PIPING MATERIAL SCHEDULE

SYSTEM	PIPING SIZE	PIPING TYPE	SCH	GRD	ASTM	MATERIAL	FITTINGS JNT	FITTINGS TYPE	MAX. WORKING PRESS (PSI)	MAX. WORKING TEMP (°F)	HYDRO TEST PRESS (PSI)	HYDRO TEST TIME
DOMESTIC WATER ABOVE GRADE	ALL	L	—	—	B88	CP	SF	SJ	150	40-180	150	1 HR
DOMESTIC WATER BELOW GRADE	ALL	K	—	—	B88	CP	SF	SJ	150	40-180	150	1 HR
FIRE PROTECTION					F438	NFPA	13				200	2 HR
NATURAL GAS ABOVE GRADE	2 1/2"-12"	DP	40	A	A53	CS/BLK	W1	THRD	1	—	100	1 HR
TEMPERATURE & PRESSURE RELIEF DRAIN	ALL	K	—	—	B88	CP	SF	SMLS	400°F	40-70	10 FT	1 HR
WASTE & VENT ABOVE GRADE	ALL	DWV	40	—	D2665	PVC	PVC	SM/SW	10 FT	50-140	10 FT	1 HR
WASTE & VENT BELOW GRADE	ALL	DWV	40	—	D2665	PVC	PVC	SM/SW	10 FT	50-140	10 FT	1 HR
REFRIGERANT PIPING	ALL	L	—	—	B88	CP	SF	SM	10 FT	50-140	10 FT	1 HR

CPP – CHASE PRESS PIPE
CI – CAST IRON
CS – CARBON STEEL
DF – DRAWING FITTING
HF – HEAT FUSED
M – MALLEABLE IRON
THRD – THREADED
WC – WROUGHT COPPER

RH – RC-HUB
PVC – POLYVINYL CHLORIDE
S – SPLICED JOINT – SILVER BRAZING ALLOY
SJ – SOLDER JOINT 95-5 TIN-ANTIMONY
SL – SEAMLESS STEEL
SW – SOLVENT WELD
TE – TH-SEAL

PLUMBING SYMBOLS

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN
- WASTE PIPING
- VENT PIPING
- DRAIN
- NATURAL GAS
- WATER SERVICE
- FIRE SERVICE
- SHUT-OFF VALVE
- METER
- HOSE BIBB
- WALL HYDRANT
- FCO – FLUSH FLOOR CLEANOUT
- FCCO – FLUSH GRADE CLEANOUT
- CO – CLEANOUT
- ELBOW UP WITH SHUT-OFF VALVE
- ELBOW DOWN WITH SHUT-OFF VALVE
- TEE UP WITH SHUT-OFF VALVE
- TEE DOWN WITH SHUT-OFF VALVE
- CAP
- FLOOR DRAIN, TYPE & SIZE
- ROOF DRAIN, TYPE & SIZE
- CONNECT TO EXISTING MAIN
- PLUMBING EQUIPMENT
- PLUMBING FIXTURE TAG

ABBREVIATIONS:

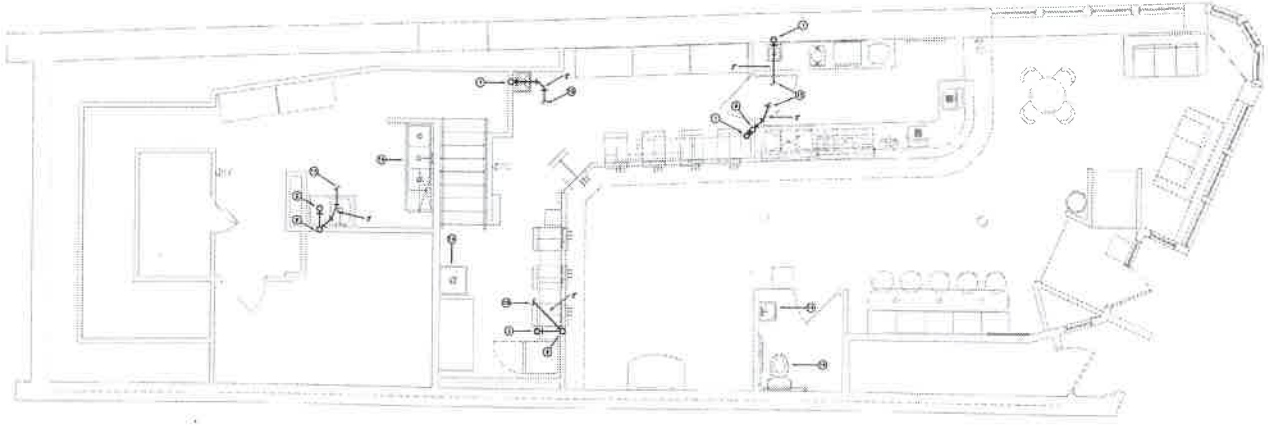
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FFCO	FINISHED FLOOR CLEANOUT
FGCO	FINISHED GRADE CLEANOUT
FHCO	FINISHED WALL CLEANOUT
HW	DOMESTIC HOT WATER
HB	HUB DRAIN
V	VENT
VTR	HEAT TRANS. ROOF
W	WASTE

