PLUMBING SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

(E)	EXISTING	IE	INVERT ELEVATION
(N)	NEW	OD	OVERFLOW DRAIN, OUTSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR	RD	ROOF DRAIN
BFF	BELOW FINISHED FLOOR	SD	STORM DRAIN
CD	CONDENSATE DRAIN	SF	SQUARE FEET
CO	CLEANOUT	SOV	SHUT OFF VALVE
CONT.	CONTINUATION	T&P	TEMPERATURE AND PRESSURE
CW	COLD WATER	TDL	TOTAL DEVELOPED LENGTH
DN	DOWN	VTR	VENT THRU ROOF
FCO	FLOOR CLEANOUT	W	WASTE
FD	FLOOR DRAIN	WCO	WALL CLEANOUT
FF	FINISHED FLOOR		
HB	HOSE BIBB		
HW	HOT WATER		
HWR	HOT WATER RETURN		

Piping Fittings

- CAP
- COTG — CLEANOUT TO GRADE
- FCO — FLOOR CLEANOUT
- FD — FLOOR DRAIN
- HOSE BIBB
- PIPE DROP
- PIPE RISE
- TEE DOWN ON PIPE
- VTR — VENT THROUGH ROOF
- WCO — WALL CLEANOUT

General

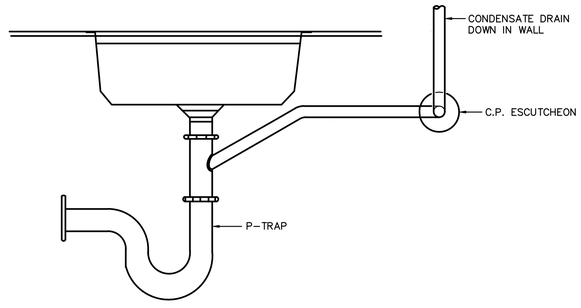
- CONTINUATION
- DEMOLISH
- X — FIXTURE TAG (LEVEL BELOW FIXTURE)
- X — KEYED NOTE
- PIPE BELOW GRADE
- POINT OF CONNECTION

Valves

- BFP — BACKFLOW PREVENTER
- GLOBE VALVE
- PRESSURE REDUCING VALVE
- SHUTOFF VALVE, GENERAL

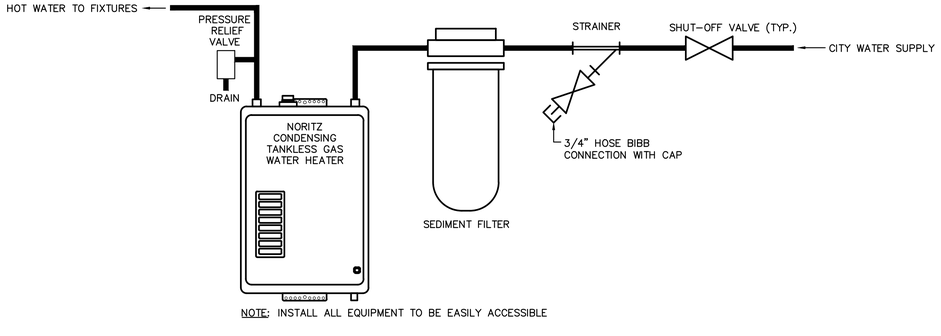
Piping Systems

- COLD WATER PIPING
- GW — GREASE WASTE ABOVE GRADE OR FINISHED FLOOR
- GW — GREASE WASTE BELOW GRADE OR FINISHED FLOOR
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- G — NATURAL GAS PIPING, STANDARD PRESSURE
- OD — OVERFLOW DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
- SANITARY VENT PIPING
- SANITARY WASTE OR SOIL PIPING ABOVE GRADE OR FINISHED FLOOR
- D — CONDENSATE DRAIN PIPING
- SANITARY WASTE OR SOIL PIPING BELOW GRADE OR FINISHED FLOOR
- SD — STORM DRAIN PIPING ABOVE GRADE OR FINISHED FLOOR
- SD — STORM DRAIN PIPING BELOW GRADE OR FINISHED FLOOR
- TP — TRAP PRIMER PIPING



