

## GENERAL NOTES

THE NOTES BELOW ARE PART OF THE CONTRACT DOCUMENTS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO READ AND UNDERSTAND THEM.

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|---|--|
| <ol style="list-style-type: none"> <li>1. DO NOT SCALE DRAWINGS.</li> <li>2. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS AND MOUNTING HEIGHTS. OBTAIN EXACT FLOOR DRAIN AND FLOOR SINK LOCATIONS FROM MECHANICAL DRAWINGS.</li> <li>3. VTR'S SHALL BE MIN. 10'-0" FROM OA INTAKES. COORDINATE WITH MECHANICAL SECTION.</li> <li>4. VERIFY LOCATION OF HANDICAPPED FIXTURES WITH ARCHITECTURAL DRAWINGS.</li> <li>5. PROVIDE CHROME PLATED ESCUTCHEONS AT PIPE SLEEVES FOR EXPOSED BARE PIPE.</li> <li>6. PROVIDE ACCESS DOORS IN GYP. BOARD CEILINGS AND INACCESSIBLE WALLS FOR VALVES AND CLEANOUTS. COORDINATE WITH ARCHITECT FOR EXACT SIZE AND LOCATION OF ACCESS DOORS.</li> <li>7. PLUMBING FIXTURES SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ORDER RELEASE. CONTRACTOR SHALL VERIFY PLUMBING FIXTURES WITH ARCHITECT PRIOR TO BID.</li> <li>8. AT HANDICAP LAVATORIES &amp; SINKS, COVER OFFSET WASTE, P-TRAP, HOT &amp; COLD WATER ANGLE STOPS &amp; SUPPLIES WITH WHITE SKAL GARD MODEL SG-102, 103 &amp; 104. (EQUAL BY PROWRAP).</li> <li>9. ARRANGE WH'S TO PROVIDE EASE OF DISASSEMBLY &amp; MAINTENANCE.</li> <li>10. PIPES PASSING THRU 1 HR. FIRE RATED WALLS &amp; FLOORS SHALL BE SEALED W/ U.L. LISTED MATERIAL EQUAL TO 3M FIRE BARRIER, CAULK OR PUTTY.</li> <li>11. EQUIPMENT START-UP SHALL BE BY MANUFACTURER'S AUTHORIZED REPRESENTATIVES.</li> <li>12. FLOOR SINKS SHALL BE LOCATED SO AS NOT TO CREATE TRIPPING HAZARD WHEN ROUTING DRAIN LINES @ FLOOR LEVEL. VERIFY EXACT DRAIN LINE ROUTING PRIOR TO FLOOR SINK ROUGH-IN.</li> <li>13. PLUMBING RISER ISOLATION &amp; DRAIN VALVES SHALL BE LOCATED WITHIN EASY REACH OF CEILING, WHERE CEILINGS OCCUR BELOW &amp; DROPPED TO WITHIN A MAX. 10'-0" OF FINISHED FLOOR WHERE NO CEILING OCCURS.</li> <li>14. PIPING SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINT.</li> <li>15. WHERE HANDICAPPED WATER CLOSET INDICATED (VERIFY WITH ARCH. DWGS.), LOCATE FLUSH VALVE ON WIDE SIDE OF STALL PER ADA STANDARDS.</li> <li>16. INSULATED PIPING EXPOSED TO VIEW THROUGHOUT THE FACILITY SHALL BE COVERED AND FINISHED WITH PVC JACKET EQUAL TO MANVILLE PVC / PERMAPIPE JACKETING SYSTEM USING 30 MIL THICK JACKET. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH SEAM ON TOP OF PIPE SO AS TO NOT BE VISIBLE FROM OCCUPIED SPACE.</li> <li>17. PROVIDE WALL CLEANOUTS AT SINKS AND URINALS IN ACCORDANCE WITH APPLICABLE SECTIONS OF IPC.</li> <li>18. TRAP PRIMER EQUAL TO PRECISION PRODUCTS CO. "PRIME-RITE" SHALL BE INSTALLED AT FLOOR SINKS &amp; FLOOR DRAINS IN MECHANICAL ROOMS. PIPE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.</li> </ol> | <ol style="list-style-type: none"> <li>19. PROVIDE 1/2" SOV AHEAD OF EACH TRAP PRIMER.</li> <li>20. PROVIDE A 6 MIL. POLYETHYLENE SLEEVE SYSTEM EQUAL TO IPS WATER-TITE FOR COPPER DOMESTIC WATER PIPE BELOW SLAB.</li> <li>21. HOT &amp; COLD WATER SOV'S SHALL BE LOCATED TO BE EASILY ACCESSED.</li> <li>22. CONTRACTOR SHALL VERIFY SIZE &amp; LOCATION OF UNDERGROUND UTILITIES. COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION.</li> <li>23. PROVIDE WATER HAMMER ARRESTORS EQUAL TO WATTS REGULATOR NO. 15 SERIES. PROVIDE ON HOT &amp; COLD WATER PIPING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. DEVICES SHALL BE PDI CERTIFIED AND ANSI APPROVED.</li> <li>24. PLUMBER SHALL MAKE FINAL CONNECTIONS TO ALL PLUMBING FIXTURES.</li> <li>25. WATER PIPING SHALL BE ROUTED "AROUND" ELECTRICAL ROOMS.</li> <li>26. ALL REQUIRED CLEANOUTS NOT LOCATED IN MECHANICAL ROOMS SHALL BE LOCATED IN WALLS AS REQUIRED. NO FLOOR CLEANOUTS ARE TO BE INSTALLED IN PUBLIC AREAS, CORRIDORS AND UNITS. CLEANOUTS SHOWN REPRESENT APPROXIMATE LOCATIONS. CONTRACTOR RESPONSIBLE FOR EXTENDING WASTE LINES TO NEAREST WALL AND PROVIDE WALL CLEANOUT AS REQUIRED. COORDINATE LOCATION AND COVER FINISHES WITH ARCHITECT PRIOR TO ORDER RELEASE AND STARTING WORK.</li> <li>27. CONTRACTOR TO PROVIDE FREEZE PROOF HOSE BIBBS AS REQUIRED AROUND EXTERIOR OF BUILDING. COORDINATE EXACT LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK.</li> <li>28. COORDINATE ROUTING OF UNDERGROUND PIPING WITH STRUCTURAL FOOTINGS PRIOR TO COMMENCING WORK.</li> <li>29. THE CONTRACTOR SHALL BRING ERRORS AND OMISSIONS WHICH MAY OCCUR IN THE CONTRACT DOCUMENTS TO THE ATTENTION OF THE ARCHITECT VERBALLY AND IN WRITING. WRITTEN INSTRUCTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY ERRORS, DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OF WHICH THE CONTRACTOR FAILED TO NOTIFY THE ARCHITECT BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK.</li> <li>29. SUBMITTED EQUIPMENT WILL BE REVIEWED FOR CONFORMITY OF SCHEDULED INFORMATION INCLUDING, BUT NOT LIMITED TO: QUALITY, PERFORMANCE, PHYSICAL CHARACTERISTICS, OPTIONS, AND OTHER FEATURES AS NOTED. IF THE CONTRACTOR SUBMITS MANUFACTURERS OR MODELS OTHER THAN THE SCHEDULED ITEMS, THE EQUIPMENT WILL BE SUBJECT TO REVIEW AND ACCEPTANCE/REJECTION AT THE ENGINEER'S DISCRETION. OWNER WILL HAVE FINAL AUTHORIZATION OF EQUIPMENT APPROVAL.</li> <li>30. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.</li> <li>31. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL DIVISIONS. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR MECHANICAL SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR PLUMBING PIPING, MECHANICAL PIPING, MECHANICAL DUCTWORK, &amp; ELECTRICAL CONDUIT MAINS. VERIFY FIT OF MECHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.</li> </ol> |
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## CODES & DESIGN CRITERIA