PLUMBING SPECIFICATIONS

1. GENERAL
1.1. SCOPE OF WORK: PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING PIPING WHERE REQUIRED, COMPLETE AS CALL FOR OR INDICATED ON THE PLANS AND SPECIFICATIONS ACCORDING TO ALL LOCAL CODES, EVEN THOSE PLANS AS A MINIMUM REQUIREMENT.
1.2. REMOVAL CONTRACTOR HEREINAFTER ABBREVIATED D/C SHALL MEAN THE PERSON OR COMPANY AND THEIR SUBCONTRACTORS WHO ENTER INTO CONTRACT WITH THE OWNER TO PERFORM THE GENERAL DIVISION WORK.
1.3. PLUMBING CONTRACTOR HEREINAFTER ABBREVIATED P/C SHALL MEAN THE PERSON OR COMPANY AND THEIR SUBCONTRACTORS WHO ENTER INTO CONTRACT WITH THE D/C TO PERFORM THE MECHANICAL DIVISION WORK.
1.4. EQUIPMENT MANUFACTURER'S REPRESENTATIVE HEREINAFTER ABBREVIATED E/R SHALL MEAN THE MANUFACTURER OR EQUIPMENT OR MATERIALS SPECIFIED IF REFERRED TO.
1.5. CONTRACTOR SHALL VERIFY SITE UTILITIES AND SUBFLOOR INVERT ELEVATIONS PRIOR TO ANY WORK.
1.6. ALL PLUMBING INSTALLATIONS SHALL CONFORM WITH THE LOCAL PLUMBING CODE AS MENTIONED AT THE CODE/PROJECT DATA AND SUBSEQUENT AMENDMENTS THEREOF EXCEPT WHERE IN THE SAME IS IN CONFLICT WITH EXISTING REGULATIONS AND THE AUTHORITY HAVING JURISDICTION
1.7. PIPING LAYOUTS ARE DIAGRAMMATIC AND INTENT TO SHOW GENERAL ARRANGEMENT, SIZE AND LOCATION OF THE WORK. FOLLOW ACCESSIBILITY OPENINGS. CONTRACTOR SHALL ARRANGE AND COORDINATE THE WORK, FOLLOW ACCESSIBILITY OPENINGS. CONTRACTOR SHALL ARRANGE AND COORDINATE THE WORK, FOLLOW ACCESSIBILITY OPENINGS. CONTRACTOR SHALL ARRANGE AND CONFLICTS WITH OTHER MECHANICAL AND ELECTRICAL SERVICES AND WITH STRUCTURAL AND ARCHITECTURAL ELEMENTS.
1.8. LOCATIONS OF EQUIPMENT, PIPING, AND OTHER MECHANICAL WORK ARE INDICATED DIAGRAMMATICALLY BY MECHANICAL DRAWINGS. DETERMINE EXACT LOCATIONS ON JOB, SUBJECT TO STRUCTURAL CONDITIONS, WORK OF OTHER CONTRACTORS, ACCESS REQUIREMENTS FOR INSTALLATION AND MAINTENANCE, AND TO APPROVAL OF A/E.
1.9. IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE PLUMBING PLANS TO BECOME FAMILIAR WITH THE FULL SCOPE OF WORK.
1.10. DO NOT SCALE MECHANICAL AND ELECTRICAL DRAWINGS FOR DIMENSIONS. ACCURATELY LAY OUT WORK FROM DIMENSIONS INDICATED ON ARCHITECTURAL DRAWINGS. UNLESS SUCH IS FOUND IN ERROR.
1.11. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO THE CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS, AND APPLIANCES OPERATE SATISFACTORILY AS DESIGNED AND SPECIFIED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS AND CONTROL EQUIPMENT AND ALL REQUIRED PROGRAMMING INSTALLED UNDER THIS SPECIFICATION.
1.12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AS REQUIRED BY PRISMO OF CONSTRUCTION FOR WITHDRAWS LIKE BY THE OWNER AS APPLICABLE.
1.13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS RELATING TO WORK, INCLUDE ALL COSTS AND FEES ASSOCIATED WITH PERMITS IN BID.
1.14. THE INTENT OF THESE SPECIFICATIONS IS TO ALLOW AMPLE OPPORTUNITY FOR P/C TO USE HIS SAGACITY AND ABILITIES IN PERFORM THE WORK TO HIS AND THE OWNER'S BEST ADVANTAGE, AND TO PERMIT MAXIMUM COMPETITION IN BIDDING ON ENHANCERS OF MATERIALS AND EQUIPMENT REQUIRED.
1.15. MATERIAL AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE FIRST CLASS QUALITY, NEW, UNUSED, AND WITHOUT DAMAGE.
2. PLUMBING – COMMON REQUIREMENTS:
2.1. INSTALL PIPING TO PERMIT MAXIMUM SCRUBBING.
