

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	ACCESSORIES	PIPING REQUIREMENTS			REMARKS	APPROVED MANUFACTURER'S	CODE APPROVALS
					WASTE	VENT	SUPPLY			
H.W.C.	HANDICAP ACCESSIBLE WATER CLOSET (TANK TYPE)	AMERICAN STANDARD	CADET RIGHT HEIGHT BOWL RIM @ 16-1/2" H PRESSURE-ASSISTED TOILET 2467.016	CHURCH 9500CT WHITE OPEN FRONT SEAT COMPLETE W/60LT CAPS	4"	2"	1/2"	LOW-CONSUMPTION 1.6 GPF MAX. MEETS ADA GUIDELINES	ZURN	ANSI A117.1, ADA COMPLIANT
LAV.	HANDICAP ACCESSIBLE LAVATORY (WALL MOUNTED)	AMERICAN STANDARD	LUCERNE 0355.012 4" CENTERS	ZURN #Z8737 FLAT GRID SINK STRAINER, DELTA #501-DST CLASSIC CENTERSET FAUCET, JAY R. SMITH #0700-M31 FLOOR MOUNTED LAVATORY SUPPORTS IN WALL	2"	2"	3/4"	SEE NOTE 2. 1.5 GPM MAX.	ZURN	ANSI A117.1 ASME A112.18.1, ADA COMPLIANT
M.V.	THERMOSTATIC MIXING VALVE	WATTS	#LFMMV-M1-US-1/2"	THERMOSTATIC MIXING VALVE	-	-	1/2"	SEE DETAIL 3/P2 & NOTE #4 110°F MAXIMUM WATER TEMP.	WILKINS, POWERS	ASSE 1070, IAPMO, ADA COMPLIANT, CUPC, NSF/ANSI 61
H.D.F.	BARRIER-FREE TWO STATION HI-LO DRINKING FOUNTAIN	ELKAY	EZ5TLBLC	ACCESSORY APRON #LJKAPREZL	2"	2"	1/2"	REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS	HALSEY TAYLOR	ADA COMPLIANT
F.D.	FLOOR DRAIN	ZURN	ZN415-B-P	1/2" TRAP PRIMER CONNECTION	2"	2"	-	COMBINATION WASTE VENT	WADE & JAY R. SMITH	ASSE 1019-B
C.O.	CLEANOUT (INTERIOR)	JAY R. SMITH	4100	W/CARPET CLAMPING RING WHERE REQUIRED	SEE PLAN	-	-	SAME SIZE AS LINE	WADE & ZURN	-
C.O.1	CLEANOUT (EXTERIOR)	JAY R. SMITH	4250	-	SEE PLAN	-	-	SAME SIZE AS LINE	WADE & ZURN	-
W.H.A.	WATER HAMMER ARRESTER	SIOUX CHIEF	652-A	-	-	-	-	-	WILLIAMS	-
H.B.	HOSE BIBB	WOODFORD	MODEL 65	W/WALL CLAMP	-	-	3/4"	W/VACUUM BREAKER. OPERATING ROD ASSEMBLY MUST BE ORDERED PER WALL WIDTH	-	-
M.B.	MOP BASIN	FIAT	FIAT MSB-2424	FIAT #832-AA HOSE & BRACKET, FIAT #889-CC-24" MOP HANGER, ZURN #Z842M-WHK-5H SERVICE FAUCET	3"	2"	3/4"	W/VACUUM BREAKER ON FAUCET. ALSO ADD HOSE CONNECTION VACUUM BREAKER (WATTS #B) ON FAUCET'S SPOUT	STERN-WILLIAMS	-
E.W.	EYE WASH	SPEAKMAN	SEF-9200	SPEAKMAN THERMOSTATIC MIXING VALVE (SEF-TW), SEF-9200-ILR	-	-	3/4"	SET MIXING VALVE TO DELIVER 80°F NOTE: TEPID WATER RANGE IS 60°F-100°F	BRADLEY, HAWS	ASME A112.18.1-2000 CSA B125-08, ANSI Z358-1, ASSE 1011
SRBP	SPILL-RESISTANT BACKFLOW PREVENTER	WATTS	LF008PCOT-1/2"	HEALTH HAZARD, ANTI-SIPHON, SPILL-RESISTANT BACKFLOW PREVENTER	-	-	1/2"	MAY BE INSTALLED VERTICALLY	-	ASSE 1056
URN.	URINAL (WALL MOUNTED)	ZURN	Z5755-U OMNI-FLO	SLOAN ROYAL #186-1 FLUSH VALVE, ZURN #Z1222 FLOOR MOUNTED URINAL SUPPORT	2"	2"	3/4"	1.0 GPF. BACK OF URINAL TO BE MOUNTED FLUSH WITH THE FACE OF FINISHED WALL. SEE DETAIL 9/P2	AMERICAN STANDARD	ASME A1212.19.2, ANSI A117.1, ADA COMPLIANT

