

PLUMBING GENERAL NOTES		
<div>1. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.</div> <div>2. ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE SYSTEM WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS, ETC. SEE FIXTURES SCHEDULE.</div> <div>3. FURNISH AND INSTALL COMPLETE SYSTEMS OF SOIL, WASTE, VENT, HOT AND COLD WATER PIPING FROM ALL PLUMBING FIXTURES, AND/OR OTHER EQUIPMENT.</div> <div>4. CLEAN-OUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS, PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS, AND AT EVERY 100 FEET. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS.</div> <div>5. ALL SOIL, WASTE, AND VENT LINES SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION.</div> <div>6. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST CONTACT WITH OTHER METALS.</div> <div>7. WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY, CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY WITH ASPHALTIC ENAMEL AND PROVIDING 15# ASPHALT SATURATED FELT BETWEEN THE PIPE AND MASONRY.</div> <div>8. THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY WITH THE MECHANICAL AND THE ELECTRICAL CONTRACTORS TO AVOID CONFLICT WITH OTHER TRADES.</div> <div>9. CEILING AREA HAS LIMITED SPACE. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED.</div> <div>10. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS.</div> <div>11. PROVIDE DRAIN VALVES IN THE HOT AND COLD WATER SYSTEM AT ALL LOW POINTS TO ALLOW FOR COMPLETE DRAINAGE.</div> <div>12. VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED. VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED.</div> <div>13. WASTE AND VENT PIPING SHALL BE AS FOLLOWS: BELOW SLAB: PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED FITTINGS, HUB & SPIGOT CAST-IRON SOIL PIPE; HUB & SPIGOT CAST-IRON SOIL PIPE FITTINGS. ABOVE SLAB: PVC PIPE, CAST-IRON, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED FITTINGS, HUBLESS CAST-IRON SOIL PIPE; HUBLESS CAST-IRON SOIL PIPE FITTINGS.</div> <div>14. STORM PIPING SHALL BE AS FOLLOW: BELOW SLAB: PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED FITTINGS. ABOVE GROUND: SERVICE WEIGHT NO-HUB CAST IRON PIPING/ INSULATION IS REQUIRED ON ALL ROOF DRAIN BODIES AND HORIZONTAL RUNS (ABOVE SLAB). ½" THICK RIGID MOLDED FIBERGLASS WITH FITTINGS INSERTS, PVC COVERS, AND VAPOR BARRIER JACKET.</div> <div>15. DOMESTIC WATER PIPING ABOVE SLAB SHALL BE TYPE 'L' COPPER. DOMESTIC WATER PIPING BELOW SLAB SHALL BE TYPE 'K' COPPER. INSULATION IS REQUIRED ON ALL WATER SUPPLY PIPING ABOVE FINISHED FLOOR IN ACCORDANCE WITH STATE PLUMBING CODE OR PER LOCAL JURISDICTION. CPVC OR FLOWGUARD SHALL BE USED AS ALTERNATE MATERIAL.</div> <div>16. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE WASTE PIPING IS INSTALLED SO THAT PROPER SLOPES WILL MAINTAINED.</div> <div>17. ALL PLUMBING CONTRACTOR SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING; INSTALLATION OF AIR CHAMBERS OR SHOCK ARRESTORS SHALL BE IN ACCORDANCE WITH PDI-WH20I. SEE SHOCK ARRESTOR SCHEDULE (IF PROVIDE).</div> <div>18. PROVIDE FULL PORT VALVES IN ALL BRANCH LINES OF THE HOT AND COLD WATER DISTRIBUTION SYSTEM ON 3/4" AND LARGER CW & HW AND AS SHOWN ON PLANS, RISERS, AND SCHEMATIC DETAILS.</div> <div>19. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.</div> <div>20. PROVIDE ACCESS DOORS FOR ALL VALVES AND DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE INACCESSIBLE CEILING CONSTRUCTION.</div> <div>21. PROVIDE DEEP SEAL TRAPS FOR ALL FLOOR DRAINS.</div> <div>22. WHERE EARTHQUAKE LOADS ARE APPLICABLE IN ACCORDANCE WITH THE NC INTERNATIONAL PLUMBING CODE, PIPING AND EQUIPMENT SUPPORTS WITH THE NC INTERNATIONAL PLUMBING CODE, PIPING AND EQUIPMENT SUPPORT SHALL BE DESIGNED AND INSTALLED FOR THE SEISMIC FORCES IN ACCORDANCE WITH THE NC BUILDING CODE.</div> <div>23. PROVIDE A U.L. LISTED ASSEMBLY FOR ALL PENETRATIONS THRU FIRE RATED WALLS AND FLOORS.</div> <div>24. PROVIDE PRESSURE REDUCING VALVE IF PRESSURE EXCEEDS 80 PSI.</div> <div>25. NO INSULATION PERMITTED ON BACKFLOW PREVENTOR ASSEMBLY.</div>		
SHOCK ARRESTOR SCHEDULE		
P.D.I. SIZE	FIXTURE UNITS	MANUFACTURER OR EQUAL
SA'A'	1 – 11	ZURN, SMITH, PPI, SIOUX-CHIEF
SA'B'	12 – 32	
SA'C'	33 – 60	
SA'D'	61 – 113	
LOCATE SHOCK ARRESTORS IN AN ACCESSIBLE LOCATION, OR PROVIDE SIOUX-CHIEF SHOCK ARRESTORS ONLY. PROVIDE SHOCK ARRESTORS AS INDICATED PER SCHEDULE. SHOCK ARRESTORS SHALL BE SAME SIZE AS PIPE INSTALLED ON, MINIMUM.		

PLUMBING LEGEND	
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	DOMESTIC 120°F HOT WATER PIPING
	DOMESTIC 140°F HOT WATER PIPING
	VENT PIPING
	WASTE (SANITARY SEWER)
	WASTE (GREASE)
	GAS PIPING
	ROOF LEADER
	EMERGENCY ROOF LEADER
	STROM PIPING UNDERSLAB
	FULL PORT VALVE
	BALANCING VALVE (BV)
	CHECK VALVE
	FIRE SPRINKLER RISER
	WASTE RISER DESIGNATION
	WATER RISER DESIGNATION
	POINT OF CONNECTION NEW TO EXISTING
	POINT OF REMOVAL FOR DEMOLITION
	HOSE BIB/WALL HYDRANT
	PRESSURE REDUCING VALVE
	SHUT OFF VALVE
	DIRECTION OF FLOW
	REDUCER OR INCREASER
	TOP CONNECTION, 45 OR 90 DEGREES
	BOTTOM CONNECTION, 45 OR 90 DEGREES
	SIDE CONNECTION
	CAPPED OUTLET
	DROP IN PIPING
	RISE IN PIPING
	UNION
	SOLENOID VALVE
	WATER FLOW MEASURING DEVICE
	PRESSURE GAUGE
	VALVE IN RISER

