

# U.S, DEPARTMENT OF COMMERCE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

NIST STANDARD BUILDING PLUMBING SYSTEM MODELS

PLUMBING CD SUBMISSION 100% 08-15-2022

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DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

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P302 P401 P501	PLUMBING DETAILS PLUMBING SCHEDULES PLUMBING RISERS						
P101	DETACHED - MULTI STORY PLUMBING FLOOR PLAN						
P301 P302 P401 P501	PLUMBING DETAILS PLUMBING SCHEDULES PLUMBING RISERS						
P502 MID RISE APAR							
P101 P102 P103 P104	PLUMBING FIRST FLOOR PLAN - WATER OF PLUMBING SECOND FLOOR PLAN - WATER PLUMBING THIRD FLOOR PLAN - WATER PLUMBING FOURTH FLOOR PLAN - WATER	ER & GAS & GAS					
P111 P112 P113	PLUMBING FIRST FLOOR PLAN - DWV & S PLUMBING SECOND FLOOR PLAN - DWV PLUMBING THIRD FLOOR PLAN - DWV & S	STORM & STORM STORM					
P114 P201 P202	PLUMBING FOURTH FLOOR PLAN - DWV & PLUMBING ENLARGED PLANS PLUMBING ENLARGED PLANS	& STORM					
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P301 P302 P401	PLUMBING DETAILS PLUMBING DETAILS PLUMBING SCHEDULES						ITECT
P501 P502	PLUMBING RISERS PLUMBING RISERS						ARCHITECT
P101 P201 P301	PLUMBING FLOOR PLAN PLUMBING ENLARGED PLANS PLUMBING DETAILS						
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DATE FACILITIES ENGR. OFF.

DATE SHED - NIST FIRE MARSHAL/AHJ

## REVISION **DESCRIPTION** BY DATE **ABBREVIATIONS** PLUMBING GENERAL CONDITIONS PLUMBING GENERAL NOTES PLUMBING SYMBOLS THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. PROVIDE ALL LABOR DESCRIPTION SYMBOL AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS. ANY OBSERVED FAULTS OR BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE UTILITIES AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. **AREA DRAIN** MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE **DEMOLISH AND REMOVE ABOVE FINISH FLOOR** ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT. DURING BID PERIOD AND AGAIN **ABOVE FINISH GRADE** INADEQUACY OF PLANS WILL NOT BE CONSIDERED. PRIOR TO EQUIPMENT ORDERING. THE (GENERAL CONTRACTOR AND THE) PLUMBING CONTRACTOR SHALL COORDINATE WITH THE SOIL OR WASTE PIPING **ACCESS PANEL** ELECTRICAL CONTRACTOR TO VERIFY THAT ALL EQUIPMENT ARE POWERED, AND PROPER VOLTAGE/WIRING/CAPACITY IS PROVIDED. IN **APPROX APPROXIMATE** ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. STORM PIPING THE EVENT OF REQUIREMENTS AMBIGUITY OR CONFLICT BETWEEN TRADES. THE CONTRACTOR IS REQUIRED TO GENERATE AN RFI **ACID VENT** ΑV ADDRESSING THE ISSUE AND REQUESTING CLARIFICATION. FAILURE TO DO SO WILL NEGATE HIS RIGHT FOR A CHANGE ORDER OR **ACID WASTE** THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS **OVERFLOW STORM PIPING** REQUEST FOR ADDITIONAL FUNDS DURING CONSTRUCTION RELATING TO THIS ISSUE. **BUILDING AUTOMATION SYSTEM** FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ENGINEER SHALL BE **BELOW FINISH FLOOR** ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED. **NON-POTABLE WATER PIPING** DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF BFP **BACKFLOW PREVENTER** EQUIPMENT, PIPING, ETC. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT HIS WORK ACCORDING TO THE FOLLOWING BLDG BUILDING CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION. STORM PIPING BELOW SLAE **BATHTUB** CA **COMPRESSED AIR** PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT **VENT PIPING** CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS AND THE CD CONDENSATE PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION AS TO BEST FIT THE LAYOUT OF THE WORK. COORDINATE FINAL LAYOUT CW CLG CEILING WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. **COLD WATER PIPING COMPANY, CLEANOUT** CO CW COLD WATER ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS. COLUMNS OR OTHER **COLD WATER PIPING (SINGLE LINE)** WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES, STRUCTURE, PIPING, CONDUITS, DRAINAGE FIXTURE UNITS OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE DUCTWORK, ETC. OR TO MAINTAIN CEILING HEIGHTS, THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. HW\_\_\_\_ NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE **DIAMETER HOT WATER PIPING** DN DS REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS. UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE CEILING. WATER PIPING **DOWNSPOUT** HOT WATER PIPING (SINGLE LINE) SHALL NOT BE ROUTED IN EXTERIOR WALLS. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE DWG DRAWING ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S AVAILABLE FOR OTHER TRADES. HWR CW **COLD WATER** RECOMMENDATIONS. **HOT WATER RECRCULATING PIPING DISPOSER** COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS, IN NO INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. **DRAINAGE WASTE & VENT HOT WATER RECRCULATING PIPING (SINGLE LINE)** CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL EA FΔCH **EQUIPMENT INCLUDING JUNCTION BOXES.** CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER. **ECO EXTERIOR CLEANOUT GAS PIPING EXISTING TO REMAIN** ETR ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE, NUMBER AND LOCATION OF PIPING BRANCHES FOR PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK FIRE PROTECTION PIPING **EMERGENCY EYEWASH** BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION. COMPLETION. **EMERGENCY SHOWER** PIPE DOWN OR DROP **ELECTRIC WATER COOLER** VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD **ELECTRIC WATER HEATER** CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT EX PIPE UP OR RISE/FLOOR CLEANOUT EXISTING THE PROPOSED WORK PRIOR TO BEGINNING WORK. FD FLOOR DRAIN UNLESS OTHERWISE NOTED, SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD, ABOVE CEILING. FFE FINISHED FLOOR ELEVATION **CAPPED OR PLUGGED PIPE** DOMESTIC HOT, COLD AND RE-CIRC. WATER PIPING SHALL BE INSTALLED ON WARM SIDE OF INSULATION. SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FIXT **FIXTURE** FOR EXACT QUANTITIES REQUIRED OF EACH TYPE. FLR ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS, FLOOR **FORCED MAIN** CODES AND REGULATIONS. CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES. WALL CLEANOUT FS **FLOOR SINK** WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE **NATURAL GAS** VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE **GATE VALVE** RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND NAMES). MATERIALS, SIZES, LOCATING AND HOOK-**GRADE CLEANOUT** TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO UP POINTS. AS-BUILTS SHALL BE GIVEN TO [OWNER] AT COMPLETION OF JOB. **GROUNDWATER DRAIN TILE** MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH BALL VALVE **GALLONS PER FLUSH** WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND **GPM GALLONS PER MINUTE GLOBE VALVE** COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKING AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE **GAS WATER HEATER** REQUIRED BY LAW TO REMAIN. **HOSE BIBB** THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE **BUTTERFLY VALVE HOT WATER** POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE **HOT WATER RECIRCULATING** POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS STATE ACCESSIBILITY STANDARDS. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC INSTALLATION REQUIREMENTS. LOCATE WATER GAS COCK I.E. **INVERT ELEVATION** MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED. CLOSET FLUSH VALVE LEVER BETWEEN TOILET AND LAVATORY. COORDINATE LOCATION OF FLUSH VALVE LEVER HANDLE WITH GRAB **INDIRECT WASTE** BAR. COORDINATE WITH ARCHITECTURAL DRAWINGS. SHUTOFF VALVE IN RISE OR DROP INTERNATIONAL PLUMBING CODE ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT LAVATORY SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES. **DOUBLE CHECK BACKFLOW PREVENTER** ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES MAKE-UP AIR UNIT MAXIMUM ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS **RPZ BACKFLOW PREVENTER** PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES. WATER MOP BASIN WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME, SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE HAMMER ARRESTORS SHALL BE SIZED & INSTALLED PER PDI STANDARDS. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO **BRITISH THERMAL UNITS (x1000)** DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE **CHECK VALVE** WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED. $\longrightarrow igwedge$ MINIMUM COMPLETE WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO **MISCELLANEOUS** FOR RECORD PURPOSES. PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING, AND BALANCE SYSTEM FOR PROPER **BALANCING VALVE** NON-FREEZE WALL HYDRANT **NOT IN CONTRACT** AS USED IN THE DRAWINGS FOR PLUMBING WORK, CERTAIN NON-TECHNICAL WORDS SHALL BE UNDERSTOOD TO HAVE SPECIFIC **OUTSIDE STEM & YOKE VALVE OVERFLOW ROOF DRAIN** MEANINGS AS FOLLOWS REGARDLESS OF INDICATIONS TO THE CONTRARY IN THE GENERAL CONDITION OR OTHER DOCUMENTS COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING. **OPEN SITE DRAIN GOVERNING THE MECHANICAL WORK** PUMPED DISCHARGE "FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND PRESSURE GAGE W/ NEEDLE VALVE 13. ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT AND PROTECTED WITH FIRESTOP. **PLUMBING & DRAINAGE INSTITUTE** SUPPORT, ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND PRESSURE REDUCING VALVE OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR **THERMOMETER** 14. SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING. **ROOF DRAIN ENCUMBRANCES** "INSTALL" - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH **TEMPERATURE & PRESSURE RELIEF VALVE** 15. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED. **ROOF TOP UNIT** SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL SANITARY Q"**A**" VACUUM BREAKER 16. ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED. SUPPLY FIXTURE UNIT SFU "PROVIDE" - "FURNISH" AND "INSTALL". **STORMWATER** "NEW" - MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED. MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH TRAP PRIMER VALVE WATER HAMMER ARRESTER, LETTER INDICATES MAIN, ELBOWS AND CONNECTIONS ARE NOT SHOWN. **TPS** TRAP PRIMING STATION TEMPERED WATER CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK. PROVIDE 18" MINIMUM CLEARANCE FOR TYP TYPICAL **HOSE BIBB UNLESS OTHERWISE NOTED** UR **URINAL WALL HYDRANT** PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT. LOCATE VALVES FOR EASY ACCESS AND SERVICING OF EQUIPMENT. PROVIDE ACCESS PANELS TO ALL SHUT-OFF VALVES. VB **VACUUM BREAKER SOLENOID VALVE VENT THRU ROOF** PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION. ALL TESTS SHALL BE IN WASTE STRAINER COMPLIANCE WITH REQUIREMENTS OF THE LOCAL WATER AUTHORITY. **WATER CLOSET** PIPE GUIDE/SLEEVE IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS, THE MOST STRINGENT OF THE OPTIONS WALL CLEANOUT SHALL APPLY FOR BIDDING PURPOSE. AFTER AWARD OF CONTRACT BUT BEFORE STARTING DESIGN/CONSTRUCTION, CONTRACTOR **WALL HYDRANT** PIPE ANCHOR SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER. **EXISTING RELOCATED** RISER/DETAIL DESIGNATION PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS LAB/MEDICAL PROJECTS FLOW DIRECTION **MEDICAL AIR** 23. ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED. CALL OUT DESIGNATION FLOOR DRAIN LA LAB AIR **NITROGEN** 24. PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS. X LIQUID NITROGEN **METER (GAS/WATER/FIRE)** 25. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT. ARGON XXX HELIUM SG **SPECIAL GAS** SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT LV LAB VACUUM PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH **PUMP MEDICAL VACUUM** M **CARBON DIOXIDE KEYNOTE TAG** ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE **DEIONIZED WATER ₽** ISOLATION VALVES FOR ALL PLUMBING FIXTURES. REVERSE OSMOSIS SUPPLY LIMIT OF DEMOLITION REVERSE OSMOSIS RETURN ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A LCW LAB COLD WATER PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER. LAB HOT WATER LAB HOT WATER RECIRCULATING 29. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION. VIVARIUM COLD WATER **VIVARIUM HOT WATER** ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED. **NON-POTABLE** MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM, FAUCETS AND MINOR ITEMS DOUBLE SYMBOLS NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY CHROME-PLATED. SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED **GATE VALVE** SHEET METAL. THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO SHEET NUMBERING LEGEND ASSURE A RATING EQUAL TO THE PENETRATED WALL OR FLOOR. **BUTTERFLY VALVE** HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT **3-WAY VALVE** INTERRUPTION. PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION. SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER GAS COCK VALVE 2018 IPC CODE, UNLESS OTHERWISE INDICATED. DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS. DISCIPLINE "PD" DEMO SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER. "P" NEW WORK BALL VALVE THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE PLAN TYPE "0" LOWEST FLOOR AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. "1" FLOOR PLAN "1" NEXT FLOOR X-RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID. "2" ENLARGED LEVEL ETC. **BALANCE VALVE** FLOOR ETC. FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING SYSTEM TYPE REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF "0" FOR UNDERGROUND "1" WATER & GAS "2" DWV & STORM UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS "3" FIRE PROTECTION OF THE AUTHORITY HAVING JURISDICTION. 39. WHEN NATURAL GAS IS AVAILABLE, USE NATURAL GAS RANGES/OVENS & FURNACES IN SINGLE FAMILY & MULTI-FAMILY BUILDINGS AS AN BACKFLOW PREVENNTER OPTION, IN-LIEU OF ELECTRIC. FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - SINGLE FAMILY DETACHED HOME SINGLE STORY PLUMBING COVERSHEET

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P002

08/15/2022 | Project Number

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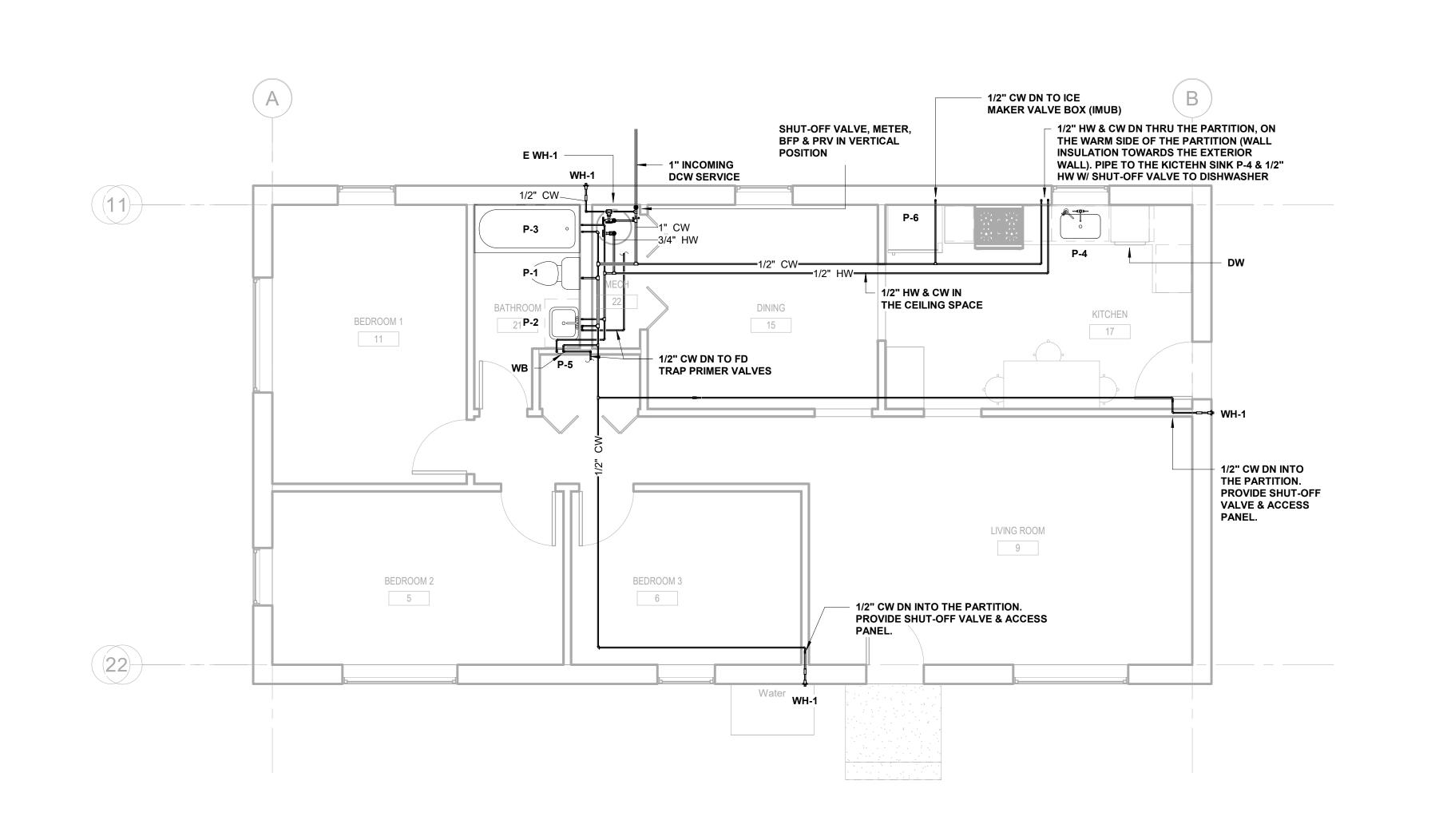
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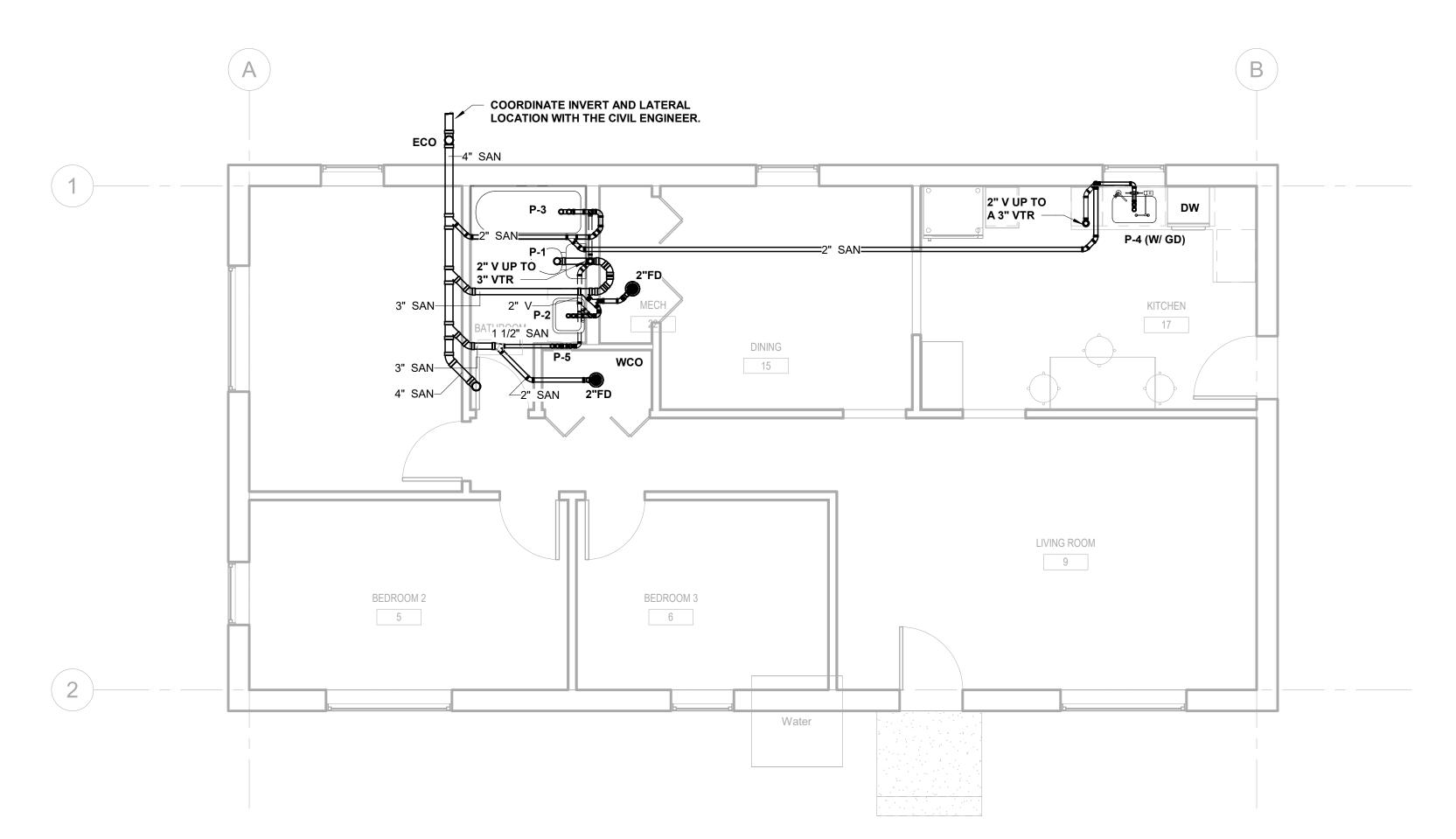
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PLUMBING FLOOR PLAN - SANITARY

1/4" = 1'-0"

DATE SAFETY

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NIST - SINGLE FAMILY DETACHED HOME
SINGLE STORY
PLUMEING FLOOR PLAN

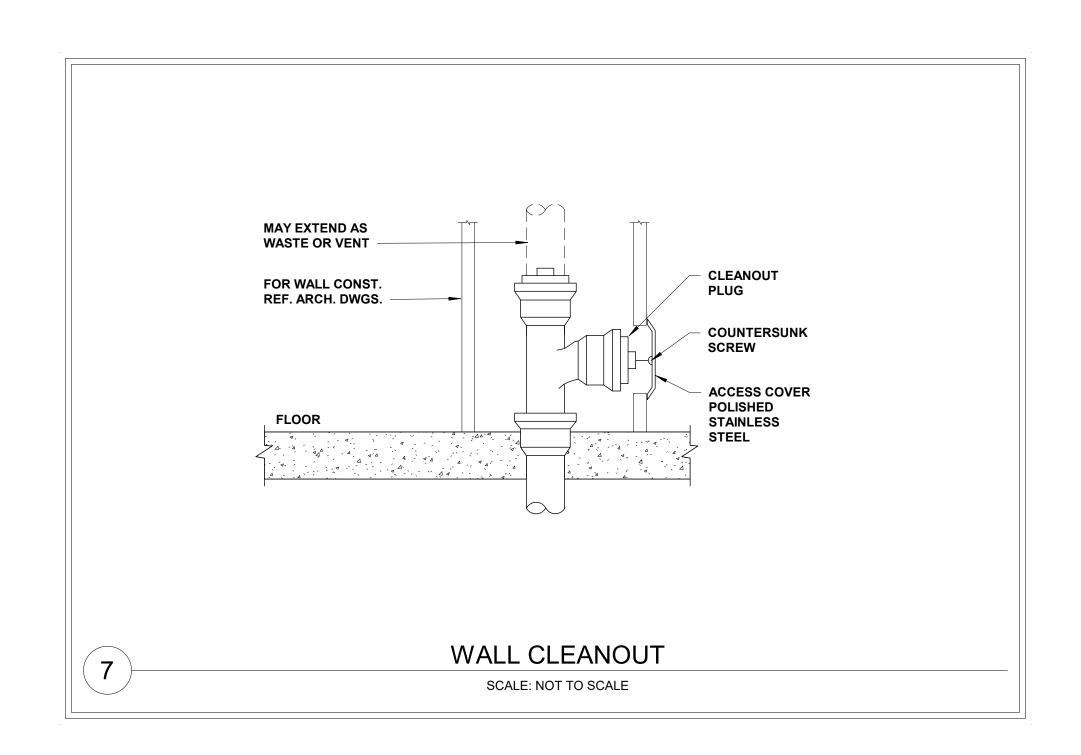
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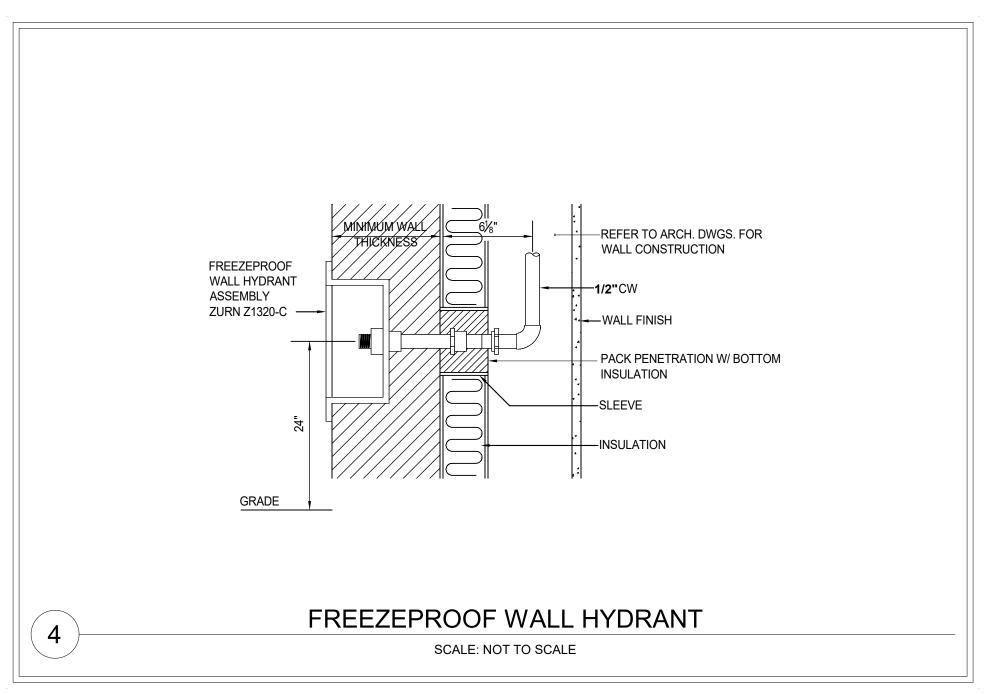
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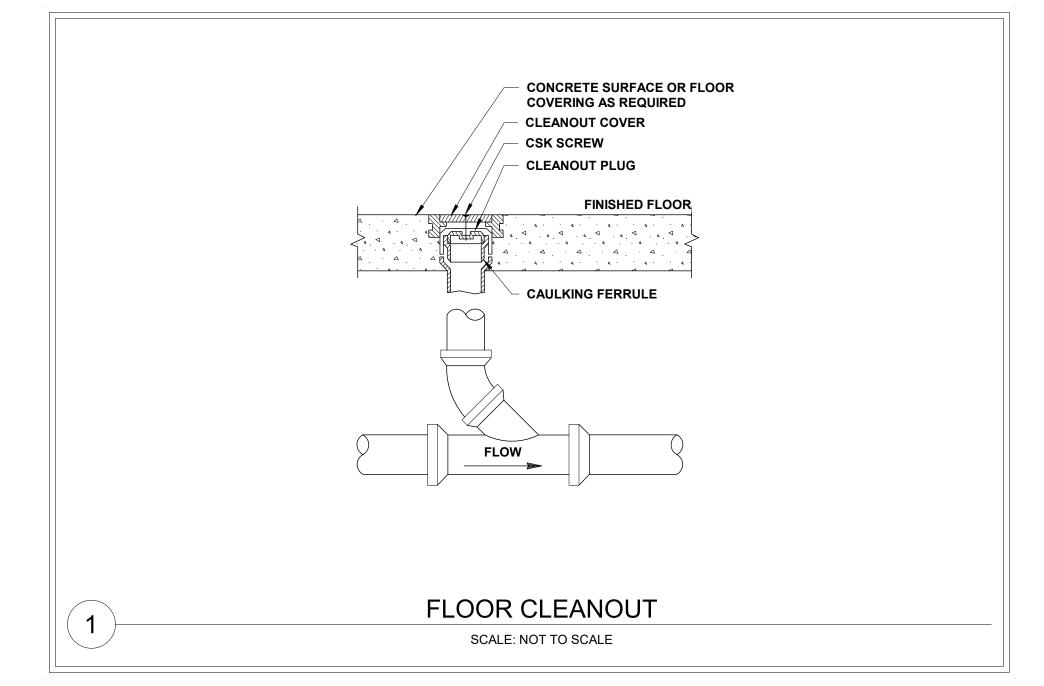
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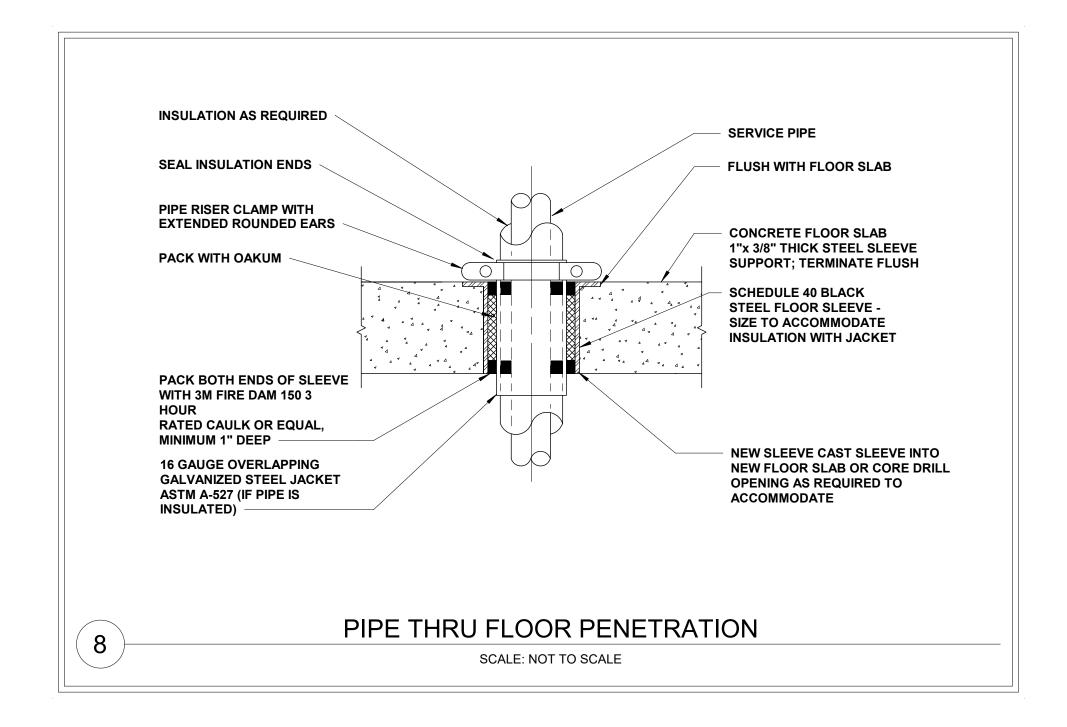
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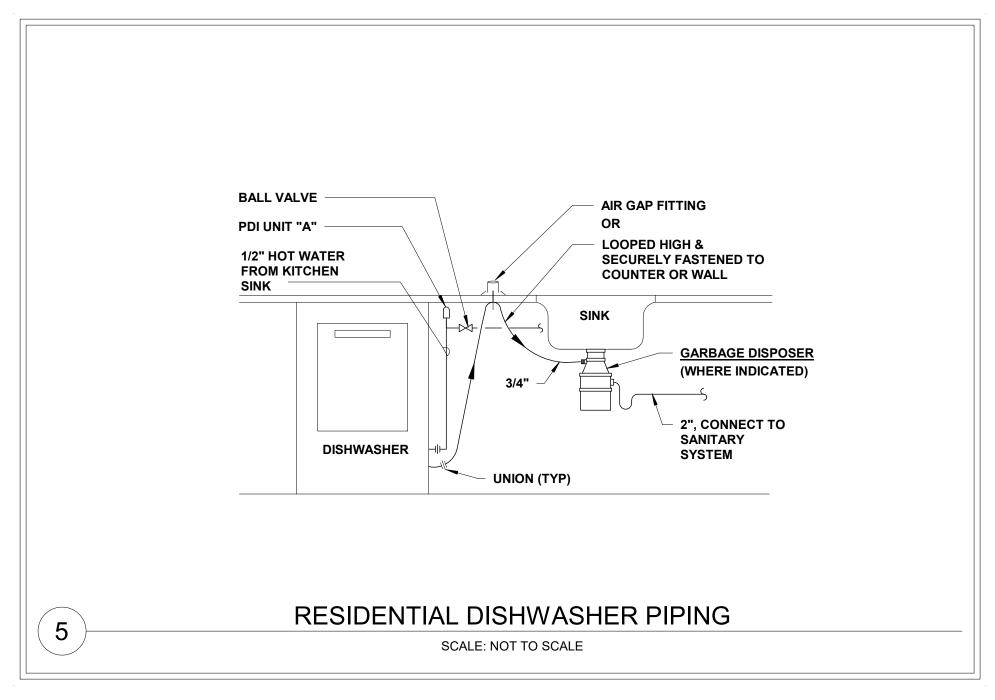
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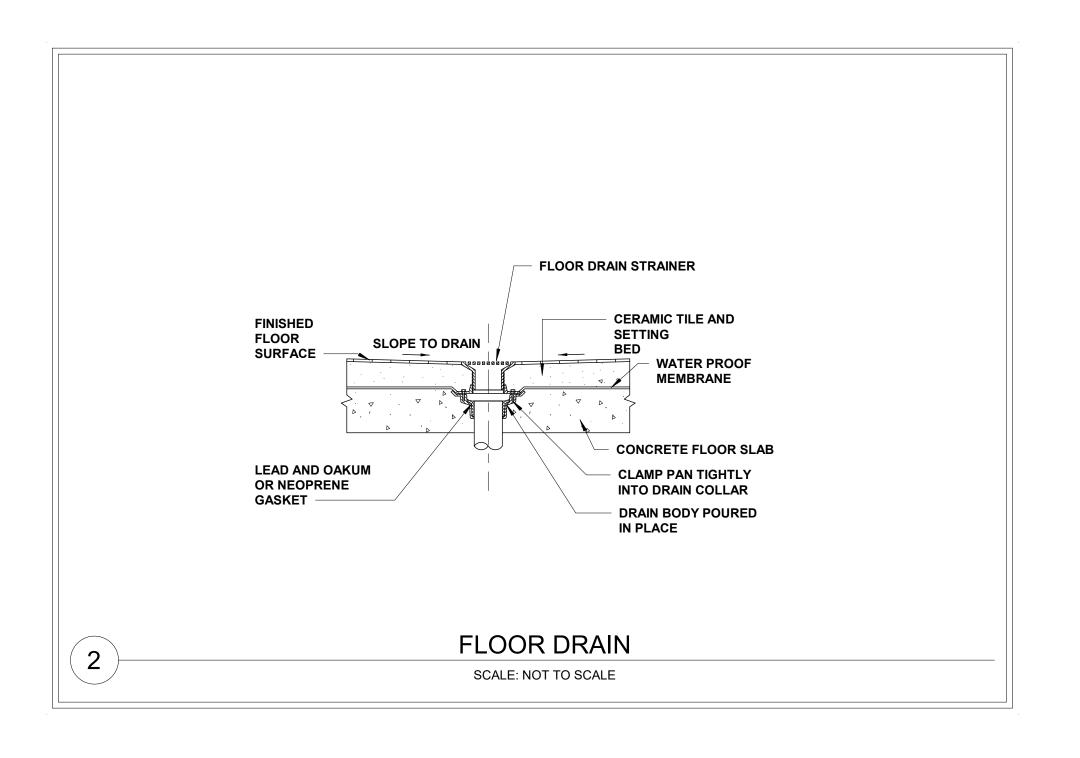


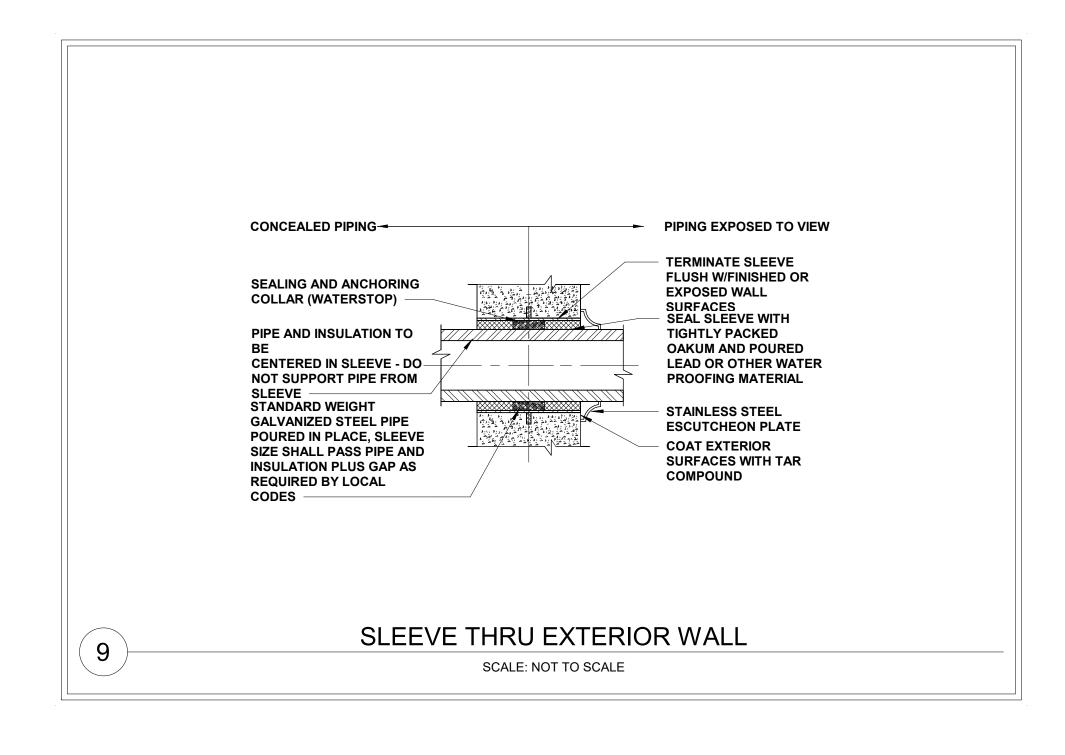


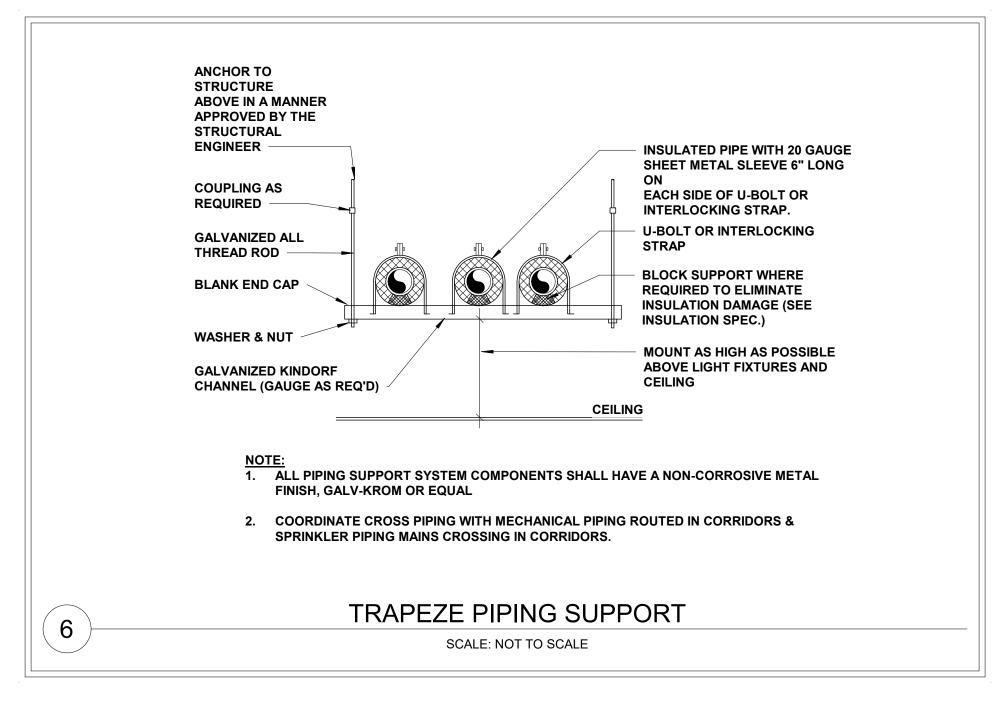


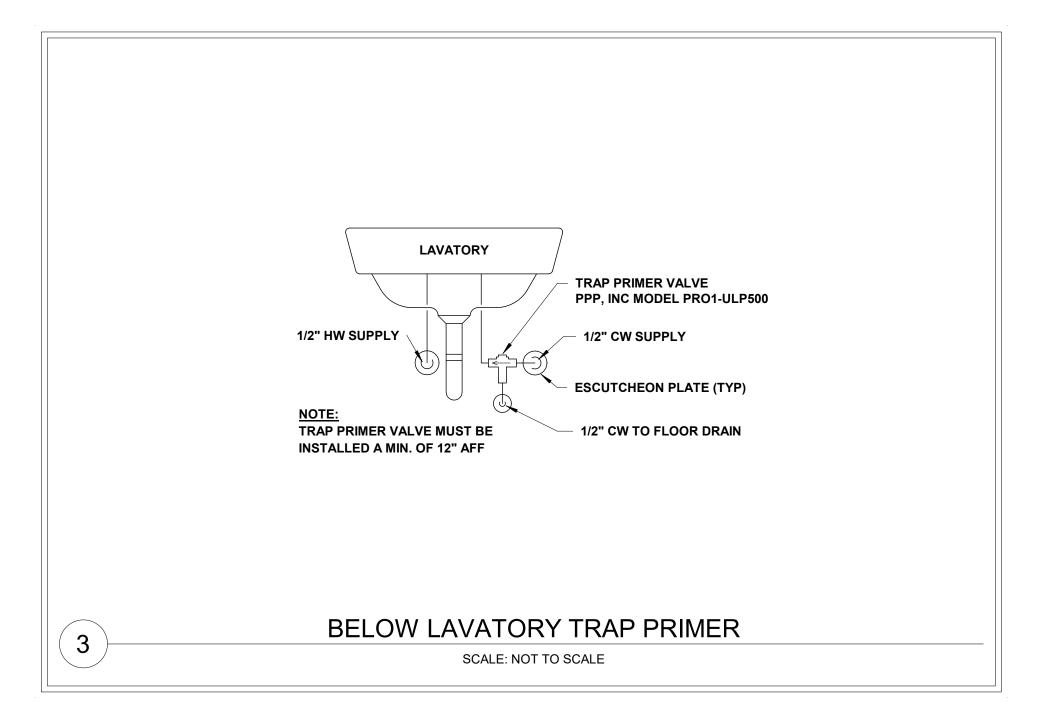












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OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - SINGLE FAMILY DETACHED HOME

SINGLE STORY

PLUMBING DETAILS

P301

SH. NO.\_\_\_OF\_

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DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

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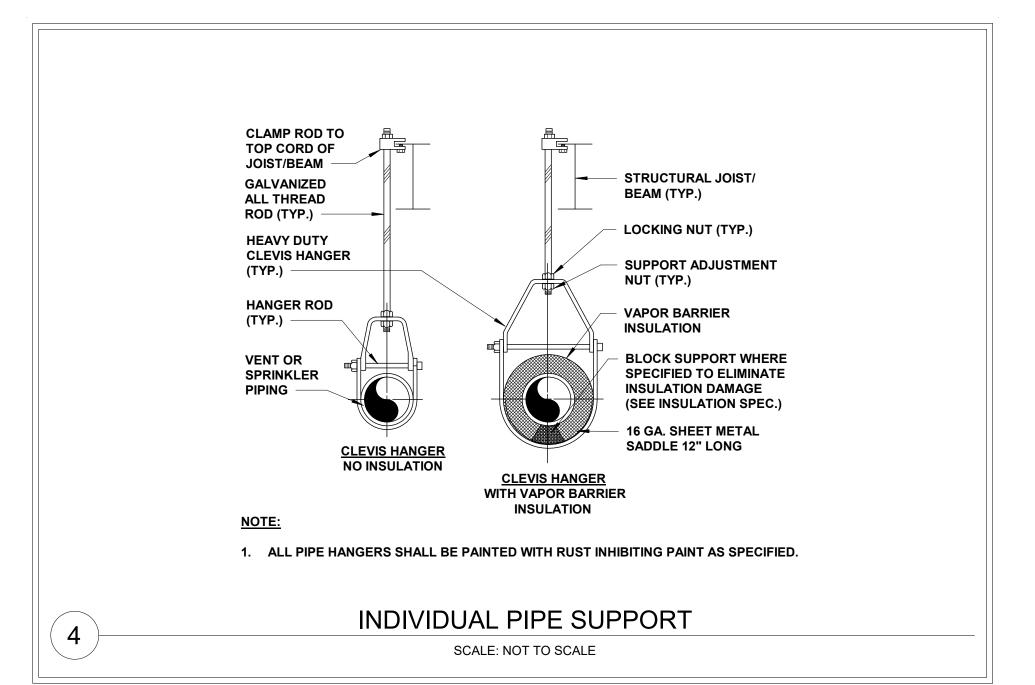
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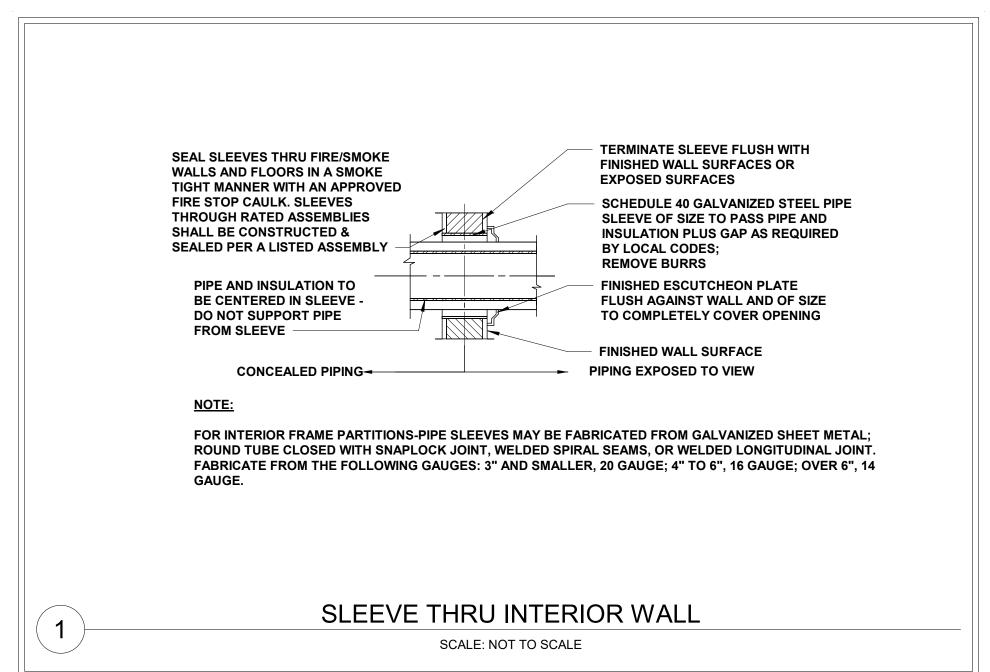
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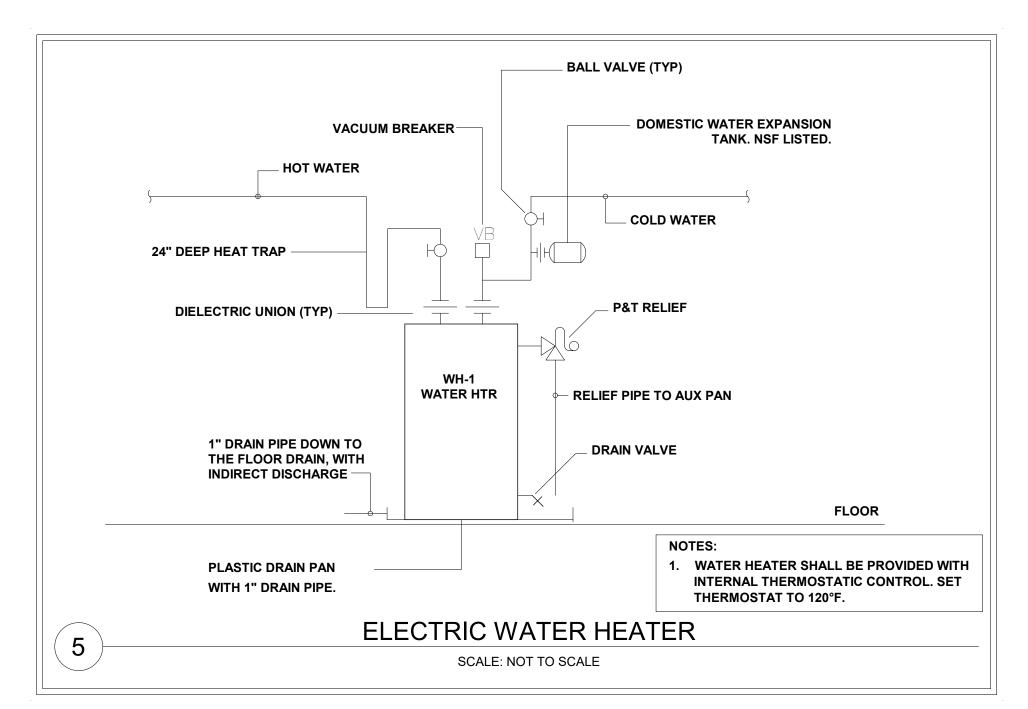
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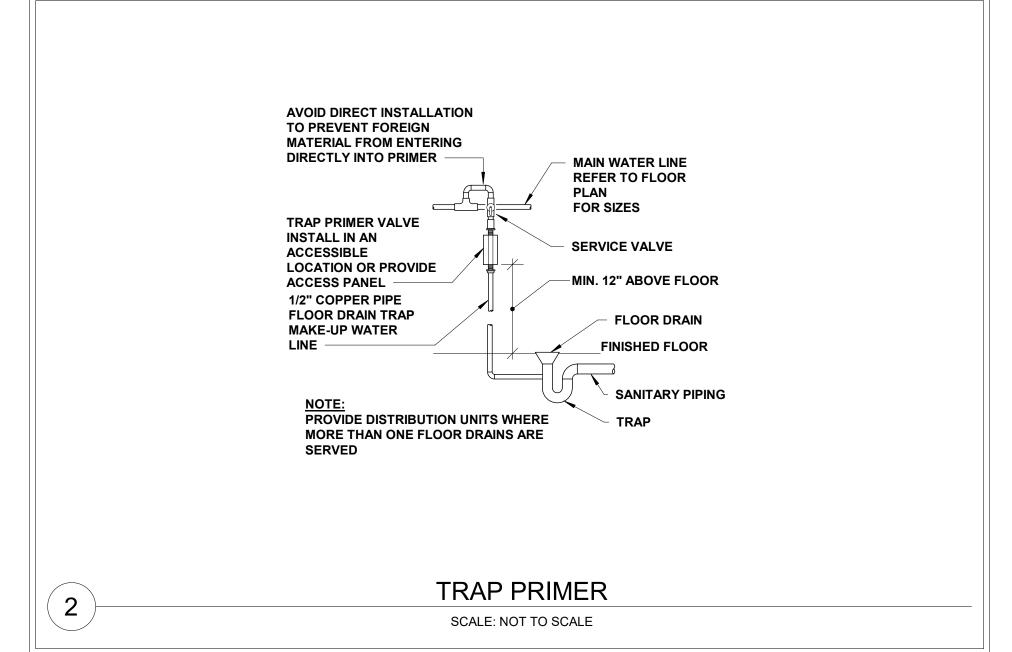
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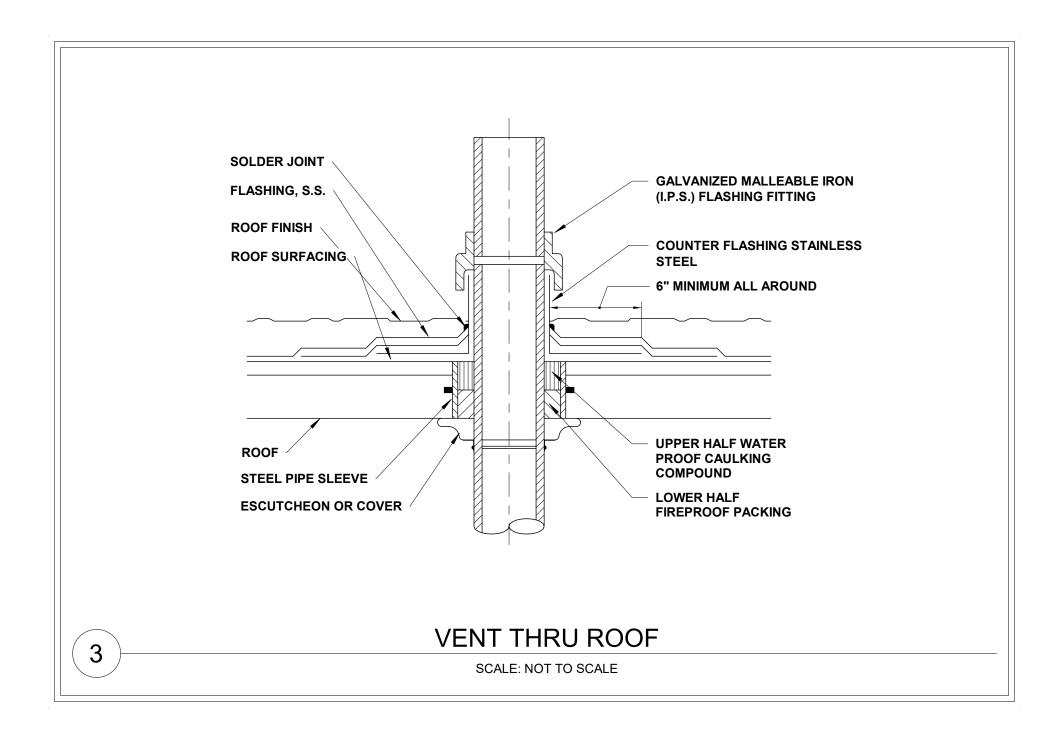
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NIST - SINGLE FAMILY DETACHED HOME SINGLE STORY

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					EL	ECTRI	C WA	TER H	EATER	RSCH	EDULE	Ξ	
ID	LOCATION	STORAGE CAPACITY	FUEL TYPE	CAPACIT Y KW	MIN. UNIFORM	GPH @ 70 DELTA T	INLET TEMP	OUTLET TEMP	ELECTRICAL CHARACTERISTICS		LECTRICAL CHARACTERISTICS		REMARKS
		(GALLONS)	IIFE	1 KVV	ENERGY FACTOR	DELIAI	(°F)	(°F)	VOLTS	PHASE	HZ	(OR EQUAL)	
EWH-1	MECHANICAL CLOSET	40	ELECTRIC	4.5	0.92	26	70	120	240	1	60	A.O. SMITH ENJ-40	
NOTES:								1	1			l	

SLOPE OF HORIZON	ITAL DRAINAGE PIPE
SIZE (INCHES)	MINUMUM 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 C	ODE 2018

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 SALB)	TYPE "K" COPPER PIPING W/ NO JOINTS						

			DON	IESTIC '	WATER	EXPANSIO	N TAN	K SCHE	DULE		
ID	WATER HEATER VOLUME	MAX TEMP. (°F)	OPERATING FILI PRESSURE PRESS	FILL TANK	TOTAL TANK VOLUME	ACCEPTANCE VOLUME	TANK DI	MENSIONS	APPROX. OPERATING	BASIS OF DESIGN	REMARKS
	(GALLONS)				(PSIG) (GALLONS)	I I	II.	(GALLONS)	HEIGHT	DIAMETER	WEIGHT (LBS.)
ET-1	40	140	80	-	4.5	2.9	13.5"	10.5"	10	WATTS PLT-12	

	CLEANOUT	SCHEDULE
ID	APPLICATION	BASIC OF DESIGN (OR EQUAL)
	FINISHED FLOORS	ZURN Z1400
СО	CERAMIC & TERRAZO	ZURN Z1400-Z
	UNFINISHED FLOORS	ZURN Z1400-HD
	LINE CLEANOUT	ZURN Z1468
wco	STACK CLEANOUT	ZURN Z1446
ECO	OUTSIDE AREAS	ZURN Z1400-HD
NOTE 1. 2.	INSTALL ECO IN 24x24x4 THI ELEVATION TO BE 2" ABOV PROVIDE ALL CLEANOUTS V DEVICE. ATTACH CLEANOUT CLEANOUTS ATE LOCATED SHALL BE FLASHED IN ACCO	ICK CONCRETE PAD. TOP OF PAD E FINISHED GRADE. WITH WIDE ANCHOR FLANGE & CLAMPS IS TO MEMBRANE IN FLOOR. WHEN IN NONOMEMBRANE FLOORS, THEY ORDANCE WITH THE SPECIFICATIONS. PE WALL CLEANOUTS WITH ACCESS

