

GENERAL NOTES:

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. 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 OWNER'S CONSTRUCTION MANAGER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER'S CONSTRUCTION MANAGER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS. REFER TO SPECIFICATIONS.
- PROVIDE TO THE OWNER'S CONSTRUCTION MANAGER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
- INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALSO MEET ALL REQUIREMENTS OF THE LANDLORD. OBTAIN A COPY OF THE LANDLORD'S REQUIREMENTS AND REVIEW PRIOR TO SUBMITTING BID.
- PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
- 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.
- INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
- 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.
- 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 INSTALL PIPING OVER ELECTRICAL PANELS.
- PAINT ALL EXPOSED GAS AND WATER 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.
- INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
- EXAMINE THE CONTRACT DRAWINGS AND ALL AVAILABLE INFORMATION CONCERNING EXISTING INSTALLATION, STRUCTURE, AND LOCAL CONDITIONS. VISIT THE SITE TO UNDERSTAND THE NATURE AND SCOPE OF ALL WORK TO BE PERFORMED AND VERIFY EXISTING CONDITIONS. THE SUBMISSION OF A BID WILL BE TAKEN AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND THAT ALL EXISTING CONDITIONS HAVE BEEN CONSIDERED. NO ALLOWANCES WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THAT OF THESE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- PLUMBING CONTRACTOR MUST PROVIDE CAMERA VERIFICATION OF EXACT LOCATION OF WASTE LINE TO GC DURING BID. VERIFICATION MUST BE MADE PRIOR TO ISSUANCE OF PERMIT AND AFTER ACCEPTANCE OF CONTRACT TO PROCEED.

KITCHEN GENERAL NOTES:

- REFERENCE THE KITCHEN EQUIPMENT PLUMBING CONNECTION SCHEDULE FOR ITEMS TO BE FURNISHED AND / OR INSTALLED AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS FOR KITCHEN EQUIPMENT. REFERENCE KITCHEN EQUIPMENT DRAWINGS FOR THE EXACT LOCATION OF EQUIPMENT AND ROUGH-IN. REFERENCE THE KITCHEN EQUIPMENT SHOP DRAWINGS AND COORDINATE WITH THE OWNER FOR EXACT REQUIREMENTS PRIOR TO THE START OF INSTALLATION.
- PROVIDE ITEMS AND WORK AS REQUIRED FOR A COMPLETE AND WORKING PLUMBING INSTALLATION FOR EACH PIECE OF KITCHEN EQUIPMENT. PROVIDE ROUGH-INS AND CONNECT TO THE KITCHEN EQUIPMENT WITH TRAPS, SUPPLIES, SHUTOFF VALVES, PIPES TO THE WALL, ESCUTCHEONS, ETC AS SHOWN, SPECIFIED AND REQUIRED.
- VERIFY GAS LOADS AND GAS ROUGH-IN OF KITCHEN EQUIPMENT WITH THE KITCHEN EQUIPMENT SHOP DRAWINGS PRIOR TO INSTALLING GAS PIPING. PROVIDE GAS COCKS, UNIONS, ETC. AS SPECIFIED AND REQUIRED. INSTALL GAS QUICK DISCONNECTS WHERE FURNISHED WITH THE KITCHEN EQUIPMENT.
- COMPLY WITH HEALTH DEPARTMENT REGULATIONS. PROVIDE CLEARANCE FOR CLEANING BEHIND AND UNDER EXPOSED PIPING AS REQUIRED BY HEALTH DEPARTMENT. CONFORM TO HEALTH DEPARTMENT REQUIREMENTS FOR LOCATIONS OF FLOOR SINKS.
- PROVIDE AIRTIGHT SEAL AROUND PIPING PENETRATIONS THROUGH WALK-IN COOLER OR FREEZER WALLS OR CEILINGS.
- DO NOT INSTALL PIPING IN COOLER OR FREEZER WALLS. INSTALL EXPOSED PIPING IN A NEAT APPEARING MANNER.
- COORDINATE FLOOR DRAIN LOCATION AND FLOOR SLOPE REQUIREMENTS WITH THE ARCHITECT.
- INSTALL RIM OF FLOOR DRAINS AND FLOOR SINKS BELOW FINISHED FLOOR LEVEL. SLOPE FLOOR TO DRAINS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- COORDINATE LOCATION OF VENT, WATER, AND GAS PIPING TO AVOID CONFLICT WITH OTHER TRADES.
- CLEAN INSTALLED PLUMBING FIXTURES AND EQUIPMENT.
- PROVIDE WALL BACKING OR SPECIFIED CARRIERS FOR THE PROPER SUPPORT OF INSTALLED WALL HUNG FIXTURES AND EQUIPMENT.
- PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR 3-COMPARTMENT SINKS, PRE-RINSE UNITS, JANITOR SINKS, MIXING HOSE BIBBS & MIXING WALL HYDRANTS DOWNSTREAM OF SHUTOFF VALVES.
- SEAL AROUND INSTALLED FIXTURES AND KITCHEN EQUIPMENT WITH CAULK.
- PROVIDE APPROPRIATE BACKFLOW PREVENTION DEVICES FOR KITCHEN EQUIPMENT REQUIRING THEM PER LOCAL AUTHORITIES REQUIREMENTS. INSTALL BACKFLOW PREVENTION DEVICES FURNISHED WITH KITCHEN EQUIPMENT.