2.2. ALL PIPING SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
2.3. PROVIDE BRANCH LINE SHUTOFF VALVES ON STRUCTURE WATER LINE TO EACH FIXTURE.
2.4. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.
2.5. INSTALL PIPING TO ALLOW APPLICATION OF INSULATION.
2.6. SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE.
2.7. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS ARE NOT INDICATED.
2.8. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, UNLESS OTHERWISE INDICATED.
2.9. INSTALL PLUMBING EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO ACCESSIBLE LOCATIONS.
2.10. INSTALL EQUIPMENT TO ALLOW RIGHT OF WAY FOR PIPING INSTALLED AT REQUIRED SLOPE.
2.11. DAMAGE AND TOUCH-UP: REPAIR MARRED AND DAMAGED FACTORY-PAINTED FINISHES WITH MATERIALS AND PROCEDURES TO MATCH ORIGINAL FACTORY FINISH.
2.12. INSTALL PIPING AT PROPER PITCH FOR COMPLETE DRAINAGE OF PIPING SYSTEM
2.13. CUTTING AND PATCHING THAT MAY BE REQUIRED FOR PLUMBING WORK SHALL BE PERFORMED BY THE ARCHITECTURAL TRADES AND PAID FOR BY THIS CONTRACTOR. NO CUTTING OF THE BUILDING STRUCTURAL SYSTEM WILL BE ALLOWED.
2.14. WHERE MARKER ARRESTERS SHALL BE INSTALLED ON BOTH COLD AND HOT WATER LINES. INSTALL IN AN UPRIGHT POSITION IN ALL WATER CLOSING VALVES, SOLENOIDS AND PLUMBING FIXTURES.
2.15. CONTRACTOR SHALL COORDINATE ROUGH-IN WORK WITH THE DIMENSIONED DRAWINGS FURNISHED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR.
2.16. BACKFLOW PREVENTERS SHALL BE INSTALLED AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. EQUIPMENT IDENTIFICATION
3.1. METAL LABELS FOR EQUIPMENT: MATERIAL AND THICKNESS – BRASS –0.032" STAINLESS STEEL –0.025" ALUMINUM –0.012". LABELS SHALL HAVE PREDRILLED OR STAMPED HOLES FOR ATTACHMENT. LENGTH AND WIDTH SHALL VARY FOR REQUIRED LABEL CONTENT BUT NOT LESS THAN 3.5" X 1.25" MINIMUM LETTER SIZE MUST LESS THAN 0.4". ATTACH TO EQUIPMENT BY FASTENERS OR ADHESIVE BUT LABEL SHALL NOT COMPROMISE THE OPERATION OF LABELED EQUIPMENT.
3.2. PLASTIC LABELS SHALL FOLLOW SAME GUIDELINES AS METAL LABELS BUT SHALL BE PLASTIC WITH MECHANICAL ENGRAVING AND BE MINIMUM OF 1/16" THICK. LABELS SHALL BE WHITE WITH BLACK LETTERING AND SHALL WITHSTAND TEMPERATURES UP TO 180F.
3.3. LABEL CONTENT: INCLUDE EQUIPMENT'S DRAWING DESIGNATION OR UNIQUE EQUIPMENT NUMBER.
4. PIPING IDENTIFICATION
4.1. LABELS SHALL BE PREFABRICATED, COLOR CODED, WITH LETTERING INDICATING SERVICE AND FLOW DIRECTION. LABELS SHALL BE PRINTED PLASTIC WITH CONTACT-TYPE, PERMANENT ADHESIVE BACKING. LABEL TEXT SHALL BE A MINIMUM OF 1.2"
5. WARRANTY
5.1. P/C WARRANTS TO OWNER AND ARCHITECT THE QUALITY OF MATERIALS, EQUIPMENT, WORKMANSHIP AND OPERATION OF EQUIPMENT PROVIDED UNDER THIS SPECIFICATION SECTION FOR A PERIOD OF ONE (1) YEAR FROM AND AFTER DATE OF SUBSTANTIAL COMPLETION OF BUILDING AND ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER
5.2. WHERE MANUFACTURERS' WARRANTIES EXPIRE DURING THE ONE (1) YEAR WARRANTY PERIOD, ONE (1) YEAR WARRANTY PERIOD IS EXTENDED AS YEAR AFTER DATE OF SUBSTANTIAL COMPLETION. P/C SHALL INCLUDE PROVISIONS FOR EXTENDING WARRANTY FOR THE FULL ONE (1) YEAR PERIOD AND SHALL COST FOR WARRANTY EXTENSION IN HIS BASE BID.