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	ULE	CHED	URE S	G FIXT	PLUMBING		
DEMARKS		ION SIZE	CONNECT		DASIS OF DESIGN (OR FOLIAL)		ID
REMARKS	HW	cw	VENT	WASTE	BASIS OF DESIGN (OR EQUAL)	DESCRIPTION	ID
1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODES		1/2"	2"	3"	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 OPENSIDE, WHITE COLOR	WATER CLOSET	P-1
2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES	1/2"	1/2"	1-1/2"	1-1/2"	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"X14"X15.5", AMERICAN STANDARD OVAL 0496.221.020 WITH DELTA FAUCET LAHARA 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	LAVATORY	P-2
2.5 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES	1/2"	1/2"	1-1/2"	2"	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	TUB & SHOWER	P-3
2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODES. PROVIDE A 1/2 HP GARBAGE DISPOSAL	1/2"	1/2"	1-1/2"	2"	SINGLE BASIN, STAINLESS STEEL SINK, 25"X21"X6" DROP 18 GAUGE WITH SOUND DAMPENING, ELKAY DSESR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER. KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STELL FINISH	SINK	P-4
WITH 1/4 TURN VALVES & WATER HAMMER ARRESTOR	1/2"	1/2"	1-1/2"	2"	WASH BOX OATEY MODEL 38569 OR EQUAL	WASH BOX	P-5
WITH WATER HAMMER ARRESTOR	-	1/2"	-	-	WATER-TITE MODEL #87978 OR EQUAL	ICE MAKER VALVE BOX	P-6

		F	LOOR DRAI	N 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

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SINGLE STORY
PLUMBING SCHEDULES

P401

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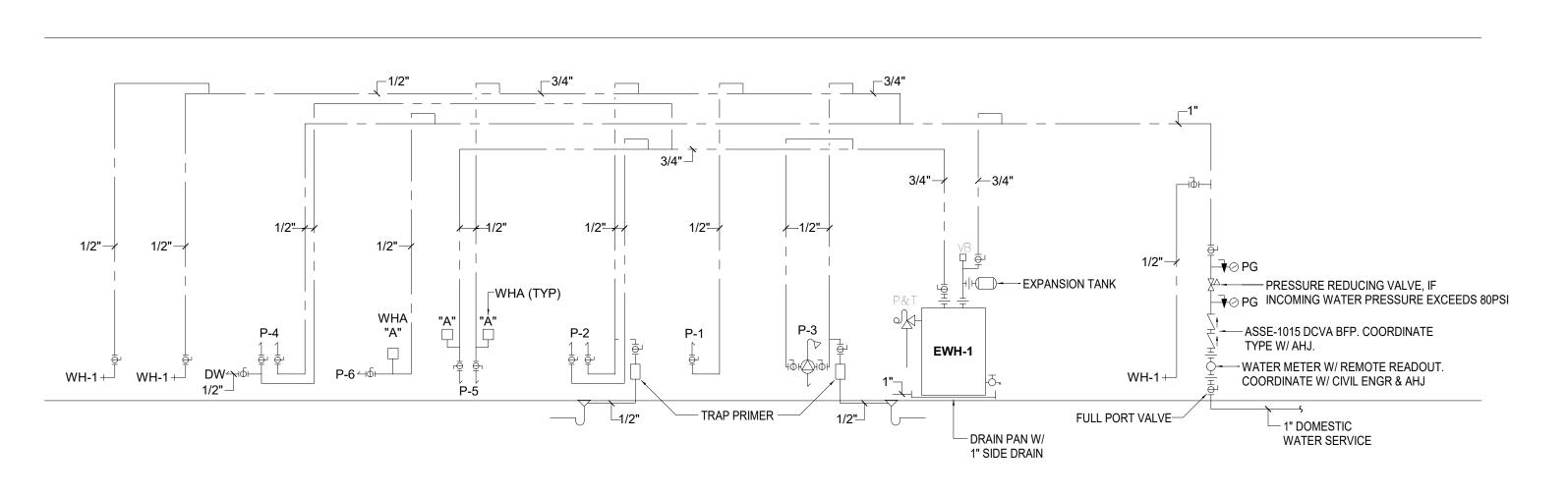
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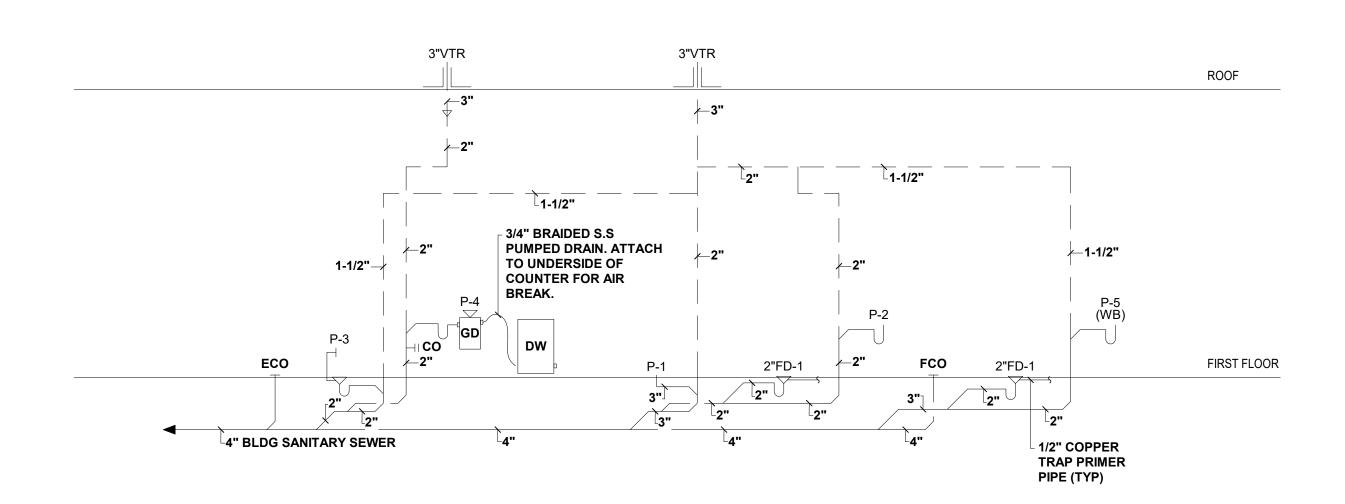
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1 WATER RISER DIAGRAM

NTS



2 SANITARY RISER DIAGRAM
NTS

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PLUMBING RISER DIAGRAMS

P501

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DWG. P501

## REVISION **DESCRIPTION** BY DATE PLUMBING GENERAL CONDITIONS PLUMBING GENERAL NOTES **ABBREVIATIONS** PLUMBING SYMBOLS THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. PROVIDE ALL LABOR SYMBOL DESCRIPTION AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS. ANY OBSERVED FAULTS OR BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES ABOVE AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. AREA DRAIN MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID. THE CONTRACTOR SHALL ACKNOWLEDGE DEMOLISH AND REMOVE ABOVE FINISH FLOOR ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT, DURING BID PERIOD AND AGAIN AFG ABOVE FINISH GRADE INADEQUACY OF PLANS WILL NOT BE CONSIDERED. PRIOR TO EQUIPMENT ORDERING. THE (GENERAL CONTRACTOR AND THE) PLUMBING CONTRACTOR SHALL COORDINATE WITH THE SOIL OR WASTE PIPING **ACCESS PANEL** ELECTRICAL CONTRACTOR TO VERIFY THAT ALL EQUIPMENT ARE POWERED, AND PROPER VOLTAGE/WIRING/CAPACITY IS PROVIDED. IN APPRO2 **APPROXIMATE** ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. THE EVENT OF REQUIREMENTS AMBIGUITY OR CONFLICT BETWEEN TRADES, THE CONTRACTOR IS REQUIRED TO GENERATE AN RFI STORM PIPING ACID VENT ADDRESSING THE ISSUE AND REQUESTING CLARIFICATION. FAILURE TO DO SO WILL NEGATE HIS RIGHT FOR A CHANGE ORDER OR THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS ΑW **ACID WASTE** REQUEST FOR ADDITIONAL FUNDS DURING CONSTRUCTION RELATING TO THIS ISSUE. OVERFLOW STORM PIPING FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ENGINEER SHALL BE BAS **BUILDING AUTOMATION SYSTEM** ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED. **BELOW FINISH FLOOR** DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF NON-POTABLE WATER PIPING BFP **BACKFLOW PREVENTER** EQUIPMENT, PIPING, ETC. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT HIS WORK ACCORDING TO THE FOLLOWING CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION. **BLDG** BUILDING STORM PIPING BELOW SLAB BATHTUB PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS AND THE VENT PIPING COMPRESSED AIR PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION AS TO BEST FIT THE LAYOUT OF THE WORK. COORDINATE FINAL LAYOUT CD CONDENSATE WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. CLG COLD WATER PIPING \_\_\_\_CW\_\_\_\_ CEILING CO COMPANY, CLEANOUT ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES, STRUCTURE, PIPING, CONDUITS, COLD WATER PIPING (SINGLE LINE) CW **COLD WATER** OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE DUCTWORK, ETC. OR TO MAINTAIN CEILING HEIGHTS, THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. DFU DRAINAGE FIXTURE UNITS NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE \_\_\_\_HW\_\_\_\_ HOT WATER PIPING DIA DIAMETER REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS. UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE CEILING. WATER PIPING SHALL DN DOWN HOT WATER PIPING (SINGLE LINE) NOT BE ROUTED IN EXTERIOR WALLS. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE DS DOWNSPOUT ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S AVAILABLE FOR OTHER TRADES. DRAWING RECOMMENDATIONS. HOT WATER RECRCULATING PIPING **COLD WATER** COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS. IN NO DISP DISPOSER INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL HOT WATER RECRCULATING PIPING (SINGLE LINE) DWV **DRAINAGE WASTE & VENT** EQUIPMENT INCLUDING JUNCTION BOXES. CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER. EA EACH GAS PIPING ECO EXTERIOR CLEANOUT ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE, NUMBER AND LOCATION OF PIPING BRANCHES FOR PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK ETR **EXISTING TO REMAIN** BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION. FIRE PROTECTION PIPING COMPLETION. **EMERGENCY EYEWASH EMERGENCY SHOWER** VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING PIPE DOWN OR DROP THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD **EWC ELECTRIC WATER COOLER** WORK. CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT PIPE UP OR RISE/FLOOR CLEANOUT ELECTRIC WATER HEATER **EWH** THE PROPOSED WORK PRIOR TO BEGINNING WORK. UNLESS OTHERWISE NOTED, SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD, ABOVE CEILING. **EXISTING** DOMESTIC HOT, COLD AND RE-CIRC. WATER PIPING SHALL BE INSTALLED ON WARM SIDE OF INSULATION. CAPPED OR PLUGGED PIPE FLOOR DRAIN SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FFE FINISHED FLOOR ELEVATION FOR EXACT QUANTITIES REQUIRED OF EACH TYPE. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS, UNION FIXT **FIXTURE** CODES AND REGULATIONS. FLR **FLOOR** CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES WALL CLEANOUT FM FORCED MAIN WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE FLOOR SINK VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER. OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND NAMES). MATERIALS, SIZES, LOCATING AND HOOK-GATE VALVE NATURAL GAS TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO UP POINTS. AS-BUILTS SHALL BE GIVEN TO [OWNER] AT COMPLETION OF JOB. GCO **GRADE CLEANOUT** MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH BALL VALVE GD **GROUNDWATER DRAIN TILE** WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND GPF GPM **GALLONS PER FLUSH** COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKING AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED GLOBE VALVE **GALLONS PER MINUTE GWH** THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE **GAS WATER HEATER** BUTTERFLY VALVE POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN HB HOSE BIBB ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE, MINOR DEVIATIONS FROM DRAWINGS HW HOT WATER STATE ACCESSIBILITY STANDARDS. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC INSTALLATION REQUIREMENTS. LOCATE WATER **GAS COCK** MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED. **HWR** HOT WATER RECIRCULATING CLOSET FLUSH VALVE LEVER BETWEEN TOILET AND LAVATORY. COORDINATE LOCATION OF FLUSH VALVE LEVER HANDLE WITH GRAB BAR. COORDINATE WITH ARCHITECTURAL DRAWINGS. **INVERT ELEVATION** SHUTOFF VALVE IN RISE OR DROP ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT INDIRECT WASTE SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES. ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES. DOUBLE CHECK BACKFLOW PREVENTER INTERNATIONAL PLUMBING CODE LAV LAVATORY ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES. WATER RPZ BACKFLOW PREVENTER MAKE-UP AIR UNIT WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME, SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE HAMMER ARRESTORS SHALL BE SIZED & INSTALLED PER PDI STANDARDS. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO MAX MAXIMUM DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE COMPLETE. WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED. CHECK VALVE MOP BASIN WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO FOR BRITISH THERMAL UNITS (x1000) RECORD PURPOSES. PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING, AND BALANCE SYSTEM FOR PROPER BALANCING VALVE MIN MINIMUM MISC **MISCELLANEOUS** AS USED IN THE DRAWINGS FOR PLUMBING WORK, CERTAIN NON-TECHNICAL WORDS SHALL BE UNDERSTOOD TO HAVE SPECIFIC OUTSIDE STEM & YOKE VALVE NFWH NON-FREEZE WALL HYDRANT MEANINGS AS FOLLOWS REGARDLESS OF INDICATIONS TO THE CONTRARY IN THE GENERAL CONDITION OR OTHER DOCUMENTS 12. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING. NOT IN CONTRACT GOVERNING THE MECHANICAL WORK. FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND' ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT AND PROTECTED WITH FIRESTOP. PRESSURE GAGE W/ NEEDLE VALVE OSD OPEN SITE DRAIN SUPPORT, ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND PUMPED DISCHARGE OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR 14. SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING. THERMOMETER PLUMBING & DRAINAGE INSTITUTE ENCUMBRANCES "INSTALL" - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE PRESSURE REDUCING VALVE 15. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED TEMPERATURE & PRESSURE RELIEF VALVE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL WORK. ROOF DRAIN "PROVIDE" - "FURNISH" AND "INSTALL' 16. ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED ROOM VACUUM BREAKER "NEW" - MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED. **ROOF TOP UNIT** MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAIN, SANITARY WATER HAMMER ARRESTER, LETTER INDICATES SFU ELBOWS AND CONNECTIONS ARE NOT SHOWN. SUPPLY FIXTURE UNIT **STORMWATER** CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK. PROVIDE 18" MINIMUM CLEARANCE FOR TRAP PRIMER VALVE HOSE BIBB TPS TRAP PRIMING STATION TW TEMPERED WATER PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT. LOCATE VALVES FOR EASY ACCESS AND SERVICING OF WALL HYDRANT TYP TYPICAL EQUIPMENT. PROVIDE ACCESS PANELS TO ALL SHUT-OFF VALVES. **UNLESS OTHERWISE NOTED** UNO SOLENOID VALVE PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION. ALL TESTS SHALL BE IN VENT COMPLIANCE WITH REQUIREMENTS OF THE LOCAL WATER AUTHORITY. STRAINER VACUUM BREAKER VTR **VENT THRU ROOF** IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS, THE MOST STRINGENT OF THE OPTIONS PIPE GUIDE/SLEEVE SHALL APPLY FOR BIDDING PURPOSE. AFTER AWARD OF CONTRACT BUT BEFORE STARTING DESIGN/CONSTRUCTION, CONTRACTOR WITH SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER. PIPE ANCHOR WATER CLOSET WCO WALL CLEANOUT PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS FLEXIBLE CONNECTION WALL HYDRANT EXISTING RELOCATED FI OW DIRFCTION RISER/DETAIL DESIGNATION 23. ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED. FLOOR DRAIN 24. PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS. OXYGEN MEDICAL AIR CALL OUT DESIGNATION ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT. I AB AIR **NITROGEN** SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT LIQUID NITROGEN METER (GAS/WATER/FIRE) PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH ARGON HELIUM SPECIAL GAS XXX ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE ISOLATION LAB VACUUM VALVES FOR ALL PLUMBING FIXTURES. MEDICAL VACUUM CARBON DIOXIDE **KEYNOTE TAG** ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A **DEIONIZED WATER** PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER. ROS **REVERSE OSMOSIS SUPPLY** LIMIT OF DEMOLITION REVERSE OSMOSIS RETURN 29. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION. LAB COLD WATER LHW LAB HOT WATER ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED. LHWR LAB HOT WATER RECIRCULATING VIVARIUM COLD WATER VCW MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM, FAUCETS AND MINOR ITEMS VIVARIUM HOT WATER NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY NON-POTABLE SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS DOUBLE SYMBOLS SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED SHEET METAL. THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO ASSURE A RATING EQUAL TO THE PENETRATED WALL OR FLOOR. HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT SHEET NUMBERING LEGEND INTERRUPTION, PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION. BUTTERFLY VALVE SOIL. WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER 2018 IPC CODE, UNLESS OTHERWISE INDICATED. DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS. 3-WAY VALVE 35. SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER. GAS COCK VALVE THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE — P111A — SECTOR AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. X-DISCIPLINE RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID. "PD" DEMO "P" NEW WORK FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING FLOOR LEVEL REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF PLAN TYPE "0" LOWEST FLOOR "1" FLOOR PLAN "1" NEXT FLOOR "2" ENLARGED LEVEL ETC. BALANCE VALVE UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS OF FLOOR ETC. SYSTEM TYPE "0" FOR UNDERGROUND WHEN NATURAL GAS IS AVAILABLE, USE NATURAL GAS RANGES/OVENS & FURNACES IN SINGLE FAMILY & MULTI-FAMILY BUILDINGS AS AN "1" WATER & GAS OPTION, IN-LIEU OF ELECTRIC. "2" DWV & STORM "3" FIRE PROTECTION BACKFLOW PREVENNTER VALVE FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - SINGLE FAMILY DETACHED HOME MULT STORY PLUMBING COVERSHEET

DATE SPONSOR

APPROVED BY

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

DATE MAINTENANCE ENG. OFF.

P002

08/15/2022 | Project Number

DATE PROJECT/ W.O. #

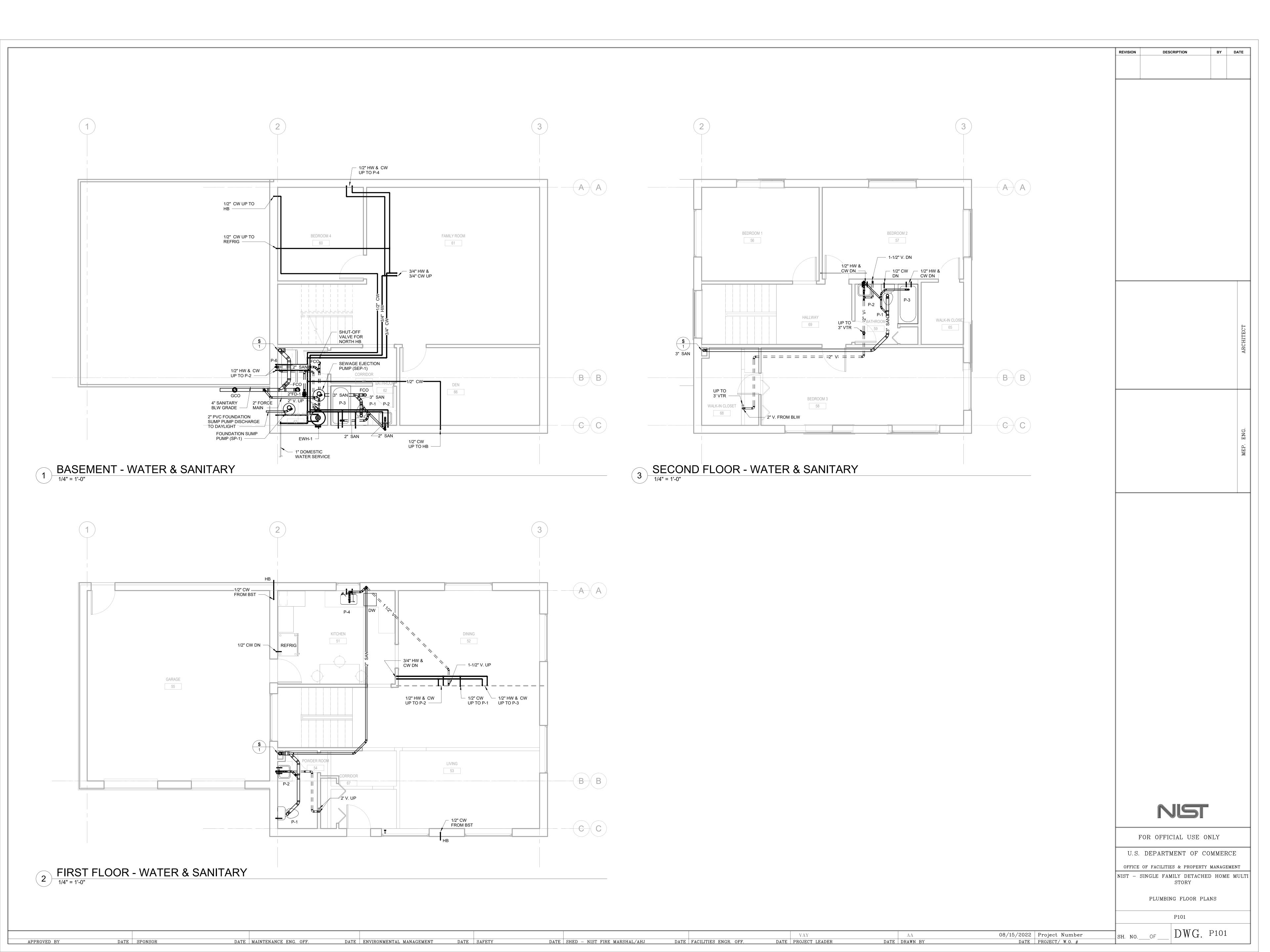
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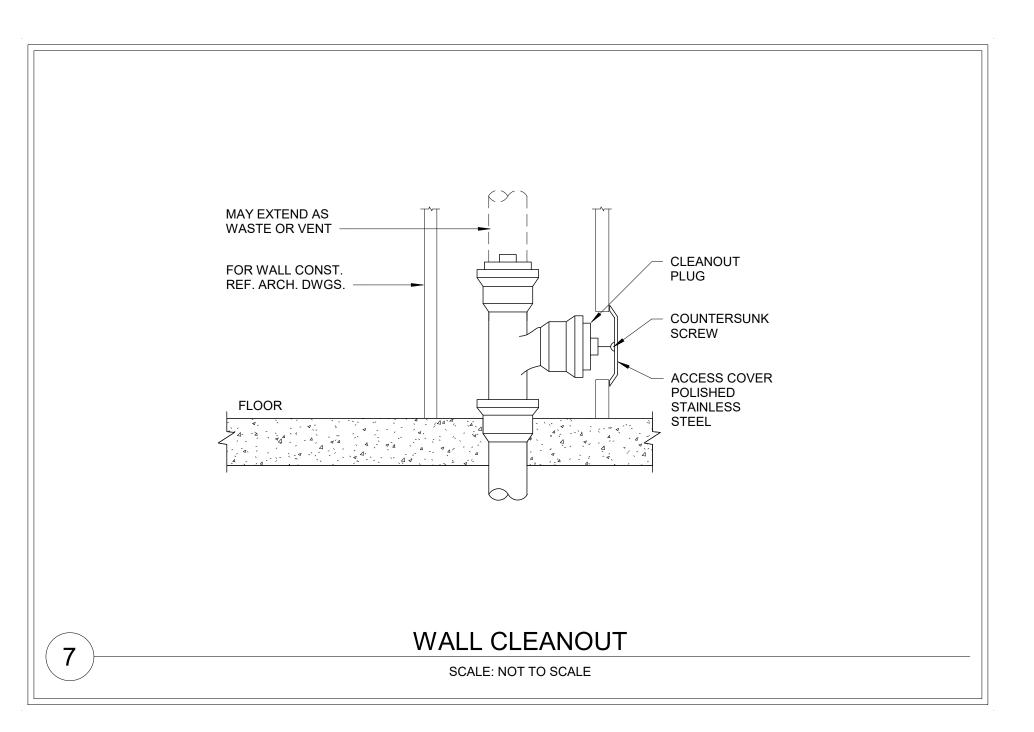
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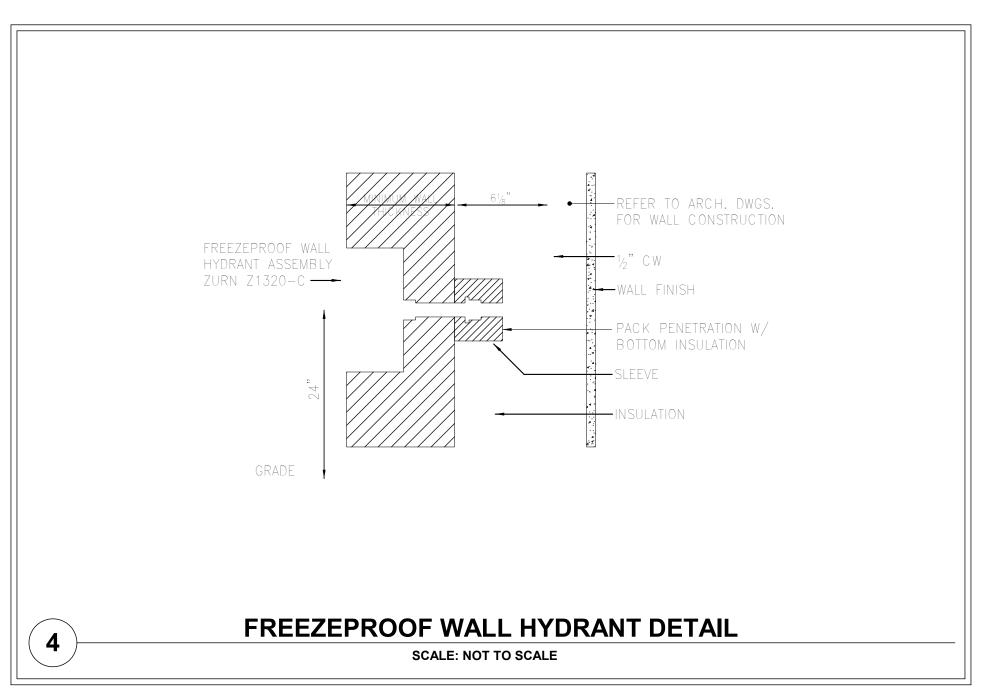
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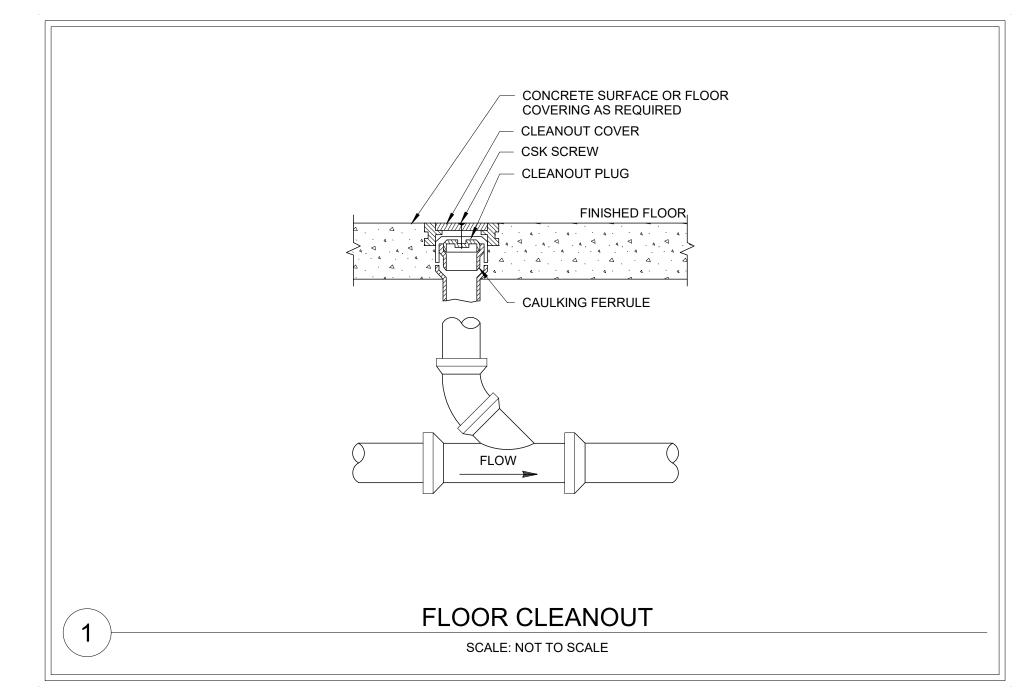
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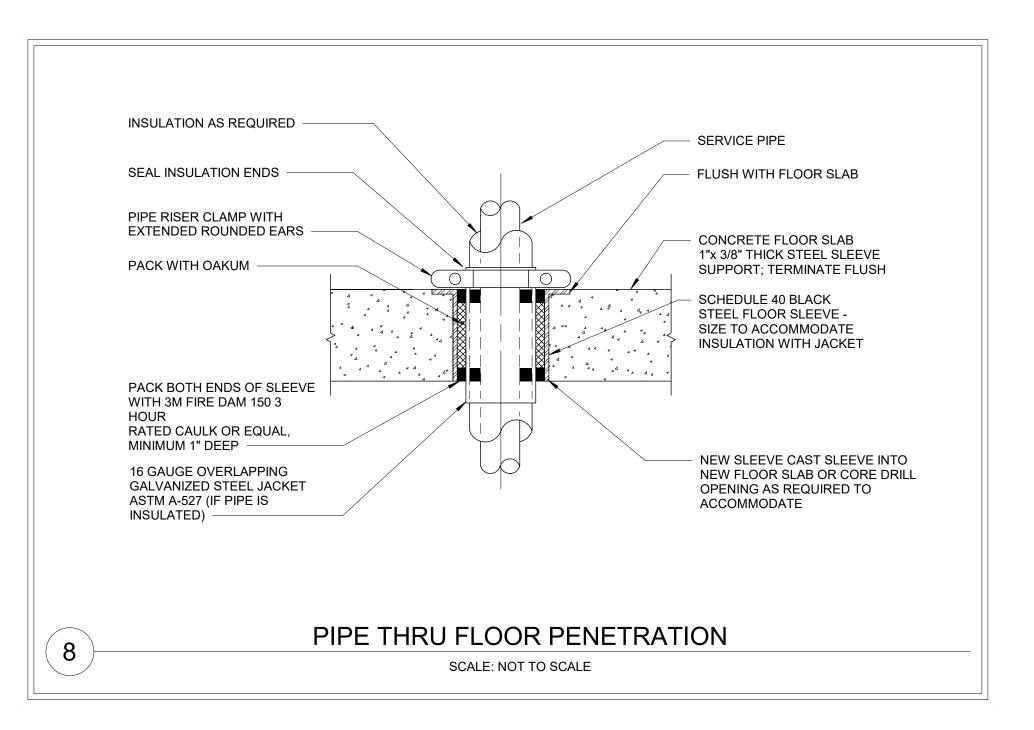
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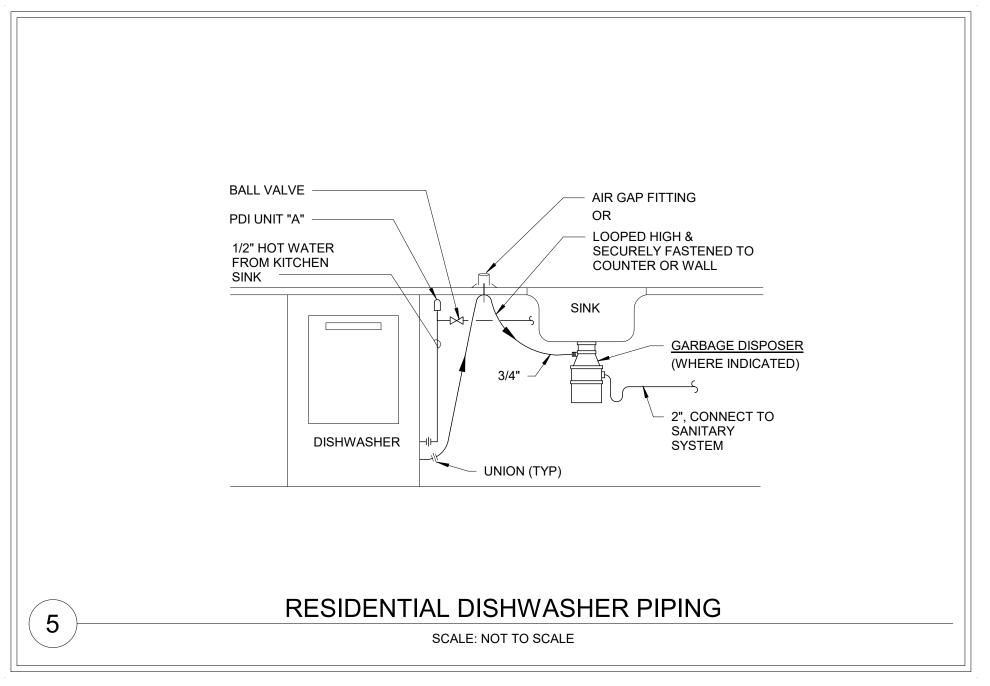


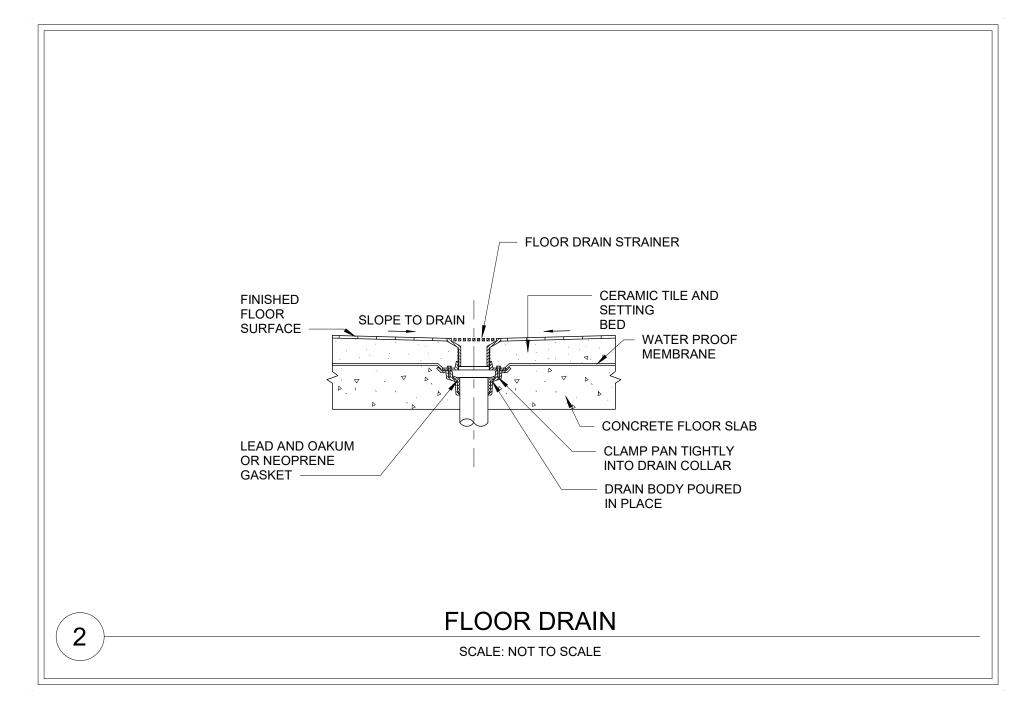


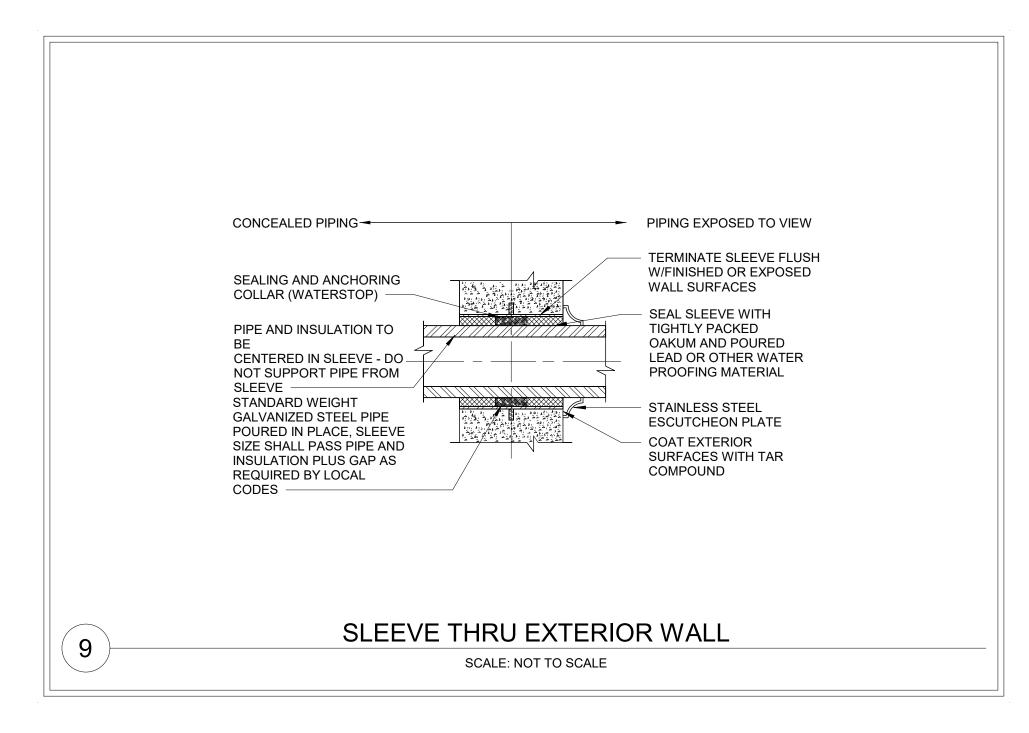




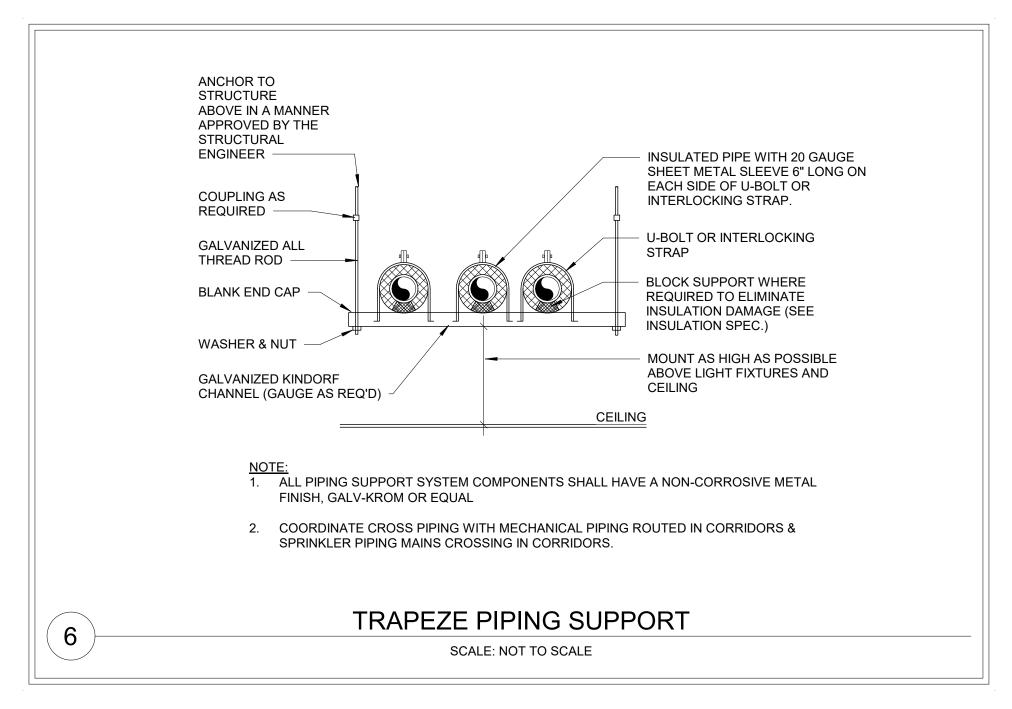


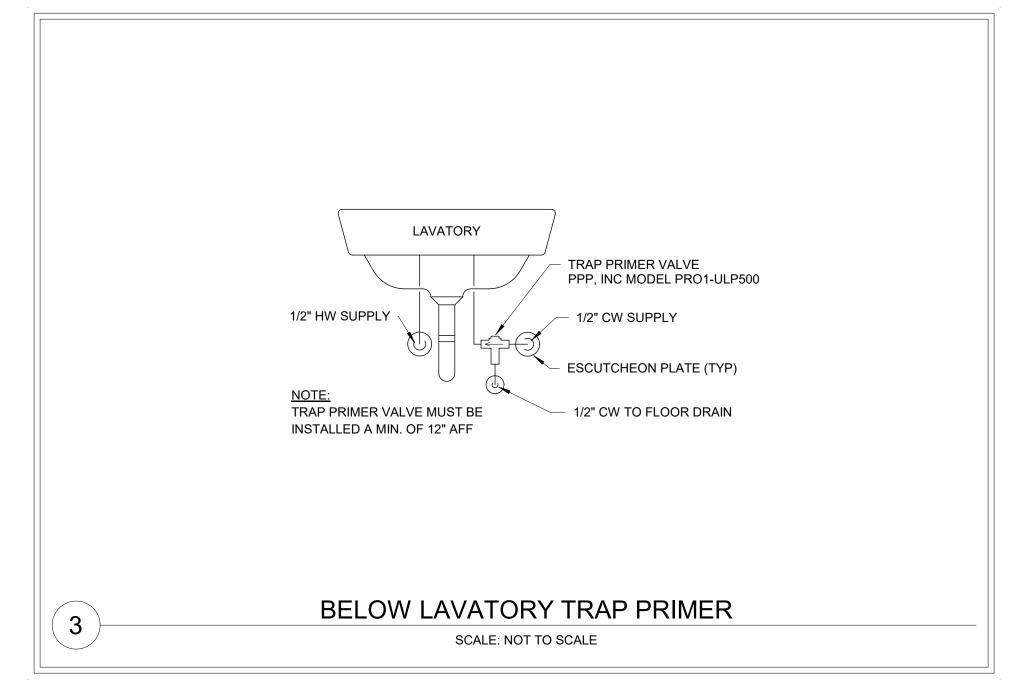






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REVISION

DESCRIPTION

BY DATE

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OFFICE OF FACILITIES & PROPERTY MANAGEMENT

NIST - SINGLE FAMILY DETACHED HOME MULTI

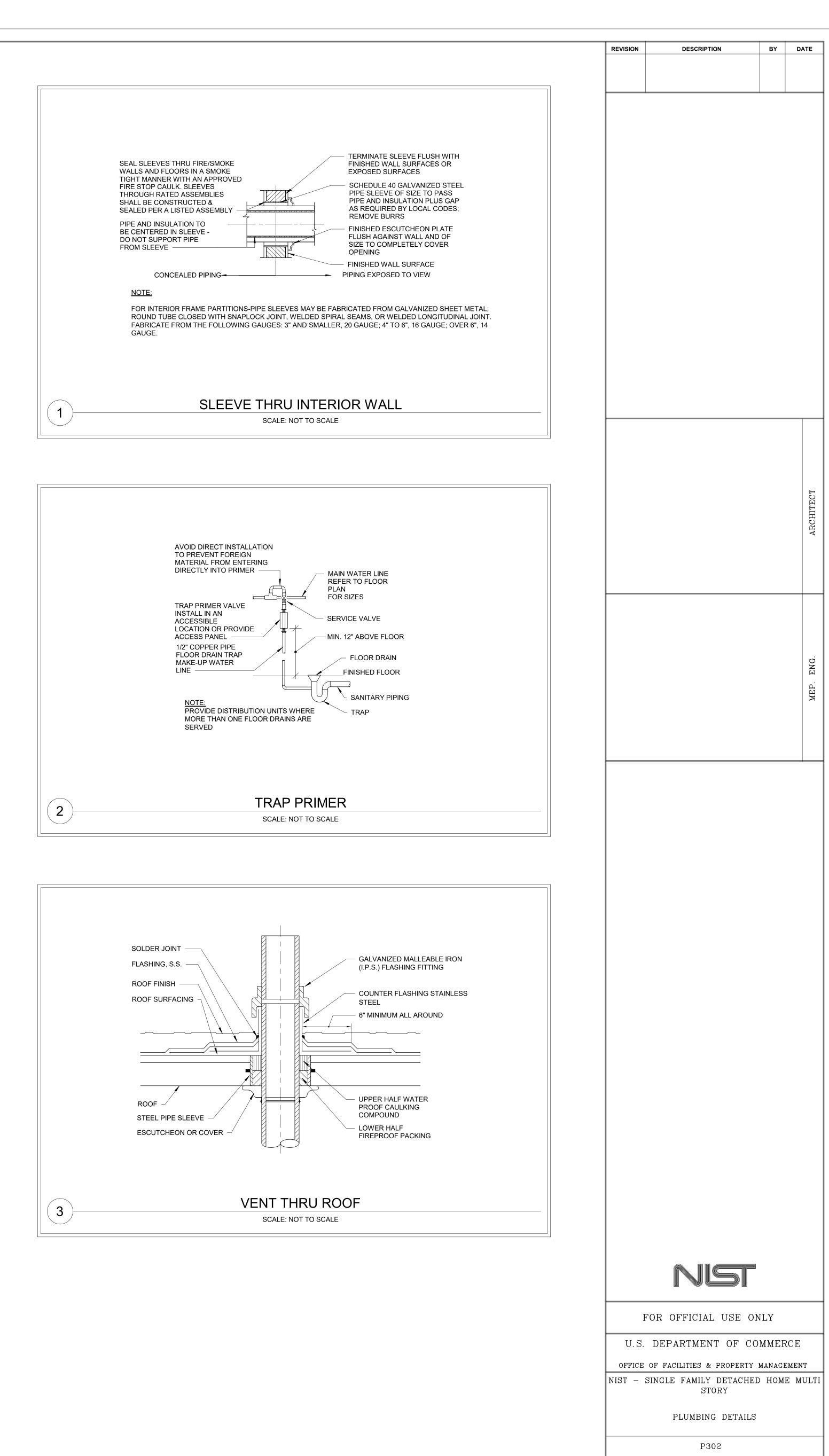
STORY

PLUMBING DETAILS

P301

NO.\_\_\_OF\_\_ DWG. P301

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DATE SPONSOR
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08/15/2022 Project Number

DATE PROJECT/ W.O. #

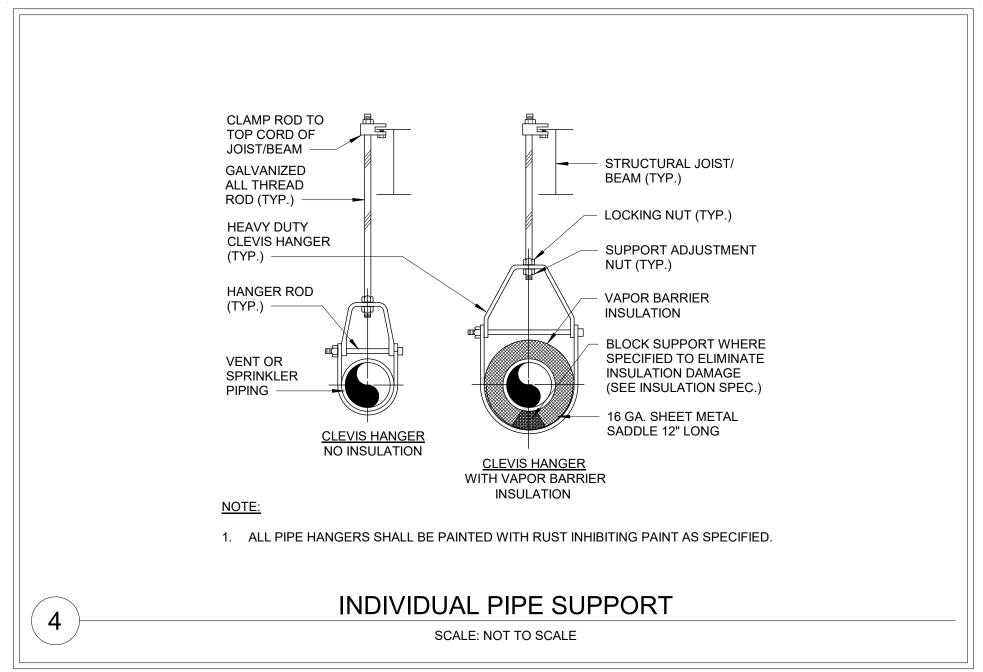
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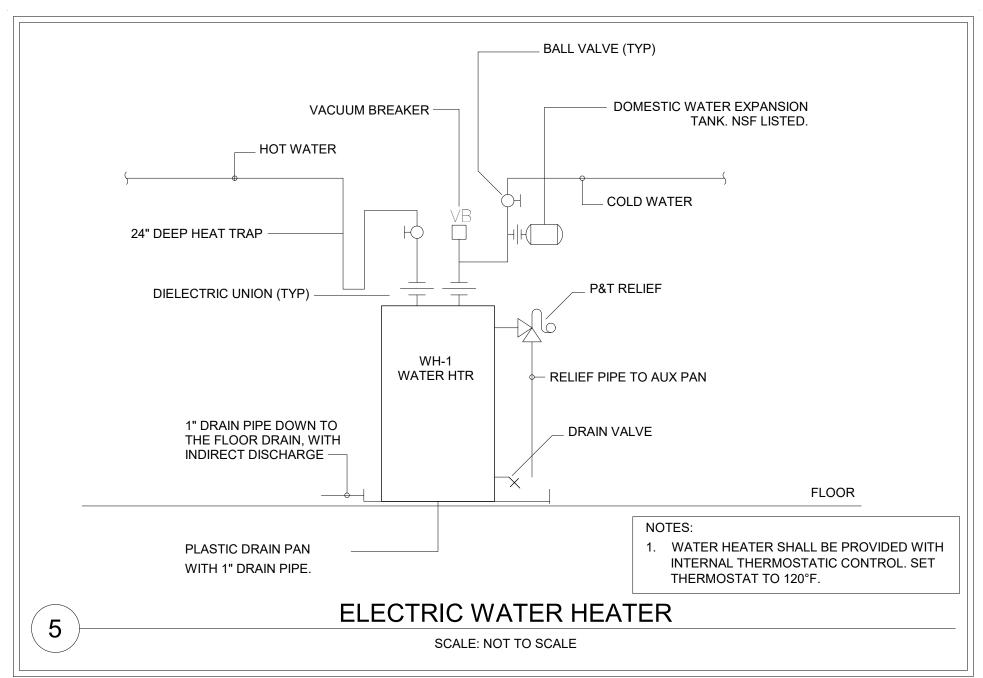
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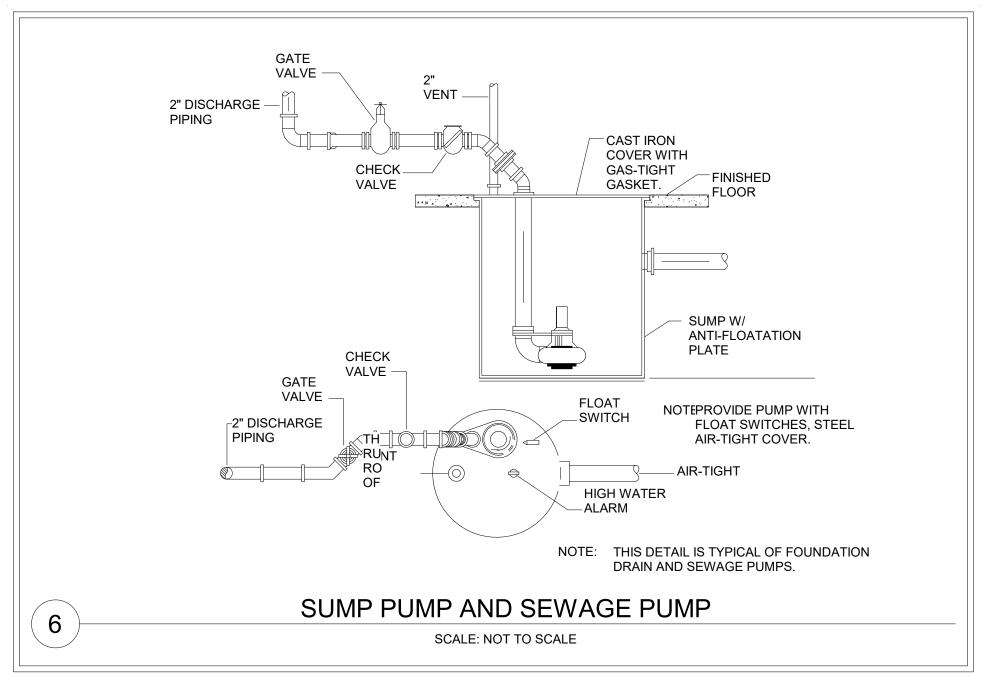
DATE FACILITIES ENGR. OFF.

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DATE DRAWN BY







DATE SHED - NIST FIRE MARSHAL/AHJ

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE MAINTENANCE ENG. OFF.

DATE SPONSOR

APPROVED BY

VISION	DESCRIPTION	BY	DATE

REMARKS		CONNECTION SIZE			BASIS OF DESIGN (OR EQUAL)	DESCRIPTION	ID
REMARKS		CW	VENT	WASTE	BASIS OF DESIGN (OR EQUAL)	DESCRIPTION	וט
1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODE		1/2"	2"	3"	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 OPENSIDE, WHITE COLOR	WATER CLOSET	P-1
2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODE	1/2"	1/2"	1-1/2"	1-1/2"	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"X14"X15.5", AMERICAN STANDARD OVAL 0496.221.020 WITH DELTA FAUCET LAHARA 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	LAVATORY	P-2
2.5 GPM MAX OR AS REQUIRED BY THE GOVERNING CODE	1/2"	1/2"	1-1/2"	2"	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	TUB & SHOWER	P-3
2.2 GPM MAX OR AS REQUIRED BY THE GOVERNING CODE PROVIDE A 1/2 HP GARBAGE DISPOSAL	1/2"	1/2"	1-1/2"	2"	SINGLE BASIN, STAINLESS STEEL SINK, 25"X21"X6" DROP 18 GAUGE WITH SOUND DAMPENING, ELKAY DSESR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER. KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STELL FINISH	SINK	P-4
WITH 1/4 TURN VALVES & WATER HAMMER ARRESTOR	1/2"	1/2"	1-1/2"	2"	WASH BOX OATEY MODEL #38569 OR EQUAL	WASH BOX	P-5

ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)		CONNECT	ION SIZE		REMARKS
	BEGORII HON	BAGIO OF BEGION (OR EQUAE)	WASTE	VENT	CW	HW	NEWARK
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 OPENSIDE, WHITE COLOR	3"	2"	1/2"		1.6 GPF MAX OR AS REQUIRED BY THE GOVERNING CODES
o-2	LAVATORY	WHITE VITREOUS CHINA, UNDERMOUNT BOWL 17"X14"X15.5", AMERICAN STANDARD OVAL 0496.221.020 WITH DELTA FAUCET LAHARA 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 DSESR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER. KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STELL 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

					EL	ECTRI	C WA	TER H	EATE	R SCH	EDULE	Ē	
ID	LOCATION	STORAGE CAPACITY	TVDE	CAPACITY	UNIFORM	GPH @ 70 DELTA T	INLET TEMP	OUTLET ELECTRICAL CHARACTERISTICS TEMP		BASIS OF DESIGN	REMARKS		
		(GALLONS	3)	KVV	ENERGY FACTOR	DELTAT	(°F)	(°F)	VOLTS	PHASE	ASE HZ	(OR EQUAL)	
EWH-1	MECHANICAL CLOSET	50	ELECTRIC	4.5	0.92	26	70	120	240	1	60	A.O. SMITH ENJ-50	
NOTES:				1									

ID	SERVICE	GPM	HEAD (FT.)	MOTOR HP	ELECTRI	RICAL 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 PU FIBERGLASS BASIN, BASIN DIMENSION: 2'-0" DIA 36" DEEP. PROVIDE AUTOMATIC CONTROLS & F LEVEL ALARM.
SP-1	FOUNDATION DRAIN PUMP	30	17	1/2	120	1	3450	ZOELLER MODELL M98	SIMPLEX SUMBERSIBLE SUMP PUMP. FIBERGLA BASIN DIMENSION: 24" DIAMETER., 36" DEEP, PRO AUTOMATIC CONTROLS & HIGH LEVEL ALARI

			DON	IESTIC	VVAIEN	EXPANSION	N I AIN	N SCHEI	DOLE		
WATER HEATER ID VOLUME		MAX TEMP. (°F)	MAX OPERATING PRESSURE		TOTAL TANK VOLUME	ACCEPTANCE VOLUME	TANK DIMENSIONS		APPROX. OPERATING	BASIS OF DESIGN	REMARKS
	(GALLONS)	12.0	(PSIG)	(PSIG)	(GALLONS)	(GALLONS)	HEIGHT	DIAMETER	WEIGHT (LBS.)	(OR EQUAL)	
T-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 #Z566	W/ 1/2" TRAP PRIMING LINE						

	DIV	ERTER VALVI	Ε												
ROP 18 SR1272 SPENSI NCTIOI	GAUGE WIT 221 WITH SIN ER. KRAUS N PULL-DOW	NLESS STEEL FH SOUND DA NGLE HOLE F KPF-161055 FA VN SPRAYHEA WITH STAINLI	AMPENING, E OR FAUCET AUCET WITH AD, BRASS T	LKAY & SOAP DUAL RAP &	2"	1-1/2"	1/2"	1/2"		S REQUIRED BY THE GOV EA 1/2 HP GARBAGE DIS					
WASH	I BOX OATE	Y MODEL #38	569 OR EQU	AL	2"	1-1/2"	1/2"	1/2"	WITH 1/4 TURN V	ALVES & WATER HAMMI	ER ARRESTOR				
		EL	ECTRI	C WA	TER H	EATEI	R SCH	EDUL	<b>E</b>						
IEL PE	CAPACITY KW	MIN. UNIFORM ENERGY	GPH @ 70 DELTA T	INLET TEMP (°F)	OUTLET TEMP (°F)	ELECTRIC	AL CHARAC	CTERISTICS	BASIS OF DESIGN (OR EQUAL)	REMA	RKS				
CTRIC	4.5	FACTOR 0.92	26	70	120	240	1	60	A.O. SMITH ENJ-50						
	l l				1	1	1	1							

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PLUMBING SCHEDULES

P401

08/15/2022 Project Number

DATE PROJECT/ W.O. # VAY AA DATE MAINTENANCE ENG. OFF. DATE SHED - NIST FIRE MARSHAL/AHJ DATE SPONSOR DATE SAFETY DATE FACILITIES ENGR. OFF. DATE PROJECT LEADER DATE DRAWN BY DATE ENVIRONMENTAL MANAGEMENT

PIPING MATERIAL SCHEDULE

PLUMBING MATERIAL DESCRIPTION

SOLID CORE SCHEDULE 40 PVC AND FITTINGS

SOLID CORE SCHEDULE 40 PVC AND FITTINGS

SOLID CORE SCHEDULE 40 PVC AND FITTINGS

TYPE "L" COPPER PIPING

TYPE "K" COPPER PIPING W/ NO JOINTS

PLUMBING SYSTEM

SANITARY DRAIN PIPING (BELOW SLAB)

SANITARY DRAIN PIPING (ABOVE SLAB)

VENT PIPING

DOMESTIC WATER PIPING (ABOVE SLAB)

DOMESTIC WATER PIPING (BELOW SALB)

SLOPE OF HORIZONTAL DRAINAGE PIPE

**CLEANOUT SCHEDULE** 

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 ATE LOCATED IN NONOMEMBRANE FLOORS, THEY SHALL BE FLASHED IN ACCORDANCE WITH THE SPECIFICATIONS.

PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS COVERS.

SIZE (INCHES)

2-1/2 OR LESS

8 OR LARGER

ID

APPROVED BY

TABLE 704.1 OF THE INTERNATIONAL PLUMBING CODE 2018

APPLICATION

FINISHED FLOORS

UNFINISHED FLOORS

CO CERAMIC & TERRAZO

LINE CLEANOUT

STACK CLEANOUT

ECO OUTSIDE AREAS

3 TO 6

MINUMUM SLOPE (INCH PER FOOT)

1/4

1/8

1/16

BASIC OF DESIGN (OR EQUAL)

ZURN Z1400

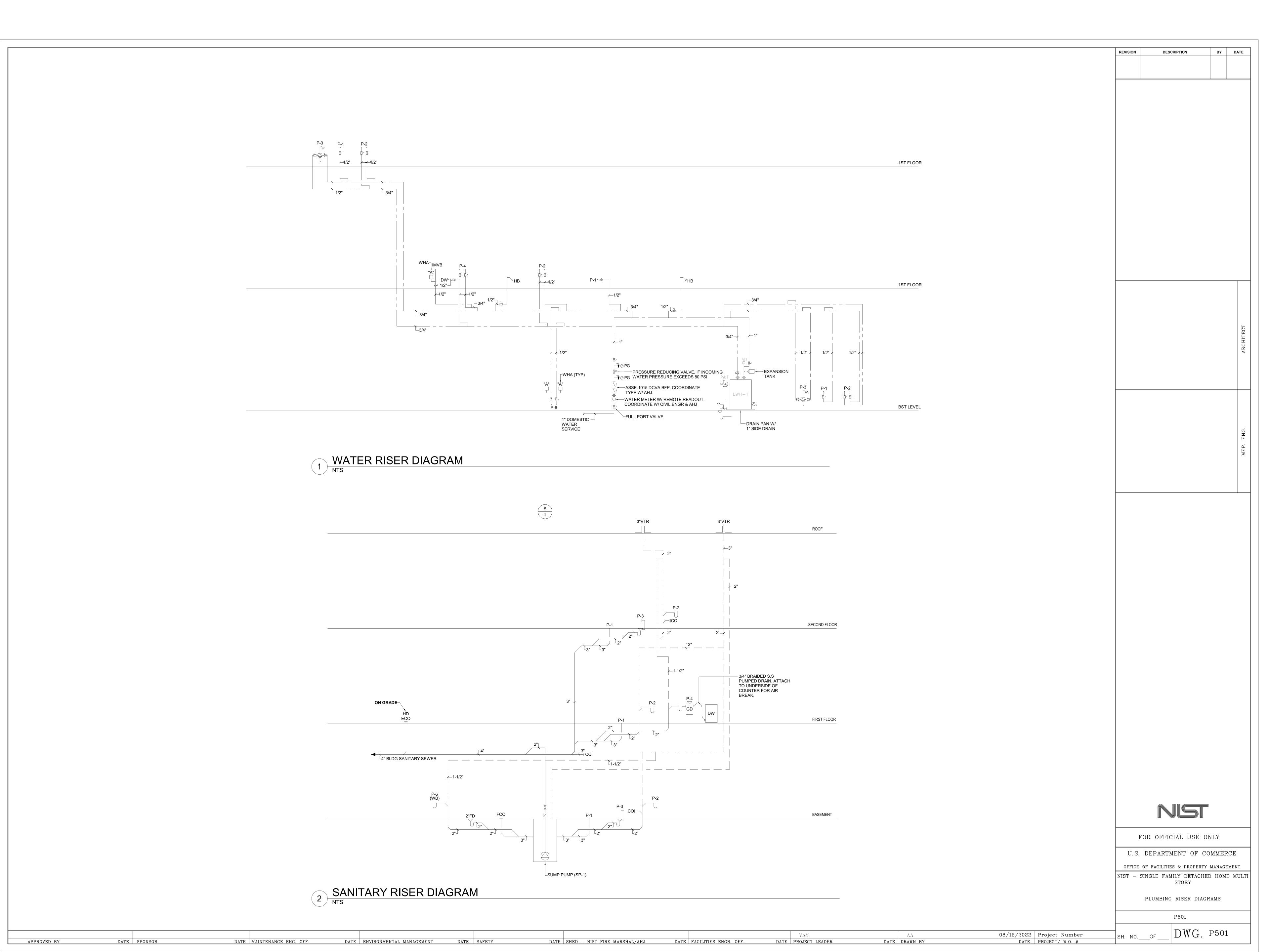
ZURN Z1400-Z

ZURN Z1400-HD

**ZURN Z1468** 

**ZURN Z1446** 

ZURN Z1400-HD



## PLUMBING GENERAL CONDITIONS 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. ANY OBSERVED FAULTS OR AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED. ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ENGINEER SHALL BE ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED. CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS. ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER. PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT THE PROPOSED WORK PRIOR TO BEGINNING WORK.

# SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FOR EXACT QUANTITIES REQUIRED OF EACH TYPE.

- CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES. WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA
- THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED.
- ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES.
- ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME. SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE COMPLETE WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO FOR RECORD PURPOSES.
- 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 IN THE GENERAL CONDITION OR OTHER DOCUMENTS GOVERNING THE MECHANICAL WORK. "FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND
  - SUPPORT, ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR
- "INSTALL" UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL WORK. "PROVIDE" - "FURNISH" AND "INSTALL".
- "NEW" MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED.

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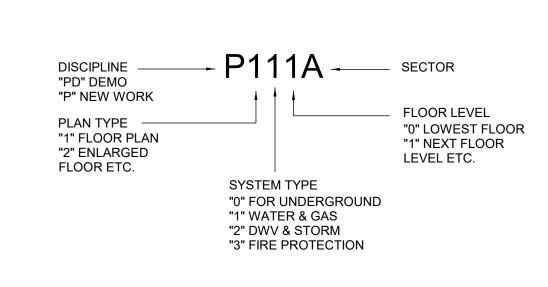
# PLUMBING GENERAL NOTES

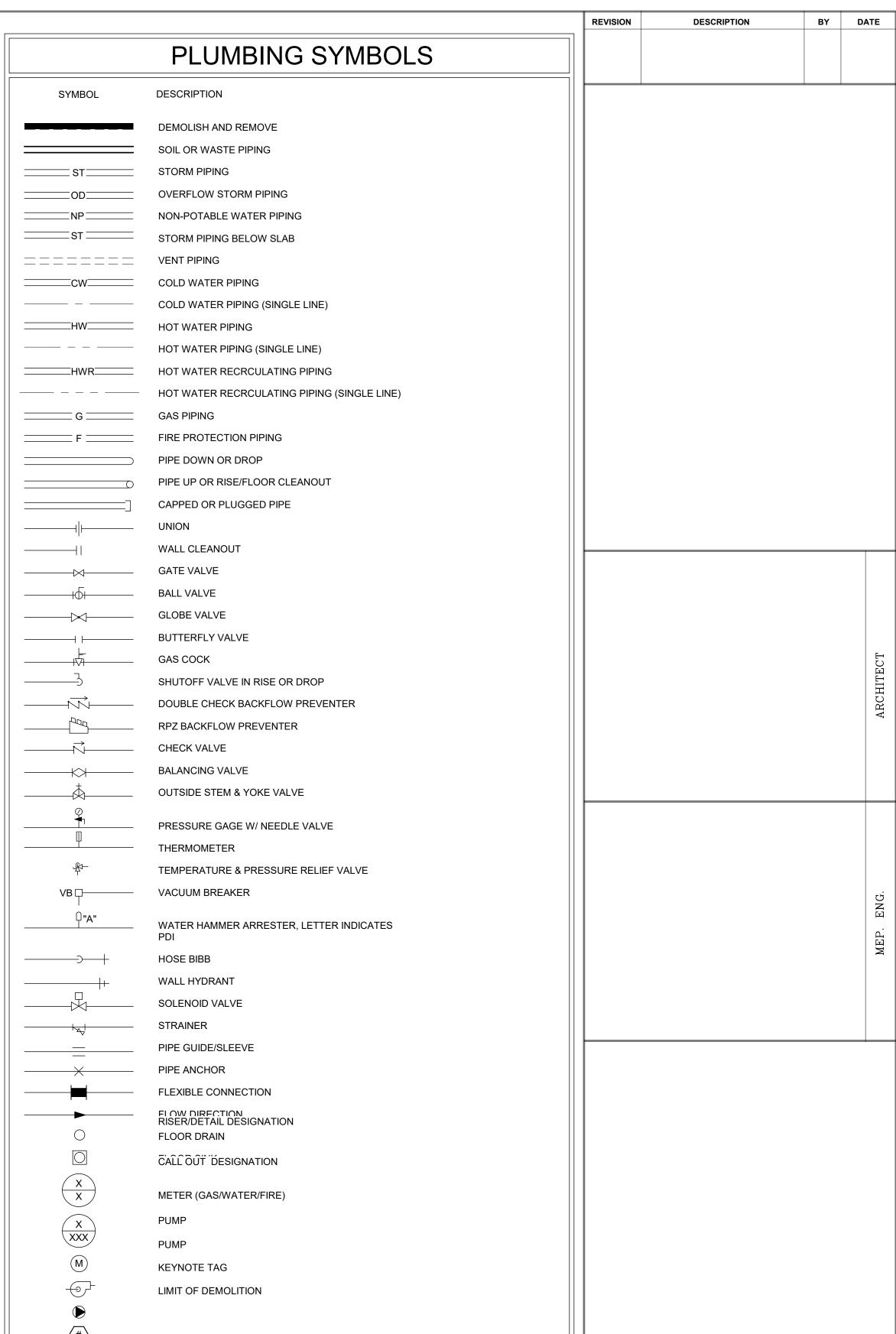
- BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT, DURING BID PERIOD AND AGAIN PRIOR TO EQUIPMENT ORDERING. THE (GENERAL CONTRACTOR AND THE) PLUMBING CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR TO VERIFY THAT ALL EQUIPMENT ARE POWERED, AND PROPER VOLTAGE/WIRING/CAPACITY IS PROVIDED. IN THE EVENT OF REQUIREMENTS AMBIGUITY OR CONFLICT BETWEEN TRADES. THE CONTRACTOR IS REQUIRED TO GENERATE AN RFI ADDRESSING THE ISSUE AND REQUESTING CLARIFICATION. FAILURE TO DO SO WILL NEGATE HIS RIGHT FOR A CHANGE ORDER OR REQUEST FOR ADDITIONAL FUNDS DURING CONSTRUCTION RELATING TO THIS ISSUE.
- DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF EQUIPMENT, PIPING, ETC. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT HIS WORK ACCORDING TO THE FOLLOWING
  - CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS AND THE EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION AS TO BEST FIT THE LAYOUT OF THE WORK. COORDINATE FINAL LAYOUT
  - WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES, STRUCTURE, PIPING, CONDUITS, DUCTWORK, ETC. OR TO MAINTAIN CEILING HEIGHTS, THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
  - UNLESS OTHERWISE NOTED. ALL PIPING TO BE ROUTED CONCEALED IN WALLS. CHASES OR ABOVE CEILING. WATER PIPING SHALL NOT BE ROUTED IN EXTERIOR WALLS. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE AVAILABLE FOR OTHER TRADES.
  - COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS, IN NO CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL EQUIPMENT INCLUDING JUNCTION BOXES.
  - ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE. NUMBER AND LOCATION OF PIPING BRANCHES FOR BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION.
  - VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING
- UNLESS OTHERWISE NOTED, SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD, ABOVE CEILING. DOMESTIC HOT, COLD AND RE-CIRC. WATER PIPING SHALL BE INSTALLED ON WARM SIDE OF INSULATION.
- ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS, CODES AND REGULATIONS.
- DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND NAMES). MATERIALS, SIZES, LOCATING AND HOOK-UP POINTS. AS-BUILTS SHALL BE GIVEN TO [OWNER] AT COMPLETION OF JOB.
- UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKING AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED
- ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE ACCESSIBILITY STANDARDS. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC INSTALLATION REQUIREMENTS. LOCATE WATER CLOSET FLUSH VALVE LEVER BETWEEN TOILET AND LAVATORY. COORDINATE LOCATION OF FLUSH VALVE LEVER HANDLE WITH GRAB BAR. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES.
- PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES. WATER HAMMER ARRESTORS SHALL BE SIZED & INSTALLED PER PDI STANDARDS. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED.
- PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING, AND BALANCE SYSTEM FOR PROPER
- 12. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING.
- 13. ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT AND PROTECTED WITH FIRESTOP.
- 14. SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING.
- 15. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED
- ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
- MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAIN, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK. PROVIDE 18" MINIMUM CLEARANCE FOR
- PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT, LOCATE VALVES FOR EASY ACCESS AND SERVICING OF EQUIPMENT. PROVIDE ACCESS PANELS TO ALL SHUT-OFF VALVES.
- PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION. ALL TESTS SHALL BE IN COMPLIANCE WITH REQUIREMENTS OF THE LOCAL WATER AUTHORITY.
- IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS. THE MOST STRINGENT OF THE OPTIONS SHALL APPLY FOR BIDDING PURPOSE. AFTER AWARD OF CONTRACT BUT BEFORE STARTING DESIGN/CONSTRUCTION, CONTRACTOR SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER.
- 22. PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS
- 23. ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED.
- 24. PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS.
- 25. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT.
- SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH
- ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE ISOLATION
- 28. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER.
- 29. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION.
- 30. ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED.
- MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM, FAUCETS AND MINOR ITEMS NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY
- SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED SHEET METAL. THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO ASSURE A RATING EQUAL TO THE PENETRATED WALL OR FLOOR.
- HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT INTERRUPTION. PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION.
- SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER 2018 IPC CODE, UNLESS OTHERWISE INDICATED. DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS.
- 35. SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER.
- THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. X-RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID.
- REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF

FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING

- UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- WHEN NATURAL GAS IS AVAILABLE, USE NATURAL GAS RANGES/OVENS & FURNACES IN SINGLE FAMILY & MULTI-FAMILY BUILDINGS AS AN OPTION, IN-LIEU OF ELECTRIC.

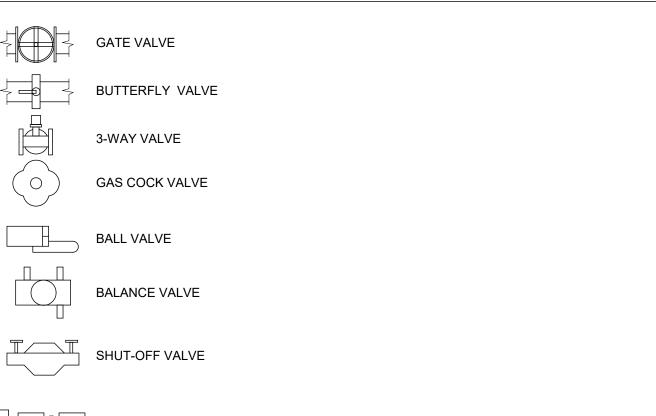
## **ABBREVIATIONS** ABOVE AREA DRAIN ABOVE FINISH FLOOR ABOVE FINISH GRADE **ACCESS PANEL APPROX APPROXIMATE** ACID VENT **ACID WASTE** BAS **BUILDING AUTOMATION SYSTEM BELOW FINISH FLOOR** BFP **BACKFLOW PREVENTER BLDG** BUILDING BATHTUB **COMPRESSED AIR** CONDENSATE CLG CEILING COMPANY, CLEANOUT CW **COLD WATER** DFU DRAINAGE FIXTURE UNITS DIA DIAMETER DN DOWN DOWNSPOUT DWG DRAWING **COLD WATER** CW DISP DISPOSER **DRAINAGE WASTE & VENT** ECO EXTERIOR CLEANOUT ETR EXISTING TO REMAIN **EMERGENCY EYEWASH EMERGENCY SHOWER ELECTRIC WATER COOLER** ELECTRIC WATER HEATER EXISTING FLOOR DRAIN FINISHED FLOOR ELEVATION FIXT **FIXTURE** FLR **FLOOR** FORCED MAIN FLOOR SINK NATURAL GAS GCO **GRADE CLEANOUT** GD GROUNDWATER DRAIN TILE GPF **GALLONS PER FLUSH** GPM **GALLONS PER MINUTE GAS WATER HEATER** GWH **HOSE BIBB** HOT WATER HOT WATER RECIRCULATING INVERT ELEVATION INDIRECT WASTE INTERNATIONAL PLUMBING CODE **LAVATORY** MAU MAKE-UP AIR UNIT MAX MAXIMUM MOP BASIN BRITISH THERMAL UNITS (x1000) MINIMUM **MISCELLANEOUS** NFWH NON-FREEZE WALL HYDRANT NOT IN CONTRACT OVERFLOW ROOF DRAIN OSD OPEN SITE DRAIN PUMPED DISCHARGE PLUMBING & DRAINAGE INSTITUTE PRV PRESSURE REDUCING VALVE RD **ROOF DRAIN** ROOM ROOF TOP UNIT SANITARY SUPPLY FIXTURE UNIT STORMWATER TRAP PRIMER VALVE TPS TRAP PRIMING STATION TEMPERED WATER TYP UNO UNLESS OTHERWISE NOTED VACUUM BREAKER VENT THRU ROOF WASTE WITH WATER CLOSET WCO WALL CLEANOUT WALL HYDRANT EXISTING RELOCATED LAB/MEDICAL PROJECTS OXYGEN MEDICAL AIR LAB AIR NITROGEN LIQUID NITROGEN ARGON HELIUM SPECIAL GAS LAB VACUUM MEDICAL VACUUM CARBON DIOXIDE CO2 **DEIONIZED WATER** REVERSE OSMOSIS SUPPLY ROR REVERSE OSMOSIS RETURN LCW LAB COLD WATER LAB HOT WATER LHW LHWR LAB HOT WATER RECIRCULATING **VCW** VIVARIUM COLD WATER VHW VIVARIUM HOT WATER NON-POTABLE SHEET NUMBERING LEGEND





# BUTTERFLY VALVE 3-WAY VALVE GAS COCK VALVE

# DOUBLE SYMBOLS





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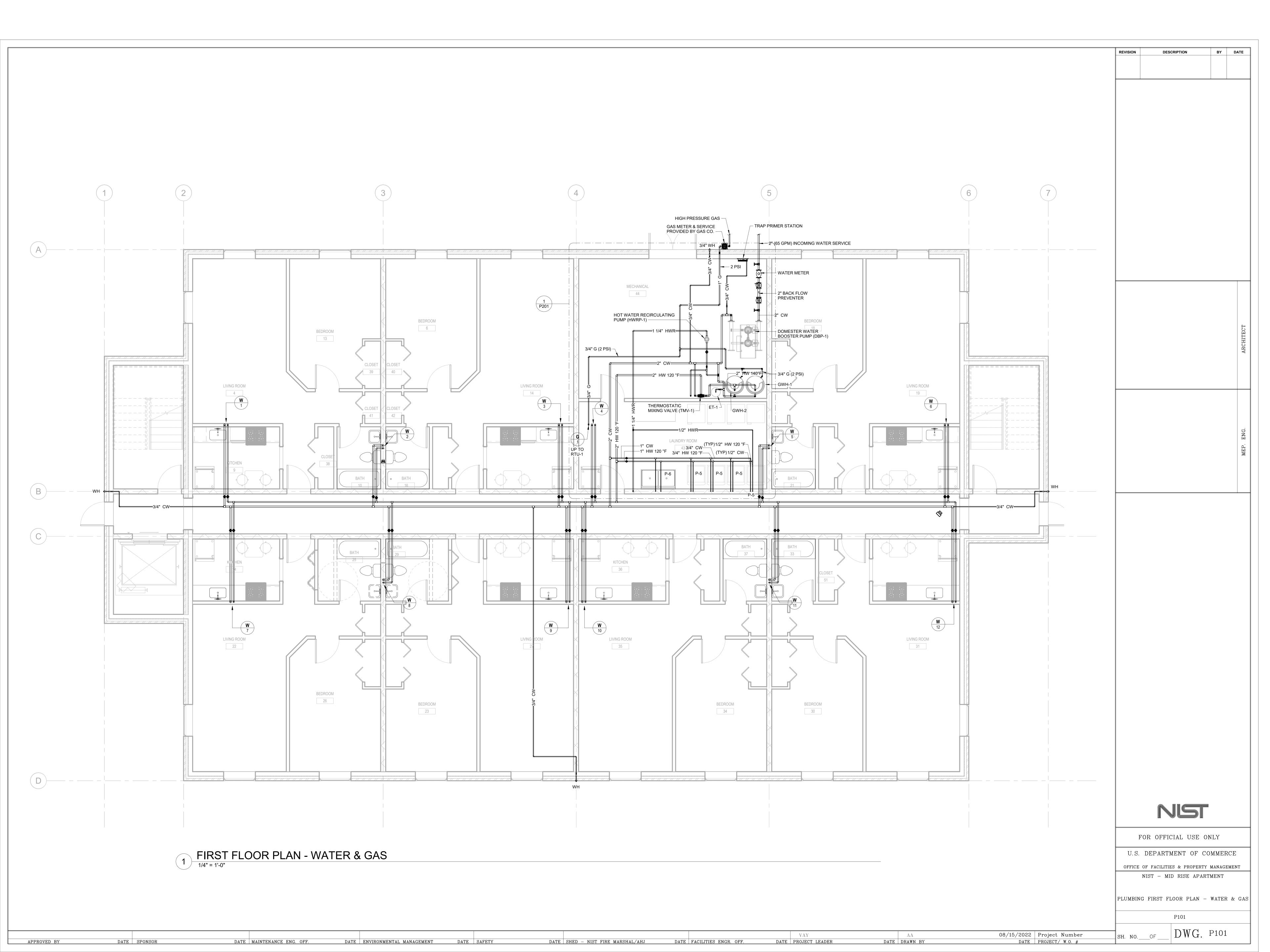
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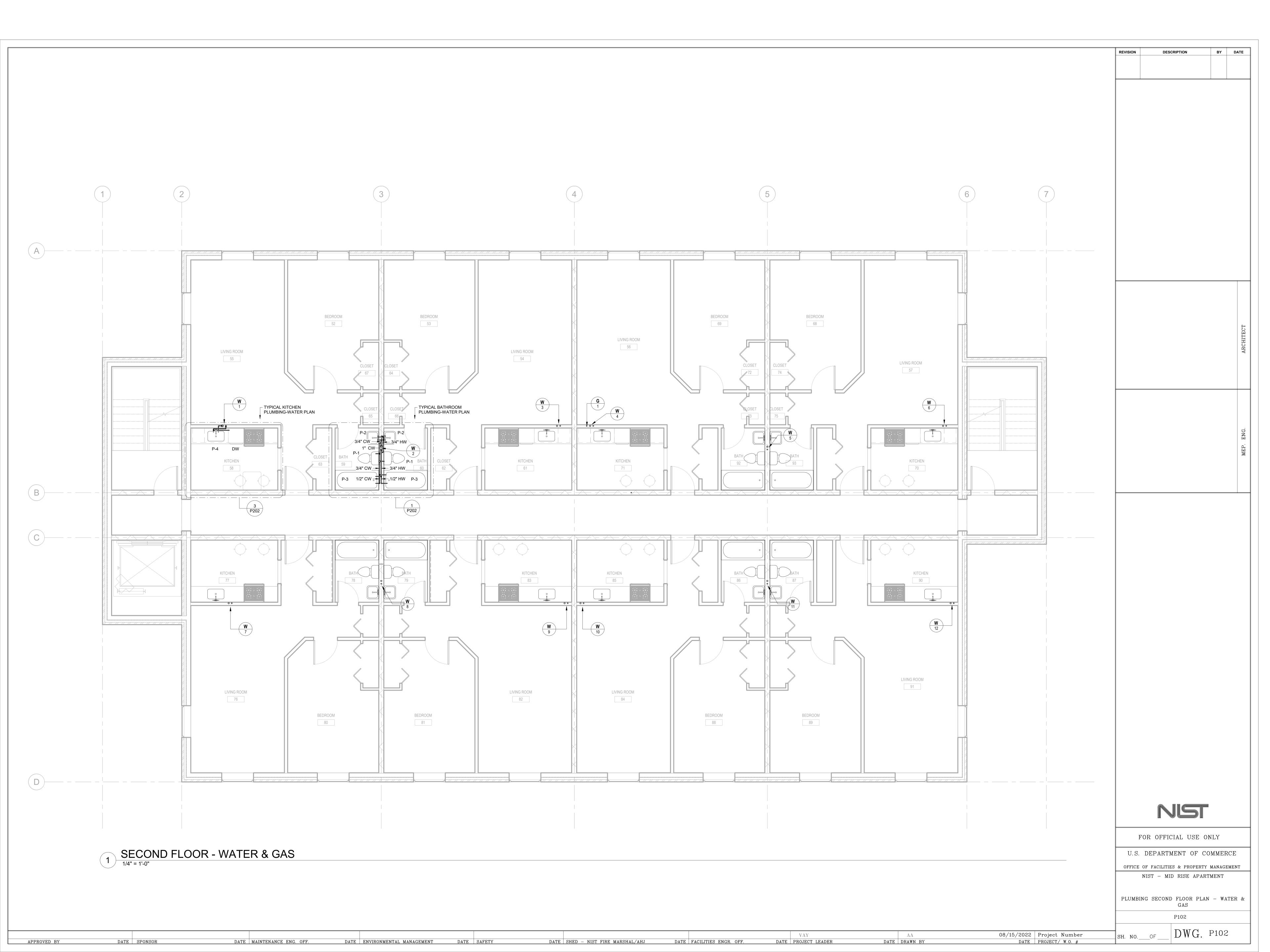
NIST - MID RISE APARTMENT

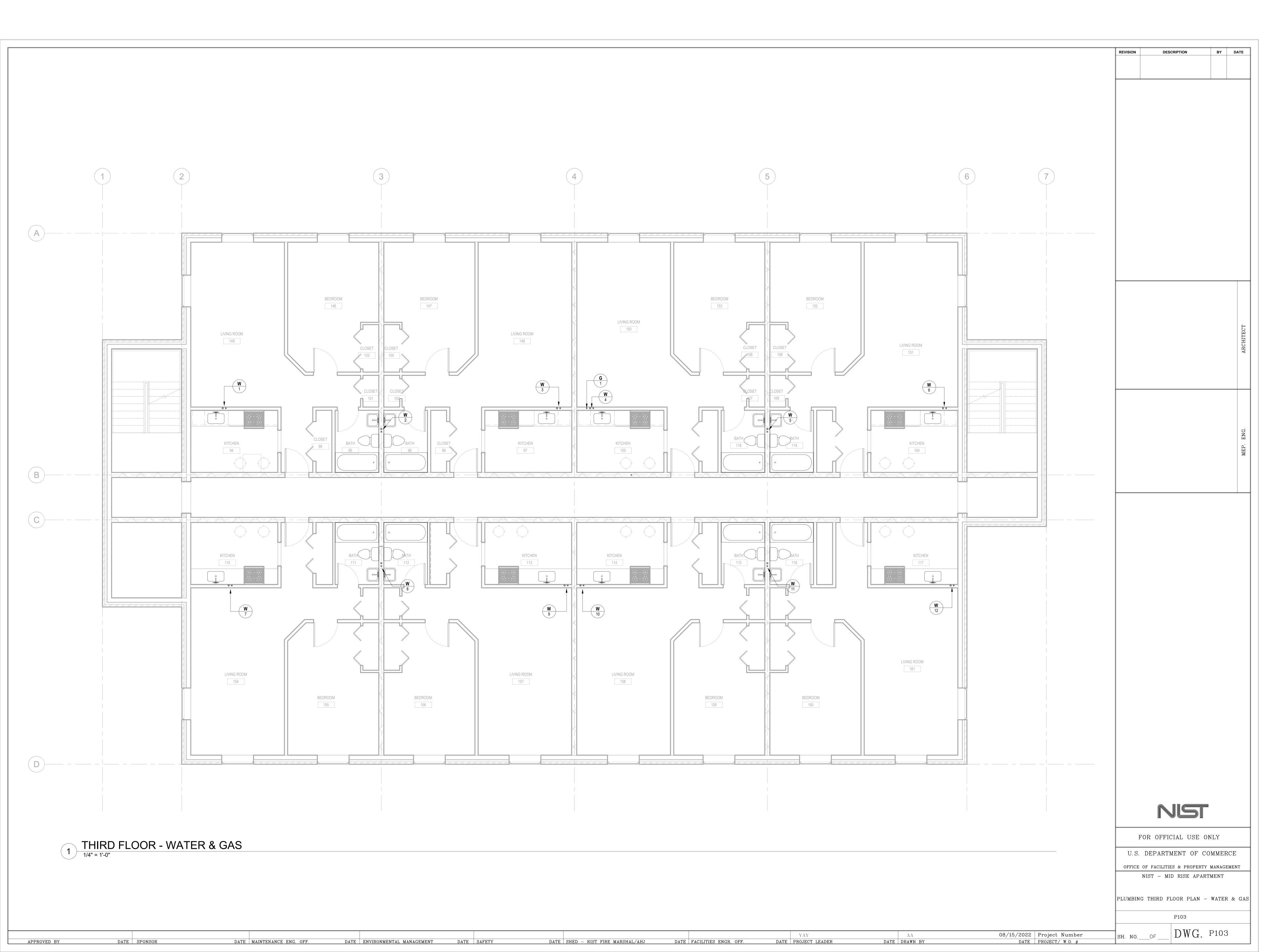
PLUMBING COVERSHEET

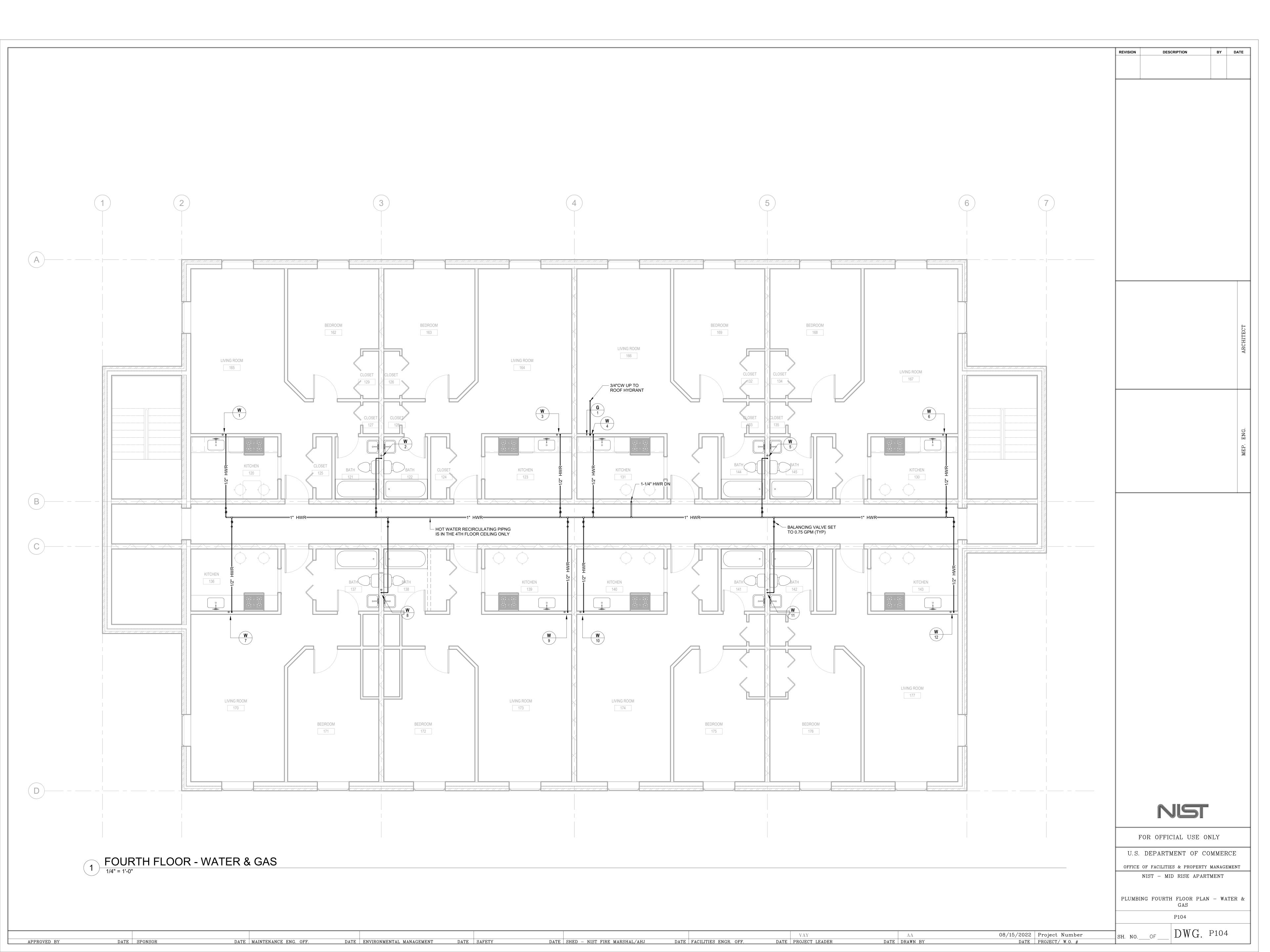
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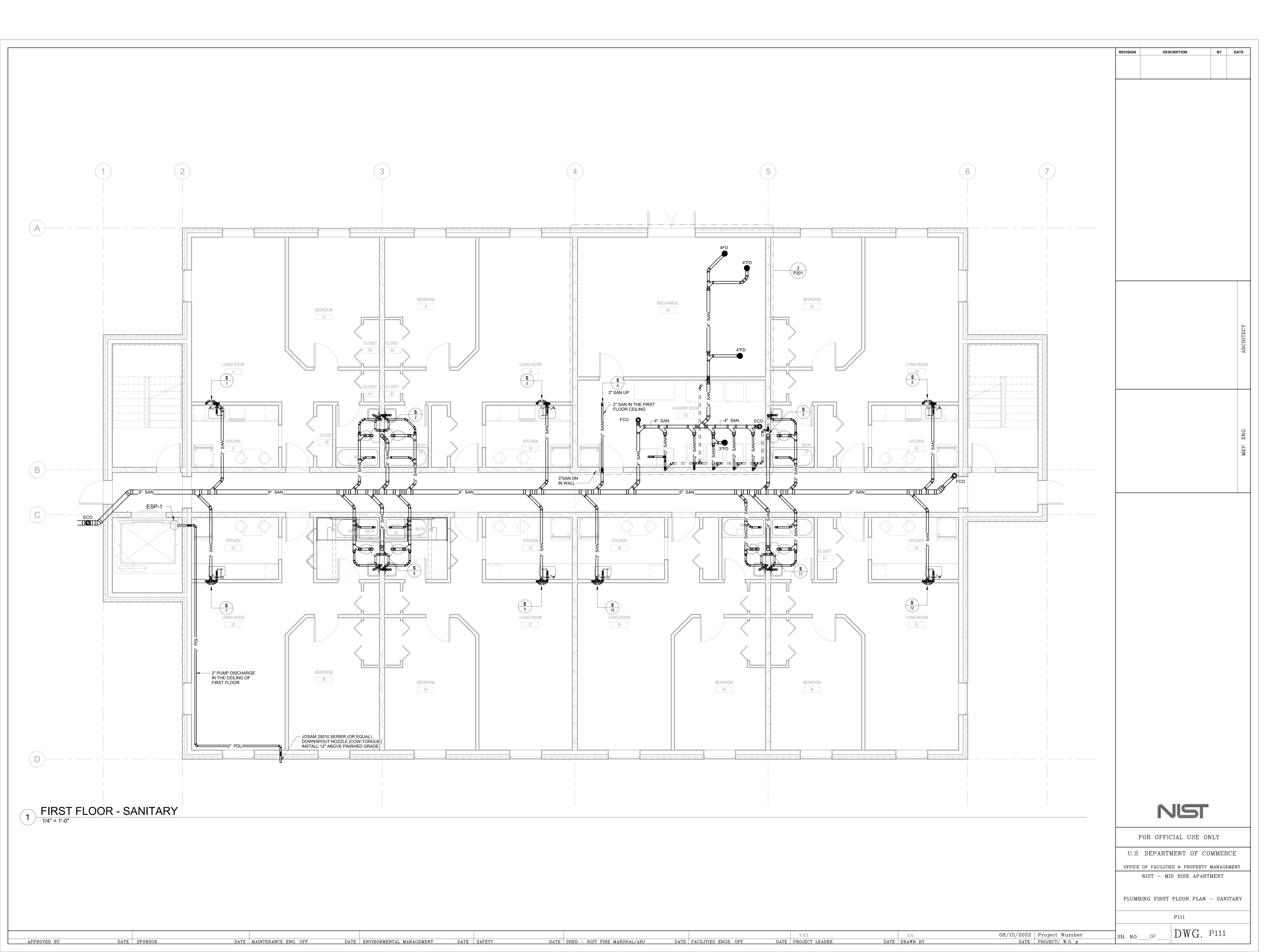
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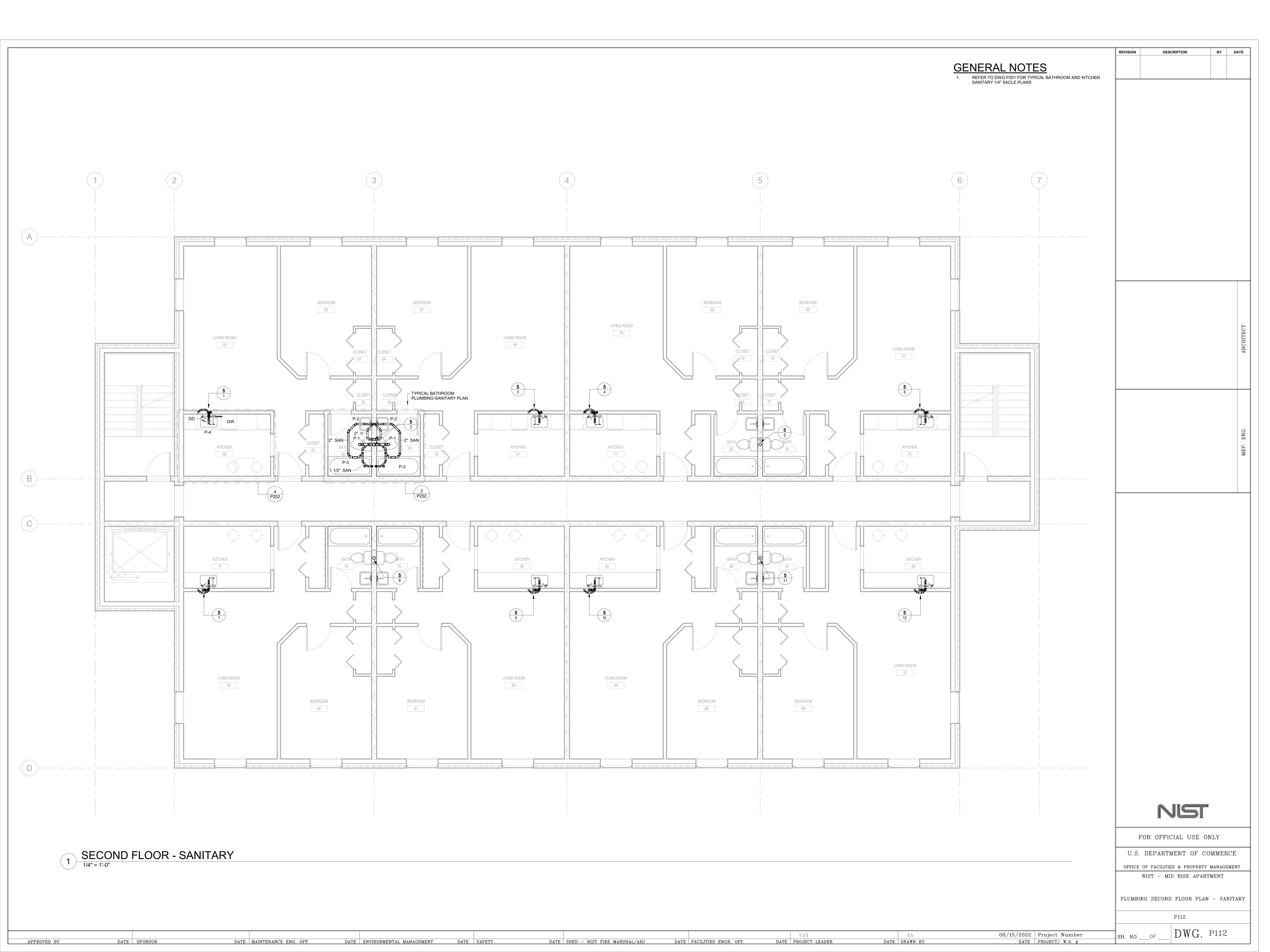


