

**PLUMBING GENERAL NOTES**

- GENERAL PLUMBING NOTES:**
1. CODES AND PERMITS: ALL WORK TO BE DONE IN ACCORDANCE WITH APPLICABLE LOCAL AND STATE CODES. PERMIT AND CONNECTION FEES TO BE PAID BY CONTRACTORS AS REQUIRED. WARRANTY: WORK AND MATERIALS TO BE WARRANTED FOR ONE (1) YEAR AFTER PROJECT COMPLETION.
  2. THE CONTRACTOR SHALL FURNISH ALL LABOR, INSTALL ALL MATERIAL AND EQUIPMENT AND INCLUDE SERVICES AND INCIDENTALS TO THE INSTALLATION OF WORK INVOLVED FOR A COMPLETE AND OPERATING FACILITY.
  3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS, INSPECTIONS, AND PAY ALL FEES REQUIRED FOR THIS JOB.
  4. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSEMBLING ANY EQUIPMENT SHIPPED IN SECTIONS, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  5. EACH EQUIPMENT CONNECTION TO HAVE SHUT-OFF COCK, DRIP LEG, AND UNION. WHERE DISTRIBUTION PRESSURE IS HIGHER THAN UTILIZATION PRESSURE, PROVIDE SUITABLE PRESSURE REGULATOR.
  6. PLUMBING FIXTURES, TRIM, AND ACCESSORIES: PROVIDE FIXTURES, TRIM, CARRIERS AND ACCESSORIES AS SCHEDULED AND REQUIRED FOR COMPLETE INSTALLATION AND PROPER OPERATION. NO "ALTERNATES" OR "EQUALS" MAY BE USED WITHOUT THE WRITTEN PRE-AUTHORIZATION BY THE ARCHITECT OR ENGINEER.
  7. FAUCETS FOR LAVATORIES AND SINKS TO HAVE WASHERLESS CARTRIDGES WITH POSITIVE POSITIONING SHUTOFF AGAINST METALLIC OR CERAMIC STOPS.
  8. HANDICAPPED PROVISIONS: HEIGHTS OF FIXTURES DESIGNATED FOR HANDICAPPED USE SHALL BE IN ACCORDANCE WITH ANSI A117.1-80, ADA, OR LOCALLY APPLICABLE HANDICAP CODES.
  9. OFFSET P-TRAPS TO MAXIMIZE KNEE SPACE AT SINKS AND LAVATORIES. INSULATE EXPOSED WATER AND WASTE PIPING WITH PREFABRICATED INSULATING ASSEMBLY.
  10. FLUSH OPERATOR DEVICE FOR WATER CLOSETS TO BE LOCATED ON SIDE OF FIXTURE WITH WIDE DIMENSION IN TOILET STALL OR ENCLOSURE.
  11. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND SHOW ONLY THE RELATIONSHIP BETWEEN EQUIPMENT AND CONNECTION. DO NOT SCALE THE DRAWINGS FOR EXACT SIZES OR LOCATIONS. FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION OR FABRICATION.
  12. AS PART OF THE PROJECT CLOSEOUT THE PLUMBING CONTRACTOR SHALL PROVIDE FULL PLUMBING SYSTEM AS-BUILTS AS WELL AS TEST AND BALANCE REPORTS OF ALL PERTINENT SYSTEMS.
  13. INSTALL PIPING TIGHT TO BEAMS, JOISTS, COLUMNS, WALLS AND OTHER PERMANENT ELEMENTS OF THE BUILDING. PROVIDE SPACE TO PERMIT INSULATION APPLICATIONS WITH 1" CLEARANCE OUTSIDE THE INSULATION. ALLOW SUFFICIENT SPACE ABOVE REMOVABLE CEILING PANELS TO ALLOW REMOVAL.
  14. REFER TO PLUMBING FIXTURE SCHEDULE FOR WATER, WASTE AND VENT CONNECTION SIZES.
  15. PROVIDE AUTOMATIC TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS, WHICH ARE LOCATED IN INTERIOR SPACES. PRIMERS TO BE INSTALLED IN CW PIPING AT NEAREST SUITABLE FIXTURE, PREFERABLY A LAVATORY. TRAPS TO HAVE FACTORY FABRICATED FITTING TO RECEIVE PRIMER LINE. PRIMERS TO HAVE AUTOMATIC OPERATION, WITH BRONZE BODY, INTEGRAL VACUUM BREAKER, NON-LIMING INTERNAL OPERATING ASSEMBLY, GASKETED BRONZE COVER, AND 1/2" CONNECTIONS. PRIMERS TO BE ZURN Z1022 OR EQUAL.
  16. PROVIDE SLEEVES FOR PIPES THRU FLOORS, MASONRY WALLS & FIRE OR SMOKE PARTITIONS. PENETRATIONS THROUGH WALLS AND FLOORS BELOW GRADE AND OUTSIDE WALLS SHALL BE SEALED AND CAULKED WATER, MOISTURE AND AIR TIGHT TO ARCHITECT APPROVAL.
  17. ALL PLUMBING PIPING ROUTING IN PLENUM RETURNS ARE TO BE PLENUM RATED.