5.3. P/C WARRANTS TO OWNER AND ARCHITECT THAT NO RECEIPT OF WRITTEN NOTICE FROM OWNER OR ENGINEER WITHIN ONE (1) YEAR WARRANTY PERIOD FOLLOWING DATE OF ACCEPTANCE, ALL DEFECTS THAT HAVE APPEARED IN MATERIALS AND/OR WORKMANSHIP SHALL BE PROMPTLY CORRECTED TO CONDITION REQUIRED BY CONTRACT DOCUMENTS AT P/C'S EXPENSE.
5.4. THE ABOVE WARRANTY SHALL NOT SUPERSEDE ANY SEPARATELY STATED WARRANTY OR OTHER REQUIREMENTS BY LAW.
5.5. IF THE ARCHITECT'S SPECIFICATION INCLUDES A WARRANTY THAT EXPIRES THE ABOVE WARRANTY REQUIREMENTS, THE ARCHITECT'S WARRANTY SHALL TAKE PRECEDENCE.
6. PRODUCTS
7. WATER PIPING:
7.1. CONNECT TO THE CITY WATER MAIN AS REQUIRED AND APPROVED BY THE CITY AND WHERE APPLICABLE VERIFY EXISTING WATER UTILITY IS NOTIFIED OF NEW ADDITIONS TO WATER SERVICE DEMAND FOR NEW RENOVATIONS.
7.2. METER TO BE ADEQUATE SIZE FOR DEMAND INDICATED ON THE DRAWINGS.
7.3. PIPING SHALL BE AS NOTED IN PIPING MATERIAL SCHEDULE
7.4. 4" INSULATED DETAILED PER AS MANUFACTURED WATER PIPING ACCORDING TO NATIONAL STAINLESS STANDARDS, ASTM F 876, F 877, AWWA C651 AND CSA B137.5. MAY BE USED. NO JOINTS UNDER SLAB. HAS PRESS AND TAPE FITTINGS, INCLUDING VALVES AND FAUCETS, SHALL HAVE NO LEAD CONTENT.
7.5. WATER PIPING BELOW GRADE 2" AND LARGER SHALL BE CLASS 150 MOLDED DUCTILE IRON PIPE AND FITTINGS WITH MECHANICAL COMPRESSION JOINTS.
7.6. SOLDERED JOINTS SHALL BE DONE IN ACCORDANCE WITH ASTM B 828 WITH A LEAD FREE SOLDER THAT CONFORMS WITH ASTM B 32 AND FLUX THAT CONFORMS WITH ASTM B 813. LEAD FREE SHALL MEAN A CHEMICAL COMPOSITION EQUAL TO OR LESS THAN 0.2 PERCENT LEAD.
7.7. PIPING SHALL BE SUPPORTED FROM HANGERS AT A MAXIMUM OF 10'-0" ON CENTER WITH SUPPORTING HANGER RODS PLUTONED TO THE BUILDING FRAMING WHENEVER POSSIBLE.
7.8. ALL STRUCTS SHALL BE CONCEALED UNLESS OTHERWISE NOTED. INSTALL CONCEALED PIPING IN WALLS, CONTRACTOR SHALL PROVIDE FIRE SCORING WHERE PIPING PASSES THROUGH FLOORS AND WALLS. FIRE RATED WALLS. CONTRACTOR SHALL GROUT IN SLEEVES WHERE PIPING PASSES THROUGH FIRE RATED WALLS. CONTRACTOR SHALL CAULK A COPY OF THE ARCHITECTURAL DRAWINGS TO IDENTIFY FIRE RATED WALLS. CONTRACTOR SHALL PROVIDE A MECHANICAL-GRADE SEAL FOR PIPING PENETRATING EXTERIOR WALLS AND SHALL PROVIDE A WATER TIGHT SEAL FOR ALL BUILDING WALLS.
7.9. FURNISH AND INSTALL ISOLATION VALVES AT ALL SERVICE POINTS AND EQUIPMENT CONNECTIONS. PROVIDE VACUUM BREAKERS AND ANTI-SIPHON FITTINGS ON WATER PIPING SYSTEMS BEFORE EQUIPMENT CONNECTIONS AND AT ALL HOSE END SPIGOTS AND HOSE CONNECTIONS.
7.10. PIPES PASSING THROUGH CONCRETE OR OTHER CORROSIVE MATERIALS SHALL BE PROTECTED WITH A PROTECTIVE SLEEVE OR A CORROSION RESISTANT COATING OF SUFFICIENT THICKNESS THAT WILL PREVENT CORROSION FOR A MINIMUM PERIOD OF TWENTY (20) YEARS. CONCRETE SHALL BE PLACED SO AS TO PROVIDE A MINIMUM OF 1" CONCRETE COVER. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR EASE OF CONSTRUCTION OF PIPING TO PROVIDE ANY REQUIRED ALTERN. WHERE SHALL THICKNESS OF MATERIAL SHALL BE 6 INCH INCHES.
7.11. INSULATION:
7.11.1. INSULATE ALL HOT AND COLD WATER PIPE AND HOT WATER DRAIN PIPING.
