

GENERAL PLUMBING NOTES

- A. FOOD SERVICE EQUIPMENT: REFER TO OTHER PORTIONS OF PLANS AND SPECIFICATIONS FOR FURTHER INFORMATION ABOUT FOOD SERVICE ITEMS FURNISHED AND WORK PERFORMED BY OTHERS. VERIFY ROUGH-IN REQUIREMENTS WITH EQUIPMENT FURNISHER.
- B. HEALTH DEPARTMENT: COMPLY WITH LOCAL HEALTH DEPARTMENT (HD) REGULATIONS.WHEREVER POSSIBLE, INSTALL ALL PIPING CONCEALED. CONFORM TO HD REQUIREMENTS FOR LOCATIONS OF FLOOR SINKS.
- C. WORKMANSHIP SHALL BE FIRST CLASS, ACCEPTABLE TO OWNER.
- D. MAKE COMPLETE: PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS TO FIXTURES AND EQUIPMENT: TRAPS, STRAINERS, GAUGES, GAS AND WATER PRESSURE REGULATORS, FLEXIBLE CONNECTIONS, STOP VALVES, UNIONS, ETC. PROVIDE AND CONNECT PLUMBING PIPE FROM ROUGH-INS TO ITEMS AS SHOWN, SPECIFIED AND REQUIRED.
- E. VERIFY LOCATIONS: EXISTING PIPING, POC SHOWN ON DRAWINGS HAS BEEN LOCATED FROM INFORMATION PROVIDED BY OTHERS. VERIFY EXACT LOCATION ON JOB SITE BEFORE START WORKING.
- F. BACKFLOW PREVENTION: PROVIDE BACKFLOW PREVENTERS (BFP) IN WATER LINES ONLY IF REQUIRED BY LOCAL AUTHORITIES. USE DEVICES OF TYPE (VACUUM BREAKER, DOUBLE CHECK, REDUCED PRESSURE) AND MANUFACTURER APPROVED BY LOCAL AUTHORITIES, ONLY IN LOCATIONS REQUIRED.
- G. RESTROOM TRAP PRIMERS: SOUX CHIEF "TRAP EASE" MODEL 200-090 TRAP PRIMER TAILPIPE, PROVIDE A CONTINUOUS LENGTH OF ½" SOFT COPPER TUBE FROM PRIMER TO TRAP, SLOPING TO TRAP, PROVIDE ELASTOMERIC INSULATION ON PIPE INSTALLED BELOW FLOOR SLAB. SEE DETAIL #9 ON SHEET P-500.
- H. WATER CONSERVATION: CONTRACTOR SHALL PROVIDE WATER FLOW LIMITING FEATURES ON FIXTURES IF/AS REQUIRED BY LOCAL AUTHORITIES.
- I. COLD WATER: CONNECT TO DOMESTIC COLD WATER VALVED STUB. EXTEND COLD WATER PIPE, SUSPENDED FROM STRUCTURE ABOVE CEILING AND DOWN IN PARTITIONS, TO SERVE FIXTURES AND EQUIPMENT.
- J. HOT WATER: PROVIDE COMMERCIAL TYPE WATER HEATER, DESIGN PER PLAN. RUN HOT WATER PIPE, SUSPENDED FROM STRUCTURE ABOVE CEILING AND DOWN IN PARTITIONS TO SERVE FIXTURE AND EQUIPMENT.
- K. SANITARY: CONNECT TO SANITARY WASTE LINE.
- L. BRANCHES: PROVIDE HOT AND/OR COLD WATER PIPES DOWN IN PARTITION TO SERVE VARIOUS EQUIPMENT PER "KITCHEN EQUIPMENT SCHEDULE".
- M. SODA CONDUIT: PROVIDE 6" CONDUIT BELOW FLOOR FROM SODA STORAGE TO SODA DISPENSER.
- N. CONDENSATE: PROVIDE 1" INSULATED PRIMARY AND SECONDARY CONDENSATE DRAIN PIPES FROM FAN-COIL UNIT ABOVE CEILING TO NEAREST FLOOR SINK.
- O. GAS SERVICE: PROVIDE ALL PIPES, VALVES AND CONNECTION TO GAS METER, FOR NATURAL GAS SERVICE, COORDINATE WITH GAS UTILITY COMPANY FOR METER REQUIREMENTS, PERMITS AND FEES. ROUTE PIPE AS REQUIRED, SUSPENDED FROM STRUCTURE ABOVE. USE WELDED PIPE, FITTINGS, AND JOINTS IN CEILING SPACE AND IN WALL AS REQUIRED BY LOCAL CODE.
- P. INDIRECT DRAIN: AN AIR GAP TWICE THE SIZE OF THE DRAIN LINE MUST BE PROVIDED BETWEEN THE DRAIN LINE AND THE SANITARY SEWER.
- Q. LIQUID WASTE FROM ALL EQUIPMENT MUST BE DISCHARGED TO THE SANITARY SEWER.
- R. FLOOR DRAIN MUST BE PLACED ADJACENT TO EQUIPMENT WHICH DISCHARGES WASTE. FLOOR DRAIN INSTALLATION MUST NOT INTERFERE WITH FLOOR FLOOR MAINTENANCE.
- S. EXPOSED UTILITY LINES ON FLOORS ARE PROHIBITED. UTILITY LINES MUST NOT BE UNNECESSARILY EXPOSED ON WALLS.
- T. ALL WATER AND GAS CONNECTIONS TO ALL PLUMBING FIXTURES TO BE HARD PIPED, NO FLEX PIPE.
- U. ALL PIPES 6" A.F.F. NO FLOOR SUPPORTS ALLOWED.
- V. ALL WATER PIPES IN EXPOSED AREAS OUTSIDE WALLS AND BELOW CEILING MUST BE COPPER UNLESS NOTED OTHERWISE.
- W. ONLY VENTS AT THE TANKLESS HOT WATER SYSTEM SHALL PENETRATE ACT CEILING TILES, NOT PLUMBING PIPES.