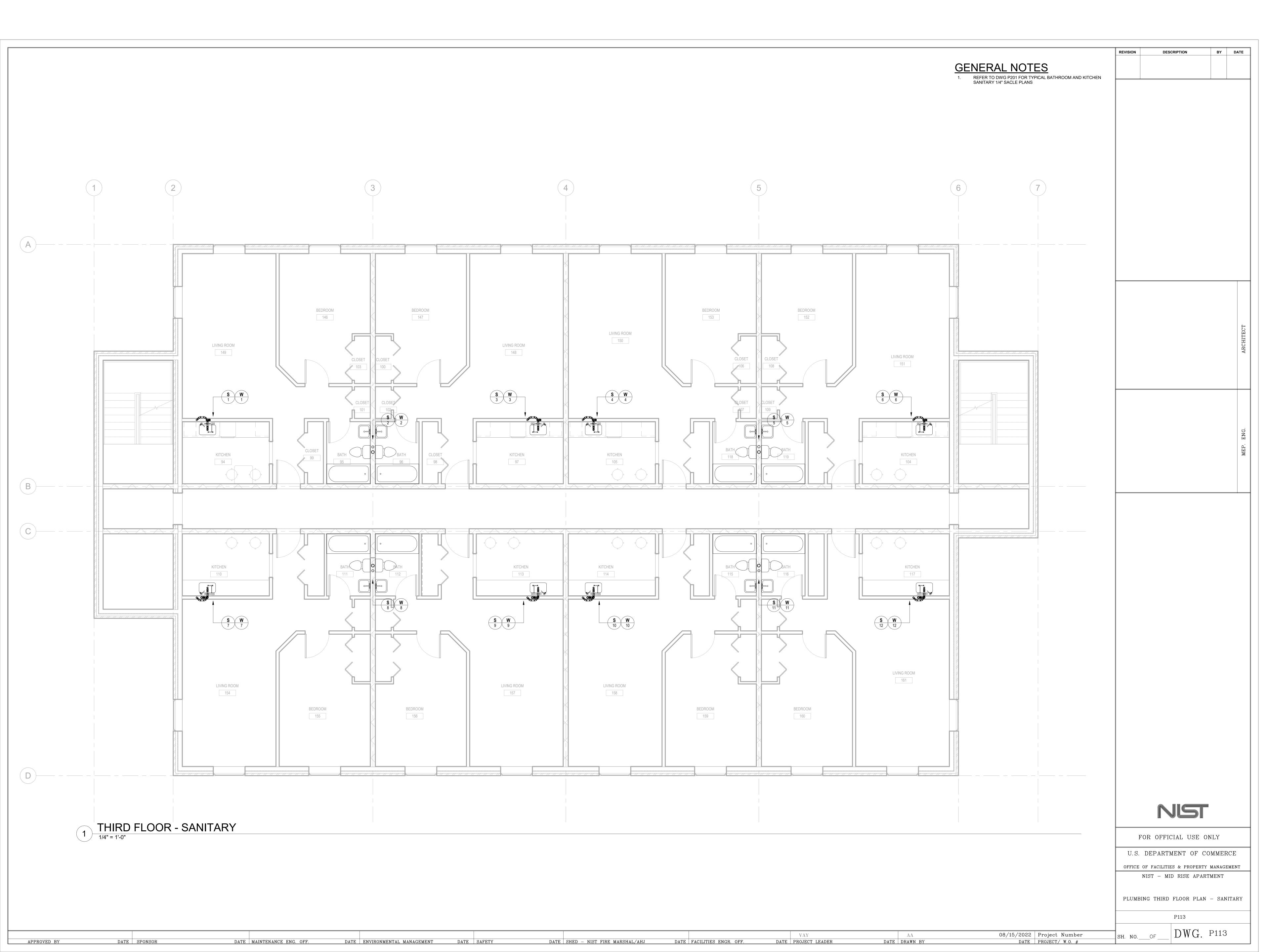


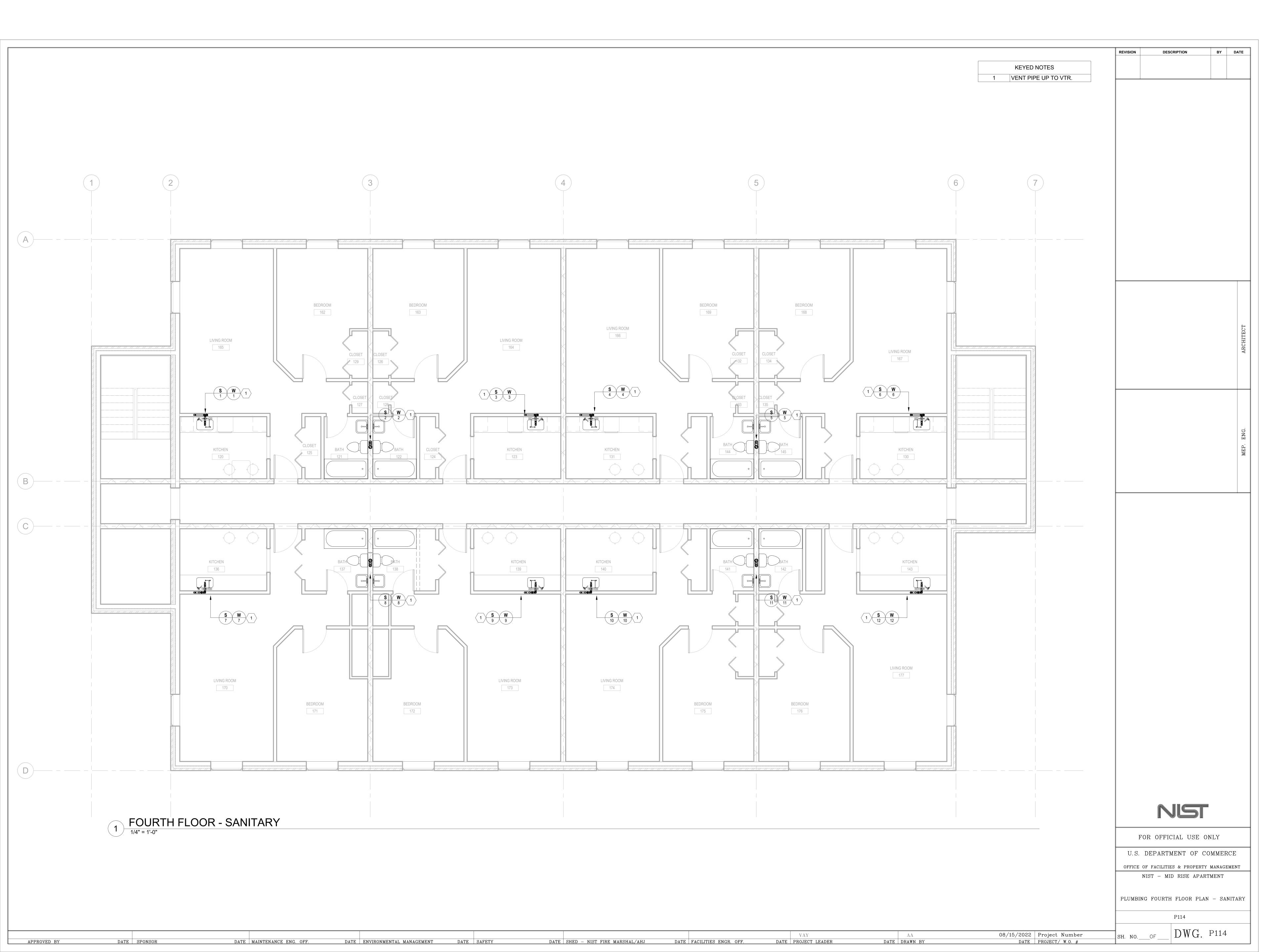


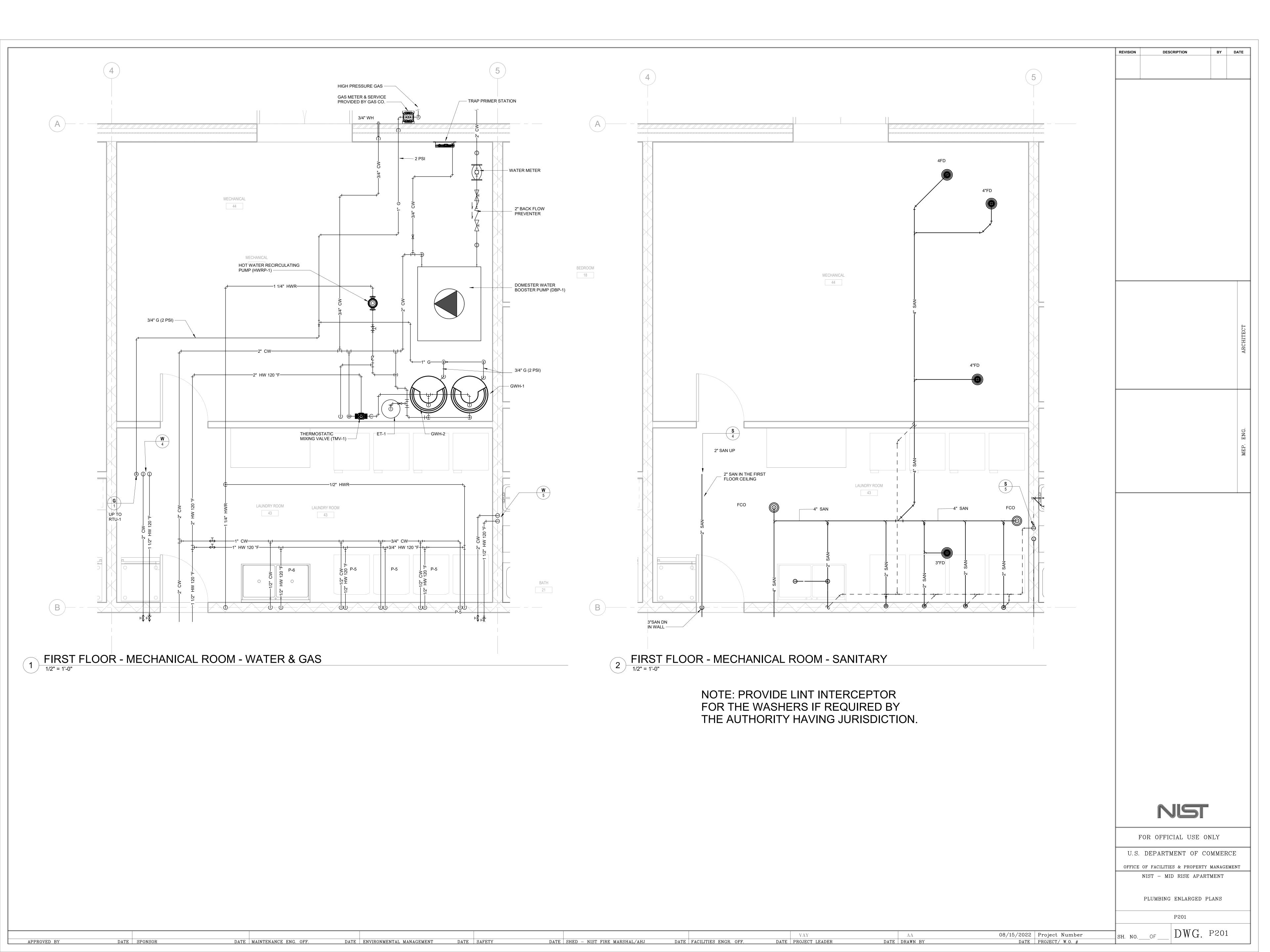


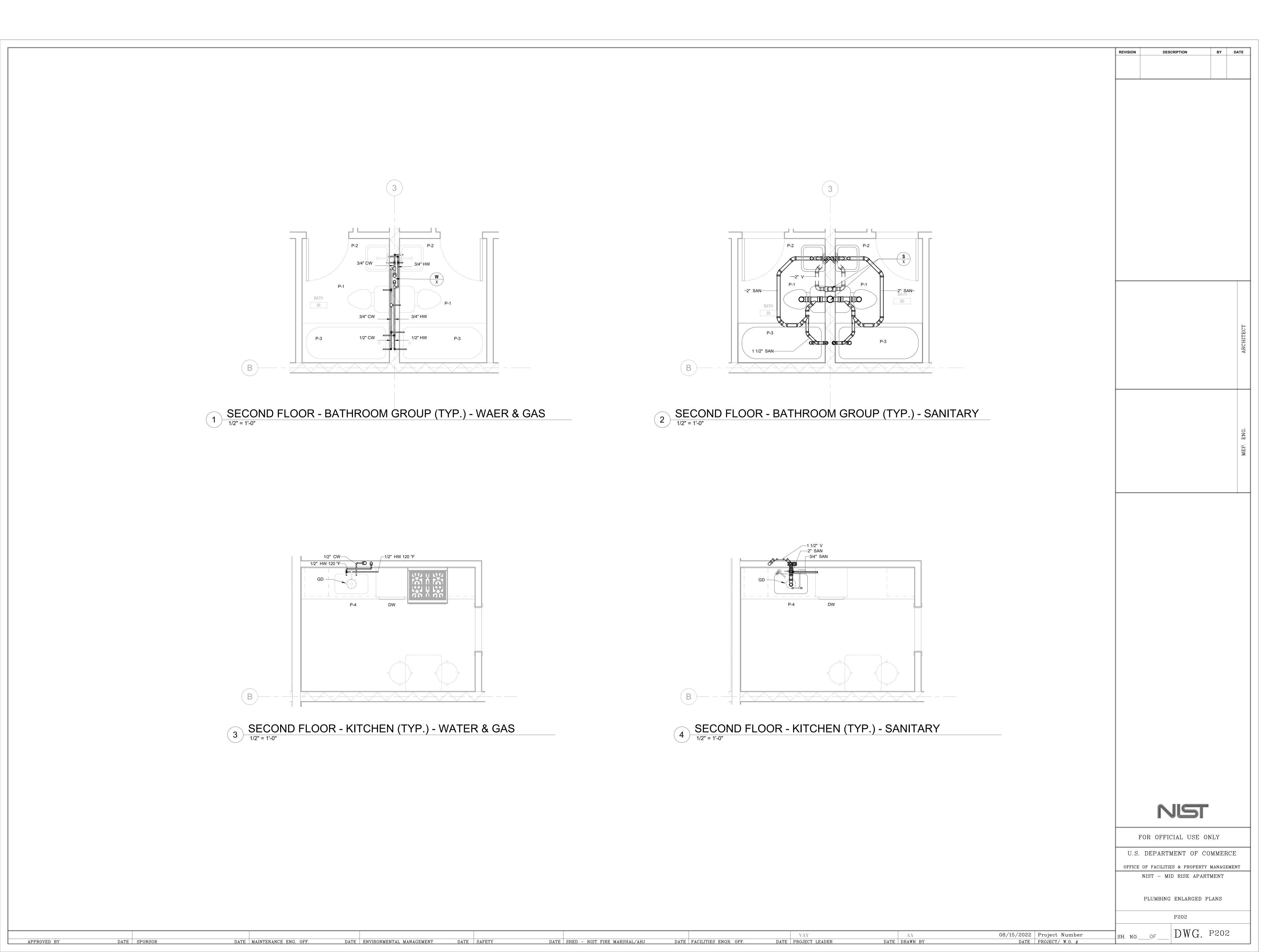


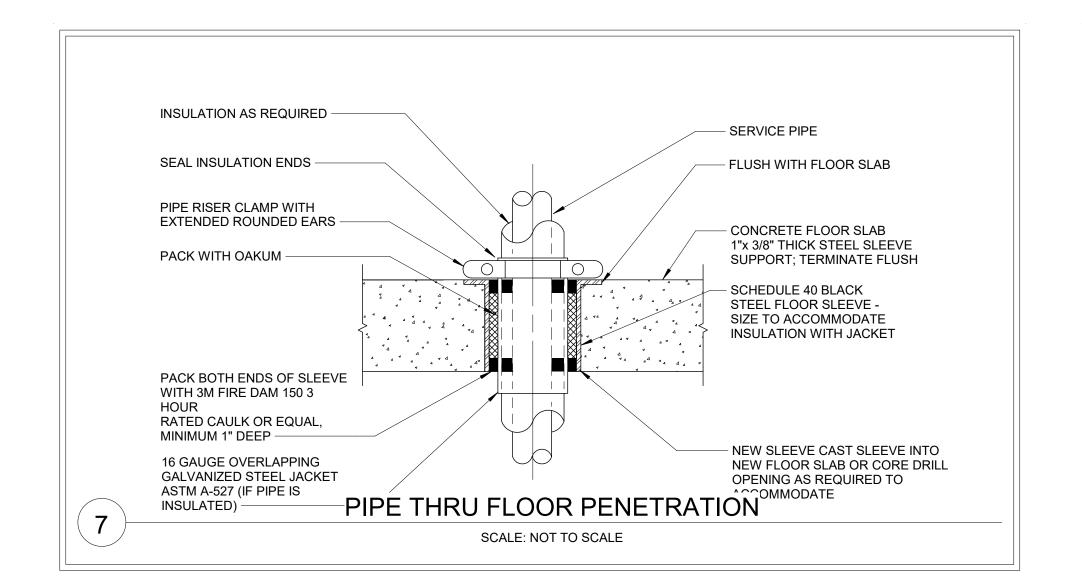


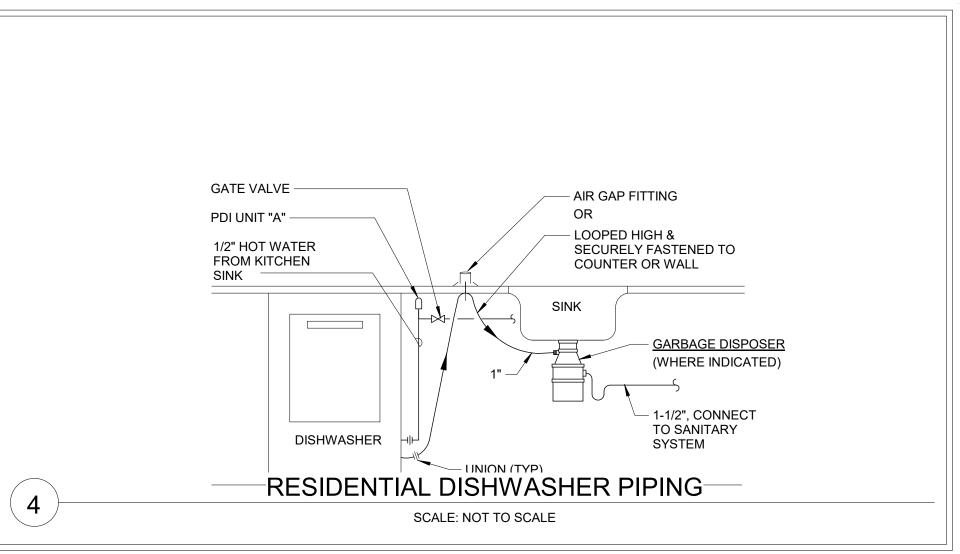


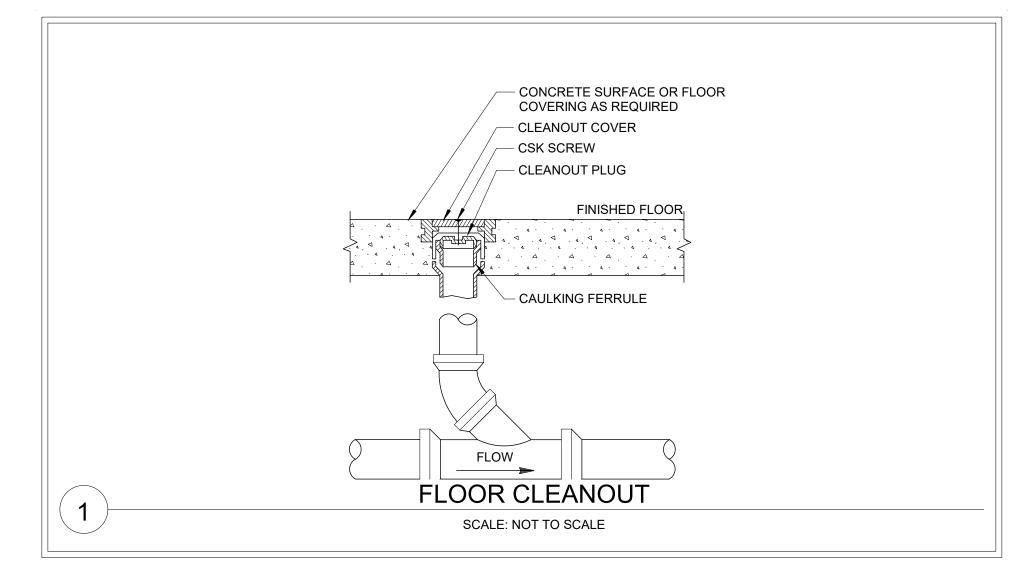


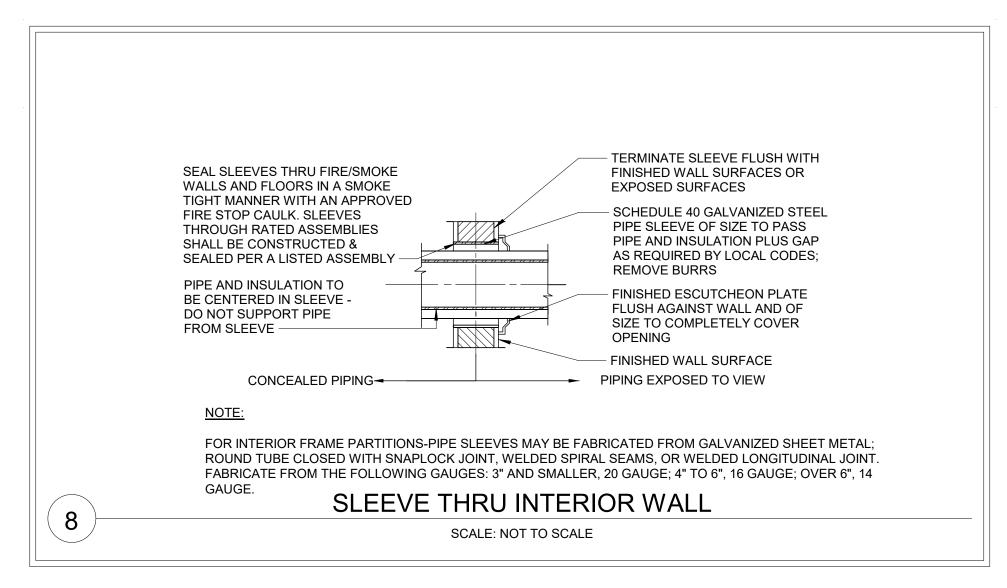


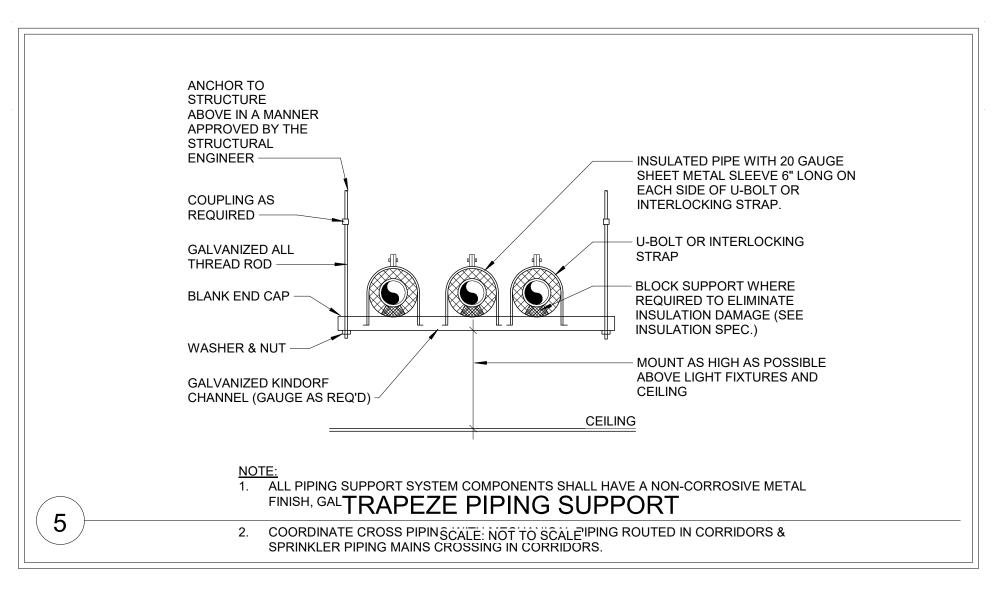


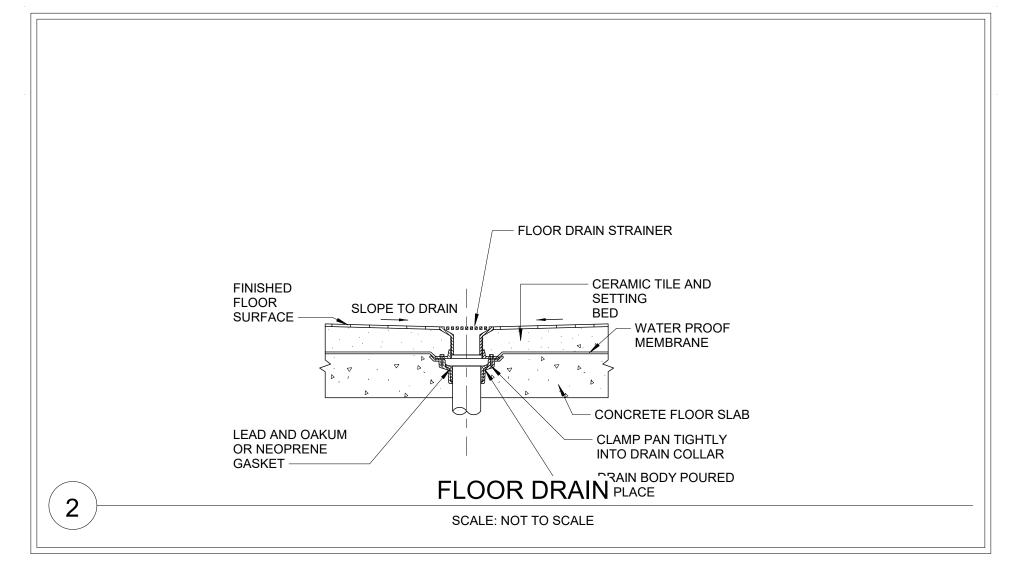


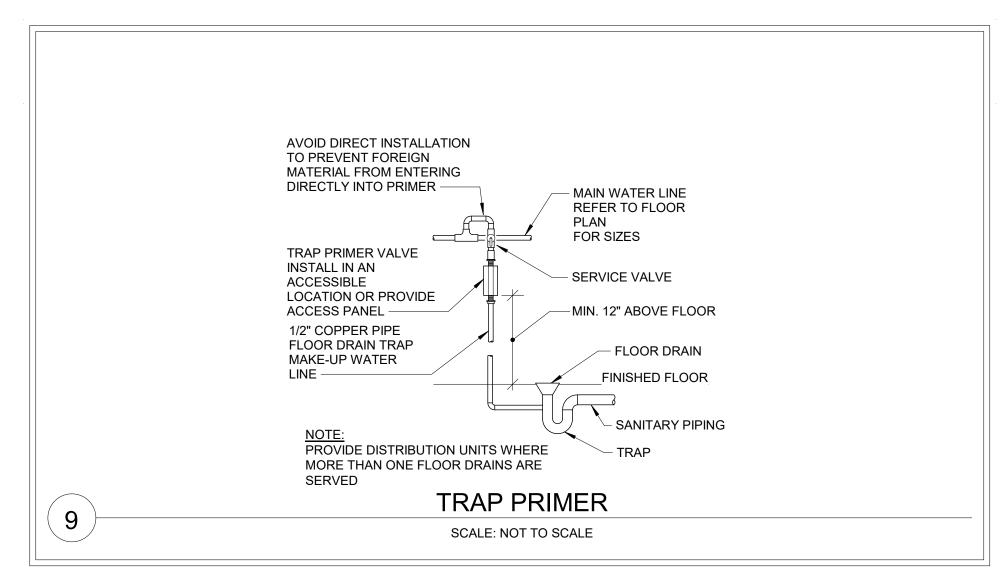


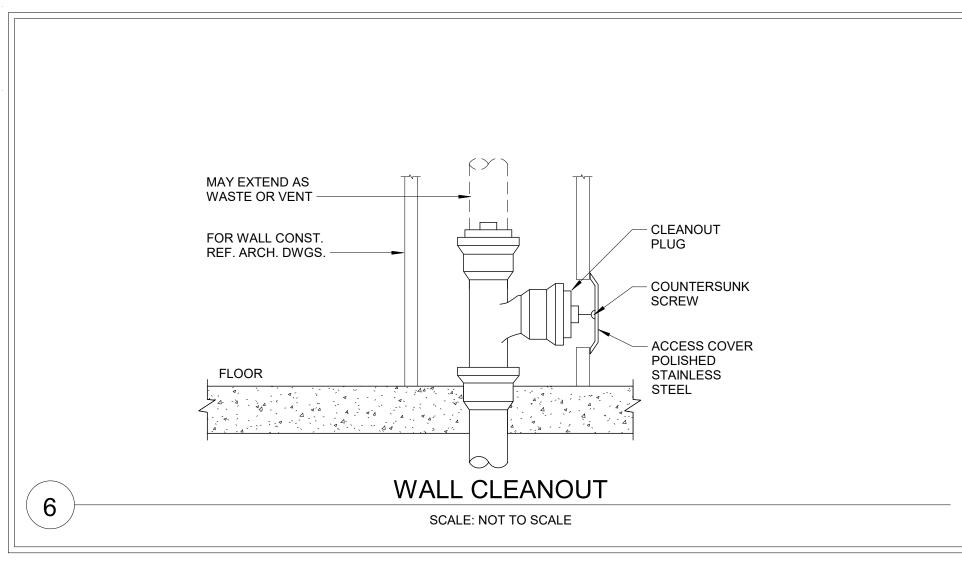


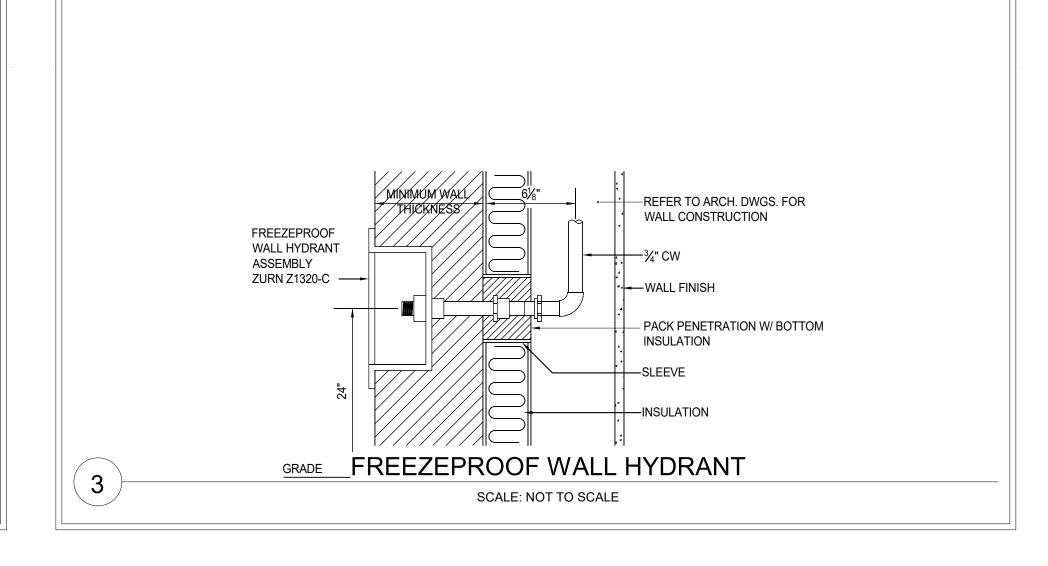












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DESCRIPTION

REVISION

BY DATE

PLUMBING DETAILS

APPROVED BY DATE SPONSOR DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

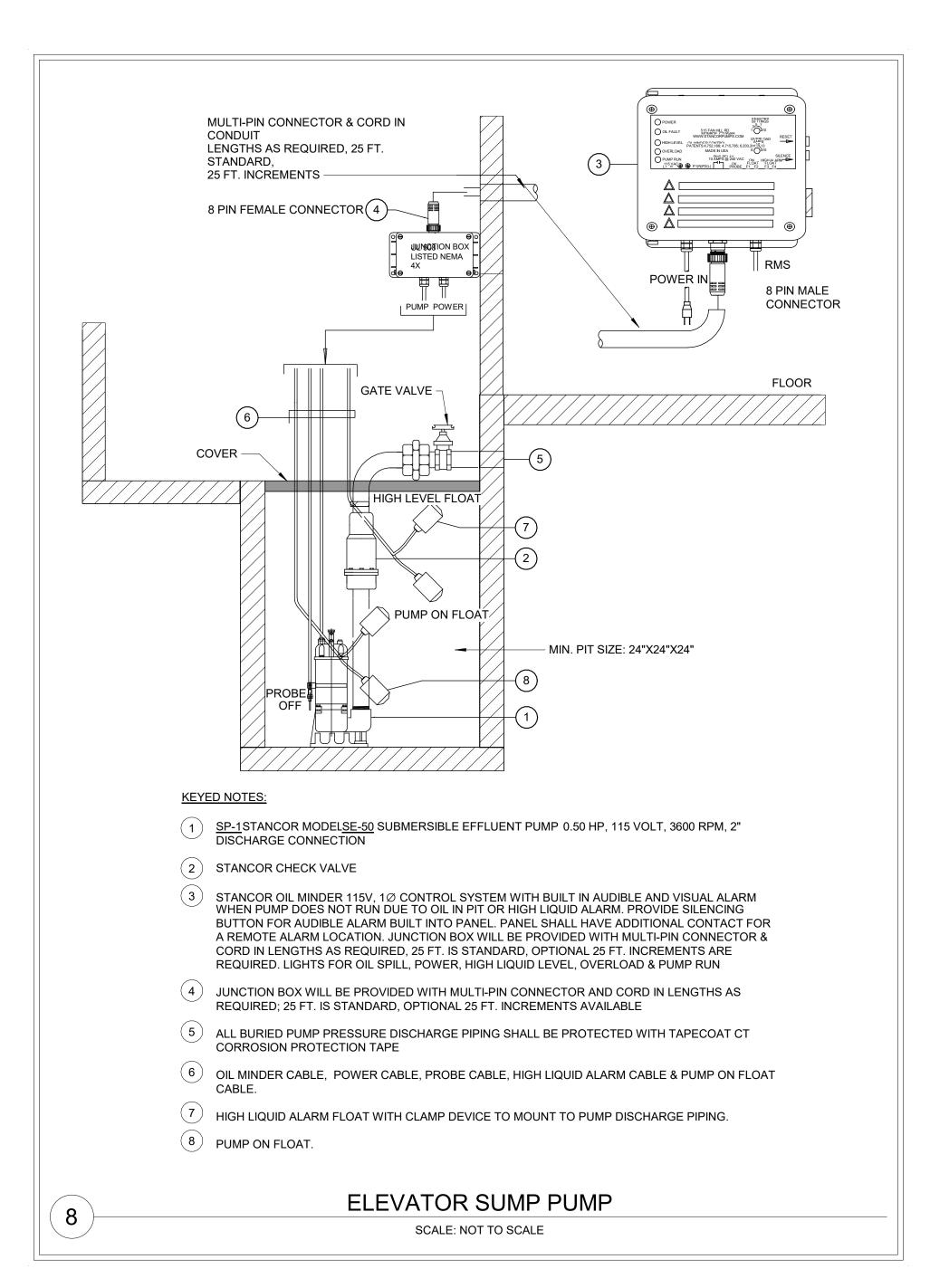
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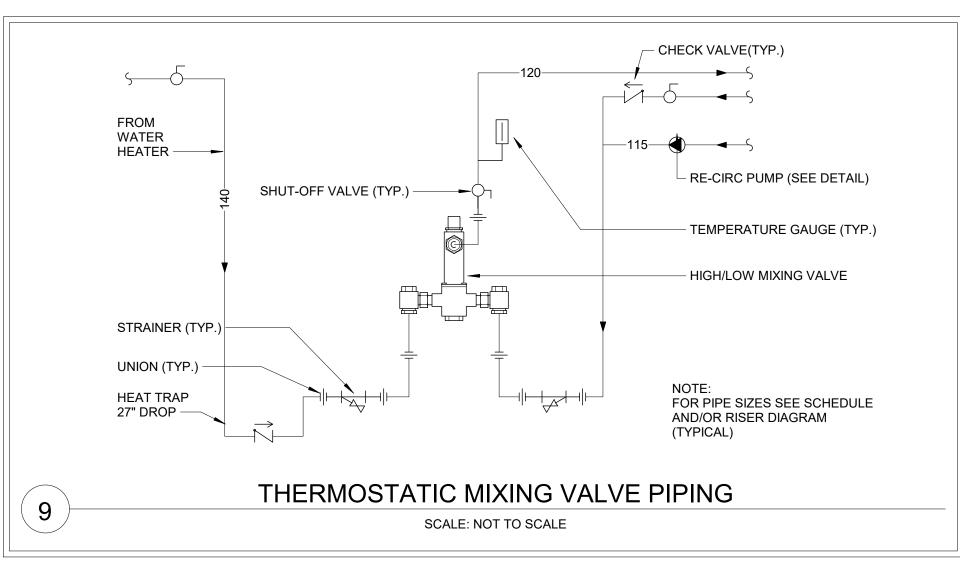
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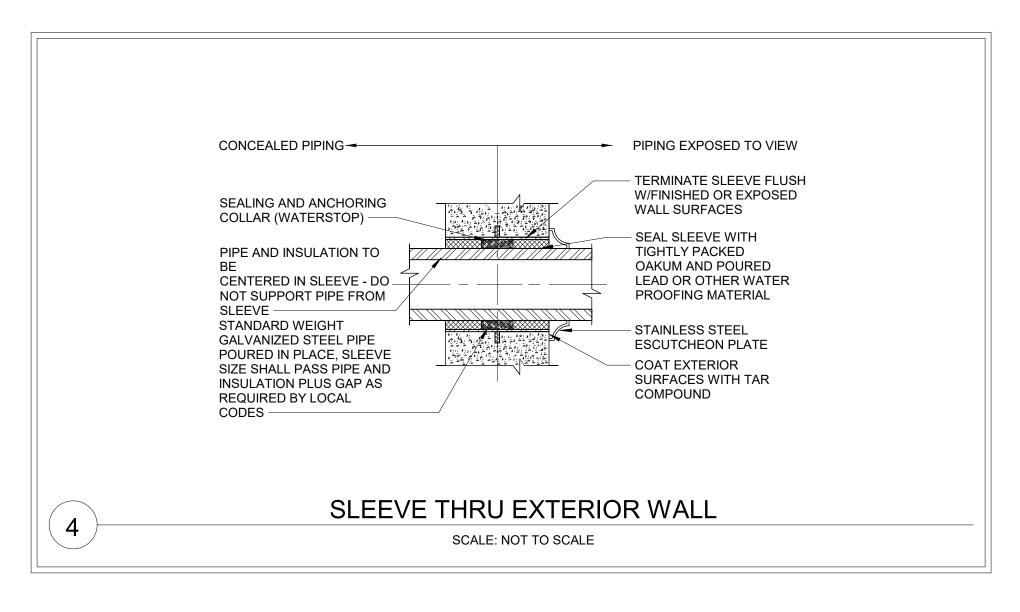
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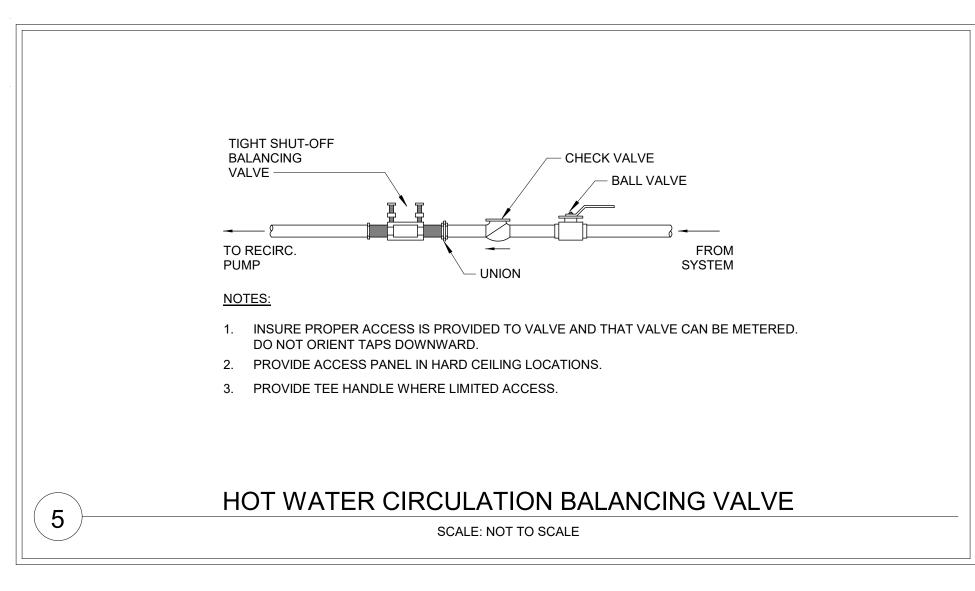
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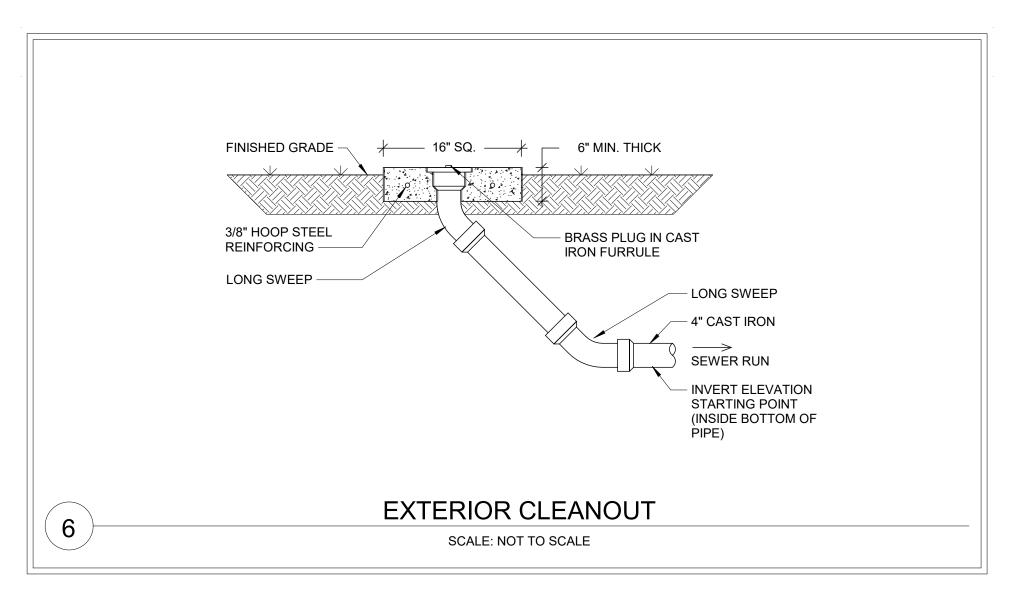
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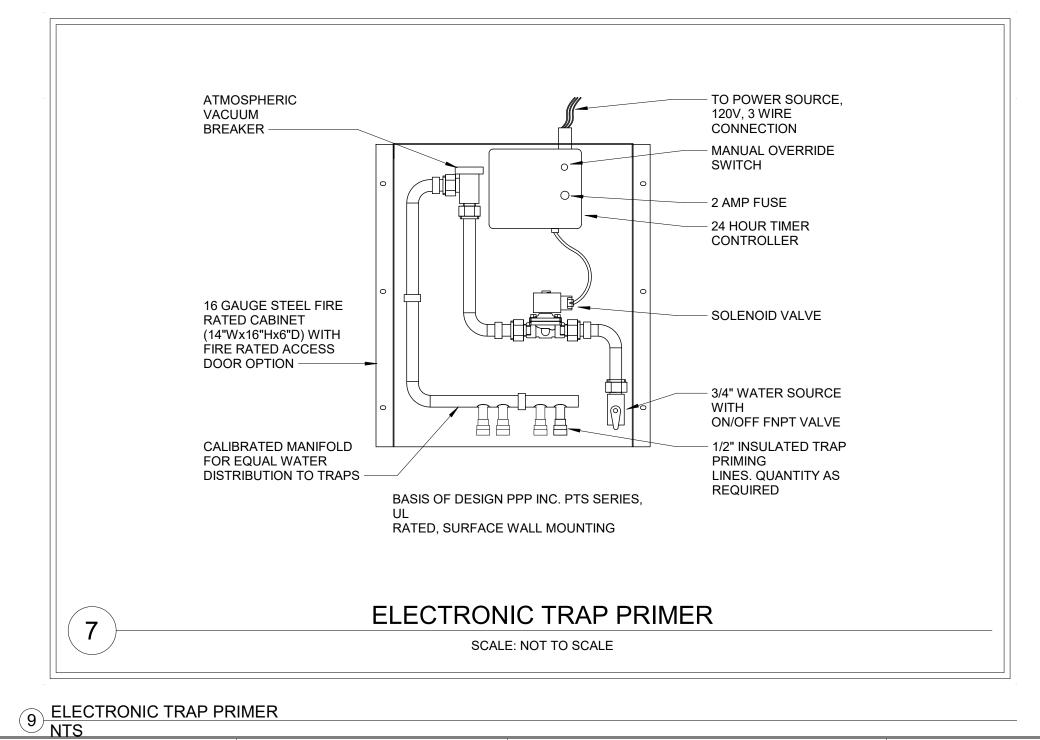


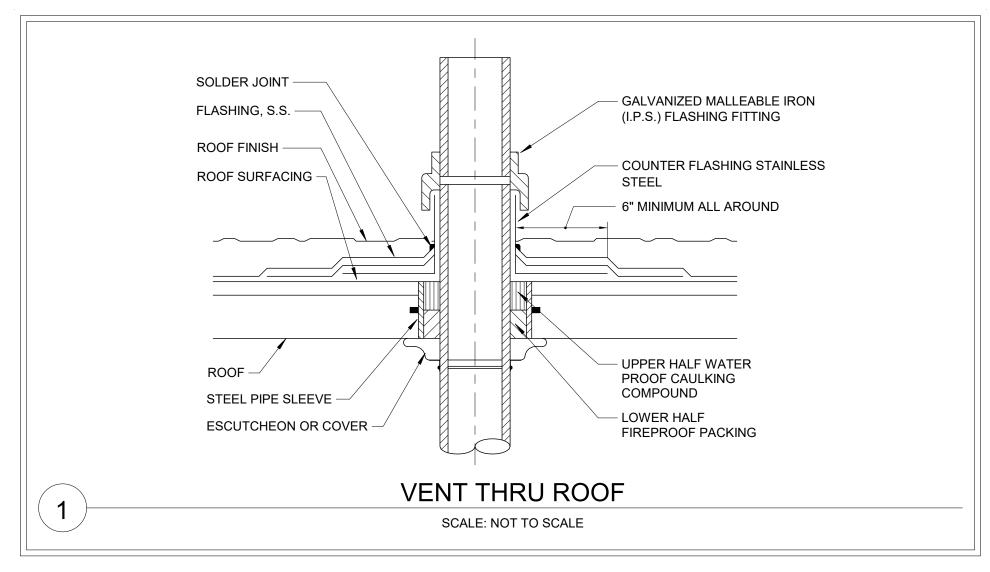


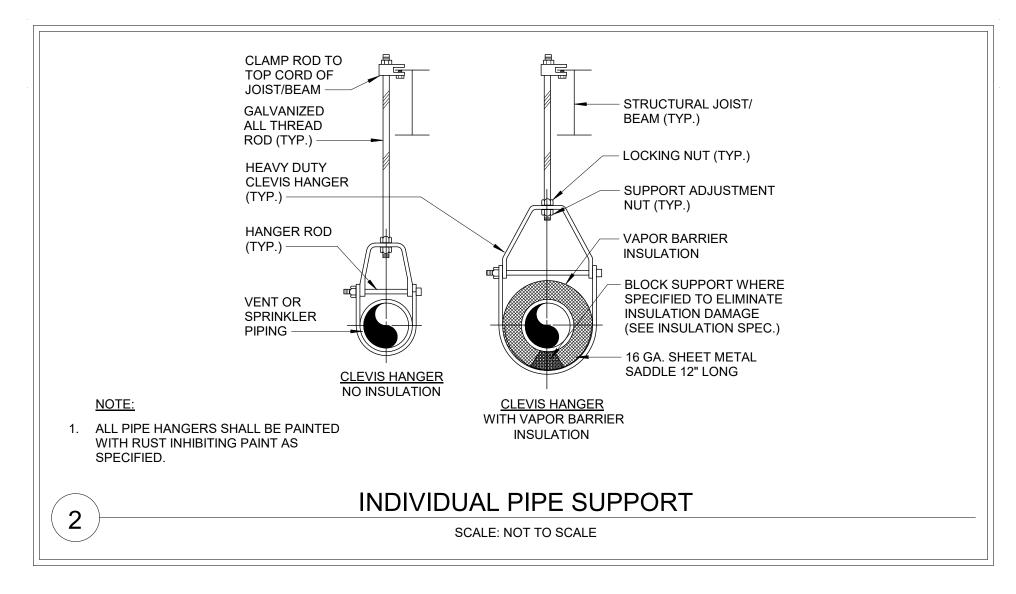


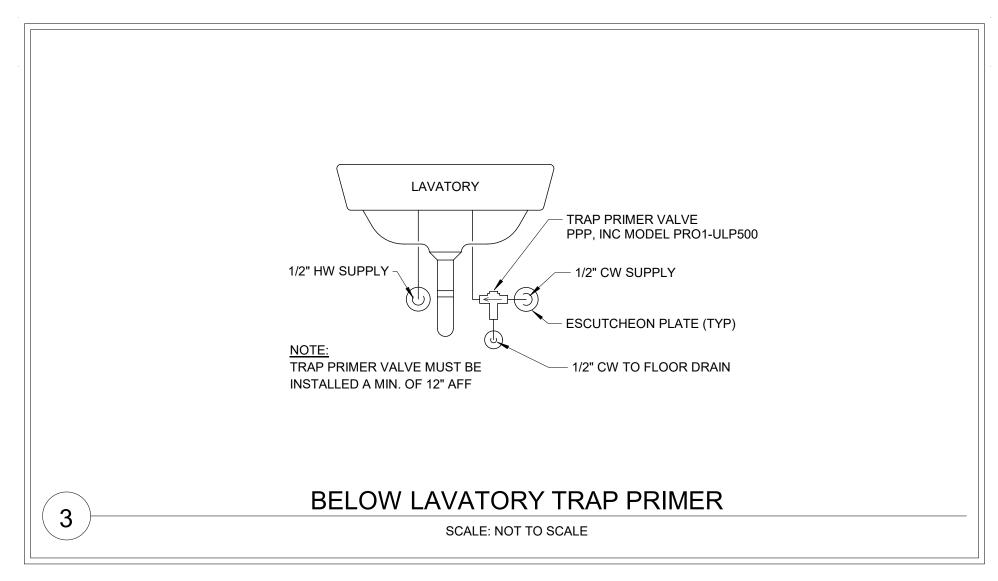














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OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - MID RISE APARTMENT

PLUMBING DETAILS

P302

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DATE MAINTENANCE ENG. OFF.

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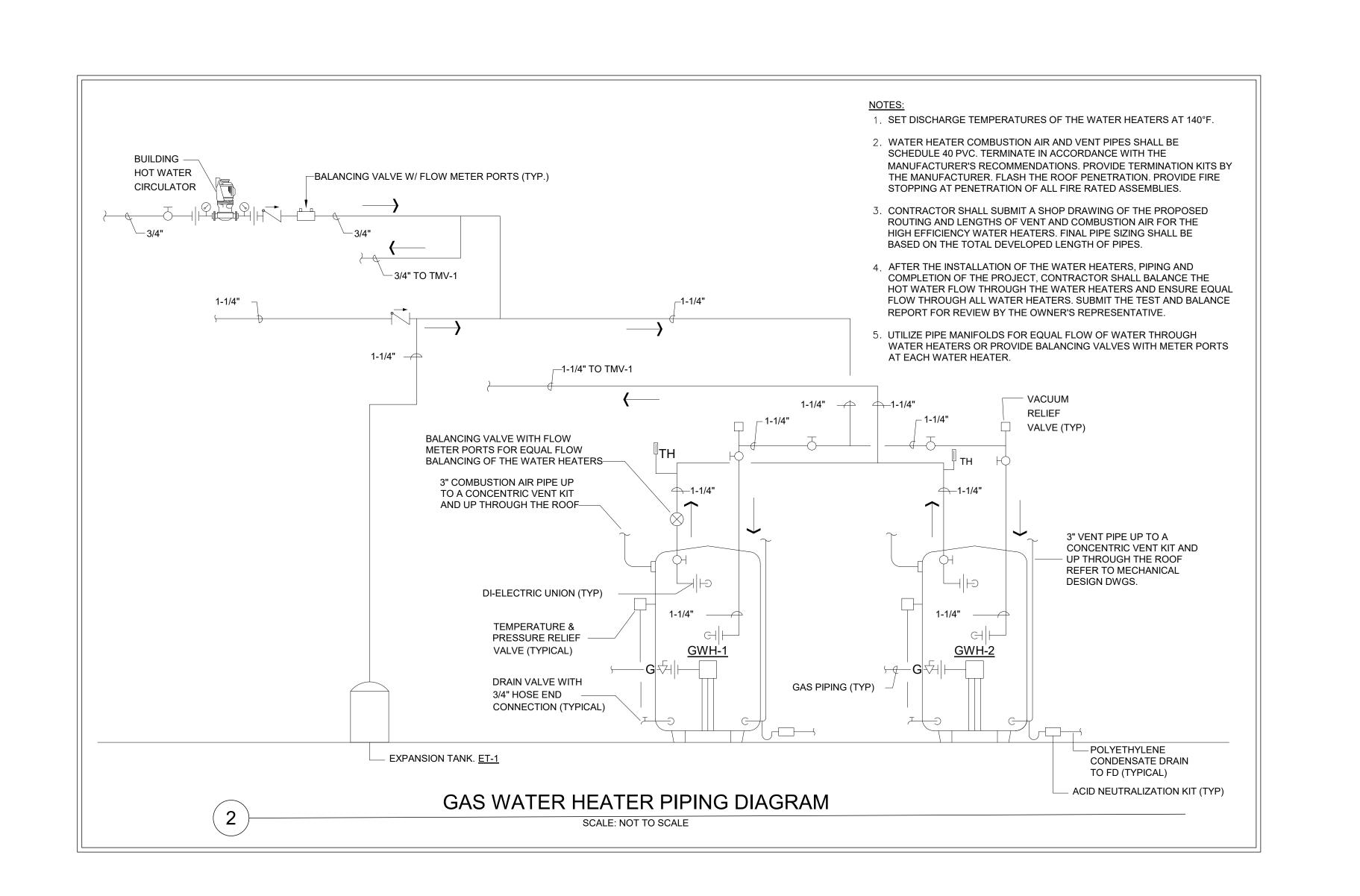
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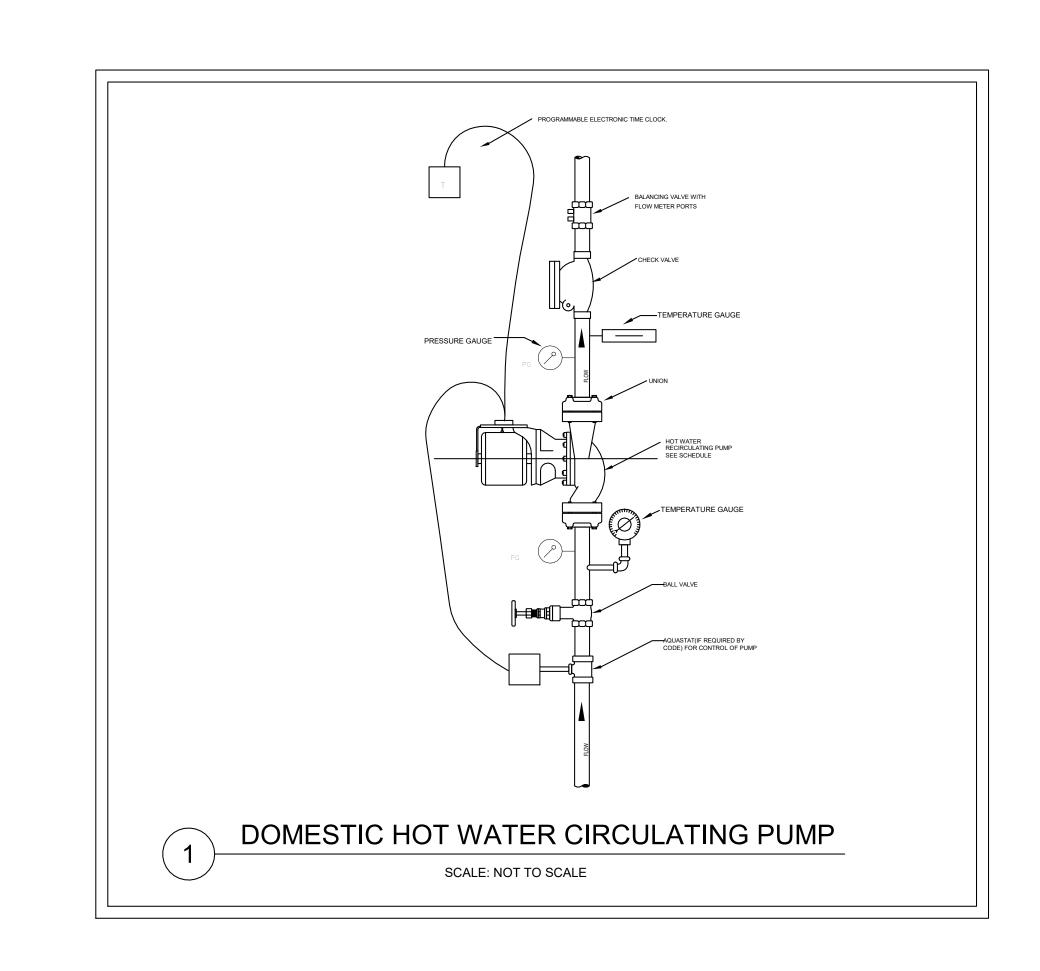
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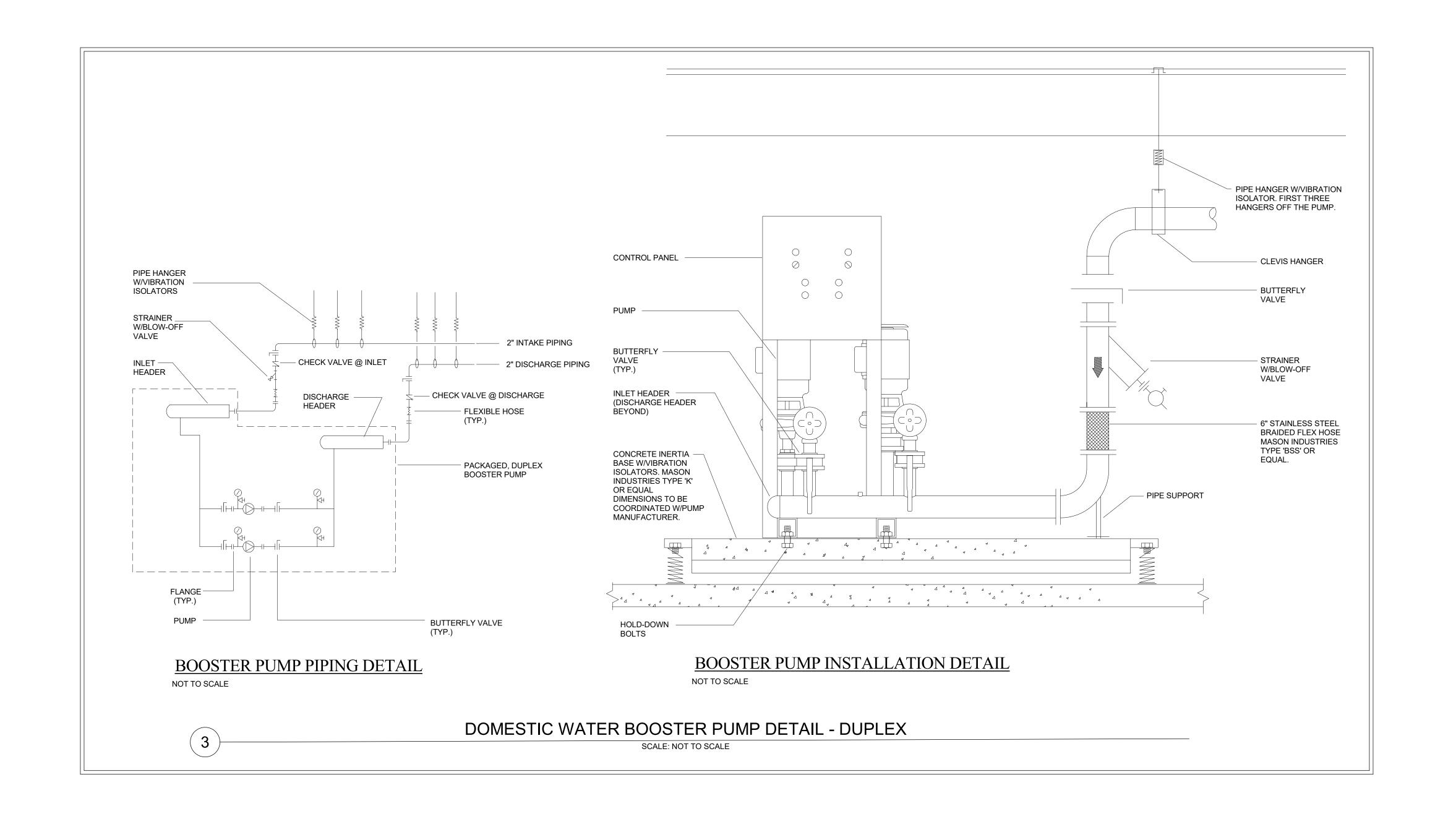
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DESCRIPTION

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DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

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08/15/2022 Project Number

DATE SHED - NIST FIRE MARSHAL/AHJ

DATE FACILITIES ENGR. OFF.

DATE PROJECT LEADER

DATE DRAWN BY

DATE PROJECT/ W.O. #

WATER HAMMER ARRESTOR SCHEDULE								
PDI#	MINMAX. 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:								

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

	TRAI	PRI	MINO	S STATION SCHEDULE
ID	ELECTRIC	CAL CHARACT	ERISTICS	BASIC OF DESIGN ( OR EQUAL)
טו	AMPS	VOLTAGE	PHASE	
TSP-1	5 120 1		1	PPP INC. PTS SERIES, SURFACE MOUNTED

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

DATE SPONSOR

APPROVED BY

DATE MAINTENANCE ENG. OFF.

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

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 ATE LOCATED IN NONOMEMBRANE FLOORS, THEY SHALL BE FLASHED IN ACCORDANCE WITH THE SPECIFICATIONS. PROVIDE LINE & STACK TYPE WALL CLEANOUTS WITH ACCESS

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

		PLUMBING	FIXT	URE S	CHEC	ULE	
				CONNEC	TION SIZE		
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	WASTE	VENT	CW	HW	REMARKS
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 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 0496.221.020 WITH DELTA FAUCET LAHARA 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 DSESR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER. KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STELL 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-FIAT MODEL #FLTDII100, 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 INTERGRAL VACUUM BREAKER AND 3/4" HOSE CONNECTION			3/4"		
RH-1	ROOF HYDRANT	WOODFORD SRH-MS NON FREEZE ROOF HYDRANT DRAIN-LESS WITH CAST IRON CASING & DUAL CHECK VALVE BACKFLOW PREVENTER			3/4"		

				GAS I	FIRED	WATE	R HE	ATER S	CHE	DULE					
ID.	LOCATION	STORAGE CAPACITY	GAS INPUT	GAS	MIN.	RECOVERY (GPH) EACH	INLET TEMP	OUTLET TEMP	FLUE (INCH)			FLUE SIZE (INCH) EACH		BASIS OF	DEMARKO
ID	LOCATION	(GALLONS) EACH	(MBTU/HR) EACH	TYPE	EFFICIENCY (%)	@ 100°F DELTA T	(°F)	(°F)	INTAKE	EXHAUST	VOLTS	PHASE	HZ	DESIGN (OR EQUAL)	REMARKS
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
	HALL BE CAPABLE OF ( E NOT NECESSARILY TI								E OF 14 INCH	ES WATER GA	UGE.				

		DUI	PLEX	DOME	ESTIC V	WATER	BOOS	TER P	UMP SCHEDULE	
ID	LOCATION	SERVICE	GPM	HEAD (FT.)	MOTOR HP (EACH)	ELECTRICAL CHARACTERISTICS			BASIS OF DESIGN	REMARKS
	LOCATION		(EACH)			VOLTAGE	PHASE	RPM	(OR EQUAL)	KLWAKKO
DWBP-1	MECHANICAL ROOM	CW	50	60	5.0	208	3	3500	GRUNDFOS HYDRO MPC E CRE 10	PROVIDE WITH VARIABLE FREQUENCY DRIVES

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 POSTIVE SUCTION HEAD AVAILABLE (NPSHA).

		F	LOOR DRAI	N 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

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

			Ι	OOMES	TIC WA	TER EXPAN	SION 7	TANK SO	CHEDULE		
ID	WATER HEATER VOLUME	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE		TOTAL TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	TANK DIMENSIONS		APPROX. OPERATING	BASIS OF DESIGN	REMARKS
	(GALLONS)		(PSIG)				HEIGHT	DIAMETER	WEIGHT (LBS.)	(OR EQUAL)	
ET-1	200	140	150	70	16.5	11	25"	15"	50	AMTROL THERM-X-TROL ST-35-CL	

VAY

DATE PROJECT LEADER

DATE FACILITIES ENGR. OFF.

