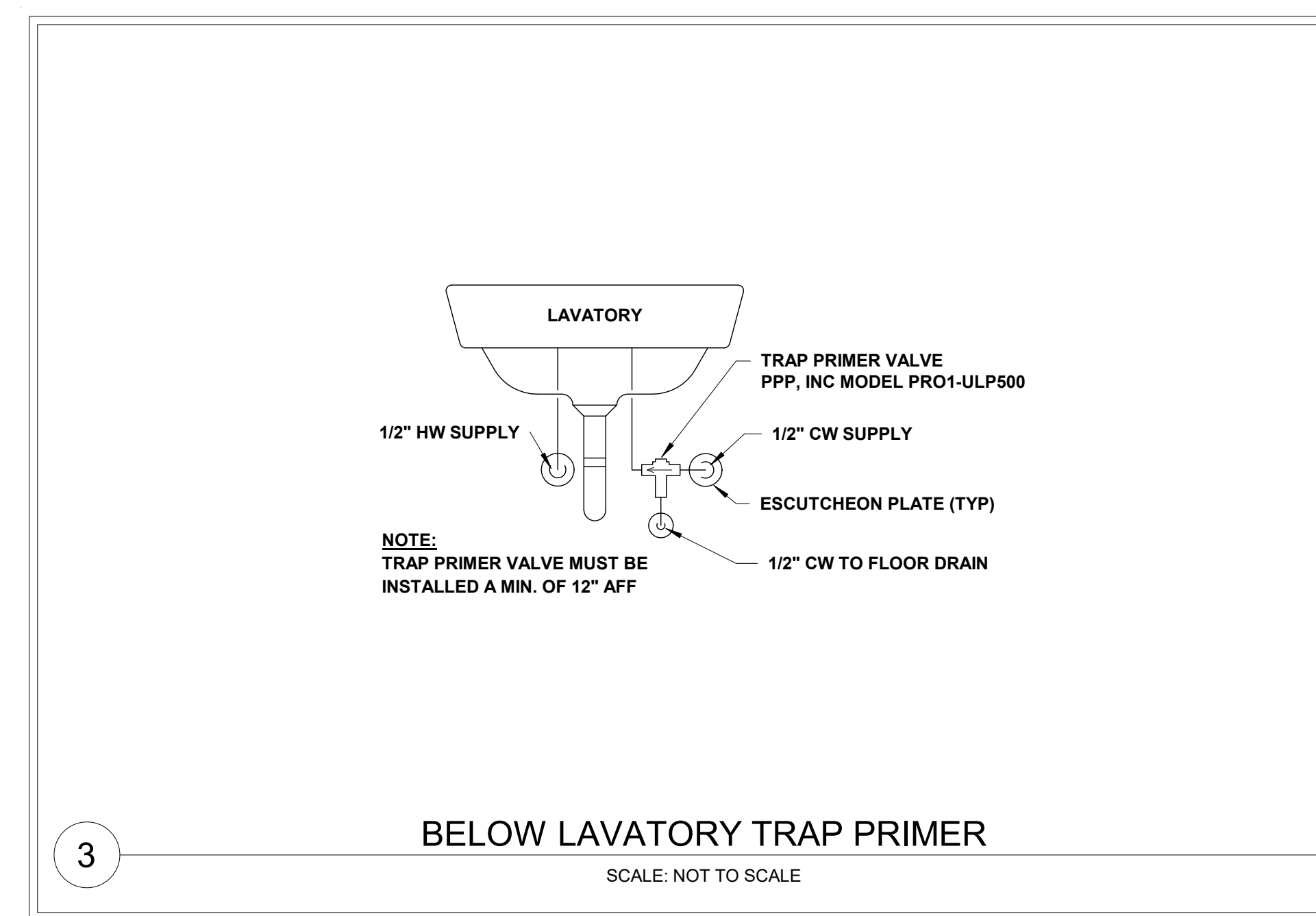
FLOOR DRAIN
SCALE: NOT TO SCALE



SLEEVE THRU EXTERIOR WALL
SCALE: NOT TO SCALE



TRAPEZE PIPING SUPPORT
SCALE: NOT TO SCALE



BELOW LAVATORY TRAP PRIMER
SCALE: NOT TO SCALE

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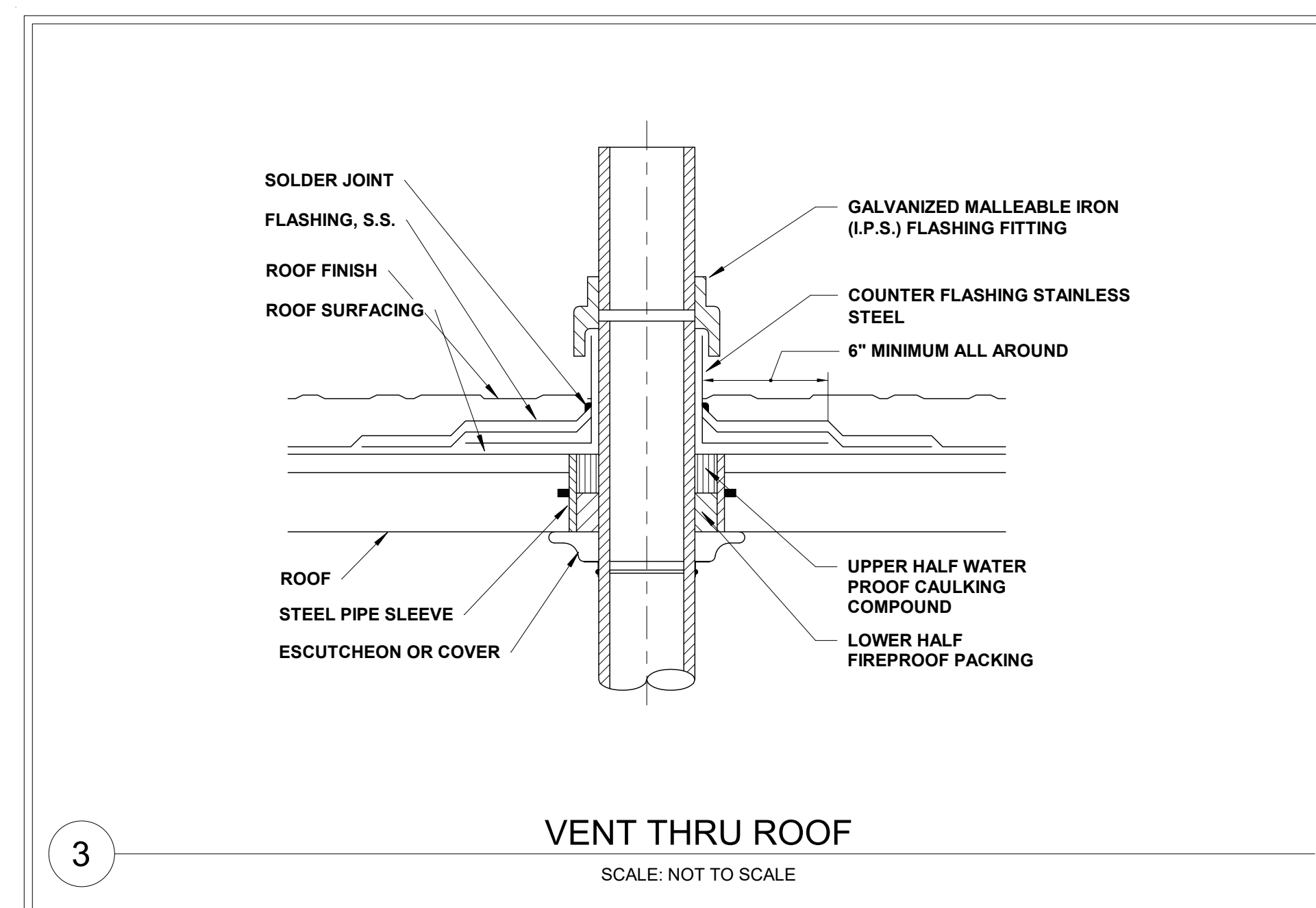
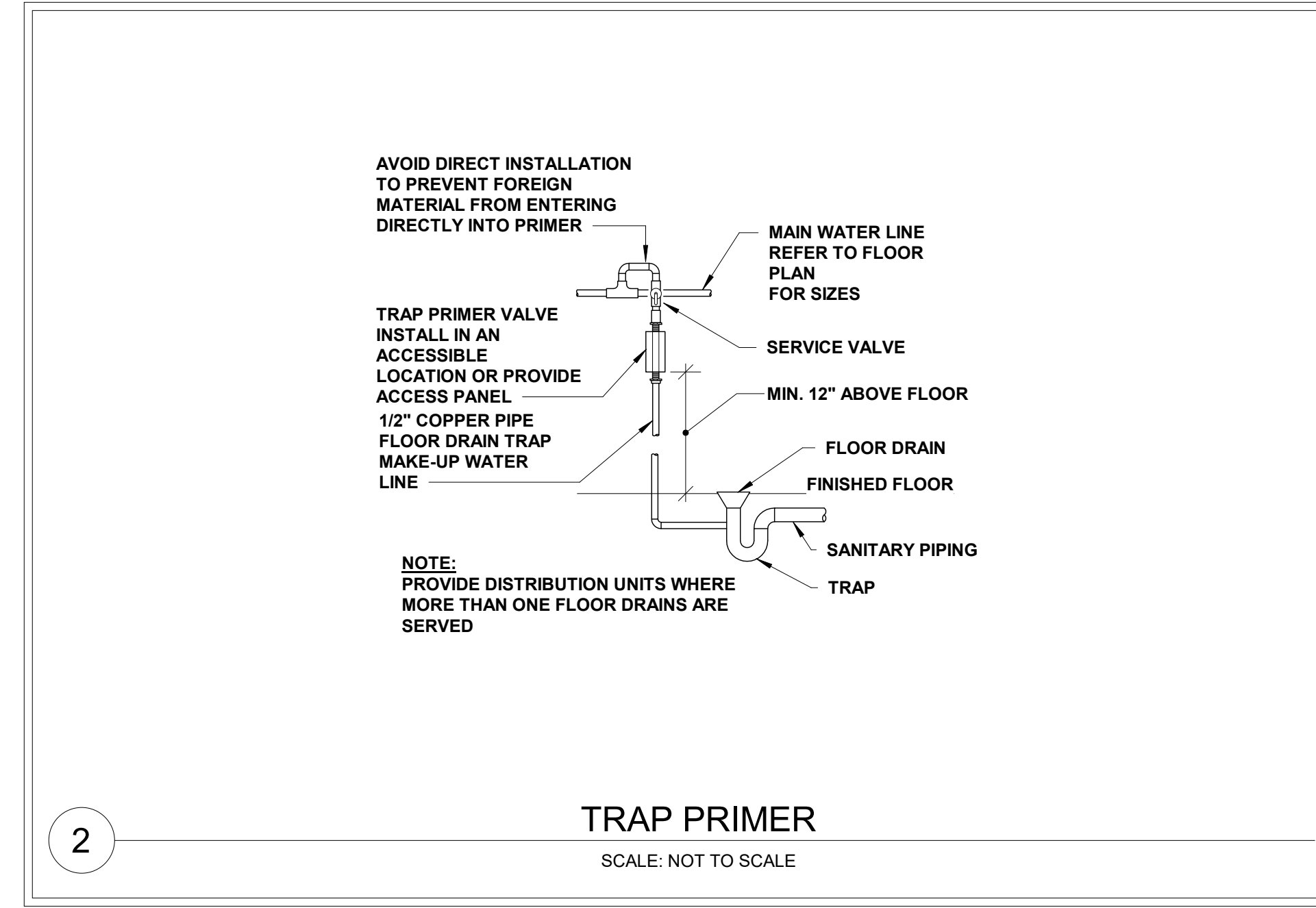
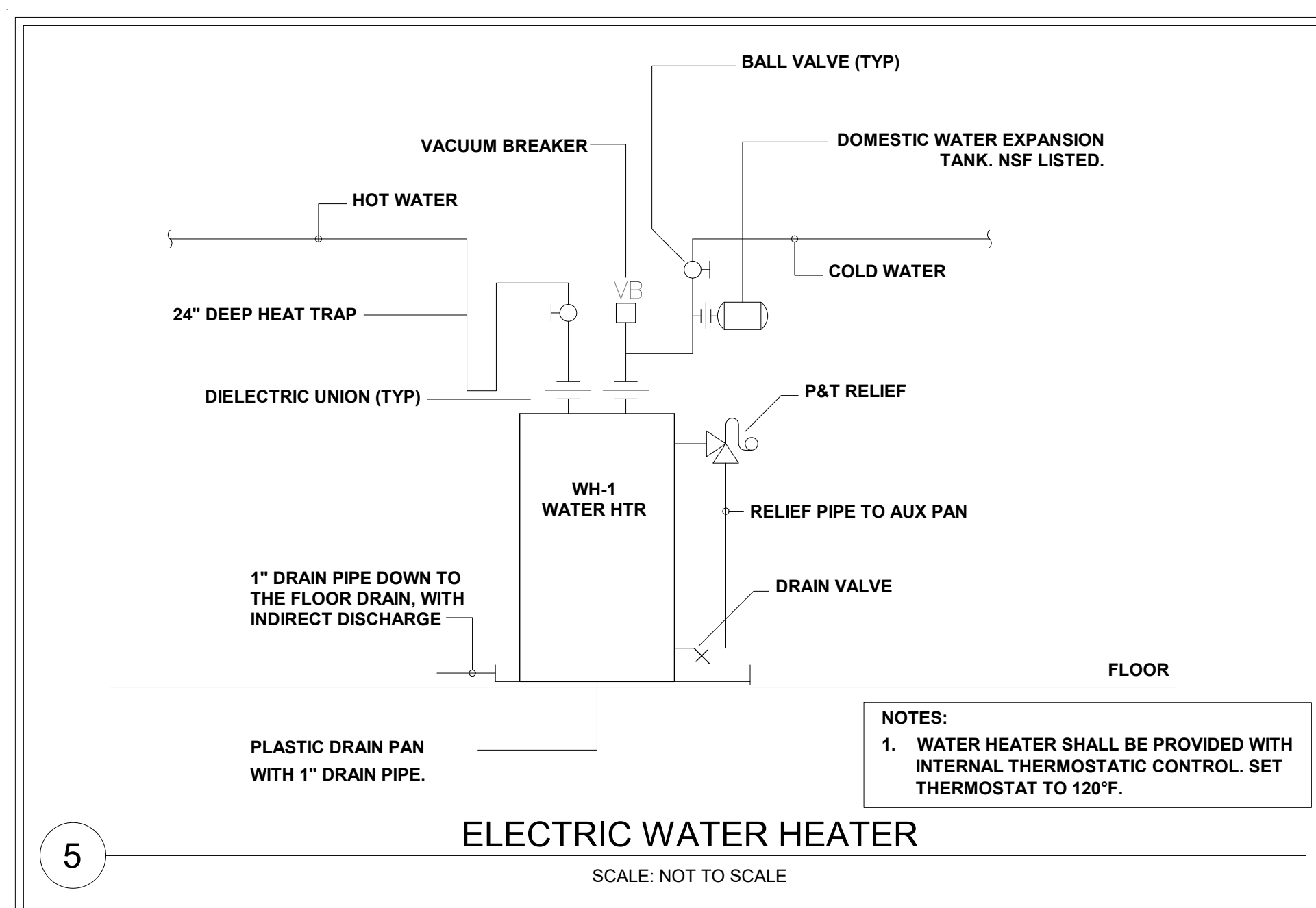
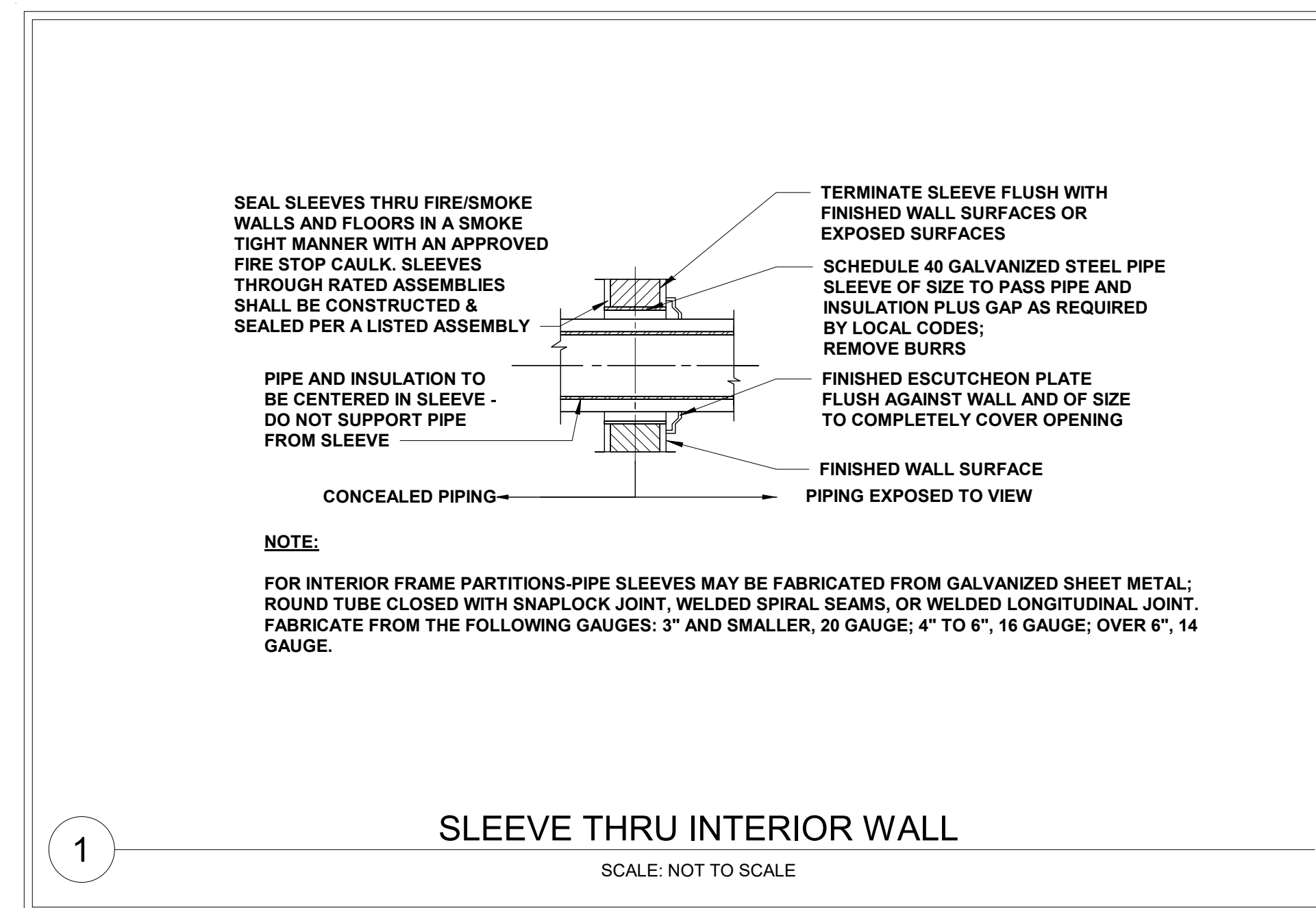
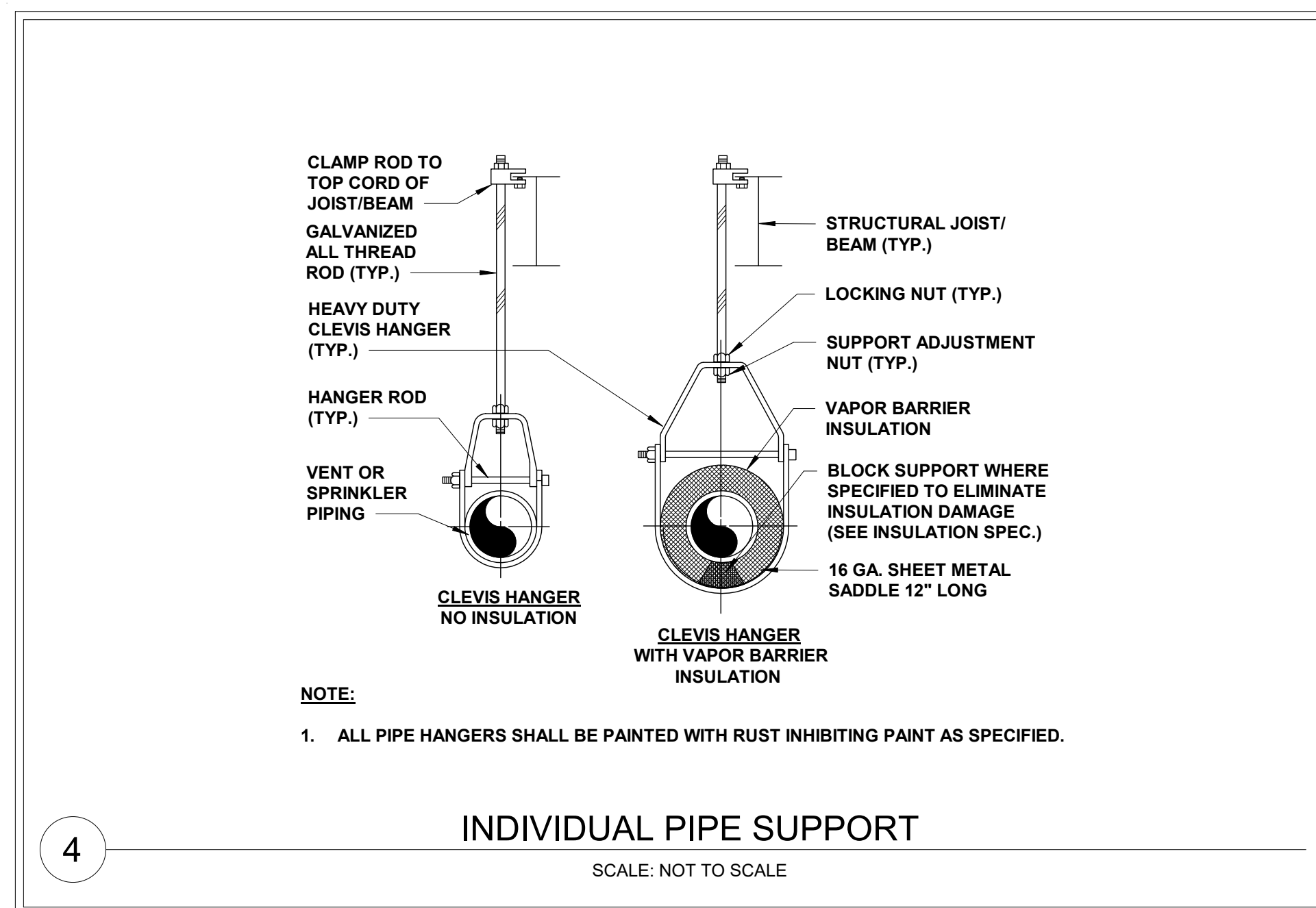
NIST - SINGLE FAMILY DETACHED HOME
SINGLE STORY

PLUMBING DETAILS

P301

SH. NO. OF DWG. P301

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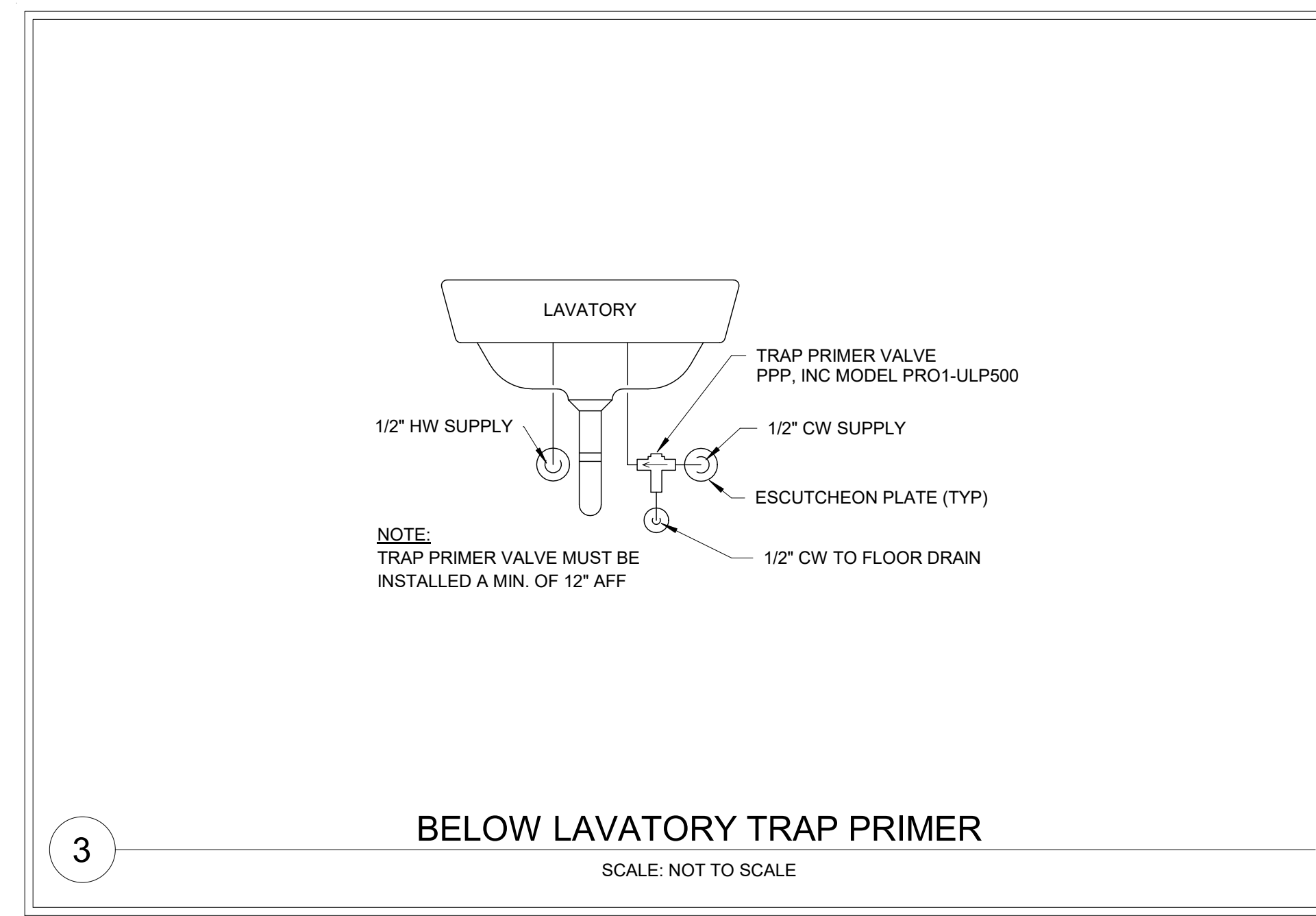
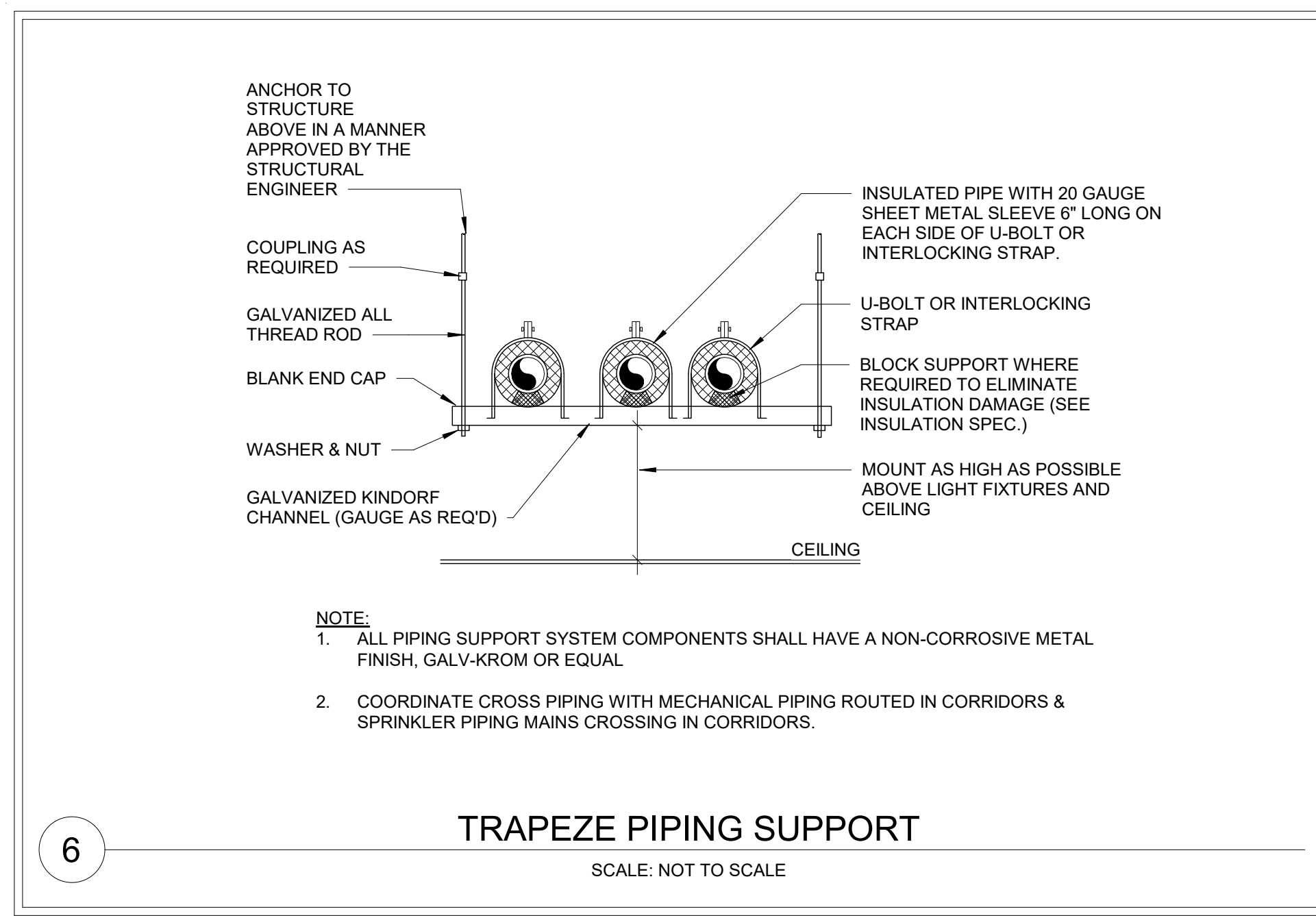
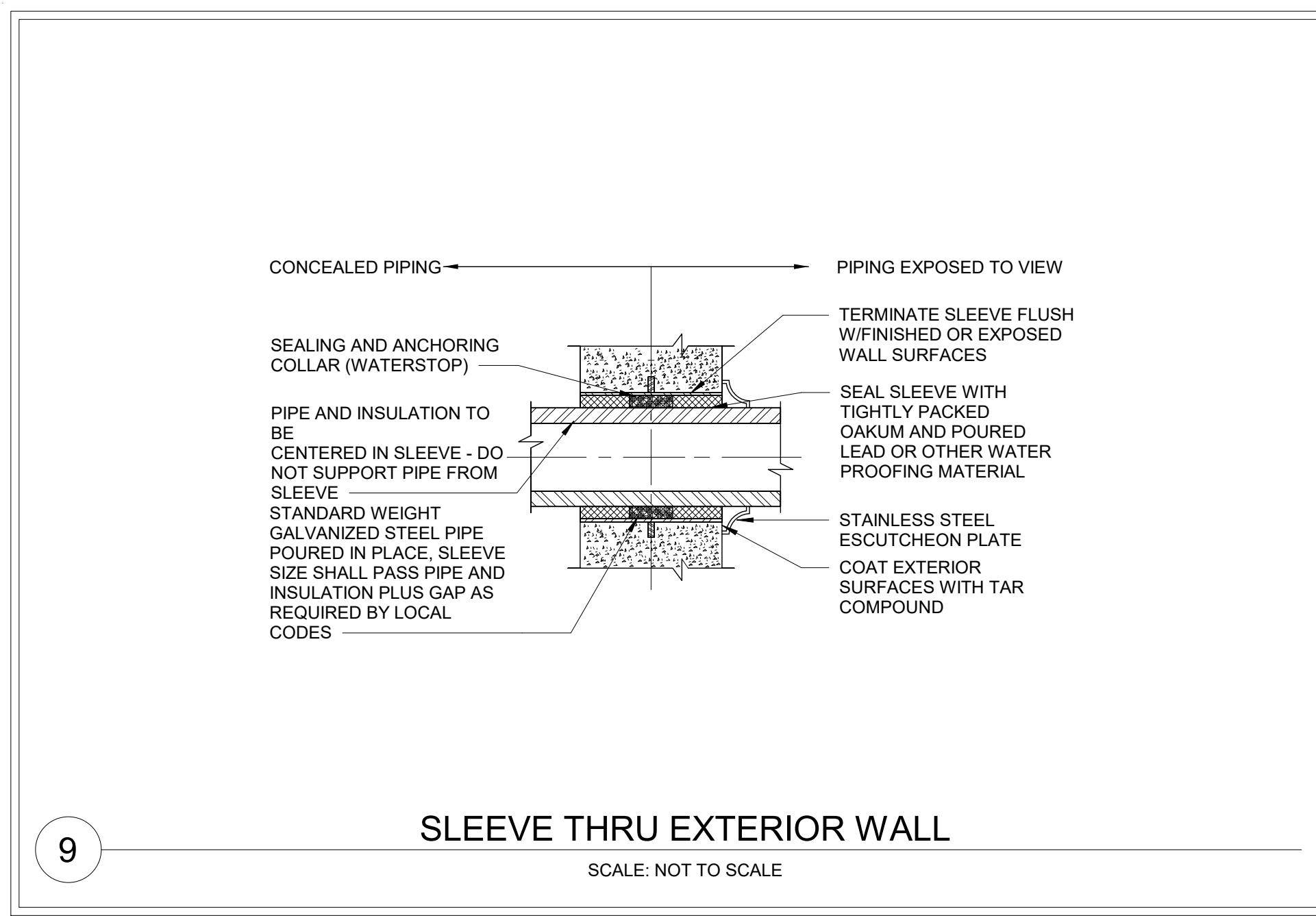
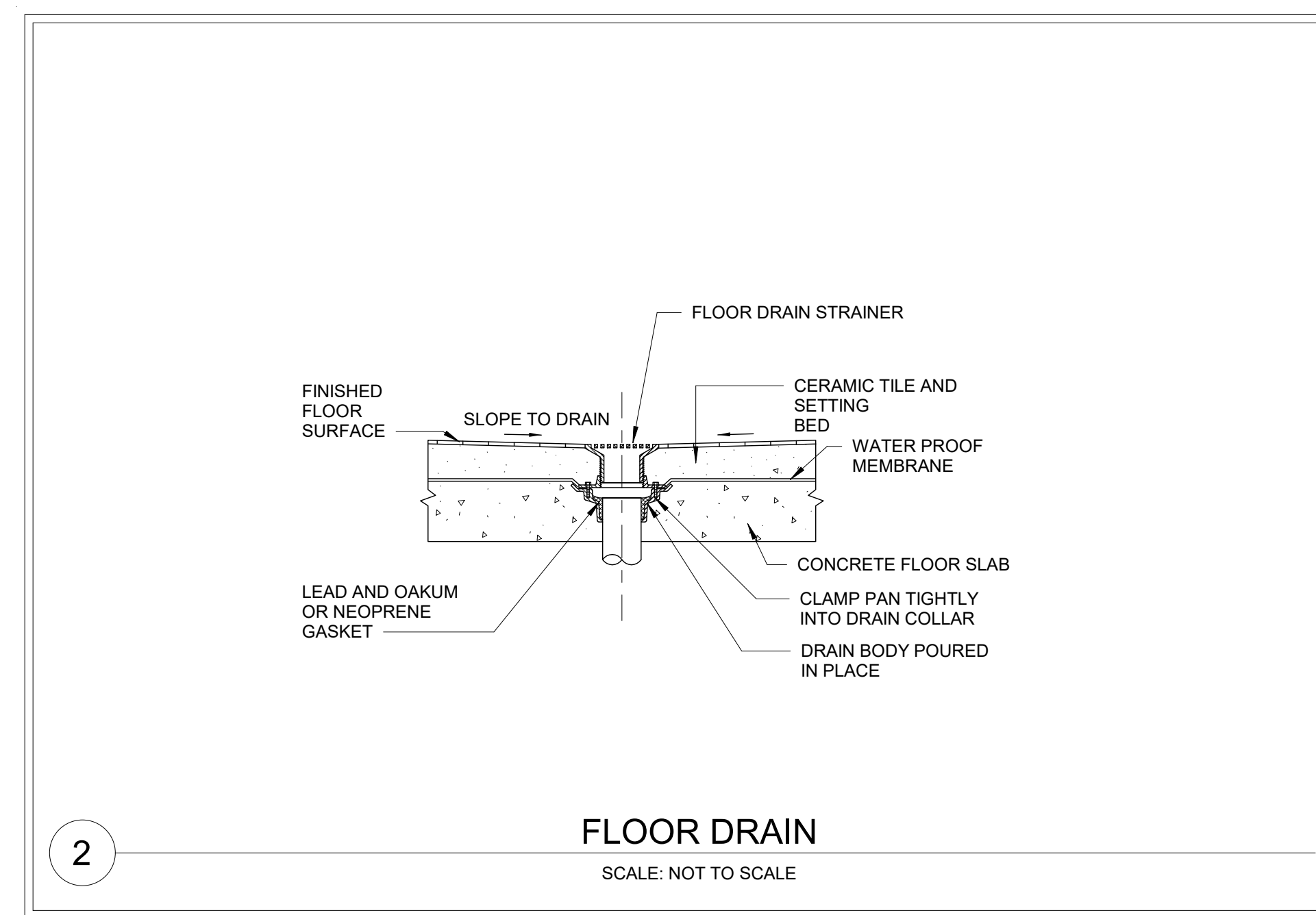
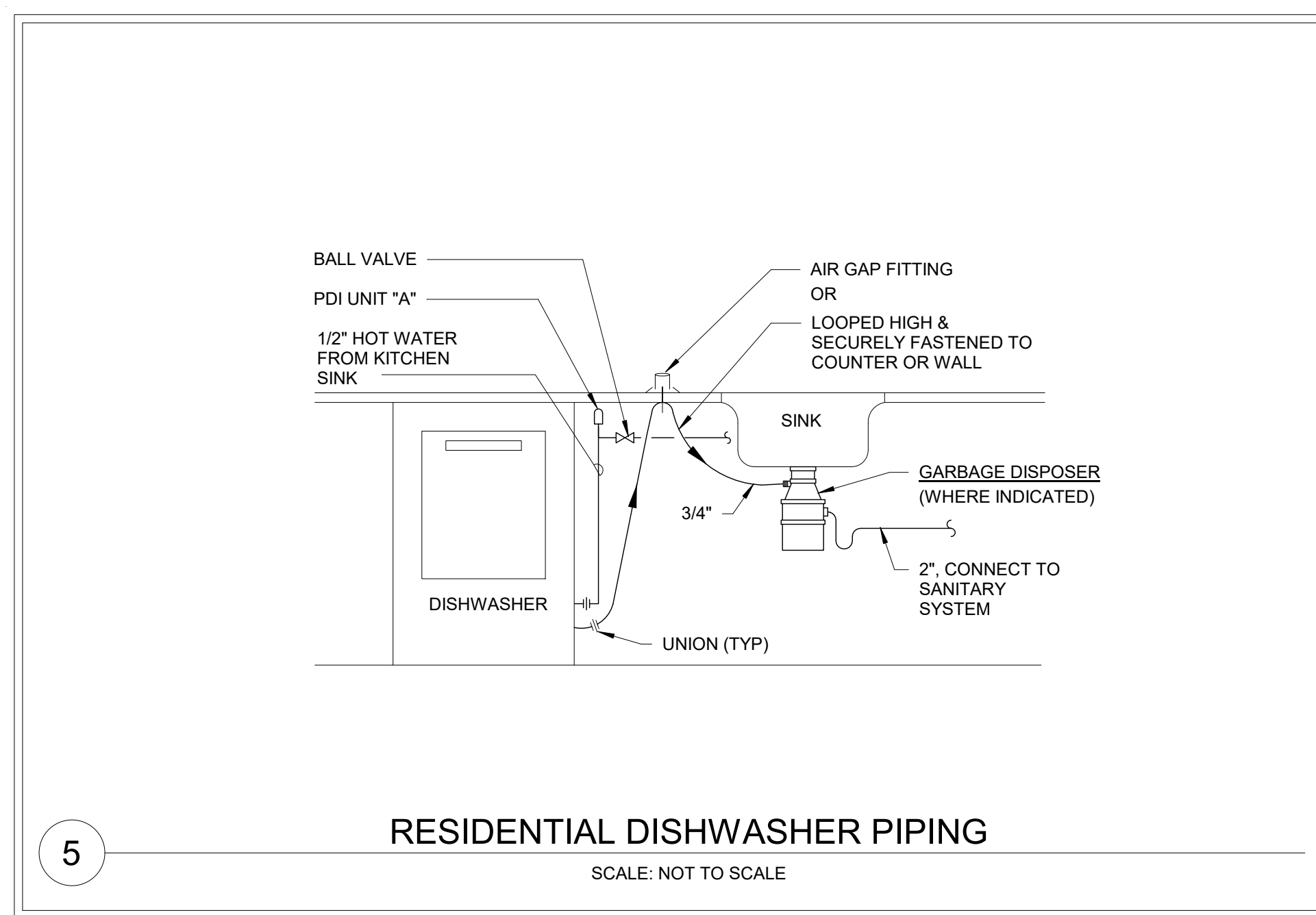
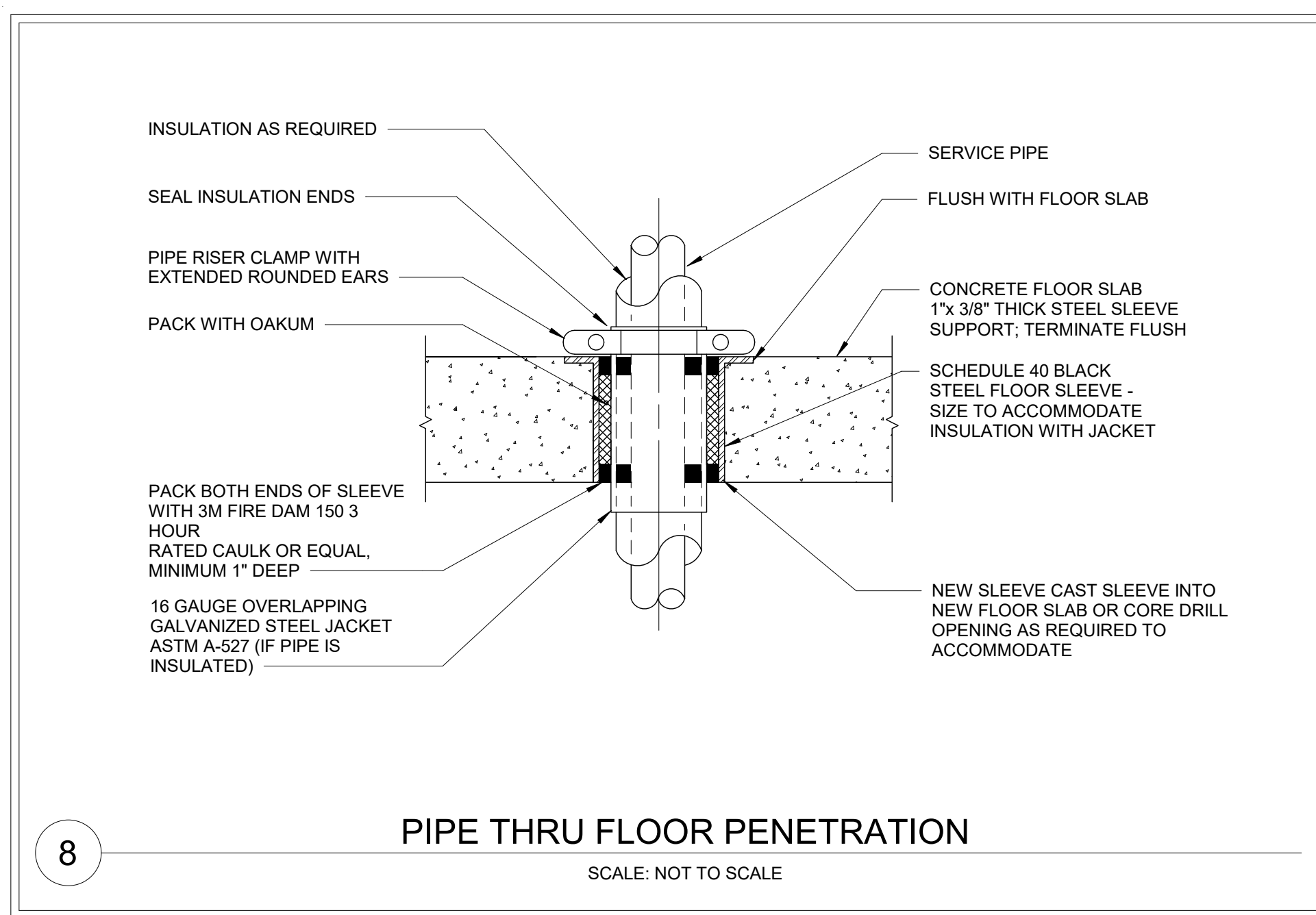
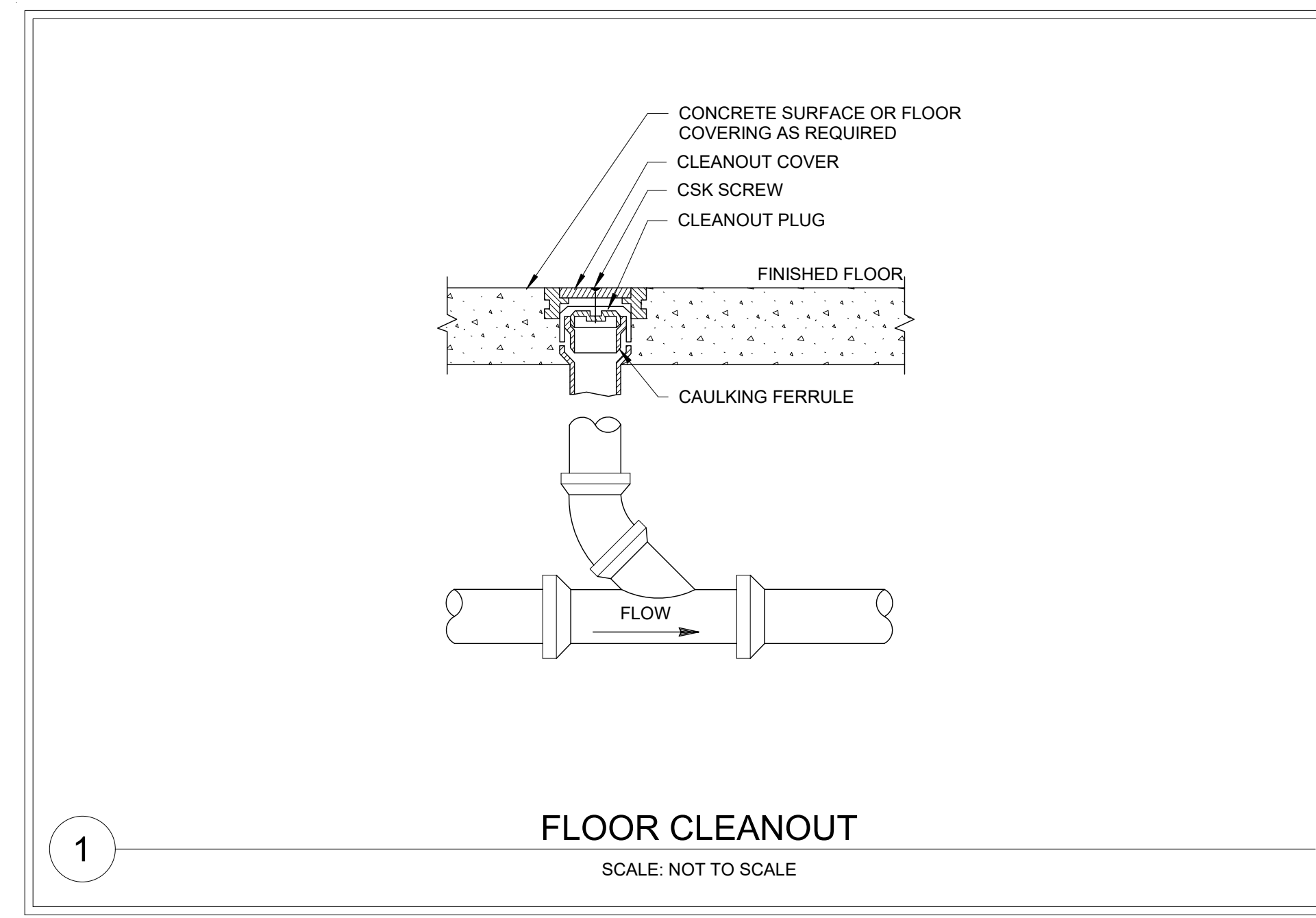
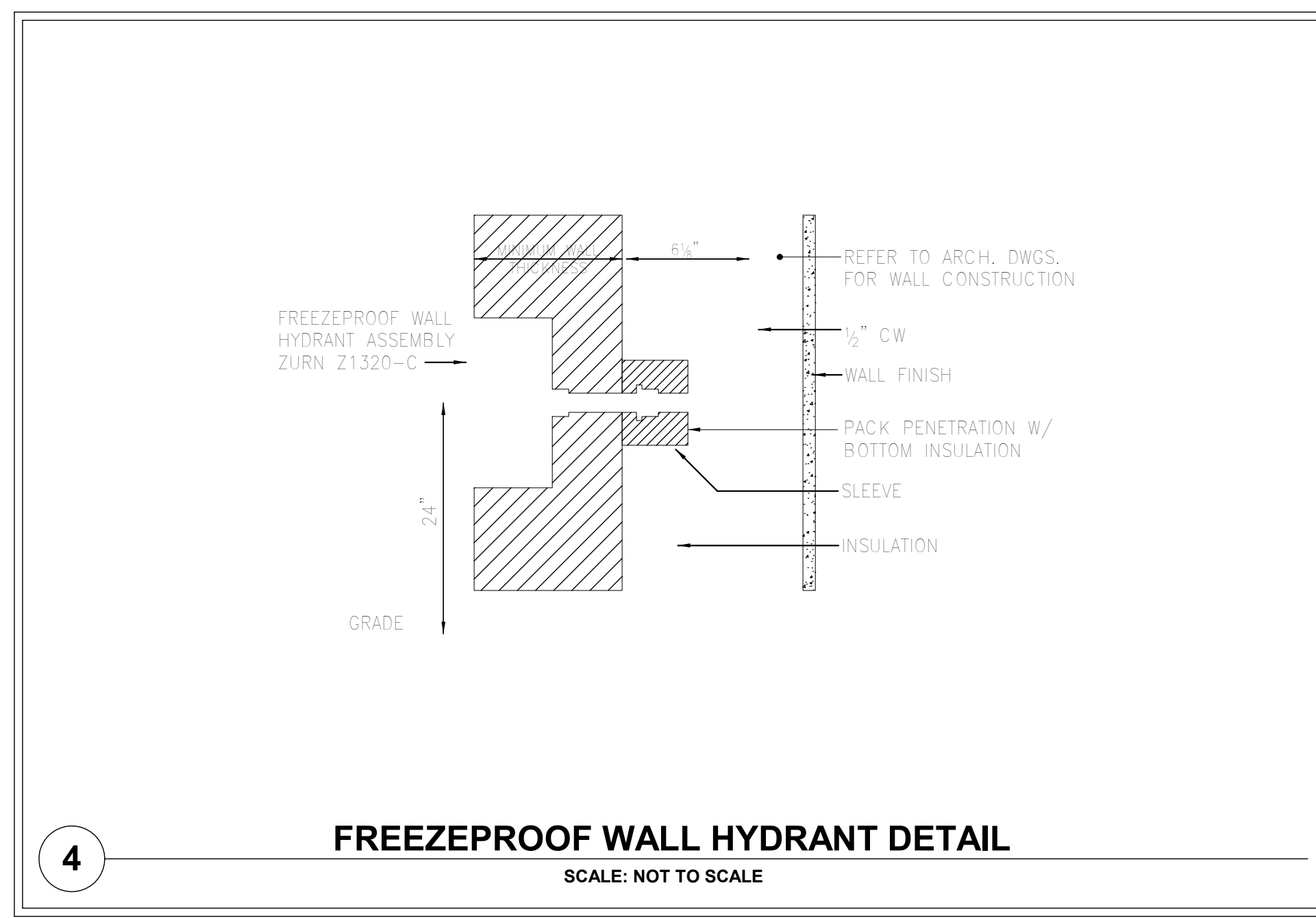
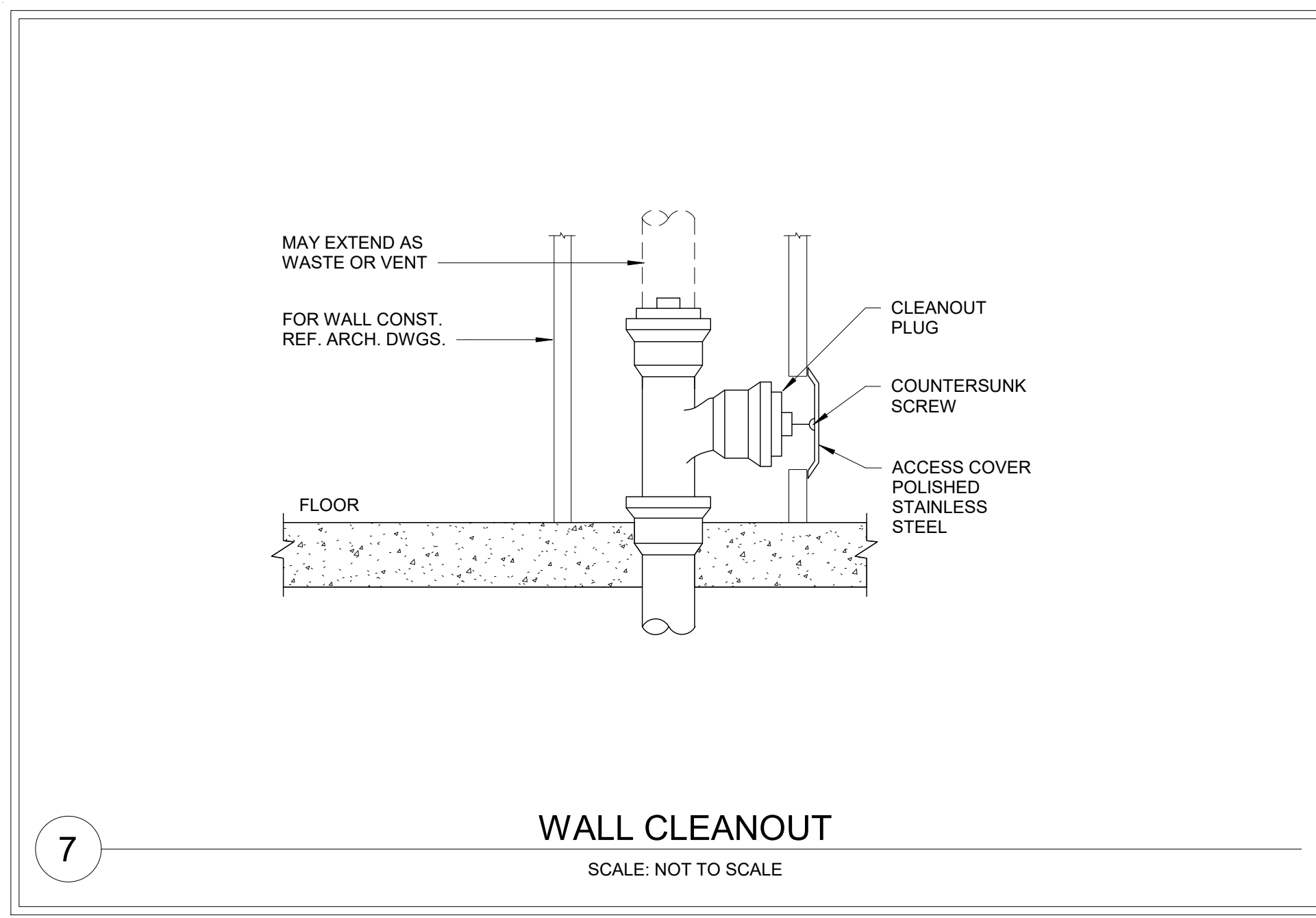
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PLUMBING DETAILS

P302

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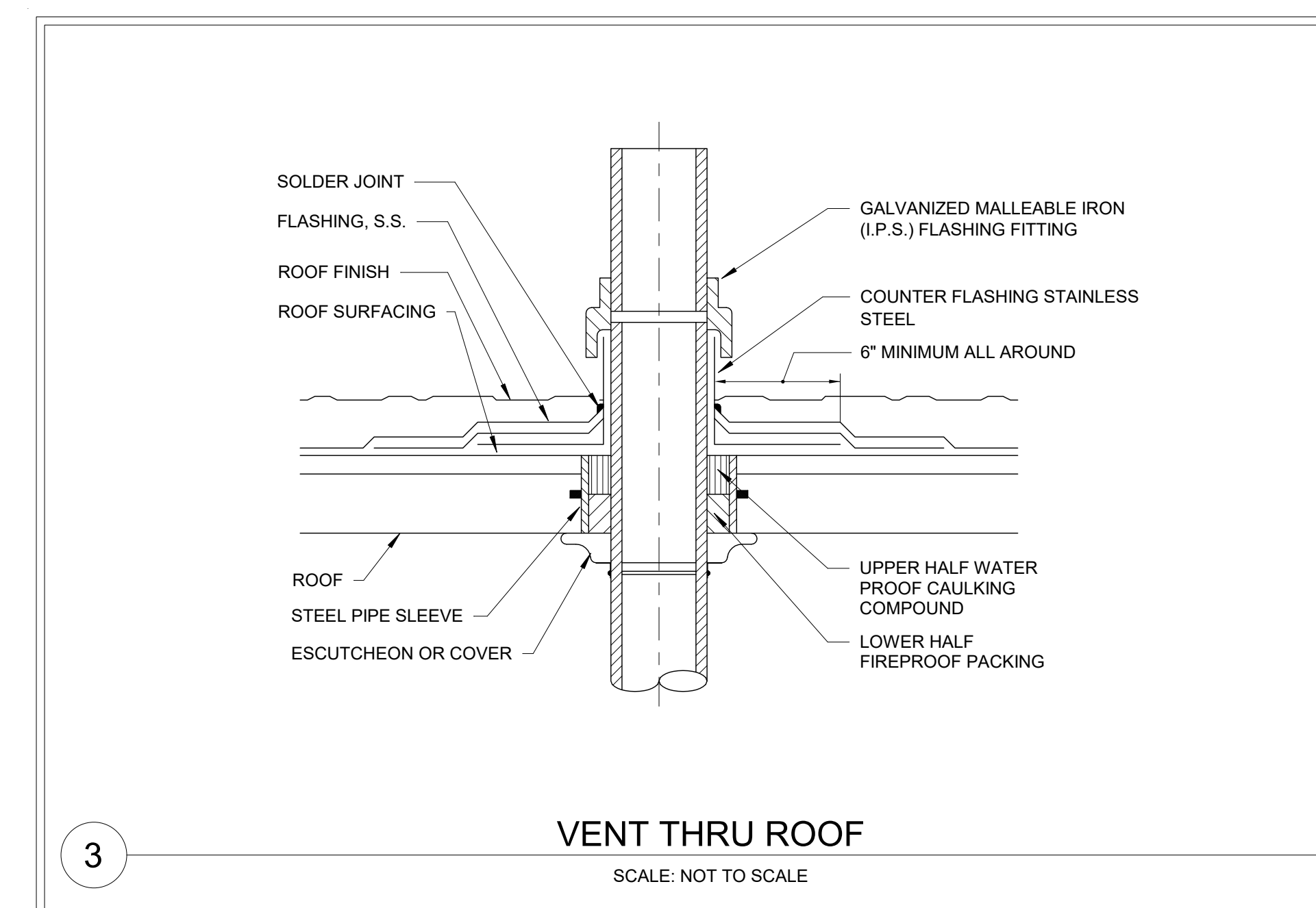
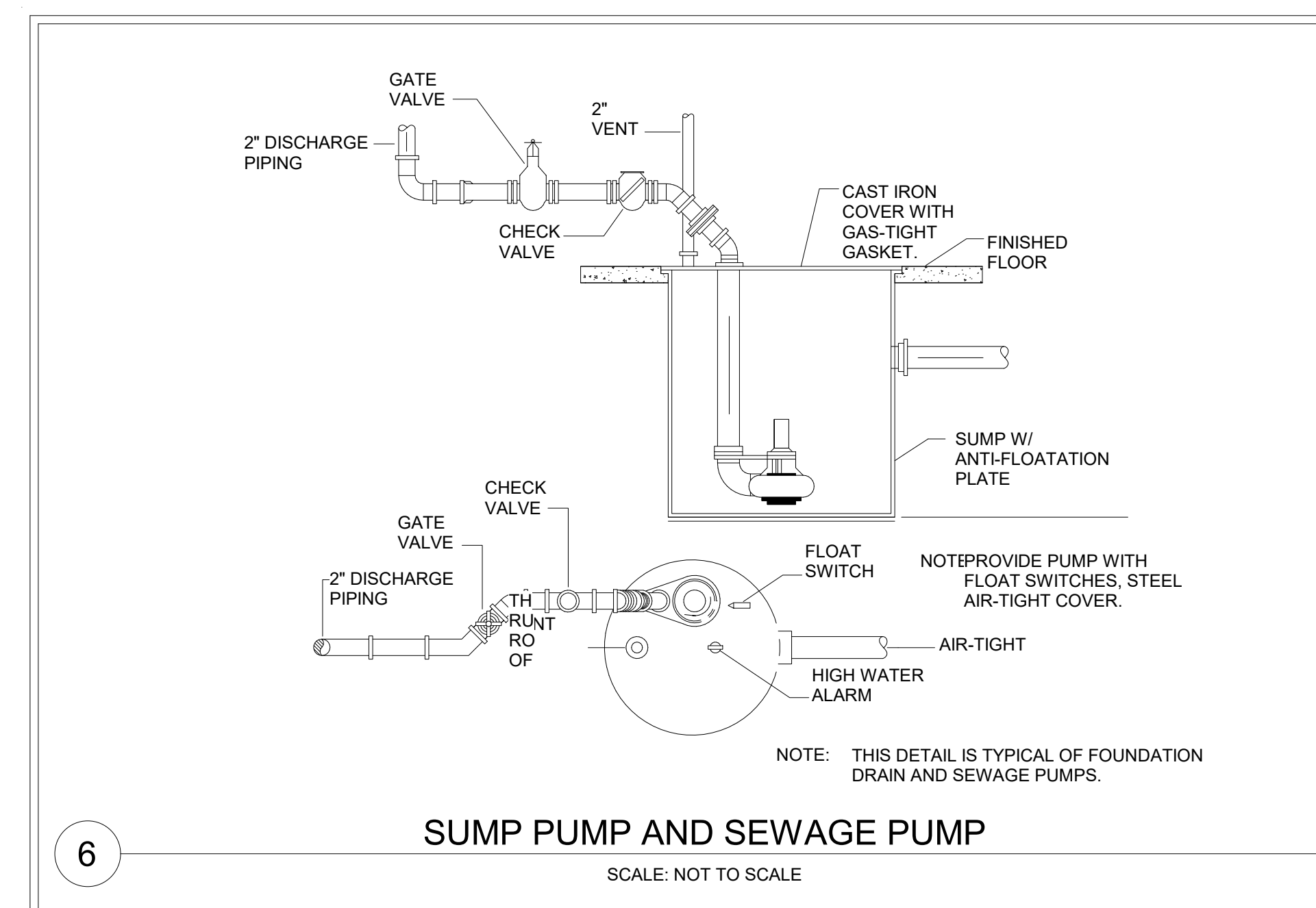
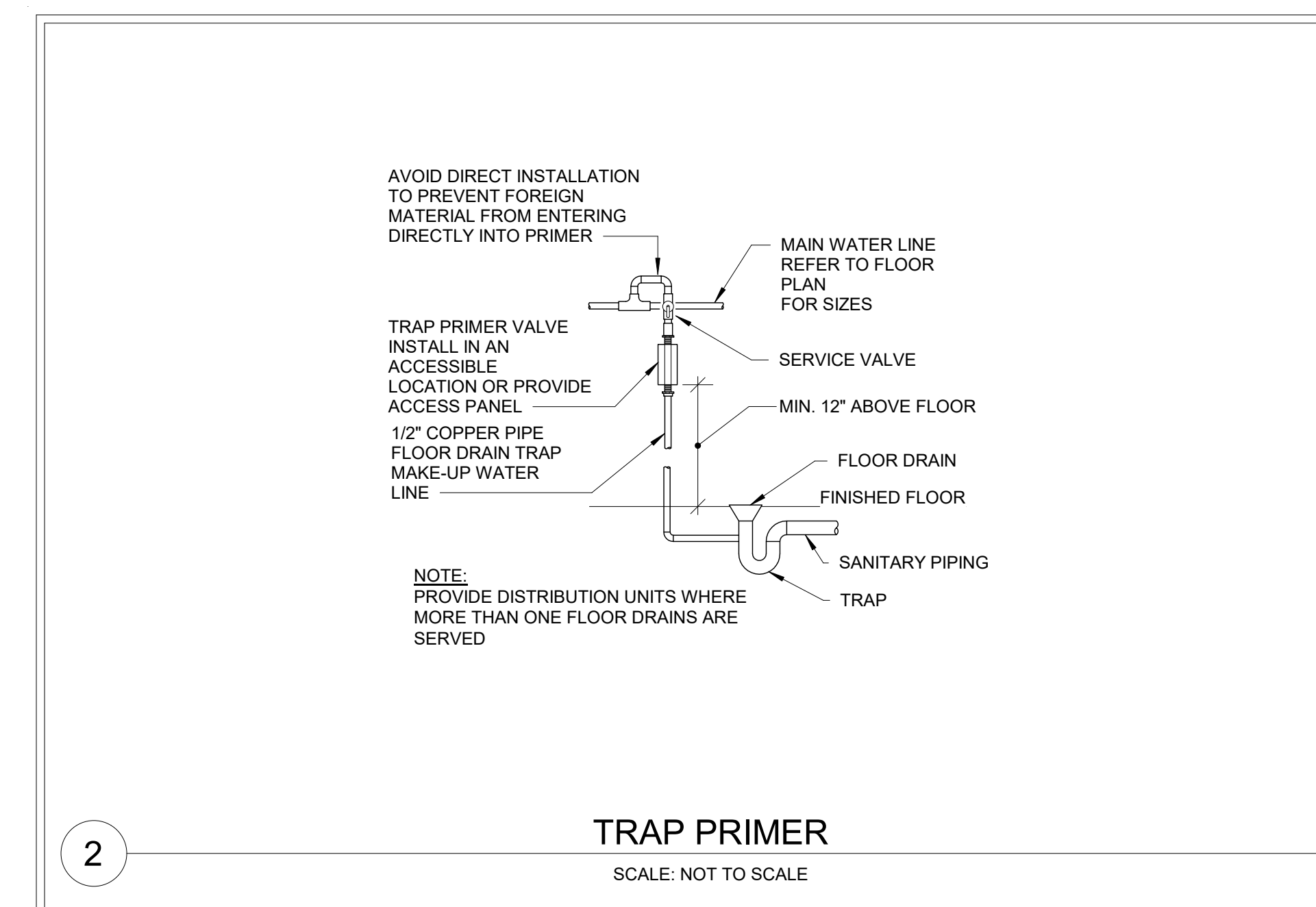
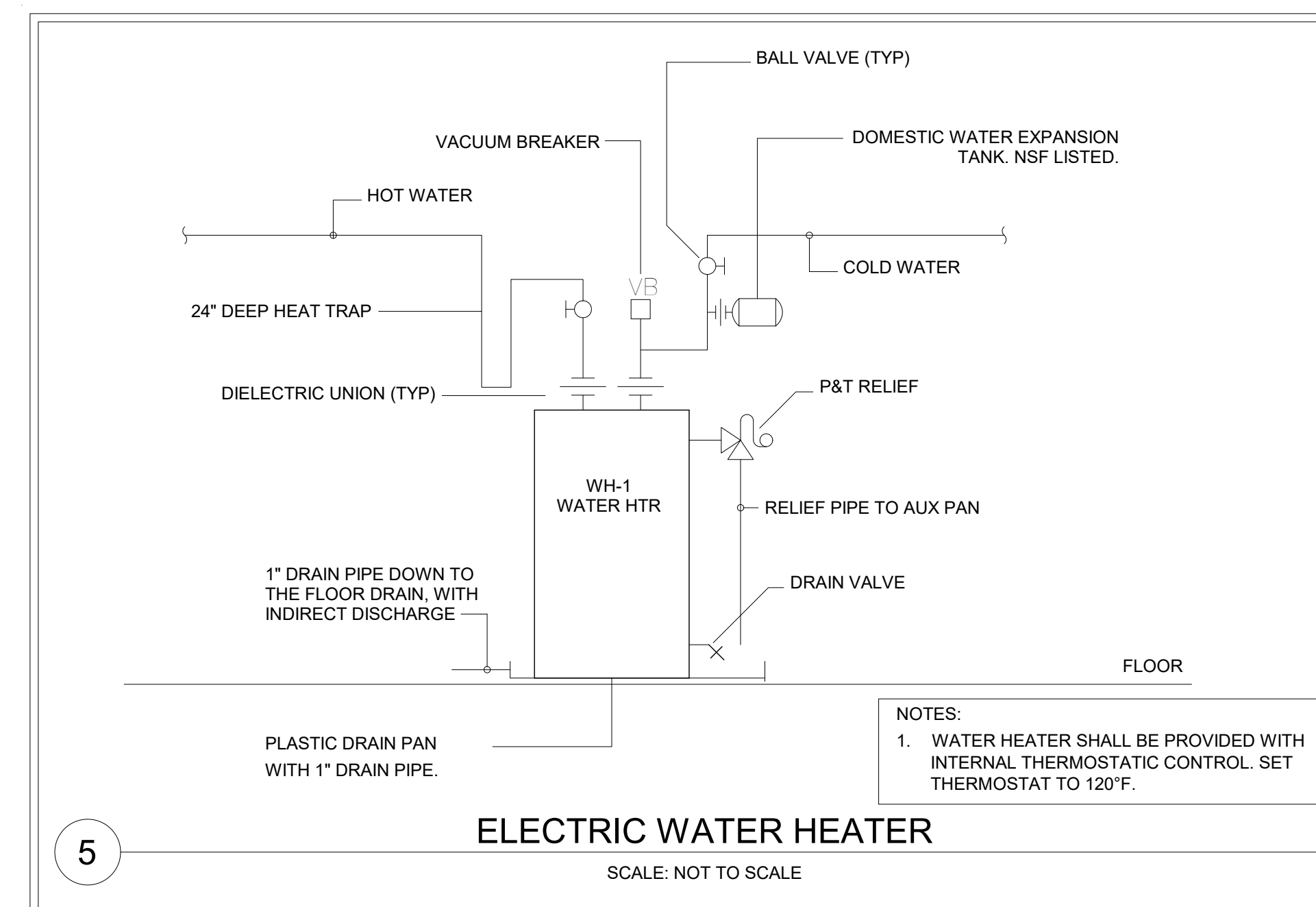
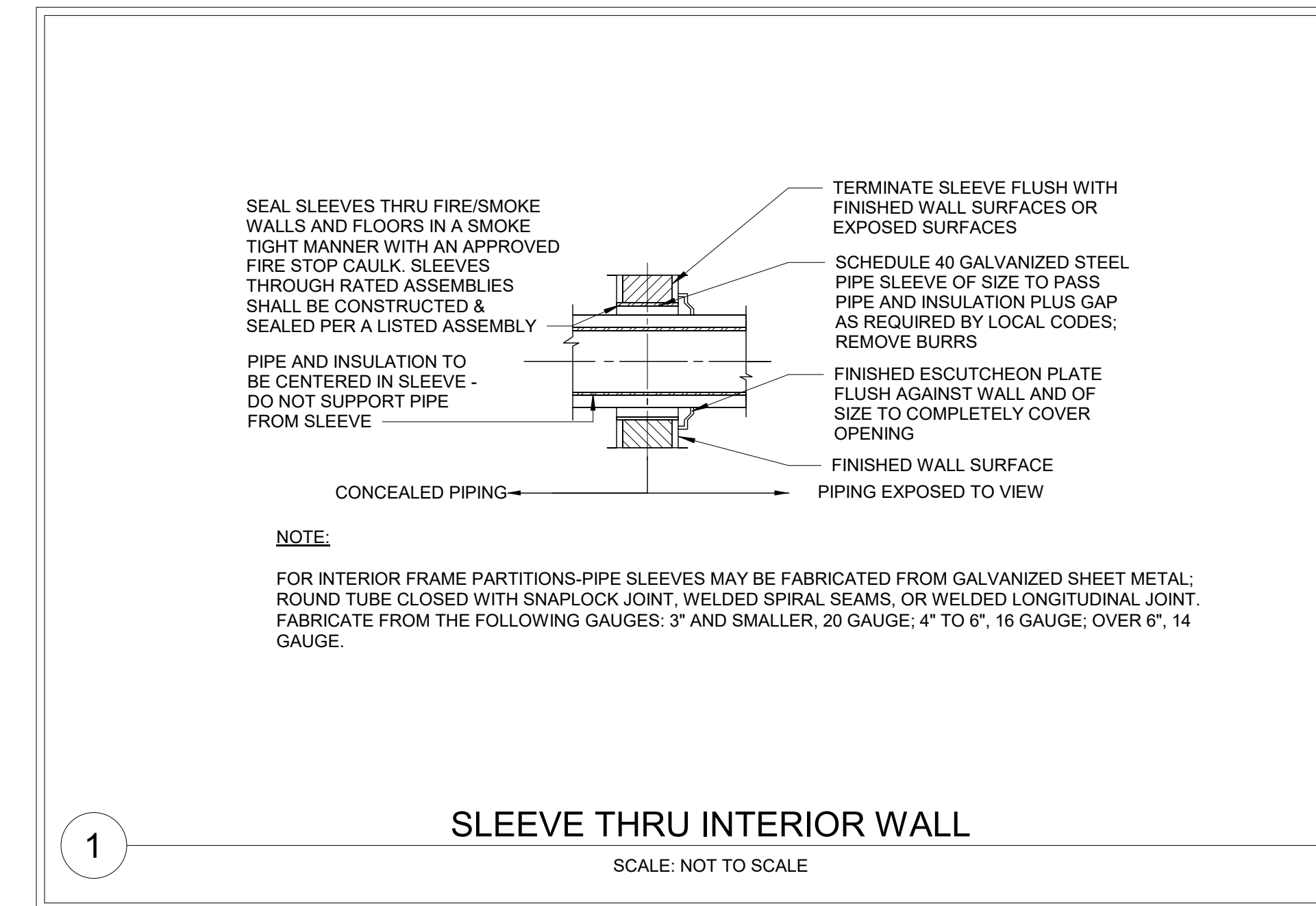
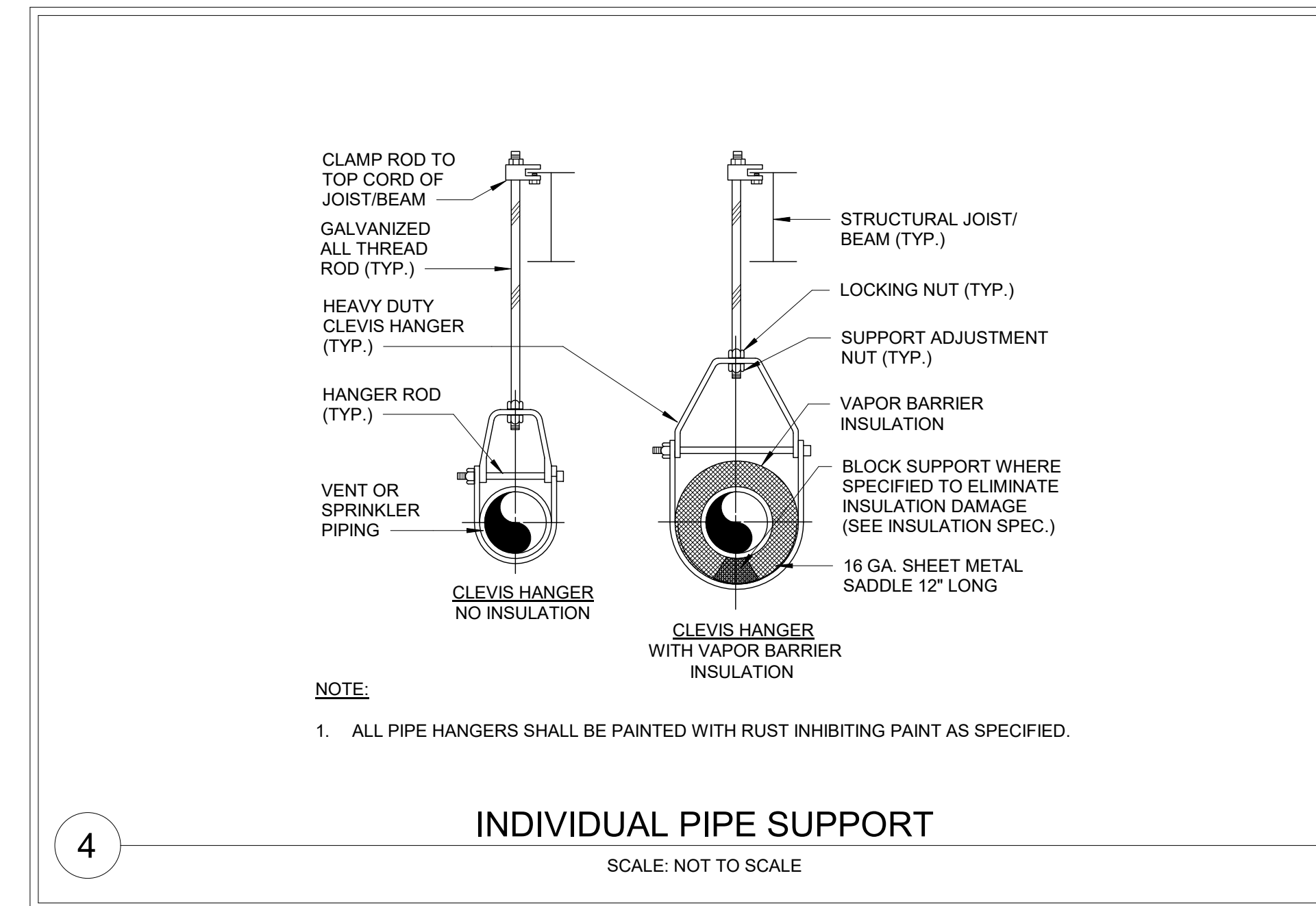
PLUMBING DETAILS

P301

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APPROVED BY	DATE	SPONSOR	DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT	DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ	DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER	DATE	DRAWN BY	AA	08/15/2022	Project Number
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PLUMBING DETAILS

P302

SLOPE OF HORIZONTAL DRAINAGE PIPE

SIZE (INCHES)	MINIMUM SLOPE (INCH PER FOOT)
2-1/2 OR LESS	1/4
3 TO 6	1/8
8 OR LARGER	1/16

TABLE 704.1 OF THE INTERNATIONAL PLUMBING CODE 2018

CLEANOUT SCHEDULE

ID	APPLICATION	BASIC OF DESIGN (OR EQUAL)
CO	FINISHED FLOORS	ZURN Z1400
	CERAMIC & TERRAZO	ZURN Z1400-Z
	UNFINISHED FLOORS	ZURN Z1400-HD
WCO	LINE CLEANOUT	ZURN Z1468
	STACK CLEANOUT	ZURN Z1446
ECO	OUTSIDE AREAS	ZURN Z1400-HD

- NOTES:
- INSTALL ECO IN 24x24x4 THICK CONCRETE PAD. TOP OF PAD ELEVATION TO BE 2" ABOVE FINISHED GRADE.
 - PROVIDE ALL CLEANOUTS WITH WIDE ANCHOR FLANGE & CLAMPS DEVICE. ATTACH CLEANOUTS TO MEMBRANE IN FLOOR. WHEN CLEANOUTS ARE LOCATED IN NONMEMBRANE FLOORS, THEY SHALL BE FLASHED IN ACCORDANCE WITH THE SPECIFICATIONS. PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS COVERS.