1 CONDENSATE DRAIN CONNECTION DETAIL

NO SCALE



NOTE: INSTALL ALL EQUIPMENT TO BE EASILY ACCESSIBLE

2 WATER TREATMENT SYSTEM DETAIL

NO SCALE

GENERAL PLUMBING NOTES

A. COORDINATE INSTALLATION OF PIPING BELOW AND ABOVE GRADE WITH STRUCTURAL COMPONENTS AND OTHER SYSTEM INSTALLATION.

B. ALL PENETRATIONS THRU FLOORS AND WALLS BELOW GRADE TO BE SEALED AT SLEEVES WITH MECHANICAL SEALING SYSTEM, "LINK SEAL" OR APPROVED.

C. COORDINATE ALL FIXTURES, EQUIPMENT LOCATION AND DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS.

D. LOCATE ALL VALVES FOR SERVICE ACCESSIBILITY.

E. PROVIDE CLEANOUTS PER 2013 CPC §707.0 AS REQUIRED. PROVIDE COVER PLATES FOR VISIBLE WALL CLEANOUTS.

GENERAL PLUMBING NOTES

A. PROVIDE GAS SHUTOFF VALVES, PRESSURE REGULATORS AND UNION (OR CODE APPROVED APPLIANCE CONNECTORS) AT CONNECTIONS TO ALL GAS-FIRED EQUIPMENT. PROVIDE REGULATOR RELIEF VENT PIPING TO ATMOSPHERE WHERE REQUIRED BY CODE.

B. COORDINATE INSTALLATION OF PIPING BELOW AND ABOVE GRADE WITH STRUCTURAL COMPONENTS AND OTHER SYSTEM INSTALLATION.

C. ALL PENETRATIONS THRU FLOORS AND WALLS BELOW GRADE TO BE SEALED AT SLEEVES WITH MECHANICAL SEALING SYSTEM, "LINK SEAL" OR APPROVED.

D. COORDINATE ALL FIXTURES, EQUIPMENT, PIPE ROUGH-IN/CONNECTION LOCATION AND DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS.

E. LOCATE ALL VALVES FOR SERVICE ACCESSIBILITY.

F. VERIFY EXACT LOCATION OF ALL CONNECTIONS TO PIPING INSTALLED BY SITE CONTRACTOR.

G. PIPING TO BE ROUTED IN COORDINATION WITH LIGHTING, DUCTWORK AND OTHER DISCIPLINES.

H. PROVIDE CLEANOUTS PER 2013 CPC §707.0 AS REQUIRED. PROVIDE COVER PLATES FOR VISIBLE WALL CLEANOUTS.

I. PROVIDE PIPING, EQUIPMENT, AND MATERIALS IN ACCORDANCE WITH APPLICABLE PLUMBING CODE REGULATIONS AND STANDARDS, AUTHORITIES HAVING JURISDICTION, AND AS OTHERWISE RECOMMENDED OR DIRECTED BY MANUFACTURERS.