JURISDICTION:	PARKER, COLORADO
PLUMBING CODE:	2018 INTERNATIONAL PLUMBING CODE
FUEL GAS CODE:	2018 INTERNATIONAL FUEL GAS CODE

## PLUMBING DESIGN CRITERIA

**DOMESTIC WATER:**  
PER LANDLORD WORK LETTER A 1" DOMESTIC COLD WATER LINE HAS BEEN STUB WITHIN 5' OF BUILDING. WITH A MINIMUM PRESSURE OF 40 PSI. LANDLORD WILL PROVIDE WATER METER OR SUB METER AT AN ACCESSIBLE LOCATION SO IT CAN BE READ WITH OUT ENTERING THE PREMISES

**SANITARY SEWER:**  
PER LANDLORD WORK LETTER A 4" SANITARY SEWER BRANCH LINE WITHIN 5' OF BUILDING HAS BEN INSTALLED AT A DEPTH TO ACCOMMODATE A GREASE INTERCEPTOR AS REQUIRED BY LOCAL AUTHORITIES. (PER PARKER WATER AND SANITARY A MINIMUM SIZE OF A GREASE INTERCEPTOR SHALL BE 1200 GALLONS. GRAVITY GREASE INTERCEPTOR MUST BE INSTALLED TO ACCOMMODATE ACCESS FOR MAINT. A SITE WINDOW NEEDS TO BE INSTALLED DOWN STREAM OF THE GREASE INTERCEPTOR SO WASTE SAMPLE CAN BE TAKEN BY THE A.H.J.

**GREASE INTERCEPTOR:**  
PER PARKER WATER AND SANITARY A MINIMUM SIZE OF A GREASE INTERCEPTOR SHALL BE 1200 GALLONS. GRAVITY GREASE INTERCEPTOR MUST BE INSTALLED OUTSIDE AND IN A LOCATION TO ALLOW FOR MAINT. A SITE WINDOW NEEDS TO BE INSTALLED DOWN STREAM OF THE GREASE INTERCEPTOR SO SAMPLES CAN BE TAKEN BY THE A.H.J.

**NATURAL GAS SYSTEM:**  
PER LANDLORD WORK LETTER A 2" NATURAL GAS LINE HAS BEEN STUBBED TO THE BUILDING. NO INCOMING PRESSURE WERE INDICATED. JCAACE BASIS OF DESIGN 7" WC ENTERING GAS PRESSURE

## SHEET INDEX

ISSUE	SHEET NO.	SHEET DESCRIPTION
XX-XX-XXXX REVIEW SET	● P0.1	PLUMBING COVER SHEET/SCHEDS
	● P0.2	PLUMBING SPECIFICATIONS
	● P1.1	PLUMBING FLOOR PLAN

## LEGEND

ABBR.	SYMBOL	DESCRIPTION
SAN OR W		WASTE OR SEWER BELOW GRADE
FCO/GCO		FLOOR OR GRADE CLEANOUT
CW		COLD WATER
SOV		SHUT-OFF VALVE
BFP		BACKFLOW PREVENTER
G		GAS, LOW PRESSURE
GC		GAS COCK
FD		FLOOR DRAIN
VTR		VENT THRU ROOF
GW		GREASE WASTE BELOW GRADE
POC		POINT OF CONNECTION
PC		PIPE CAP

## PLUMBING MATERIAL SCHEDULE

SYSTEM	ABV/BLW GRADE	SIZES	MATERIAL	JOINTS	FITTINGS
WASTE & VENT DRAIN	ABV	ALL	NO HUB CAST IRON	GASKET COUPLINGS W/ CLAMPS	NO HUB CAST IRON
WASTE & VENT DRAIN	BLW	ALL	SCH. 40 PVC	SOLVENT WELD	MATCH PIPE
DOMESTIC WATER	ABV	ALL	TYPE L COPPER	LEAD FREE SOLDER	WROUGHT COPPER
GAS	ABV	1/2" TO 2"	SCH. 40 BLACK STEEL	SCREWED	MALLEABLE BLACK IRON
DOMESTIC WATER	BLW	ALL	TYPE K COPPER	LEAD FREE SOLDER	

## PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MFR/MODEL	ROUGH-IN (INCHES)						NOTES
			HW	CW	V	TRAP	S	W	
FD-1	CAST IRON FLOOR DRAIN WITH DOUBLE DRAINAGE FLANGE AND WEEPHOLES WHERE WATERPROOF MEMBRANES OCCUR, MEDIUM DUTY CAST IRON STRAINER, AND 1/2" TRAP PRIMER CONNECTION. PROVIDE P-TRAP OF MATERIAL SPECIFIED FOR DRAINAGE PIPING AND SIZE INDICATED ON DRAWINGS.	FLOOR DRAIN = ZURN #Z-550-P OR EQUAL BY JOSAM, J.R. SMITH, WADE, OR EQUAL	---	---	---	SEE NOTES	SEE NOTES	SET DRAIN FLUSH AND LEVEL WITH FINISHED SURFACES. COORDINATE PLACEMENT WITH OTHER TRADES. COVER DRAIN DURING CONSTRUCTION TO PREVENT FOREIGN OBSTACLES FROM ENTERING DRAIN. FLOOR DRAIN CONNECTION SIZE AS NOTED ON PLANS.	