PIPING MATERIAL SCHEDULE

PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION
SANITARY DRAIN PIPING (BELOW SLAB)	SOLID CORE SCHEDULE 40 PVC AND FITTINGS
SANITARY DRAIN PIPING (ABOVE SLAB)	SOLID CORE SCHEDULE 40 PVC AND FITTINGS
VENT PIPING	SOLID CORE SCHEDULE 40 PVC AND FITTINGS
DOMESTIC WATER PIPING (ABOVE SLAB)	TYPE "L" COPPER PIPING
DOMESTIC WATER PIPING (BELOW SLAB)	TYPE "K" COPPER PIPING W/ NO JOINTS

PLUMBING FIXTURE SCHEDULE

ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	CONNECTION SIZE				REMARKS
			WASTE	VENT	CW	HW	
P-1	WATER CLOSET	FLOOR MOUNTED, FLUSH TANK, TWO PIECE ELONGATED BOWL, AMERICAN STANDARD 270FA001.020 WITH ELONGATED SOLID PLASTIC SEAT, CLOSED FRONT, 3/8" CHROME PLATED SUPPLY & STOP WAX BOWL RING & WATER CLOSET BOLTS TRIP LEVER TO BE ON THE OPPOSITE, WHITE COLOR	3"	2"	1/2"	---	1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODES
P-2	LAVATORY	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"x14"x15.5", AMERICAN STANDARD OVAL 0496.221.020 WITH DELTA FAUCET LAHARRA COLLECTION, MODEL 528-55MPU-DST DIAMOND COATED CERAMIC CARTRIDGE SINGLE LEVER WITH METALLIC POP-UP DRAIN, 2.2 GPM AT 60PSI, STAINLESS STEEL FINISH, PROVIDE CAST BRASS TRAP & SUPPLIES & STOPS, STAINLESS STEEL FINISH	1-1/2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES
P-3	TUB & SHOWER	WHITE CAST IRON 60"x30"x14", WITH ENAMEL FINISH, KOHLER VILLAGER MODEL K-715 WITH DELTA THERMOSTATICALLY CONTROLLED SHOWER VALVE, STAINLESS STEEL FINISH, SCALD-GUARD, METAL LEVER HANDLE, SHOWER ARM, SHOWER HEAT, DIVERTER VALVE	2"	1-1/2"	1/2"	1/2"	2.5 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES
P-4	SINK	SINGLE BASIN, STAINLESS STEEL SINK, 25"x21"x6" DROP 18 GAUGE WITH SOUND DAMPENING, ELKAY D5ESR17221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER, KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STEEL FINISH	2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES. PROVIDE A 1/2 HP GARBAGE DISPOSAL
P-5	WASH BOX	WASH BOX OATEY MODEL #38569 OR EQUAL	2"	1-1/2"	1/2"	1/2"	WITH 1/4 TURN VALVES & WATER HAMMER ARRESTOR

ELECTRIC WATER HEATER SCHEDULE

ID	LOCATION	STORAGE CAPACITY (GALLONS)	FUEL TYPE	CAPACITY KW	MIN. UNIFORM ENERGY FACTOR	GPH @ 70 DELTA T	INLET TEMP (°F)	OUTLET TEMP (°F)	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)	REMARKS
									VOLTS	PHASE	HZ		
EW-1	MECHANICAL CLOSET	50	ELECTRIC	4.5	0.92	26	70	120	240	1	60	A.O. SMITH ENJ-50	

NOTES:

SEWAGE EJECTOR AND SUMP PUMP SCHEDULE

ID	SERVICE	GPM	HEAD (FT.)	MOTOR HP	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)	REMARKS
					VOLTAGE	PHASE	RPM		
SEP-1	BASEMENT BATHROOM	20	17	1/2	120	1	1750	ZOELLER MODEL 226	SIMPLEX SUBMERSIBLE SEWAGE EJECTION PUMP, FIBERGLASS BASIN, BASIN DIMENSION: 2'-0" DIAM, 36" DEEP. PROVIDE AUTOMATIC CONTROLS & HIGH LEVEL ALARM.
SP-1	FOUNDATION DRAIN PUMP	30	17	1/2	120	1	3450	ZOELLER MODEL M98	SIMPLEX SUBMERSIBLE SUMP PUMP, FIBERGLASS, BASIN DIMENSION: 24" DIAMETER, 36" DEEP. PROVIDE AUTOMATIC CONTROLS & HIGH LEVEL ALARM.

DOMESTIC WATER EXPANSION TANK SCHEDULE

ID	WATER HEATER VOLUME (GALLONS)	MAX TEMP. (°F)	MAX OPERATING PRESSURE (PSIG)	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							HEIGHT	DIAMETER			
ET-1	50	140	80	-	4.5	2.9	13.5"	10.5"	10	WATTS PLT-12	

FLOOR DRAIN SCHEDULE

ID	TYPE	LOCATION/AREA	SIZE	BASIS OF DESIGN (OR EQUAL)	REMARKS
FD-1	FLOOR DRAIN	GENERAL	12X12	ZURN #2566	W/ 1/2" TRAP PRIMING LINE

NIST

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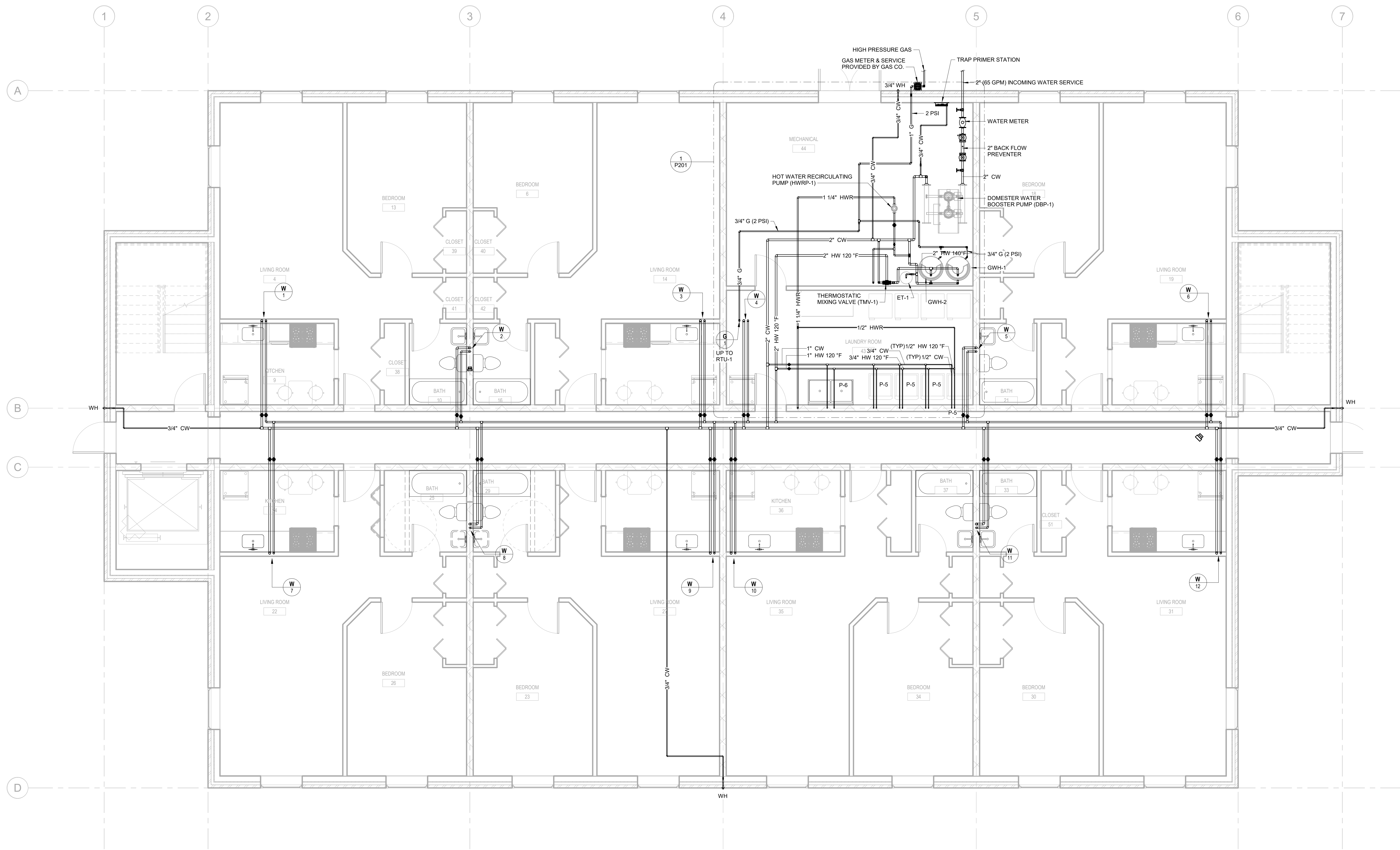
NIST - SINGLE FAMILY DETACHED HOME MULTI STORY

PLUMBING SCHEDULES

P401

SH. NO. ___ OF ___ DWG. P401

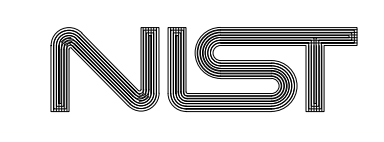
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1 FIRST FLOOR PLAN - WATER & GAS
1/4" = 1'-0"

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MEP. ENG.

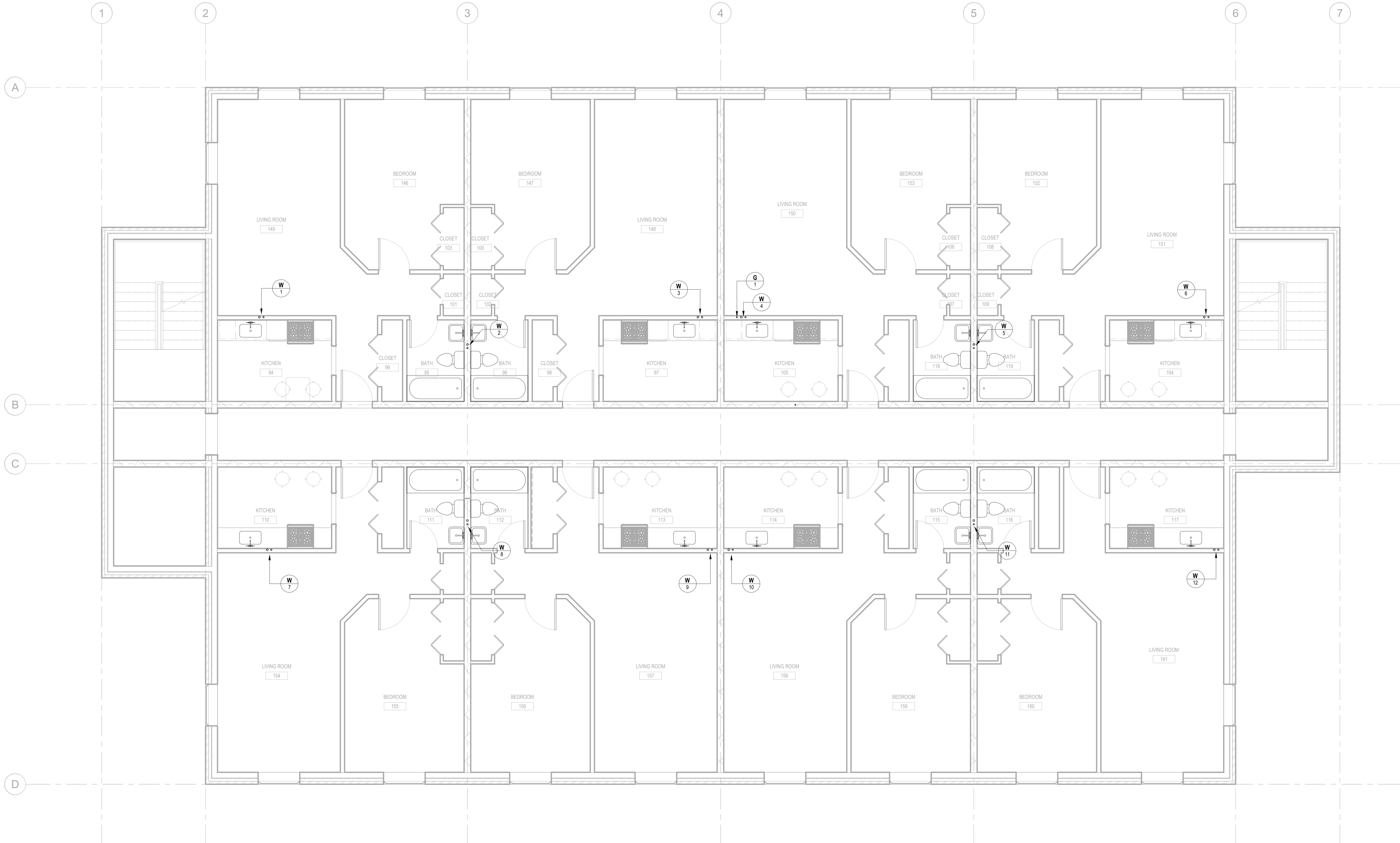


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 NIST - MID RISE APARTMENT
 PLUMBING FIRST FLOOR PLAN - WATER & GAS

P101

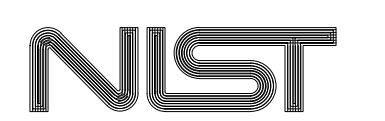
DWG. P101

REVISION	DESCRIPTION	BY	DATE



1 THIRD FLOOR - WATER & GAS
1/4" = 1'-0"

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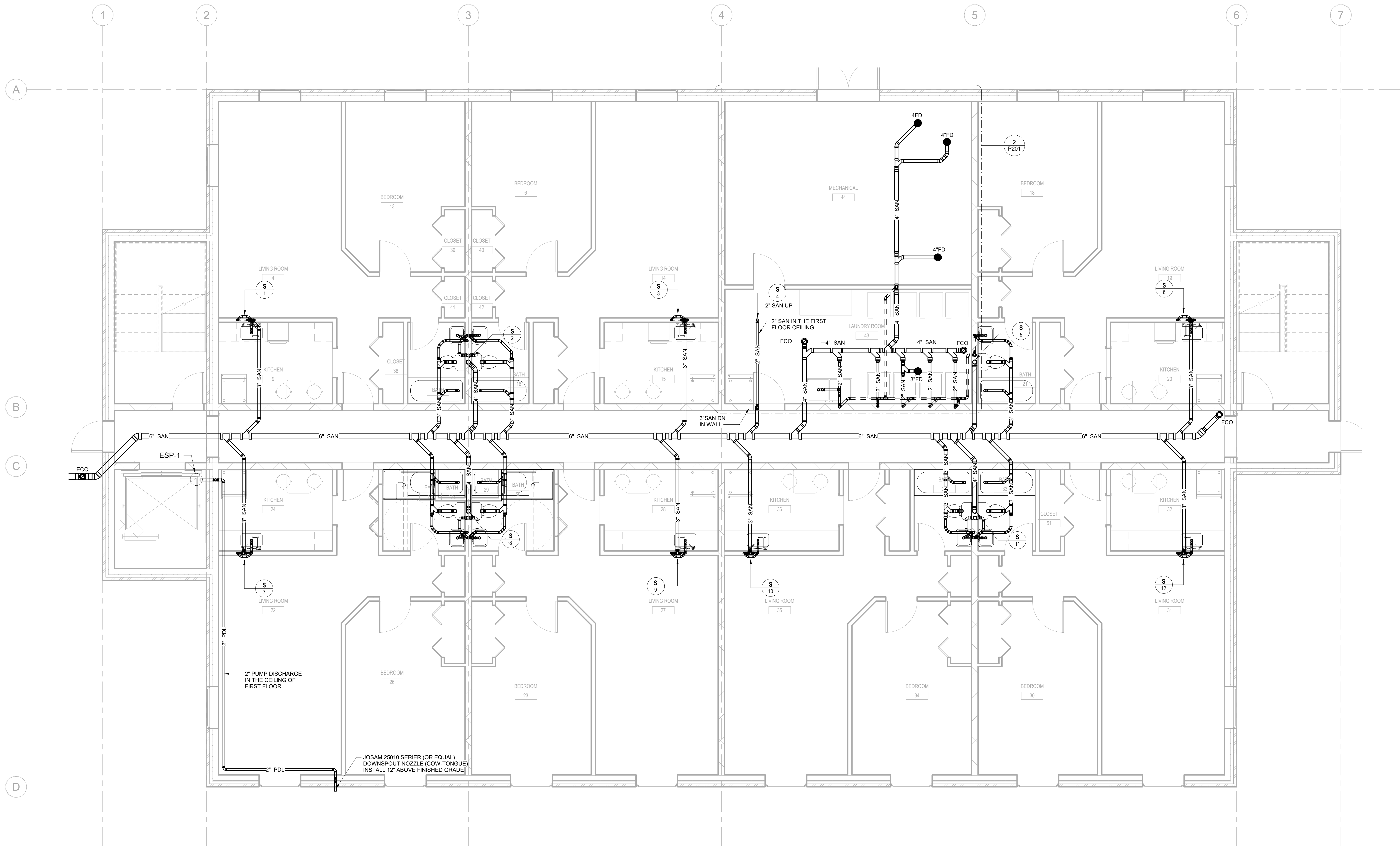
PLUMBING THIRD FLOOR PLAN - WATER & GAS

P103

SH. NO. ___ OF ___ DWG. P103

APPROVED BY	DATE	SPONSOR	DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT	DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ	DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER	DATE	VAY	DATE	AA	DATE	08/15/2022	Project Number	PROJECT/ W.O. #
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REVISION	DESCRIPTION	BY	DATE
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1 FIRST FLOOR - SANITARY
1/4" = 1'-0"

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NIST - MID RISE APARTMENT

PLUMBING FIRST FLOOR PLAN - SANITARY

P111

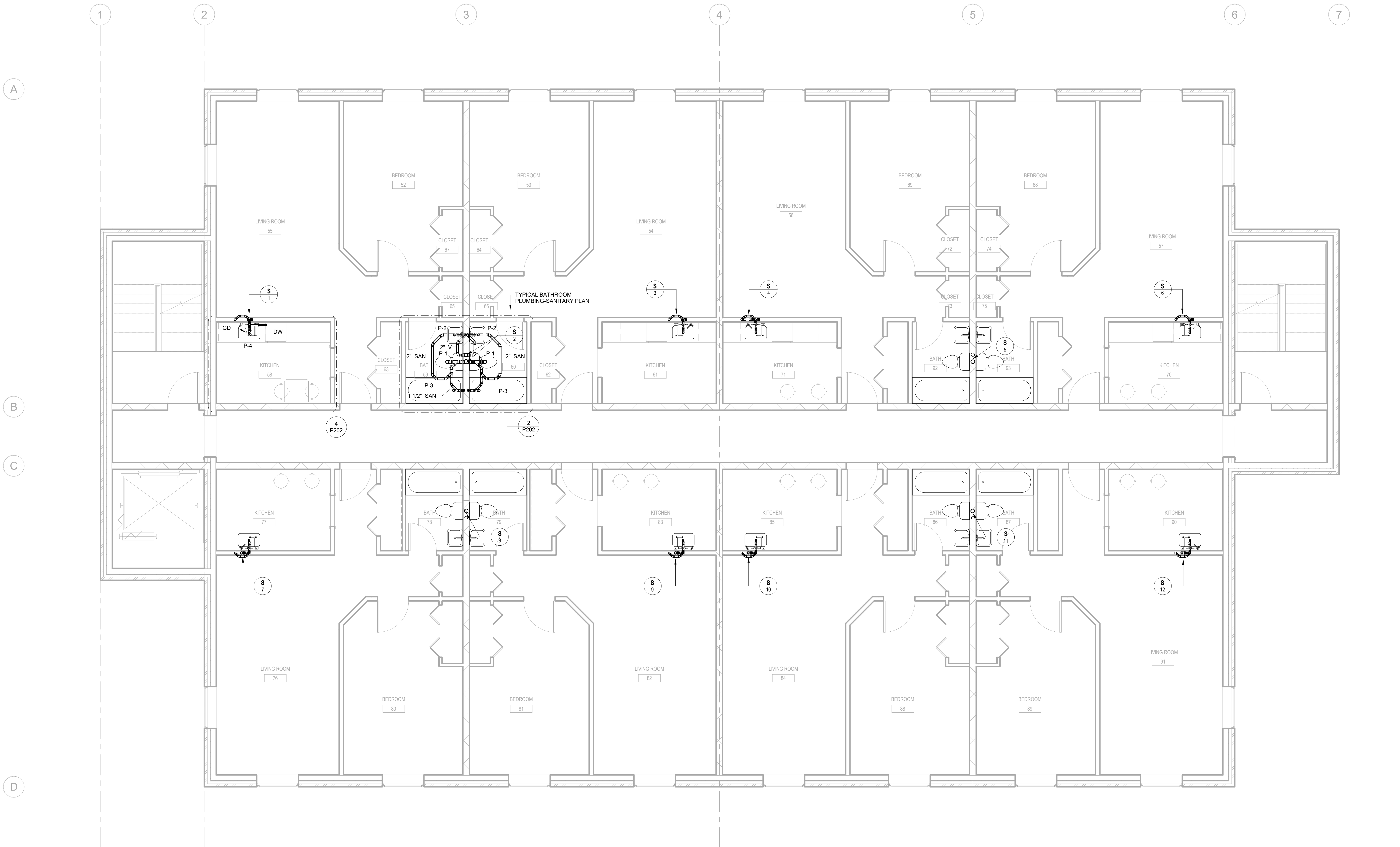
SH. NO. ___ OF ___ DWG. P111

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GENERAL NOTES

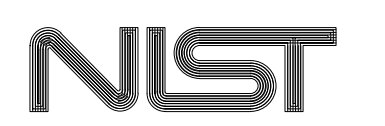
- REFER TO DWG P201 FOR TYPICAL BATHROOM AND KITCHEN SANITARY 1/4" SCALE PLANS

REVISION	DESCRIPTION	BY	DATE



1 SECOND FLOOR - SANITARY
1/4" = 1'-0"

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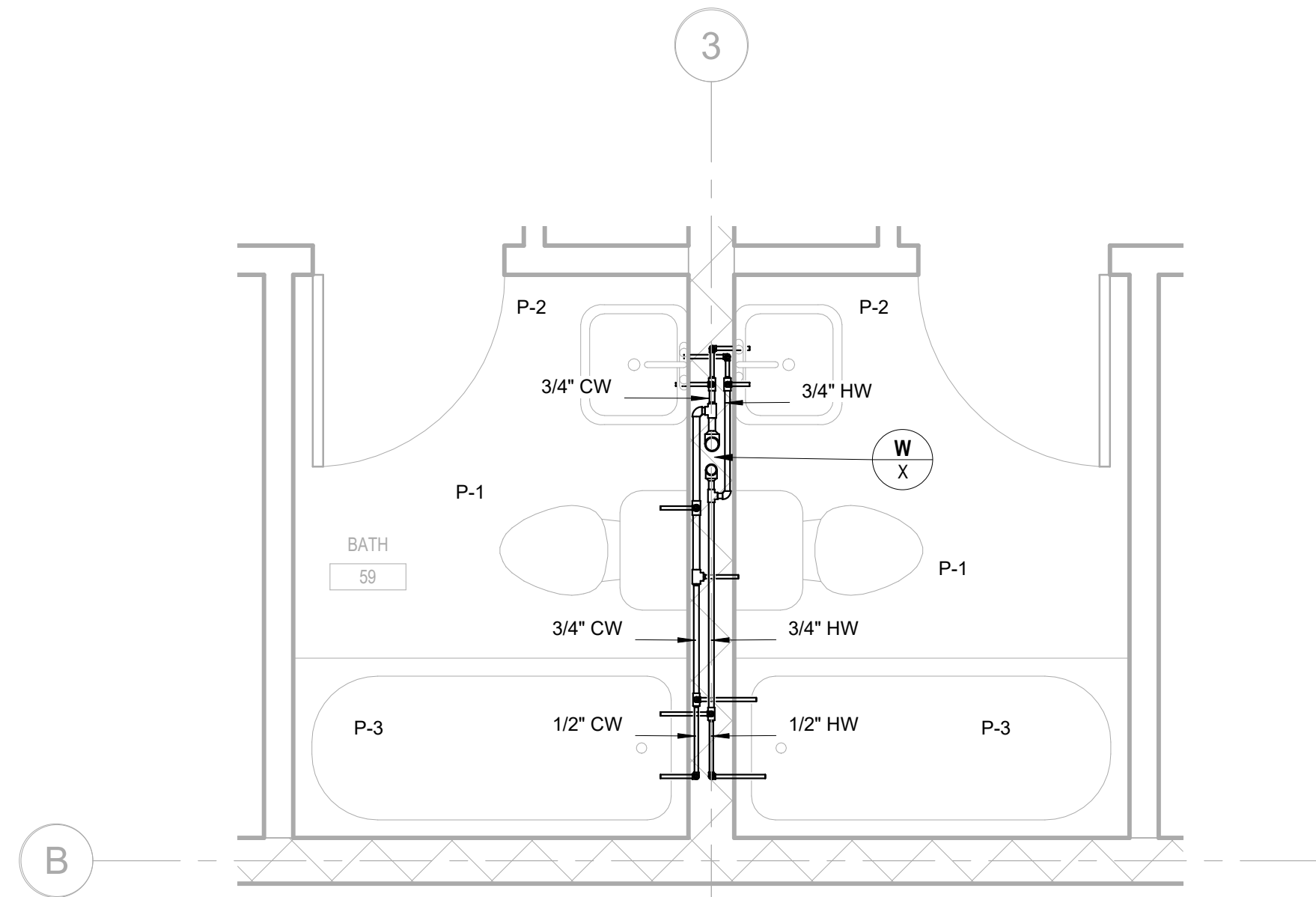
NIST - MID RISE APARTMENT

PLUMBING SECOND FLOOR PLAN - SANITARY

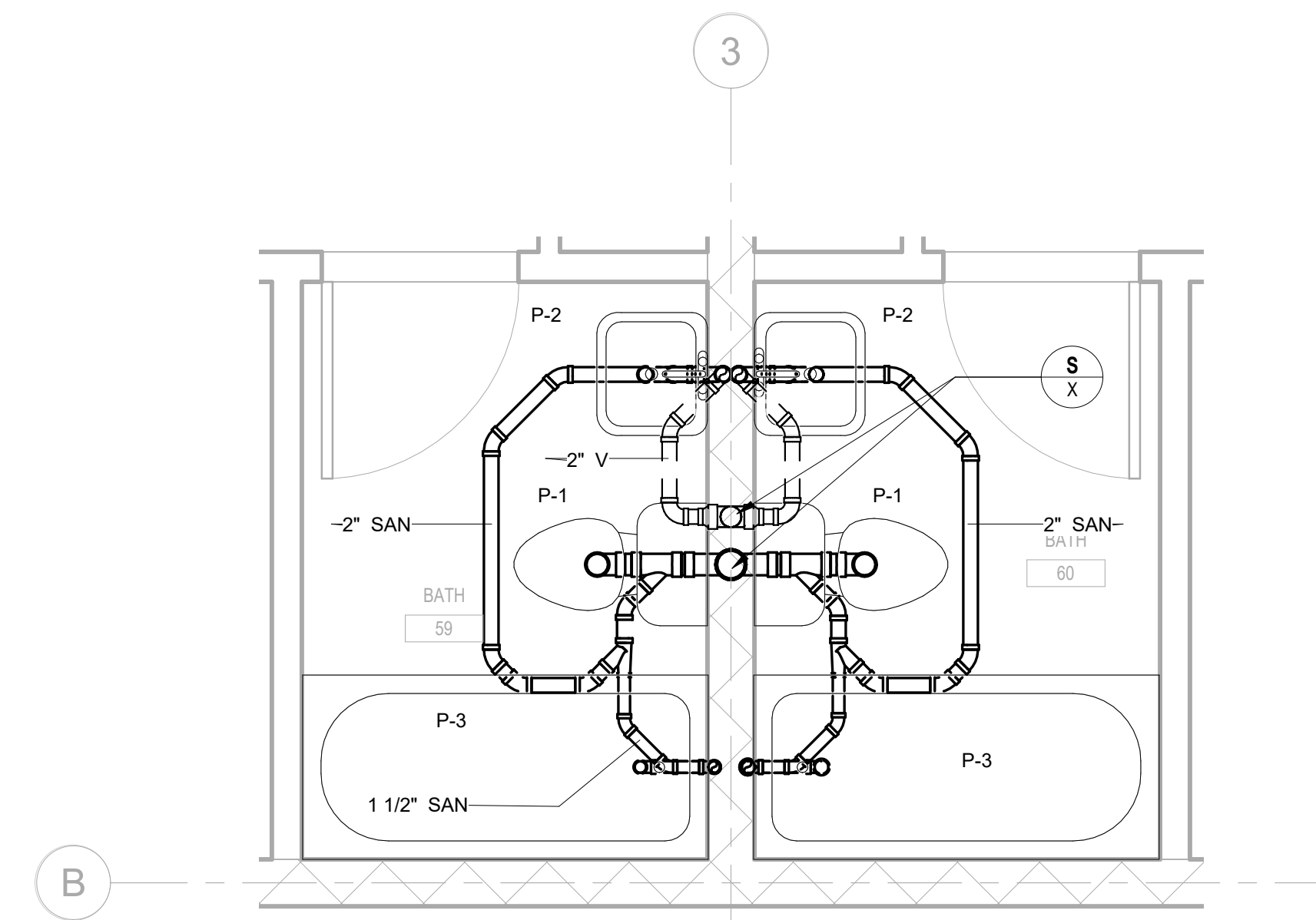
P112

SH. NO. ___ OF ___ DWG. P112

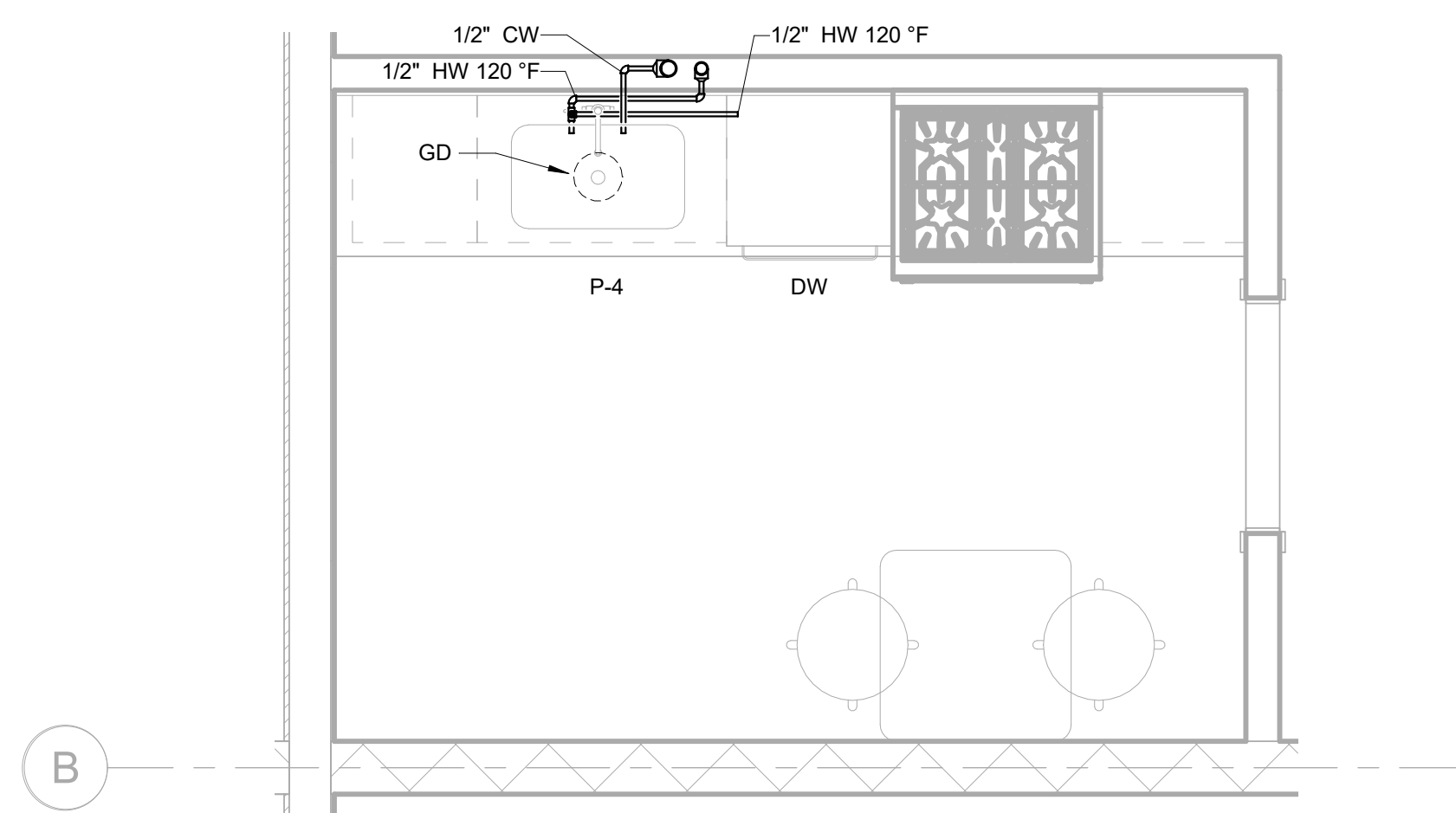
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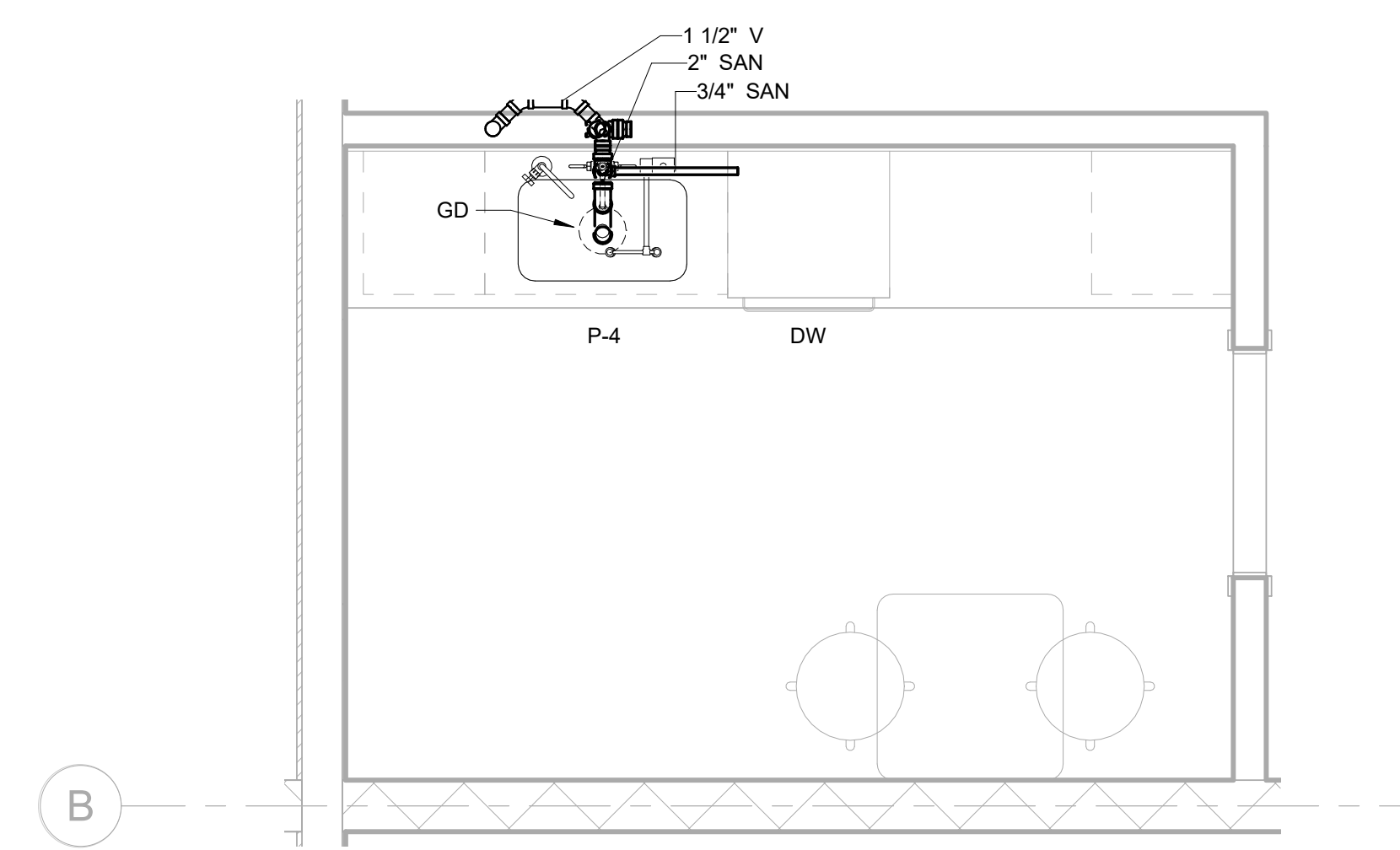
1 SECOND FLOOR - BATHROOM GROUP (TYP.) - WATER & GAS
1/2" = 1'-0"



2 SECOND FLOOR - BATHROOM GROUP (TYP.) - SANITARY
1/2" = 1'-0"



3 SECOND FLOOR - KITCHEN (TYP.) - WATER & GAS
1/2" = 1'-0"



4 SECOND FLOOR - KITCHEN (TYP.) - SANITARY
1/2" = 1'-0"

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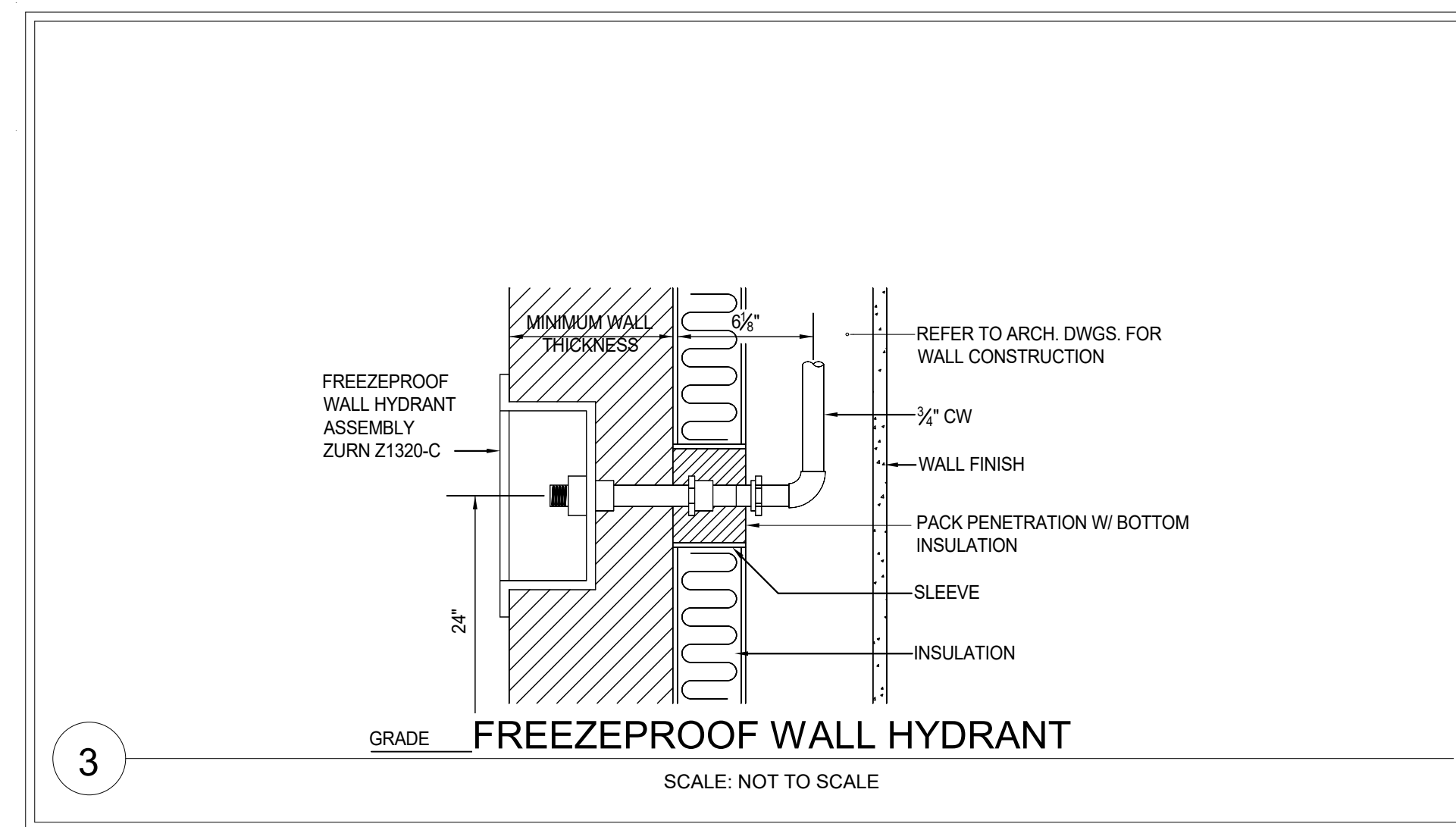
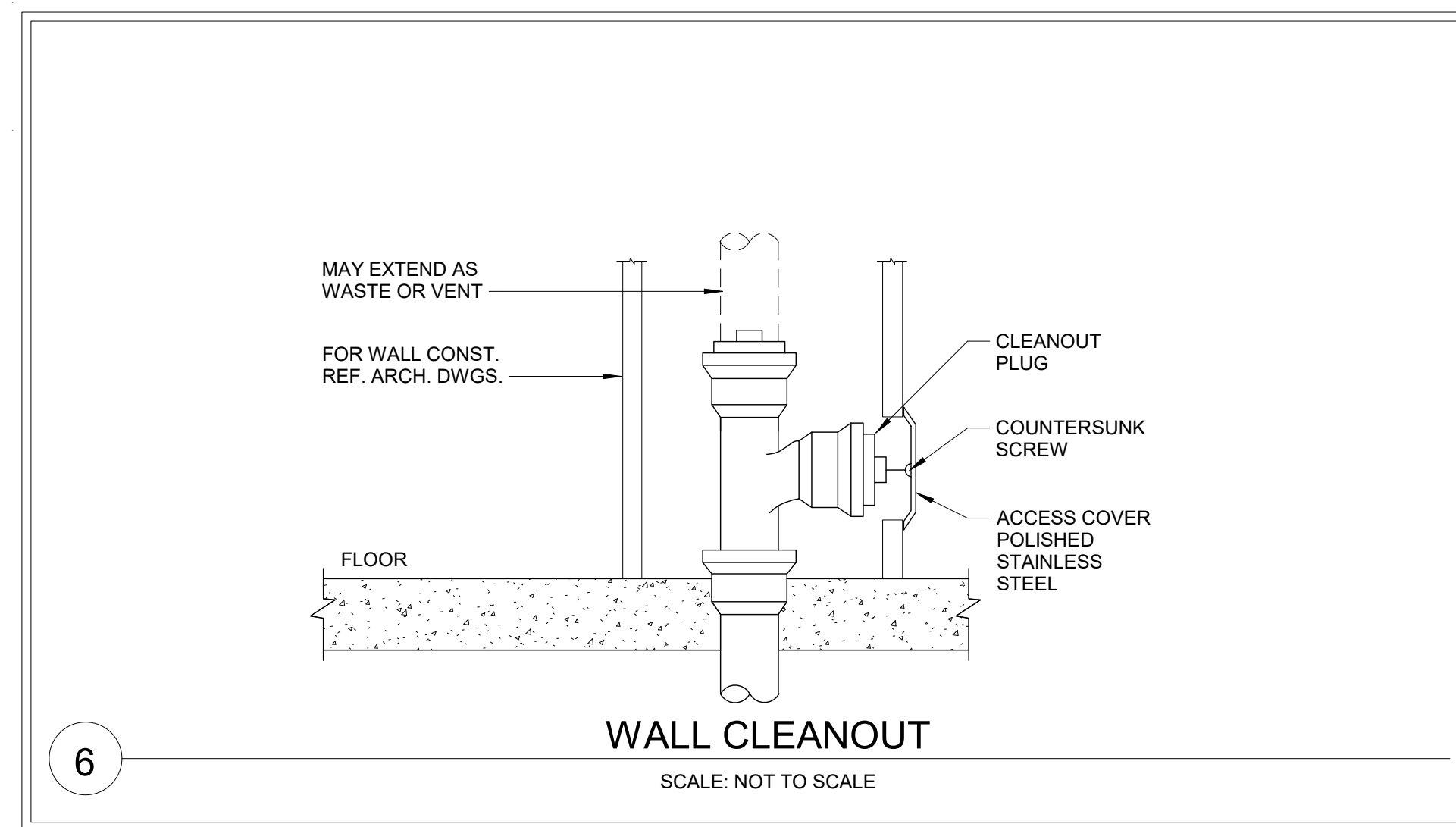
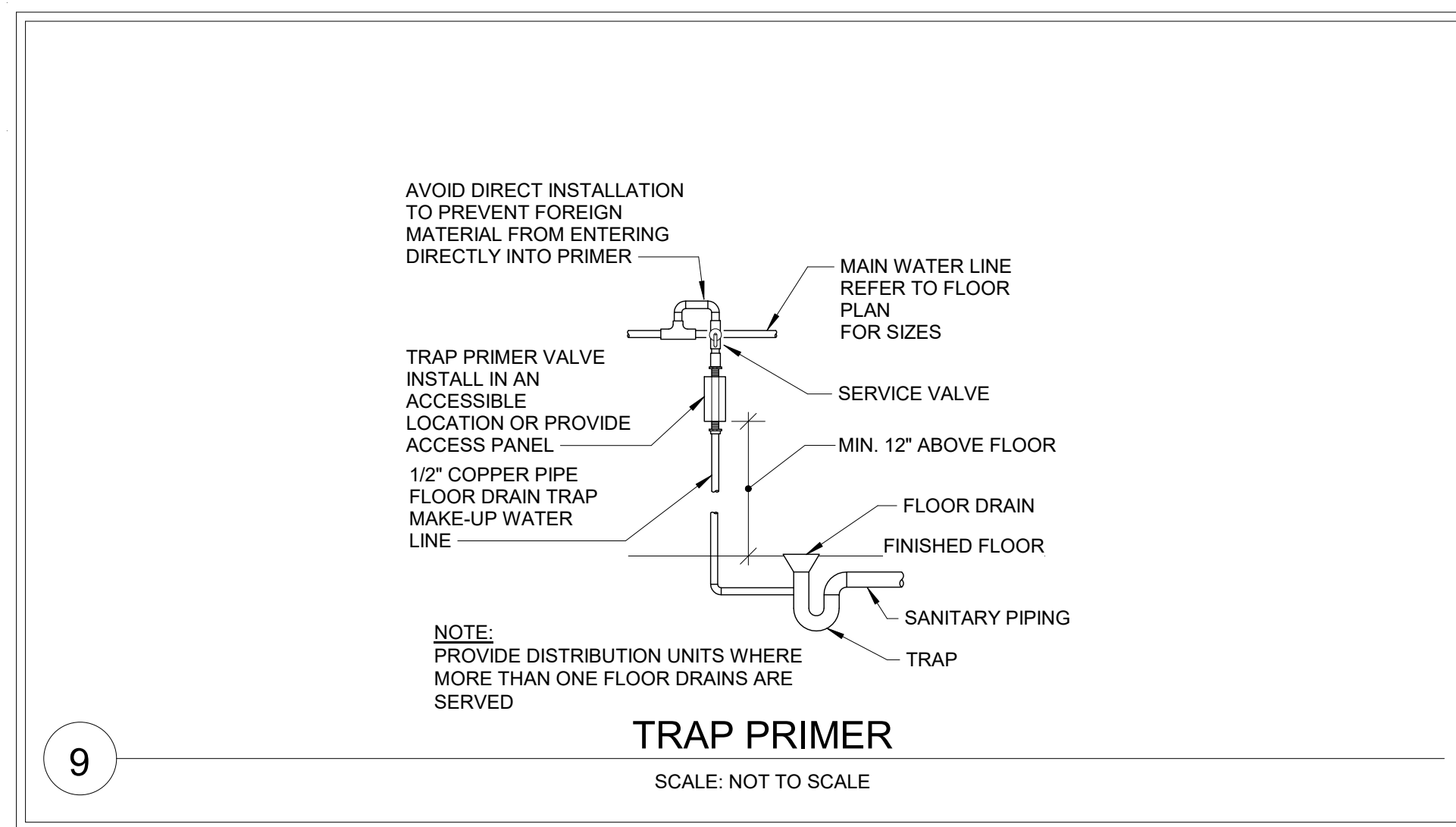
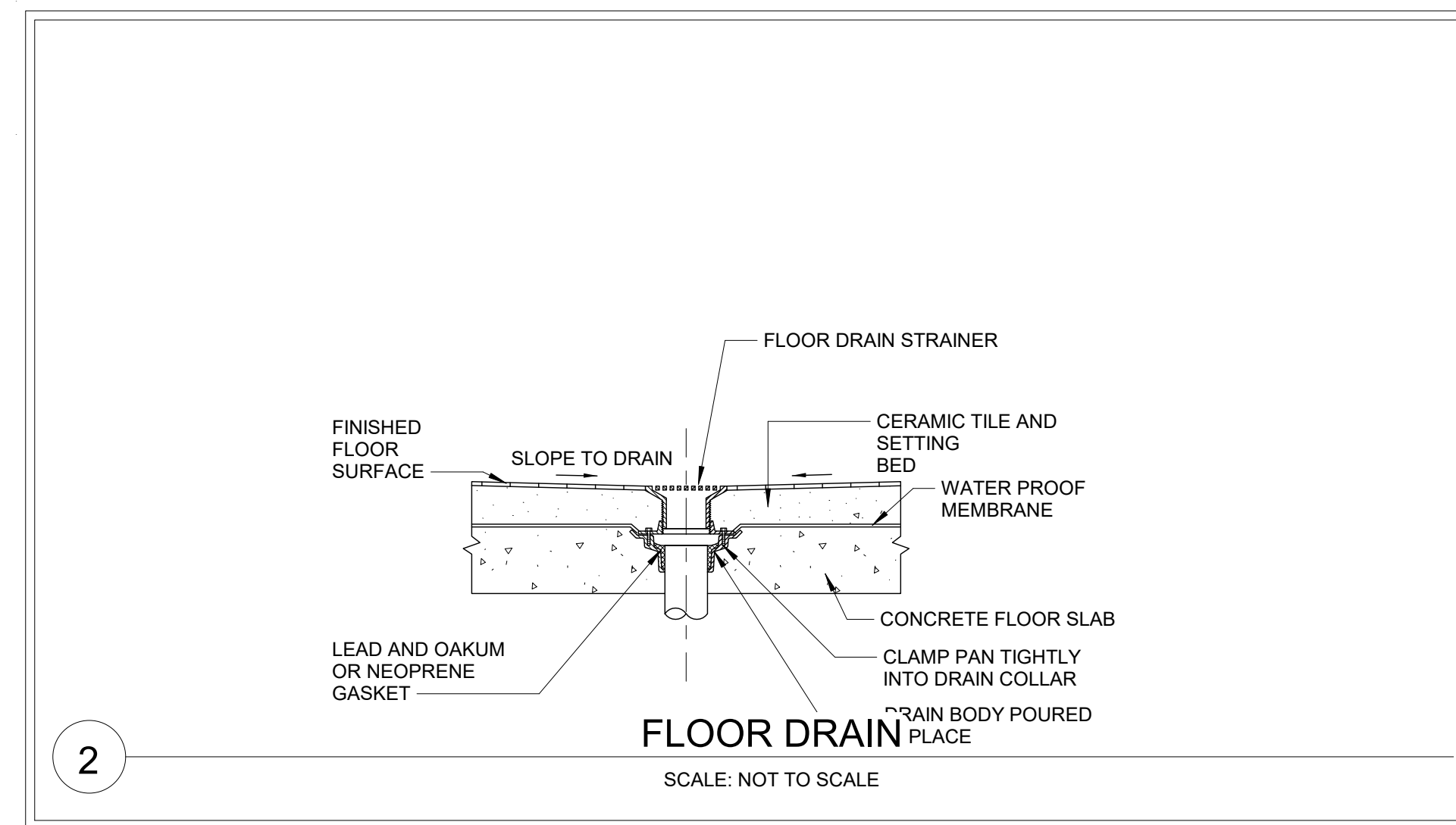
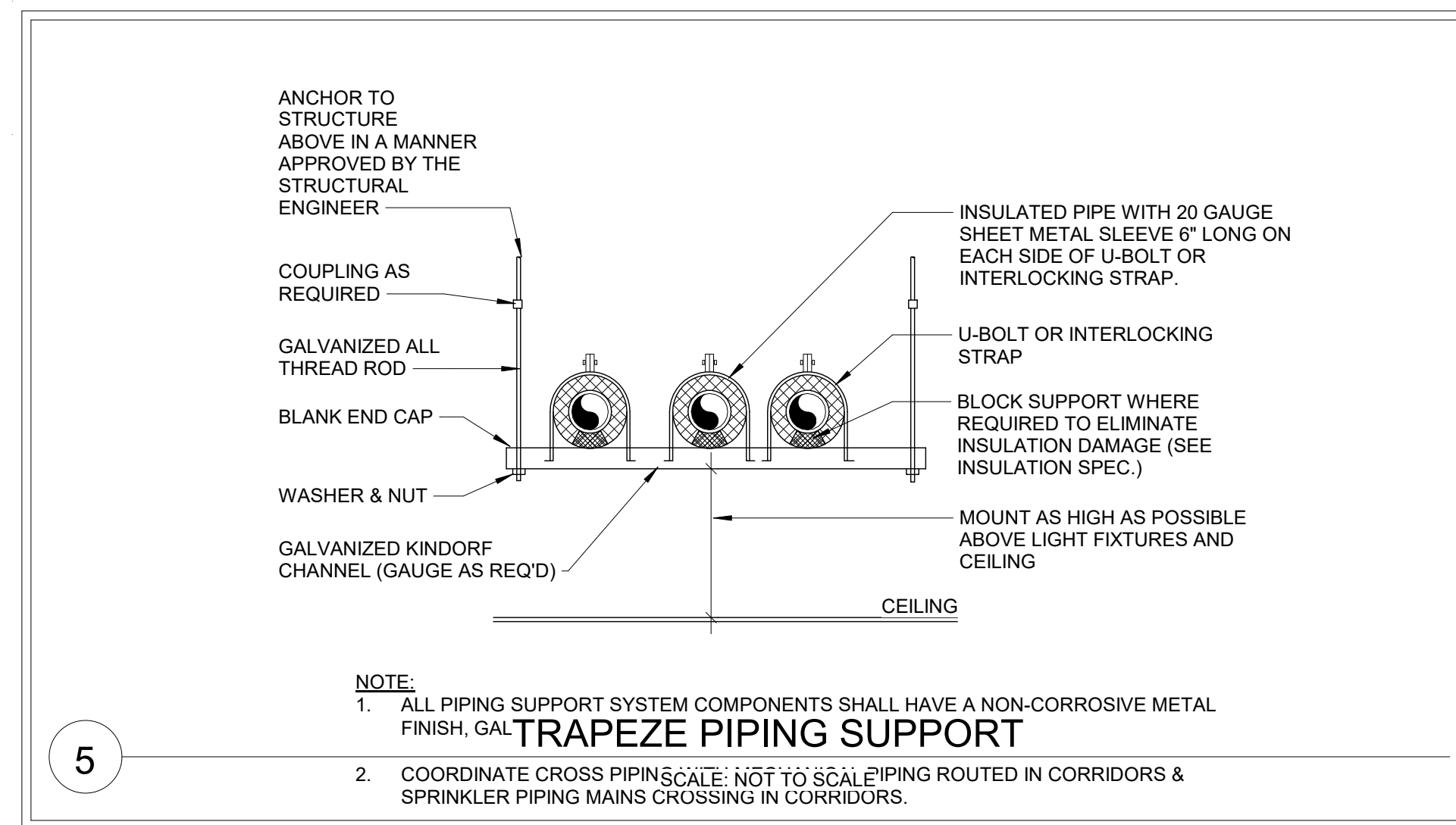
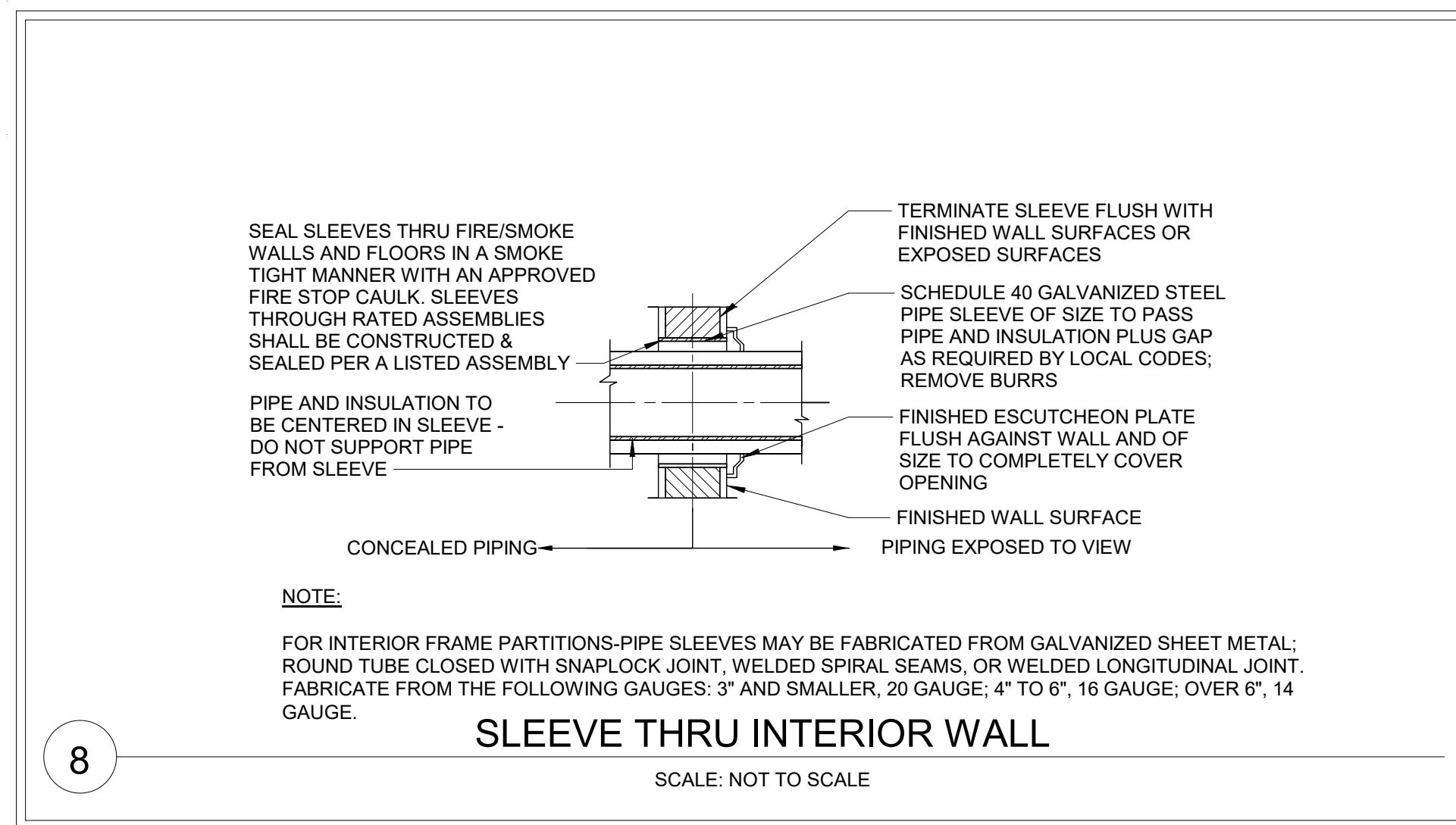
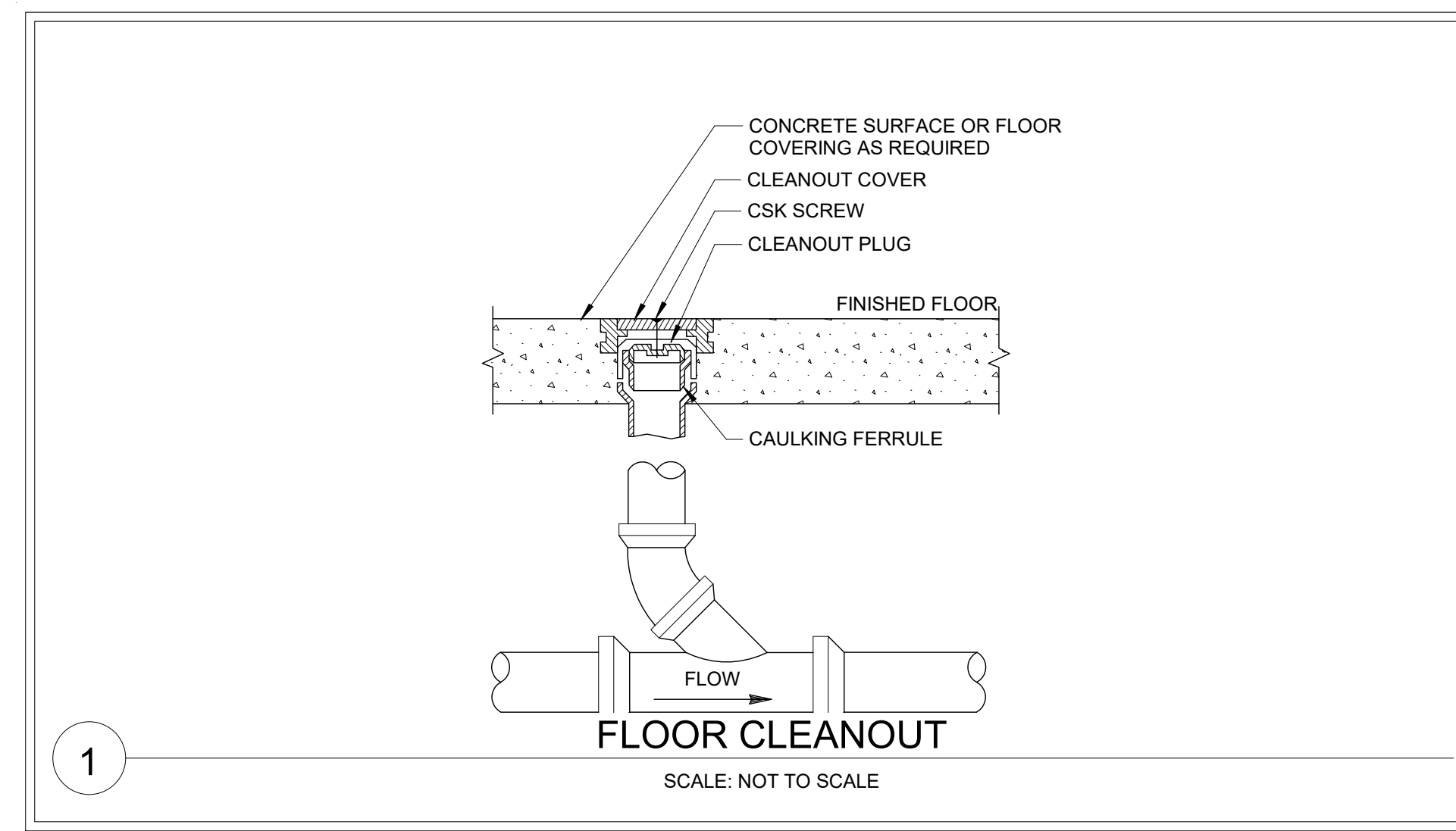
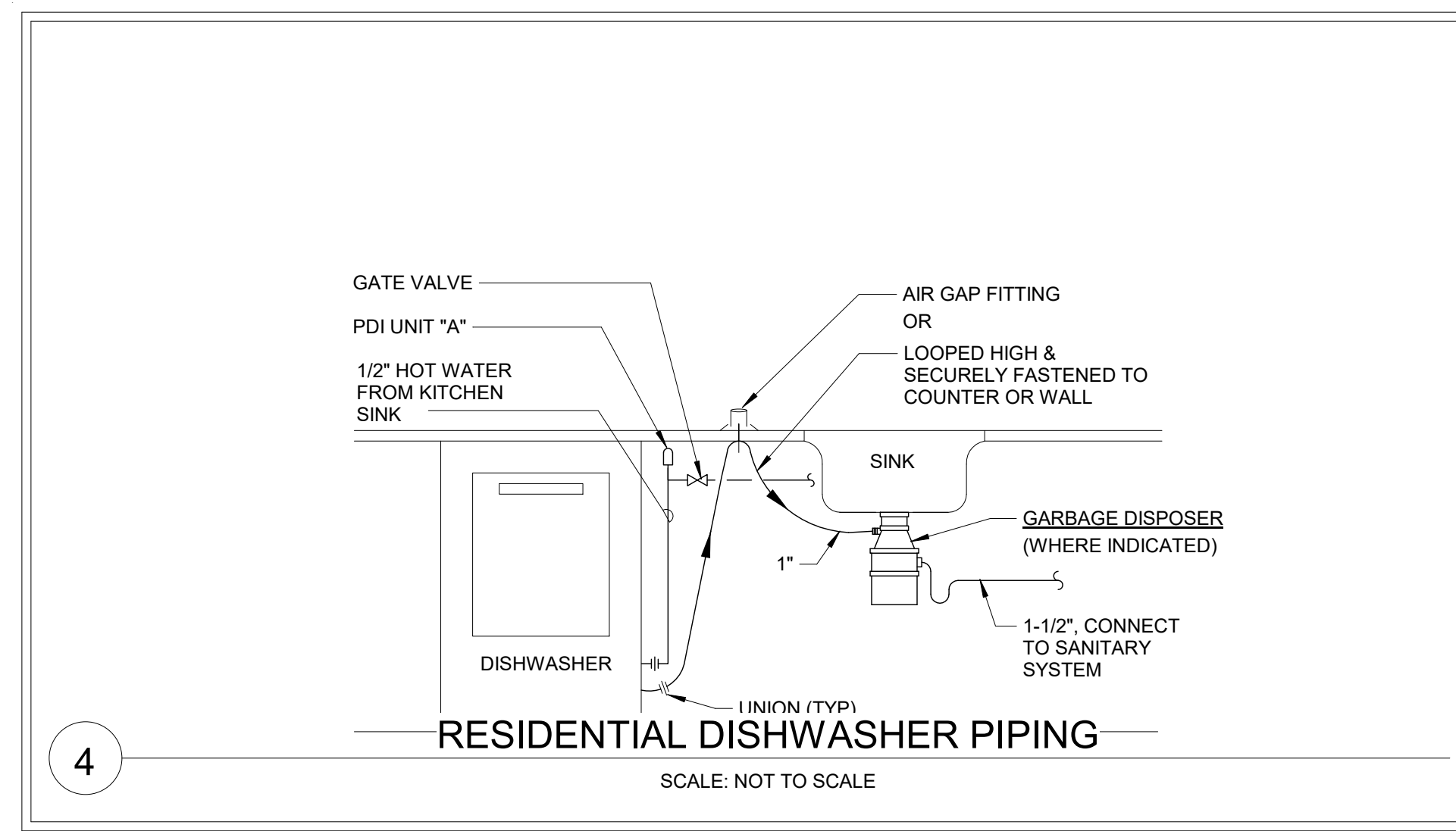
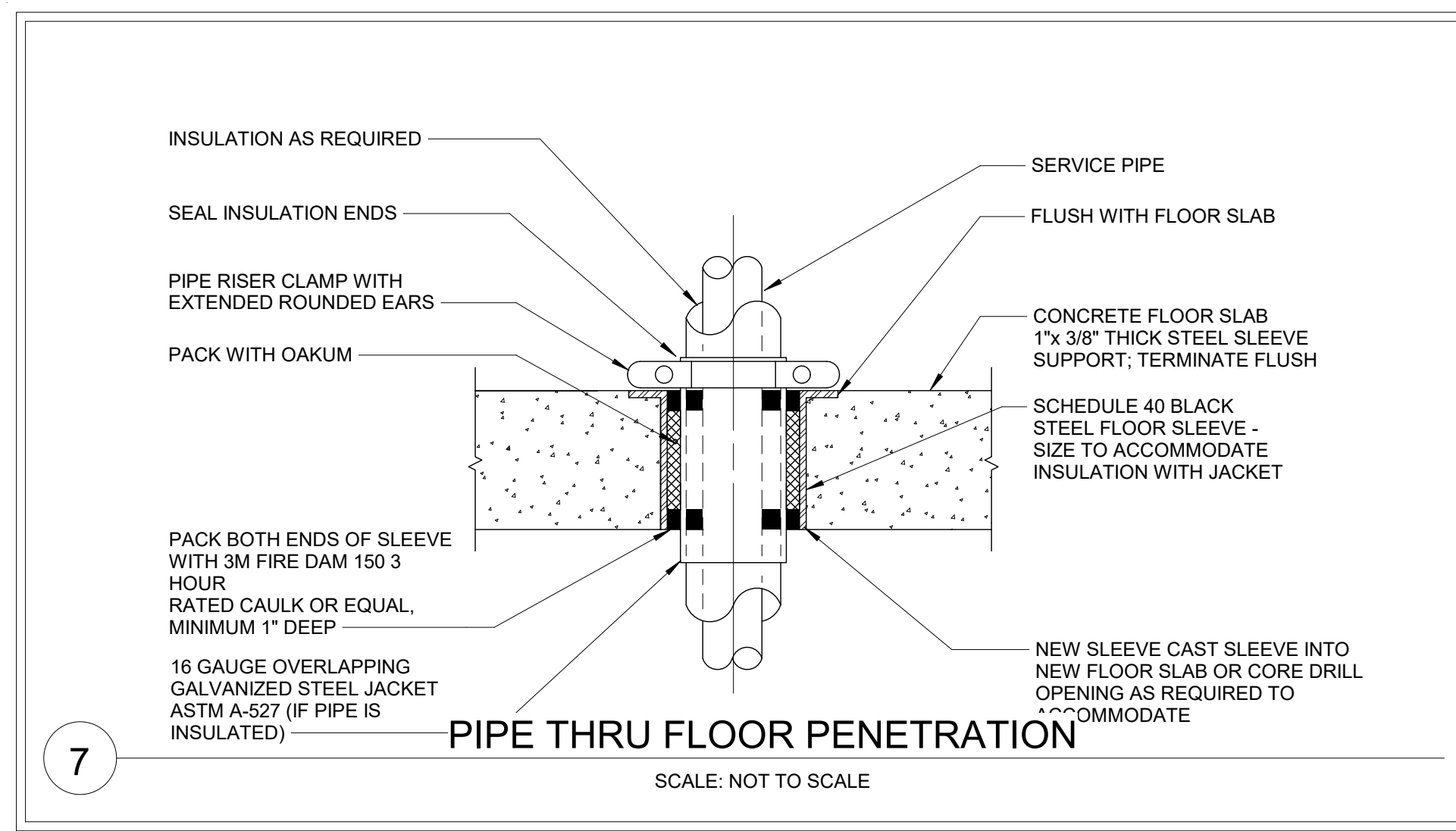
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NIST - MID RISE APARTMENT