NOTES:

- COORDINATE ROUGH-IN OF ALL PLUMBING FIXTURES W/ARCHITECTURAL DRAWINGS.
- SINKS & LAVATORIES FOR HANDICAPPED ACCESS SHALL BE INSTALLED W/OFFSET TAILPIECES. ALL SINK & LAVATORY DRAIN & WATER LINES SHALL BE INSULATED W/PROTECTIVE DEVICES EQUAL TO "McGUIRE" #PW 2150 WC, WHITE MOLDED CLOSED CELL VINYL, OR "TRUBRO" #103W, WHITE MOLDED VINYL.
- FOR HANDICAPPED-ACCESSIBLE WATER CLOSET, FURNISH & INSTALL W/THE FLUSH HANDLE ON THE WIDE SIDE OF THE RESTROOM.
- ALL LAVATORIES SHALL BE INSTALLED WITH A THERMOSTATIC MIXING VALVE.

OWNER SUPPLIED, CONTRACTOR INSTALLED	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	QUANTITY	REMARKS	NO SUBSTITUTIONS	CODE APPROVALS
W.H.	WATER HEATER (ELECTRIC)	A.O. SMITH	EHCS-20	(19 GALLONS) 120V, 19.15 KW ELEMENT WITH T & P RELIEF VALVE	-	-	CSA, ASME RATED, NAECA
SHELF	WATER HEATER SHELF	HOLDRITE	#40-SWHP-WM	SUPPORTS WATER HEATERS UP TO 20 GALLON OR 300 LBS	-	-	-
T.E.A.	THERMAL EXPANSION ABSORBER	AMTROL	ST-12	-	-	-	-

NOTE: WATER HEATER, SHELF AND T.E.A. SHALL BE DIRECT ORDERED AND OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR:

GRAYBAR ELECTRIC CO. INC.
 11885 LACKLAND ROAD
 ST. LOUIS, MO 63146

GRAYBAR O'REILLY TEAM
 EMAIL: oreilly@graybar.com
 TOLL FREE: (314) 573-2080

PLUMBING NOTES

- DRAWING IS DIAGRAMMATIC & IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
- ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
- VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING. (SPEC 22 05 00)
- ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC. (SPEC 22 40 00)
- THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS & SUBCONTRACTORS IN LAYING HIS OUT & INSTALLING HIS WORK. COOPERATION DOES NOT MEAN "I WAS HERE FIRST."
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
- DO NOT INSTALL CAPPED AIR CHAMBERS AT FIXTURES. INSTALL WATER HAMMER ARRESTERS AS CALLED FOR ON PLAN. ARRESTERS ARE TO BE RATED FOR INSTALLATION IN CONCEALED LOCATIONS. (SPEC 22 00 00)
- ALL HOT & COLD WATER SUPPLY PIPING CONNECTION TO FIXTURES ARE TO BE 1/2" UNLESS NOTED OTHERWISE.
- PLUMBING PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. PROVIDE REQUIRED CLEARANCES PER "N.E.C." COORDINATE ELECTRICAL PANEL LOCATIONS WITH THE ELECTRICAL CONTRACTOR.
- INSTALL PIPE INSULATION ON ALL DOMESTIC WATER LINES ABOVE FINISH FLOOR. (SPEC 22 07 19)
- CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT OF & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
- PROVIDE CHROME ESCUTCHEON COVERPLATES AT ALL PIPE PENETRATIONS OF FINISHED WALL SURFACES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ROUTE ALL WATER PIPING AROUND SPACES WITH TEMPERATURES BELOW FREEZING (i.e. ATTICS, CHASES, EXTERIOR WALLS, ETC.). IF FREEZING OF ANY WATER PIPING OCCURS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR THE PIPING THRU A NON-FREEZING SPACE TO THE FIXTURE/APPLIANCE ORIGINALLY SERVED BY THE FROZEN PIPING.
- ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USED SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT. (SPEC 07 92 00)
- PLUMBING SUB-CONTRACTOR SHALL INFORM THE ELECTRICAL SUB-CONTRACTOR OF THE VOLTAGE & POWER REQUIREMENTS OF ALL PLUMBING EQUIPMENT TO BE INSTALLED.
- ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
- ALL WATER HEATERS & HOT WATER STORAGE TANKS SHALL HAVE A DRAIN VALVE INSTALLED AT THE BOTTOM OF THE TANK AS REQUIRED BY CODE.

PLUMBING PIPE MATERIALS

(SEE SPEC SECTION 22 00 00 FOR ADDITIONAL INFORMATION)

A. The following applications are for inside, below & above the building and depending on point 5 feet outside perimeter building walls.

