PLUMBING LEGEND

C.O.	CLEAN OUT
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
VTR	VENT THRU ROOF
DN	DOWN
V.I.F.	VERIFY IN FIELD
WHA	WATER HAMMER ARRESTER– PDI #
SOV	SHUT–OFF VALVE
T.P.	TRAP PRIMER
—▼—	GAS COCK
—N—	CHECK VALVE
⋈	BALL VALVE
⊷	BALL VALVE IN VERTICAL
—•—	HOSE BIBB WITH VACUUM BREAKER
—S⋈—	SOLENOID VALVE
—▮— WHA	WATER HAMMER ARRESTER– PDI #
— · — · —	DOMESTIC COLD WATER PIPING
—— · · ——	DOMESTIC HOT WATER PIPING (110°F)
—— 110 ——	DOMESTIC HOT WATER PIPING (110°F)
—— 120 ——	DOMESTIC HOT WATER PIPING (120°F)
—— PT ——	PRESSURE & TEMPERATURE RELIEF LINE
—— GAS ——	DOMESTIC L.P/N.G.. GAS PIPING
—— COND ——	CONDENSATE PIPING
– – – – – –	VENT PIPING
————	SANITARY SEWER PIPING
—— IW ——	IN–DIRECT WASTE PIPING
—— GW ——	GREASE WASTE PIPING
——○——	PIPE DROP DOWN
——○——	PIPE RISER UP
——∃	CAPPED END OF PIPE
⊔ —∞	P–TRAP
‖—	CLEAN OUT
—‖—‖—	UNION – SCREWED OR FLANGED
▣	CONDENSATE PIPE SUPPORT
⊃● FD	FLOOR DRAIN
⊐▥ FS	FLOOR SINK W/ 1/2 GRATE