**PLUMBING SPECIFICATIONS**

- DOMESTIC WATER:**
1. BACK FLOW PREVENTER AT THE BUILDING SERVICE ENTRY SHALL BE LOCAL AUTHORITY APPROVED TYPED IRRESPECTIVE OF WHAT IS SHOWN ON THE DRAWINGS. THE REQUIRED TYPE SHALL BE VERIFIED PRIOR TO BID. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH RECOMMENDED CLEARANCES FOR TESTING AND SERVICE. BACK FLOW PREVENTER SHALL BE LOCATED IN ACCORDANCE WITH STATE CODES, LOCAL CODES AND AUTHORITY HAVING JURISDICTION.
  2. ALL COLD WATER SUPPLY LINES TO HAVE IN-LINE SHUT-OFF VALVES AT CONNECTION POINT TO MAIN. ALL BRANCH DOMESTIC WATER PIPING TO PLUMBING FIXTURES TO HAVE IN-LINE SHUT-OFF VALVES. LOCATE SHUT-OFF VALVES WITHIN EASY REACH ABOVE SUSPENDED CEILINGS. SEE ARCH REFLECTED CEILING PLAN.
  3. INTERIOR ABOVE SLAB - TYPE L HARD-DRAWN COPPER WITH SOLDERED JOINTS.
  4. INTERIOR BELOW SLAB - TYPE L SOFT-DRAWN COPPER WITHOUT JOINTS IN SIZES 1-1/4" AND SMALLER, AND SILVER-BRAZED JOINTS IN SIZES 1-1/2" AND LARGER.
  5. EXTERIOR BURIED PIPING - TYPE L HARD-DRAWN COPPER WITH SOLDERED JOINTS, OR LOCAL CODES PERMITTING, POLYPROPYLENE (PP-R) SDR-11 'GREENPIPE' WITH FUSION WELDED JOINTS. INSTALL #10 AWG COPPER TRACER WIRE WITH PLASTIC PIPING AND TERMINATE ABOVE GRADE AT BUILDING.
  6. INSULATION: INSULATE DOMESTIC WATER LINES ABOVE GRADE WITH CLOSED CELL ELASTOMERIC INSULATION. THICKNESS AS FOLLOWS: 1/2" AT CW LINES AND 1" AT HW.
  7. IF DOMESTIC WATER PIPING MATERIAL USED IS PE-X ALL SIZES INDICATED ARE TO BE INCREASED BY ONE PIPE SIZE UNLESS USING COLD PRESS FITTINGS.
- SANITARY WASTE AND VENT (DWV) SYSTEM:**
1. ROUTE SANITARY AND VENT PIPING AS SHOWN. MAKE ALL CHANGES IN DIRECTION FOR SANITARY AND VENT PIPING USING APPROPRIATE "Y" BRANCHES, STRAIGHT TEES AND ELBOWS. MAKE NO CHANGE IN DIRECTION OF FLOW GREATER THAN 90 DEGREES. REDUCTION OF THE SIZE OF SANITARY PIPING IN THE DIRECTION OF FLOW IS PROHIBITED. SLOPE SANITARY PIPING A MINIMUM OF 1/8 INCH PER FOOT.
  2. ALL LOCATIONS - NO-HUB CAST IRON WITH GASKETED JOINTS, OR WHERE LOCAL CODES PERMIT, DWV (SCH. 40) SOLID WALL PVC WITH SOLVENT-WELDED JOINTS. CELLULAR (FOAM) CORE PVC IS AN UNACCEPTABLE SUBSTITUTION.
  3. IF PLASTIC PIPING IS USED, PROVIDE SUITABLE EXPANSION JOINTS IN VERTICAL RISERS. FLASHING - AT BUILT-UP ROOF, USE 4 LB. SHEET LEAD; AT METAL ROOF, COORDINATE WITH ROOF SYSTEM VENDOR.
  4. PROVIDE CLEANOUTS PER CODE AND WHERE INDICATED AS FOLLOWS: FLOOR: ZURN ZN-1400, WALL: ZURN Z-1441 WITH STAINLESS STEEL COVER EXTERIOR: ZURN ZN-1400-HD WITH RECESSED PLUG AND 12"X 12"X 4" DEEP CONCRETE PAD.
- NATURAL GAS**
1. SCH. 40 BLACK STEEL WITH THREADED (1-1/2" AND SMALLER) OR WELDED (2" AND LARGER) JOINTS. INSTALL PIPING IN ACCESSIBLE, VENTILATED SPACES AND PROVIDE SUITABLE SLEEVES UNDER SLABS ON GRADE AND THRU PLENUMS.
  2. WHERE GAS PIPING CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE SUPPLY PIPE, A 100% SHUT-OFF GAS COCK AND UNION.
  3. PORTIONS OF A GAS PIPING SYSTEM INSTALLED IN CONCEALED LOCATIONS SHALL NOT HAVE UNIONS, TUBE FITTINGS OR RUNNING THREADS.
  4. BURIED STEEL PIPING TO BE PLASTIC COATED, WITH JOINTS TAPED. PROVIDE 17 LB. MAGNESIUM ANODE(S) AS DIRECTED.
  5. ALL EXPOSED, UNFINISHED PIPE, FITTINGS, SUPPORTS AND ACCESSORIES SHALL BE PREPARED FOR FINISH PAINT. IN THE ABSENCE OF MORE STRINGENT SPECIFICATIONS, CONTRACTOR SHALL TOUCH-UP THE SURFACE AS REQUIRED WITH A RUST-INHIBITIVE PRIMER RECOMMENDED BY TOP COAT MANUFACTURER AND THEN APPLY TWO COATS OF LATEX ENAMEL IN A COLOR CONSISTENT WITH THE ANSI STANDARDS OR AS DIRECTED BY THE OWNER/ARCHITECT.