PLUMBING SPECIFICATIONS

1. WORK INCLUDES CONNECTION OF PLUMBING UTILITIES TO DEVELOPER OR LANDLORD'S UTILITIES AND INSTALLATION OF A COMPLETE PLUMBING SYSTEM WITHIN SPACE. PROVIDE NEW MATERIALS, FITTINGS, ACCESSORIES, FIXTURES AND EQUIPMENT NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING SYSTEM AS SHOWN ON PLANS AND AS REQUIRED. WORK INCLUDES FINAL CONNECTIONS TO EQUIPMENT AND FIXTURES PROVIDED BY OTHERS. FURNISH ALL NEW MATERIALS. WORK SHALL BE PERFORMED BY EXPERIENCED TRADESMEN, AND THEIR WORKMANSHIP SHALL BE HIGH STANDARD, ACCEPTABLE TO OWNER.
2. CODES: ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS, OR ORDINANCES. PAY FOR ANY PERMITS REQUIRED, AND CALL FOR ANY REQUIRED INSPECTIONS TO BE MADE BY LOCAL AUTHORITIES.
3. INTENT OF DRAWINGS IS TO INDICATE GENERAL EXTENT OF WORK REQUIRED FOR PROJECT. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING GENERAL LOCATION, TYPE, PIPING, FIXTURES AND EQUIPMENT REQUIRED. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FULLY INTENT OF PLANS. DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. USE DIMENSIONED ARCHITECTURAL DRAWINGS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURES, AND TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
4. FSE ROUGH-IN DRAWINGS: REFER TO ROUGH-IN DRAWINGS FURNISHED BY THE FOOD SERVICE EQUIPMENT SUPPLIER, FOR EXACT LOCATION OF WATER PIPING SUPPLIES AND DRAIN LOCATIONS TO SERVE FOOD SERVICE EQUIPMENT. DO NOT LAYOUT WORK OF THIS SECTION WITHOUT SUCH DRAWINGS.
5. COORDINATE WITH WORK OF OTHER SECTIONS AND TRADES, WITH EQUIPMENT FURNISHED BY OTHERS, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE.
6. MISCELLANEOUS EXPENSES SUCH AS HOOK-UP CHARGES, PERMITS, INSPECTIONS, AND OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING SYSTEM ARE INCLUDED AS PART OF THIS SECTION.
7. PIPING SYSTEMS, GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK INCLUDING DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC UNION. SEAL PIPE PENETRATIONS OF FIRE FLOORS AND FIREWALLS WITH FIREPROOF PUTTY OR GROUT. PROVIDE SUMNER OR EQUIVALENT PIPE HANGING SYSTEM IN CHASES. PROVIDE HANGERS AS RECOMMENDED BY HANGER MANUFACTURER AND MSS-SP-58, 69 AND 89.
8. WASTE PIPING: PROVIDE ALL DRAIN, WASTE AND SEWER PIPING WITHIN PROJECT SPACE WITH CONNECTION TO SANITARY WASTE SYSTEM ON SITE. PROVIDE A COMPLETE SYSTEM OF WASTE PIPING, CONSISTING OF SCH 40 PVC PIPE, CONNECTORS AND FITTINGS ALL PIPING SHALL BE SLOPED UNIFORMLY AT 2% UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS.
- 8.1. CLEANOUTS SHALL BE INSTALLED IN ALL HORIZONTAL DRAINAGE PIPE AND SHALL BE LOCATED NOT MORE THAN 100 FT APART.
- 8.2. CLEANOUTS SHALL BE INSTALLED AT ALL CHANGES OF DIRECTION GREATER THAN 45 DEGREES. WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A SINGLE PIPE RUN, ONLY ONE (1) CLEANOUT SHALL BE REQUIRED FOR EVERY 40 FEET OF DEVELOPED LENGTH.
9. VENTS: PROVIDE A COMPLETE SYSTEM OF VENT PIPING, CONSISTING OF SCH 40 PVC PIPE, CONNECTORS AND FITTINGS. COMBINE THE VENT RISERS IN THE CEILING SPACE, CONNECT TO EXISTING VENT MAIN.
10. WATER PIPING: CONNECT TO EXISTING WATER PIPING AND PROVIDE A NEW DOMESTIC HOT AND COLD WATER PIPING SYSTEM INSIDE THE BUILDING AS SHOWN ON DRAWINGS. LAY OUT WATER PIPING SO THAT ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE ZURN PEX (ASTM F1960 COMPATIBLE) WITH ZURN PEX PRE-ASSEMBLED MANIFOLDS, FITTINGS AND JOINTS FOR PEX-A TUBE. ASTM F1960 COMPATIBLE COLD EXPANSION FITTINGS, MATCHING PEX TUBE DIMENSIONS. USE BLUE COLOR PEX FOR COLD WATER AND RED COLOR PEX FOR HOT WATER. PEX PIPING SHALL BE CONTINUOUS FROM MANIFOLD CONNECTION TO COPPER STUB-OUT AT EACH FIXTURE. PEX PIPING SHALL NOT BE SPLICED WITHIN WALLS. PROVIDE WATER HAMMER ARRESTERS AT RESTROOM AREA & CHINESE WORK AREA PER DRAWING SHOWN. FLUSH WATER PIPING CLEAR OF DEBRIS AND CLEAN AGITATORS AND STRAINERS AT TERMINATION OF INSTALLATION.
11. NATURAL GAS PIPING INSIDE AND OUTSIDE THE BUILDING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL ASTM A-33 PIPE WITH 125 LB MALLEABLE IRON SCREWED FITTINGS WHERE EXPOSED. PRIMER AND PAINT EXTERIOR GAS PIPING YELLOW TO PREVENT RUST. PROVIDE ALL UNIONS, SHUT OFF VALVES AND DRIP LEGS REQUIRED BY NFPA-54 AND GOVERNING CODES. PROVIDE ALL TESTS, INSPECTIONS, HANGERS AND ADJUSTMENTS REQUIRED FOR A COMPLETE OPERATING SYSTEM. TAP ON UTILITY GAS MAIN AND GAS METER SHALL BE BY GAS COMPANY. EXTEND PIPING FROM METER TO EQUIPMENT AS DETAIL ON DRAWINGS. PROVIDE ROUTING, HANGING, AND PENETRATIONS PER OWNER'S REQUIREMENTS.
12. PIPE INSULATION: INSULATE ALL COLD WATER AND CONDENSATE PIPING WITH ½", AND HOT WATER PIPING WITH 1", PREFORMED FIBERGLASS WITH ALL-SERVICE JACKET WITH VAPOR BARRIER (BY CT, DC, JM, PPG, OR KNAUF). AT CONTRACTOR'S OPTION, PLENUM-RATED ELASTOMERIC INSULATION (BY ARMSTRONG, RUBATEX OR EQUAL) MAY BE USED.
13. PIPE MARKING:
- 13.1. IDENTIFY ALL PIPING WITH ANSI/ASME A13.1 2007 APPROVED PIPE MARKER SYSTEM USING EZ ARROWS AND ARROW BANDING TAPE IN CONJUNCTION WITH EZ PIPE MARKERS. PRODUCTS AVAILABLE AT PIPEMARKER.COM #222-274-6271. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- 13.2. IDENTIFY ALL MANIFOLDS AND ALL VALVES ON THE MANIFOLDS FOR CORRESPONDING FIXTURES.
14. SHUT-OFF VALVES WITH UNIONS SHALL BE PROVIDED AT BRANCHES TO GROUPS OF MORE THAN TWO FIXTURES, AND AT THE WATER HEATER, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. USE CHROME-FINISHED FORGED BRONZE BODY BALL VALVE, WITH TEFLON SEATS AND PACKING, 400 LB WOG, WITH SOLDER ENDS, EQUAL TO JENKINS #902-1. GAS VALVES SHALL BE ALL BRONZE LUBRICATED PLUG COCKS FOR SCREWED PIPE, BY WALWORTH, ROCKWELL, NORDSTROM OR APPROVED EQUIVALENT.
15. ACCESS PANELS SHALL BE PROVIDED IN CEILINGS OR WALLS WHERE CONCEALED CONTROL DEVICES ARE LOCATED, EXCEPT WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN CEILINGS. SUPPLIES AND TRAPS: PROVIDE WATER SEALED TRAPS AND SUPPLIES INSTALLED AS CLOSE AS POSSIBLE TO ALL PLUMBING FIXTURES, DRAINS, AND FOOD SERVICE EQUIPMENT OR BEVERAGE DISPENSING EQUIPMENT ITEMS FURNISHED BY OTHERS, HAVING A WASTE CONNECTION, OR REQUIRING WATER SERVICE. EXPOSED TRAPS AND SUPPLIES IN EXPOSED AREAS (INCLUDING CABINET INTERIORS) SHALL BE CHROME PLATED BRASS.
17. INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS INDICATED AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES, PER MANUFACTURER'S ROUGH-IN DIMENSIONS. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT. REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AND RESTORE TO ORIGINAL CONDITIONS. PROVIDE CLEAN CONDITIONS AT TERMINATION OF WORK.
18. TEST WATER, GAS, VENT, AND WASTE SYSTEMS PER LOCAL CODE REQUIREMENTS. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP ARE DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST TILL STANDARDS ARE ACHIEVED.
19. GUARANTEE THE WORK AND THE INSTALLATION FOR ONE YEAR AFTER FORMAL ACCEPTANCE BY THE OWNER. ALL SAW CUT AND PATCH BACK OF FLOOR TO MATCH EXISTING FINISHES. BACKFILL PER DEVELOPER OR OWNER' SOILS ENGINEER'S RECOMMENDATIONS

