

# PLUMBING SPECIFICATIONS

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

A. GENERAL PROVISIONS SPECIFICALLY APPLICABLE TO DIVISION 15 SECTIONS, IN ADDITION TO DIVISION 1 - GENERAL REQUIREMENTS.

#### 1.2 SCOPE

A. THE WORK SHALL INCLUDE THE PROVISIONS OF SYSTEMS, EQUIPMENT AND MATERIALS SPECIFIED IN THIS DIVISION AND AS CALLED FOR ON THE DRAWINGS. WORK SHALL ALSO INCLUDE SUPERVISION, OPERATION, METHODS AND LABOR FOR THE FABRICATION, START-UP AND TESTS FOR A COMPLETE OPERATIONAL PLUMBING INSTALLATION.

B. DRAWINGS FOR THE WORK ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY THE SCOPE OF THE INSTALLATION AND TO INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS PIPE FITTINGS, ACCESS PANELS, AND SLEEVES MAY NOT BE SHOWN. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE EQUIPMENT TO FIT THE SPACE PROVIDED, THE LOCATION AND SIZES FOR PIPE FITTINGS, SLEEVES, INSERTS, FIRE AND/OR SMOKE DAMPERS, AND OTHER BASIC ITEMS REQUIRED BY CODE AND OTHER SECTIONS SHALL BE COORDINATED AND INCLUDED FOR THE PROPER INSTALLATION OF THE WORK.

C. EQUIPMENT SPECIFICATIONS MAY NOT DEAL INDIVIDUALLY WITH MINUTE ITEMS REQUIRED SUCH AS COMPONENTS, PARTS, CONTROLS AND DEVICES WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT PERFORMANCE SPECIFIED OR AS REQUIRED TO MEET THE EQUIPMENT WARRANTIES. WHERE SUCH ITEMS ARE REQUIRED, THEY SHALL BE INCLUDED BY THE INSTALLER OF THE EQUIPMENT, WHETHER OR NOT SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS WITH NO ADDITIONAL COST INCURRED.

D. WHERE NOTED ON THE DRAWINGS OR INDICATED IN OTHER SECTIONS OF THE SPECIFICATION, THE CONTRACTOR FOR THIS DIVISION SHALL INSTALL PLUMBING EQUIPMENT FURNISHED BY OTHERS, AND SHALL MAKE ALL FINAL CONNECTIONS. CONTRACTOR SHALL INSTALL EQUIPMENT AND SYSTEMS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

E. COORDINATE WITH ALL TRADES IN SUBMITTAL OF SHOP DRAWINGS. TIGHT SPACE CONDITIONS SHALL BE DETAIL TO THE SATISFACTION OF ALL TRADES, SUBJECT TO THE REVIEW AND FINAL ACCEPTANCE OF THE ARCHITECT/ENGINEER. IN THE EVENT THAT THE CONTRACTOR INSTALLED HIS WORK BEFORE COORDINATING WITH OTHER TRADES OR SO AS TO CAUSE ANY INTERFERENCE WITH THE WORK OF THE OTHER TRADES THIS CONTRACTOR SHALL MAKE ALL REQUIRED CHANGES TO CORRECT THE CONDITION AT NO ADDITIONAL COST TO THE PROJECT.

F. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION SIZES PRIOR TO INSTALLATION OF ANY SYSTEMS. THIS CONTRACTOR SHALL ADJUST PIPING SYSTEM SIZES AS REQUIRED TO MATCH EQUIPMENT CONNECTIONS. UTILIZE REDUCERS WHERE EQUIPMENT CONNECTIONS ARE SMALLER THAN PIPE SIZES INDICATED ON PLANS, NO PIPING SHALL BE DECREASED IN SIZE (IN THE DIRECTION OF FLOW).

#### 1.3 EXAMINATION OF BIDDING DOCUMENTS:

1. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY AND NOT LATER THAN TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ENGINEER FOR INTERPRETATION OR CORRECTION OF ANY AMBIGUITY, INCONSISTENCY OR ERROR THEREIN. ANY INTERPRETATION OR CORRECTION WILL BE ISSUED AS AN ADDENDUM BY THE ENGINEER. ONLY A WRITTEN INTERPRETATION OR CORRECTION TO BID DOCUMENTS BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON ANY INTERPRETATION OR CORRECTION GIVEN BY ANY OTHER METHOD.

