

# PLUMBING SYMBOLS

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS, ETC. ARE NECESSARILY USED ON THE DRAWINGS.

ANNOTATION	PIPING
① PLUMBING PLAN NOTE CALLOUT	--- DOMESTIC COLD WATER (CW)
② PLUMBING EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED); REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES.	--- DOMESTIC HOT WATER (HW)
③ EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)	--- DOMESTIC HOT WATER RETURN (HWR)
④ MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)	T TRAP PRIMER LINE (T)
⑤ CONNECTION POINT OF NEW WORK TO EXISTING	S SANITARY PIPING - BELOW FLOOR (S)
⑥ DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER	DW OILY WASTE (OW)
⑦ SECTION CUT DESIGNATION	V VENT (V)
	ID INDIRECT DRAIN (ID)
	CD CONDENSATE DRAIN (CD)
	ACD AUXILIARY CONDENSATE DRAIN (ACD)
	SPD SUMP OR SEWAGE PUMP DISCHARGE (SPD)
	G NATURAL GAS (G)
	CA COMPRESSED AIR (CA)
	OP OIL PIPING
	⊕ FLOOR DRAIN, SIZE & TYPE
	⊖ BALL VALVE
	⊘ SHUTOFF VALVE
	⊙ WATER METER
	⊚ STRAINER
	⊛ STRAINER WITH BLOWOFF
	⊜ GAS PRESSURE REGULATOR
	⊝ THERMOSTATIC MIXING VALVE
	⊞ BACKFLOW PREVENTER
	⊟ PRESSURE GAUGE
	⊠ UNION
	⊡ FLANGE CONNECTION
	⊢ HOSE BIBB (HB)
	⊣ CLEANOUT
	⊤ WALL CLEANOUT (WCO)
	⊥ FLOOR CLEANOUT (FCO)
	⊦ EXTERIOR CLEANOUT (ECO)
	⊧ ELBOW UP
	⊨ ELBOW DOWN
	⊩ TEE UP
	⊪ TEE DOWN
	⊫ ELBOW UP WITH SHUT-OFF VALVE (SOV)
	⊬ ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
	⊭ TEE UP WITH SHUT-OFF VALVE (SOV)
	⊮ TEE DOWN WITH SHUT-OFF VALVE (SOV)
	⊯ WATER HAMMER ARRESTER (WHA) WITH POI SIZES, (A, B, C, D, & F)
	⊰ P-TRAP
	⊱ GAS COCK

## STANDARD MOUNTING HEIGHTS

**PLUMBING** (AFF, AFG, UNLESS NOTED OTHERWISE)  
REFER TO THE ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHTS. UNO, INSTALL PLUMBING FIXTURES WITH THE MOUNTING HEIGHTS AS LISTED BELOW WITH FINAL APPROVAL BY THE ARCHITECT.

ADA ACCESSIBLE DRINKING FOUNTAIN	25" FLOOR TO RIM
ADA ACCESSIBLE LAVATORIES	34" FLOOR TO RIM
ADA ACCESSIBLE SHOWER VALVES	38" MINIMUM TO 48" MAXIMUM FLOOR TO CENTERLINE
ADA ACCESSIBLE TUB VALVES	CENTER BETWEEN GRAB BAR AND TUB RIM
ADA ACCESSIBLE URINALS	17" FLOOR TO RIM
ADA ACCESSIBLE WATER CLOSET	17" TO 19" FLOOR TO TOP OF SEAT
ADA ACCESSIBLE WATER COOLER	35" FLOOR TO RIM
ADULT STANDARD DRINKING FOUNTAIN	40" FLOOR TO RIM
ADULT STANDARD WATER COOLER	30" FLOOR TO RIM
CHILD STANDARD DRINKING FOUNTAIN	30" FLOOR TO RIM
CHILD STANDARD WATER COOLER	14" FLOOR TO RIM
CHILD URINAL	14" FLOOR TO RIM
CLINIC SERVICE SINKS	30" FLOOR TO RIM
JANITOR'S SINK FAUCET FITTINGS	42" FLOOR TO CENTERLINE
HOSE BIBS	36" AFF TO CENTERLINE
ICE MAKER OUTLET BOXES	24" FLOOR TO CENTER OF BOX
LAVATORY OR SINK	31" FLOOR TO RIM
NON FREEZE HYDRANT	18" AFF TO CENTERLINE
SHOWER HEADS	6'-0" MEN & 5'-6" WOMEN FLOOR TO CENTERLINE
SHOWER VALVES	48" MEN & 42" WOMEN FLOOR TO CENTERLINE
STANDARD URINALS	22" FLOOR TO RIM
SURGEDOWN SCRUB-UP SINKS	35" FLOOR TO FRONT RIM
TUB VALVES	32" FLOOR TO CENTERLINE
WASHING MACHINE OUTLET BOXES	42" FLOOR TO RIM
WATER CLOSET	15" FLOOR TO RIM

