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P-100

WATER & GAS PLAN

GENERAL PLUMBING NOTES

- FOOD SERVICE EQUIPMENT: REFER TO OTHER PORTIONS OF PLANS AND SPECIFICATIONS FOR FURTHER INFORMATION ABOUT FOOD SERVICE EQUIPMENT AND WORK PERFORMED BY OTHERS. VERIFY ROUGH-IN REQUIREMENTS WITH EQUIPMENT FURNISHER.
- HEALTH DEPARTMENT: COMPLY WITH LOCAL HEALTH DEPARTMENT (HD) REGULATIONS. WHEREVER POSSIBLE, INSTALL ALL PIPING CONCEALED. CONFORM TO HD REQUIREMENTS FOR LOCATIONS OF FLOOR SINKS.
- WORKMANSHIP SHALL BE FIRST CLASS, ACCEPTABLE TO OWNER.
- 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.
- 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.
- BACKFLOW PREVENTION: PROVIDE BACKFLOW PREVENTERS (BFP) IN WATER LINES ONLY IF REQUIRED BY LOCAL AUTHORITIES. USE DEVICES OF TYPE (WACUM BREAKER, DOUBLE CHECK, REDUCED PRESSURE) AND MANUFACTURER APPROVED BY LOCAL AUTHORITIES. ONLY IN LOCATIONS REQUIRED.
- RESTROOM TRAP PRIMERS: SOLEX CHEF "TRAP EASE" MODEL 200-090 TRAP PRIMER TAILPIECE. PROVIDE A CONTINUOUS LENGTH OF 1/2" 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.
- WATER CONSERVATION: CONTRACTOR SHALL PROVIDE WATER FLOW LIMITING FEATURES ON FIXTURES IF/AS REQUIRED BY LOCAL AUTHORITIES.
- COLD WATER: CONNECT TO DOMESTIC COLD WATER VALVED STUB. EXTEND COLD WATER PIPE, SUSPENDED FROM STRUCTURE ABOVE CEILING AND DOWN IN PARTITIONS, TO EQUIPMENT.
- 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.
- SANITARY: CONNECT TO SANITARY WASTE LINE.
- BRANCHES: PROVIDE HOT AND/OR COLD WATER PIPES DOWN IN PARTITION TO SERVE VARIOUS EQUIPMENT PER "KITCHEN EQUIPMENT SCHEDULE".
- SODA CONDUIT: PROVIDE 4" CONDUIT BELOW FLOOR FROM SODA STORAGE TO SODA DISPENSER.
- CONDENSATE: PROVIDE 1" INSULATED PRIMARY AND SECONDARY CONDENSATE DRAIN PIPES FROM FAN-COIL UNIT ABOVE CEILING TO NEAREST FLOOR SINK.
- 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.
- INDIRECT DRAIN: AN AIR GAP TWICE THE SIZE OF THE DRAIN LINE MUST BE PROVIDED BETWEEN THE DRAIN LINE AND THE SANITARY SEWER.
- LIQUID WASTE FROM ALL EQUIPMENT MUST BE DISCHARGED TO THE SANITARY SEWER.
- FLOOR DRAIN MUST BE PLACED ADJACENT TO EQUIPMENT WHICH DISCHARGES WASTE. FLOOR DRAIN INSTALLATION MUST NOT INTERFERE WITH PROPER FLOOR MAINTENANCE.
- EXPOSED UTILITY LINES ON FLOORS ARE PROHIBITED. UTILITY LINES MUST NOT BE UNNECESSARILY EXPOSED ON WALLS.
- ALL WATER AND GAS CONNECTIONS TO ALL PLUMBING FIXTURES TO BE HARD PIPED. NO FLEX PIPE.
- ALL PIPES 6" A.F.F. NO FLOOR SUPPORTS ALLOWED.
- ALL WATER PIPES IN EXPOSED AREAS OUTSIDE WALLS AND BELOW CEILING MUST BE COPPER UNLESS NOTED OTHERWISE.

