

1. SOIL AND WASTE PIPE SHALL SLOPE 2% MINIMUM, UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.

2. ALL DRAWN WATER & GAS LINES SHALL BE KEPT TIGHT TO THE UNDERSIDE OF EQUIPMENT & SECURED IN PLACE.

3. VERIFY THE LOCATION OF THE SANITARY SEWER ON THE SITE PLAN AND SHALL REVISE THE SEWER SYSTEM AS REQUIRED.

4. PROVIDE TRAP PRIMERS FOR FLOOR DRAINS IN RESTROOMS, WHERE REQUIRED BY CODES. PROVIDE DEEP SEAL TRAPS FOR FLOOR DRAINS WITHOUT TRAP PRIMERS.

5. ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC. AND THE OWNERS REPRESENTATIVE PRIOR TO ANY INSTALLATION.

6. ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL.

7. ALL PLUMBING FIXTURE VENTS SHALL TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM ANY OUTSIDE AIR INTAKE.

8. PROVIDE GAS PIPING TO UNITS AND ALL FINAL CONNECTIONS REQUIRED FOR OPERATION.

9. INSTALL SHUT-OFF VALVES ON ALL HOT & COLD WATER LINES TO FIXTURE OR APPLIANCE. ALL EXPOSED WATER AND WASTE LINES TO BE CHROME PLATED.

10. PROVIDE A LEVER HANDLE GAS SHUT-OFF VALVE IN THE BRANCH PIPING OF EACH APPLIANCE OR PIECE OF EQUIPMENT. FOR EACH APPLIANCE INSTALL QUICK DISCONNECT, FLEXIBLE PIPE WHEN ALLOWED BY CODE AND RESTRAINING DEVICE FURNISHED BY OWNER. PROVIDE PRESSURE REDUCING VALVES AT EACH PIECE OF EQUIPMENT OR APPLIANCE. IF GAS PRESSURE GREATER THAN 10"/wc IS USED DOWNSTREAM FROM THE GAS METER.

11. ALL VALVES, UNIONS, ETC. SHALL BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.

12. REFER TO KITCHEN EQUIPMENT DRAWINGS FOR PLUMBING ROUGH-IN SCHEDULE & FOR ADDITIONAL WORK TO BE FURNISHED & INSTALLED BY CONTRACTOR. ALL ROUGH-IN PLUMBING AND FINAL CONNECTIONS TO KITCHEN EQUIPMENT SHALL BE MADE BY THE CONTRACTOR U.O.N.

13. REFER TO MECHANICAL SHEETS FOR HVAC AND HOOD PLUMBING REQUIREMENTS.

14. ALL GAS LINES SHALL BE SUPPORTED SEE SPECS.

15. ALL FLOOR SINKS AND FLOOR DRAINS IN TRAFFIC AREAS SHALL BE INSTALLED FLUSH TO FLOOR SURFACE.

16. PROVIDE WATER HAMMER ARRESTOR FOR ALL HAND SINKS AND URINAL WATER LINES.

17. PROVIDE AIR GAPS FOR INDIRECT DRAINS AS REQUIRED BY CODE. AIR GAP SHALL BE MINIMUM 2 TIMES THE DIAMETER OF THE INDIRECT DRAIN.

18. PRIOR TO COMMENCING WORK ON THIS PROJECT, VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL EXISTING UTILITIES IN FIELD. SHOULD CONDITIONS EXIST OTHER THAN THOSE INDICATED WHICH WOULD CAUSE THE DESIGN TO BE ALTERED, CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY.

19. COORDINATE INSTALLATION OF PLUMBING WORK WITH ALL OTHER TRADES SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND EQUIPMENT SHEETS.

20. FURNISH & INSTALL ALL BACKFLOW PROTECTION DEVICES REQUIRED BY AGENCIES HAVING JURISDICTION. BACKFLOW DEVICES REQUIRING TESTING SHALL BE INSTALLED NO HIGHER THAN 5'-0" A.F.F.

21. PROVIDE CONDENSATE DRAIN FROM A/C UNITS TO APPROVED DRAIN, GAS PIPING TO UNITS AND ALL FINAL CONNECTIONS REQUIRED FOR OPERATION.