2. NO SUBSTITUTIONS FOR OTHER MATERIALS AND EQUIPMENT WILL BE CONSIDERED UNLESS WRITTEN REQUEST HAS BEEN SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS. EACH SUCH REQUEST SHALL INCLUDE A COMPLETE DESCRIPTION OF THE PROPOSED SUBSTITUTE, THE NAME OF THE MATERIAL OR EQUIPMENT FOR WHICH IT IS TO BE SUBSTITUTED, DRAWINGS, CUTS, PERFORMANCE AND TEST DATA OR INFORMATION NECESSARY FOR A COMPLETE EVALUATION.

3. IF THE ENGINEER APPROVES ANY PROPOSED SUBSTITUTION, SUCH APPROVAL WILL BE ISSUED AS AN ADDENDUM FORWARDED TO ALL PARTICIPATING BIDDERS.

4. IF ANY BIDDER IS UNABLE TO OBTAIN WRITTEN APPROVAL OF ANY SUBSTITUTION FROM THE ENGINEER PRIOR TO THE OPENING OF BIDS, THEN HE SHALL BASE HIS BID ON ITEMS AND SYSTEMS AS SPECIFIED IN BID DOCUMENTS.

5. SUBSTITUTIONS REQUESTED ON THE BID PROPOSAL FORM WHICH ARE PRIOR APPROVED BY THE ENGINEER WILL BE INCORPORATED INTO THE CONTRACT WITH THE SUCCESSFUL BIDDER.

6. REQUESTS FOR ANY SUBSTITUTIONS NOT SUBMITTED AND APPROVED IN ACCORDANCE WITH THE ABOVE INSTRUCTIONS WILL BE DENIED BY THE ENGINEER.

#### 1.4 REGULATORY REQUIREMENTS

A. ALL INSTALLATIONS AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STATUTES, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION.

1. CONFORM TO 2012 INTERNATIONAL BUILDING CODE W/ GA AMENDMENTS.

2. CONFORM TO 2012 INTERNATIONAL PLUMBING CODE W/ GA AMENDMENTS.

3. CONFORM TO 2012 INTERNATIONAL FIRE CODE W/ GA AMENDMENTS.

4. CONFORM TO 2014 NATIONAL ELECTRICAL CODE W/ GA AMENDMENTS.

#### 1.5 CUTTING AND PATCHING

A. SUBMIT WRITTEN REQUEST IN ADVANCE CUTTING OR PATCHING ELEMENTS.

B. EMPLOY SKILLED AND EXPERIENCED INSTALLER TO PERFORM CUTTING AND PATCHING WHICH INCLUDES:

1. INTEGRITY OF WEATHERTIGHTING MATERIALS.

2. EFFICIENCY, PERFORMANCE AND SAFETY OF ELEMENT. VISUAL QUALITY OF SIGN.

WORK OF OWNOR OR SEPARATE CONTRACTOR.

C. NO CUTTING ELEMENTS TO BE CUT WITHOUT PRIOR APPROVAL OF THE ARCHITECT.

### PART 2 PRODUCTS

#### 2.1 PIPE HANGERS AND SUPPORTS

##### A. MANUFACTURERS:

1. B-LINE

2. OTHER ACCEPTABLE MANUFACTURERS OFFERING EQUIVALENT PRODUCTS.

a. MICHIGAN HANGER.

b. PHD.

#### 2.2 HOT WATER WATER PIPING INSULATION

##### A. MANUFACTURERS:

1. OWENS-CORNING

2. JOHNS-MANVILLE

3. KNAUF

B. ASTM C547, RIGID MOLDED NON-COMBUSTIBLE FIBERGLASS INSULATION. 'K' VALUE .024 @ 75 DEGREES F.

C. VAPOR BARRIER JACKET, KRAFT PAPER WITH GLASS FIBER YARN AND BONDED TO ALUMINUM FILM. CLOSURE SYSTEM SHALL BE UL 181.

D. INSULATION THICKNESS 1-1/2"

#### 2.3 VENT PIPING

A. PVC: ASTM D2665 SCHEDULE 40 PVC PIPING.

1. FITTINGS: ASTM D2665 SCHEDULE 40 PVC DWV FITTINGS.

2. JOINTS: ASTM D2564 SOLVENT CEMENT. JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2855.

2.4 SANITARY AND GREASE SEWER PIPING

A. CAST IRON

#### 2.5 WATER PIPING

A. COPPER PIPING: ASTM B88 TYPE 'L' HARD DRAWN OR CPVC.

1. FITTINGS: ASME 16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER OR BRONZE.

2. JOINTS: ASTM B32 SOLDER, ASTM 95-5 TA MINIMUM, FLUX ASTM B813. JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM B828.