PLUMBING ENLARGED PLANS

P202

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NIST - MID RISE APARTMENT

PLUMBING DETAILS

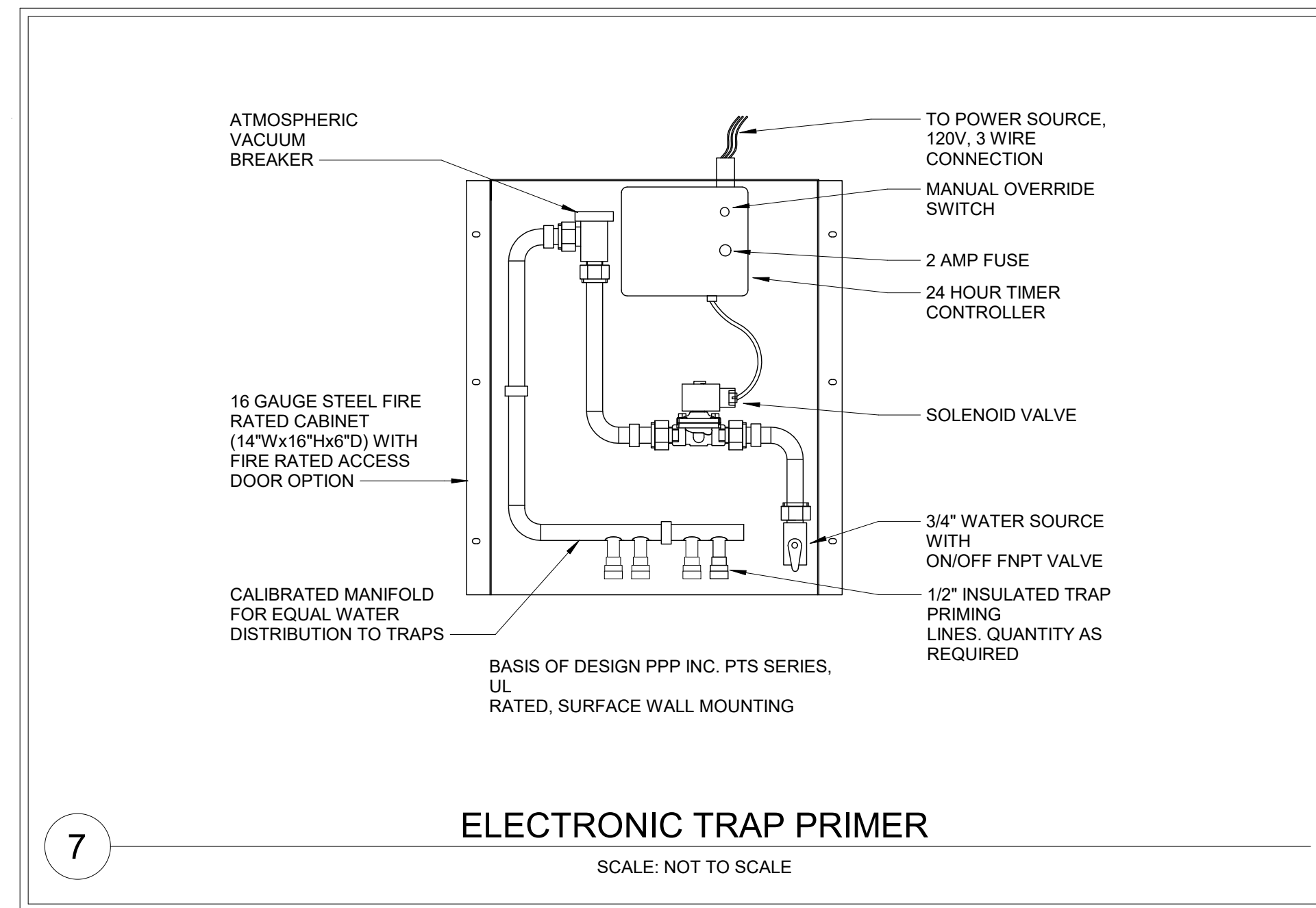
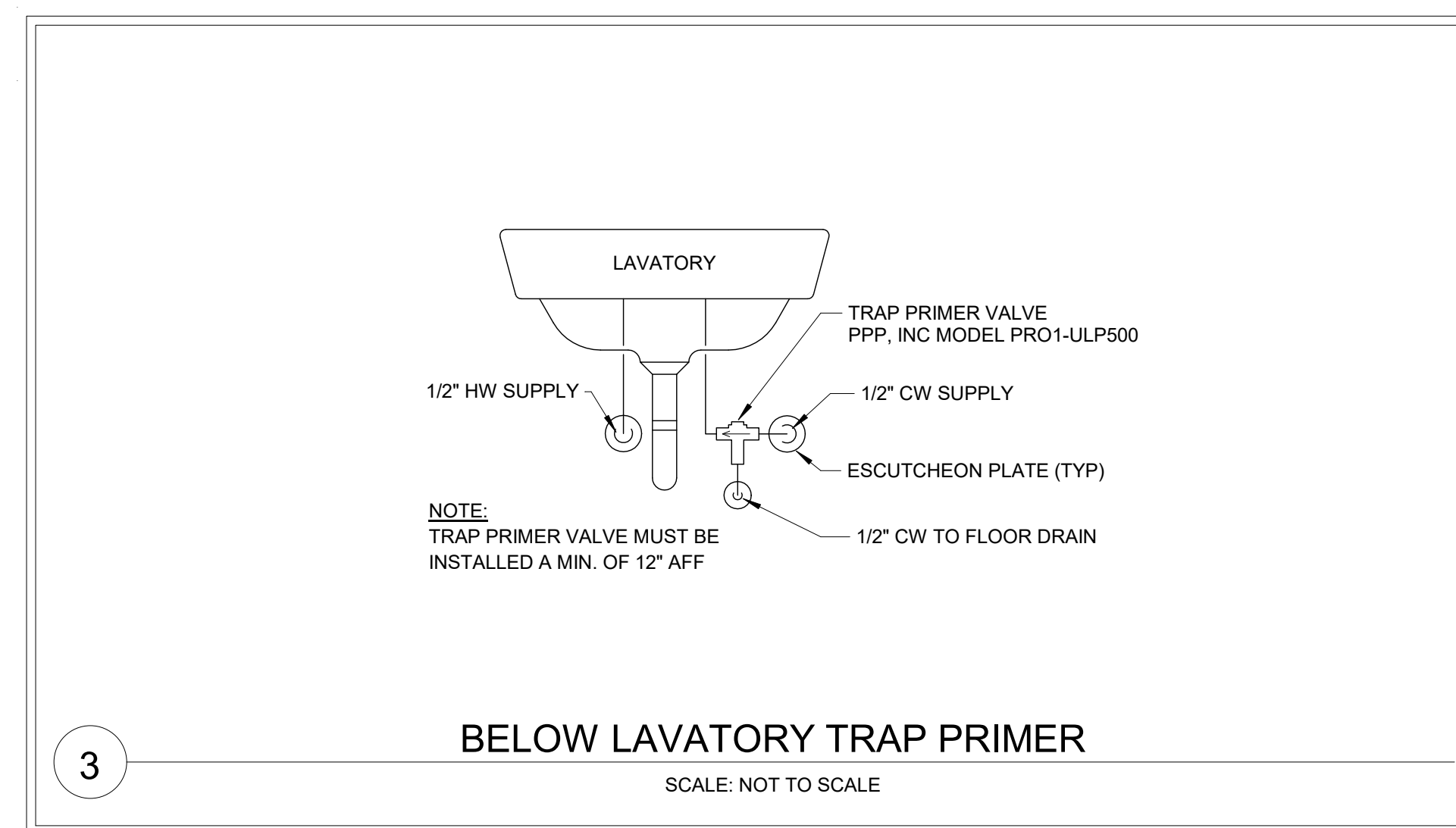
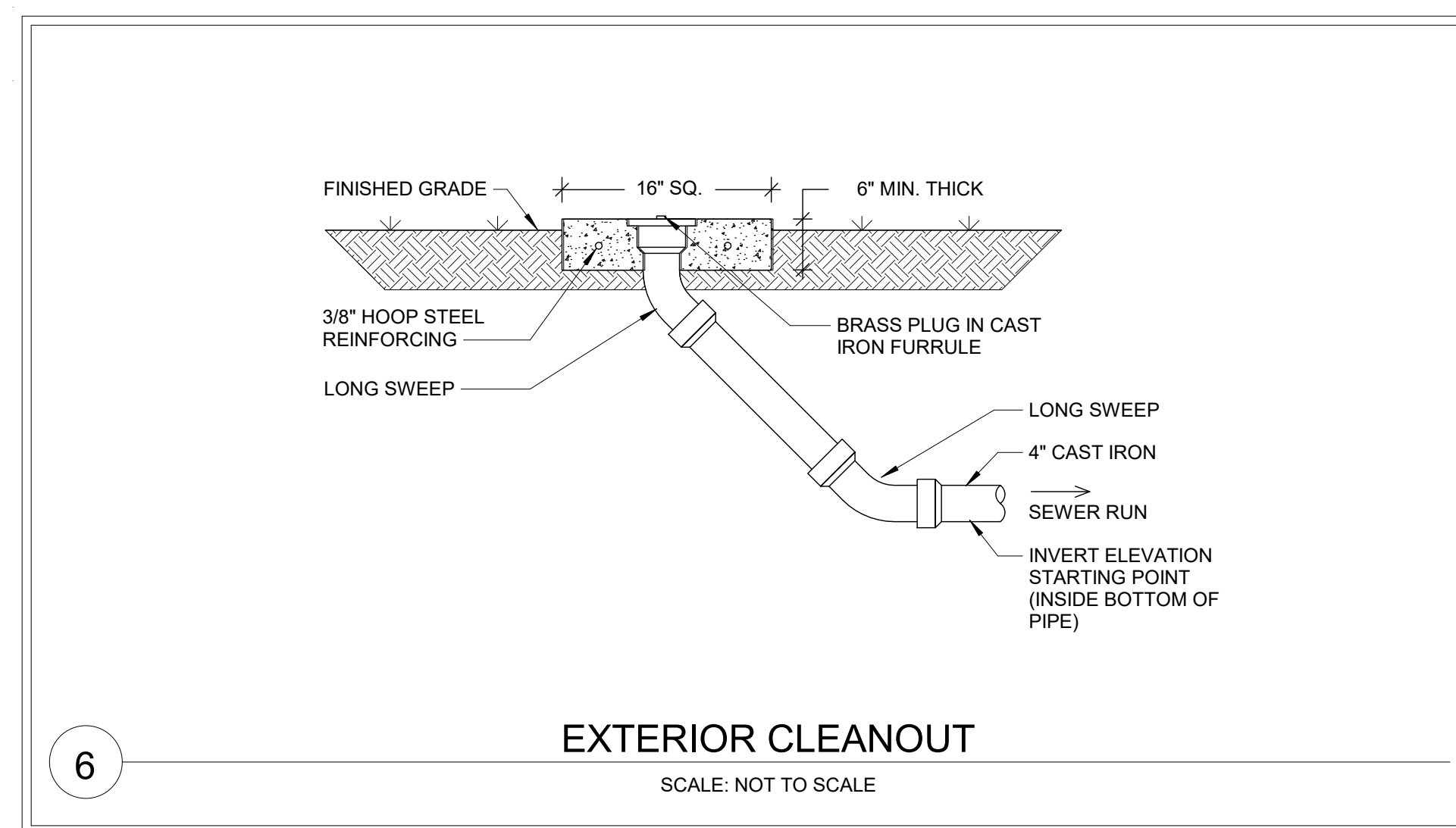
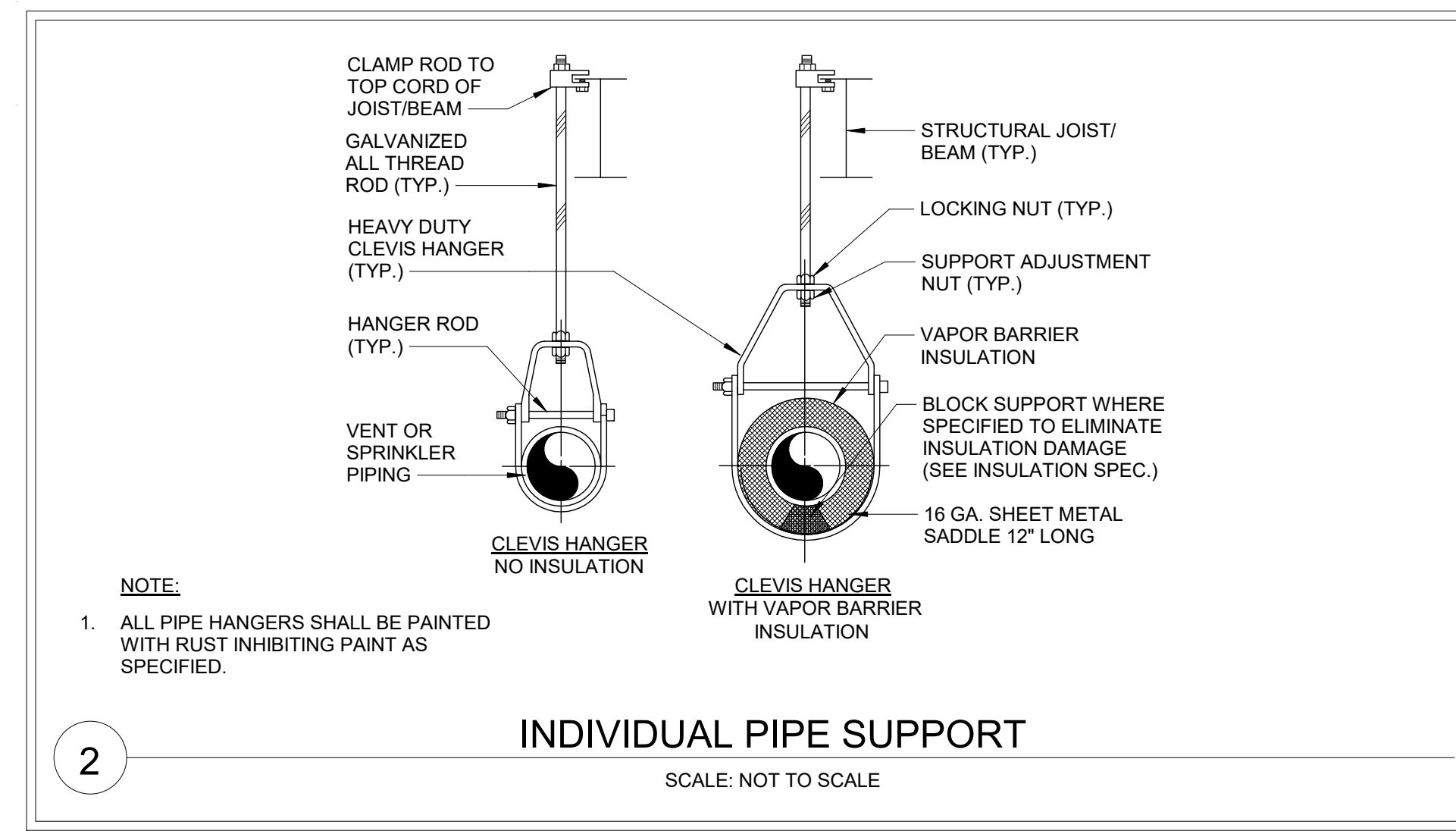
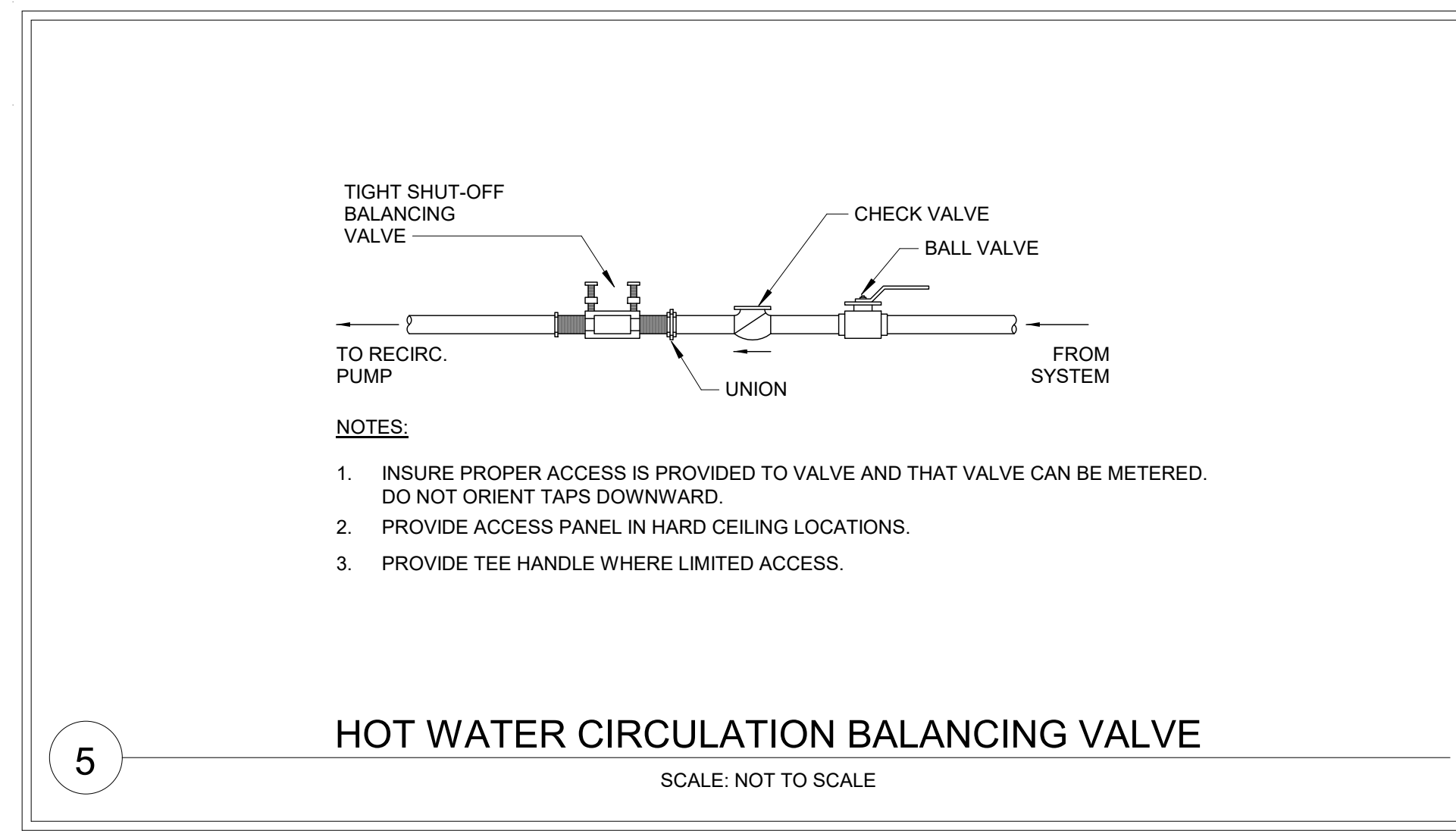
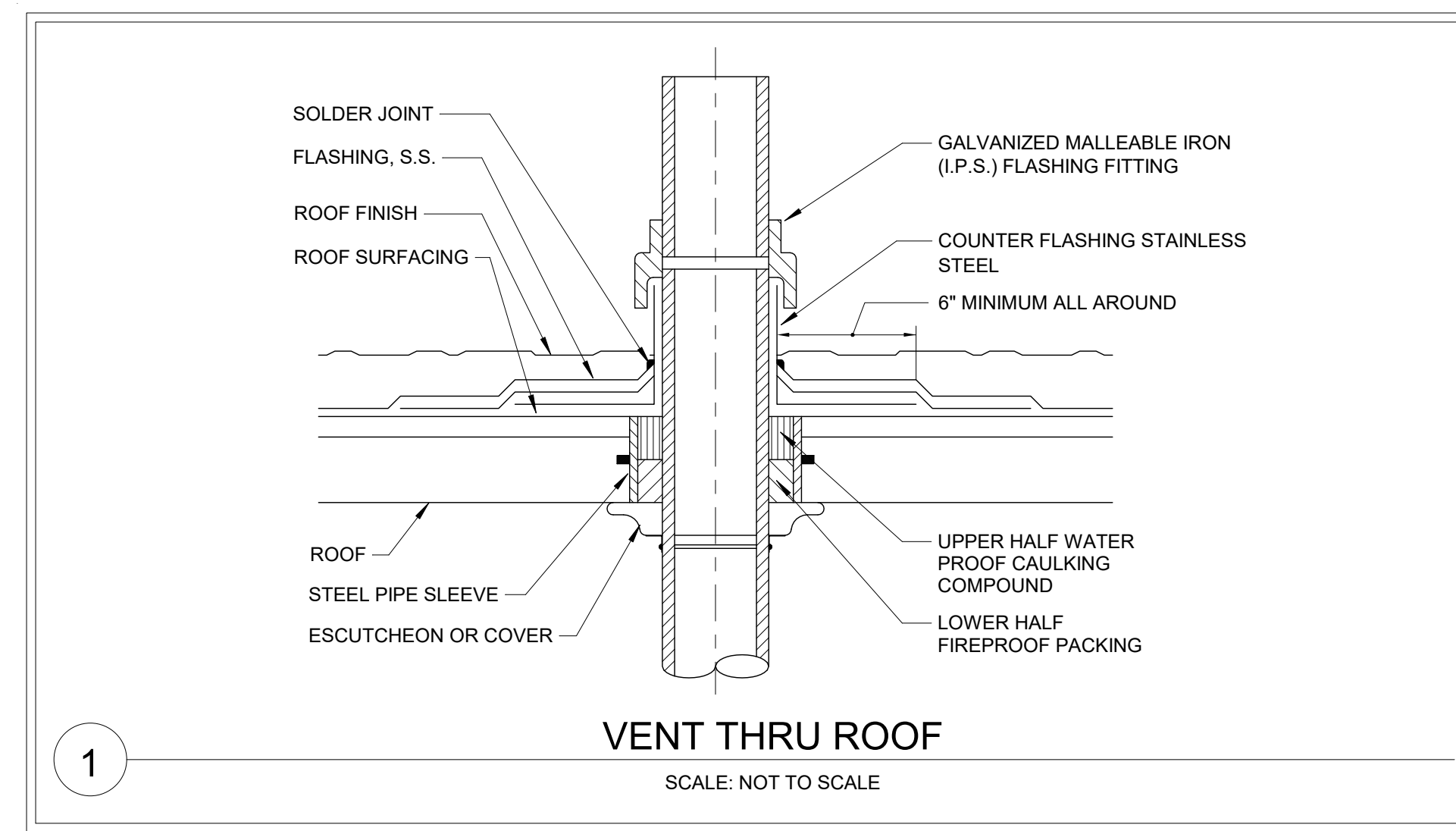
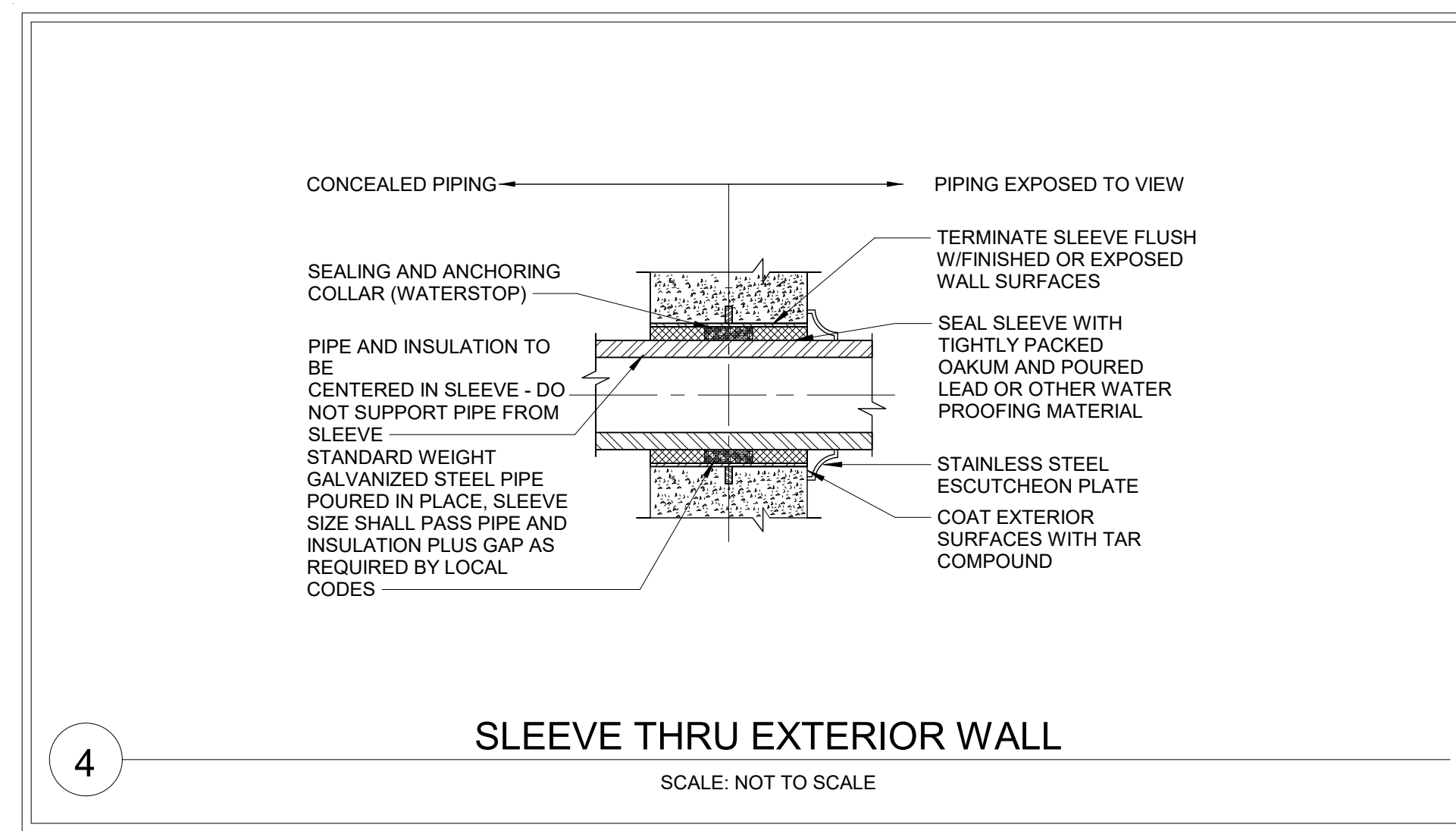
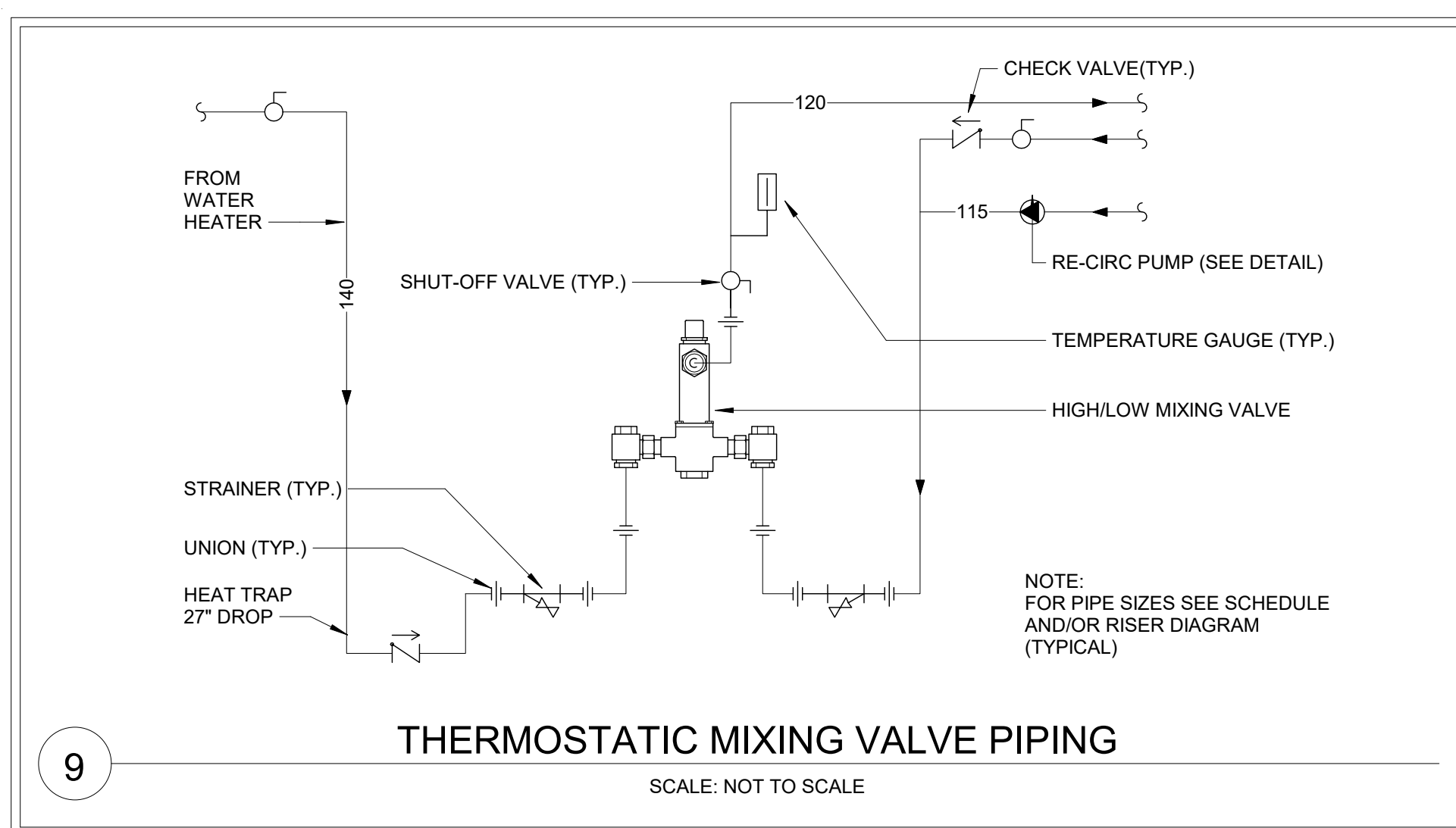
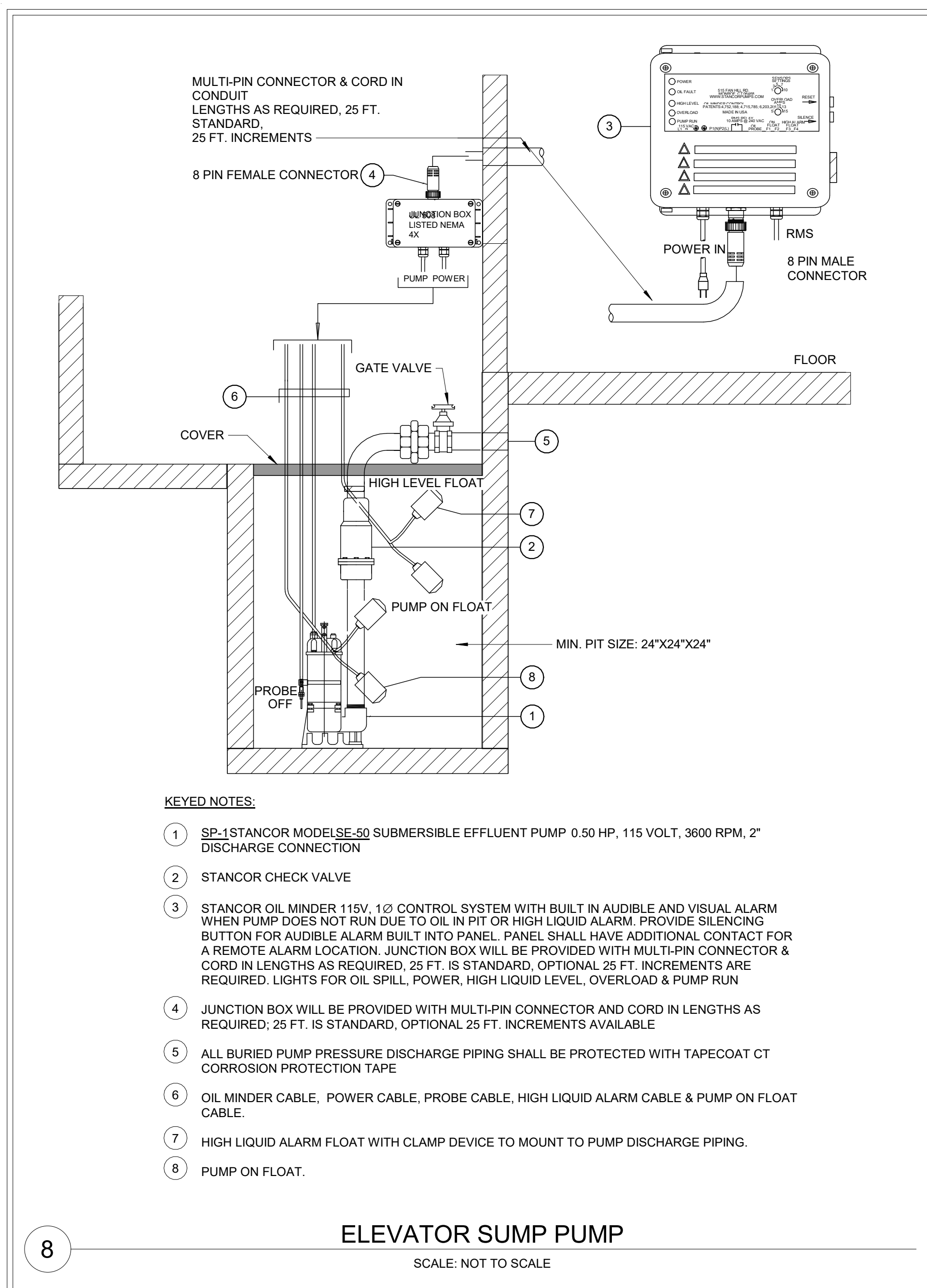
P301

DWG. P301

APPROVED BY	DATE	SPONSOR	DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT	DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ	DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER	DATE	VAY	AA	08/15/2022	Project Number

SH. NO. ___ OF ___	P301
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REVISION	DESCRIPTION	BY	DATE
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9. ELECTRONIC TRAP PRIMER NTS

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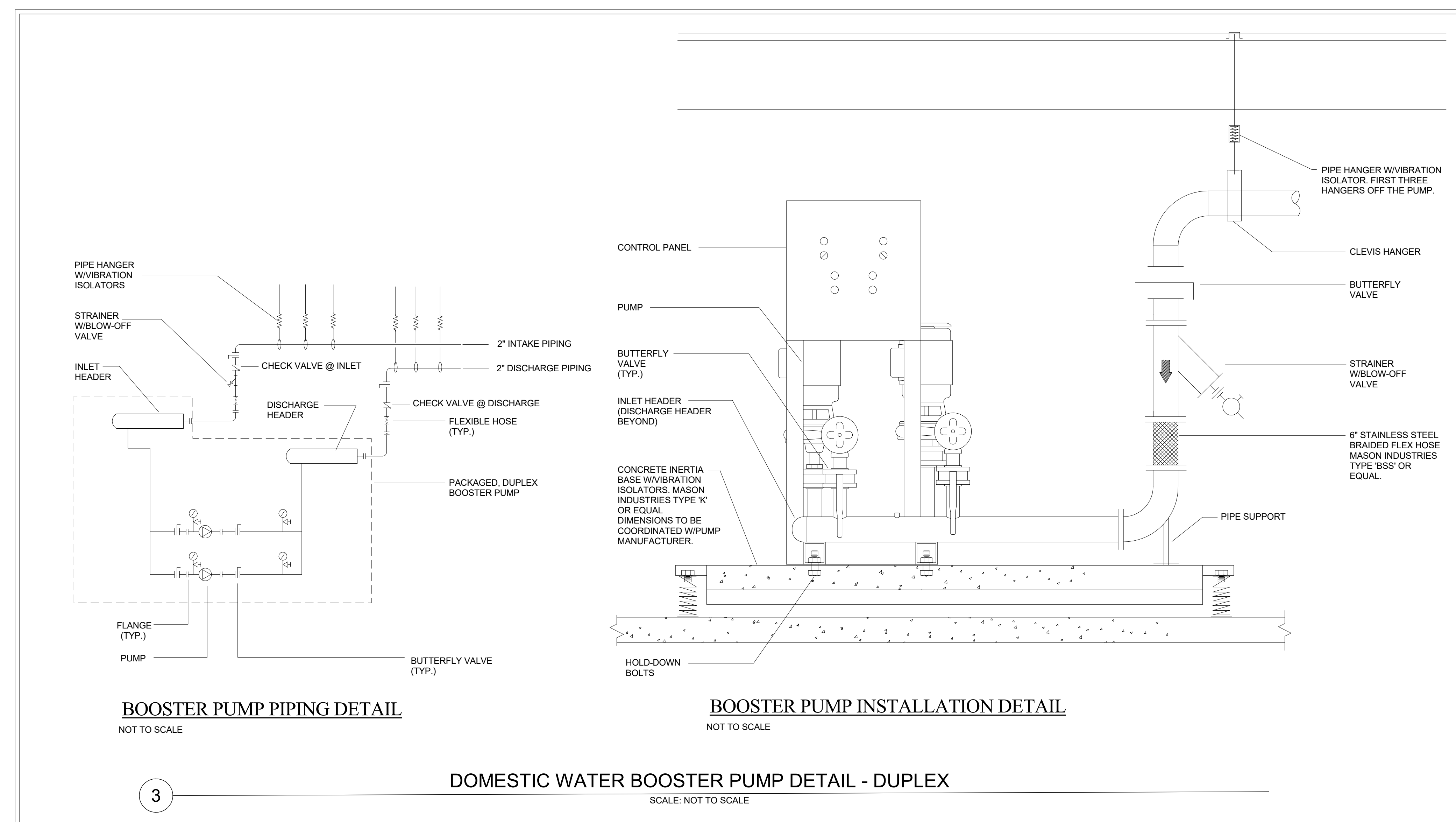
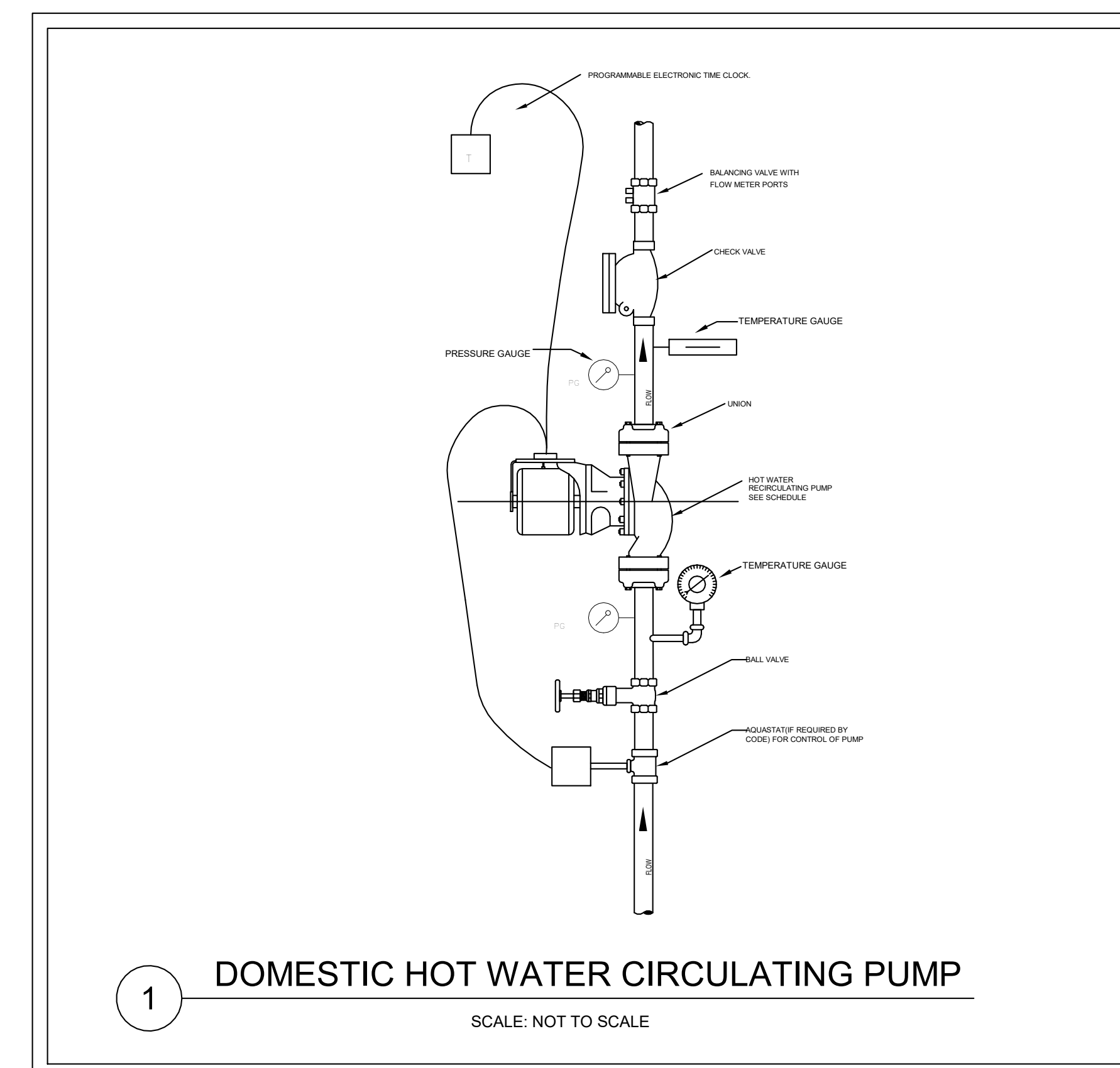
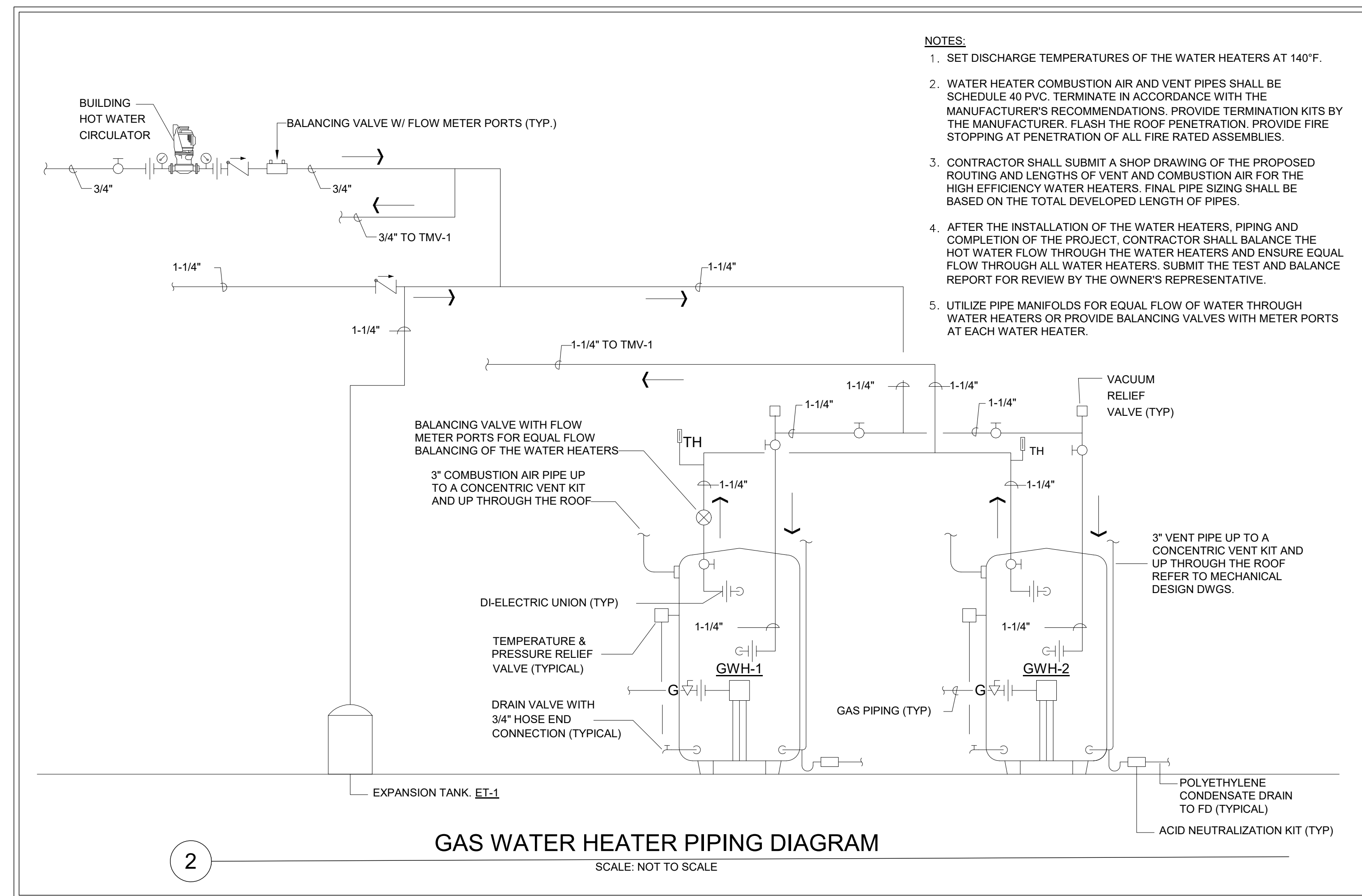
NIST - MID RISE APARTMENT

PLUMBING DETAILS

P302

SH. NO. OF DWG. P302

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NIST - MID RISE APARTMENT

PLUMBING DETAILS

P303

WATER HAMMER ARRESTOR SCHEDULE				
PDI #	MIN. MAX. FIXTURE UNIT CAPACITY	CONNECTION SIZE		MANUFACTURER & MODEL NUMBER (OR EQUAL)
"A"	1-11	1/2"		PPP, INC. MODEL SC-500
"B"	12-32	3/4"		PPP, INC. MODEL SC-750
"C"	33-60	1"		PPP, INC. MODEL SC-1000
"D"	61-113	1-1/4"		PPP, INC. MODEL SC-1250
"E"	114-154	1-1/2"		PPP, INC. MODEL SC-1500
"F"	155-330	2"		PPP, INC. MODEL SC-2000

NOTES:
1. AIR CHAMBERS ARE NOT ACCEPTABLE EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED
2. SIZE PER MANUFACTURER'S RECOMMENDATIONS
3. PROVIDE ACCESS PANELS WHERE REQUIRED TO BE IN CONCEALED LOCATIONS

PIPING MATERIAL SCHEDULE	
PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION
SANITARY DRAIN PIPING (BELOW SLAB)	SCHEDULE 40 PVC AND FITTINGS
SANITARY DRAIN PIPING (ABOVE SLAB)	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
VENT PIPING	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
DOMESTIC WATER PIPING (ABOVE SLAB)	TYPE "L" COPPER PIPING
NATURAL GAS PIPING	SCHEDULE 40 BLACK STEEL PIPE, W/ CAST IRON FITTING

TRAP PRIMING STATION SCHEDULE				
ID	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)
	AMPS	VOLTAGE	PHASE	
TSP-1	5	120	1	PPP INC. PTS SERIES, SURFACE MOUNTED

SLOPE OF HORIZONTAL DRAINAGE PIPE	
SIZE (INCHES)	MINIMUM SLOPE (INCH PER FOOT)
2-1/2 OR LESS	1/4
3 TO 6	1/8
8 OR LARGER	1/16

TABLE 704.1 OF THE INTERNATIONAL PLUMBING CODE 2018

CLEANOUT SCHEDULE		
ID	APPLICATION	BASIS OF DESIGN (OR EQUAL)
CO	FINISHED FLOORS	ZURN Z1400
	CERAMIC & TERRAZO	ZURN Z1400-Z
	UNFINISHED FLOORS	ZURN Z1400-HD
WCO	LINE CLEANOUT	ZURN Z1468
	STACK CLEANOUT	ZURN Z1446
ECO	OUTSIDE AREAS	ZURN Z1400-HD

NOTES:
1. INSTALL ECO IN 24x24x4 THICK CONCRETE PAD, TOP OF PAD ELEVATION TO BE 2" ABOVE FINISHED GRADE.
2. PROVIDE ALL CLEANOUTS WITH WIDE ANCHOR FLANGE & CLAMPS DEVICE. ATTACH CLEANOUTS TO MEMBRANE IN FLOOR, WHEN CLEANOUTS ARE LOCATED IN NONMEMBRANE FLOORS, THEY SHALL BE FLASHED IN ACCORDANCE WITH THE SPECIFICATIONS. PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS COVERS.

PLUMBING FIXTURE SCHEDULE									
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	CONNECTION SIZE				REMARKS		
			WASTE	VENT	CW	HW			
P-1	WATER CLOSET	FLOOR MOUNTED, FLUSH TANK, TWO PIECE ELONGATED BOWL, AMERICAN STANDARD 270FA01 020 WITH ELONGATED SOLID PLASTIC SEAT, CLOSED FRONT. 3/8" CHROME PLATED SUPPLY & STOP WAX BOWL RING & WATER CLOSET BOLTS TRIP LEVER TO BE ON THE OPENSIDE, WHITE COLOR	3"	2"	1/2"	---	1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODES		
P-2	LAVATORY	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"X14"X15.5", AMERICAN STANDARD OVAL 0496221 020 WITH DELTA FAUCET LAHARA COLLECTION, MODEL 528-SMPL-DST DIAMOND COATED CERAMIC CARTRIDGE SINGLE LEVER WITH METALLIC POP-UP DRAIN, 2.2 GPM AT 60PSI, STAINLESS STEEL FINISH, PROVIDE CAST BRASS TRAP & SUPPLIES & STOPS, STAINLESS STEEL FINISH	1-1/2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES		
P-3	TUB & SHOWER	WHITE CAST IRON, 60"X30"X14", WITH ENAMEL FINISH, KOHLER VILLAGER MODEL K-715 WITH DELTA THERMOSTATICALLY CONTROLLED SHOWER VALVE, STAINLESS STEEL FINISH, SCALD-GUARD, METAL LEVER HANDLE, SHOWER ARM, SHOWER HEAT, DIVERTER VALVE	2"	1-1/2"	1/2"	1/2"	2.5 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES		
P-4	SINK	SINGLE BASIN, STAINLESS STEEL SINK, 25"X21"X6" DROP 18 GAUGE WITH SOUND DAMPENING, ELKAY DSESIR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER, KRAUS KP7-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STEEL FINISH	2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES. PROVIDE A 1/2 HP GARBAGE DISPOSAL		
P-5	WASH BOX	WASH BOX WITH WATER HAMMER ARRESTORS	2"	1-1/2"	1/2"	1/2"			
P-6	LAUNDRY SINK	FIBERGLASS, TWO-BOWL, FIBERGLASS MIX, 24"X40"X13-3/2 DEEP BOWL, FREESTANDING, FLOOR-FIT MODEL #FLTDD100, WITH DECK MOUNTED FAUCET A.1	2"	1-1/2"	1/2"	1/2"			
WH-1	WALL HYDRANT	JOSAM 71300, ENCASED NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER AND KEY LOCK, INSTALL WALL HYDRANT 18" AFF.	--	--	3/4"	--			
HB-1	HOSE BIBB	ZURN Z1333, INTERIOR RECESSED WALL HYDRANT WITH INTEGRAL VACUUM BREAKER AND 3/4" HOSE CONNECTION	--	--	3/4"	--			
RH-1	ROOF HYDRANT	WOODFORD SRH-MS NON FREEZE ROOF HYDRANT DRAINLESS WITH CAST IRON CASING & DUAL CHECK VALVE BACKFLOW PREVENTER	--	--	3/4"	--			

GAS FIRED WATER HEATER SCHEDULE															
ID	LOCATION	STORAGE CAPACITY (GALLONS) EACH	GAS INPUT (MBTUHR) EACH	GAS TYPE	MIN. EFFICIENCY (%)	RECOVERY (GPH) EACH @ 100°F DELTA T	INLET TEMP (°F)	OUTLET TEMP (°F)	FLUE SIZE (INCH) EACH		FLUE SIZE (INCH) EACH			BASIS OF DESIGN (OR EQUAL)	REMARKS
									INTAKE	EXHAUST	VOLTS	PHASE	HZ		
GWH-1 & GWH-2	MECHANICAL ROOM	100	199	NATURAL	97	230	40	140	4	4	120	1	60	A.O. SMITH CYCLONE, BTH-199 Mxi	EXTEND FRESH AIR AND EXHAUST OUT TO ATMOSPHERE

NOTES:
1. GAS BURNER SHALL BE CAPABLE OF OPERATING ON A MIN. GAS PRESSURE OF 3.5 INCHES WATER GAUGE AND A MAX. GAS PRESSURE OF 14 INCHES WATER GAUGE.
2. FLUE SIZES ARE NOT NECESSARILY THE EQUIPMENT CONNECTION SIZE. REFER TO MECHANICAL DRAWINGS FOR FLUE SIZES

DUPLEX DOMESTIC WATER BOOSTER PUMP SCHEDULE										
ID	LOCATION	SERVICE	GPM (EACH)	HEAD (FT.)	MOTOR HP (EACH)	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)	REMARKS
						VOLTAGE	PHASE	RPM		
DWBP-1	MECHANICAL ROOM	CW	50	60	5.0	208	3	3500	GRUNDFOS HYDRO MPC E CRE 10	PROVIDE WITH VARIABLE FREQUENCY DRIVES

NOTES:
1. ACTUAL CAPACITY (FLOW AND HEAD) OF THE DUPLEX PACKAGE IS TO BE VERIFIED UPON PERFORMING A WATER FLOW TEST AFTER CONNECTION OF THE WATER MAIN TO THE TRANSITION MAIN.
2. THE TOTAL DYNAMIC HEAD SPECIFIED ABOVE INCLUDES A 5 PSIG PRESSURE DROP THROUGH THE UNIT AND PRESSURE REDUCING VALVE. SELECT PRV 50 AS NOT TO EXCEED SCHEDULED VALUE.
3. PERFORMANCE AND ELECTRICAL CHARACTERISTICS ARE TYPICAL FOR EACH PUMP.
4. BRAKE HORSEPOWER OF SELECTED UNITS SHALL NOT EXCEED VALUE AT DESIGN OPERATING CONDITIONS.
5. NET POSITIVE SUCTION HEAD REQUIRED (NPSHR) SHALL NOT EXCEED NET POSITIVE SUCTION HEAD AVAILABLE (NPSHA).

FLOOR DRAIN SCHEDULE					
ID	TYPE	LOCATION/AREA	SIZE	BASIS OF DESIGN (OR EQUAL)	REMARKS
FD-1	FLOOR DRAIN	GENERAL	12X12	ZURN #Z566	W/ 1/2" TRAP PRIMING LINE
HD-1	HUB DRAIN	CUST.	4" STRAINER	ZURN #Z211-S	W/ 1/2" TRAP PRIMING LINE

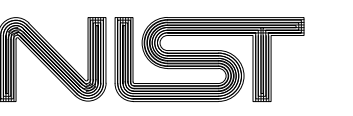
THERMOSTATIC MIXING VALVE SCHEDULE								
ID	AREA/SYSTEM SERVED	THERMOSTATIC CONTROLLERS		RUN OUT PIPE SIZES			BASIS OF DESIGN (OR EQUAL)	REMARKS
		GPM (FLOW @ 10 PSI)		CW INLET	HW INLET	TEMPERED WATER OUTLET		
TMV-1	GENERAL BLDG FIXTURES	39		1	1-1/4"	1-1/4"	LAWLER MODEL 802	HI/LOW

NOTES:
1. ALL UNITS MUST BE INSTALLED, PIPED, AND ADJUSTED IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS

DOMESTIC WATER EXPANSION TANK SCHEDULE											
ID	WATER HEATER VOLUME (GALLONS)	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE (PSIG)	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							HEIGHT	DIAMETER			
ET-1	200	140	150	70	16.5	11	25"	15"	50	AMTROL THERM-X-TROL ST-35-CL	

REVISION	DESCRIPTION	BY	DATE

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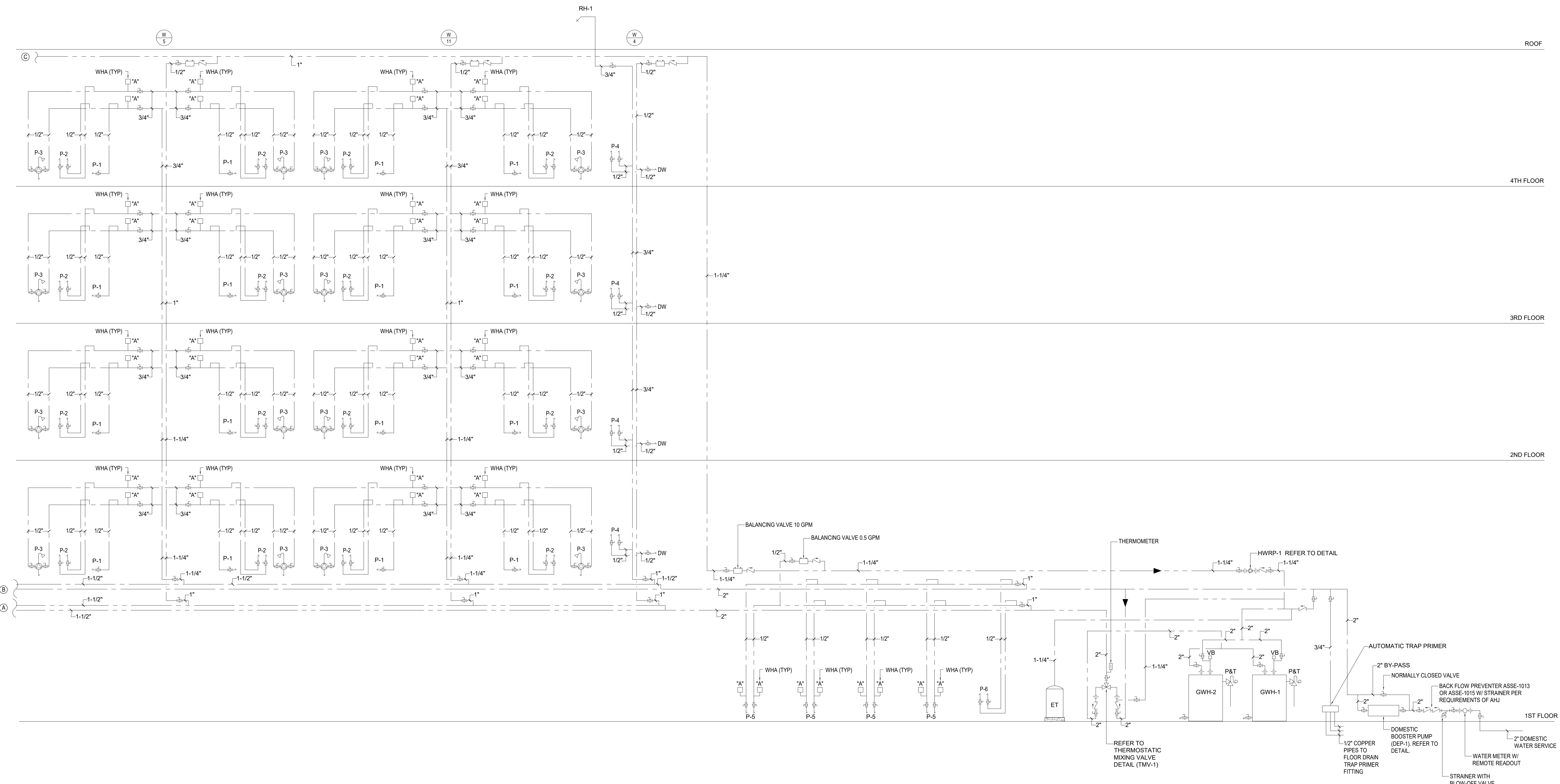
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NIST - MID RISE APARTMENT

PLUMBING SCHEDULES

P401

SH. NO. ___ OF ___ DWG. P401

REVISION	DESCRIPTION	BY	DATE
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ROOF

4TH FLOOR

3RD FLOOR

2ND FLOOR

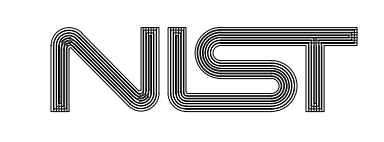
1ST FLOOR

1 APARTMENT BLDG - WATER RISER DIAGRAM

NTS

ARCHITECT

MEP. ENG.



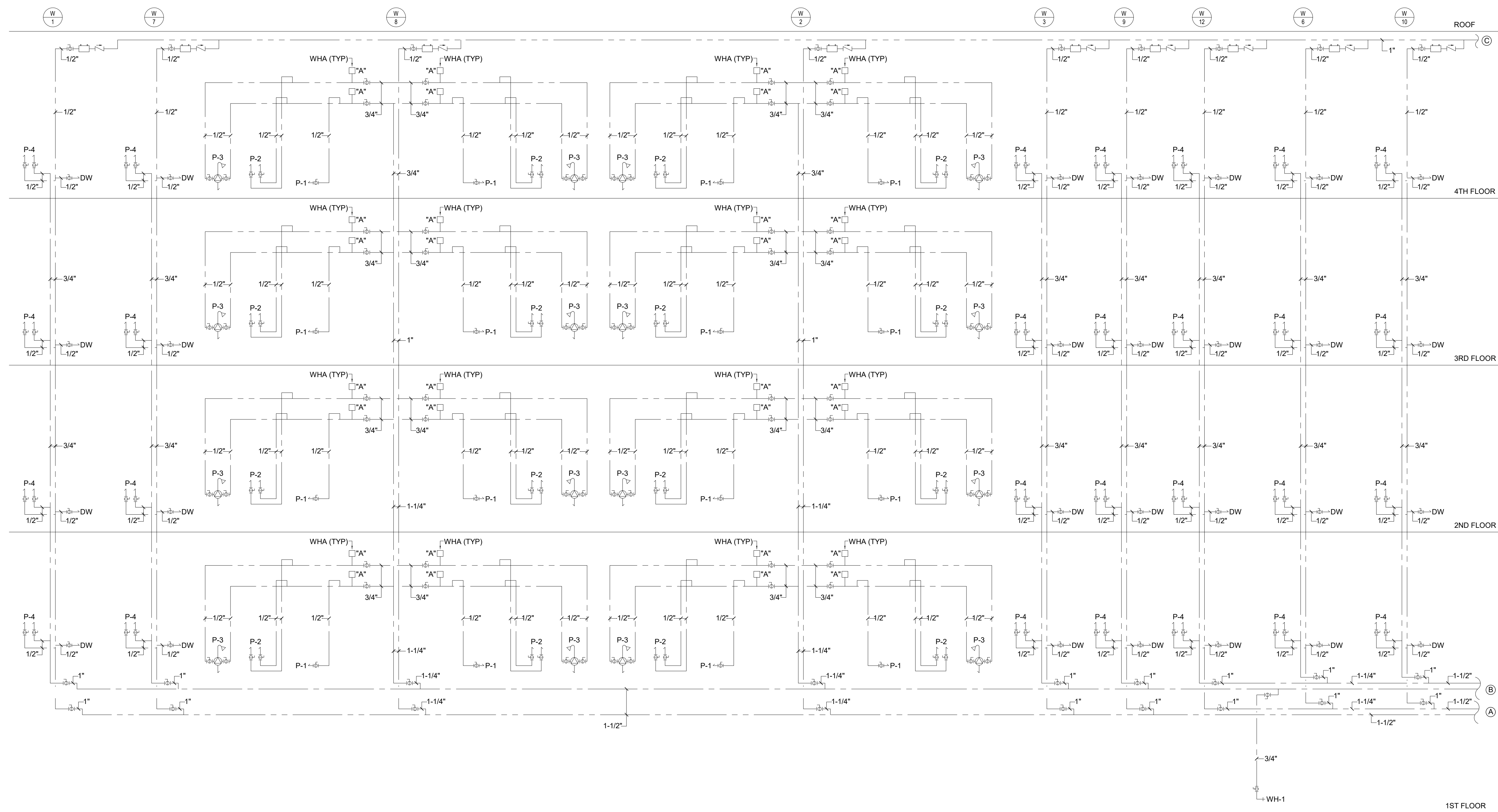
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PLUMBING RISERS

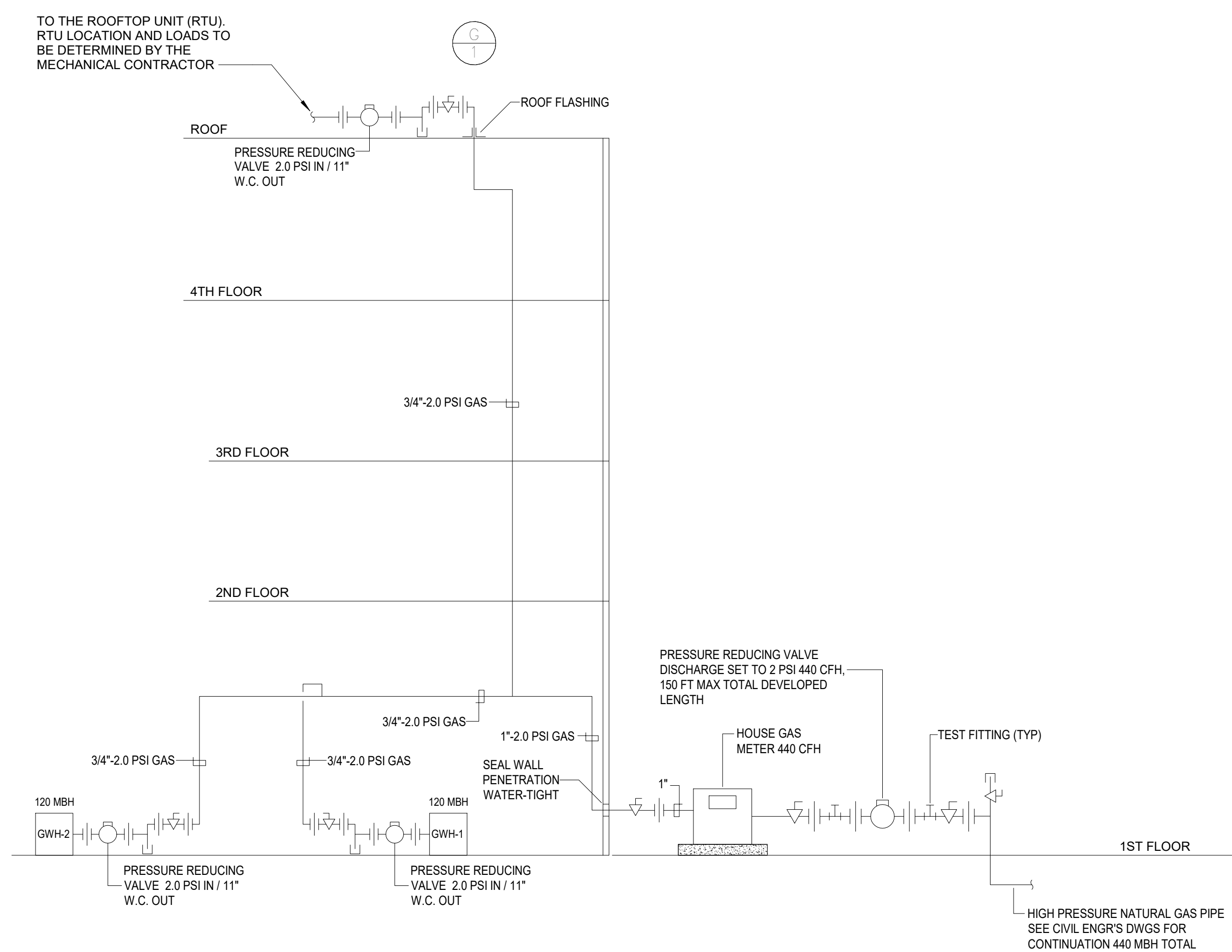
P501

APPROVED BY	DATE	SPONSOR	DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT	DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ	DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER	DATE	VAY	AA	08/15/2022	Project Number
																			PROJECT/ W.O. #

SH. NO. OF DWG. P501



1 APARTMENT BLDG - WATER RISER DIAGRAM
NTS



2 APARTMENT BLDG - GAS RISER DIAGRAM
NTS

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PLUMBING RISERS

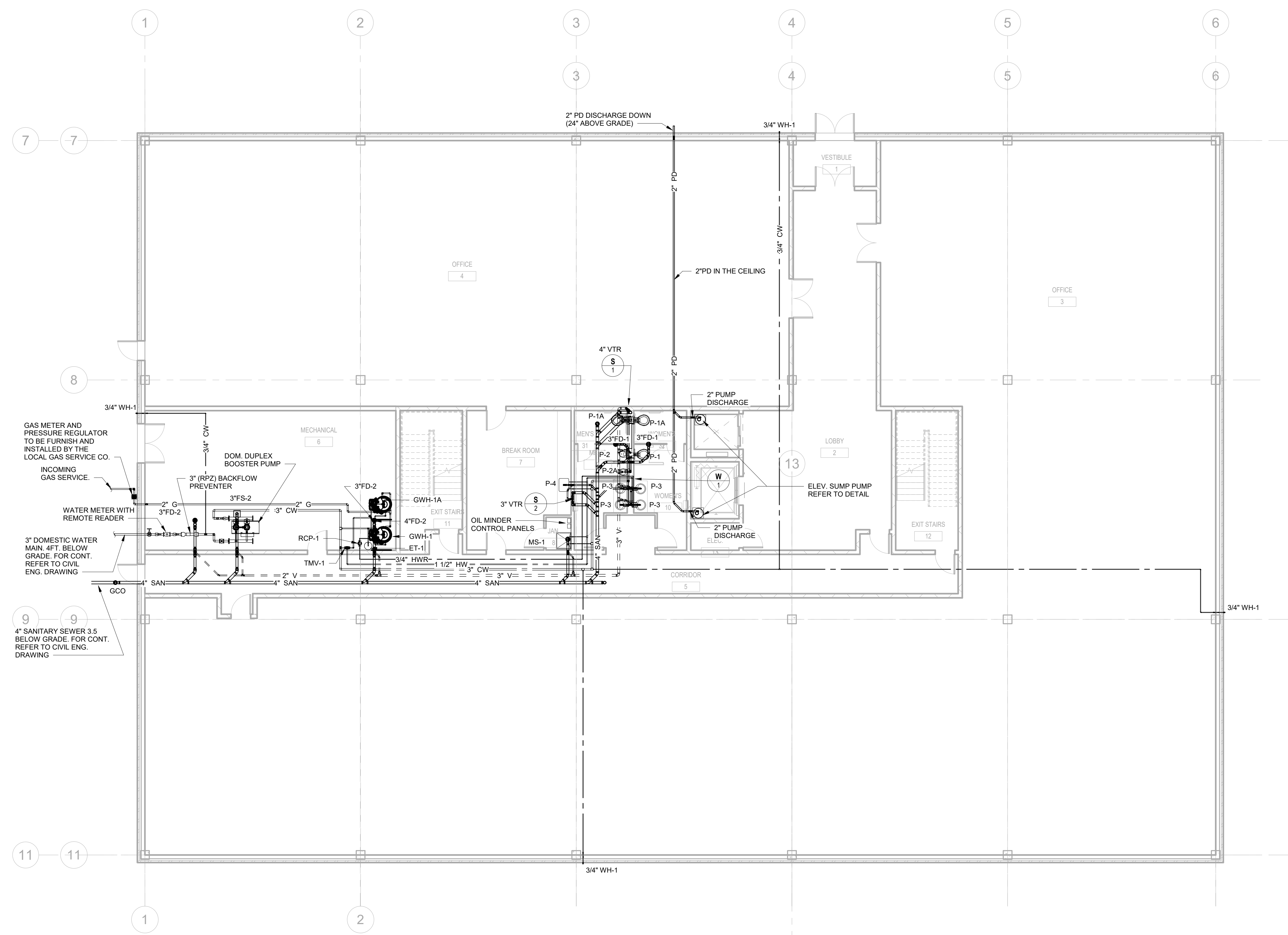
P502

DWG. P502

REVISION	DESCRIPTION	BY	DATE
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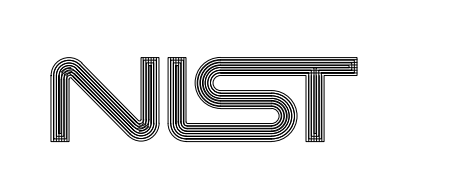
GENERAL NOTES

- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



1 FIRST FLOOR - SANITARY, WATER & GAS
1/8" = 1'-0"

ARCHITECT
MEP. ENG.