PLUMBING KEY NOTES

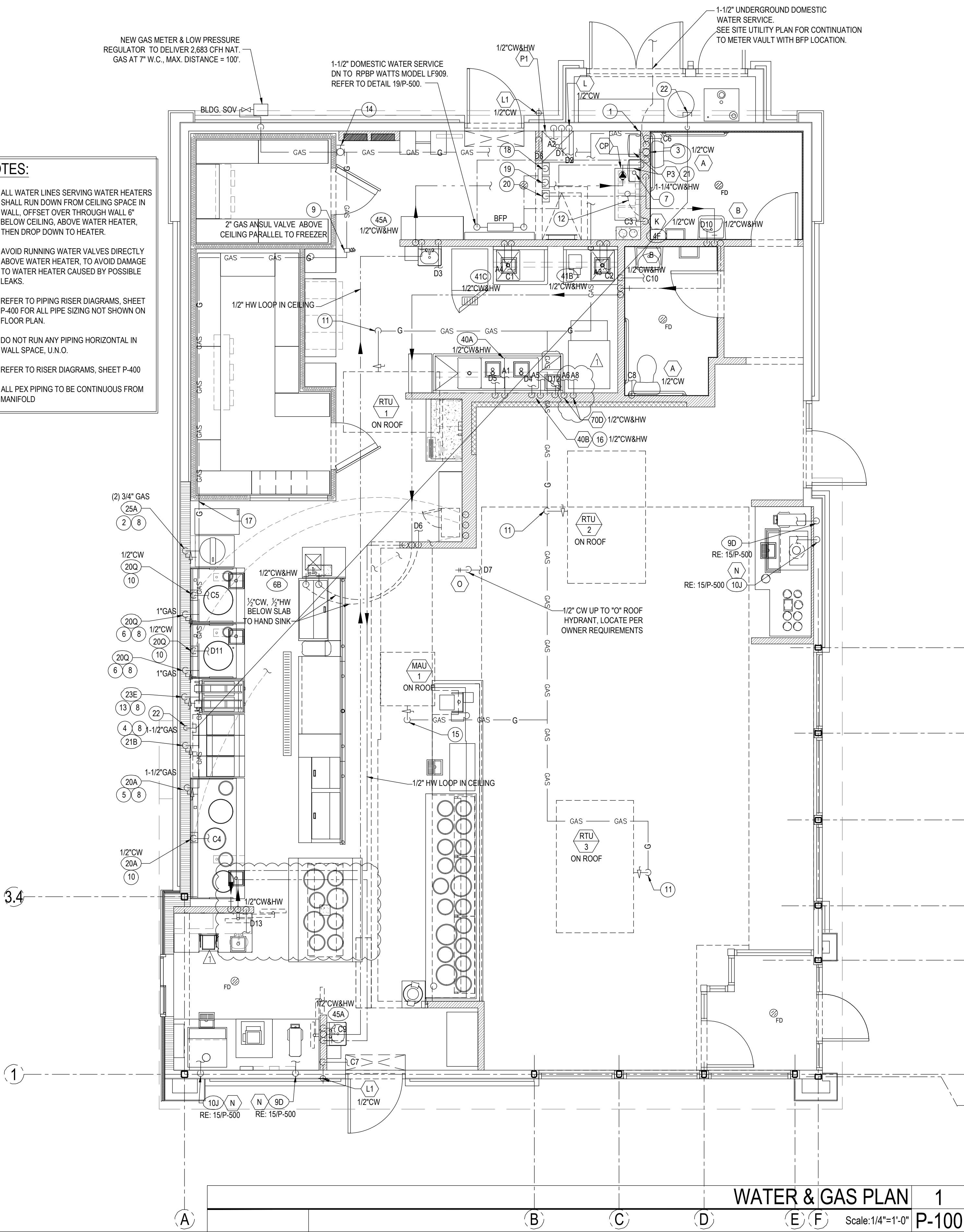
1. 1-1/4" G DOWN TO WATER HEATER W/ SOV (SHUT OFF VALVE).
2. ¾" G DOWN TO RICE COOKER W/ SOV. PROVIDE 6" LENGTH OF RIGID PIPE BETWEEN RICE COOKER AND FLEXIBLE GAS LINE.
3. CW SHUT OFF BALL VALVE LOCATED WITHIN WALL AT 40" AFF. PROVIDE ACCESS PANEL.
4. 1½" G DOWN TO DEEP FRYER W/ SOV.
5. 1½" G DOWN TO CHINESE RANGE "20A OR 20B" W/ SOV. LOCATE STUB OUT BEHIND THE END OF RANGE FOR EASY ACCESS.
6. 1" G DOWN TO CHINESE RANGE "200" W/ SOV.
7. EXHAUST & INTAKE VENTS UP TO ROOF. COORDINATE WITH MECHANICAL DRAWINGS AND DETAIL #10 ON SHEET P-500.
8. ROUTE NEW PIPING IN WALL.
9. 2" GAS ANSUL VALVE PROVIDED BY OWNER (G.C. CALL CAPTAINFARE FOR DELIVERY). INSTALL GAS ANSUL VALVE AS CLOSE TO EXTERIOR WALL AS ALLOWED PER LOCAL CODE.
10. WATER PIPE UP IN CURB. VALVE AND CAP.
11. 1" G UP TO ROOF W/ SOV. FOR ROOFTOP UNITS.
12. ½" CW TO TRAP PRIMER. PROVIDE WALL ACCESS PANEL. RUN ½" CW BELOW FLOOR TO FLOOR DRAIN, SEE DETAIL #17 ON PLAN P-500.
13. ¾" GAS DOWN FOR EQUIPMENT.
14. SHUT OFF VALVE W/ HANDLE AT 11"-0" ABOVE FINISH FLOOR, EASILY ACCESSIBLE. G.C. TO INSTALL LOCATION INDICATOR STICKER PROVIDED BY PANDA EXPRESS
15. 1½" GAS UP TO MAKE-UP AIR UNIT ON ROOF.
16. ½" HW & CW TO FAUCET (40B) FOR CHEMICAL FEED SYSTEM. LEFT SIDE PLUMBING ROUGH AT 4" OFF LEFT END OF SINK. SEE DETAIL 7 SHEET P-500
17. GAS HEADER - INSTALL TIGHT TO WALL AND TIGHT TO BOTTOM OF TRUSSES.
18. COLD WATER MANFOLD "C" BELOW CEILING. REF ARCH ELEVATIONS
19. COLD WATER MANFOLD "D" BELOW CEILING. REF ARCH ELEVATIONS
20. HOT WATER MANFOLD "A" BELOW CEILING. REF ARCH ELEVATIONS
21. SEE HOT WATER SYSTEM DIAGRAM 5/P-400
22. 3/4" GALVANIZED PIPE, THREADED AT BOTH ENDS. ROUTE ABOVE CEILING FROM FRYERS TO GREASE STORAGE. RUGH-IN HEIGHT AT STORAGE ROOM: 90" AFF RUGH-IN HEIGHT AT COOKLINE: 18" AFF VERTICAL RISE AT FRYER LOCATION BE AS HIGH AS POSSIBLE, BUT NOT TO EXCEED 15" IN HEIGHT. SLOPE OF PIPE TO BE AS STEEP AS POSSIBLE, BUT NO LESS THAN ¼" PER LINEAR FOOT.