GENERAL PLUMBING NOTES

1. ALL WORK SHALL COMPLY WITH THE 2014 EDITION OF THE FLORIDA PLUMBING, ENERGY CONSERVATION, ACCESSIBILITY AND FUEL GAS CODES, AND ALL LOCAL CODE AMENDMENTS.
2. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL LAYOUT OF PLUMBING SYSTEMS.
3. CONTRACTOR SHALL VISIT THE EXISTING SITE (IF APPLICABLE) PRIOR TO BIDDING AND SHALL INVESTIGATE ALL CONDITIONS THAT AFFECT HIS WORK; VERIFY LOCATIONS, SIZES, DIMENSIONS, AND INVERT ELEVATIONS OF ALL ON–SITE SANITARY SEWERS, STORM DRAINS, WATER MAINS AND NATURAL GAS MAINS, AND MAKE CERTAIN THAT ALL CONNECTIONS CAN BE MADE. THE CONTRACTOR SHALL MAKE THE ARCHITECT/ENGINEER AWARE OF ANY CONFLICTS.
4. CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID AND SHALL COORDINATE ALL TRADES TO PROVIDE A COMPLETE PRODUCT TO AVOID CONFLICTS BETWEEN THE TRADES, AND TO DETERMINE WHICH TRADE IS TO PERFORM THE NECESSARY WORK. RESOLVE ALL QUESTIONS OR CONFLICTS WITH THE ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED. CONSULT THE ARCHITECT'S DRAWINGS FOR ALL GRADE AND FINISH FLOOR ELEVATIONS.
5. CONTRACTOR SHALL GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. CONTRACTOR SHALL OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO COMMENCEMENT OF WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR SHALL BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
7. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS TO THE BUILDING OWNER AND ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
8. CONTRACTOR SHALL PROVIDE INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
9. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT AT ONE TIME, BOUND IN THREE–RING BINDERS, INDEXED IN A NEAT AND ORDERLY MANNER. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. PLUMBING CONTRACTOR SHALL NOT ORDER ANY EQUIPMENT WITHOUT APPROVAL FROM PLUMBING ENGINEER, ARCHITECT, OWNER, AND INTERIOR DESIGNER (IF APPLICABLE).
10. CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS OR CEILINGS MUST MAINTAIN THE SAME RATING AND MUST MATCH THE FINISH OF THE WALL OR CEILING IN WHICH IS INSTALLED.
11. TRENCHING, BACKFILL AND CONCRETE WORK ASSOCIATED WITH PLUMBING SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.
12. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES THROUGH FLOORS AND WALLS. PIPING THROUGH FLOORS SHALL BE SLEEVED, CAULKED AND FLASHED TO PREVENT LEAKAGE. SEAL ALL WALL PENETRATIONS WATERTIGHT WITH SILICONE CAULKING AND BACKER ROD, OR COVERED WITH ESCUTCHEON PLATES. IT SHALL ALSO BE THE RESPONSIBILITY OF THE PLUMBING SUBCONTRACTOR TO PROVIDE ALL LAYOUT, SLEEVING, CONCRETE CUTTING AND PATCHING, AND CONCRETE COREBORING AS REQUIRED TO COMPLETE ALL OF PLUMBING WORK. ALL LAYOUT OF REQUIRED CONCRETE CUTTING MUST BE APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLUMBING SUBCONTRACTOR'S EXECUTION OF SAME.
13. PIPE PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL HAVE EQUIVALENTLY RATED SLEEVES AND SHALL BE SEALED AND FIRE CAULKED WITH A UL LISTED FIRE STOPPING SYSTEM INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S LISTED DETAILS AND SPECS.
14. LAYOUT PIPES TO FALL (CONCEALED) WITHIN PARTITION WALL OR CHASES. NOTIFY ARCHITECT IF ADDITIONAL WALL SPACE IS REQUIRED. COORDINATE PIPE DROP WITH FOOTINGS, STRUCTURAL STEEL, FIRE RATED WALLS, WHICH MAY FALL BELOW PARTITION WALL OR CHASE. MAKE NECESSARY ADJUSTMENT TO PIPING TO AVOID CONFLICT WITH BUILDING OBSTRUCTIONS. CONSULT WITH ARCHITECT AND CONTRACT DOCUMENTS FOR LOCATION OF ALL RATED WALLS, CEILINGS, FLOORS AND ROOF. FURNISH AND INSTALL APPROPRIATE AND APPROVED FIRE BARRIER AT ALL PENETRATIONS. INSTALLATION SHALL BE PER MANUFACTURES SPECIFICATIONS.
15. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOM(S) OR IN CEILING SPACE(S) WHERE USED AS RETURN AIR PLENUMS.
16. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
17. CONTRACTOR SHALL PROVIDE PIPE HANGERS FOR ALL PIPING. HANGER RODS AND DEVICES SHALL BE USED FOR SUPPORT OF ALL PIPING. MAKESHIFT DEVICES WILL NOT BE ACCEPTABLE. HANGER DEVICES SHALL BE SIZED TO FIT AROUND INSULATION. PROVIDE GALVANIZED STEEL SADDLES AS REQUIRED. PIPING SUPPORT SPACING SHALL COMPLY WITH THE FLORIDA PLUMBING CODE–2014.
18. SANITARY, VENT PIPING AND DOMESTIC WATER PIPING SHALL BE TESTED IN ACCORDANCE WITH SECTION 312 OF THE FLORIDA PLUMBING CODE–2014.
19. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS.
20. IN AREAS OF EXPOSED CMU, ALL PIPING SHALL BE WITHIN CMU WALL. NO EXPOSED PIPING SHALL BE ALLOWED. COORDINATION WITH OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
21. MAINTAIN A MINIMUM SEPARATION OF 5 FEET BETWEEN POTABLE WATER PIPE AND BUILDING SEWER. WHEN THERE IS LESS THAN 5 FEET OF SEPARATION MAINTAIN A MINIMUM OF 12 INCHES BETWEEN INVERT OF POTABLE WATER AND TOP OF SEWER.
22. MATERIALS AND EQUIPMENT SHALL BE NEW OF AMERICAN MANUFACTURER, FREE OF DEFECTS AND IT SHALL MEET THE REQUIREMENTS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, ASTM & ANSI SPECIFICATIONS WHERE SUCH EXIST, STANDARD AND LOCAL BUILDING CODES, AND SHALL BE SUITABLE FOR THE USE INTENDED.
23. PLUMBING PIPING SHALL BE LABELED WITH CONTENT DESCRIPTION AND FLOW DIRECTION. REFER TO MARKER PLACEMENT RECOMMENDATION DETAIL FOR FURTHER INFORMATION.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	PIPE SIZE C.W.	H.W.	WASTE	TRAP	QTY	DFU	TOTAL DFU	WSFU	TOTAL WSFU	REMARKS
HLAV	LAVATORY (HANDICAPPED)	1/2"	1/2"	2"	1–1/2"	2	1	**2**	2.0	**4.0**	
HWC	WATER CLOSET (HANDICAPPED)	1/2"	–	3"	INT.	2	4	**8**	5.0	**10.0**	3x4
E–9	DISHWASHING MACHINE	1/2"	1/2"	I.D.	–	1	0	**0**	4.5	**4.5**	
E–11	HAND SINK	1/2"	1/2"	2"	1–1/2"	1	2	**2**	1.4	**1.4**	
E–10	THREE–COMPARTMENT SINK	1/2"	1/2"	I.D.	–	1	0	**0**	4.0	**4.0**	
MS	MOP SINK	1/2"	1/2"	3"	3"	1	2	**2**	3	**3.0**	
FD	FLOOR DRAIN			3"	3"	1	0	**0**	0	**0.0**	1/2"T.P.
FS	FLOOR SINK			3"	3"	1	5	**5**	0	**0.0**	
TOTAL								**19**		**26.9 WSFU** **22.2 GPM**	