7.11.2. INSULATION FOR COLD SURFACE PIPING SYSTEM WITH WHICH 30 DEG F TO FLUID 220 DEG F OPERATING TEMPERATURE RANGE SHALL BE ARMSTRONG AP ARMAFLEX ELASTOMERIC PIPE INSULATION WITH MINIMUM THICKNESS SHALL NOT EXCEED 0.27 BTU/HR. SF TO DEG F HEAT TRANSMISSION. TO MAINTAIN SYSTEM POSSIBLE APPLY INSULATION MANUFACTURER'S JOINT BY SLIPPING INSULATION OVER PIPING. SEAL LONGITUDINAL SEAMS AND JOINTS WITH ARMSTRONG 520 ADHESIVE. THICKNESS SHALL BE AS MANUFACTURER'S RECOMMENDATIONS FOR MINIMUM DENSITY OF 90 DEG F AND 50 FOOTOT SQ.
7.12. EXPANSION JOINTS, LOOPS, ANCHORS, AND GUIDES
7.12.1. PROVIDE FOR PROPER CONTROL OF EXPANSION AND CONTRACTION OF PIPING SYSTEM BY MEANS OF EXPANSION LOOPS, EXPANSION JOINTS, OR BELLOWS TYPES, WHERE SHOWN ON EQUIPMENT DRAWINGS, AND WHERE SHALL BE PROVIDED WITH SWIVEL SPHERE JOINTS OR OFF SETS TO RELIEVE STRESSES DUE TO EXPANSION OR CONTRACTION OF PIPING.
8. WASTE AND VENT PIPING
8.1. PIPING SHALL BE ASTM B 32800 SCHEDULE 40 PVC PLASTIC WITH FITTINGS INSTALLED AS RECOMMENDED BY THE MANUFACTURER.
8.2. USE PVC SOLVENT CEMENT THAT HAS A VOC CONTENT OF 510 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART C (EPA METHOD 24). USE ADHESIVE PRIMER THAT HAS A VOC CONTENT OF 550 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART C (EPA METHOD 24).
2.3. ALL WASTE AND VENT PIPING ABOVE GRADE IN A RETURN AIR PLENUM SPACE SHALL BE FIREBLESS CAST-IRON SOIL PIPE AND FITTINGS.
9.4. CONNECT TO THE CITY SEWER AS REQUIRED AND APPROVED BY LOCAL AUTHORITY
9. GAS PIPING
9.1. STEEL PIPE – ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B
9.1.1. WELDING-2-INCH THREADED FITTINGS (SAME AS A, CLASS 150, STANDARD MATERIAL)
9.1.2. WROUGHT-STEEL WELDING FITTINGS (ASTM A 234/A/234M FOR BUTT WELDING AND SOCKET WELDING.
9.1.3. UNIONS ASME B16.39 CLASS 150, MALLEABLE IRON WITH BRASS-TO-IRON SEAT, GROUND JOINT, AND THREADED ENDS.
9.1.4. PROTECTIVE COATING FOR UNDERGROUND PIPING: FACTORY APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE.
9.1.5.1. JOINT COVER KITS, EPOXY PAINT, ADHESIVE, AND HEAT-SHRINK PE SLEEVES.
9.2. PRESSURE REGULATORS
9.2.1. REGULATORS SHALL BE SINGLE STAGE AND SUITABLE FOR NATURAL GAS AND SHALL HAVE A TYPE 303 STAINLESS STEEL SPRING AND CORROSION-RESISTANT COMPONENTS. THEY SHALL HAVE A CLOSE-TOLERANCE, EQUAL-PRESSURE SPRING AND HAVE SUITABLE END CONNECTIONS FOR THE SPECIFIED INSTALLATION.
9.2.2. APPLIANCE PRESSURE REGULATORS: COMPLY WITH ANSI Z21.18]
9.2.2.1. BODY AND DIAPHRAGM CASE SHALL BE DIE-CAST ALUMINUM
9.2.2.2. SPRING SHALL BE ZINC-PLATED STEEL OR CORROSION-RESISTANT.
9.2.2.3. DIAPHRAGM PLATE SHALL BE ZINC PLATED STEEL.
9.2.2.4. SEAT DISC SHALL BE NITRILE RUBBER
9.2.2.5. SEAL PLUG SHALL BE ULTRAVIOLET STABILIZED, MINERAL FILLED NYLON
9.2.2.6. FACTORY APPLIED ENERGY SEAL BE ARMAFLEX THREE-LAYER POLYESTER AND POLYURETHANE PAINT FINISH
9.2.2.7. REGULATOR MAY INCLUDE VENT LIMITING DEVICE, INSTEAD OF VENT CONNECTION IF APPROVED BY AUTHORITIES HAVING JURISDICTION
9. VACUUM BREAKERS
9.1. WHERE SHOWN ON THE DRAWINGS, OR AS REQUIRED, SHALL BE ANGLE PATTERN WITH BUILT-IN LEY PIPE CHECK VALVE.
10. VALVES:
10.1. PLUMBING CONTRACTORS SHALL FURNISH ALL VALVES OF ONE MANUFACTURER, FIGURE NUMBER AND TYPE THROUGHOUT THE ENTIRE INSTALLATION OF THE WORK, UNLESS OTHERWISE SPECIFIED. THE FOLLOWING NUMBERS ARE FROM THE NIBCO CATALOG. VALVES OF REPUTABLE MANUFACTURERS, SUCH AS CRANE 13C, BRUTE NICHOLSON CO., KING MILWORTH CO. WILL BE ACCEPTABLE ALTERNATIVES, WHERE SHOWN TO BE EQUAL TO THOSE SPECIFIED. INSTALL SHUT-OFF VALVES AT EACH EQUIPMENT CONNECTION.