J. CONDENSATE DRAINS SHALL DRAIN TO A CODE COMPLIANT LOCATION.

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURES RECOMMENDATIONS	CONNECTION W	V	CW	HW
BT-1	TUB/SHOWER HEAS/TRIM: BARRIER FREE, ADJUSTABLE TEMPERATURE LIMIT STOP, LEVER STYLE HANDLE, 1.75 GPM SHOWERHEAD, POP-U CFG: 40311GCR CFG VALVE: 45311 FITTINGS: TRIP LEVER WASTE/OVERFLOW P-TRAP.	2"	1-1/2"	1/2"	1/2"
L-1	LAVATORY: BARRIER FREE, COUNTERTOP, 20-1/4 IN. BY 17-1/2 IN. OVAL, OVERFLOW, SELF-RIMMING, VITREOUS CHINA, KOHLER K-2196-4 (PENNINGTON) FITTINGS: 1-1/4 IN. BY 1-1/2 IN. P-TRAP. SUPPLIES AND STOPS, FOR BARRIER FREE, PROVIDE INSULATION KIT TO P-TRAP AND SUPPLIES. SEE SPECIFICATIONS, FAUCET: BARRIER FREE, 1.5 GPM AERATOR, LEVER STYLE HANDLE CFG: 40225	1-1/2"	1-1/2"	1/2"	1/2"
S-1	SINK: SELF RIMMING, 18 GAUGE BRUSHED STAINLESS STEEL, 4" CENTERS, 33 IN.x22 IN.x8 IN., MOEN: G182133 FAUCET: BARRIER FREE, BRASS CONSTRUCTION, 9" SPOUT, 1.5 GPM AERATOR, DECK PLATE, CFG: 40616	2"	1-1/2"	1/2"	1/2"
WC-1	WATER CLOSET: VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNT, TANK TYPE, 1-1/2" TOP SPUD, 1.28 GPF, BOLT CAPS, KOHLER: K-3997 (WELLWORTH) SEAT: COMMERCIAL WEIGHT HEAVY-DUTY PLASTIC, STAINLESS STEEL CHECK HINGE, WHITE, KOHLER: K-4636	4"	2"	1/2"	---

PLUMBING EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURES RECOMMENDATIONS	ELECTRICAL
WH-1 (TYP. ALL UNITS)	TANKLESS WATER HEATER: GAS-FIRED, 120,000 BTU INPUT, DRAIN VALVE, T & P VALVE, PROVIDE ISOLATION VALVE KIT, CONDENSATE NEUTRALIZER KIT, VENT KIT, AND WATER TREATMENT SYSTEM NORITZ: NRC663-FSV	120V

SHEET INDEX

P0.1	PLUMBING SYMBOLS, GENERAL NOTES AND FIXTURE SCHEDULE
P0.2	PLUMBING SPECIFICATIONS AND GAS CALCULATIONS.
P2.1	BUILDINGS 'A' AND 'B' FIRST AND SECOND FLOOR DEMO PLANS – PLUMBING
P2.2	BUILDING 'C' FIRST AND SECOND FLOOR DEMO PLANS – PLUMBING
P2.3	BUILDINGS 'A', 'B' AND 'C' FIRST AND SECOND FLOOR PLANS – PLUMBING

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL LEE STANTON
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Exp. 09-30-17
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Date Signed: 11/8/16

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PLUMBING SYMBOLS AND GENERAL NOTES

RICHLAND HOUSING PHASE II
DEVELPMENT 1, BUILDING TYPES 'A', 'B' & 'C'
REHABILITATION & IMPROVEMENTS
YUBA CITY, CALIFORNIA 95992

DATE 11/24/2016
DRAWN BY GS/NN/KD
JOB 15002-000
SHEET

P0.1

GAS CALCULATIONS (BLDG. TYPE A)

FIXTURE	DESCRIPTION	NO. OF FIXT.	BTU/HR INPUT	TOTAL BTU/HR
MECHANICAL EQUIPMENT				
F-1	FURNACE	2	40,000	80,000
F-2	FURNACE	2	80,000	160,000
PLUMBING EQUIPMENT				
WH-1	TANKLESS WATER HEATER	4	120,000	480,000
	TOTAL DEMAND (BTU)			720,000
	TOTAL DEMAND (CFH)			720

SIZING BASED ON 2013 CPC
LESS THAN 2 PSI SUPPLY PRESSURE WITH 0.5 IN. W.C PRESSURE DROP
100 FEET DEVELOPED LENGTH

2"	1160 CFH
1 1/2"	600 CFH
1 1/4"	400 CFH
1"	195 CFH
3/4"	104 CFH
1/2"	50 CFH

GAS CALCULATIONS (BLDG. TYPE B)

FIXTURE	DESCRIPTION	NO. OF FIXT.	BTU/HR INPUT	TOTAL BTU/HR
MECHANICAL EQUIPMENT				
F-2	FURNACE	4	80,000	320,000
PLUMBING EQUIPMENT				
WH-1	TANKLESS WATER HEATER	4	120,000	480,000
	TOTAL DEMAND (BTU)			800,000
	TOTAL DEMAND (CFH)			800