PLUMBING PIPING SPECIFICATION SECTION PART 1 – GENERAL		2.4 VALVES		C. INSTALL CAST-IRON SOIL PIPE AND CAST-IRON SOIL PIPE FITTINGS ACCORDING TO CISPI 2006 REVISED AND EDITED EDITION OF "CAST-IRON SOIL PIPE AND FITTINGS HANDBOOK, VOLUME 1," CHAPTER IV, "INSTALLATION OF CAST-IRON SOIL PIPE AND FITTINGS."		
1.1 SYSTEM PERFORMANCE REQUIREMENTS		A. BALL VALVES, 4 INCHES AND SMALLER: MSS SP-110, CLASS 150, 600-PSI CWP; FOR 2 INCH AND SMALLER, 120 WSP AND 200 WOG; FOR 2-1/2 INCH AND LARGER, ASTM B 584 BRONZE BODY AND BONNET, 2-PIECE CONSTRUCTION; STAINLESS STEEL BALL, BLOWOUT PROOF; BRONZE OR BRASS STEM; TEFLON SEATS AND SEALS; THREADED OR SOLDERED END CONNECTIONS:		D. MAKE CHANGES IN DIRECTION FOR DRAINAGE AND VENT PIPING USING APPROPRIATE Y BRANCHES, Y BRANCHES WITH 1/8 BENDS, AND LONG-SWEEP 1/4, 1/5, 1/6, 1/8, AND 1/16 BENDS.		
1. WATER DISTRIBUTION SYSTEMS, ABOVE GROUND: 125 PSIG.		1. OPERATOR: VINYL-COVERED STEEL LEVER HANDLE.		E. INSTALL DRAINAGE PIPING LESS THAN 3" DIAMETER AT 1/4 INCH PER FOOT (2 PERCENT); PIPING 3" DIAMETER OR GREATER AT 1/8 INCH PER FOOT (1 PERCENT). INSTALL VENT PIPING AT 1/8 INCH PER FOOT (1 PERCENT).		
2. SOIL,WASTE, AND VENT SYSTEMS: 10-FOOT HEAD OF WATER.		2. OPERATOR: LEVER OPERATORS WITH LOCK, WHERE INDICATED.				
1.2 IDENTIFYING DEVICES AND LABELS:		B. ACCEPTABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:				
A. EQUIPMENT NAMEPLATES: LAMINATED PLASTIC, WITH OPERATIONAL DATA ENGRAVED OR STAMPED, PERMANENTLY FASTENED TO EQUIPMENT.		1. BALL VALVES:		3.3 HANGERS AND SUPPORTS INSTALLATION		
1. DATA: MANUFACTURER PRODUCT NAME, MODEL NUMBER, SERIAL NUMBER, CAPACITY OPERATING AND POWER CHARACTERISTICS.		A. HAMMOND VALVE CORPORATION.		A. INSTALL HANGERS FOR HORIZONTAL PIPING UP TO 2" AT A MAXIMUM SPAN OF 5 FEET. PROVIDE 3/8 IN DIAMETER RODS.		
2. COORDINATE NAMEPLATES WITH OWNER AND THEIR CODING SYSTEM.		B. MILWAUKEE VALVE COMPANY, INC.		B. SUPPORT CAST-IRON SOIL PIPE AND FITTINGS AT MAXIMUM HORIZONTAL SPACING OF 5 FEET, EXCEPT 10-FOOT SECTIONS OF PIPE MAY BE SUPPORTED AT 10-FOOT SPACING AND AT AT MAXIMUM VERTICAL SPACING OF 15 FEET.		
		C. NIBCO INC.		C. REFER TO MECHANICAL SPECIFICATIONS FOR INSULATION REQUIREMENTS.		
		D. RED WHITE VALVE				
		2.5 SUMP PUMPS		3.4 FIELD QUALITY CONTROL		
		A. ACCEPTABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:		A. INSPECT PIPING AS FOLLOWS:		
		1. STANCOR PUMPS		1. DO NOT ENCLOSE, COVER, OR PUT INTO OPERATION PIPING SYSTEMS UNTIL IT HAS BEEN INSPECTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.		
		2. ZOELLER PUMPS		2. DURING PROGRESS OF THE INSTALLATION, NOTIFY THE PLUMBING OFFICIAL HAVING JURISDICTION AT LEAST 24 HOURS PRIOR TO TIME INSPECTION MUST BE MADE.		
		2.6 COMMERCIAL GRADE FIXTURES		PERFORM TESTS SPECIFIED BELOW IN PRESENCE OF THE PLUMBING OFFICIAL.		
		A. ACCEPTABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:		A. ROUGHING-IN INSPECTION: ARRANGE FOR INSPECTION OF PIPING SYSTEM BEFORE CONCEALED OR CLOSED-IN AFTER SYSTEM ROUGHING-IN AND PRIOR TO SETTING FIXTURES.		
		1. AMERICAN STANDARD		B. FINAL INSPECTION: ARRANGE FOR FINAL INSPECTION BY PLUMBING OFFICIAL TO OBSERVE TESTS SPECIFIED BELOW AND TO ENSURE COMPLIANCE WITH REQUIREMENTS OF PLUMBING CODE.		
		2. KOHLER		3. REINSPECTIONS: MAKE REQUIRED CORRECTIONS AND ARRANGE FOR REINSPECTION BY PLUMBING OFFICIAL WHEN PIPING SYSTEM FAILS TO PASS TEST OR INSPECTION.		
		2.6 COMMERCIAL GRADE WATER HEATERS		4. REPORTS: PREPARE INSPECTION REPORTS SIGNED BY THE PLUMBING OFFICIAL.		
		A. ACCEPTABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:		B. TEST PIPING AS FOLLOWS:		
		1. EEMAX,INC.		1. TEST FOR LEAKS AND DEFECTS IN NEW WATER DISTRIBUTION PIPING SYSTEMS AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED. IF TESTING IS PERFORMED IN SEGMENTS, SUBMIT SEPARATE REPORT FOR EACH TEST, COMPLETE WITH DIAGRAM OF PORTION OF SYSTEM TESTED.		
		2. CHRONOMITE LABS		2. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST SYSTEM OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.		
		3. RHEEM		3.5 CLEANING		
PART 2 – PRODUCTS		PART 3 – EXECUTION		A. CLEAN AND DISINFECT WATER DISTRIBUTION PIPING AS FOLLOWS:		
2.1 PIPES AND TUBES		3.1 PIPE AND FITTINGS APPLICATIONS		1. PURGE NEW POTABLE WATER DISTRIBUTION PIPING SYSTEMS AND PARTS OF EXISTING POTABLE WATER SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED PRIOR TO USE.		
A. GENERAL:THE APPLICATION OF THE FOLLOWING PIPE, TUBE, AND FITTING MATERIALS AND JOINING METHODS REQUIRED FOR PLUMBING PIPING SYSTEMS ARE INDICATED IN PART 3 ARTICLE "PIPE AND FITTINGS APPLICATIONS."		A. GENERAL: USE PIPE, TUBE, FITTINGS, AND JOINING METHODS FOR PIPING SYSTEMS.		2. USE PURGING AND DISINFECTING PROCEDURE WHICH IS THE MORE STRINGENT OF THAT PRESCRIBED BY THE AUTHORITY HAVING JURISDICTION OR, IF A METHOD IS NOT PRESCRIBED BY THAT AUTHORITY, THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652.		
B. HARD COPPER TUBE: ASTM B 88, TYPES K AND L WATER TUBE, DRAWN TEMPER.		B. WATER DISTRIBUTION PIPING ABOVE GROUND:				
C. COPPER DRAINAGE TUBE: ASTM B 306, TYPE DWV, DRAWN TEMPER.		1. 3" AND SMALLER: HARD COPPER TUBE, TYPE L, WROUGHT-COPPER OR CAST-COPPER-ALLOY PRESSURE FITTINGS, COPPER UNIONS AND SOLDER JOINTS WITH ALLOY Sn95 SOLDER.				
D. HUBLESS, CAST-IRON SOIL PIPE: CISPI 301, 2012 EDITION.		1. 2 TO 4 INCHES: HUBLESS CAST-IRON SOIL PIPE; HUBLESS CAST-IRON SOIL PIPE FITTINGS; STAINLESS-STEEL, CAST-IRON, OR FM-TYPE HEAVY-DUTY COUPLINGS FOR HUBLESS CAST-IRON SOIL PIPE AND FITTINGS; AND HUBLESS JOINTS.				
E. HUB & SPIGOT, CAST-IRON SOIL PIPE: ASTM A 74, SERVICE CLASS.		2. 2 TO 4 INCHES: COPPER DRAINAGE TUBE,WROUGHT-COPPER OR CAST-COPPER-ALLOY DRAINAGE FITTINGS, AND SOLDERED JOINTS WITH ALLOY C SOLDER.				
F. DOMESTIC POTABLE WATER PIPING SHALL MEET THE NSF/ANSI 61 STANDARDS.		3. 1-1/2 INCHES: HUBLESS CAST-IRON SOIL PIPE, HUBLESS CAST-IRON SOIL PIPE FITTINGS, CAST-IRON HEAVY-DUTY COUPLINGS FOR HUBLESS CAST-IRON SOIL PIPE AND FITTINGS, AND HUBLESS JOINTS.				
		4. 1-1/4 AND 1-1/2 INCHES: COPPER DRAINAGE TUBE, WROUGHT-COPPER OR CAST-COPPER-ALLOY DRAINAGE FITTINGS, AND SOLDERED JOINTS WITH ALLOY E SOLDER.				
2.2 PIPE FITTINGS AND TUBE FITTINGS		D. SOIL, WASTE, AND VENT PIPING BELOW GROUND: USE THE FOLLOWING:				
A. WROUGHT-COPPER, SOLDER-JOINT PRESSURE FITTINGS: ASME B16.22.		1. 2 TO 6 INCHES: HUB & SPIGOT CAST-IRON SOIL PIPE; HUB & SPIGOT CAST-IRON SOIL PIPE FITTINGS; NEOPRENE RUBBER GASKETS AND COMPRESSION JOINTS.				
B. CAST-COPPER-ALLOY, SOLDER-JOINT PRESSURE FITTINGS: ASME B16.18.						
C. WROUGHT-COPPER, SOLDER-JOINT, DWV DRAINAGE FITTINGS: ASME B16.29.						
D. CAST-COPPER-ALLOY, SOLDER-JOINT, DWV DRAINAGE FITTINGS: ASME B16.23.						
E. HUB AND SPIGOT, CAST-IRON SOIL PIPE FITTINGS: ASTM A 74, SERVICE CLASS.						
F. HUBLESS, CAST-IRON SOIL PIPE FITTINGS: CISPI 301, 2012 EDITION.						
		3.2 PIPING INSTALLATION, GENERAL				
2.3 JOINING MATERIALS		A. INSTALL NEW SANITARY DRAIN AND DOMESTIC WATER PIPING AND CONNECT TO EXISTING SANITARY SEWER, VENT AND WATER PIPING AS INDICATED.				
A. SOLDER, BRAZING, AND WELDING FILLER METALS ARE IN COMPLIANCE WITH THE MAX. WEIGHTED AVG. 0.25% LEAD.		B. INSTALL WATER PIPING LEVEL WITHOUT PITCH.				
B. SOLDER, BRAZING, AND WELDING FILLER METALS ARE CAST-IRON SOIL PIPE AND FITTINGS: ASTM C 564 NEOPRENE RUBBER GASKETS AND LUBRICANT.						
C. CISPI COUPLINGS FOR HUBLESS CAST-IRON SOIL PIPE AND FITTINGS: CISPI 310-2012 EDITION, HAVING ASTM C 564 NEOPRENE SEALING SLEEVE, WITH 300 SERIES STAINLESS-STEEL CORRUGATED SHIELD-AND-CLAMP ASSEMBLY.						
2.4 PIPING INSULATION						
A. INSULATE ALL STORM DRAINAGE PIPING TO THE FIRST 20' OR DOWN TO THE FIRST 90 DEGREE BEND, WHICHEVER IS LESS.						
B. INSULATE ALL STORM DRAINAGE ROOF DRAIN BODIES.						
C. INSULATE ALL STORM DRAINAGE PIPING AND DRAIN BODIES WITH MINERAL FIBER, PREFORMED PIPE INSULATION 1 INCH THICK OR CELLULAR GLASS 1-1/2" THICK.						
PLUMBING ABBREVIATIONS				PLUMBING SHEET INDEX		
AAV	AIR ADMITTANCE VALVE	G.C.	GENERAL CONTRACTOR	SHEET NO.	SHEET NAME	SCALE
ABV	ABOVE	GAL	GALLONS	P-01	GENERAL INFORMATION – PLUMBING	N.T.S.
AFF	ABOVE FINISHED FLOOR	GPM	GALLONS PER MINUTE	P-02	SITE PLAN – PLUMBING	1/4"=1'-0"
A/E	ARCHITECT/ENGINEER	HB	HOSE BBB	P-03	UNIT A1&A2 FLOOR PLAN DOMESTIC WATER – PLUMBING	1/4"=1'-0"
ACW	AUTOMATIC CLOTHES WASHER	HR	HOUR	P-04	UNIT A1&A2 FLOOR PLAN WASTE AND VENT – PLUMBING	1/4"=1'-0"
ADA	AMERICANS WITH DISABILITIES ACT	HW	HOT WATER	P-05	UNIT A1&A2 ISOMETRIC – PLUMBING	N.T.S.
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MX	MIXING VALVE	P-06	DETAILS – PLUMBING	N.T.S.
AST	AUTOMATIC SPRAY TAN UNIT	MAX	MAXIMUM	P-07	SCHEDULES – PLUMBING	N.T.S.
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	MIN	MINIMUM			
BHP	BRAKE HORSEPOWER	M.C.	MECHANICAL SUB-CONTRACTOR			
BTU	BRITISH THERMAL UNIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION			
C/I	CONTRACTOR INSTALLED	NTS	NOT TO SCALE			
CD	CONDENSATE	PD	PUMP DISCHARGE			
CONN	CONNECTION	PDI	PLUMBING DRAINAGE INSTITUTE			
CONT	CONTINUOUS	PSIG	POUNDS PER SQUARE INCH			
CV	CHECK VALVE	P.C.	PLUMBING SUB-CONTRACTOR			
CW	COLD WATER	RM	ROOM			
DFU	DRAINAGE FIXTURE UNIT	SPC	STANDARD PLUMBING CODE			
DIA	DIAMETER	T & P	TEMPERATURE & PRESSURE			
DN	DOWN	TPV	TRAP PRIMER VALVE			
DWG	DRAWING	TYP	TYPICAL			
ECO	EXTERIOR CLEAN OUT	U/G	UNDERGROUND			
E.C.	ELECTRICAL SUB-CONTRACTOR	V	VENT			
F	DEGREES FAHRENHEIT	W	WASTE			
FBC	FLORIDA BUILDING CODE	W/	WITH			
FCO	FLOOR CLEAN OUT	WCO	WALL CLEAN OUT			
FD	FLOOR DRAIN	WFU	WATER FIXTURE UNITS			
FR	FROM	TW	TEMPERED WATER			

