PLUMBING SPECIFICATIONS

Provide all plumbing items indicated on the drawings, described herein or otherwise required for a complete and proper installation, including:
A. Plumbing fixtures, fittings and equipment.
B. Hot and cold water systems.
C. Drain waste and vent piping systems.
D. Indirect waste piping, including all valves, traps, piping and accessories for all equipment. Size per equipment requirements.

Comply with all applicable codes, standards and ordinances, including requirements of the Georgia State Minimum Standard Plumbing Code (2012 International Plumbing Code with all Georgia State Amendments) and the DOJ 2010 ADA Standards for Accessible Design.

The contractor should not attempt to precisely scale dimensions from these drawings to obtain construction dimensions and clearance. The contractor shall verify all actual dimensions and clearances. Although these plans are diagrammatic in nature, they shall be followed as closely as site conditions, new construction, and work by other trades shall permit. Deviations from these drawings, which are required to conform to the available space or to actual building construction, shall be made at no additional cost to the owner.

The submission of a bid or proposal will be construed a evidence that the contractor has familiarized himself with the plans and building site. Claims made subsequent to the proposal for materials and/or labor due to difficulties encountered will not be recognized unless these difficulties could not have been foreseen, even though proper examination had been made.

Fabrication or ordering of any material or equipment prior to verification of site conditions shall be done at the contractor's risk.

All equipment and material shall be new and of first quality. Equipment and material shall be the same or equal to the basis of design listed on these drawings.

Coordinate with all trades and verify all equipment rough-in items and locations with the equipment supplier or contractor. All re-work and corrections required due to lack of coordination shall be the contractor's responsibility, and done at no cost to the owner.

Submit shop drawings and material data submittals to the engineer for approval before installation. No substitutions shall be allowed without prior approval by the engineer. Product data for piping, insulation, valves, specialties and all fixtures and equipment scheduled and specified here. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

All equipment and flue materials shall be U.L. listed.

Installation shall comply with manufacturer requirements including all clearances recommended for proper operation of service. All serviceable parts shall be readily accessible.

Below ground sanitary drain and vent piping shall be solid-wall ASTM D2665 schedule 40 PVC. Install underground, PVC plastic drainage piping according to ASTM D2321. Above ground sanitary drain and vent piping shall be cellular-core ASTM F891 schedule 40 PVC. Install aboveground PVC piping according to ASTM D 2665. All aboveground piping shall be adequately supported. Sanitary drain and vent piping shall have PVC Socket Fittings (ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Schedule 40 pipe). Slope at 1/8 inch per foot continuously toward public sewer.

All above ground domestic water distribution piping shall be ASTM D 2846, SDR11, schedule 40 CPVC with socket fittings. All piping shall be adequately supported. Disinfect all domestic water piping after installation. All underground domestic water distribution piping shall be ASTM D 1785 schedule 40 PVC with ASTM D 2466 PVC socket fittings.

HW & CW Valves: Use pipe size valves, as shown below:
A. Ball: Watts #B-6000 or B-6001.
B. Check: Watts #600 or #601S.

Ball-Valve-Type Hose-End Drain Valves shall comply with MSS SP-110 for standard-port, two-piece ball valves. Copper alloy body, 3/4", 400-psig pressure rating, replaceable seats and seals, vinyl-covered steel handle, threaded short nipple outlet with garden-hose thread complying with ASME B1.20.7 and cap with brass chain.

Fixture tailpieces, wall escutcheon, and traps for lavatories and sinks shall be brass tubing, semi-cast, or cast iron: All brass tubing shall be 17 gage, chrome plated. Exemption: If the fixture tailpieces and traps are located in cabinets, the tailpiece & trap shall be PVC. Grid drains for public lavatories. Basket strainers for sinks.

Water Hammer Arresters shall comply with standard ASSE 1010, metal bellows type or copper piston type.

Urinal Supports shall be type I, urinal carrier with fixture support plates and coupling with seat and fixture bolts and hardware matching fixture for wall-mounting, urinal-type fixture. Include steel uprights with feet. For accessible-fixture support include rectangular steel uprights. Lavatory Supports shall be type II, lavatory carrier with concealed arms and tie rod for wall-mounting, lavatory-type fixture. Include steel uprights with feet. For accessible-fixture support include rectangular steel uprights. Plate type wall hangers for water coolers.

Lavatory/ Sink supply fittings: NSF Standard: Comply with NSF/ANSI 61 Annex G, "Drinking Water System Components – Health Effects," for supply-fitting materials that will be in contact with potable water. Standard: ASME A112.18.1/CSA B125.1. Supply Stops: Chrome-plated-brass, one-quarter-turn, ball-type valve with inlet connection matching supply piping. Wheel handle operation. Risers: Chrome-plated, soft-copper flexible tube for exposed applications and ASME A112.18.6, braided- or corrugated-stainless-steel, flexible hose for conceal behind cabinet applications.

