

PLUMBING LEGEND		ABBREVIATIONS		
120 HOT WATER SUPPLY		DHW	AAV	AIR ADMITTANCE VALVE
HOT WATER RETURN		HWR	AFF	ABOVE FINISHED FLOOR
COLD WATER SUPPLY		DCW	AHAP	AS HIGH AS POSSIBLE
SANITARY		SAN	BFP	BACK FLOW PREVENTOR
KITCHEN GREASE SANITARY		GW	BF	BELOW FLOOR
STORM		ST	BFF	BELOW FINISHED FLOOR
STORM OVERFLOW		OF	BG	BELOW GRADE
VENT PIPING		VENT	BOD	BASIS OF DESIGN
CONDENSATE		C	C	CONDENSATE
ELBOW, TURNED DOWN		DN	CO	CLEAN OUT
ELBOW, TURNED UP		UP	CWV	COMBINATION WASTE AND VENT
ELBOW, 90°		90°	DCW	DOMESTIC COLD WATER
CONNECTION, TOP		TOP	DHW	DOMESTIC HOT WATER
CONNECTION, BOTTEM		BOTTEM	DN	DOWN
CONNECTION, SIDE		SIDE	ECO	EXTERIOR CLEANOUT
CAP, AIR AND WATER TIGHT		CAP	EWV	ELECTRIC WATER COOLER
VENT THROUGH ROOF		VENT	EWV	ELECTRIC WATER COOLER
RECIRCULATION PUMP		REC	EX	EXISTING
CHECK VALVE / BACKFLOW PREVENTOR		CHECK	FC	FLOW CONTROL VALVE
BALL VALVE		BALL	FCO	FLOOR CLEANOUT
FLOW CONTROL VALVE		FLOW	FD	FLOOR DRAIN
WATER METER		METER	GWV	GAS WATER HEATER
PRESSURE REGULATOR		REG	HB	HOSE BIBB
SOLENOID SHUTOFF VALVE		SOLE	HD	HUB DRAIN
HOSE BIBB WITH VACUUM BREAKER		HOB	HWR	HOT WATER RETURN
AIR ADMITTANCE VALVE (BOD: STUDOR)		AAV	IE	INVERT ELEVATION
UNION		UNION	IM	ICE MAKER VALVE BOX
WALL CLEANOUT		WCO	IRP	IN-LINE RECIRCULATION PUMP
FLOOR CLEANOUT		FCO	L	LAVATORY
FLOOR DRAIN		FD	MS	MOP SINK
FLOOR SINK		FS	PF	PLUMBING FIXTURE
EXISTING SYSTEM PIPING		EX	SAN	SANITARY WASTE
TO BE DEMOLISHED		EX	SH	SHOWER
DEMOLITION KEYNOTE		DEM	SK	STAINLESS STEEL SINK
RENOVATION KEYNOTE		REN	TYP	TYPICAL
CONNECT TO EXISTING		CON	TMV	THERMOSTATIC MIXING VALVE
LIMITS OF DEMOLITION		LIMITS	UNO	UNLESS NOTED OTHERWISE
ACCESS PANEL		ACC	UR	URINAL
MIN. INVERT ELEVATION		MIN	VTR	VENT THROUGH ROOF
			WC	WATER CLOSET
			WCO	WALL CLEAN OUT
			WH	WALL HYDRANT
			WHA	WATER HAMMER ARRESTER
			WHY	FREEZE PROOF WALL HYDRANT
			XT	EXPANSION TANK

GAS PIPING	POTABLE WATER
1. INSTALL GAS PIPING, APPLIANCES, AND SPECIALTIES IN ACCORDANCE WITH FBC-FUEL GAS SECTION 8.07, 8TH ED. NFPA-54. 2. CLEARANCES. UNDERGROUND GAS PIPING SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE TO AVOID CONTACT THEREWITH, TO ALLOW MAINTENANCE, AND TO PROTECT AGAINST DAMAGE FROM PROXIMITY TO OTHER STRUCTURES. IN ADDITION, UNDERGROUND PLASTIC PIPING SHALL BE INSTALLED WITH ADEQUATE CLEARANCE OR SHALL BE INSULATED FROM ANY SOURCE OF HEAT SO AS TO PREVENT THE HEAT FROM IMPAIRING THE SERVICEABILITY OF THE PIPE. 3. COVER REQUIREMENTS. UNDERGROUND PIPING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF 18IN. OF COVER. WHERE EXTERNAL DAMAGE TO THE PIPE IS NOT LIKELY TO RESULT, THE MINIMUM COVER SHALL BE 12IN(300MM). WHERE A MINIMUM OF 12IN OF COVER CANNOT BE PROVIDED, THE PIPE SHALL BE INSTALLED IN CONDUIT OR BRIDGED(SHIELDED). 4. THROUGH FOUNDATION WALL. UNDERGROUND PIPING, WHERE INSTALLED THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED IN A PROTECTIVE PIPE. THE SPACE BETWEEN THE GAS PIPING AND THE BUILDING SHALL BE SEALED TO PREVENT ENTRY OF GAS OR WATER. 5. PIPING UNDERGROUND BENEATH BUILDINGS. WHERE THE INSTALLATION OF GAS PIPING UNDERGROUND BENEATH BUILDINGS IS UNAVOIDABLE, THE PIPING SHALL BE ENCASED IN AN APPROVED CONDUIT DESIGNED TO WITHSTAND THE SUPERIMPOSED LOADS. THE CONDUIT SHALL EXTEND INTO A NORMALLY USABLE AND ACCESSIBLE PORTION OF THE BUILDING AND, AT THE POINT WHERE THE CONDUIT TERMINATES IN THE BUILDING, THE SPACE BETWEEN THE CONDUIT AND THE GAS PIPING SHALL BE SEALED TO PREVENT THE ESCAPE OF GAS OR THE ENTRY OF WATER. IF THE PIPING IS OF A TYPE THAT WILL RETAIN THE FULL PRESSURE OF THE PIPE, THE CONDUIT SHALL BE DESIGNED FOR THE SAME PRESSURE AS THE PIPE. THE CONDUIT SHALL EXTEND AT LEAST 4IN(100MM) OUTSIDE THE BUILDING, BE VENTED ABOVE GRADE TO THE OUTSIDE, AND BE INSTALLED SO AS TO PREVENT THE ENTRANCE OF WATER AND INSECTS. 6. CONNECTION OF PLASTIC PIPING. PLASTIC PIPE SHALL BE INSTALLED OUTSIDE, UNDERGROUND ONLY. 7. CONNECTIONS BETWEEN METALLIC AND PLASTIC PIPING. CONNECTIONS MADE OUTSIDE AND UNDERGROUND BETWEEN METALLIC AND PLASTIC PIPING SHALL BE MADE ONLY WITH ASTM D 2515 STANDARD SPECIFICATION FOR THERMOPLASTIC GAS PRESSURE PIPE, TUBING, AND FITTINGS, CATEGORY I TRANSITION FITTINGS. 8. HANGERS, SUPPORTS, AND ANCHORS. PIPING SHALL BE SUPPORTED WITH PIPE HOOKS, METAL PIPE STANDS, BANDS, BRACKETS, OR HANGERS SUITABLE FOR THE SIZE OF PIPING, OF ADEQUATE STRENGTH AND QUALITY, AND LOCATED AT INTERVALS SO AS TO PREVENT OR DAMP OUT EXCESSIVE VIBRATION. PIPING SHALL BE ANCHORED TO PREVENT UNDUE STRAINS ON CONNECTED EQUIPMENT AND SHALL NOT BE SUPPORTED BY OTHER PIPING. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF ANSISMS SP-58. PIPE HANGERS AND SUPPORTS-MATERIALS, DESIGN AND MANUFACTURE. 9. OTHER OCCUPANCIES. IN OTHER THAN INDUSTRIAL OCCUPANCIES AND WHERE APPROVED BY THE AUTHORITY HAVING JURISDICTION, GAS PIPING EMBEDDED IN CONCRETE FLOOR SLABS CONSTRUCTED WITH PORTLAND CEMENT SHALL BE DISJOINED WITH A MINIMUM OF 1/2IN(12.5MM) CLEARANCE TO 1/2 IN PHYSICAL CONTACT WITH OTHER METALLIC STRUCTURES SUCH AS REINFORCING RODS OR ELECTRICALLY NEUTRAL CONDUCTORS. ALL PIPING, FITTINGS, AND RISERS SHALL BE PROTECTED AGAINST CORROSION IN ACCORDANCE WITH NFPA-54. PIPING SHALL NOT BE EMBEDDED IN CONCRETE SLABS CONTAINING QUICKSET ADDITIVES OR GINER AGGREGATE. 10. EACH OUTLET, INCLUDING A VALVE, SHALL BE CLOSED GAS TIGHT WITH A THREADED PLUG OF CAP IMMEDIATELY AFTER INSTALLATION AND SHALL BE LEFT CLOSED UNTIL THE GAS UTILIZATION EQUIPMENT IS CONNECTED THERETO. WHEN EQUIPMENT IS DISCONNECTED FROM AN OUTLET AND THE OUTLET IS NOT TO BE USED AGAIN IMMEDIATELY, IT SHALL BE CLOSED GAS TIGHT. 11. GAS APPLIANCE FLEXIBLE CONNECTIONS SHALL BE MADE IN COMPLIANCE WITH FBC-FG SECTION 411.1 AND 411.1.1.	1. ALL POTABLE WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH THE PLUMBING CODE AND VERIFIED BY WRITTEN REPORT FROM THE STATE BOARD OF HEALTH. 2. ALL PLUMBING PIPING SHALL BE CONCEALED IN FLOORS, WALLS, OR ABOVE CEILINGS AS APPLICABLE EXCEPT AT IMMEDIATE FIXTURE. 3. PROVIDE HANGERS FOR SUPPLY PIPING AT A MAXIMUM SPACING OF 3 FEET. 4. PROVIDE WATER HAMMER ARRESTORS AT EACH FIXTURE, QUICK CLOSING VALVE, OR BATTERY OF FIXTURES WHERE REQUIRED AND PER FBC-P 604.9. ARRESTORS SHALL BE FACTORY FABRICATED. SIZED PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I WH-201. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER HAMMER ARRESTORS AS SPECIFIED. 5. BALL VALVES 1/4" THRU 2" SHALL BE TWO PIECE - 600 WOG, TEFLON SEATS, ANSI 316 STAINLESS STEEL BALL AND STEM (EXTENSION STEM ON INSULATED HOT WATER AND TEMPERED HOT WATER), BRONZE BODY WITH THREADED OR SOLDER ENDS. 6. DURING CONSTRUCTION ALL PRESSURE PIPING SYSTEMS SHALL RECEIVE A HYDROSTATIC TEST OF 1-1/2 TIMES THE OPERATING PRESSURE FOR A PERIOD OF NOT LESS THAN EIGHT (8) HOURS. NO LEAKAGE EVIDENT DURING THE TEST PERIOD IS ALLOWED. NOTIFY THE ARCHITECT AND ENGINEER OF RECORD 24 HOURS IN ADVANCE OF ANY TESTING SO THAT THE ARCHITECT MAY OBSERVE IF THE NEED IS CALLED FOR. PIPING SYSTEMS EQUIPMENT - SPECIALTIES, PUMPS, TRAPS, VALVES, STRAINERS, ETC. SHALL BE INSPECTED AND TESTED FOR PROPER FUNCTIONALITY AT THE CONCLUSION OF CONSTRUCTION AND ANY LEAKAGE OR MALFUNCTIONS SHALL BE REPAIRED. 7. PROVIDE ISOLATION AND ASSE1024 DUAL CHECK BACKFLOW PREVENTION BEFORE AND BEVERAGE CONNECTION, CARBONATED DEVICE(ASSE1022), STERILIZATION EQUIPMENT, AND ICE MACHINE SUPPLY, PER FBC-P608.3 AND 608.17. 8. MOUNT HOSE BIBBS 24" ABOVE FINISHED GRADE, UNLESS OTHERWISE NOTED. 9. ALL PRESSURE PIPING SHALL BE INSTALLED ABOVE CEILING AND IN WALLS UNLESS NOTED OTHERWISE. 10. BELOW GRADE 10.1. PIPING SHALL BE COATED WITH HEAVY TROWEL GRADE LION OIL CO. NOKORODE SEALKOTE OR APPROVED EQUAL. 10.2. UNDERGROUND SERVICE PIPING SHALL BE COPPER TUBING. 11. PIPING SPECIFICATIONS 11.1. ABOVE GRADE DOMESTIC COLD WATER SUPPLY PIPING SHALL BE HIGH IMPACT CPVC WITH SOLVENT WELD FITTINGS. 11.1.1. PROVIDE TRANSITION FITTINGS AS REQUIRED TO INSTALL VALVES, FIXTURE STOPS, EQUIPMENT AND OTHER COMPONENTS. 11.1.2. ALL PIPES AND FITTINGS SHALL CONFORM TO ASTM 1784. 11.2. PIPING LOCATED IN RETURN AIR PLENUMS SHALL BE TYPE L HARD COPPER TUBE OR CPVC WITH 1" THICK FIRE WRAP INSULATION SEALED TO PROVIDE F/S/D-2550. 11.3. EXPOSED PIPING SHALL BE TYPE L HARD COPPER TUBE PAINTED TO MATCH ADJACENT ARCHITECTURAL SURFACE. 12. INSULATION SPECIFICATIONS 12.1. INSULATE COLD WATER SUPPLY PIPING IN EXTERIOR WALLS AND ATTIC AS WELL AS ALL HOT WATER WITH 1" MOCOLOCK PRE-SLIT, PRE-GLUED INSULATION. INSULATE FITTINGS WITH MITERED CUT PIECES OF MOCOLOCK, 1" INSULATION. 12.2. THERE SHALL BE NO EXPOSED HOT WATER SUPPLY PIPING EXCEPT WITHIN MECHANICAL OR EQUIPMENT ROOMS. 12.3. PIPING UNDER HANDICAPPED LAVATORIES SHALL BE INSULATED PER AMERICANS

CODE REFERENCE (ALL MAY NOT APPLY)		
THE LATEST EDITIONS OF THE ESTABLISHED STANDARDS OF THE FOLLOWING ORGANIZATIONS, AND INDIVIDUAL STANDARDS NAMED SHALL BE FOLLOWED THE SAME AS IF THEY WERE FULLY WRITTEN HEREIN AND CONSTITUTE A PART OF THE SPECIFICATION REQUIREMENTS EXCEPT WHERE OTHERWISE SPECIFIED:		
FBC,BUILDING	FLORIDA BUILDING CODE 8TH EDITION	
FBC,PLUMBING	FLORIDA BUILDING CODE 8TH EDITION	
FBC,EXISTING BUILDING	FLORIDA BUILDING CODE 8TH EDITION	
FBC, FUEL GAS	FLORIDA BUILDING CODE 8TH EDITION	
FBC, ENERGY CONSERVATION	FLORIDA BUILDING CODE 8TH EDITION	
FFPC	FLORIDA FIRE PREVENTION CODE, 2023 8TH EDITION	
NFPA 54	NATIONAL FUEL GAS CODE	
NFPA 101	LIFE SAFETY CODE	
NFPA 101A	GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY	
NFPA 101B	CODE FOR MEANS OF EGRESS FOR BUILDINGS AND STRUCTURES	
NFPA 900	BUILDING ENERGY CODE	
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	
ADA	AMERICAN WITH DISABILITIES ACT	
UL	UNDERWRITERS LABORATORIES	
THESE CODE AND STANDARDS SHALL BE CONSIDERED A MINIMUM REQUIREMENT. THE CONTRACTOR SHALL NOT RELIEVED FROM PROVIDING HIGHER GRADE MATERIALS, PRODUCTS AND WORKMANSHIP WHICH MAY BE SPECIFIED WITHIN THESE DOCUMENTS		
INTERIOR CLEANOUT SCHEDULE		
LOCATION	TYPE	JR SMITH M#:
FLOOR (FCO) (CAST IRON BODY, BRONZE PLUG, THREADED BRONZE TOP)		4028C
WALL (WCO) (CAST IRON BODY, BRONZE PLUG STAINLESS STEEL COVER)		4532S
EXPOSED (TCO) (CAST IRON BODY, BRONZE PLUG, THREADED CAP)	HORIZONTAL	4400C
	VERTICAL	4512S