### PART 3 INSTALLATION

A. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINING DISSIMILAR METALS.

C. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT.

D. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE.

E. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.

F. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.

G. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.

H. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. COORDINATE SIZE AND LOCATION OF ACCESS DOORS WITH APPROPRIATE ARCHITECTURAL SECTION.

I. ESTABLISH ELEVATIONS OF PIPING INSIDE AND OUTSIDE THE BUILDING TO ENSURE PROPER SLOPE AND CONNECTION.

J. WHERE PIPE SUPPORT MEMBERS ARE WELDED TO STRUCTURAL BUILDING FRAMING, SCRAPE, BRUSH CLEAN, AND APPLY ONE COAT OF ZINC RICH PRIMER TO WELDING.

K. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH MIXTURE OF GRAPHITE AND LINDSEED TO ENSURE CLEARANCE AT CLEANOUT FOR ROOFING OF DRAINAGE SYSTEM.

L. INSTALL WATER HAMMER SHOCK ARRESTORS AT EACH FIXTURE OR UTILITY OF FIXTURES WHERE REQUIRED. ARRESTORS SHALL BE FACTORY FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND FITTING SUBSTITUTE STANDARD P.D.I. WH-201. ACCEPTABLE MANUFACTURERS ZURN, JOSAM, SIOUX CHIEF. PPP INC. FOR 1-11 FU'S PROVIDE PART NUMBER 12-33 FU'S PDI, C. 33-60 FU'S PDI, C. 61-113 FU'S PDI.

### MODIFICATION OF EXISTING SPRINKLER SYSTEM

1. THE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA #13 (LATEST EDITION) AND NFPA #1 AND THE ADMINISTRATIVE CODE.

2. THE DRAWINGS ARE PERFORMANCE SPECIFICATION ONLY AND ARE ONLY INTENDED TO CONVEY THE GENERAL SCOPE OF WORK AS DEFINED IN THE DRAWINGS. IT IS THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR TO SUBMIT UNSEALED AND SEALED DRAWINGS AND HYDRAULIC CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION AS DEFINED IN WORKING PLANS.

3. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL LABOR, TRUCKING, HOISTING, ENGINEERING SCAFFOLDING POWER HOOK UP'S PROTECTION SHOP DRAWINGS, LAYOUT, EQUIPMENTS, SUPERVISION, INSURANCE, ETC. NECESSARY FOR THE FURNISHING AND INSTALLATION OF ALL SPECIFIED AND RELATED WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

4. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, APPLY FOR ALL PERMITS AND PAY ALL GOVERNMENTAL TAXES, FEES AND SEAL ALL NECESSARY PLANS ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS FROM ALL DEPARTMENTS HAVING JURISDICTION. OBTAIN ALL REQUIRED CERTIFICATIONS OF INSPECTION FOR HIS/HER WORK AND DELIVER SAME TO THE OWNER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

5. THE CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES. CONTRACTOR TO COORDINATE FIRE PROTECTION EQUIPMENT LOCATIONS TO AVOID LIGHTS AND AIR DIFFUSERS.

6. PIPE MATERIAL AND HANGERS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH LATEST EDITION OF NFPA #13.

7. IT IS THE FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SPRINKLER COVERAGE IN AREAS OUTSIDE SCOPE OF WORK THAT BECOME UNPROTECTED BY EXISTING SPRINKLERS DUE TO NEW CONSTRUCTION.