PLUMBING SPECIFICATIONS

- 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.
- 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.
- 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 FULFILL 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.
- 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.
- COORDINATE WITH WORK OF OTHER SECTIONS AND TRADES, WITH EQUIPMENT FURNISHED BY OTHERS, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE.
- 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.
- 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 USE SP-58, 59 AND 60.
- 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.
- CLEANOUTS SHALL BE INSTALLED IN ALL HORIZONTAL DRAINAGE PIPE AND SHALL BE LOCATED NOT MORE THAN 100 FT APART.
- 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.
- 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.
- 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 PEX WITH ZURIN PEX PRE-ASSEMBLED MANIFOLDS. 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 SHOWING. FLUSH WATER PIPING CLEAR OF DEBRIS AND CLEAN AERATORS AND STRAINERS AT TERMINATION OF INSTALLATION.
- 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 TO PREVENT RUST. PROVIDE ALL UNIONS, SHUT OFF VALVES AND DRIP LUGS REQUIRED BY NFPA-54 AND GOVERNING CODES. PROVIDE ALL TESTS, INSPECTIONS, HANGERS AND APPURTENANCES 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 DETAILED ON DRAWINGS. PROVIDE ROUTING, HANGING, AND PENETRATIONS PER OWNER'S REQUIREMENTS.
- PIPE INSULATION: INSULATE ALL COLD WATER AND CONDENSATE PIPING WITH 1/2", AND HOT WATER PIPING WITH 1", PREFORMED FIBERGLASS WITH ALL-SERVICE JACKET WITH VAPOR BARRIER (BY CT, OC, JM, PPG, OR KNAUF). AT CONTRACTOR'S OPTION, FLENUM-RATED ELASTOMERIC INSULATION (BY ARMISTRING, RUBATEX OR EQUAL) MAY BE USED.
- PIPE MARKING:
  - IDENTIFY ALL PIPING WITH ANSI/ASME A13.1 2007 APPROVED PIPE MARKER SYSTEM USING EZ ARROW AND ARROW BANDING TAPE IN CONJUNCTION WITH EZ PIPE MARKERS. PRODUCTS AVAILABLE AT PIPEMARKER.COM. 822-274-6271. INSTALL PER MANUFACTURERS INSTRUCTIONS.
  - IDENTIFY ALL MANIFOLDS AND ALL VALVES ON THE MANIFOLDS FOR CORRECT IDENTIFYING FITTINGS.
- SHUT-OFF VALVES WITH UNIONS SHALL BE PROVIDED AT BRANCHES OR GROUPS OF MORE THAN ONE FIXTURES AND AT THE WATER HEATER. TO FACILITATE ISOLATION FOR REPAIRS, REPLACEMENT, RELOCATION, RE-PAINTED FORGED BRONZE BODY BALL VALVE, WITH TETLON SEALS AND PNEUMATIC 400 LB WOG W/ 3/4" BOLDER EQUAL TO JENKINS #302-T. GAS VALVES SHALL BE ALL BRONZE. TIGHTENED PLUG COCK FOR SCHEDULE PIPE, BY WALWORTH, ROCKWELL, NORDSTROM OR APPROVED EQUIVALENT.
- ACCESS PANELS SHALL BE PROVIDED IN CEILINGS OR WALLS WHERE UNSEALED CONTROL SERVICES ARE LOCATED, EXCEPT WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS AVAILABLE THROUGH LAY-IN CEILINGS. SUPPLIES AND TRAPS: PROVIDE WATER SEALED TRAPS AND SUPPLIES INSTALLATION WHEREVER 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.
- INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY 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.
- 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.
- GUARANTEE THE WORK AND THE INSTALLATION FOR ONE YEAR AFTER FORMAL ACCEPTANCE BY THE OWNER. ALL SAW OUT AND PATCH BACK OF FLOOR TO MATCH EXISTING FINISHES. BACKFILL PER DEVELOPER OR OWNER'S SOILS ENGINEER'S RECOMMENDATIONS.