DATE DRAWN BY

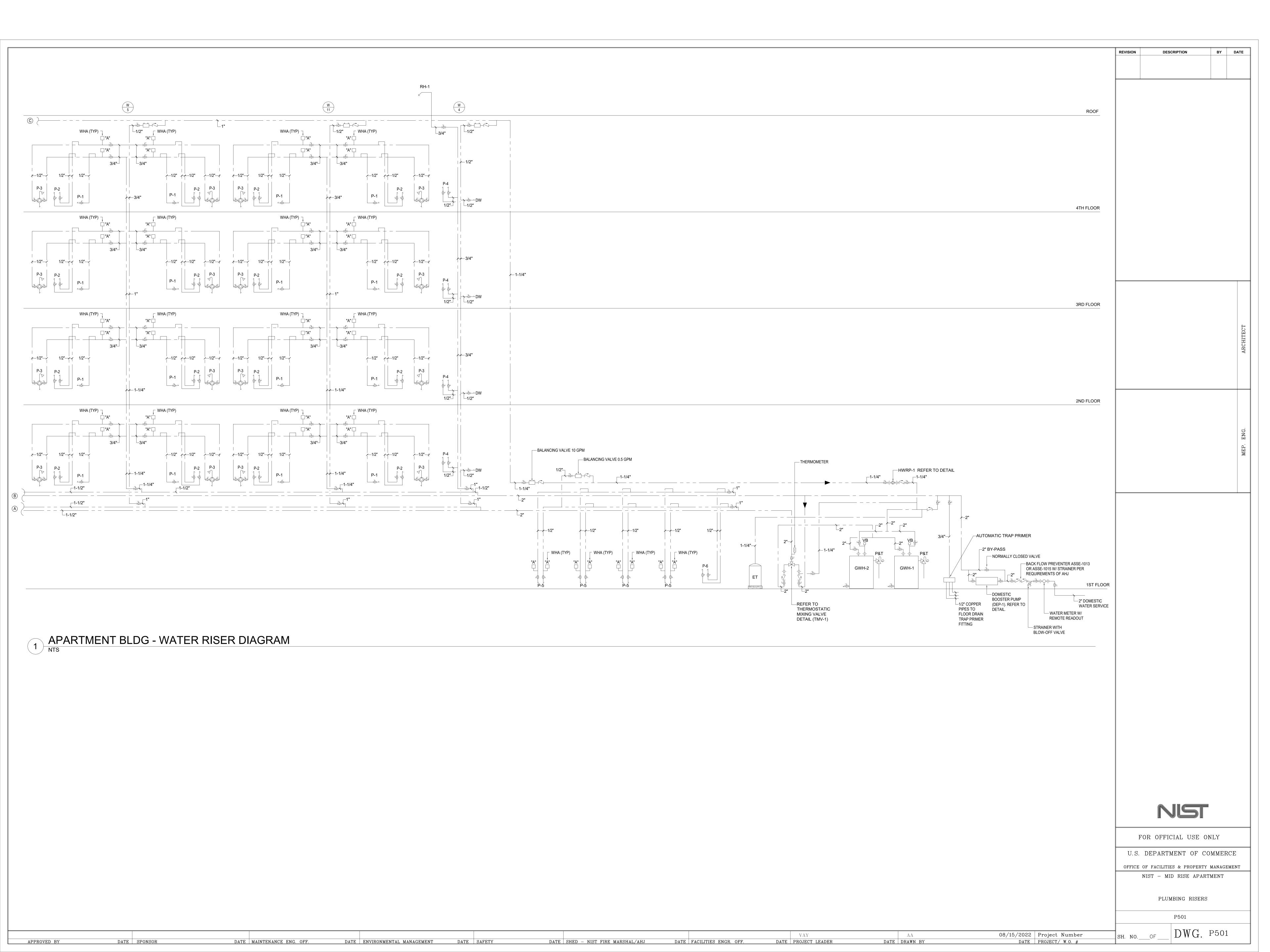
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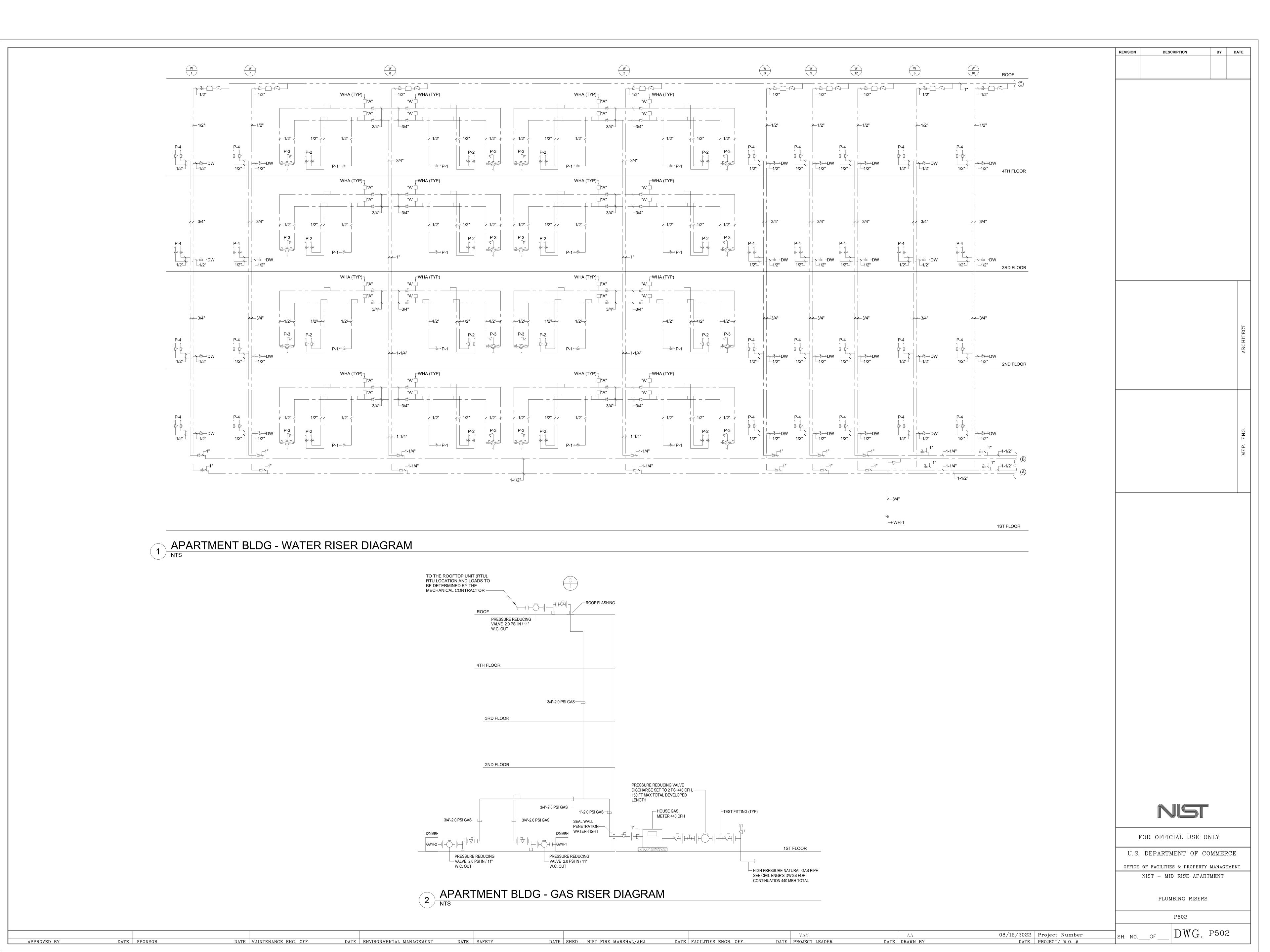
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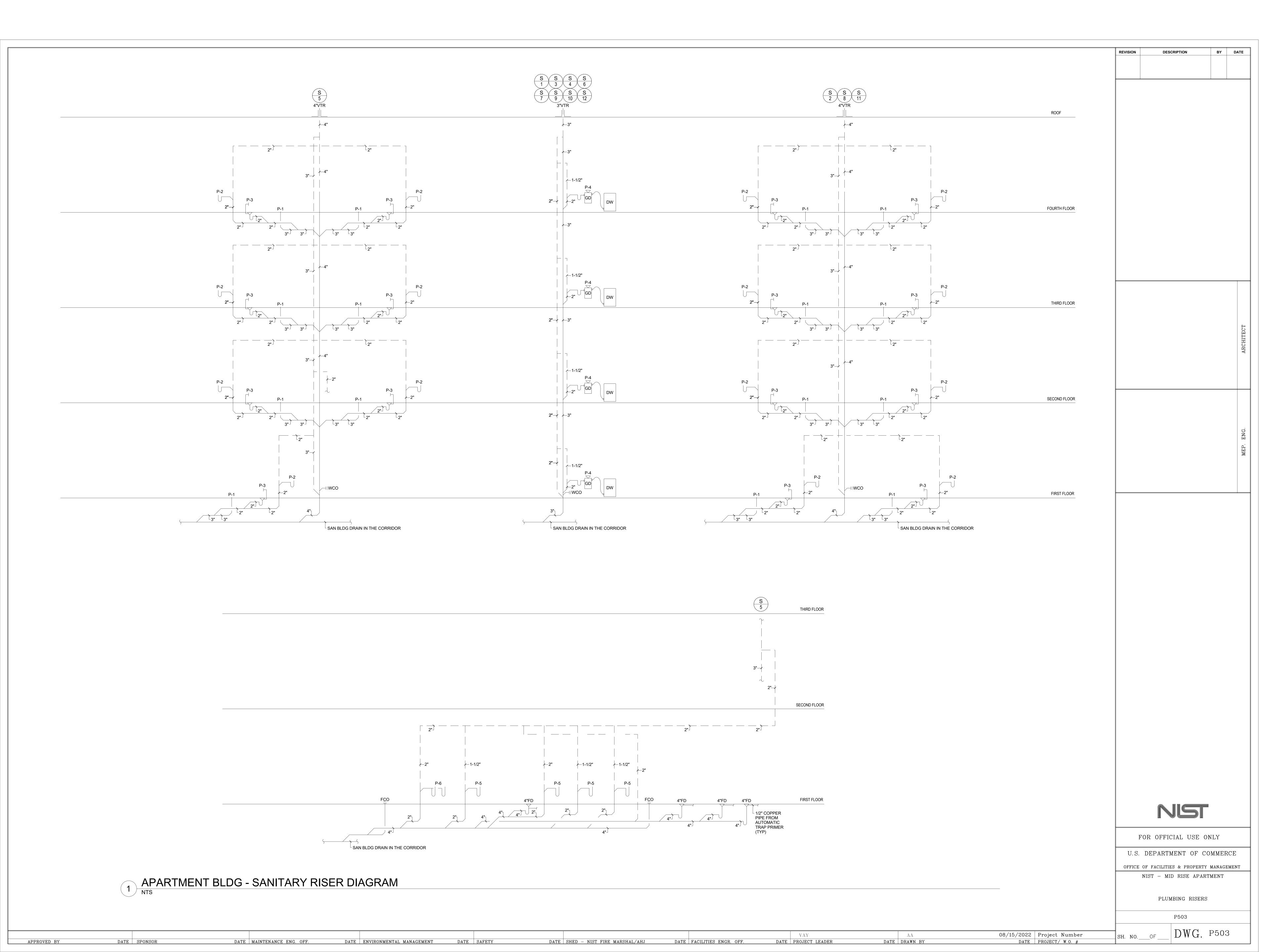
DATE PROJECT/ W.O. #

REVISION

BY DATE







## **DESCRIPTION** BY DATE REVISION PLUMBING GENERAL CONDITIONS PLUMBING GENERAL NOTES **ABBREVIATIONS** PLUMBING SYMBOLS THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. PROVIDE ALL LABOR SYMBOL DESCRIPTION AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS. ANY OBSERVED FAULTS OR BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES ABV **ABOVE** AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE AND PIPING AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. AD AREA DRAIN MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE DEMOLISH AND REMOVE AFF ABOVE FINISH FLOOR ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT, DURING BID PERIOD AND AGAIN ABOVE FINISH GRADE INADEQUACY OF PLANS WILL NOT BE CONSIDERED. PRIOR TO EQUIPMENT ORDERING. THE (GENERAL CONTRACTOR AND THE) PLUMBING CONTRACTOR SHALL COORDINATE WITH THE SOIL OR WASTE PIPING **ACCESS PANEL** ELECTRICAL CONTRACTOR TO VERIFY THAT ALL EQUIPMENT ARE POWERED, AND PROPER VOLTAGE/WIRING/CAPACITY IS PROVIDED. IN **APPROX** ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. APPROXIMATE THE EVENT OF REQUIREMENTS AMBIGUITY OR CONFLICT BETWEEN TRADES, THE CONTRACTOR IS REQUIRED TO GENERATE AN RFI STORM PIPING **ACID VENT** ADDRESSING THE ISSUE AND REQUESTING CLARIFICATION. FAILURE TO DO SO WILL NEGATE HIS RIGHT FOR A CHANGE ORDER OR THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS ΑW **ACID WASTE** REQUEST FOR ADDITIONAL FUNDS DURING CONSTRUCTION RELATING TO THIS ISSUE. OVERFLOW STORM PIPING FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT. THE ENGINEER SHALL BE **BUILDING AUTOMATION SYSTEM** ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED. BFF **BELOW FINISH FLOOR** DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF NON-POTABLE WATER PIPING BFP **BACKFLOW PREVENTER** EQUIPMENT, PIPING, ETC. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT HIS WORK ACCORDING TO THE FOLLOWING CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION BLDG STORM PIPING BELOW SLAB **BUILDING** BATHTUB PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS AND THE VENT PIPING CA COMPRESSED AIR PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION AS TO BEST FIT THE LAYOUT OF THE WORK. COORDINATE FINAL LAYOUT CONDENSATE WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. \_\_\_\_CW\_\_\_\_ COLD WATER PIPING CEILING CO COMPANY, CLEANOUT ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER COLD WATER PIPING (SINGLE LINE) WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES, STRUCTURE, PIPING, CONDUITS, CW COLD WATER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE DUCTWORK, ETC. OR TO MAINTAIN CEILING HEIGHTS, THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. DFU DRAINAGE FIXTURE UNITS NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE HOT WATER PIPING \_\_\_\_HW\_\_\_\_ DIA DIAMETER REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS. UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE CEILING. WATER PIPING SHALL DN DOWN NOT BE ROUTED IN EXTERIOR WALLS. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE HOT WATER PIPING (SINGLE LINE) DS DOWNSPOU<sup>\*</sup> ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S AVAILABLE FOR OTHER TRADES. DWG DRAWING RECOMMENDATIONS. HOT WATER RECRCULATING PIPING \_\_\_HWR\_\_\_\_ CW COLD WATER COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS. IN NO DISP DISPOSER INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. HOT WATER RECRCULATING PIPING (SINGLE LINE) CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL \_\_\_\_\_\_ **DRAINAGE WASTE & VENT EQUIPMENT INCLUDING JUNCTION BOXES.** CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER. EACH EXTERIOR CLEANOUT ECO ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE, NUMBER AND LOCATION OF PIPING BRANCHES FOR PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK ETR **EXISTING TO REMAIN** BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION. FIRE PROTECTION PIPING **EMERGENCY EYEWASH** VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING **EMERGENCY SHOWER** PIPE DOWN OR DROP THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD **ELECTRIC WATER COOLER** CONDITIONS ARE DIFFERENT THAN SHOWN. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT PIPE UP OR RISE/FLOOR CLEANOUT **ELECTRIC WATER HEATER** THE PROPOSED WORK PRIOR TO BEGINNING WORK. UNLESS OTHERWISE NOTED. SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD, ABOVE CEILING. **EXISTING** DOMESTIC HOT, COLD AND RE-CIRC. WATER PIPING SHALL BE INSTALLED ON WARM SIDE OF INSULATION. CAPPED OR PLUGGED PIPE FD FLOOR DRAIN SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FINISHED FLOOR ELEVATION FOR EXACT QUANTITIES REQUIRED OF EACH TYPE. ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS, UNION FIXT **FIXTURE** CODES AND REGULATIONS. FLR FLOOR CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES. WALL CLEANOUT FM **FORCED MAIN** WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE FS **FLOOR SINK** VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND NAMES). MATERIALS, SIZES, LOCATING AND HOOK-**GATE VALVE NATURAL GAS** TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO UP POINTS. AS-BUILTS SHALL BE GIVEN TO [OWNER] AT COMPLETION OF JOB. **GRADE CLEANOUT** MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH BALL VALVE GD **GROUNDWATER DRAIN TILE** WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND GPF **GALLONS PER FLUSH** COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKING AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED GLOBE VALVE GPM **GALLONS PER MINUTE** THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE **GAS WATER HEATER BUTTERFLY VALVE** POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN HOSE BIBB ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS HW **HOT WATER** GAS COCK STATE ACCESSIBILITY STANDARDS. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC INSTALLATION REQUIREMENTS. LOCATE WATER MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED. CLOSET FLUSH VALVE LEVER BETWEEN TOILET AND LAVATORY. COORDINATE LOCATION OF FLUSH VALVE LEVER HANDLE WITH GRAB HOT WATER RECIRCULATING **INVERT ELEVATION** SHUTOFF VALVE IN RISE OR DROP BAR. COORDINATE WITH ARCHITECTURAL DRAWINGS. ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT **INDIRECT WASTE** SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES. ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES. INTERNATIONAL PLUMBING CODE DOUBLE CHECK BACKFLOW PREVENTER LAVATORY ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS RPZ BACKFLOW PREVENTER PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES. WATER MAKE-UP AIR UNIT MAU WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME, SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE HAMMER ARRESTORS SHALL BE SIZED & INSTALLED PER PDI STANDARDS. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO MAX MAXIMUM DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE COMPLETE CHECK VALVE WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED. MOP BASIN WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO FOR BRITISH THERMAL UNITS (x1000) RECORD PURPOSES. PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING, AND BALANCE SYSTEM FOR PROPER BALANCING VALVE MINIMUM OPERATION. MISC MISCELLANEOUS AS USED IN THE DRAWINGS FOR PLUMBING WORK. CERTAIN NON-TECHNICAL WORDS SHALL BE UNDERSTOOD TO HAVE SPECIFIC **OUTSIDE STEM & YOKE VALVE** NON-FREEZE WALL HYDRANT MEANINGS AS FOLLOWS REGARDLESS OF INDICATIONS TO THE CONTRARY IN THE GENERAL CONDITION OR OTHER DOCUMENTS COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING. NOT IN CONTRACT GOVERNING THE MECHANICAL WORK. OVERFLOW ROOF DRAIN "FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT AND PROTECTED WITH FIRESTOP. PRESSURE GAGE W/ NEEDLE VALVE OPEN SITE DRAIN ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR PUMPED DISCHARGE 14. SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING. THERMOMETER PLUMBING & DRAINAGE INSTITUTE **ENCUMBRANCES** "INSTALL" - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE PRESSURE REDUCING VALVE TEMPERATURE & PRESSURE RELIEF VALVE 15. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED. MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL WORK. ROOF DRAIN "PROVIDE" - "FURNISH" AND "INSTALL". ROOM ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED. VACUUM BREAKER "NEW" - MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED. **ROOF TOP UNIT** MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAIN, SANITARY WATER HAMMER ARRESTER, LETTER INDICATES SUPPLY FIXTURE UNIT ELBOWS AND CONNECTIONS ARE NOT SHOWN. STORMWATER CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK. PROVIDE 18" MINIMUM CLEARANCE FOR TRAP PRIMER VALVE HOSE BIBB TRAP PRIMING STATION TEMPERED WATER WALL HYDRANT PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT. LOCATE VALVES FOR EASY ACCESS AND SERVICING OF TYPICAL EQUIPMENT. PROVIDE ACCESS PANELS TO ALL SHUT-OFF VALVES. **UNLESS OTHERWISE NOTED** SOLENOID VALVE PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION. ALL TESTS SHALL BE IN COMPLIANCE WITH REQUIREMENTS OF THE LOCAL WATER AUTHORITY. STRAINER VACUUM BREAKER VENT THRU ROOF VTR IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS. THE MOST STRINGENT OF THE OPTIONS PIPE GUIDE/SLEEVE WASTE SHALL APPLY FOR BIDDING PURPOSE. AFTER AWARD OF CONTRACT BUT BEFORE STARTING DESIGN/CONSTRUCTION, CONTRACTOR W/ WITH SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER. PIPE ANCHOR WC WATER CLOSET WALL CLEANOUT 22. PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS FLEXIBLE CONNECTION WALL HYDRANT EXISTING RELOCATED FI OW DIRECTION RISER/DETAIL DESIGNATION ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED. AB/MEDICAL PROJECTS $\bigcirc$ FLOOR DRAIN 24. PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS. OXYGEN MEDICAL AIR CALL OUT DESIGNATION 25. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT. LAB AIR **NITROGEN** SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT LN LIQUID NITROGEN METER (GAS/WATER/FIRE) PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH ARGON HELIUM XXX PUMP SPECIAL GAS ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE ISOLATION LAB VACUUM LV PUMP VALVES FOR ALL PLUMBING FIXTURES. MEDICAL VACUUM CARBON DIOXIDE **KEYNOTE TAG** ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A **DEIONIZED WATER** PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER. **€** REVERSE OSMOSIS SUPPLY LIMIT OF DEMOLITION ROR REVERSE OSMOSIS RETURN 29. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION. LCW LAB COLD WATER LHW LAB HOT WATER 30. ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED. LAB HOT WATER RECIRCULATING VCW VIVARIUM COLD WATER MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM, FAUCETS AND MINOR ITEMS VIVARIUM HOT WATER NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE VHW NON-POTABLE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY DOUBLE SYMBOLS SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED SHEET METAL. THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO ASSURE A RATING EQUAL TO THE PENETRATED WALL OR FLOOR. HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT GATE VALVE INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT SHEET NUMBERING LEGEND INTERRUPTION. PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION. BUTTERFLY VALVE SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER 2018 IPC CODE, UNLESS OTHERWISE INDICATED. DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS. 3-WAY VALVE SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER. GAS COCK VALVE THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. X-DISCIPLINE RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID. "PD" DEMO "P" NEW WORK FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING FLOOR LEVEL PLAN TYPE -REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF "0" LOWEST FLOOR "1" FLOOR PLAN "1" NEXT FLOOR "2" ENLARGED LEVEL ETC. UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS OF FLOOR ETC. THE AUTHORITY HAVING JURISDICTION. SYSTEM TYPE "0" FOR UNDERGROUND "1" WATER & GAS "2" DWV & STORM "3" FIRE PROTECTION BACKFLOW PREVENNTER VALVE FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - MEDIUM OFFICE PLUMBING COVERSHEET

DATE SPONSOR

APPROVED BY

DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

P002

08/15/2022 | Project Number

DATE PROJECT/ W.O. #

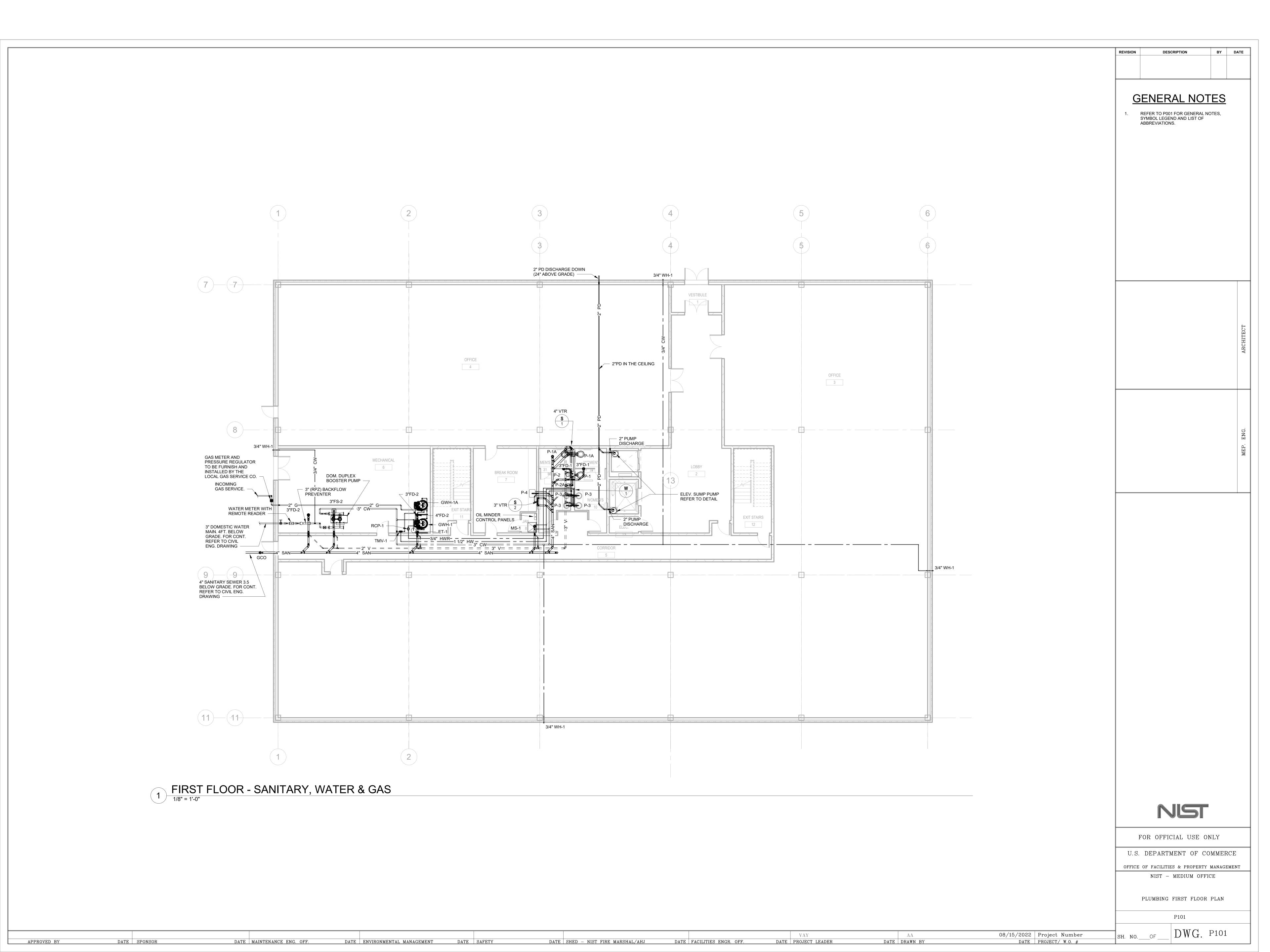
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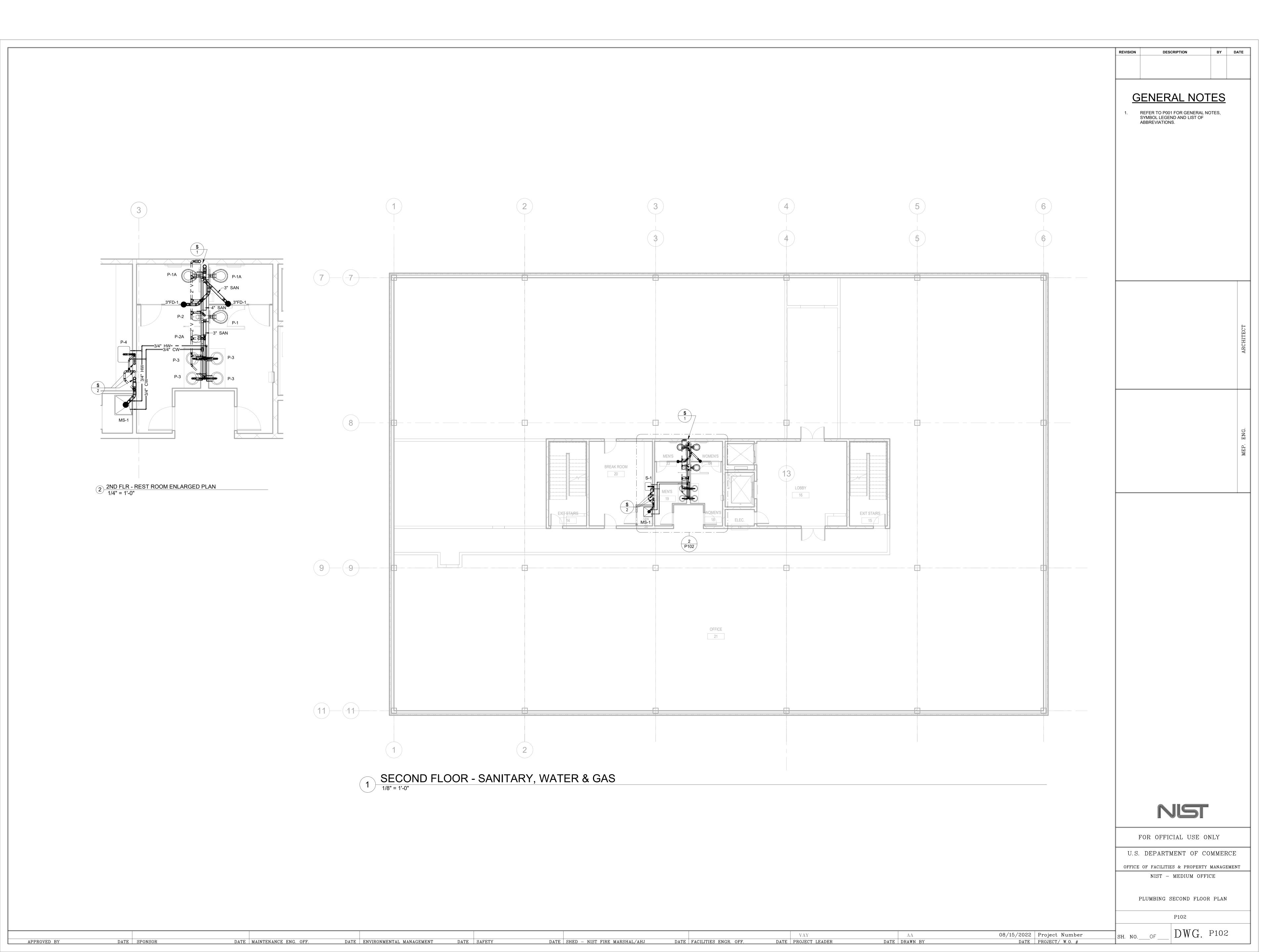
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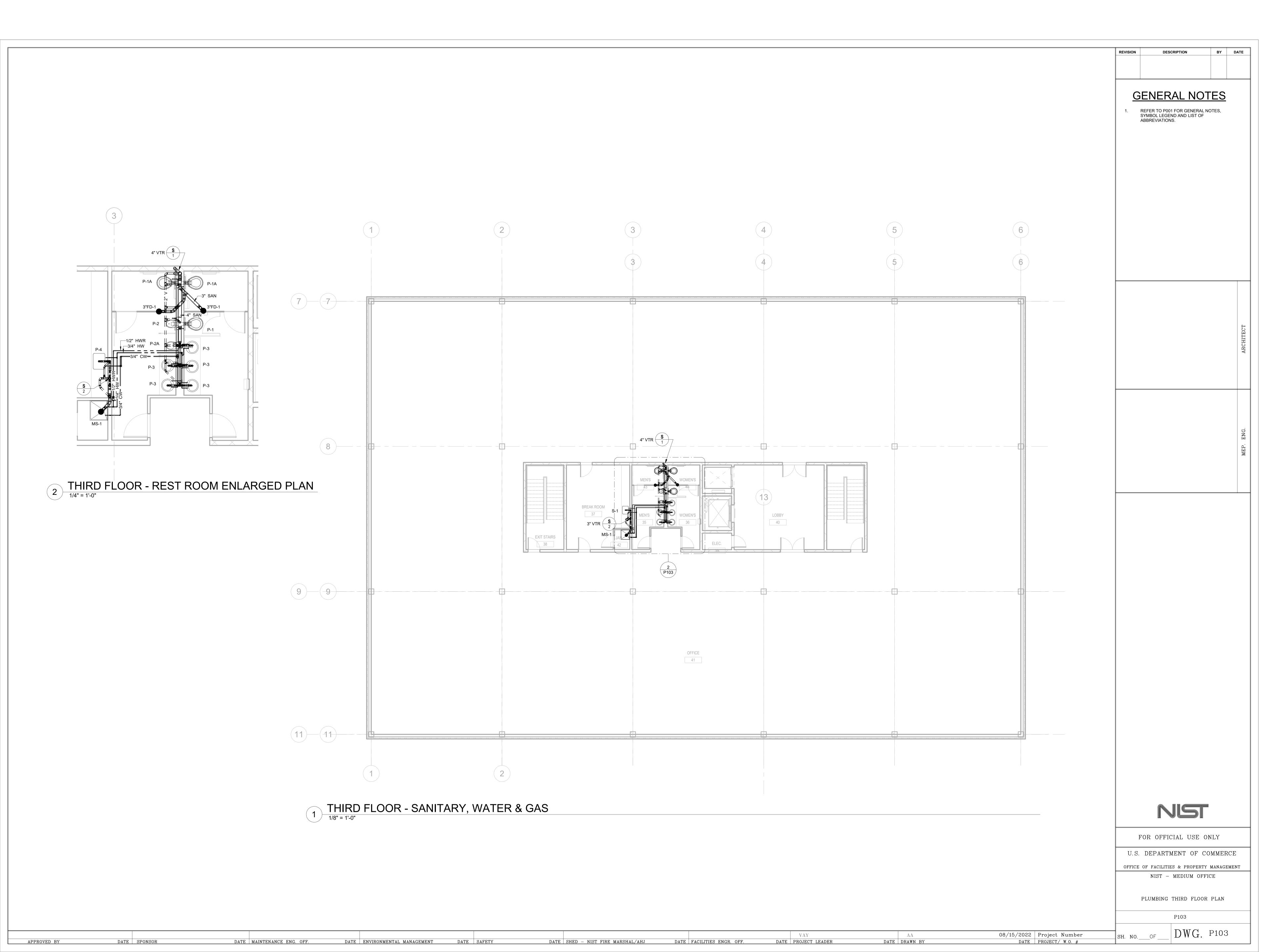
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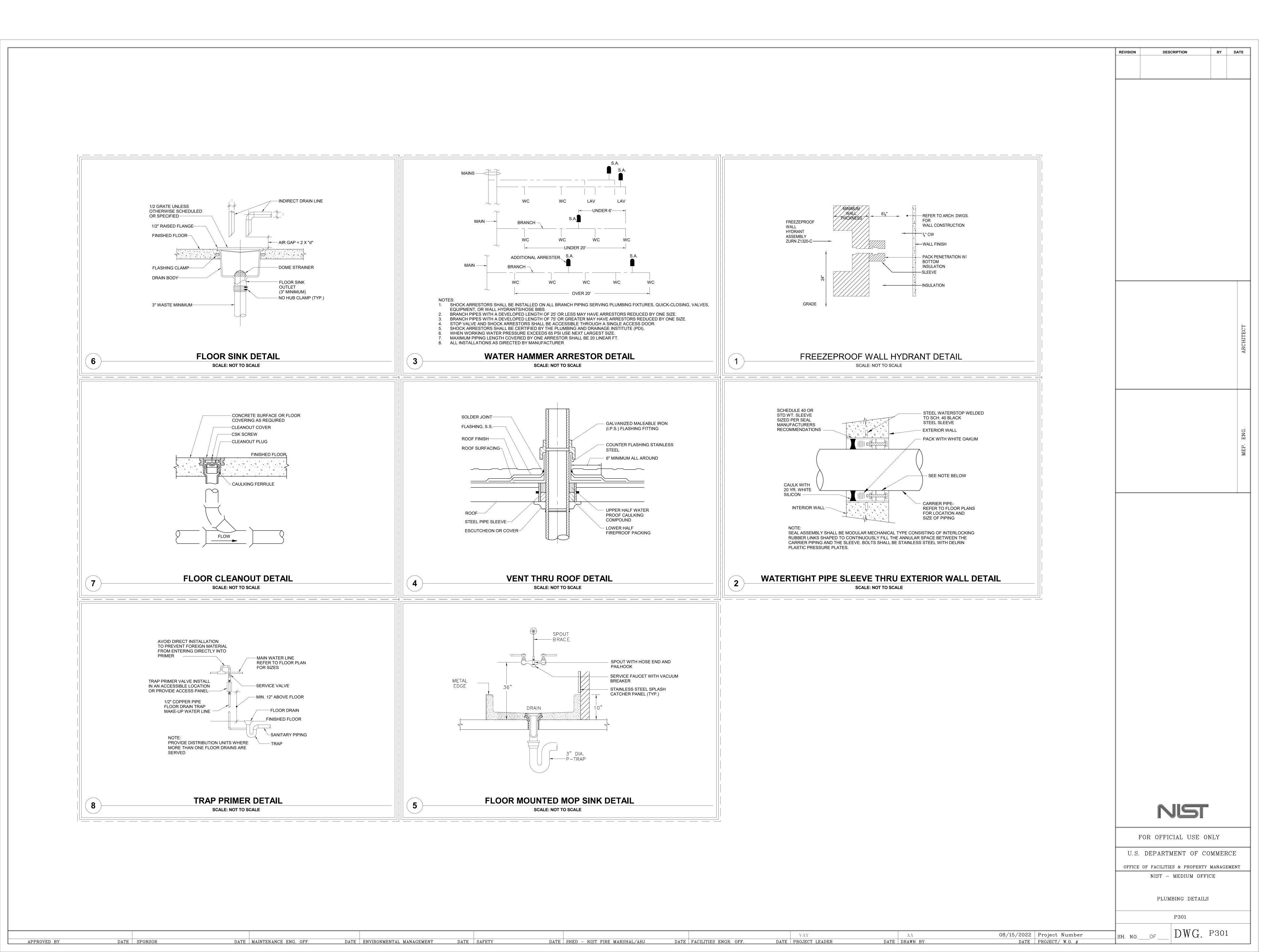
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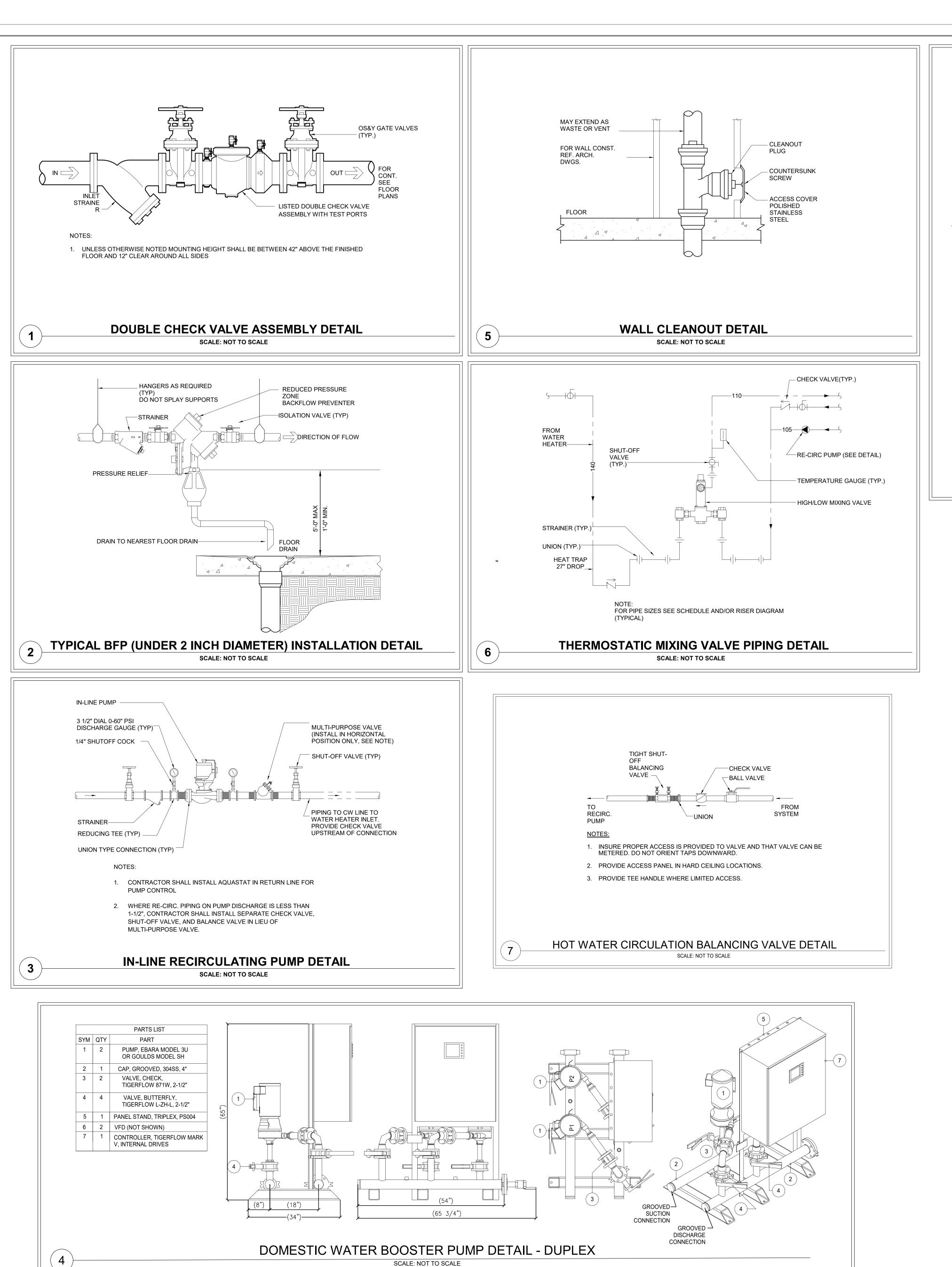
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DATE ENVIRONMENTAL MANAGEMENT

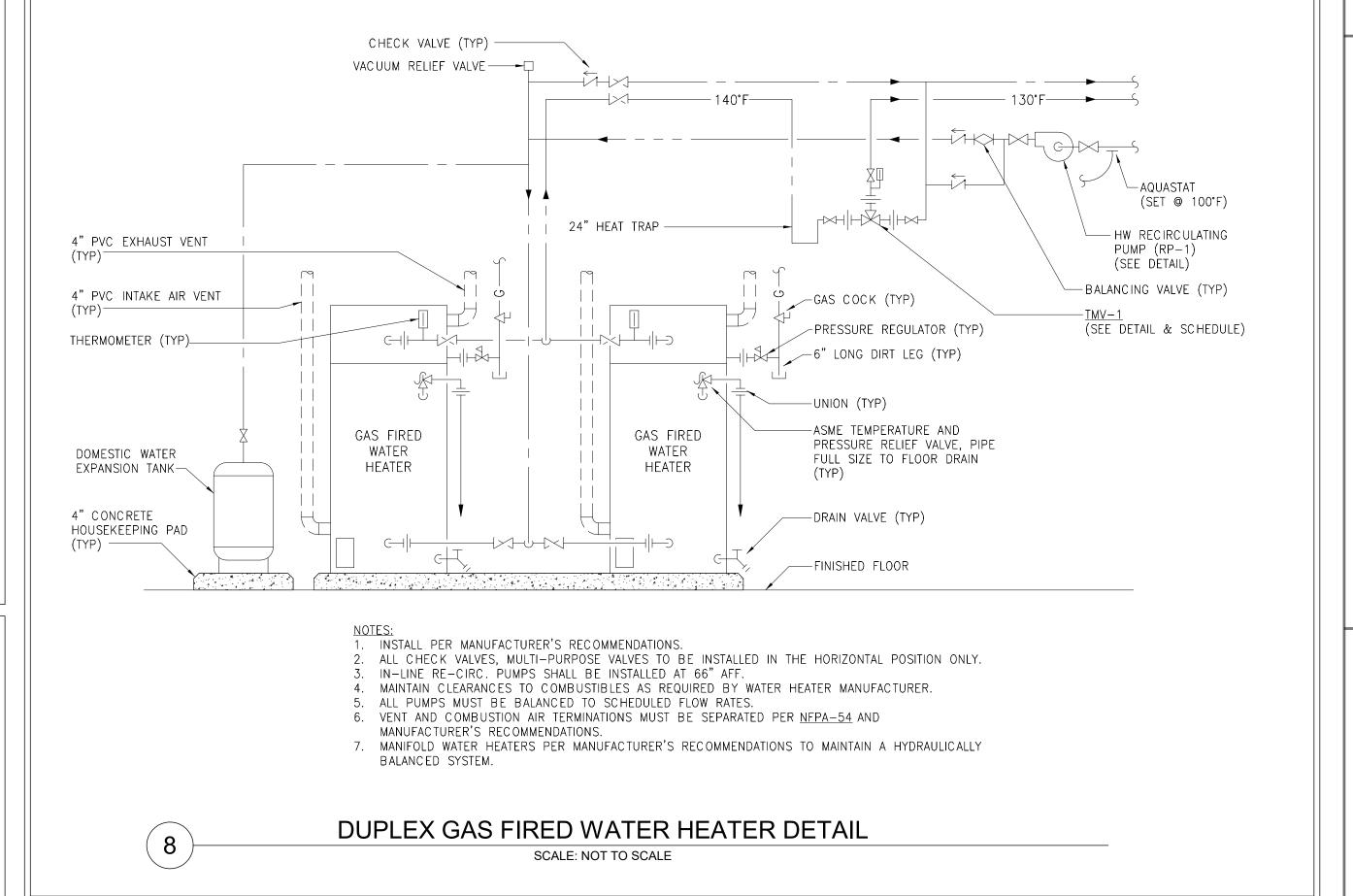
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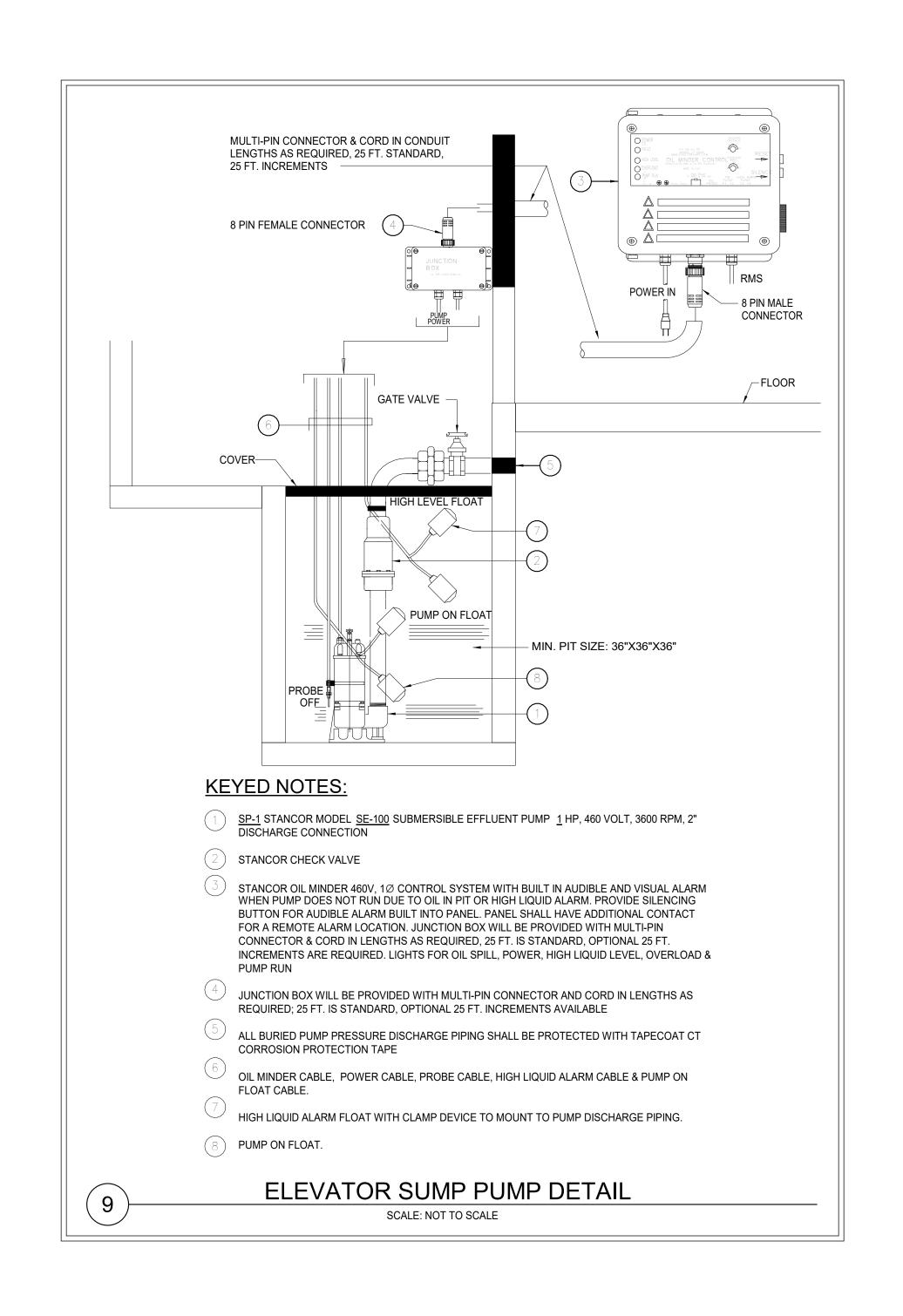
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08/15/2022 Project Number

DATE PROJECT/ W.O. #

DESCRIPTION

REVISION

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

		FLO	OR DRAIN S	CHEDULE	
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

PDI#	MINMAX. 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

	TRAI	P PRI	MINO	G STATION SCHEDULE
ID	ELECTRIC	CAL CHARACT	ERISTICS	BASIC OF DESIGN ( OR EQUAL)
ID.	AMPS	VOLTAGE	PHASE	
TSP-1	SP-1 5 120 1		1	PPP INC. PTS SERIES, SURFACE MOUNTED

SLOPE OF HORIZON	TAL DRAINAGE PIPE						
SIZE (INCHES)	MINUMUM 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							

DATE ENVIRONMENTAL MANAGEMENT

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				CC	NNECTION S	SIZE			
ID	DESCRIPTION	WASTE	VENT	TRAP	TRAP ARM	TEMPERED	CW	HW	REMARKS
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 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, HI/LO PROVIDE WITH TIMER FOR NIGHT/OFF HOURS DE- ACTIVATION. COORDINATE WITH ELECTRICAL
HB-1	HOSE BIBB	-	1	-	-	-	3/4"	-	HANDS FREE ELECTRONIC FLUSH VALVE
WH-1	WALL HYDRANT	-	-	-	-	-	3/4"	-	HANDS FREE ELECTRONIC FLUSH VALVE

						GAS F	FIRED	WATE	ER HE	ATER S	SCHE	DULE			
ID	LOCATION	STORAGE CAPACITY	GAS INPUT	GAS TYPE	MIN. EFFICIENCY	RECOVERY (GPH)	INLET TEMP	OUTLET TEMP	FLUE (INCH)			FLUE SIZE (INCH) EACH		BASIS OF	DEMAN(O
U	LOCATION	(GALLONS) EACH	(MBTU/HR) EACH	TYPE	(%)	ÈACH	(°F)	(°F)	INTAKE	EXHAUST	VOLTS	PHASE	HZ	DESIGN (OR EQUAL)	REMARKS
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

	DUPLEX DOMESTIC WATER BOOSTER PUMP SCHEDULE											
ID	LOCATION	SERVICE G	PM (TOT		MOTOR HP	ELECTR	ICAL CHARACTI	ERISTICS	NPSHA	NPSHR	BASIS OF DESIGN	REMARKS
		(EA	ACH) (101)		(TOTAL)	VOLTAGE			(OR EQUAL)	112.117 (1.110		
DWBP-1 & 2	MECHANICAL ROOM	CW 6	65 130	140	3	208	3	3500	-	92	GRUNDFOS HYDRO MPC E CRE 10	PROVIDE WITH VARIABLE FREQUENCY DRIVES
			'	•	•		1	•	•	-		

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. PLUMBING FIXTURES ARE BY DIVISION 22 INCLUDING ROUGH-INS, DRAINS, SUPPLIES, TRIM AND FINAL CONNECTIONS.

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).

HEAD REQUIRED (NPSHR) SHALL NOT EXCEED NET POSTIVE SUCTION HEAD AVAILABLE (NPSHA).

DATE SHED - NIST FIRE MARSHAL/AHJ

COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
 ELECTRICAL CONTRACTOR.
 ELECTRICAL REQUIREMENT CONNECTION SIZE. REFER TO MECHANICAL DRAWINGS FOR FLUE SIZES.

PIP	ING 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

			Ι	DOMES	TIC WA	TER EXPANS	SION 1	TANK SC	CHEDULE		
ID	WATER HEATER VOLUME (GALLONS)	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE	DESIGN FILL PRESSURE	TOTAL TANK VOLUME	AC C EPTANC E VOLUME (GALLONS)	TANK D	DIMENSIONS	APPROX. OPERATING WEIGHT (LBS.)	BASIS OF DESIGN (OR EQUAL)	REMARKS
	,		(PSIG)	(PSIG)	(GALLONS)		HEIGHT	DIAMETER		,	
ET-1	200	200	150	55	14	8.96	20"	17"	120	AMTROL THERM-X-TROL ST-447-C	

						PU	MP SCH	EDULE	
ID	DESCRIPTION	GPM		HP	VOLTAGE	PHASE	RPM	BASIS OF DESIGN (OR EQUAL)	REMARKS
CP-1	HOT WATER CIRCULATING	6	14	1/16	115	1		GRUNFUS MAGNA3	IN-LINE

DATE FACILITIES ENGR. OFF.

VAY

DATE PROJECT LEADER

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U.S. DEPARTMENT OF COMMERCE
OFFICE OF FACILITIES & PROPERTY MANAGEMENT  NIST - MEDIUM OFFICE
PLUMBING SCHEDULES
P401
DWG. P401

08/15/2022 Project Number

DATE PROJECT/ W.O. #

DATE DRAWN BY

REVISION

DESCRIPTION



#### PLUMBING GENERAL CONDITIONS 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. ANY OBSERVED FAULTS OR AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY. SO THAT THE MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED. ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ENGINEER SHALL BE ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED. CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS. WHETHER OR NOT SAME IS INDICATED. WHERE NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS. ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK COMPLETION. THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT THE PROPOSED WORK PRIOR TO BEGINNING WORK. SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FOR EXACT QUANTITIES REQUIRED OF EACH TYPE CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES. WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES. THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA

THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE

ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT

MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED.

SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES.

"NEW" - MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED.

RECORD PURPOSES.

APPROVED BY

GOVERNING THE MECHANICAL WORK.

"PROVIDE" - "FURNISH" AND "INSTALL"

**ENCUMBRANCES** 

POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN

POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS

ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS

DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE COMPLETE

WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME, SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE

WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO FOR

AS USED IN THE DRAWINGS FOR PLUMBING WORK, CERTAIN NON-TECHNICAL WORDS SHALL BE UNDERSTOOD TO HAVE SPECIFIC

"FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND

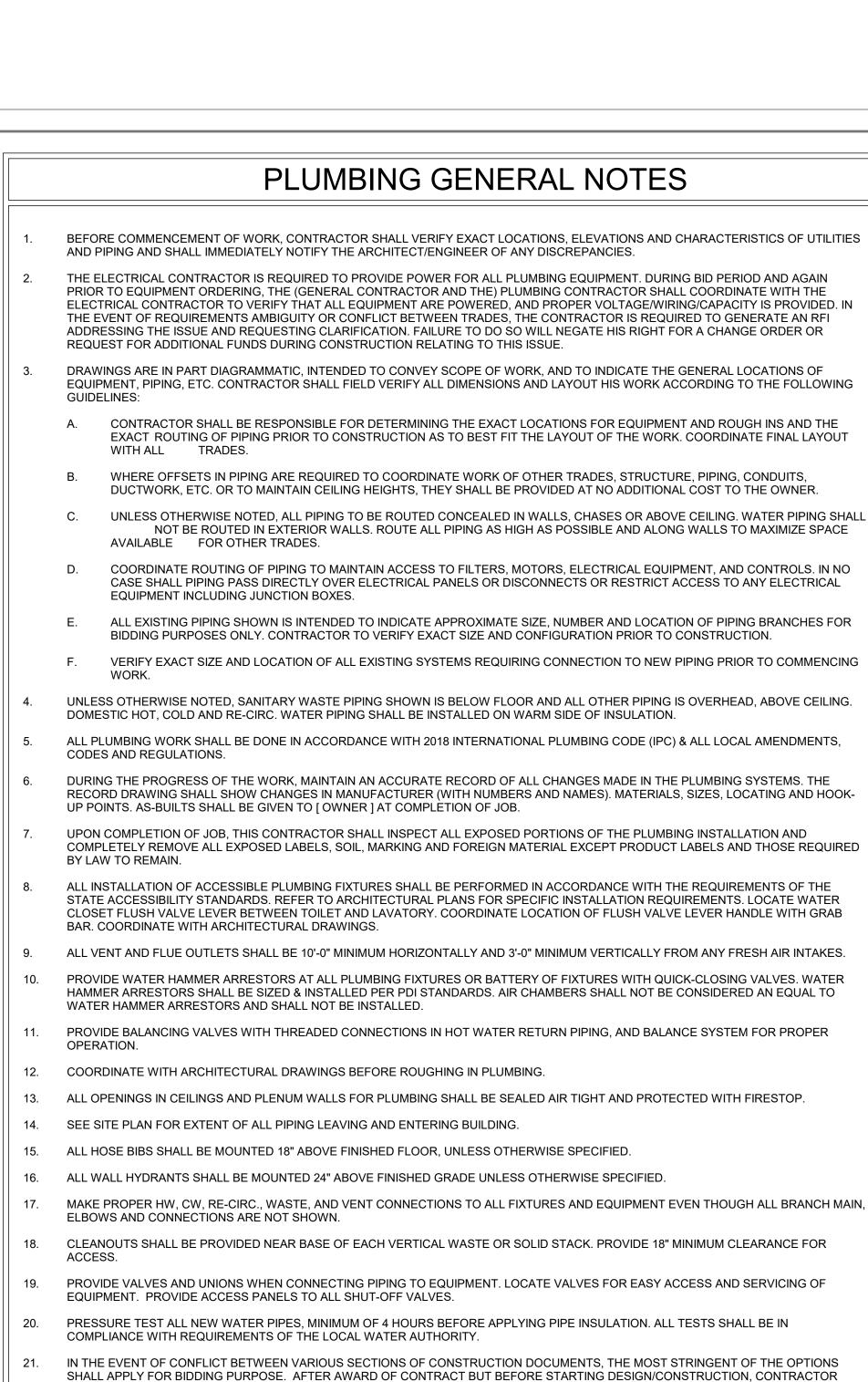
OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR

SUPPORT, ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND

"INSTALL" - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE

MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL WORK.

MEANINGS AS FOLLOWS REGARDLESS OF INDICATIONS TO THE CONTRARY IN THE GENERAL CONDITION OR OTHER DOCUMENTS



SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER.

PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS.

VALVES FOR ALL PLUMBING FIXTURES.

25. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT.

PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER.

INTERRUPTION. PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION.

IPC CODE, UNLESS OTHERWISE INDICATED. DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS.

SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER.

ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION.

ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED.

RATING EQUAL TO THE PENETRATED WALL OR FLOOR.

THE AUTHORITY HAVING JURISDICTION.

ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED.

PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS

SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT

PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH

ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE ISOLATION

ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A

MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM. FAUCETS AND MINOR ITEMS

NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE

SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS

SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED SHEET METAL. THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO ASSURE A

HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT

SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER 2018

THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. X-

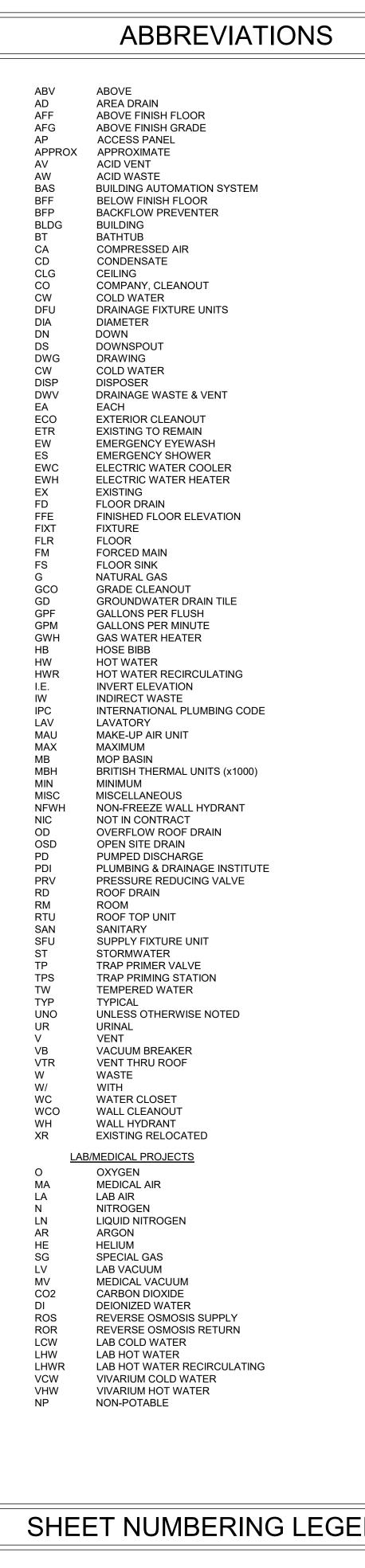
FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER, SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING

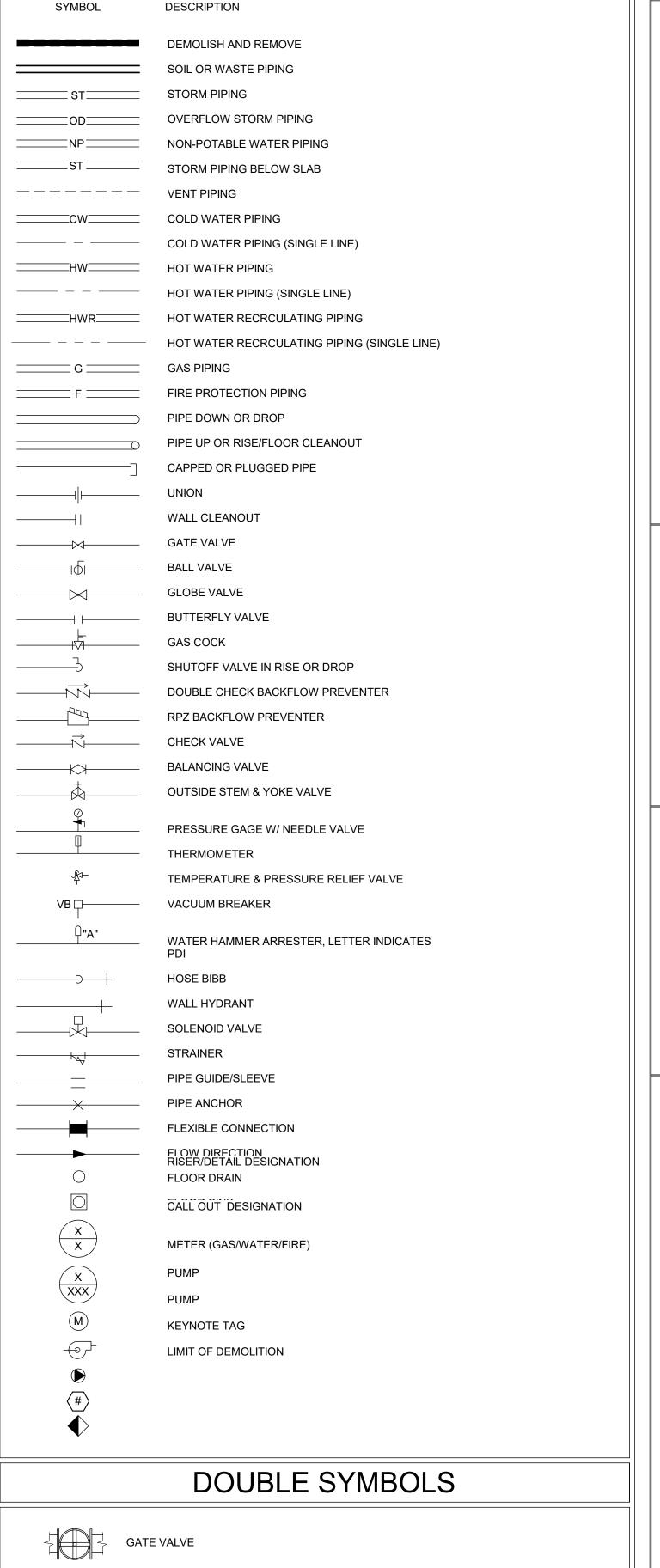
REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF

UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS OF

RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID.

FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY





PLUMBING SYMBOLS

REVISION

**DESCRIPTION** 

BY DATE

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

	GATE VALVE
	BUTTERFLY VALVE
	3-WAY VALVE
	GAS COCK VALVE
	BALL VALVE
	BALANCE VALVE
	SHUT-OFF VALVE
	BACKFLOW PREVENNTER VALVE



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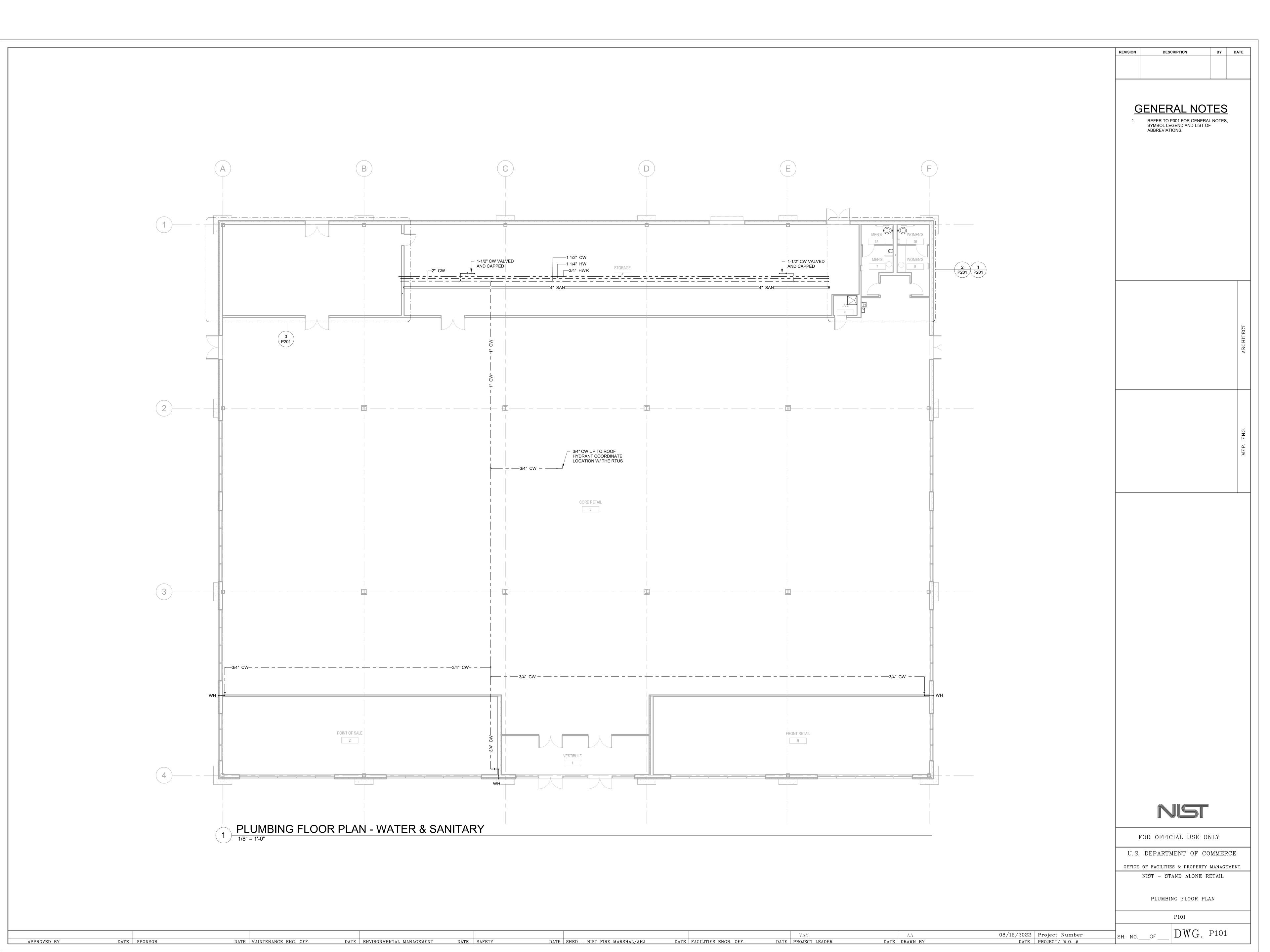
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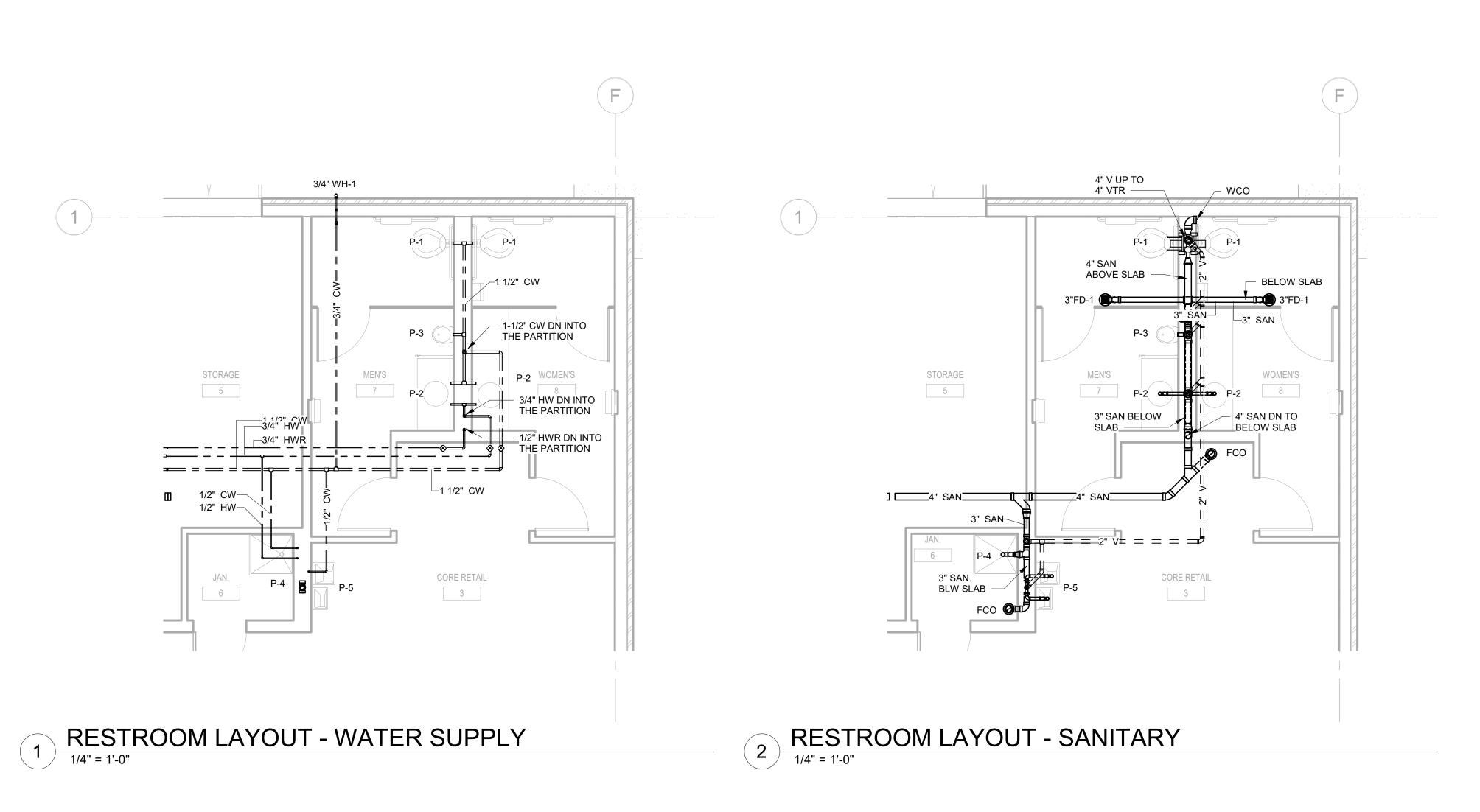
OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - STAND ALONE RETAIL

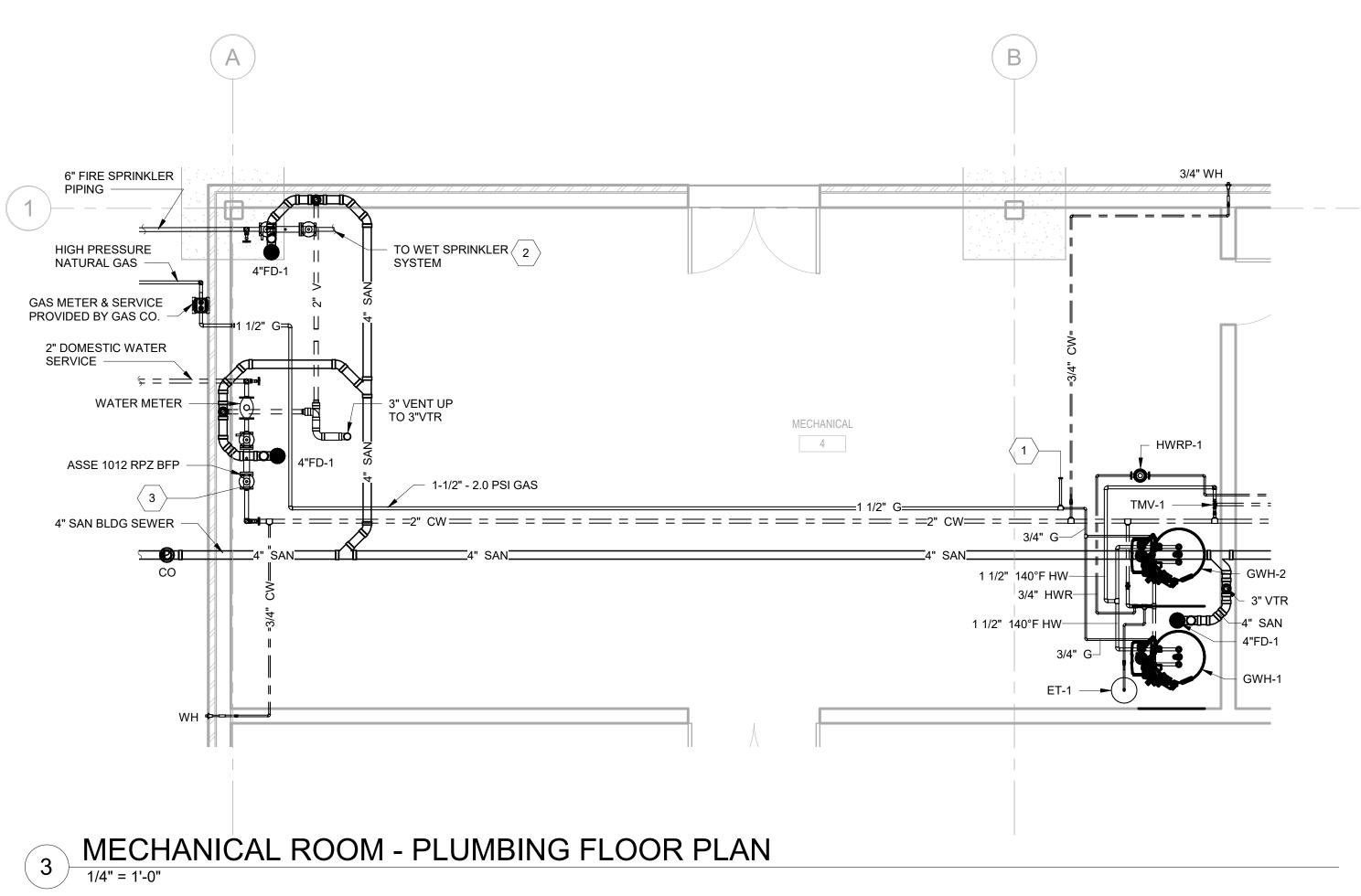
P002

PLUMBING COVERSHEET

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







DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

DATE SPONSOR

APPROVED BY

REVISION DESCRIPTION BY DATE **KEYED NOTES** KEYED NOTES **KEYED NOTE TEXT GENERAL NOTES** 1" (2 PSI) GAS PIPE VALVED & CAPPED FOR THE ROOF TOP UNITS (RTU). ESTIMATED LOAD IS 800 REFER TO P001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS. MBH COORDINATE PIPE ROUTING & LOADS WITH THE MECHANICAL CONTRACTOR. DESIGN OF FIRE SPRINKLER SYSTEM IS BY OTHERS. SHOWN FOR COORDINATION ONLY. BACKFLOW PREVENTER ASSE-1015 OR ASSE-1013 AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. FOR OFFICIAL USE ONLY U.S. DEPARTMENT OF COMMERCE OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - STAND ALONE RETAIL

PLUMBING ENLARGED PLANS

P201

08/15/2022 Project Number

DATE PROJECT/ W.O. #

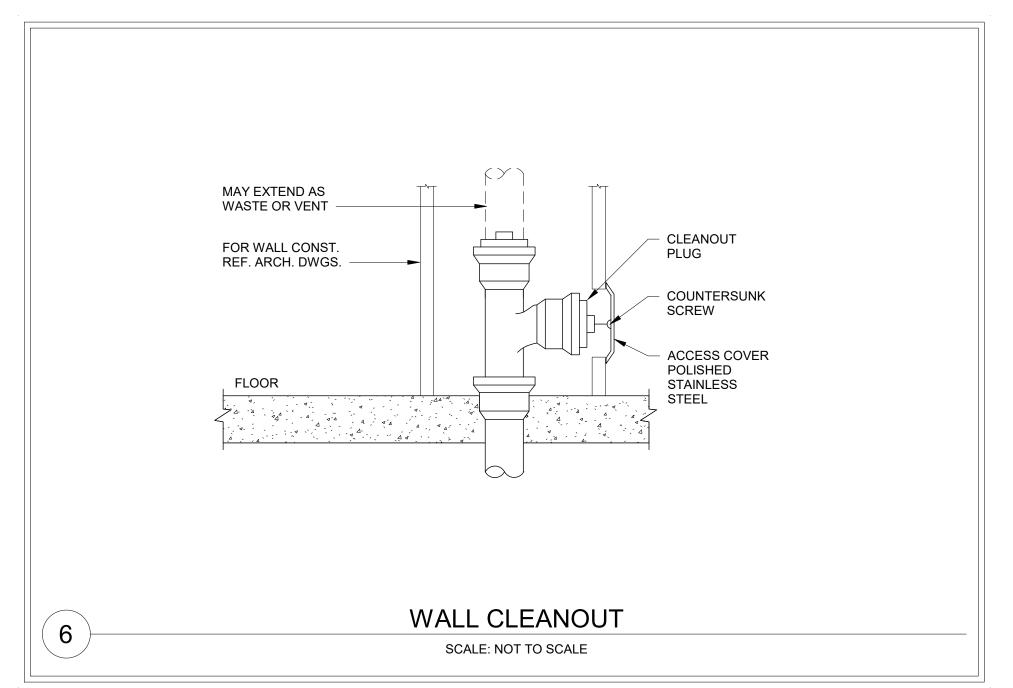
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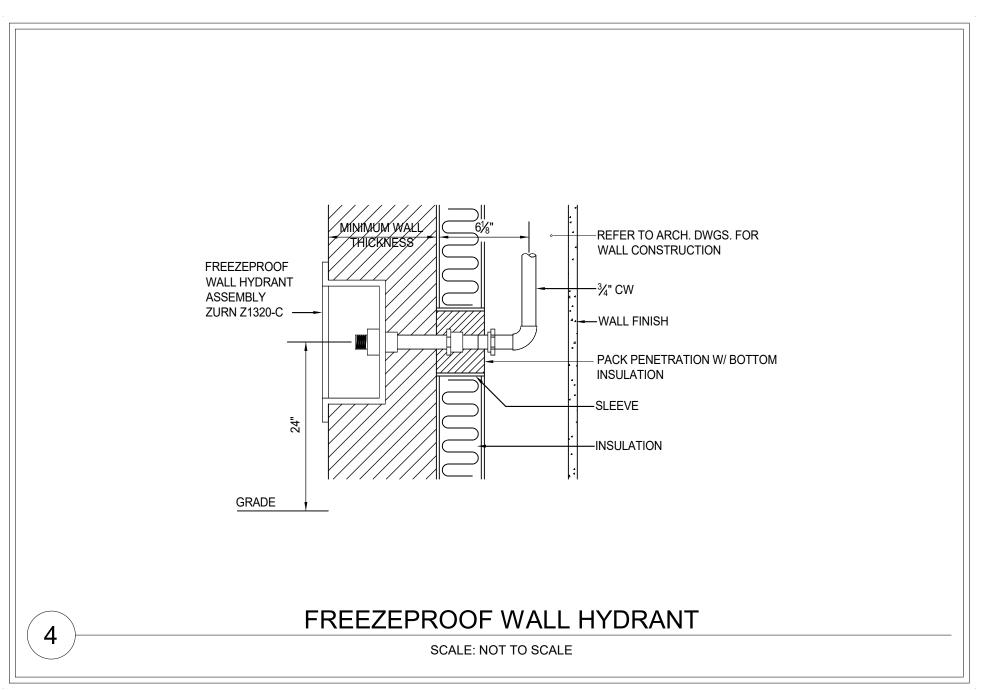
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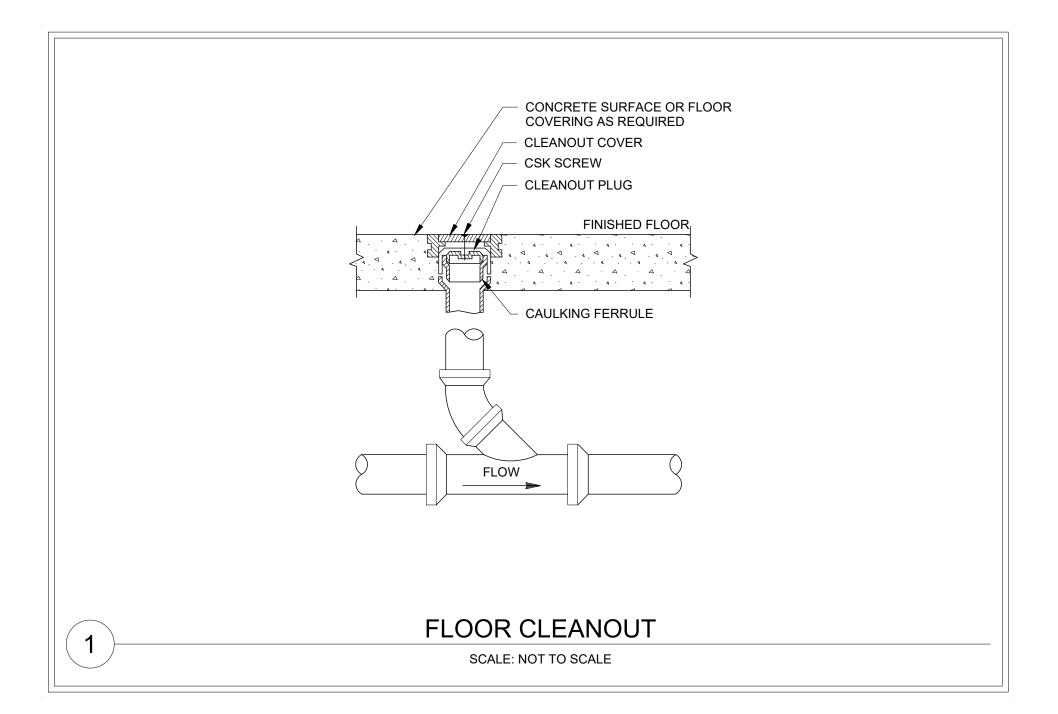
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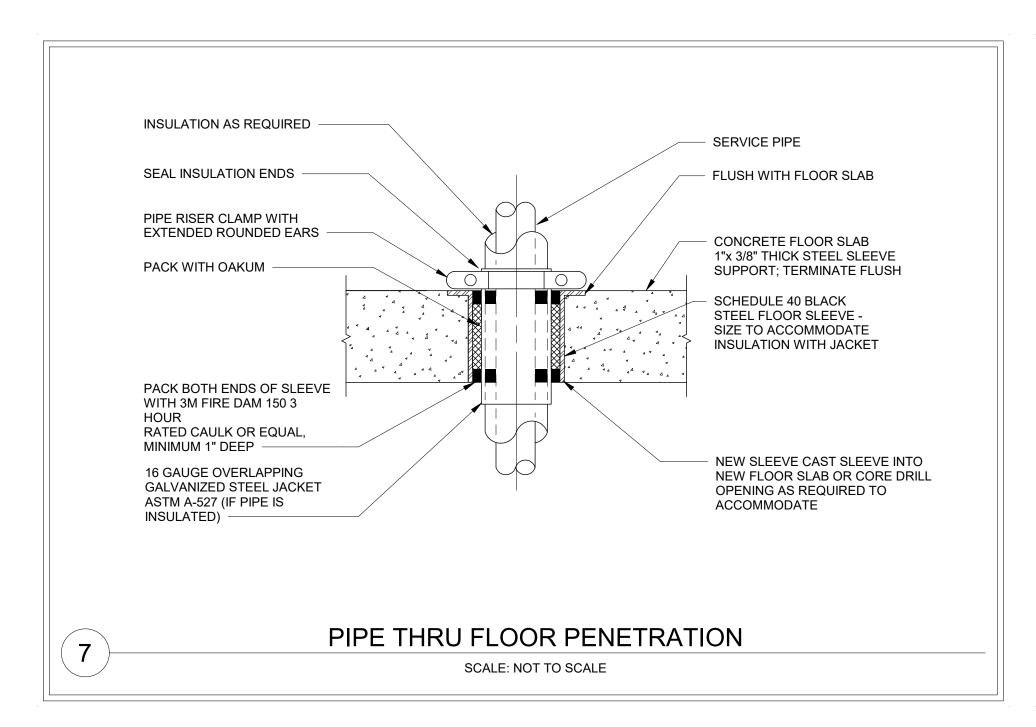
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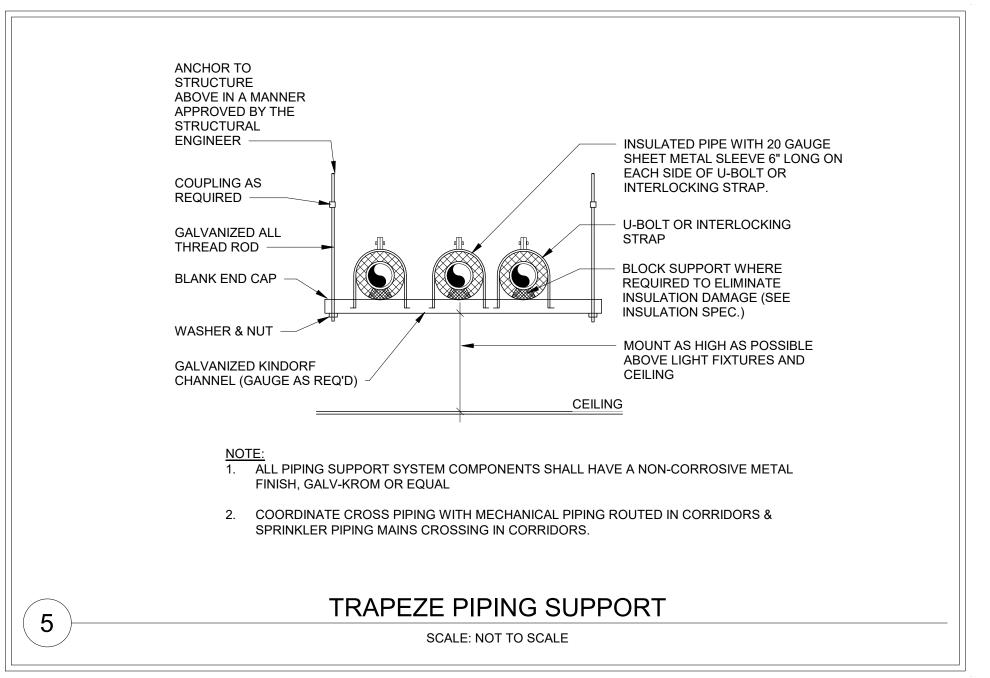
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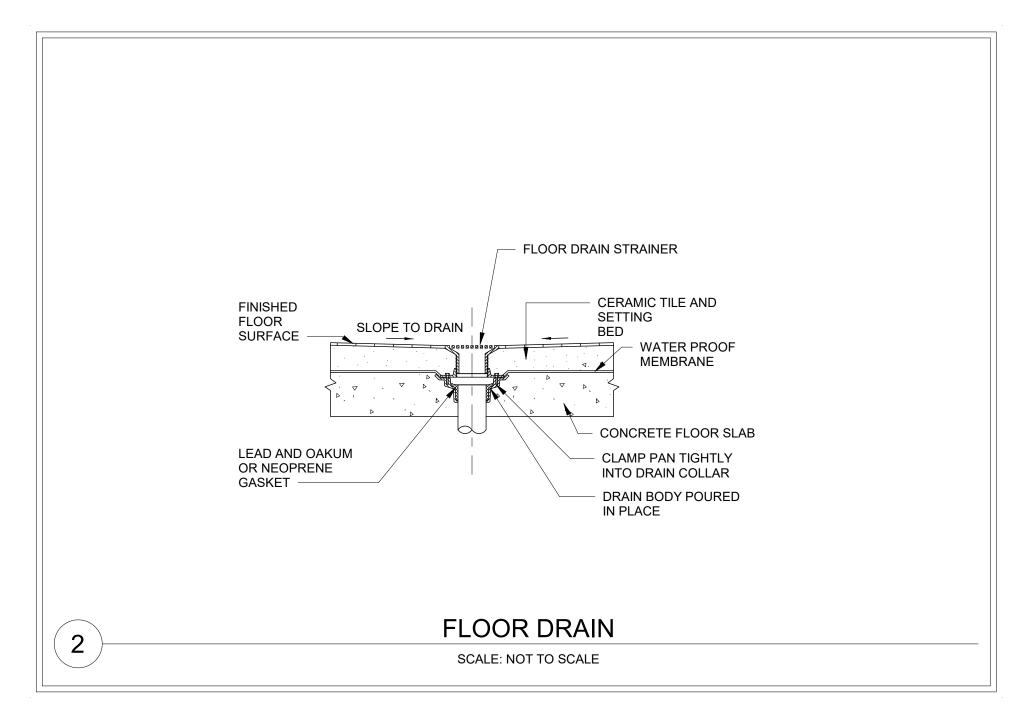


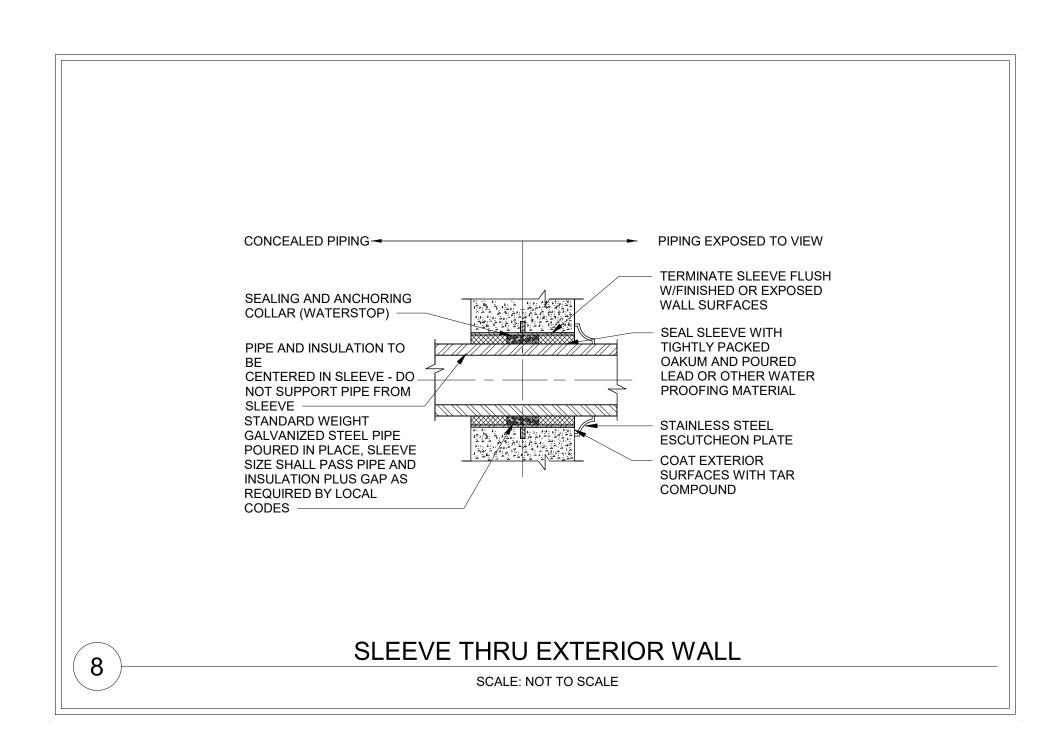












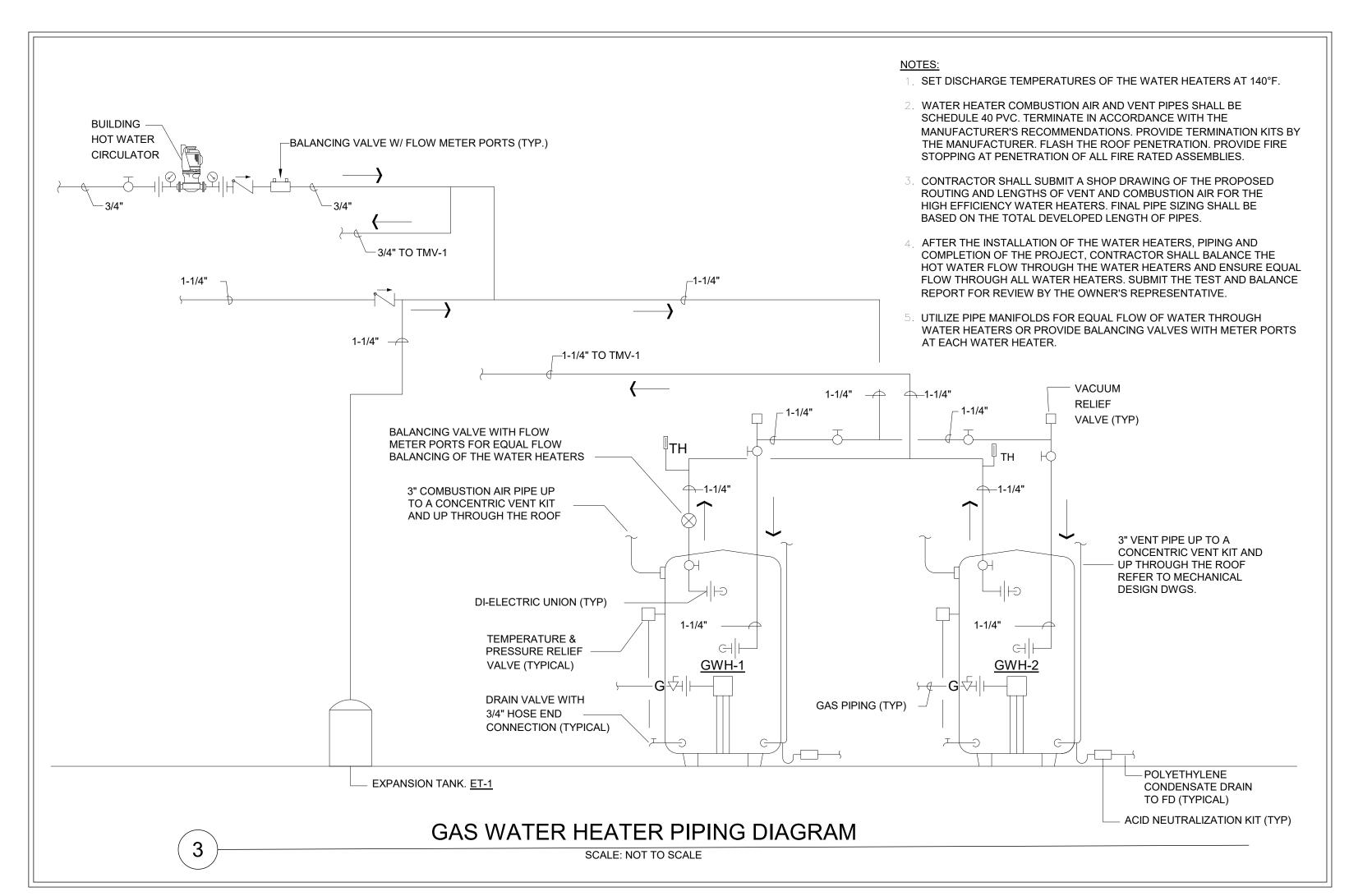
DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

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DATE FACILITIES ENGR. OFF.

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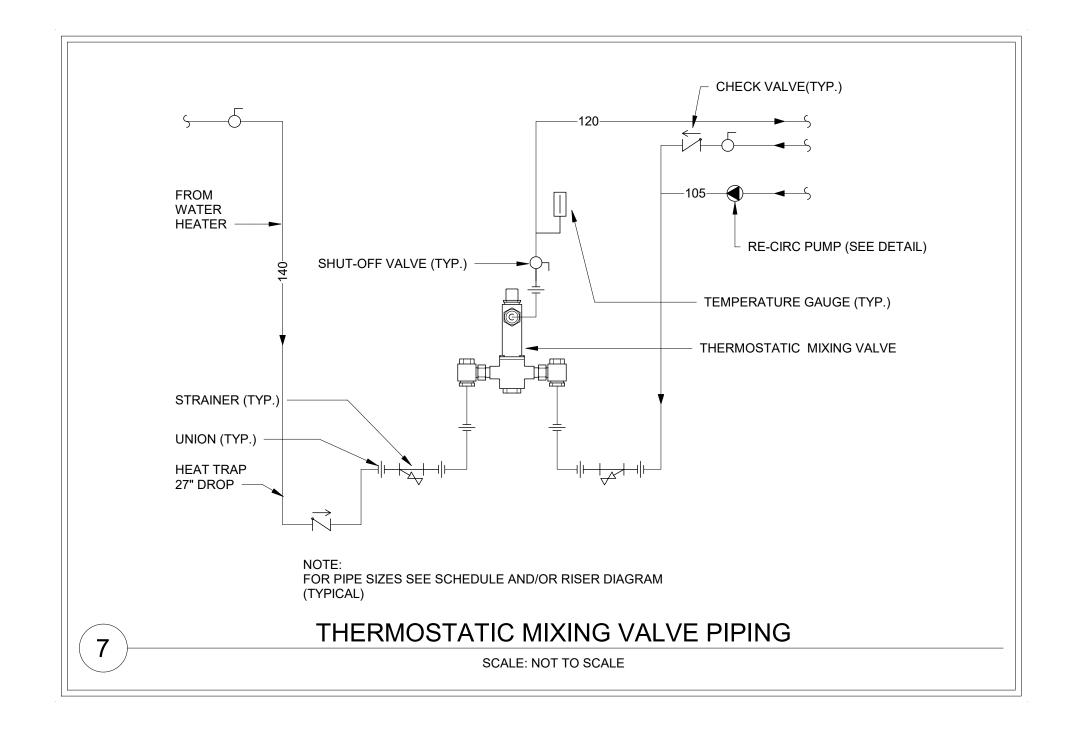
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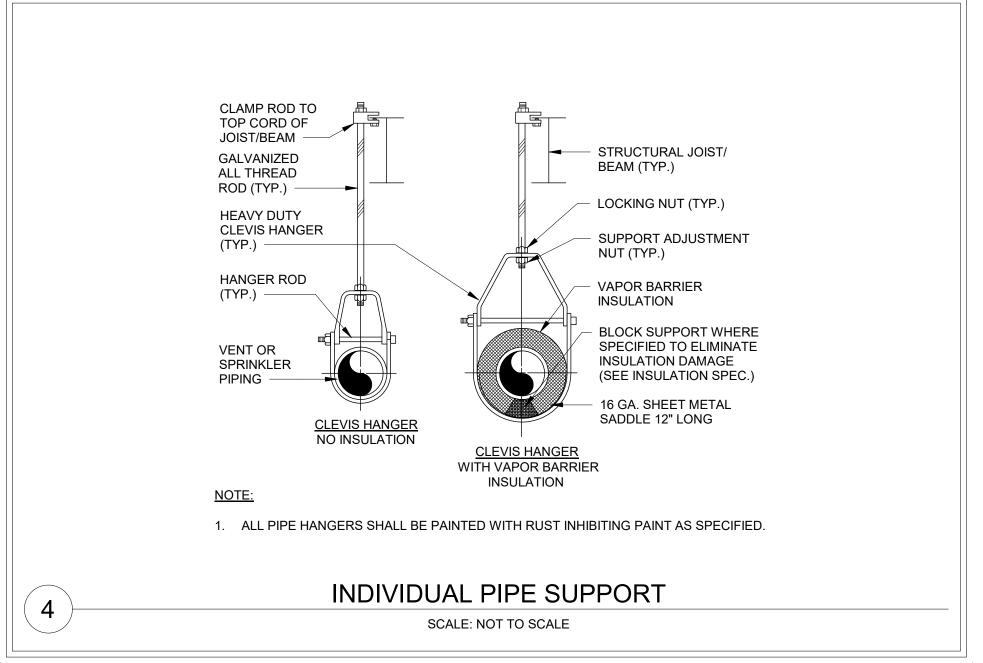
08/15/2022 Project Number

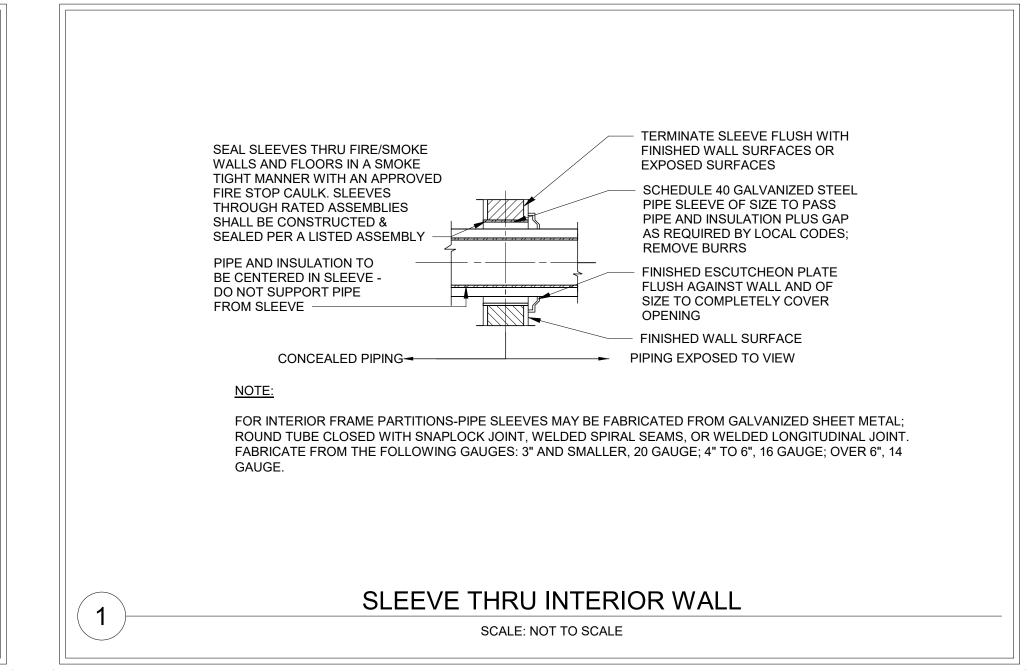
DATE PROJECT/ W.O. #

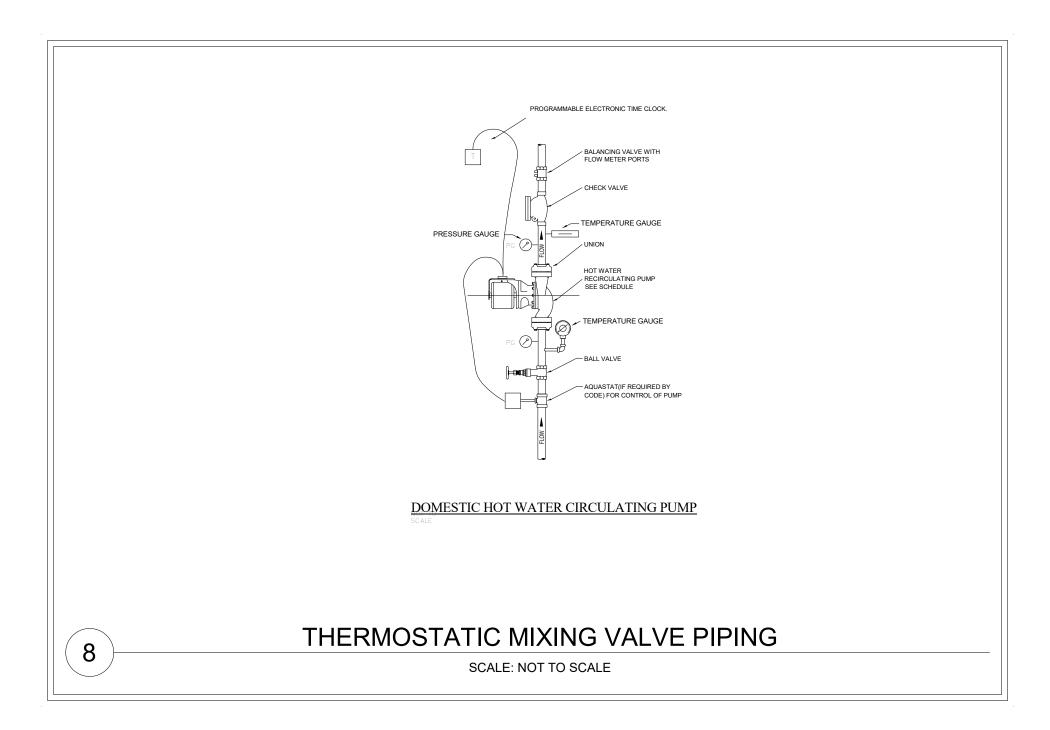
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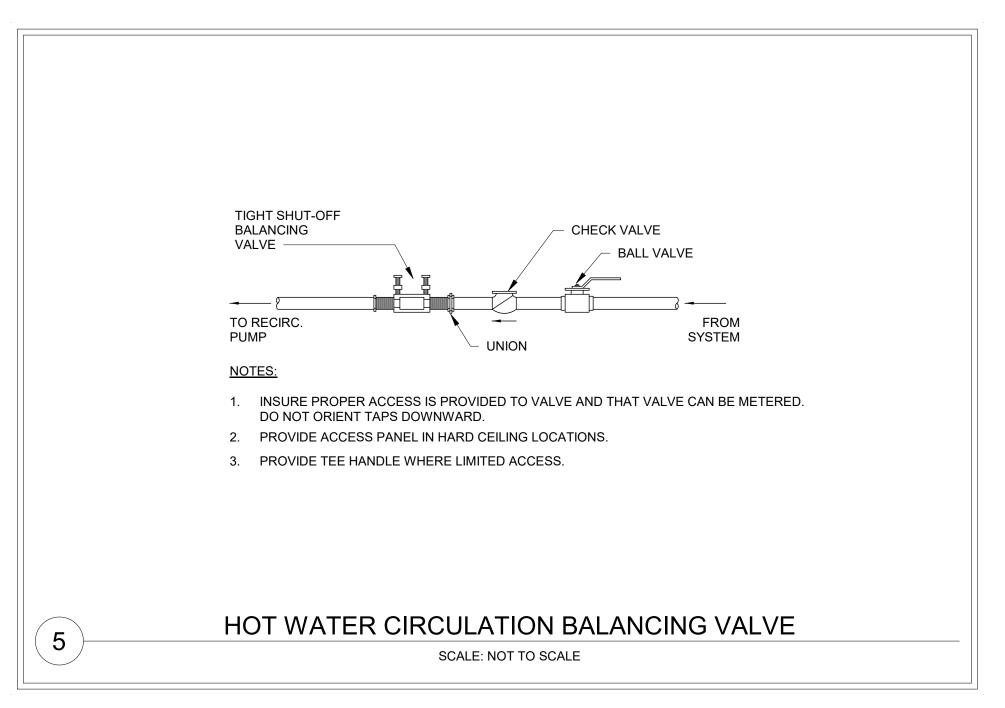
REVISION

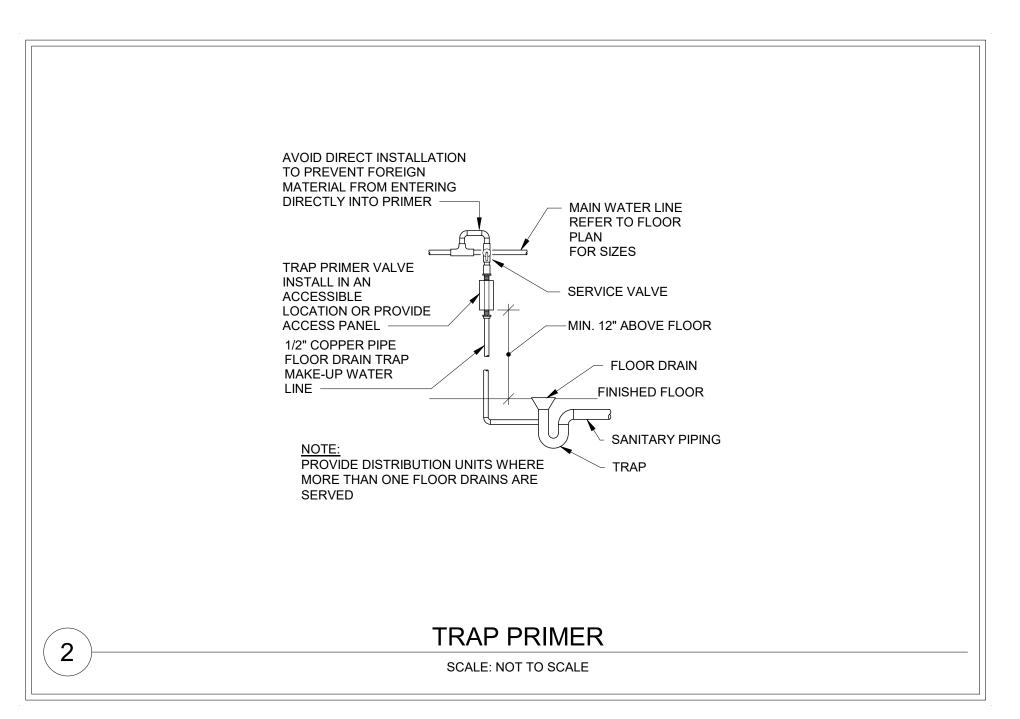


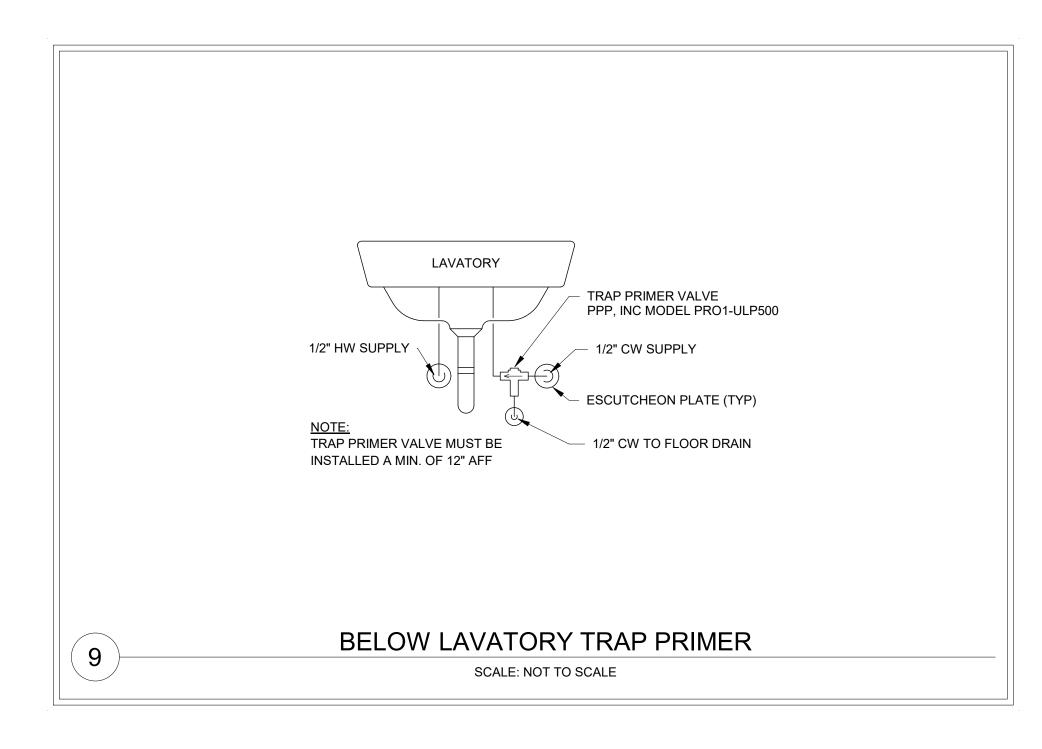






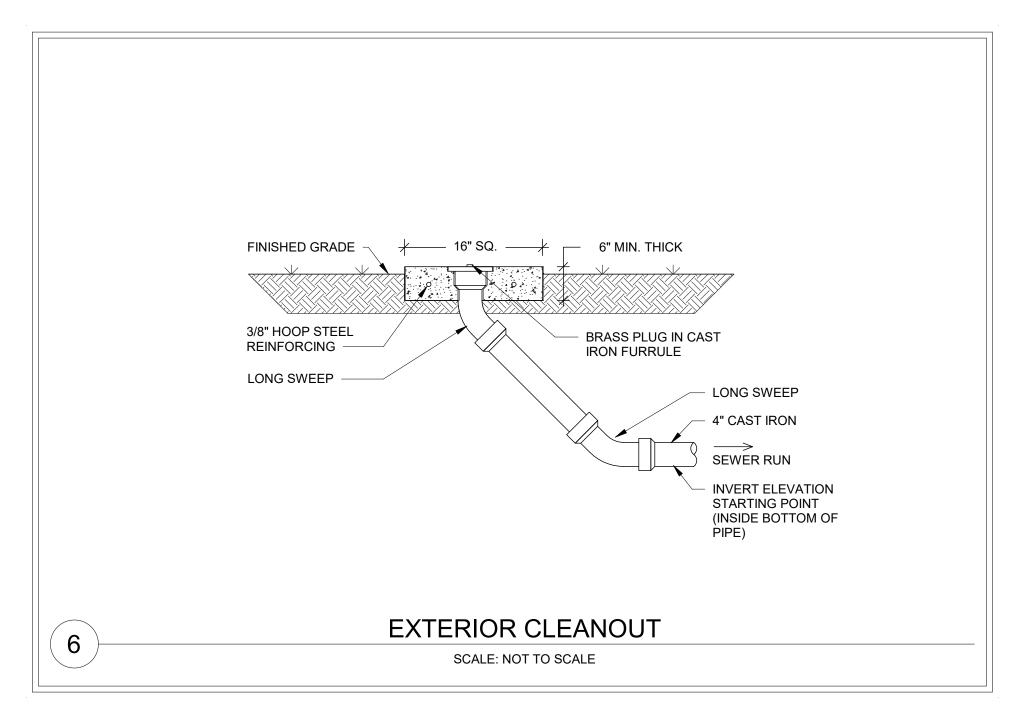






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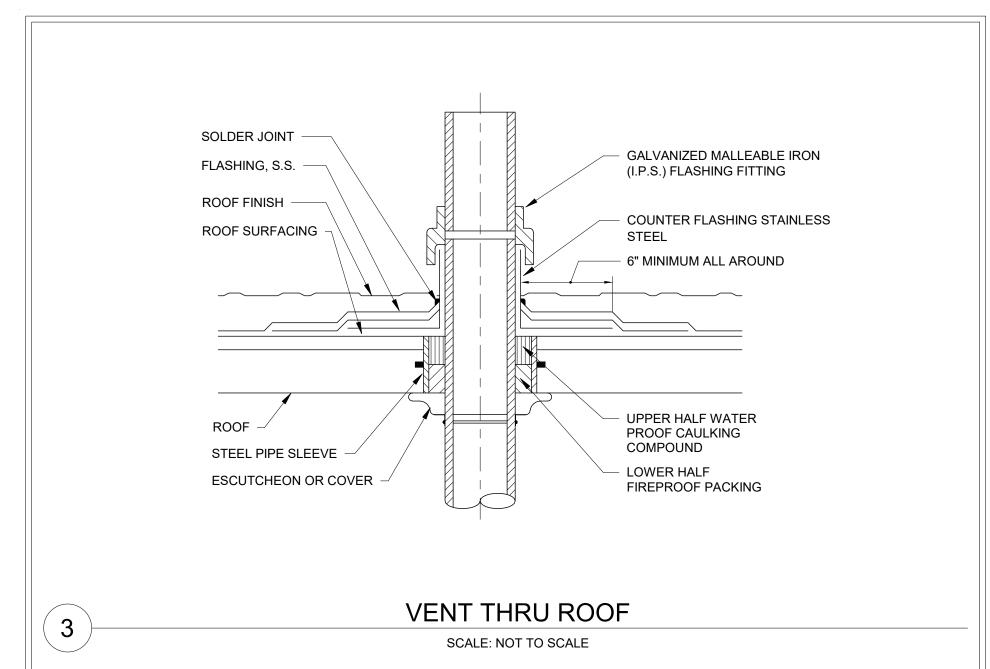
DATE SPONSOR



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DATE SAFETY

DATE ENVIRONMENTAL MANAGEMENT



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DATE PROJECT LEADER

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PLUMBING DETAILS

P302

SH. NO. OF DWG. P302

08/15/2022 Project Number

DATE PROJECT/ W.O. #

REVISION

DESCRIPTION

	WATER HAMMER ARRESTOR SCHEDULE									
PDI#	MINMAX. 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)	MINUMUM 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 COD	E 2018				

	TRAF	P PRI	MINO	S STATION SCHEDULE
ID	ELECTRIC	AL CHARACT	ERISTICS	BASIC OF DESIGN ( OR EQUAL)
	AMPS	VOLTAG F	PHASE	
TSP-1	5 120 1		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	BASIC OF DESIGN (OR EQUAL)				
	FINISHED FLOORS	ZURN Z1400				
СО	CERAMIC & TERRAZO	ZURN Z1400-Z				
	UNFINISHED FLOORS	ZURN Z1400-HD				
	LINE CLEANOUT	ZURN Z1468				
WCO	STACK CLEANOUT	ZURN Z1446				
ECO	OUTSIDE AREAS	ZURN Z1400-HD				
NOTE 1. 2.	INSTALL ECO IN 24x24x4 THICELEVATION TO BE 2" ABOVE PROVIDE ALL CLEANOUTS WITH DEVICE. ATTACH CLEANOUT CLEANOUTS ATE LOCATED IS SHALL BE FLASHED IN ACCORD	CK CONCRETE PAD. TOP OF PAD E FINISHED GRADE. VITH WIDE ANCHOR FLANGE & CLAMPS 'S TO MEMBRANE IN FLOOR. WHEN N NONOMEMBRANE FLOORS, THEY ORDANCE WITH THE SPECIFICATIONS. E WALL CLEANOUTS WITH ACCESS				

DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE SPONSOR

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		PLUMBING	FIXT	URE S	CHED	ULE	
	PERCENTION			CONNECT	TION SIZE		DEMANG
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	WASTE	VENT	CW	HW	REMARKS
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 OPENSIDE, 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 528-55MPU-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 DSESR127221 WITH SINGLE HOLE FOR FAUCET & SOAP DISPENSER. KRAUS KPF-161055 FAUCET WITH DUAL FUNCTION PULL-DOWN SPRAYHEAD, BRASS TRAP & SUPPLIES & STOPS WITH STAINLESS STELL 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-FIAT MODEL #FLTDII100, 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 INTERGRAL VACUUM BREAKER AND 3/4" HOSE CONNECTION			3/4"		

ID	LOCATION	ATION STORAGE CAPACITY (GALLONS) EACH	GAS INPUT	GAS	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	DEMARKS
			(MBTU/HR) EACH	TYPE					INTAKE	EXHAUST	VOLTS	PHASE	HZ	DESIGN (OR EQUAL)	REMARKS
WH-1 GWH-2	MECHANICAL ROOM	60	120	NATURAL	97	140	40	140	3	3	120	1	60	A.O. SMITH CYCLONE, BTH-120 Mxi	EXTEND FRESH AIR AND EXHAUST OUT TO ATMOSPHERE

			•		110 117(1	ER EXPAN					
WATER HEATER ID VOLUME (GALLONS)	ME   MAX.   O		DESIGN FILL PRESSURE	TOTAL TANK VOLUME	ACCEPTANCE VOLUME	TANK DIMENSIONS		APPROX. OPERATING	BASIS OF DESIGN	REMARKS	
	(GALLONS)		(PSIG)	(PSIG)	(GALLONS)	(GALLONS)	HEIGHT	DIAMETER	WEIGHT (LBS.)	(OR EQUAL)	
ET-1	200	140	150	70	16.5	11	25"	15"	50	AMTROL THERM-X-TROL ST-35-CL	

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

		F	LOOR DRAI	N 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

VAY
DATE PROJECT LEADER

DATE FACILITIES ENGR. OFF.