SIZING BASED ON 2013 CPC
LESS THAN 2 PSI SUPPLY PRESSURE WITH 0.5 IN. W.C PRESSURE DROP
100 FEET DEVELOPED LENGTH

2"	1160 CFH
1 1/2"	600 CFH
1 1/4"	400 CFH
1"	195 CFH
3/4"	104 CFH
1/2"	50 CFH

GAS CALCULATIONS (BLDG. TYPE C)

FIXTURE	DESCRIPTION	NO. OF FIXT.	BTU/HR INPUT	TOTAL BTU/HR
MECHANICAL EQUIPMENT				
F-1	FURNACE	2	40,000	80,000
F-2	FURNACE	2	80,000	160,000
PLUMBING EQUIPMENT				
WH-1	TANKLESS WATER HEATER	4	120,000	480,000
	TOTAL DEMAND (BTU)			720,000
	TOTAL DEMAND (CFH)			720

SIZING BASED ON 2013 CPC
LESS THAN 2 PSI SUPPLY PRESSURE WITH 0.5 IN. W.C PRESSURE DROP
100 FEET DEVELOPED LENGTH

2"	1160 CFH
1 1/2"	600 CFH
1 1/4"	400 CFH
1"	195 CFH
3/4"	104 CFH
1/2"	50 CFH

GENERAL NOTES

PART 1: GENERAL

1. EXAMINE CONSTRUCTION DOCUMENTS, SITE OF PROPOSED WORK AND BECOME FAMILIAR WITH JOB CONDITIONS AFFECTING WORK. NO ADDITIONAL ALLOWANCE WILL BE GRANTED DUE TO LACK OF KNOWLEDGE OF THE PROJECT CONDITIONS. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. VERIFY SPACE REQUIREMENTS AND CLEARANCES REQUIRED FOR SYSTEMS INSTALLATION PRIOR TO CONSTRUCTION. ALL CONFLICTS AND DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT, DESIGN ENGINEER, OWNER OR OWNER'S REPRESENTATIVE PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, MATERIALS, TECHNIQUES, SEQUENCES OR PROCEDURES IN ORDER TO DELIVER SAFE AND OPERABLE SYSTEMS MEETING THE DESIGN INTENT AND CONFORMING TO ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL REPORT DISCREPANCIES OR UNUSUAL CONDITIONS IN WRITING TO THE ARCHITECT AND/OR ENGINEER PRIOR TO FINALIZING BIDS OR CONSTRUCTION OF AREAS AFFECTED BY SUCH CONDITIONS. ALL ADDITIONAL COSTS RESULTING FROM UNREPORTED DISCREPANCIES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. DRAWINGS SHOWING LOCATION OF EQUIPMENT, PIPING, DUCTWORK, ETC. ARE DIAGRAMMATIC AND JOB CONDITIONS WILL NOT ALWAYS PERMIT THEIR INSTALLATION IN THE LOCATION SHOWN. THE MECHANICAL/ PLUMBING DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC. AND SHALL BE FOLLOWED, AS CLOSELY AS PROJECT CONDITIONS, ACTUAL BUILDING CONSTRUCTION, AND THE WORK OR OTHER TRADES WILL PERMIT. THE ARCHITECTURAL, CIVIL, ELECTRICAL, FIRE PROTECTION AND STRUCTURAL DRAWINGS AND SPECIFICATIONS SHALL BE CONSIDERED A PART OF THE WORK INSOFAR AS THESE DRAWINGS FURNISH THE CONTRACTOR WITH INFORMATION RELATING TO DESIGN AND CONSTRUCTION OF THE BUILDING. ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER PLUMBING DRAWINGS. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL/PLUMBING DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES, WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY PROVIDING SUCH FITTING, VALVES, AND ACCESSORIES AS MAY BE REQUIRED TO MEET CONDITIONS AND FOR PROPER SYSTEMS' OPERATION.

3. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2013 CALIFORNIA BUILDING CODE, 2013 CALIFORNIA MECHANICAL CODE, 2013 CALIFORNIA PLUMBING CODE, NFPA (LATEST EDITION), 2013 CALIFORNIA ENERGY CODE, 2013 CALIFORNIA GREEN BUILDINGS STANDARDS, STATE HEALTH AND SAFETY ORDERS, STATE FIRE MARSHAL LOCAL FIRE DEPARTMENT, CALIFORNIA TITLE-24 AND OTHER LOCAL CODES, ORDINANCES AND REGULATIONS, AND ANY OTHER AUTHORITIES HAVING JURISDICTION. APPLICABLE CODES AND STANDARDS CONTAINED THEREIN SHALL DETERMINE MINIMUM REQUIREMENTS FOR MATERIALS, METHODS, AND LABOR PRACTICES NOT OTHERWISE STATED HEREIN. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

4. COORDINATE ALL WORK WITH OTHER TRADES TO PROVIDE A COMPLETE INSTALLATION. CONNECT ALL EQUIPMENT FURNISHED BY OTHERS AS REQUIRED. INSTALL ALL WORK TO CLEAR ARCHITECTURAL AND STRUCTURAL MEMBERS.

5. RESTORE ALL DAMAGE RESULTING FROM YOUR WORK AND LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK. ADJUST, CLEAN, REPAIR, OR REPLACE PRODUCTS, WHICH HAVE BEEN DAMAGES. THE CONTRACTOR WILL BE EXPECTED TO PROTECT ALL OWNERS' PROPERTY FROM DAMAGE AND DEBRIS AT ALL TIMES DURING THE CONSTRUCTION PROCESS. INTERIOR WORK AREA SHALL BE CLEANED AND RESTORED TO THEIR INITIAL CONDITION AT THE END OF THE WORK PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SECURITY OF ALL MATERIALS, TOOLS AND OTHER EQUIPMENT STORED AT THE JOB SITE. ALL ELECTRICAL TOOLS USED ON THIS PROJECT MUST HAVE GFI PROTECTION. THE CONTRACTOR SHALL PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF THE WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES AS REQUIRED. DURING ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN ADEQUATE FIRE EXTINGUISHERS READY FOR USE IN CASE OF FIRE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENFORCE THESE POLICIES.

6. COORDINATE ALL CUTTING AND PATCHING WITH GENERAL CONTRACTOR AND OTHER RELATED TRADES. OBTAIN ANY WRITTEN PERMISSION FROM ARCHITECT AND/OR STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY CUTTING OR PATCHING OF STRUCTURAL SYSTEMS. ALL DUCTWORK, PIPING AND CONDUITS PENETRATING THE WALLS, ROOF OR FLOOR ASSEMBLY THAT REQUIRE PROTECTION, SHALL BE FIRE STOPPED. ALL FIRE STOP MATERIALS SHALL BE UL TESTED AND APPROVED BY THE STATE FIRE MARSHALL.

7. PROVIDE LAYOUT CHANGES AND SUBMITTALS OF SUBSTITUTIONS ON ALL EQUIPMENT, FIXTURES, PIPING FITTINGS, VALVES, AND INSULATION TO THE OWNER, OWNER'S REPRESENTATIVE OR ENGINEER FOR REVIEW AND APPROVAL BEFORE ORDERING. WHERE PRODUCT MANUFACTURERS HAVE BEEN SPECIFIED ON THE PLANS, SUBSTITUTIONS SHALL BE EQUAL TO THE SPECIFIED PRODUCT IN CAPACITY, PERFORMANCE AND QUALITY OF CONSTRUCTION AND APPROVED BY THE OWNER, OWNER'S REPRESENTATIVE OR ENGINEER. SUBSTITUTIONS, WHICH IN THE OPINION OF THE ENGINEER ARE NOT EQUAL, WILL BE REJECTED, IN WHICH CASE THE CONTRACTOR SHALL PROVIDE THE SPECIFIED PRODUCT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY THAT SUBSTITUTED ITEMS OR PROCEDURES WILL MEET THE SPECIFICATIONS AND JOB REQUIREMENTS AND SHALL BE RESPONSIBLE FOR THE COST OF REDESIGN AND MODIFICATIONS TO THE WORK CAUSED BY THESE ITEMS.