22. THE OWNER OR KITCHEN EQUIPMENT SUPPLIER MAY SUBSTITUTE EQUIPMENT OR THE EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE, VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.

23. ALL WATER LINES SHALL BE RUN OVERHEAD U.O.N.

24. ALL WATER LINES SHALL BE FLUSHED PRIOR TO CONNECTING ANY FIXTURES OR EQUIPMENT.

25. PROVIDE ESCUTCHEON PLATES AND SILICONE SEALANT AT ALL UTILITY PENETRATIONS INTO WALLS, CEILINGS, AND FLOORS. DO NOT USE CAULKS OR EXPANDING FOAMS FOR SEALANT.

26. CPVC SCHEDULE 40 WASTE PIPE CAN BE SUBSTITUTED FOR BLACK IRON WASTE PIPE WHERE ALLOWED BY LOCAL MUNICIPALITIES.

GENERAL NOTES - PLUMBING

NTS

5

ITEM	QTY.	GPH	TOTAL GPH
HAND SINK / LAVATORY	4	5	20
PRE RINSE SINK	1	20	20
3 COMP POT SINK	1	90	90
MOP SINK	1	50	50
TOTAL			180

DEMAND FACTOR = 0.7
TOTAL HW DEMAND = 126 GPH

BTU/HR OUTPUT = TOTAL HW DEMAND x 8.34 x TEMP RISE
= 126 x 8.34 x 80
= 84,067 BTU
BTU/HR INPUT = 84,067 / 0.75
= 112,089 BTU

HOT WATER DEMAND

NTS

6

SYMBOLS	ABBREV.	DESCRIPTION
	Y.B.	YARD BOX
	R.D.	ROOF DRAIN
	A.P.	ACCESS PANEL
	V.T.R.	VENT THRU ROOF
	V.B.F.	VENT BELOW FLOOR
	U.T.R.	UP THRU ROOF
	V.C.P.	VITRIFIED CLAY PIPE
	C.I.	CAST IRON
	A.C.P.	ASBESTOS CEMENT PIPE
	(N)	NEW
	(E)	EXISTING
	F.D.	FLOOR DRAIN
	H.D.	HUB DRAIN
	OFD	OVERFLOW DRAIN
	F.S.	FLOOR SINK
	G.L.	GAS LINE
	A.F.F.	ABOVE FINISHED FLOOR
		PLUMBING EQUIPMENT DESIGNATION
(X-X) 0000		KITCHEN EQUIPMENT NUMBER: REFER TO KITCHEN EQUIPMENT DRAWINGS FOR DESCRIPTION.
XXX		SOIL OR WASTE (SANITARY)/WASTE STUB
SS		SOIL OR WASTE (GREASE WASTE)/WASTE STUB
GW		GAS / GAS STUB
G		COLD WATER/ CW STUB
CW		HOT WATER / HW STUB
HW		HOT WATER RETURN
HWR		SANITARY VENT
V		STORM DRAIN
SD		CONDENSATE DRAIN
CD		FLOOR CLEANOUT OR CLEANOUT TO GRADE
F.C.O.		WALL CLEANOUT
W.C.O.		FILTERED WATER
FW		PREMIXED TEMPERATURE WATER
TW		HOSE BIBB
H.B.		SHUT-OFF GATE VALVE
S.O.V.		SHUT-OFF GAS COCK
S.O.C.		CHECK VALVE
C.V.		PRESS-TEMPERATURE RELIEF VALVE
P.T.R.V.		BALL VALVE
B.V.		COLD WATER BELOW GRADE
C.W.		EXTERIOR CLEAN OUT
E.C.O.		BACK FLOW PREVENTER
BFP		FIXTURE UNIT
FU		

PLUMBING LEGEND

NTS

3

FIXTURE	NO.	DRAIN		COLD WATER		HOT WATER	
		D.F.U.	TOTAL D.F.U.	F.U. C.W.	TOTAL C.W.	F.U. H.W.	TOTAL H.W.
WATER CLOSET	2	4	8	5	10	--	--
URINAL	0	5	--	5	--	--	--
LAVATORY	2	1	2	1.5	3	1.5	3
HAND SINK	2	2	4	1.5	3	1.5	3
PREP SINK *	1	--	--	2	2	2	2
3 - COMPARTMENT SINK *	1	--	--	3	3	3	3
HOSE BIBB/WATER FILTRATION UNIT	2/1	--	--	5/0.5	12	--	--
FLOOR DRAIN	5	2	10	--	--	--	--
HUB DRAIN	2	2	4	--	--	--	--
FLOOR SINK	3	3	9	--	--	--	--
MOP SINK	1	3	3	2.25	2.25	2.25	2.25
RETRMALIZER *	1	--	--	--	--	1.0	1.0
TOTAL	--	--	40	--	35.25	--	14.25