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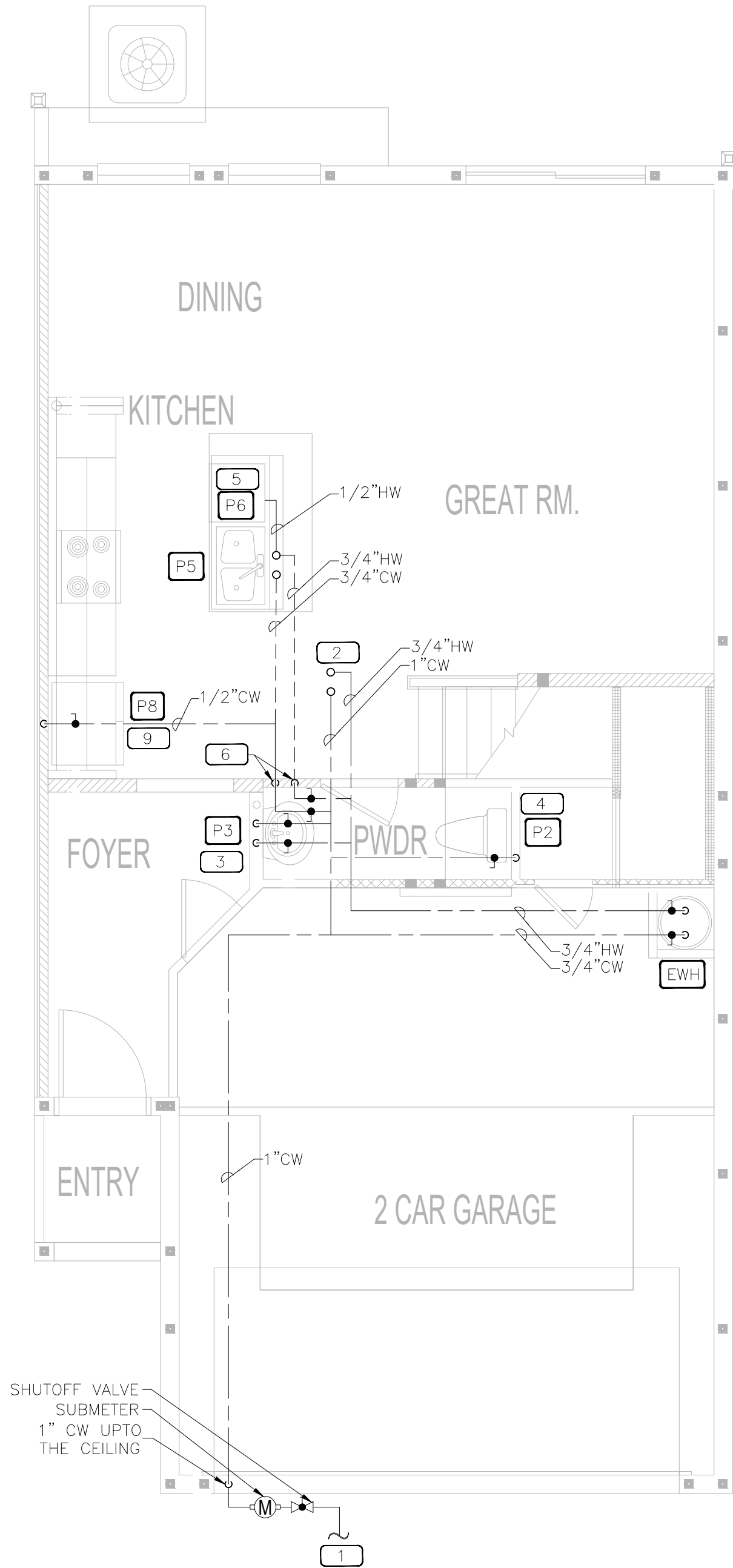
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CONSTRUCTION SHALL BE PER INDICATED DIMENSIONS AND NOTES ONLY. ANY DISCREPANCIES TO BE REPORTED TO ARCHITECT FOR CLARIFICATION

NOT FOR CONSTRUCTION

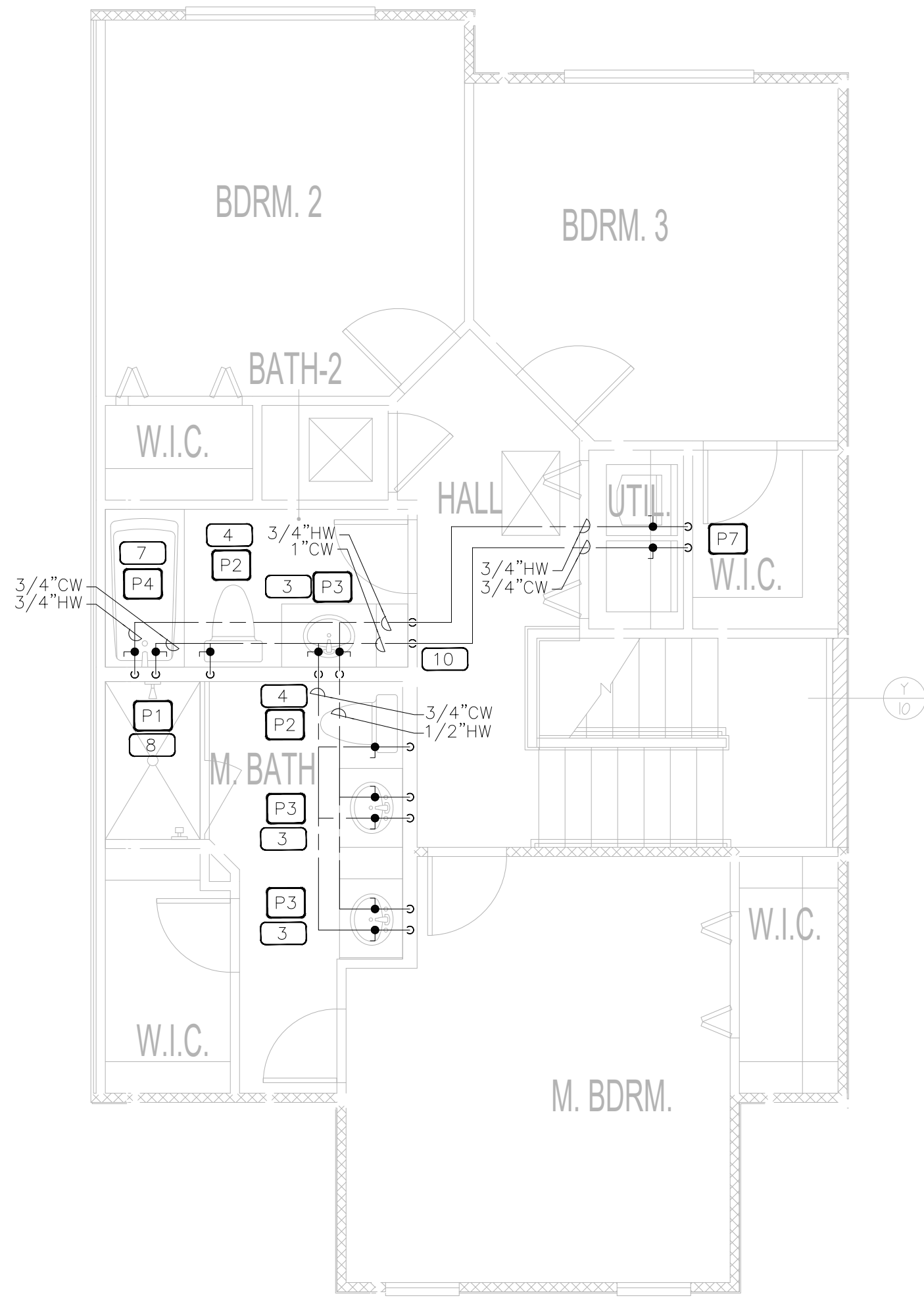
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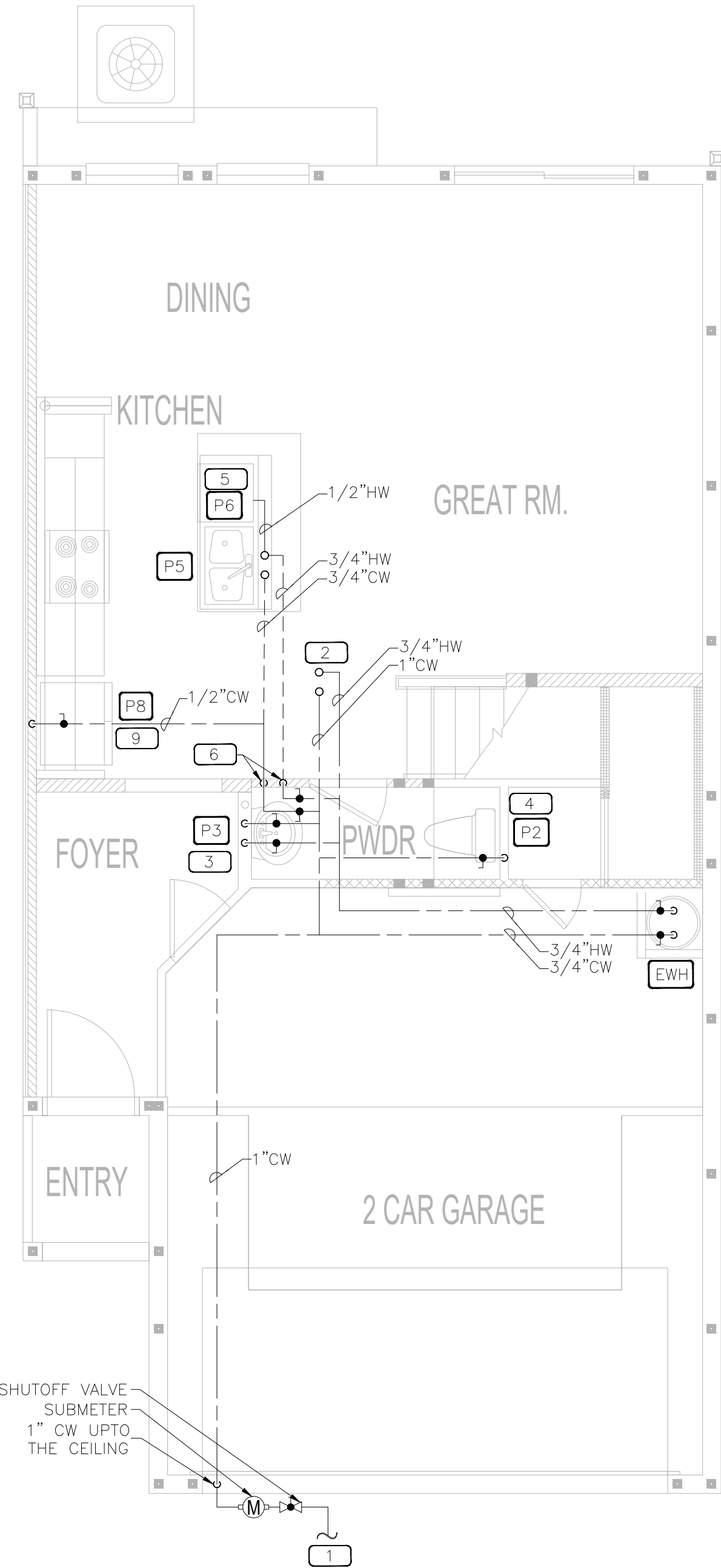
1 FIRST FLOOR UNIT PLAN "A1" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"



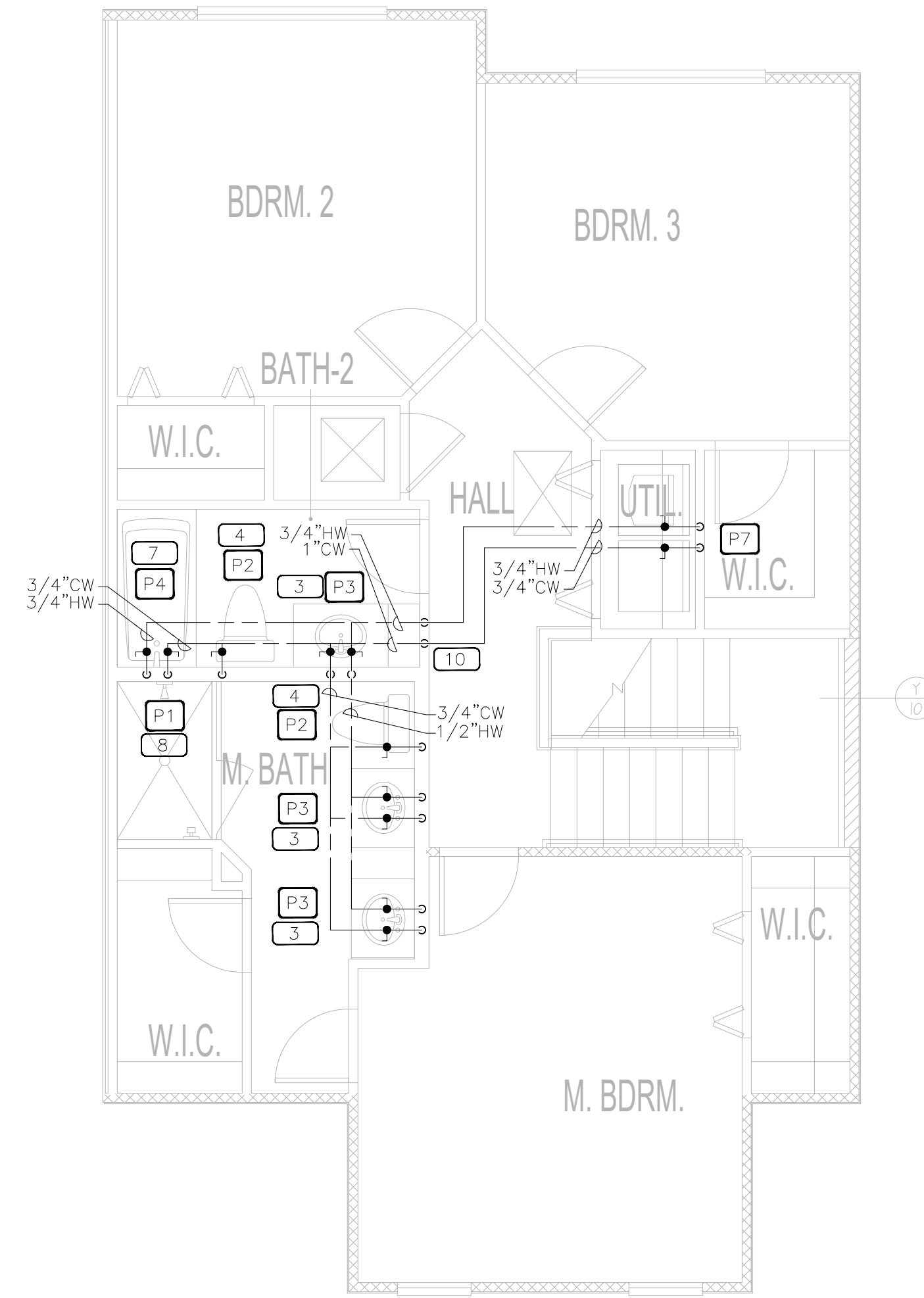
2 SECOND FLOOR UNIT PLAN "A1" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"