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PLUMBING FIRST FLOOR PLAN

P101

DWG. P101

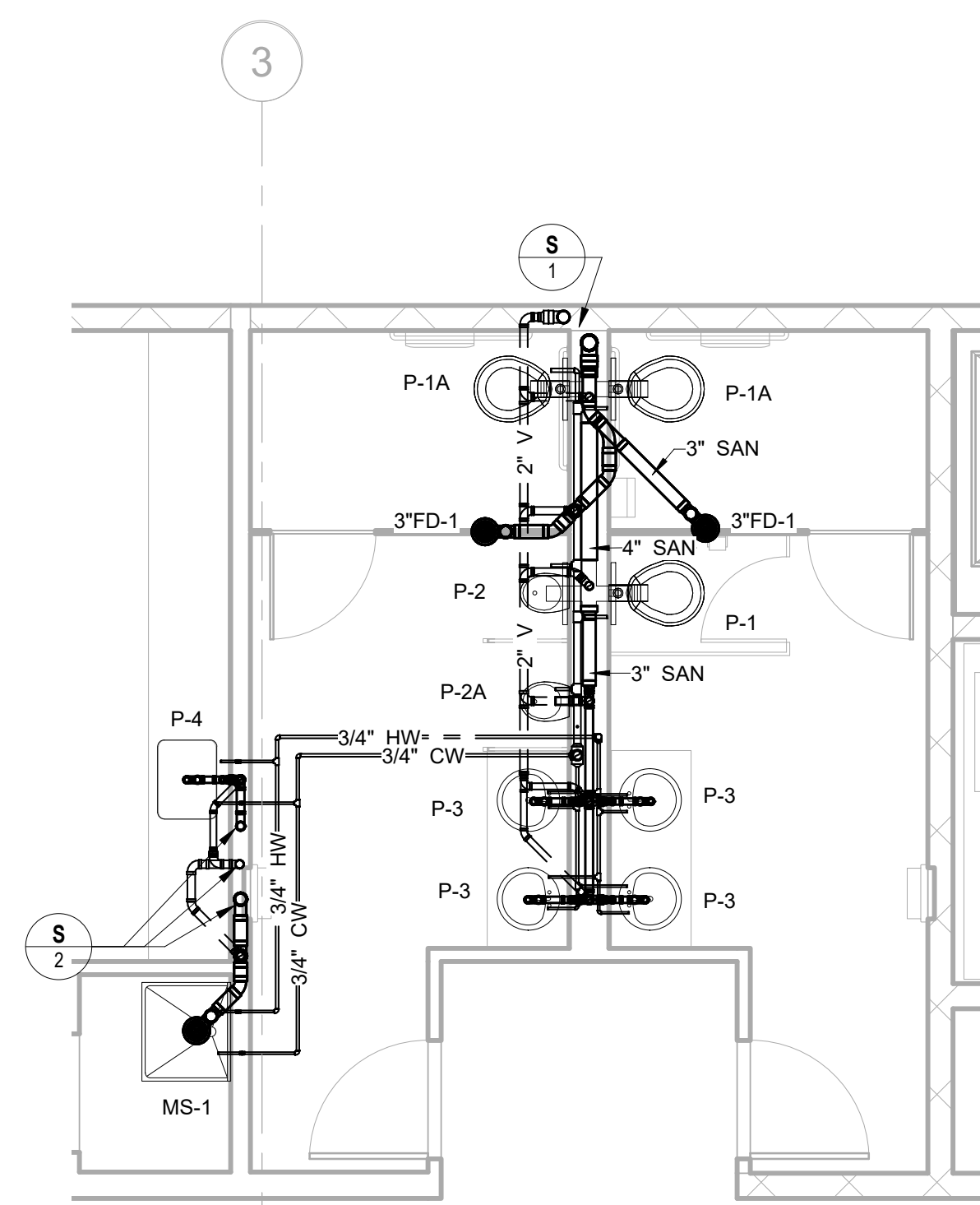
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																			PROJECT / W.O. #

SH. NO. ___ OF ___

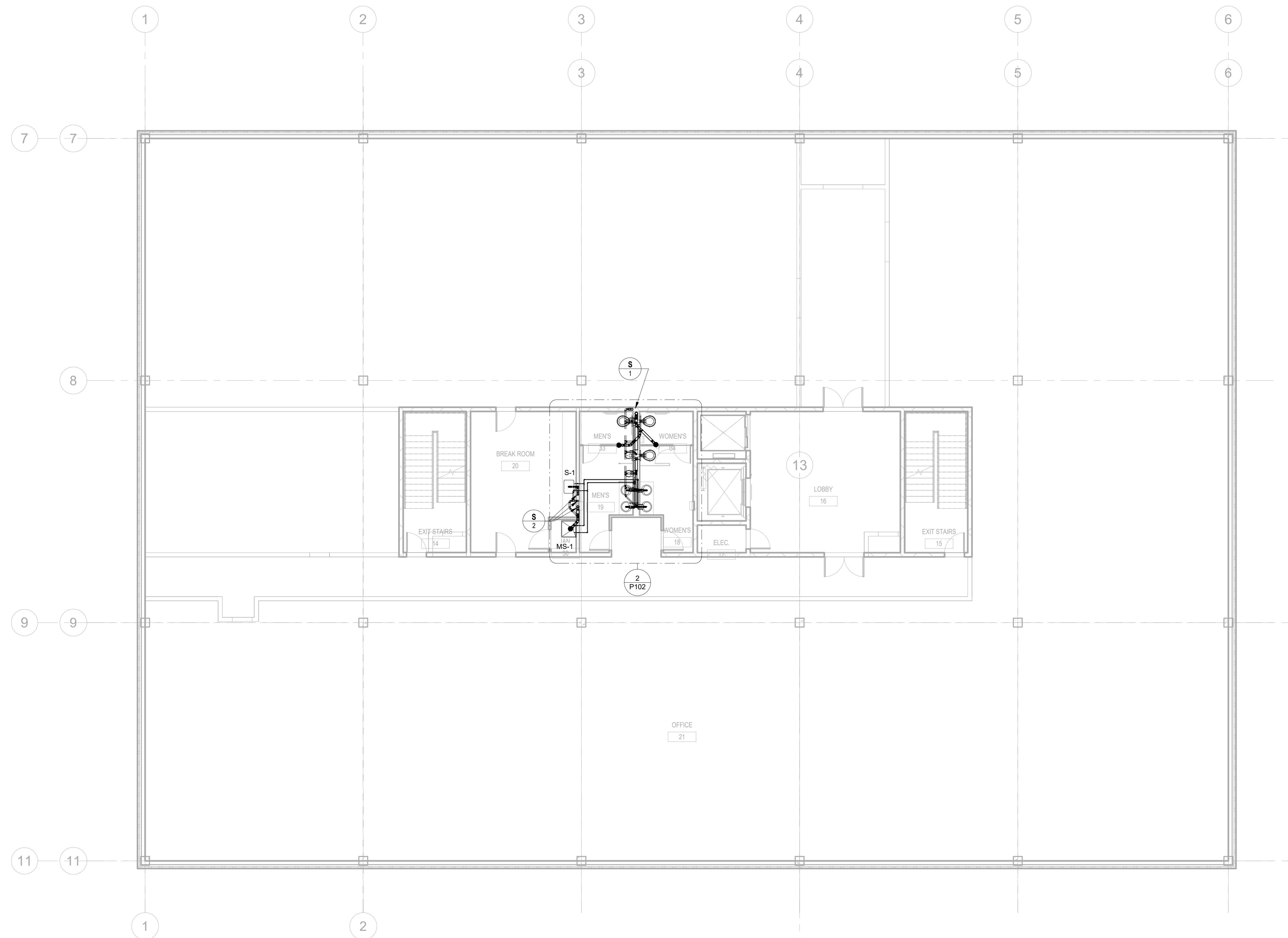
REVISION	DESCRIPTION	BY	DATE
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GENERAL NOTES

- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.

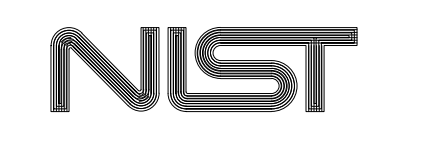


② 2ND FLR - REST ROOM ENLARGED PLAN
1/4" = 1'-0"



① SECOND FLOOR - SANITARY, WATER & GAS
1/8" = 1'-0"

ARCHITECT
MEP - ENG.



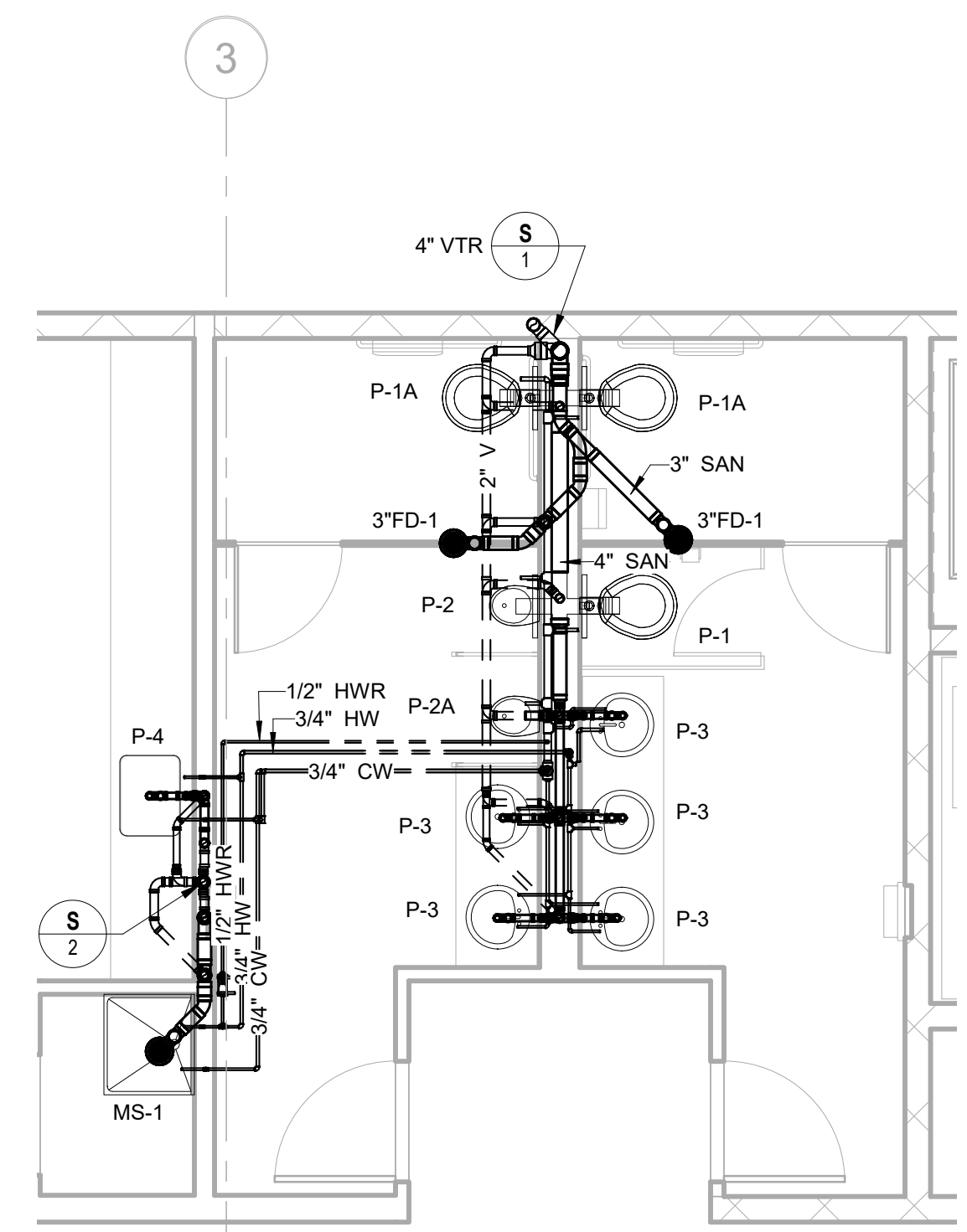
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PLUMBING SECOND FLOOR PLAN

P102

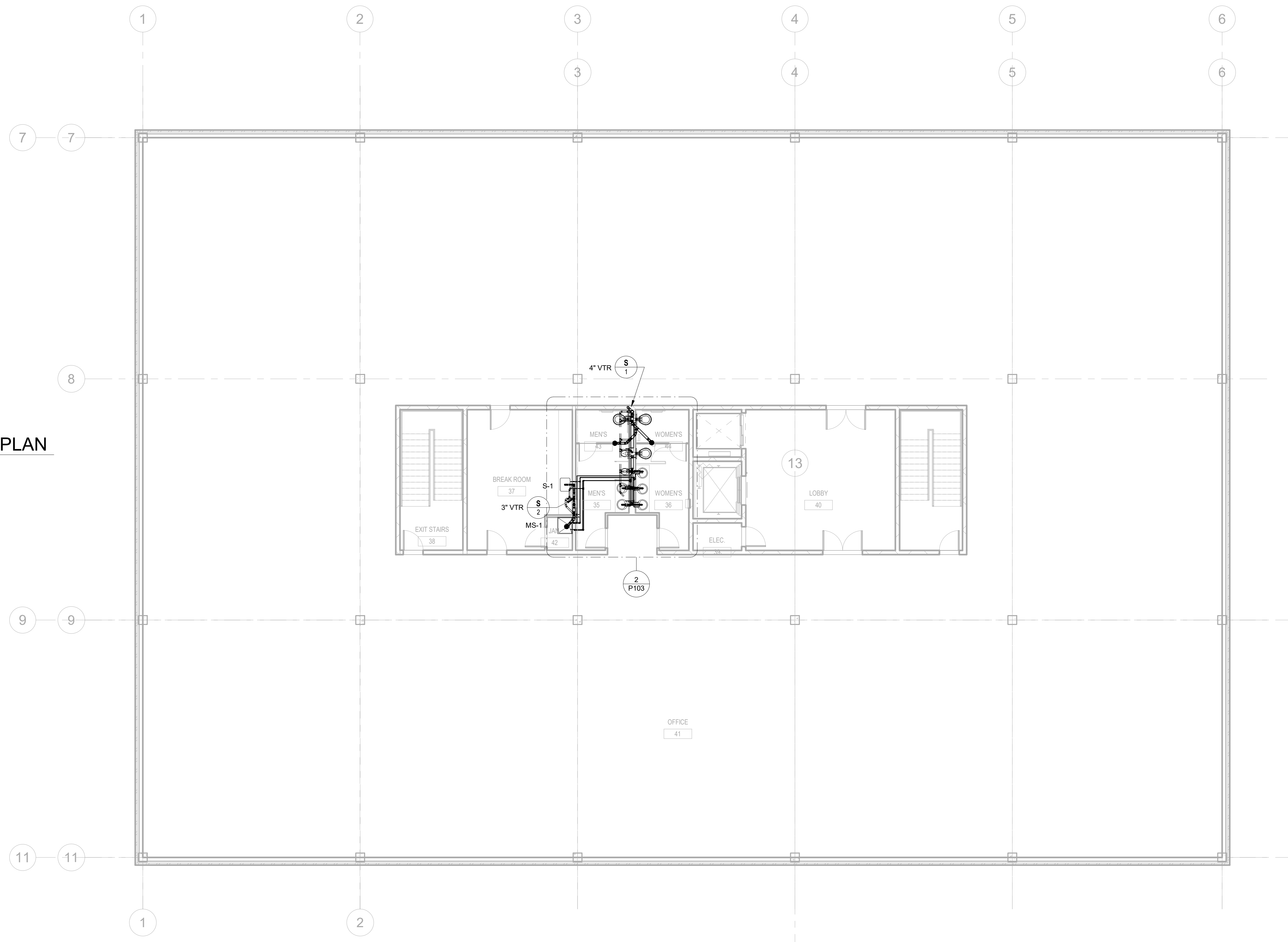
REVISION	DESCRIPTION	BY	DATE
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GENERAL NOTES

- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



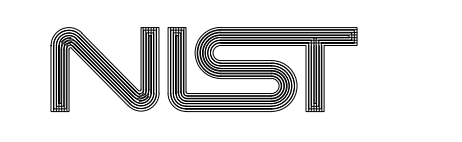
2 THIRD FLOOR - REST ROOM ENLARGED PLAN
1/4" = 1'-0"



1 THIRD FLOOR - SANITARY, WATER & GAS
1/8" = 1'-0"

ARCHITECT

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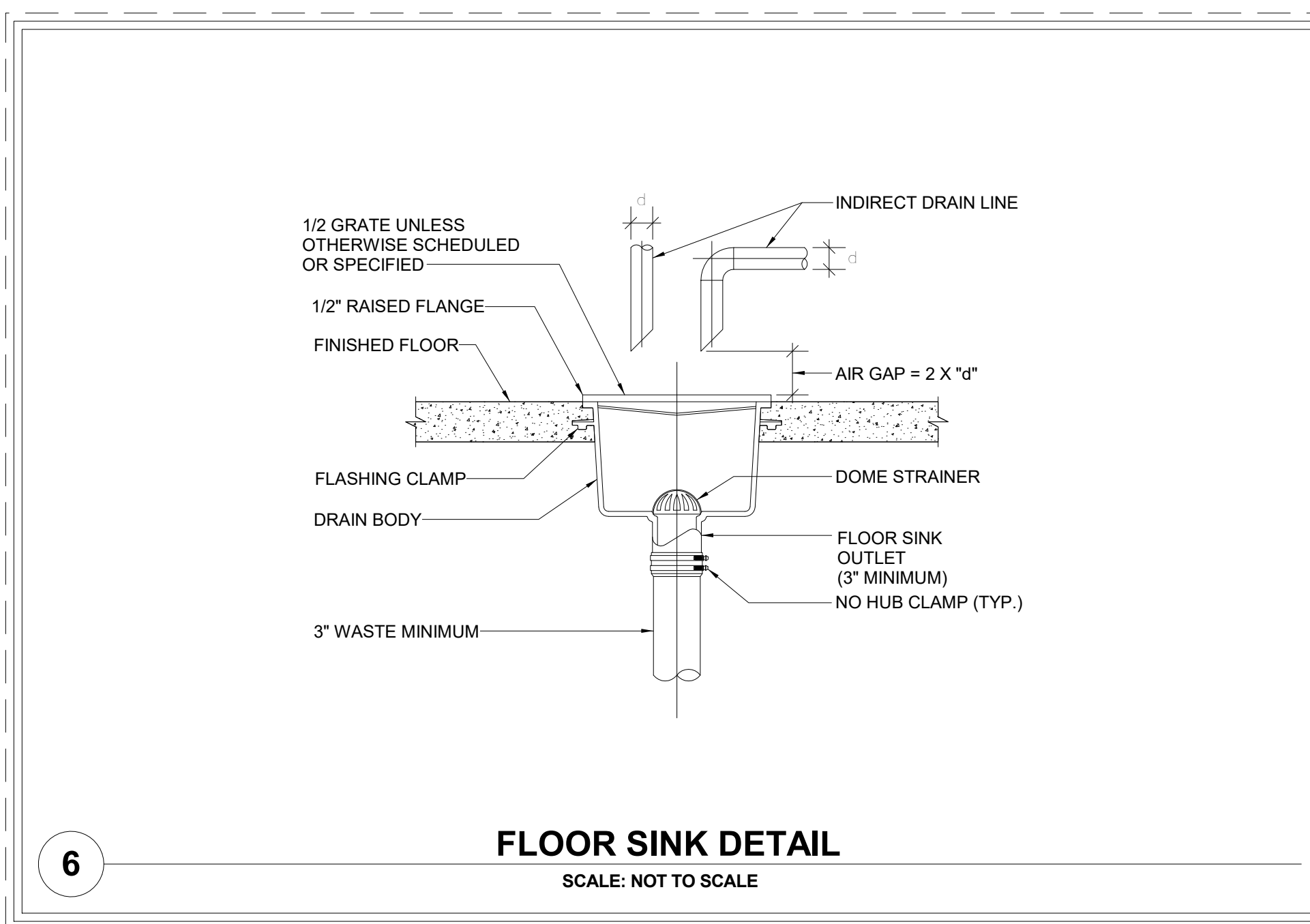


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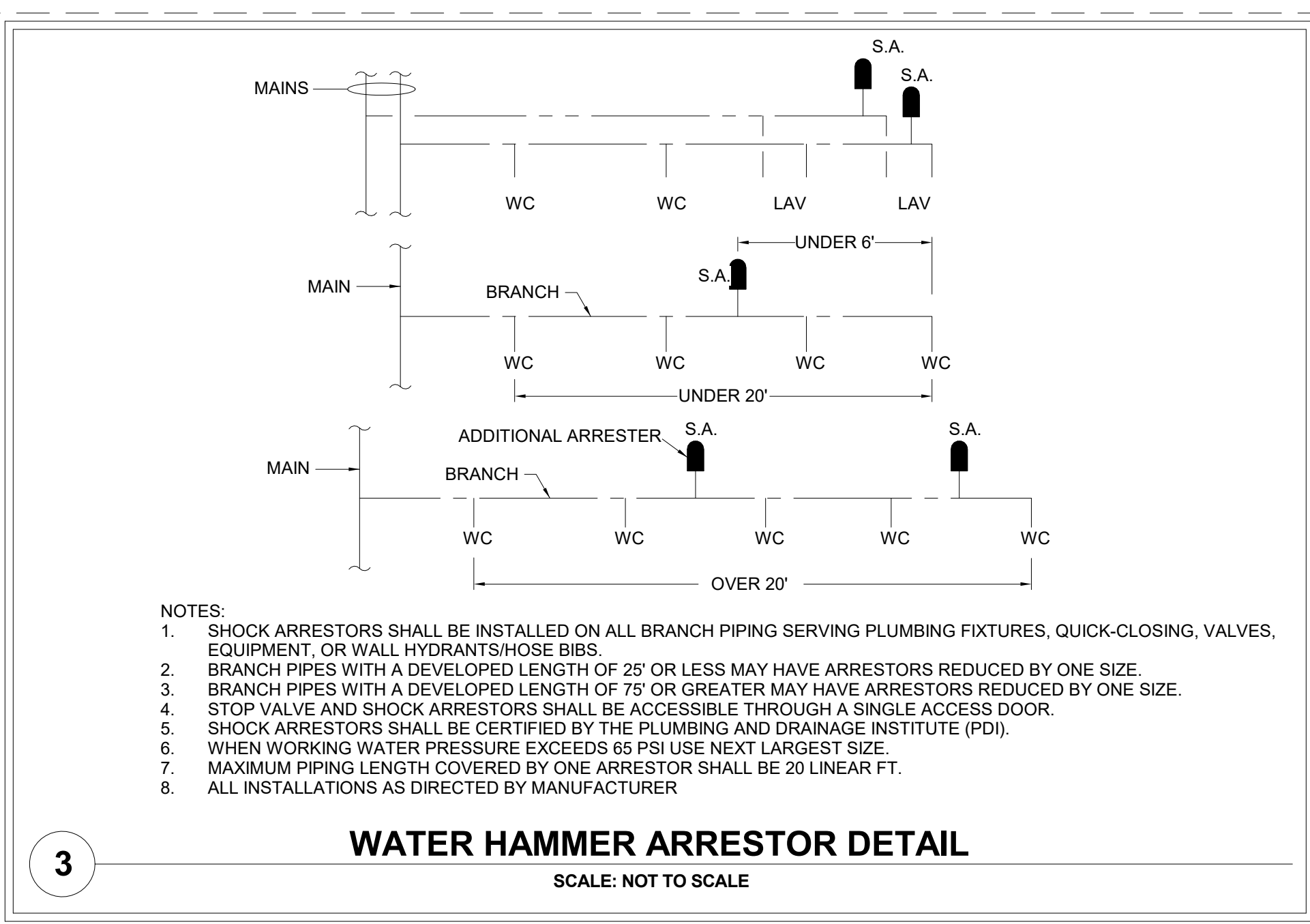
PLUMBING THIRD FLOOR PLAN

P103

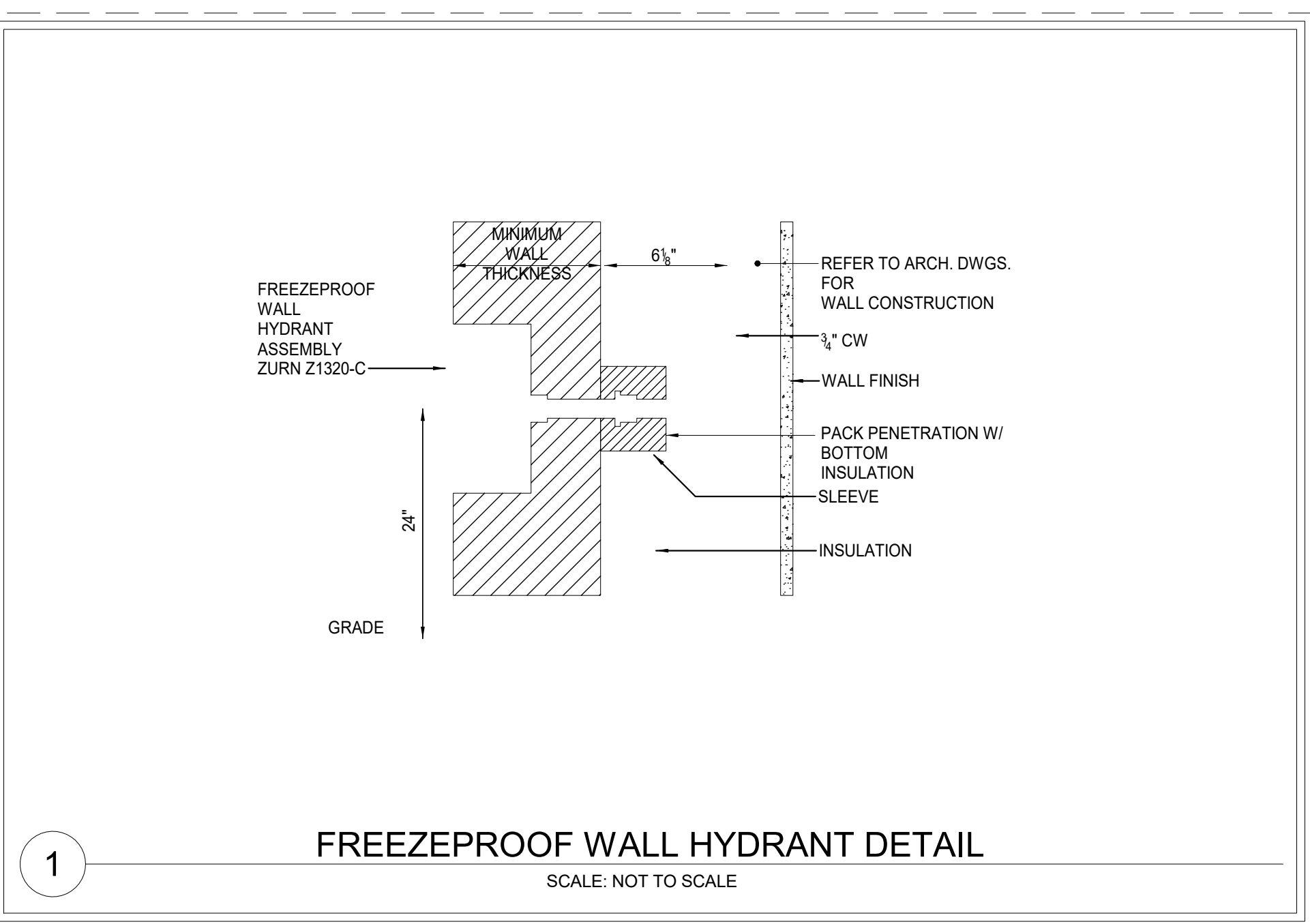
REVISION	DESCRIPTION	BY	DATE



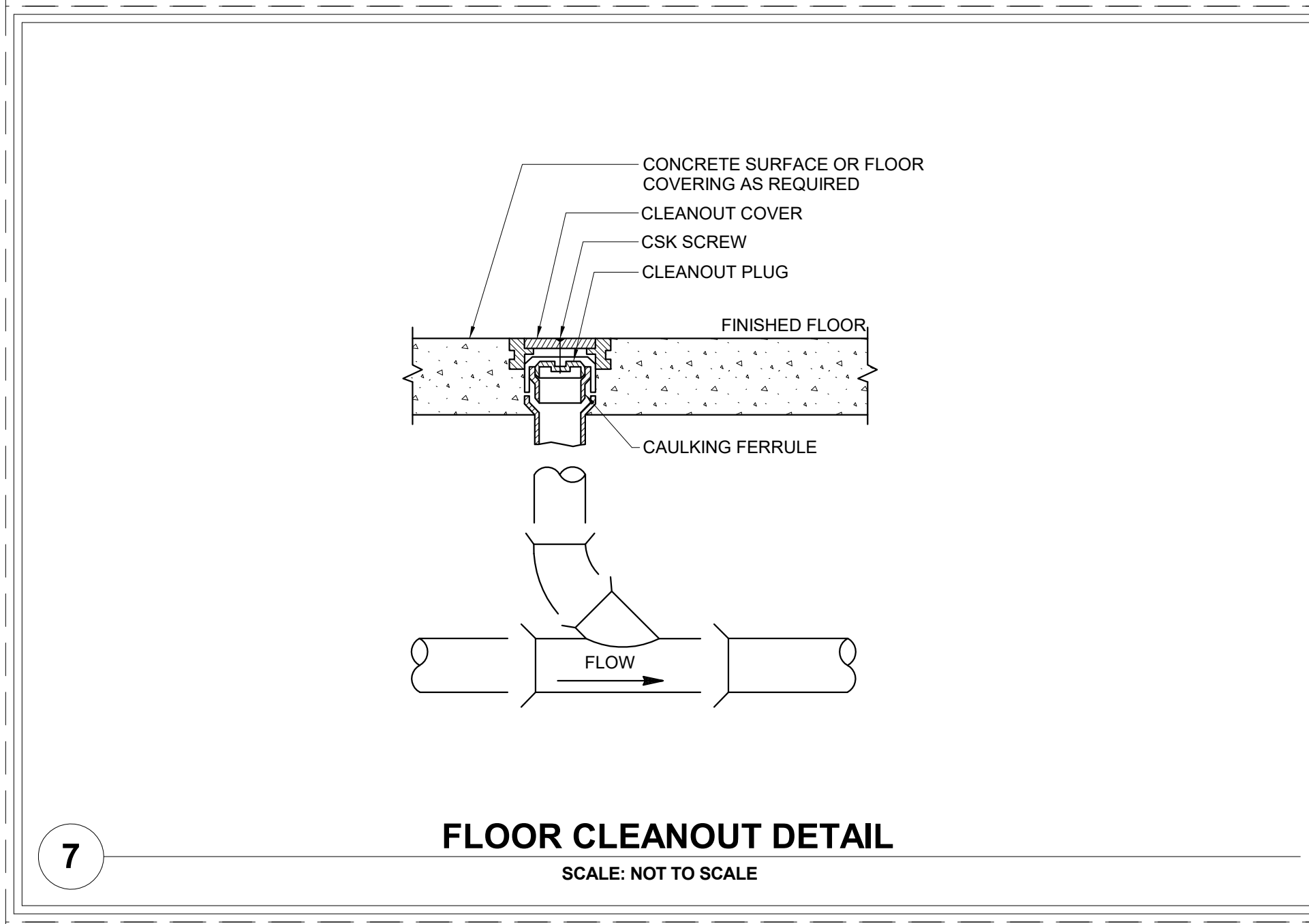
6 FLOOR SINK DETAIL
SCALE: NOT TO SCALE



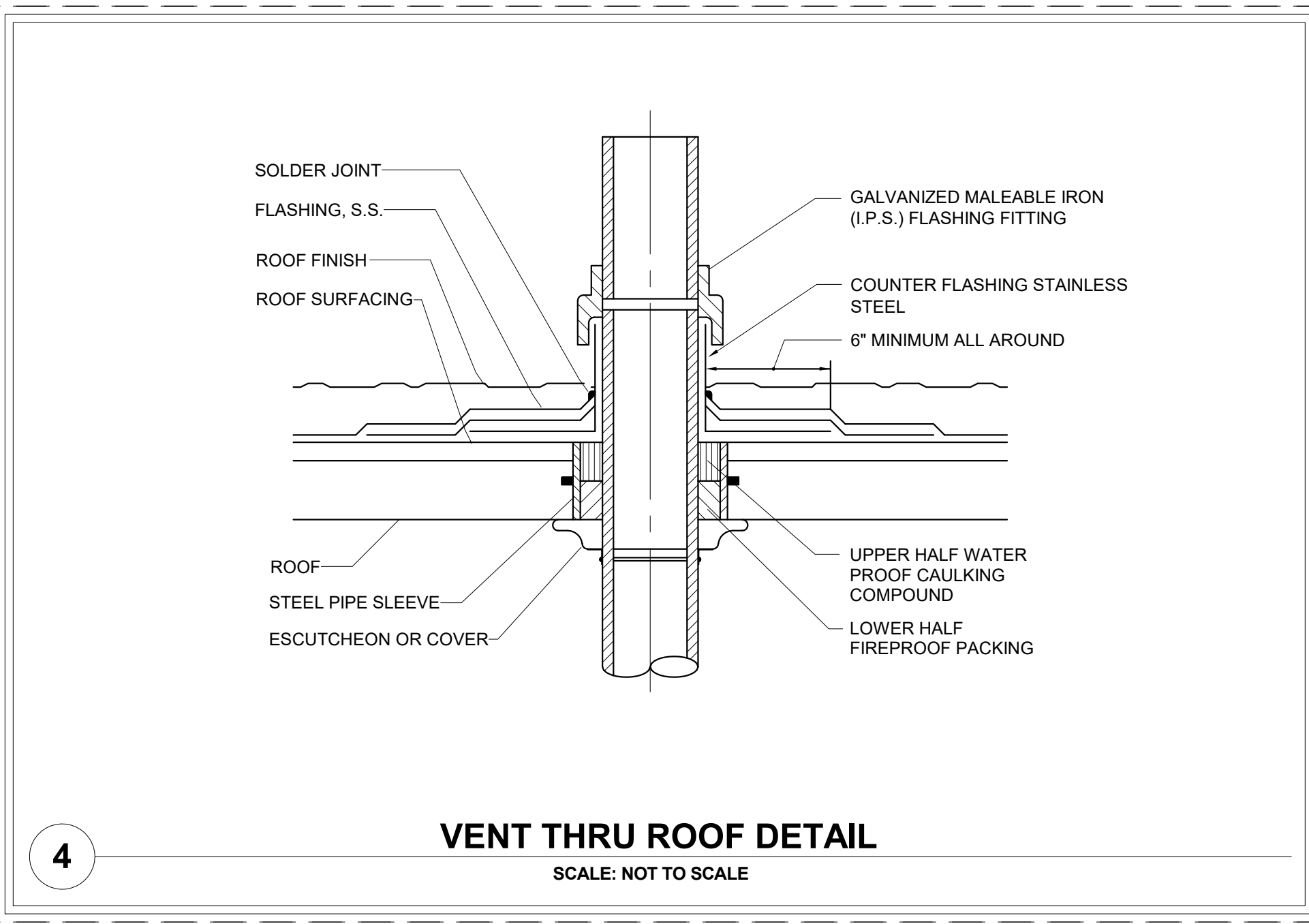
3 WATER HAMMER ARRESTOR DETAIL
SCALE: NOT TO SCALE



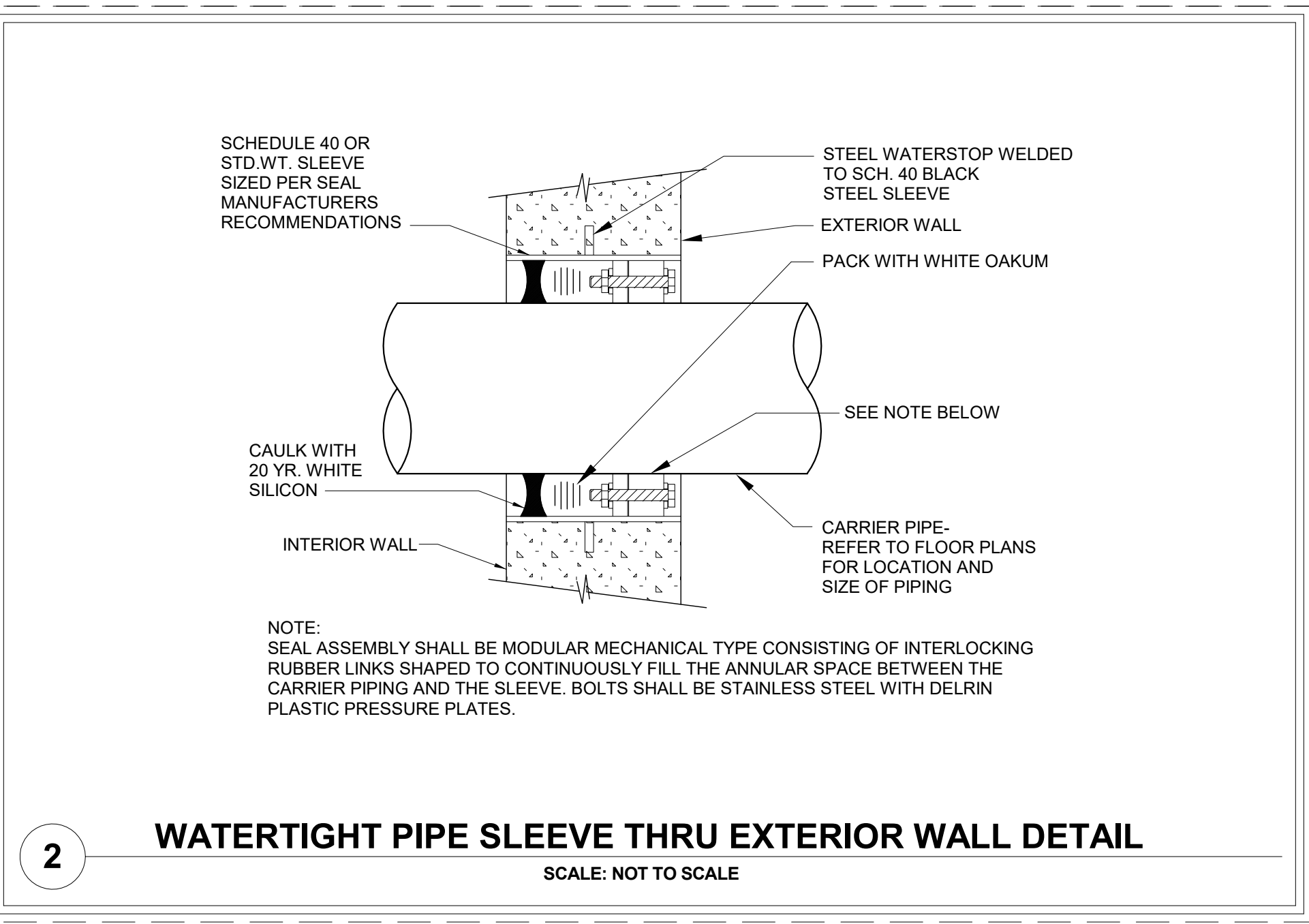
1 FREEZEPROOF WALL HYDRANT DETAIL
SCALE: NOT TO SCALE



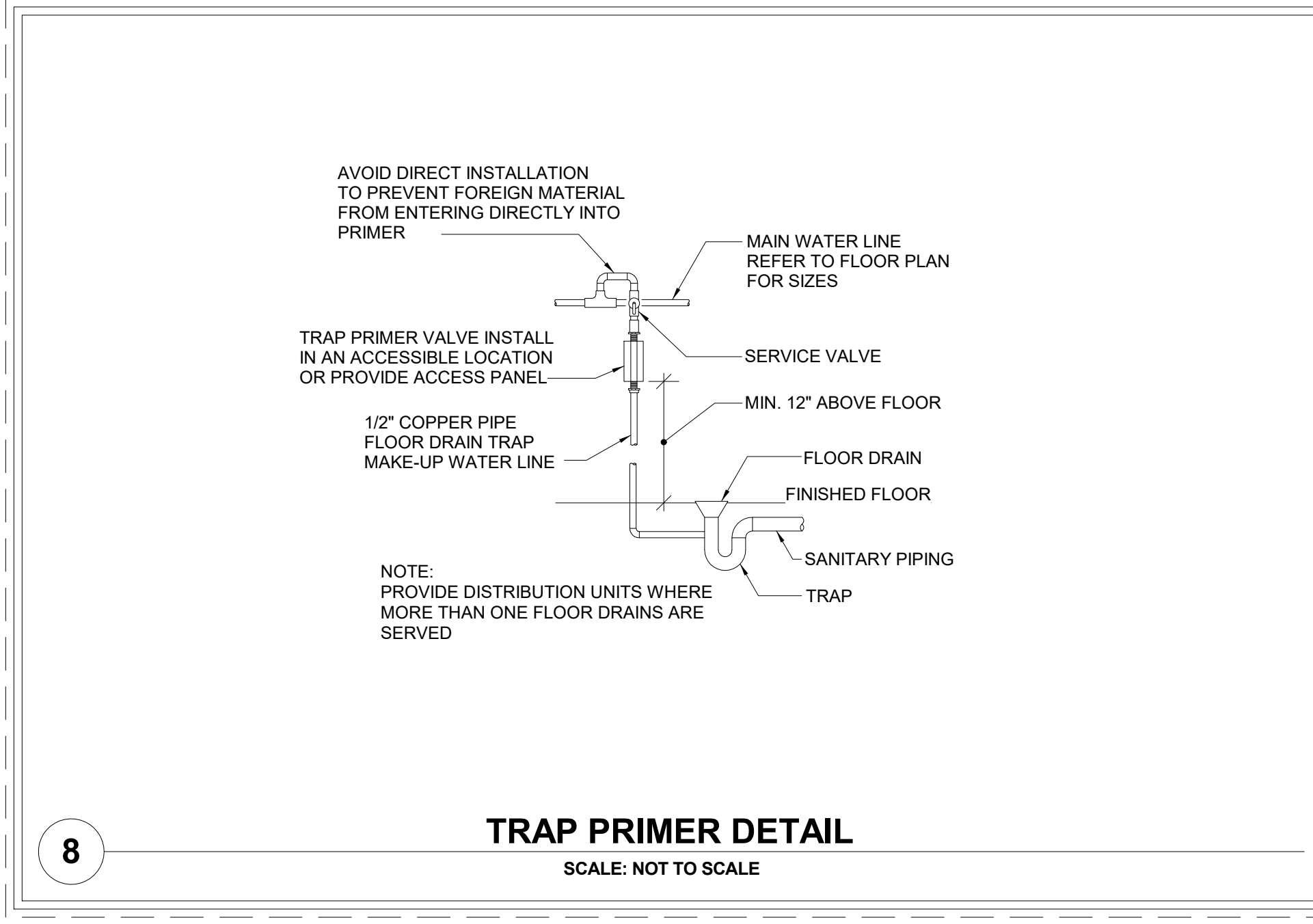
7 FLOOR CLEANOUT DETAIL
SCALE: NOT TO SCALE



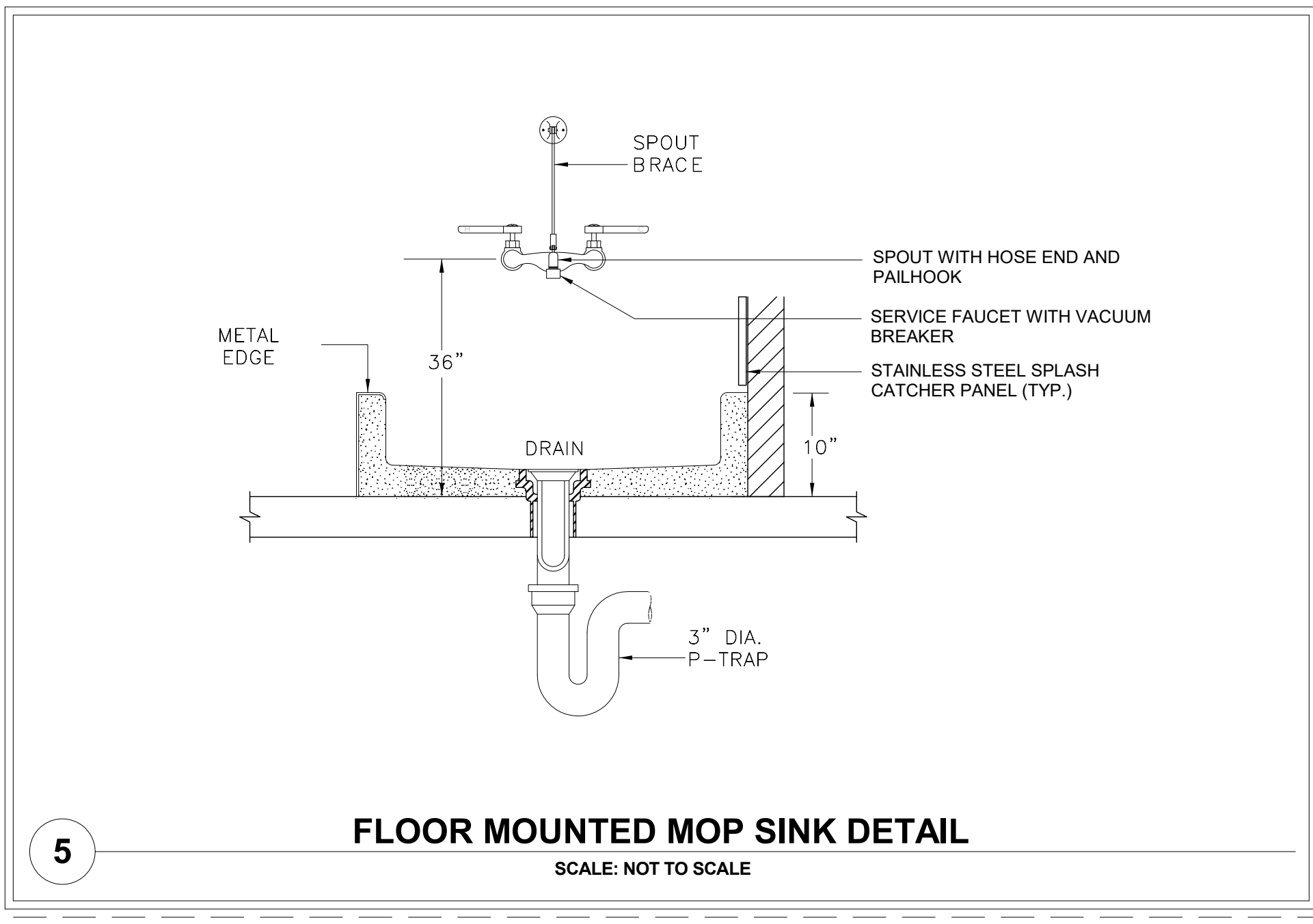
4 VENT THRU ROOF DETAIL
SCALE: NOT TO SCALE



2 WATERTIGHT PIPE SLEEVE THRU EXTERIOR WALL DETAIL
SCALE: NOT TO SCALE



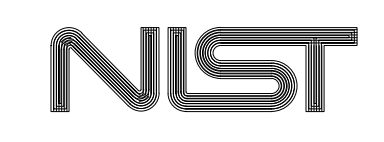
8 TRAP PRIMER DETAIL
SCALE: NOT TO SCALE



5 FLOOR MOUNTED MOP SINK DETAIL
SCALE: NOT TO SCALE

ARCHITECT

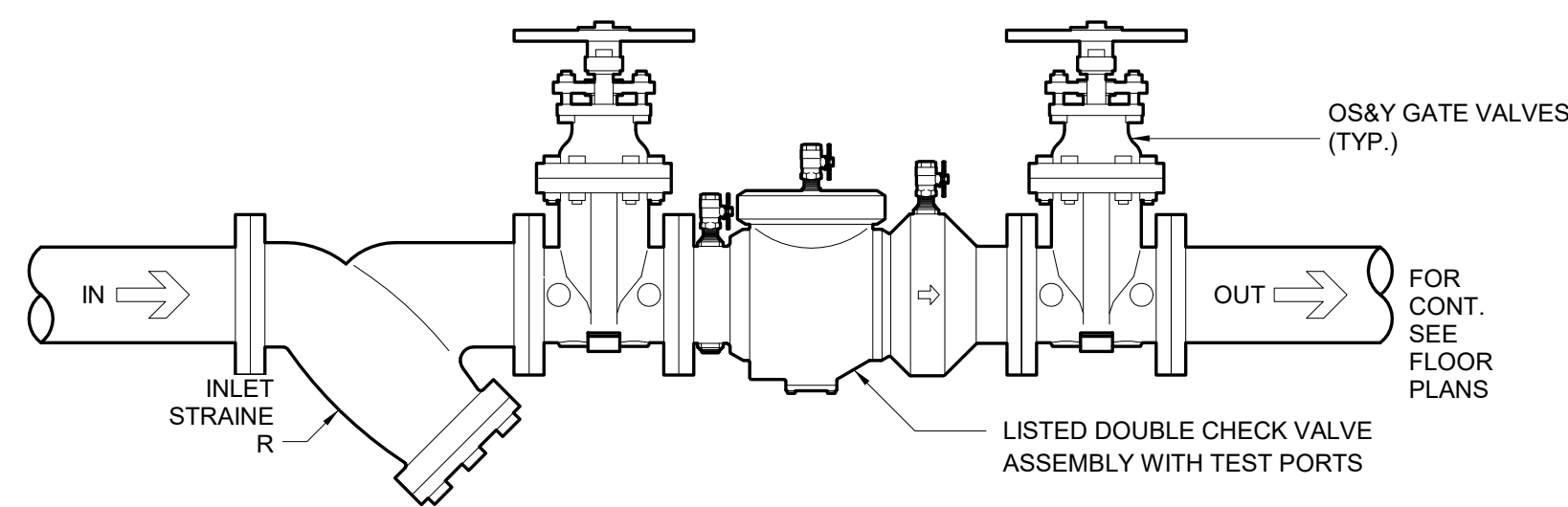
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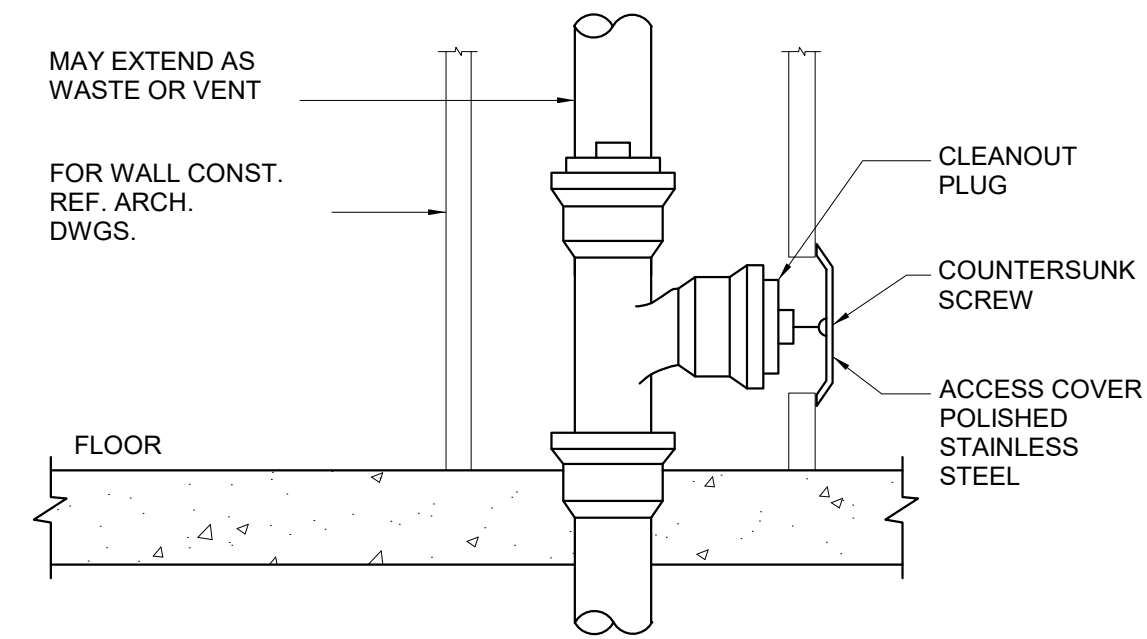
PLUMBING DETAILS

P301

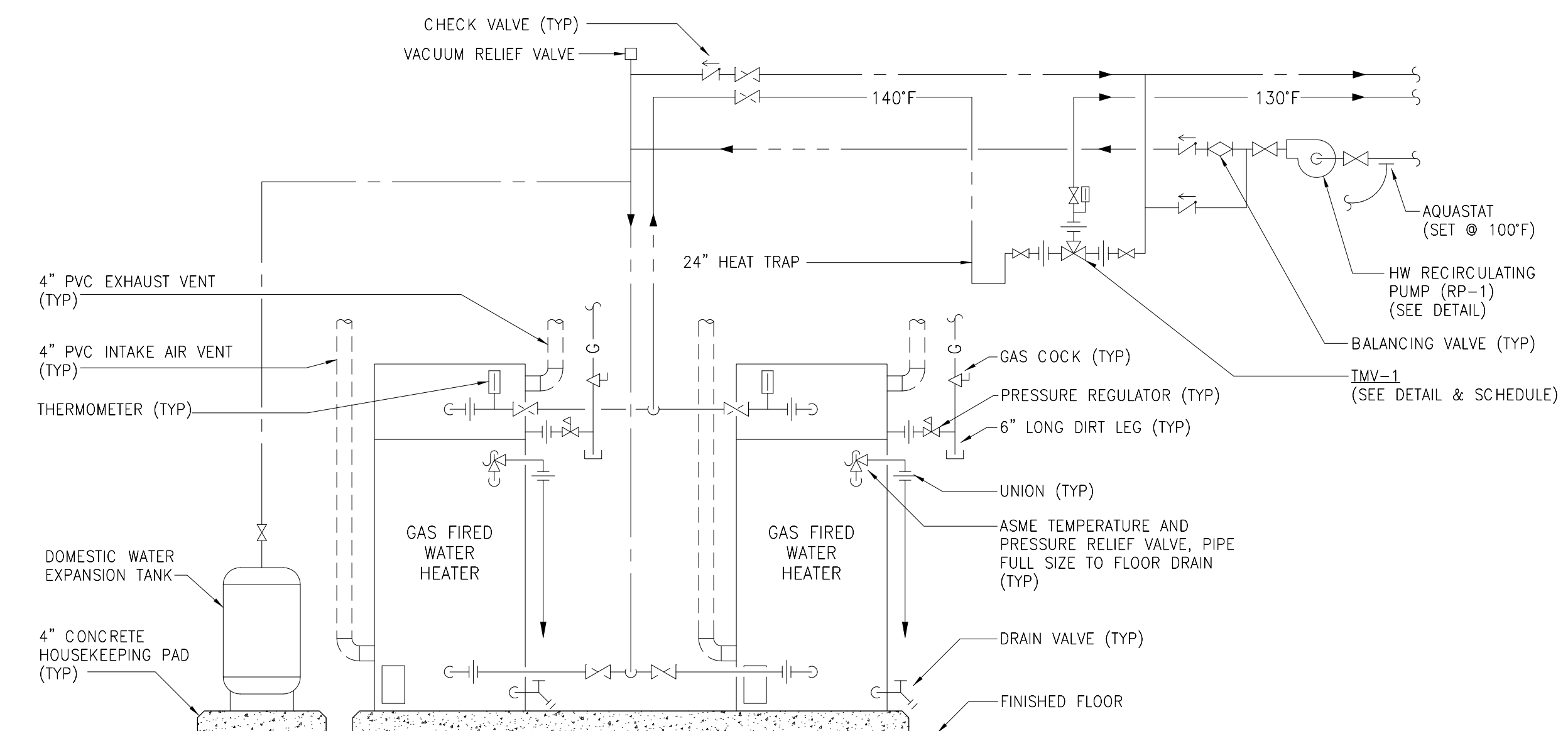


NOTES:
1. UNLESS OTHERWISE NOTED MOUNTING HEIGHT SHALL BE BETWEEN 42" ABOVE THE FINISHED FLOOR AND 12" CLEAR AROUND ALL SIDES

1 DOUBLE CHECK VALVE ASSEMBLY DETAIL
SCALE: NOT TO SCALE

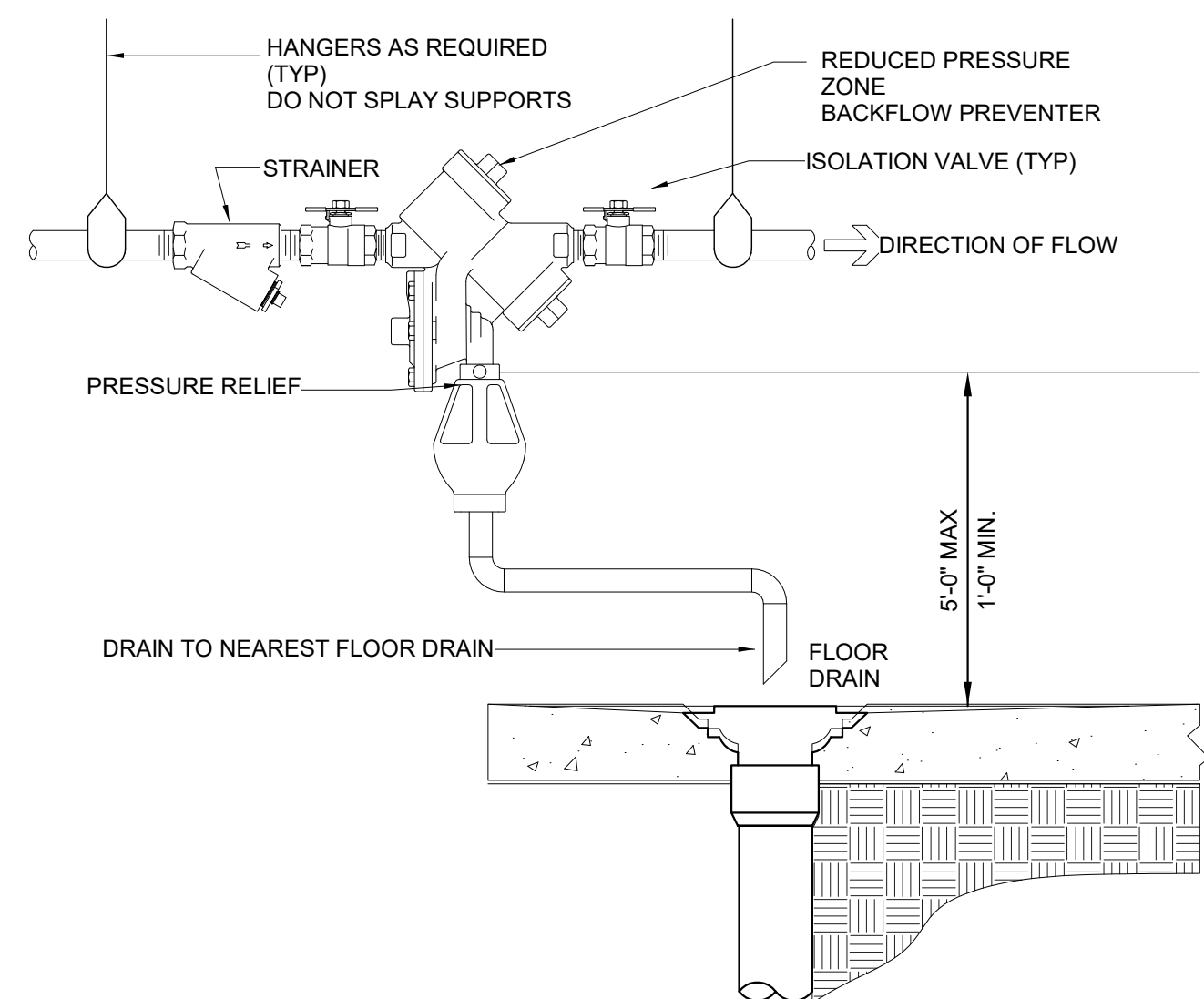


5 WALL CLEANOUT DETAIL
SCALE: NOT TO SCALE

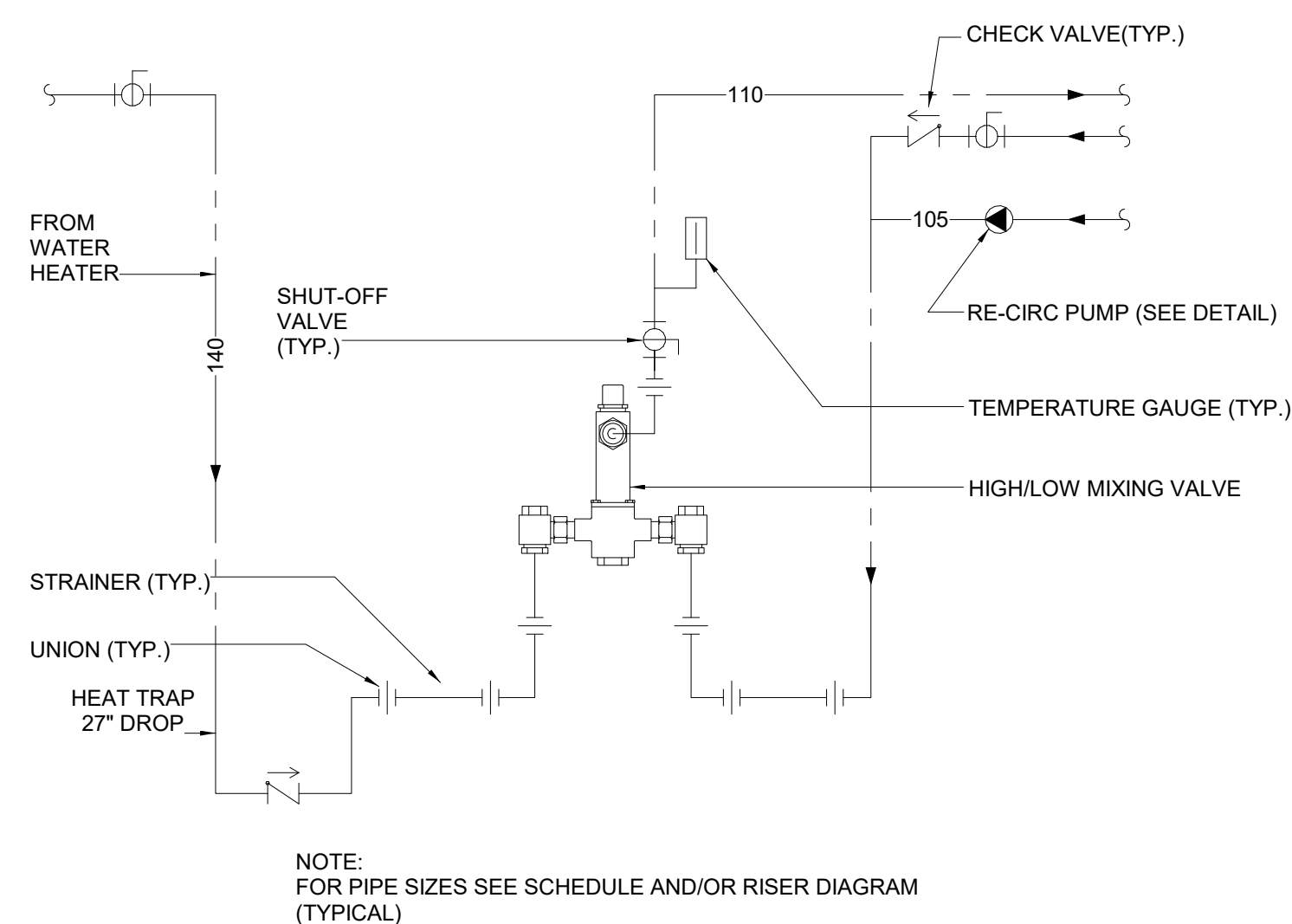


NOTES:
1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL CHECK VALVES, MULTI-PURPOSE VALVES TO BE INSTALLED IN THE HORIZONTAL POSITION ONLY.
3. IN-LINE RE-CIRC. PUMPS SHALL BE INSTALLED AT 66" AFF.
4. MAINTAIN CLEARANCES TO COMBUSTIBLES AS REQUIRED BY WATER HEATER MANUFACTURER.
5. ALL PUMPS MUST BE BALANCED TO SCHEDULED FLOW RATES.
6. VENT AND COMBUSTION AIR TERMINATIONS MUST BE SEPARATED PER NFPA-54 AND MANUFACTURER'S RECOMMENDATIONS.
7. MANFOLD WATER HEATERS PER MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN A HYDRAULICALLY BALANCED SYSTEM.

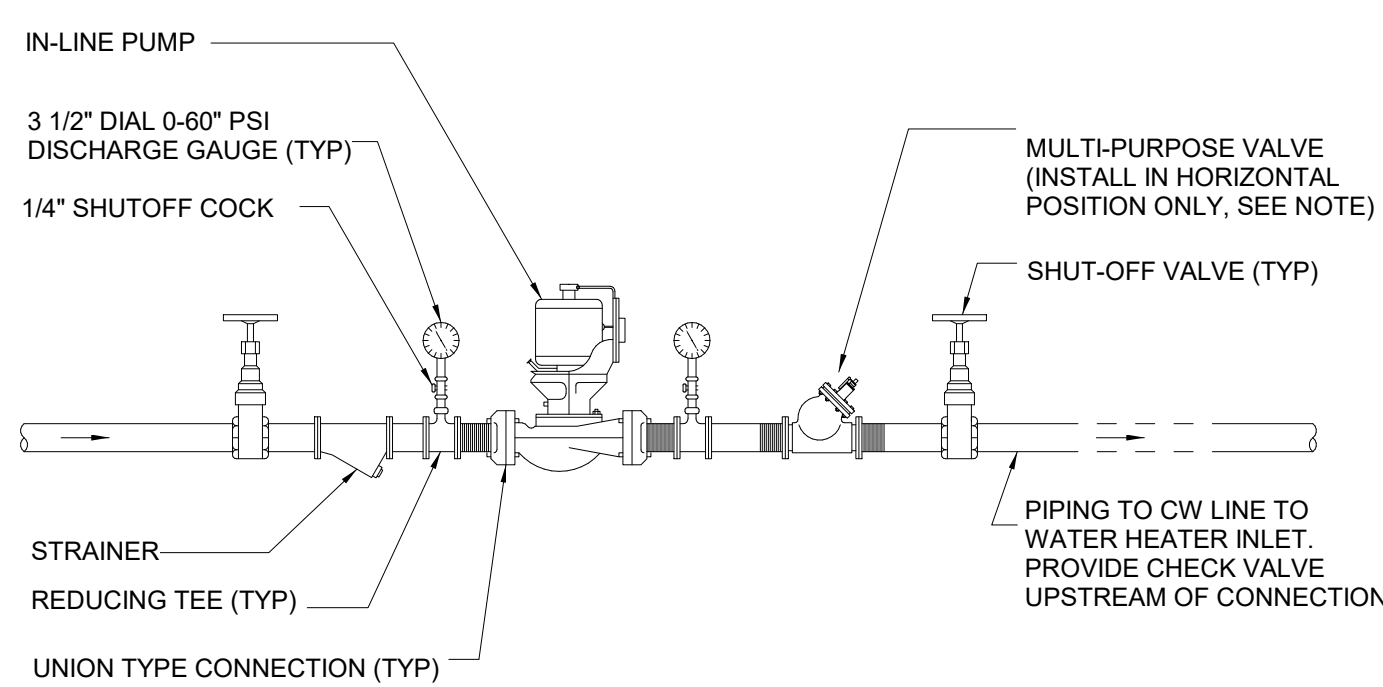
8 DUPLEX GAS FIRED WATER HEATER DETAIL
SCALE: NOT TO SCALE



2 TYPICAL BFP (UNDER 2 INCH DIAMETER) INSTALLATION DETAIL
SCALE: NOT TO SCALE

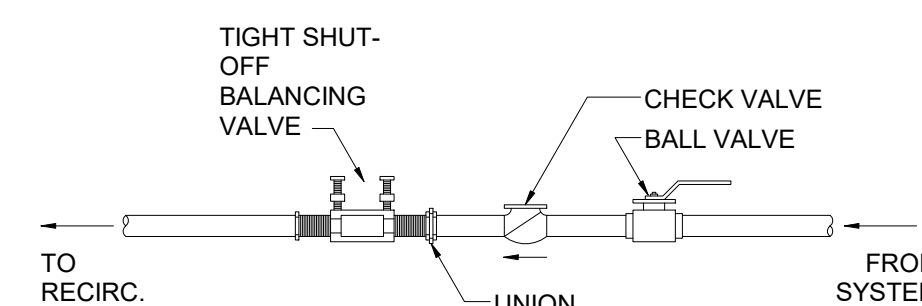


6 THERMOSTATIC MIXING VALVE PIPING DETAIL
SCALE: NOT TO SCALE



NOTES:
1. CONTRACTOR SHALL INSTALL AQUASTAT IN RETURN LINE FOR PUMP CONTROL.
2. WHERE RE-CIRC. PIPING ON PUMP DISCHARGE IS LESS THAN 1-1/2", CONTRACTOR SHALL INSTALL SEPARATE CHECK VALVE, SHUT-OFF VALVE, AND BALANCE VALVE IN LIEU OF MULTI-PURPOSE VALVE.