PLUMBING SYMBOLS

	COLD WATER PIPING
	HOT WATER PIPING
	GAS LINE
	PLUMBING VENT (V)
	PLUMBING VENT (V) BELOW SLAB/GRADE
	SANITARY WASTE (SAN) BELOW SLAB/GRADE
	PIPE TURNING UP/DOWN
	GAS COCK
	F.S. WITH HALF GRATE
	FLOOR DRAIN
	FIXTURE IDENTIFICATION
	PLAN NOTE
	KITCHEN EQUIPMENT IDENTIFICATION
	VENT THRU ROOF
	ABOVE FINISHED FLOOR/GRADE
	CLEANOUT
	WALL CLEANOUT
	FLUSH FLOOR/GRADE CLEANOUT
	FIRE PROTECTION CONTRACTOR
	DEPARTMENT OF NATURAL RESOURCES
	TYPICAL
	EXISTING
	POINT OF CONNECTION
	BALL VALVE
	CHECK VALVE
	GREASE WASTE

NOTES:

1. ALL WATER LINES SERVING WATER HEATERS SHALL RUN DOWN FROM CEILING SPACE IN WALL, OFFSET OVER THROUGH WALL 6" BELOW CEILING. ABOVE WATER HEATER, THEN DROP DOWN TO HEATER.
2. AVOID RUNNING WATER VALVES DIRECTLY ABOVE WATER HEATER, TO AVOID DAMAGE TO WATER HEATER CAUSED BY POSSIBLE LEAKS.
3. REFER TO PIPING RISER DIAGRAMS, SHEET P-400 FOR ALL PIPE SIZING NOT SHOWN ON FLOOR PLAN.
4. DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE, U.N.O.
5. REFER TO RISER DIAGRAMS, SHEET P-400
6. ALL PEX PIPING TO BE CONTINUOUS FROM MANIFOLD



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REVISIONS:

△ PERMIT RESPONSE 01 02/07/2023

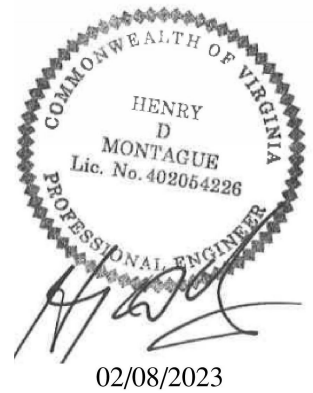
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STAFFORD, VA 22554

P-100

WATER & GAS PLAN

TRUE WARM & WELCOME 2500 R2

	TANK WATER CLOSET (HANDICAPPED): AMERICAN STANDARD 2467 016, FLUSH TANK WITH TRIP LAYER ON OPEN SIDE OF TOILET. FLOOR MOUNTED. STANDARD WHITE FINISHED. ELONGATED. FRONT BOWL. PRESSURE ASSISTED 1.6 GPF. RIM 16 1/2" A.F.F. AM. STD. 4142 600 TANK COVER LOCKING DEVICE. AM. STD. 5901.100.020 OPEN FRONT SEAT LESS COVER.
B	LAVATORY: ZURN MODEL Z344, 20"x18" WALL HUNG LAVATORY. VITREOUS CHINA, WITH 4" CENTER FAUCET HOLES & ZURN Z-1231 CONCEALED ARM CARRIER. FAUCET: TOTO T61.01-D10ET STANDARD ECOPOWER FAUCET. SENSOR, 1.0 GPM, 0.19gpc. 4" COVER PLATE #TPH315B90. THERMOSTATIC MIXING VALVE: TOTO TLT10R. PROVIDED & INSTALLED BY CONTRACTOR CONTACT CHRISTINE MCALEXANDER 800-459-7099 PANDARG@JCHINC.COM
C	FLOOR DRAIN WITH PROSET TRAP GUARD.
D	FLOOR DRAIN: ZURN # ZB415-B5 CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP. MEMBRANE FLASHING CLAMP. PROVIDE 3" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION. REFER TO DETAIL 17P-500. PROVIDE TRAP PRIMER
D1	FLOOR DRAIN: ZURN # ZB415-B5 CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP. MEMBRANE FLASHING CLAMP. PROVIDE 3" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION. REFER TO DETAIL 31P-500. PROVIDE TRAP PRIMER
E	FLOOR SINK: ZURN # Z1901-31, RECEPTOR WITH 12" SQUARE TOP x 8" DEEP CAST IRON BODY WITH ACID-RESISTING ENAMEL INTERIOR. RECEPTOR PROVIDED WITH ALUMINUM DOME STRAINER WITHOUT GRATE.
E1	FLOOR SINK: ZURN # Z1901-32, RECEPTOR WITH 12" SQUARE TOP x 8" DEEP CAST IRON BODY WITH ACID-RESISTING ENAMEL INTERIOR. RECEPTOR PROVIDED WITH PORCELAIN ENAMEL LOOSE-SET 1/2 GRATE AND ALUMINUM DOME STRAINER.
F	NOT USED
G	FLOOR DRAIN WITH FUNNEL: ZURN # ZB415-AR-4 ACID RESISTING EPOXY COATED CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP, 4" FUNNEL. PROVIDE 2" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION. REFER TO DETAIL. PROVIDE TRAP PRIMER
H	NOT USED
I	GREASE INTERCEPTOR: JENSEN JP100EE-G, 1000 GALLONS, 4" INLET AND OUTLET. TRAFFIC COVER. REFER TO CIVIL DRAWINGS FOR LOCATION. THE DESIGN OF THE GREASE INTERCEPTOR SHALL BE APPROVED BY LOCAL CITY REQUIREMENT.
J	WATER HAMMER ARRESTER: J. R. SMITH #5020, 1" NIPPLE OR EQUAL
K	PROVIDE ZURN 375ST STAINLESS STEEL REDUCED PRESSURE PRINCIPLE ASSEMBLY AT BAG-N-BOX. REFER TO 15P-500
L	HOSE BIBB: ACONR #8121 WITH VACUUM BREAKER, CHROME PLATED.
L1	HOSE BIBB: WOODFORD MB65 FREEZELESS COMMERCIAL CONCEALED BOX TYPE WALL HANGING IN SECURE LOCK STYLE MODULAR BOX. SINGLE CHECK ANTI SIPHON VACUUM BREAKER. CHROME HEAD, BRASS VALVE BODY HYDRANT WITH 3/2" HOSE CONNECTION 18" A.F.F.
M	TRENCH DRAIN: ZURN #Z-886-RFS, 6" WIDE X 80" LONG, TRENCH DRAIN SYSTEM. MODULAR CHANNEL SECTIONS SHALL BE MADE OF HIGH DENSITY POLYETHYLENE WITH INTERLOCK ENDS, A RADIUS BOTTOM AND REINFORCED STAINLESS STEEL SLOTTED GRATE.
M1	TRENCH DRAIN: ZURN #Z-664, 6" WIDE X 12" LONG, TRENCH DRAIN SYSTEM. PROVIDE ONE BOTTOM OUTLET MODULE AND ONE EXTENSION MODULE WITH INTERLOCK ENDS. SLOTTED HEEL-PROOF GRATE.
N	PROVIDE WATTS SD-3 DUAL CHECK VALVE WITH ATMOSPHERIC PORT AND STRAINER AFTER EACH BAY.
O	FREEZE PROOF ROOF HYDRANT: WOODFORD MODEL. SRH-MS
P1	MOP SINK: GSW # SE2424FM 24"x24" STAINLESS STEEL UNIT, 18 GA. STAINLESS STEEL CHICAGO FAUCET #897 WITH INTEGRAL STOPS IN SHANKS, WALL BRACE, HOSE THREADS, PAIL HOOK, VACUUM BREAKER, ROUGH BRASS FINISH; THREE FOOT RUBBER HOSE, 3" TRAPPED AND VENTED WASTE CONNECTION. PROVIDE 3/4" HW & CW R1" OC, 3/4" A.F.F. PROVIDE 3/2" CW HOSE BIBB, ACONR #8121 W/ VACUUM BREAKER, 48" A.F.F. FOR CHEMICAL CONNECTION.
P3	TANKLESS GAS WATER HEATER SYSTEM. MFG. RINNAI TRX-020U (2 CU/199), 398.00 BTU/HG GAS INPUT. 7.6 GPM @ 100° RISE. SEE PIPING DIAGRAM ON SHEET P-400 INCLUDE ALL PIPING, VENTING, WALL MOUNTING BRACKET AND ANY ACCESSORIES NECESSARY TO COMPLETE SYSTEM INSTALL. PLUMBER SHALL REGISTER PRODUCTION WITH RINNAI AT TIME OF INSTALLATION TO VALIDATE WARRANTY. CONTACT: RICO VIGLIETTI, RINNAI AMERICA CORPORATION CORPORATE ACCOUNTS (901.440-7389 JVGUINETTE@RINNAI.US
CP	HW CIRC. PUMP - MFG. GRUNDFOSS, 15-18BBS, 1/25 HP, 115 VOLT, 2 GPM @ 7' HEAD OR APPROVED EQUIVALENT.
RD	RD - ROOF DRAIN: J.R. SMITH #1010 CAST IRON ROOF DRAINS WITH FLASHING COLLAR AND CAST IRON DOME. FURNISH EXTENSION (SUFFIX-E) FOR INSULATED ROOFS. SUMP RECEIVER (SUFFIX-R) AND UNDER-DECK CLAMP (SUFFIX-C) FOR ALL BUT ROOF-IN-PLACE INSTALLATIONS. OUTLET CONNECTION TYPE SHALL BE COMPATIBLE WITH PIPING SYSTEM. PLUMBER TO PROVIDE AND INSTALL HEAT TAPE, RADIANT SOLUTIONS #HSF-301 ON BOTH DRAINS IN COLD CLIMATES.
OD	OD - OVERFLOW ROOF DRAIN: J.R. SMITH #1070 WITH SAME FEATURES AS DESCRIBED FOR "ROOF DRAINS". STANDPIPES SHALL BE ADJUSTED AND SECURED SO THAT AFTER THE INSTALLATION OF THE DRAIN ASSEMBLY, THE TOP OF THE STANDPIPE SHALL BE (2") ABOVE THE ADJACENT ROOF SURFACE.
40B	FAUCET FOR CHEM: T&S BRASS MODEL #0-0669-POL. PROVIDED BY G.C.

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (HANDICAPPED)	1/2"	--	4"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
2 AND 3 - COMP SINK	1/2"	1/2"	3"	2"
HAND SINK	1/2"	1/2"	2"	1 1/2"
MOP SINK (J.S.)	1/2"	1/2"	3"	2"
EQUIPMENT	1/2"	--	--	--
FLOOR DRAIN/SINK	--	--	2" OR 3"	2"

ALL PIPES IN THIS SCHEDULE ARE FURNISHED BY THE OWNER AND INSTALLED BY THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE AND CONNECTED TO THE PLUMBING UTILITIES BY THE PLUMBING CONTRACTOR, WHO SHALL INSTALL ALL PLUMBING DEVICES FURNISHED WITH HOSE CLAMPS.

WASTE, FS = FLOOR SINK, CFD = CONDENSATE FLOOR DRAIN, VB = VACUUM BREAKER, FLEX = A SIX FOOT COLD LENGTH OF FOOD QUALITY FLEXIBLE REINFORCED PLASTIC TUBING CONNECTED FROM THE ROUGH IN TO THE EQUIPMENT WITH ALL REQUIRED ADAPTERS AND HOSE CLAMPS.

ALL PIPES MUST MAINTAIN A MINIMUM CLEARANCE OF 6" AFF AND MUST BE WELL SUPPORTED. NO FLOOR STOPS ALLOWED.

(4A) SERVING COUNTER MOUNTED SODA MACHINE: IF PROVIDED, SODA MACHINE INSTALLER TO PROVIDE DRAIN LINES FROM ICE BIN AND SODA MACHINE TO FS WITH 1" AIR GAP. DRAIN LINE TO BE INSULATED. WATER TO SODA MACHINE TO BE PROVIDED THROUGH BUNDLE FROM FILTER AND RACK IN KITCHEN BY SODA MACHINE INSTALLER.

(4AB) BEVERAGE COUNTER MOUNTED SODA MACHINE WITH ICE MACHINE: PROVIDE 3/4" COPPER PIPE IW FROM COUNTER TROUGH DRAIN TO FS WITH 1" AIR GAP. INSULATE. WATER TO SODA MACHINE TO BE PROVIDED THROUGH BUNDLE FROM FILTER AND RACK IN KITCHEN BY SODA MACHINE INSTALLER. NO LEGS TO BE INSTALLED. MACHINE TO SET DIRECTLY ON COUNTER.

(4F) WATER FILTER: PROVIDE 3/2" CW AT 96" AFF WITH BV. PROVIDE FLEX AND REDUCED PRESSURE STAINLESS STEEL BACKFLOW PREVENTOR, OR OTHER DEVICE AS REQUIRED BY LOCAL CODE. INSTALL OWNER PROVIDED WATER FILTER AND MAKE CONNECTIONS TO BACKFLOW PREVENTOR AND WATER SUPPLY. PROVIDE ALL REQUIRED FITTINGS TO ALLOW SODA MACHINE INSTALLER TO HOOK UP BOOSTER PUMP TO WATER FILTER. REFER TO DETAIL 15P-500.

(6B) 22"D REAR COUNTER WITH HAND SINK. PROVIDE 3/2" CW AND 3/2" HW AT 24" AFF AND 8" OC WITH CHROME-PLATED, 1/2 TURN BALL VALVES. CONNECT TO OWNER SUPPLIED FAUCETS WITH METAL FLEX. PROVIDE 2" DRAIN PIPE WITH 2" TRAP AND WALL MOUNTED CLEAN-OUT. ALL EXPOSED DRAIN PIPES AND FITTINGS TO BE CHROME PLATED, NOT P.V.C.

(9D) ICE TEA MAKER: PROVIDE 3/2" CW @ 24" A.F.F. PROVIDE ALL REQUIRED FITTINGS TO ALLOW ICE TEA INSTALLER TO HOOK UP ONE BV, OTHER BV FOR OTHER EQUIPMENT.

(10J) SODA MACHINE MOUNTED ICE MACHINE: PROVIDE 1/2" CW AT 24" A.F.F. WITH BV. PROVIDE ALL REQUIRED FITTINGS TO ALLOW ICE MACHINE INSTALLER TO HOOK UP ICE MACHINE TO CW.

(20A) CHINESE RANGE: PROVIDE 3/4" CW AT 10" AFF WITH BV. PROVIDE PRESSURE TYPE VB OR OTHER BACKFLOW DEVICE AS REQUIRED BY LOCAL CODE, AND CONNECT TO OWNER SUPPLIED FAUCETS. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP.

(20B) PROVIDE 1/2" GAS SUPPLY AT 9" AFF WITH EASILY ACCESSIBLE SHUT-OFF VALVE. INSTALL OWNER SUPPLIED GAS REGULATOR AND ADJUST GAS LEVEL TO BURNERS.

(20C) CHINESE RANGE: PROVIDE 3/4" CW AT 10" AFF WITH BV. PROVIDE PRESSURE TYPE VB OR OTHER BACKFLOW DEVICE AS REQUIRED BY LOCAL CODE, AND CONNECT TO OWNER SUPPLIED FAUCETS. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP. PROVIDE 1" GAS SUPPLY DOWN TO 9" AFF REDUCE TO 3/4" @ EQUIPMENT CONNECTION WITH EASILY ACCESSIBLE SHUT-OFF VALVE. INSTALL OWNER SUPPLIED GAS REGULATOR AND ADJUST GAS LEVEL TO BURNERS.

(21B) FRYER: PROVIDE 1/2" GAS SUPPLY DOWN TO 14" AFF THEN TRANSITION TO 1" WITH 90° ANGLE AND SHUT OFF VALVE. PROVIDE ALL REQUIRED FITTINGS AND INSTALL OWNER SUPPLIED QUICK DISCONNECT FLEXIBLE PIPE AND CONNECT TO UNITS WITH 90° ANGLE. SEE DETAIL ON P-500

(23E) GRIDDLE: PROVIDE 3/4" GAS SUPPLY DOWN TO 20" AFF WITH EASILY ACCESSIBLE SHUT-OFF VALVE. PROVIDE ALL REQUIRED FITTINGS. CONNECT TO UNIT WITH OWNER SUPPLIED QUICK DISCONNECT (3/4"x48", (1) SWIVEL KIT)

(25A) RICE COOKER: PROVIDE 3/4" GAS SUPPLY AT 30", AND 3/4" GAS SUPPLY AT 10" AFF WITH SHUT OFF VALVES. ONE FOR EACH UNIT. PROVIDE ALL REQUIRED FITTINGS AND INSTALL OWNER SUPPLIED QUICK DISCONNECT FLEXIBLE PIPE AND CONNECT TO UNITS.

(31) WALK-IN COOLER: PROVIDE 1" COPPER PIPE IW FROM DRAIN PAN ON EACH UNIT TO FLOOR DRAIN WITH 1" TRAP AND 1" AIR GAP. MOUNT ALL PIPES WITHIN WALK-IN BOX WITH 1" HOLD-OFF SUPPORTS.

(32) WALK-IN FREEZER: PROVIDE 1" COPPER PIPE IW FROM DRAIN PAN ON EACH UNIT TO FLOOR DRAIN WITH 1" TRAP AND 1" AIR GAP. MOUNT ALL PIPES WITHIN WALK-IN BOX WITH 1" HOLD-OFF SUPPORTS. PROVIDE HEAT TRACE REFER TO ELECTRICAL DRAWING.