8. THE CONTRACTOR SHALL MAINTAIN ON A SET OF BLUELINE PRINTS FOR THE PROJECT, A RECORD OF ALL CONSTRUCTION CHANGES MADE. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL DEVIATIONS IN THE WORK FROM THAT INDICATED ON THE DRAWINGS. FINAL LOCATION OF ALL UNDERGROUND WORK SHALL BE RECORDED BY DEPTH FROM FINISHED GRADE AND BY OFFSET DISTANCE FROM PERMANENT SURFACE STRUCTURES, (I.E. BUILDING, CURBS, WALKS, ETC.). IN ADDITION, THE WATER, GAS, SEWER, UNDER FLOOR DUCTS, ETC. WITHIN THE BUILDING SHALL BE RECORDED BY OFFSET DISTANCES FROM BUILDING WALLS. THE CONTRACTOR SHALL THEN TRANSFER THE CHANGES, NOTATIONS, ETC. FROM THE MARKED UP PRINTS TO THE REPRODUCIBLE DRAWINGS. THE RECORD DRAWINGS (MARKED UP PRINTS AND REPRODUCIBLES) SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. THE SET OF RECORD DRAWINGS SHALL BE LEFT WITH THE OWNER UPON WORK COMPLETION.

9. IT IS CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES.

10. GUARANTEE ALL WORKS AND MATERIALS FOR ONE-YEAR MINIMUM FROM DATE OF FILING NOTICE OF COMPLETION. ALL MANUFACTURERS' EXTENDED WARRANTIES SHALL BE PASSED OVER TO THE OWNER. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL PROVIDE THE OWNER WITH THE SET OF EQUIPMENT START-UP REPORTS, OPERATION AND MAINTENANCE MANUALS AND NECESSARY WARRANTY DOCUMENTS. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL DEMONSTRATE AND EXPLAIN THE SYSTEMS' OPERATION, CONTROLS AND OTHER RELEVANT FEATURES TO THE OWNER'S REPRESENTATIVE TO HIS/HER FULL UNDERSTANDING AND SATISFACTION.

11. BY ACCEPTING THESE DRAWINGS AND EXECUTING WORK SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIM OR SUIT WHATSOEVER, INCLUDING BUT NOT LIMITED TO ALL PAYMENTS, EXPENSES OR COSTS INVOLVED, ARISING FROM OR ALLEGED TO HAVE ARISEN FROM THE CONTRACTOR'S PERFORMANCE OR FAILURE OF THE CONTRACTOR'S PERFORMANCE OR FAILURE THE CONTACTOR'S WORK TO CONFORM TO THE DESIGN INTENT AND THE CONTRACT DOCUMENTS.

PART II: PLUMBING

1. IN ADDITION TO ABOVE-MENTIONED CODES AND REGULATIONS ALL PIPING INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF AMERICAN GAS ASSOCIATION (AGA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), AMERICAN WATER WORKS ASSOCIATION (AWWA), PLUMBING AND DRAINAGE INSTITUTE (PDI), ETC. ALL PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE ASA SAFETY CODE, BE FREE FROM ALL DEFECTS AND BE IDENTIFIED. PIPING MATERIALS:

A. SOIL, WASTE AND VENT PIPING:
A. INSIDE BUILDING AND WITHIN FIVE FEET OF BUILDING WALLS: STANDARD WEIGHT COATED CAST IRON PIPE AND FITTINGS. PLAIN END WITH NEOPRENE GASKET AND STAINLESS STEEL RETAINING SLEEVE, CISPI 301, OR HUB END WITH RUBBER GASKETS, ASTM A74, ASTM C564. SIZE 2" AND SMALLER ABOVE GRADE MAY BE STANDARD WEIGHT GALVANIZED STEEL, ASTM A53, WITH COATED CAST IRON RECESSED DRAINAGE FITTINGS, ANSI B16.12.