# GENERAL NOTES

1. ALL INSTALLATIONS AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STATUTES, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION (2009 INTERNATIONAL BUILDING CODE, 2009 INTERNATIONAL PLUMBING CODE, 2009 INTERNATIONAL FIRE PREVENTION CODE, NATIONAL ELECTRIC CODE 2011 EDITION).
2. CONTRACTOR SHALL GIVE 72 HOUR NOTICE IN WRITING TO, AND RECEIVE WRITTEN APPROVAL, FROM THE BUILDING ADMINISTRATOR (OR HIS REPRESENTATIVE) PRIOR TO SHUT DOWN OF ANY SYSTEM OR DISRUPTION OF SERVICE TO ANY AREA. CONTRACTOR SHALL ALSO COORDINATE THE EXACT LOCATION AND TIMING OF SYSTEM(S) SHUTDOWN POINTS WITH THE OWNER REPRESENTATIVE (IE: ENGINEERING DEPARTMENT) CONTRACTOR SHALL MAKE EVERY EFFORT POSSIBLE TO MINIMIZE THE DURATION OF ANY DOWNTIME OR DISRUPTION PERIOD.
3. THE CONTRACTOR IS EXPECTED TO ORDER ALL MATERIALS IN SUFFICIENT TIME TO AVOID DELAYING THE COMPLETION OF THE PROJECT. DELAY IN DELIVERIES WILL NOT BE CONSIDERED A JUSTIFIABLE REASON FOR SUBMISSION OF SUBSTITUTE MATERIALS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PLUMBING FIXTURE MOUNTING HEIGHTS, AND DIMENSIONS.
5. REFER TO ARCH PLANS FOR ALL FIRE RATED FLOOR AND WALL PENETRATION DETAILS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES.
7. ALL PIPING PENETRATING A BEARING WALL OR STRUCTURAL MEMBER MUST BE SLEEVED AND LOCATION APPROVED BY STRUCTURAL ENGINEER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FITTINGS AS REQUIRED BY ALL APPLICABLE CODES AND GOVERNING AUTHORITIES.
9. CONTRACTOR SHALL VERIFY AND CORRECT AS REQUIRED TO MEET ALL CODES AND REGULATIONS ANY POSSIBLE DISCREPANCIES BETWEEN TYPE AND SIZE OF CONNECTION SPECIFIED IN PLUMBING FIXTURE SCHEDULE AND FIXTURES ACTUALLY INSTALLED ON THE SITE.
10. VALVES AND FITTINGS SHALL BE OF SAME SIZE OF LINE ON WHICH THEY ARE LOCATED, UNLESS OTHERWISE INDICATED ON DRAWINGS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS. ALL PENETRATION FOR ALL PIPING THRU FLOOR SLAB SHALL BE WATERPROOFED.
12. ALL WATER SUPPLY, SANITARY AND STORM PIPING SHALL BE RUN AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGES IN SIZING.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN CONTRACT OR HEREIN SPECIFIED OR OTHERWISE.
14. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES. PIPING EXPOSED SHALL BE SLOPED AND PAINTED TO MATCH ARCHITECTURAL FINISHES. PIPING IN MECHANICAL ROOMS MAY BE EXPOSED.
15. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
16. CONTRACTOR SHALL ROUGH-IN ALL WASTES AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURER'S SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED. INSTALL VACUUM BREAKERS WHERE REQUIRED BY CODE.
17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING PIPE ROUTING AND EQUIPMENT LOCATIONS) TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OR PURCHASING OF ANY PIPING AND/OR EQUIPMENT.
18. CONTRACTOR SHALL FIELD VERIFY ALL GIVEN MEASUREMENTS PRIOR TO LAYING AND CONNECTING ALL SANITARY AND WASTE PIPING AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
19. ALL SANITARY PIPING OVER 2" IN DIAMETER SHALL HAVE A 1/8" PER FOOT AND ALL SANITARY PIPING 2" OR LESS IN DIAMETER SHALL HAVE A 1/4" PER FOOT SLOPE UNLESS OTHERWISE NOTED.
20. ALL DRAINAGE PIPING SHALL BE MARKED WITH THE SEAL OF APPROVAL OF THE NATIONAL SANITATION FOUNDATION.
21. ALL FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMER VALVE AND FITTINGS UNLESS NOTED OTHERWISE.
22. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW SEWER LINES ARE TO BE CONNECTED BEFORE COMMENCING ANY WORK.
23. PROVIDE ACCESS PANELS TO ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
24. PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS FOR DOMESTIC WATER SUPPLY AS REQUIRED BY LOCAL WATER PURVEYORS.
25. PRESSURE REDUCING VALVES SHALL BE INSTALLED ON BRANCH LINES TO ALL MAINS SERVICE FIXTURES AND/OR EQUIPMENT, WHEN THE PRESSURE IN THE LINE EXCEEDS 80 P.S.I. A VELOCITY BETWEEN 5 AND 8 FEET PER SECOND BE MAINTAINED.
26. CONCEALED GAS PIPING IS NOT PERMITTED. ALL GAS PIPING IN UNHEATED SPACES MUST BE EXPOSED.
27. GAS PIPING TO BE WELDED CONSTRUCTION EXCEPT CONNECTION TO EQUIPMENT.
28. SUPPORT AND PAINT PER LL STANDARD DETAILS. TRAP COATS OF ZINC PREVENTATIVE PAINT COLOR AS SELECTED BY LANDLORD.
29. ROOF SUPPORTS TO BE DBRIO-WOOD MANUFACTURED. WOOD PIPE-LINE OR EQUAL. PRESSURE TREATED WOOD BLOCKING IS NOT ALLOWED.
30. PIPING TO BE SUPPORTED EVERY 10' OR AS REQUIRED BY LOCAL CODE.