NOTES:

1. ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 (MAX. FLOW RATES), TABLE 604.5 (MIN. SIZES OF WATER SUPPLY), & TABLE 709.1 (MIN. SIZE OF TRAP) OF F.B.C.–PLUMBING
2. PROVIDE A 1" WATER SERVICE LINE AS PER FBC–PLUMBING APPENDIX E TABLE E103.3(3) (ESTIMATING DEMAND) AND FIGURE E103.3(2) GPM Vs. PRESSURE DROP (MAX. VELOCITIES 6 FT/SEC HOT WATER AND 8 FT/SEC COLD WATER).

WATER PIPING SYSTEM NOTES

1. WATER PIPING SHALL BE:
   COPPER PIPING (ABOVE GRADE): ASTM B88, TYPE L, HARD DRAWN.
   FITTINGS: (a) SOLDERED: ANSI/ASME B16.23, CAST BRASS OR ANSI/ASME B16.29, WROUGHT COPPER.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).
   JOINTS: (a) SOLDERED: ANSI/ASTM B32, LEAD–FREE SOLDER, GRADE 95TA.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).

   COPPER PIPING (UNDERGROUND BUILDING EXTERIOR): ASTM B88, TYPE K, HARD DRAWN.
   FITTINGS: (a) SOLDERED: ANSI/ASME B16.29, WROUGHT COPPER.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).
   JOINTS: (a) SOLDERED: ANSI/ASTM B32, LEAD–FREE SOLDER, GRADE 95TA.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).

   COPPER PIPING (UNDERGROUND UNDER BUILDING SLAB): ASTM B878, TYPE K, SOFT DRAWN.
   FITTINGS: (a) SOLDERED: ANSI/ASME B16.29, WROUGHT COPPER.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).
   JOINTS: (a) SOLDERED: ANSI/ASTM B32, LEAD–FREE SOLDER, GRADE 95TA.
   (b) PRESSED: ASME B16.18 OR ASME B16.22, COPPER PRESS FITTING WITH EPDM O–RING AND SMART CONNECT (SC FEATURE).

   FITTINGS AND JOINTS SHALL COMPLY WITH SECTIONS 605.14.1 THROUGH 605.14.5 OF FBC–PLUMBING.

   WATER VALVES 2" AND SMALLER SHALL BE A BRONZE BALL VALVE, TWO–PIECE BODY, 600 PSI WORKING PRESSURE, NIBCO MODEL S–585–80–LF (NSF–61 LEAD FREE) OR APPROVED EQUAL. THE USE OF GATE VALVES SHALL BE PROHIBITED.
2. DOMESTIC AND SERVICE HOT WATER PIPING SHALL BE INSULATED AS PER: 2014 FLORIDA BUILDING CODE–PLUMBING, SECTION 607.5 WITH 1" INSULATION FOR AUTOMATIC MAINTENANCE SYSTEMS AND 1/2" INSULATION THE FIRST 8 FEET OF HOT WATER PIPING FROM A HOT WATER SOURCE THAT DOES NOT HAVE HEAT TRAPS. INSULATION MATERIAL SHALL HAVE A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/HxS.F.x°F. INSULATION MATERIAL SHALL BE FIBERGLASS(JOHN MANVILLE MICRO–LOK), ARMACELL ELASTOMERIC (AP ARMAFLEX) OR APPROVED EQUAL. COVER VALVES, FITTINGS AND FLANGES WITH INSULATION SIMILAR TO ADJACENT PIPE COVERING. EXTERIOR ABOVE GRADE WATER PIPING SHALL BE FINISHED WITH AN ALUMINUM JACKET SECURED WITH 1/2" ALUMINUM BANDS AND SEALS, ALUMINUM SCREWS, OR POP RIVETS ON 9". PLACE LAPS TO SHED WATER, AND CAULK WHERE NECESSARY TO PREVENT WATER INTRUSION. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.
3. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY, DISINFECTED PRIOR TO UTILIZATION. THE METHOD TO BE FOLLOWED SHALL BE AS PER SECTION 610 OF FPC–2014.
4. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
5. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT–OFF.
6. PROVIDE A WATER HAMMER ARRESTOR ON ALL WATER SUPPLY LINES SERVING FLUSH VALVE PLUMBING FIXTURES, SOLENOID VALVES, ETC. INCLUDING OTHER FIXTURES OR EQUIPMENT WITH QUICK CLOSING VALVES (ICE MAKERS, & DISHWASHERS). USE SIOUX CHIEF SHOCK ARRESTORS, P.D.I.#A ; 1/2"CONN., P.D.I.#B ; 3/4"CONN. P.D.I.#C ; 1"CONN.. APPROVED FOR INSTALLATION WITH NO ACCESS PANEL REQUIRED. CONFORMS WITH ANSI/ASSE 1010 STANDARDS.
7. PROVIDE AUTOMATIC TRAP PRIMER ON COLD WATER CONNECTION TO LAVATORY FIXTURE WITH COLD WATER TUBE TO FLOOR DRAIN AUXILIARY INLET FITTING. FLOOR DRAINS IN AREAS WHERE A LAVATORY (TRAP PRIMER) CONNECTION IS NOT AVAILABLE, PROVIDE A TRAP PRIMER DISTRIBUTION UNIT PRECISION PLUMBING PRODUCTS, MODEL PR–500 (OR APPROVED EQUAL) AND A SHUT–OFF VALVE IN ACCESSIBLE AREA.
10. DO NOT PENETRATE DOMESTIC WATER PIPING USED FOR ELECTRICAL GROUNDING THROUGH AND INTO THE ELECTRICAL ROOMS. TERMINATE THE PIPE OUTSIDE OF THE ELECTRICAL ROOM AND PROVIDE GROUND STRAPS.
11. ESCUTCHEONS SHALL BE CHROME PLATED BRASS WITH LOCKING SCREWS WHERE PIPES PASS THROUGH FINISHED WALLS.
12. INSTALL VACUUM BREAKERS ON ALL HOSE BIBBS AND HYDRANTS.