PLUMBING KEY NOTES

- 1" G DOWN TO WATER HEATER W/ SOV (SHUT OFF VALVE).
- 3/4" G DOWN TO RICE COOKER W/ SOV. PROVIDE 6" LENGTH OF RIGID PIPE BETWEEN RICE COOKER AND FLEXIBLE GAS LINE.
- CONNECT TO EXISTING COLD WATER STUB IN SPACE. VERIFY INSTALLATION OF SHUT-OFF VALVE AND SUBMETER. COORDINATE LOCATION OF STUB WITH SHELL PACKAGE.
- 1/2" G DOWN TO DEEP FRYER W/ SOV.
- 1/2" G DOWN TO CHINESE RANGE "20A OR 20B" W/ SOV. LOCATE STUB OUT BEHIND THE END OF RANGE FOR EASY ACCESS.
- 1" G DOWN TO CHINESE RANGE "20C" W/ SOV.
- EXHAUST & INTAKE VENTS UP TO ROOF. COORDINATE WITH SHELL PACKAGE, MECHANICAL DRAWINGS AND DETAIL #10 ON SHEET P-500.
- ROUTE NEW PIPING IN WALL.
- 2" GAS ANSUL VALVE PROVIDED BY OWNER (G.C. CALL CAPITMARE FOR DELIVERY). INSTALL GAS ANSUL VALVE AS CLOSE TO EXTERIOR WALL AS ALLOWED PER LOCAL CODE.
- NOT USED.
- NOT USED.
- 1/2" CW TO TRAP PRIMER. PROVIDE WALL ACCESS PANEL. RUN 1/2" CW BELOW FLOOR TO FLOOR DRAIN. SEE DETAIL #17 ON PLAN P-500.
- LAV, TAILPIECE WITH TRAP PRIMER. RUN 1/2" CW BELOW FLOOR TO FLOOR DRAIN, SEE DETAIL #9 ON PLAN P-500.
- NOT USED.
- CONNECT TO EXISTING GAS SERVICE. VERIFY EXISTING SHUT OFF VALVE W/ HANDLE AT 11'-0" ABOVE FINISH FLOOR, EASILY ACCESSIBLE. G.C. TO INSTALL LOCATION INDICATOR STICKER PROVIDED BY PANDA EXPRESS.
- 1/2" GAS TO MAKE-UP AIR UNIT. CONNECT TO EXISTING GAS PIPING ON ROOF.
- 1/2" HW & CW TO FAUCET (C) FOR CHEMICAL FEED SYSTEM.
- NOT USED.
- COLD WATER MANFOLD "C" BELOW CEILING. REF ARCH ELEVATIONS.
- COLD WATER MANFOLD "D" BELOW CEILING. REF ARCH ELEVATIONS.
- NOT USED.
- HOT WATER MANFOLD "A" BELOW CEILING. REF ARCH ELEVATIONS.
- ORIENTATION OF WATER HEATER CONTROL PANEL TO MATCH MAKE SHOWN ON PLANS. DO NOT TURN WATER HEATER ON 45 DEGREE ANGLE.

NOTES:

- 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.
- AVOID RUNNING WATER VALVES DIRECTLY ABOVE WATER HEATER TO AVOID DAMAGE TO WATER HEATER CAUSED BY POSSIBLE LEAKS.
- REFER TO PIPING RISER DIAGRAMS, SHEET P-400 FOR ALL PIPE SIZING NOT SHOWN ON FLOOR PLAN.
- DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE, U.N.O.
- REFER TO RISER DIAGRAMS, SHEET P-400.

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
FD	FLOOR DRAIN
A	PIPE IDENTIFICATION
1	PLAN IDENTIFICATION
1	KITCHEN EQUIPMENT IDENTIFICATION
VTE	VENT THRU ROOF
AF	ABOVE FINISHED FLOOR/GRADE
CO	CLEANOUT
CO	WALL CLEANOUT
FGCO	FLUSH FLOOR/GRADE CLEANOUT
FPC	FIRE PROTECTION CONTRACTOR
DNR	DEPARTMENT OF NATURAL RESOURCES
TYP	TYPICAL
(E)	EXISTING
●	POINT OF CONNECTION
BV	BALL VALVE
CV	CHECK VALVE
GS	GREASE WASTE