# PLUMBING FIXTURE SCHEDULE

FIXTURE NO.	FIXTURE TYPE	WASTE CONN.	TRAP	VENT CONN.	C.W. CONN.	H.W. CONN.	MANUFACTURER / MODEL #	DESCRIPTION
1-1	TOILET	SEE PLAN	-	-	-	-	ZURN ZN415B	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND TYPE 'B' POLISHED NICKEL BRONZE STRAINER. PROVIDE 1/2" COLD WATER TRAP PRIMER CONNECTION.
ID-1	INCREASER DRAIN	SEE PLAN	-	-	-	-	-	3" X 6" PVC INCREASER DRAIN. SEE PLAN FOR LOCATION.
SA	SHOCK ABSORBER	-	-	-	-	-	SIOUX CHIEF 650 SERIES	SIZE PER MANUFACTURER'S RECOMMENDATIONS. PDI CERTIFIED. WHA-1: SIZE "A" WHA-2: SIZE "B" REFER TO RISER DIAGRAMS FOR ARRESTOR LOCATIONS.
TPV-1	TRAP PRIMER VALVE	-	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS PR-500	CORROSION RESISTANT BRASS TRAP PRIMER, 1/2" COLD WATER INLET AUTOMATICALLY OPERATED BY PRESSURE DROP OF 10 PSIG.
TMX-1	MIXING VALVE	-	-	-	1/2"	1/2"	WATTS LFMMV	THERMOSTATIC MIXING VALVE ALL BRONZE REMOVABLE PISTON AND THERMAL MOTOR, ROUGH CHROME FINISH WITH CHECK VALVES. SET TO MAXIMUM TEMPERATURE OF 120F.
HD-1	HUB DRAIN	SEE PLAN	-	-	-	-	ZURN Z-1019	FUNNEL DRAIN WITH "P" TRAP, DURA COATED CAST IRON COMBINATION FUNNEL AND TRAP DRAIN, COMPLETE WITH BRONZE BOTTOM CLEAN-OUT.
WCO	WALL CLEAN-OUT	SEE PLAN	-	-	-	-	ZURN Z1446	CAST IRON CLEAN-OUT TEE, DURA COATED BODY, GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND, SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW.
WH-1	AD SMITH	-	-	-	1-1/4"	1-1/4"	AD SMITH DRE-52-36	50 GALLON, 36KW, TANK WATER HEATER, 480/36w, 164 GPH RECOVERY AT 90F TEMPERATURE RISE.
P-1	TACO CARTRIDGE RE-CIRCULATOR PUMP	-	-	-	-	-	TACO-008	TACO PUMP 1/25 HP,120V/1
HB	HOSE BIBB	-	-	-	3/4"	-	WOODFORD 24P	-

ALL PLUMBING FIXTURES SHALL BE SUPPLIED WITH WATTS "FLOODSAFE" AUTO-SHUT OFF CONNECTOR TYPE SUPPLY RISERS WITH BRAIDED STAINLESS STEEL CONNECTORS. THIS SHALL INCLUDE ALL FAUCETS, KITCHEN APPLIANCES & ICE MACHINES.  
CONFIRM ALL PLUMBING FIXTURE SELECTIONS WITH OWNER PRIOR TO BID. PROVIDE ALTERNATE MODELS AND OPTIONS AT OWNERS DISCRETION.