PLUMBING FIXTURE LIST

AMERICAN STANDARD & ZURN PRODUCTS ARE LISTED. SUBMIT FIXTURES FOR APPROVAL. OBTAIN FINAL APPROVAL FROM ARCHITECT & OWNER PRIOR TO ORDERING FIXTURES.

ALL FIXTURES SHALL COMPLY WITH TABLE 604.4 OF F.B.C.–PLUMBING

PROVIDE FIXTURES WITH REQUIRED STOP VALVES, FITTINGS, ACCESSORIES, SUPPORTS, ETC, AS REQUIRED FOR A COMPLETE FUNCTIONAL PLUMBING SYSTEM.

TAG	MFG.	MODEL	REMARKS
LAV–1	AMERICAN STANDARD	0476.028 7385V05 .003.002	AQUALYN COUNTER TOP LAVATORY. FAUCET, 0.5 GPM, GRID DRAIN, LESS POP–UP HOLE VANDAL RESISTANT, INDEXED METAL LEVER HANDLE.
LAV–2	AMERICAN STANDARD	0497.221 7385V05 .003.002	OVALYN UNDER COUNTER TOP LAVATORY. FAUCET, 0.5 GPM, GRID DRAIN, LESS POP–UP HOLE VANDAL RESISTANT, INDEXED METAL LEVER HANDLE.
LAV–3	AMERICAN STANDARD	0355.012 7385V05 .003.002	LUCERNE WALL HUNG LAVATORY, WITH CARRIER FAUCET, 0.5 GPM, GRID DRAIN, LESS POP–UP HOLE VANDAL RESISTANT, INDEXED METAL LEVER HANDLE.
HLAV	AMERICAN STANDARD	0355.012 7385V05 .003.002	WALL HUNG HANDICAPPED LAVATORY, WITH CARRIER ZURN Z1231 CONCEALED ARM SYSTEM. PROVIDE OPTION –SL WHEN BACK WALL IS 4" OR LARGER. FAUCET, 0.5 GPM, GRID DRAIN, LESS POP–UP HOLE, VANDAL RESISTANT, INDEXED METAL LEVER HANDLE, PROVIDE TRUEBRO DRAIN/PIPE INSULATION.
WC	AMERICAN STANDARD	2386.010	TANK TYPE WATER CLOSET MADERA(1.6 GPF) CADET ELONGATED, AND OLSONITE #95 SEAT.
HWC	AMERICAN STANDARD	2386.012 4142.801	HANDICAPPED TANK TYPE WATER CLOSET (1.6 GPF) CADET ADA ELONGATED, 16–1/2"H PROVIDE ALTERNATE TANK CONFIGURATION WITH TRIP LEVER ON RIGHT SIDE WHERE REQUIRED. OLSONITE #95 SEAT.
FD	ZURN	Z415BZ –NH–P	FLOOR DRAIN, DURA COATED CAST IRON BODY WITH BOTTOM OUTLET, POLISHED BRONZE ROUND LEVELING STRAINER TOP, NO HUB, 3"ø SIZE, 1/2" TRAP PRIMER CONNECTION.
TP	ZURN	Z1022	SANI–GUARD AUTOMATIC TRAP PRIMER, ALL BRONZE BODY WITH INTEGRAL VACUUM BREAKER. 1/2" PIPE SIZE.
FS	ZURN	FD2376 –NH3–H	NO HUB FLOOR SINK, 12" X 12". 1/2 GRATE, CAST IRON BODY WITH A WHITE ACID–RESISTANT PORCELAIN ENAMEL INTERIOR COATING, AND AN ABS ANTI–SPLASH DOME STRAINER.
MS	FIAT	MSB–2424	MOLDED STONE MOP BASIN, 830–AA FAUCET, 899–CC MOP HANGER,832–AA HOSE AND HANGER, MSG 2424 S.S. WALL GUARD
HB	ZURN	Z1341–P34	HOSE BIBB W/ VACUUM BREAKER. ROUGH BRONZE.
WHA	SIOUX CHIEF OR WILKINS	HYDRA RESTER 1250	WATER HAMMER ARRESTOR, CONFORM TO PDI WH–201, ANSI A112.26.1M, ASSE 1010, SEE DOMESTIC WATER ISOMETRIC DIAGRAM FOR SIZES AND LOCATION.
INLINE BACKFLOW PREVENTOR	WILKINS OR WATTS	740 SD3–MF	INLINE BACKFLOW PREVENTOR, ASSE 1022 APPROVED. 3/8"CONNECTION. SEE ISOMETRIC DIAGRAM FOR LOCATION. PROVIDE AN INDIRECT WASTE CONNECTION TO FLOOR SINK. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.