10.2. FLOW CONTROL VALVES:
10.2.1. 2 INCH VALVES AND SMALLER: FLOW DESIGN INC AUTOFLOW MODEL AC AUTOMATIC FLOW CONTROL VALVE WITH BODY OF CAST BRONZE, TRIM OF STAINLESS STEEL AND NITRIL SEALS, HOUSE SUPPLIED WITH STAINLESS STEEL STRAINER, REACTOR STRAINER, AND DELIVERY TUBE. PROVIDE WITH SHUT-OFF VALVE AND TEFLON PACKING. PROVIDE COMPLETE WITH POLYURETHANE INSULATION COVER.
11. UNIONS:
11.1. PROVIDE UNIONS AT EACH EQUIPMENT CONNECTION. PROVIDE PROPER DIELECTRIC UNIONS WHERE CONNECTIONS ARE MADE BETWEEN MATERIALS OF DISSIMILAR METALS.
12. EXTERIOR HOSE BIBBS/WALL HYDRANTS:
12.1. HOSE BIBBS SHALL BE THROUGH-WALL FROST-FREE WITH INTERIOR PANEL FOR ELBOW DOWN WHERE PIPEWORK MAY OCCUR. ALSO WITH PERPENDICULAR WALL AND PROVIDE INTERIOR SHUT-OFF VALVE.
12.2. COMMON EXTERIOR HOSE BIBB ACCEPTABLE IN CLIMATES THAT DO NOT HAVE FREEZING WEATHER.
12.3. ALL HOSE BIBBS SHALL HAVE REMOVABLE KEY AND A VACUUM BREAKER.
13. BACKFLOW PREVENTER
13.1. PROVIDE BACKFLOW PREVENTERS AS REQUIRED BY LOCAL AND/OR STATE AUTHORITIES. PROVIDE WATTS NE-OD AT STEL. COOKS. PROVIDE AT BUILDING SERVICE ENTRANCE AS SPECIFIED BY AUTHORITIES.
14. CLEANOUTS:
14.1. PROVIDE CLEANOUTS FULL SIZE OF SOIL PIPE UP TO 4INS INCLUDING 4 INCH O. PROVIDE CLEANOUTS AT BASE OF STACKS, END OF SEWER MAIN, AND AT CLEANING OVER 40 DEGREES AND IN ANY HORIZONTAL RUN OF PIPING EXCEEDING 100 FEET AT 50-FOOT INTERVALS. PROVIDE AT EACH CHANGE IN DIRECTION OF HORIZONTAL WASTE LINE LOCATED MORE THAN 10FTS. CLEANOUT OF SIZE SHALL BE NOT SMALLER THAN 4 INCH LARGE CLEANOUTS NO TRAP ARE ACCESSIBLE BY EXTENDING THEM THROUGH WALL. CLEANOUTS SO THEY ARE ACCESSIBLE AS REQUIRED. CLEANOUTS SHALL BE AS FOLLOWS:
14.1.1. WALL TYPE FINISHED AREAS: J.R. SMITH NO. 4532 CAST IRON CLEANOUT 'T' WITH CLEANOUT PLUG AND STAINLESS STEEL ACCESS COVER
14.1.2. WALL TYPE UNFINISHED AREAS: J.R. SMITH NO. 4512 CAST IRON CLEANOUT 'T' WITH COUNTERSUNK PLUG.
14.1.3. FLOOR TYPE HARD FLOORING AREAS: J.R. SMITH NO.4023 WITH ROUND CHROME PLATED ADJUSTABLE COVER.
14.1.4. FLOOR TYPE CARPET AREAS: J.R. SMITH 4023-Y WITH NICKEL BRONZE TOP AND CARPET CLAMP
14.1.5. FLOOR TYPE CARPET AREAS: J.R. SMITH 4023-Y WITH NICKEL BRONZE TOP AND CARPET MARKER.
14.1.6. EQUIVALENT CLEANOUTS BY MAKE, WATTS, ZURN, JOSAM OR JOHNSPEC WILL BE ACCEPTABLE
14.1.7. VERIFY FLOOR MATERIALS USED FROM ARCHITECTURAL PLANS.
15. WATER HAMMER ARRESTORS: (SHOCK ABSORBERS)
15.1. ZURN INSTALLATION, SIZING AND INSTALLED PER MANUFACTURER INSTRUCTIONS, REGARDLESS IF SHOWN ON THE PLANS OR NOT. UNIT REFERENCE GROUP IS RECOMMEND TO HAVE SIZE-#1 UNIT ASSEMBLY.
15. WATER HEATER
15.1. PROVIDE WATER HEATERS AS SPECIFIED AND AS INDICATED ON CONSTRUCTION DRAWINGS. WATER HEATERS SHALL BE ELECTRIC ASME 200-1 SIZE AND SHALL BE ABLE WATER AND WATER HEATER SHALL BE ALL CERTIFIED ELECTRIC WATER HEATERS SHALL BE UL LISTED, EQUIVALENT BY NATIONAL STANDARDS, MANUFACTURERS SHEET, RUUD, RHEEM, A.O. SMITH, OR STATE WILL BE ACCEPTABLE.
16. EXPANSION TANK TANK SHALL BE EQUAL TO AMTRIX
17. FLOOR DRAINS AND FLOOR SINKS:
17.1. FLOOR DRAIN TYPE 'A': J.R. SMITH 2005 WITH SIZE AS INDICATED ON PLANS.
17.2. FLOOR SINK TYPE 'A': ZURN FD 2377-NH2-Y, 12"x12" FLOOR SINK WITH HALF GRATE AND 6INN SIZE AS INDICATED ON PLANS.