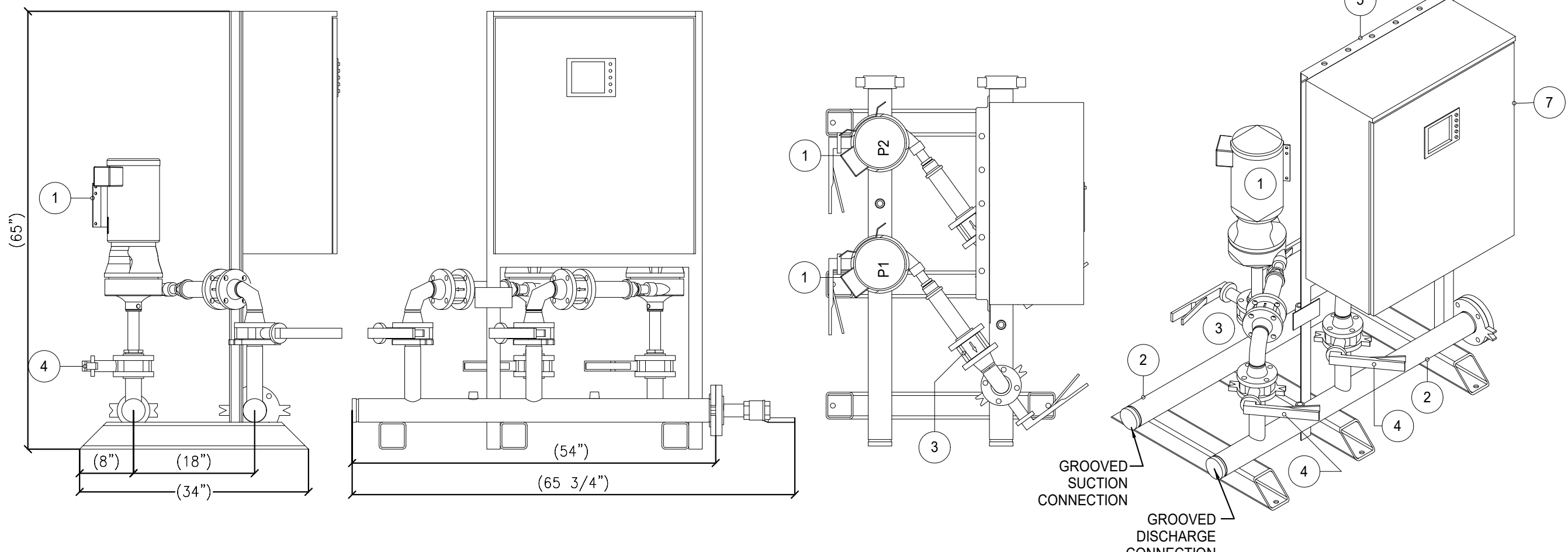
3 IN-LINE RECIRCULATING PUMP DETAIL
SCALE: NOT TO SCALE



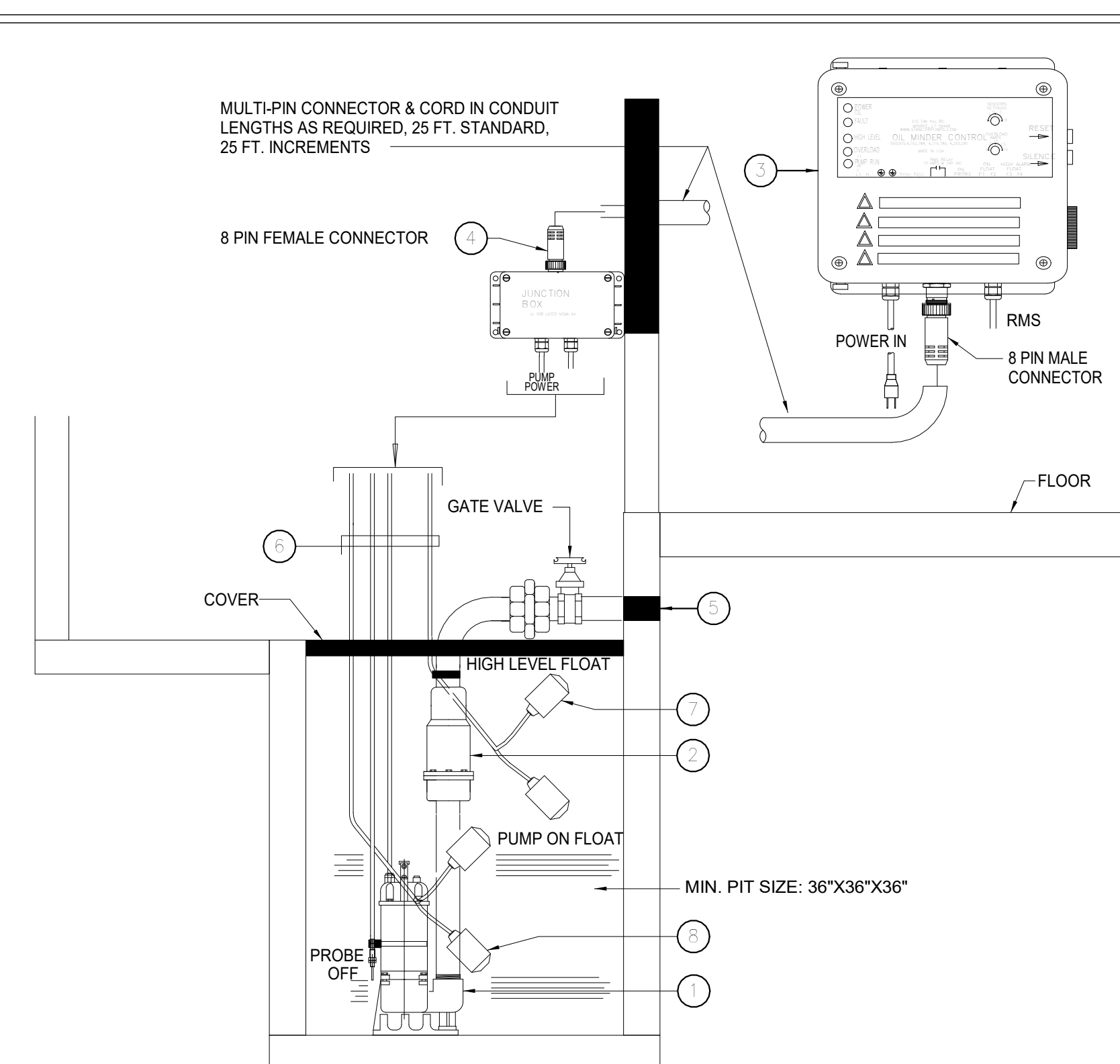
NOTES:
1. INSURE PROPER ACCESS IS PROVIDED TO VALVE AND THAT VALVE CAN BE METERED. DO NOT ORIENT TAPS DOWNWARD.
2. PROVIDE ACCESS PANEL IN HARD CEILING LOCATIONS.
3. PROVIDE TEE HANDLE WHERE LIMITED ACCESS.

7 HOT WATER CIRCULATION BALANCING VALVE DETAIL
SCALE: NOT TO SCALE

PARTS LIST		
SYM	QTY	PART
1	2	PUMP, EBARA MODEL 9U OR GOULDS MODEL SH
2	1	CAP, GROOVED, 304SS, 4"
3	2	VALVE, CHECK, TIGERFLOW 871W, 2-1/2"
4	4	VALVE, BUTTERFLY, TIGERFLOW L-ZH-L, 2-1/2"
5	1	PANEL STAND, TRIPLEX, PS004
6	2	VFD (NOT SHOWN)
7	1	CONTROLLER, TIGERFLOW MARK V, INTERNAL DRIVES



4 DOMESTIC WATER BOOSTER PUMP DETAIL - DUPLEX
SCALE: NOT TO SCALE



KEYED NOTES:

- SP-1 STANCOR MODEL SE-100 SUBMERSIBLE EFFLUENT PUMP 1 HP, 460 VOLT, 3600 RPM, 2" DISCHARGE CONNECTION
- STANCOR CHECK VALVE
- STANCOR OIL MINDER 460V, 10" CONTROL SYSTEM WITH BUILT IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES NOT RUN DUE TO OIL IN PIT OR HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACT FOR A REMOTE ALARM LOCATION. JUNCTION BOX WILL BE PROVIDED WITH MULTI-PIN CONNECTOR & CORD IN LENGTHS AS REQUIRED, 25 FT. IS STANDARD, OPTIONAL 25 FT. INCREMENTS ARE REQUIRED. LIGHTS FOR OIL SPILL, POWER, HIGH LIQUID LEVEL, OVERLOAD & PUMP RUN
- JUNCTION BOX WILL BE PROVIDED WITH MULTI-PIN CONNECTOR AND CORD IN LENGTHS AS REQUIRED, 25 FT. IS STANDARD, OPTIONAL 25 FT. INCREMENTS AVAILABLE
- ALL BURIED PUMP PRESSURE DISCHARGE PIPING SHALL BE PROTECTED WITH TAPECOAT CT CORROSION PROTECTION TAPE
- OIL MINDER CABLE, POWER CABLE, PROBE CABLE, HIGH LIQUID ALARM CABLE & PUMP ON FLOAT CABLE
- HIGH LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT TO PUMP DISCHARGE PIPING.
- PUMP ON FLOAT.

9 ELEVATOR SUMP PUMP DETAIL
SCALE: NOT TO SCALE

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PLUMBING DETAILS

P302

DWG. P302

THERMOSTATIC MIXING VALVE SCHEDULE							
ID	AREA/SYSTEM SERVED	THERMOSTATIC CONTROLLERS		RUN OUT PIPE SIZES		BASIS OF DESIGN (OR EQUAL)	REMARKS
		GPM (FLOW @ 20 PSI)		CW INLET	HW INLET		
TMV-1	GENERAL BLDG FIXTURES	---		---	---	---	

NOTES:
1. RUN-OUT PIPE SIZES ARE NOT NECESSARILY MIXING VALVE PIPE SIZES
2. ALL UNITS MUST BE INSTALLED, PIPED, AND ADJUSTED IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS

FLOOR DRAIN SCHEDULE					
ID	TYPE	LOCATION/AREA	SIZE	BASIS OF DESIGN (OR EQUAL)	REMARKS
FD-1	FLOOR DRAIN	TOILET RM, KITCHEN	5" STRAINER	ZURN #Z415B	W/ 1/2" TRAP PRIMING LINE
FD-2	FLOOR DRAIN	MECHANICAL RMS	9" STRAINER	ZURN #Z550	W/ 1/2" TRAP PRIMING LINE

WATER HAMMER ARRESTOR SCHEDULE				
PDI #	MIN-MAX. FIXTURE UNIT CAPACITY	CONNECTION SIZE	MANUFACTURER & MODEL NUMBER (OR EQUAL)	
"A"	1-11	1/2"	PPP, INC. MODEL SC-500	
"B"	12-32	3/4"	PPP, INC. MODEL SC-750	
"C"	33-60	1"	PPP, INC. MODEL SC-1000	
"D"	61-113	1-1/4"	PPP, INC. MODEL SC-1250	
"E"	114-154	1-1/2"	PPP, INC. MODEL SC-1500	
"F"	155-330	2"	PPP, INC. MODEL SC-2000	

NOTES:
1. AIR CHAMBERS ARE NOT ACCEPTABLE EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED
2. SIZE PER MANUFACTURER'S RECOMMENDATIONS
3. PROVIDE ACCESS PANELS WHERE REQUIRED TO BE IN CONCEALED LOCATIONS

TRAP PRIMING STATION SCHEDULE				
ID	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)
	AMPS	VOLTAGE	PHASE	
TSP-1	5	120	1	PPP INC. PTS SERIES, SURFACE MOUNTED

SLOPE OF HORIZONTAL DRAINAGE PIPE	
SIZE (INCHES)	MINIMUM SLOPE (INCH PER FOOT)
2-1/2 OR LESS	1/4
3 TO 6	1/8
8 OR LARGER	1/16

TABLE 704.1 OF THE INTERNATIONAL PLUMBING CODE 2018

PLUMBING FIXTURE SCHEDULE									
ID	DESCRIPTION	CONNECTION SIZE							REMARKS
		WASTE	VENT	TRAP	TRAP ARM	TEMPERED	CW	HW	
P-1	WATER CLOSET	4"	2"	-	-	-	1"	-	WALL MOUNTED, HANDS-FREE ELECTRONIC FLUSH VALVE
P-1A	WATER CLOSET-ADA	4"	2"	-	-	-	1"	-	WALL MOUNTED, HANDS-FREE ELECTRONIC FLUSH VALVE
P-2	URINAL	2"	1 1/2"	-	-	-	3/4"	-	WALL MOUNTED, HANDS-FREE ELECTRONIC FLUSH VALVE
P-2A	URINAL-ADA	2"	1 1/2"	-	-	-	3/4"	-	WALL MOUNTED, HANDS-FREE ELECTRONIC FLUSH VALVE
P-3	LAVATORY	2"	2"	1 1/2"	1 1/2"	-	1/2"	1/2"	UNDERMOUNT, SENSOR OPERATED, BATTERY POWERED FAUCETS
P-4	PANTRY SINK	2"	1 1/2"	1 1/2"	1 1/2"	-	1/2"	1/2"	STAINLESS STEEL, UNDERMOUNT, WITH GARBAGE DISPOSER MODEL BADGER 5 XP, 3/4 HP AND FILTERED WATER FAUCET (BREAKROOM AND CONFERENCE)
P-5	MOP SINK	3"	2"	3"	3"	-	3/4"	3/4"	WALL MOUNTED FAUCET WITH VACUUM BREAKER
P-6	ELECTRIC WATER COOLER	2"	2"	1 1/2"	1 1/2"	-	1/2"	-	WALL MOUNTED, HILO PROVIDE WITH TIMER FOR NIGHT/OFF HOURS DE-ACTIVATION COORDINATE WITH ELECTRICAL
HB-1	HOSE BIBB	-	-	-	-	-	3/4"	-	HANDS FREE ELECTRONIC FLUSH VALVE
WH-1	WALL HYDRANT	-	-	-	-	-	3/4"	-	HANDS FREE ELECTRONIC FLUSH VALVE

NOTES:
1. PROVIDE INSULATION KIT FOR WASTE AND WATER SUPPLY PIPES OF ALL HANDICAPPED LAVATORIES, TRUEBRO, LAVGUARD OR EQUAL.
2. PROVIDE MIXING VALVES FOR ALL HAND WASHING SINKS, SYMMONS 5-210-CK OR EQUAL.
3. SEE ARCHITECTURAL DOCUMENTS FOR EXACT FIXTURE LOCATION AND MOUNTING HEIGHTS.
4. PLUMBING FIXTURES ARE BY DIVISION 22 INCLUDING ROUGH-INS, DRAINS, SUPPLIES, TRIM AND FINAL CONNECTIONS.

GAS FIRED WATER HEATER SCHEDULE															
ID	LOCATION	STORAGE CAPACITY (GALLONS) EACH	GAS INPUT (MBTUHR) EACH	GAS TYPE	MIN. EFFICIENCY (%)	RECOVERY (GPH) EACH	INLET TEMP (°F)	OUTLET TEMP (°F)	FLUE SIZE (INCH) EACH		FLUE SIZE (INCH) EACH		BASIS OF DESIGN (OR EQUAL)	REMARKS	
									INTAKE	EXHAUST	VOLTS	PHASE			HZ
GWH-1 & GWH-1A	MECHANICAL ROOM B	100	199	NATURAL	96	230	40	140	5	5	120	1	60	A.O. SMITH CYCLONE BTH-199 (Mxi)	EXTEND FRESH AIR AND EXHAUST OUT TO ATMOSPHERE

NOTES:
1. COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
2. FLUE SIZES ARE NOT NECESSARILY THE EQUIPMENT CONNECTION SIZE. REFER TO MECHANICAL DRAWINGS FOR FLUE SIZES

DUPLEX DOMESTIC WATER BOOSTER PUMP SCHEDULE													
ID	LOCATION	SERVICE	GPM (EACH)	GPM (TOTAL)	HEAD (FT.)	MOTOR HP (TOTAL)	ELECTRICAL CHARACTERISTICS			NPSHA (FT.)	NPSHR (FT.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							VOLTAGE	PHASE	RPM				
DWBP-1 & 2	MECHANICAL ROOM	CW	65	130	140	3	208	3	3500	-	92	GRUNDFOS HYDRO MPC E CRE 10	PROVIDE WITH VARIABLE FREQUENCY DRIVES

NOTES:
1. ACTUAL CAPACITY (FLOW AND HEAD) OF THE DUPLEX PACKAGE IS TO BE VERIFIED UPON PERFORMING A WATER FLOW TEST AFTER CONNECTION OF THE WATER MAIN TO THE TRANSITION MAIN.
2. THE TOTAL DYNAMIC HEAD SPECIFIED ABOVE INCLUDES A 5 PSIG PRESSURE DROP THROUGH THE UNIT AND PRESSURE REDUCING VALVE. SELECT PRV SO AS NOT TO EXCEED SCHEDULED VALUE.
3. PERFORMANCE AND ELECTRICAL CHARACTERISTICS ARE TYPICAL FOR EACH PUMP.
4. BRAKE HORSEPOWER OF SELECTED UNITS SHALL NOT EXCEED VALUE AT DESIGN OPERATING CONDITIONS.
5. NET POSITIVE SUCTION HEAD REQUIRED (NPSHR) SHALL NOT EXCEED NET POSITIVE SUCTION HEAD AVAILABLE (NPSHA).

PIPING MATERIAL SCHEDULE	
PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION
SANITARY DRAIN PIPING (BELOW SLAB)	SCHEDULE 40 PVC AND FITTINGS
SANITARY DRAIN PIPING (ABOVE SLAB)	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
VENT PIPING	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
DOMESTIC WATER PIPING (ABOVE SLAB)	TYPE "L" COPPER PIPING
NATURAL GAS PIPING	SCHEDULE 40 BLACK STEEL PIPE, W/ CAST IRON FITTING

DOMESTIC WATER EXPANSION TANK SCHEDULE											
ID	WATER HEATER VOLUME (GALLONS)	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE (PSIG)	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							HEIGHT	DIAMETER			
ET-1	200	200	150	55	14	8.96	20"	17"	120	AMTROL THERM-X-TROL ST-447-C	

PUMP SCHEDULE									
ID	DESCRIPTION	GPM	HP	VOLTAGE	PHASE	RPM	BASIS OF DESIGN (OR EQUAL)		REMARKS
CP-1	HOT WATER CIRCULATING	6	14	115	1		GRUNDFOS MAGNA3		IN-LINE

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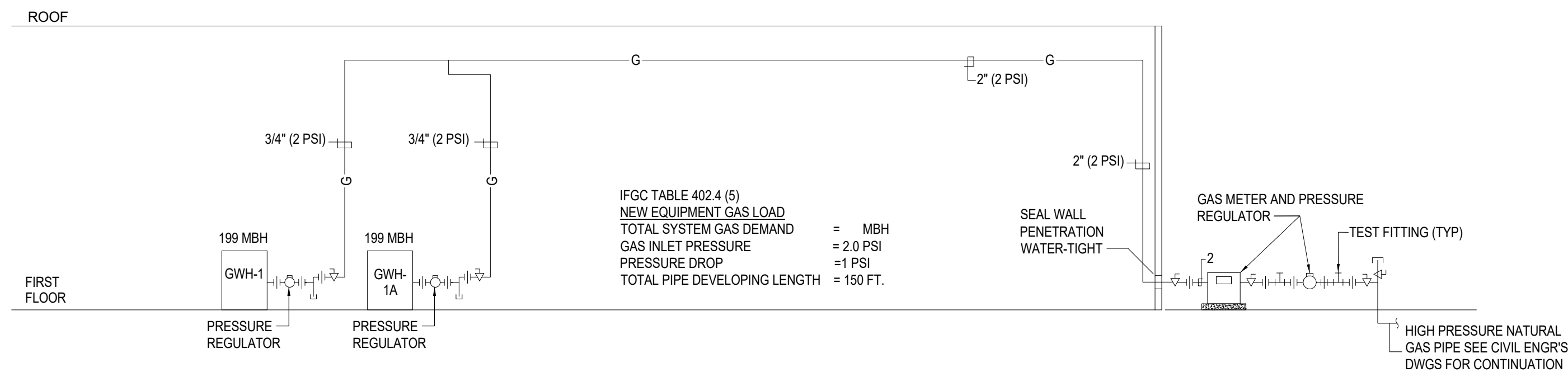
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PLUMBING SCHEDULES

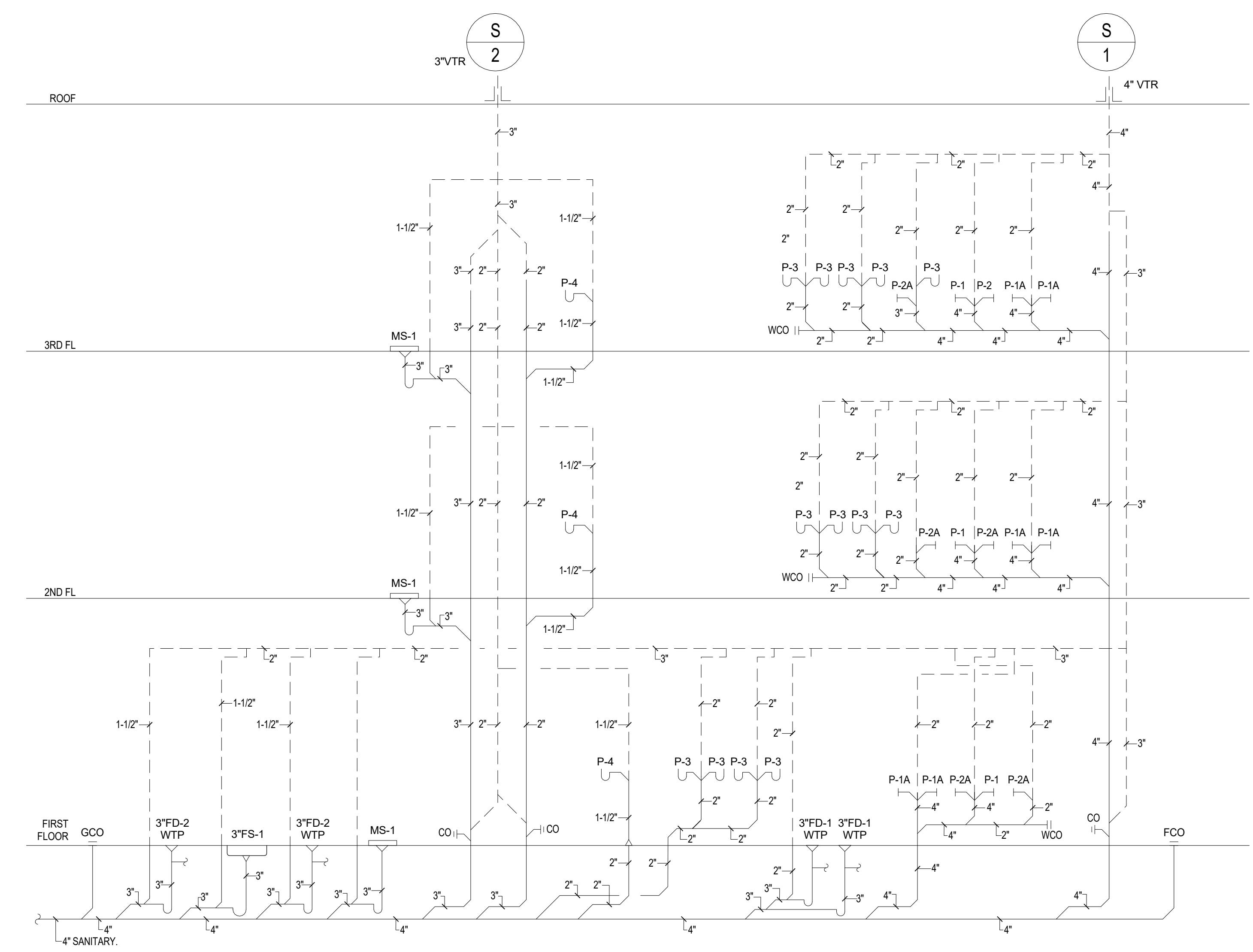
P401

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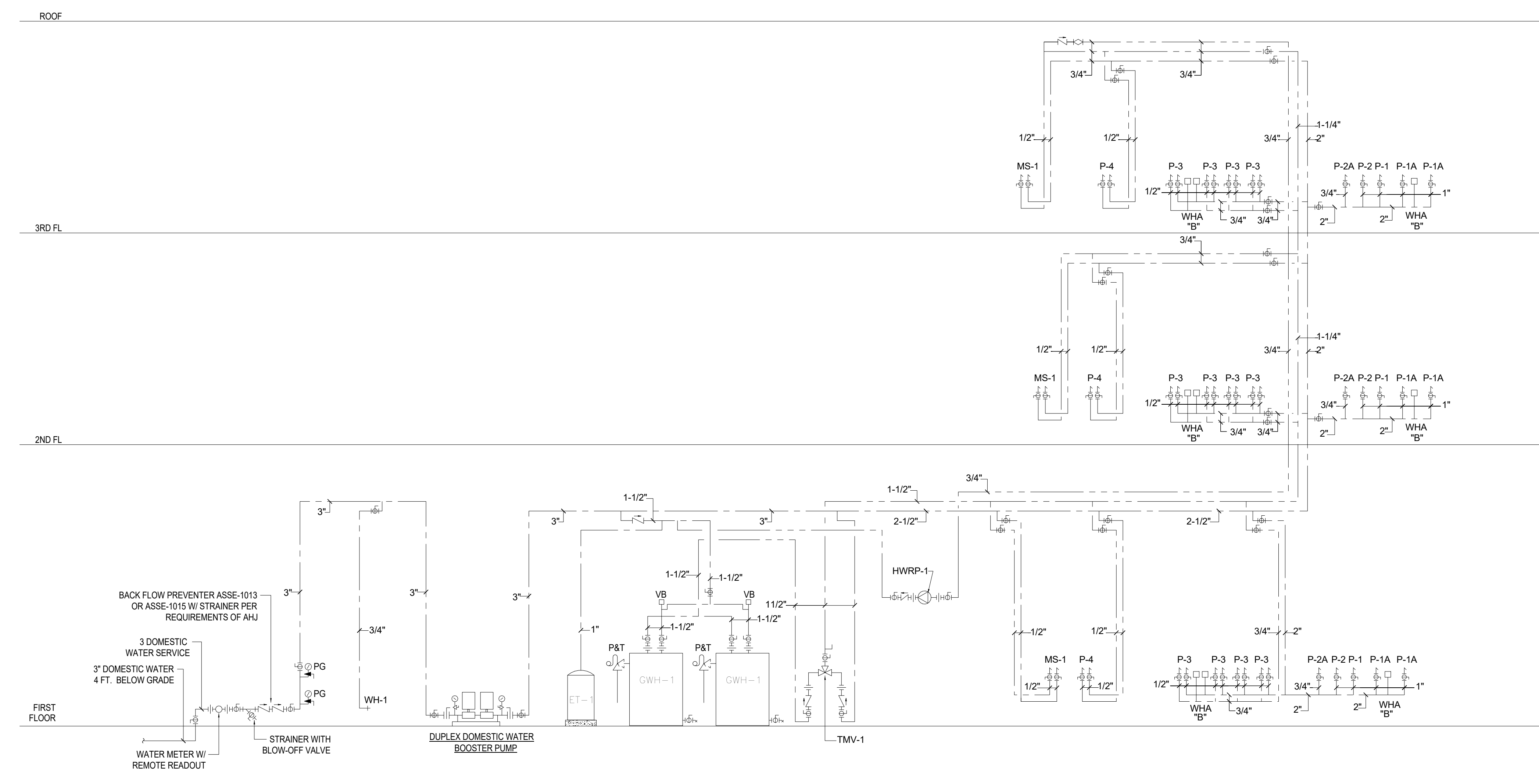
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3 OFFICE BLDG GAS RISER DIAGRAM
1/4" = 1'-0"



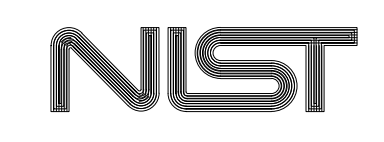
1 OFFICE BLDG SANITARY RISER DIAGRAM
1/4" = 1'-0"



2 OFFICE BLDG WATER RISER DIAGRAM
1/4" = 1'-0"

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SANITARY, WATER & GAS RISER DIAGRAMS

P501

DWG. P501

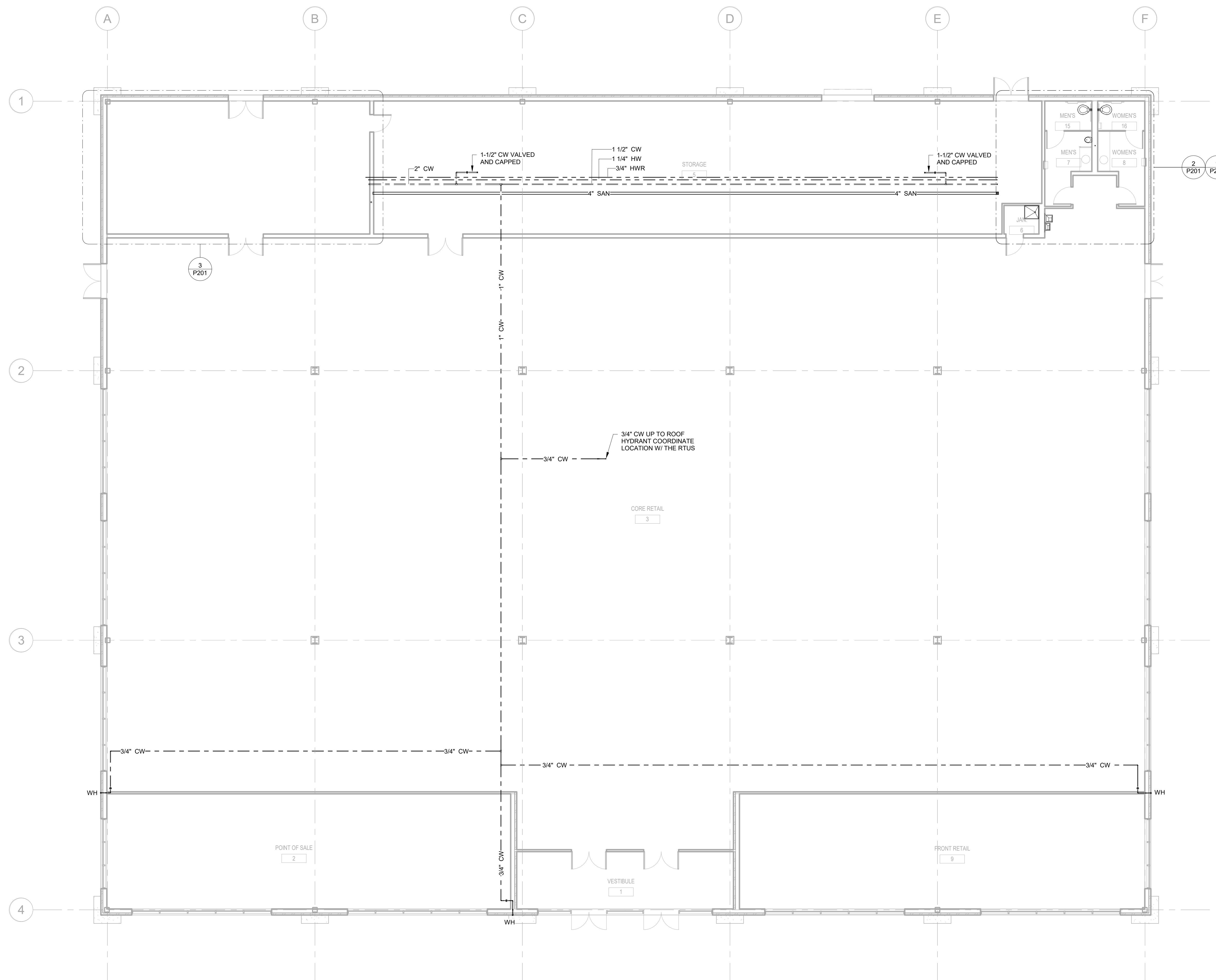
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																			PROJECT/ W.O. #

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REVISION	DESCRIPTION	BY	DATE
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GENERAL NOTES

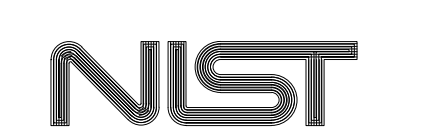
- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



1 PLUMBING FLOOR PLAN - WATER & SANITARY
1/8" = 1'-0"

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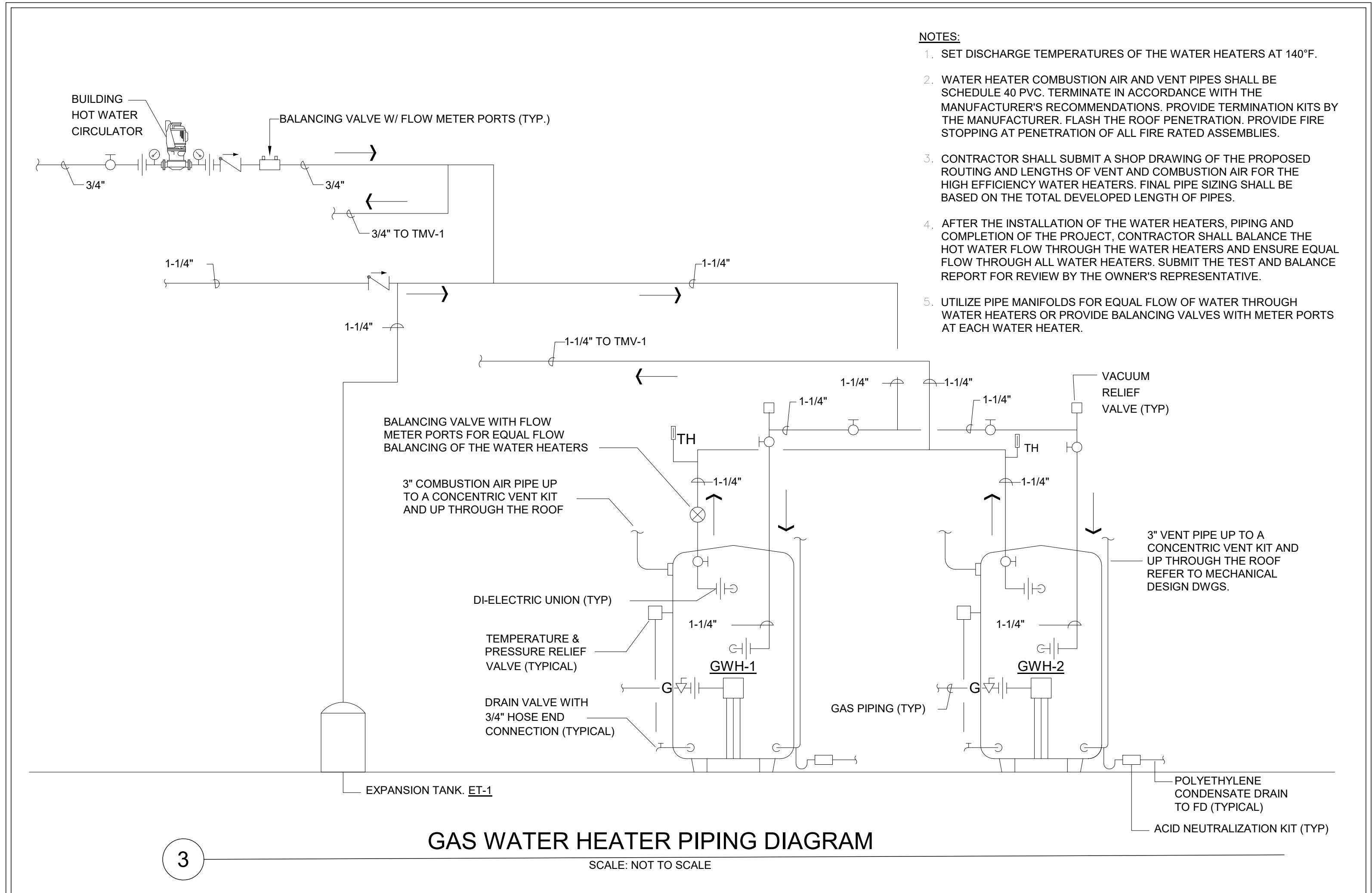
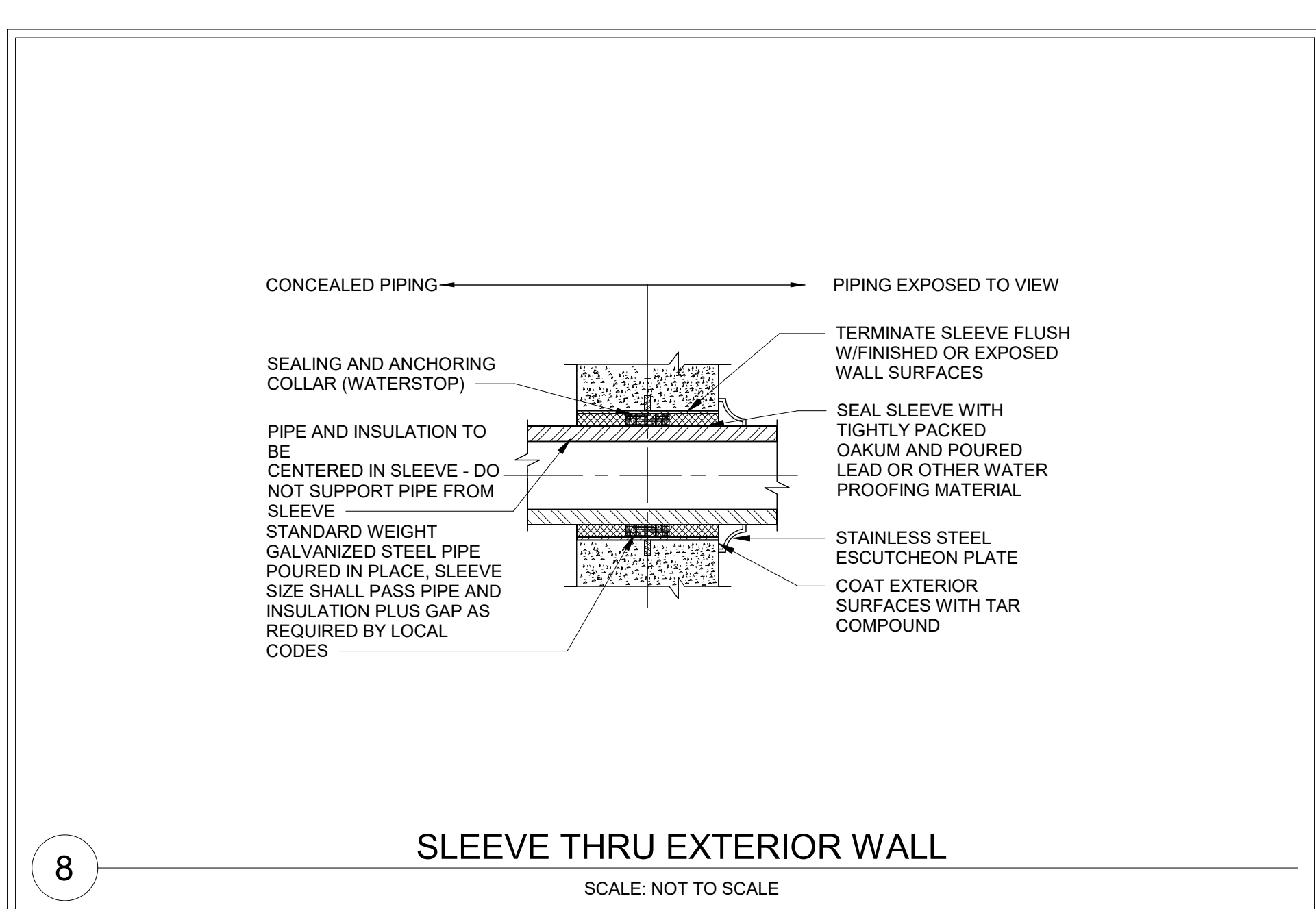
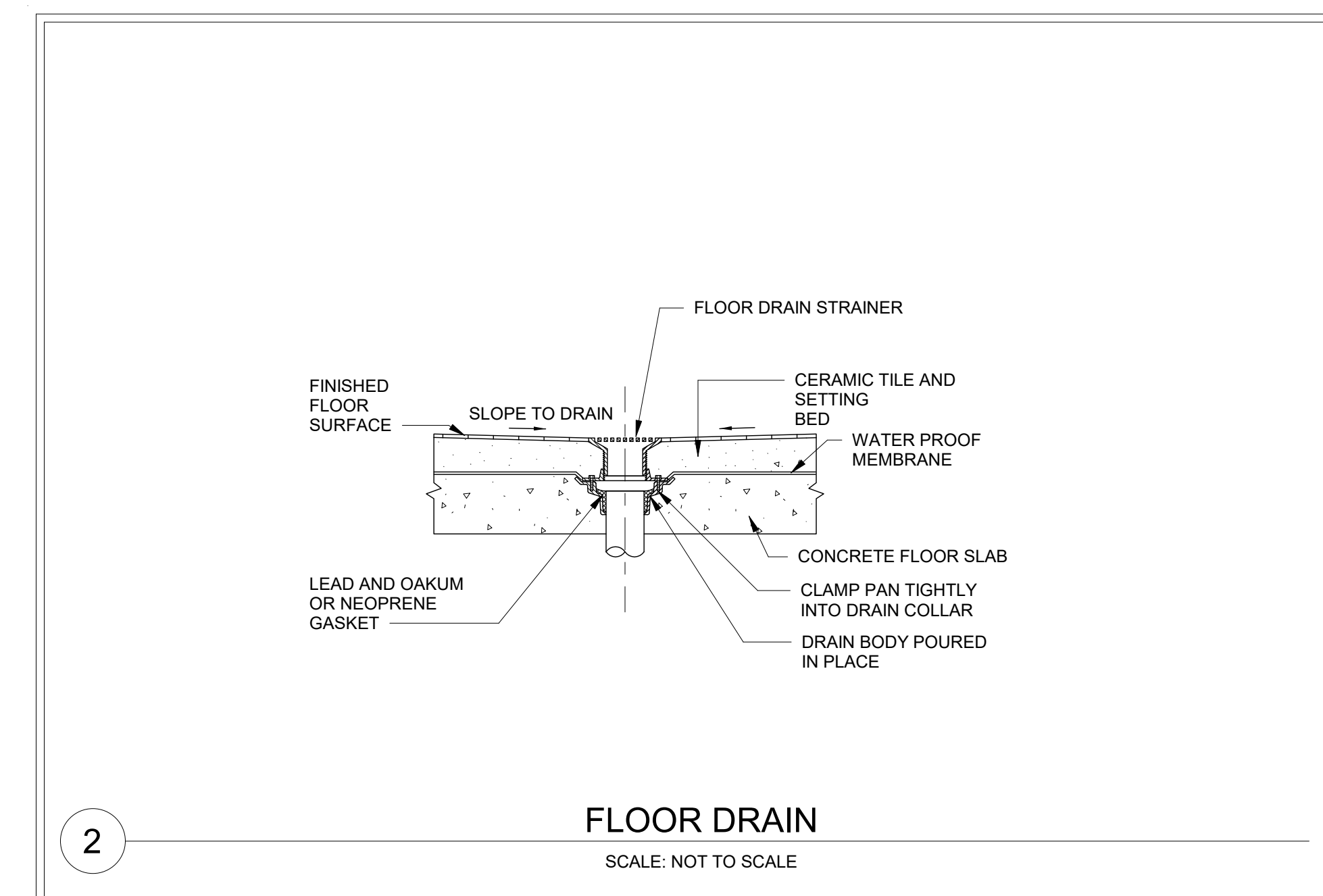
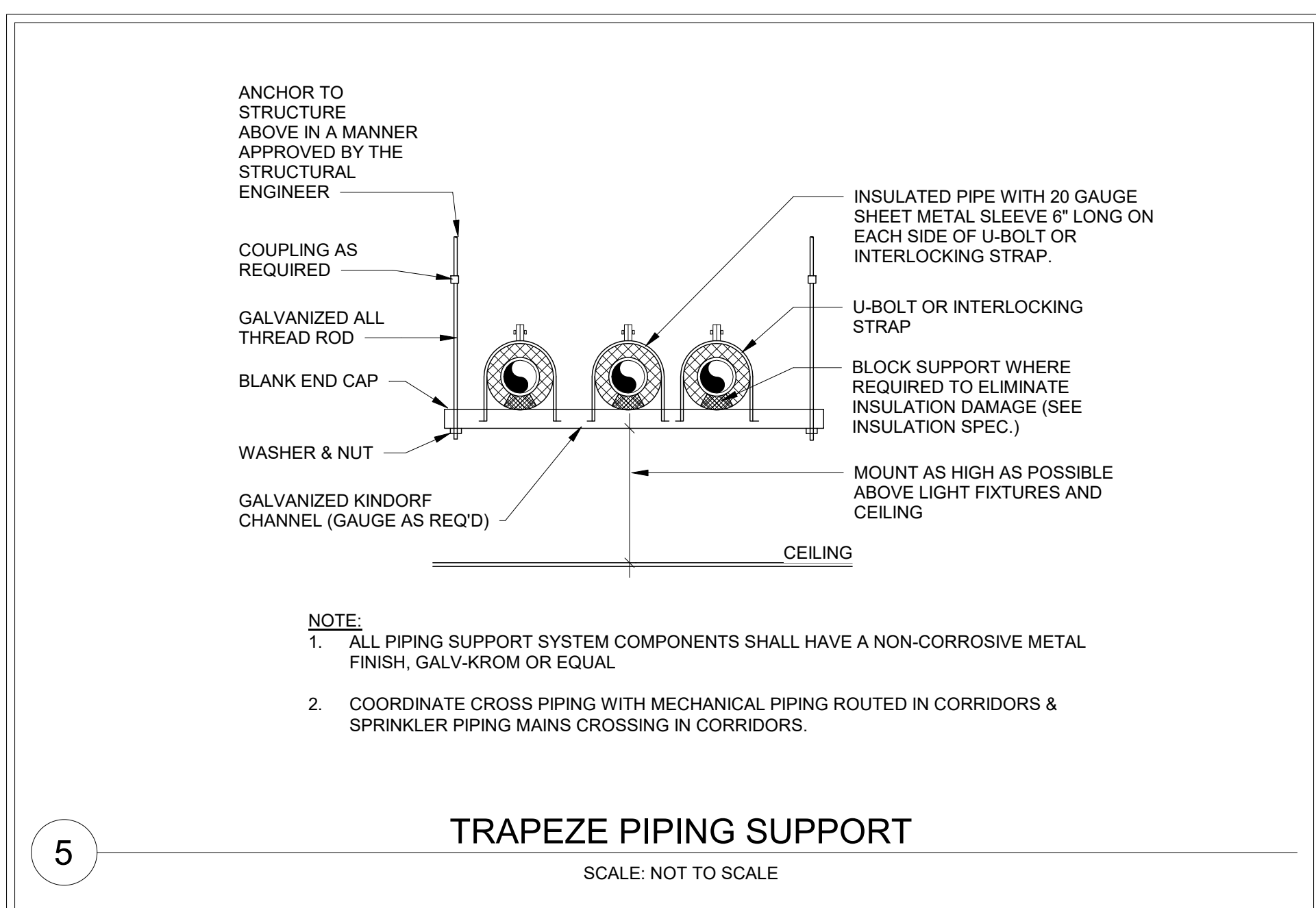
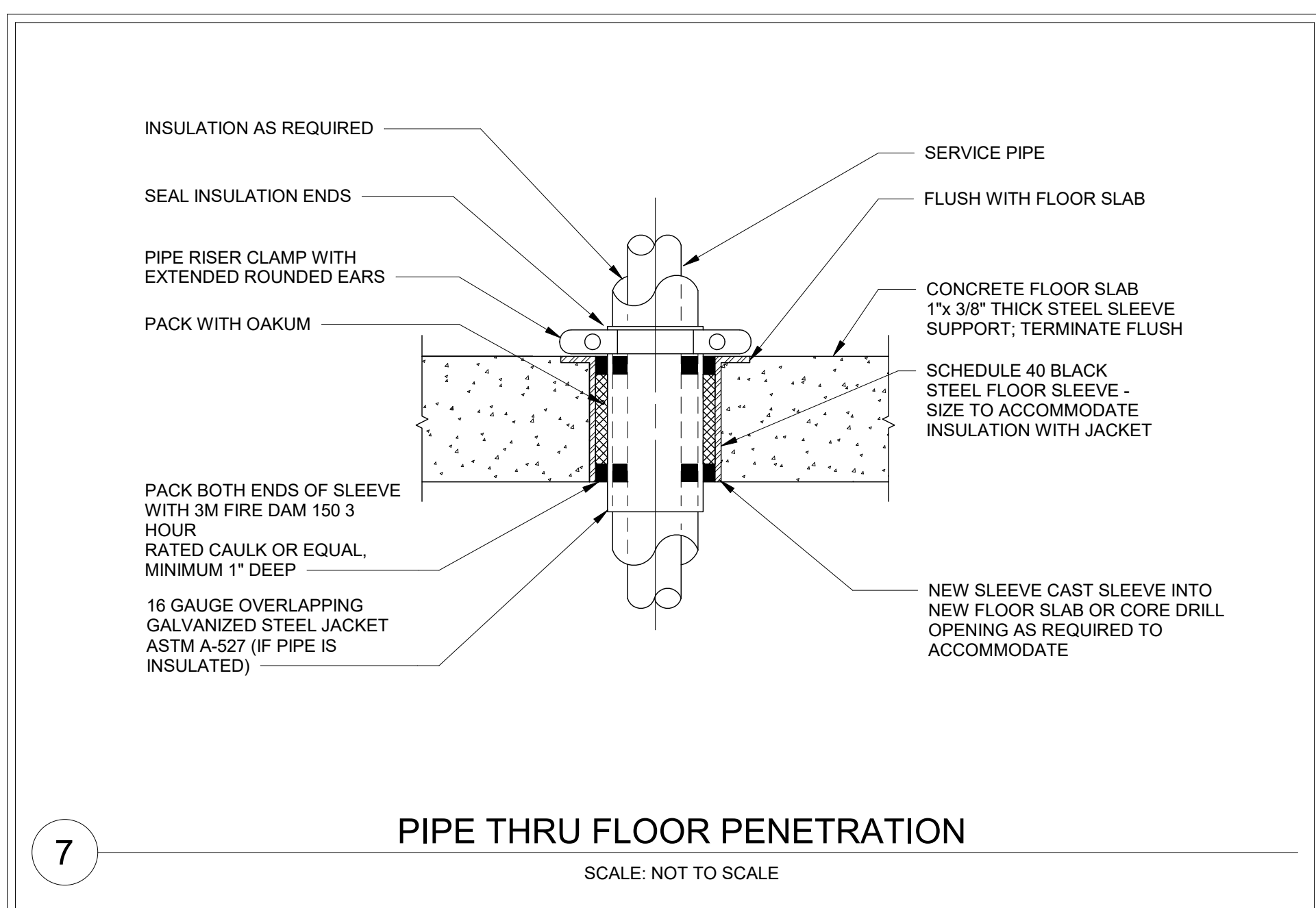
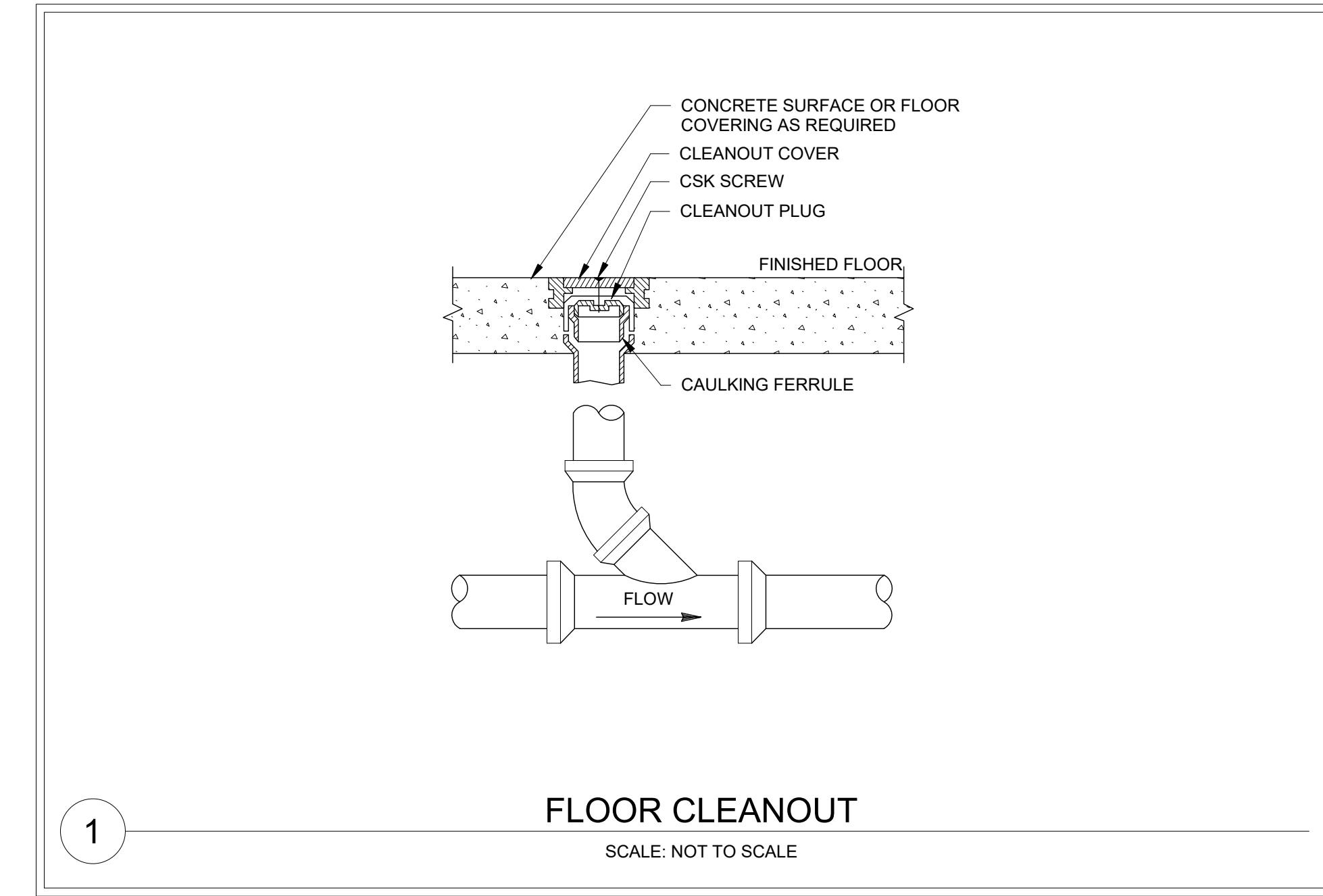
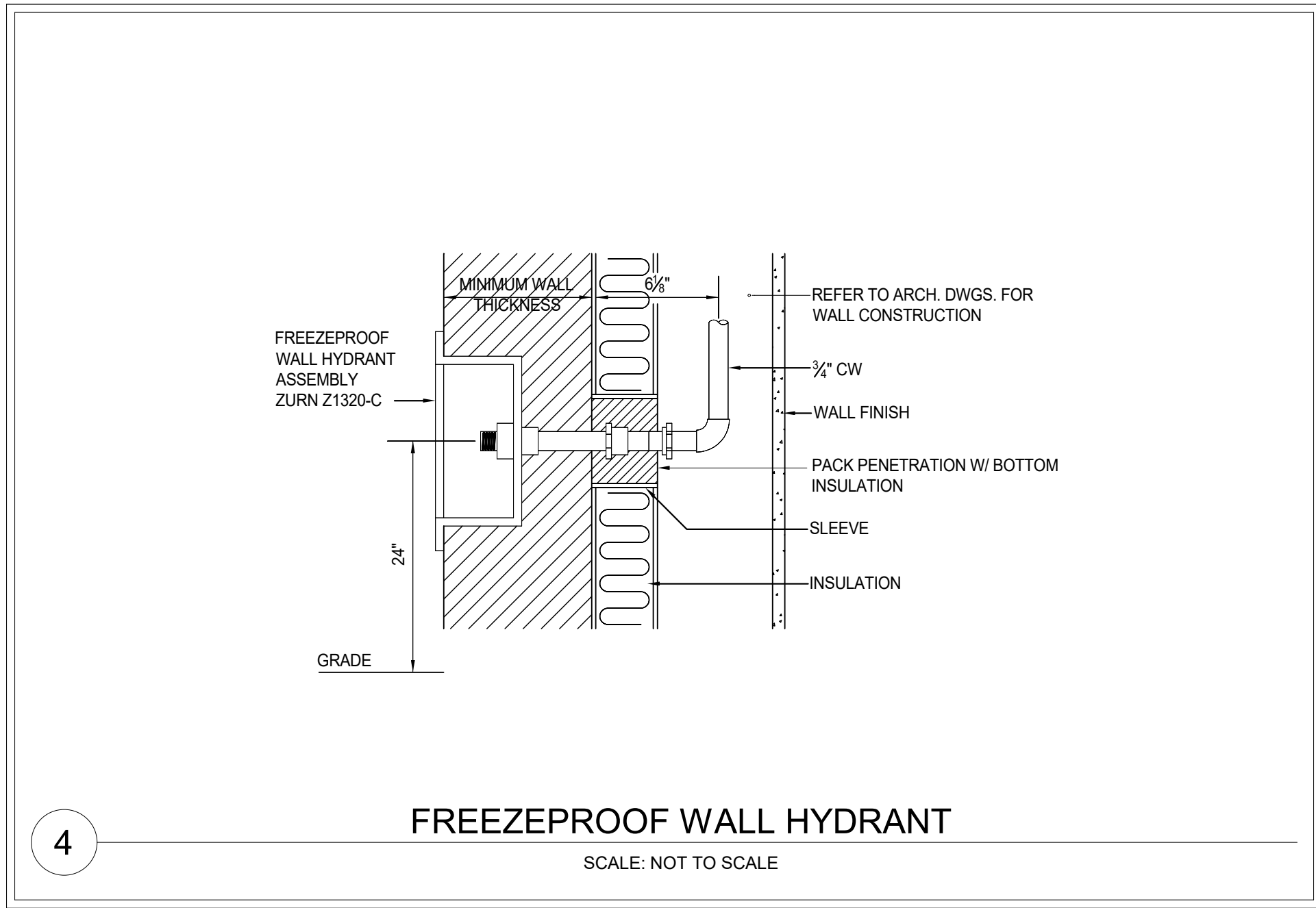
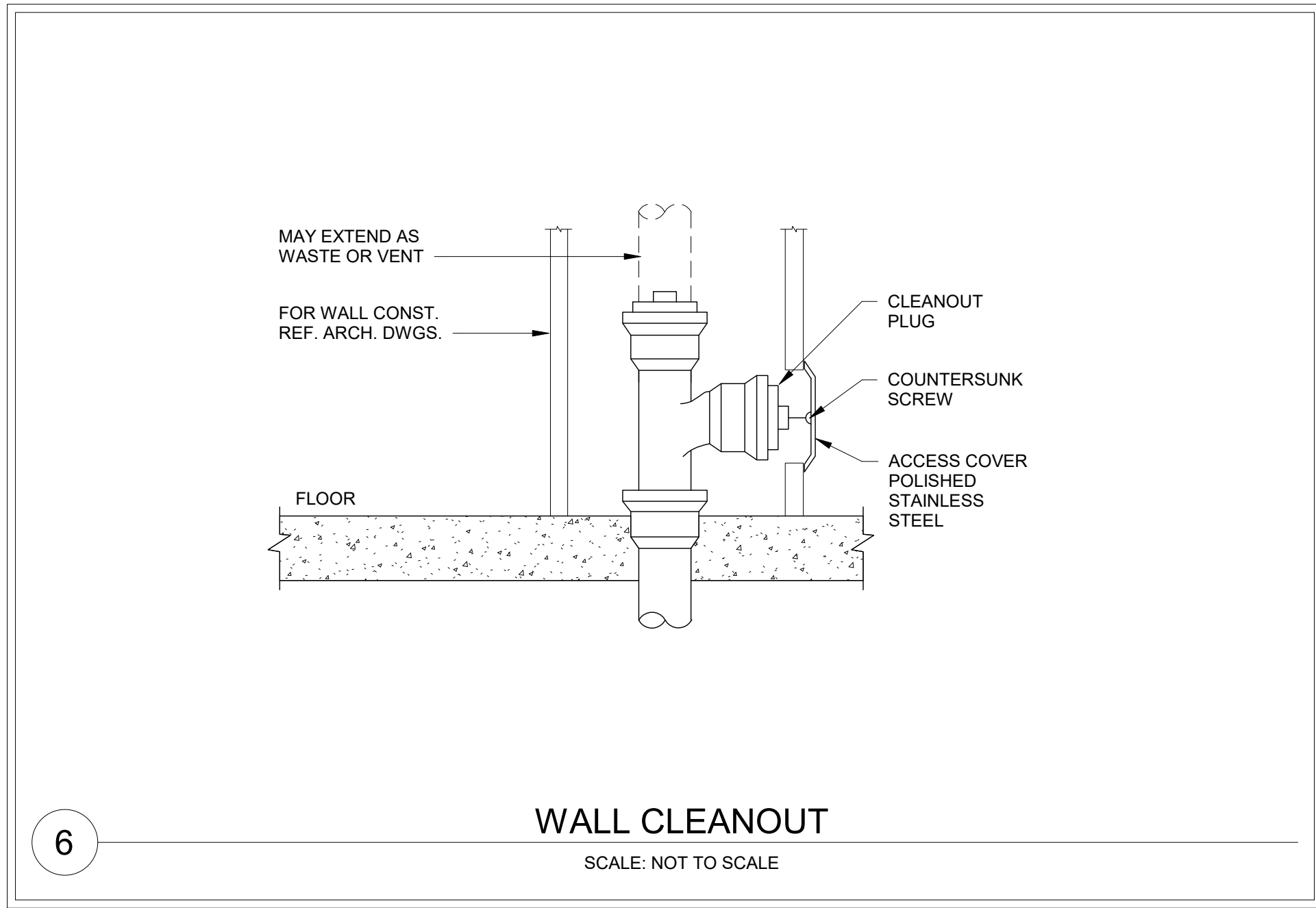
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PLUMBING FLOOR PLAN

P101

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- NOTES:**
1. SET DISCHARGE TEMPERATURES OF THE WATER HEATERS AT 140°F.
 2. WATER HEATER COMBUSTION AIR AND VENT PIPES SHALL BE SCHEDULE 40 PVC. TERMINATE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE TERMINATION KITS BY THE MANUFACTURER. FLASH THE ROOF PENETRATION. PROVIDE FIRE STOPPING AT PENETRATION OF ALL FIRE RATED ASSEMBLIES.
 3. CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ROUTING AND LENGTHS OF VENT AND COMBUSTION AIR FOR THE HIGH EFFICIENCY WATER HEATERS. FINAL PIPE SIZING SHALL BE BASED ON THE TOTAL DEVELOPED LENGTH OF PIPES.
 4. AFTER THE INSTALLATION OF THE WATER HEATERS, PIPING AND COMPLETION OF THE PROJECT, CONTRACTOR SHALL BALANCE THE HOT WATER FLOW THROUGH THE WATER HEATERS AND ENSURE EQUAL FLOW THROUGH ALL WATER HEATERS. SUBMIT THE TEST AND BALANCE REPORT FOR REVIEW BY THE OWNER'S REPRESENTATIVE.
 5. UTILIZE PIPE MANIFOLDS FOR EQUAL FLOW OF WATER THROUGH WATER HEATERS OR PROVIDE BALANCING VALVES WITH METER PORTS AT EACH WATER HEATER.