Provide ADA Supply and Drain Protective Shielding Guards on ADA fixtures that piping is exposed. Supply and Drain Protective Shielding Guards shall comply with ICC A117.1 and Americans with Disabilities Act (ADA) requirements. Manufactured plastic wraps shall cover hot and cold water supplies, trap, and drain piping.

All pipe hangers, clamps and channels shall be adequately sized to carry pipe loads and prevent sagging.

All other materials not specifically described but required for a complete and proper installation of work of this section, shall be new, first quality of their respective kinds, and as selected by the contractor subject to acceptance by the engineer.

Lay out the plumbing system in careful coordination with the drawings, determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactorily functioning system. Follow the general layout shown on the drawings in all cases except where other work may interfere. Unless shown otherwise, lay out all pipes to fall within partition, wall floor, or roof cavities, and to not require furring other than as shown on the drawings.

Do not cut into or reduce the size of any load-carrying member without the prior approval of the architect. Install all pipes to clear all beams and obstructions.

Permanently close and make weatherproof any openings or penetrations of the building envelope made for plumbing systems. All wall and floor penetrations shall be sleeved. All exterior wall or foundation wall penetrations shall use a mechanical seal.

Coordinate all roof penetrations with architectural plans and building and roofing trades.

Provide shut-off balls valves and unions at all water connections to equipment and appliances.

Isolate all dissimilar metals with "EPCO" dielectric unions, except for brass or bronze valves with steel pipe.

Protect the potable water supply against backflow and siphonage from equipment, fixtures, etc., using approved backflow and anti-siphon devices.

Thoroughly clean all piping and equipment. Removing all dirt, rust, oil, and plaster.

Test Sanitary drainage piping by plugging all openings and filling with water to a height equal to 10 foot head. Allow to stand one hour or longer as required. Repair leaking joints and then re-test.

No work shall be covered until it has been inspected and accepted by the local authority and the engineer.

Test water lines at 100 PSIG. Retain for 24 hours, repair all leaks and re-test.

The entire system shall be warranted for a period of one year beginning with owner's acceptance of the work. All labor and materials necessary to repair all defective parts of the system, or parts thereof, during that time shall be warranted for a period of one (1) year from such repair or replacement.

Install piping in concealed locations, unless otherwise indicated and except in equipment rooms, and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Install piping to permit valve servicing. Install piping at indicated slopes. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install piping to allow application of insulation. Select system components with pressure rating equal to or greater than system operating pressure. Install escutcheons for penetrations of walls, ceilings, and floors. Verify final equipment locations for roughing-in.

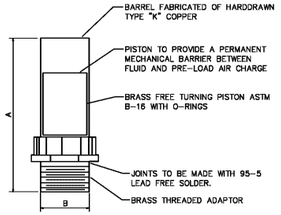
Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

Seal fixtures to wall and floor surfaces with sealant, color to match fixture.

All vents thru roof (VTR) shall be offset a minimum of 10'-0" from all outside air intakes.

Approved manufactures: (Items submitted shall be approved by architect and engineer. Architect and engineer reserve the right to reject any item substituted for basis of design item for any reason.)

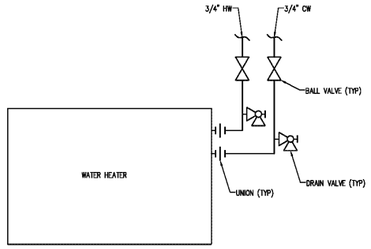
China Fixtures: American Standard, Kohler, Toto, Zurn, Sloan
Faucets: Delta, T&S Brass, Chicago Faucets, Zurn, Kohler, Grohe, Moen, Speakman, Symmons
Supplies & Traps: Engineered Brass CO., Mcguire, Charlotte Pipe, Brasscraft, IPS, Watts, Zurn
Flush Valves: Sloan, Delany, Zurn, American Standard
Floor Drains & Cleanouts: Zurn, Jay R Smith, Proset, Watts, Mifab, Wade, Josam, Sioux Chief, Oatey
Water Heaters: A.O. Smith, Rheem, EEmax, Bradford White, Chromite
Toilet Seats: Bemis, Centoco, Church Seats, Olsonite, Beneke, Zurn, Mainline
Stainless Steel Sinks: Dayton, Elkay, Just, Kohler, Moen, Sterling, Just
ADA Protective Shielding Pipe Covers: Engineered Brass, McGuire, Plumberex, TRUEBRO, Zurn, Oatey
Fixture Supports: MIFAB, Jay R. Smith, Wade, Watts, Zurn
Wall Hydrants/ Hose Bibbs: MIFAB, Jay R. Smith, Wade, Watts, Woodford, Zurn
Expansion Tanks: AMTROL, State, Watts, Wilkins
Water Hammer Arresters: AMTROL, Josam, MIFAB, PPP, Sioux Chief, Jay R. Smith, Wade, Watts, Zurn
Brass Valves: American, Crane, Watts, Apollo
Water Coolers: Elkay, Oasis, Haws
Mop Sinks: Stern Williams, Acorn, Fiat