DATE SHED - NIST FIRE MARSHAL/AHJ

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PLUMBING SCHEDULES

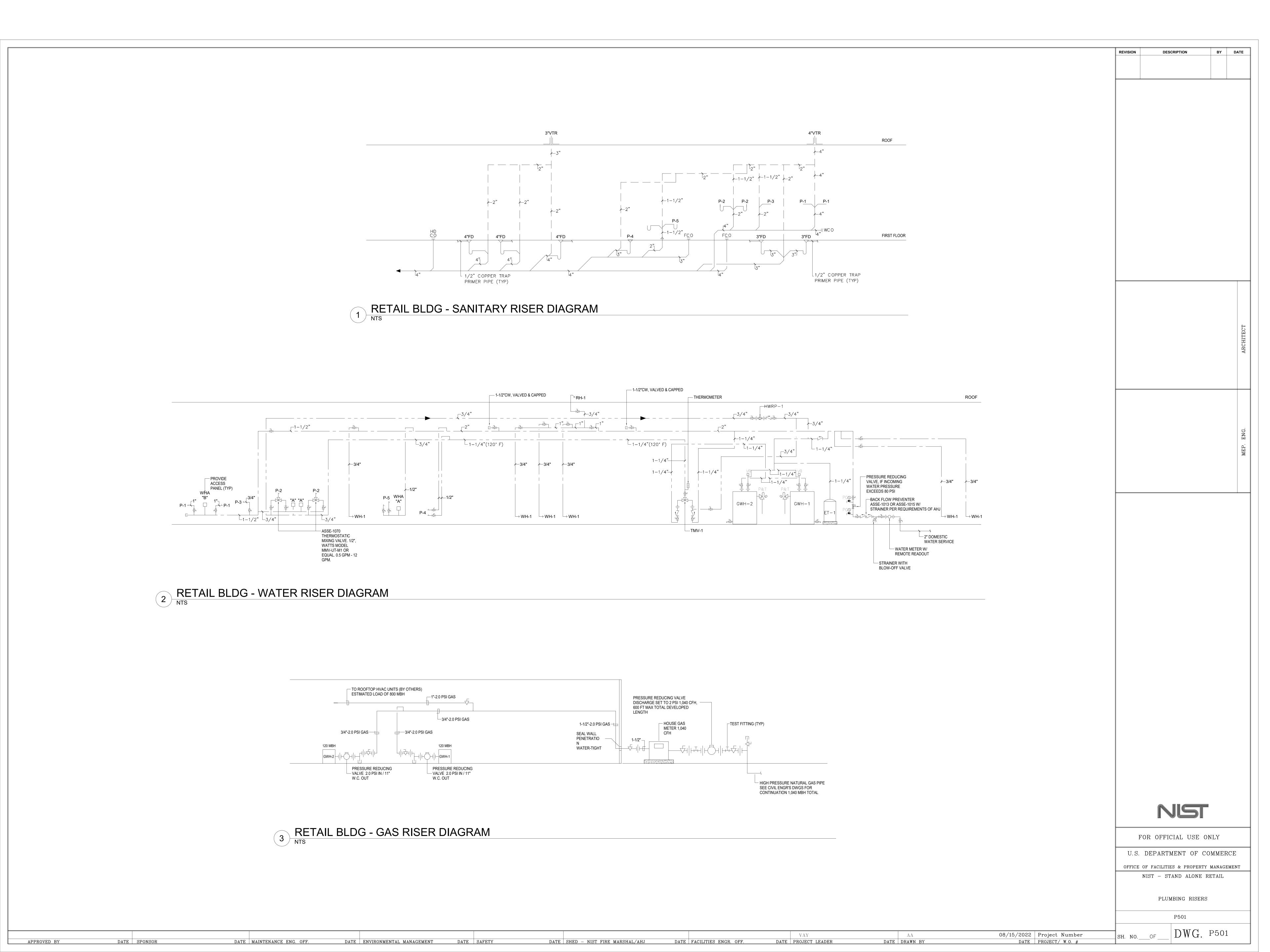
P401

08/15/2022 Project Number

DATE PROJECT/ W.O. #

REVISION

DESCRIPTION



## PLUMBING GENERAL CONDITIONS

- 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. ANY OBSERVED FAULTS OR AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED.
- ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- THE PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING WORK WITH OTHER TRADES. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO AVOID MINOR CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ENGINEER SHALL BE ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED.
- CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION
- PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB.
- ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS, WHETHER OR NOT SAME IS INDICATED. WHERE NECESSARY TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIGNED CEILING HEIGHTS.
- ALL ROTATING PLUMBING EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- CONTROLS AND ACCESSORIES FOR EQUIPMENT SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER.
- PLUMBING CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY AND SHALL ALSO REMOVE ALL TRASH AFTER WORK
- THE WORK DETAILED ON THESE PLANS IS BASED ON PREVIOUSLY PREPARED BASE BUILDING DRAWINGS. IF EXISTING FIELD CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT THE PROPOSED WORK PRIOR TO BEGINNING WORK.
- SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FOR EXACT QUANTITIES REQUIRED OF EACH TYPE.
- CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH OTHER DISCIPLINES. WHERE CONFLICTS OCCUR, CONTRACTOR SHALL IMMEDIATELY CONTACT THE CONSTRUCTION MANAGER. WHERE THE WORK OF VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA
- THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED. OPERATED. MAINTAINED IN FULLY ACCESSIBLE POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE. ALLOW FOR BETTER ACCESSIBILITY, AND ANY CHANGE FOR THAT PURPOSE SHALL BE APPROVED.
- ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES.
- ALL WORK TO BE GUARANTEED FOR ONE YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME. SHALL BE REPLACE OR REPAIRED AS DIRECTED FOR THE DURATION OF THE GUARANTEE PERIOD. TIME FOR THIS GUARANTEE SHALL BEGIN FROM THE DATE OF ACCEPTANCE OF THE COMPLETE WORK BY THE OWNER OR HIS APPOINTED REPRESENTATIVE. NOTE: THESE GUARANTEES SHALL BE SUBMITTED TO THE CO FOR RECORD PURPOSES.
- 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 IN THE GENERAL CONDITION OR OTHER DOCUMENTS GOVERNING THE MECHANICAL WORK. A. "FURNISH" - PURCHASE AND DELIVER TO THE PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND SUPPORT, ALL AS PART OF THE MECHANICAL WORK. PURCHASING SHALL INCLUDE PAYMENT OF ALL SALES TAXES AND
- OTHER SURCHARGES AS MAY BE REQUIRED TO ASSURE THAT PURCHASED ITEMS ARE FREE OF ALL LIENS, CLAIMS OR **ENCUMBRANCES** "INSTALL" - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE
- MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT, ALL AS PART OF THE MECHANICAL WORK. "PROVIDE" - "FURNISH" AND "INSTALL".
- "NEW" MANUFACTURED WITHIN THE PAST TWO YEARS AND NEVER BEFORE USED.

APPROVED BY

# PLUMBING GENERAL NOTES

- 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.
- THE ELECTRICAL CONTRACTOR IS REQUIRED TO PROVIDE POWER FOR ALL PLUMBING EQUIPMENT. DURING BID PERIOD AND AGAIN PRIOR TO EQUIPMENT ORDERING. THE (GENERAL CONTRACTOR AND THE) PLUMBING CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR TO VERIFY THAT ALL EQUIPMENT ARE POWERED, AND PROPER VOLTAGE/WIRING/CAPACITY IS PROVIDED. IN THE EVENT OF REQUIREMENTS AMBIGUITY OR CONFLICT BETWEEN TRADES, THE CONTRACTOR IS REQUIRED TO GENERATE AN RFI ADDRESSING THE ISSUE AND REQUESTING CLARIFICATION. FAILURE TO DO SO WILL NEGATE HIS RIGHT FOR A CHANGE ORDER OR REQUEST FOR ADDITIONAL FUNDS DURING CONSTRUCTION RELATING TO THIS ISSUE.
- DRAWINGS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND TO INDICATE THE GENERAL LOCATIONS OF EQUIPMENT, PIPING, ETC. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT HIS WORK ACCORDING TO THE FOLLOWING
- CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS FOR EQUIPMENT AND ROUGH INS AND THE EXACT ROUTING OF PIPING PRIOR TO CONSTRUCTION AS TO BEST FIT THE LAYOUT OF THE WORK. COORDINATE FINAL LAYOUT
- WHERE OFFSETS IN PIPING ARE REQUIRED TO COORDINATE WORK OF OTHER TRADES, STRUCTURE, PIPING, CONDUITS, DUCTWORK, ETC. OR TO MAINTAIN CEILING HEIGHTS. THEY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- UNLESS OTHERWISE NOTED, ALL PIPING TO BE ROUTED CONCEALED IN WALLS, CHASES OR ABOVE CEILING. WATER PIPING SHALL NOT BE ROUTED IN EXTERIOR WALLS. ROUTE ALL PIPING AS HIGH AS POSSIBLE AND ALONG WALLS TO MAXIMIZE SPACE AVAILABLE FOR OTHER TRADES.
- COORDINATE ROUTING OF PIPING TO MAINTAIN ACCESS TO FILTERS, MOTORS, ELECTRICAL EQUIPMENT, AND CONTROLS. IN NO CASE SHALL PIPING PASS DIRECTLY OVER ELECTRICAL PANELS OR DISCONNECTS OR RESTRICT ACCESS TO ANY ELECTRICAL **EQUIPMENT INCLUDING JUNCTION BOXES.**
- ALL EXISTING PIPING SHOWN IS INTENDED TO INDICATE APPROXIMATE SIZE. NUMBER AND LOCATION OF PIPING BRANCHES FOR BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY EXACT SIZE AND CONFIGURATION PRIOR TO CONSTRUCTION.
- VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SYSTEMS REQUIRING CONNECTION TO NEW PIPING PRIOR TO COMMENCING
- UNLESS OTHERWISE NOTED. SANITARY WASTE PIPING SHOWN IS BELOW FLOOR AND ALL OTHER PIPING IS OVERHEAD. ABOVE CEILING. DOMESTIC HOT, COLD AND RE-CIRC. WATER PIPING SHALL BE INSTALLED ON WARM SIDE OF INSULATION.
- ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH 2018 INTERNATIONAL PLUMBING CODE (IPC) & ALL LOCAL AMENDMENTS, CODES AND REGULATIONS.
- DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND NAMES). MATERIALS, SIZES, LOCATING AND HOOK-UP POINTS. AS-BUILTS SHALL BE GIVEN TO [OWNER] AT COMPLETION OF JOB.
- UPON COMPLETION OF JOB. THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKING AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED
- ALL INSTALLATION OF ACCESSIBLE PLUMBING FIXTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE ACCESSIBILITY STANDARDS. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC INSTALLATION REQUIREMENTS. LOCATE WATER CLOSET FLUSH VALVE LEVER BETWEEN TOILET AND LAVATORY. COORDINATE LOCATION OF FLUSH VALVE LEVER HANDLE WITH GRAB BAR. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- ALL VENT AND FLUE OUTLETS SHALL BE 10'-0" MINIMUM HORIZONTALLY AND 3'-0" MINIMUM VERTICALLY FROM ANY FRESH AIR INTAKES. PROVIDE WATER HAMMER ARRESTORS AT ALL PLUMBING FIXTURES OR BATTERY OF FIXTURES WITH QUICK-CLOSING VALVES. WATER
- WATER HAMMER ARRESTORS AND SHALL NOT BE INSTALLED. PROVIDE BALANCING VALVES WITH THREADED CONNECTIONS IN HOT WATER RETURN PIPING, AND BALANCE SYSTEM FOR PROPER

HAMMER ARRESTORS SHALL BE SIZED & INSTALLED PER PDI STANDARDS. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO

- 12. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN PLUMBING.
- ALL OPENINGS IN CEILINGS AND PLENUM WALLS FOR PLUMBING SHALL BE SEALED AIR TIGHT AND PROTECTED WITH FIRESTOP.
- 14. SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING AND ENTERING BUILDING.
- 15. ALL HOSE BIBS SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE SPECIFIED.
- 16. ALL WALL HYDRANTS SHALL BE MOUNTED 24" ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
- MAKE PROPER HW, CW, RE-CIRC., WASTE, AND VENT CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAIN, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- CLEANOUTS SHALL BE PROVIDED NEAR BASE OF EACH VERTICAL WASTE OR SOLID STACK. PROVIDE 18" MINIMUM CLEARANCE FOR
- PROVIDE VALVES AND UNIONS WHEN CONNECTING PIPING TO EQUIPMENT. LOCATE VALVES FOR EASY ACCESS AND SERVICING OF EQUIPMENT. PROVIDE ACCESS PANELS TO ALL SHUT-OFF VALVES.
- PRESSURE TEST ALL NEW WATER PIPES, MINIMUM OF 4 HOURS BEFORE APPLYING PIPE INSULATION. ALL TESTS SHALL BE IN COMPLIANCE WITH REQUIREMENTS OF THE LOCAL WATER AUTHORITY.
- IN THE EVENT OF CONFLICT BETWEEN VARIOUS SECTIONS OF CONSTRUCTION DOCUMENTS. THE MOST STRINGENT OF THE OPTIONS SHALL APPLY FOR BIDDING PURPOSE. AFTER AWARD OF CONTRACT BUT BEFORE STARTING DESIGN/CONSTRUCTION, CONTRACTOR SHALL REQUEST CLARIFICATIONS WITH BID ON ANY CONFLICTING INFORMATION FROM THE OWNER.
- PROVIDE DIELECTRIC FITTINGS OTHER THAN DIELECTRIC UNIONS WHEN CONNECTING DISSIMILAR MATERIAL PIPING. DIELECTRIC UNIONS NOT PERMITTED.
- 23. ALL CONCRETE FLOORS, SLABS, BRICK AND BLOCK WALL PENETRATIONS SHALL BE SLEEVED AND FIRE STOPPED.
- PROVIDE BALL VALVE FOR ALL CW AND HW BRANCH TAKE-OFFS.
- 25. ALL EXTERIOR ROOF PENETRATIONS SHALL BE SEALED WEATHERTIGHT.
- SLOPES AND INVERT ELEVATIONS OF ALL INTERIOR PIPING SHALL BE ESTABLISHED BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. ALL PIPING SHALL BE LOCATED AND DETERMINED WHERE TO BE RUN TO AVOID CONFLICT WITH
- ALL PIPING SHALL BE PROVIDED WITH SECTIONAL SHUT-OFF VALVES AND ACCESS PANELS FOR ALL HIDDEN VALVES. PROVIDE ISOLATION VALVES FOR ALL PLUMBING FIXTURES.
- ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS, LEAKS, LACK OF PROPER SYSTEM PERFORMANCE OR NON-OPERATION FOR A PERIOD OF ONE YEAR AFTER DATED OF FINAL ACCEPTANCE OF WORK BY OWNER.
- 29. ALL WORK SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION.
- ALL EXPOSED PIPING TO FIXTURES SHALL BE HEAVILY CHROME-PLATED.
- MAKE FINAL CONNECTIONS AFTER FIXTURES AND EQUIPMENT ARE SET IN PLACE. ALLREQUIRED TRIM, FAUCETS AND MINOR ITEMS NECESSARY FOR A COMPLETE FUNCTIONING INSTALLATION, SUCH AS STRAINERS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC., SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH EQUIPMENT REQUIREMENTS. ALL FAUCETS TO BE HEAVILY
- THE SPACE BETWEEN THE PIPE AND SLEEVE SHALL BE PACKED WITH "3M" EXPANDABLE FOAM FIRE-STOP MATERIAL, TO ASSURE A RATING EQUAL TO THE PENETRATED WALL OR FLOOR. HANGERS SHALL BE OF SIMILAR MATERIAL AS PIPING TO AVOID GALVANIC ACTION IN ACCORDANCE WITH MSS-SP-69, AND LOCATED AT

SLEEVES THROUGH CMU BLOCKS WALLS AND/OR MASONRY FLOORS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SLEEVES THRU FLOORS SHALL STAND PROUD OF FLOOR SLAB BY 1/2". SLEEVES THROUGH SHEET ROCK WALL SHALL BE 18" GAUGE GALVANIZED SHEET METAL.

- INTERVALS NOT TO EXCEED 6'-0" O.C. WHERE "HUBLESS" PIPE IS BEING USED, PROVIDE HANGERS ON ETHER SIDE OF THE JOINTS AS RECOMMENDED BY CISPI BULLETIN 310. FOR INSULATED PIPING, INSULATION SHALL EXTEND CONTINUOUSLY THRU HANGER WITH OUT INTERRUPTION. PROVIDE SADDLE TO PROTECT INSULATION FROM COMPRESSION.
- SOIL, WASTE AND VENT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH CODE. HORIZONTAL DRAINAGE PIPING SHALL SLOPE PER 2018 IPC CODE, UNLESS OTHERWISE INDICATED, DOMESTIC WATER SHALL BE SLOPED TO DRAIN POINTS.
- SUBMIT OPERATING AND MAINTENANCE MANUALS AND WARRANTY CERTIFICATES TO OWNER.
- THE CONTRACTOR SHALL NOT CORE DRILL CONCRETE SLABS OR PRE-CAST CONCRETE PANELS OR DECK WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE BUILDING OWNER AND SHALL X-RAY PRIOR TO ANY CORE DRILLING. X-RAYING AND CORE DRILLING SLABS SHALL BE SCHEDULED WITH THE BUILDING OWNER, INCLUDE COSTS OF X-RAYING IN BID.
- FINAL ACCEPTANCE OF PLUMPING SYSTEMS BY THE USER/OWNER. SHALL BE CONTINGENT TO COMPLIANCE WITH ALL COMMISSIONING REQUIREMENTS AND TESTS PRESCRIBED IN THE PROJECT DESIGN DOCUMENTS/SPECIFICATIONS AND APPROVAL BY THE CXA AGENT OF
- UPON COMPLETION OF THE PROJECT, ALL DOMESTIC WATER PIPING SHALL BE SANITIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

#### **ABBREVIATIONS** ABV **ABOVE** AREA DRAIN ABOVE FINISH FLOOR ABOVE FINISH GRADE ACCESS PANEL **APPROX** APPROXIMATE ACID VENT ACID WASTE **BUILDING AUTOMATION SYSTEM** BFF BELOW FINISH FLOOR BFP **BACKFLOW PREVENTER** BLDG BUILDING BATHTUB COMPRESSED AIR CD CONDENSATE CLG CEILING CO COMPANY, CLEANOUT CW COLD WATER DRAINAGE FIXTURE UNITS DIA DIAMETER DN DOWN DS DOWNSPOUT DWG DRAWING CW **COLD WATER** DISP DISPOSER DRAINAGE WASTE & VENT EACH **EXTERIOR CLEANOUT** ECO ETR **EXISTING TO REMAIN EMERGENCY EYEWASH EMERGENCY SHOWER** ELECTRIC WATER COOLER **ELECTRIC WATER HEATER** EX EXISTING FLOOR DRAIN FINISHED FLOOR ELEVATION FIXT FIXTURE FLR **FLOOR** FORCED MAIN FLOOR SINK NATURAL GAS GRADE CLEANOUT GD GROUNDWATER DRAIN TILE GPF **GALLONS PER FLUSH** GPM **GALLONS PER MINUTE** GAS WATER HEATER HOSE BIBB HW **HOT WATER** HWR HOT WATER RECIRCULATING INVERT ELEVATION INDIRECT WASTE INTERNATIONAL PLUMBING CODE LAVATORY MAU MAKE-UP AIR UNIT MAXIMUM MAXMOP BASIN BRITISH THERMAL UNITS (x1000) MINIMUM MISC MISCELLANEOUS NFWH NON-FREEZE WALL HYDRANT NOT IN CONTRACT **OVERFLOW ROOF DRAIN** OPEN SITE DRAIN PDPUMPED DISCHARGE PLUMBING & DRAINAGE INSTITUTE PRESSURE REDUCING VALVE **ROOF DRAIN** ROOM **ROOF TOP UNIT** SANITARY SUPPLY FIXTURE UNIT STORMWATER TRAP PRIMER VALVE TRAP PRIMING STATION TEMPERED WATER TYP TYPICAL UNLESS OTHERWISE NOTED VENT VACUUM BREAKER **VENT THRU ROOF** WASTE WATER CLOSET WALL CLEANOUT WALL HYDRANT EXISTING RELOCATED <u>AB/MEDICAL PROJECTS</u> OXYGEN MEDICAL AIR I AR AIR **NITROGEN** LIQUID NITROGEN ARGON HELIUM SPECIAL GAS LAB VACUUM MEDICAL VACUUM CARBON DIOXIDE DEIONIZED WATER ROS REVERSE OSMOSIS SUPPLY ROR REVERSE OSMOSIS RETURN LCW LAB COLD WATER LHW LAB HOT WATER LHWR LAB HOT WATER RECIRCULATING VIVARIUM COLD WATER VCW **VIVARIUM HOT WATER** VHW NON-POTABLE SHEET NUMBERING LEGEND

FLOOR LEVEL

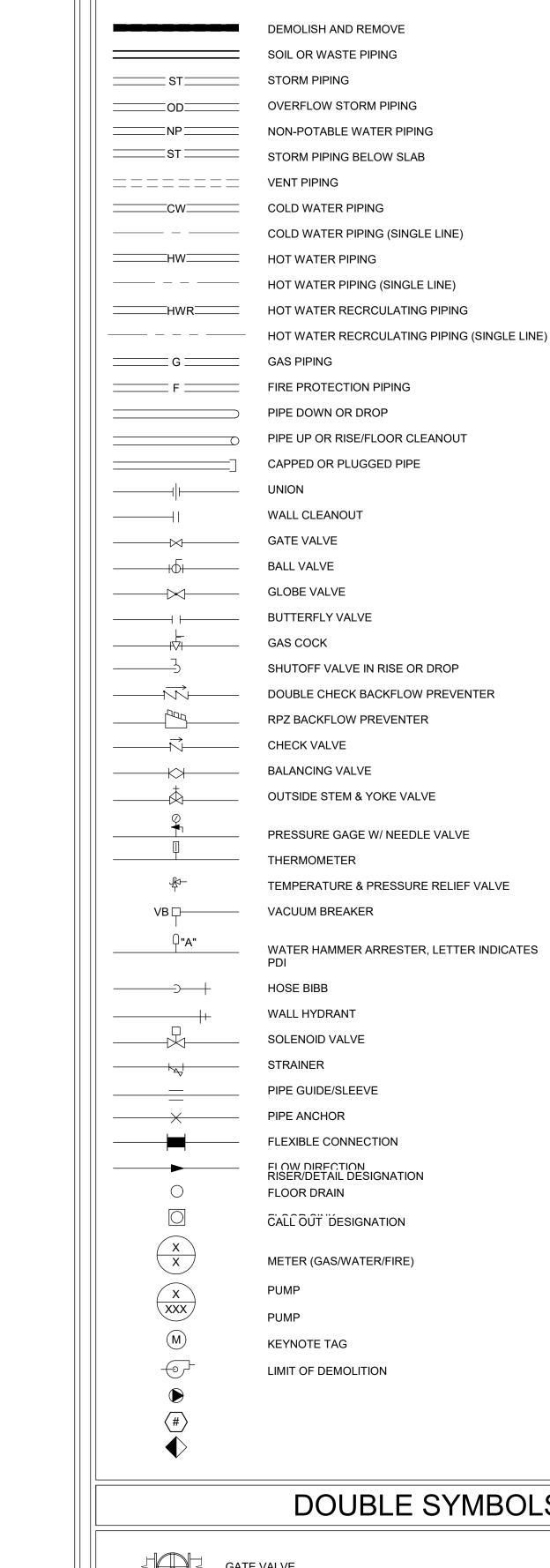
LEVEL ETC.

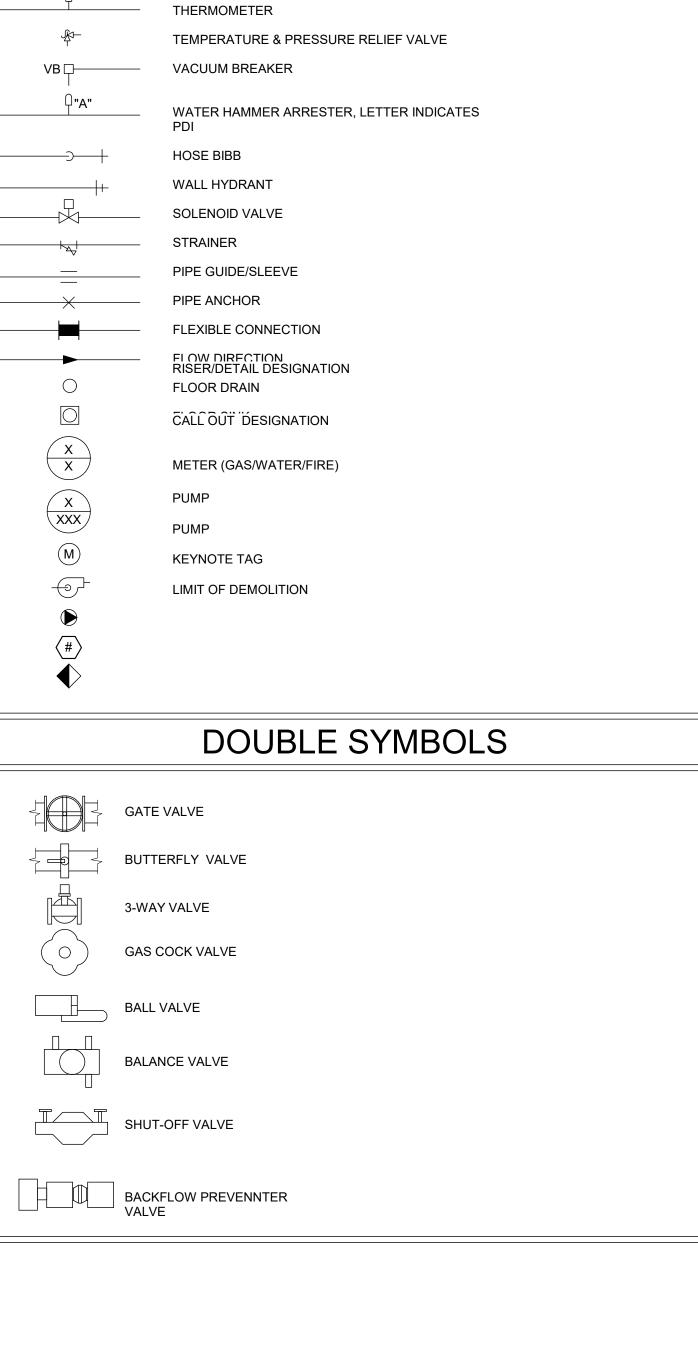
SYSTEM TYPE

"0" FOR UNDERGROUND "1" WATER & GAS "2" DWV & STORM "3" FIRE PROTECTION

"0" LOWEST FLOOR

"1" NEXT FLOOR





PLUMBING SYMBOLS

DESCRIPTION

SYMBOL



FOR OFFICIAL USE ONLY

**DESCRIPTION** 

REVISION

BY DATE

OFFICE OF FACILITIES & PROPERTY MANAGEMENT

PLUMBING COVERSHEET

P002

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

DISCIPLINE

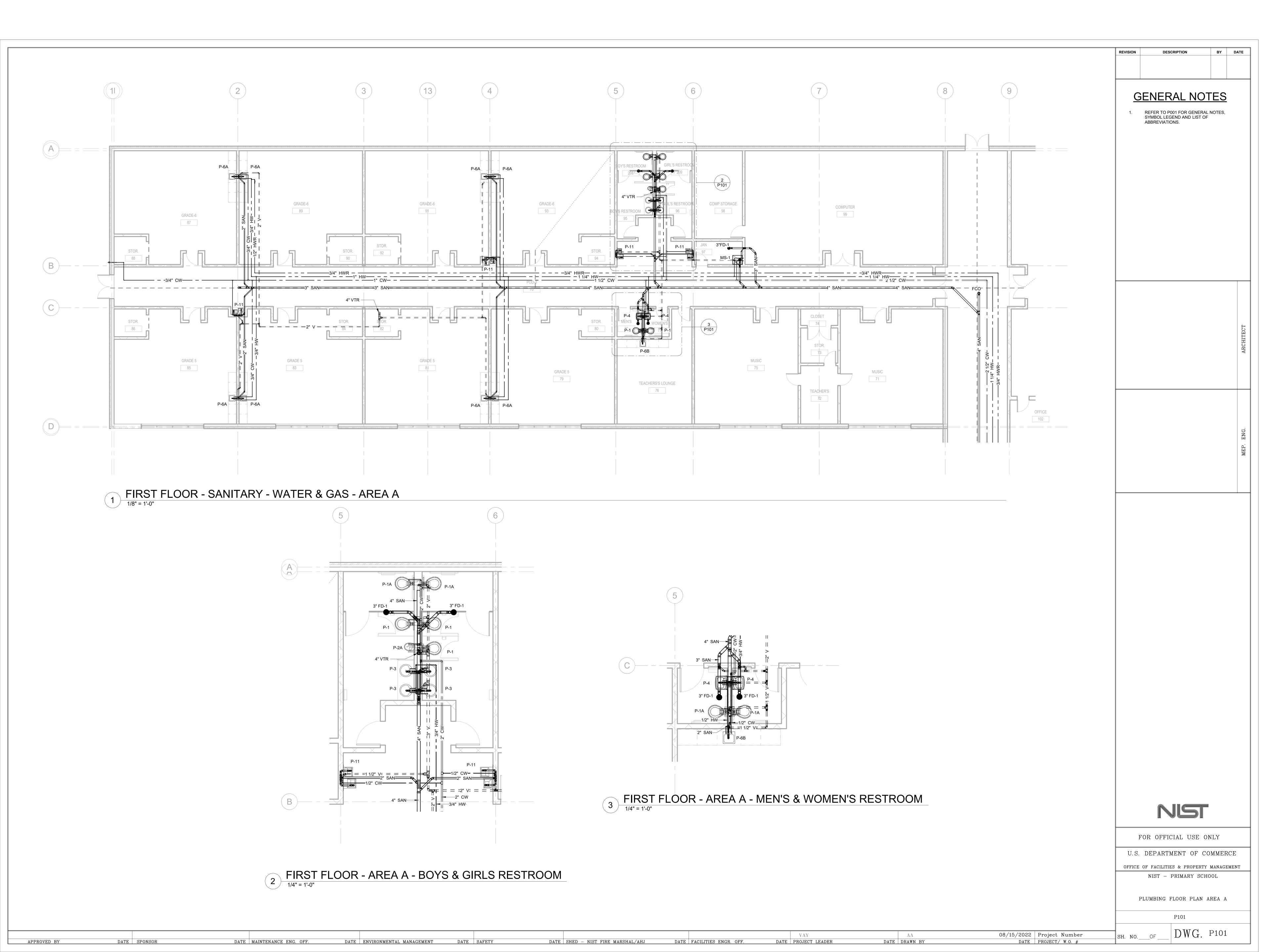
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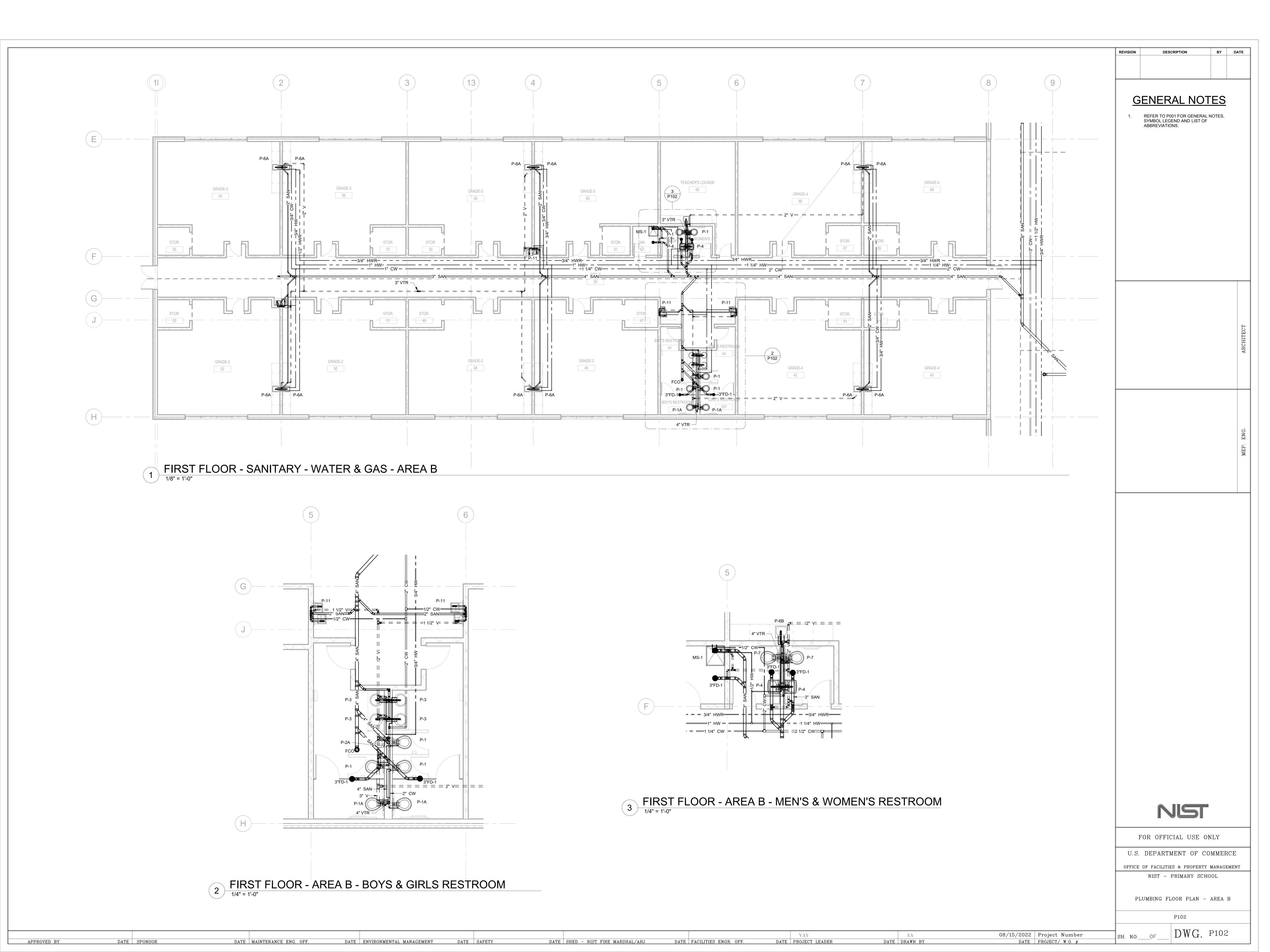
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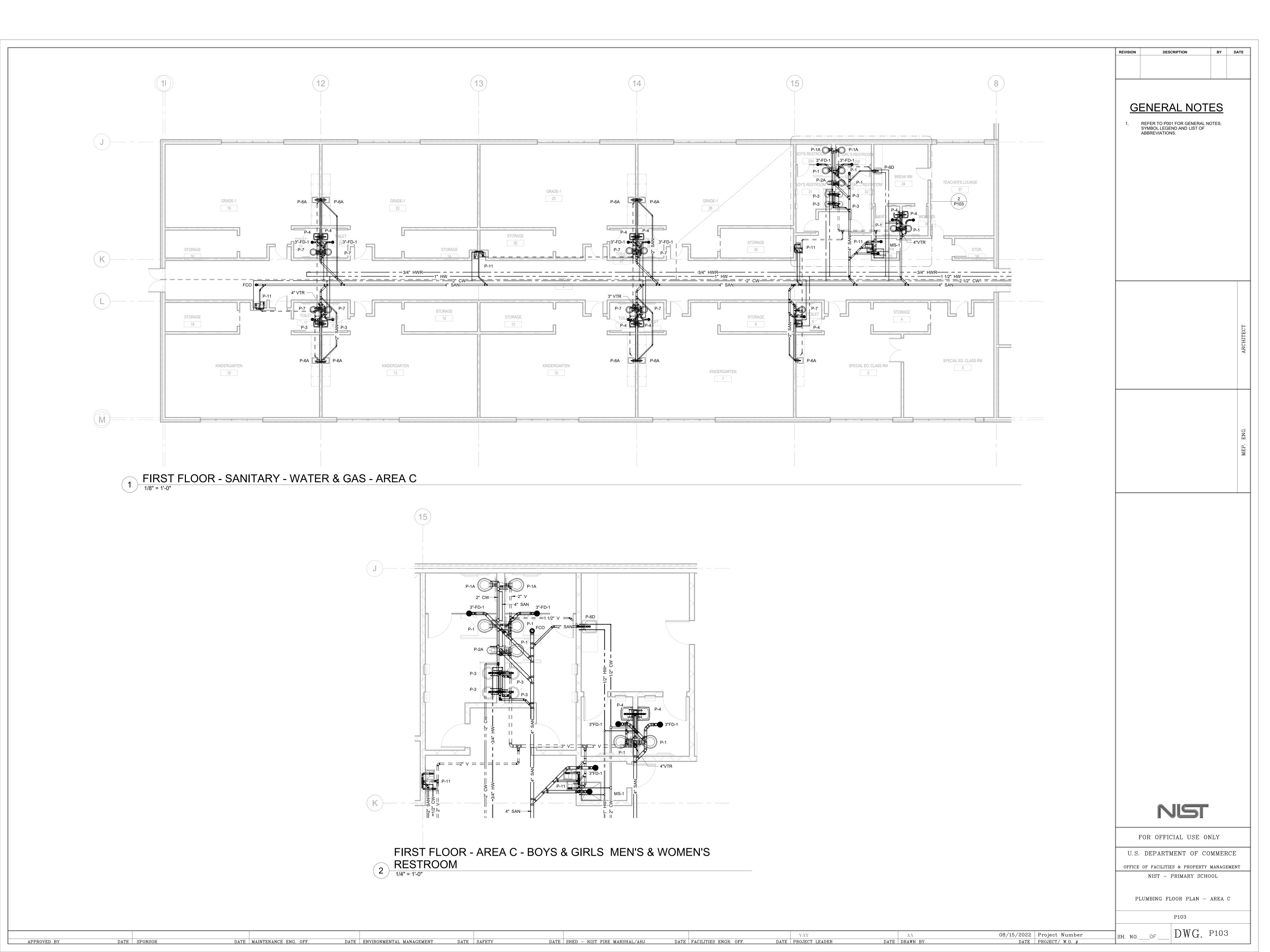
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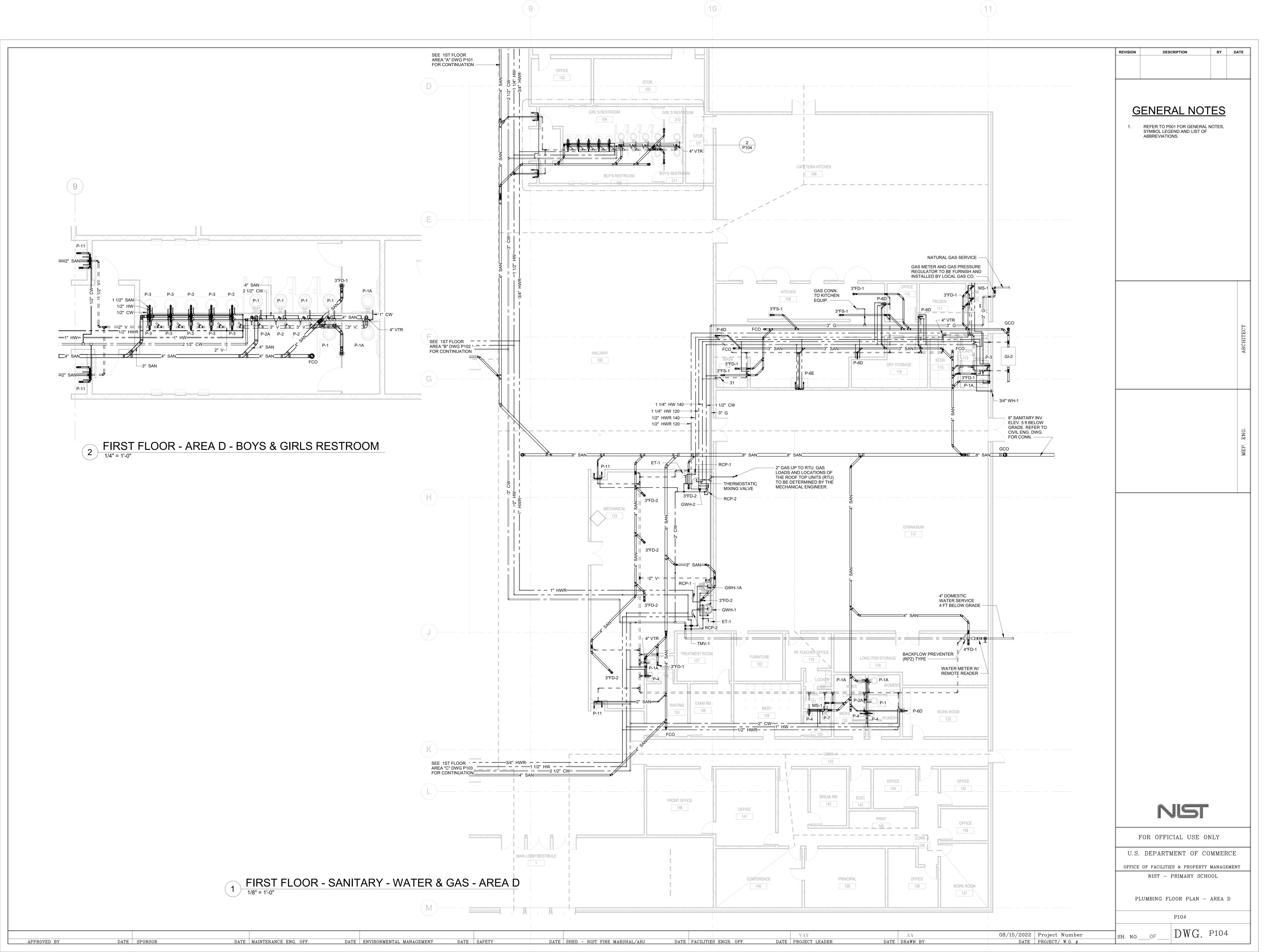
"2" ENLARGED

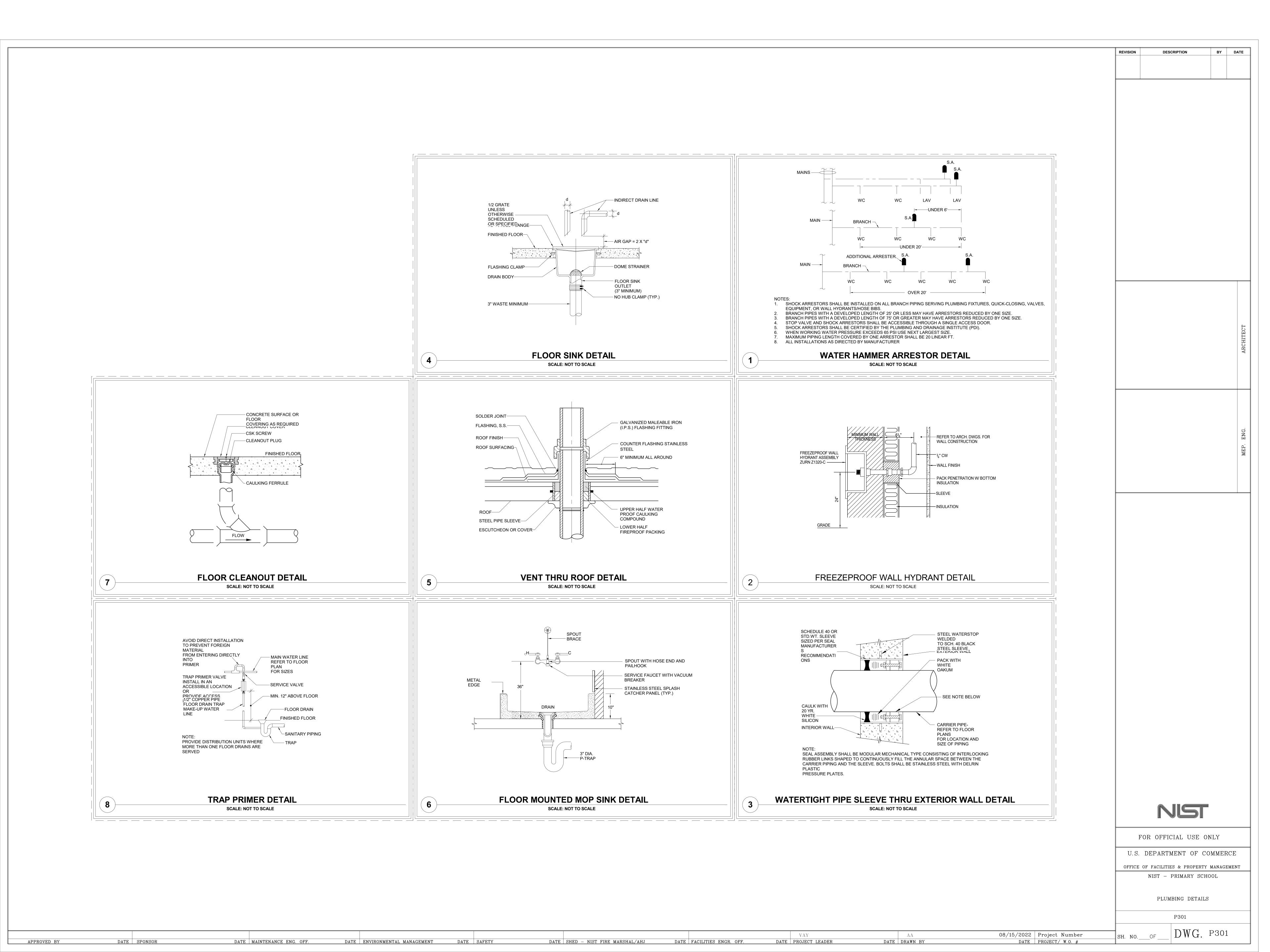
FLOOR ETC.