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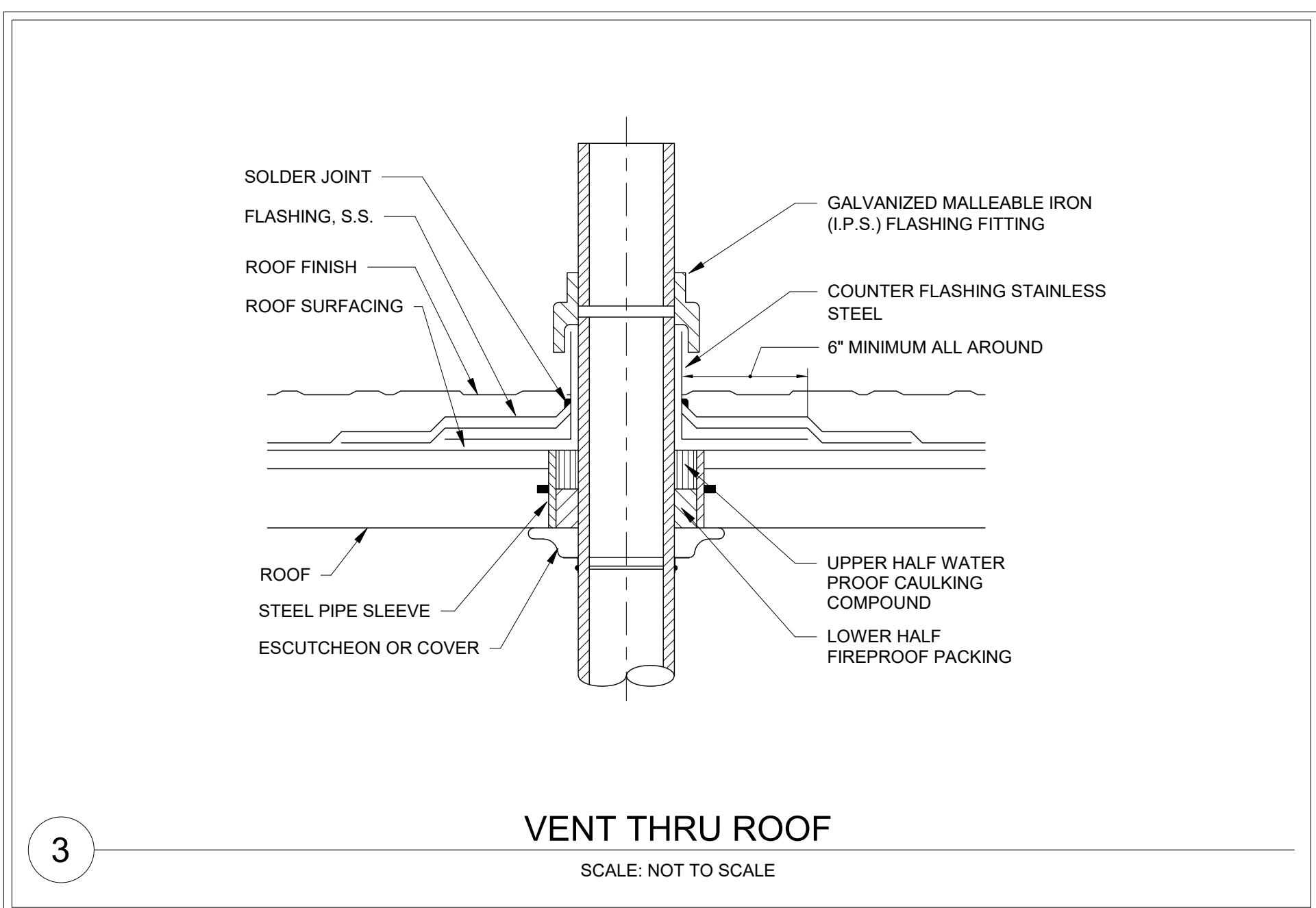
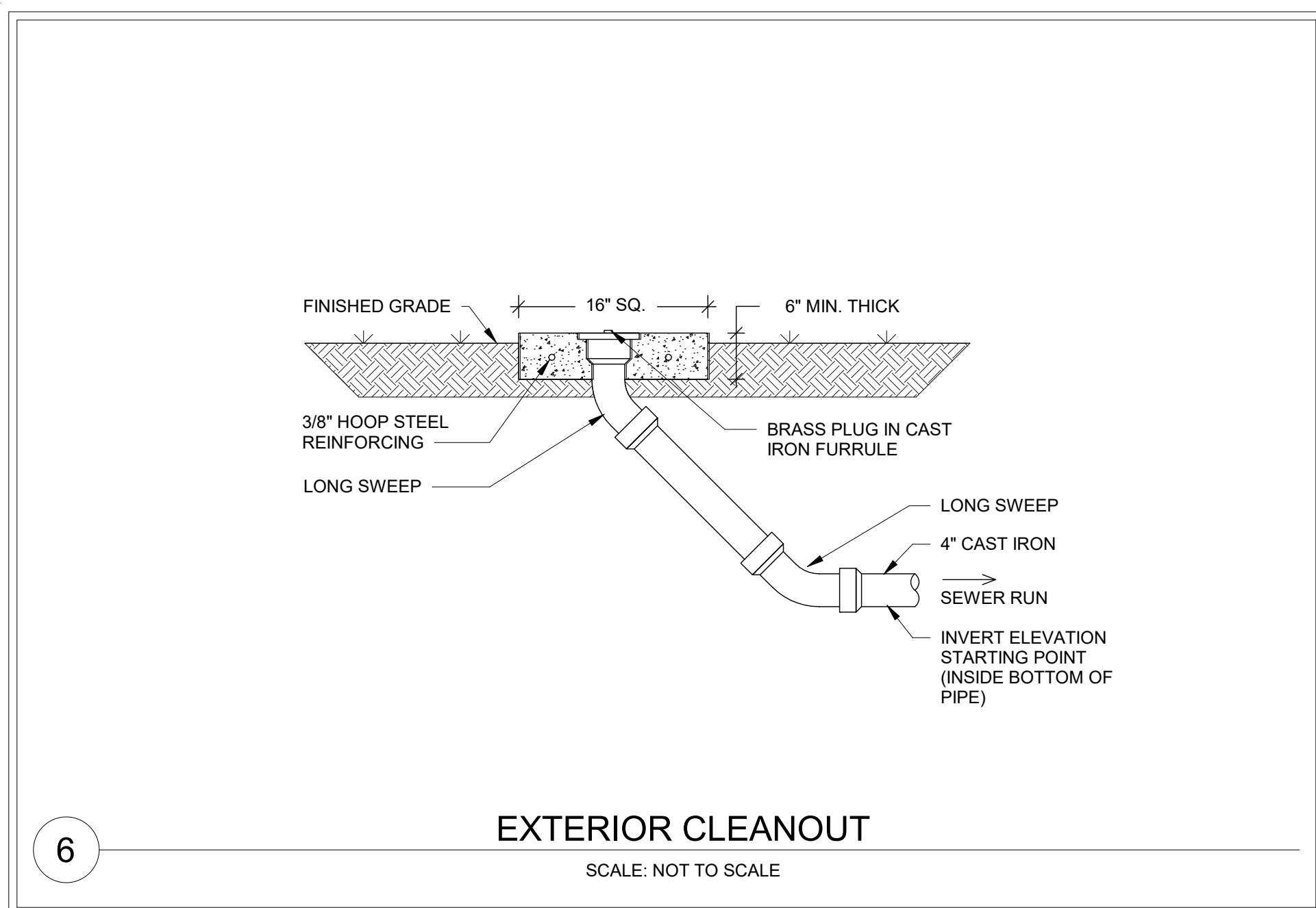
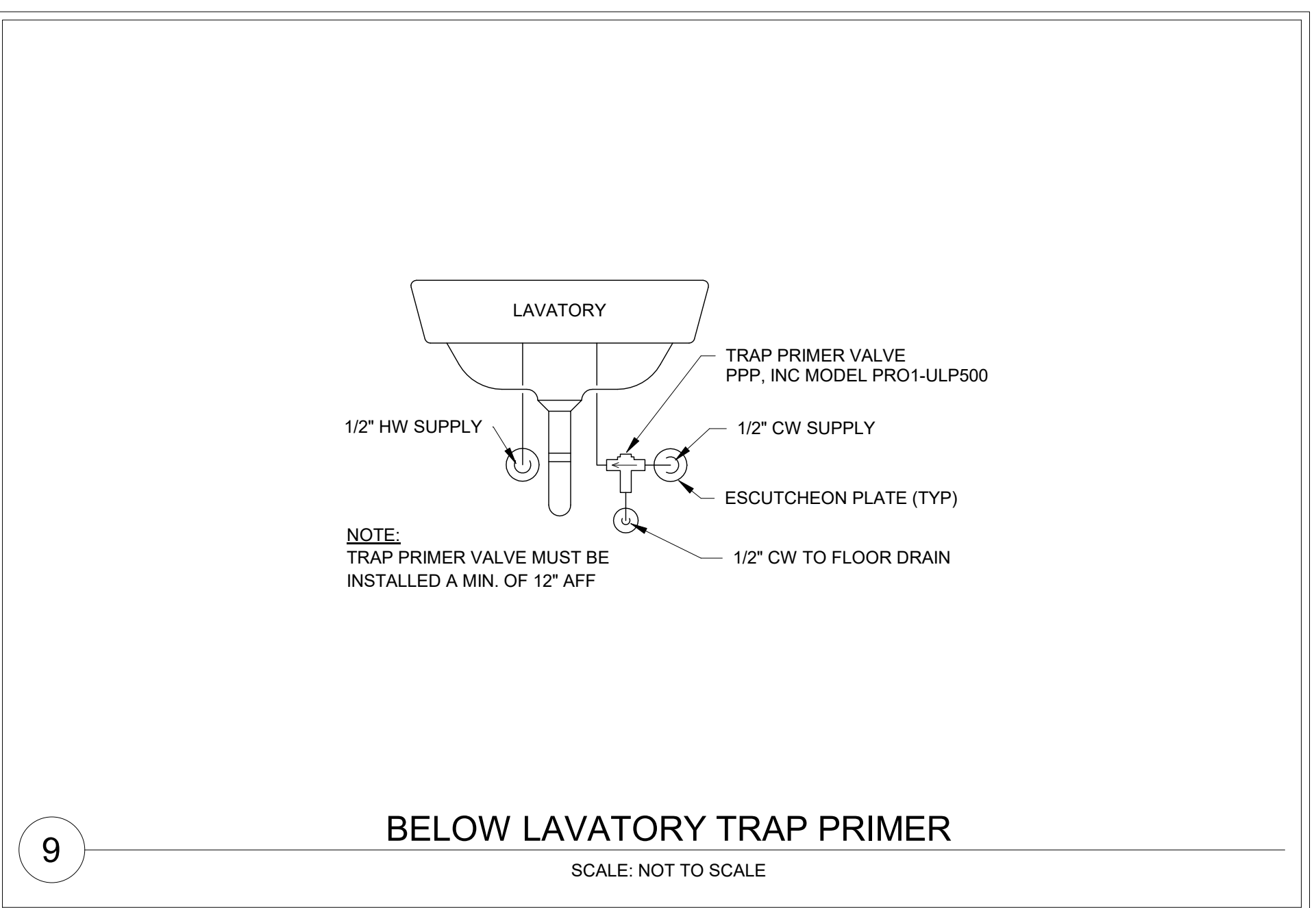
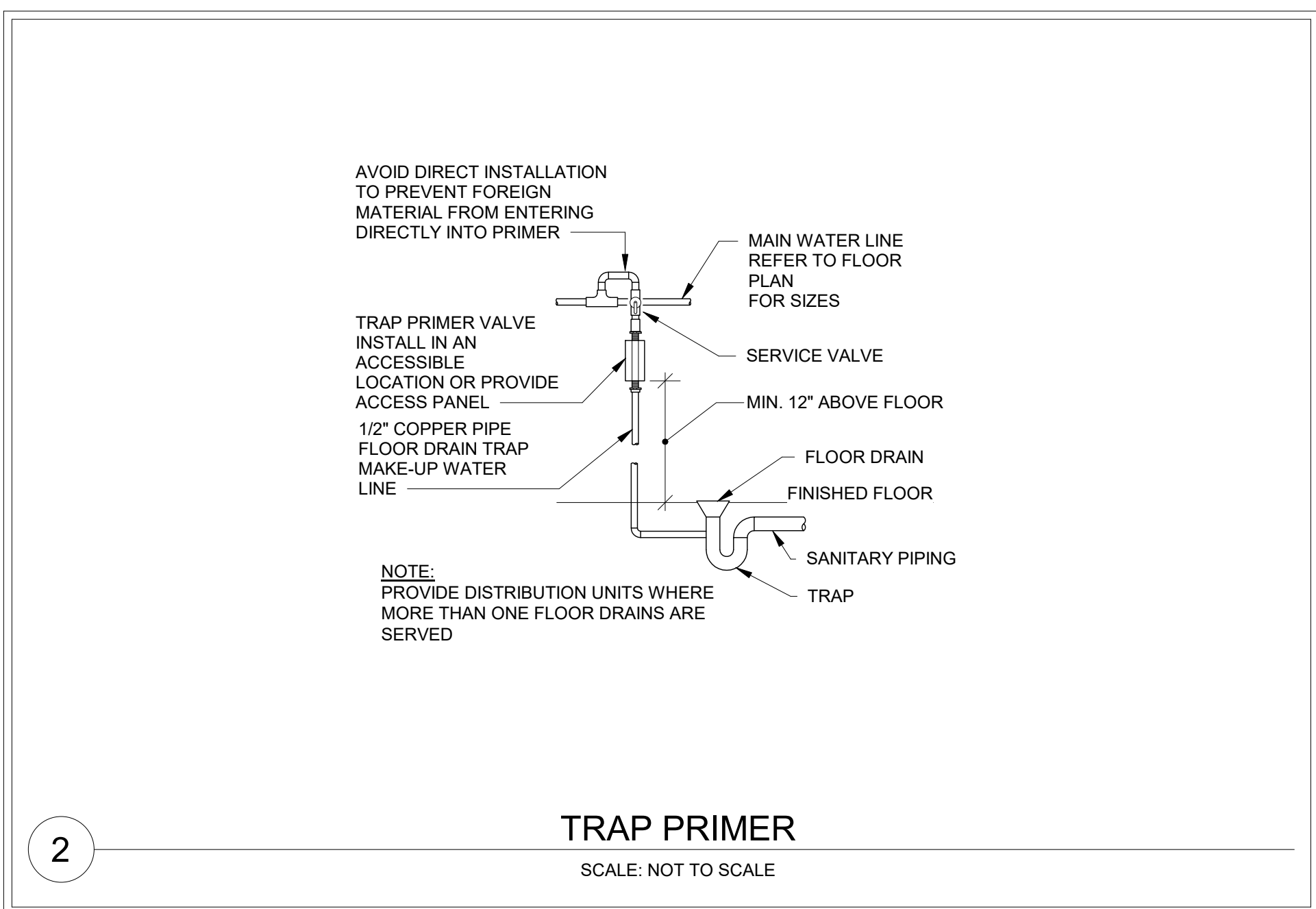
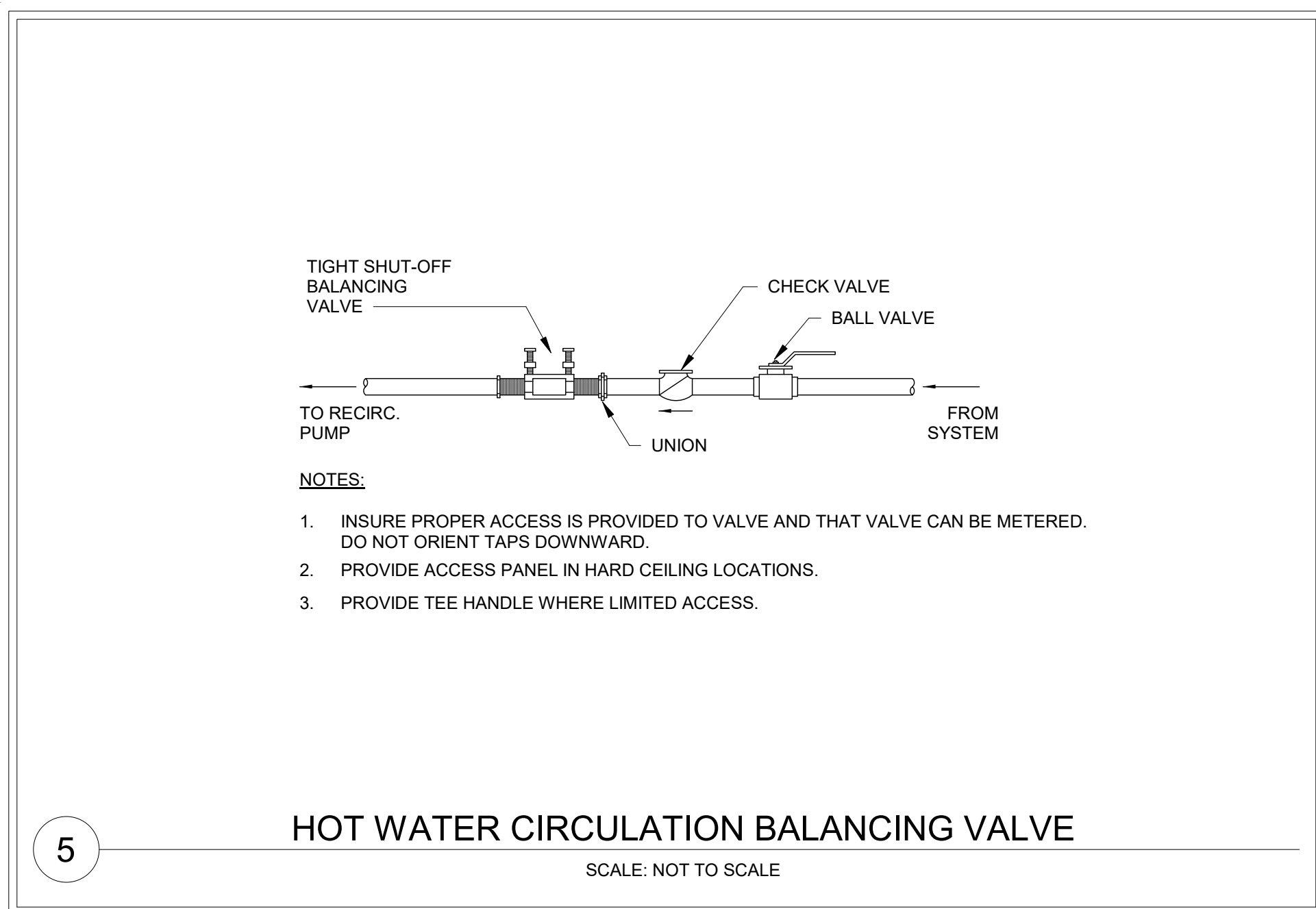
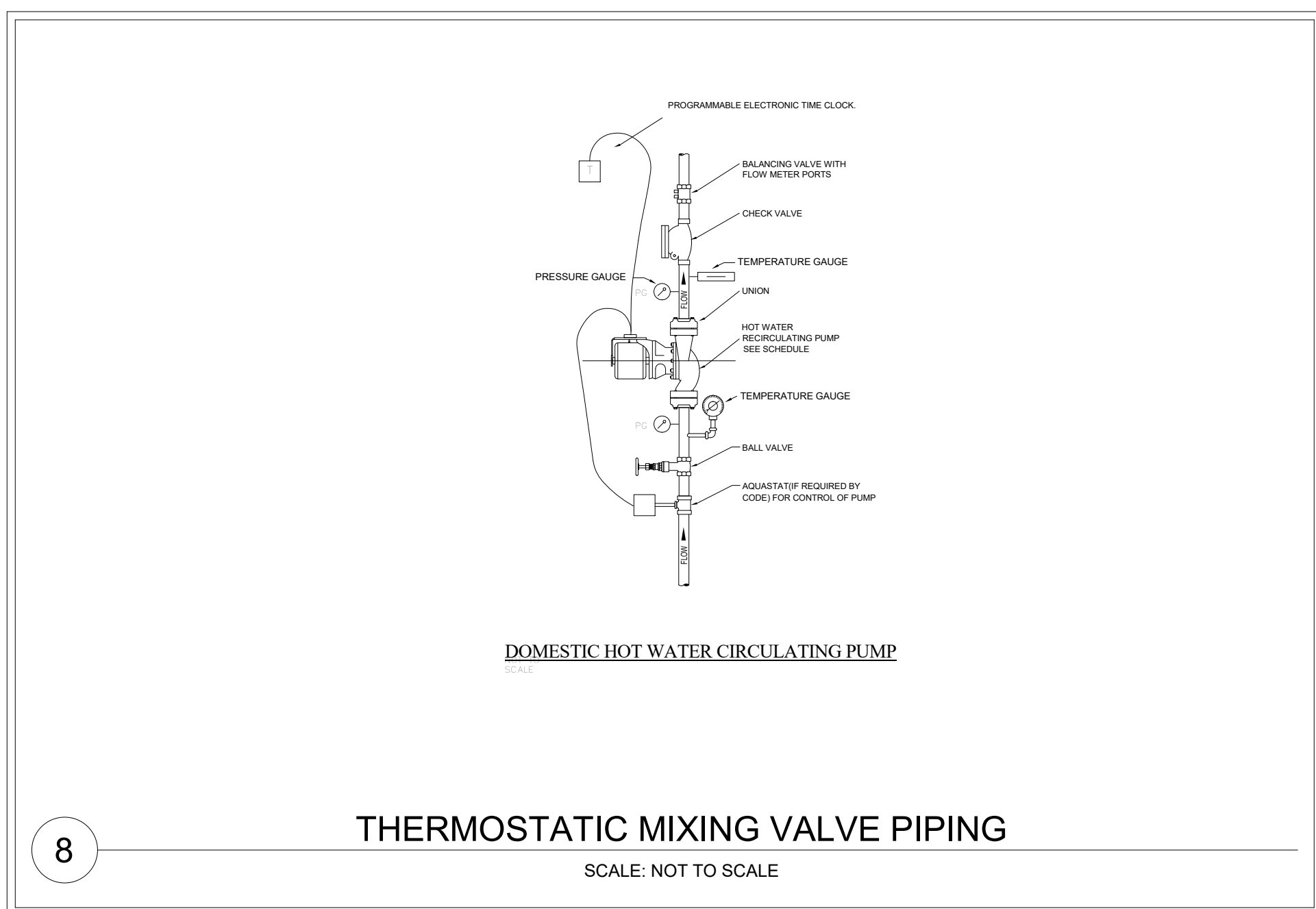
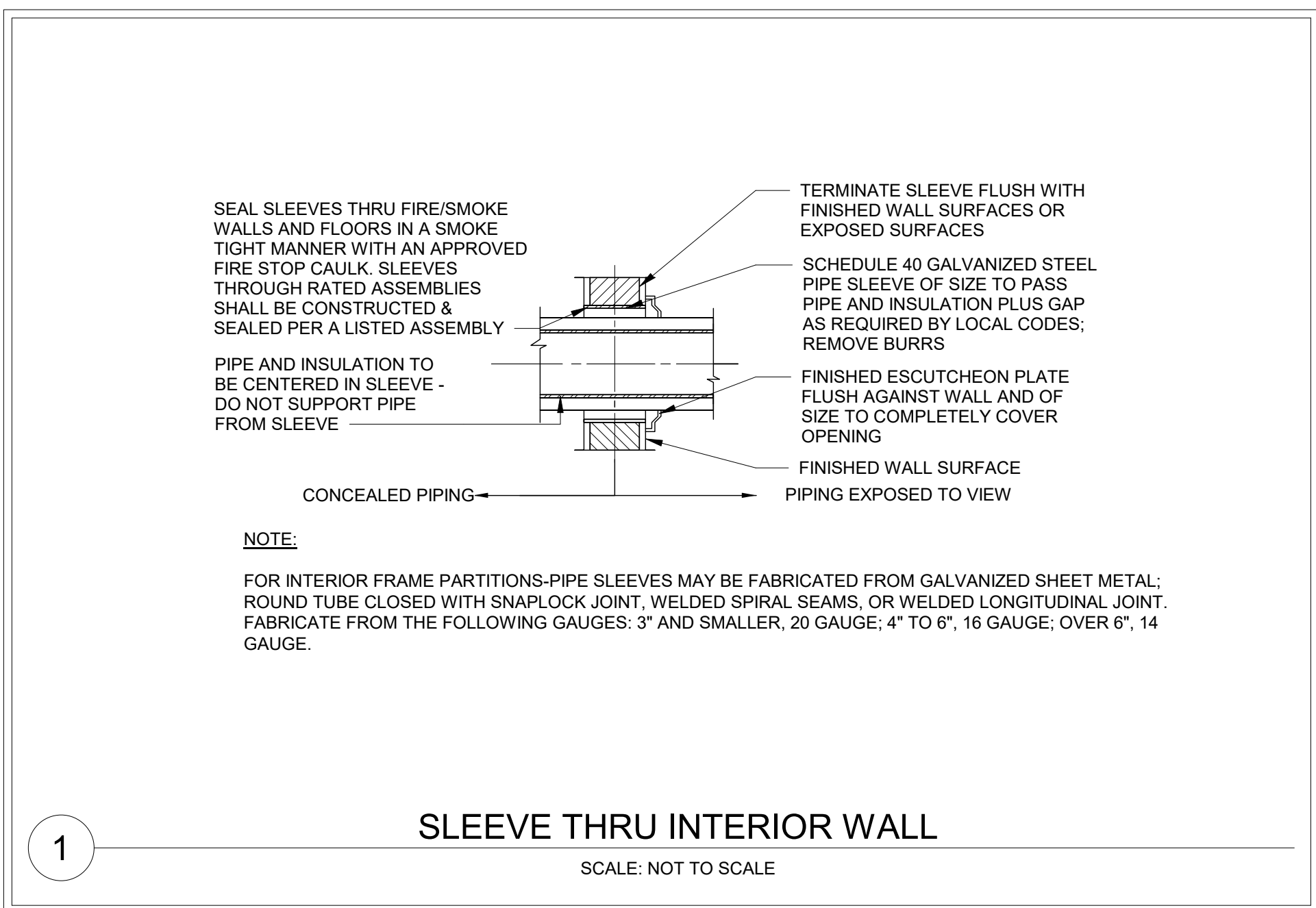
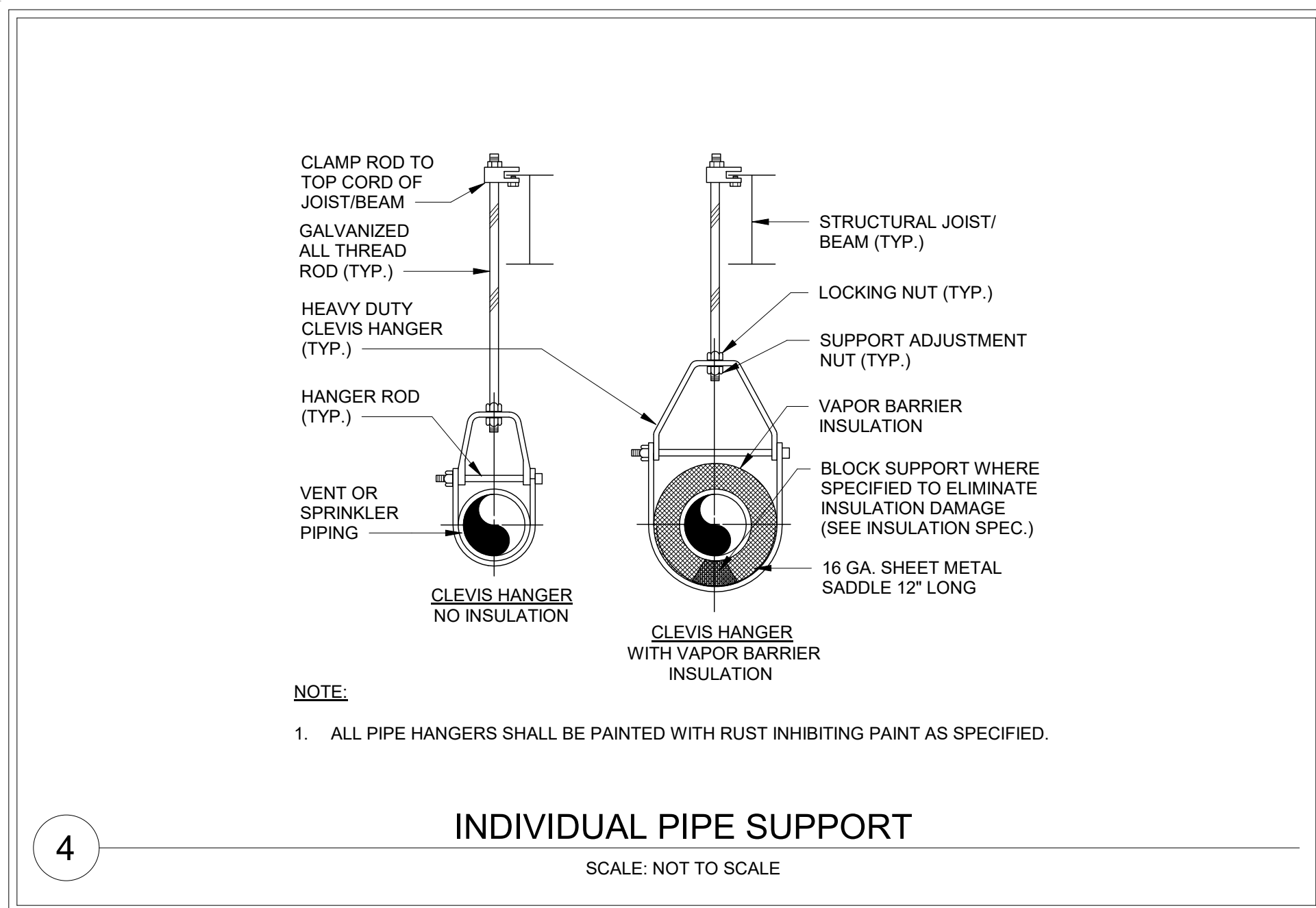
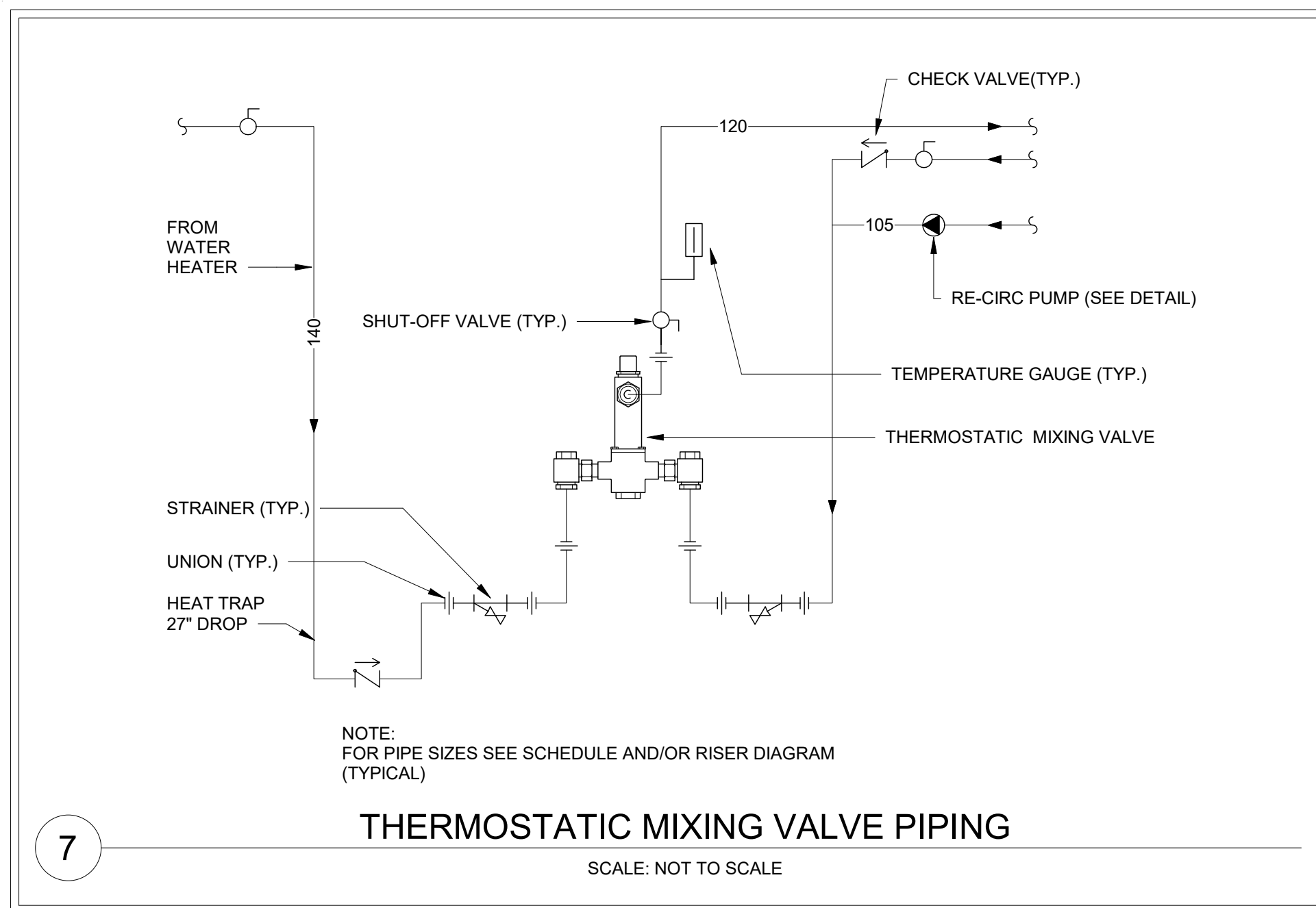
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PLUMBING DETAILS

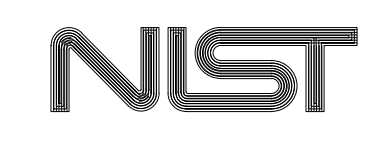
P301

DWG. P301

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PLUMBING DETAILS

P302

WATER HAMMER ARRESTOR SCHEDULE				
PDI #	MIN-MAX FIXTURE UNIT CAPACITY	CONNECTION SIZE		MANUFACTURER & MODEL NUMBER (OR EQUAL)
"A"	1-11	1/2"		PPP, INC. MODEL SC-500
"B"	12-32	3/4"		PPP, INC. MODEL SC-750
"C"	33-60	1"		PPP, INC. MODEL SC-1000
"D"	61-113	1-1/4"		PPP, INC. MODEL SC-1250
"E"	114-154	1-1/2"		PPP, INC. MODEL SC-1500
"F"	155-330	2"		PPP, INC. MODEL SC-2000

NOTES:
1. AIR CHAMBERS ARE NOT ACCEPTABLE EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED
2. SIZE PER MANUFACTURER'S RECOMMENDATIONS
3. PROVIDE ACCESS PANELS WHERE REQUIRED TO BE IN CONCEALED LOCATIONS

SLOPE OF HORIZONTAL DRAINAGE PIPE	
SIZE (INCHES)	MINIMUM SLOPE (INCH PER FOOT)
2-1/2 OR LESS	1/4
3 TO 6	1/8
8 OR LARGER	1/16

TABLE 704.1 OF THE INTERNATIONAL PLUMBING CODE 2018

TRAP PRIMING STATION SCHEDULE				
ID	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)
	AMPS	VOLTAGE	PHASE	
TSP-1	5	120	1	PPP INC. PTS SERIES, SURFACE MOUNTED

PIPING MATERIAL SCHEDULE	
PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION
SANITARY DRAIN PIPING (BELOW SLAB)	SCHEDULE 40 PVC AND FITTINGS
SANITARY DRAIN PIPING (ABOVE SLAB)	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
VENT PIPING	STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
DOMESTIC WATER PIPING (ABOVE SLAB)	TYPE "L" COPPER PIPING
NATURAL GAS PIPING	SCHEDULE 40 BLACK STEEL PIPE, W/ CAST IRON FITTING

CLEANOUT SCHEDULE		
ID	APPLICATION	BASIS OF DESIGN (OR EQUAL)
CO	FINISHED FLOORS	ZURN Z1400
	CERAMIC & TERRAZO	ZURN Z1400-Z
	UNFINISHED FLOORS	ZURN Z1400-HD
WCO	LINE CLEANOUT	ZURN Z1468
	STACK CLEANOUT	ZURN Z1446
ECO	OUTSIDE AREAS	ZURN Z1400-HD

NOTES:
1. INSTALL ECO IN 24x24x4 THICK CONCRETE PAD, TOP OF PAD ELEVATION TO BE 2" ABOVE FINISHED GRADE.
2. PROVIDE ALL CLEANOUTS WITH WIDE ANCHOR FLANGE & CLAMPS DEVICE. ATTACH CLEANOUTS TO MEMBRANE IN FLOOR. WHEN CLEANOUTS ARE LOCATED IN NONMEMBRANE FLOORS, THEY SHALL BE FLASHED IN ACCORDANCE WITH THE SPECIFICATIONS. PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS COVERS.

PLUMBING FIXTURE SCHEDULE							
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	CONNECTION SIZE				REMARKS
			WASTE	VENT	CW	HW	
P-1	WATER CLOSET	FLOOR MOUNTED, FLUSH TANK, TWO PIECE ELONGATED BOWL, AMERICAN STANDARD 270FA001 020 WITH ELONGATED SOLID PLASTIC SEAT, CLOSED FRONT, 3/8" CHROME PLATED SUPPLY & STOP WAX BOWL RING & WATER CLOSET BOLTS TRIP LEVER TO BE ON THE OPPOSITE, WHITE COLOR	3"	2"	1"	---	1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODES
P-2	LAVATORY	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"x14"x15.5", AMERICAN STANDARD OVAL 0496 221 020 WITH DELTA FAUCET LAHARA COLLECTION, MODEL 528-55MFL-DST DIAMOND COATED CERAMIC CARTRIDGE SINGLE LEVER WITH METALLIC POP-UP DRAIN, 2.2 GPM AT 60PSI, STAINLESS STEEL FINISH, PROVIDE CAST BRASS TRAP & SUPPLIES & STOPS, STAINLESS STEEL FINISH	1-1/2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES
P-3	TUB & SHOWER	WHITE CAST IRON, 60"x30"x14", WITH ENAMEL FINISH, KOHLER VILLAGER MODEL K-715 WITH DELTA THERMOSTATICALLY CONTROLLED SHOWER VALVE, STAINLESS STEEL FINISH, SCALD-GUARD, METAL LEVER HANDLE, SHOWER ARM, SHOWER HEAT, DIVERTER VALVE	2"	1-1/2"	1/2"	1/2"	2.5 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES
P-4	SINK	SINGLE BASIN, STAINLESS STEEL SINK, 25"x21"x6" DROP 18 GAUGE WITH SOUND DAMPENING, ELKAY DSESR12721 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER, KRAUS KPF-16105 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STEEL FINISH	2"	1-1/2"	1/2"	1/2"	2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES. PROVIDE A 1/2 HP GARBAGE DISPOSAL
P-5	WASH BOX	WASH BOX WITH WATER HAMMER ARRESTORS	2"	1-1/2"	1/2"	1/2"	
P-6	LAUNDRY SINK	FIBERGLASS, TWO-BOWL, FIBERGLASS MIX, 24"x40"x13-3/2" DEEP BOWL, FREESTANDING, FLOOR-FIT MODEL WFLTD100, WITH DECK MOUNTED FAUCET A.1	2"	1-1/2"	1/2"	1/2"	
WH-1	WALL HYDRANT	JOSAM 71300, ENCASED NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER AND KEY LOCK, INSTALL WALL HYDRANT 18" AFF.	--	--	3/4"	--	
HB-1	HOSE BIBB	ZURN Z1333, INTERIOR RECESSED WALL HYDRANT WITH INTEGRAL VACUUM BREAKER AND 3/4" HOSE CONNECTION	--	--	3/4"	--	

GAS FIRED WATER HEATER SCHEDULE															
ID	LOCATION	STORAGE CAPACITY (GALLONS) EACH	GAS INPUT (MBTUHR) EACH	GAS TYPE	MIN. EFFICIENCY (%)	RECOVERY (GPH) EACH @ 100°F DELTA T	INLET TEMP (°F)	OUTLET TEMP (°F)	FLUE SIZE (INCH) EACH		FLUE SIZE (INCH) EACH			BASIS OF DESIGN (OR EQUAL)	REMARKS
									INTAKE	EXHAUST	VOLTS	PHASE	HZ		
GW-1 & GW-2	MECHANICAL ROOM	60	120	NATURAL	97	140	40	140	3	3	120	1	60	A.O. SMITH CYCLONE, 5TH-120 Mx	EXTEND FRESH AIR AND EXHAUST OUT TO ATMOSPHERE

NOTES:
1. GAS BURNER SHALL BE CAPABLE OF OPERATING ON A MIN. GAS PRESSURE OF 3.5 INCHES WATER GAUGE AND A MAX. GAS PRESSURE OF 14 INCHES WATER GAUGE.
2. FLUE SIZES ARE NOT NECESSARILY THE EQUIPMENT CONNECTION SIZE. REFER TO MECHANICAL DRAWINGS FOR FLUE SIZES

DOMESTIC WATER EXPANSION TANK SCHEDULE											
ID	WATER HEATER VOLUME (GALLONS)	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE (PSIG)	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							HEIGHT	DIAMETER			
ET-1	200	140	150	70	16.5	11	25"	15"	50	AMTROL THERM-X-TROL ST-35-CL	

THERMOSTATIC MIXING VALVE SCHEDULE								
ID	AREA/SYSTEM SERVED	THERMOSTATIC CONTROLLERS		RUN OUT PIPE SIZES			BASIS OF DESIGN (OR EQUAL)	REMARKS
		GPM (FLOW @ 10 PSI)		CW INLET	HW INLET	TEMPERED WATER OUTLET		
TMV-1	GENERAL BLDG FIXTURES	5.5		3/4"	3/4"	3/4"	LAWLER SERIES 61-15	

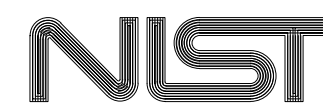
NOTES:
1. RUN-OUT PIPE SIZES ARE NOT NECESSARILY MIXING VALVE PIPE SIZES
2. ALL UNITS MUST BE INSTALLED, PIPED, AND ADJUSTED IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS

FLOOR DRAIN SCHEDULE					
ID	TYPE	LOCATION/AREA	SIZE	BASIS OF DESIGN (OR EQUAL)	REMARKS
FD-1	FLOOR DRAIN	GENERAL	12X12	ZURN #Z566	W/ 1/2" TRAP PRIMING LINE
HD-1	HUB DRAIN	CUST.	4" STRAINER	ZURN #Z211-S	W/ 1/2" TRAP PRIMING LINE

REVISION	DESCRIPTION	BY	DATE

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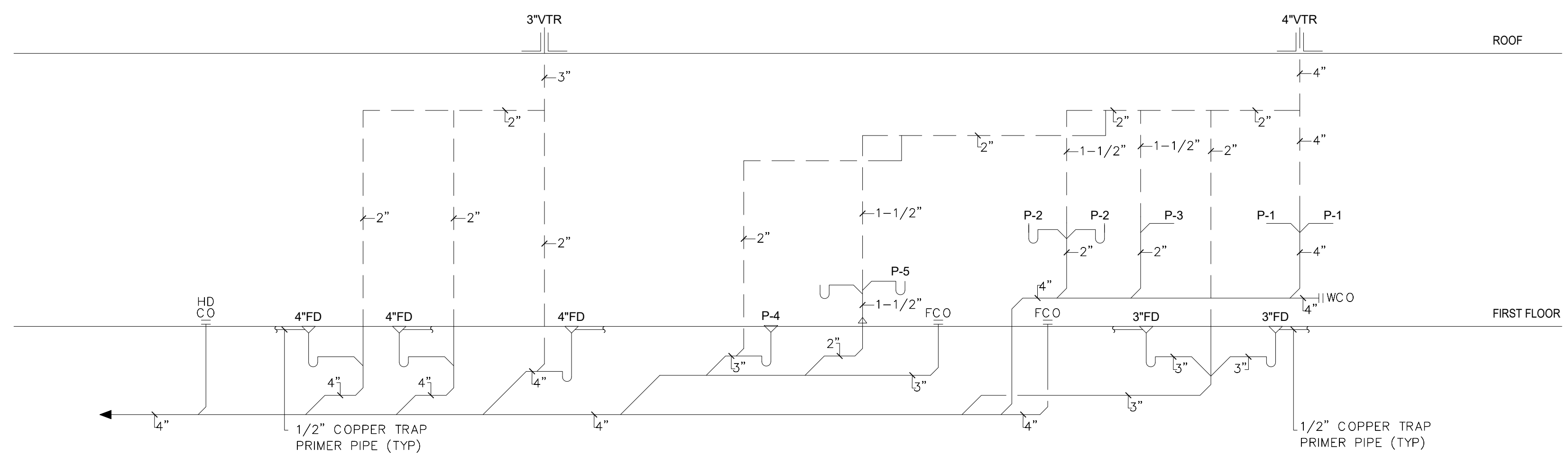
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PLUMBING SCHEDULES

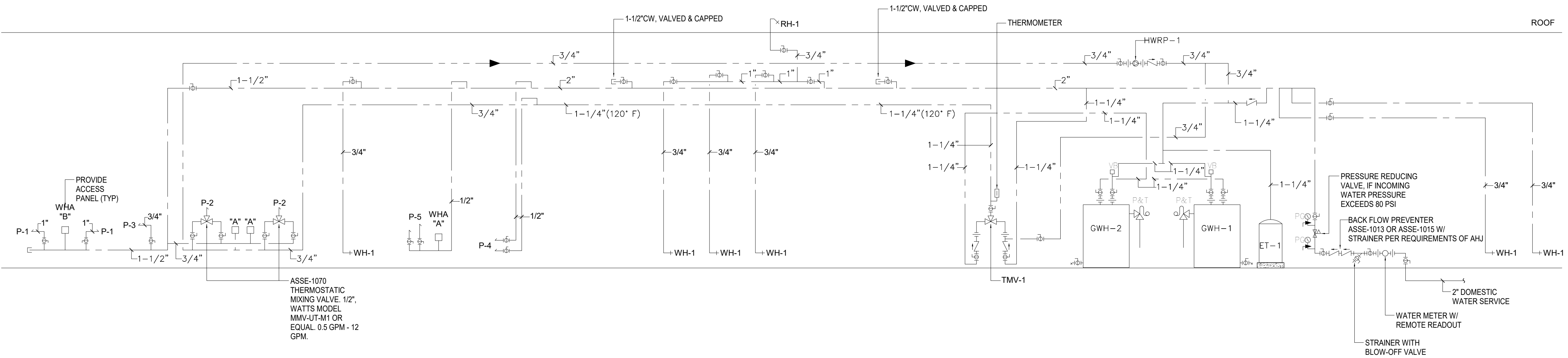
P401

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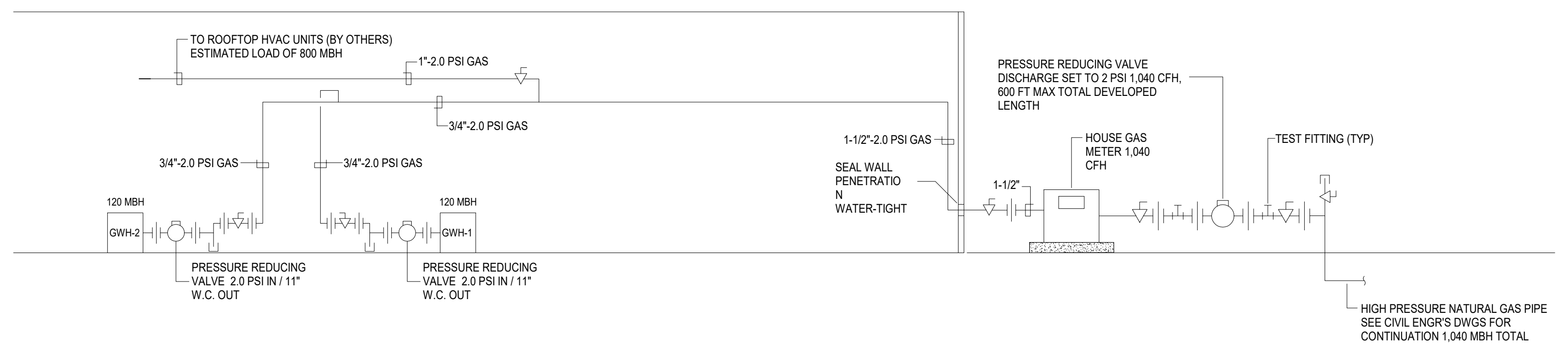
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1 RETAIL BLDG - SANITARY RISER DIAGRAM
NTS



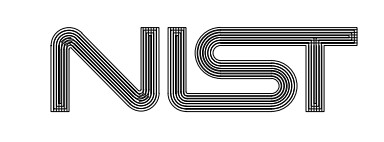
2 RETAIL BLDG - WATER RISER DIAGRAM
NTS



3 RETAIL BLDG - GAS RISER DIAGRAM
NTS

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PLUMBING RISERS

P501

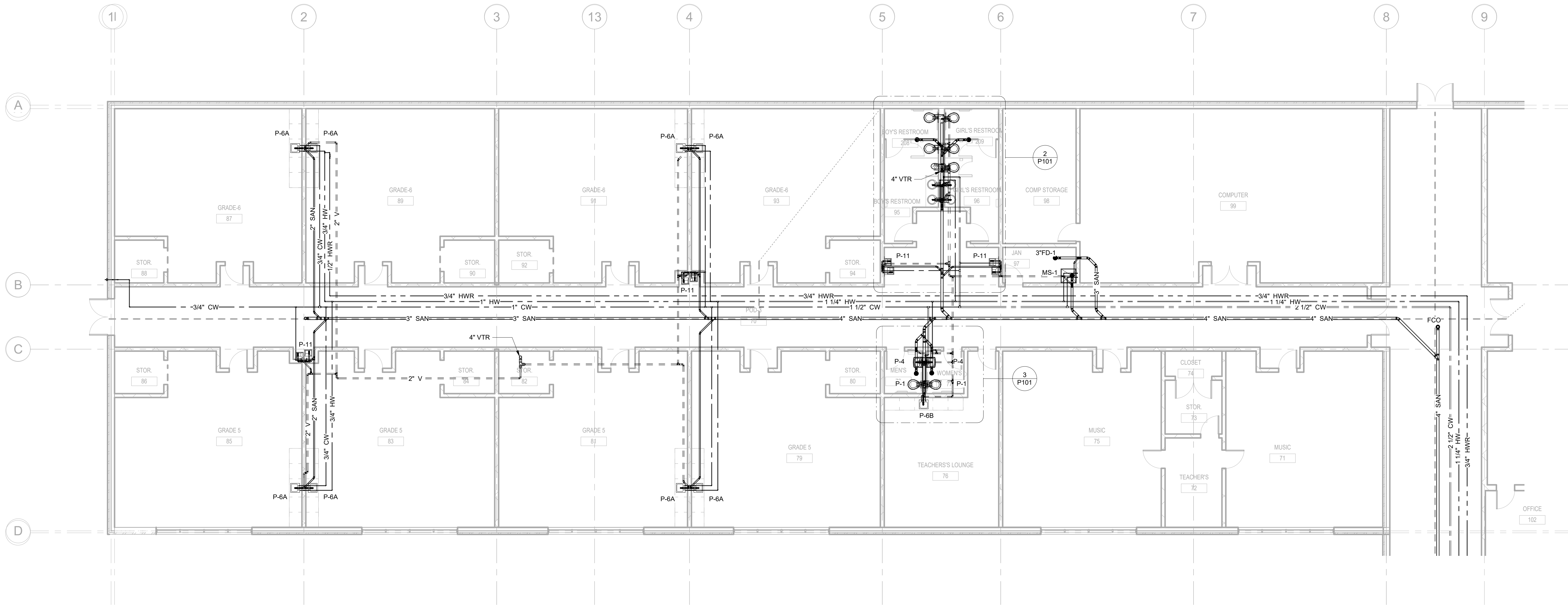
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																					Project / W.O. #

SH. NO. ___ OF ___ DWG. P501

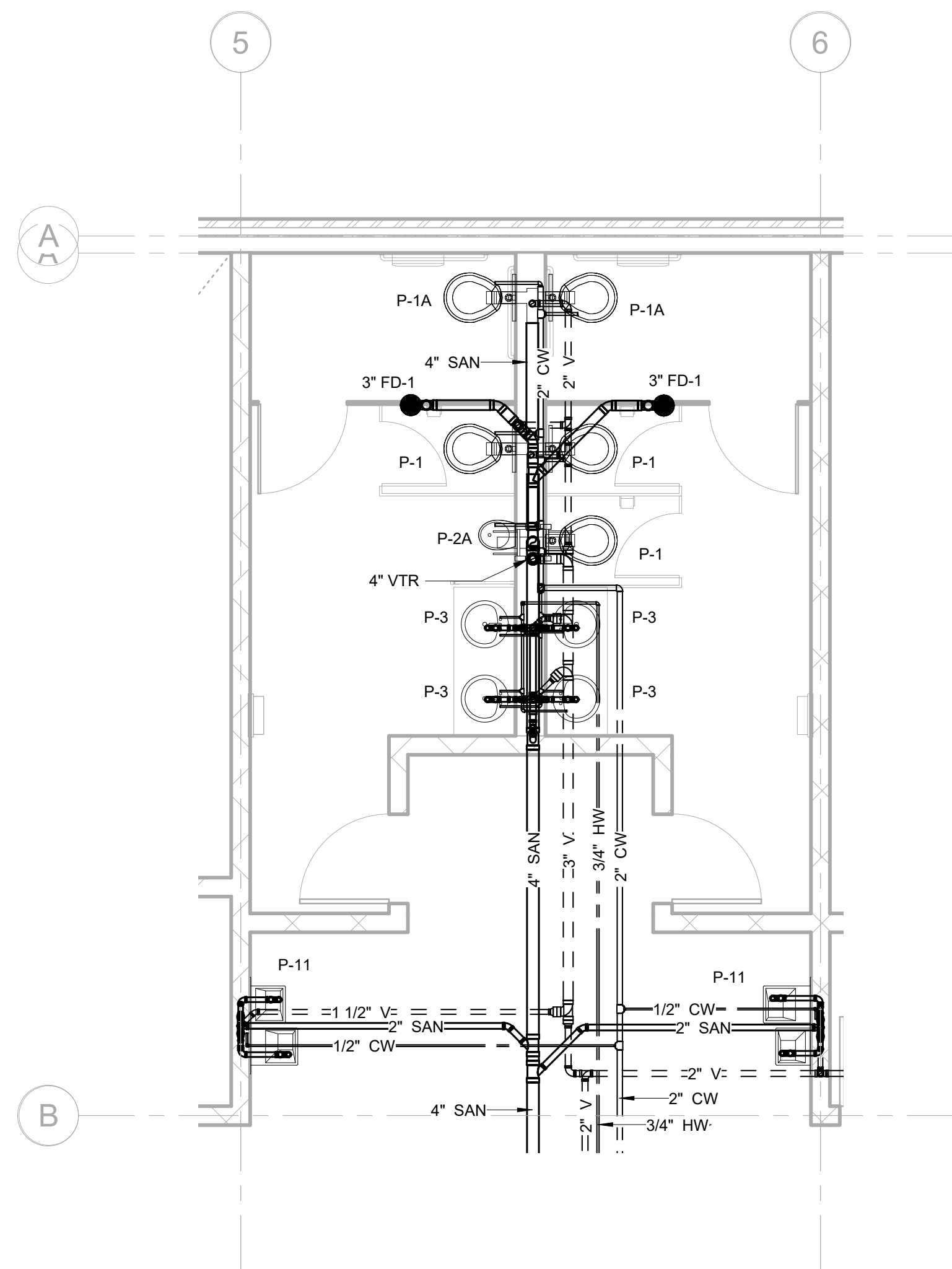
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GENERAL NOTES

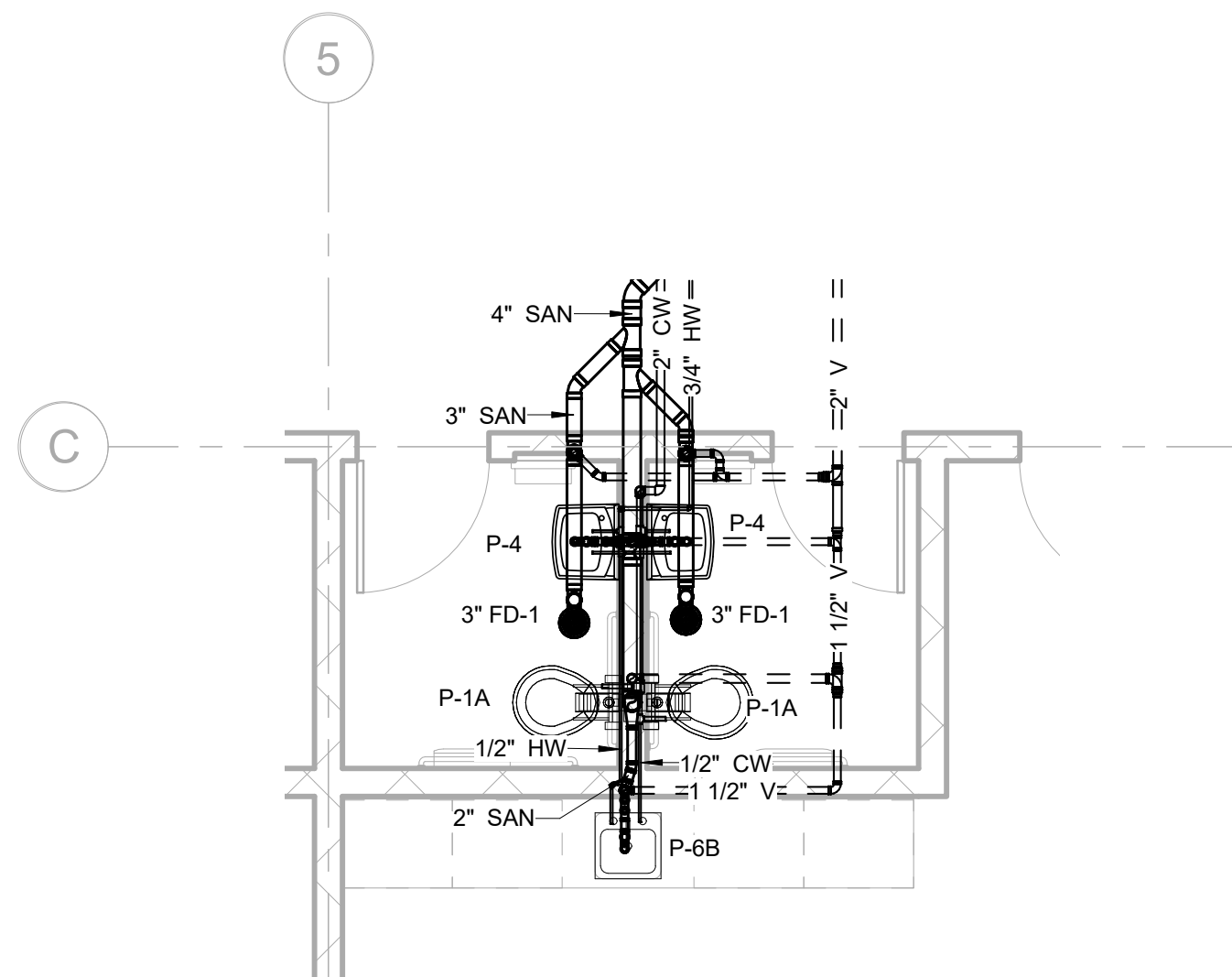
- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



1 FIRST FLOOR - SANITARY - WATER & GAS - AREA A
1/8" = 1'-0"



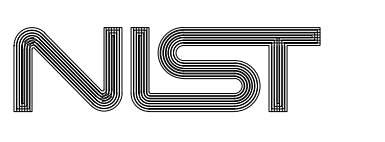
2 FIRST FLOOR - AREA A - BOYS & GIRLS RESTROOM
1/4" = 1'-0"



3 FIRST FLOOR - AREA A - MEN'S & WOMEN'S RESTROOM
1/4" = 1'-0"

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PLUMBING FLOOR PLAN AREA A

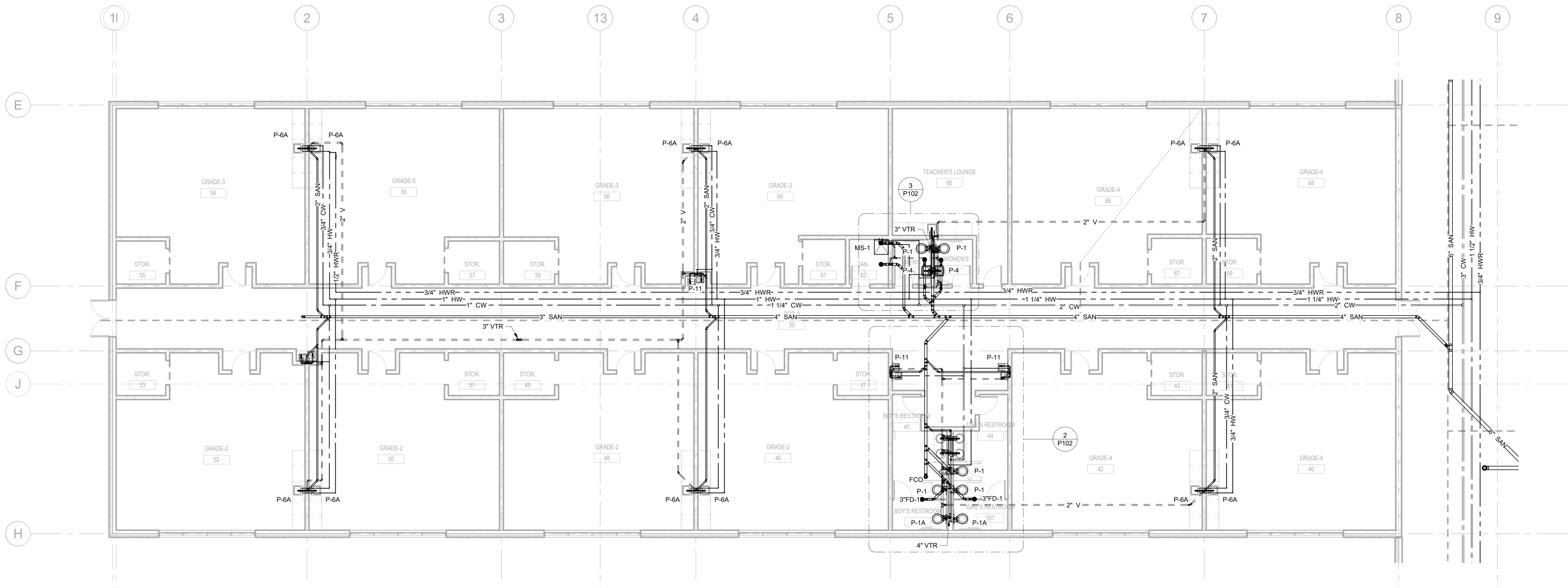
P101

DWG. P101

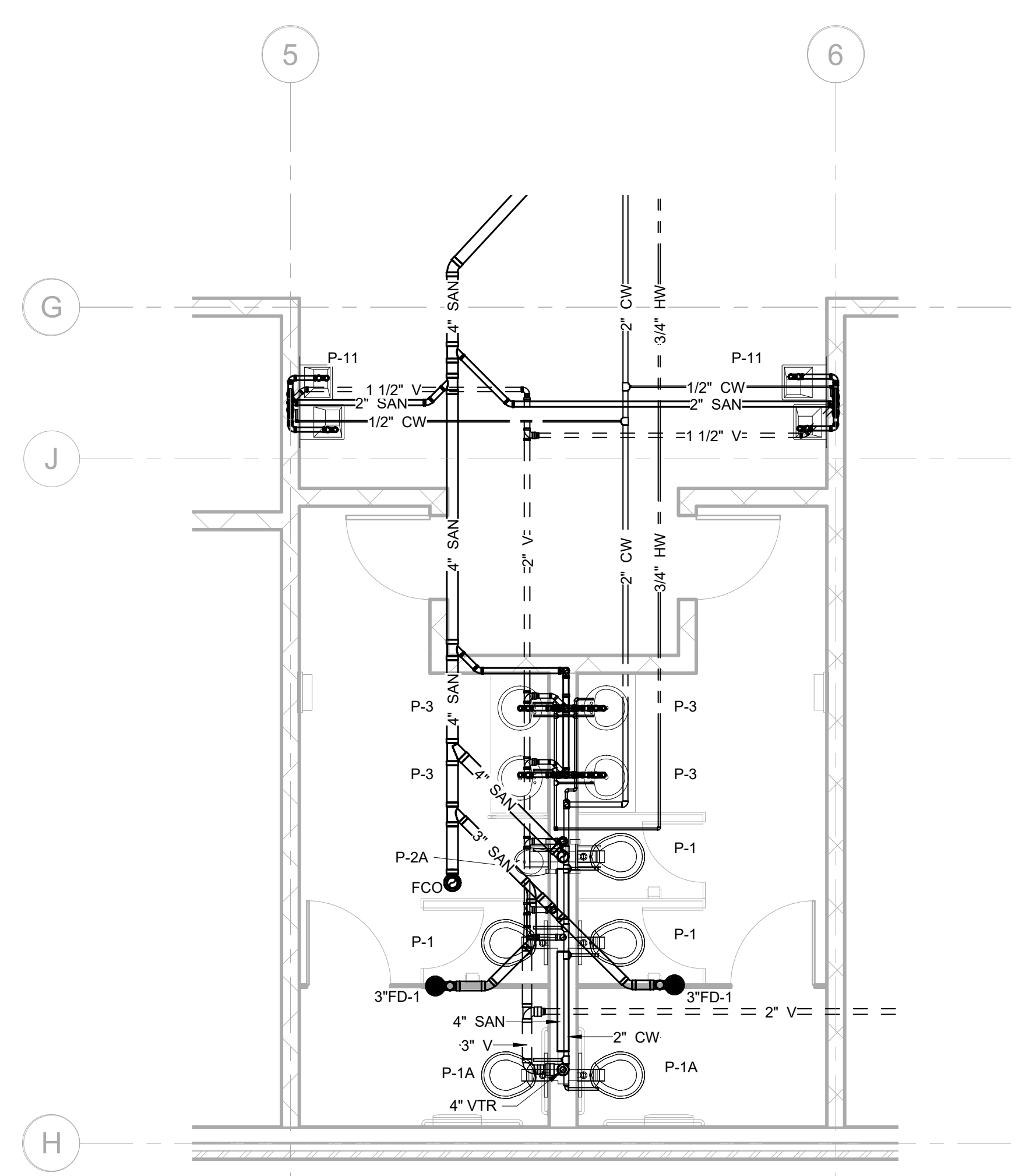
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GENERAL NOTES

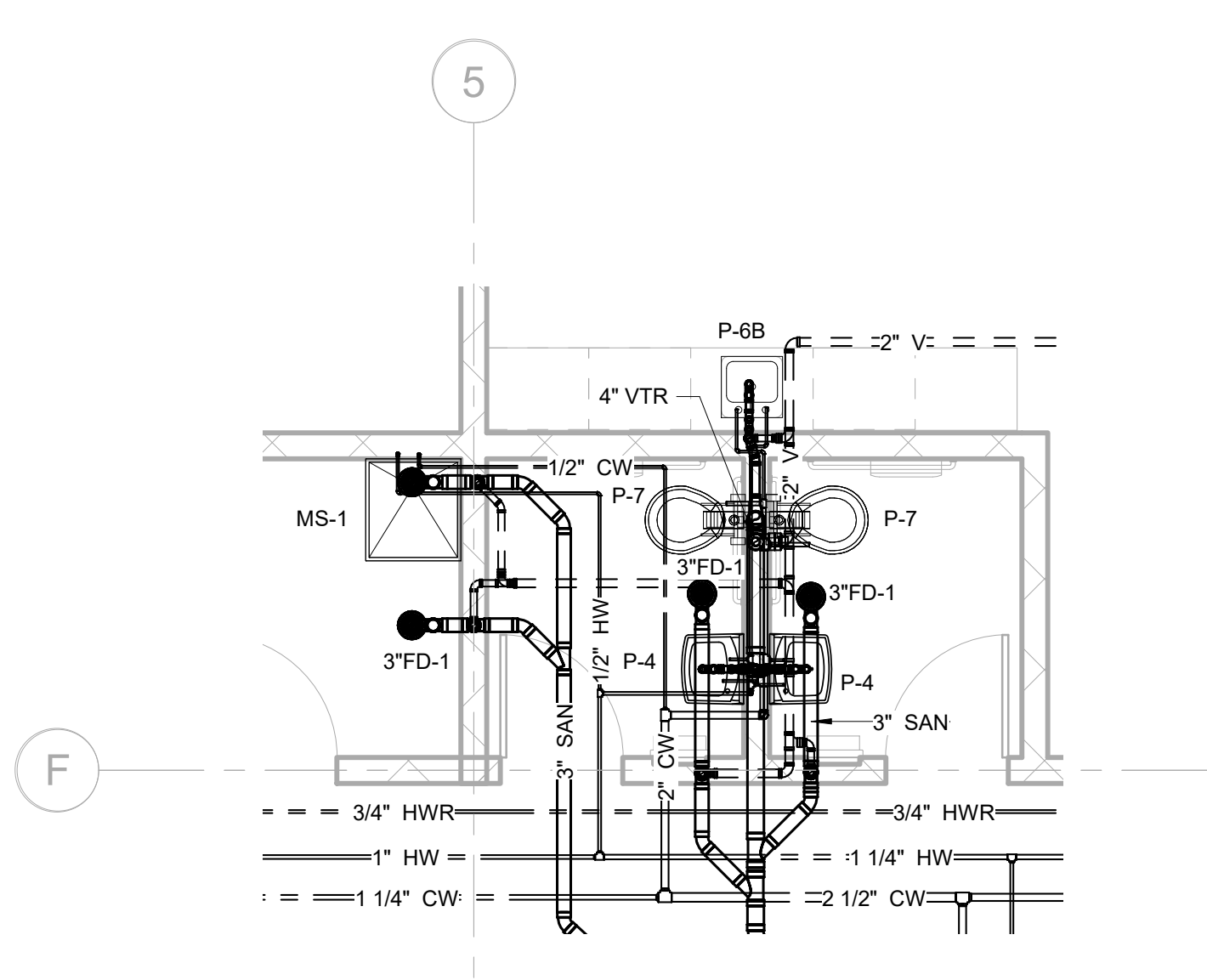
- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



1 FIRST FLOOR - SANITARY - WATER & GAS - AREA B
1/8" = 1'-0"

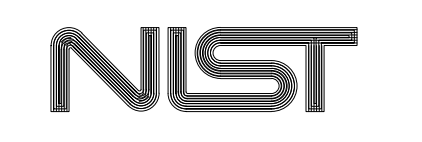


2 FIRST FLOOR - AREA B - BOYS & GIRLS RESTROOM
1/4" = 1'-0"



3 FIRST FLOOR - AREA B - MEN'S & WOMEN'S RESTROOM
1/4" = 1'-0"

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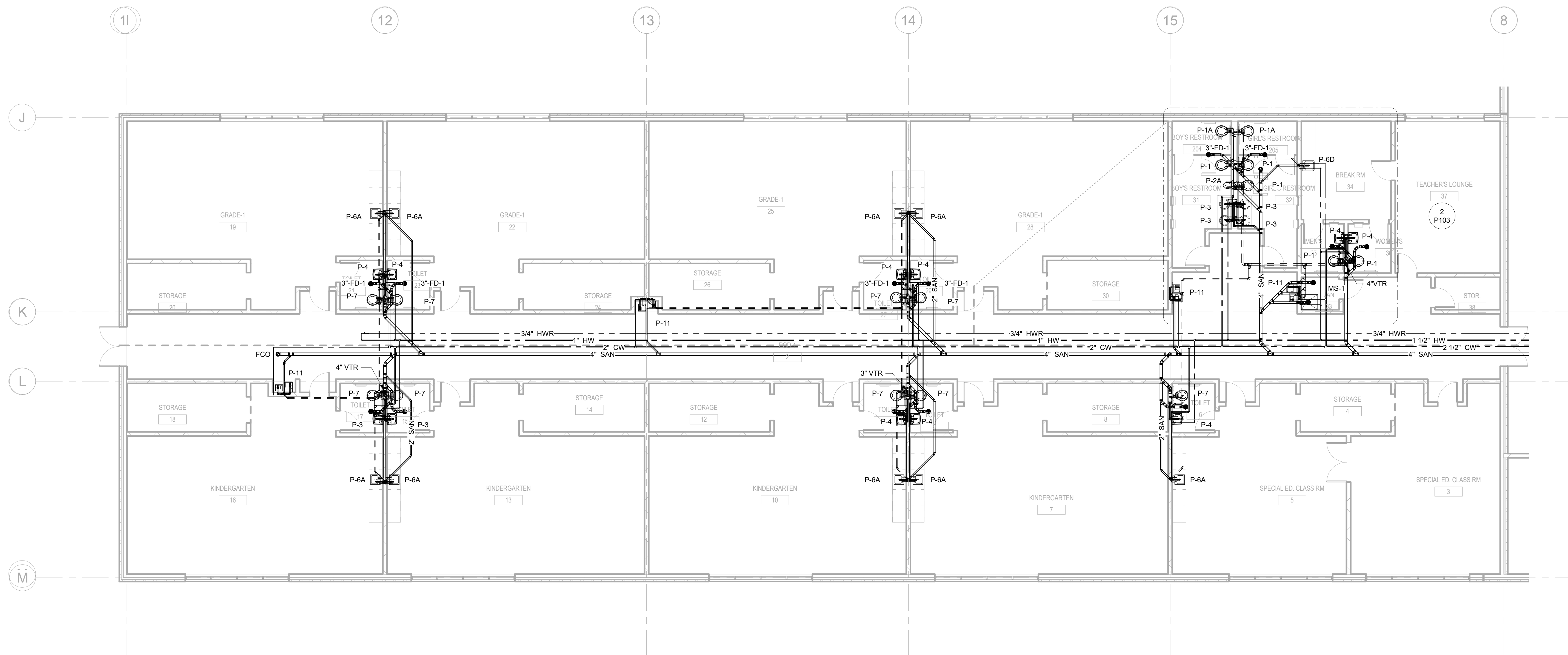
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P102

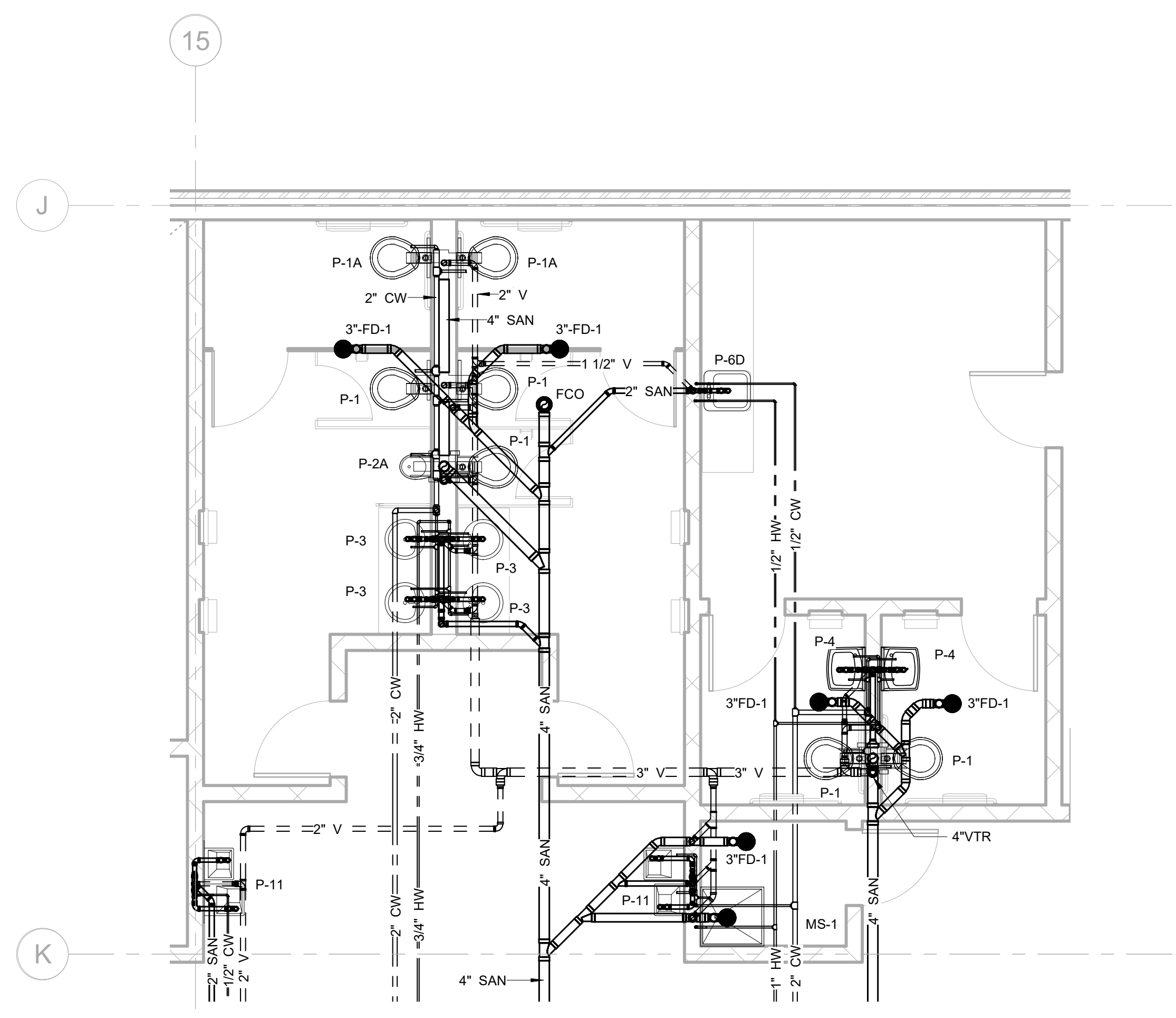
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GENERAL NOTES

- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.

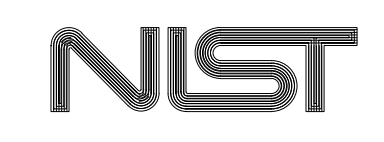


1 FIRST FLOOR - SANITARY - WATER & GAS - AREA C
1/8" = 1'-0"



2 FIRST FLOOR - AREA C - BOYS & GIRLS MEN'S & WOMEN'S RESTROOM
1/4" = 1'-0"

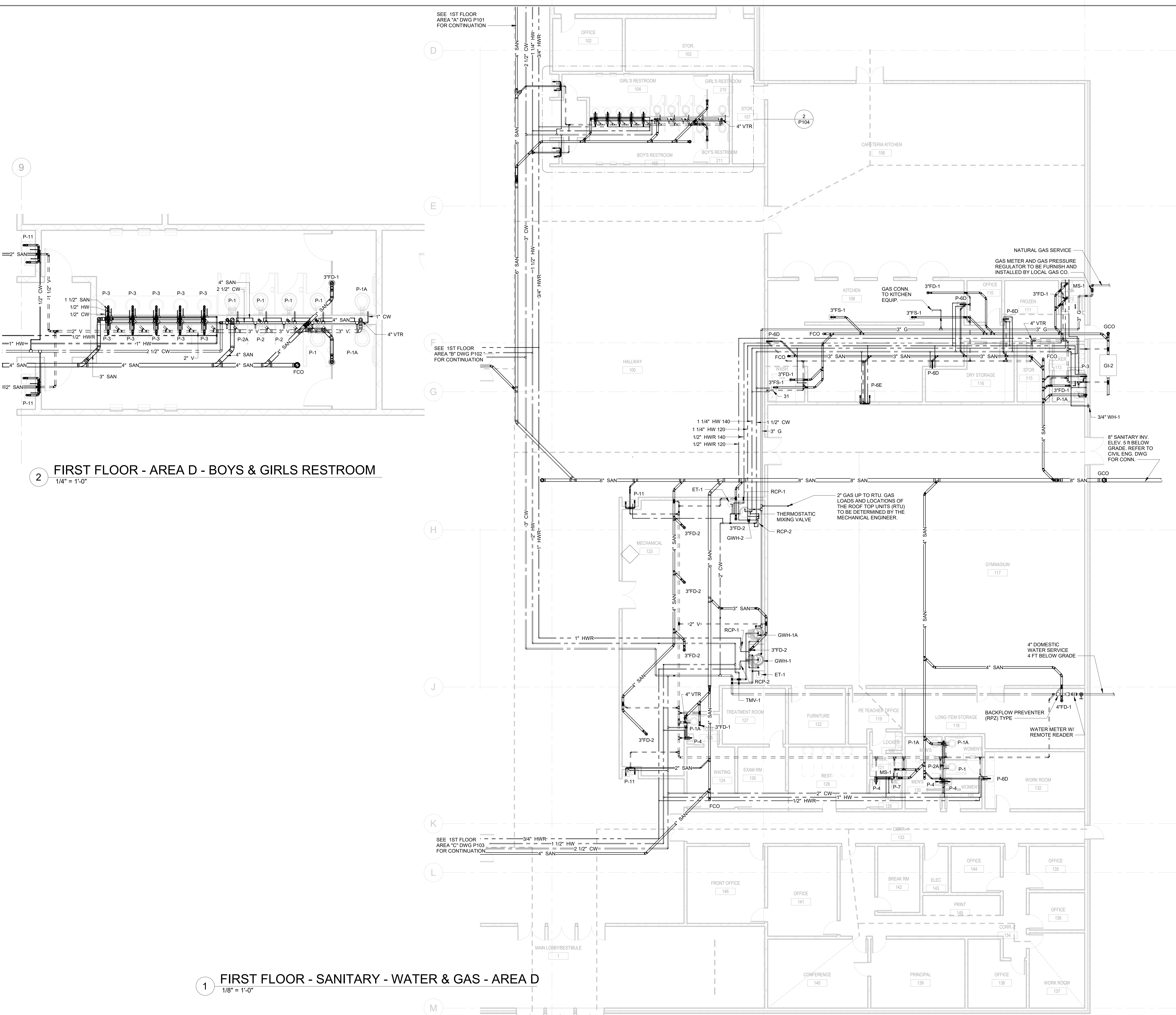
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PLUMBING FLOOR PLAN - AREA C

P103

DWG. P103



2 FIRST FLOOR - AREA D - BOYS & GIRLS RESTROOM
1/4" = 1'-0"

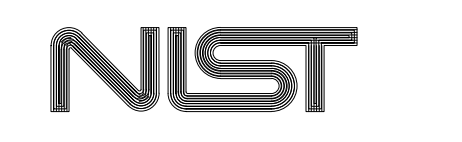
1 FIRST FLOOR - SANITARY - WATER & GAS - AREA D
1/8" = 1'-0"

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GENERAL NOTES

- REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.