FUEL GAS SYSTEM NOTES

1. ABOVE GRADE GAS PIPING INSTALLED IN THE INTERIOR OF THE BUILDING SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE THREADED FITTINGS UP TO 4"ø OR WELDED FITTINGS FOR PIPING LARGER THAN 4"ø. PIPING SHALL COMPLY WITH EITHER ASME B 36.10, 10M OR ASTM A 53, OR ASTM A 106 STANDARD. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.
2. GAS PIPING INSTALLED IN CONCEALED LOCATIONS AS PER FBC–FUEL GAS SECTION 404.3 SHALL NOT HAVE UNIONS, TUBING FITTINGS, RIGHT AND LEFT COUPLINGS, BUSHINGS, COMPRESSION COUPLINGS AND SWING JOINTS MADE BY COMBINATIONS OF FITTINGS. EXCEPTIONS:
   A. TUBING JOINED BY BRAZING.
   B. FITTINGS LISTED FOR USE IN CONCEALED LOCATIONS AS DEFINED IN NFPA 54 NATIONAL FUEL GAS CODE SECTION 7.3, THE UNIFORM PLUMBING CODE, AND THE INTERNATIONAL FUEL GAS CODE.
3. GAS PIPING INSTALLED ON THE EXTERIOR OF THE BUILDING AND ABOVE GRADE SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE THREADED FITTINGS AND SHALL COMPLY WITH EITHER ASME B 36.10, 10M OR ASTM A53, OR ASTM A106 STANDARD. PIPE SHALL BE COVERED WITH 2 COATS OF A WATERPROOF ASPHALTIC COATING (OR EQUAL) TO PREVENT CORROSION OF THE PIPE.
4. AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NONMETALLIC (PLASTIC) PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE NONMETALLIC GAS PIPING. THE TRACER WIRE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR BURIAL.
5. UNDERGROUND PIPING SHALL BE INSTALLED TO ALLOW PROPER MAINTENANCE AND TO PROTECT AGAINST CONTACT OR DAMAGE RESULTING FROM PROXIMITY TO OTHER STRUCTURES. UNDERGROUND PLASTIC PIPING SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE FROM ANY HEAT SOURCE.

2014 IFGC SECTION 404.12

6. PIPING INSTALLED UNDERGROUND BENEATH BUILDINGS IS PROHIBITED EXCEPT WHERE THE PIPING IS ENCASED IN A CONDUIT OF WROUGHT IRON, PLASTIC PIPE OR STEEL PIPE DESIGNED TO WITHSTAND THE SUPERIMPOSED LOADS. SUCH CONDUIT SHALL EXTEND INTO AN OCCUPIABLE 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 POSSIBLE ENTRANCE OF ANY GAS LEAKAGE.