## ABBREVIATIONS

AF	ABOVE FINISHED FLOOR	HW	HANDHELD
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
AHJ	AIR HANDLING UNIT	N/C	NORMALLY CLOSED
BFF	BELOW FINISHED FLOOR	N/O	NORMALLY OPEN
BFG	BELOW FINISHED GRADE	ORD	OVERFLOW ROOF DRAIN
BP	BOTTOM OF PIPE	PI	PLUMBING INSTITUTE
BS	BOTTOM OF STRUCTURE	PVC	POLYVINYL CHLORIDE
BTU	BRITISH THERMAL UNIT	PRV	PRESSURE REDUCING VALVE
CPVC	CHLORINATED POLYVINYL CHLORIDE	RD	ROOF DRAIN
DN	DOWN	RPM	REVOLUTIONS PER MINUTE
DTU	DRAINAGE FIXTURE UNIT	RTU	ROOFTOP UNIT
DS	DOWNSPOUT	SF	SQUARE FEET, SUPPLY FAN
E	EXISTING TO REMAIN	SP	SUMP PUMP
EVC	ELECTRIC WATER COOLER	SS	STAINLESS STEEL, SANITARY
FD	FLOOR DRAIN	SEWER	SEWER, SOIL STACK
FFA	FROM FLOOR ABOVE	TDH	TOTAL DYNAMIC HEAD
FFB	FROM FLOOR BELOW	TFA	TO FLOOR ABOVE
FF	FINISHED FLOOR	TFB	TO FLOOR BELOW
FL	FLOW LINE	TYP	TYPICAL
FLA	FULL LOAD AMPS	UL	UNDERWRITERS LABORATORIES, INC.
FLR	FLOOR	UNO	UNLESS NOTED OTHERWISE
GPM	GALLONS PER MINUTE	UPS	UNINTERRUPTIBLE POWER SUPPLY
HD	HEAD, HUB DRAIN	V	VOLTS
IE	INVERT ELEVATION	VCP	VITRIFIED CLAY PIPE
IN WC	INCHES OF WATER COLUMN	VS	VENT STACK
JB	JUNCTION BOX	VTR	VENT THROUGH ROOF
J-BOX	JUNCTION BOX	W	WITH
KW	KILOWATT	W/O	WITHOUT
MAU	MAKE-UP AIR UNIT	WC	WATER COLUMN
MAX	MAXIMUM	WS	WASTE STACK
MBH	1000 BTU PER HOUR	WSFU	WATER SUPPLY FIXTURE UNIT

## PLUMBING FIXTURE SCHEDULE:

FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT ARE PROVIDED BY THE PLUMBING CONTRACTOR. SUBMIT SHOP DRAWINGS ON EACH OF THESE ITEMS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION AND INSTALLATION REQUIREMENTS. VERIFY ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE PLUMBING FIXTURE MOUNTING HEIGHTS.

