

### VIEW KEY

NAME → LEVEL NAME  
10'-0" → HEIGHT ABOVE PROJECT 0'-0"

1 → INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

INDICATES DIRECTION OF TRUE NORTH  
PLAN OR DETAIL NUMBER  
PLAN OR DETAIL NAME  
1/8" = 1'-0"  
PLAN OR DETAIL SCALE

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS  
DETAIL REFERRED TO BY SECTION CUT  
SHEET DETAIL IS LOCATED ON → T101

**LINE TYPE AND TAG KEY:**

NEW WORK BY THIS CONTRACTOR (WIDE LINE)  
NEW  
--- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)  
--- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)  
--- EXISTING  
--- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)  
--- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

**TAG** UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

### PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
—CW—	COLD WATER - POTABLE
—D—	DRAIN
—HW—	HOT WATER - POTABLE
—HWC—	HOT WATER CIRCULATING - POTABLE
—SAN—	SANITARY DRAINAGE
—STS—	STORM DRAINAGE (SECONDARY)
—TWC—	THERMAL WATER COLD
—TWH—	THERMAL WATER HOT
—V—	VENT
—	PIPE CONTINUATION
—	PIPE CAP
—	PIPE DOWN
—	PIPE UP OR UP/DOWN
—	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
—	PITCH PIPE IN DIRECTION
—	DIRECTION OF FLOW IN PIPE
—	ROUTE TO DRAIN
—	DIELECTRIC CONNECTION
—	UNION/FLANGE
—	SHUTOFF VALVE NORMALLY OPEN
—	SHUTOFF VALVE NORMALLY CLOSED
—	THROTTLING VALVE
—	BALANCING VALVE (NUMBER INDICATES GPM)
—	AUTOMATIC BALANCING VALVE
—	MIXING VALVE
—	CONTROL VALVE (THREE-WAY)
—	CONTROL VALVE (TWO-WAY)
—	CHECK VALVE
—	"WYE" - STRAINER
—	"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
—	BACKFLOW PREVENTER
—	VACUUM BREAKER
—	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB

### PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
EE	EXISTING
EE	EMERGENCY EYEWASH
ES	EMERGENCY SHOWER
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
GB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
NIC	NOT IN CONTRACT
NT	NEUTRALIZATION TANK
OS	OIL SEPARATOR
RD	ROOF DRAIN
SCCR	SHORT CIRCUIT CURRENT RATING
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UON	UNLESS OTHERWISE NOTES
YCO	YARD CLEANOUT

### CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.C.	ASBESTOS ABATEMENT CONTRACTOR
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
F.S.C.	FOOD SERVICE CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR

- ### PLUMBING GENERAL NOTES:
- THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
  - CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
  - CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
  - ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
  - INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.
  - REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
  - FOR CLARITY, NOT ALL VALVES HAVE BEEN SHOWN. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER PIPING SERVING EACH ROOM WITH FIXTURES. ANGLE STOPS SHALL NOT BE CONSIDERED SHUTOFF VALVES.
  - EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.
  - P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.

### PLUMBING ROUGH-IN SCHEDULE

NOTES: (APPLIES TO ALL PLUMBING FIXTURES LISTED BELOW)  
1) SIZES SHOWN ARE MINIMUMS. LARGER SIZES SHOWN ON THE DRAWING SHALL DICTATE THE ROUGH-IN SIZE.  
2) SANITARY RISERS UP IN WALL TO FIXTURES SHALL BE A MINIMUM OF 2".  
3) DOMESTIC WATER BRANCH PIPING OUTSIDE OF THE WALL/CHASE SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. ONLY THE FINAL RISE/DROP SHALL BE SMALLER.  
4) FINAL SANITARY SIZE SHALL MATCH P-TRAP SIZE (REFER TO MATERIAL LIST).