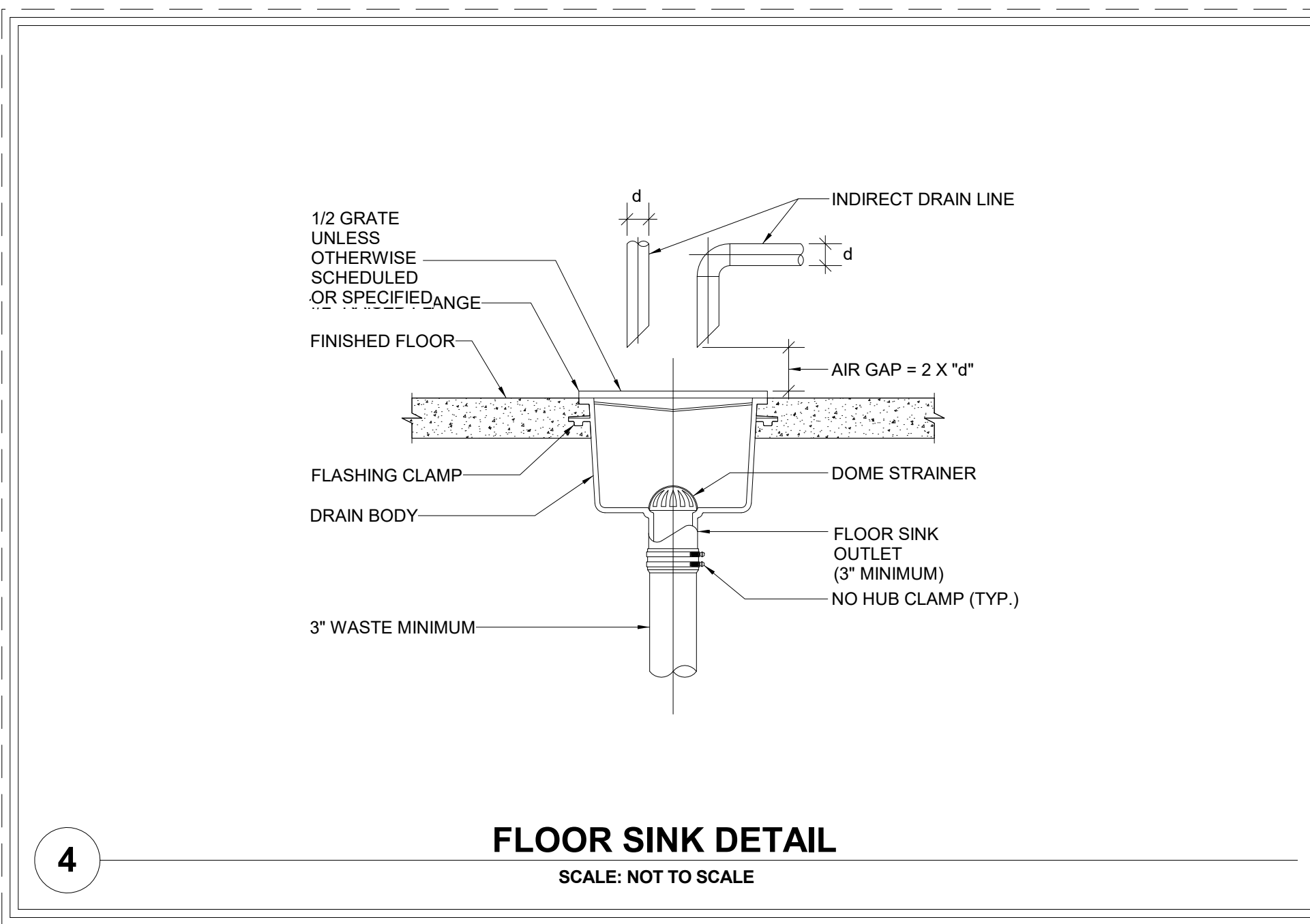
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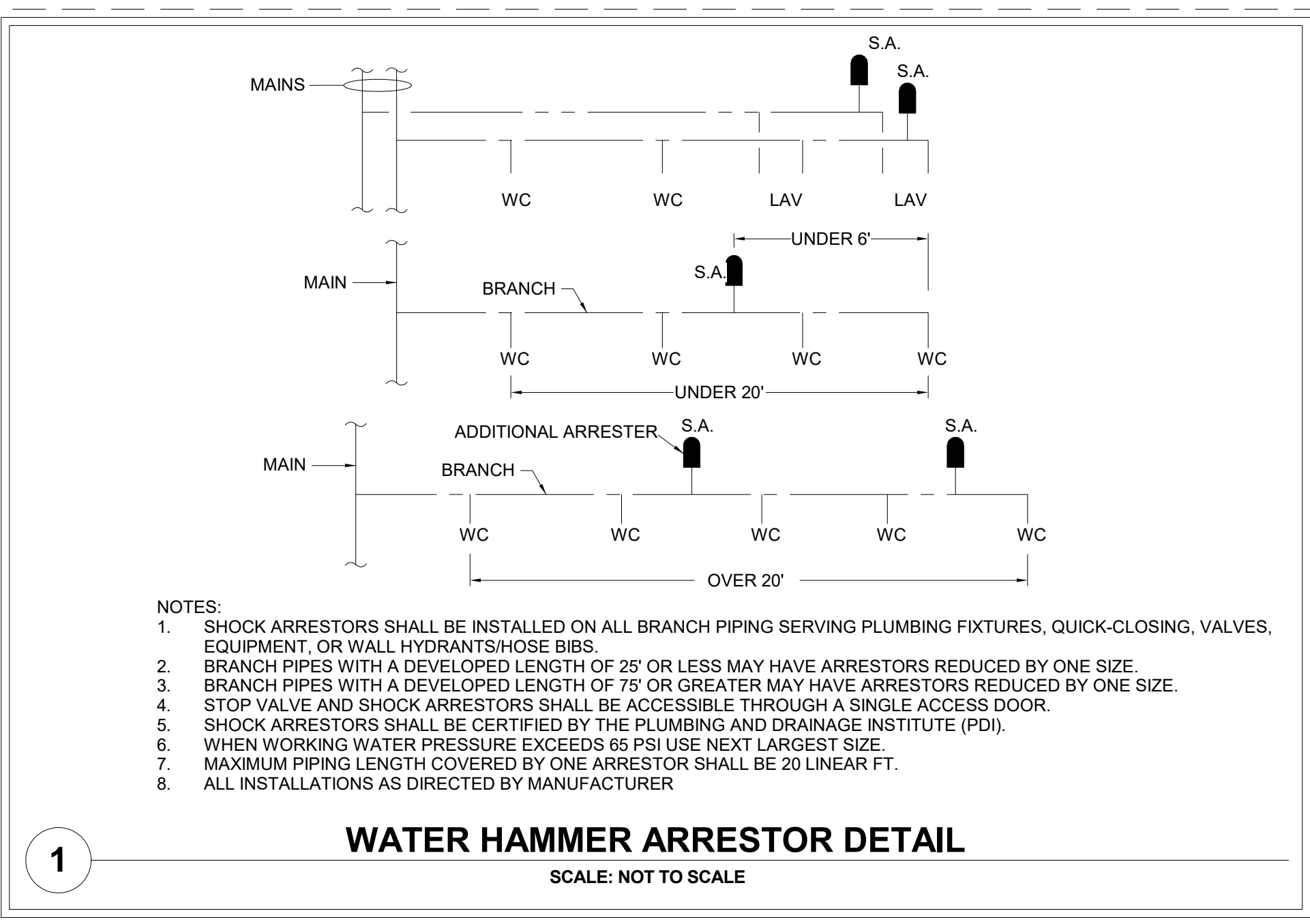
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P104

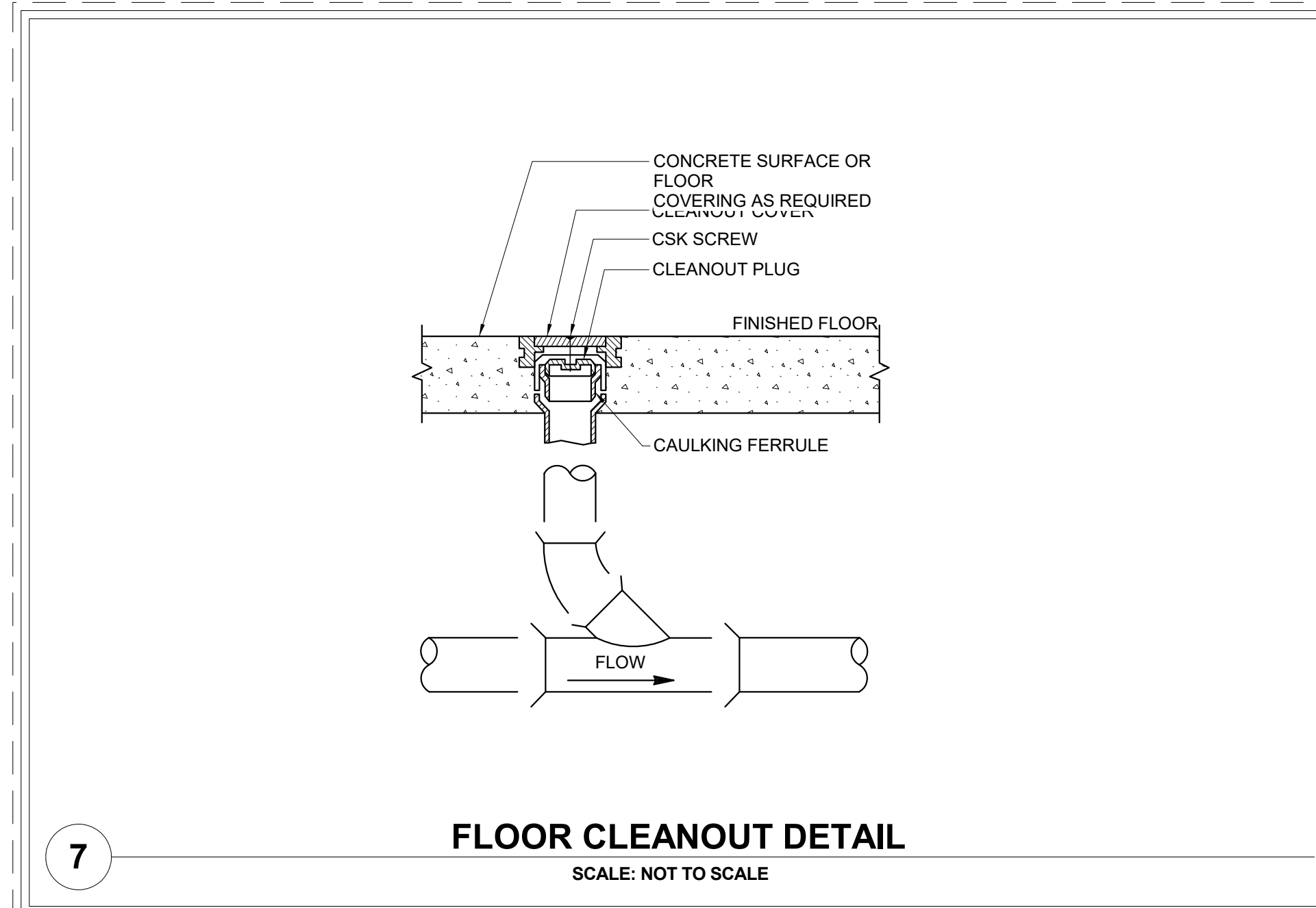
DWG. P104



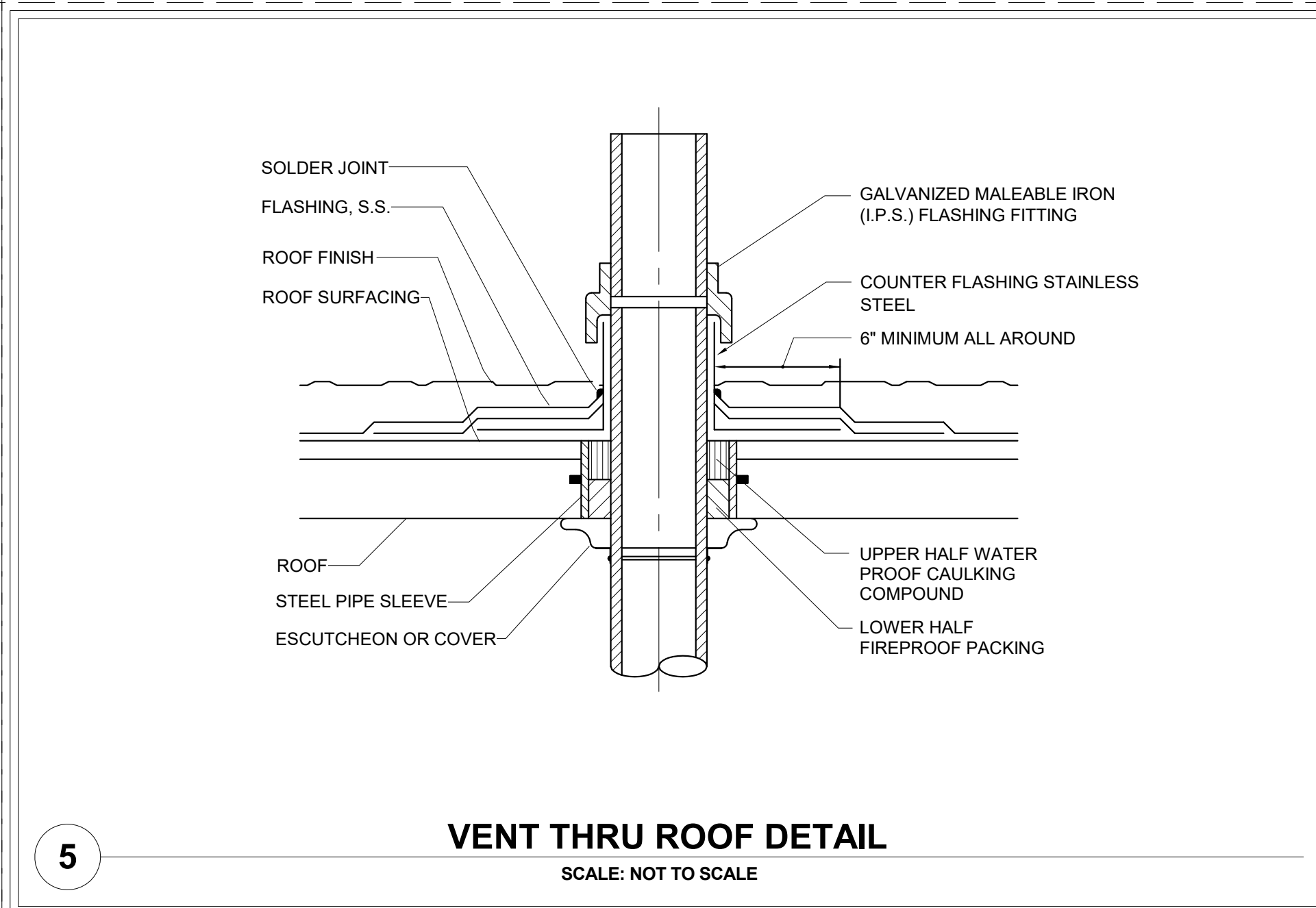
4 FLOOR SINK DETAIL
SCALE: NOT TO SCALE



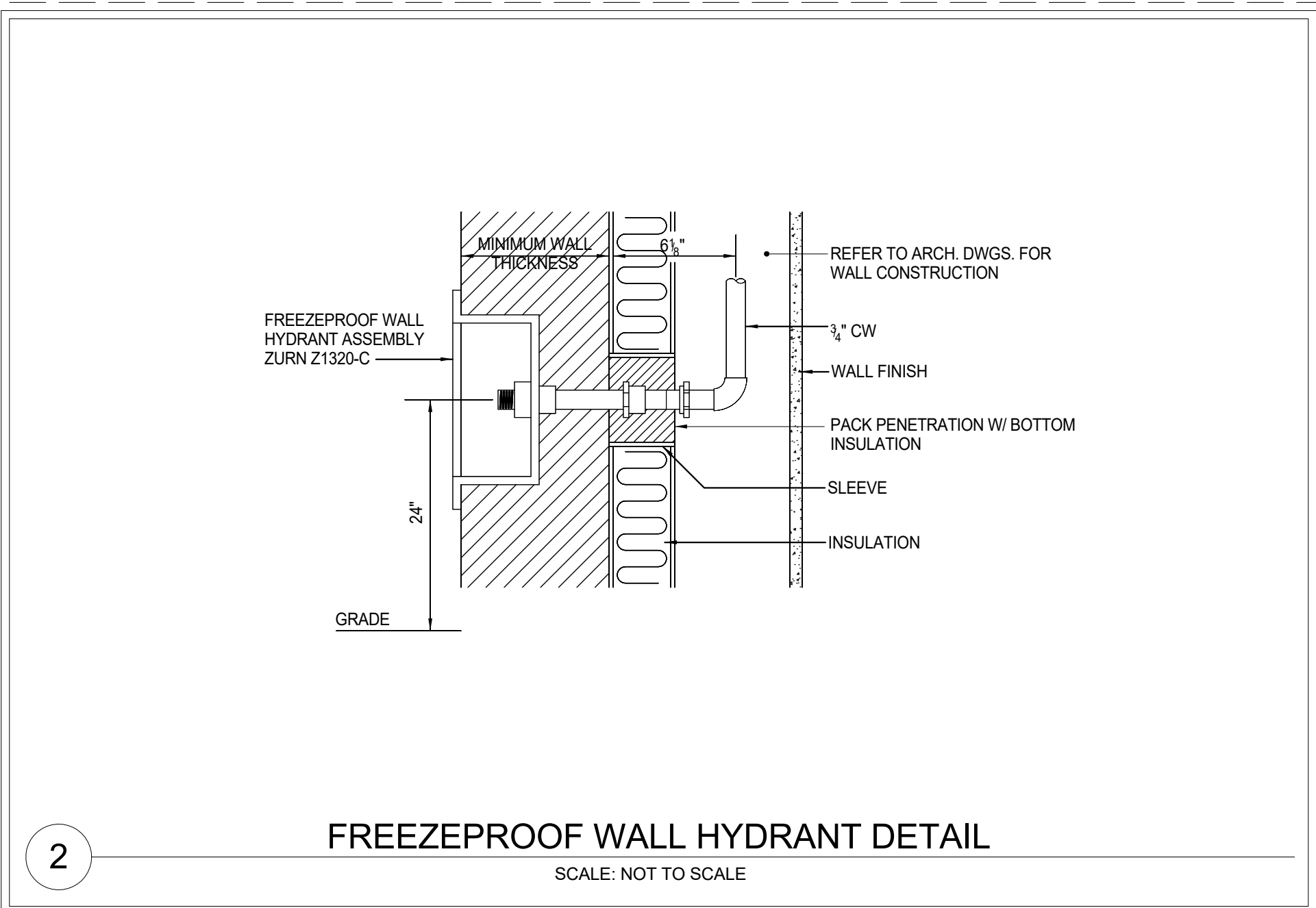
1 WATER HAMMER ARRESTOR DETAIL
SCALE: NOT TO SCALE



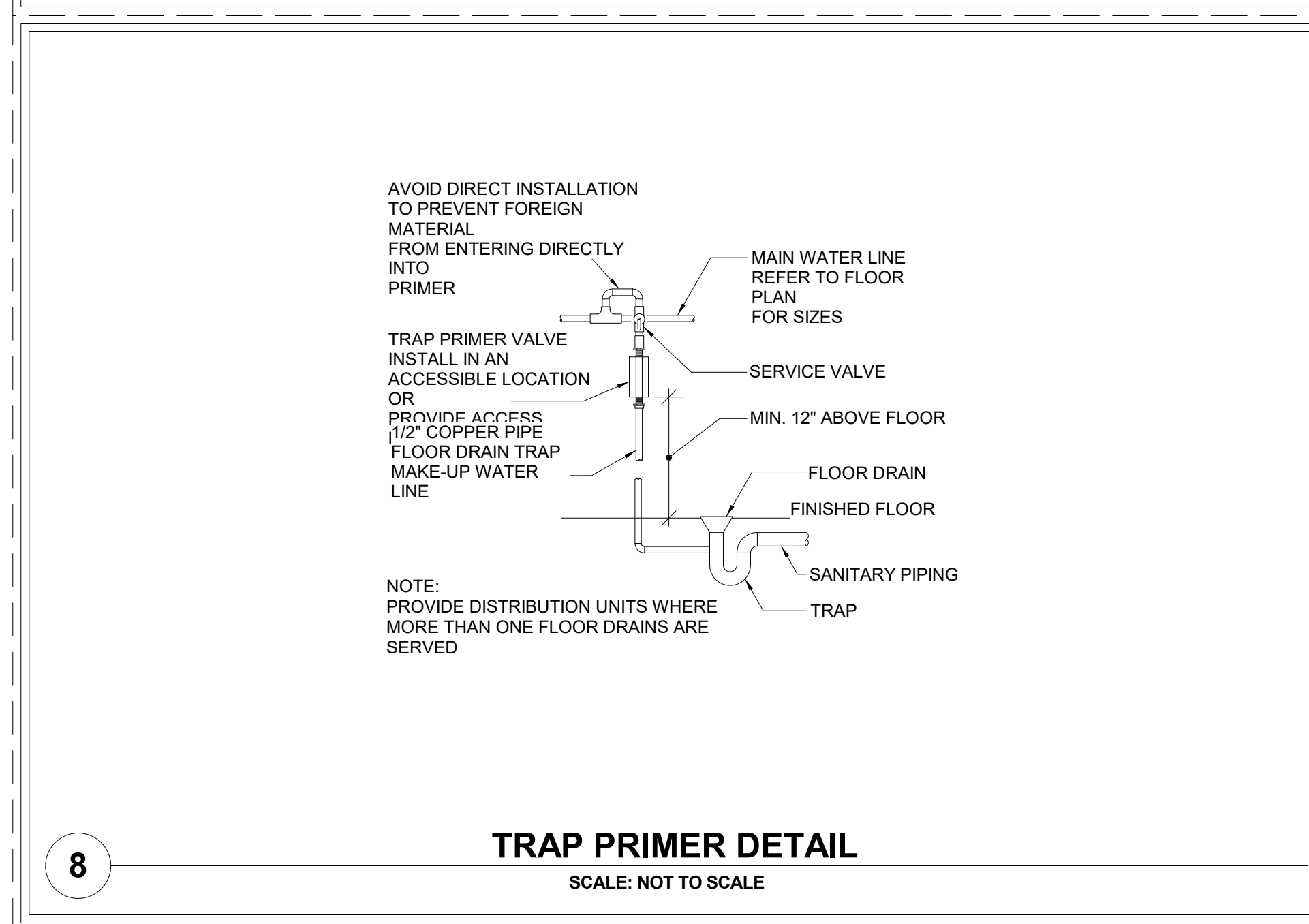
7 FLOOR CLEANOUT DETAIL
SCALE: NOT TO SCALE



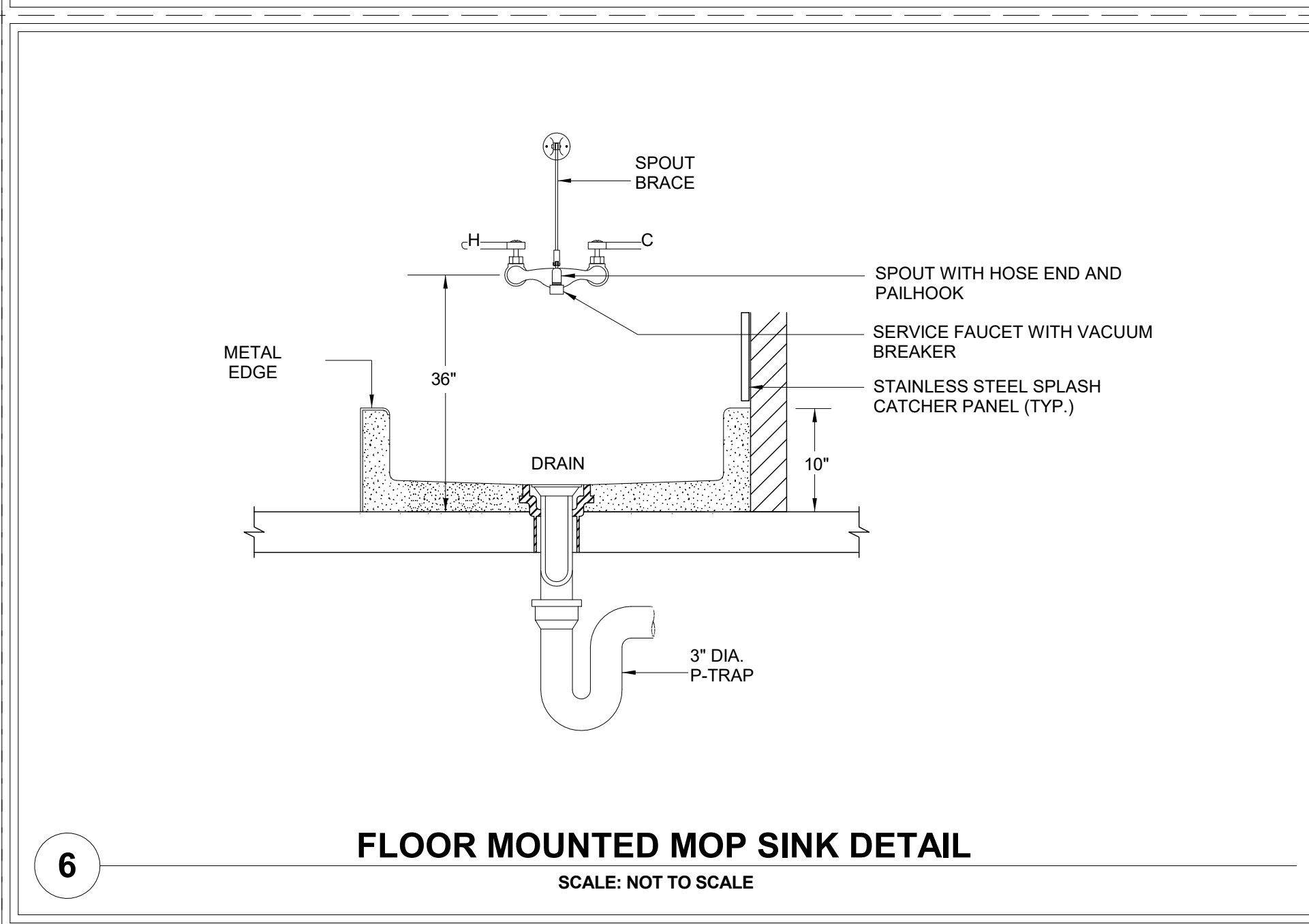
5 VENT THRU ROOF DETAIL
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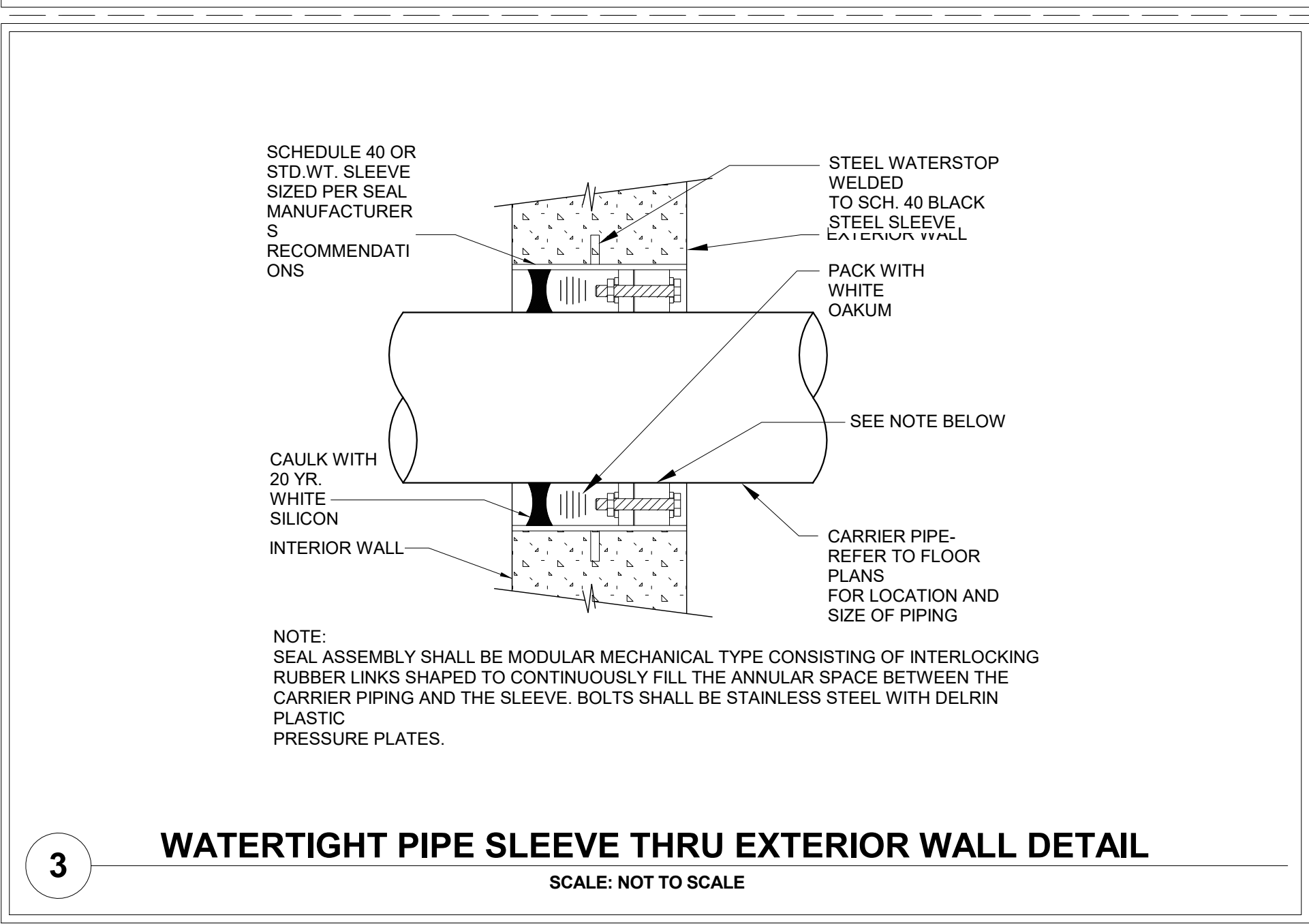
2 FREEZEPROOF WALL HYDRANT DETAIL
SCALE: NOT TO SCALE



8 TRAP PRIMER DETAIL
SCALE: NOT TO SCALE

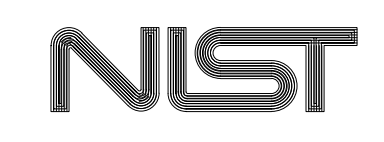


6 FLOOR MOUNTED MOP SINK DETAIL
SCALE: NOT TO SCALE



3 WATERTIGHT PIPE SLEEVE THRU EXTERIOR WALL DETAIL
SCALE: NOT TO SCALE

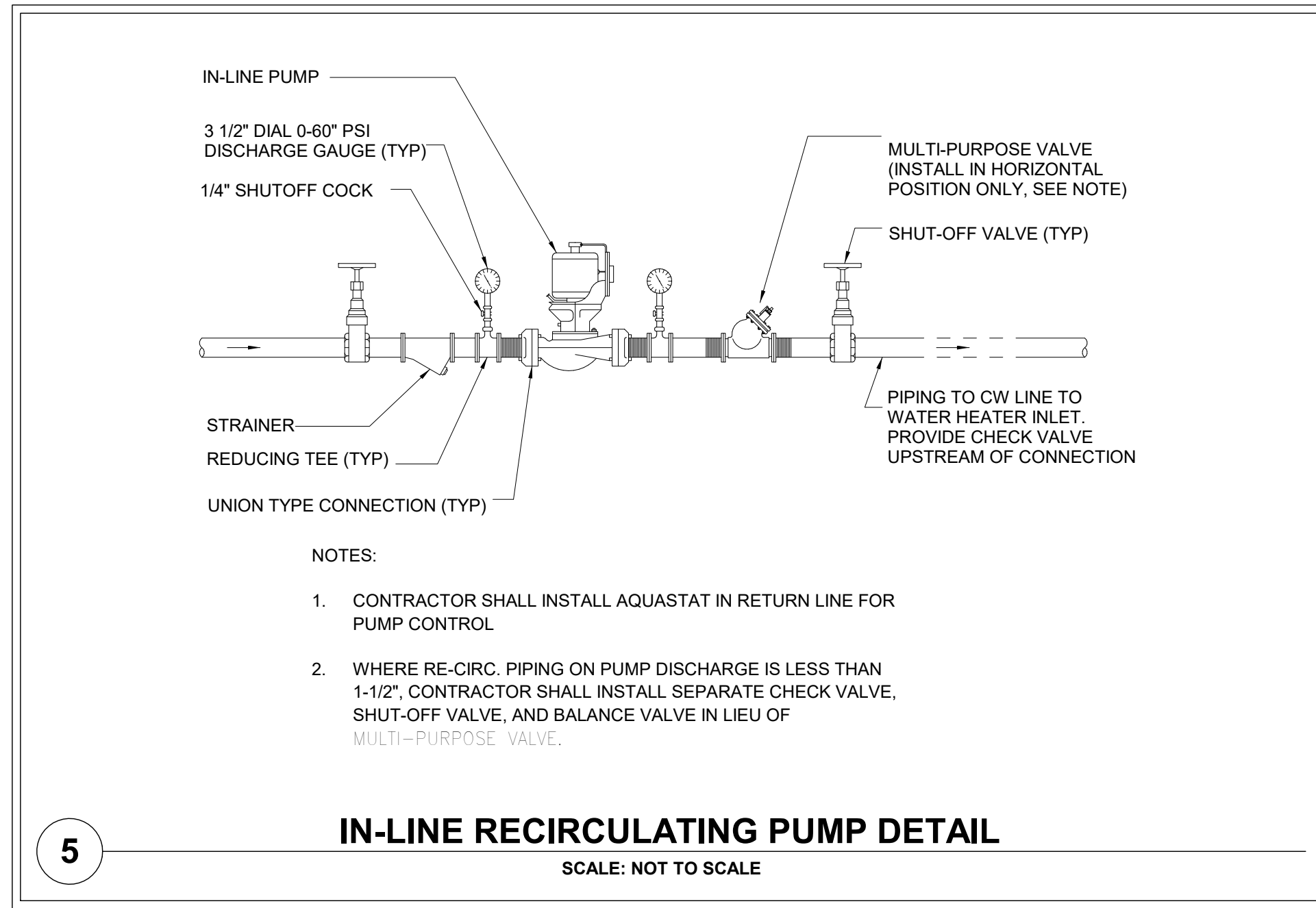
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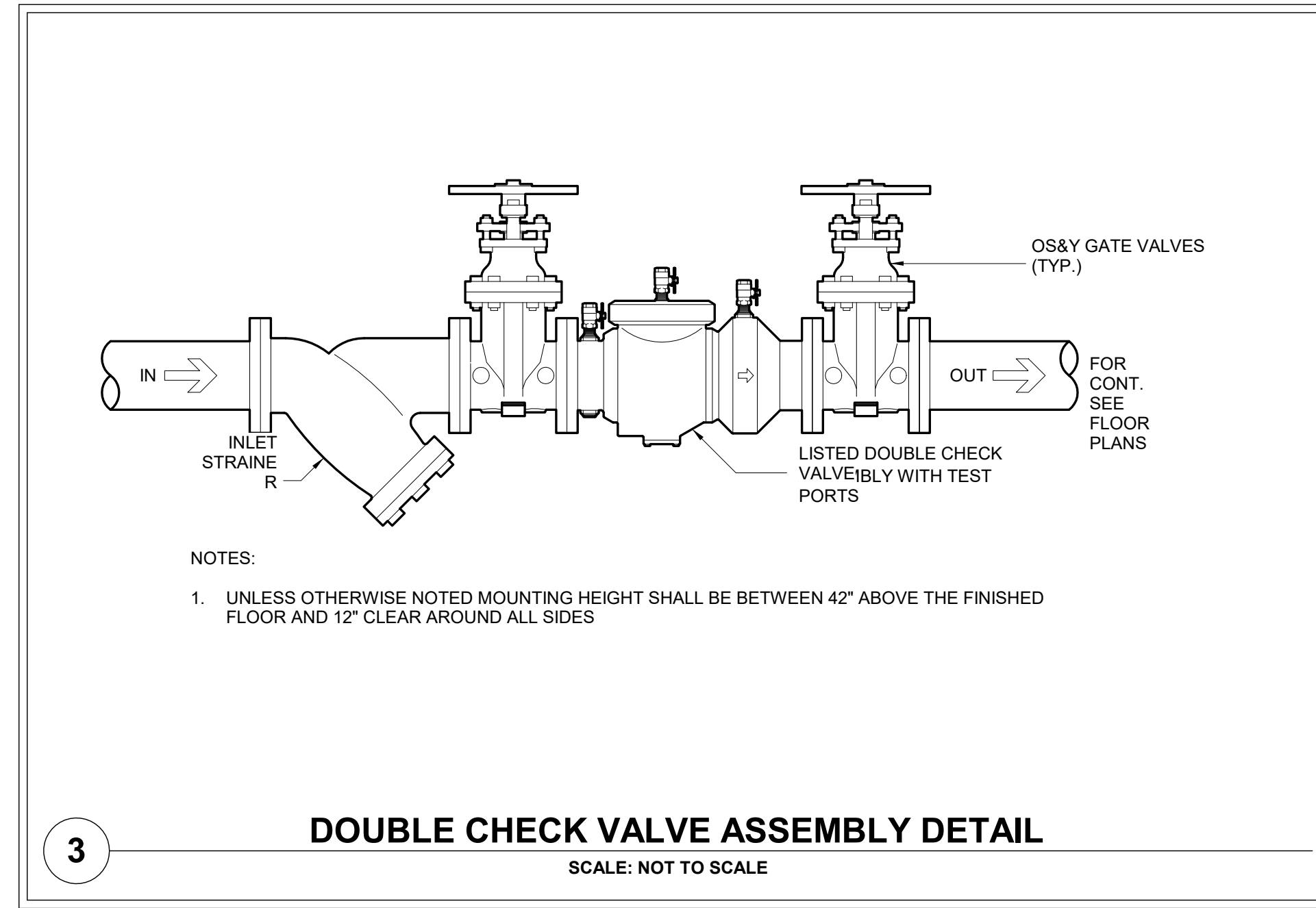
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PLUMBING DETAILS

P301

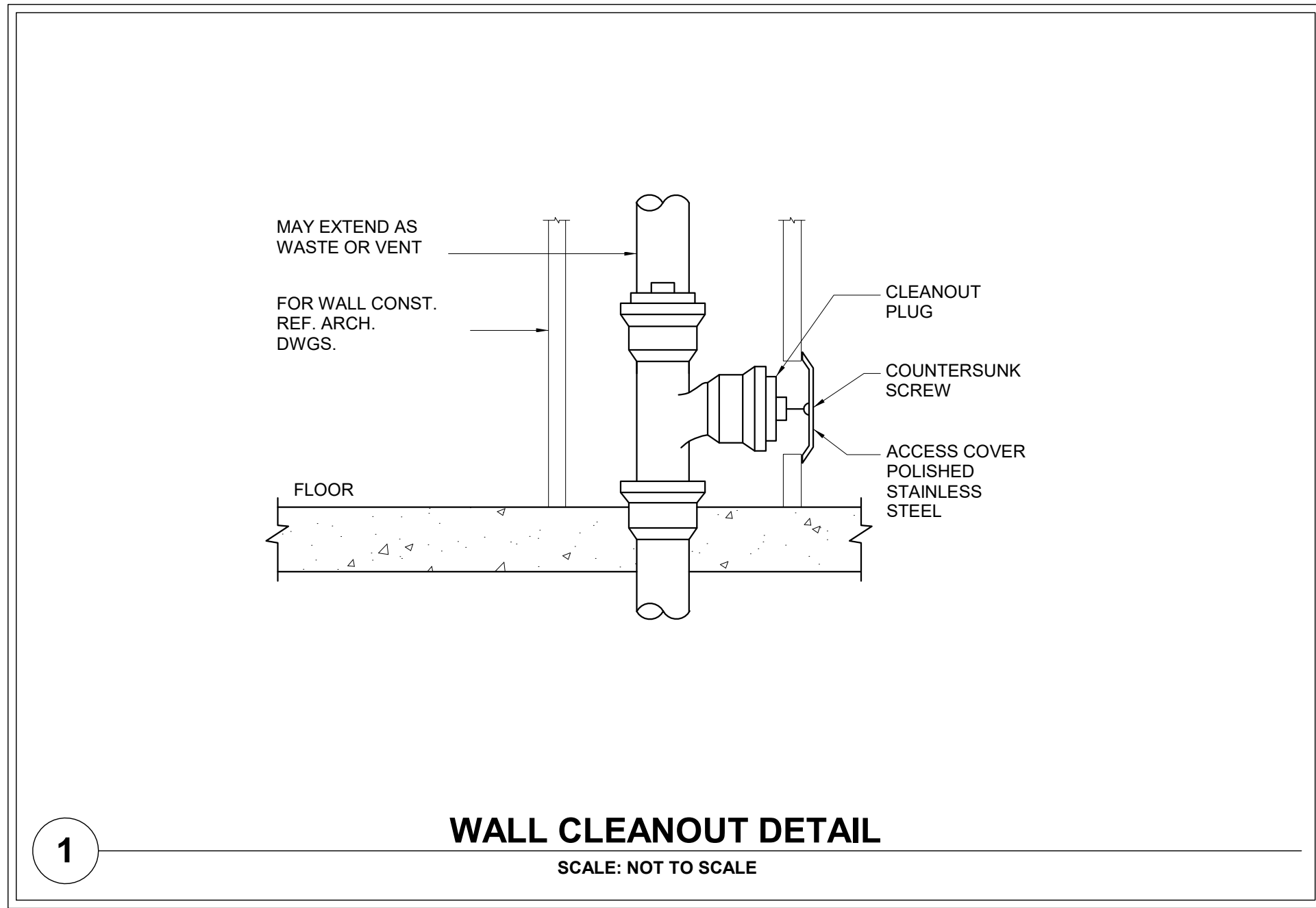
REVISION	DESCRIPTION	BY	DATE



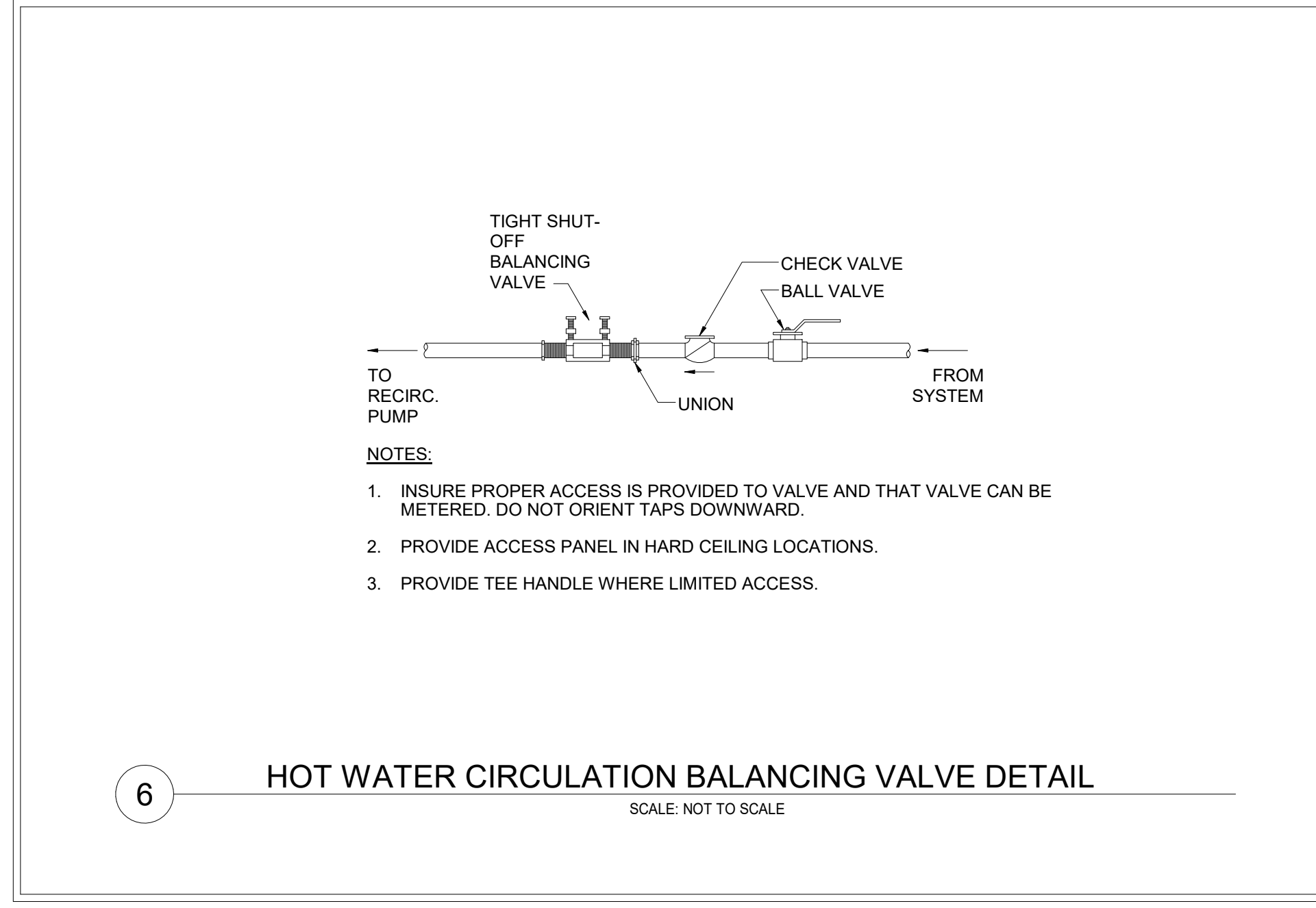
5 IN-LINE RECIRCULATING PUMP DETAIL
SCALE: NOT TO SCALE



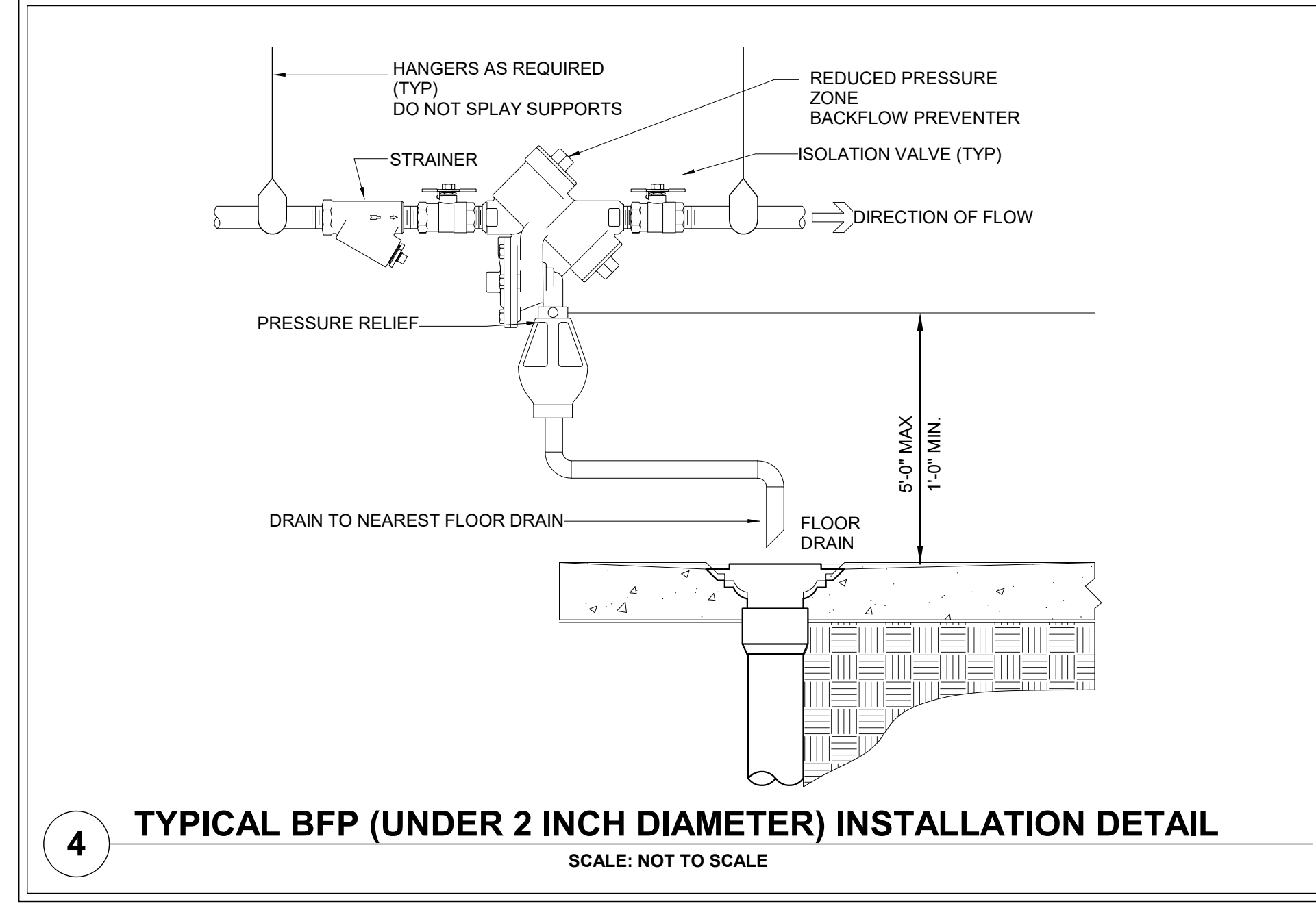
3 DOUBLE CHECK VALVE ASSEMBLY DETAIL
SCALE: NOT TO SCALE



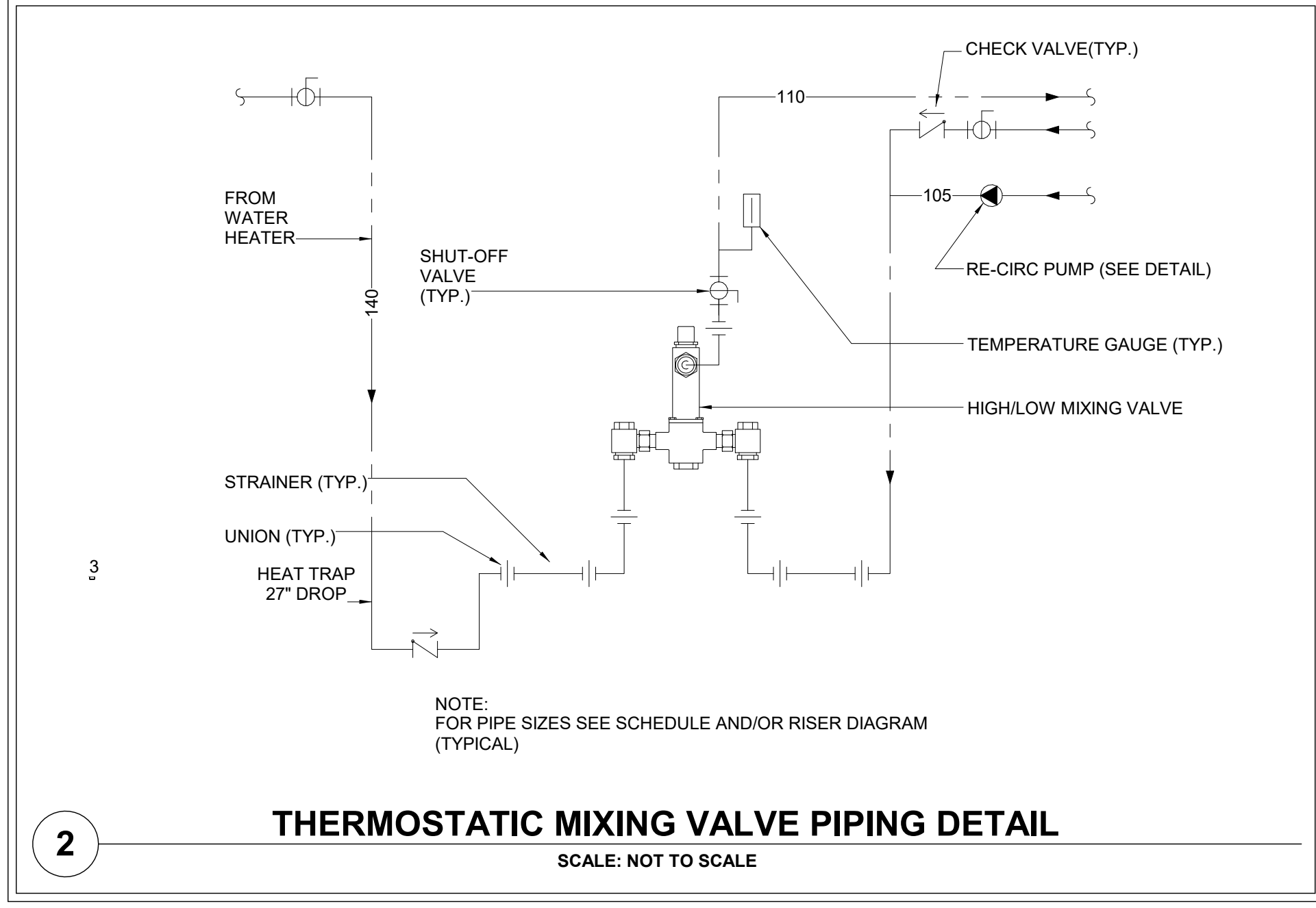
1 WALL CLEANOUT DETAIL
SCALE: NOT TO SCALE



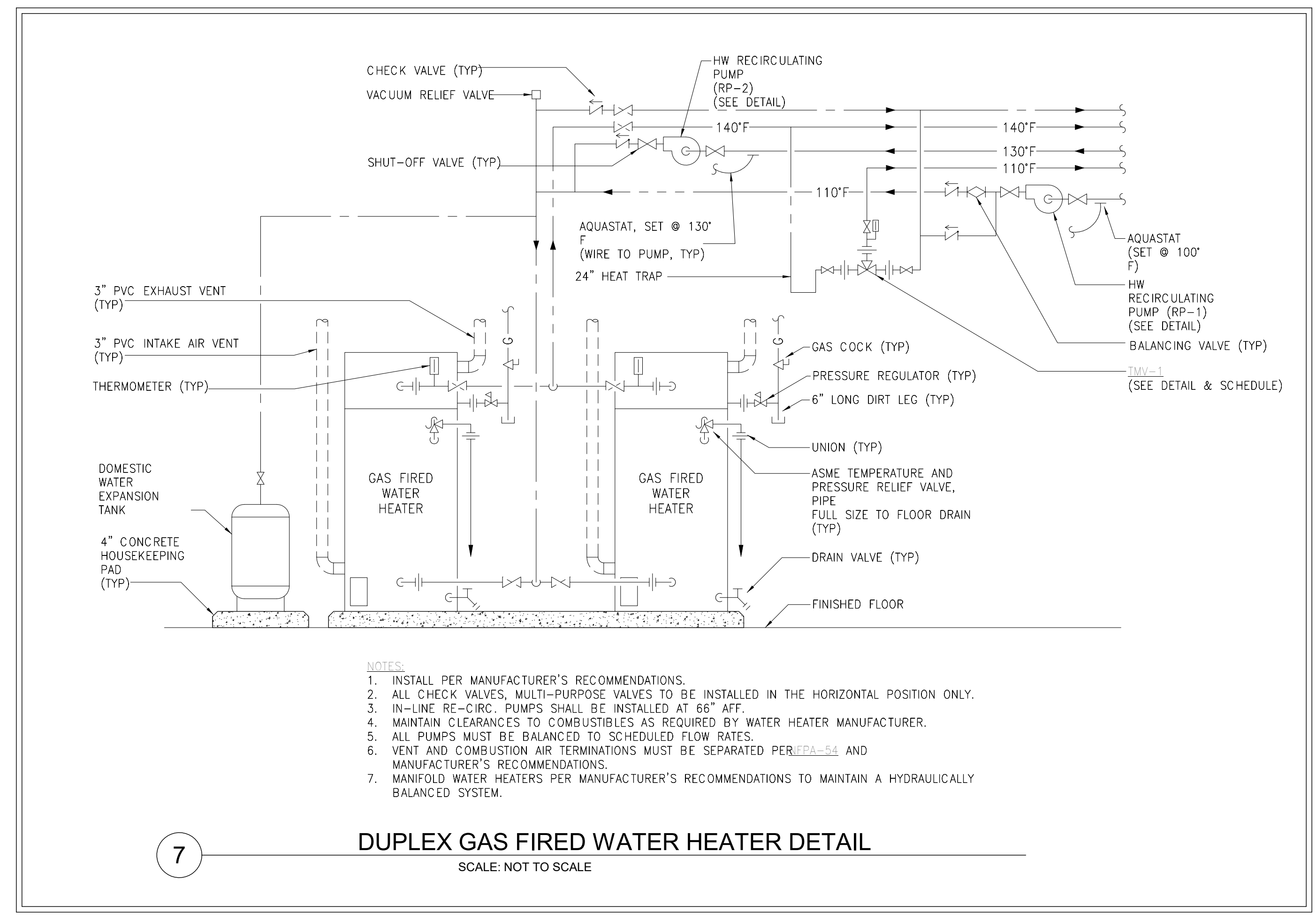
6 HOT WATER CIRCULATION BALANCING VALVE DETAIL
SCALE: NOT TO SCALE



4 TYPICAL BFP (UNDER 2 INCH DIAMETER) INSTALLATION DETAIL
SCALE: NOT TO SCALE

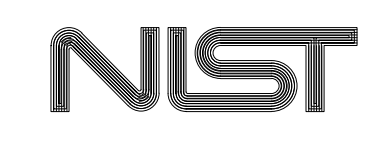


2 THERMOSTATIC MIXING VALVE PIPING DETAIL
SCALE: NOT TO SCALE



7 DUPLEX GAS FIRED WATER HEATER DETAIL
SCALE: NOT TO SCALE

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PLUMBING DETAILS

P302

GAS LOAD SCHEDULE				
ID	DESCRIPTION	MBH	QTY	SUB-TOTAL
WATER HEATING				
GWH-1	GAS FIRED DOMESTIC WATER HEATER	200	1	200
GWH-2	GAS FIRED DOMESTIC WATER HEATER	200	1	200
HEATING				
DOAS-001	VENTILATION	-	1	-
DOAS-002	VENTILATION	-	1	-
DOAS-003	VENTILATION	-	1	-
RTU-001	ROOF TOP UNIT	-	1	-
RTU-002	ROOF TOP UNIT	-	1	-
KITCHEN EQUIPMENT				
12	COMBIOVEN	170	1	40
13	RANGE/OVEN	164	1	164
14	CONVECTION STEAMER	60	1	60
TOTAL:				3440

NOTES:
 1. GAS PRESSURE OF .25 PSI WITH PRESSURE DROP OF 0.5 PSI
 2. MAX. EQUIVALENT LENGTH OF PIPE = 130 FT.
 3. GAS PIPE SIZING IS BASED ON 2012 IFGC TABLE 402.4(1).

THERMOSTATIC MIXING VALVE SCHEDULE								
ID	AREA/SYSTEM SERVED	THERMOSTATIC CONTROLLERS		RUN OUT PIPE SIZES			BASIS OF DESIGN (OR EQUAL)	REMARKS
		GPM (FLOW @ 20 PSI)	---	CW INLET	HW INLET	TEMPERED WATER OUTLET		
TMV-1	GENERAL BLDG FIXTURES	---	---	---	---	---	---	---

NOTES:
 1. RUN-OUT PIPE SIZES ARE NOT NECESSARILY MIXING VALVE PIPE SIZES
 2. ALL UNITS MUST BE INSTALLED, PIPED, AND ADJUSTED IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS

FLOOR DRAIN SCHEDULE					
ID	TYPE	LOCATION/AREA	SIZE	BASIS OF DESIGN (OR EQUAL)	REMARKS
FD-1	FLOOR DRAIN	GENERAL	5" STRAINER	ZURN #Z415B	W/ 1/2" TRAP PRIMING LINE
FD-2	FLOOR DRAIN	MECHANICAL ROOM	9" STRAINER	ZURN #520	W/ 1/2" TRAP PRIMING LINE
FS-1	FLOOR SINK	KITCHEN	12" x 12"	ZURN #1751	W/ 1/2" TRAP PRIMING LINE
OSD	OPEN SITE DRAIN	NEXT TO FREEZER	4"		

PLUMBING SYSTEM		PLUMBING MATERIAL DESCRIPTION
SANITARY DRAIN PIPING (BELOW SLAB)		SCHEDULE 40 PVC AND FITTINGS
SANITARY DRAIN PIPING (ABOVE SLAB)		STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
VENT PIPING		STANDARD WEIGHT CAST IRON PIPE, W/ NO HUB JOINTS
DOMESTIC WATER PIPING (ABOVE SLAB)		TYPE "L" COPPER PIPING
NATURAL GAS PIPING		SCHEDULE 40 BLACK STEEL PIPE, W/ CAST IRON FITTING

WATER HAMMER ARRESTOR SCHEDULE			
PDI #	MIN-MAX FIXTURE UNIT CAPACITY	CONNECTION SIZE	MANUFACTURER & MODEL NUMBER (OR EQUAL)
"A"	1-11	1/2"	PPP, INC. MODEL SC-500
"B"	12-32	3/4"	PPP, INC. MODEL SC-750
"C"	33-60	1"	PPP, INC. MODEL SC-1000
"D"	61-113	1-1/4"	PPP, INC. MODEL SC-1250
"E"	114-154	1-1/2"	PPP, INC. MODEL SC-1500
"F"	155-330	2"	PPP, INC. MODEL SC-2000

NOTES:
 1. AIR CHAMBERS ARE NOT ACCEPTABLE EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED
 2. SIZE PER MANUFACTURER'S RECOMMENDATIONS
 3. PROVIDE ACCESS PANELS WHERE REQUIRED TO BE IN CONCEALED LOCATIONS

INTERCEPTOR SCHEDULE									
ID	DESCRIPTION	GREASE CAPACITY (LBS)	INLET/OUTLET SIZES	TANK DIMENSIONS			DRAW-OFF	BASIS OF DESIGN (OR EQUAL)	REMARKS
				HEIGHT	WIDTH	LENGTH			
GI-1	KITCHEN GREASE INTERCEPTOR	1500	4"	7'-3"	6'-4"	7'-10"		COLUMBIA PRE-CAST-1500	

PUMP SCHEDULE									
ID	DESCRIPTION	GPM	HEAD (FT.)	HP	VOLTAGE	PHASE	RPM	BASIS OF DESIGN (OR EQUAL)	REMARKS
SP-1	ELEVATOR SUMP PUMP	50	25	1/2	115	1		STANCOR MODEL SE-50 OIL MINDER	
CP-1	HOT WATER CIRCULATING	6	14	1/16	115	1		GRUNFUS MAGNA3	IN-LINE
CP-2	HOT WATER CIRCULATING	2	10	1/16	115	1		GRUNFUS MAGNA3	IN-LINE

PLUMBING FIXTURE SCHEDULE							
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	CONNECTION SIZE				REMARKS
			WASTE	VENT	CW	HW	
P-1	WATER CLOSET	AMERICAN STANDARD MILLENIUM 2856.128 K-4406SLOAN OPTIMA 11-1.6 ES-S TMO FLUSH VALVE	4"	2"	1"	---	WALL MOUNTED, 1.6 GPF, 15" MOUNTING HEIGHT, ELONGATED OPEN FRONT SEAT
P-1A	WATER CLOSET - ADA	AMERICAN STANDARD MILLENIUM 2856.128 SLOAN OPTIMA 11-1.6 ES-S TMO FLUSH VALVE	4"	2"	1"	---	WALL MOUNTED, 1.6 GPF, ADA, 17" MOUNTING HEIGHT, ELONGATED OPEN FRONT SEAT
P-2	URINAL	SLOAN WEUS-1000.1401-0.125 ECOS BATTERY FLUSH VALVE	2"	2"	3/4"	---	1.0 GPF, 24" MOUNTING HEIGHT
P-2A	URINAL - ADA	SLOAN WEUS-1000.1401-0.125 ECOS BATTERY FLUSH VALVE	2"	2"	3/4"	---	ADA, .125 GPF, 15" MOUNTING HEIGHT
P-3	LAVATORY	SLOAN SS-3001 WITH SLOAN ETF-80 OPTIMA HARDWIRED SENSOR FAUCET	1-1/2"	1-1/2"	1/2"	1/2"	OVAL UNDERMOUNT, 0.5 GPM SET @ 12 SEC. CYCLE (0.1 GPC), ASSE 1070 BELOW LAV MIXING VALVE
P-4	LAVATORY - ADA	SLOAN WALL MOUNT SS-3103 SLOAN OPTIMA ETF-80 HARDWIRED SENSOR FAUCET	1-1/2"	1-1/2"	1/2"	1/2"	ADA, WALL MOUNTED, 0.5 GPM SET @ 12 SEC. CYCLE (0.1 GPC), ASSE 1070 BELOW LAV MIXING VALVE, INSULATE TRAP & SUPPLIES
P-5	SHOWER - ADA	AQUA-BATH C41368F-FLUS WITH POWERS P905H-K1-1B PRESSURE BALANCING VALVE	2"	1-1/2"	1/2"	1/2"	SHOWER HEAD 2.5 GPM, INCLUDE SHOWERHEAD, ARM, FLANGE, DIVERTER AND HANDHELD SHOWER SYSTEM
P-6A	CLASSROOM SINK	ELKAY CDKAD251765 WITH FAUCET MODEL LKD2432-LK114A FLEXI-GUARD BUBBLER	1-1/2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, COUNTER MOUNTED
P-6B	SINK	ELKAY DLR202210 WITH CHICAGO FAUCET MODEL 1100-GZE3-317AB	1-1/2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, COUNTER MOUNTED
P-6C	SINK	ELKAY DLQR252210 WITH CHICAGO FAUCET MODEL 1100-GZE3-317AB					STAINLESS STEEL, COUNTER MOUNTED
P-6E	SINK	ELKAY DLRS332212 WITH CHICAGO FAUCET MODEL 1100-GZE3-317AB	2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, COUNTER MOUNTED W/ GARBAGE DISPOSER INSINKERATOR BADGER EXP - 3/4 HP
P-6D	SINK	ELKAY LR3322EK WITH CHICAGO FAUCET MODEL 1100-GZE3-317AB	1-1/2"	1-1/2"	1/2"	1/2"	SINK SHALL DRAIN TO NEUTRALIZATION TANK IN SCIENCE LAB WHERE INDICATED.
P-7	WATER CLOSET	AMERICAN STANDARD BABY DEVORO-FLOWISE 2282.001 WITH SLOAN DUAL FLUSH WES-111	4"	2"	1"	---	FLOOR MOUNTED 1.28 GPF, 10" MOUNTING HEIGHT, ROUND FRONT SEAT
P-8	WATER CLOSET	AMERICAN STANDARD MADERA WITH SLOAN DUAL FLUSH WES-111	4"	2"	1"	---	FLOOR MOUNTED, 1.28 GPF, 15" MOUNTING HEIGHT, ELONGATED OPEN FRONT SEAT
P-10	MOP SINK	FLORESTONE 20 FIAT MODEL 830-AA FAUCET	3"	1 1/2"	3/4"	3/4"	FLOOR MOUNTED, PROVIDE MOP BRACKET (T-40) & HOSE (T35)
P-11	ELECTRIC WATER COOLER	ELKAY VANDAL RESISTANT EZH2O LVRC1L8WS & LVRC1DDWS WITH FLEXI-GUARD BUBBLER	1 1/2"	1 1/2"	1/2"		ADA, DUAL HEIGHT
P-11A	ELECTRIC WATER COOLER	ELKAY VANDAL RESISTANT EZH2O LVRC1L8WS & LVRC1DDWS WITH FLEXI-GUARD BUBBLER	1 1/2"	1 1/2"	1/2"		CHILDREN ADA HEIGHT DUAL HEIGHT
P-12	WASHER BOX	GUY GRAY RECESSED BOX	2"	1 1/2"	3/4"	3/4"	

- PROVIDE POINT OF USE THERMOSTATIC MIXING VALVE-ASSE-1070.
- PER DCPS DESIGN GUIDELINES CHAPTER 7, PLUMBING DESIGN CRITERIA, G-PLUMBING FIXTURES, ITEM 17, ALL ART ROOM SINKS SHALL BE PROVIDED WITH A PLASTER TRAP/SOLIDS INTERCEPTOR. PROVIDE ZURN Z1180 SOLIDS INTERCEPTOR INSIDE CABINET.
- PER DCPS DESIGN GUIDELINES CHAPTER 7, PLUMBING DESIGN CRITERIA, G-PLUMBING FIXTURES, ITEM 7, ALL SCIENCE SINKS SHALL BE PROVIDED BY CASEWORK CONTRACTOR. SEE ARCHITECTURAL DOCUMENTS FOR CLARIFICATION OF SINK REQUIREMENTS. PLUMBER IS RESPONSIBLE FOR ROUGH-INS AND FINAL CONNECTIONS ONLY FOR SCIENCE SINKS. PLUMBER ALSO RESPONSIBLE TO PROVIDE 5 GALLON ACID NEUTRALIZATION TANK IN CABINET BENEATH EACH SCIENCE SINK. WASTE PIPING FROM SINK TO TANK SHALL BE ACID RESISTANT POLYPROPYLENE WITH MECHANICAL JOINTS. PROVIDE 50 POUND BAG OF LIMESTONE CHIPS MADE FOR ACID NEUTRALIZATION FOR EACH SINK. ACID VENT SHALL BE ROUTED TO ATMOSPHERE INDEPENDENT OF OTHER VENT PIPING.

KITCHEN EQUIPMENT FIXTURE SCHEDULE							
ID	DESCRIPTION	WATER		WASTE		GAS	REMARKS
		CW	HW	INDIRECT	DIRECT		
9	HANDSINK	1/2"	1/2"	1-1/2"	1-1/2"		
12	CONVECTION OVEN, MOBILE					3/4"	170 CFH
13	RANGE/OVEN, MOBILE					3/4"	184 CFH
14	CONVECTION STEAMER	1/2"				1/2"(2)	60 CFH
16	PRE SINK	1/2"	1/2"	1-1/2"(2)			
21a	HOT FOOD SERVING COUNTER	1/2"		3/4"			
25	SOILED DISH TABLE PRE-RINSE	1/2"	1/2"				
26	DISPOSER	1/2"		2"	1-1/2"		SS-200 2HP, 208 V, 3PH
27	DISHMACHINE		3/4"				
31	POT WASHING SINK	3/4"	3/4"	2"(3)			
38	MOP SINK	3/4"	3/4"	3"	1-1/2"		

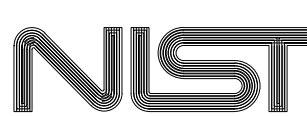
NOTES:
 1. KITCHEN EQUIPMENT PROVIDED UNDER FOOD SERVICE DRAWINGS. PROVIDE ROUGH-IN AND FINAL CONNECTION UNDER THIS DIVISION. COORDINATE FINAL CONNECTION AND ROUGH-IN REQUIREMENTS WITH FOOD SERVICE DRAWINGS.
 2. EQUIPMENT NO.'S ARE PER THE KITCHEN EQUIPMENT DRAWINGS.

DOMESTIC WATER EXPANSION TANK SCHEDULE											
ID	WATER HEATER VOLUME (GALLONS)	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE (PSIG)	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
							HEIGHT	DIAMETER			
ET-1	200	140	150	55	14	8.96	20"	17"	120	AMTROL THERM-X-TROL ST-447-C	
ET-2	100	140	150	55	6	3.76	15"	11"		AMTROL ST-12V	

GAS FIRED WATER HEATER SCHEDULE															
ID	LOCATION	STORAGE CAPACITY (GALLONS)	GAS INPUT (BTU/HR)	GAS TYPE	MIN. EFFICIENCY	RECOVERY (GPH @100)	INLET TEMP (°F)	OUTLET TEMP (°F)	FLUE SIZE		ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN (OR EQUAL)	REMARKS
									INTAKE	EXHAUST	VOLTS	PHASE	HZ		
GWH-1 & GWH-1A	MECHANICAL ROOM	100	199,000	NAT.	96	230	40	140	3"	3"	115	1	60	AO SMITH- CYCLONE MODEL BTH-199Mxi	
GWH-2	MECHANICAL ROOM	100	199,000	NAT.	96	230	40	140	3"	3"	115	1	60	AO SMITH- CYCLONE MODEL BTH-199Mxi	

NOTES:
 1. GAS BURNER SHALL BE CAPABLE OF OPERATING ON A MIN. GAS PRESSURE OF [] INCHES WATER GAUGE AND A MAX. GAS PRESSURE OF [] INCHES WATER GAUGE
 2. FLUE SIZES ARE NOT NECESSARILY THE EQUIPMENT CONNECTION SIZE.