- (ECD) EXTERIOR CLEANOUT: JAY R. SMITH # 4261L SERIES DUO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORRATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
- (BCD) DOUBLE CLEANOUT: TWO (2) JAY R. SMITH # 4261L SERIES DUO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORRATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
- (FCD) FLOOR CLEANOUT - HEAVY DUTY: JAY R. SMITH # 4111L CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORRATED NICKEL BRONZE TOP. REFER TO SPECIFICATIONS FOR INSTALLATION. SEE DETAIL 5/P-5.01.
- (WCD) WALL CLEANOUT: JAY R. SMITH # 4530S CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION. NOTE FOR CLEANOUTS: USE TYPICAL CLEANOUTS, AVOID WALL CLEANOUTS WHENEVER POSSIBLE.
- (EVC) ELECTRIC WATER COOLER (ADA ACCESSIBLE): ELKAY EZ158LSLK ELKAY EZ120 BOTTLE FILLING STATION & VERSAILE 88-LEVEL ADA COOLER, NON-FILTERED 8 GPH LIGHT GRAY. CHILLING CAPACITY OF 8 GPH OF 50°F WATER BASED ON 80°F INLET TEMPERATURE AND 80°F AMBIENT, PER ASHRAE 18 TESTING. FEATURES SHALL INCLUDE HANDS FREE, GREEN TICKER, LAMINAR FLOW, ANTIMICROBIAL REAL DRAIN, FURNISHED WITH FLEXIGUARD SAFETY BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR WITH ELECTRONIC FRONT AND SIDE BUBBLER PUSH BAR ACTIVATION. PRODUCT SHALL BE WALL MOUNT (ON WALL) FOR INDOOR APPLICATIONS, SERVING 2 STATIONS. UNIT SHALL BE CERTIFIED TO UL 399 AND CAN/CSA C22.2 NO.120. UNIT SHALL BE LEAD-FREE DESIGN WHICH IS CERTIFIED TO NSFANSI 61 & 372. MCGUIRE #8872CF 1-1/4" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON.
- ELECTRICAL REQUIREMENTS: 120-VOLT, 3.7 FULL LOAD AMPS.
- (ET) EXPANSION TANK: AMTROL "THERM-X-TROL" # ST-5, WELDED STEEL PRESSURE TANK, POLYPROPYLENE LINING, FLEXIBLE BUTYL DIAPHRAGM, AIR CHARGING VALVE, 150 PSI MAXIMUM WORKING PRESSURE, 2.0 GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.
- (FB-1) FLOOR DRAIN: JAY R. SMITH # 2095L (-A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS WITH TRAP PRIMER IN SHOP TOLERANCE. NOTE FOR FLOOR DRAINS: USE 6" DRAINS IN SHOP, AND 4" DRAINS IN RESTROOMS.
- (HB) HOSE BIBB: CHICAGO FAUCET # 952-CP, POLISHED CHROME PLATED BRASS, 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, # 293-6 LOOSE KEY HANDLE, AND INTEGRAL VACUUM BREAKER. SVB 1056 PRESSURE VACUUM BREAKER SHALL BE INCLUDED WITH INSTALLATION.
- (L-1) WALL-MOUNTED LAVATORY: AMERICAN STANDARD # 0355.012 "LUCERNE" 20-1/2" X 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW. FAUCET: CHICAGO FAUCET # 802-VCP 4" CENTERSET, VANDAL RESISTANT, FAUCET WITH # 390 LEVER HANDLES AND # E12 2.2 GPM AERATOR. TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # 2165CCLK LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 8872CF 1-1/4" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, ZURN 21231 CHAIR CARRIER, ANCHOR TO FLOOR.
- (L-2) WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): AMERICAN STANDARD # 0355.012 "LUCERNE" 20-1/2" X 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW. FAUCET: CHICAGO FAUCET # 802-VCP 4" CENTERSET, VANDAL RESISTANT, FAUCET WITH # 390 LEVER HANDLES AND # E12 2.2 GPM AERATOR. TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # 2165CCLK LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 8872CF 1-1/4" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, ZURN 21231 CHAIR CARRIER, ANCHOR TO FLOOR AND TRUEBRO "HANDI LAV-GUARD" # 102 INSULATION KIT FOR WATER AND WASTE PIPES.
- (SK-1) SINK (ADA ACCESSIBLE): ELKAY # LR40-1517-2, 15" X 17-1/2" X 5-1/2" DEEP SINGLE COMPARTMENT SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL. FIXTURE WITH FAUCET LEDGE. SET IN 4" OF PUTTY. FAUCET: CHICAGO FAUCET # 895-3170ZFCOP 4" CENTERSET FAUCET WITH WRIST BLADE HANDLES AND # E13 2.2 GPM AERATOR. TRIM: MCGUIRE # 2165CC WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 151M CUP STOP VALVE WITH 1-1/2" 17 GAUGE TAILPIECE, MCGUIRE # 8912-C-F 1-1/2" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT AND ESCUTCHEON, TRUEBRO "HANDI LAV-GUARD" # 102 INSULATION KIT FOR WATER AND WASTE PIPES.
- (SK-2) SINK: ELKAY #SS8124 FREE STANDING, RECTANGULAR 18 QUINCE STAINLESS STEEL, SINGLE COMPARTMENT. FAUCET: ELKAY FAUCET #LK-940 WITH 18" SWING SHUT W/ BUCKET SUPPORT. TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # 2165CCLK LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 8872CF 1-1/4" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON. BOSS BACK LEGS OF SINK TO BLOCK WALL AFTER INSULATION WITH EXPANSION ANCHOR AND NEOPRENE WASHERS.
- (ATP) TRAP PRIMER: PRECISION PLUMBING PRODUCTS # PR-500 "PRIME RITE", CORROSION RESISTANT BRASS BODY, "O" RING SEALS, 1/2" INLET AND OUTLET, AND INTEGRAL VACUUM BREAKER. INSTALL THE VALVE AT A MINIMUM OF 12" ABOVE FINISHED FLOOR. SERVES RESTROOM FLOOR DRAINS AND SINKS. ALL TRAP PRIMERS SHALL BE ASSE 1018 APPROVED.
- (TS) TRAP SEAL: RECTORSER # SURE-SEAL #97044 TRAP SEAL WITH FLOOR DRAINS IN SHOP AREA.
- (IMB) ICE MAKER BOX: GUY GRAY #ICE # BUBBLS, 20 GAUGE GALVANIZED STEEL BOX, 18 GAUGE STEEL FACEPLATE, BOTTOM INLET WITH 1/2" X 1/4" COMPRESSION ANGLE STOP VALVE. TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING.
- (WC-1) FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): AMERICAN STANDARD # 2377.100 "CADET" TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, CLOSE-COUPLED TANK WITH PRESSURE ASSISTED SIPHON JET ACTION. INSTALL TRIP LEVER ON THE WIDE SIDE OF THE STALL. TRIM: CHURCH # 9500SSC WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS, MCGUIRE # 2166CC ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.
- (WHA) WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM "O" RING SEALS, ASSE 1010 CERTIFICATION. PROVIDE POI SIZES "A" THROUGH "F" AS SHOWN ON PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS.
- (WH) WATER HEATER: A.O. SMITH # DEL-20, 20 GALLON GLASS LINED STORAGE TANK, ONE 2.5KW DIRECT-IMMERSION HEATING ELEMENT, SURFACE-MOUNTED THERMOSTATS, ANODE ROD, T & P VALVE, AND 18 GALLONS PER HOUR RECOVERY AT A 60 DEGREE TEMPERATURE RISE. SET WATER HEATER OPERATING TEMPERATURE TO 120 °F. ELECTRICAL REQUIREMENTS: 208 VOLT SINGLE PHASE, 12.0 FULL LOAD AMPS.
- (EW) WALL-MOUNTED EMERGENCY EYE WASH: EDDY SAFETY PRODUCTS MODEL #01030401.
- (TMV) THERMOSTATIC MIXING VALVE: POWERS # E480, SOLID BRASS BODY, WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110 DEGREES. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS(S).
- (HBE) HOSE BIBB - EXTERIOR: HOSE BIB WITH LOCKABLE RECESSED WALL BOX. ENCLOSED FREEZE-PROOF UNIT WITH KEY - ALL EXTERIOR LOCATIONS.
- (RAC) AIR COMPRESSOR: FURNISHED BY OWNER, INSTALLED BY THE OWNER.
- (TD-1) TRENCH DRAIN: ZURN #Z886 MODULAR CHANNEL SECTIONS, HIGH DENSITY POLYETHYLENE. WITH BUILT IN SLOPE. PROVIDE CATCH BASIN ZURN #Z887-6. PROVIDE GRATE ZURN #P6-DGC.
- (BFP) BACKFLOW PREVENTER: WATTS LF-909-OT REDUCED PRESSURE ZONE ASSEMBLIES WITH A 908AG FITTING FOR DRAINAGE.
- (RCP) CIRCULATION PUMP: BELL & GOSSETT #1100, BRONZE PUMP WITH A CAPACITY OF 9 GPM AT 8 FT HEAD, 1/12 HORSEPOWER, 1750 RPM, 115V-1A, 1.75A. PROVIDE WITH AQUASTAT. INSTALL NEAR WATER HEATER PER MANUFACTURER'S INSTRUCTIONS.