TAG NAME	DESCRIPTION	COLD WATER	HOT WATER	SANITARY	VENT
FS-1	FLOOR SINK			4"	2"
FS-2	FLOOR SINK			3"	1 1/2"

### PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
BFP-1	BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, STAINLESS STEEL CONSTRUCTION, SIZE SAME AS PIPE 3", NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES, GATE STYLE SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, RATED FOR 175 PSI AT 33°F TO 140°F, 15 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TESTED, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR. AWWA C511-82, ASSE 1013, IAPMO AND SBCCI LISTED.	WATTS (957), APOLLO (RPLF4A), WILKINS (375AST), MIFAB (BECCO BARRACUDA 40 FRP SS)
FS-1	FLOOR SINK - CAST IRON BODY, NICKEL BRONZE RIM AND GRATE, 12" SQUARE, 4" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH ALUMINUM DOME STRAINER, ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP.	ZURN (Z1901), SMITH (3151), WADE (9140), JOSAM (49340A), WATTS (FS-740), SIOUX CHIEF (861-2xXFNWC), SUN (FS2000), MIFAB (FS1730)
FS-2	FLOOR SINK - CAST IRON BODY, NICKEL BRONZE RIM AND GRATE, 8" SQUARE, 3" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH STAINLESS STEEL ALUMINUM DOME STRAINER, ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP.	ZURN (Z1910), SMITH (3101), WADE (W-9110), JOSAM (49300), WATTS (FS-710), SIOUX CHIEF (861-2xXFNWC), SUN (FS2300), MIFAB (FS1520)
HB-1	HOSE BIBB - FOR INDOOR USE, SURFACE MOUNTED, BRASS CONSTRUCTION WITH STANDARD FINISH, VACUUM BREAKER, 3/4" MALE HOSE THREAD, 3/4" FPT INLET TOP AND BOTTOM, INCLUDE BRASS PLUG FOR CLOSING OFF UNUSED SIDE, ASSE 1052 LISTED AND APPROVED.	PRIER (P-166NP.75), WOODFORD (V26)

MOUNT WITHIN 60" OF FINISHED FLOOR. ROUTE DRAIN PIPE FROM AIR GAP FITTING TO FLOOR DRAIN. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.

MOUNT AT 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON DRAWINGS.

### PIPE INSULATION SCHEDULE (PLUMBING)

GENERAL NOTES:  
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS.  
2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.  
3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.  
4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723  
5. TYPE C 4" SHALL BE INSTALLED IN TWO (2) 2" LAYERS WITH STAGGERED SEAMS.  
6. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.  
7. DIRECT BURED PIPING SHALL ONLY USE TYPE C OR TYPE E. REDUCTION IN THICKNESS FOR DIRECT BURED PIPING IS ALLOWED PER ASHRAE / IECC AS APPLICABLE.

SYMBOL	PIPE SYSTEM	INSULATION TYPE	INSULATION THICKNESS PER NOMINAL PIPE OR TUBE SIZE					NOTES
			< 1"	1" TO < 1.5"	1.5" TO < 4"	4" TO < 8"	≥ 8"	
22 PLUMBING - WATER								
CW	COLD WATER - POTABLE	A (GlsFbr), B (Elasto), E (Pllyoso), F (Phenol)	A, B	A, B	A, B	-	-	

### PLUMBING SHEET INDEX

P0.0	PLUMBING COVERSHEET
PX1.1	LOWER LEVEL DEMOLITION PLAN - PLUMBING
PX1.2	UPPER LEVEL DEMOLITION PLAN - PLUMBING
P1.1	LOWER LEVEL PLAN - PLUMBING
P1.2	UPPER LEVEL PLAN - PLUMBING
P5.0	PLUMBING DETAILS
GRAND TOTAL: 6	



A/E FIRMS	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
ARCH: QUINN EVANS 219 1/2 N. MAIN STREET ANN ARBOR, MI T: 734.663.5888	SGB		LIBBEY BATHHOUSE	128
MEP/ENG: IMEG CORP. 1400 BALTIMORE STREET SUITE 300 KANSAS CITY, MO T: 816.842.8437	CADD: WMM		PLUMBING COVERSHEET	182951
	TECH. REVIEW: SCB		REHABILITATE BATHHOUSES HOT SPRINGS NATIONAL PARK	PMIS/PKG NO. 318915
	DATE: 10.27.2023	02 P0.0		SHEET 226 OF 286