REVISION	DESCRIPTION	BY	DATE



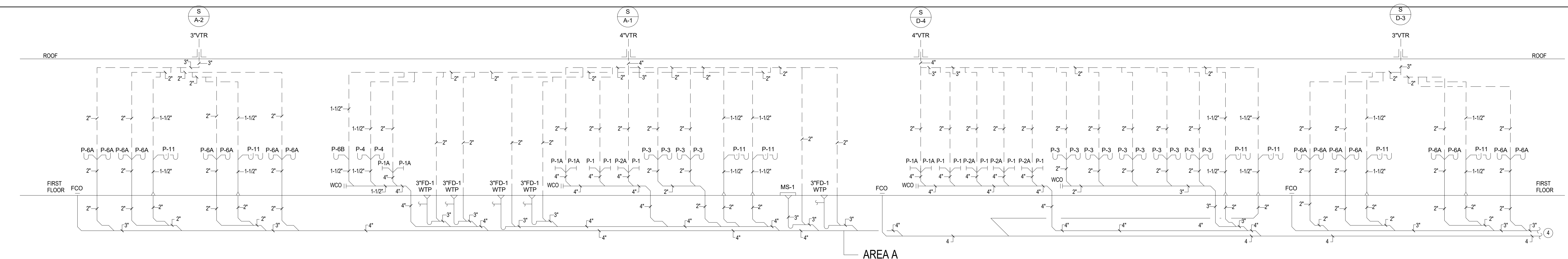
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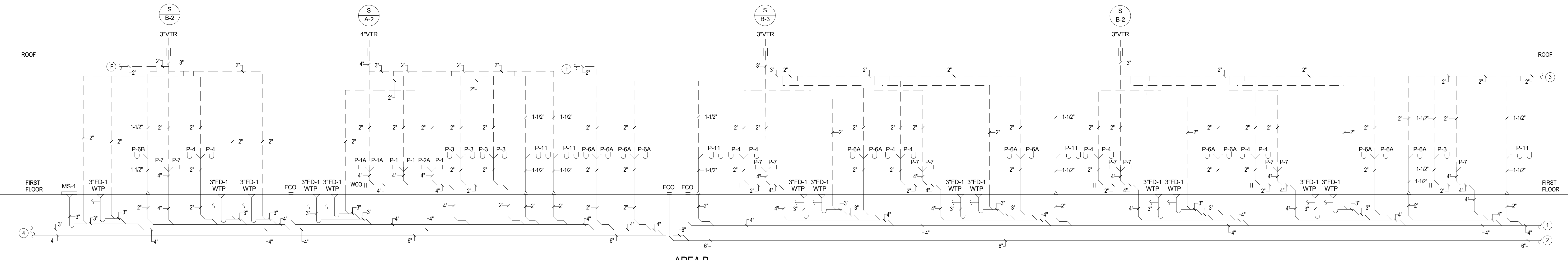
PLUMBING SCHEDULES

P401

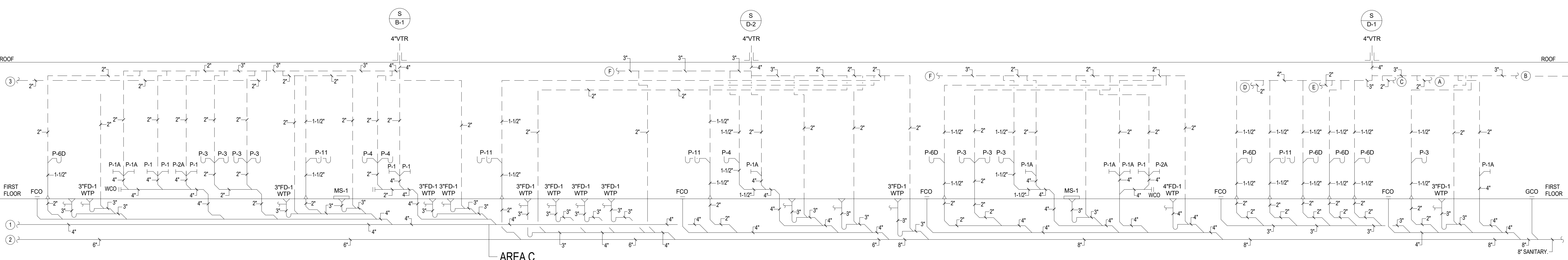
APPROVED BY _____ DATE _____	SPONSOR _____ DATE _____	MAINTENANCE ENG. OFF. _____ DATE _____	ENVIRONMENTAL MANAGEMENT _____ DATE _____	SAFETY _____ DATE _____	SHED - NIST FIRE MARSHAL/AHJ _____ DATE _____	FACILITIES ENGR. OFF. _____ DATE _____	PROJECT LEADER _____ DATE _____	DRAWN BY _____ DATE _____	AA _____ DATE _____
SH. NO. ___ OF ___									DWG. P401



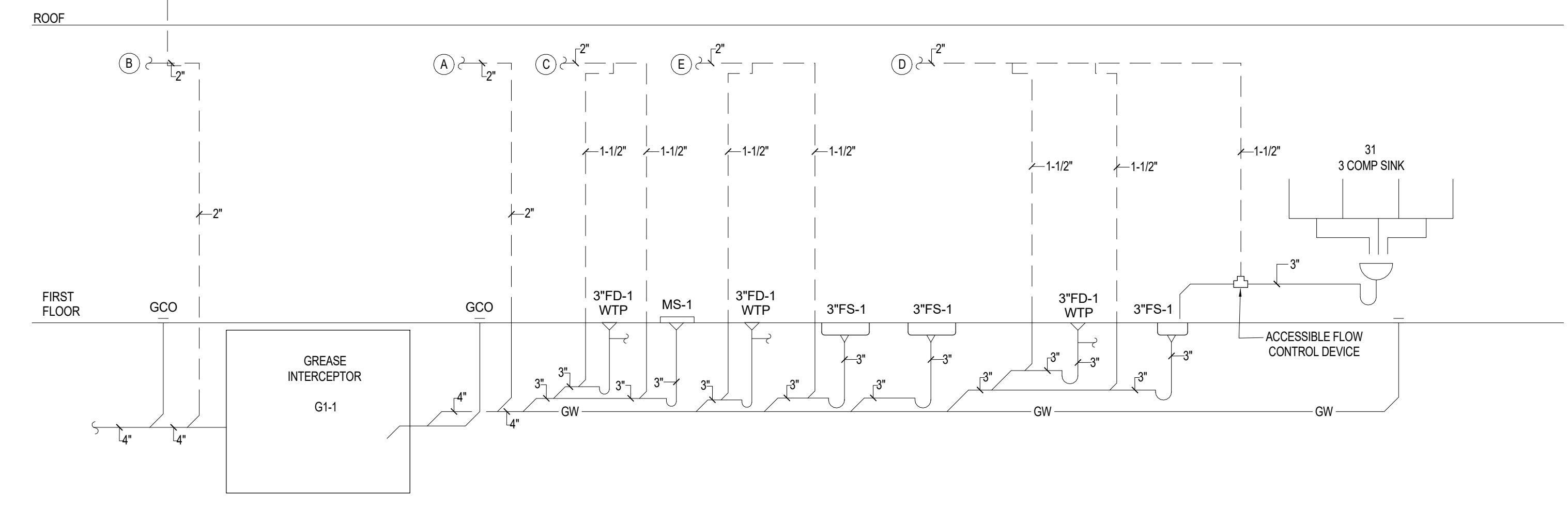
AREA A



AREA B



AREA C

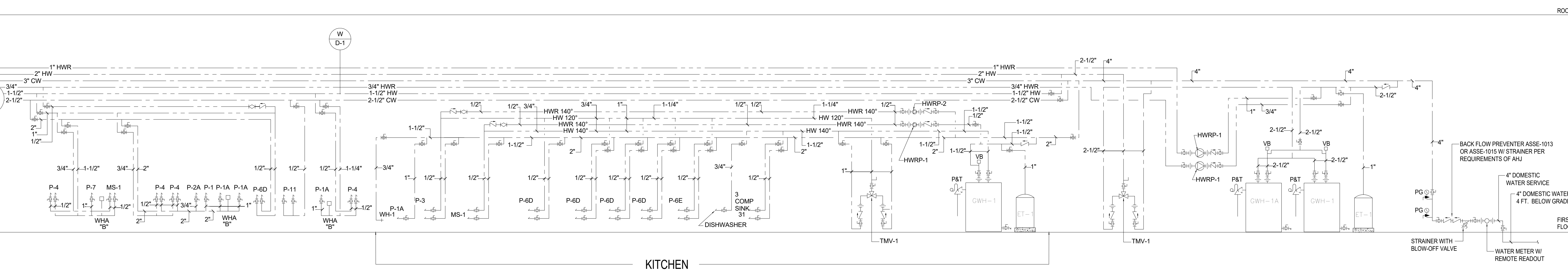
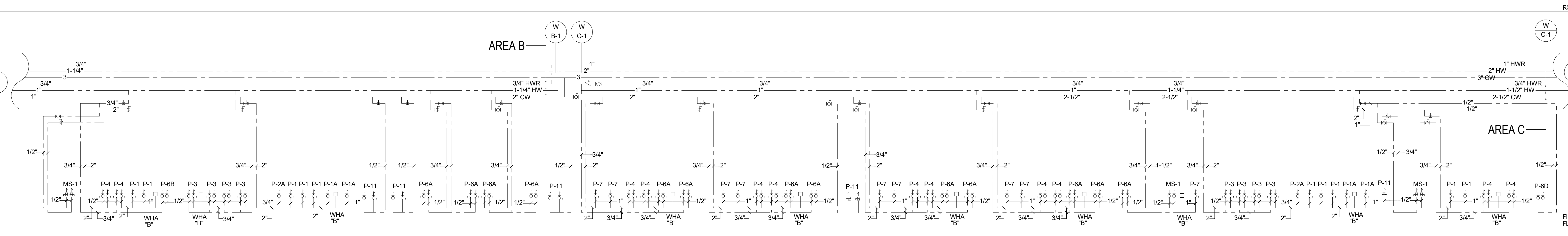
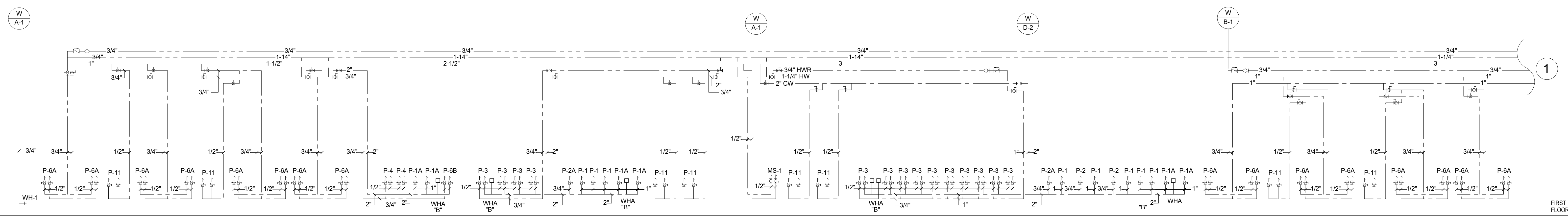


REVISION	DESCRIPTION	BY	DATE
FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - PRIMARY SCHOOL PLUMBING SANITARY RISER DIAGRAM			
P501			
SH. NO. ___ OF ___			DWG. P501
APPROVED BY	DATE	SPONSOR	
DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT
DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ
DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER
DATE	VAY	DATE	AA
		08/15/2022	Project Number
			PROJECT/ W.O. #

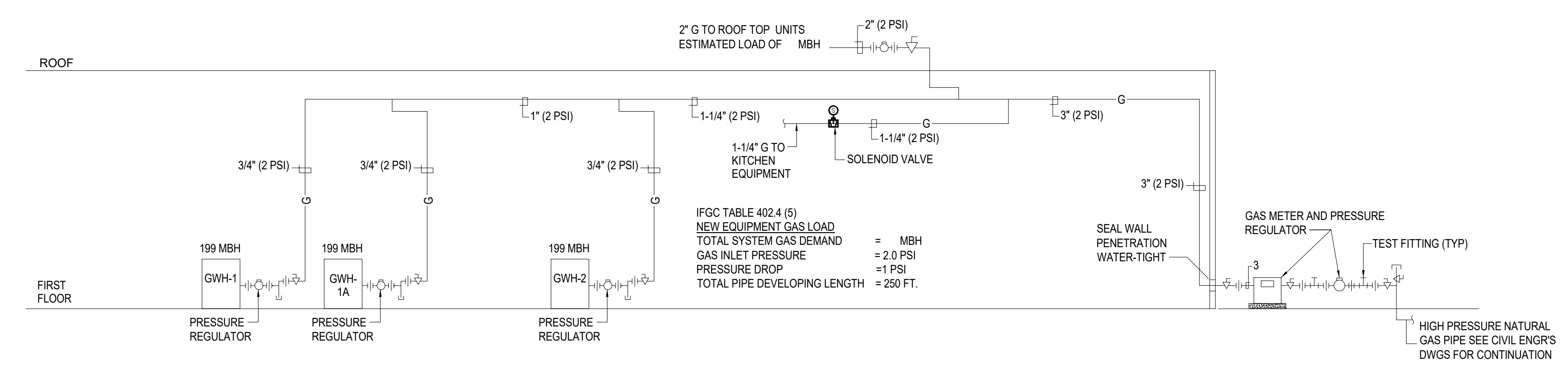
1 SCHOOL SANITARY RISER DIAGRAM
1/4" = 1'-0"

ARCHITECT
MEP. ENG.

REVISION	DESCRIPTION	BY	DATE

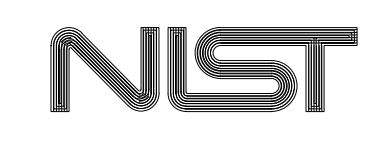


1 SCHOOL WATER RISER DIAGRAM
1/4" = 1'-0"



2 SCHOOL GAS RISER DIAGRAM
1/4" = 1'-0"

ARCHITECT
MEP. ENG.



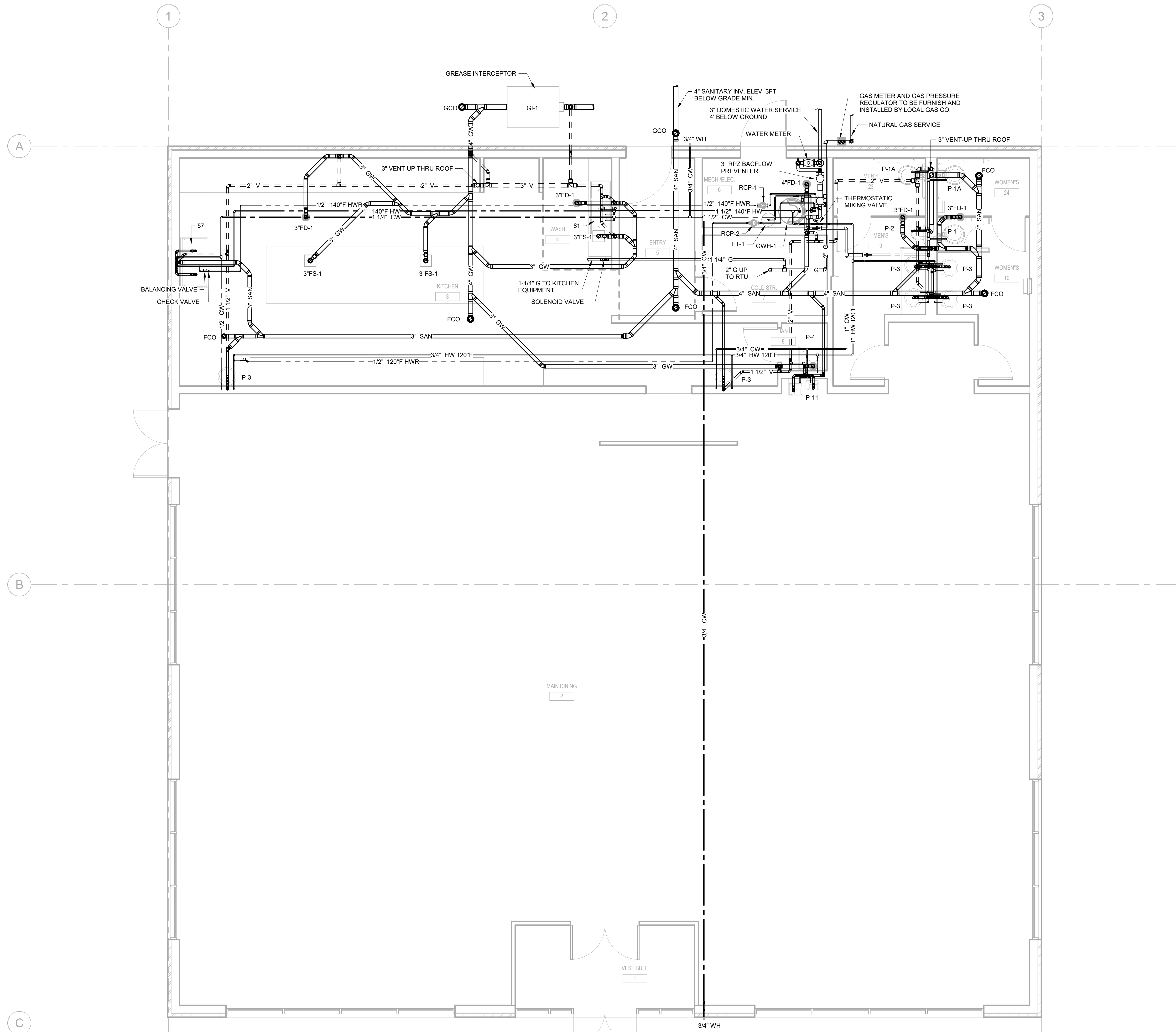
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NIST - PRIMARY SCHOOL
PLUMBING WATER & GAS RISER DIAGRAM

P502

REVISION	DESCRIPTION	BY	DATE
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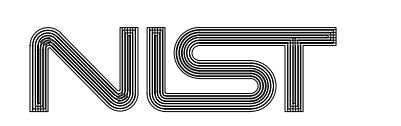
GENERAL NOTES

- REFER TO P101 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.



1 FIRST FLOOR - FIRST FLOOR - SANITARY, WATER & GAS
1/4" = 1'-0"

ARCHITECT
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NIST - FULL SERVICE RESTAURANT

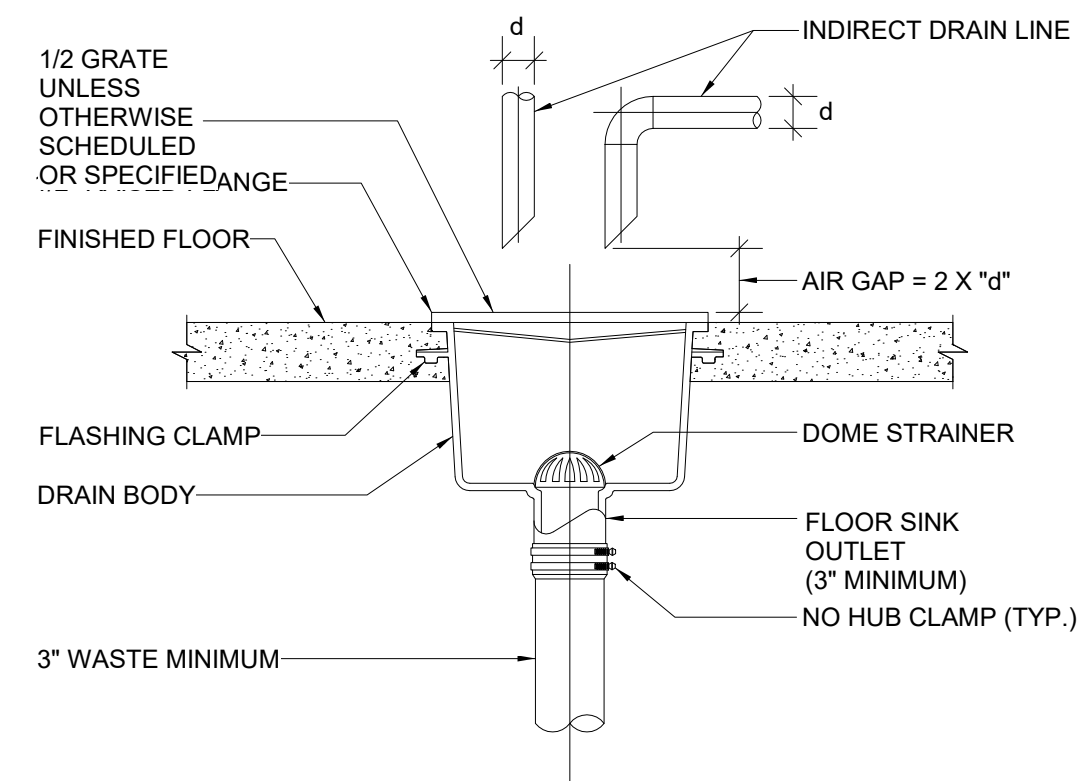
PLUMBING FLOOR PLAN

P101

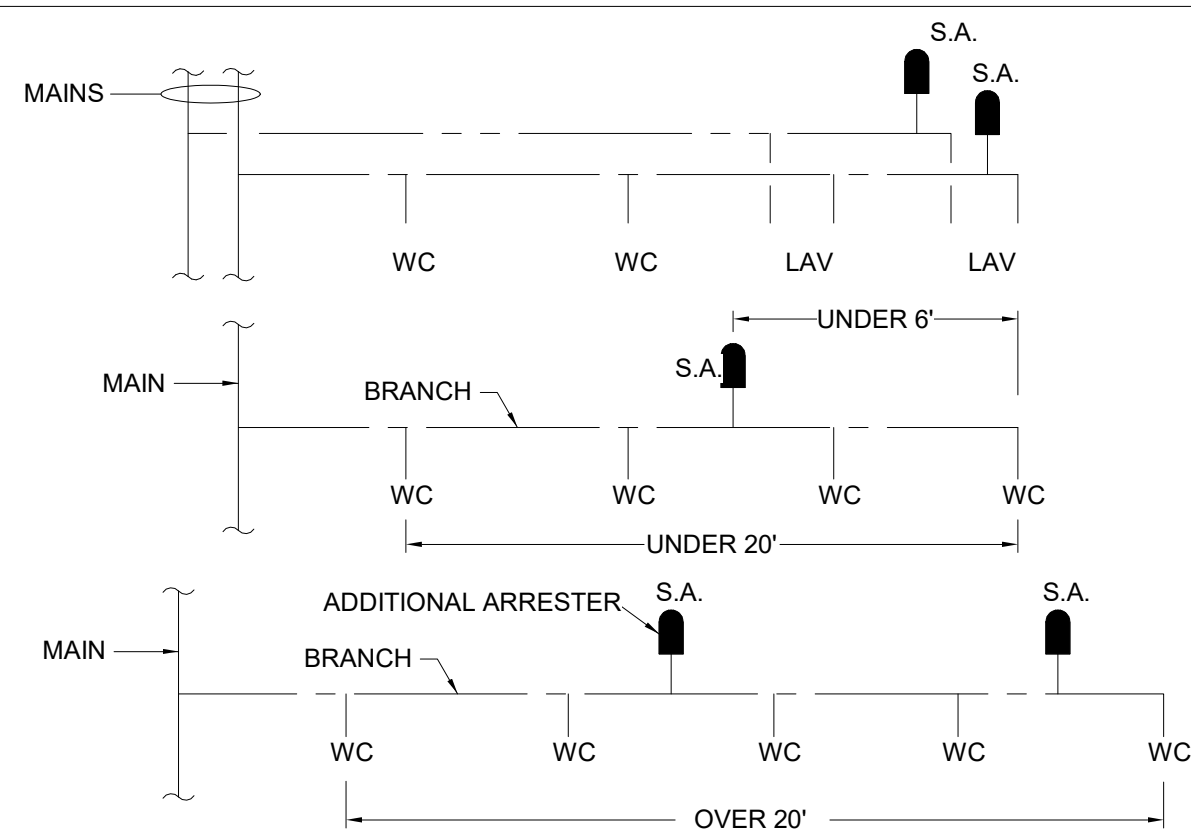
DWG. P101

APPROVED BY	DATE	SPONSOR	DATE	MAINTENANCE ENG. OFF.	DATE	ENVIRONMENTAL MANAGEMENT	DATE	SAFETY	DATE	SHED - NIST FIRE MARSHAL/AHJ	DATE	FACILITIES ENGR. OFF.	DATE	PROJECT LEADER	DATE	DRAWN BY	DATE	08/15/2022	Project Number	SH. NO. OF
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REVISION	DESCRIPTION	BY	DATE

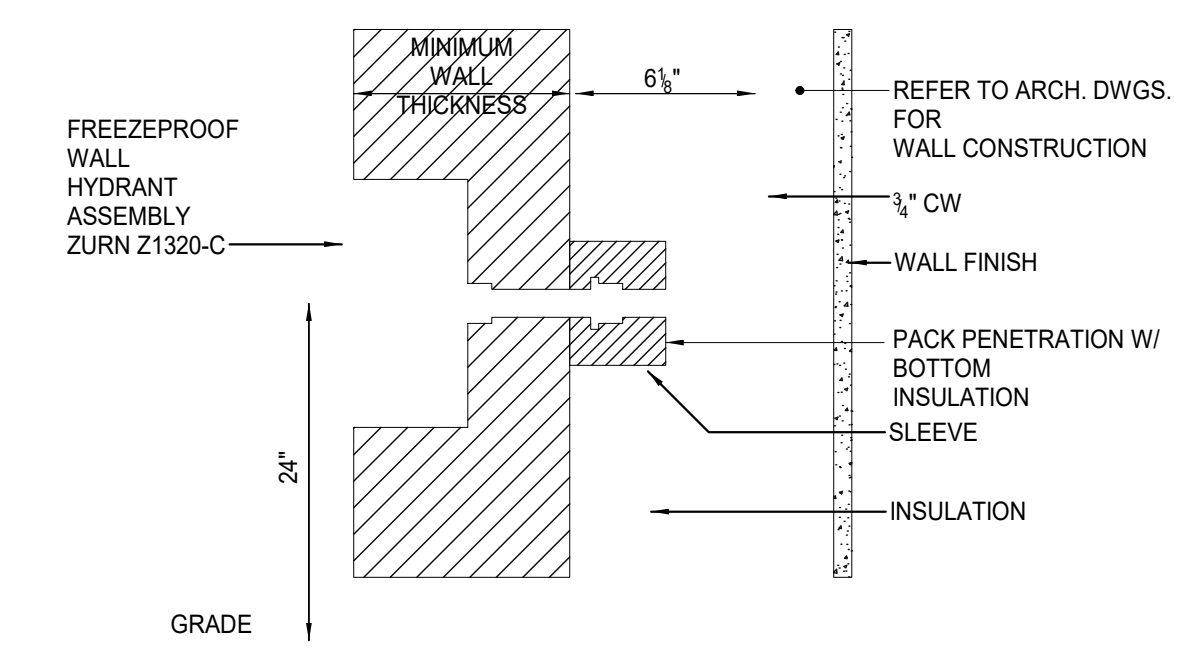


6 FLOOR SINK DETAIL
SCALE: NOT TO SCALE

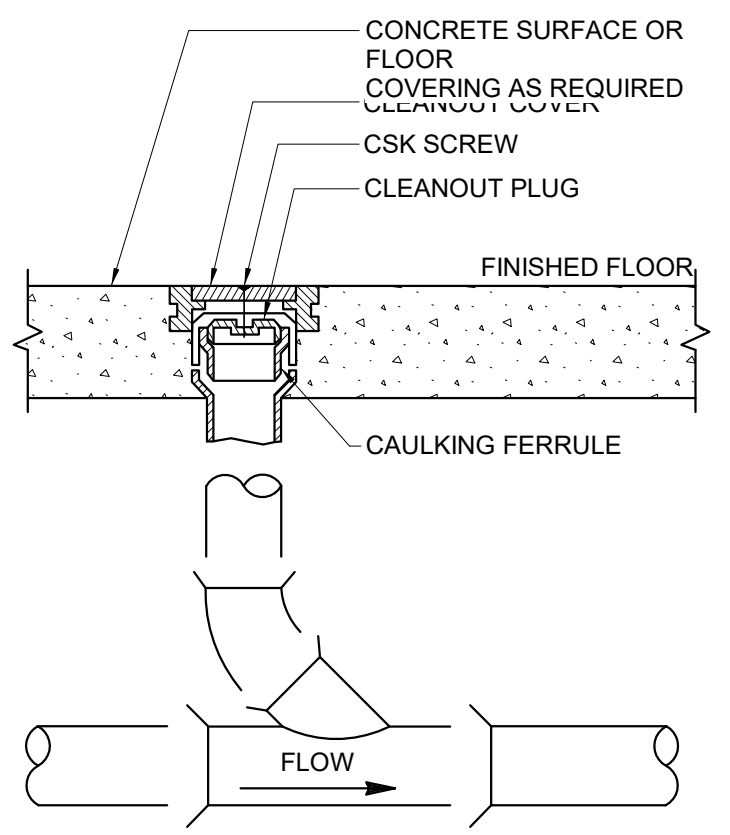


- NOTES:
 1. SHOCK ARRESTORS SHALL BE INSTALLED ON ALL BRANCH PIPING SERVING PLUMBING FIXTURES, QUICK-CLOSING, VALVES, EQUIPMENT, OR WALL HYDRANTS/HOSE BIBS.
 2. BRANCH PIPES WITH A DEVELOPED LENGTH OF 25' OR LESS MAY HAVE ARRESTORS REDUCED BY ONE SIZE.
 3. BRANCH PIPES WITH A DEVELOPED LENGTH OF 75' OR GREATER MAY HAVE ARRESTORS REDUCED BY ONE SIZE.
 4. STOP VALVE AND SHOCK ARRESTORS SHALL BE ACCESSIBLE THROUGH A SINGLE ACCESS DOOR.
 5. SHOCK ARRESTORS SHALL BE CERTIFIED BY THE PLUMBING AND DRAINAGE INSTITUTE (PDI).
 6. WHEN WORKING WATER PRESSURE EXCEEDS 65 PSI USE NEXT LARGEST SIZE.
 7. MAXIMUM PIPING LENGTH COVERED BY ONE ARRESTOR SHALL BE 20 LINEAR FT.
 8. ALL INSTALLATIONS AS DIRECTED BY MANUFACTURER.

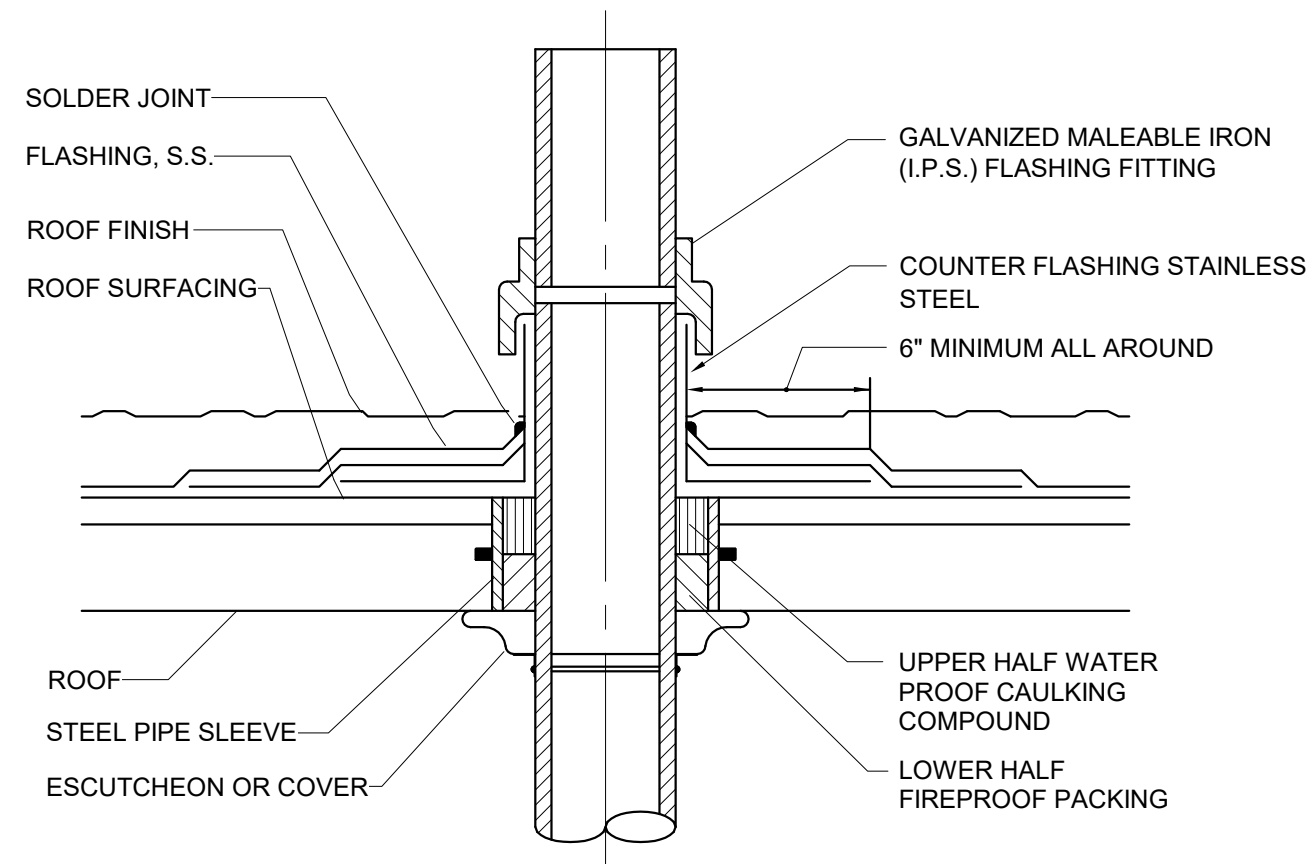
3 WATER HAMMER ARRESTOR DETAIL
SCALE: NOT TO SCALE



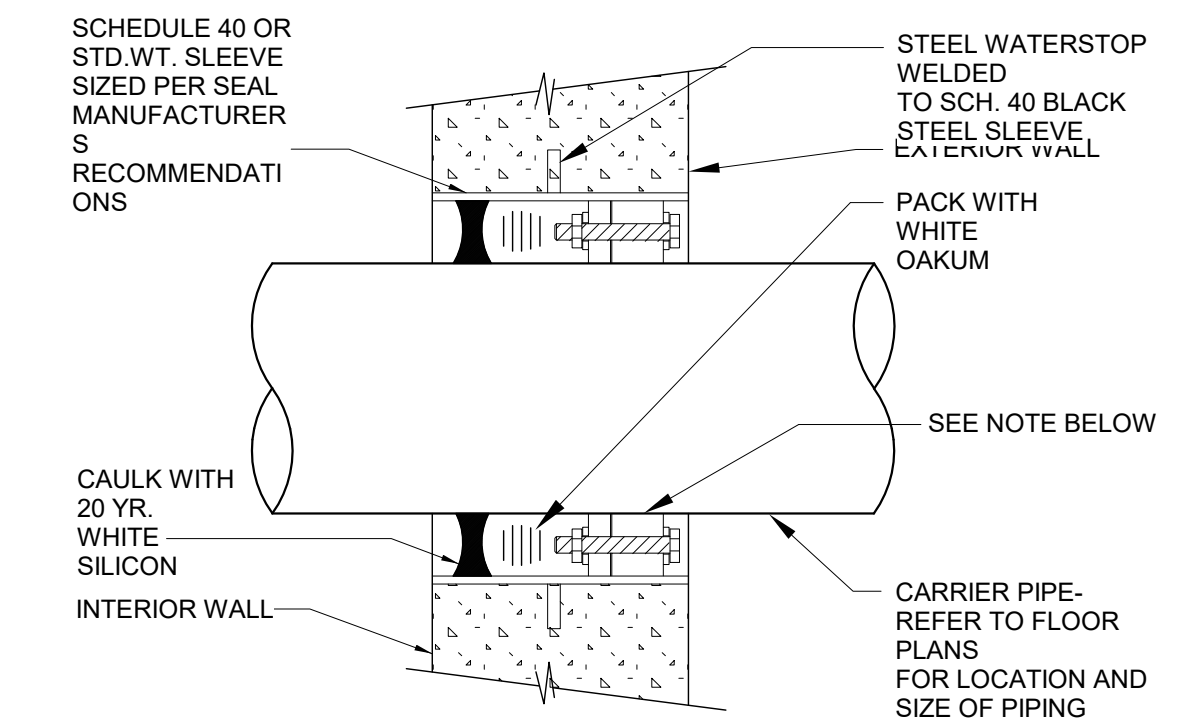
1 FREEZEPROOF WALL HYDRANT DETAIL
SCALE: NOT TO SCALE



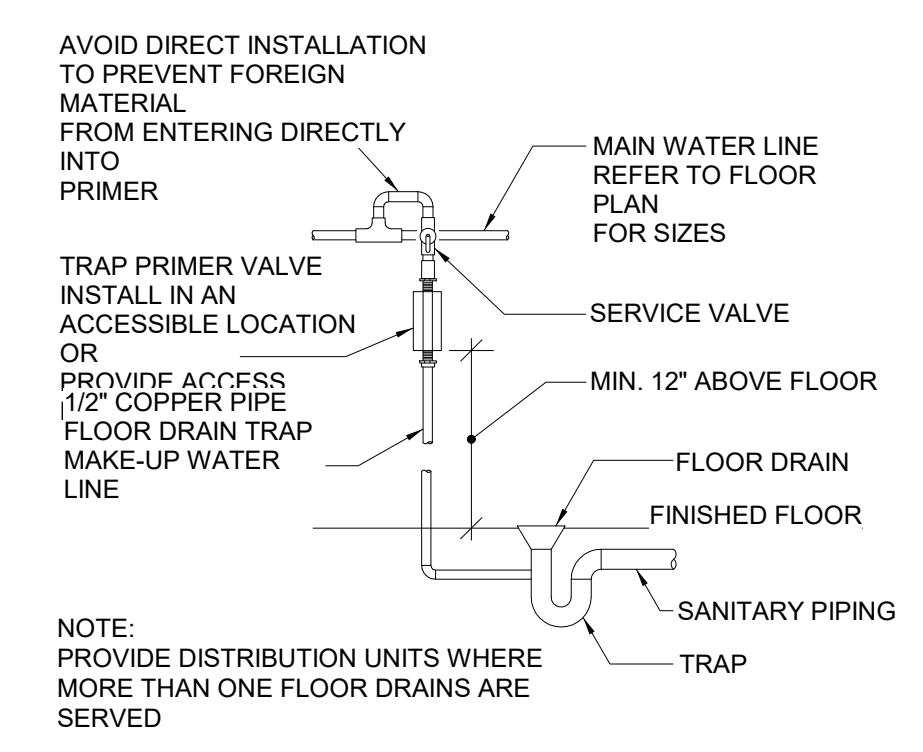
7 FLOOR CLEANOUT DETAIL
SCALE: NOT TO SCALE



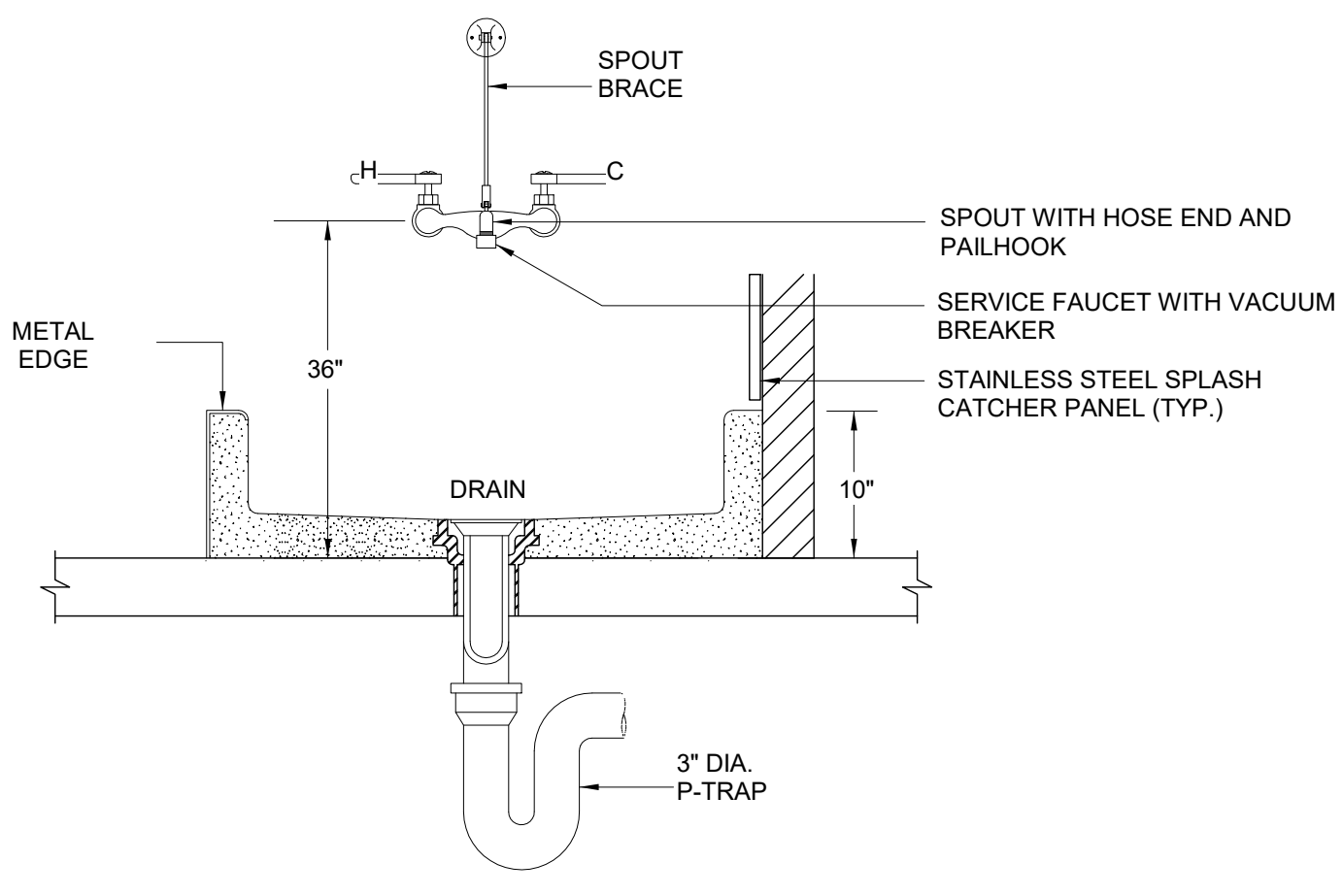
4 VENT THRU ROOF DETAIL
SCALE: NOT TO SCALE



2 WATERTIGHT PIPE SLEEVE THRU EXTERIOR WALL DETAIL
SCALE: NOT TO SCALE

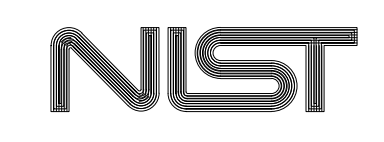


8 TRAP PRIMER DETAIL
SCALE: NOT TO SCALE



5 FLOOR MOUNTED MOP SINK DETAIL
SCALE: NOT TO SCALE

ARCHITECT
MEP - ENG.

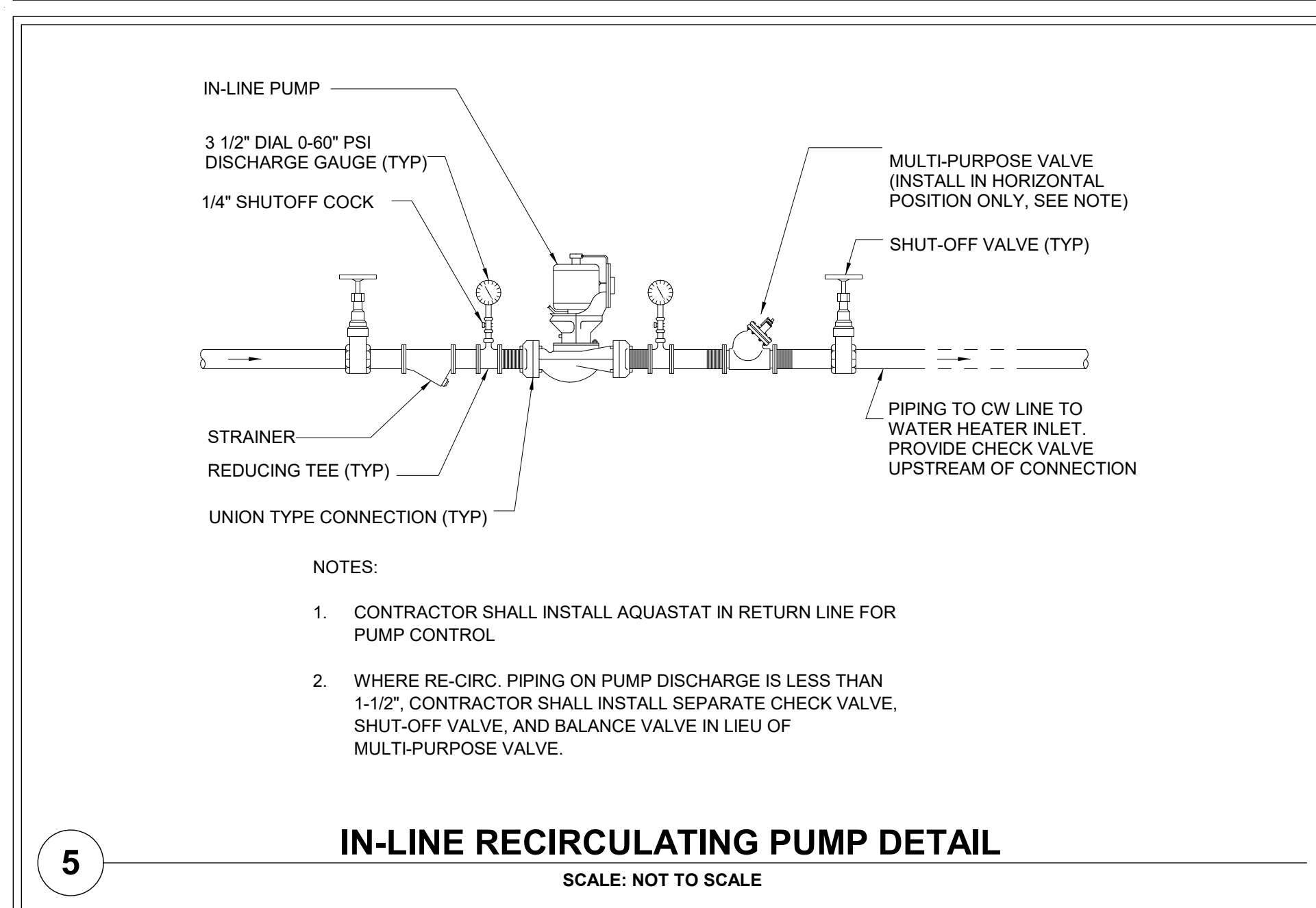
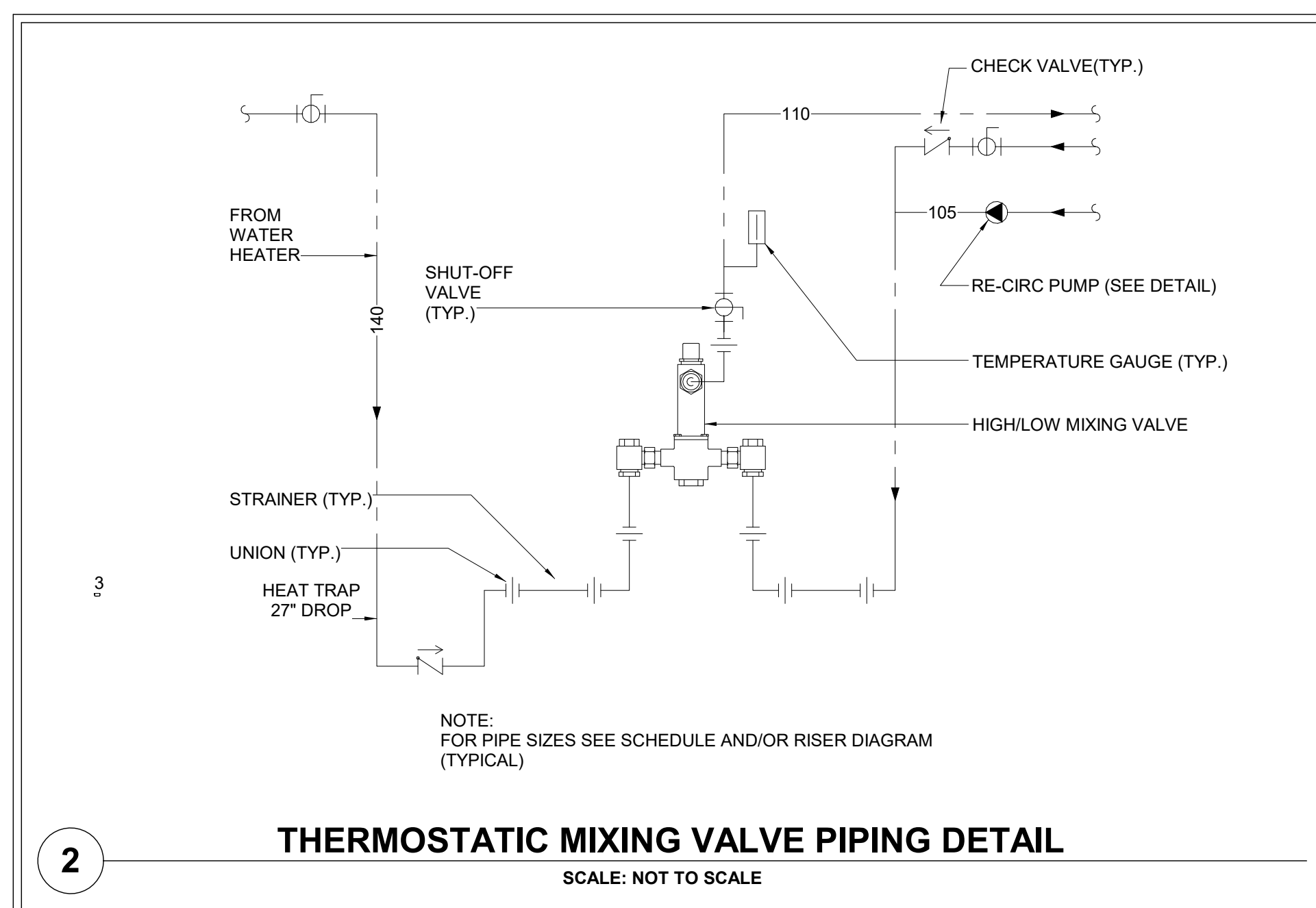
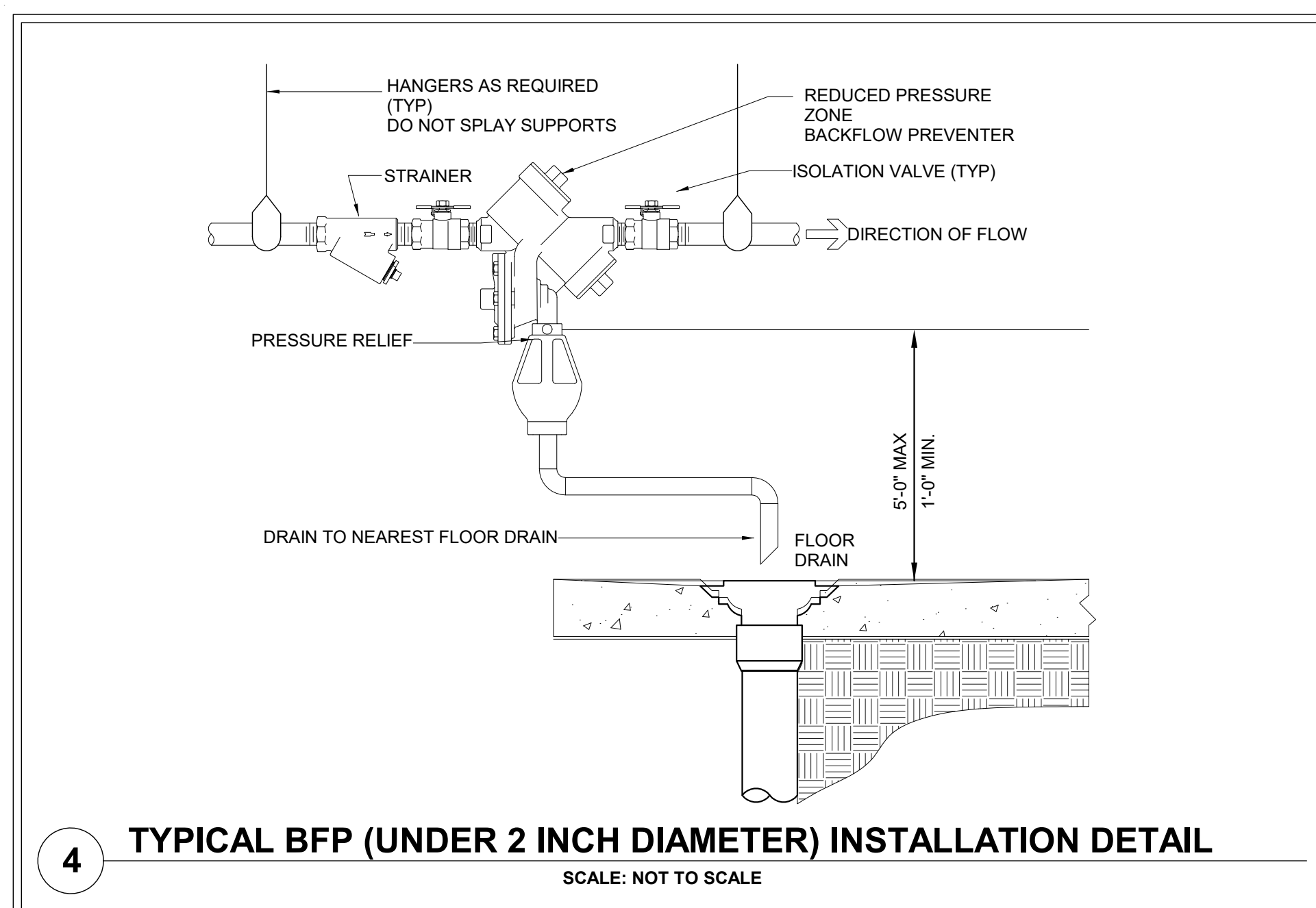
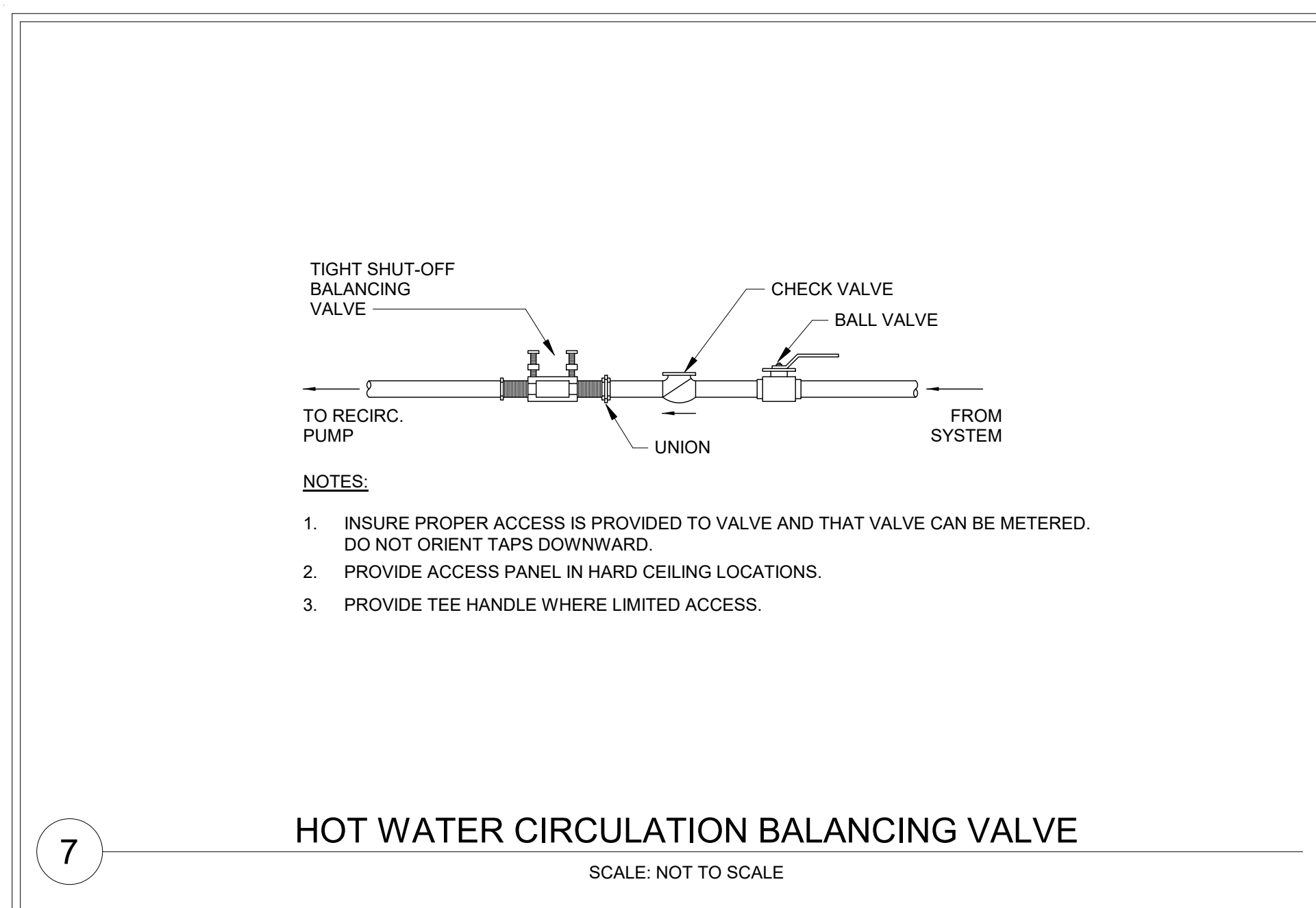
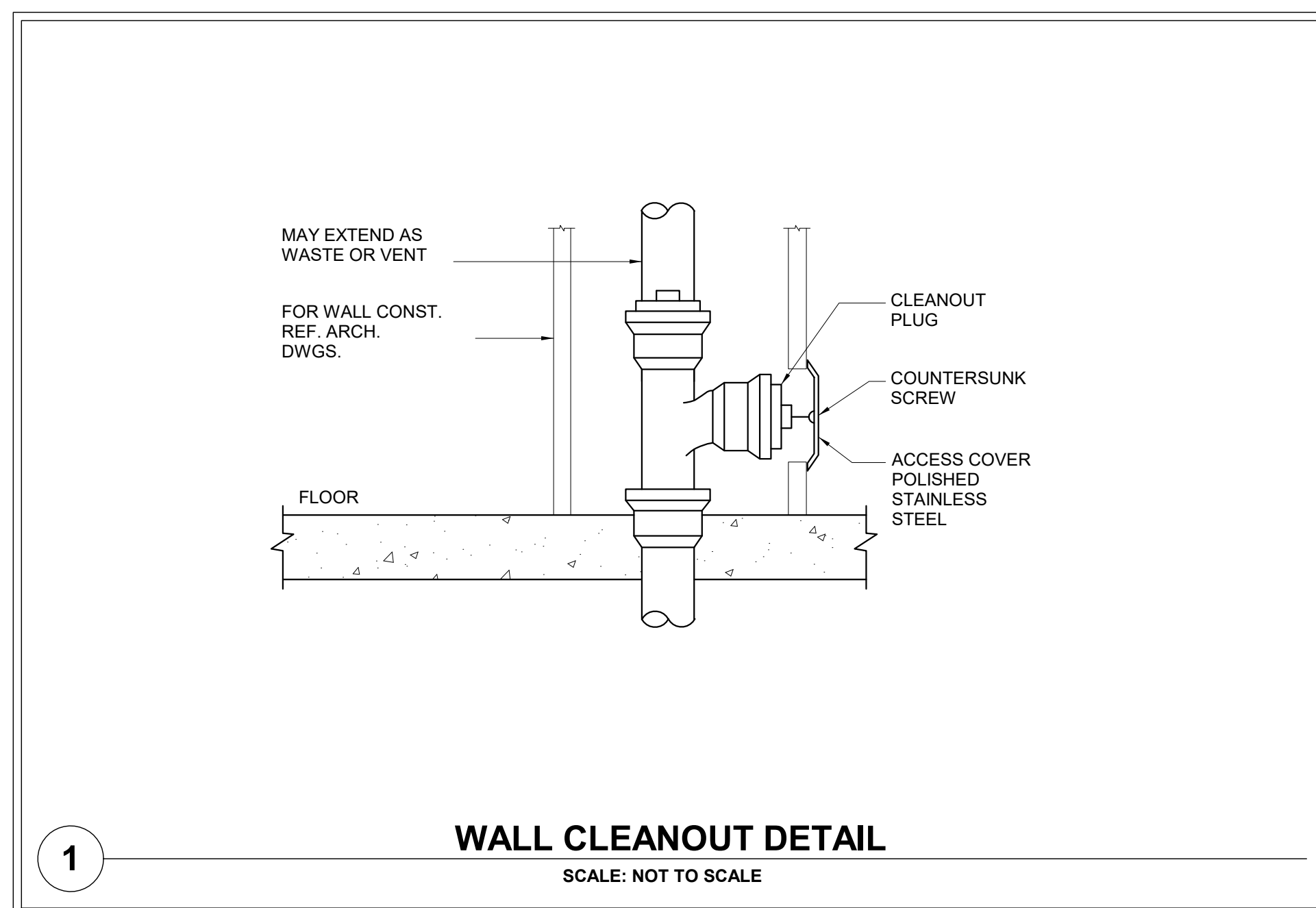
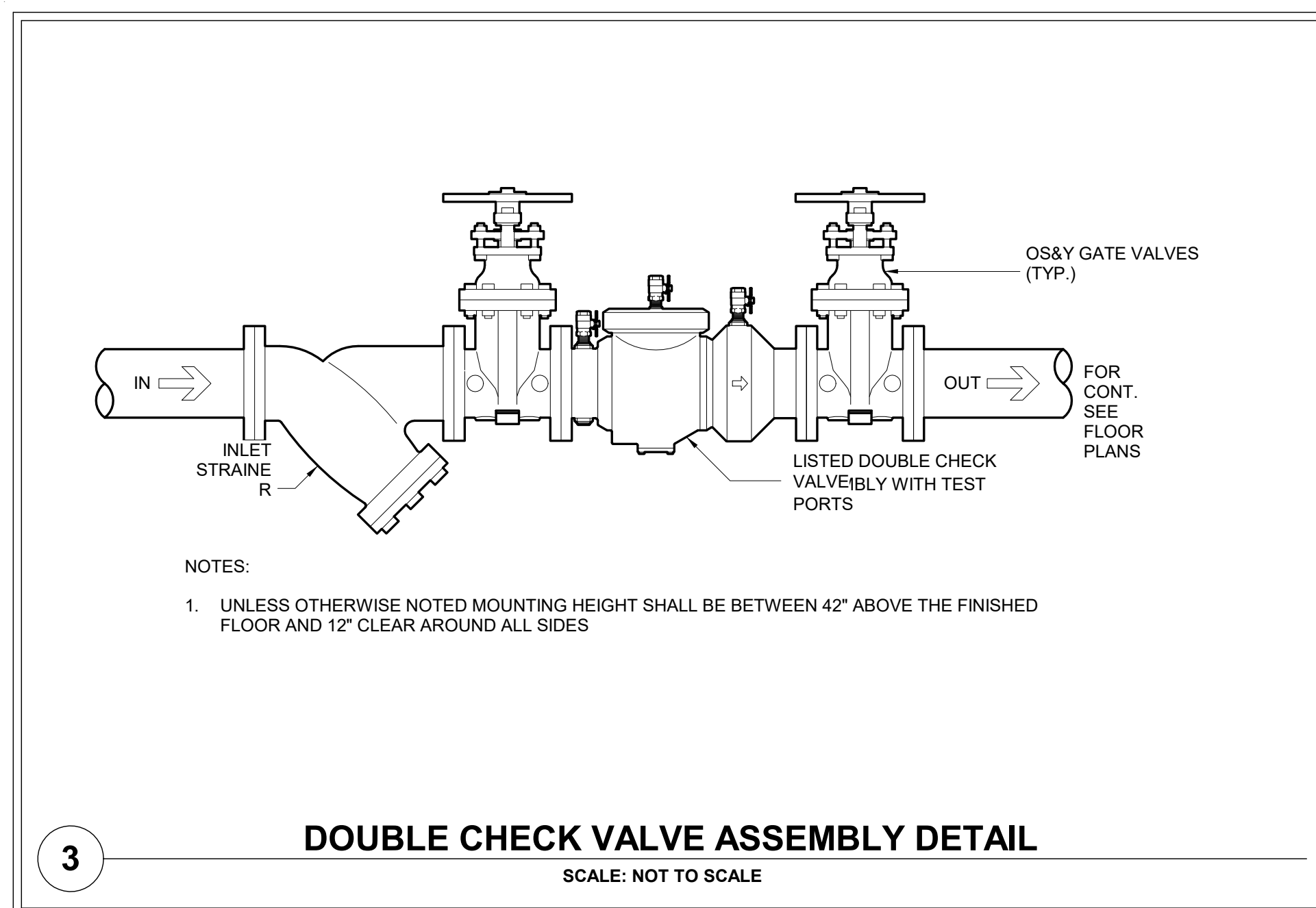
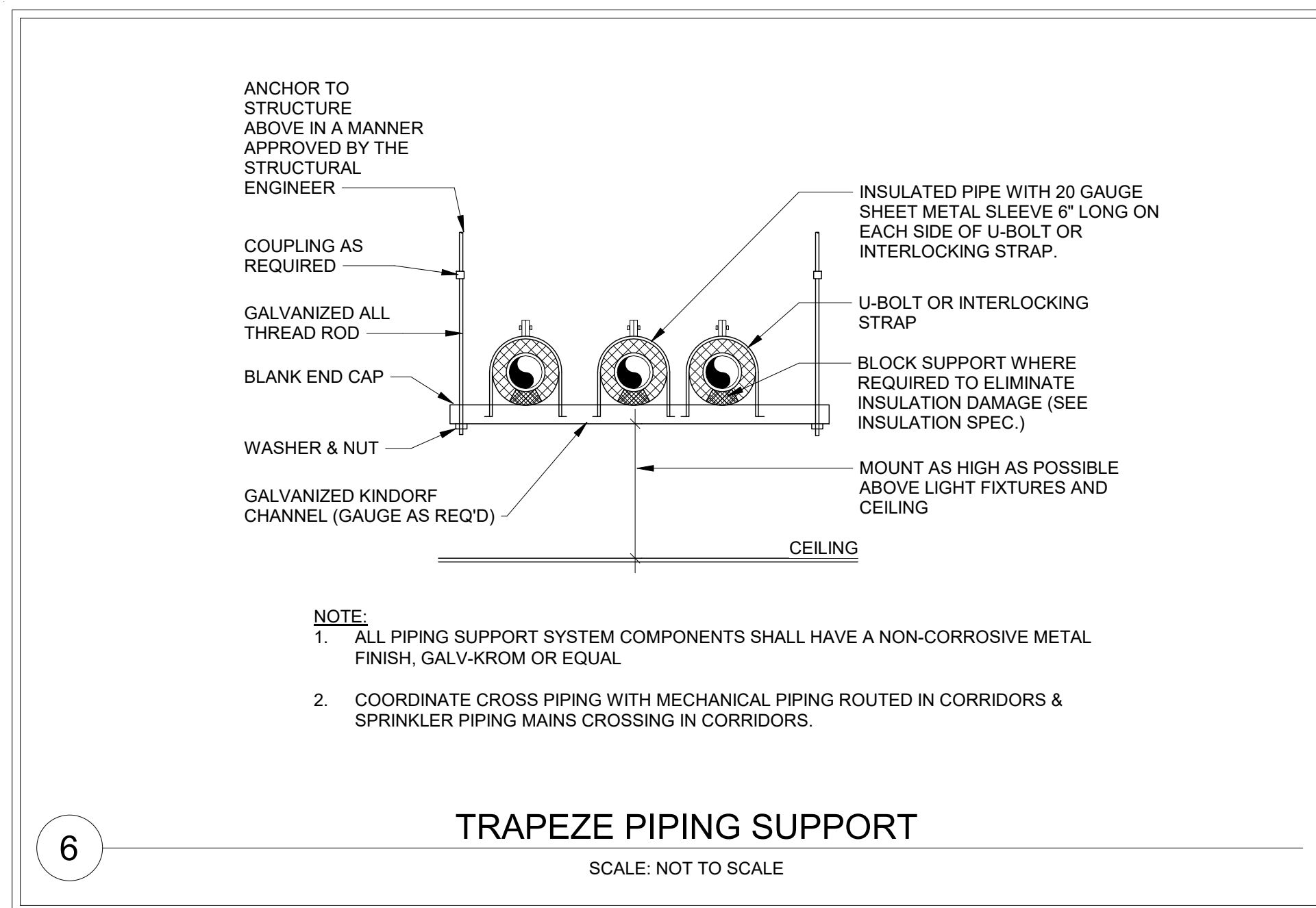


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 NIST - FULL SERVICE RESTAURANT

PLUMBING DETAILS

P301

REVISION	DESCRIPTION	BY	DATE



ARCHITECT

MEP. ENG.

NIST

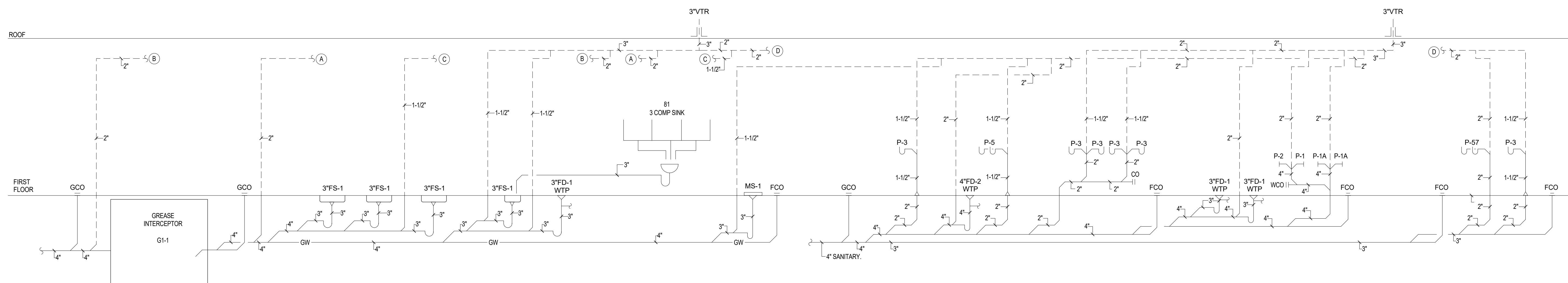
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 NIST - FULL SERVICE RESTAURANT

PLUMBING DETAILS

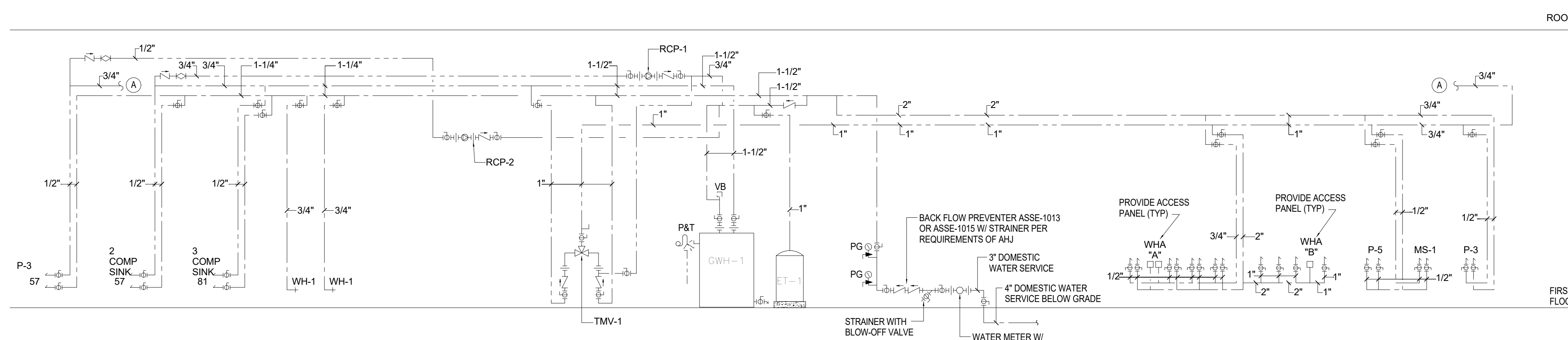
P302

SH. NO. ___ OF ___ DWG. P302

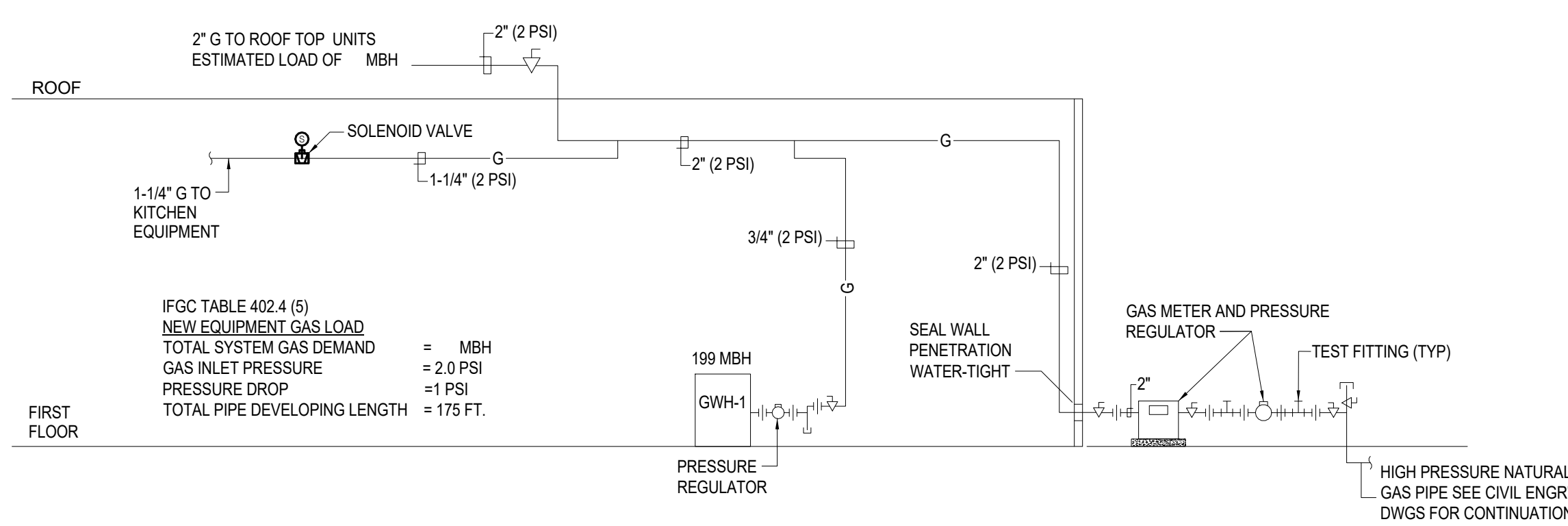
REVISION	DESCRIPTION	BY	DATE
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1 RESTAURANT - SANITARY RISER DIAGRAM
NOT TO SCALE



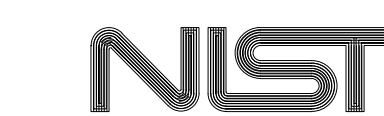
2 RESTAURANT - WATER RISER DIAGRAM
NOT TO SCALE



3 RESTAURANT - GAS RISER DIAGRAM
NOT TO SCALE

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RISER DIAGRAM

P501

DWG. P501