3 FIRST FLOOR UNIT PLAN "A2" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"

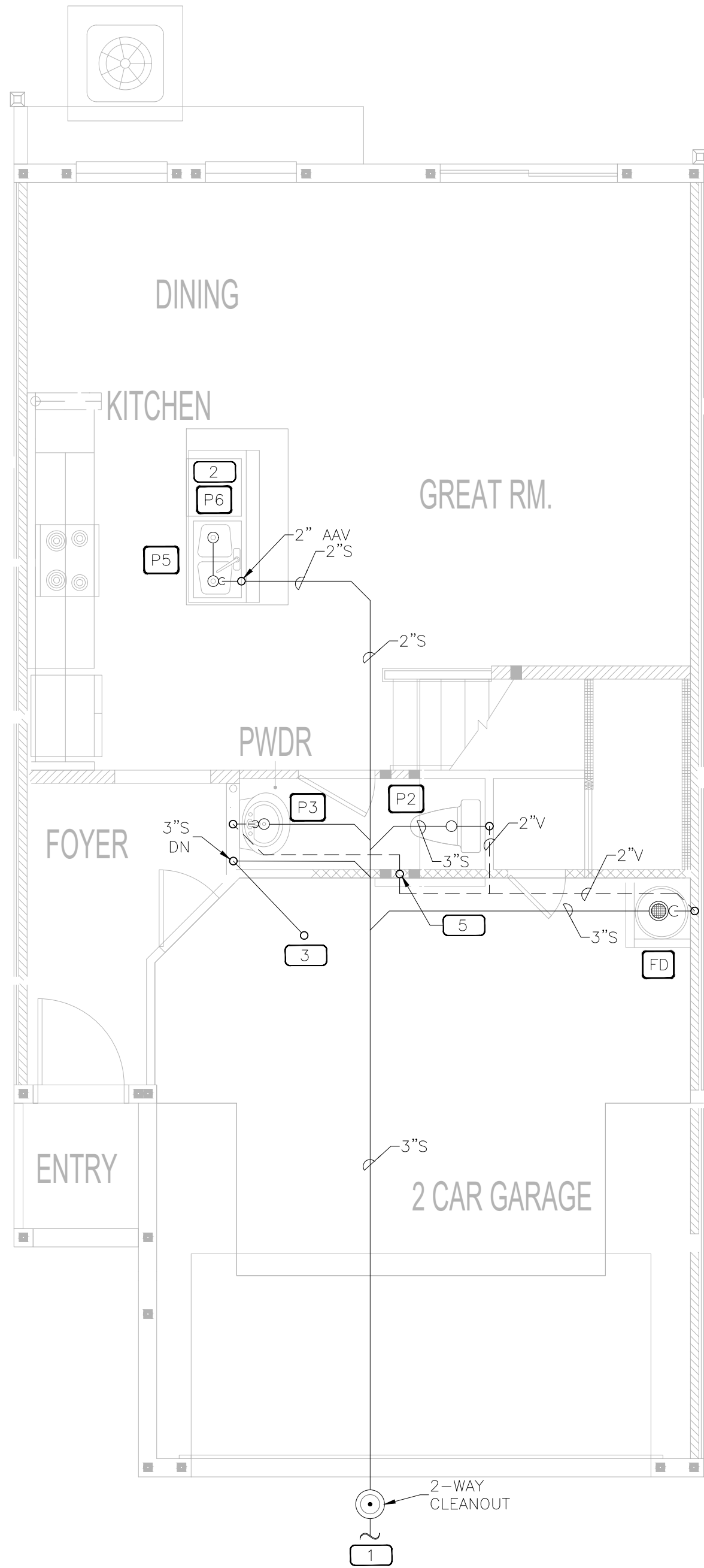


4 SECOND FLOOR UNIT PLAN "A2" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"

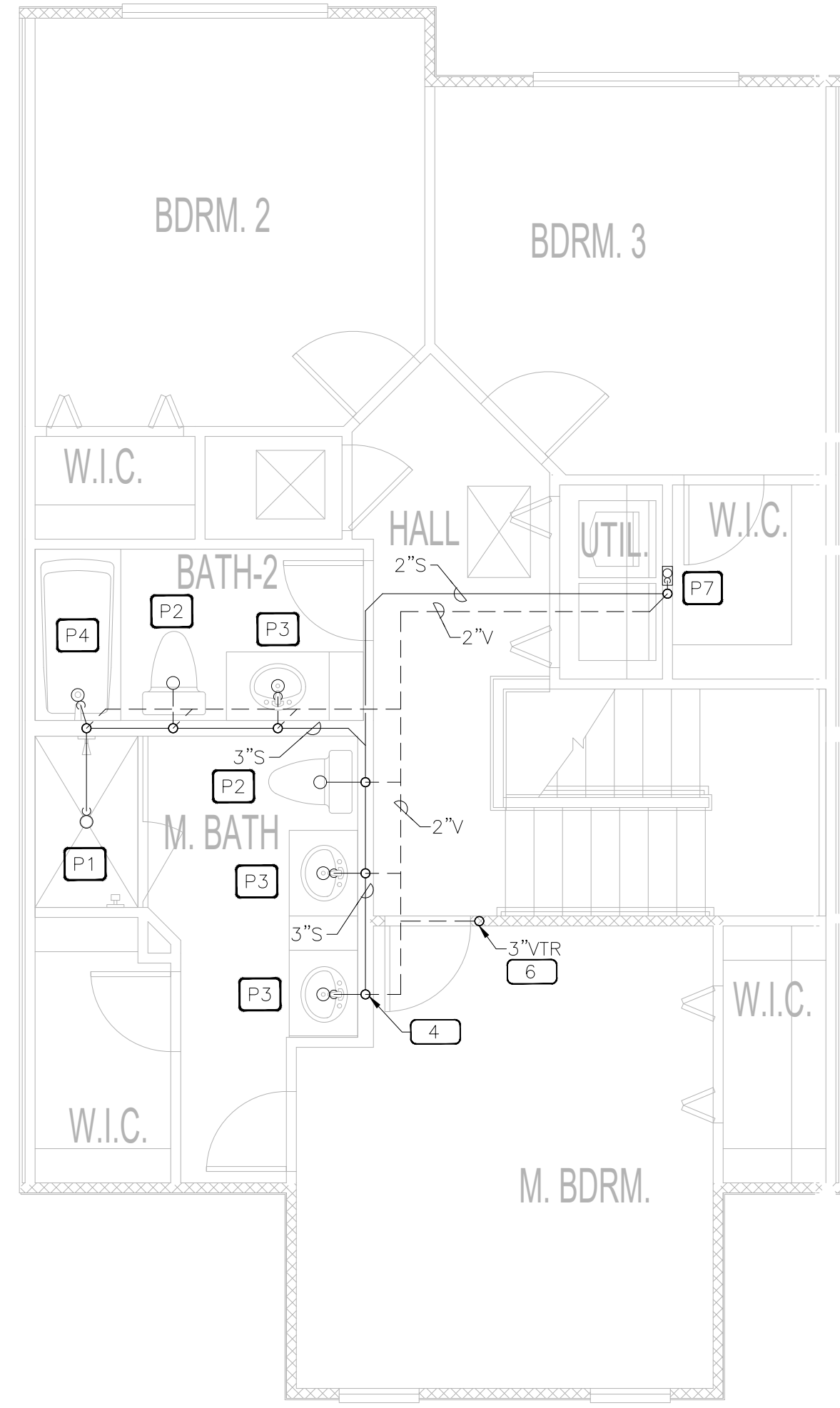
KEYNOTES

- 1" DOMESTIC WATER LINE FROM THE MAIN CIVIL LINE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE DOMESTIC MAIN.
- 1" CW AND 3/4" HW UP TO SECOND FLOOR CEILING.
- 1/2" CW AND 1/2" HW DN TO LAVATORY.
- 1/2" CW DN TO WATER CLOSET.
- 1/2" HW TO DISHWASHER.
- 3/4" CW AND 3/4" HW PIPE DOWN THROUGH WALL AND RUN BELOW GRADE TO KITCHEN SINK AND DISHWASHER.
- 1/2" CW AND 1/2" HW DN TO BATHTUB.
- 3/4" CW AND 3/4" HW DN TO SHOWER.
- ICE MAKER — PROVIDE 1/2" CW SUPPLY STOP IN WALL WITH ASSE1022 BACKFLOW PREVENTER.
- 1" CW AND 3/4" HW DN TO FIRST FLOOR CEILING.



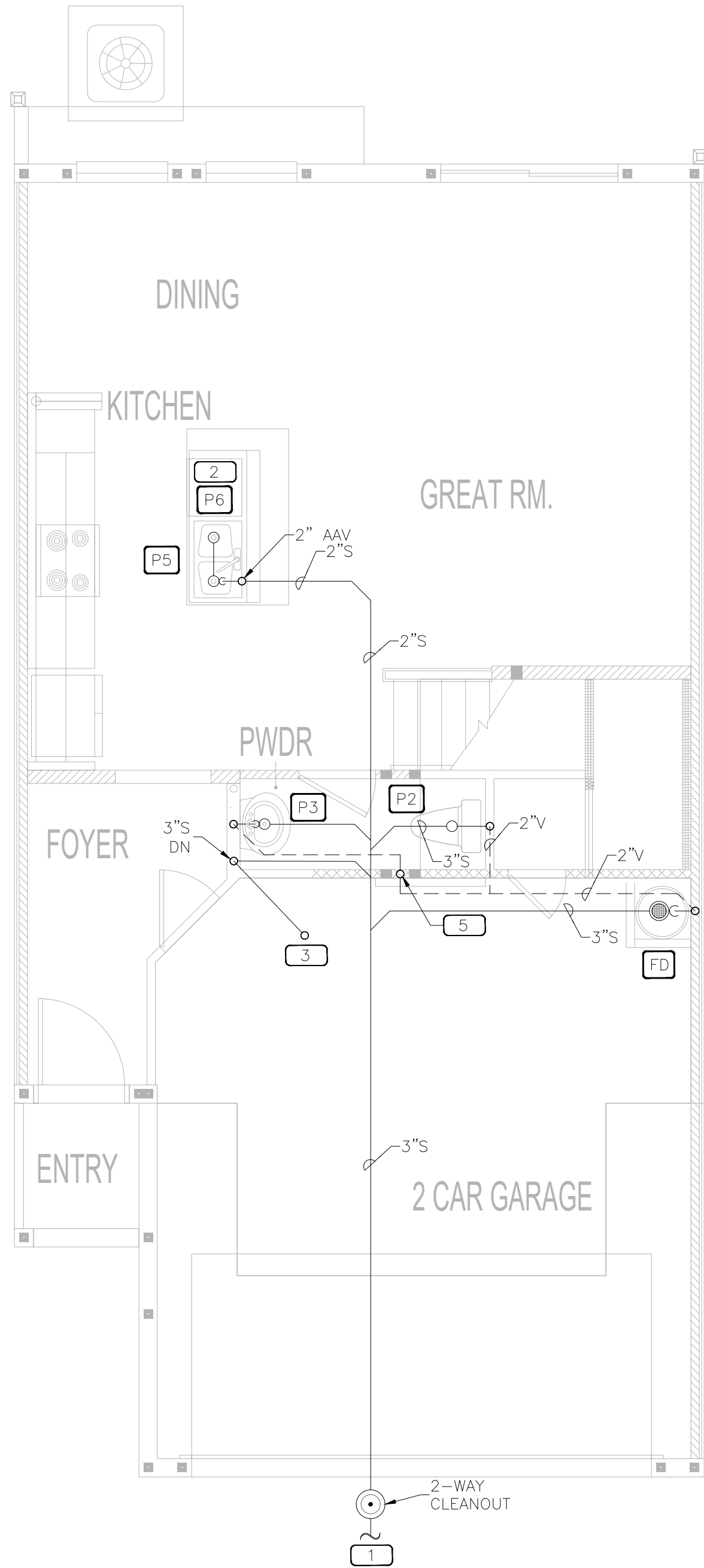
1 FIRST FLOOR UNIT PLAN "A1" - PLUMBING

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1/4" = 1'-0"