EXTERIOR CLEANOUT SCHEDULE	
TYPE	JR SMITH MW:
ONE WAY (CAST IRON BODY, BRONZE PLUG, CAST IRON TOP TAPER THREAD)	4233L
TWO WAY (CAST IRON BODY, BRONZE PLUG, CAST IRON TOP TAPER THREAD)	4233L

WATER HAMMER ARRESTOR SCHEDULE						
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330
JR SMITH M#:	5005	5010	5020	5030	5040	5050

SUBMITTAL REQUIREMENTS

1. USE OF AN APPROVAL STAMP ON SUBMITTAL DOCUMENTS CERTIFIES THAT THE CONTRACTOR HAS COMPLIED WITH THE CONTRACT DOCUMENT REQUIREMENTS.
2. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT/ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES, OR SIMILAR SUBMITTAL ITEMS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT/ENGINEER IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND THE ARCHITECT/ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SAMPLES, OR SIMILAR SUBMITTAL ITEMS BY THE ARCHITECT/ENGINEER'S APPROVAL THEREOF.
3. CONTRACTOR SHALL SUPPLY TO THE ARCHITECT SUBMITTALS ON THE FOLLOWING WHERE APPLICABLE (ALL MAY NOT APPLY):
 - 3.1. PLUMBING FIXTURES
 - 3.2. PIPE AND FITTINGS
 - 3.3. INSULATION MATERIALS
 - 3.4. PLUMBING ACCESSORIES AND SPECIALTIES
 - 3.5. VALVES
 - 3.6. HOT WATER HEATER

ENERGY SYSTEMS - WATER HEATING

1. SERVICE WATER HEATING EQUIPMENT SHALL ALLOW LAVATORY OUTLET TEMPERATURES IN PUBLIC FACILITY RESTROOMS SHALL BE LIMITED TO 110°F. CONTROL BY TMV.
2. WATER-HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE REQUIREMENTS OUTLINED IN FBC CHAPTER 4, TABLE C404.2 AND THE EFFICIENCY SHALL BE VERIFIED THROUGH DATA FURNISHED BY THE MANUFACTURER THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM.
3. ALL HOT WATER SUPPLY AND RECIRCULATION PIPING IN THE HOT WATER SYSTEM SHALL BE INSULATED WITH MINIMUM 1IN OF INSULATION HAVING A CONDUCTIVITY OF 0.27 (BTU / IN / H X FT² X °F).
4. CIRCULATING HOT WATER SYSTEM PUMPS OR HEAT TRACE SHALL BE ARRANGED TO BE TURNED OFF EITHER AUTOMATICALLY OR MANUALLY WHEN THERE IS LIMITED HOT WATER DEMAND. READY ACCESS SHALL BE PROVIDED TO THE OPERATING CONTROLS.
5. FOR NON-CIRCULATING STORAGE WATER TANKS HEAT TRAPS MUST BE INSTALLED ON THE SUPPLY AND DISCHARGE PIPING ASSOCIATED WITH THE EQUIPMENT.
6. CONDENSER HEAT RECOVERY SHALL BE INSTALLED FOR HEATING OR REHEATING OF SERVICE HOT WATER, PROVIDED THE FACILITY OPERATES 24 HOURS A DAY. THE TOTAL HEAT CAPACITY OF WATER-COOLED SYSTEMS EXCEEDS 6,000,000 BTU/HR OF HEAT REJECTION, AND THE DESIGN SERVICE WATER HEATING LOAD EXCEEDS 1,000,000 BTU/HR. THE HEAT RECOVERY SHALL PROVIDE THE SMALLER OF EITHER: 60% OF THE PEAK HEAT REJECTION LOAD AT DESIGN CONDITIONS, OR PROVIDE THE PREHEATING REQUIRED TO RAISE THE PEAK SERVICE HOT WATER DRAW TO 85°F.

PLUMBING GENERAL NOTES

1. LOCATIONS OF ANY WASTE AND SUPPLY PIPING SHOWN ARE ONLY APPROXIMATE. THE PLUMBING CONTRACTOR SHALL VERIFY THESE LOCATIONS BEFORE PROCEEDING WITH WORK.
2. ALL PLUMBING PIPE SHALL BE RUN STRAIGHT, SQUARE, AND LEVEL. NO SAGGING OF PLUMBING PIPING SHALL BE ACCEPTED.
3. ALL DRAINAGE PIPING 3" AND LARGER SHALL HAVE A MINIMUM SLOPE OF 1/8" PER FOOT. PIPING 2-1/2" AND SMALLER SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.
4. VENT PIPING SHOWN ON FLOOR PLAN IS ONLY INDICATIVE EXCEPT FOR VTR LOCATIONS.
5. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
6. VALVES AND FITTINGS SHALL BE OF THE SAME SIZE AS THE LINE IN WHICH THEY ARE INSTALLED.
7. ALL WATER SANITARY WASTE, VENT AND SUPPLY PIPING SHALL BE INSTALLED AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGE IN SIZING.
8. SEE ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS, MOUNTING HEIGHTS, DIMENSIONS AND ADDITIONAL REQUIREMENTS NOT COVERED ON THESE DRAWINGS.
9. PIPING SHALL NOT BE RUN ABOVE ELECTRICAL OR SERVER EQUIPMENT, COORDINATE WITH FIELD CONDITIONS.
10. DO NOT PENETRATE WALL FOOTINGS AS REQUIRED TO CLEAR PLUMBING SERVICES. WHERE ABSOLUTELY NECESSARY, ALL PIPES PENETRATING BEARING WALL OR FOOTING MUST BE SLEEVED AND IN A LOCATION APPROVED BY THE STRUCTURAL ENGINEER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES OR ALL FIXTURES INCLUDED IN THESE CONTRACT DOCUMENTS.
12. WALL BRACKETS, HANGERS, SUPPORTS, ETC. SHALL BE PROVIDED WHERE REQUIRED IN ACCORDANCE WITH THE BEST STANDARD PRACTICE OF THE TRADE AND AS PER CODE. ADDITIONAL SUPPORTS SHALL BE PROVIDED TO TRANSMIT LOADS TO THE MAIN STRUCTURE WHERE REQUIRED. CPVC PIPING SUPPORTS SHALL BE 3'-0" ON CENTER FOR 1/2" THRU 1" AND 4'-0" ON CENTER FOR 1-1/2" AND LARGER. ALL EXPOSED SUPPORTS SHALL BE HOT DIPPED GALVANIZED OR FIBERGLASS REINFORCED "UNISTRUT" TYPE INCLUDING HARDWARE.
13. POWER WIRING, PANELS, TRANSFORMERS, AND DISCONNECT SWITCHES FOR PLUMBING EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING, RELAYS, AND PANELS SHALL BE PROVIDED AND INSTALLED BY THE PLUMBING CONTRACTOR. ALL MOTOR STARTERS REQUIRED FOR ANY PLUMBING EQUIPMENT SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
14. INSTALL ACCESS PANELS (MINIMUM 18x18) WHERE EQUIPMENT REQUIRING ACCESS RESIDES ABOVE AN INACCESSIBLE CEILING TYPE.
15. ALL CONCEALED VALVES, WATER HAMMER ARRESTORS, CLEANOUTS, ETC., CONCEALED IN WALLS SHALL BE PROVIDED WITH AN ACCESS PANEL, ZURN MODEL ZN-1460 OR APPROVED EQUAL.

16. ALL CONCEALED PIPING IN CHASE AREAS SHALL BE SUPPORTED WITH A PIPING SUPPORT SYSTEM, SUMNER POSIFIX, STAKFIX AND CHANNEL OR APPROVED EQUAL.

17. PURGE, CLEAN, DISINFECT & TEST WATER PIPING SYSTEMS. SUBMIT REPORT & WATER SAMPLES TO A.H.J. USE PROCEDURE PRESCRIBED BY A.H.J., OR IF METHOD NOT PRESCRIBED USE AWWA C651 OR AWWA C652.

18. CONTRACTOR SHALL INSTALL WATER HAMMER ARRESTORS AT ALL QUICK CLOSING VALVES. REFER TO FPC 604.9.

CONDENSATE, SANITARY WASTE AND VENT

1. GRAVITY FLOW SYSTEMS HAVE SPACE PRIORITY FOR SLOPING PIPES.
2. SLOPING PIPES SHALL BE STARTED AT THE HIGHEST POINT POSSIBLE.
3. ALL SOIL, WASTE, AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND LOCAL PERMITTING AUTHORITIES REQUIREMENTS.
4. THE GENERAL CONTRACTOR SHALL VERIFY ALL FLOOR DRAIN AND WATER SUPPLY LOCATIONS BEFORE POURING SLABS.
5. CONDENSATE, SANITARY AND VENT PIPING SHALL BE COLLECTED AND TERMINATED AT A POINT SHOWN ON THE DRAWINGS.
 - 5.1. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR CONDENSATE PIPES AFTER AIR UNIT TRAP. MECHANICAL CONTRACTOR RESPONSIBLE FOR FIRST 12" OF CONDENSATE AND TRAP.
6. INVERT SHOWN ON PLANS IS AN ESTIMATE OF MINIMUM INVERT CALCULATED USING ENGINEERING ESTIMATES OF SLOPE, FITTING DIMENSIONS AND OTHER FACTORS THAT MAY NOT MATCH THE EXACT FIELD CONDITIONS. DUE DILIGENCE HAS BEEN PUT FORTH TO COORDINATE THIS WITH THE SITE CONNECTIONS BUT IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL SITE CONNECTION INVERT AND ITS CONNECTION TO THE BUILDING SERVICE PIPING. ANY ISSUES SHALL BE BROUGHT TO THE ATTENTION OF THE EIR PRIOR TO COMMENCING WITH INSTALLATION OF UNDERGROUND PIPING.
7. WHEN REQUIRED BY CODE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL AN AIR GAP SERVING INDIVIDUAL FIXTURES, DEVICES, OR APPLIANCES.
8. ALL SANITARY WASTE LINES SHALL BE INSTALLED UNDER THE FLOOR SLAB, UNLESS OTHERWISE NOTED. VENT PIPING SHALL BE INSTALLED ABOVE CEILING AND IN WALLS UNLESS NOTED OTHERWISE.

9. FLOOR DRAIN TRAPS SHALL BE DEEP SEAL (MIN. 4"). FURNISH AND INSTALL TRAP PRIMERS, WHERE INDICATED, OR IF LOCAL CODES REQUIRE THEM. VERIFY AND INCLUDE IN BID. PER FBC-P 1002.4 ANY TRAPPED FIXTURE SUBJECT TO EVAPORATION SHALL BE FURNISHED WITH 1/2" TRAP PRIMER CONNECTION TO NEAREST DCW WATER SUPPLY LINE, WITH VALVE CONFORMING TO ASSE1018. USE SELF SEAL RUBBER TYPE THAT CONFORM TO ASSE1044 FOR REMOTE DRAINS THAT ARE OVER 20' FROM THE WATER SUPPLY.

10. SIZE AND LOCATION OF CLEANOUTS SHALL BE IN ACCORDANCE WITH FLORIDA PLUMBING CODE AND ALL JURISDICTIONAL REGULATIONS.

11. PIPING SPECIFICATIONS

11.1. CONDENSATE, DOMESTIC WASTE, AND VENT PIPING SHALL BE SCHEDULE 40 PVC/DWV PIPE WITH SOLVENT WELD DRAINAGE FITTINGS CONFORMING TO ASTM D-2665.

11.2. VENT PIPING SHALL BE MINIMUM OF 2", UNLESS NOTED OTHERWISE.

11.3. PIPING INSTALLED WITHIN A RETURN AIR PLENUM SHALL BE CAST IRON WITH HUB AND SPIGOT FITTINGS OR PVC PIPING WITH 1/2" THICK FIRE WRAP INSULATION SEALED TO PROVIDE FS/SD=25/50.

11.4. UNLESS NOTED OTHERWISE, ASSUME ALL COMBINED DISCHARGE CONNECTIONS ARE WYE TYPE.

12. EXPOSED PIPING

12.1. ALL EXPOSED PIPING SHALL BE COORDINATED WITH OTHER ABOVE-CEILING SYSTEMS AND ROUTED TO AVOID CONFLICTS EVEN IF ITS ROUTING IS DIFFERENT THAN WHAT IS SHOWN ON THESE PLANS.

12.2. ALL EXPOSED PIPING SHALL BE INSTALLED NEAT AND ORDERLY. PAINT TO MATCH ADJACENT ARCHITECTURAL SURFACE OR AS DIRECTED BY ARCHITECT.

GENERAL NOTES

1. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY MISUSE AND/OR MISREPRESENTATION OF THIS SET OF DOCUMENTS.
2. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE USE OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE THEMSELVES AWARE OF PROJECT CONDITIONS AND OWNER REQUIREMENTS PRIOR TO PROCUREMENT OF EQUIPMENT AND SERVICES. CHANGES IN PROJECT COST WILL NOT BE GRANTED DUE TO FIELD CONFLICTS AND OR PROJECT CONDITIONS.
3. THIS SET OF DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED A SET OF CONSTRUCTION DOCUMENTS UNLESS A SIGNATURE AND DATE ARE AFFIXED TO THE DRAWINGS AND SPECIFICATIONS BY THE ENGINEER OF RESPONSIBLE CHARGE OF THE GIVEN DISCIPLINE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED UNLESS EMBOSSED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ELECTRONIC COPIES.
4. CONFLICTS BETWEEN THIS SET OF DRAWINGS AND THE CONTRACT SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER OF RECORD. THE CONTRACTOR DOES NOT HAVE THE AUTHORITY TO INTERPRET CONFLICTS AND RESOLVE ISSUES WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.
5. ANY CONFLICTS IN THE FIELD OR WITHIN THESE DOCUMENTS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER OF RECORD ON THE CONTRACTOR'S STANDARD LETTERHEAD. WRITTEN DIRECTION RESOLVING CONFLICT WILL BE ISSUED BY THE ENGINEER OF RECORD.
6. PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING OR OTHER WALL MOUNTED FURNISHINGS.
7. PLANS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO SHOW THE GENERAL SCOPE OF THE WORK TO BE PERFORMED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.
8. DUE TO THE SMALL SCALE OF THE DRAWINGS, AND TO UNFORESEEN JOB CONDITIONS, ALL REQUIRED OFFSETS, TRANSITIONS AND FITTINGS MAY NOT BE SHOWN BUT SHALL BE PROVIDED AT NO ADDITIONAL COST.
9. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND EXISTING EQUIPMENT TO ENSURE THE EQUIPMENT SPECIFIED WILL WORK FOR THE SPACES PROVIDED. FINAL DIMENSIONS OF SYSTEMS SHOWN ON THESE PLANS SHALL BE COORDINATED IN THE FIELD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROVIDING OFFSETS AND TRANSITIONS TO FIT IN SPACES PROVIDED AND AT NO COST TO THE OWNER.
10. THE CONTRACTOR IS RESPONSIBLE FOR ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED TO BRING INTO THE BUILDING AND EQUIPMENT ROOMS.
11. ALL WORK PERFORMED AS PART OF THIS PROJECT SHALL BE PERFORMED BY EXPERIENCED TRADESMEN WHO ARE TRAINED, EXPERIENCED, AND SKILLED IN THE TASKS INCIDENTAL TO THE PROJECT.
12. ALL WORK SHALL COMPLY WITH APPLICABLE OSHA AND EPS REGULATIONS AND GUIDELINES.
13. THE CONTRACTOR PERFORMING WORK ON THIS PROJECT WILL BE RESPONSIBLE FOR REGULARLY CLEANING THE WORK AREA OF ANY DEBRIS ASSOCIATED WITH THE WORK BEING PERFORMED. THE SITE SHALL BE CLEAN OF ALL CONSTRUCTION DEBRIS AT THE COMPLETION OF THE JOB, BEFORE FINAL PAYMENT IS MADE.
14. REASONABLE PRECAUTIONS SHALL BE MADE FOR SAFETY AND HEALTH INCLUDING BUT NOT LIMITED TO WARNING SIGNS, SAFETY PRECAUTIONS, AND BARRICADES FOR PEDESTRIANS.
15. COORDINATE ALL DEMOLITION, CLEANING, AND CONSTRUCTION WORK. CONTRACTOR SHALL PROVIDE OWNER A FULL CONSTRUCTION SCHEDULE.
16. CONTRACTOR SHALL BE HELD TO PROVIDED SCHEDULE. THEY SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT MANPOWER AND EQUIPMENT TO COMPLETE THE WORK IN THE TIME INDICATED.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND SECURITY OF ALL EQUIPMENT AND MATERIALS. THE LOCATION OF STORAGE SHALL BE RESTRICTED SPECIFICALLY TO THE AREA ALLOTTED BY THE OWNER.
18. ALL ITEMS INSTALLED UNDER THE SCOPE OF THIS PROJECT SHALL BE NEW, CLEAN, AND FREE OF DEFECTS.
19. IF DRAWING CHANGES ARE NEEDED FOR INSPECTION DUE TO FIELD CHANGES MADE BY THE CONTRACTOR WITHOUT PRIOR APPROVAL OF THE ENGINEER AND AGREED UPON TERMS, THEN THE CONTRACTOR SHALL PAY HOURLY RATES TO THE ENGINEER OF RECORD FOR MAKING NECESSARY CHANGES.
20. SUPPORTS, HANGERS, WIRING, AND PIPING SHALL BE INSTALLED IN A NEAT FASHION AND IN AN ORDERLY APPEARANCE.
21. ALL ROOF EQUIPMENT SHALL BE SECURED TO STRUCTURE TO RESIST A 120 MPH WIND LOAD.