- Domestic Water Distribution Piping Below Ground: All interior domestic water piping shall be type "K" and drawn copper tubing (SIL-FOS 2, FOS-FLO 7 or other silver brazing material). This is required for the water service line from the shut-off valve in the building to a point 5 feet outside the building.
- Domestic Water Distribution Piping Above Ground: Hard copper tube, Type L.
- Soil, Waste, and Vent Piping Below Ground: Schedule 40 1/2" Polyvinyl chloride (PVC) plastic DWV pipe.
- Soil, Waste, and Vent Piping Above Ground: Hubless 4" on soil pipe or Polyvinyl chloride (PVC) plastic DWV pipe.
- Note: PVC piping is not permitted in air-handling ceiling spaces, use only cast-iron or ductile iron pipe in these locations.

B. The following applications are for from 0" to 10" outside the building to the utility point of connection (POC).

Underground domestic water service piping from a point 5 feet outside the building to the POC. (See Site Utilities Plan for which piping material and POC is required):

- 3/4" - 1-1/4" Schedule 40 PVC with 90° elbows and 90° tees.
- 1-1/2" - 3" Schedule 40 PVC with 90° elbows and 90° tees.
- 3/4" - 3" 1/2" Schedule 40 cast iron pipe with 90° elbows and 90° tees.
- 3/4" - 3" 1/2" Schedule 40 cast iron pipe with 90° elbows and 90° tees.
- 3/4" - 3" 1/2" Schedule 40 cast iron pipe with 90° elbows and 90° tees.

Underground sanitary sewer service piping from a point 5 feet outside the building to the POC.

- Polyvinyl chloride (PVC) sewer pipe shall conform to ASTM D3034 (SDR-35).
- Cast iron pipe shall conform to USAS1 #A-21 class 50.

C. GAS PIPE MATERIALS

Low-Pressure Gas Systems, above Ground within or outside Building:

Use the following:

- 2" and smaller: Steel pipe, malleable-iron, threaded fittings, and threaded joints.
- 2" and larger: Steel pipe, butt-welding fittings, and welded joints.

SEISMIC RESTRAINTS (ONLY REQUIRED FOR SEISMIC DESIGN CATEGORIES C,D,E,F)

CONTRACTOR TO REFER TO ARCHITECTURAL SHEET G1.1 FOR SEISMIC DESIGN CATEGORY.

IF REQUIRED SEE SEISMIC DETAILS SHEET ME-1

PIPING LEGEND

WS	WATER SERVICE (BELOW GRADE)
HW	HOT WATER
CW	COLD WATER
W	WASTE
S	SOIL
V	VENT
G	GAS
GS	GAS SERVICE (BELOW GRADE)

WATER HAMMER ARRESTER, SEE SCHEDULE
 FLOOR DRAIN, SEE SCHEDULE
 CLEANOUT (INTERIOR), SEE SCHEDULE
 CLEANOUT (EXTERIOR), SEE SCHEDULE
 (P) BALL VALVE