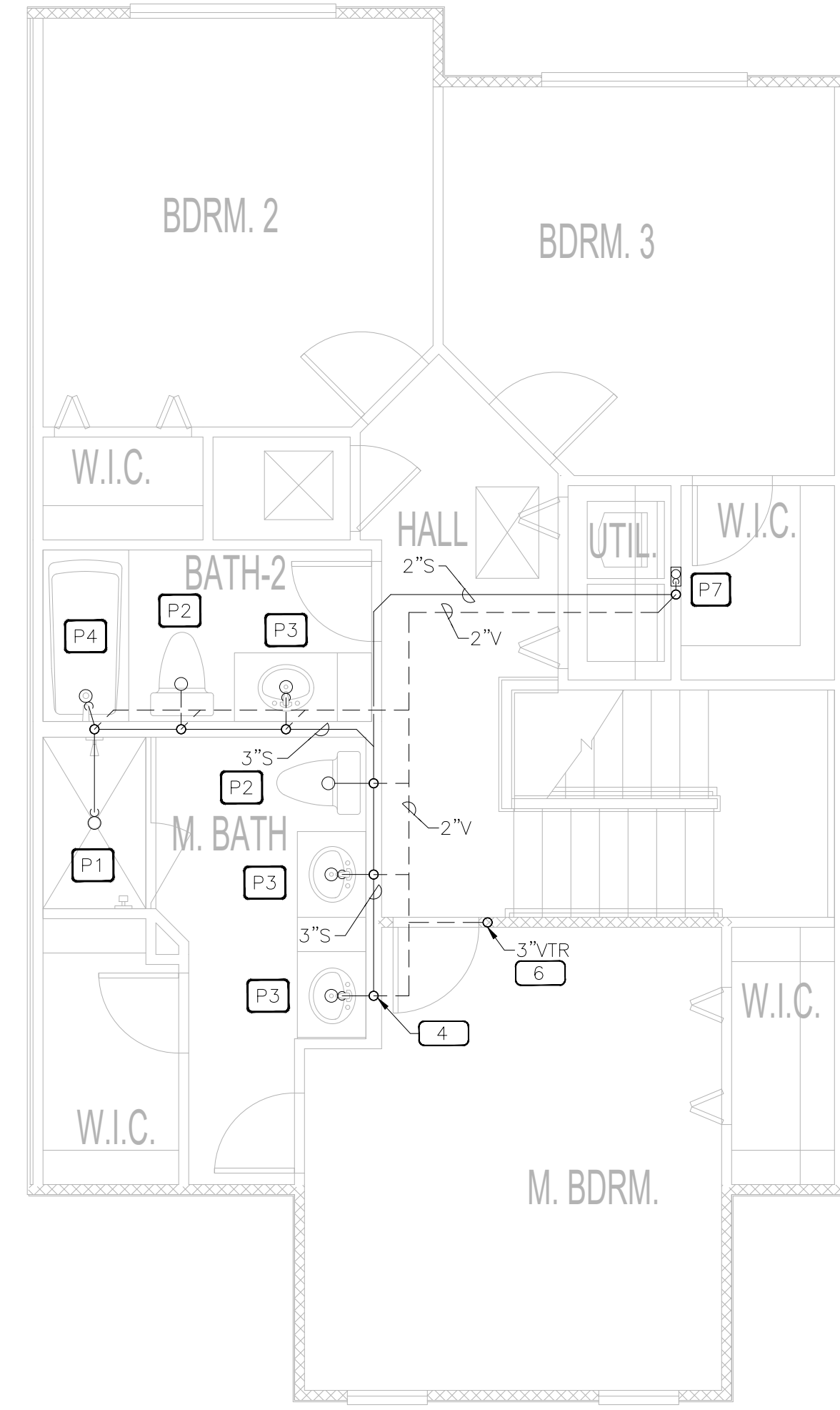
2 SECOND FLOOR UNIT PLAN "A1" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"



3 FIRST FLOOR UNIT PLAN "A2" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"



4 SECOND FLOOR UNIT PLAN "A2" - PLUMBING

0 2' 4' 8' 12'
1/4" = 1'-0"

KEYNOTES

- 1 3" SANITARY LINE FROM THE MAIN CIVIL LINE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE SANITARY MAIN.
- 2 INDIRECT DISHWASHER CONNECTION TO NEAREST SINK.
- 3 3" SANITARY UP FROM FIRST FLOOR TO SECOND FLOOR CEILING.
- 4 3" SANITARY DN FROM SECOND FLOOR TO FIRST FLOOR CEILING.
- 5 2"V UP FROM 1ST FLOOR TO SECOND FLOOR.
- 6 3" VENT THROUGH ROOF.