PROBABLE DEMANDS/ AND PIPE SIZING REQUIREMENTS:

COLD WATER: 35.25 FU = 25 GPM
DRAIN: GW 22 DFU
DRAIN: SAN 18 DFU
HOT WATER: 14.25 FU = 17 GPM

USE 1-1/2" CW SERVICE
USE 4" SANITARY (MIN)
USE 4" SANITARY (MIN)
USE 1-1/4" HW SERVICE

BASED ON 2018 IPC (COMBINATION DRAIN & VENT).

*FIXTURE HAS INDIRECT WASTE TO FLOOR SINK

PLUMBING FIXTURE COUNT

NTS

4

ITEM	FIXTURE	SOIL OR WASTE	VENT	COLD WATER	HOT WATER	TEMPD WATER	WASTE FU	WATER FU	DESCRIPTION	MANUFACTURER / MODEL NUMBER
ECO 1	EXTERIOR CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
FS 1	FLOOR SINK	4"	2"	--	--	--	6	--	PVC 12" SQUARE FLOOR SINK, 8" DEEP, WITH ALUMINUM OR PVC DOME STRAINER AND LOOSE SET PVC SLOTTED TOP GRATE. SET FLOOR SINK UP FLUSH WITH FLOOR TILE.	JOSAM / MODEL: JF54-PVC ZURN / MODEL: FD-2370-PV4-DS-F
FS 2	FLOOR SINK	3"	2"	--	--	--	6	--	CAST IRON 12" SQUARE FLOOR SINK, 8" DEEP, WITH ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP.	JOSAM / MODEL: 49034AS WADE / MODEL: 9144 ZURN / MODEL: Z-1900-32
FD 1	FLOOR DRAIN	3"	2"	--	--	--	2	--	PVC FLOOR DRAIN, 5" DIA. IF PVC OR ABS DRAINS ARE USED, SCHEDULE 80 PVC DRAIN PIPE SHALL BE USED FOR THE FIRST 10' -0" FROM THE DRAIN.	ZURN / MODEL: FD-2210 JOSAM / MODEL: 30003-A WADE / MODEL: 1103
HD 1	HUB DRAIN	3"	2"	--	--	--	2	--	CAST IRON DEEP SEAL P-TRAP WITH FUNNEL, NO-HUB OUTLET AND BRASS GASKETED CLEANOUT PLUG.	JOSAM / MODEL: 88213 WADE / MODEL: 2453EF ZURN / MODEL: Z-1019
ECO 1	FLOOR CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.	JOSAM / MODEL: 56000 WADE / MODEL: 6000Z ZURN / MODEL: Z-1400
WCO 1	WALL CLEANOUT	--	--	--	--	--	--	--	CAST IRON CLEANOUT TEE WITH INLET/OUTLET SPIGOT AND THREADED BRASS PLUG, WITH STAINLESS STEEL ACCESS COVER.	JOSAM / MODEL: 58510 WADE / MODEL: 8560E ZURN / MODEL: Z-1446-BP
HB 1	HOSE BIBB	--	--	3/4"	--	--	--	2.5/1	NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER, BRONZE CASING AND NICKEL BRONZE BOX.	JOSAM / MODEL: 71000 WADE / MODEL: 8600L ZURN / MODEL: Z-1300
WC 1	WATER CLOSET	4"	2"	1/2"	--	--	4	2	WHITE VITREOUS CHINA FLOOR MOUNTED FLUSHOMETER VALVE TYPE, ELONGATED BOWL, ADA COMPLIANT, 1.1 GPF, WITH OPEN FRONT SEAT LESS COVER, OLSENITE #95 OR EQUIVALENT, FLUSHOMETER VALVE: SLOAN ROYAL 111-1.6 OR EQUAL, FLUSH VALVES SHALL BE RIGHT HAND OR LEFT HAND AS REQUIRED TO CORRESPOND WITH ACCESS FROM WIDE SIDE OF STALL. VERIFY FLUSH SIDE REQUIREMENTS.	AM. STD. "MADERA" FLOWISE MODEL: 3043.001