# FOOD SERVICE NOTES

1. ALL SERVICE LINES FOR WATER AND GAS SHALL BE SIZED TO PROVIDE FULL FLOW VOLUME FOR ALL ITEMS SUPPLIED ON RESPECTIVE MAINS AND BRANCHES. IDENTIFY ALL LINES WITH PERMANENT LABELS FOR THE SERVICE THEY PROVIDE.
2. FUEL GAS SERVICES SHALL BE SIZED TO SUPPLY THE REQUIRED BTUH INDICATED AT THE EQUIPMENT AT LOW PRESSURE OF APPROXIMATELY 7"-11" WATER COLUMN. PROVIDE PRESSURE REGULATORS AS REQUIRED.
3. ALL HOT AND COLD WATER SERVICE LINES, EXCEPT SHORT BRANCHES EXTENDED AND CONNECTED TO FIXTURES, SHALL BE INSULATED. ALL EXPOSED INSULATED LINES SHALL BE COVERED WITH PROTECTIVE COVERING TO SUIT THE APPLICATION.
4. ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT, BELOW EQUIPMENT, SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATION ABOVE FLOOR, TO PROVIDE CLEARANCE FOR CLEANING. NO LINES SHALL LAY ON FLOOR.
5. ALL PIPING ROUTED THROUGH OR NEAR EQUIPMENT OR COUNTERS SHALL NOT INTERFERE WITH THE INTENDED USE OF, OR SERVICING OF, EQUIPMENT OR COUNTERS.
6. ALL EXPOSED PIPING AND FITTINGS SHALL BE CHROME PLATED OR STAINLESS STEEL. TAIL PIECES FOR SINKS SHALL BE 17 GAUGE CHROME PLATED FLARED BRASS TUBING FOR CONNECTION TO 1-1/2" L.P.S. MALE THREAD FITTING. "P" TRAPS SHALL BE CHROME PLATED BRASS, UNIFORM CODE PATTERN.
7. STOPS SHALL BE FURNISHED AND INSTALLED ON ALL HOT AND COLD WATER LINES AT EQUIPMENT. PROVIDE ALL REQUIRED SHUT-OFF VALVES, CHROME FINISH.
8. EQUIPMENT SINKS ARE PROVIDED WITH 1-1/2" WASTE CONNECTIONS.
9. ALL WASTES, DIRECT OR INDIRECT, SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR EXCEPT AS NOTED ON UTILITY PLANS. MINIMUM INDIRECT WASTES SHALL BE 1" REGARDLESS OF SIZE OF CONNECTION AT EQUIPMENT.
10. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL DRAIN LINES FROM COOLERS AND FREEZER TO DRAIN LOCATIONS AT 1/4"/12" MINIMUM PITCH AND "P" TRAP IN END OVER FLOOR RECEPTOR. DRAIN LINES SHALL BE 1" MINIMUM. EACH UNIT SHALL HAVE A SEPARATE DRAIN LINE.
11. GAS AND WATER SERVICES FOR PORTABLE AND COUNTER TOP APPLIANCES SHALL BE CONNECTED TO THE MAINS WITH STAINLESS STEEL FLEXIBLE HOSE AND QUICK DISCONNECT FITTINGS. GAS TAPS AND VALVES SHALL BE APPROVED FOR COMMERCIAL KITCHEN EQUIPMENT. GAS AND WATER HOSES SHALL BE COVERED WITH FIRE RESISTANT P.C. OR P.C. COATING.
12. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER CONSULTANT DRAWINGS FOR ROUGH LOCATIONS, SIZES, AND HOOK-UP REQUIREMENTS FOR ALL KITCHEN EQUIPMENT. FINISH IN EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.