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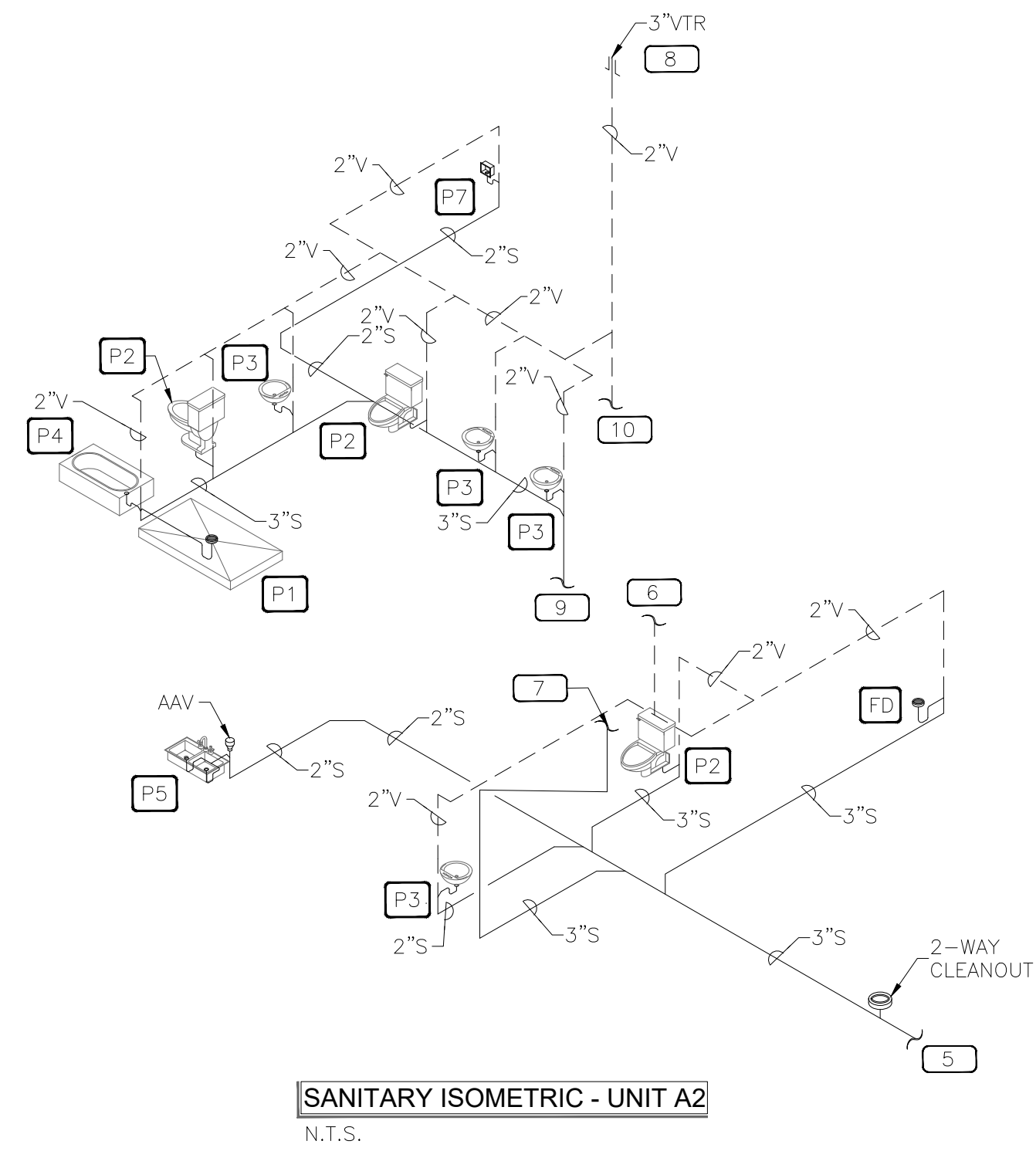
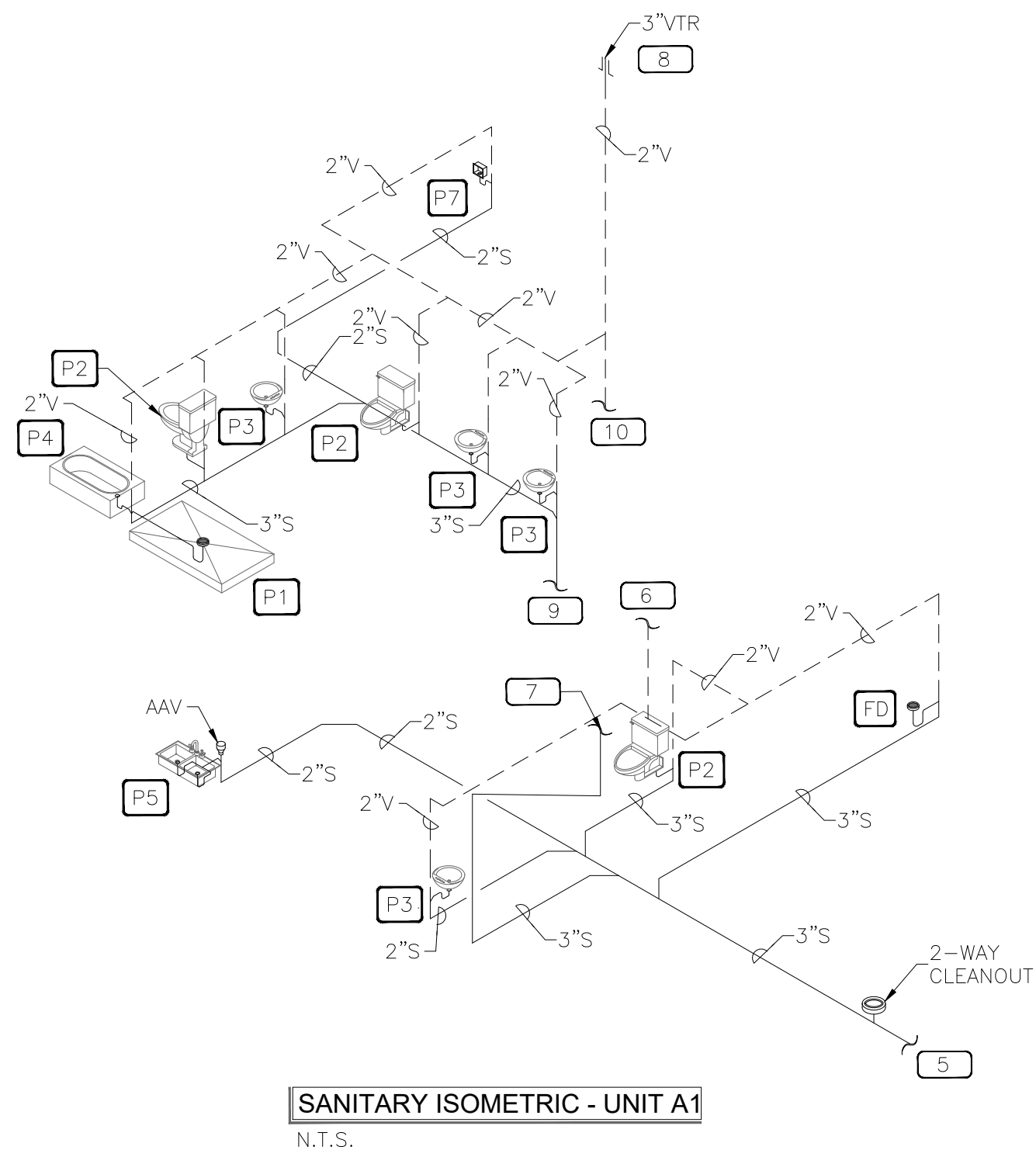
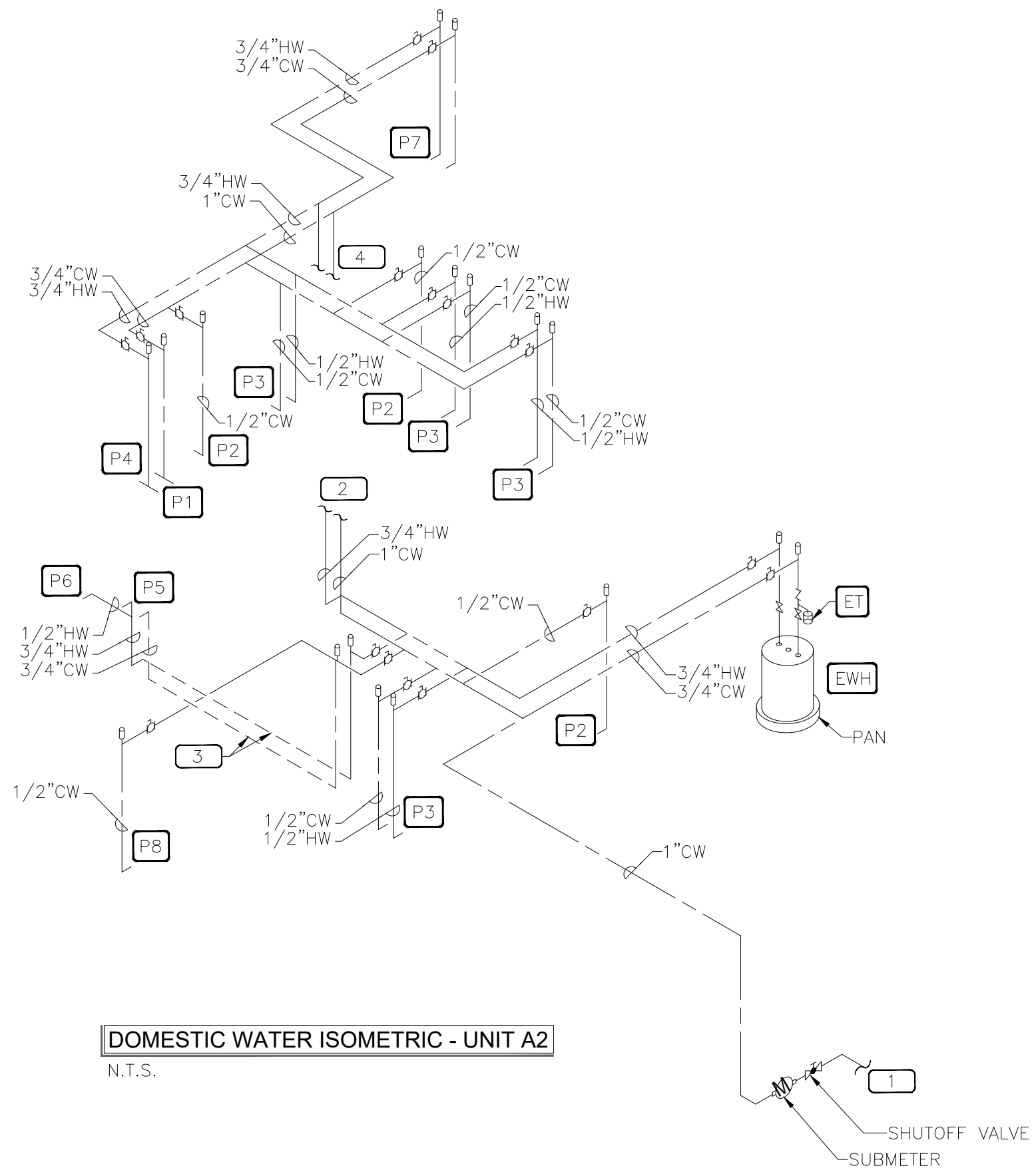
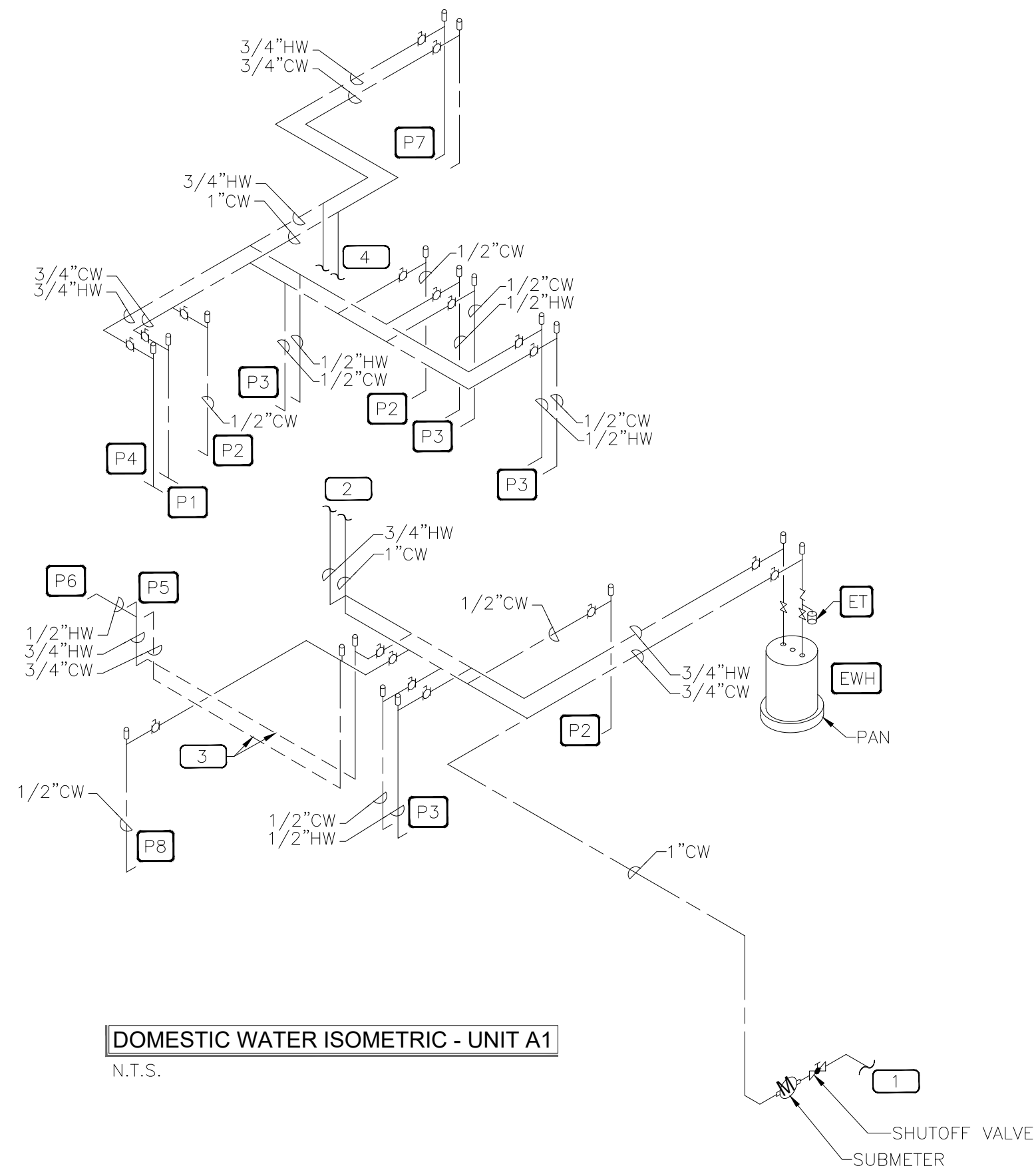
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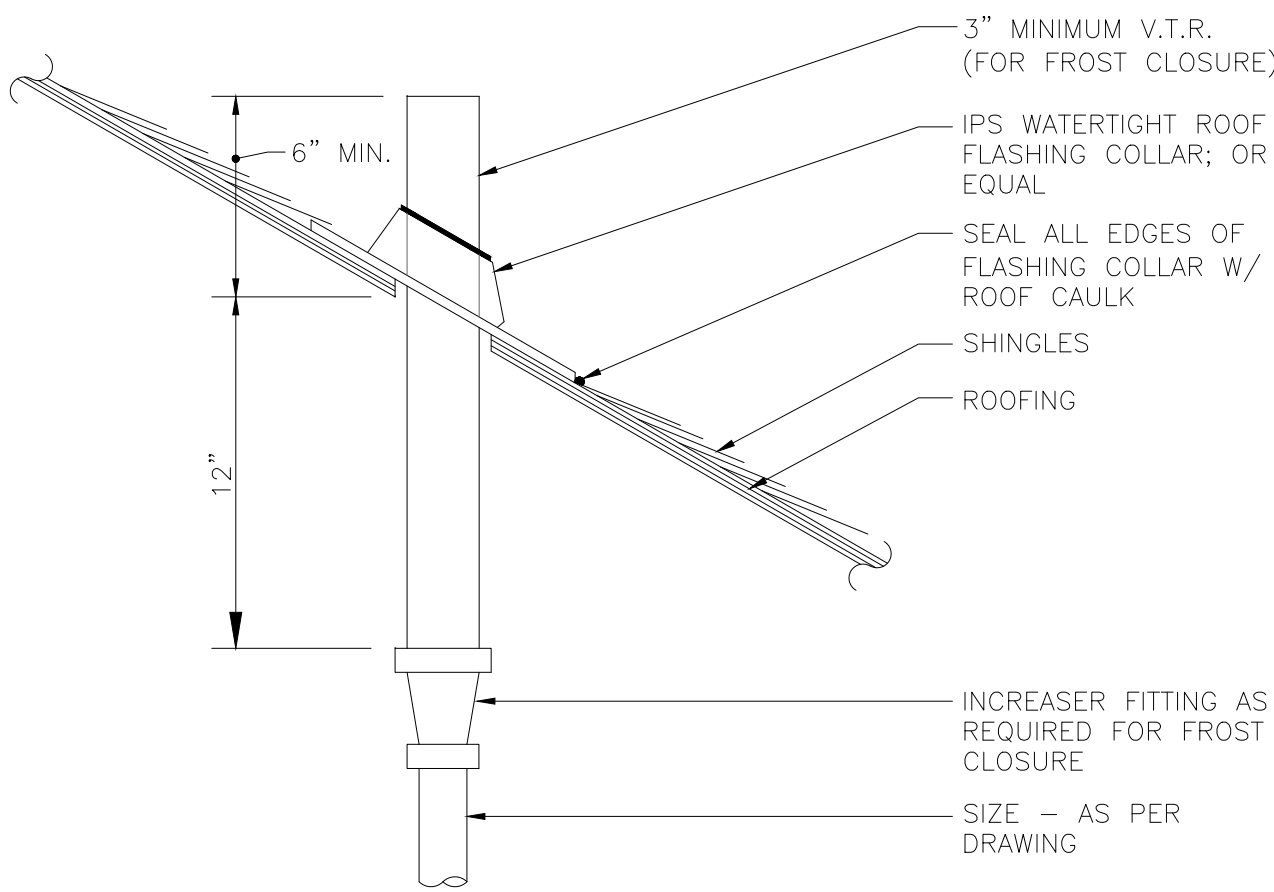
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KEYNOTES