L 1	LAVATORY	1-1/4"	1-1/2"	1/2"	--	1/2"	1	1.5	WHITE VITREOUS CHINA, WALL HUNG, WITH CONCEALED ARMS SUPPORT SEE 5/P6.0, 4" CENTERS, WITH INTEGRAL BACKSPASH, ADA ACCESSIBLE. FLAT GRID STRAINER, BRAIDED WATER LINES. FAUCET: FURNISHED BY OWNER-INSTALLED BY G.C. ELECTRONIC SENSOR TYPE FAUCET. SLOAN SF-2300, ADA COMPLIANT. SEE 5/P6.0 FOR LAV SUPPORT DETAIL, .5 GPM AERATOR	A.S. COMRADE/ MODEL: 0124 131 CRANE "HARWICH" / MODEL: 1412V
S 1	HAND SINK	1-1/2"	1-1/2"	1/2"	--	1/2"	2	1.5	S-1- STAINLESS STEEL HAND SINK, WALL HUNG, INCLUDES A 6" GOOSENECK STAINLESS, FAUCET W/SINGLE KNEE PEDAL. BRAIDED WATER LINES, 0.5 GPM AERATOR.	--
S 2	MOP SINK	3"	2"	1/2"	1/2"	--	3	2.25	MOP SINK: AERO - 3MP-2121-6 W/ 48" HIGH S.S. LEFT SIDE AND BACK-SPLASH. FURNISHED BY OWNER, INSTALLED BY G.C. FAUCET: T&S #B2465, WITH VACUUM BREAKER, FURNISHED BY OWNER, INSTALLED BY G.C.	--
S 3	3-COMP. SINK	INDIRECT	--	1/2"	1/2"	--	--	3	SINK, FAUCET & DRAIN, GEN IV POWER SOAK STANDARD, GEN III IS AN OPTION FOR FRANCHISES	--
S 4	PREP SINK	INDIRECT	--	1/2"	1/2"	--	--	3	SINK, FAUCET AND DRAIN	--
GI 1	GREASE INTERCEPTOR	4"	--	--	--	--	--	--	PRECAST 1,000 GALLON GREASE INTERCEPTOR WITH SAMPLING BOX. SEE SITE PLAN FOR EXTERIOR GREASE INTERCEPTOR LOCATION.	JENSEN / JP1000G -- --
MV 1	MIXING VALVE	--	--	1/2"	1/2"	--	--	--	THERMOSTATIC, 125 P516, 200VF BRONZE BODY, STAINLESS STEEL PISTON LINER, CHECK VALVES SIZE PER PIPE CONNECTIONS.	POWERS SERIES LFLM495 LAWLER SERIES 310 LEONARD SERIES 170
WH 1 WH 2	WATER HEATER	--	--	3/4"	3/4"	--	--	--	INSTANTANEOUS GAS FIRED WATER HEATER, 98% THERMAL EFF., 199,000 BTUH INPUT, 3.8 GPM @ 100 DEG. RISE, INTEGRAL RECIRCULATING PUMP, PROVIDE WITH REMOTE CONTROLLER, NAVIEN PLUMB EASY VALVE SET, PRESSURE RELIEF VALVE, CONDENSATE DRAIN HOSE, CONDENSATE NEUTRALIZER, VENT TERMINATORS.	NEVIEN NPE-240A -- --
ET 1	EXPANSION TANK	--	--	3/4"	--	--	--	--	EXPANSION TANK, STEEL, EXPANSION MEMBRANE 150 PSI, 160° F, 12 GALLON CAPACITY.	WATTS SERIES DETA AMTROL SERIES ST WILKINS SERIES WXTP
BFP 1	BACKFLOW PREVENTOR	--	--	1"	--	--	--	1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER, CAST BRONZE CONSTRUCTION WITH QUARTER TURN FULL-PORT BALL VALVES AND BRONZE STRAINER, USC CERTIFIED FOR VERTICAL INSTALLATION.	WATTS / MODEL: LF909 -- --
RO 1	REVERSE OSMOSIS	INDIRECT	--	1/2"	--	--	--	--	REVERSE OSMOSIS FILTER SYSTEM BY OWNER. SEE DETAIL 9/P6.0	-- -- --

* IF GEN POWER SOAK SINK IS USED THEN ADD A MIXING VALVE TO SINK ABOVE SUSPENDED CEILING.