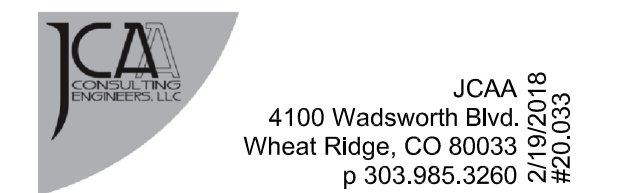
NEW CONSTRUCTION:

# PARKER MIXED-USE RETAIL

HESS ROAD & PARDEE  
STREET  
PARKER, COLORADO



8111 Preston Road, Suite 300  
Dallas, Texas 75225



JCAA  
4100 Wadsworth Blvd.  
Wheat Ridge, CO 80033  
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219/2018  
#20.033

DATE: 04.27.2020      ISSUE: ISSUED TO PWSD

ARCHITECTURE

# R

# OGUE

CHALLENGING THE STATUS QUO

**4100**  
Wadsworth Boulevard  
Suite 300  
Wheat Ridge  
CO 80033  
720-599-3330 - P  
303-987-2304 - X



5/13/2020

DATE: 04.27.2020  
DRAWN: ATE  
CHECKED: JCAA  
ROGUE PROJECT NO.: 2019.30

PLUMBING COVER SHEET

P0.1

SHEET:

ISSUED TO PWSD - 04.27.2020

# PLUMBING SPECIFICATIONS

## DIVISION 22 SPECIFICATIONS:

### PLUMBING EQUIPMENT, METHODS AND MATERIALS

#### PRODUCTS

##### 1. GENERAL

ALL PRODUCTS USED SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE PLUMBING CODE IN EFFECT IN THE BUILDING LOCATION. WHERE BIDDER IS NOT SURE, HE IS ADVISED TO DETERMINE WHAT LIMITATIONS, IF ANY, ARE IMPOSED AT THE SITE.

##### 2. WATER DISTRIBUTION PIPE

PIPE 4" AND SMALLER SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS FOR PIPE NOT IN OR UNDER FLOOR SLABS.

DIELECTRIC UNIONS SHALL BE INSTALLED WHEREVER ANY DISSIMILAR METALS ARE USED.

##### 3. SANITARY SOIL, WASTE AND VENT SYSTEMS

SOIL AND WASTE PIPE SHALL BE CAST IRON AS APPROVED BY CODE FOR THIS DUTY. NO VENT STACK SHALL BE LESS THAN 2" IN DIAMETER.

##### 4. SLEEVES AND ESCUTCHEONS

PROVIDE GALVANIZED SHEET METAL SLEEVES FOR ALL PIPES AT FLOORS, CEILINGS AND PARTITIONS. PROVIDE PIPE SLEEVES TWO PIPE SIZES LARGER THAN PIPE OR INSULATION AT PENETRATIONS. CAULK AND INSTALL ESCUTCHEONS AS SPECIFIED.

PROVIDE NICKEL PLATED BRASS ESCUTCHEONS WITH SPRING LOCKS OR SET SCREWS AT CEILINGS, FLOORS, AND WALLS FOR ALL PIPES. DO NOT USE CHROME PLATED FERROUS METAL ESCUTCHEONS.

##### 5. VALVES

VALVES SHALL BE SOLID BRONZE THROUGH 2" SIZE AND BRONZE FITTED FOR LARGER SIZES.

PROVIDE FULL PORT BALL VALVES WITH SOLDER CONNECTIONS.

VALVES SHALL BE RATED AT 125 PSI SWP/200 PSI WOG EQUIVALENT TO NIBCO, STOCKHAM, CRANE OR APPROVED EQUIVALENT.

##### 6. CLEANOUTS AND COVERS

PROVIDE CLEANOUTS AT THE BASE OF EACH STACK AND AS SHOWN ON THE DRAWINGS. SPACING SHALL NOT BE GREATER THAN 50 FEET APART. PROVIDE CLEANOUT AT EACH CHANGE OF DIRECTION OF THE WASTE LINE GREATER THAN 45 DEGREES AND AS REQUIRED TO PROPERLY ROD THE SYSTEM.

CLEANOUT COVER SHALL BE THE PROPER TYPE FOR THE LOCATION AS ACCEPTED BY THE TRADE AS GOOD PRACTICE. THAT IS, FLUSH SCORED TOP FOR TILE AREAS, RECESSED TOP FOR VINYL FLOOR AREAS, DEEP CUT FOR TERRAZZO AREAS, FLUSH MOUNTED ON FLOOR UNDER CARPET WITH SCREW MARKER, CHROME PLATED COVER PLATE FOR FINISHED WALLS, ETC.

##### 7. ROOF FLASHING FOR ROOF DRAINS AND VENT STACKS

FLASHING SHALL BE LEAD OF NOT LESS THAN FOUR POUNDS PER SQUARE FEET AND SHALL BE TALL ENOUGH TO TURN INTO THE TOP OF THE VENT PIPE 12" ABOVE THE ROOF AND EXTEND OUT FROM THE ROOF DRAINS AND STACKS AT LEAST 12" ON EACH SIDE. OR AS DIRECTED BY THE ARCHITECT.

##### 8. PIPE HANGERS AND SUPPORTS

HANGERS FOR HORIZONTAL PIPES IN BUILDING SHALL BE ADJUSTABLE TYPE SUPPORTED BY THREADED RODS EQUIVALENT TO FEE AND MASON #239 OR #400. HANGERS ON BARE COPPER LINES SHALL BE COPPER PLATED. INSULATED LINES SHALL BE PROVIDED WITH A 20 GAUGE MINIMUM SADDLE 12" LONG FOR PIPES 2" AND SMALLER AND 18" FOR LARGER PIPES.

SUPPORT ALL PIPING BELOW THE BUILDING, SIDEWALKS, ETC. WITH 1/4 INCH STAINLESS STEEL RODS 4 FOOT ON CENTER AND AT EACH SIDE OF EACH FITTING. FOR NEW CONCRETE, EMBED IN THE CONCRETE ABOVE AND WIRE TO THE STEEL REINFORCING. FOR EXISTING CONCRETE SLABS, USE THREADED STAINLESS STEEL RODS AND 1/4 INCH CONCRETE DRILL AND SET ANCHORS. DRILL ANCHORS ONLY INTO BEAMS AND WEBS. TWIST THE RODS AROUND THE PIPING WITH THREE COMPLETE TURNS AROUND THE VERTICAL ROD. PROVIDE 1 FOOT LONG SCHEDULE 40 PVC SADDLES FOR ALL COPPER AND PVC PIPING. THE SADDLES SHALL BE THE SAME DIAMETER AS THE PIPE. WHERE REPAIRS ARE BEING MADE, THE CONTRACTOR SHALL INSTALL THESE SUPPORT RODS ON BOTH SIDES OF THE REPAIR FOR A DISTANCE OF 4 FEET OF THE EXISTING PIPE.