- 1 1" DOMESTIC WATER LINE FROM THE MAIN CIVIL LINE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE DOMESTIC MAIN.
- 2 1" CW AND 3/4" HW UP TO SECOND FLOOR CEILING.
- 3 3/4" CW AND 3/4" HW PIPE DOWN THROUGH WALL AND RUN BELOW GRADE TO KITCHEN SINK AND DISHWASHER.
- 4 1" CW AND 3/4" HW UP FROM FIRST FLOOR CEILING.
- 5 3" SANITARY LINE FROM THE MAIN CIVIL LINE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE SANITARY MAIN.
- 6 2" VENT UP TO SECOND FLOOR CEILING.
- 7 4" SANITARY DN FROM SECOND FLOOR.
- 8 3" VENT UP TO ROOF.
- 9 4" SANITARY DN FROM SECOND FLOOR TO FIRST FLOOR CEILING.
- 10 2" VENT UP FROM FIRST FLOOR.

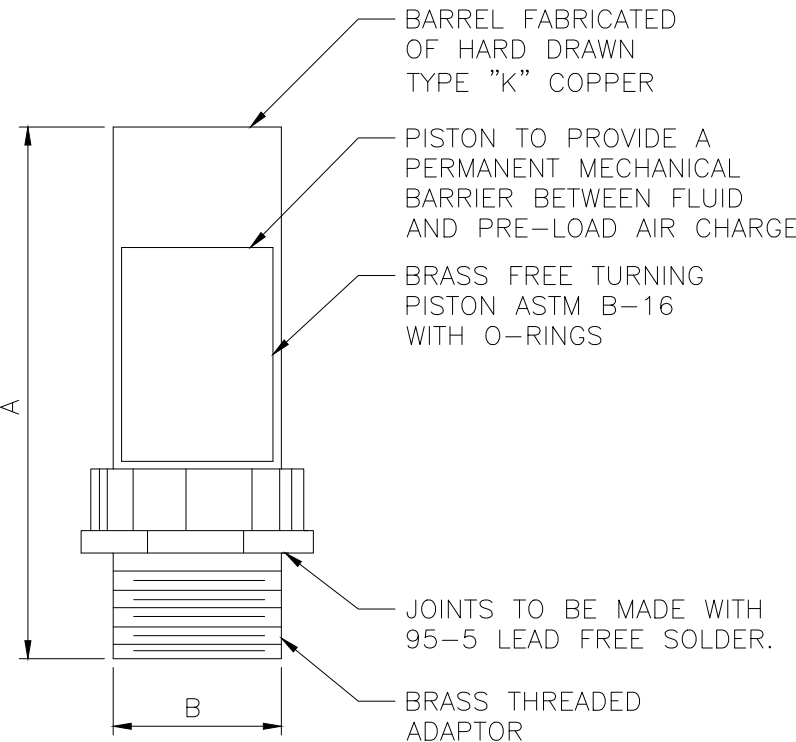




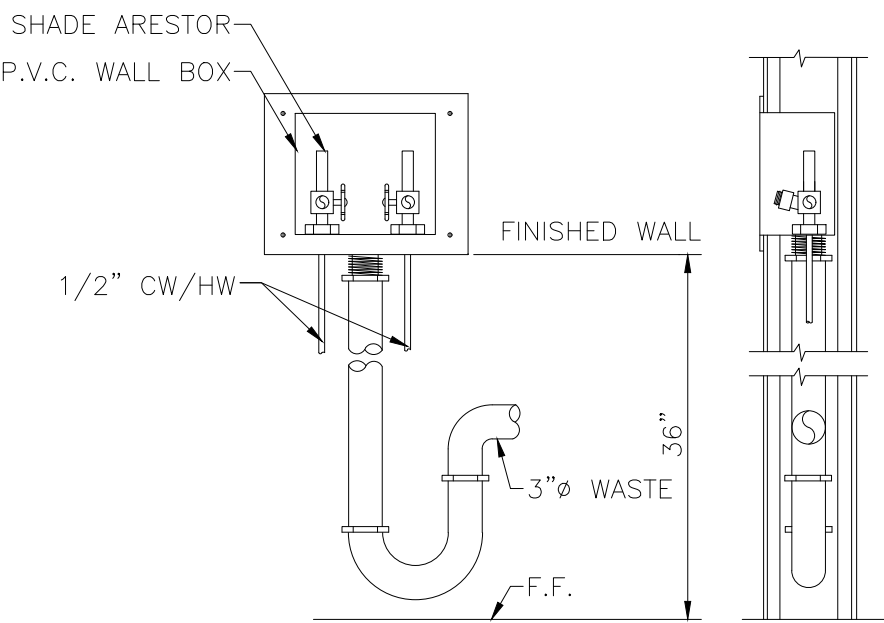
PLUMBING VENT THROUGH PITCHED ROOF DETAIL
NOT TO SCALE

PPP SIZE	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
1/2"	A	1 - 11	5"	1/2"
3/4"	B	12 - 32	5"	3/4"
1"	C	33 - 60	7"	1"
1-1/4"	D	61 - 113	7"	1-1/4"
1-1/2"	E	114 - 154	9"	1-1/2"
2"	F	155 - 330	9"	2"

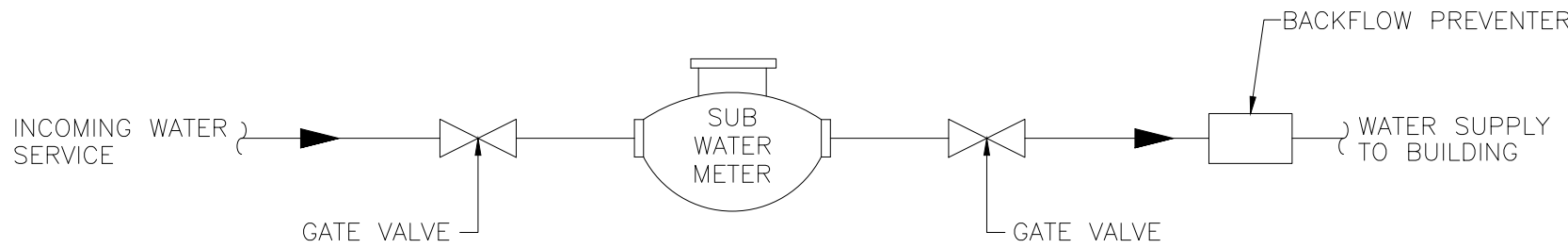
NOTE: SEE WATER RISER DIAGRAMS FOR LOCATIONS OF SHOCK ABSORBERS.