(40A) POT SINK: PROVIDE 3/2" CW AND 3/2" HW AT 14" AFF AND 8" OC WITH BVS & CV. CONNECT TO OWNER SUPPLIED FAUCET WITH COPPER PIPING. PROVIDE 2" COPPER PIPE IW (MANIFOLD ALL COMPARTMENT DRAINS INTO ONE LINE) TO FS WITH 2" AIR GAP. OR, IF REQUIRED BY LOCAL CODE, INSTALL 2" COPPER PIPE DIRECTLY TO SEWER SYSTEM. INSTALL OWNER SUPPLIED LEVER DRAIN STOPS. SEE DETAIL ON SHEET P-500.

(41B) SINGLE BOWL PREP SINK: PROVIDE 3/2" CW AND 3/2" HW AT 14" AFF AND 8" OC WITH BVS & CV. CONNECT TO OWNER SUPPLIED FAUCET WITH COPPER PIPING. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP, OR, IF REQUIRED BY LOCAL CODE, INSTALL 2" COPPER PIPE DIRECTLY TO SEWER SYSTEM. INSTALL OWNER SUPPLIED LEVER DRAIN STOPS.

(41C) HAND SINK: PROVIDE 3/2" CW AND 3/2" HW AT 24" AFF AND 8" OC WITH CHROME-PLATED, 1/2 TURN BALL VALVES. CONNECT TO OWNER SUPPLIED CHROME PLATED METAL FLEX RAIN PIPE WITH 2" TRAP AND WALL MOUNTED CLEAN-OUT. ALL EXPOSED DRAIN PIPES AND FITTINGS TO BE CHROME PLATED, NOT P.V.C.

SERVICE	UNDERGROUND	ABOVE GROUND
COLD & HOT WATER	TYPE "K" OR "L" HARD DRAWN COPPER TUBE	PEX
SANITARY WASTE	*SCH. 40 PVC	*SCH. 40 PVC
SANITARY VENT	*SCH. 40 PVC	*SCH. 40 PVC
GAS	_____	BLACK STEEL, SCHEDULE 40
INDIRECT DRAIN	_____	HARD DRAWN COPPER TUBE TYPE "M"

*SCH. 40 PVC IS PREFERRED IF APPROVED BY AUTHORITY HAVING JURISDICTION.
 PROVIDE SCHEDULE 40 PVC FOR ALL WASTE VENT PIPING & FITTINGS.

1. SODA CONDUIT: PROVIDE 6" PVC CONDUIT BELOW FLOOR FROM THE SIDE OF SODA STORAGE RACK TO SODA DISPENSER PER DETAIL #4 ON SHEET P-500.
2. CONDENSATE: ROUTE SHARED CONDENSATE LINE THROUGH WALK-IN COOLER. DO NOT RUN THROUGH WALK-IN FREEZER. PROVIDE 1" INSULATED CONDENSATE DRAIN PIPE FROM THE EVAPORATIVE COIL DISCHARGE TO FLOOR SINK OR MOP SINK WITH AIR GAP OF TWICE PIPE DIAMETER. INSTALL AT MINIMUM 76" HEIGHT A/F.F. REFER TO DETAIL #2 ON SHEET P-500.
3. PROVIDE TRAP PRIMER FOR FLOOR SINK. SEE DETAIL T/TP-500.
4. RDL & ODL LINES DN. IN WALL. TERMINATE ODL THRU WALL AS CLOSE TO BOTTOM PLANK AS POSSIBLE. EXTEND 12" PAST EFIS, WATER PROOF SEAL ALL AROUND. TERMINATE RDL & ODL WITH 4" PVC LAMBS TONGUE NOZZLE. COLOR ANTIQUE BRONZE, ARMATURE MODEL #PDN-4. (IF AVAILABLE IT TO STORM SEWER UNDERGROUND).
5. COMBINATION WASTE/VENT
6. LAV. TAILPIECE WITH TRAP PRIMER, RUN 1/2" CW BELOW FLOOR TO FLOOR DRAIN. SEE DETAIL #9 ON PLAN P-500.
7. (AAV) STUDOR MINI-VENT AIR ADMITTANCE VALVE- INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. WYE WITH CLEANOUT ON TOP.

ITEM	FIXTURE	QTY	WATER FU		SEWER FU	
			EACH	TOTAL	EACH	TOTAL
(A)	WATER CLOSET	2	5	10	4	8
(B)	LAVATORY	2	2	4	1	2
(D)(D1)	FLOOR DRAIN 3" TRAP	6	—	—	5	30
(E)(E1)	FLOOR SINK 3" TRAP	12	—	—	5	60
(P1)	MOP SINK	1	3	3	2	2
(G)	FLOOR DRAIN W/ FUNNEL 2" TRAP	2	—	—	3	6
(L)(L1)	HOSE BIBB	3	4	12	—	—
(M)(M1)	TRENCH DRAIN 3" TRAP	2	—	—	5	10
(4F)	FILTER SYSTEM	1	1	1	FS	—
(9D)	ICE TEA BREWER	2	1	2	FS	—
(10J)	400 LB ICE MACHINE	2	1	2	FS	—
(20A)	CHINESE RANGE	1	2	2	FS	—
(20C)	CHINESE RANGE	2	2	4	FS	—
(40A)(40B)	POT SINK (3.COMP.)	1	4	4	FS	—
(41B)(41C)	PREP. SINK (1.COMP.)	2	4	8	FS	—
(45A)(45B)	HAND SINK (WALL MOUNT)	3	2	6	1	3
(6C)	HAND SINK (IN COUNTER)	1	4	4	FS	—
(40T)	THAWING CABINET	1	-	-	FS	—
(70D)	DISHWASH	1	4	4	FS	—
TOTAL			66		121	

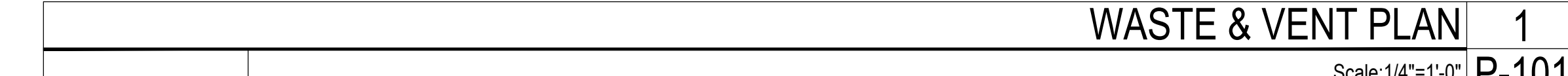
SERVICE		TOTAL F.U.
DOMESTIC WATER		66
SANITARY SEWER		121
SERVICE REQUIREMENTS		
SERVICE	SIZE MAIN	CAPACITY
DOMESTIC WATER	1-1/2 INCH	34 GPM
SANITARY SEWER	4 INCH	121 F.U.
FUEL GAS	3 INCH	2,683 CFH
FIRE PROTECTION	INCH	GPM