##### 9. UNIONS

UNIONS 2" AND SMALLER SHALL BE GROUND JOINT TYPE WITH FLANGES BEING USED IN PIPES LARGER THAN 2".

##### 10. FIXTURES AND EQUIPMENT GENERAL

FURNISH ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT AS SHOWN ON THE DRAWINGS. IF THE ARCHITECTURAL DRAWINGS DIFFER FROM THE PLUMBING DRAWINGS, THE ARCHITECT SHALL BE NOTIFIED PRIOR TO BIDDING. FURNISH FIXTURES AND OTHER EQUIPMENT COMPLETE WITH ALL REQUIRED AND NECESSARY TRIM, FITTINGS, AND OTHER DEVICES FOR A COMPLETE FINISHED PROJECT AND AS DIRECTED BY THE ARCHITECT.

FIXTURES AND EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME OR TRADE MARK IMPRINTED ON OR ATTACHED BY METALLIC NAME PLATE. ALL FIXTURES AND ALL TRIM SHALL BE BY THE SAME MANUFACTURER UNLESS NOTED OTHERWISE. TRIM MAY BE OF DIFFERENT MANUFACTURER THAN FIXTURES, BUT EQUIVALENT TO THAT SPECIFIED.

ALL EXPOSED TRIM SHALL BE CHROME PLATED. TOPS OF ALL FLOOR DRAINS SHALL BE CHROME OR NICKEL BRONZE UNLESS OTHERWISE NOTED.

FURNISH BOLT CAPS FOR ALL TOILETS AND URINALS.

##### 11. PLUMBING FIXTURES

GENERAL: THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES, WITH ALL ASSOCIATED VALVES, TRIM, CONNECTORS, ETC., SHOWN ON THE ACCOMPANYING DRAWINGS. ALL FIXTURES MUST BE DELIVERED TO THE BUILDING PROPERLY CRATED. ESCUTCHEONS SHALL BE CHROME PLATED BRASS OR STAINLESS STEEL. TRAPS SHALL BE 17-GAUGE AND SHALL HAVE COUNTER SUNK CLEANOUT PLUG.

##### EXECUTION

##### 12. GENERAL

ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES AND THE BEST PRACTICES AND ALL PRODUCTS INSTALLED AS DIRECTED BY THE MANUFACTURER THROUGH THEIR WRITTEN INSTRUCTIONS.

##### 13. DISINFECTION

DISINFECT NEW WATER PIPING (AND EXISTING WATER PIPING AFFECTED BY THE CONTRACTOR'S OPERATION) IN ACCORDANCE WITH AWWA C601. FILL PIPING SYSTEMS WITH SOLUTION CONTAINING A MINIMUM OF 50 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOW SOLUTION TO STAND FOR A MINIMUM OF 24 HOURS. FLUSH SOLUTION FROM SYSTEMS WITH CLEAN WATER UNTIL MAXIMUM RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 0.2 PARTS PER MILLION.

##### 14. EXCAVATION AND BACKFILLING

DO ALL EXCAVATION AND BACKFILLING REQUIRED. TRENCHES SHALL BE WIDE ENOUGH FOR PROPER INSTALLATION OF THE PIPE. GRADE THE DITCH BOTTOM FOR PROPER SLOPE AND PROVIDE BELL HOLES TO ALLOW THE FULL BEARING OF THE PIPE BARREL. COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS RELATING TO DITCHING.

DEWATER TO EXTENT NECESSARY TO GIVE PROPER COMPACTION UNDER ALL PIPES. CONTINUE DEWATERING OPERATION UNTIL SYSTEM HAS BEEN TESTED, APPROVED, BACKFILLED AND COMPACTED.

EXCAVATE 6" BELOW THE PIPE AND FILL WITH COMPACTED OR WETTED SAND TO PIPE GRADE.

NO EXCAVATION SHALL BE UNDER OR NEAR FOOTINGS WITHOUT APPROVAL OF THE ARCHITECT.

BACKFILL WITH CLEAN DIRT OR SAND, NO ROCKS, CLODS OR TRASH. TAKE CARE NOT TO DISTURB THE PIPE GRADE OR ALIGNMENT. COMPACT AROUND AND UNDER THE PIPE CAREFULLY. FINISH BACKFILL WITH APPROVED MATERIAL AND LEAVE SLIGHTLY MOUNDED. CLEAN UP AROUND THE DITCH AREA TO REMOVE TRASH AND ANY EXCESS DIRT.

WHERE DITCH IS UNDER FUTURE PAVEMENT, FINISH SURFACES, OR FOOTINGS, THE FILL SHALL BE COMPACTED IN 6" LAYERS WITH A POWER TAMPER.

##### 15. CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR'S RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO:

SETTING FLOOR AND WALL SLEEVES IN PROPER LOCATIONS.

INFORMING OTHER TRADES OF LOCATION OF AND SIZE OF CHASES, STACKS, CLEANOUTS, ETC. THAT WILL LATER RELATE TO THEIR WORK.

PROVIDING ACCESS TO ALL ITEMS REQUIRING ROUTINE SERVICE.

SETTING THE ELEVATION OF FLOOR DRAIN TOPS TO PROVIDE FOR A SLOPE OF 1/16" PER FOOT TOWARD THE DRAIN. THIS REQUIRES COORDINATION WITH THE CONCRETE SUBCONTRACTOR AND RECHECKING AT THE TIME THE POUR IS BEING MADE.

##### INSULATION:

##### 16. GENERAL

THIS SECTION APPLIES TO ALL PLUMBING WORK.

ALL INSULATION SHALL BE IN STRICT ACCORDANCE ALL LOCAL AND STATE ENERGY CODES.

THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.

INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U. L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

##### 17. DOMESTIC HOT AND COLD WATER

DOMESTIC HOT AND COLD WATER PIPE ABOVE GRADE AND IN CONCEALED SPACES SHALL BE INSULATED USING ALL SERVICE JACKET WITH SELF-SEALING LAPS. THICKNESS FOR ALL SIZES OF PIPE SHALL BE 1" INCH THICK FIBERGLASS FOR NON HOT WATER RECIRCULATING SYSTEMS. INSULATION SHALL MEET OR EXCEED IECC. FITTINGS SHALL BE COVERED WITH FORMED SECTIONS OF MATERIAL.

##### 18. COLD DRAIN LINES

INSULATE ALL HORIZONTAL DRAIN LINES WHICH CAN RECEIVE COLD CONDENSATE WITH 1" THICK (3/4 LBS/CU. FT. DENSITY) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER.

##### 19. WATER DISTRIBUTION PIPING

EXTEND FROM THE WATER ENTRANCE TO EVERY FIXTURE, WATER HEATER, OR OUTLET REQUIRING HOT OR COLD WATER. PROVIDE STOP VALVE AND A DRAIN FOR THE SYSTEM. EVERY LOW POINT SHALL BE DRAINED WITH A CAP OR PLUG AND DRAIN VALVE.

PIPE SIZES SHOWN ON THE DRAWINGS ARE INTERNAL DIAMETER.

EVERY FIXTURE CONNECTION SHALL BE PROVIDED WITH A STOP VALVE AND AN 3/4" X 15" HIGH AIR CHAMBER VERTICALLY AT THE FIXTURE CONNECTION.

AT CONTRACTOR'S OPTION, EXISTING BRANCH (NOT MAIN) DOMESTIC WATER PIPING MAY BE REUSED WITHIN UNIT IF TESTED AND PROVEN TO BE IN PROPER CONDITION WITH APPROVAL OF ARCHITECT.

##### 20. BUILDING DRAIN, WASTE AND VENT SYSTEM

THE WASTE AND VENT SYSTEM SHALL BE GENERALLY AS SHOWN ON THE DRAWINGS WITH CHANGES ON THE JOB AS REQUIRED TO MEET JOB CONDITIONS. ANY MAJOR CHANGE FROM THAT SHOWN ON THE DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY THE ARCHITECT.

A FIXTURE SHALL WASH THE BOTTOM OF ALL STACKS WHETHER REQUIRED BY LOCAL CODE OR NOT.

EXTEND VENT STACKS 12" ABOVE THE ROOF AND FLASH WITH FLASHING. TURN THE TOP OF FLASHING INTO THE STACK.

THERE SHALL BE NO HORIZONTAL OFFSET IN VENTS LESS THAN 6" ABOVE THE FLOOD RIM OF THE HIGHEST FIXTURE IN THE GROUP.

##### 21. TESTING

NOTIFY ARCHITECT THREE WORKING DAYS BEFORE ANY TESTS ARE MADE. NO JOINTS OR FITTINGS SHALL BE CONCEALED UNTIL TESTED AND APPROVED. REPEAT TEST AS NECESSARY UNTIL PROVEN SATISFACTORY.

THE FOLLOWING TEST AS DESCRIBED IN THE INTERNATIONAL PLUMBING CODE, SECTION 312, SHALL BE PERFORMED:

##### SEWER SYSTEM:

WATER TEST - FILL SYSTEM WITH WATER AND HOLD FOR 45 MINUTES WITHOUT DROP IN WATER LEVEL.

MINIMUM HEAD SHALL BE 10 FEET OF WATER.

BALL TEST - PASS A WOODEN SEWER BALL THROUGH THE SYSTEM USING ONLY WATER TO ASSIST.

##### WATER SYSTEM

IMPOSE 150 PSI WATER PRESSURE ON THE SYSTEM WITH SYSTEM FULL OF WATER AND HOLD FOR FOUR HOURS WITHOUT PRESSURE DROP. IN FREEZING WEATHER ONLY, USE 150 PSI AIR PRESSURE AND HOLD FOR 8 HOURS WITHOUT DROP IN PRESSURE BEYOND THAT EXPECTED FROM TEMPERATURE CHANGES. INSTALL PRESSURE GAUGE FOR EITHER TEST AND LEAVE IN PLACE UNTIL WATER SUPPLY IS CONNECTED.

##### 22. SCREWED PIPE FITTINGS

CUT THREADS TO FULL DEPTH AND MAKE UP USING TEFLON TAPE. USE DRAINAGE PATTERN FITTINGS FOR WASTE AND VENT SYSTEMS.

##### 23. CAST IRON PIPE FITTINGS

FITTINGS MAY BE NO-HUB, PUSH TYPE, OR LEAD AND OAKUM. INSTALL AS RECOMMENDED BY THE MANUFACTURER USING TOOLS AS RECOMMENDED BY THEM. CARE SHALL BE TAKEN TO PREVENT SHIFTING OR SETTLING OF PIPE.

##### 24. SOLDER TYPE FITTINGS

BRAZE USING J.W. HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.

CLEAN PIPE AND FITTINGS BRIGHT WITH SAND PAPER OR WIRE BRUSH AND APPLY PASTE FLUX (LIQUID FLUX IS NOT ACCEPTABLE) AND ASSEMBLE JOINT. APPLY HEAT EVENLY TO THE PIPE AND FITTINGS AND APPLY SOLDER TO FILL THE JOINT BY CAPILLARY ACTION. CLEAN JOINT OF EXCESS SOLDER BEFORE IT COOLS. FITTINGS DISCOLORED BY HEAT SHALL BE REMOVED AND THE JOINT REMADE.

##### 25. GRADES

PIPE SHALL GRADE IN DIRECTION OF FLOW NOT LESS THAN THE FOLLOWING  
BUILDING SEWER AND BUILDING DRAIN- 1/8" PER FOOT.  
WASTE AND VENT 2-1/2" AND SMALLER- 1/4" PER FOOT.  
WASTE AND VENT 3" AND LARGER- 1/8" PER FOOT.

##### 26. PIPE SLEEVES

TIGHTLY CAULK ALL ANNULAR SPACES BETWEEN PIPES (OR INSULATION) AND SLEEVES WITH SILICONE TYPE SEALANT.

SLEEVES PASSING THROUGH FLOORS SHALL EXTEND 2" ABOVE THE FLOOR LEVEL TO PREVENT WATER PENETRATION AROUND PIPE. THE SLEEVE SHALL ALSO BE SEALED TO THE FLOOR.

##### 27. PROTECTION OF PIPE BELOW SLABS.

ALL STEEL AND COPPER PIPES INSTALLED BELOW A FLOOR SLAB AND NOT INSULATED SHALL BE GIVEN ONE HEAVY TROWEL COAT OF MASTIC EQUIVALENT TO KOPPERS NO. 50. THE THREADS SHALL BE GIVEN A SECOND COAT.

##### 28. INSTALLATION OF PIPES

ALL THREADED PIPES SHALL BE REAMED TO REMOVE ALL CUTTING LIPS FROM THE INSIDE EDGE AND SHALL BE THREADED WITH CLEAN DIES TO THE PROPER DEPTH. CUTS SHALL BE CLEAN AND NOT GOUGED OR ROUGH. APPLY LUBRICANT TO MALE THREAD ONLY.

ALL COPPER PIPES SHALL BE REAMED TO REMOVE ALL CUTTING LIPS FROM INSIDE EDGE.

PIPE SHALL BE LAID OR SUPPORTED IN A STRAIGHT AND TRUE MANNER WITH FITTINGS USED TO MAKE ALL CHANGES IN DIRECTION.

ALL PIPE SHALL BE CUT CLEAN AT PRECISE ANGLE, HAND CUTTING OF PVC PIPE SHALL NOT BE ACCEPTABLE.

##### 29. PIPE HANGERS AND SUPPORTS

SUPPORT ALL SUSPENDED PIPE WITH PROPER ADJUSTABLE SWIVEL HANGERS WITH MAXIMUM SPACING AS FOLLOWS:

CAST IRON - ONE HANGER FOR EACH SECTION OF CAST IRON PIPE.  
SCREWED AND SOLDER PIPE - 6 FOOT SPACING FOR PIPE 1-1/2" AND SMALLER AND 10 FEET FOR LARGER.

ALL THREAD HANGER RODS SHALL BE USED AS FOLLOWS:

PIPE 2" AND SMALLER - 3/8"  
PIPE 2-1/2 TO 4" - 1/2"  
PIPE ABOVE 4" - 5/8"

SUPPORT ALL VERTICAL PIPE WITH KNEE ANCHORS OR FLOOR CLAMPS AND BRACE AS REQUIRED.

CLAMPS AND HANGERS ON INSULATED PIPE SHALL BE PROVIDED WITH A HEAVY GALVANIZED BEARING PLATE NOT LESS THAN FOUR INSULATION DIAMETERS LONG.

BARE COPPER PIPES SHALL BE SUPPORTED WITH COPPER PLATED HANGERS.

SUPPORT HANGERS FROM BEAM CLAMPS, INSERTS IN CONCRETE, JOIST CLAMPS, ETC. AS NECESSARY TO SUPPORT THE WEIGHT. NO WIRE OR STRAPS ARE TO BE USED FOR HANGERS.

##### 30. PROTECTION DURING CONSTRUCTION

INSTALL TEST PLUGS, WOOD PLUGS OR CAPS IN ALL OPEN PIPES AT TIME OF INSTALLATION AND DO NOT REMOVE UNTIL PIPE IS CONNECTED.

MAINTAIN PRESSURE AND PRESSURE GAUGE ON ALL WATER LINES DURING CONSTRUCTION. USE WATER EXCEPT IN COLD WEATHER.

DRAIN ALL WATER FROM LINES TO PREVENT FREEZING.

PROTECT ALL FINISHED SURFACES OF FIXTURES AND BRASS FROM ANY DAMAGE. FIXTURES OR BRASS OF ANY TYPE THAT IS DAMAGED, SCRATCHED, DISCOLORED SHALL BE REMOVED AND REPLACED AT THIS CONTRACTOR'S EXPENSE.

##### 31. NAUTRAL GAS SYSTEM

GAS PIPING ROUTED WITHIN THE BUILDING, 2" AND BELOW, SHALL BE BLACK STEEL SCHEDULE 40 WITH MALLEABLE FITTINGS, GAS PIPING 2 1/2" AND ABOVE SHALL BE BLACK STEEL SCHEDULE 40, WITH WELD FITTINGS. GAS PIPING INSTALLATION SHALL CONFORM IN ALL RESPECT TO APPLICABLE BUILDING CODES. PROVIDE DRIP LEGS WHERE EVER DIRECTION CHANGES FROM HORIZONTAL TO VERTICAL. GAS PLUG COCKS SHALL BE ROCKWELL, NORDSTRUM, DEZURICK OR APPROVED EQUAL.

VENT ALL GAS REGULATORS TO OUTDOORS.

EACH PIECE OF EQUIPMENT TO BE PROVIDED W/ GAS COCK AND UNION IN ACCORDANCE TO CODE.

## NEW CONSTRUCTION:

# PARKER MIXED-USE RETAIL

HESS ROAD & PARDEE  
STREET  
PARKER, COLORADO

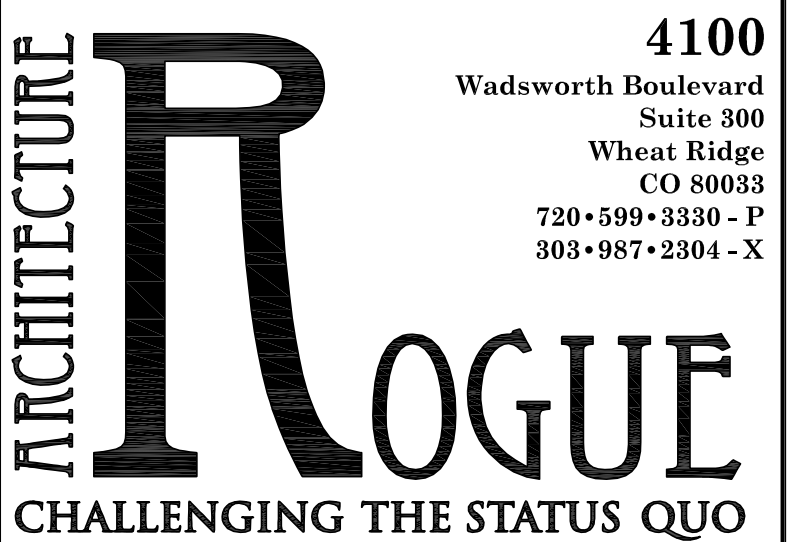


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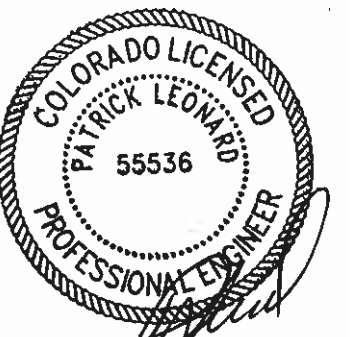


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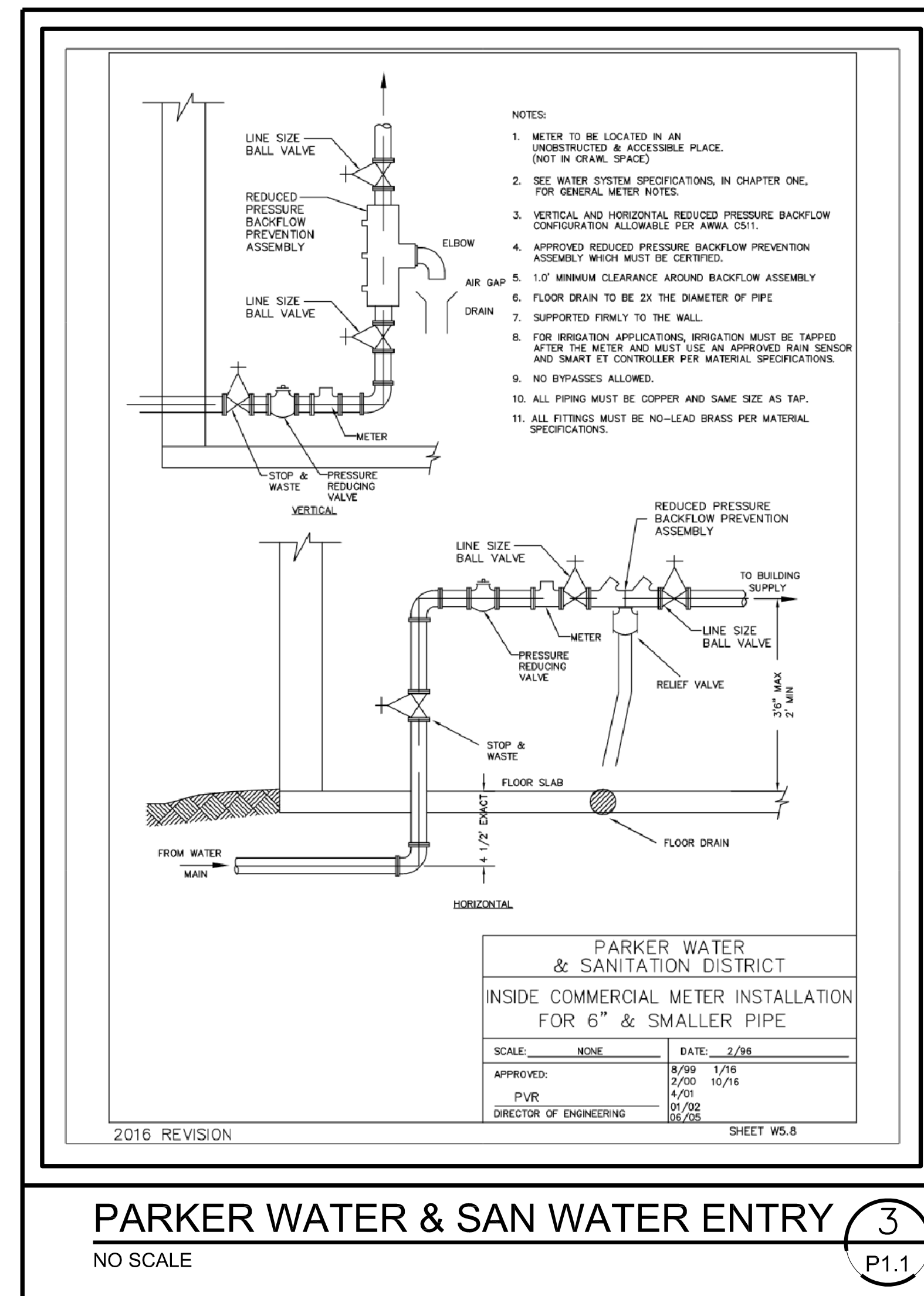
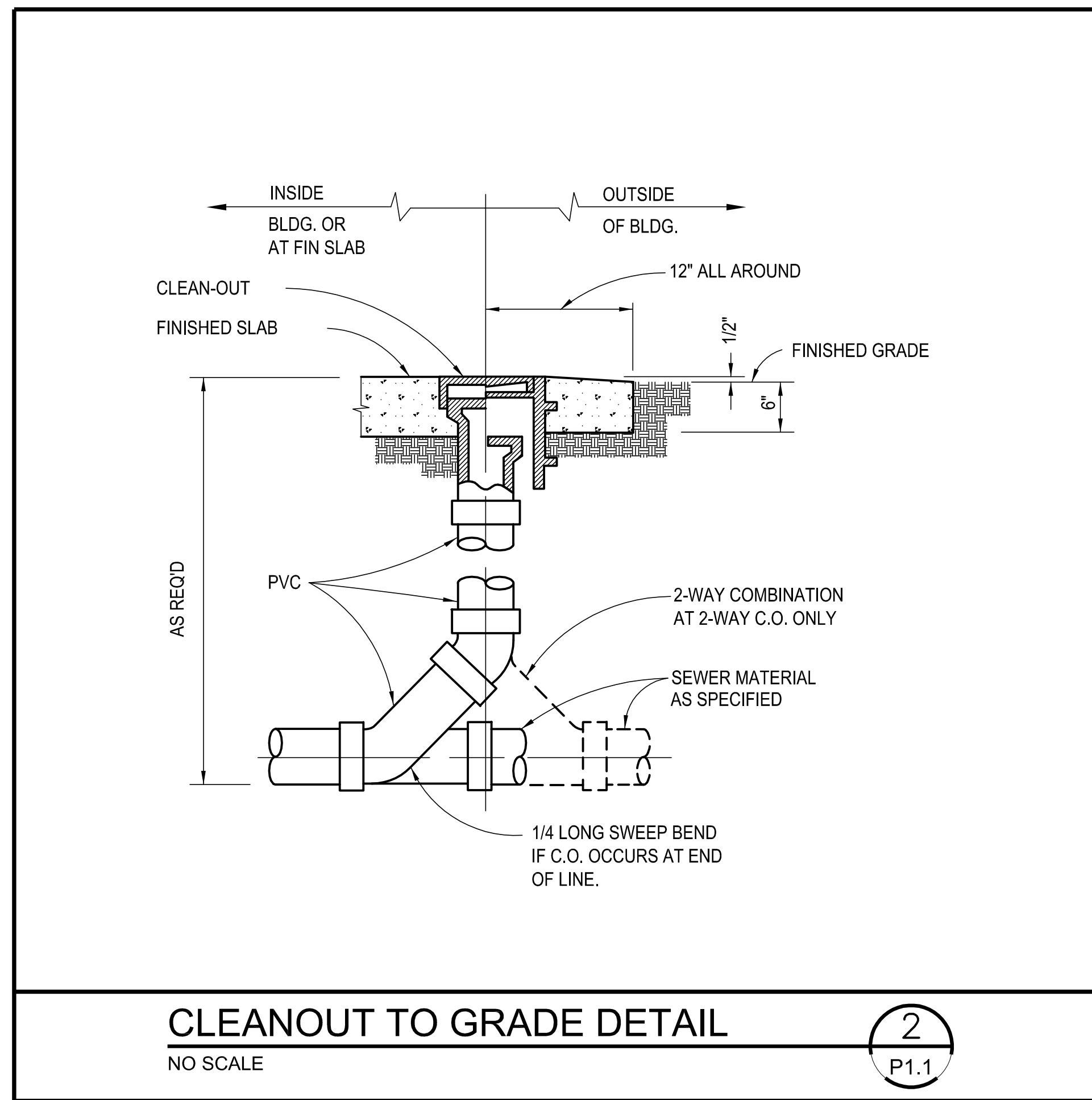
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## PLUMBING SPECIFICATIONS

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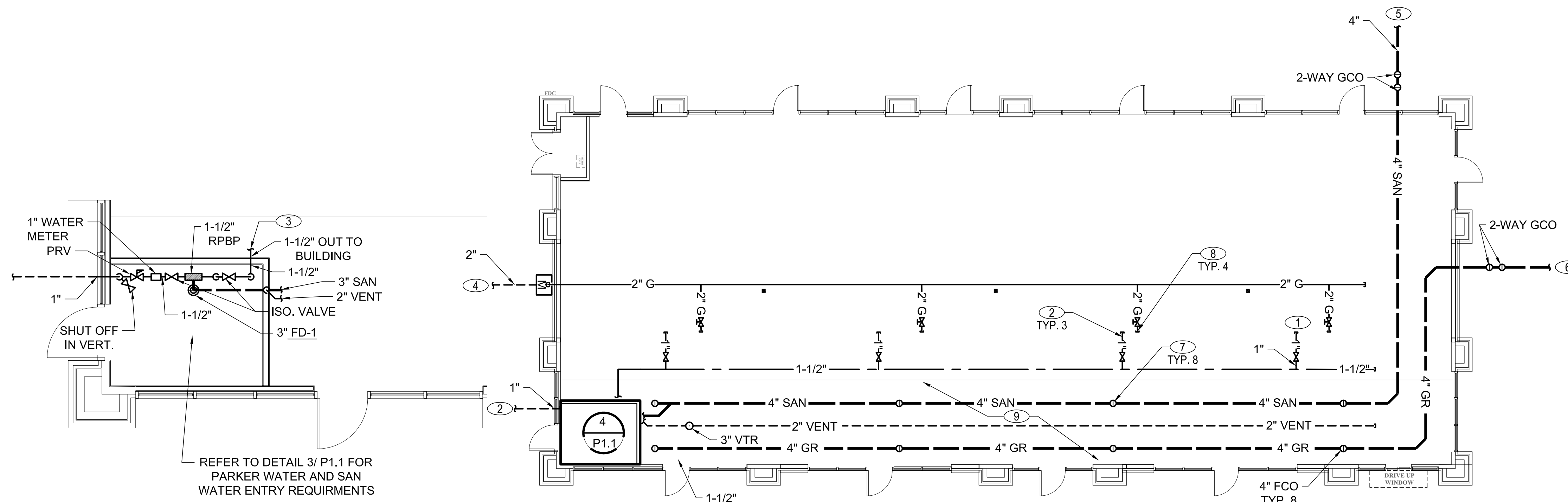


**SHEET NOTES**

- PER LL LETTER PROVIDE 1" COPPER WATER LINE WITH A MINIMUM PRESSURE 40 PSI TO BE CAPPED, VALVE, AND SUBMETERED FOR FUTURE CONNECTION
- 1" CW OUT TO MAIN, REFER TO CIVIL FOR CONTINUATION.
- REFER TO 1 ON SHEET P1.1 FOR CONTINUATION
- REFER TO CIVIL FOR CONTINUATION, JCAACE BASIS OF DESIGN WILL BE 7" WC ENTERING GAS PRESSURE. PER LL LETTER A 2" 7" WC LOW PRESSURE NATURAL GAS LINE WAS STUBBED IN AT AREA OF WORK
- REFER TO CIVIL FOR CONTINUATION AND CONNECTION TO 4" SAN. INSTALL SAN AT A INVERT CAPABLE OF ACCOMMODATE FUTURE GREASE INTERCEPTOR.
- REFER TO CIVIL FOR CONTINUATION, AND CONNECTION TO FUTURE GREASE INTERCEPTOR, GREASE INTERCEPTOR SHALL BE SET, SIZED, AND LOCATED BY FUTURE TENANT / OTHERS.
- FLOOR CLEAN OUTS INSTALLED FOR FUTURE CONNECTION POINTS
- 2" 7" WC GAS LINE CAPPED AND VALVED FOR FUTURE CONNECTION.
- SLAB LEAVE OUT FOR FUTURE TENANT CONNECTION TO BELOW GRADE UTILITIES, REFER TO ARCH / STRUCTURAL SHEETS FOR LEAVE OUT DETAILS. ALL UNDERGROUND PIPING SHALL BE ROUTED THROUGH SLAB LEAVE OUT.

**GENERAL NOTES**

- PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
- CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR PLUMBING SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PLUMBING PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUTS BEFORE CONCRETE IS POURED OR BLOCK SET.
- CONTRACTOR SHALL COORDINATE FINAL ROUTING FOR NEW TO EXISTING WATER, WASTE, & VENT PIPING AS REQUIRED.
- COORDINATE WITH TENANT/OWNER FOR AND BUILDING MANAGEMENT TO ACCESS ADJACENT SPACE FOR PLUMBING WORK IF REQUIRED.
- PROVIDE ACCESSIBLE CLEANOUTS AS REQUIRED PER CODE.
- PROVIDE ACCESSIBLE SHUT-OFF VALVES ON ALL NEW FIXTURE HW & CW BRANCHES.
- ALL VENT PIPING IS 2" UNLESS NOTED OTHERWISE.



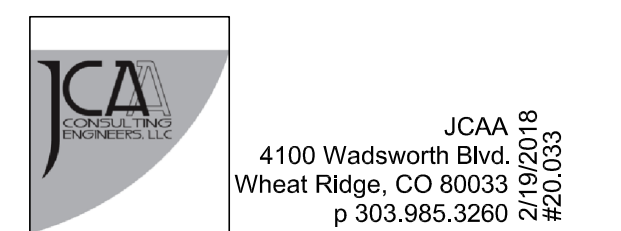
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**PLUMBING FLOOR PLAN**

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