**DOMESTIC WATER FIXTURE LOAD GYM ADDITION**

FIXTURE	OCCUPANCY	TYPE OF SUPPLY CONTROL	SUPPLY FIXTURE UNIT VALUES			QTY	TOTAL WATER SUPPLY FIXTURE UNITS
			COLD	HOT	TOTAL		
LAVATORY	PRIVATE	FAUCET	0.50	0.50	0.70	6	4.2
SINK	PRIVATE	FAUCET	0.50	0.50	0.70	1	.7
ADDED WATER SUPPLY FIXTURE UNIT						TOTAL	4.9

**SANITARY SEWER FIXTURE LOAD GYM ADDITION**

FIXTURE	OCCUPANCY	TYPE OF SUPPLY CONTROL	DRAINAGE FIXTURE UNIT VALUES		QTY	TOTAL DFUS	
			FIXTURE	UNIT			
LAVATORY	PRIVATE	FAUCET	2.00		6	12	
SINK	PRIVATE	FAUCET	2.00		1	2	
ADDED DRAINAGE FIXTURE UNIT						TOTAL	14

**DOMESTIC WATER FIXTURE LOAD SPIRIT SHOP**

FIXTURE	OCCUPANCY	TYPE OF SUPPLY CONTROL	SUPPLY FIXTURE UNIT VALUES			QTY	TOTAL WATER SUPPLY FIXTURE UNITS
			COLD	HOT	TOTAL		
SINK	PRIVATE	FAUCET	0.50	0.50	0.70	1	0.7
ADDED WATER SUPPLY FIXTURE UNIT						TOTAL	0.7

**SANITARY SEWER FIXTURE LOAD SPIRIT SHOP**

FIXTURE	OCCUPANCY	TYPE OF SUPPLY CONTROL	DRAINAGE FIXTURE UNIT VALUES		QTY	TOTAL DFUS	
			FIXTURE	UNIT			
SINK	PRIVATE	FAUCET	2.00		1	2.00	
ADDED DRAINAGE FIXTURE UNIT						TOTAL	2.00

**NATURAL GAS LOAD**

FIXTURE	INPUT (MBH)
PAC-1	180
TOTAL CONNECTED LOAD (MBH)	
	180

1. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH LEADABLE IRON FITTINGS. WHERE GAS PIPING CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE SUPPLY PIPE, A 100% SHUT-OFF GAS COCK AND UNION.
2. PORTIONS OF A GAS PIPING SYSTEM INSTALLED IN CONCEALED LOCATIONS SHALL NOT HAVE UNIONS, TUBE FITTINGS OR RUNNING THREADS.
3. NATURAL GAS PIPING SIZED PER INTERNATIONAL FUEL GAS CODE. PIPE SIZING FOR 1/2 PSI WITH A 7" W.C. PRESSURE DROP AND A GAS OF 0.6 SPECIFIC GRAVITY. TOTAL EQUIVALENT LENGTH: 150 FT. PROVIDE "LBS-TO-INCHES" REGULATORS AT EQUIPMENT CONNECTIONS AS REQ'D.