2014 IFGC SECTION 404.4

7. GAS PIPING SHALL NOT PENETRATE BUILDING FOUNDATION WALLS AT ANY POINT BELOW GRADE. GAS PIPING SHALL ENTER AND EXIT A BUILDING AT A POINT ABOVE GRADE AND THE ANNULAR SPACE BETWEEN THE PIPE AND THE WALL SHALL BE SEALED.
8. CONNECTIONS MADE OUTSIDE AND UNDERGROUND BETWEEN METALLIC AND PLASTIC PIPING SHALL BE MADE ONLY WITH TRANSITION FITTINGS CATEGORIZED AS CATEGORY I IN ACCORDANCE WITH ASTM D 2513.
9. PIPING SHALL NOT BE INSTALLED IN OR THROUGH A CIRCULATING AIR DUCT, CLOTHES CHUTE, CHIMNEY OR GAS VENT, VENTILATING DUCT, DUMBWAITER OR ELEVATOR SHAFT.
10. CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS REQUIRED FOR THE INSTALLATION OF GAS SERVICE TO BUILDING, SEPARATE GAS PERMIT WILL BE REQUIRED.
11. ALL GAS LINES SHALL BE BLOWN CLEAN OF DEBRIS AND FOREIGN MATTER WITH COMPRESSED AIR PRIOR TO FINAL CONNECTION TO EQUIPMENT.
12. BEFORE ANY SYSTEM OF PIPING IS PUT IN SERVICE OR CONCEALED, IT SHALL BE TESTED TO ENSURE THAT IT IS GAS TIGHT. TESTING, INSPECTION AND PURGING OF PIPING SYSTEMS SHALL COMPLY WITH FBC–FUEL GAS, SECTION 406.
13. ALL PENETRATIONS OF GAS PIPING THROUGH SLABS AND FOUNDATION WALLS SHALL BE SLEEVED WITH A PIPE SLEEVE.
14. FROM GAS HEADER INSTALL PIPE DROP WITH A 6" LONG SEDIMENT TRAP. PROVIDE GAS SHUT OFF VALVE ACCESSIBLE FOR MANUAL SHUT–OFF OF GAS TO EQUIPMENT.
15. PRESSURE REGULATORS THAT REQUIRE A VENT SHALL HAVE AN INDEPENDENT VENT TO THE OUTSIDE OF THE BUILDING. THE VENT SHALL BE DESIGNED TO PREVENT THE ENTRY OF WATER OR FOREIGN OBJECTS. EXCEPTION: A VENT TO THE OUTSIDE OF THE BUILDING IS NOT REQUIRED FOR REGULATORS EQUIPPED WITH AND LABELED FOR UTILIZATION WITH APPROVED VENT–LIMITING DEVICES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
16. FROM GAS VALVE INSTALL APPROVED FLEXIBLE HOSE AND QUICK DISCONNECT WITH RESTRAINING DEVICE AND MAKE FINAL CONNECTION TO MOVEABLE EQUIPMENT(IF APPLICABLE).
17. CONTRACTOR SHALL PROVIDE NECESSARY REGULATORS FOR EACH APPLIANCE TO DROP GAS LINE PRESSURE TO APPLIANCE'S REQUIREMENTS.
18. CONTINUE GAS SERVICE AND PROVIDE CONNECTION TO MAIN GAS SERVICE LINE.
19. LOCATION OF CONNECTION, INCLUDING GAS METER, MAIN SHUT–OFF VALVE, ETC., SHALL BE COORDINATED WITH CIVIL DOCUMENTS AND/OR LOCAL GAS COMPANY.
20. AS PER FBC– FUEL GAS, SECTION 401.5, FOR OTHER THAN STEEL PIPE, EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS. THE MARKING SHALL BE SPACED AT INTERVALS NOT EXCEEDING 5 FEET. THE MARKING SHALL NOT BE REQUIRED ON PIPE LOCATED IN THE SAME ROOM AS THE EQUIPMENT SERVED.
21. COORDINATE WITH KITCHEN HOOD FIRE SUPPRESSION SYSTEM CONTRACTOR FOR LOCATION OF INTERLOCK CONTROL WIRING FOR AUTOMATIC SHUT OFF OF GAS VALVE.
22. REFER TO FOOD SERVICE DRAWINGS AND EQUIPMENT MANUFACTURER'S DATA SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

PLUMBING SHEET INDEX

WATER HEATER SCHEDULE - NAT. GAS

DESIGNATION	MFG.	MODEL No.	BTU/HR	CAPACITY	SET POINT (°F)
GWH–1	RINNAI	C199eN	199,999	TANKLESS	120
GWH–2	RINNAI	C199eN	199,999	TANKLESS	120

NOTE:

1. CONTRACTOR TO CONSULT MANUFACTURER FOR SPECIFIC INSTALLATION REQUIREMENTS.
2. INSTALL TEMPERATURE CONTROLLER INDOORS.
3. ELECTRONICALLY LINK BOTH UNITS WITH REU–EZC–1US CONNECT CABLE. COORDINATE ELECTRICAL CONTRACTOR.