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.

- AP** ACCESS PANEL: JAY R. SMITH # 4762 - 12" x 12" - CL. TYPE 304 STAINLESS STEEL PANEL AND FRAME WITH CONCEALED HINGE, KEY OPERATED CYLINDER LOCK. PROVIDE WITH NAILER SLOTS FOR INSTALLATION IN STUD WALLS AND ANCHOR STRAPS FOR INSTALLATION IN MASONRY CONSTRUCTION.
- BFP** DOUBLE CHECK VALVE BACKFLOW PREVENTER: WATTS # LF7190T-5, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, AND STRAINER.
- DCV** DUAL CHECK VALVE WITH ATMOSPHERIC PORT: WATTS # SD-3, 3/16 STAINLESS STEEL BODY, ASSE 1022 COMPLIANT, 3/8" INLET AND OUTLET, ATMOSPHERIC PORT, AND WYE PATTERN STRAINER.

- FCO** PVC FLOOR CLEANOUT: SIOUX CHIEF # 852 SERIES WITH SQUARE SCORATED MEDIUM DUTY CAST NICKEL ADJUSTABLE TOP. IN UNFINISHED AREAS, WITH FLANGED PVC ADAPTER WITH BLANK TRAP PRIMER PORT AND POLYPROPYLENE THREADED PLASTIC PLUG WITH THREADED BRASS INSERT. INSTALL WITH CARPET MARKER IN CARPETED FLOOR AREAS. CLEAN AND POLISH TOP AFTER INSTALLATION WHERE EXPOSED. REFER TO SPECIFICATIONS FOR INSTALLATION.
- FD** FLOOR DRAIN: ZURN # FD-2320-NH3-ST-P, CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" SQUARE NICKEL BRONZE STRAINER. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- FS** FLOOR SINK: ZURN # FD2375, 6" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, ABS DOME STRAINER, NICKEL BRONZE RIM AND HALF/FULL GRATE. USE CAULK JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
- TMV** THERMOSTATIC MIXING VALVE: POWERS # LF4480, SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. SET TEMPERATURE TO 110F FOR DUEL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.
- TP** 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. PROVIDE WITH DISTRIBUTION # DU-2 FOR TWO, # DU-3 FOR THREE, OR # DU-4 FOR FOUR DRAIN CONNECTIONS.
- WCO** WALL CLEANOUT: SIOUX CHIEF #873 SERIES, BRASS COUNTERSINK PLUG, 20 GAUGE STAINLESS STEEL COVER AND SCREW. CLEANOUT TEE TO BE PROVIDED SEPARATELY. REFER TO SPECIFICATIONS FOR INSTALLATION.
- WHA** WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM "O" RING SEALS, MEETING ASSE 1010 OR PDI WH-201. PROVIDE PDI SIZES "A" THROUGH "F" AS SHOWN ON PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS.
- LV** WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): TOTO MODEL # LT307 21" x 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW, SINGLE HOLE. FAUCET: ELKAY FAUCET # LK656, 4" CENTERSET, SELF CLOSING METRIC CERAMIC CARTRIDGES, POLISHED CHROME FINISH. TRIM: MCGUIRE # 155A GRID DRAIN WITH TAILPIECE, MCGUIRE # 216SCCLK LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 88872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND PLUMBEREK "PRO-EXTREME" # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
- WC** FLOOR-MOUNTED WATER CLOSET: AMERICAN STANDARD # 2898.012 "CADET" TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, AND SIPHON FLUSH ACTION AND CLOSE-COUPLED TANK WITH LEFT HAND TRIP LEVER. 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.