**PLUMBING LEGEND**

---	CW	COLD WATER
----	HW	HOT WATER
-----	HWR	HOT WATER RECIRC
-----	SAN	SANITARY WASTE
-----	SAN	SANITARY WASTE BELOW FLOOR
-----	V	VENT
---SD---	SD	STORM/OVERFLOW
---G---	G	NATURAL GAS
---CD---	CD	CONDENSATE DRAIN
---A---	A	MEDICAL AIR
---O---	O	MEDICAL OXYGEN
---V---	V	MEDICAL VACUUM
---		ARROW INDICATES DIRECTION OF FLOW
---		UNION
---	WTS	WATER TIGHT SLEEVE
---	SOV	SHUT-OFF VALVE
---	CV	CHECK VALVE
---	PRV	PRESSURE REDUCING VALVE
---	CS	CIRCUIT SETTER
---	MV	MIXING VALVE
---	PHB & HB	FREEZE PROOF HOSE BIBB WITH SOV INLINE
---	BFP	REDUCED PRESSURE BACKFLOW PREVENTER
---	GM	GAS METER
---	TP	AUTOMATIC TRAP PRIMER
---	VRV	VACUUM RELIEF VALVE
---	T & P	TEMPERATURE & PRESSURE RELIEF VALVE
---	W & T	WASTE & TRAP
---	PG	PRESSURE GAUGE WITH ISOLATION VALVE
---	TG	PRESSURE GAUGE WITH ISOLATION VALVE
---	WHA	WATER HAMMER ARRESTOR
---	CO	CLEANOUT PLUG FLUSH WITH FLOOR
---	CO & WCO	CLEANOUT PLUG OR WALL CLEAN OUT
---	VTR	VENT THROUGH ROOF
---	CVK	CONCENTRIC VENT KIT
---	RCP	RECIRCULATION PUMP
---	POC	POINT OF CONNECTION

**ABBREVIATIONS**

CO	CLEAN OUT	HW	DOMESTIC HOT WATER
CD	CONDENSATE DRAIN	HWR	DOMESTIC HOT WATER RECIRC
CW	DOMESTIC COLD WATER	IWH	INSTANT. WATER HEATER
DF	DRINKING FOUNTAIN	LAV	LAVATORY
ECO	EXTERIOR CLEANOUT	MS	MOP SINK
EEW	EMERGENCY EYE WASH	RD	ROOF DRAIN
EWC	ELECTRIC WATER COOLER	SH	SHOWER
EX	EXISTING	SK	SINK
FD	FLOOR DRAIN	SK	SINK
FPFB	FREEZE PROOF HOSE BIB	TUB	BATHTUB
FS	FLOOR SINK	UR	URINAL
G	GAS	VTR	VENT THRU ROOF
GI	GREASE INTERCEPTOR	WC	WATER CLOSET
GM	GAS METER	WCO	WALL CLEAN OUT
GW	GREASE WASTE	WH	WATER HEATER
HB	HOSE BIB	WHA	WATER HAMMER ARRESTOR

Plumbing Sheet Index		ISSUANCE
Sheet Number	Sheet Name	11.26.18
		100% CD

P001	COVER SHEET	X
P101	WASTE & VENT - GYM ADDITION	X
P102	WASTE & VENT - SPIRIT SHOP	X
P201	DOMESTIC & GAS - GYM ADDITION	X
P202	DOMESTIC & GAS - SPIRIT SHOP	X
P300	SCHEDULES & DETAILS	X

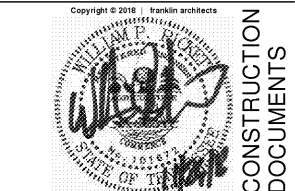
franklin architects  
1411 Market Street P.O. Box 4048  
Chattanooga, TN 37405  
V: 423.266.1207 F: 423.266.1216

In association with:  
Project No. 150-18  
**A.E.E.D., inc.**  
Advanced Energy  
Engineering & Design, Inc.  
408 McCallee Ave  
Chattanooga, TN 37402  
www.aeedinc.com  
(423) 752-3438

**CCS Gym  
Expansion + Spirit  
Store**  
for  
**Chattanooga  
Christian School**

3354 Charger Dr.  
Chattanooga, TN 37409

This drawing is the property of  
Franklin Associates Architects Inc.  
Any use, reuse, reproduction, display  
or sale of this drawing without the  
express written consent of the Architect  
is strictly prohibited.



Revisions		
No.	Issue	Date

Sheet Information	
Date	11.26.2018
Job No.	6774.3 / 6774.4
Title	

**PLUMBING**

**COVER SHEET**

Sheet

**P001**

Order Plans @