CONNECTION TO EXISTING PLUMBING SYSTEM NOTES

1. INSTALLATION OF WORK AND NEW CONNECTION TO EXISTING PLUMBING LINES SHALL BE MADE AT TIME WHICH WILL NOT INTERFERE OR INTERRUPT THE NORMAL BUILDING OPERATION.
2. EXACT LOCATIONS, SIZE, AND ELEVATION OF EXISTING PIPING SHALL BE FIELD VERIFIED BEFORE START OF ANY WORK. ACTUAL FIELD CONDITIONS MAY REQUIRE ADJUSTMENT OR MODIFICATION TO PROPOSED ROUGHING, LAYOUT, AND ROUTING OF PIPING, INCLUDING POINT OF CONNECTION TO EXISTING WORK OF ADEQUATE SIZE TO ACCOMMODATE NEW WORK.
3. PROVIDE NECESSARY ADJUSTMENT OF NEW INSTALLATION DUE TO INTERFERENCE WITH BUILDING CONDITIONS, INCLUDING WORK OF OTHER TRADES.
4. PIPING MATERIAL, VALVES, PIPE SUPPORTS, PIPE COVERING, ETC. USED IN THE INSTALLATION OF WORK OF THIS CONTRACT SHALL BE NEW AND SHALL MATCH EXISTING, PROVIDING SAME MEETS ALL APPLICABLE BUILDING AND PLUMBING CODES.
5. PROVIDE NEW PLUMBING ROUGHING WITH CONNECTIONS NECESSARY OR REQUIRED FOR PROPER FUNCTION OF PLUMBING EQUIPMENT.
6. EXISTING PIPING SHALL BE MODIFIED AND/OR REMOVED TO POINT THAT WOULD ACCOMMODATE CONNECTION OF NEW (WATER AND WASTE) PLUMBING ROUGHING.
7. ROUTING OF NEW PIPING AND POINT OF CONNECTION TO EXISTING PIPING IS BASED ON ASSUMPTION THAT PIPING IS AT LOCATION SHOWN ON PLAN.
8. PROVIDE NECESSARY TEST TO DETERMINE TIGHTNESS OF EXISTING AND NEW PLUMBING PIPING SYSTEMS. ALL LEAKS AND OPEN OUTLETS FOUND DURING TEST SHALL BE REPAIRED, CAPPED OR PLUGGED, PERFORM ADDITIONAL TEST UNTIL IT IS DETERMINED THAT THE PLUMBING PIPING SYSTEMS IS WATER TIGHT.
9. CAP AND PLUG OF INACTIVE SANITARY PIPING SHALL BE TO POINT OF CONNECTIONS TO ACTIVE LINES. NO DEAD END SHALL BE PROVIDED.
10. ALL OPENINGS, HOLES, ETC; MADE FOR THE REMOVAL OF PLUMBING PIPING, FIXTURES, ETC; SHALL BE PATCHED WITH MATERIAL TO MATCH EXISTING.
11. IF FIELD CONDITION FINDS THAT EXISTING SANITARY, VENT, AND DOMESTIC WATER LINES CAN BE UTILIZED, CONNECT NEW SANITARY, VENT, AND DOMESTIC WATER LINES TO EXISTING. MAKE NECESSARY ADJUSTMENTS TO ACCOMMODATE NEW SANITARY, VENT AND DOMESTIC WATER LINES.

SANITARY, VENT, & CONDENSATE DRAIN SYSTEMS

1. SANITARY WASTE AND VENT DRAIN PIPING ABOVE GROUND SHALL BE ANY OF THE FOLLOWING:
   A. HUBLESS CAST–IRON SOIL PIPE AND FITTINGS COMPLIANT WITH ASTM A 74, ASTM A 888, AND CISPI 301. PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL INSTITUTE AND LISTED BY NSF INTERNATIONAL. COUPLINGS SHALL BE STANDARD, SHIELDED, & STAINLESS–STEEL COMPLIANT WITH CISPI 310, WITH S.S. CORRUGATED SHIELD, S.S. BANDS AND TIGHTENING DEVICES, AND ASTM C 564, RUBBER SLEEVE.

   B. COPPER DWV TUBE: ASTM B 306, DRAINAGE TUBE, DRAWN TEMPER. COPPER DRAINAGE FITTINGS: ASME B16.23, CAST COPPER OR ASME B16.29, WROUGHT COPPER, SOLDER–JOINT FITTINGS.