# ABBREVIATIONS

AD	ACCESS DOOR	HD	HEAD
EF	ABOVE FINISHED FLOOR	HW	HOT WATER
APPROX	APPROXIMATELY	HR	HOUR
ARCH	ARCHITECTURAL	INV	INVERT ELEVATION
AUTO	AUTOMATIC	LBS	POUNDS
BLDG	BUILDING	MIN	MINIMUM
CD	CONDENSATE DRAIN	NC	NORMALLY CLOSED
CLG	CEILING	NIC	NOT IN CONTRACT
CO	CLEAN-OUT	NO	NORMALLY OPEN
COND	CONDENSATE OR CONDENSER	NTS	NOT TO SCALE
CONT	CONTINUATION	PSI	POUNDS PER SQUARE INCH
CMU	CONCRETE MASONRY UNIT	PVC	POLYVINYL CHLORIDE
CW	COLD WATER (CITY)	R	RISE
EL	ELEVATION	REQ'D	REQUIRED
ELEC	ELECTRIC	RM	ROOM
F	DEGREES FAHRENHEIT	SAN	SANITARY
ECO	EXTERIOR CLEANOUT	SPEC	SPECIFICATION
FCO	FLOOR CLEANOUT	TEMP	TEMPERATURE
FD	FLOOR DRAIN	TYP	TYPICAL
GAL	GALLONS	V	VENT LINE
GPH	GALLONS PER HOUR	VTR	VENT THRU ROOF
GPM	GALLONS PER MINUTE	W/	WITH
HB	HOSE BIBB	WCO	WALL CLEANOUT

# GENERAL LEGEND

- PIPE SECTION-SUPPLY
- PIPE SECTION-RETURN
- DIRECTION OF FLOW IN PIPE
- PITCH PIPE DOWN IN DIRECTION OF ARROW
- PIPE UP
- PIPE DOWN
- BALL VALVE
- CHECK VALVE, HORIZONTAL SWING
- GATE VALVE
- BUTTERFLY VALVE
- GLOBE VALVE
- PLUMBING VALVE
- PLUMBING COCK
- STRAINER Y-TYPE AND BLOWOFF VALVE
- PRESSURE RELIEF VALVE (WATER)
- PRESSURE REDUCING VALVE
- MANUAL AIR VENT
- SOLENOID VALVE
- VALVE OS & Y
- GAS COCK
- CAPPED LINE
- SANITARY SEWER (ABOVE GRADE)
- SANITARY SEWER (BELOW GRADE)
- DOMESTIC COLD WATER
- COLD FILTERED WATER
- SHOCK ABSORBER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN
- CONDENSATE DRAIN (BELOW GRADE)
- CONDENSATE DRAIN (ABOVE GRADE)
- STORM SEWER (BELOW GRADE)
- STORM SEWER (ABOVE GRADE)
- SECONDARY STORM PIPING
- GREASE SEWER (BELOW GRADE)
- GREASE SEWER (ABOVE GRADE)
- SOFT COLD WATER
- VENT
- GAS LINE (BELOW GRADE)
- GAS LINE (ABOVE GRADE)
- POINT OF CONNECTION NEW TO EXISTING
- DELTA T (TEMPERATURE DIFFERENCE)
- HOSE BIBB
- FLOOR DRAIN
- HUB DRAIN
- TRENCH DRAIN
- FLOOR CLEANOUT
- CLEANOUT
- EXTERIOR CLEANOUT
- HORIZONTAL CLEANOUT
- ITEMS TO BE REMOVED (DEMOLITION)

# FIELD VERIFY ALL CONDITIONS

## NOTE

AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

# INTERPLAN

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN  
PROJECT MANAGEMENT

604 COURTLAND STREET  
SUITE 1100  
ORLANDO, FLORIDA 32804  
PH 407.645.5008  
FX 407.629.9124

SEAL:  
THIS DOCUMENT IS NOT FOR CONSTRUCTION  
UNLESS THE ARCHITECT OR ENGINEER'S  
SIGNATURE AND SEAL APPEAR BELOW.

PROJECT NO: 2017.0221  
DATE: 12.08.2017

2 01.04.18 ISSUED/RELEASED FOR CONSTRUCTION  
1 12.28.17 LANDLORD COMMENTS  
NO DATE REMARKS  
REVISIONS

PEACHTREE CENTER MALL  
231 PEACHTREE ST. NE SUITE B14  
ATLANTA, GA 30303

P1.0  
PLUMBING SCHEDULES AND SPECIFICATIONS

CHECKED: PD DRAWN: AC

Order

Order

Order

Order

Order