## PLUMBING GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- FURNISH A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS PREPARED BY THE ENGINEER-OF-RECORD AFTER FINAL INSPECTION OF INSTALLED PLUMBING SYSTEMS.
- FURNISH TO THE OWNER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
- PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
- VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS. ALL EXPOSED PIPING TO BE INSULATED WITH ARMAFLEX.
- COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
- CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS.
- PAINT ALL EXPOSED GAS PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
- COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10" MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2" CLEARANCE FROM ALL OTHER EQUIPMENT. NO ROOF PENETRATIONS ON FRONT OF BUILDING.
- INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" INSULATION TO PREVENT FREEZING.
- PROVIDE SHIELDED ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE DIVISION 15 SPECIFICATION SECTION "DRAINAGE AND VENT SYSTEMS" FOR MORE INFORMATION.
- WATER HAMMER ARRESTORS SHALL BE 1/2" A" UNLESS NOTED OTHERWISE.
- PROVIDE CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
- AIR PIPING MUST BE BLED THOROUGHLY PRIOR TO CONNECTING TO TOOLS OR EQUIPMENT.
- ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH THE 2017 FLORIDA MECHANICAL CODE, THE 2017 FLORIDA PLUMBING CODE, THE 2017 FLORIDA ENERGY CONSERVATION CODE, ALL STATE REQUIREMENTS, AND LOCAL REQUIREMENTS.
- ALL FLOOR CLEANOUTS TO BE FLUSH / LEVEL WITH FINISH FLOOR.