   C. SCHEDULE 40 PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT CEMENTED JOINTS COMPLIANT WITH ASTM D 2665.

   SANITARY WASTE PIPING BELOW GROUND SHALL BE SOLID WALL SCHEDULE 40 PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT–CEMENTED JOINTS COMPLIANT WITH ASTM D 2665

   GREASE WASTE PIPING UNDERGROUND AND ABOVEGROUND SHALL BE HUBLESS CAST–IRON PIPE AND FITTINGS COMPLIANT WITH ASTM A 74, ASTM A 888, CISPI 301. COUPLINGS SHALL BE STANDARD(ABOVEGROUND) & HEAVY–DUTY(BELOWGROUND), SHIELDED, & STAINLESS–STEEL COMPLIANT WITH CISPI 310, WITH S.S. CORRUGATED SHIELD, S.S. BANDS AND TIGHTENING DEVICES, AND ASTM C 564, RUBBER SLEEVE. UNDERGROUND PIPING SHALL BE COATED WITH ONE LAYER OF LATEX PAINT ON EXTERIOR OF PIPE PRIOR TO INSTALLATION. SOLID WALL SCHEDULE 40 PVC PIPE MAY BE USED IF PIPE MANUFACTURER APPROVES THE USE OF SUCH FOR GREASE WASTE LINES. ALL FLOOR SINKS RECEIVING HOT WATER ABOVE 140°F (STEAMERS, HOT RINSE DISHWASHERS, KETTLES) SHALL HAVE THE P–TRAP AND A MINIMUM OF 10 FEET OF THE DRAIN LINE BE CAST–IRON.

   PIPING MATERIALS SHALL BEAR LABEL, STAMP, OR OTHER MARKINGS OF SPECIFIED TESTING AGENCY. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.
2. CONDENSATE DRAIN PIPING SHALL BE SOLID WALL SCHEDULE 40 PVC COMPLIANT WITH ASTM D 2665. PROVIDE 3/4" THICK AP/ARMAFLEX SS (SELF–SEAL) INSULATION FOR ALL HORIZONTAL ABOVE–GRADE CONDENSATE PIPING. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.
3. CONDENSATE DRAIN PIPING SHALL BE SOLID WALL SCHEDULE 40 PVC COMPLIANT WITH ASTM D 2665 BELOW GRADE AND HUBLESS CAST IRON OR TYPE "DMV" COPPER ABOVE SLAB. PROVIDE 3/4" THICK AP/ARMAFLEX SS (SELF–SEAL) INSULATION FOR ALL HORIZONTAL ABOVE–GRADE PIPING. SCHEDULE 40 PVC MAY BE USED IF NOT IN A RETURN AIR PLENUM RATED SPACE. ALL CONDENSATE PIPING ABOVE ROOF DECK SHALL BE SCHEDULE 40 PVC WITH NO INSULATION. PVC PIPING EXPOSED TO SUNLIGHT SHALL BE COATED WITH AN ULTRA VIOLET INHIBITING MATERIAL. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.
4. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEANOUT PLUG OR ACCESS PANEL FOR ALL WALL CLEANOUTS.
5. MAINTAIN A MINIMUM SLOPE OF 1/4" PER FOOT FOR DRAIN PIPING 2–1/2" OR LESS, AND 1/8" PER FOOT FOR PIPES 3" AND LARGER.
6. ALL DRAINAGE P–TRAPS FOR SINKS, LAVATORIES, AND WATER COOLERS SHALL BE OF A SLIP–JOINT TYPE.
7. ALL VENT AND BRANCH VENT PIPES SHALL BE SO GRADED AND CONNECTED AS TO DRAIN BACK TO THE DRAINAGE PIPE BY GRAVITY.
8. EVERY DRY VENT SHALL RISE VERTICALLY TO A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM OF THE HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.
9. ALL INDIRECT WASTE PIPING SHALL DISCHARGE THROUGH AN AIR GAP INTO A WASTE RECEPTOR. ALL WASTE RECEPTORS SHALL BE TRAPPED & VENTED. ALL INDIRECT WASTE PIPING THAT EXCEEDS 24" IN DEVELOPED LENGTH MEASURED HORIZONTALLY OR 48" IN TOTAL DEV. LENGTH SHALL BE TRAPPED.
10. VENT FLASHING AND COUNTER FLASHING SHALL BE COMPATIBLE TO ROOFING SYSTEM.
11. ALL FLOOR DRAINS SHALL HAVE DEEP SEALTRAP RESEAL FITTINGS.
12. WATER HEATER RELIEF AND DRAIN LINE SHALL BE TYPE "L" COPPER, 3/4"ø MINIMUM.
13. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK.
14. ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'–0" FROM ALL FRESH AIR INTAKE OPENINGS.

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Issued Date:

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Florida Reg. No. 73704

NORTH

TO THE BEST OF MY KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THE 2014 FLORIDA BUILDING CODE, ALL AMENDMENTS AND SECTION 633 OF THE FLORIDA STATUES.

PLUMBING NOTES
AS NOTED
PROGRESS SET/NFC 03/04/2016

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