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	S, W OR V	HUBLESS CAST IRON (PVC DWV OPTIONAL)
SANITARY DRAINAGE & VENT (BELOW GRADE)	S, W OR V	SERVICE WEIGHT CAST IRON (PVC DWV OPTIONAL)
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	TYPE L HARD DRAWN COPPER WITH SOLDERED JOINTS
POTABLE WATER - 2" & SMALLER (BELOW GRADE)	CW, HW OR HWR	TYPE K SOFT ANNEALED COPPER
NATURAL GAS (ABOVE GRADE & ON ROOF)	G	SCHEDULE 40 BLACK STEEL
NATURAL GAS (BELOW GRADE)	G	APPROVED PE PIPE FOR GAS
CONDENSATE DRAIN - 1" & SMALLER	CD	TYPE M HARD DRAWN COPPER
CONDENSATE DRAIN - 1-1/4" & LARGER	CD	TYPE DWV HARD DRAWN COPPER
INDIRECT DRAIN - 1" & SMALLER	ID	TYPE M HARD DRAWN COPPER
INDIRECT DRAIN - 1-1/4" & LARGER	ID	TYPE DWV HARD DRAWN COPPER

REFER TO SPECIFICATIONS FOR FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION

WATER PIPE SIZING CHART
FIXTURE UNITS VS. PRESSURE LOSS
IN PSI / 100 FEET FOR TYPE "L" COPPER TUBE

PIPE SIZE	COLD WATER @ 5 PSI / 100'			HOT WATER @ 5.0 PSI / 100'			
	FLUSH TANK SFU	FLUSH VALVE SFU	VELOCITY FEET/SEC	FLOW GPM	FLUSH TANK SFU	VELOCITY FEET/SEC	FLOW GPM
1/2"	1.6	N/A	3.1	2.4	-	-	-
3/4"	6.9	N/A	3.9	6.3	-	-	-
1"	16	N/A	4.7	12.5	-	-	-
1-1/4"	32	4	5.4	22.0	19.75	5	19.5
1-1/2"	59.6	6.8	5.9	35.0	44.3	5	27.5
2"	214	11.5	6.5	57.0	120	5	48
2-1/2"	378	15.0	7.0	79.3	245	5	74
3"	570	17.46	7.5	110	407.9	5	106.5
4"	1130	20.9	8.0	170	847	5	186.0
6"	10300	25.0	9.0	1170.0	4849	5	641.0