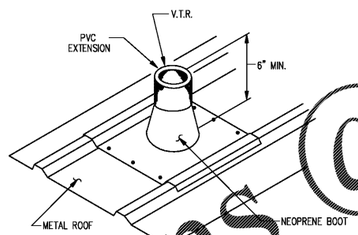
PPP SIZE	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
1/2"	A	1 – 11	5"	1/2"
3/4"	B	12 – 32	5"	3/4"
1"	C	33 – 60	7"	1"
1-1/4"	D	61 – 113	7"	1-1/4"
1-1/2"	E	114 – 154	9"	1-1/2"
2"	F	155 – 330	9"	2"

NOTE: SEE WATER RISER DIAGRAMS FOR LOCATIONS OF SHOCK ABSORBERS.

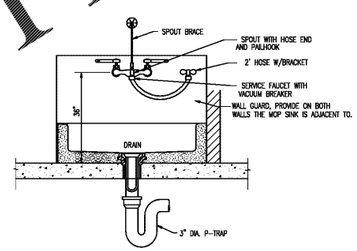
WATER HAMMER ARRESTOR DETAIL
SCALE: N.T.S.



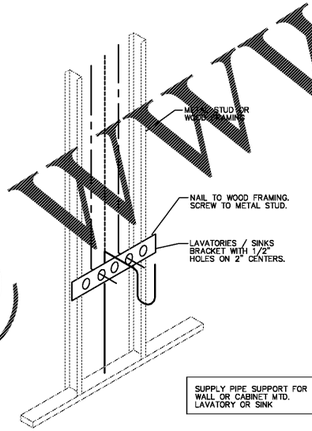
WATER HEATER PIPING SCHEMATIC
SCALE: N.T.S.



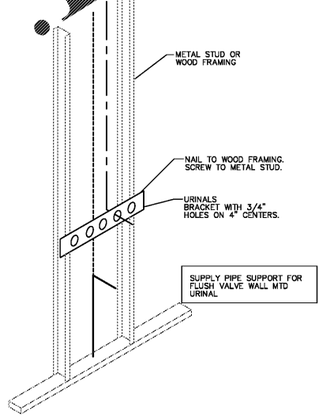
VENT THRU SLOPED ROOF DETAIL
SCALE: N.T.S.



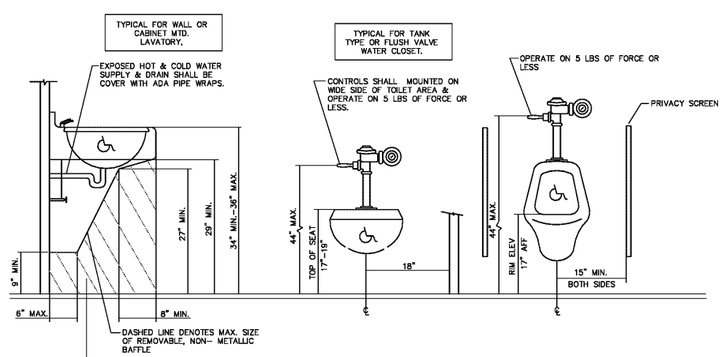
MOP SINK DETAIL
SCALE: N.T.S.



LAV./SINK PIPE SUPPORT DETAIL
SCALE: N.T.S.



URINAL PIPE SUPPORT DETAIL
SCALE: N.T.S.



HANDICAP PLUMBING FIXTURE INSTALLATION
SCALE: N.T.S.