GAS LOAD

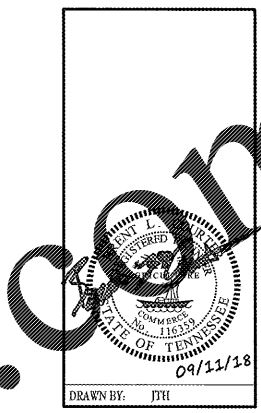
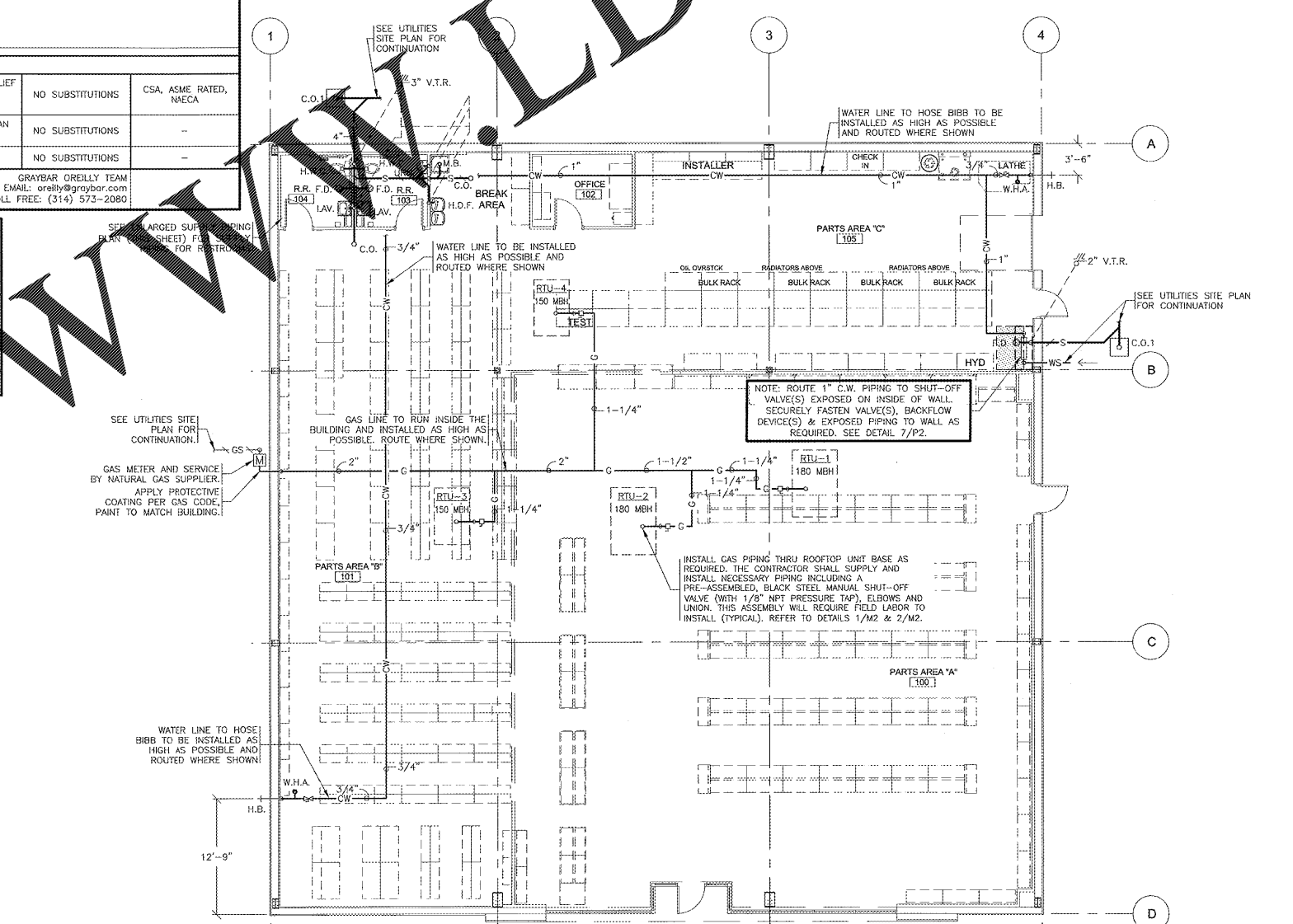
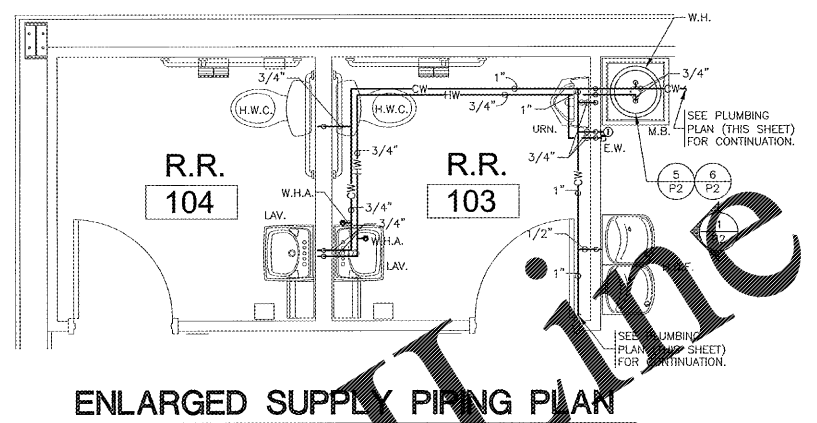
(PIPE SIZING BASED ON INTERNATIONAL FUEL GAS CODE, TABLE 402.4(2))

ITEM	MBH/INPUT
ROOFTOP UNIT (RTU-1)	180
ROOFTOP UNIT (RTU-2)	180
ROOFTOP UNIT (RTU-3)	150
ROOFTOP UNIT (RTU-4)	150
TOTAL CONNECTED LOAD	660

GAS PIPING SIZED USING LONGEST MAXIMUM RUN OF EQUIVALENT LENGTH OF PIPING = 150'-0"

INLET PRESSURE = 7in W.C. OR 1/4 psig
 MAXIMUM PRESSURE DROP = .5 INCH W.C. AND .6 SPECIFIC GRAVITY

NOTE: SEE THE APPLICABLE PLUMBING CODE FOR MINIMUM WASTE PIPING SLOPE.



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 CORPORATE OFFICES
 233 SOUTH PATTERSON
 SPRINGFIELD, MO 65802
 (417) 862-2074 TELEPHONE
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COMM # 4231
 DATE: 09.11.18
 REVISION DATE:

