

PLUMBING MATERIAL SCHEDULE												
SERVICE	MATERIAL	(THIN WALLED) COPPER TYPE "M"	(MEDIUM WALLED) COPPER TYPE "L"	(THICK WALLED) COPPER TYPE "K"	PVC SCHEDULE 80	SCH 40 BLACK STEEL	SCH 40 GALVANIZED STEEL	CAST IRON 3.	SDR-35 PVC	SCH 40 ABS-DWV-2, 12.	SCH 40 PVC 9.	NOTES
WATER	INSIDE		●									1.
	OUTSIDE		●									1.
SANITARY DRAINAGE	INSIDE							●				5, 6.
	BEL. GRADE		●									4.
GAS	INSIDE					●						10.
	BEL. GRADE					●	●					
CONDENSATE DRAINAGE	INSIDE	●										
	OUTSIDE		●									1.
INDIRECT WASTE	INSIDE		●									1.
	OUTSIDE		●									3.
STORM DRAIN	INSIDE							●				11.
	BEL. GRADE								●			6.

- NOTES:
- LEAD FREE SOLDERED FITTINGS
 - SCHEDULE 40 SOLVENT WELD FITTINGS
 - TYLER 4 BAND NO-HUB COUPLINGS
 - TYLER 2 BAND NO-HUB COUPLINGS
 - DO NOT USE IN VERTICAL RISER. PROVIDE FACTORY HOLES IN FOUNDATION DRAIN PIPING.
 - GASKETED JOINT FOR PVC
 - 3" AND SMALLER, SOFT TEMPER BRAZED JOINTS W/ BITUMINOUS COATING
 - GAS PIPING DROPPING INSIDE CONCRETE BLOCK PARTITIONS SHALL BE FACTORY WRAPPED FOR CORROSION PROTECTION. PIPING 3" AND LARGER WHERE PRESSURE EXCEEDS 14"W.C. SHALL BE WELDED.
 - WRAP FOR GAS PIPING SHALL EXTEND 6" ABOVE THE GRADE.
 - IN PLACE OF UNIONS USE RIGHT OR LEFT NIPPLES. EXCEPT AS REQUIRED BY CODE.
 - TEMPERATURES NOT TO EXCEED 120°F
 - STEEL GAS PIPE AND FITTINGS BELOW GRADE SHALL BE MILL WRAPPED OR X-TRU COAT TYPE
 - SCHEDULE 40 THREADED FITTINGS
 - WHERE IN CONTACT WITH CORROSIVE SOILS, NOT ALLOWED ABOVE GRADE IN BUILDINGS OVER 2 STORIES

NATURAL GAS LOAD (TOTAL UNITS)		
1	RTU	60,000
1	RTU	60,000
1	RTU	60,000
1	RTU	60,000
1	RTU	60,000
1	RTU	60,000
1	WH	40,000
TOTAL BTUH		400,000
TOTAL CFH (BTUH/1100)		364

GAS PIPE SIZING CHART		
LOW PRESSURE		
INLET PRESSURE	LESS THAN 2PSI	
PRESSURE DROP	0.3 IN.W.C.	
DEVELOPED LENGTH	100'	
PIPE SIZE REQ.	FT	CFH
3/4"	100	79
1"	100	148
1-1/4"	100	304
1-1/2"	100	455
2"	100	877
MED PRESSURE		
INLET PRESSURE	2PSI	
PRESSURE DROP	1.0 PSI	
DEVELOPED LENGTH	100'	
PIPE SIZE REQ.	FT	CFH
1/2"	90	502
3/4"	90	1,010
1"	90	1,850

PLUMBING FIXTURE SCHEDULE										
MARK No.	DESCRIPTION	MANUF.	MODEL No.	WASTE	VENT	COLD WATER	HOT WATER	MAX GPM	NOTES	
F-1	WATER CLOSET	TOTO	ECO PROMINADE CST424EFG	3"	2"	1/2"	--	1.28 GPF	FLOOR MOUNTED STANDARD TANK TYPE, 1.6 GPF W/ELONGATED CLOSE FRONT SEAT & COVER, BOLT CAPS, ANGLE STOPS AND CHROME LEVER	
F-2	HAND SINK	AMERICAN STANDARD	SEE DENTAL EQUIPMENT DWGS	1-1/2"	1-1/4"	1/2"	1/2"	1.5	SEE DENTAL EQUIPMENT DWGS FOR FAUCET MODEL No.	
F-3	DENTAL SINK	ELKAY	SEE DENTAL EQUIPMENT DWGS	1-1/2"	1-1/4"	1/2"	1/2"	1.5	SEE DENTAL EQUIPMENT DWGS FOR GOOSENECK FAUCET MODEL No.	
F-4	DUAL COMPARTMENT SS SINK	ELKAY	SEE DENTAL EQUIPMENT DWGS	1-1/2"	1-1/4"	1/2"	1/2"	1.5	SEE DENTAL EQUIPMENT DWGS FOR GOOSENECK FAUCET MODEL No.	
F-5	SINGLE COMPARTMENT SS SINK	ELKAY	SEE DENTAL EQUIPMENT DWGS	1-1/2"	1-1/4"	1/2"	1/2"	1.5	SEE DENTAL EQUIPMENT DWGS FOR GOOSENECK FAUCET MODEL No.	
F-6	SINGLE COMPARTMENT SS SINK	ELKAY	SEE DENTAL EQUIPMENT DWGS	1-1/2"	1-1/4"	1/2"	1/2"	1.5	SEE DENTAL EQUIPMENT DWGS FOR GOOSENECK FAUCET MODEL No. AND DISPOSABLE PLASTER TRAP DETAIL	
F-7	GAS WATER HEATER	A.O. SMITH	GPDX-50	--	--	3/4"	3/4"	--	W/ T&P RELIEF, CLOSED COMBUSTION - 3"Ø BLOWER CONNECTIONS 40,000 BTU INPUT, 73GAL 1ST HR (41GPH RECOVERY) 224LBS	
LAV	WALL HUNG LAVATORY	AMERICAN STANDARD	0321.026	1-1/4"	1-1/4"	1/2"	1/2"	1.5	PROVIDE SINGLE HANDLE FAUCET	
WC	WATER CLOSET	TOTO	ECO PROMINADE CST424EFG	3"	2"	1/2"	--	1.28 GPF	FLOOR MOUNTED STANDARD TANK TYPE, 1.6 GPF W/ELONGATED CLOSE FRONT SEAT & COVER, BOLT CAPS, ANGLE STOPS AND CHROME LEVER	
WH	TANKLESS ELEC. WH	CHRONOMITE	S-23L	---	---	1/2"	1/2"	---	0.5 GPM 2300W 208V 15A BREAKER	
SK	KITCHEN SINK COUNTER TOP SINGLE COMPARTMENT	ELKAY	CELEBRITY GEOR2521	1-1/2"	1-1/2"	1/2"	1/2"	2.0	18GA (23GA NOT ACCEPTABLE) STEEL UNDER COUNTER MOUNT. FAUCET SHALL BE AS MANUFACTURED BY DELTA MODEL 100 WF. PROVIDE WITH BASKET TYPE STRAINER, STOPS & P-TRAP. SINK FAUCET MAX. FLOW: 2.5 GPM	
WB	WASHING MACHINE DRAIN BOX	OATEY	38983	2"	1-1/2"	1/2"	1/2"	2.0	PROVIDE SUPPLIES WITH SHOCK ARRESTORS. LAUNDRY FAUCET	
TP	TRAP PRIMER	P.P.P.	NO. P-1	--	--	1/2"	--	--	CAST BRONZE W/VACUUM BREAKER TRAP PRIMER WITH GROUND JOINT CONNECT, LOCATED IN WALL WITH ACCESS PANEL	
RD	ROOF DRAIN	JOSAM	#22080	--	--	--	--	--	SIZES AS SHOWN ON RISER DIAGRAM SHEET CAST IRON DOME	
FD	FLOOR DRAIN	ZURN	ZN-415	2"	2"	--	--	--	TYPE B 6" POLISHED NICKEL BRONZE GRATE, P-TRAP & TRAP PRIMER TAP	

ALL FIXTURES SHALL MEET 2010 CA GREEN CODE WATER USE REQUIREMENTS

WASTE AND VENT (TOTAL UNITS)			
QTY	FIXTURE TYPE	FU	TOTAL
SUITE A			
2	WATER CLOSET	4.0	4.0
2	LAVATORY	1.0	1.0
1	BREAK RM SINK	2.0	2.0
2	SINK	2.0	4.0
4	HAND SINK	1.0	4.0
4	DENTIST CHAIR	0.5	2.0
SUB TOTAL 13.0			
SUITE B			
1	WATER CLOSET	4.0	4.0
6	LAVATORY	1.0	1.0
2	BREAK RM SINK	2.0	4.0
SUB TOTAL 7.0			
SUITE C			
1	WATER CLOSET	4.0	4.0
6	LAVATORY	1.0	6.0
2	BREAK RM SINK	2.0	4.0
SUB TOTAL 13.0			
TOTAL FIXTURE UNITS 30.0			

PIPE SIZE REQ.	SAN F.U.	VENT F.U.
1 1/2"	2	8
2"	8	24
2-1/2"	14	48
3"	35	84
4"	216	256
6"	720	1380

WATER SIZING SUMMARY (TOTAL UNITS)			
QTY	FIXTURE TYPE	FU	TOTAL
SUITE A			
2	WATER CLOSET (TANK)	2.5	5.0
2	LAVATORY	1.0	2.0
1	BREAK RM SINK	1.5	1.5
2	SINK	1.5	3.0
6	HAND SINK	1.5	9.0
6	DENTIST CHAIR	0.5	3.0
1	COMPRESSOR/VACUUM	0.5	0.5
SUB TOTAL 24			
SUITE B			
1	WATER CLOSET (TANK)	2.5	2.5
1	LAVATORY	1.0	1.0
1	BREAK RM SINK	1.5	1.5
1	CLOTHES WASHER	4.0	4.0
2	FUTURE	2.0	4.0
SUB TOTAL 13.0			
SUITE C			
1	WATER CLOSET (TANK)	2.5	2.5
1	LAVATORY	1.0	1.0
1	BREAK RM SINK	1.5	1.5
4	FUTURE	2.0	8.0
SUB TOTAL 13.0			
TOTAL FIXTURE UNITS		50	
TOTAL GPM		29	

WATER PIPE SIZING CHART			
PIPE SIZE	MAX FIXTURE UNITS		
	HOT WATER FU	COLD WATER FU TANKS	FU VALVES
1/2"	3	4	N/A
3/4"	9	14	N/A
1"	17	31	N/A
1-1/4"	29	56	14

PIPE SIZED BASED ON CHART 12.4 PSI/100' PRESSURE DROP

WATER SUPPLY FRICTION LOSS CALCULATION			
CPC SEC.	REQ PRESS @ HIGH FIXTURE (RES)		25.0 PSI
A 3.1	HT HIGHEST FIXT ABOVE METER	10 FT	
A 3.2	HT x 0.43 = TOT STAT =	10x0.43	4.3 PSI
A 3.3	AVE MIN DAILY RES		71 PSI
	METER LOSS (1" DISC TYPE)		3 PSI
	PRV LOSS (1"WATTS 223S)		n/a
	RPBFP LOSS (1-1/4"AMES 4000B)		14 PSI
	PRESS AVAIL =		
	AVE MIN-RES-TOT STAT-METER LOSS-PRV LOSS-RPBFP =		24.7 PSI
	DISTANCE TO REMOTE FIXTURE = 160'		
	DEVELOPED LENGTH = DISTANCE x 1.25 = 200'		
A 3.4	DEVELOPED LENGTH (DEV LEN) (FT)	200	
	MAX ALLOWABLE FRICTION LOSS =		
	PRESS AVAIL/DEV LENx100 = 24.7/200x100 = 12.4PSI/100'		

Per Elsinore Valley Municipal Water District
 Roy Stringer (Angel Marquez)
 Location: 32395 Clinton Keith 3/8/10

HYDRANT STATIC 77 PSI
 HYDRANT RESIDUAL 71 PSI
 PRV NOT REQUIRED

RAIN WATER LEADER SIZE		
BASED ON RAINFALL OF 2"		
PIPE SIZE	MAX HORIZ PROJ ROOF AREA	
3"	1,644 SF	
4"	3,760 SF	
6"	10,700 SF	

LEGEND					
SYMBOL	ABBR..	DESCRIPTION	SYMBOL	ABBR..	DESCRIPTION
	SAN.	SANITARY WASTE LINE		P-TRAP	
	SAN.	SANITARY WASTE LINE BELOW SLAB		FD	FLOOR DRAIN
	CW	COLD WATER LINE		CO	CLEANOUT
	HW	HOT WATER LINE		WC	WALL CLEANOUT
	V	VENT LINE		GV	GATE VALVE
	RL	RAIN LEADER		HD	HUB DRAIN
	RO	RAIN OVERFLOW			CAPPED PIPING
	D	CONDENSATE DRAIN		RD	ROOF DRAIN DRAIN
	G	NATURAL GAS		RO	ROOF OVERFLOW
	VTR	VENT THRU ROOF		(F)	FUTURE
	NO	NITROUS OXIDE			
	OX	OXYGEN			
	VAC	VACUUM			
	CA	COMPRESSED AIR			
	IR	IRRIGATION WATER			

GENERAL PLUMBING NOTES

- THE WORK OF THIS SECTION INCLUDES ALL PLUMBING WORK AND EQUIPMENT NEEDED FOR A COMPLETE INSTALLATION AND OPERATION. PROVIDE ANY SUPPLEMENTARY LABOR OR MATERIALS REQUIRED FOR A COMPLETE, APPROVED, AND PROPERLY OPERATING INSTALLATION WHETHER OR NOT INDICATED WITHOUT ADDITIONAL COST TO THE OWNER.
- ACQUIRE AND PAY FOR ALL PERMITS, INSPECTIONS AND RELATED FEES FOR THIS INSTALLATION. COORDINATE ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR PRIOR TO SUBMITTING BID.
- VERIFY EXACT SIZE, LOCATIONS AND DEPTH (WHERE APPLICABLE) OF ALL EXISTING PIPING, LINES, LATERALS AND WYES BEFORE STARTING TRENCHING OR ANY OTHER WORK. SHOULD IT BE NECESSARY TO ROUTE LINES DUE TO CONDITIONS FOUND ON THE SITE OR IF INDICATED POINTS OF CONNECTIONS CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL, BEFORE CONTINUING, NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- THE INSTALLATION SHALL COMPLY WITH ALL OF THE LATEST APPLICABLE ORDINANCES, REGULATIONS AND CODES OF ALL AGENCIES HAVING JURISDICTION, INCLUDING THE UNIFORM PLUMBING CODE, COUNTY BUILDING AND SAFETY DEPARTMENT AND ALL OTHER AUTHORITIES HAVING JURISDICTION. ALL MATERIAL DEVICES AND EQUIPMENT SHALL BE APPROVED FOR SUCH INSTALLATION. IN CASE OF CONFLICT BETWEEN CODES AND DRAWINGS OR SPECIFICATIONS, THE MORE STRINGENT SHALL PREVAIL.
 - NOTHING IN THESE DRAWINGS AND SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK IN VIOLATION THEREOF.
 - NO EXTRAS WILL BE PAID FOR FURNISHING ITEMS REQUIRED BY THE CODES, BUT NOT SPECIFIED OR SHOWN ON THE DRAWINGS.
 - RULINGS AND INTERPRETATIONS OF THE ENFORCING AGENCIES SHALL BE CONSIDERED AS PART OF THE CODE.
- ALL PLUMBING FIXTURES AND EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA STATE ENERGY COMMISSION TO COMPLY WITH EFFICIENCY STANDARDS PER SECTION 2-531(A) OF THE TITLE 24 REGULATIONS.
- INSULATE ALL HOT WATER PIPING WITH MANVILLE MICROLOCK 850-APT FIBERGLASS SNAP-ON INSULATION.
- ALL MATERIALS, EQUIPMENT, INSTALLATION, ETC. SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE CITY, COUNTY, STATE & FEDERAL CODES, ORDINANCES & REGULATIONS. IN CASE OF CONFLICT WITH CODES DRAWINGS OR SPECIFICATIONS, THE MORE STRINGENT SHALL PREVAIL.
- FOR EXACT LOCATIONS, DIMENSIONS, MOUNTING HEIGHTS AND HANDICAP REQUIREMENTS SEE ARCHITECTURAL, STRUCTURAL OR KITCHEN DRAWINGS. INSULATE ALL EXPOSED HOT WATER AND DRAIN PIPING BELOW HANDICAP LAVATORIES AND SINKS WITH PROWRAP INSULATION KIT BY MCGUIRE AND OFFSET P-TRAP AGAINST WALL. ALL WATER CLOSET FLUSHING LEVERS SHALL BE TO WIDE SIDE OF STALL.
- MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND PAY FOR ALL PERMITS, CHARGES, METERS AND CITY SEWAGE FACILITIES CHARGE.
- ALL SEWER LINES SHALL RUN AT 2% SLOPE.
- ANY SEWER LINES RUN @ SLOPES LESS THAN 2% ARE SUBJECT TO FIELD APPROVAL OF PLUMBING INSPECTOR.
- NOT USED.
- ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SEC. 707.0 & 719.0 OF THE PLUMBING CODE ALL FLOOR CLEANOUT COVERING DECKS SHALL HAVE FINE FINISH. INSTALL ONLY WHERE EASILY ACCESSIBLE AND COORDINATE LOCATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION TO ACCOUNT FOR ALL EQUIPMENT, CABINETS AND OTHER TRADES.
- ALL GAS, WASTE, VENT AND COLD WATER STUB-OUTS SHALL BE CAPPED.
- GAS, WATER, SEWER AND VENT PIPES THRU CONCRETE WALLS AND FLOORS SHALL HAVE PIPE-SLEEVES WITH NON COMBUSTIBLE SEALING. LIKEWISE PROTECT OR PROVIDE POLYSLEEVE WHERE COPPER PIPE TOUCHES METAL AND WHERE HOT AND COLD WATER LINES CROSS.
- PIPING WITHIN OR THRU FIRE RATED ASSEMBLIES SHALL BE MADE WITH APPROVED U.L. LISTED FIRE RATED ASSEMBLIES OR SYSTEMS. COORDINATE SENSITIVE WALL LOCATIONS WITH ARCHITECT.
- ALL SERVICE OUTLETS FOR FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A LINE SIZE SHUT OFF VALVE.
- ALL SANITARY FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A HALF INCH TRAP PRIMER FROM A COLD WATER SERVICE LINE TO A FREQUENTLY USED FIXTURE. PROVIDE ADAPTER FITTINGS WITH PRIMER TAPS AS REQUIRED.
- PROVIDE AN APPROVED TYPE PRESSURE REGULATOR SYSTEM WITH INTEGRAL STRAINER.
- ALL PLUMBING MATERIALS USED IN THE WATER SUPPLY SYSTEM, EXCEPT VALVES AND SIMILAR DEVICES, SHALL BE OF LIKE MATERIALS.
- VERIFY AND COORDINATE ROUGH-IN LOCATIONS AND DIMENSIONS FOR EQUIPMENT. PROVIDE ALL INTERCONNECTING PIPING AND APPURTENANCES REQUIRED AND MAKE ALL FINAL CONNECTIONS.
- PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES, STRAINERS, TRAP PRIMERS, ETC. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

CONSTRUCTION NOTES

- NO VENT OUTLET SHALL TERMINATE CLOSER THAN FOUR FEET TO OR ONE FOOT ABOVE ANY DOOR, WINDOW OR GRAVITY AIR INTAKE, NOR CLOSER THAN TEN FEET HORIZONTAL TO OR THREE FEET ABOVE ANY FORCED OR MECHANICAL AIR INTAKE. THE TERMINAL END SHALL NOT BE THREADED.

THE AGGREGATE CROSS SECTIONAL AREA OF VENTS SHALL NOT BE LESS THAN THAT OF THE LARGEST REQUIRED BUILDING SEWER.

EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES IN HEIGHT ABOVE THE FLOOD LEVEL RIM OF THE FIXTURE BEFORE BEING CONNECTED TO ANY OTHER VENT.

VENTS SHALL TERMINATE NO CLOSER THAN 12" FROM ANY VERTICAL SURFACE.
- CONSTRUCTION NOTES:
 - VERIFICATION OF DIMENSIONS: SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, CHECK AND VERIFY DIMENSIONS AND SIZES, AND ASSUME FULL RESPONSIBILITY FOR FITTING IN OF EQUIPMENT AND MATERIALS TO OTHER PARTS OF EQUIPMENT AND TO THE STRUCTURE, WHERE APPARATUS AND EQUIPMENT HAVE BEEN INDICATED ON THE DRAWINGS. DIMENSIONS HAVE BEEN TAKEN FROM TYPICAL EQUIPMENT OF THE CLASS INDICATED, CHECK DRAWINGS TO SEE THAT EQUIPMENT CONTEMPLATED FOR USE WILL FIT INTO SPACES PROVIDED, WITH AMPLE SPACE FOR MAINTENANCE REQUIREMENTS.
 - LOCATIONS OF THE PIPING AND FIXTURES INDICATED ON THE DRAWINGS ARE APPROXIMATE ONLY AND SHALL BE CHANGED TO MEET THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AS REQUIRED, AT NO EXTRA COST TO THE OWNER.
 - DRAWINGS: DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED. EXAMINE DRAWINGS AND PREMISES IN ORDER TO DETERMINE BEST METHODS, EXACT LOCATIONS, ROUTES AND BUILDING OBSTRUCTIONS, INSTALL APPARATUS AND EQUIPMENT IN AVAILABLE LOCATIONS.
- RECORD ON "AS BUILT" DRAWINGS ALL SIZES MATERIALS, LOCATIONS AND DEPTHS OF BURIED PIPING, PLUGGED TEES, FUTURE CONNECTIONS AND ALL CHANGES IN PIPING FROM THAT SHOWN ON DRAWINGS, AND SUBMIT SUCH SET TO ARCHITECT AT COMPLETION OF WORK.
- WATER CLOSETS, URINALS, LAVATORIES, SHALL BE APPROVED BY AUTHORITY HAVING JURISDICTION AND WHERE REQUIRED COMPLY TO HANDICAPPED REGULATIONS.
- WATER CLOSETS FOR PUBLIC USE ARE TO BE ELONGATED BOWLS WITH OPEN FRONT TOILET SEAT. UPC 901.
- ALL BACKFLOW DEVICES SHALL BE TESTED BY A CERTIFIED BACKFLOW TESTER WITH THE RESULTS DOCUMENTED ON FORMS PROVIDED BY THE L.A. COUNTY DEPARTMENT OF HEALTH SERVICES. CROSS CONNECTION CONTROL SECTION. THE CERTIFIED TEST RESULTS SHALL BE REGISTERED WITH THE ABOVE AGENCY AND A COPY OF THE CERTIFIED TEST RESULTS SHALL BE PRESENTED TO THE CITY INSPECTOR PRIOR TO THE FINAL APPROVAL.
- SUPPORT HORIZONTAL CAST IRON VENT PIPING AT EVERY OTHER JOINT UNLESS OVER 4 FEET THEN SUPPORT EVERY JOINT. SUPPORT ADJACENT TO JOINT NOT TO EXCEED 18" AND AT EACH HORIZONTAL BRANCH CONNECTION. PROVIDE HORIZONTAL BRACING EVERY 40". HANGERS SHALL NOT BE PLACED ON THE COUPLINGS.
- ALL HANGERS AND SUPPORTS FOR BOTH VERTICAL AND HORIZONTAL PIPING SHALL BE INSTALLED PER UPC SECTION 314.0 AND TABLE 3.2.
- PROVIDE WALL CLEANOUTS AT ALL SINKS.
- POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE PLUMBING CODE.
- 1-1/2" TRAP ARMS SHALL NOT EXCEED 3'6" IN LENGTH.
- 2" TRAP ARMS SHALL NOT EXCEED 5' IN LENGTH.
- DO NOT BORE HOLES IN STUDS TO RUN HORIZONTAL VENTS. INSTALL VENTS VERTICALLY UNTIL 6" ABOVE TOP PLATES OF WALLS.
- WATER HEATING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTMENT FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE. SETTINGS FOR THE INTENDED USE AS LISTED IN TABLE 2, CHAPTER 49 OF THE ASHRAE HANDBOOK, HVAC APPLICATIONS VOLUME.
- SERVICE WATER HEATING SYSTEMS AND EQUIPMENT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE APPLIANCE EFFICIENCY REGULATIONS AS REQUIRED BY SEC. 111.
- CIRCULATING SERVICE WATER HEATING SYSTEMS SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP WHEN HOT WATER IS NOT REQUIRED.
- LAVATORIES IN PUBLIC RESTROOMS SHALL HAVE CONTROLS THAT LIMIT THE WATER SUPPLY TEMPERATURE TO 110 DEGREES F.
- RIGHT AND LEFT NIPPLES AND COUPLINGS SHALL BE USED INSTEAD OF UNIONS WHERE UNIONS ARE NECESSARY. GROUND-JOINT UNIONS MAY BE USED AT EXPOSED FIXTURE, APPLIANCE, OR EQUIPMENT CONNECTIONS AND IN EXPOSED EXTERIOR LOCATIONS IMMEDIATELY ON THE DISCHARGE SIDE OF A BUILDING SHUTOFF VALVE. HEAVY DUTY FLANGED TYPE UNIONS MAY BE USED IN SPECIAL CASES, WHEN FIRST APPROVED BY THE ADMINISTRATIVE AUTHORITY. BUSHINGS SHALL NOT BE USED IN CONCEALED LOCATIONS.

NO.	REVISION	BY	DATE

HANDLEY ENGINEERING