PLUMBING FIXTURE SCHEDULE

NTS

1

GREASE INTERCEPTOR SIZING TCB-40.

FIXTURE	QTY.	FIXTURE D.F.U.	TOTAL D.F.U.
MOP SINK	1	2	2
COMM. SINK 3-COMP. (FS)	1	6	6
PREP. SINK 1-COMP (FS)	1	6	6
FLOOR SINK (FS)	2	6	12
FLOOR DRAIN	5	2	10
TOTAL			36
TOTAL DRAIN FIXTURE UNITS = 36 DFU. 1 DFU = 0.5 GPM AND 30 MINUTE RETENTION 36/2 = 18 GPM X 30 MINUTES = 540 GALLON USE 1000 GALLON GREASE INTERCEPTOR			

NOTE:

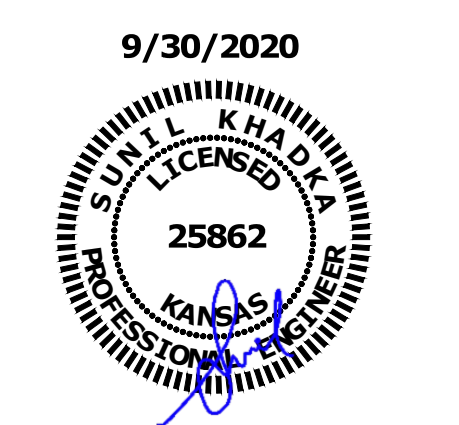
ALL WASTE PLUMBING LINES AND THE FIXTURES CONNECTED TO THE LINES SHOWN ON THESE PLANS, THOSE SHOWN ON THE PLANS FOR THE GREASE INTERCEPTOR, AND THOSE SHOWN ON THE PLUMBING PLANS THAT ARE APPROVED BY THE LOCAL JURISDICTION MUST ALL MATCH. APPROVED PLUMBING PLANS ARE NEEDED PRIOR TO PRETREATMENT AND GREASE INTERCEPTOR APPROVALS.

KANSAS PE COA #E-359
BC PROJECT #: 20684

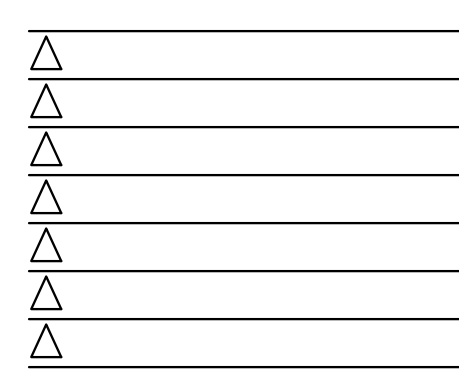
This drawing has been prepared by the Engineer, or under his supervision. This drawing is provided as an instrument of service by the Design/Engineer and is intended for use on this project only. Pursuant to the Architectural Record Copyright Protection Act of 1990, all drawings, specifications, notes and designs, including the overall form, arrangement and composition of spaces and elements appearing herein, constitute the original, copyrighted work of the Design/Engineer. Any reproduction, use, or disclosure of information contained herein without prior written consent of the Engineer is strictly prohibited. © 2019 BC Engineers, Inc.

BC ENGINEERS
INCORPORATED

5720 Reeder Shawnee, Ks. 66203 (913)262-1772



18048.20003



CONTRACT DATE:
BUILDING TYPE: END. MED40
PLAN VERSION: MARCH 2020
SITE NUMBER: #000000
STORE NUMBER: #000000

TACO BELL
615 METROPOLITAN AVE
LEAVENWORTH, KS 66048



ENDEAVOR 1.0

PLUMBING SCHEDULES AND NOTES

P1.0

PLOT DATE: 9/30/2020 1:00 PM