KEYNOTES

1. 3" WASTE UP TO SINK
2. 2" WASTE UP TO FLOOR SINK
3. HOT U/S02
4. HOT U/S03
5. HOT U/S04
6. HOT U/S05
7. 2" WASTE UP TO MOP SINK
8. HOT U/S01
9. 1.5" VENT UP
10. HOT U/S02
11. HOT U/S03
12. HOT U/S04
13. HOT U/S05
14. EXISTING PLUMBING FIXTURE AND ASSOCIATED PIPING SHALL REMAIN
15. CONNECT TO EXISTING WASTE LINE. FIELD VERIFY EXACT LOCATION OF CONNECTION



PLUMBING LAYOUT – WASTE
Scale: 1/4" = 1'-0"

GODWIN + ASSOCIATES
architects & engineers
1200 East Woodbourne, Bldg. P • Springfield • Missouri 65804 • (417) 887-2687 • Fax: (417) 887-3215

Professional Seal

Professional Seal

Revisions

SPECIAL NOTICE:
In the event the client, consents to, allows, authorizes or approves of changes to any plans, specifications or other construction instruments, and those changes are not approved in writing by the design professional, the client recognizes that such changes and the results thereof are not the responsibility of the design professional. Therefore, the client agrees to waive any claims against the design professional and to indemnify and hold harmless the design professional from any claims, liability, and costs of defense arising from such changes.

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Project Number: 42115
Drawn By: TKD
Reviewed By: BBP
Date: 11.27.2013

orange leaf

363 Fore Street
Portland, ME 04101

Plumbing Layout - Waste, Notes and Details

CONSTRUCTION DOCUMENTS
Sheet Number
P1.1