22. PROTECT THE ROOF FROM DAMAGE WHENEVER ANY WORK ON THE ROOF IS REQUIRED.	
23. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL PARTITIONS LABELED WITH A SPECIAL LISTING ON THE ARCHITECTURAL PLANS. THIS INCLUDES FIRE, SMOKE ACUSTICAL AND OTHER UL WALL OR CEILING ASSEMBLIES.	
24. STRUCTURAL PENETRATIONS INCLUDING BUT NOT LIMITED TO WALL, FLOOR, OR BEAM SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ALL BEAM SLEEVES AND REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.	
25. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY THE MATERIAL SUPPLIES AND MANUFACTURERS.	
26. VALUE ENGINEERING OR CHANGES TO PLANS MUST BE APPROVED BY THE ENGINEER OF RECORD AND RESUBMITTED THROUGH THE BUILDING DEPARTMENT PRIOR TO BEING INSTALLED.	
PLUMBING SHEET INDEX	
SHEET NUMBER	SHEET NAME
P001	PLUMBING NOTES & LEGEND
P101	SANITARY FLOOR PLAN
P102	PRESSURE FLOOR PLAN
P501	PLUMBING DETAILS
P502	PLUMBING DETAILS
P503	PLUMBING DETAILS
P601	PLUMBING SCHEDULES
P901	RISER DIAGRAMS
PG101	GAS FLOOR PLAN

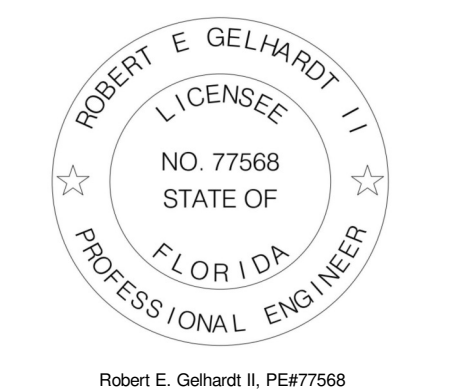
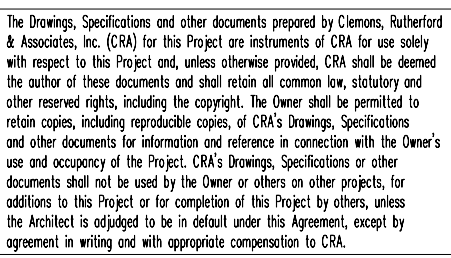
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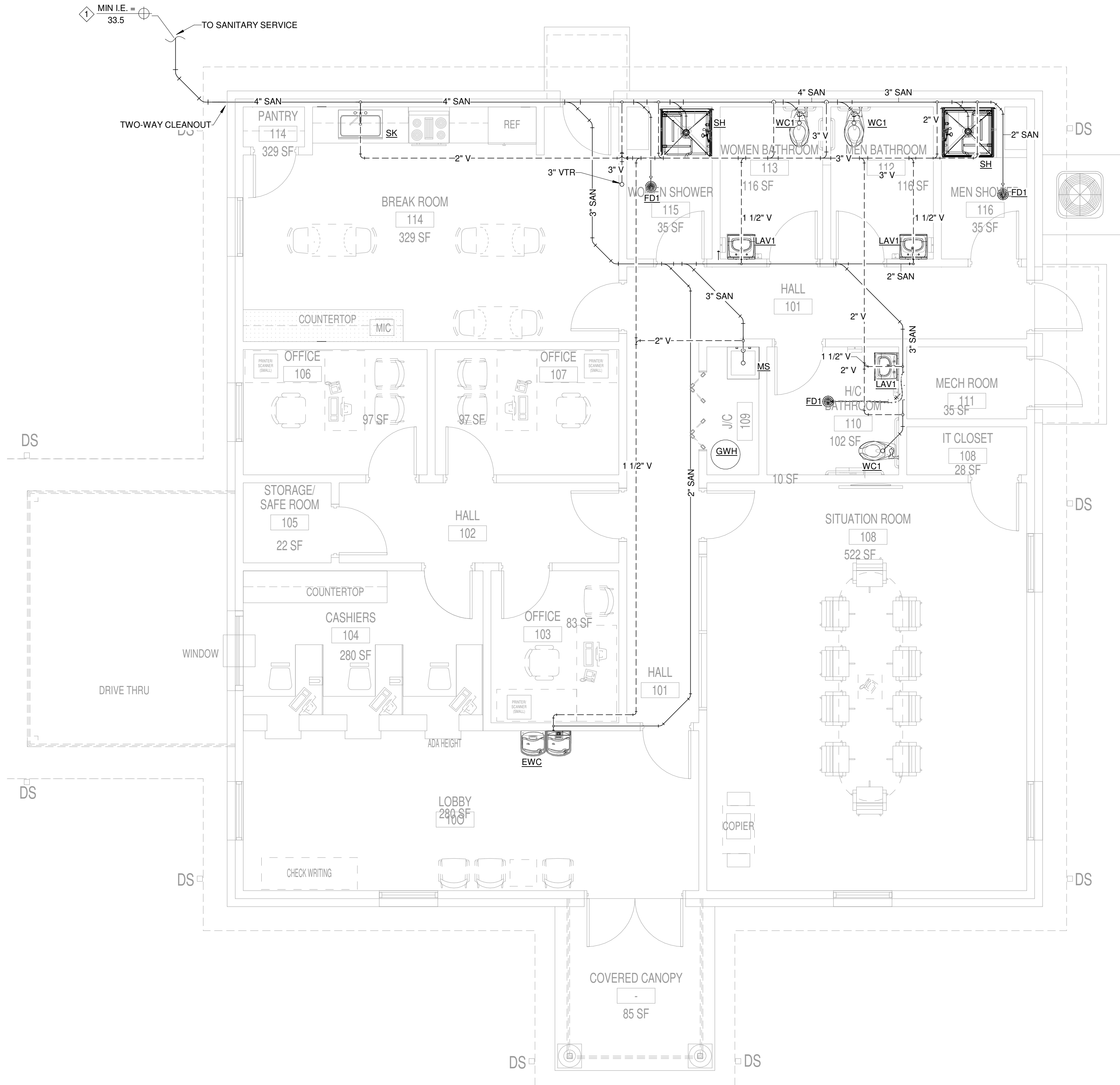
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SHEET TITLE

**PLUMBING NOTES &
LEGEND**

P001



1 FLOOR PLAN - SANITARY
Scale: 1/4" = 1'-0"

SANITARY GENERAL NOTES

- 1.SANITARY SEWER SYSTEM HAS BEEN DESIGNED & ROUTED WITH COORDINATION OF STRUCTURAL FOOTERS & FOUNDATION PLANS. THESE DOCUMENTS SHOULD BE FIELD VERIFIED PRIOR TO INSTALLATION TO ASSURE COMPLIANCE.
- 2.CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
- 3.CONTRACTOR SHALL CONNECT NEW PIPING TO EXISTING CIVIL SYSTEMS BELOW GRADE AT PROPER ELEVATION INVERT.



SANITARY KEYED NOTES

1 SANITARY SHALL ROUTE FROM FURTHEST FIXTURE TO 5' OUTSIDE OF BUILDING AT 33.5' INVERT WITH A STARTING ELEVATION OF 24" BELOW GRADE AND 76 FEET OF DEVELOPED LENGTH.



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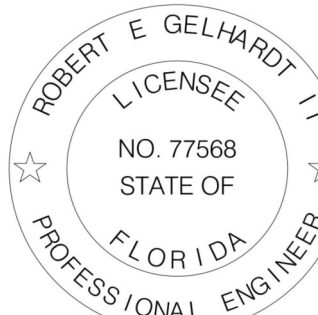
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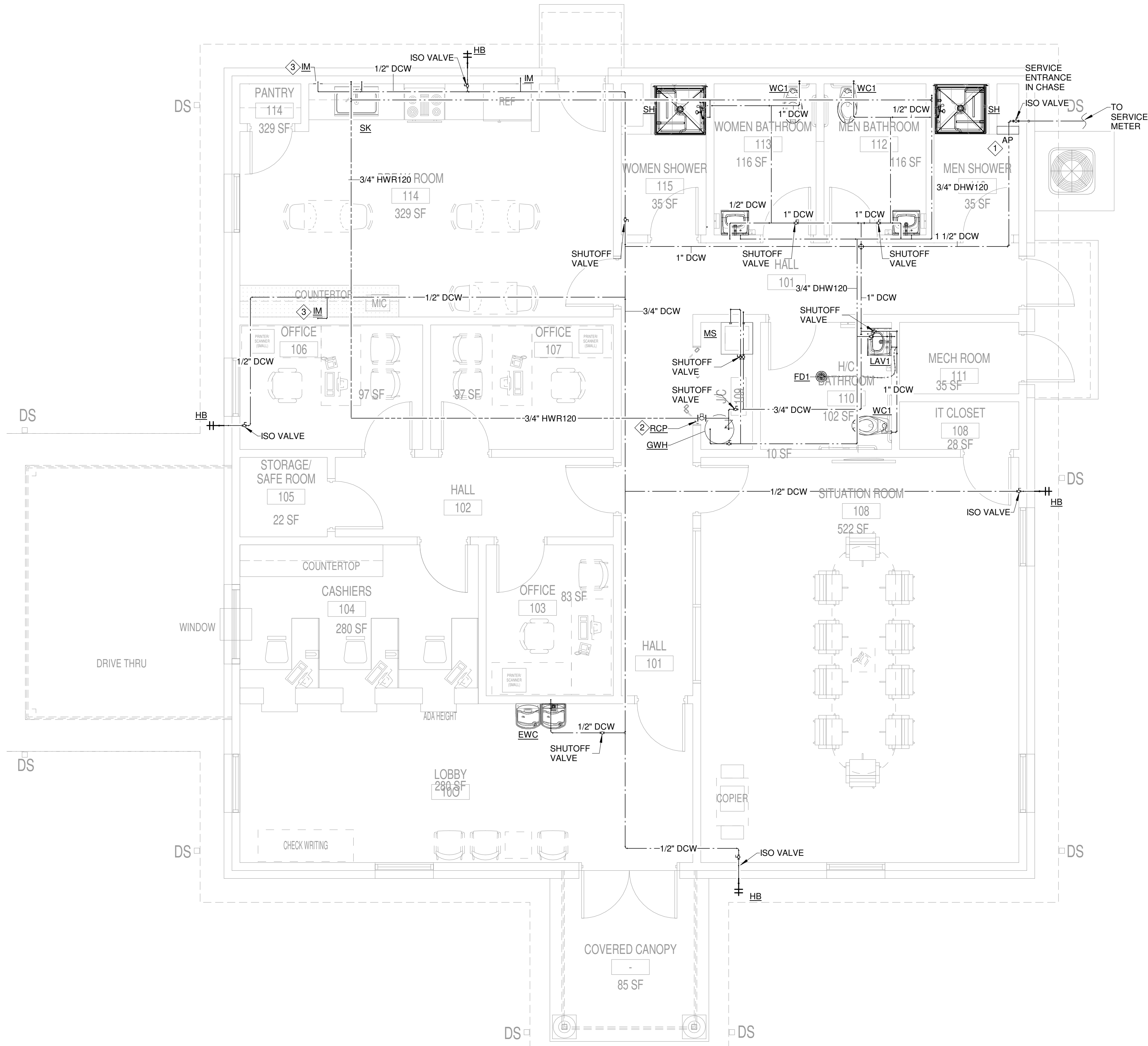
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SHEET TITLE

**SANITARY FLOOR
PLAN**

P101



1 FLOOR PLAN - PRESSURE
Scale: 1/4" = 1'-0"



PRESSURE GENERAL NOTES

1. WATER PIPING MATERIAL & FITTINGS FROM PLUMBING FIXTURES ON ALL FLOORS SHALL BE EITHER A) COPPER (AS SPEC'D IN PLUMBING MATERIAL SCHEDULE), OR B) CPVC PRODUCT.
2. ALL HOT WATER & HOT WATER RETURN SYSTEM SHALL BE INSULATED AS INDICATED IN PLUMBING MATERIAL SCHEDULE.
3. ALL FAUCETS SHALL BE EQUIPPED WITH TEMPERATURE & PRESSURE VALVES AS REQUIRED BY ASME-A112.1070-2014, ASSE-1016-2011, ASSE-1017-2014 & ASSE-1070-2014 USING THERMOSTATIC MIXING VALVES; HOT WATER DELIVERED TO MIXING VALVES FROM WATER HEATERS SHALL BE SUPPLIED AT 120F DEGREES IN ORDER TO CONTROL BACTERIA; ADJUSTMENTS MUST BE MADE AT FIXTURES TO ASSURE TEMPERED WATER COMPLIANCE AS SET FORTH BY GOVERNING CODES.
4. ALL FAUCETS SHALL HAVE FACTORY BUILT-IN TEMPERATURE LIMIT TO PREVENT SCALDING.
5. PROVIDE ACCESS TO ALL VALVES, ACCESS PANEL WHERE NOT LOCATED IN CEILING TILE SPACES.

PRESSURE KEYED NOTES

X	
1	CONTRACTOR SHALL PROVIDE ACCESS PANEL TO SERVICE ENTRANCE AND ISOLATION VALVE.
2	PROVIDE TACO 006E RECIRCULATION PUMP IN HWR LINE.
3	INSTALL 1/4 VALVE BELOW COUNTER FOR COFFEE MAKER HOOKUP.