* UTILIZE COLD WATER SIZING CHART

WATER AND WASTE FIXTURE COUNT

FIXTURE TYPE	QTY	D.F.U.		TOTAL D.F.U.	HOT S.F.U.		COLD S.F.U.		COMBINED S.F.U.		TOTAL S.F.U. (HOT)	TOTAL S.F.U. (COLD)	TOTAL S.F.U. SERVICE
		(EA)	(EA)		(EA)	(EA)	(EA)	(EA)					
PUBLIC LAVATORY	2	2.0	4.0	1.50	1.50	2.00	3	3	4.0				
SERVICE SINK (MOP BASIN)	1	3.0	3.0	2.25	2.25	3.00	2.25	2.25	3.0				
FLOOR SINK	1	2.0	2.0	0.00	0.00	0.00	0	0	0.0				
FLOOR DRAIN	5	2.0	10.0	0.00	0.00	0.00	0	0	0.0				
PUBLIC WATER CLOSET (11.6 GPF FLUSH TANK)	2	4.0	8.0	0.00	5.00	5.00	0	10	10.0				
SPECIALTY KITCHEN EQUIP.													
SINK (HAND) (2" W)	1	2.0	2.0	1.50	1.50	2.00	1.5	1.5	2.0				
SINK (PREP / VEGGIE) (2" W)	1	3.0	3.0	1.50	1.50	2.00	1.5	1.5	2.0				
SINK (4 COMPARTMENT) (2" W)	1	3.0	3.0	3.00	3.00	4.00	3	3	4.0				
ICE MACHINE (3/4" W)	2	0.5	1.0	0.00	1.00	1.00	0	2	2.0				
IEA MAKER (3/4" W)	1	0.5	0.5	0.00	0.50	0.50	0	0.5	0.5				
SODA MACHINE (3/4" W)	2	0.5	1.0	0.00	0.50	0.50	0	1	1.0				
CARBONATOR	1	0.5	0.5	0.00	0.50	0.50	0	0.5	0.5				
DIPPER WELL (3/4" W)	1	0.5	0.5	0.00	0.75	0.75	0	0.75	0.8				
TOTAL UNITS:	21		39.0				11.25	26.00	30.75				

KITCHEN FIXTURE CONNECTION SCHEDULE

FIXTURE	HOT WATER (IN)	COLD WATER (IN)	VENT (IN)	WASTE	
				INDIRECT	DIRECT
4-COMP SINK DECK MOUNT FAUCET	3/4"	3/4"		3"	
WALL MOUNTED HANDSINK	1/2"	1/2"	2"		2"
PREP SINK FAUCET	1/2"	1/2"		2"	
SODA MACHINE				3/4"	
ICE MACHINE		1/2"		3/4"	
TEA MAKER		1/2"			
DIPPER WELL		1/2"		3/4"	

TOTAL CONNECTED NATURAL GAS LOAD

MECHANICAL EQUIPMENT

EQUIPMENT DESIGNATION	DESCRIPTION	CFH (EACH)
RTU-1(EXISTING)	ROOF-TOP UNIT	180
RTU-2	ROOF-TOP UNIT	72
WH-1(EXISTING)	WATER HEATER	200
TOTAL =		452
TOTAL CONNECTED LOAD =		452

NATURAL GAS SYSTEM OPERATING PRESSURE OF 7" WC
NATURAL GAS SYSTEM SIZED WITH TOTAL DEVELOPED LENGTH FROM GAS METER TO MOST REMOTE PIECE OF EQUIPMENT OF 120' WITH A PRESSURE DROP OF 0.5 PSI.

FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (TANK)	3/4"	--	4"	2"
LAVATORY	1/2"	1/2"	2"	2"
JANITORS SINK	3/4"	3/4"	3"	2"
FLOOR DRAIN	--	--	2"	2"
SINK	1/2"	1/2"	2"	2"
FLOOR SINK			3"	2"

NOTES:
PIPE SIZES SHOWN ARE MINIMUM.

RUN RUN DESIGN

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DRAWING REVISIONS:

no.	distribution	date
A	ISSUE DATE	12.21.17
B	SUBMITTAL DATE	--

no.	revision	date
1	--	--
2	--	--
3	--	--

SHEET NAME:
PLUMBING SCHEDULES & NOTES

Order Plans @

BID SET

project no:
17-085
dwg no:
P1