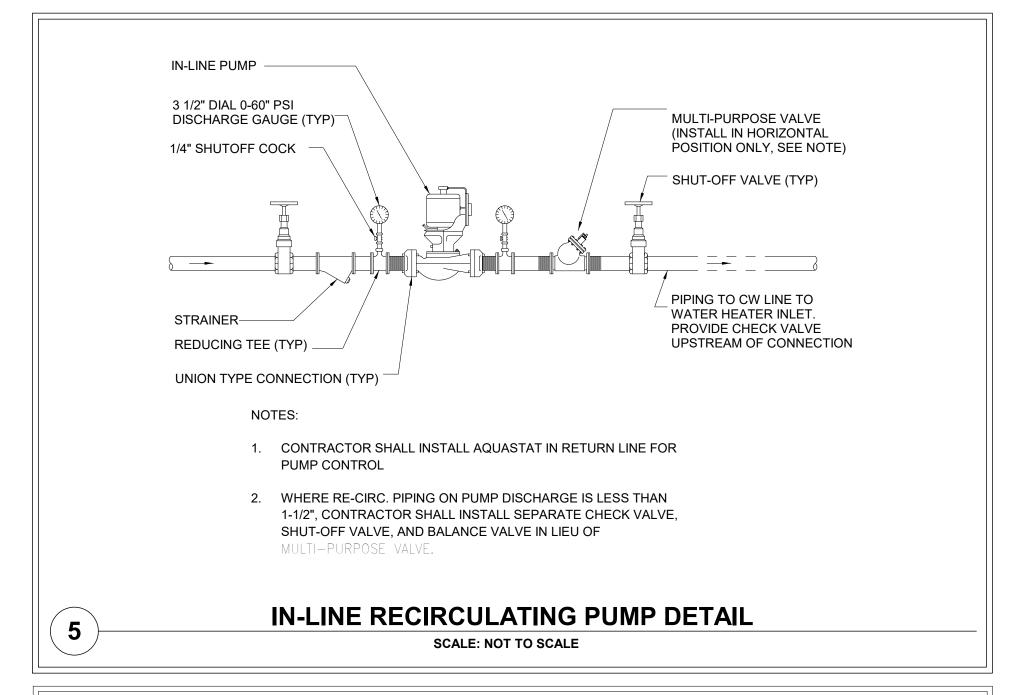


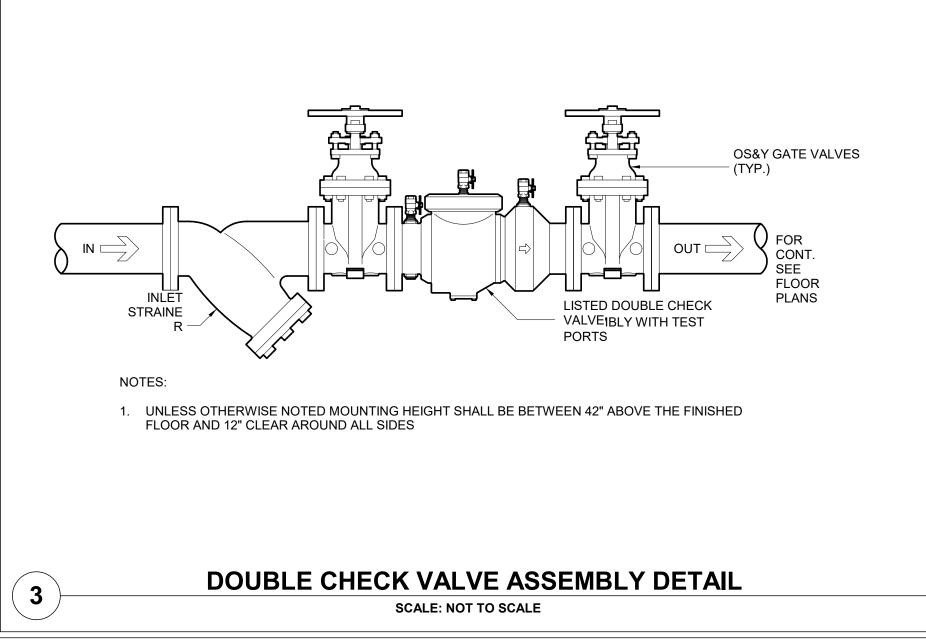


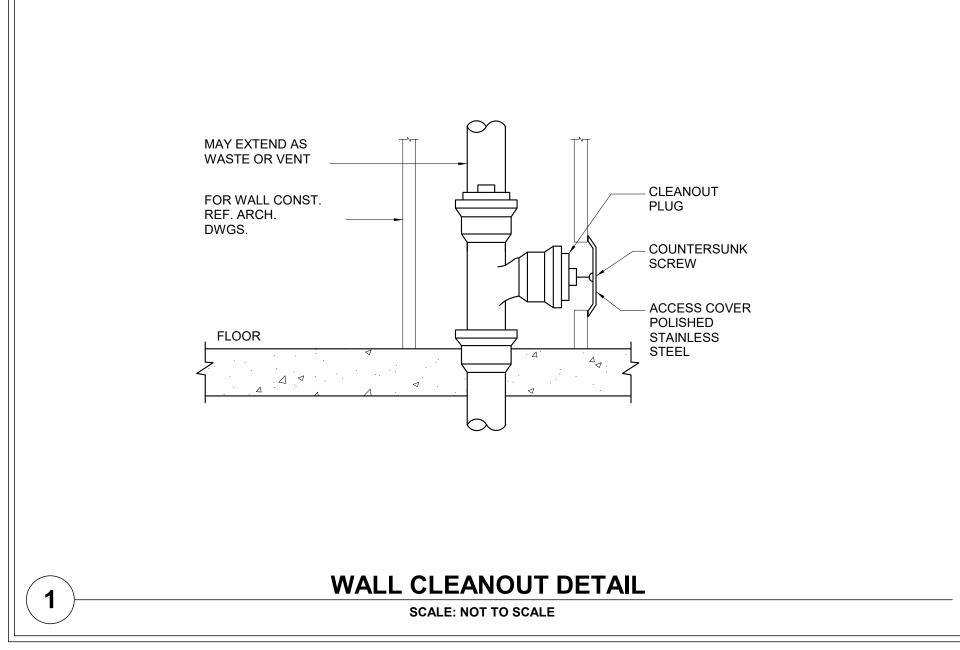


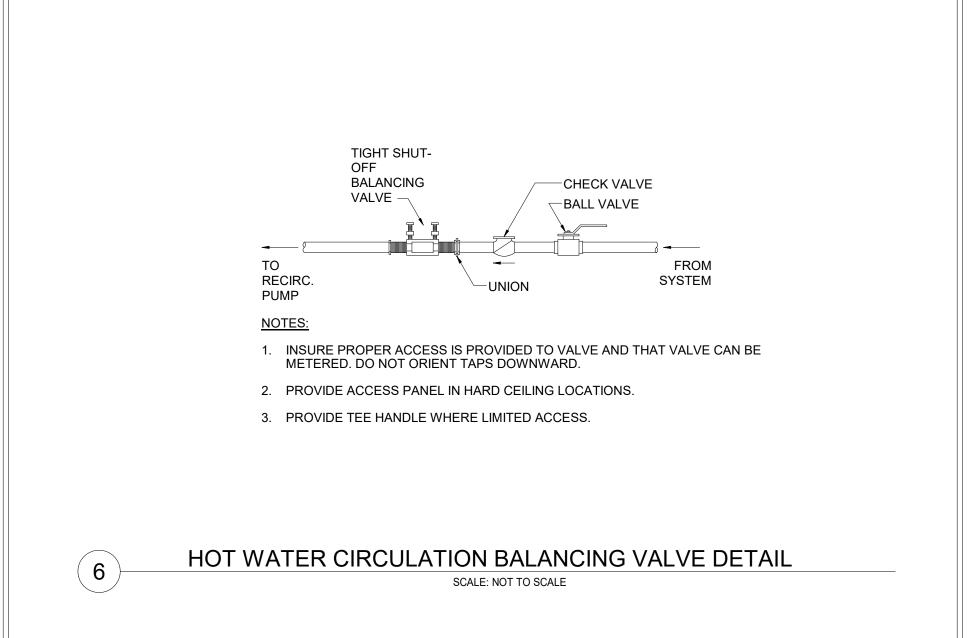


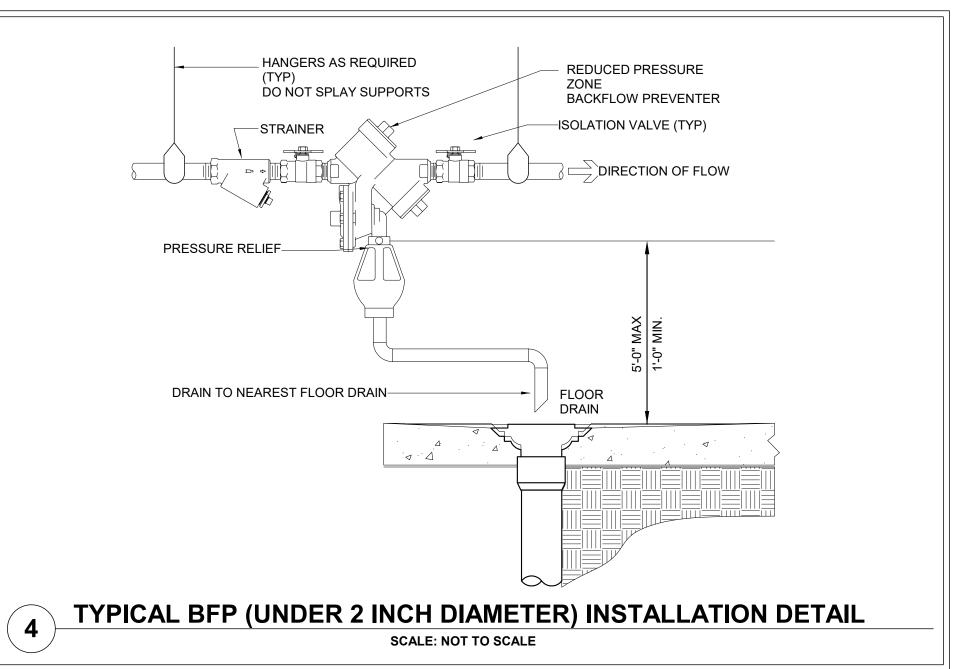


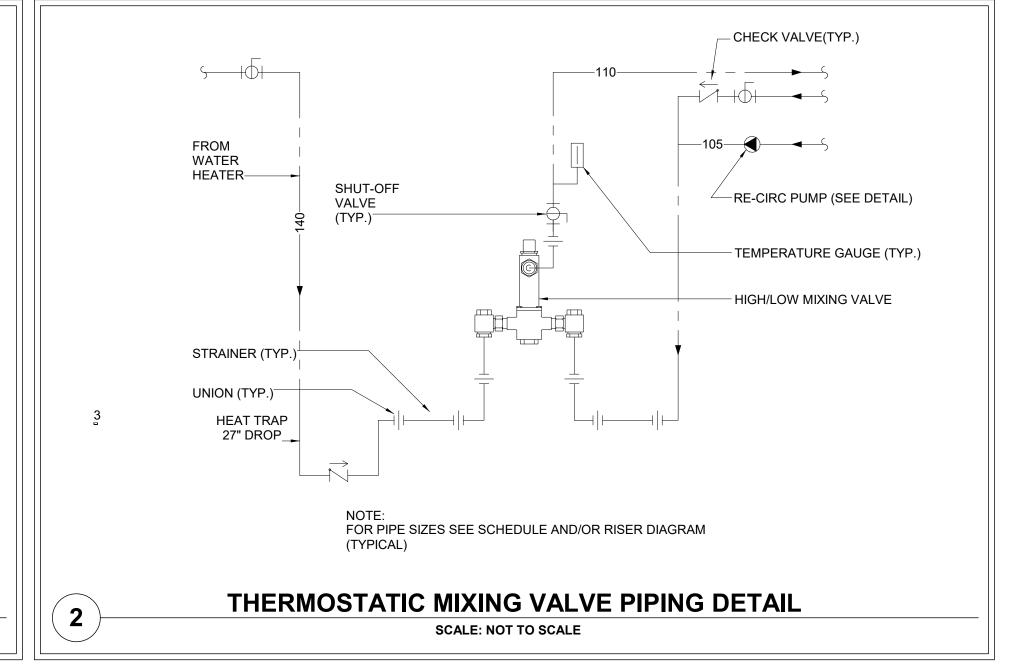


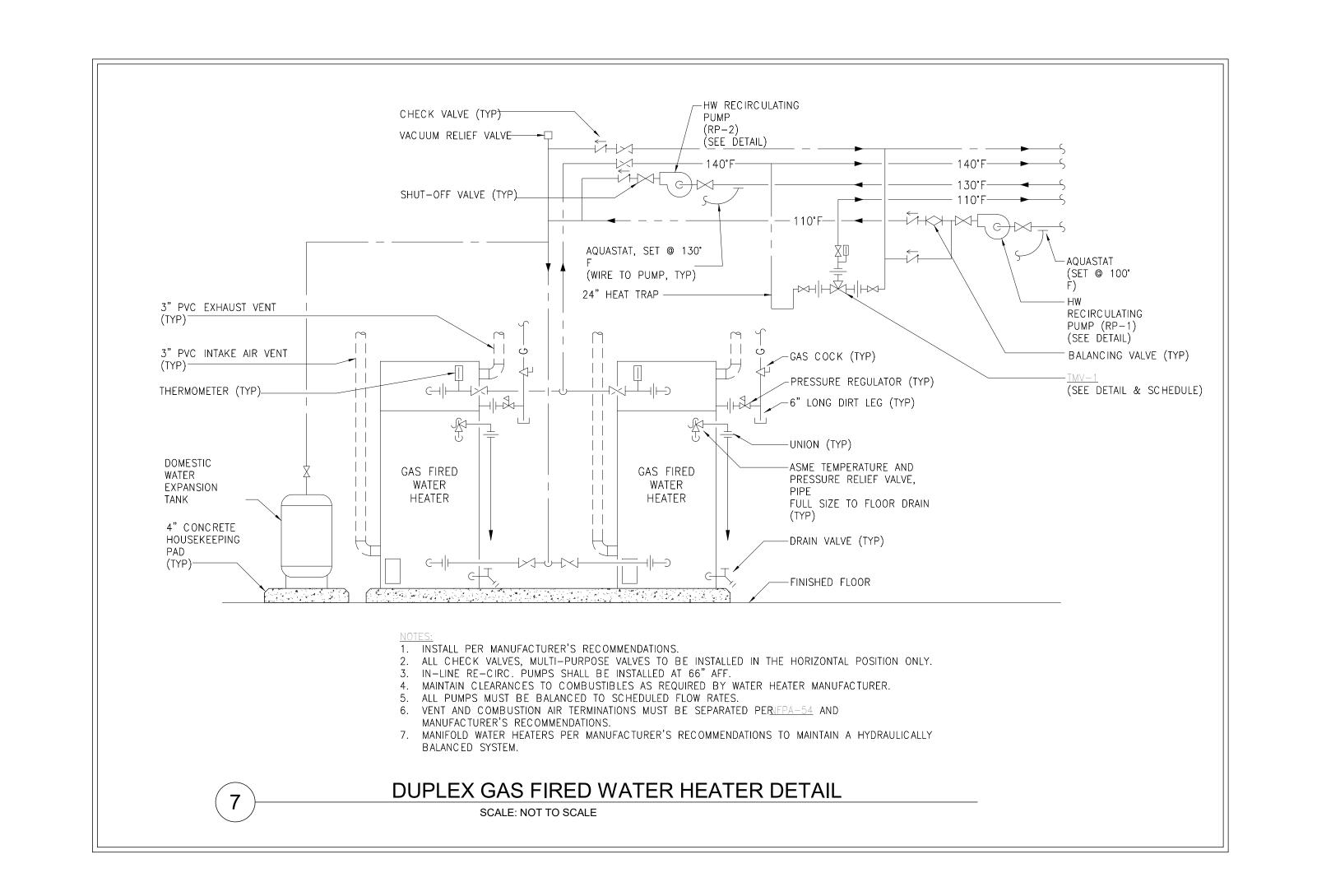












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REVISION

DESCRIPTION

BY DATE

P302

APPROVED BY

DATE SPONSOR

DATE SAFETY

08/15/2022 | Project Number

PLUMBING DETAILS

DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

DATE SHED - NIST FIRE MARSHAL/AHJ

DATE FACILITIES ENGR. OFF.

VAY DATE PROJECT LEADER

AA DATE DRAWN BY

DATE PROJECT/ W.O. #

DWG. P302

	GAS LOAD	SCHEDUL	E	
ID	DESCRIPTION	МВН	QTY	SUB-TOTAL
	WATER I	HEATING		
GWH-1	GAS FIRED DOMESTIC WATER HEATER	200	1	200
GWH-2	GAS FIRED DOMESTIC WATER HEATER	200	1	200
	HEA	TING		
DOAS-001	VENTILATION	-	1	-
DOAS-002	VENTILATION	-	1	-
DOAS-003	VENTILATION	-	1	-
RTU-001	ROOF TOP UNIT	-	1	-
RTU-002	ROOF TOP UNIT	-	1	-
		<u>-</u>		-
	KITCHEN E	QUIPMENT		
12	COMBI/OVEN	170	1	40
13	RANGE/OVEN	164	1	164
14	CONVECTION STEAMER	60	1	60
•			TOTAL:	3440

. 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).	

TI	HERMOSTATIC MIXIN	IG VALVE SCHEDULE	
	THERMOSTATIC CONTROLLERS	RUN OUT PIPE SIZES	

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

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"										

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							

	WATER HAMMER ARRESTOR SCHEDULE										
PDI#	MINMAX. 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								

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

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

	PUMP SCHEDULE													
ID	DESCRIPTION	GPM	HEA D (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					

				CONNECT	ΓΙΟΝ SIZE		
ID	DESCRIPTION	BASIS OF DESIGN (OR EQUAL)	WASTE	VENT	CW	HW	- REMARKS
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" MONTNG 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 WALLMOUNT 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 C4136BF-FUS 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-G2E3-317AB	1-1/2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, COUNTER MOUNTED
P-6C	SINK	ELKAY DLRQ252210 WITH CHICAGO FAUCET MODEL 1100-G2E3-317AB					STAINLESS STEEL, COUNTER MOUNTED
P-6E	SINK	ELKAY DLRSS332212 WITH CHICAGO FAUCET MODEL 1100-G2E3-317AB	2"	1-1/2"	1/2"	1/2"	STAINLESS STEEL, COUNTER MOUNTED W/ GARBAGE DISPOSER INSINKERATOR BADGER 5XP - 3/4 HP
P-6D	SINK	ELKAY LR3322EK WITH CHICAGO FAUCET MODEL 1100-G2E3-317AB	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" MONTNG 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 LVRCTL8WS & LVRCTLDDWS WITH FLEXI-GUARD BUBBLER	1 1/2"	1 1/2"	1/2"		ADA, DUAL HEIGHT
P-11A	ELECTRIC WATER COOLER	ELKAY VANDAL RESISTANT EZH2O LVRCTL8WS & LVRCTLDDWS 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"	

igstyle 1 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.

3 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.

		WA	TER		WASTE			
ID	DESCRIPTION	CW	HW	INDIRECT	DIRECT	VENT	GAS	REMARKS
9	HANDSINK	1/2"	1/2"		1-1/2"	1-1/2"		
12	COMVECTION 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"		

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	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE	DESIGN FILL PRESSURE (PSIG)	TOTAL TANK VOLUME	ACCEPTANCE VOLUME	VOLUME		APPROX. OPERATING	BASIS OF DESIGN	REMARKS
	(GALLONS)	(PSIG)		(F313)	(GALLONS)	(GALLONS)	HEIGHT	DIAMETER	WEIGHT (LBS.)	(OR EQUAL)	
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	

					GA	AS FIRE		AILK		LK 30	IILDU	<b></b>			
ID	LOCATION	STORAGE CAPACITY	GAS INPUT	GAS TYPE	MIN. EFFICIENCY	RECOVERY (GPH	INLET TEMP	OUTLET TEMP	FLUE	SIZE	ELECTRICA	AL CHARAC	TERISTICS	BASIS OF DESIGN	REMARKS
		(GALLONS) (BTU/HR)			@100)	(°F)	(°F)	INTAKE	EXHAUST	VOLTS	PHASE	HZ	(OR EQUAL)		
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	

BY DATE

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OFFICE OF FACILITIES & PROPERTY MANAGEMENT NIST - PRIMARY SCHOOL

PLUMBING SCHEDULES

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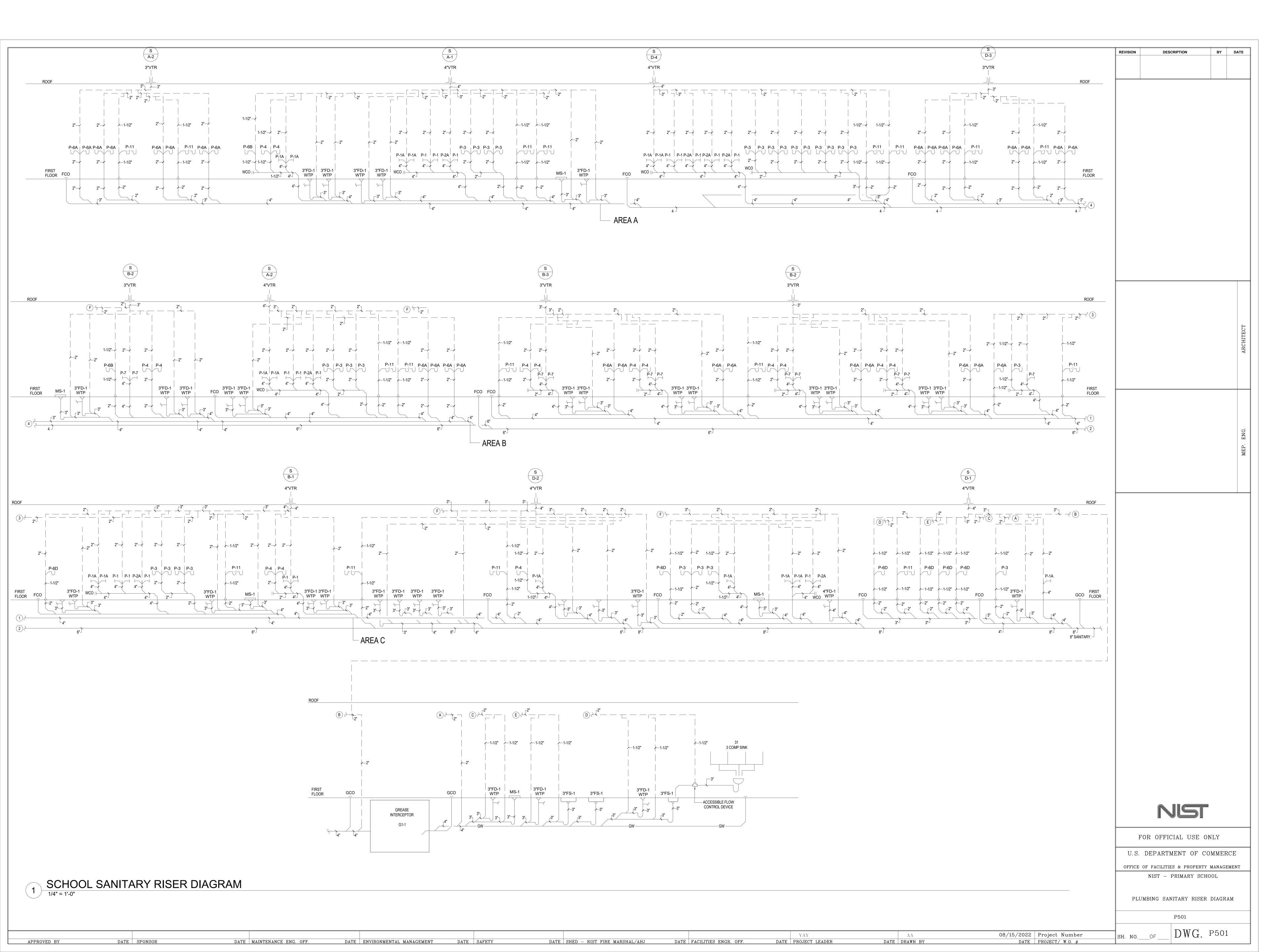
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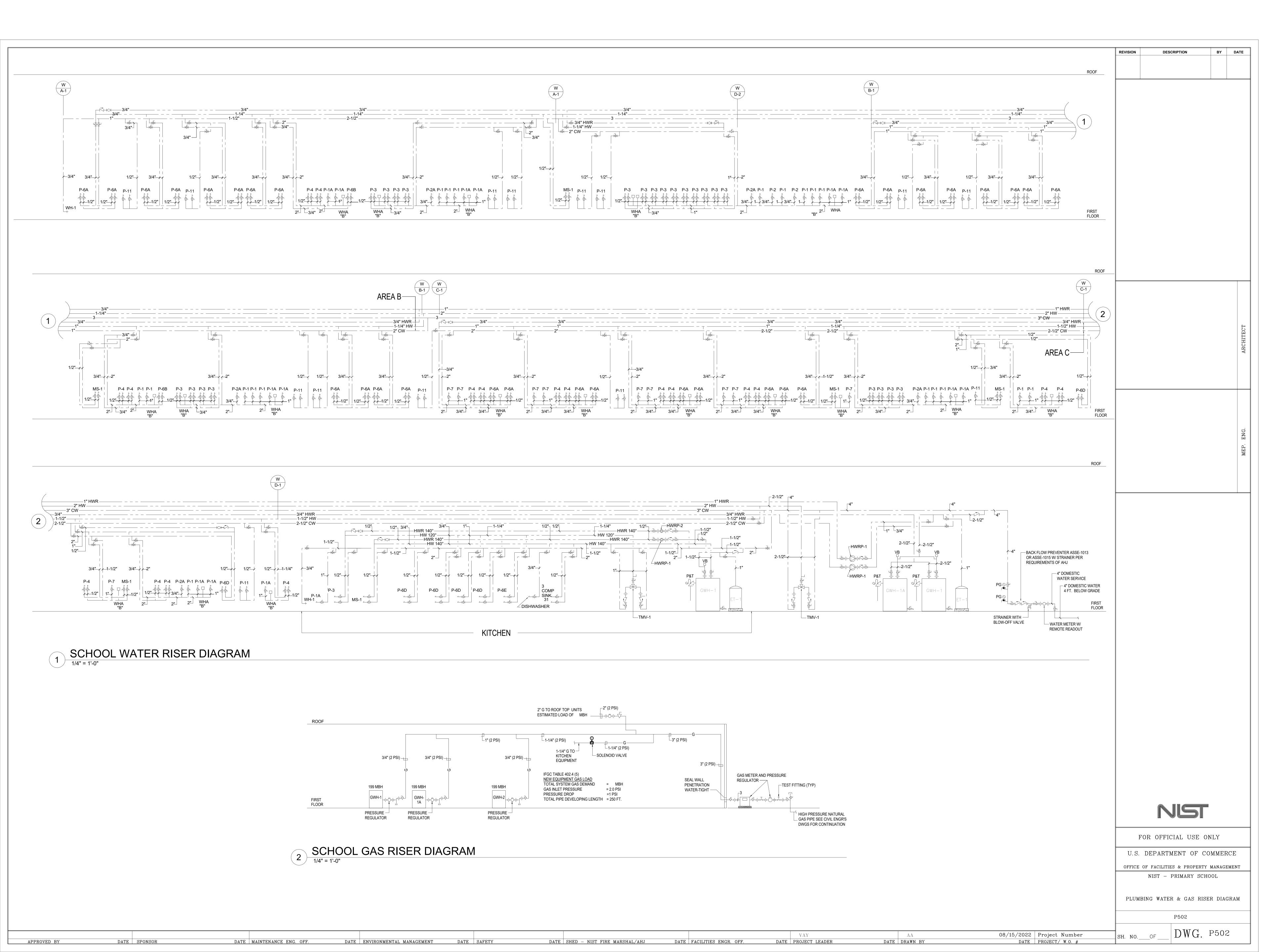
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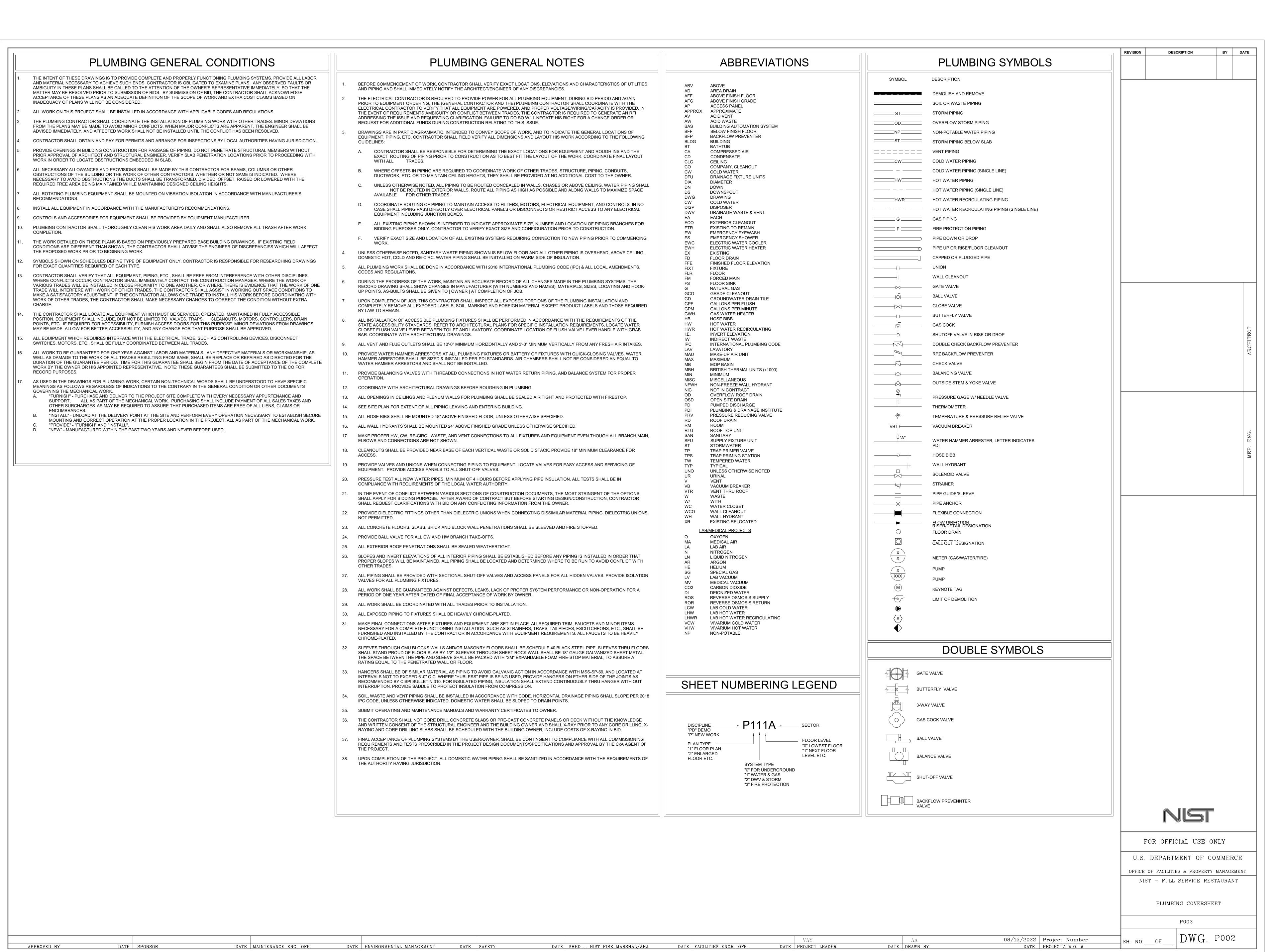
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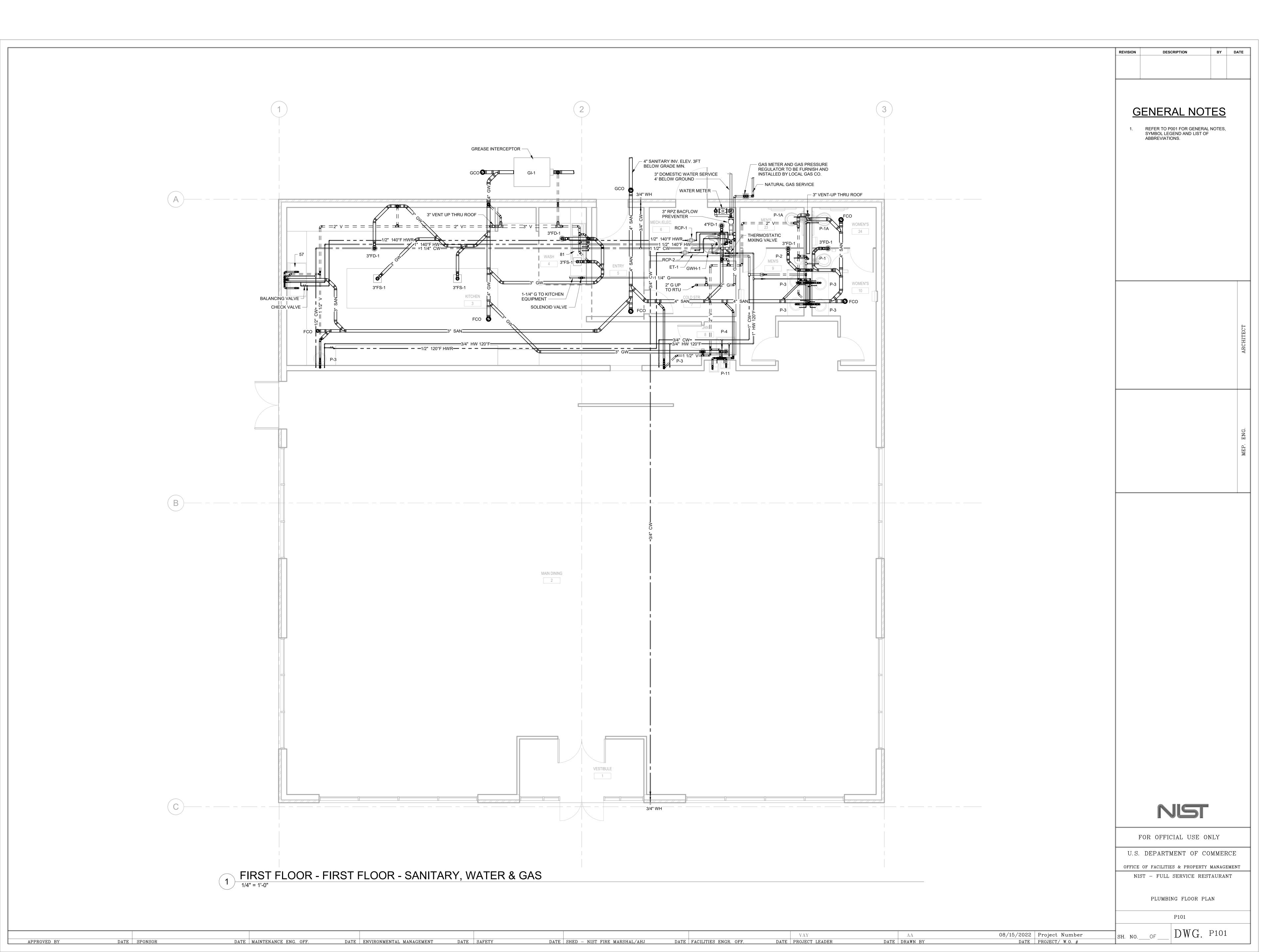
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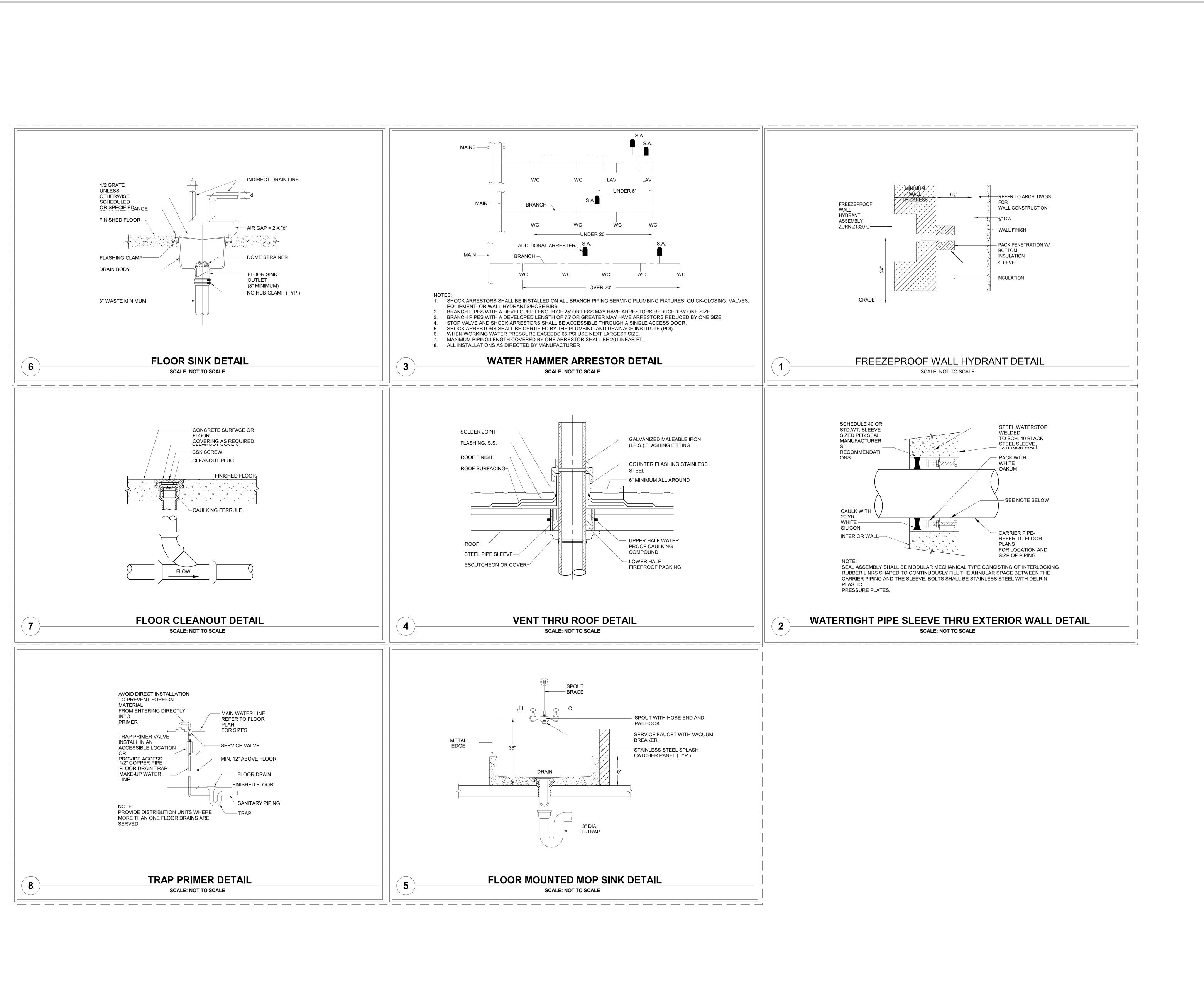
VAY DATE MAINTENANCE ENG. OFF. DATE ENVIRONMENTAL MANAGEMENT DATE SAFETY DATE SHED - NIST FIRE MARSHAL/AHJ DATE FACILITIES ENGR. OFF. DATE PROJECT LEADER DATE DRAWN BY











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REVISION

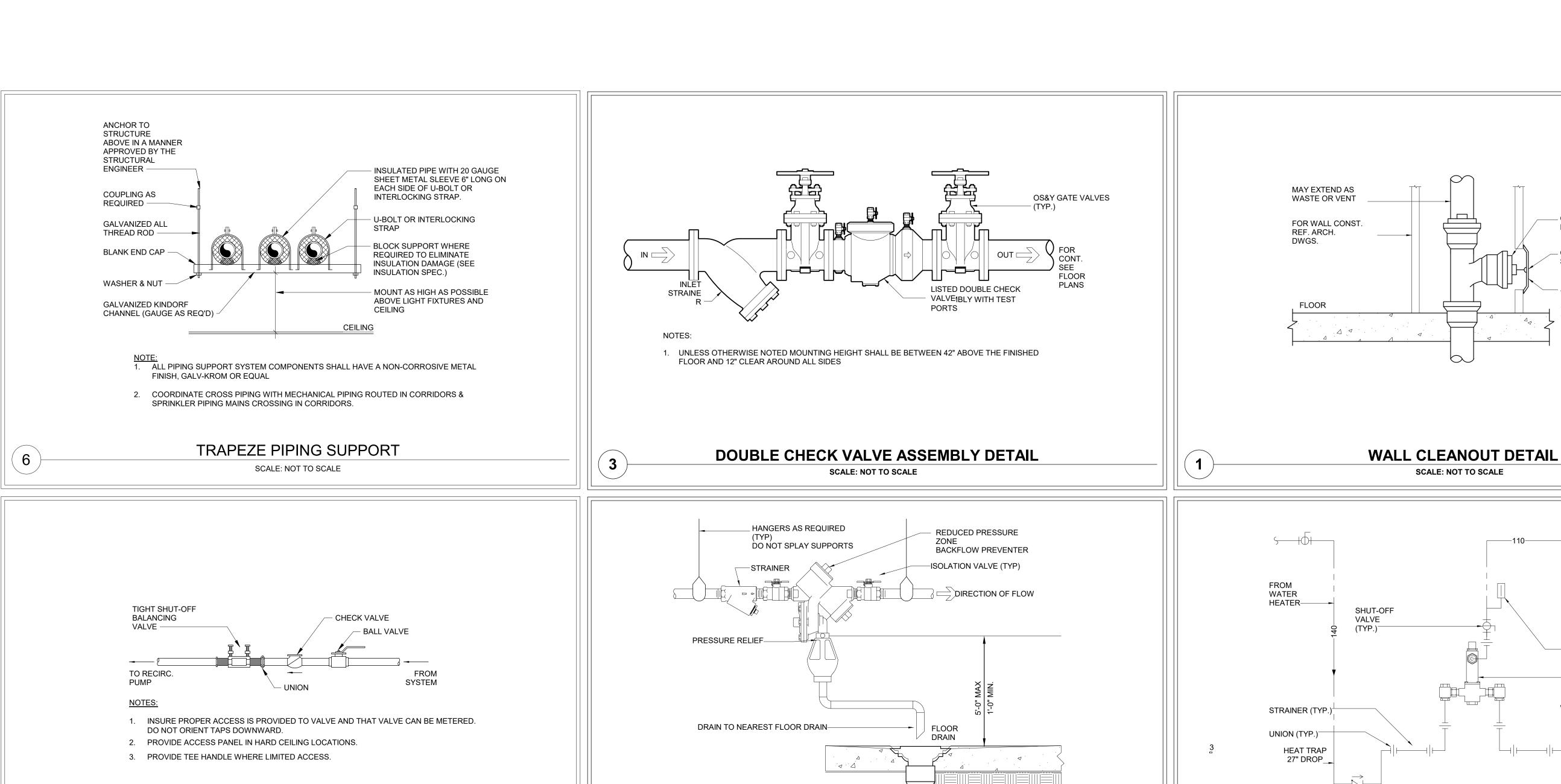
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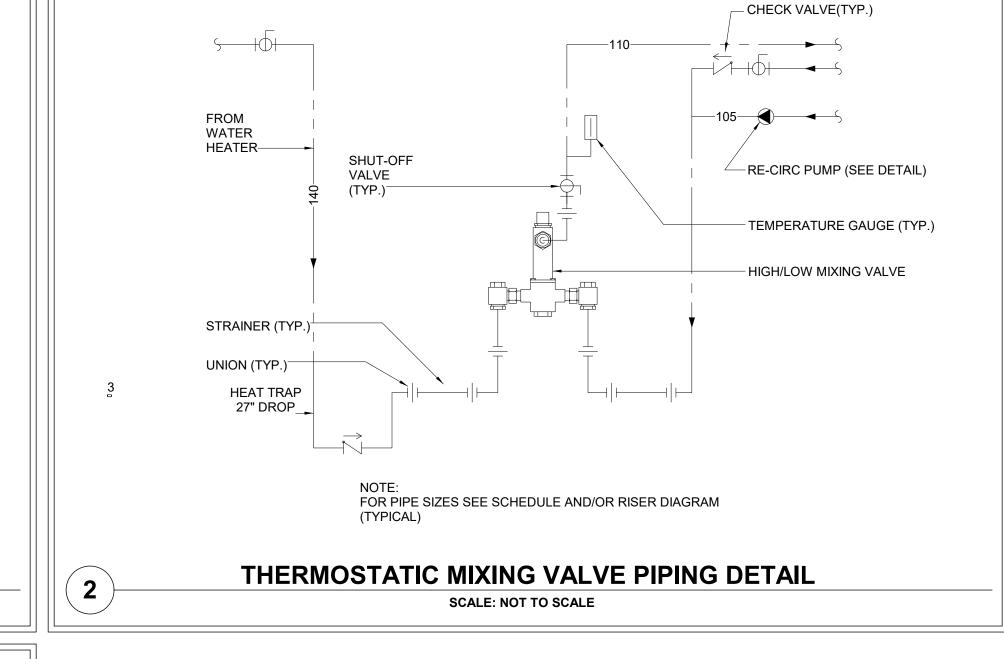
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— CLEANOUT

\_ COUNTERSUNK

ACCESS COVER

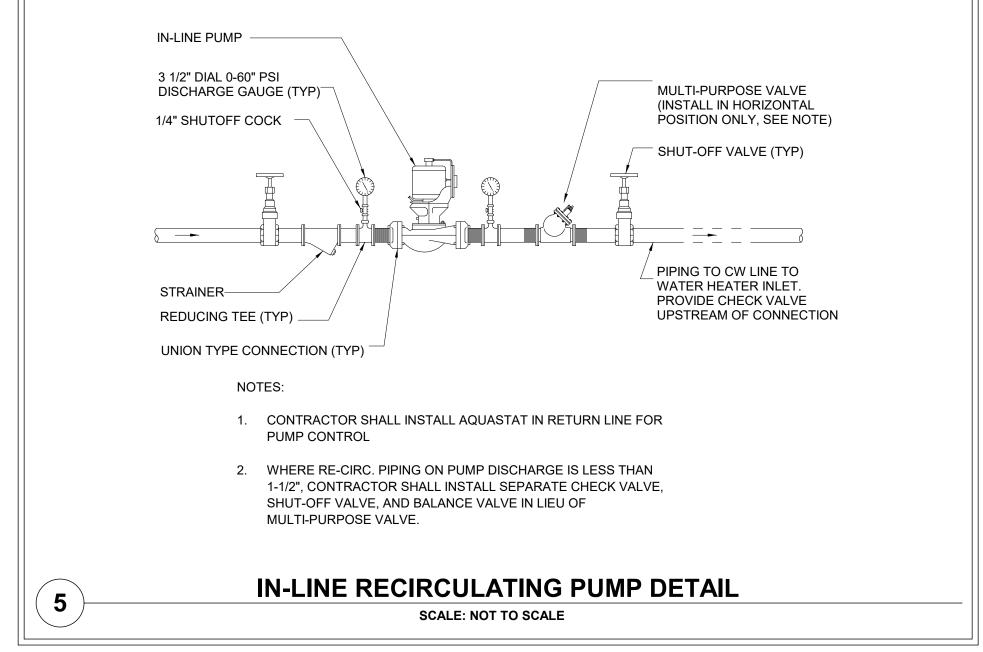
POLISHED

STEEL

STAINLESS

PLUG

SCREW



TYPICAL BFP (UNDER 2 INCH DIAMETER) INSTALLATION DETAIL

SCALE: NOT TO SCALE

REVISION

DESCRIPTION

BY DATE

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NIST - FULL SERVICE RESTAURANT

PLUMBING DETAILS

P302

DATE SPONSOR APPROVED BY DATE MAINTENANCE ENG. OFF.

DATE ENVIRONMENTAL MANAGEMENT

HOT WATER CIRCULATION BALANCING VALVE

SCALE: NOT TO SCALE

DATE SAFETY

DATE SHED - NIST FIRE MARSHAL/AHJ

DATE FACILITIES ENGR. OFF.

VAY DATE PROJECT LEADER

AA DATE DRAWN BY

08/15/2022 Project Number DATE PROJECT/ W.O. #

DWG. P302

	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

			INTER	CEPTC	R SC	HEDUL	_E	
ID	DESCRIPTION	CAPACITY (GAL.)	INLET/ OUTLET SIZES		NK DIMENTIO		BASIS OF DESIGN (OR EQUAL)	REMARKS
				HEIGHT	WIDTH	LENGTH		
GI-1	EXTERIOR GREASE INTERCEPTOR TRIPLE COMPARTMENT	1600	4"	66"	64"	170"	BAYSTAR PRECAST	GREASE INTERCEPTOR SHALL BE ON WSSC APPROVED LIST

PDI#	MINMAX. FIXTURE	CONNECTION SIZE	MANUFACTURER & MODEL NUMBER	
	UNIT CAPACITY		(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	

SLOPE OF HORIZON	TAL DRAINAGE PIPE
SIZE (INCHES)	MINUMUM 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 COL	DE 2018

				PLU	MBIN	G FIXTI	JRE \$	SCHE	DULE
				CO	NNECTION	SIZE			
ID	DESCRIPTION	WASTE	VENT	TRAP	TRAP ARM	TEMPERED	CW	HW	REMARKS
P-1	WATER CLOSET	4"	2"	-	-	-	1"	-	FLOOR 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, FAUCET WITH LEVER HANDLES
P-4	MOP SINK	3"	2"	3"	3"	-	3/4"	3/4"	WALL MOUNTED FAUCET WITH VACUUM BREAKER
P-5	ELECTRIC WATER COOLER	2"	2"	1 1/2"	1 1/2"	-	1/2"	-	STAINLESS STEEL, WALL MOUNTED COOLER, FILTERED, 8 GPH, ADA. COORDINATE WITH ELECTRICAL
WH-1	WALL HYDRANT	-	-	-	-	-	3/4"	-	EXPOSED, NON FREEZE (LOADING DOCK)
WH-1	WALL HYDRANT	-	-	-	-	-	3/4"	-	EXPOSED, NON FREEZE (LOADING DOCK)

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. SET DISCHARGE TO 105° F.
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.

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3. PROVIDE ACCESS PANELS WHERE REQUIRED TO BE IN CONCEALED LOCATIONS

				<b>O</b> 7 ( <b>O</b> 1		WATE			· · · · · ·						
ID	LOCATION	STORAGE CAPACITY	GAS INPUT	GAS	MIN. EFFICIENCY	RECOVERY (GPH)	INLET TEMP	OUTLET TEMP	FLUE (INCH)			FLUE SIZE (INCH) EACH		BASIS OF	DEMARKO.
טו	LOCATION	(GALLONS) EACH	(MBTU/HR) EACH	TYPE	(%)	ÈACH	(°F)	(°F)	INTAKE	EXHAUST	VOLTS	PHASE	HZ	DESIGN (OR EQUAL)	REMARKS
GWH-1	MECHANICAL ROOM	100	199	NATURAL	96	230	40	140	4	4	120	1	60	A.O. SMITH CYCLONE, BTH-199 (A)	EXTEND FRESH AIR AND EXHAUST TO ATMOSPHERE

				DOME2	IIC WA	TER EXPAN	1910N	IANN SU	CHEDULE		
ID	WATER HEATER VOLUME	MAX. TEMP. (°F)	MAX. OPERATING PRESSURE	DESIGN FILL PRESSURE	TOTAL TANK VOLUME	AC C EPTANC E VOLUME	TANK [	DIMENSIONS	APPROX. OPERATING	BASIS OF DESIGN	REMARKS
	(GALLONS)	12WI . (1)	(PSIG)	(PSIG)	(GALLONS)	(GALLONS)	HEIGHT	DIAMETER	WEIGHT (LBS.)	(OR EQUAL)	

						PU	MP SC	HEDULE	
ID	DESCRIPTION	GPM	HEA D (FT.)	HP	VOLTAGE	PHASE	RPM	BASIS OF DESIGN (OR EQUAL)	REMARKS
CP- 1 & 2	HOT WATER CIRCULATING	2	10	1/16	115	1		GRUNFUS MAGNA3	IN-LINE

DATE ENVIRONMENTAL MANAGEMENT

DATE SAFETY

DATE MAINTENANCE ENG. OFF.

				WA	TER		WASTE		G/	AS	
ITEM	QTY.	DESCRIPTION	HW	CW	FILTERED	DW	IW	VENT SIZE	GAS SIZE	MBTU	REMARKS
1	1	WALK-IN COOLER/FREEZER									(1)
2	1	COOLER REFRIGERATION SYSTEM									
3	1	FREEZER REFRIGERATION SYSTEM									
11	5	HAND SINK	1/2"	1/2"		1 1/2"		1 1/2"			2 3
13	1	PREP SINK	1/2"	1/2"		1 1/2"					
15	1	VENTILATOR									
15a	1	FIRE PROTECTION SYSTEM									
16	1	COMBI OVEN		3/4"	3/4"		2"				(1)
17	1	CONVECTION OVEN							3/4"	55.0(2)	
18	1	TILTING SKILLET, 30-GALLON	1/2"	1/2"					3/4"	91.0	
19	1	TILTING KETTLE, 40-GALLON							3/4"	140.0	
20	1	FLOOR TROUGH				4"		2"		7.2	
22	1	VENTILATOR				<u> </u>		_			
23	1	CHARBROILER							3/4"	87.0	
24	1	GRIDDLE							3/4"	120	
26	1	FRYER ASSEMBLY							1"	120	
27	1	REACH-IN FREEZER, MOBILE							<u>'</u>	366.0	
33	1	VENTILATOR								000.0	
34	1	CONVEYOR OVEN									
36	3	HAND SINK	1/2"	1/2"		1 1/2"		1 1/2"			2 3
42	2	DROP-IN HOT FOOD WELL	1/2	1/2"		1 1/2	1"	1 1/2			(1) (4)
43	2	DROP-IN COLD FOOD WELL		1/2			1"				(1)
47	1	TEA DISPENSER			1/4"		I				4)
48	1	COFFEE BREWER		3/8"	1/4						+ ×
	1			-	4/0"		2"				4
49	1	CONDIMENT COUNTER MODILE		1/2"	1/2"		1"				
53	1	SALAD BAR COUNTER, MOBILE	4 /0!!	4/0"			I				
56	1	RETRACTABLE HOSE REEL	1/2"	1/2"			0"				(4)
57	1	POT WASHING SINK	3/4"	3/4"		0"	2"	4.4/0"			
59	1	DISPOSER	4 (0)	1/2"		2"	0"	1 1/2"			<u>(4)</u>
60	1	SOILED DISHTABLE	1/2"	1/2"			2"				
61	1	CONDENSATE CANOPY	0/4"	0/4"			1/2"				1
62	1	DISHMACHINE	3/4"	3/4"		0"	1 1/2"	4.4/0"			(1)
65	1	MOP SINK	1/2"	1/2"		3"		1 1/2"			
68	1	PREP SINK	1/2"	1/2"			1 1/2"				1
70	1	VENTILATOR							<b>-</b>	65 -	
71	1	GRIDDLE							3/4"	60.0	
72	1	CHARBROILER							3/4"	58.0	
74	1	RANGE								60.0	
78	1	DROP-IN HOT FOOD WELL		1/4"			1"				1 4
78A	1	FOOD PROTECTOR WITH LIGHTS									
79	1	DROP-IN COLD FOOD WELL					1"				1
80	1	DISPOSER		1/2"		2"		1 1/2"			
81	1	POT WASHING SINK	3/4"	3/4"			2"				

### REMARKS:

DATE SHED - NIST FIRE MARSHAL/AHJ

- 1 INDIRECT WASTE PIPES SHLL BE EXTENDED AND SPILLED OVER NEAREST FLOOR SINK. PROVIDE 1-INCH MINIMUM OF AIR GAP.
- 2 PROVIDE 1/2" COLD AND HOT WATER SUPPLIES WITH STOP, 1 1/2" TAILPIECE AND 1 1/2" 'P' TRAP.
- 3 PROVIDE TEMPERING VALVE ASSE 1070 POWERS LFe-480 (0.5 GPM) AND/OR LFG-480 (0.25 GPM). VALVE TO BE SET AT 105 DEGREES FAHRENHEIT.
- 4 PROVIDE DUAL CHECK VALVE ASSE 1024

		THERMOSTATIC CONTROLLERS	RI	JN OUT PIPE S	SIZES	BASIS OF	
ID	AREA/SYSTEM SERVED	GPM (FLOW @ 20 PSI)	CW INLET	HW INLET	TEMPERED WATER OUTLET	DESIGN (OR EQUAL)	REMARKS
TMV-1	GENERAL BLDG FIXTURES		1 1/4"	1 1/4"	1 1/2"	LAWLER MODEL 805	PROVIDE HIGH/LOWTYPE VALVE, SE @ 120°F

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				

	TRA	P PRI	MINO	S STATION SCHEDULE
ID	ELECTRICAL CHARACTERISTICS			BASIC OF DESIGN ( OR EQUAL)
ID	AMPS	VOLTAG F	PHASE	
TSP-1	5	120	1	PPP INC. PTS SERIES, SURFACE MOUNTED

VAY

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	ARCHITECT
	MEP. ENG.
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NIST - FULL SERVICE RESTAURANT

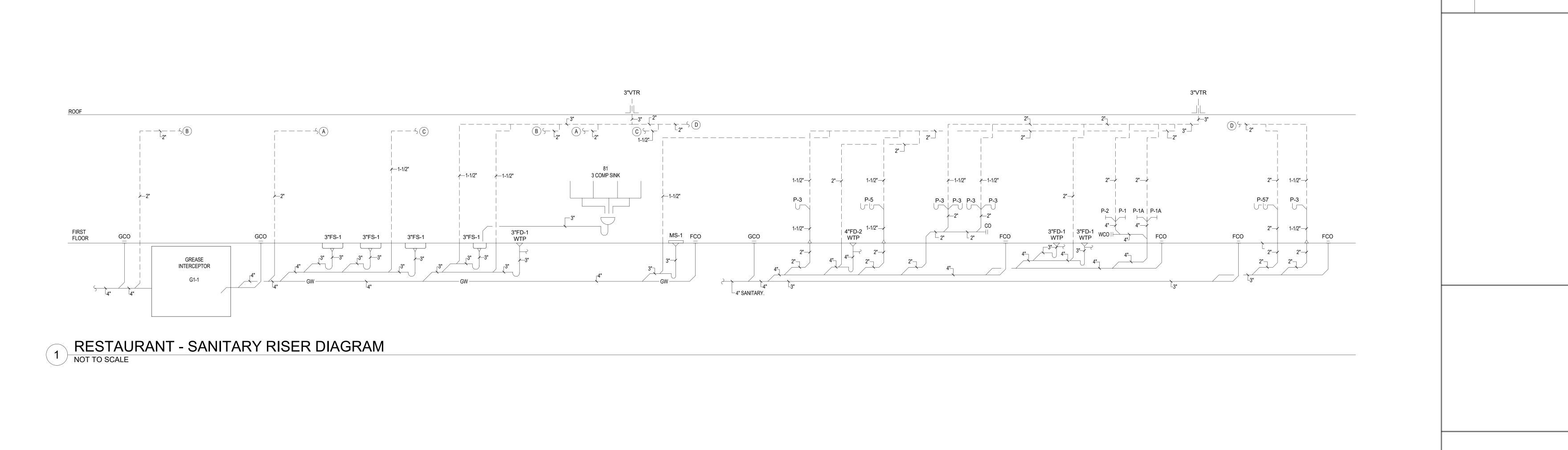
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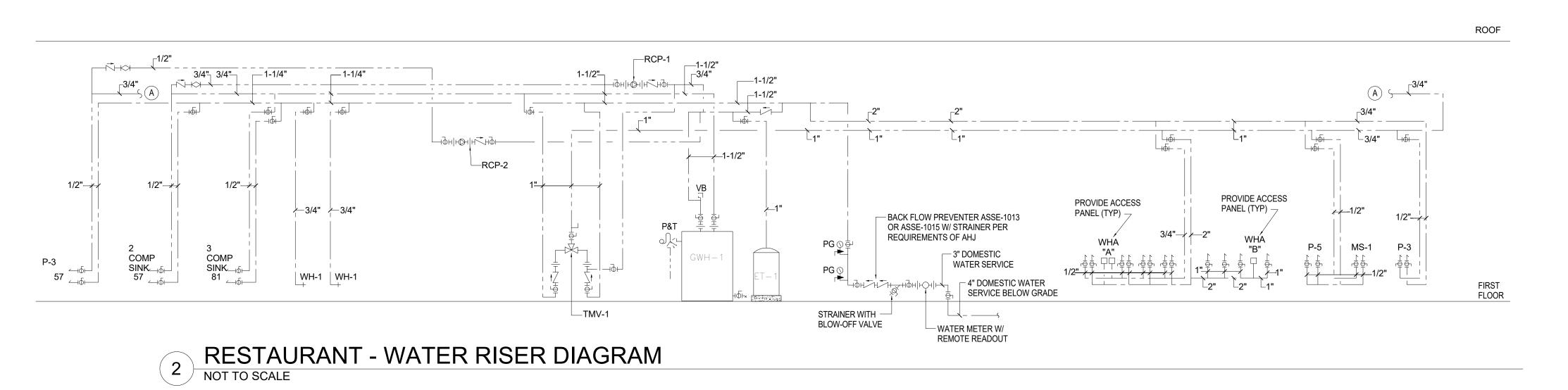
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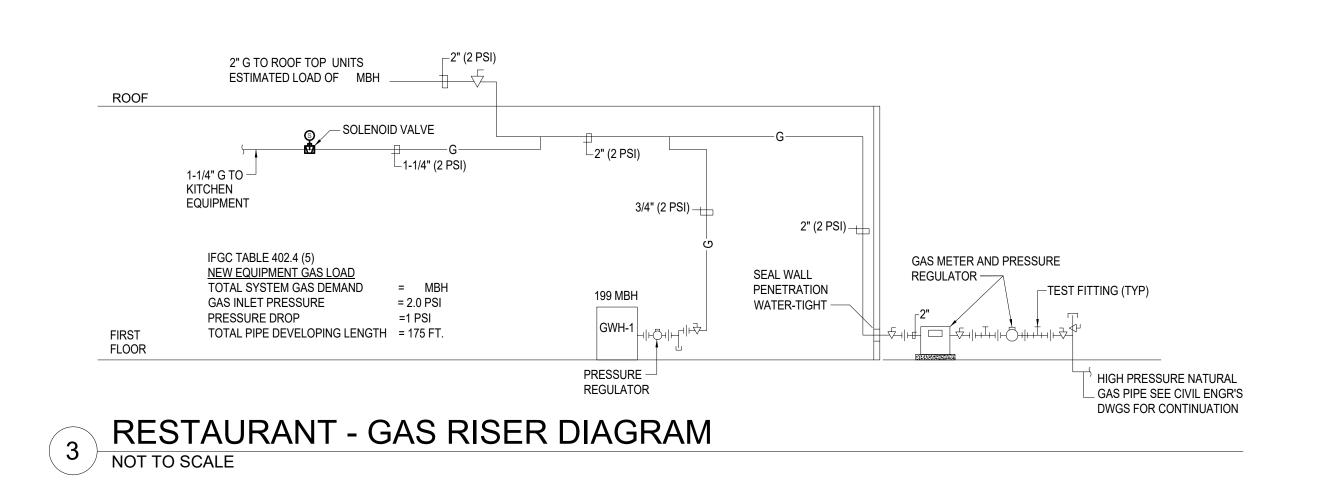
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NIST - FULL SERVICE RESTAURANT

BY DATE

RISER DIAGRAM
P501

08/15/2022 Project Number SH. NO. OF DATE PROJECT/ W.O. #

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