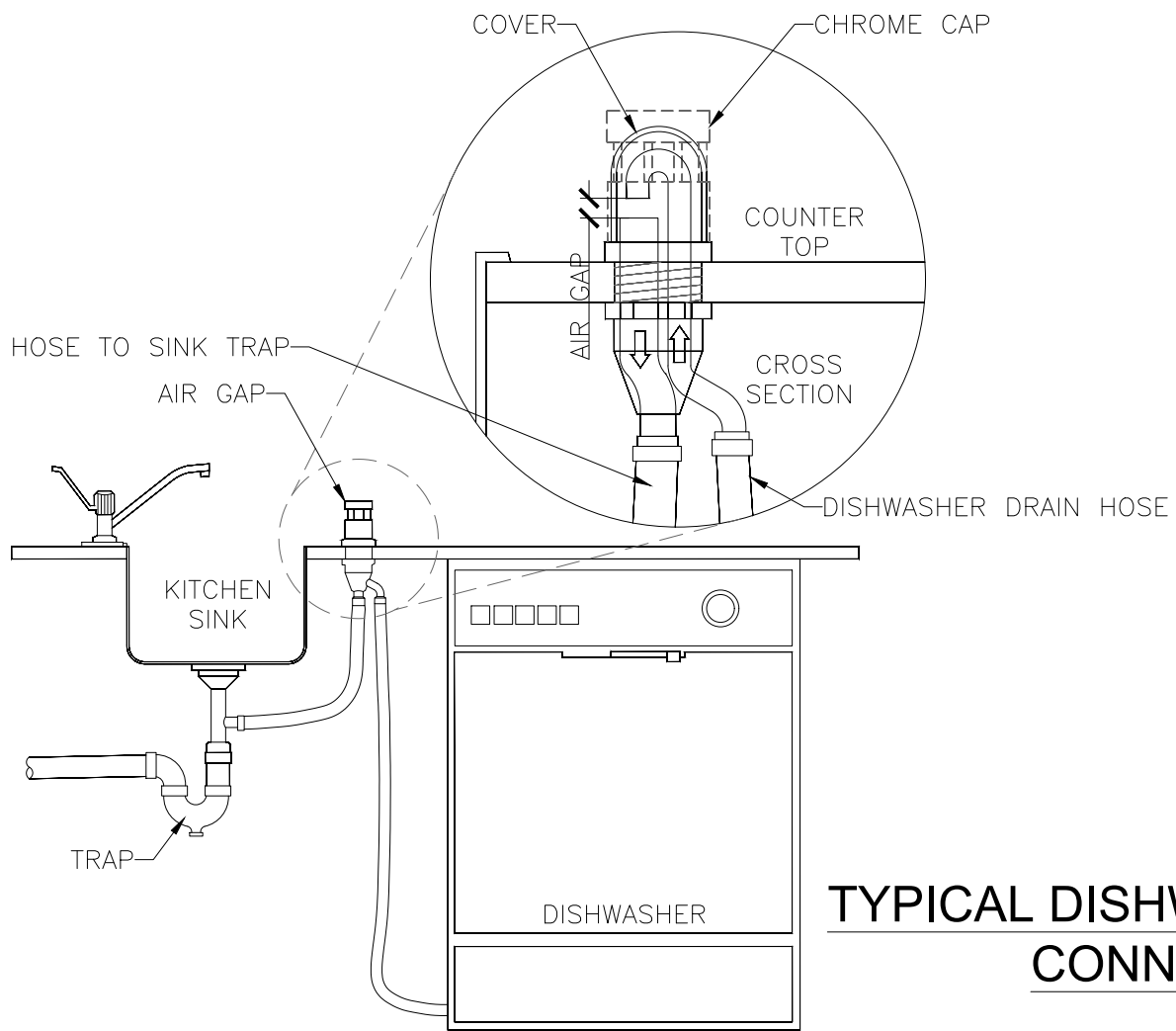
WATER SHOCK ARRESTOR DETAIL
NOT TO SCALE



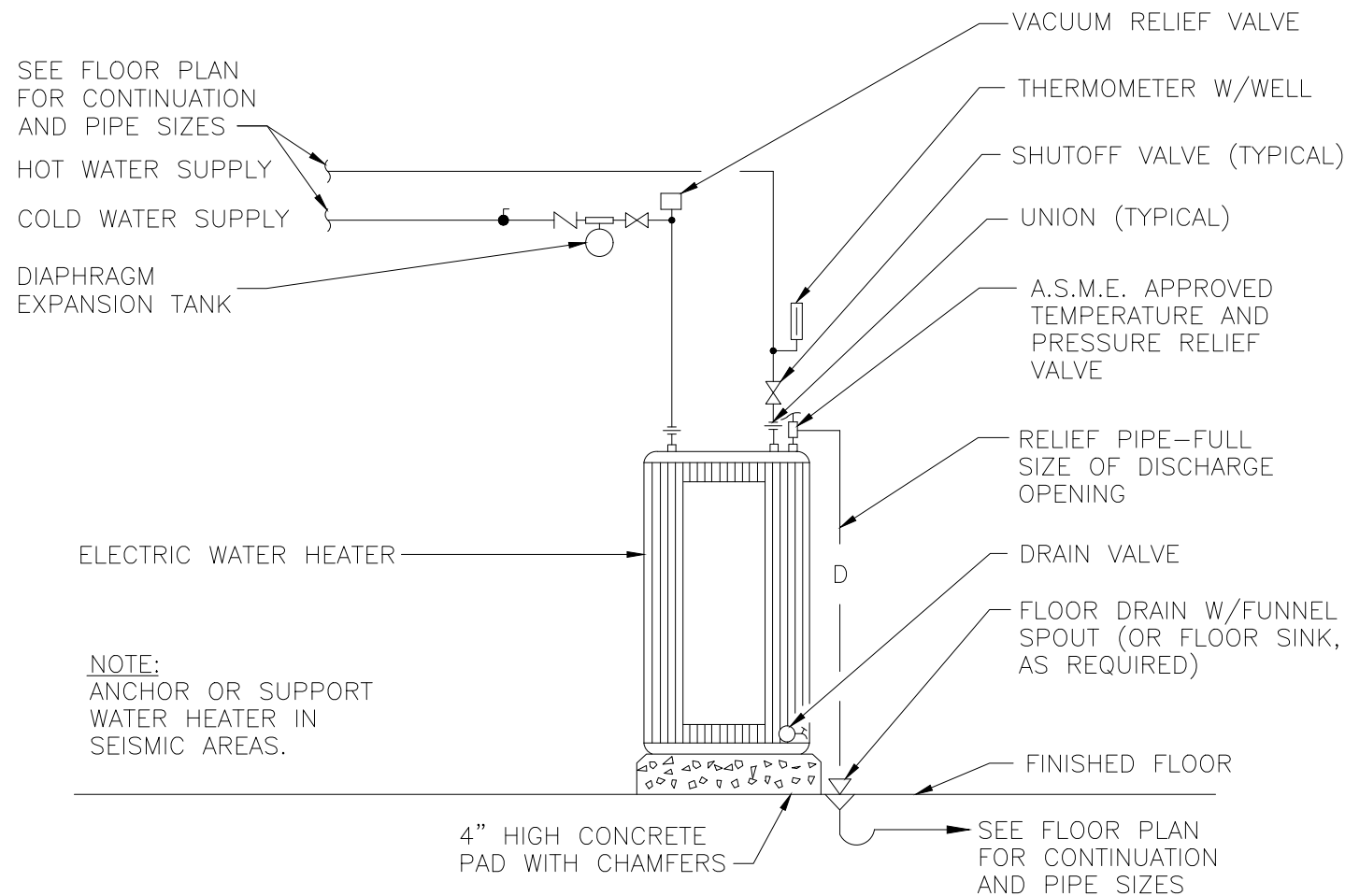
TYPICAL WASHING MACHINE CONNECTION DETAIL
NOT TO SCALE



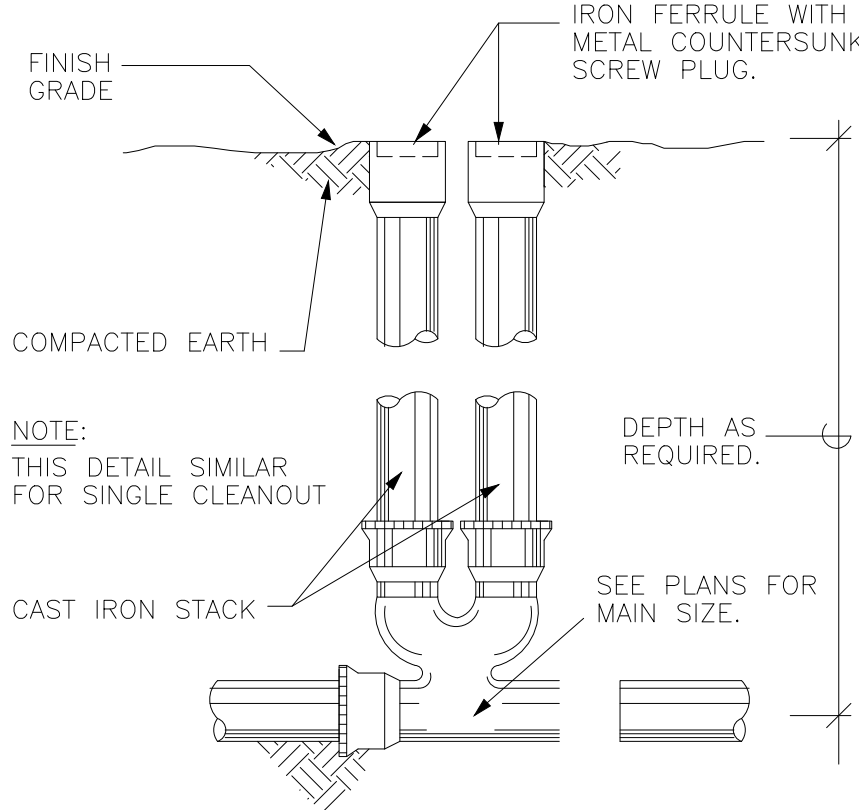
WATER METER INSTALLATION DETAIL
NOT TO SCALE



TYPICAL DISHWASHER DRAIN CONNECTION DETAIL
NOT TO SCALE



ELECTRICAL WATER HEATER DETAIL
NOT TO SCALE



TWO WAY CLEANOUT
NOT TO SCALE

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PLUMBING FIXTURE AND EQUIPMENT SCHEDULE														
MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	FAUCET/VALVE				PIPE SIZES				NOTES
						MANUFACT. MODEL NO.	SPOUT	HANDLES	CENTERS	WASTE	VENT	CW	HW	
P1	SHOWER HEAD	–	KOHLER	HONESTY K–T99764–4	STAINLESS STEEL	KOHLER K–304	–	–	–	2”	2”	3/4”	3/4”	INCLUDES SHOWERHEAD WITH ARM AND FLANGE, AND VALVE TRIM PLATE, 2.0 GPM (7.6 IPM) SHOWERHEAD WITH KATALYST™ SPRAY TECHNOLOGY, TRIM ONLY, REQUIRES VALVE TO COMPLETE INSTALLATION. RITE–TEMP® SHOWER VALVE TRIMK–2971–KS, K–304 VALVES
P2	WATER CLOSET	FLUSH TANK	AMERICAN STANDARD	2891.128	VITREOUS CHINA	–	–	–	–	3”	2”	1/2”	–	VITREOUS CHINA MATERIAL,HIGH EFFICIENCY TOILET.28 GPF/4.8 LPF, SOLUTION, ELONGATED CONCEALED TRAPWAY, POWERWASH™ RIM SCRUBS BOWL WITH EACH FLUSH, 6–1/2” RIM HEIGHT FOR ACCESSIBLE APPLICATIONS, FULLY GLAZED 2” TRAPWAY.OVERSIZED 3” FLUSH VALVE WITH CHEMICALLY RESISTANT FAPPER.
P3	LAVATORY	WALL HUNG	ZURN	Z5124	VITREOUS CHINA	–	–	–	8” CENTER	2”	2”	1/2”	1/2”	KOHLER FAUCET K–13466 1.5 GPM MAX.FLOW RATE,ZURN Z7440–XL–FC POL CHROME SIERRA LAV FAUCET POP–UP HOLE ADA COMPLIANT, 5–5/16” SPOUT REACH. BRASS CONSTRUCTION, POLISHED CHROME MODEL K–13466, WILKINGS MODEL 38– ZW3870XLT THERMOSTATIC MIXING VALVE.
P4	BATH TUB	–	AMERICAN STANDARD	CAMBRIDGE 5’ WHIRLPOOL 2461.028W	–	–	–	–	–	2”	2”	1/2”	1/2”	ACID–RESISTANT PORCELAIN FINISH, 1.5 HP SINGLE SPEED, SELF–DRAINING PUMP/MOTOR, SIX MULTI–DIRECTIONAL AND FLOW–ADJUSTABLE JETS, TWO SILENT AIR VOLUME CONTROLS, QUICK CONNECT SAFE–T–HEATER CONNECTION SYSTEM, FULL SLIP–RESISTANT COVERAGE
P5	DUAL KITCHEN SINK	UNDERMOUNT	KOHLER	K–6626–6U	ENAMELED CAST IRON	–	–	–	–	2”	2” AAV	3/4”	3/4”	UNDERMOUNT SMART DIVIDE®DOUBLE–EQUAL KITCHEN SINK K–6626–6U, 33” X 22” X 9–5/8” SMART DIVIDE® UNDERMOUNT DOUBLE–EQUAL KITCHEN SINK WITH 6 OVERSIZE FAUCET HOLE, 36” MINIMUM BASE CABINET WIDTH. 9” (229 MM) DEPTH PROVIDES GENEROUS WORKSPACE.
P6	DISHWASHER	–	SAMSUNG	DW80R9950US	STAINLESS STEEL	–	–	–	–	–	–	–	1/2”	LINEAR WASH 24” TOP CONTROL BUILT–IN DISHWASHER WITH AUTORELEASE DRY, 39 DBA
P–7	WASHER BOX	–	OATEY	38529	–	–	–	–	–	3”	2”	3/4”	3/4”	OATEY 38529 QUADTRO WASHING MACHINE OUTLET BOX COPPER SWEAT TAIL PIECE, 1/4” TURN, 2” HUB
P–8	ICEMAKER BOX	–	MANITOWOC	CNF–0201	–	–	–	–	–	–	–	1/2”	–	COUNTERTOP NUGGET ICE MAKER AND DISPENSER – CHEWABLE ICE

EXPANSION TANK SCHEDULE									
TAG	TANK VOLUME (GALLONS)	MAX. ACCEPT VOLUME (GALLONS)	DIMENSIONS (INCHES)		SYSTEM CONNECTION (INCHES)	MAX. WORKING PRESSURE (PSI)	SHIPPING WEIGHT (LBS)	MODEL NUMBER	MANUFACTURER
			DIAMETER	HEIGHT					
ET	2	0.9	8	13	3/4	150	5	ST–5	AMTROL

DRAIN AND CLEANOUT SCHEDULE					
MARK	TYPE	OUTLET SIZE	MANUFACTURER	MODEL	NOTES
FD	FLOOR DRAIN	3”	ZURN	Z–415–S	NICKLE BRONZE TOP, 1/2” TRAP PRIMER CONNECTION. PRECISION PLUMBING “ORGON #1 TRAP PRIMER.

WATER HEATER SCHEDULE												
TAG	TYPE	MANUFACTURER	MODEL NO	NOMINAL CAPACITY (GAL.)	TEMPERATURE RATING	FIRST HOUR RATING (GALLONS)	UEF	RECOVERY @ 90°F RISE GPH	ELECTRICAL WATTAGE	DIMENSIONS (INCH)		WEIGHT (LBS)
									KW	HEIGHT	DIAMETER	
EWB	RESIDENTIAL STORAGE TYPE	Rheem	PROE47 S2 RH95 B	47	120° TO 160°F	55	0.93	21	4.5	32	26 ¼	149

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