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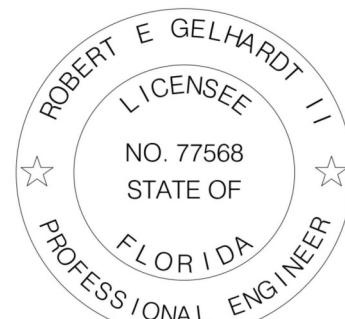
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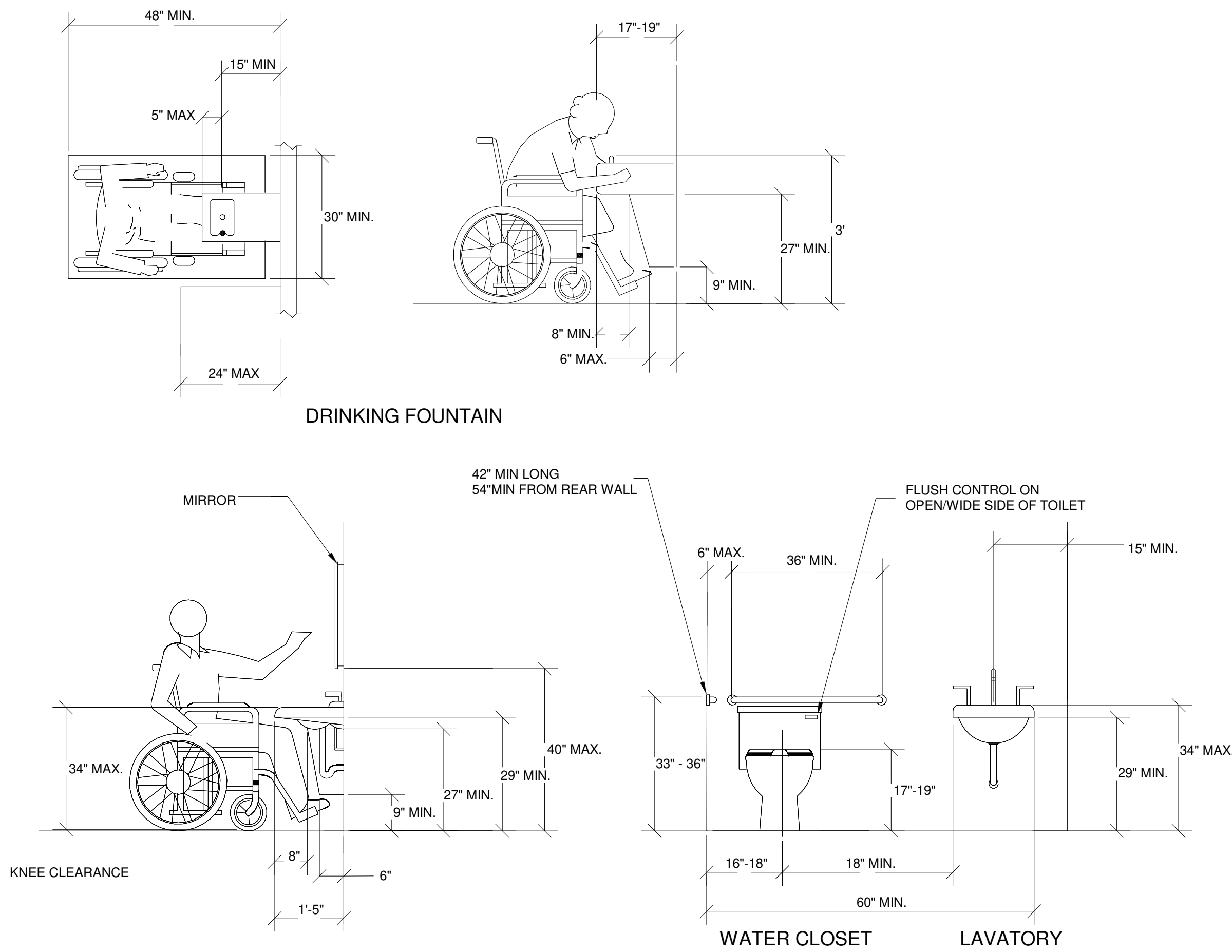
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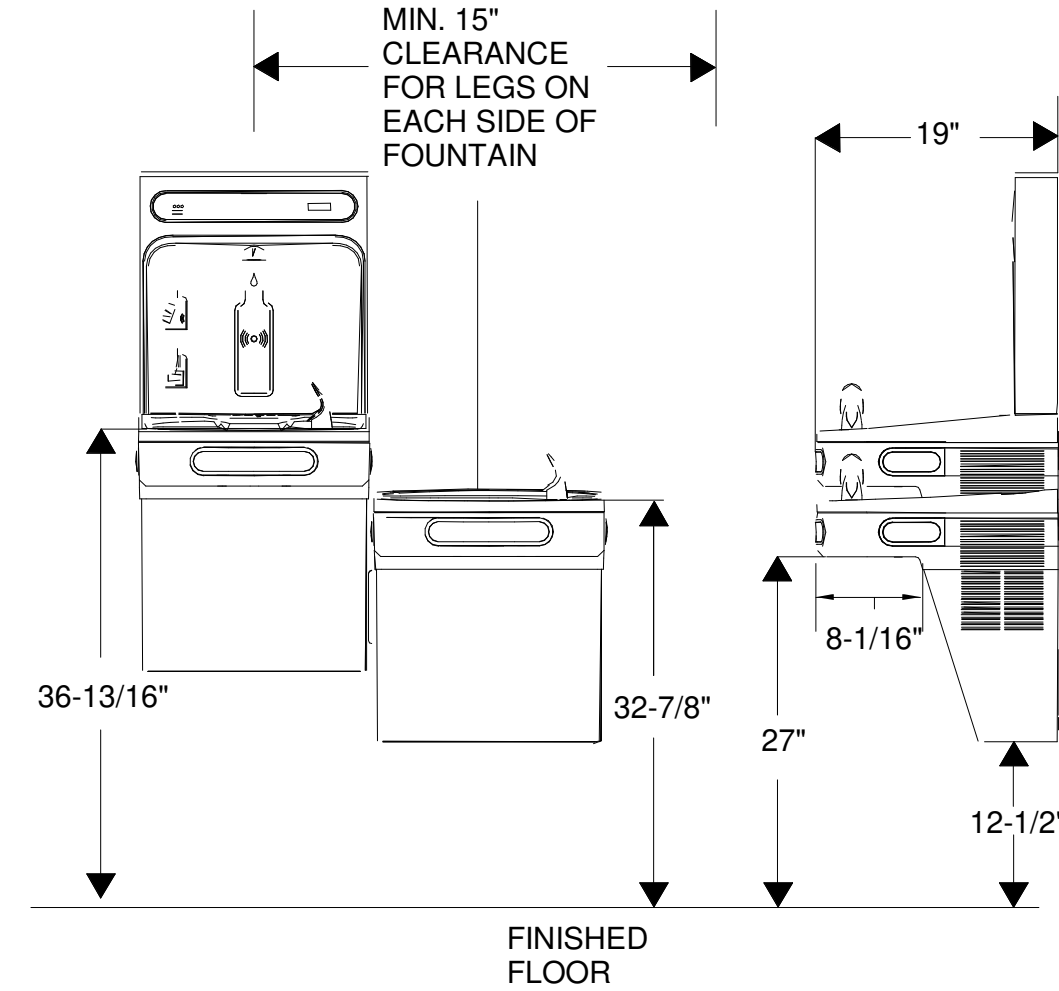
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**PRESSURE FLOOR
PLAN**

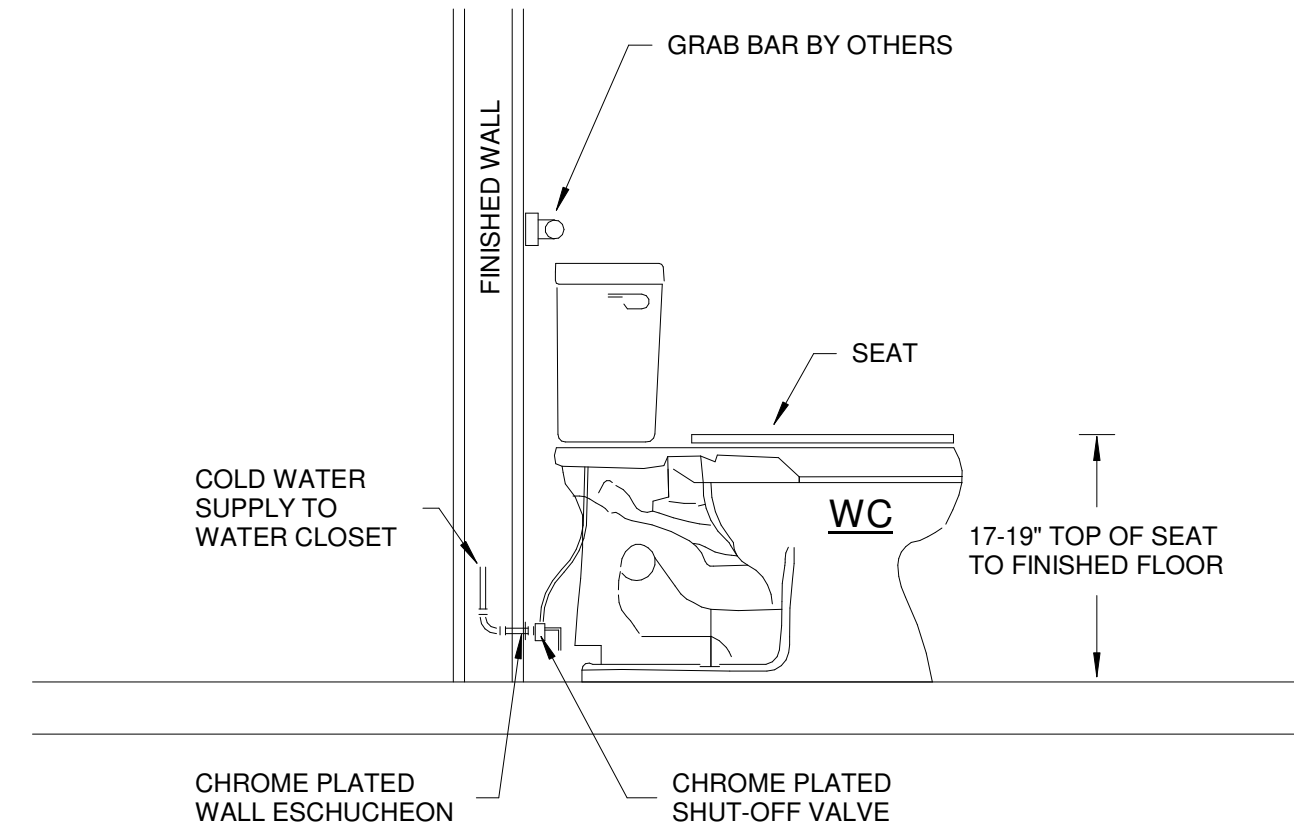
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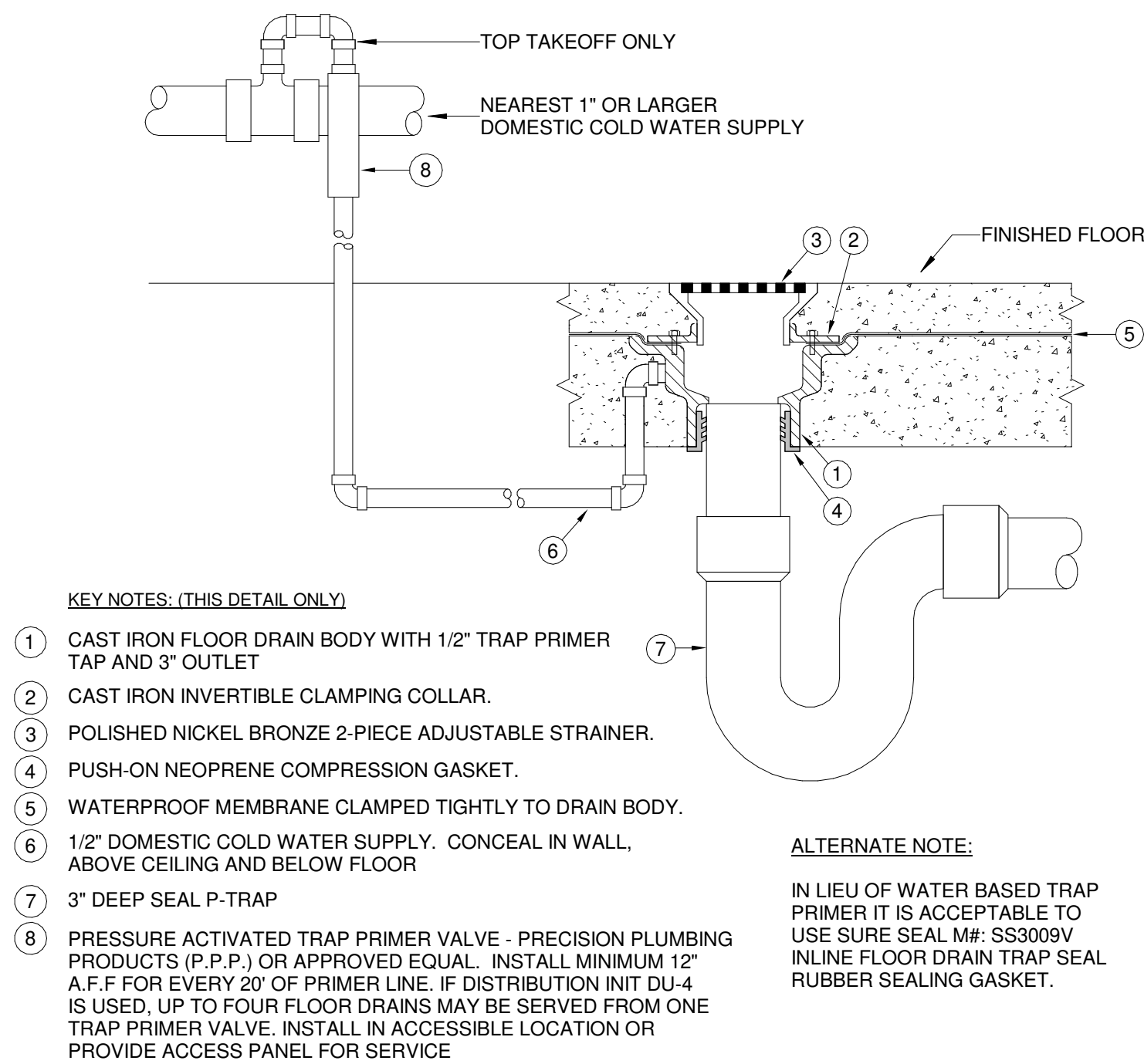
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SCALE: NTS