FIXTURE AND EQUIPMENT SCHEDULE

#	FIXTURE TYPE	WASTE BELOW FIXTURE FLOOR	WASTE CONN.	WATER SUPPLY COLD	WATER SUPPLY HOT	WATER FIX. CONN. COLD	WATER FIX. CONN. HOT	MODEL NUMBER
WC1	WALL HUNG WATER CLOSET	4"	4"	1"		1"		SLOAN ST-2459 WATER CLOSET, SLOAN 111 ESS-1.28-DFB-OR-HW FLUSH VALVE . CENTOCO 500STSCCSS SEAT. ZURN Z1209-N CARRIER.
WC2	WALL HUNG ADA WATER CLOSET	4"	4"	1"		1"		SLOAN ST-2459 WATER CLOSET, SLOAN 111 ESS-1.28-DFB-OR-HW FLUSH VALVE . CENTOCO 500STSCCSS SEAT. ZURN Z1209-N CARRIER.
UR1	URINAL	2"	2"	3/4"		3/4"		SLOAN SU-7409 URINAL & 111 ESS-1.28-DFB-OR-HW FLUSH VALVE.
UR2	ADA URINAL	2"	2"	3/4"		3/4"		SLOAN SU-7409 URINAL & 111 ESS-1.28-DFB-OR-HW FLUSH VALVE.
LAV1	ADA UNDERMOUNT LAVATORY	2"	1-1/4"	1/2"	1/2"	1/2"	1/2"	SLOAN SS-3021 LAVATORY, EFX-200-4-FLO-ISM-CP-0.5GPM-MLM-IR-FCT FAUCET, & ESD-500-CP SOAP DISPENSER WITH OPTIONAL AC ADAPTOR 0346090.
LAV2	ADA WALL-HUNG LAVATORY	2"	1-1/4"	1/2"	1/2"	1/2"	1/2"	KOHLER K-2007-R LAVATORY, SLOAN EFX-200-4-FLO-ISM-CP-0.5GPM-MLM-IR-FCT FAUCET, & ESD-500-CP SOAP DISPENSER WITH OPTIONAL AC ADAPTOR 0346090.
SNK	ONE COMPARTMENT SINK	2"	1-1/2"	1/2"	1/2"	1/2"	1/2"	ELKAY PSR3122. ZURN Z87104-XL FAUCET.
MOP	24"X24" TERRAZZO MOP SINK	3"	3"	1/2"	1/2"	1/2"	1/2"	FIAT TSB3010 SINK, 8300AA FAUCET, 832AA HOSE/BRACKET, 889CC MOP HANGER, MSG2424 PANELS, GDC32 DRAIN, & 1453BB STRAINER.
EWC	EH-LEVEL WATER COOLER	2"	1-1/2"	1/2"		1/2"		ELKAY VRCTLBWSK.
FD1	FLOOR DRAIN WITH WATERLESS TRAP PRIMER	2"	2"					WATTS FD-190-PR-60 FLOOR DRAIN. RECTORSEAL "SURESEAL" WATERLESS TRAP PRIMER.
FD2	FLOOR DRAIN WITH DOME STRAINER	4"	4"					WATTS FD-100-C-K.
GCO	GRADE CLEANOUT	SEE DWGS	SEE DWGS					WATTS CO-200-RX-4-80.
NFWH	NON-FREEZE WALL HYDRANT			3/4"		3/4"		WOODFORD B65.
HB	INTERIOR WALL HYDRANT			3/4"		3/4"		WOODFORD 75.
HD	HUB DRAIN WITH WATERLESS TRAP PRIMER	2"	2"					PROSET TG2JHD.

WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	TYPE	BTUH/KW
WH1	CHRONOMITE	ER-48L/240	TANKLESS ELECTRIC	11.5 KW
WH2	CHRONOMITE	ER-48L/240	TANKLESS ELECTRIC	11.5 KW
WH3	CHRONOMITE	ER-48L/240	TANKLESS ELECTRIC	11.5 KW

CONTRACTOR SHALL CONSULT THE ELECTRICAL DOCUMENTS FOR VOLTAGE AND PHASE

LEGEND

—⋈—	SHUTOFF VALVE	— — — — —	COLD WATER
—⋈—	CHECK VALVE	— — — — —	HOT WATER
—○—	PIPE UP	— — — — —	SEWER VENT
—⊂—	PIPE DOWN	———	SEWER
PDI-B	PDI UNIT	DWGS.	DRAWINGS
(H)	WATER HAMMER ARRESTOR	VTR	VENT THRU ROOF
(TYP)	TYPICAL	AFF	ABOVE FINISHED FLOOR
C.T.	COUNTER-TOP	CW	COLD WATER
DN	DOWN	HW	HOT WATER
CONN.	CONNECTION	VT	VENT
NTS	NOT TO SCALE		

WM2A ARCHITECTS
WM2A.COM
346 COTTON AVENUE
SUITE 500, PO BOX 119
MACON, GEORGIA 31201

GEORGIA REGISTERED PROFESSIONAL ENGINEER KRAMI M. PATEL

CENTER PARK RESTROOMS FACILITIES AND SHADE PAVILION

REVISIONS
DATE DESCRIPTION

Date: 11/04/19
Drawn By: KMP/JWK
Checked By: KMP
Project Number: 2018-077
Drawing Name: **PLUMBING SPECIFICATIONS & SCHEDULES**

TOTAL ENGINEERS
169 New Street, Macon, GA 31201
(478)741-4632 - T.E. project #19-055
www.totalengineers.com

Drawing Number: **P0-1**