DESIGN COMPLIES WITH 2017 FECC

FOR ALL BIDDING QUESTIONS, CONTACT THE OWNER. DO NOT CONTACT THE ENGINEER.

## PLUMBING SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
P-1.01	PLUMBING SCHEDULES
P-2.01	PLUMBING SITE PLAN
P-3.01	PLUMBING FLOOR PLANS
P-3.02	NATURAL GAS & COMPRESSED AIR PLANS
P-4.01	PLUMBING RISER DETAILS
P-5.01	PLUMBING DETAILS
P-6.01	PLUMBING SPECIFICATIONS
P-6.02	PLUMBING SPECIFICATIONS

## GAS LOAD SUMMARY

SYSTEM	DESIGNATION	EQUIPMENT	MBH
BUILDING HEATING	AHJ-1	ROOF	80
		SUB-TOTAL	80
BUILDING HEATING	UH-1	UNIT HEATER	105
	UH-2	UNIT HEATER	105
		SUB-TOTAL	210
TOTAL NATURAL GAS CONNECTED LOAD			290
MBH CAPACITY			290
TOTAL DEVELOPED LENGTH INCLUDING EQUIVALENT PIPE LENGTH FOR FITTING AND VALVE FRICTION LOSSES TO GAS METER			96 FT X 125 = 115 FT
CONSULT GAS UTILITY COMPANY FOR REGULATOR RATING			

## PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	S, W OR V	HURLESS CAST IRON (USE PVC WHERE ALLOWED BY CODE) ****(ABS PIPE NOT ALLOWED)****
SANITARY DRAINAGE & VENT (BELOW GRADE)	S, W OR V	SERVICE WEIGHT CAST IRON (PVC DWV OPTIONAL) ****(ABS PIPE NOT ALLOWED)****
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	UPONOR PRE-INSULATED PIPE (NO SUBSTITUTIONS) COLOR CODED RED/HOT & BLUE/COLD.
POTABLE WATER - 2" & SMALLER (BELOW GRADE)	CW, HW OR HWR	UPONOR PRE-INSULATED PIPE (NO SUBSTITUTIONS) COLOR CODED RED/HOT & BLUE/COLD.
NATURAL GAS (ABOVE GRADE & ON ROOF)	G	SCHEDULE 40 BLACK STEEL
NATURAL GAS (BELOW GRADE)	G	APPROVED "PE" PIPE FOR GAS
COMPRESSED AIR	CA	TYPE L HARD DRAWN COPPER
OIL PIPING	OL	5/8" O.D., 0.049 WALL, J524 HYDRAULIC PIPING

REFER TO SPECIFICATIONS FOR FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION

## FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (FV)	1-1/4"	---	4"	2"
WATER CLOSET (TANK)	1/2"	---	4"	2"
URINAL	1"	---	2"	2"
LAVATORY / HAND SINK	1/2"	1/2"	2"	1-1/2"
DRINKING FOUNTAIN	1/2"	---	2"	1-1/2"
JANITOR'S SINK	1/2"	1/2"	3"	2"
WASH FOUNTAIN	1"	1"	2"	1-1/2"
FLOOR DRAIN	REFER TO PLAN FOR SIZES			
SINK	1/2"	1/2"	2"	2"
FLOOR CLEANOUT	REFER TO PLAN FOR SIZES			
WALL CLEANOUT	REFER TO PLAN FOR SIZES			
CLEANOUT TO GRADE	REFER TO PLAN FOR SIZES			
ICE-MAKER CONNECTION BOX	1/2"	---	2"	2"
TRAP PRIMER	1/2"	---	---	---

NOTE:  
PIPE SIZES SHOWN ARE MINIMUM. NOT ALL FIXTURES SHOWN IN THIS SCHEDULE ARE USED ON THIS PROJECT.

THIS SHEET IS PART OF THE CONSTRUCTION DOCUMENTS. OTHER SHEETS INCLUDING SPECIFICATIONS APPLY. THAT SHOWN HEREON IS SCHEMATIC IN NATURE AND NOT TO BE USED AS A SHOP DRAWING. THEREFORE, INCLUDE ALL MODIFICATIONS REQUIRED TO CONFORM TO SITE CONDITIONS AND THE EQUIPMENT AND MATERIAL USED. VERIFY LOCATIONS AND DIMENSIONS OF ALL ARCHITECTURAL AND STRUCTURAL ELEMENTS AS SHOWN ON THEIR RESPECTIVE DOCUMENTS. THESE ELEMENTS ARE SHOWN FOR REFERENCE AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION AND THE ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OF THESE ELEMENTS. NO DESIGN RESPONSIBILITY IS ASSUMED FOR ANY PORTION OF THE WORK THAT THE PROFESSIONAL ENGINEER HAS NOT SIGNED AND SEALED PER STATE/PROVINCE REQUIREMENTS.

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Revisions

1/23/20 - Prototype Update

4/1/20 - City Comments

4/9/20 - T2 Client Rev.

Date

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Project No. 19-097

Drawn By: MDB

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Sheet Title:

PLUMBING SCHEDULE

Drawing No.

P-1.01

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