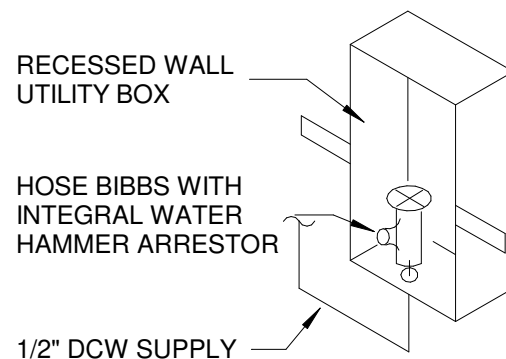
2 ADA DUAL HEIGHT DRINKING FOUNTAIN DETAIL
SCALE: NTS



3 ADA FLUSH TANK WATER CLOSET DETAIL
SCALE: NTS



4 FLOOR DRAIN (CONCRETE FLOOR) DETAIL
SCALE: NTS



5 ICE MAKER BOX DETAIL
SCALE: NTS



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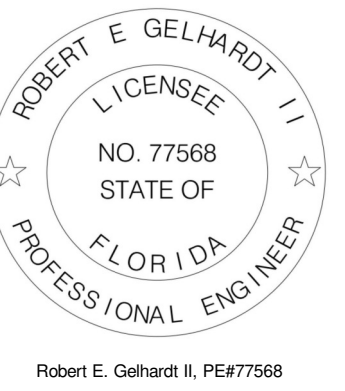
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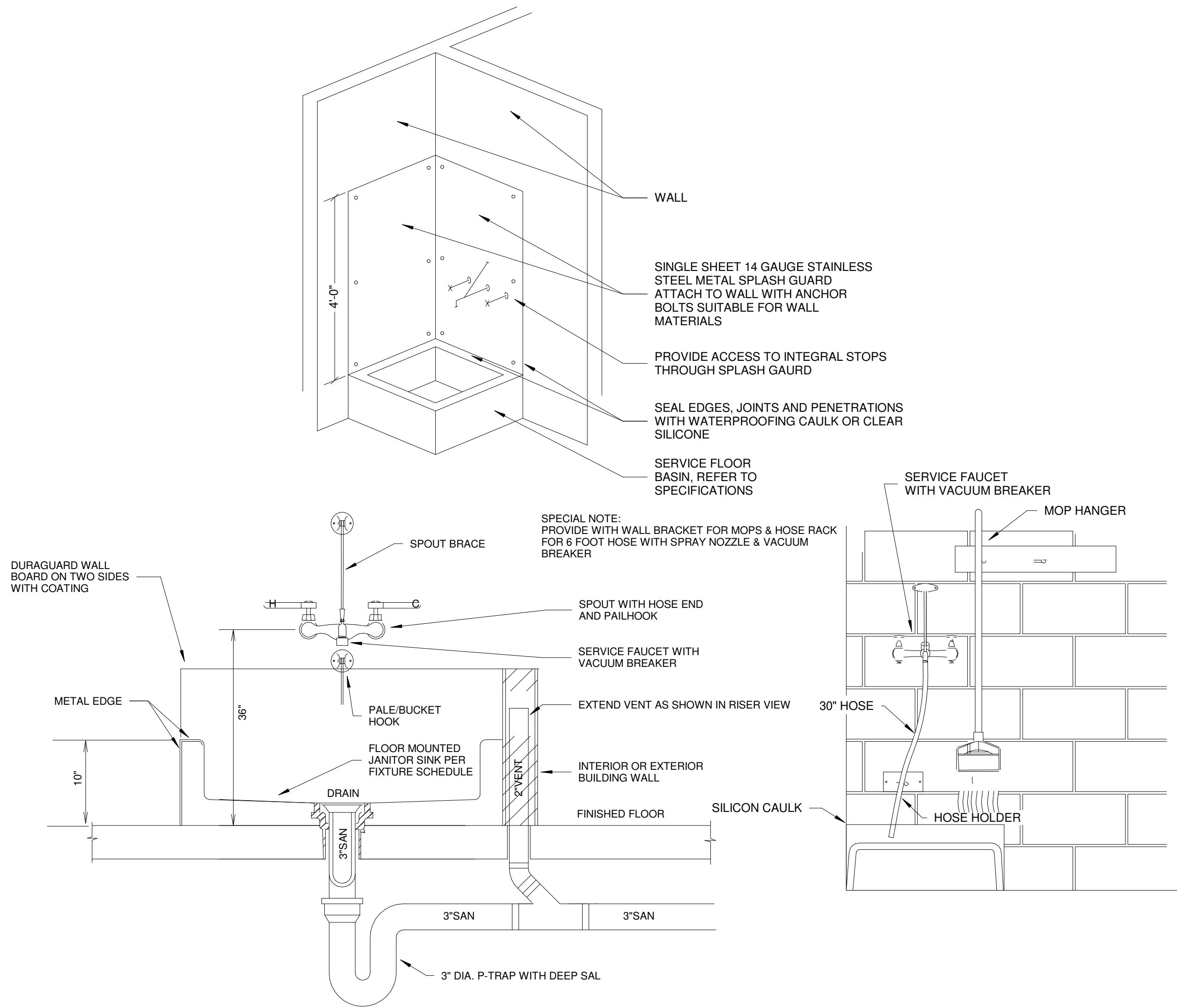
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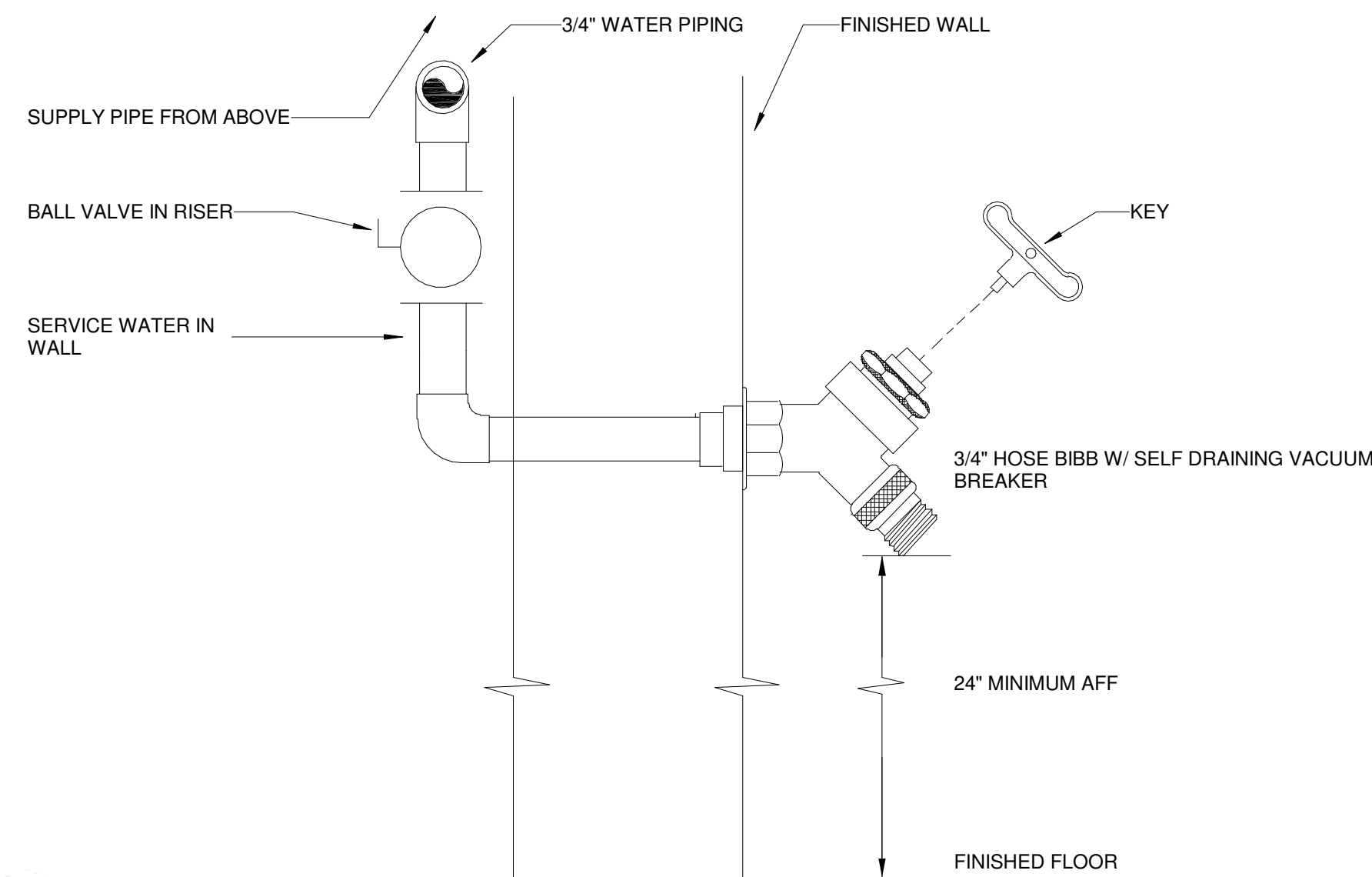
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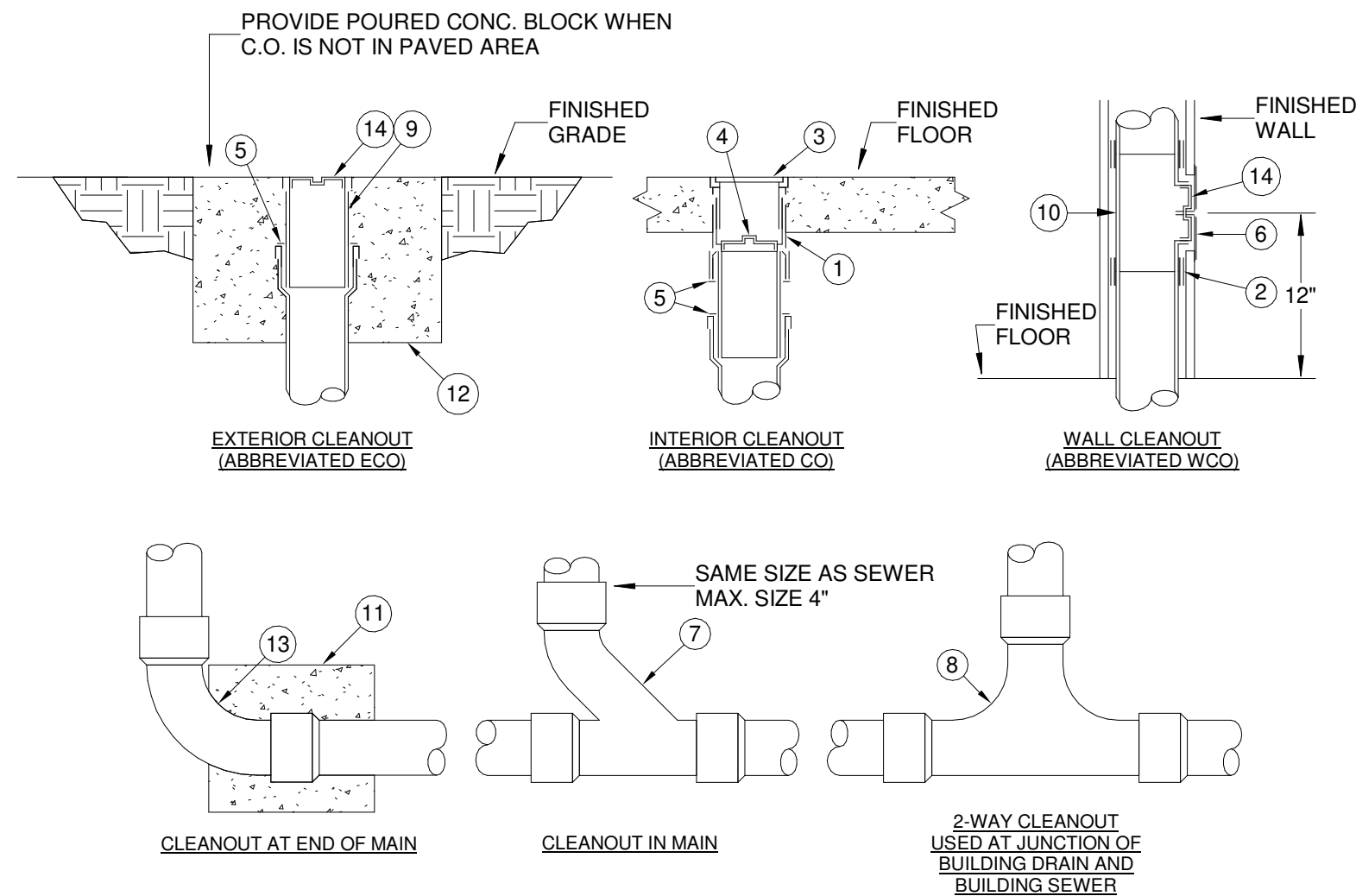
P501



1 MOP SINK DETAIL
SCALE: NTS

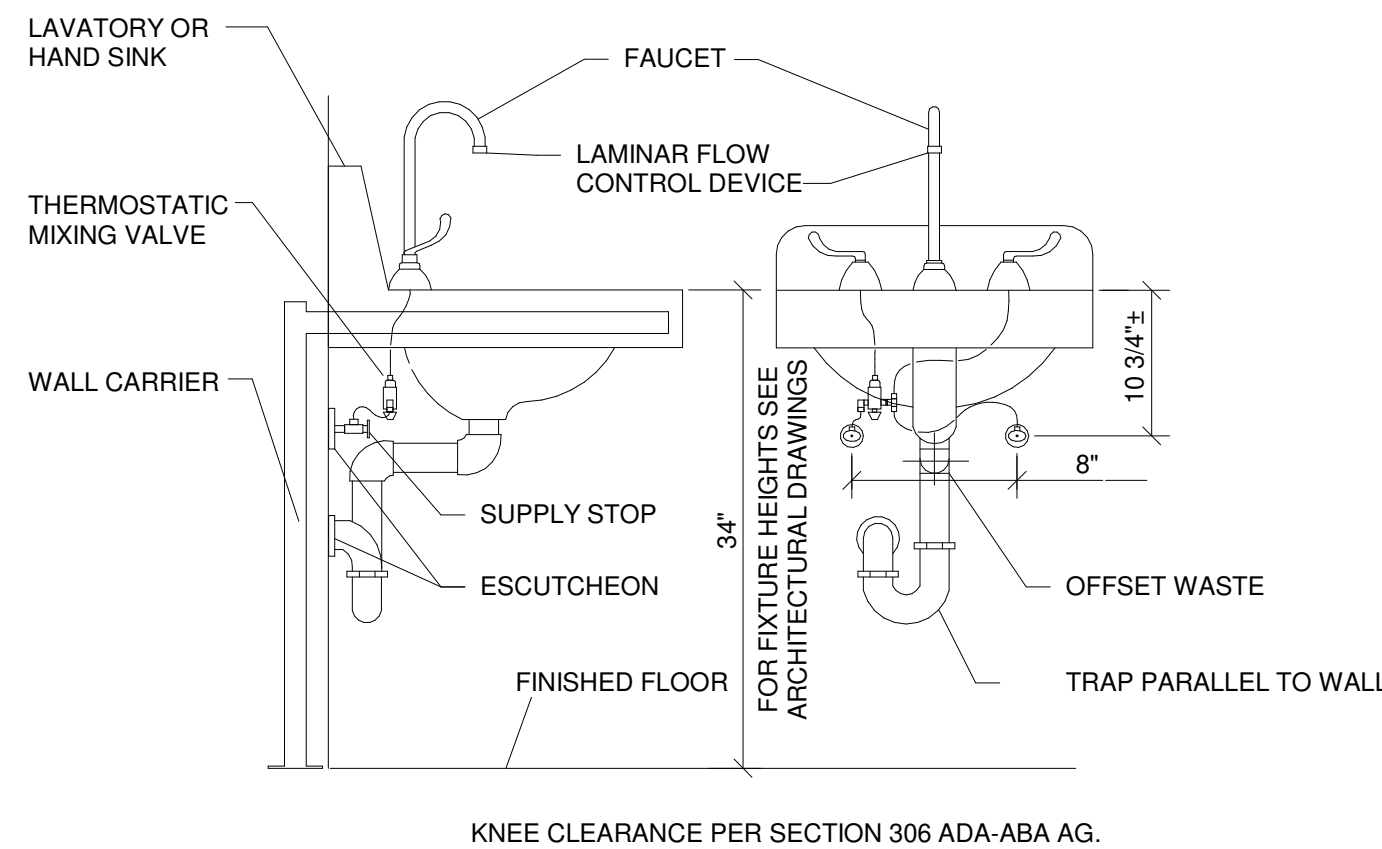


3 HOSE BIBB DETAIL
SCALE: NTS



- KEY NOTES: (THIS DETAIL ONLY)**
1. CAST IRON 2-PIECE CLEANOUT BODY WITH ADJUSTABLE HEAD.
 2. NO-HUB COUPLING (FOR ABOVE GROUND APPLICATION ONLY).
 3. POLISHED NICKEL BRONZE SCORIATED TOP (PROVIDE CARPET MARKER FOR CARPETED FLOORS).
 4. BRONZE TAPERED THREAD, RAISED HEAD CLEANOUT PLUG.
 5. PUSH-ON NEOPRENE RUBBER COMPRESSION GASKET.
 6. STAINLESS STEEL ROUND WALL ACCESS COVER.
 7. COMBINATION "Y" & 1/8" BEND FITTING.
 8. TWO-WAY CLEANOUT FITTING.
 9. CAST IRON CLEANOUT FERRULE.
 10. CAST IRON CLEANOUT TEE.
 11. 12" x 12" x 12" CONCRETE THRUST BLOCK.
 12. 24" x 24" x 12" CONCRETE PAD FLUSH WITH GRADE.
 13. LONG SWEEP ELBOW.
 14. BRONZE TAPERED THREAD, RECESSED HEAD CLEANOUT PLUG.

2 TYPICAL CLEANOUT
SCALE: NTS



- NOTES:**
1. ALL HAND SINKS AND LAVATORIES REQUIRED TO MEET A.D.A. GUIDELINE SHALL HAVE ADA COMPLIANT UNDER-SINK PROTECTION. SUPPLY, WASTE AND VALVES MUST ALL BE COVERED.
 2. ALL HAND SINKS AND LAVATORIES REQUIRE THERMOSTATIC MIXING VALVES ASSE 1070 CERTIFIED AND SET TO 110°F

4 LAV WITH THERMOSTATIC MIXING VALVE DETAIL
SCALE: NTS



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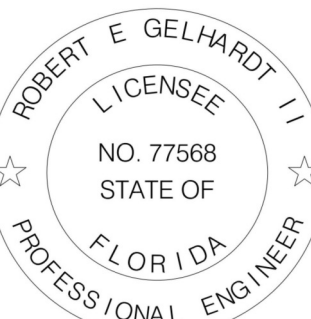
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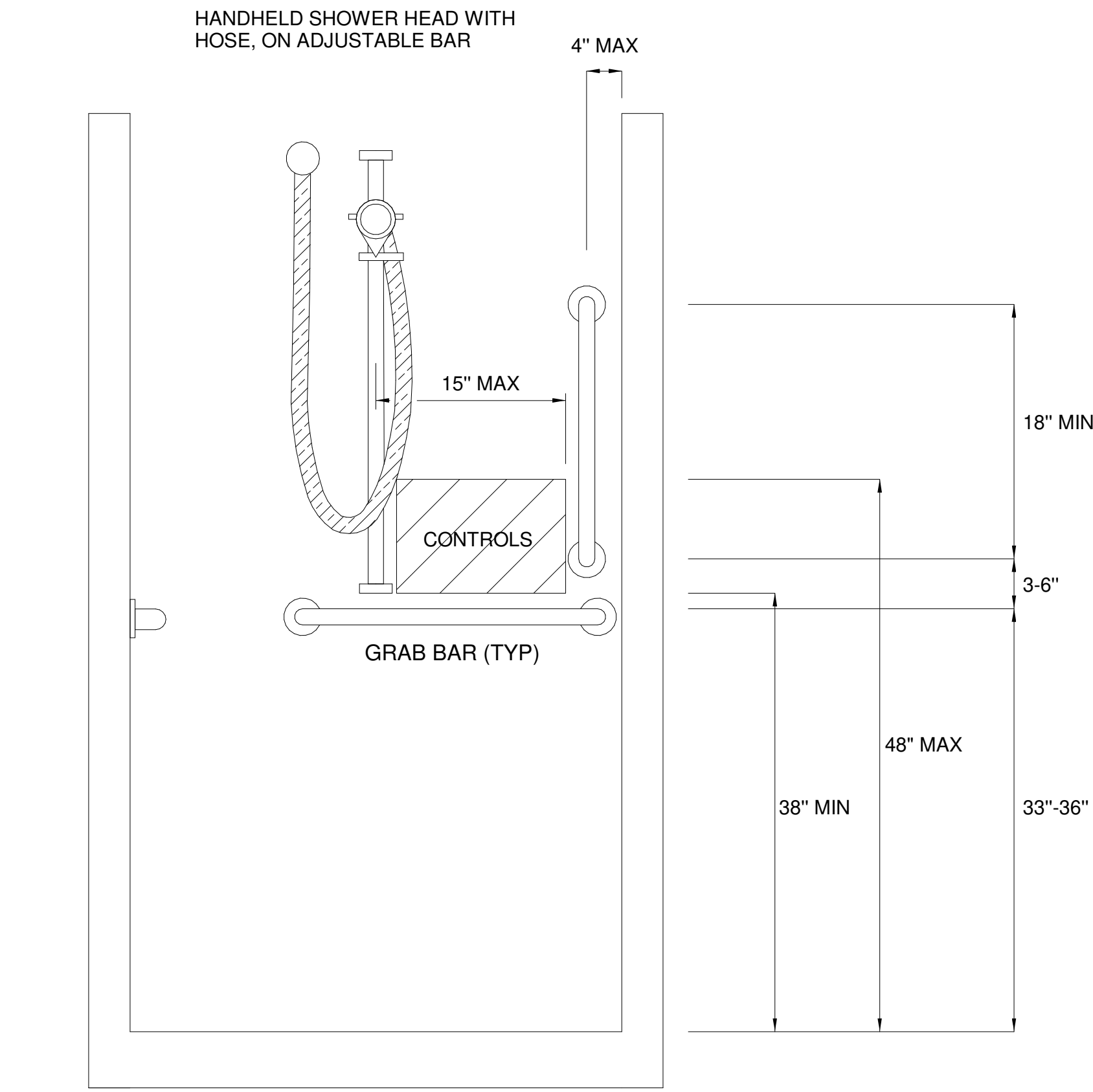
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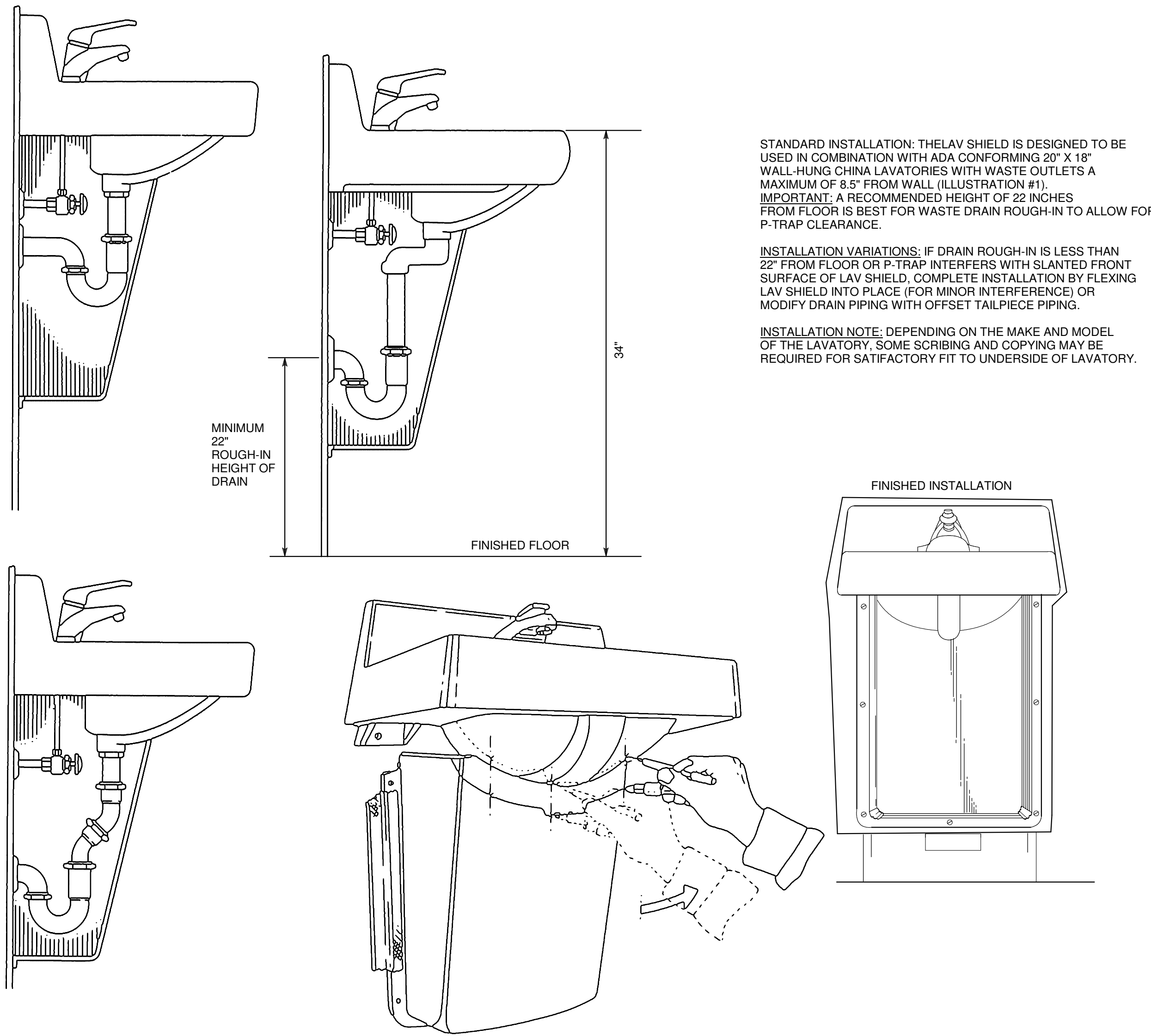
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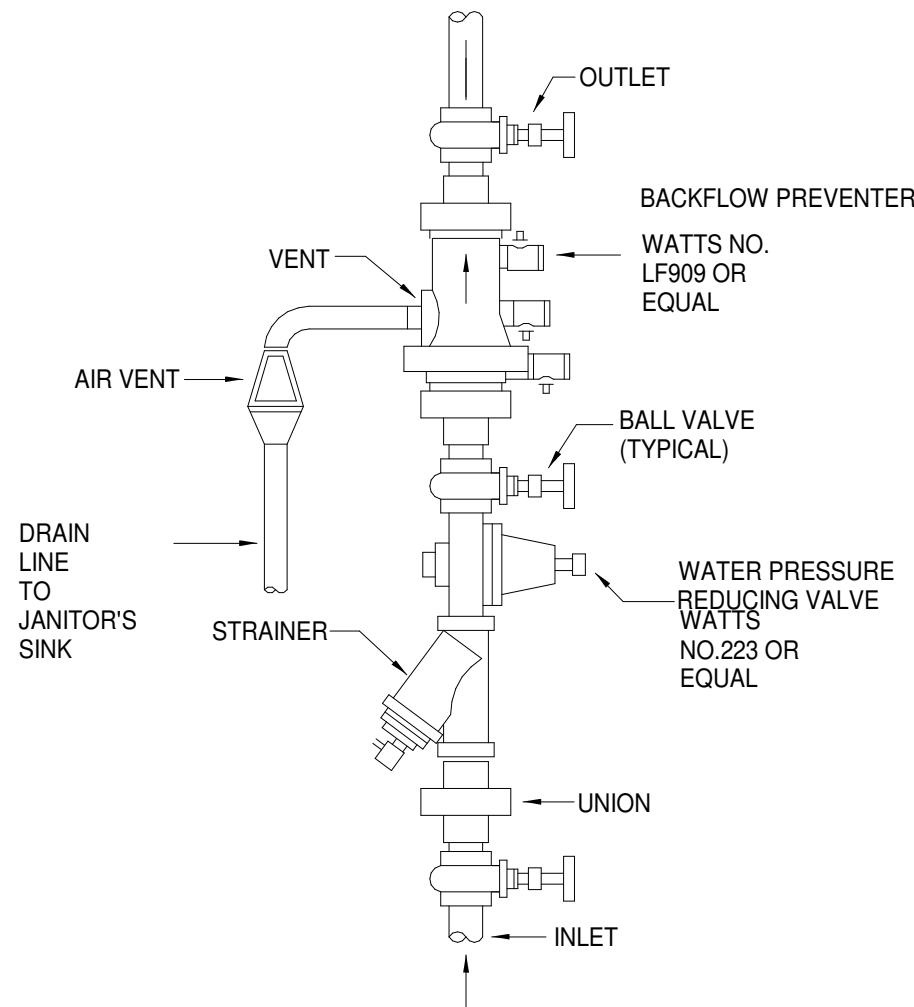
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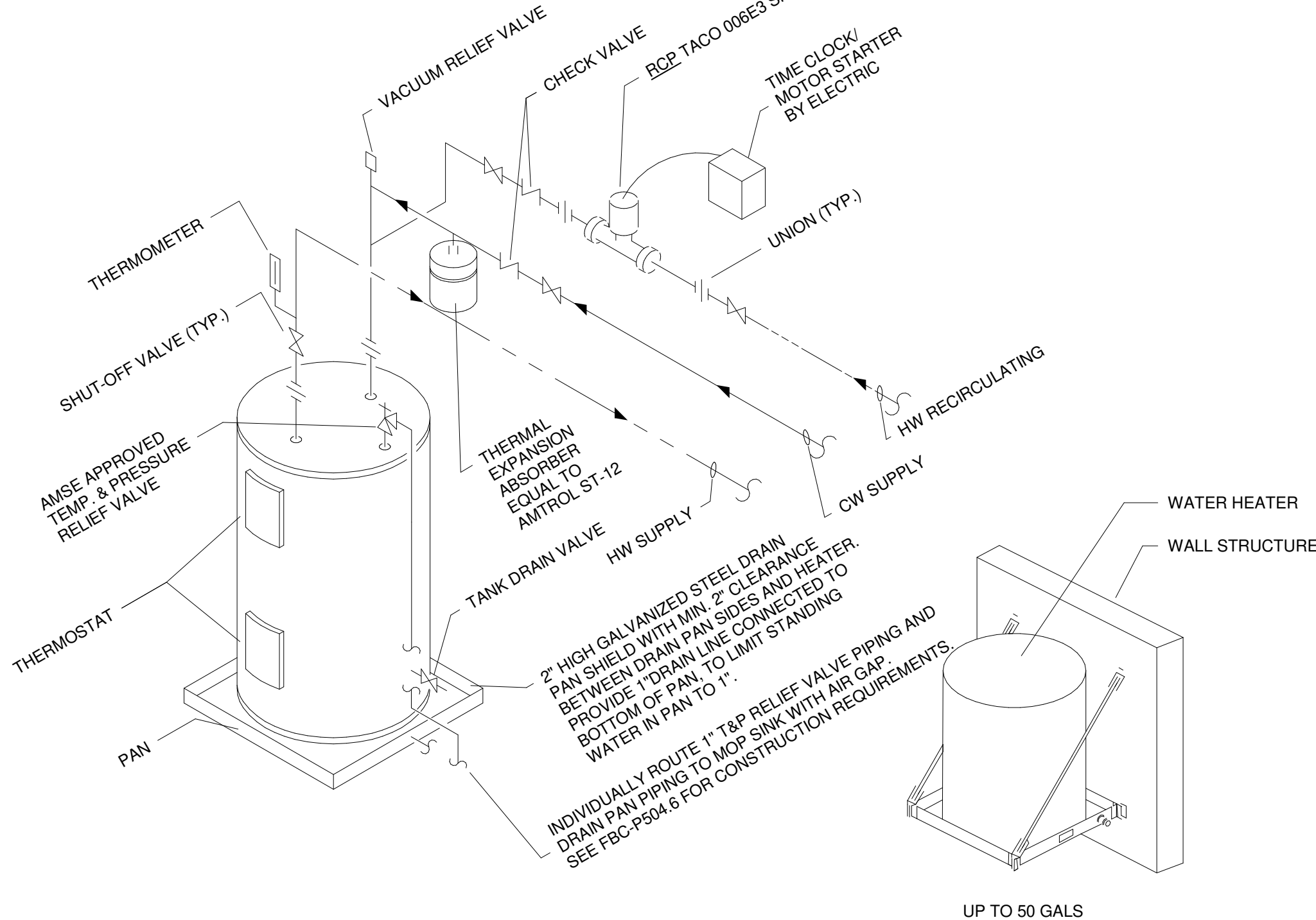
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SCALE: NTS



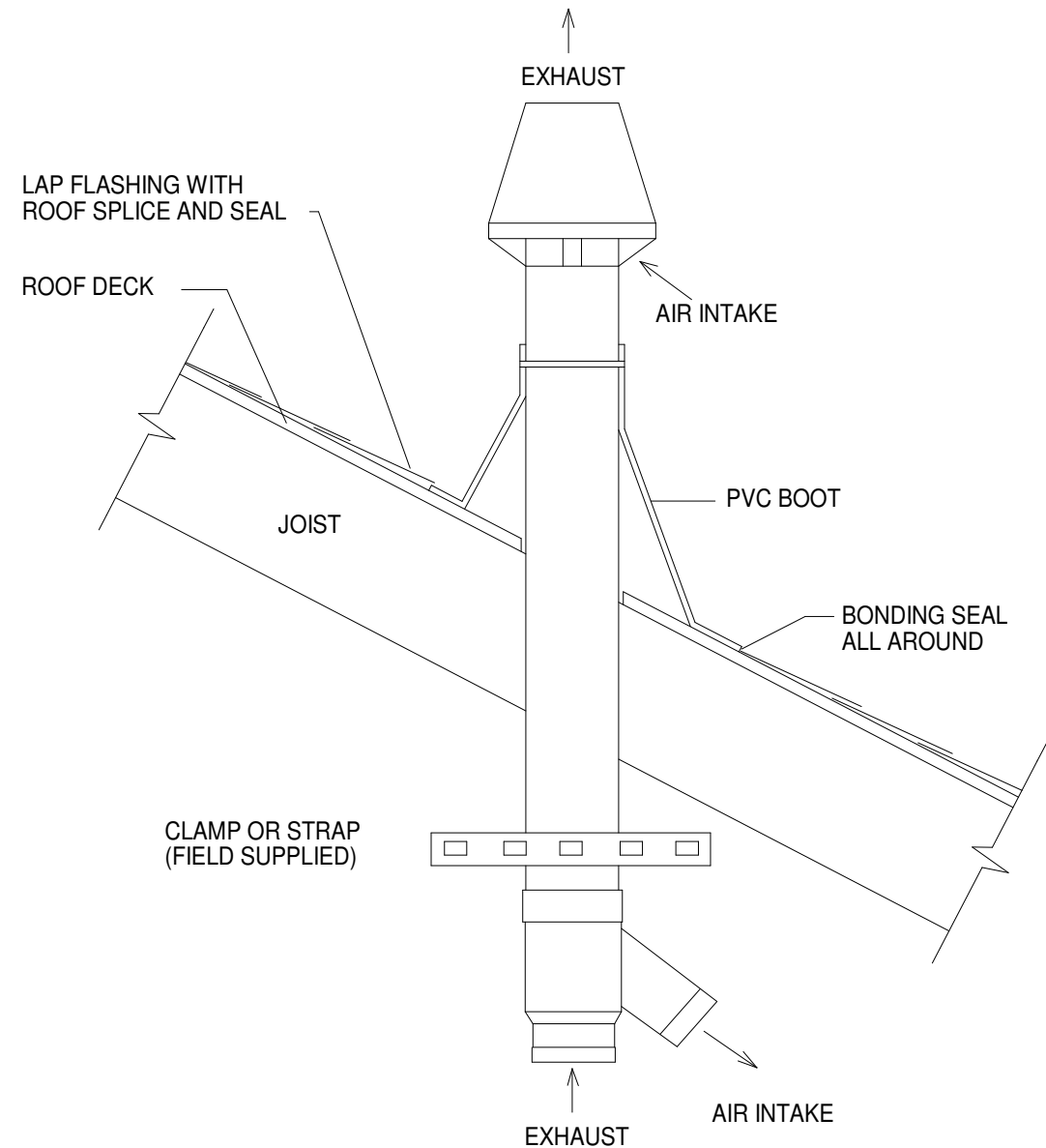
2 TYPICAL "LAV-SHIELD" LAVATORY-SINK ANSI-ADA DETAIL
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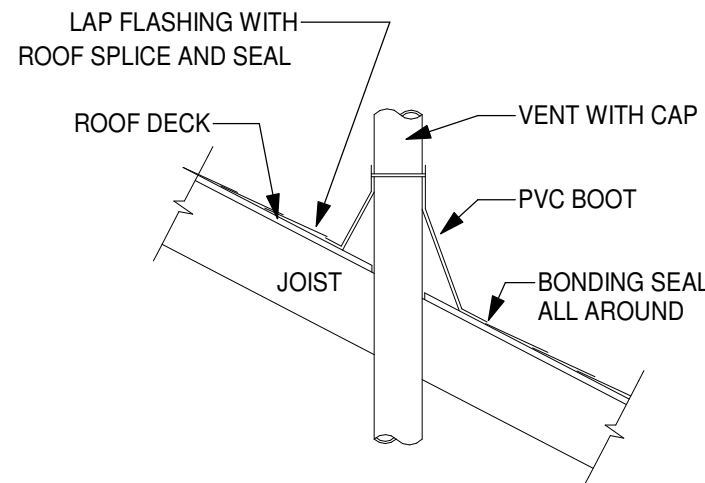
3 WATER SERVICE VERTICAL
SCALE: NTS



4 WATER HEATER PIPING DIAGRAM DETAIL
SCALE: NTS



5 GAS WATER HEATER VENT THRU ROOF
SCALE: NTS



6 PLUMBING VENT THRU ROOF
SCALE: NTS



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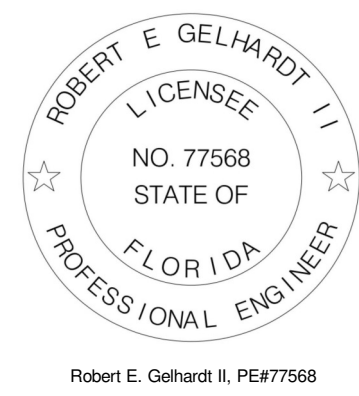
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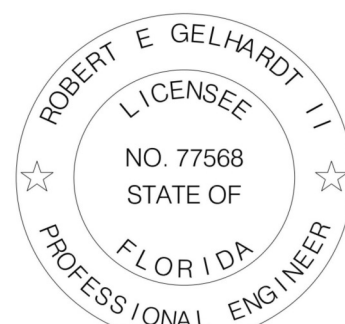
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SHEET TITLE

PLUMBING
SCHEDULES

P601

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	MFG/ MODEL	FIXTURE DESCRIPTION	CW	HW	SAN	IMAGE
EWC	ADA DUAL HEIGHT DRINKING FOUNTAIN	ELKAY/LZSTLBWSLK	WALL MOUNT DUAL HEIGHT ADA ELECTRIC WATER COOLER WITH BOTTLE FILLER, FILTERED, REFRIGERATED, CHILLING CAPACITY OF 8 GPH OF 50 DEGREE DRINKING WATER, ELECTRONIC BOTTLE FILLER SENSOR WITH ELECTRONIC FRONT AND SIDE PUSHBAR ACTIVATION, MCGUIRE 17 GA FULLY CAST BRASS P-TRAP AND TAILPIECE, MCGUIRE ANGLE SUPPLY STOPS AND BRAIDED STAINLESS STEEL SUPPLY, CHROME PLATED ESCUTCHEON PLATE WITH SET SCREW, PROVIDE BACKFLOW PREVENTER AND WALL CARRIER.	1/2"	0"	1 1/2"	
SH	ADA SHOWER	FREEDOM SHOWERS/APFQ3838BF 1PRRF	ADA COMPLIANT CENTER DRAIN, 36"X36" ID, SH-1: LEFT SEAT, SH-2: RIGHT SEAT OPTIONS, INCLUDE GRAB BARS, SHOWER ROD, BALANCING VALVE, FLOOR DRAIN, ADA HAND-HELD SHOWER KIT, AND SLIDE BAR.	1/2"	1/2"	3"	
FD1	FLOOR DRAIN	WATTS/FD-100-A	WATTS FD-100-A FLOOR DRAIN WITH ROUND STRAINER, 2" TO 6" PIPE SIZE, NO HUB, PUSH ON, THREADED OUTLET AND INSIDE CAULK FOR OUTLET TYPES, 5" TO 10" STRAINER,	0"	0"	2"	
WC1	FLOOR MOUNT FLUSH VALVE WATER CLOSET	AMERICAN STANDARD /3043528	WATER CLOSET, ADA, FLOOR MOUNT, FLUSH VALVE, VITREOUS CHINA, SIPHON JET FLUSHING ACTION, ELONGATED RIM, MIN. 17" RIM HEIGHT, 1 1/2" TOP SPUD, TOUCHLESS BATTERY-POWERED 1.28 GPF PISTON (CAN OTHERWISE PAIR WITH SLOAN ROYAL 1111ESSGEM 1111BYG FLUSH VALVES), INSTALL WITH WATER HAMMER ARRESTOR.	1"	0"	3"	
GWH	GAS WATER HEATER	AO SMITH/GPDL 40	5AMP 120V FAN ON DEDICATED NON-GFI OUTLET, 40 GALLON CAPACITY, 0.68 UEF, 40 MBH INPUT, 45 USGPH AT 72 TEMP RISE, 74 GALLON FIRST HOUR RATINGS, 22" DIAMETER, 3" CONCENTRIC VENT KIT, NON-CONDENSING WATER HEATER, THEREFORE THE EXHAUST VENT MAY COLLECT ACIDIC CONDENSATION DURING COLD OUTDOOR CONDITIONS, ROUTE VENT CONDENSATE DRAIN LINE TO NEAREST DRAIN OR MOP SINK AFTER PH NEUTRALIZATION.	1"	1"	0"	
HB	HOSE BIBB	WOODFORD/24	MODEL B24, ANTI-SIPHON.	1/2"	0"	0"	
IM	ICE MAKER BOX	GUY GREY/88531	WHITE POWDER-COATED COLD-ROLLED STEEL ICE MAKER OUTLET BOX, 4"X4"X2" OPENING, WATER HAMMERARRESTER VALVE, 1/4 TURN VALVE.	1/2"	0"	0"	
LAV2	LAVATORY	KOHLER/K-2005	SINK BASIN: (20-1/2" x 18-1/4" x 12-1/8") VITREOUS CHINA, WALL HUNG, WALL CARRIER WITH CONCEALED ARMS, FRONT OVERFLOW, SELF DRAINING FAUCET LEDGE, SIDE SPLASH SHIELD, ADA COMPLIANT, FAUCET: DELTA D501LF-HDF CENTERSET, PROVIDE LAV SHIELD.	1/2"	1/2"	1 1/2"	
MS	MOP SINK	FIAT/MSBIDTG2424	MOP BASIN, FLOOR MOUNTED, 24"X24" BASIN, 10" DEEP, INCLUDES 830AA FAUCET, 832AA HOSE AND BRACKET, 889CC MOP HANGER BRACKET.	3/4"	3/4"	3"	
SK	SINGLE COMP. SINK	ELKAY/LUSTERTONE CLASSIC #DLRS332210	33"X22" STAINLESS STEEL 3-HOLE DROP IN SINGLE-BOWL KITCHEN SINK.	1/2"	1/2"	2"	

PLUMBING FIXTURE CALCULATION

MARK	QUANTITY	CWFU	TOTAL CWFU	HWFU	TOTAL HWFU	TWFU	COMBINED FU	WFU	TOTAL WFU
EWC	1	0.25	0.25	0	0	0.25	0.25	0.5	0.5
FD1	3	0	0	0	0	0	0	2	6
HB	4	2	8	0	0	2	8	0	0
IM	3	0.25	0.75	0	0	0.25	0.75	0	0
LAV2	3	1.5	4.5	1.5	4.5	2	6	1	3
MS	1	2.25	2.25	2.25	2.25	3	3	5	5
SH	2	1	2	1	2	1.4	2.8	2	4
SK	1	1	1	1	1	1.4	1.4	2	2
WC1	3	10	30	0	0	10	30	4	12
TOTAL: 21	21		48.75		9.75		52.2		32.5

NOTE: FIXTURE UNITS BASED ON TABLES FBC-P 709 & E103.3.

BUILDING SERVICE PIPING

TYPE	FU	SIZE	DEV LENGTH
DCW METER	53	1"	160'
DCW DISTRIB.		1-1/2"	
SEWAGE	33	4"	160'

REMARKS:
BRING ANY ISSUES TO EOR.
RESIDUAL PRESSURE: 39 PSI
WATER LINE SIZED PER FBC-P TABLE 201.1
SEWER SIZED PER FBC-P TABLE 710.1(1)



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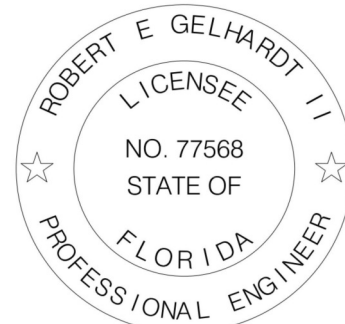
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Robert E. Gelhardt II, PE#77568

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PHASE	DATE	DRAWN	CHECK
DD	07/25/24	LJ	REGII
50% CD	08/13/24	LJ	REGII
90% CD	10/04/24	LJ	REGII
100% CD	10/22/24	LJ	REGII
PERMIT	02/21/25	LJ	REGII

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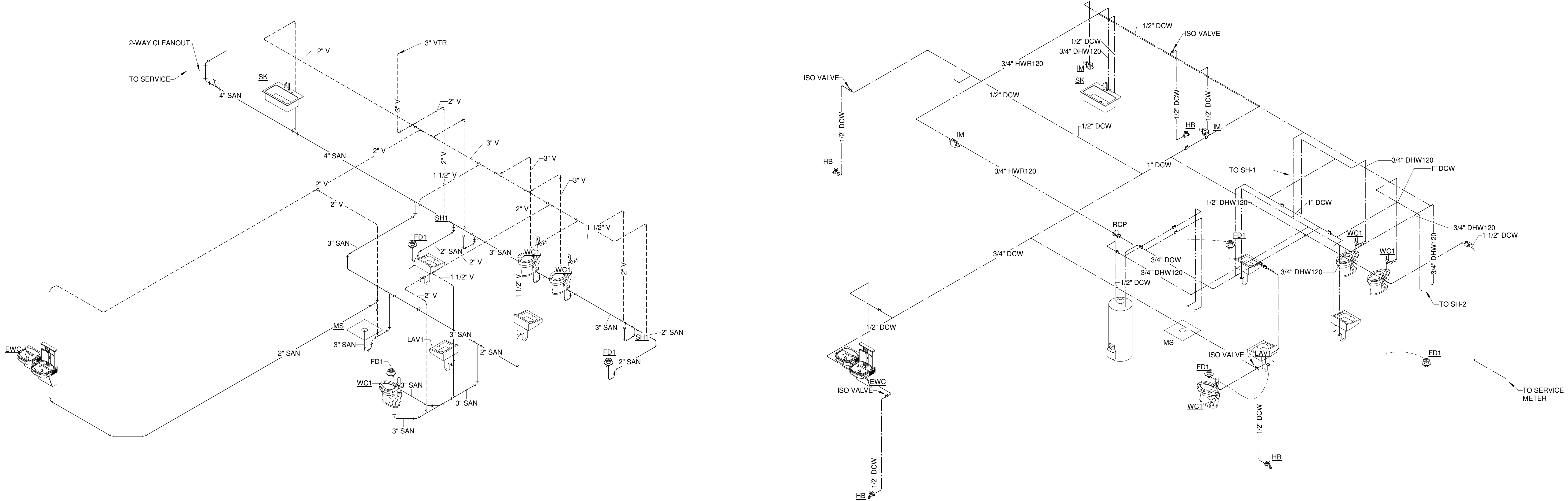
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SHEET TITLE