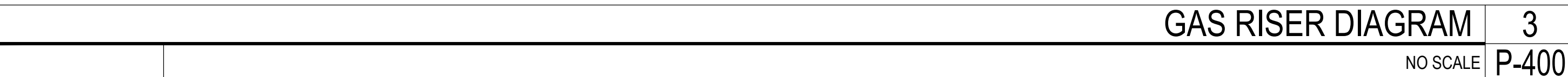
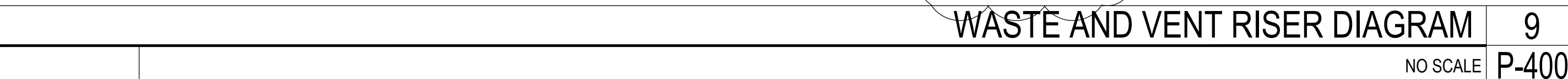
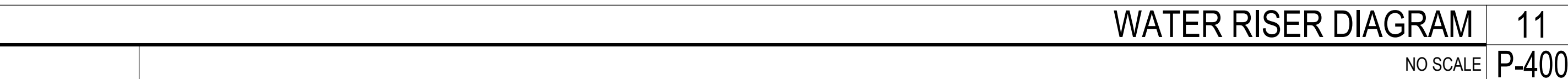
PIPE SIZE	GPM	VELOCITY FT/SEC	FIXTURE UNITS				
			F - TANK		F - VALVE		
1/2"	2.5	3.5	2 F.U. @	psi	6.0	F.U. @	psi
3/4"	6.6	4.4	8 F.U. @	psi	1	F.U. @	psi
1"	13.4	5.2	19 F.U. @	psi		F.U. @	psi
1-1/4"	23.3	5.9	37 F.U. @	psi		6 F.U. @	psi
1-1/2"	36.7	6.6	74 F.U. @	psi		23 F.U. @	psi
2"	76.4	7.9	254 F.U. @	psi	▼	132 F.U. @	psi

PIPE SIZE	GPM	VELOCITY FT/SEC	FIXTURE UNITS	
			F - TANK	F - VALVE
1/2"	2.5	3.5	2 F.U. @ psi	F.U. @ psi
3/4"	6.6	4.4	8 F.U. @ psi	F.U. @ psi
1"	13.2	5.0	19 F.U. @ psi	F.U. @ psi
1-1/4"	19.0	5.0	37 F.U. @ psi	6 F.U. @ psi

FIXTURE	QTY.	FU	FU TOTAL
FLOOR DRAIN/FLOOR SINK 3" TRAP	8	5	40
TRENCH DRAIN 3" TRAP	1	5	5
MOP SINK	1	2	2
TOTAL			47 (24 GPM)

GRAVITY TYPE GREASE INTERCEPTOR SIZE BASED ON 24 GPM WITH 30 MINUTE RETENTION TIME ($24 \times 30 = 720$) TO BE SIZED AT 1000 GALLONS.





LOW PRESSURE NATURAL GAS CALCULATION:
SIZED PER 2015 IFGC TABLE 402.4(2)

TOTAL DEVELOPED LENGTH: 100'

TOTAL LOAD: 2,683 CFH

NOTE: DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE

TRUE WARM & WELCOME 2500 R2



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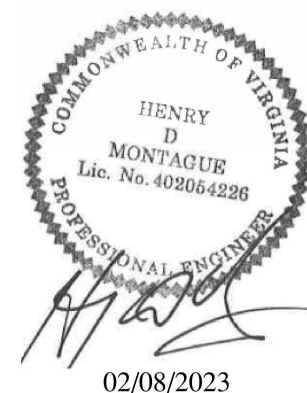
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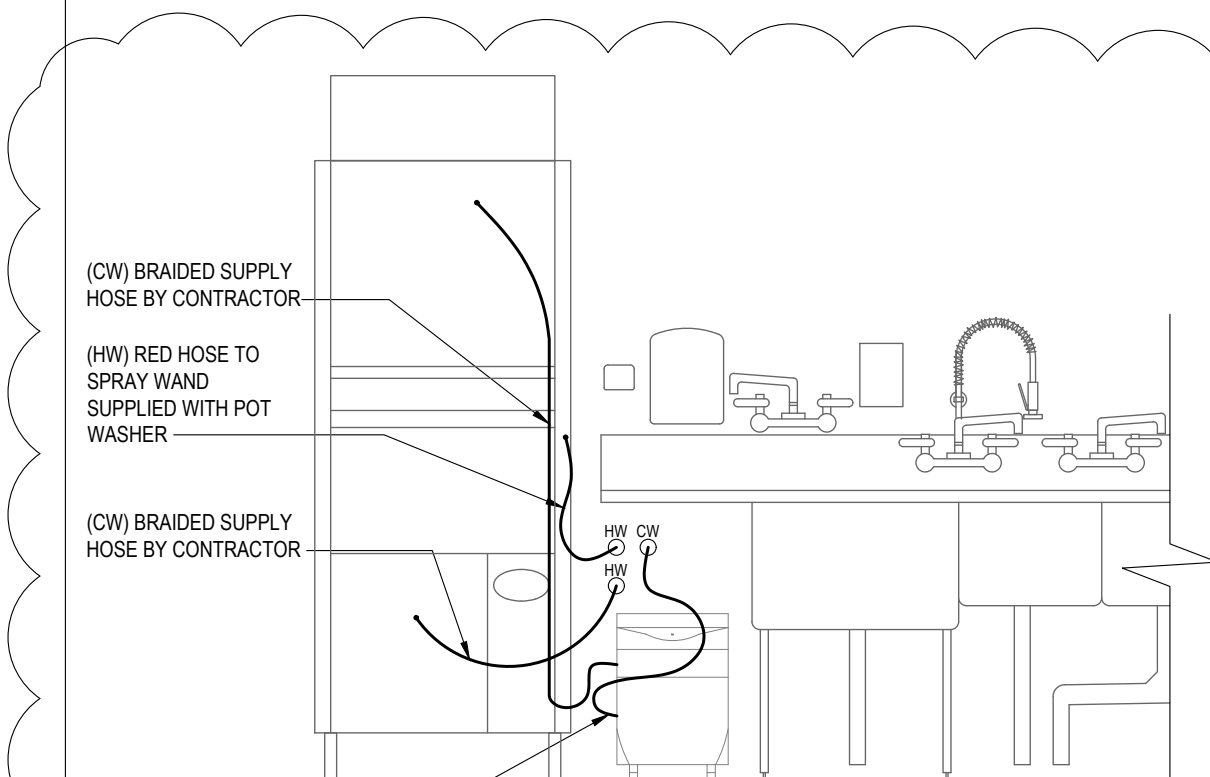


PANDA EXPRESS
TRUE WARM & WELCOME
1121 COURTHOUSE RD.
STAFFORD, VA 22554

P-501

PLUMBING DETAILS

TRUE WARM & WELCOME 2500 R2



W. SOFTN'R/POT WSH'R HOSE DIAG.		20
	Scale: NO SCALE	P-501