RISER DIAGRAMS

P901

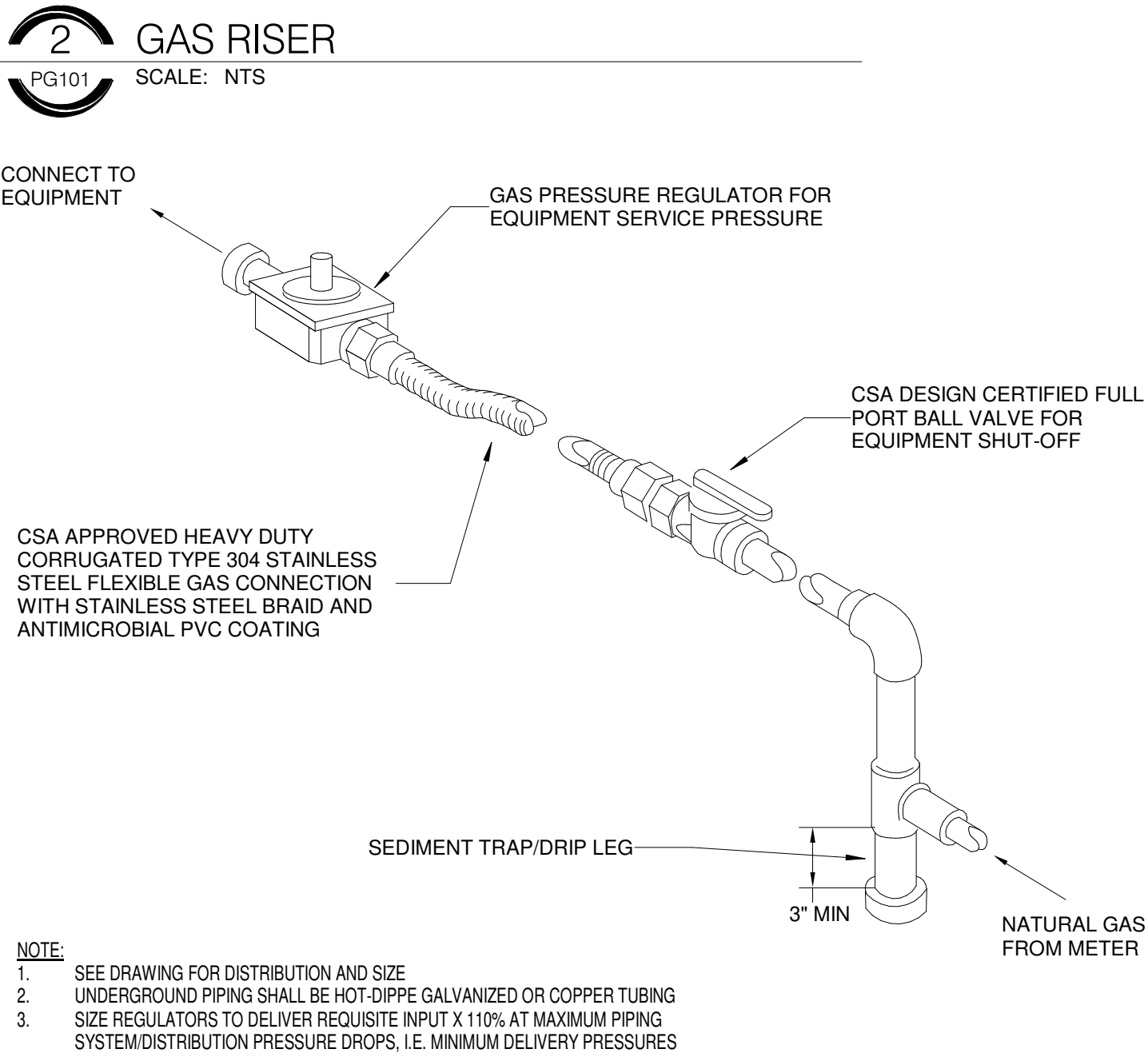
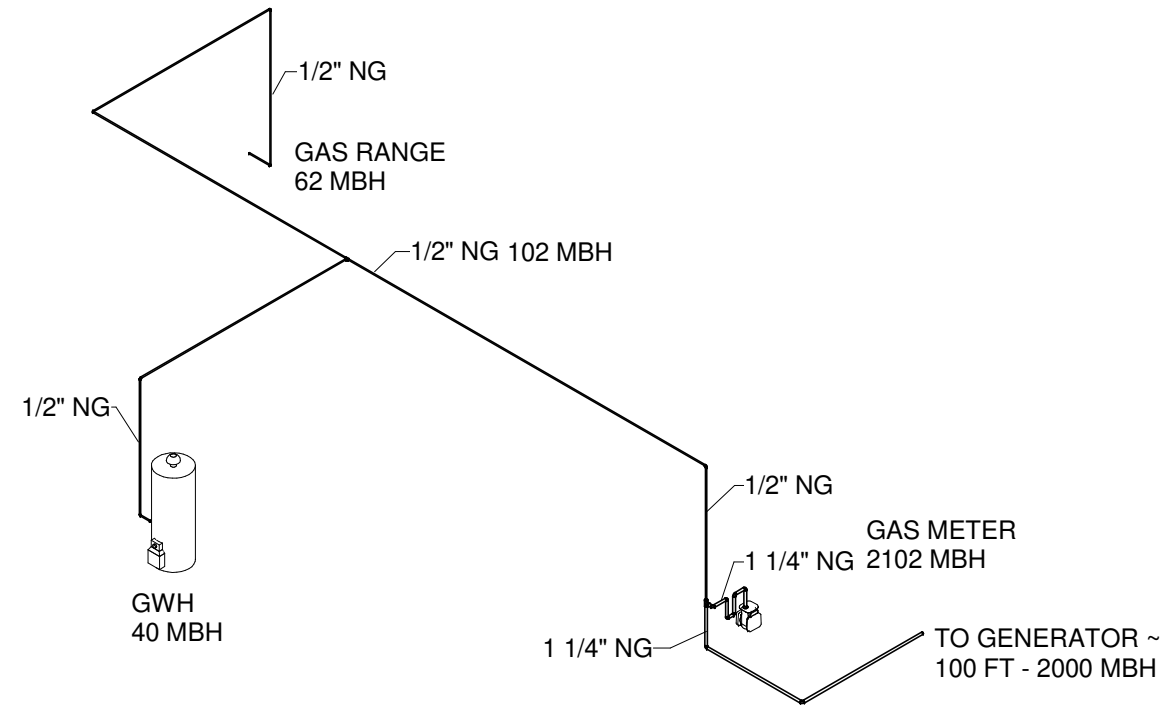
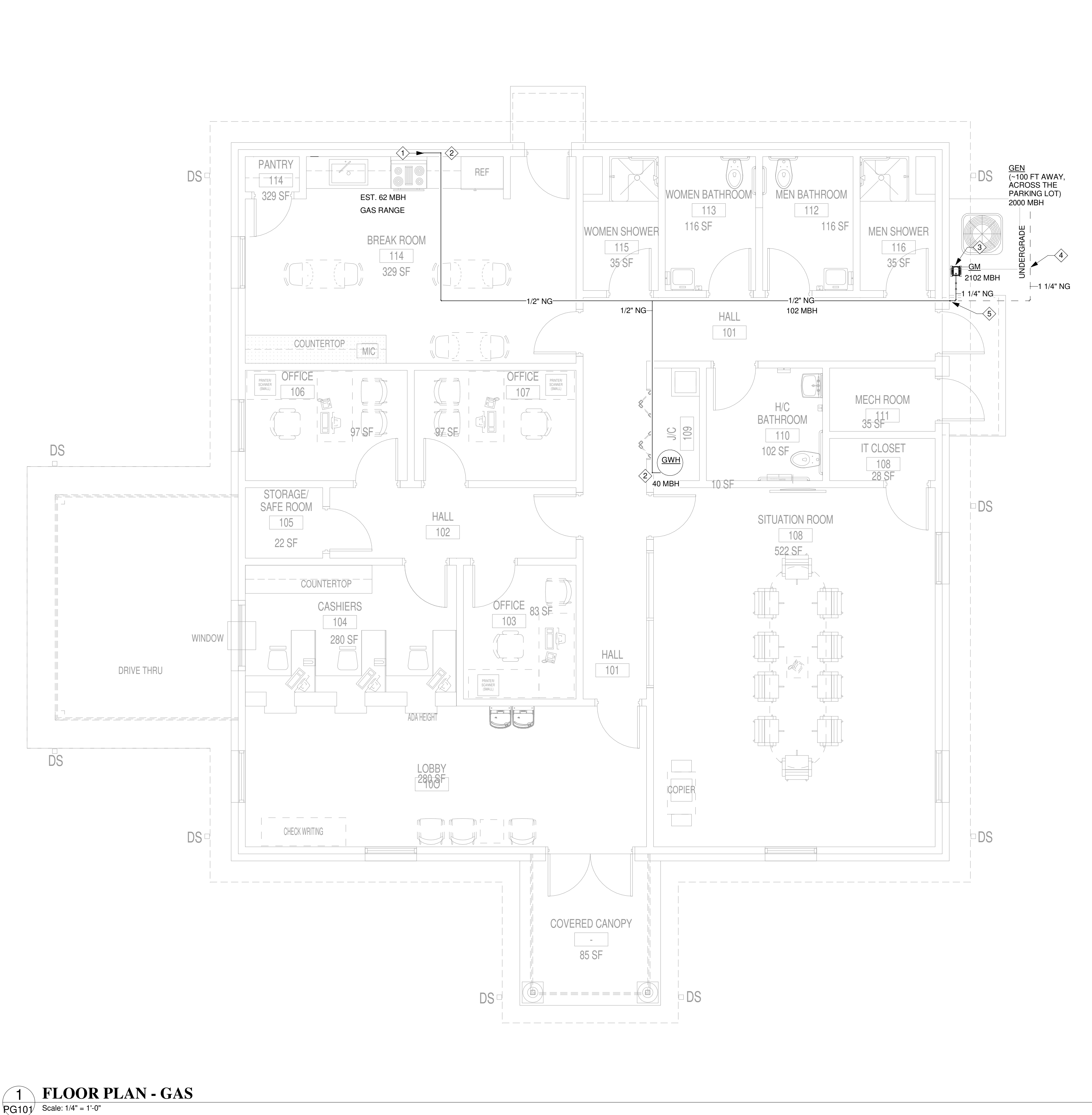


1 SANITARY RISER

Scale:

2 PRESSURE RISER

Scale:



		Gas	
		Natural	
		Inlet Pressure	2.0 psi
		Pressure Drop	1.0 psi
		Specific Gravity	0.60

PIPE SIZE (inch)									
Nominal	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Actual ID	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	4.026
Length (ft)	Capacity in Cubic Feet of Gas Per Hour								
10	1,510	3,040	5,560	11,400	17,100	32,900	52,500	92,800	189,000
20	1,070	2,150	3,930	8,070	12,100	23,300	37,100	65,600	134,000
30	869	1,760	3,210	6,590	9,880	19,000	30,300	53,600	109,000
40	753	1,520	2,780	5,710	8,550	16,500	26,300	46,400	94,700
50	673	1,360	2,490	5,110	7,650	14,700	23,500	41,500	84,700
60	615	1,240	2,270	4,660	6,980	13,500	21,400	37,900	77,300
70	569	1,150	2,100	4,320	6,470	12,500	19,900	35,100	71,600
80	532	1,080	1,970	4,040	6,050	11,700	18,600	32,800	67,000
90	502	1,010	1,850	3,810	5,700	11,000	17,500	30,900	63,100
100	462	934	1,710	3,510	5,260	10,100	16,100	28,500	58,200
125	414	836	1,530	3,140	4,700	9,060	14,400	25,500	52,100
150	372	751	1,370	2,820	4,220	8,130	13,000	22,900	46,700
175	344	695	1,270	2,601	3,910	7,530	12,000	21,200	43,300
200	318	642	1,170	2,410	3,610	6,960	11,100	19,600	40,000
250	279	583	1,040	2,140	3,210	6,180	9,850	17,400	35,500
300	253	528	945	1,940	2,910	5,600	8,920	15,800	32,200
350	232	486	869	1,790	2,670	5,150	8,210	14,500	29,600
400	216	452	809	1,660	2,490	4,790	7,640	13,500	27,500
450	203	424	759	1,560	2,330	4,500	7,170	12,700	25,800
500	192	401	717	1,470	2,210	4,250	6,770	12,000	24,400

GAS GENERAL NOTES

1.CONTRACTOR TO INSTALL DRIP LEG WITH ISOLATION VALVE, WYE STRAINER(W-PLUG), MAXITROL PRESSURE REGULATOR & "CSST" GAS RATED FLEXIBLE PIPE TO ALL GAS APPLIANCES. COORDINATE EXACT APPLIANCE CONNECTION AT EQUIPMENT & ACTUAL GAS CAPACITY PRIOR TO INSTALLATION. INSTALL "PORTAL PLUS" APPROVED ROOF PIPE PENETRATION FOR PIPING TO ASSURE PROPER AIR-WATER TIGHT SEAL.

2.ALL EXPOSED GAS PIPING TO BE PAINTED YELLOW WITH RED LABELING AND FLOW ARROWS PER FBC-FG; INSTALL AIR-WATER TIGHT SLEEVE AT ANY WALL PENETRATIONS.

GAS KEYED NOTES

1 CONTRACTOR SHALL PROVIDE GAS PIPING TO RANGE, REFER TO GAS DETAIL ON PG501. GAS PIPING SHALL BE CONNECTED TO 1/2" BRANCH.

2 GAS PIPING SHALL DROP ONE TIME BEFORE SERVING ALL GAS EQUIPMENT. PROVIDE SHUT-OFF VALVE, PRESSURE REGULATOR, AND DRIP LEG PRIOR TO GAS - EQUIPMENT CONNECTION.

3 NATURAL GAS PIPING FROM MUNICIPALITY TO SERVE MINIMUM 2102 MBH AT 120 FEET. NATURAL GAS LINE ESTIMATED USING FBC-FUEL GAS TABLE.

4 PIPING UNDERGROUND PER GAS PIPING SPEC, COORDINATE EXACT TERMINATION WITH GAS GENERATOR ON SITE. ~100 FT ON THE OTHER SIDE OF THE PARKING LOT.

5 RISE 12" ABOVE GRADE AND ENTER BUILDING, AFTER BUILDING ENTRANCE ROUTE PIPING ABOVE CEILING.



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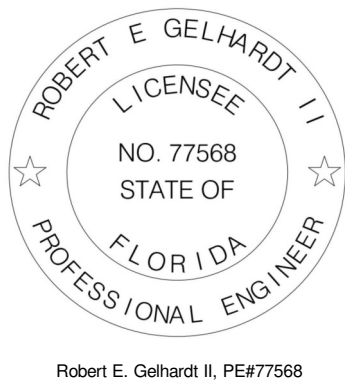
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SHEET TITLE
GAS FLOOR PLAN

PG101