B. HOT AND COLD WATER PIPING:
A. INSIDE BUILDING: COPPER TUBE, TYPE L HARD TEMPER SEAMLESS COPPER, ASTM B88. WROUGHT COPPER FITTINGS ANSI B16.22. 95/5 TIN-SILVER BRAZED JOINTS.

C. GAS PIPING:
A. ABOVE GRADE: SCHEDULE 40 BLACK STEEL PIPE, ASTM A120. 150 PSI BLACK MALLEABLE IRON SCREWED FITTINGS, ANSI B16.3, ANSI B31.8. GALVANIZED PIPE AND FITTINGS WILL NOT BE ALLOWED. FLEXIBLE CONNECTIONS SHALL BE CONVOLUTED BRASS WITH DIELECTRIC COUPLINGS, AGA APPROVED. OUTSIDE BUILDING FLEXIBLE CONNECTIONS SHALL BE CONVOLUTED STAINLESS STEEL WITH DIELECTRIC COUPLINGS, AGA APPROVED. PAINT EXPOSED PIPING WITH TWO COATS OF GRAY PRIMER.
OUTSIDE BUILDING - BELOW GRADE: SAME AS INSIDE BUILDING - ABOVE GRADE, WITH PROTECTIVE COATING OF FERROUS PIPE OR APPROVED PE PIPE.

D. CONDENSATE DRAIN PIPING: TYPE L HARD TEMPER SEAMLESS COPPER, ASTM B88. WROUGHT COPPER FITTINGS ANSI B16.22. 95/5 TIN-SILVER BRAZED JOINTS.

2. ALL BURIED FERROUS PIPING SHALL BE PROVIDED WITH CATHODIC PROTECTION INSTALLED IN ACCORDANCE WITH DETAIL SHOWN ON THE PLANS, TABLE 3-3. ANY PIPING LAID IN THE SAME TRENCH WITH PIPE REQUIRING CATHODIC PROTECTION SHALL BE SEPARATED LATERALLY A MIN. OF 12" FROM THE PROTECTED PIPE, AND PIPING INSTALLED DIAGONALLY ABOVE PIPE REQUIRING CATHODIC PROTECTION SHALL BE SEPARATED VERTICALLY A MIN. OF 6". ALL SEPARATIONS SHALL BE MAINTAINED WITH CLEAN EARTH.

3. PROVIDE DIELECTRIC UNIONS BETWEEN ALL DISSIMILAR MATERIALS. MAKE ALL SCREWED JOINTS WITH THREAD-TIGHT COMPOUND.

4. PROVIDE UNIFORM PITCH OF AT LEAST ¼" PER LINEAR FOOT FOR ALL HORIZONTAL DRAINAGE PIPES AND 1/8" PER FOOT FOR CONDENSATE DRAINS. PROVIDE CONDENSATE DRAIN PUMP FOR HVAC EQUIPMENT WHERE IT IS IMPOSSIBLE TO MAINTAIN THE INDICATED PITCH (FIELD VERIFY).

5. COMPLETED SYSTEMS WITHIN THE BUILDING SHALL BE TESTED WITH WATER IN ACCORDANCE WITH THE 2013 CPC, SECTION 712 AND OTHER APPLICABLE CODES AND REGULATIONS.

6. PIPING HANGERS AND ANCHORS SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF THE PIPING AND ITS CONTENTS. SUPPORTS SHALL HAVE ADJUSTABLE SPLIT RING, SWIVEL HANGER AND ROD. SIZING AND MAXIMUM LOAD PER MANUFACTURER'S INSTRUCTIONS. SUPPORT ALL PIPING SO THAT IT IS FIRMLY HELD IN PLACE BY APPROVED IRON HANGERS AND SUPPORTS, IN ACCORDANCE WITH ALL APPLICABLE CODES, RECOMMENDATIONS OF AMERICAN PIPE FITTERS ASSOCIATION AND PIPE HANGER INSTITUTE. HANGER RODS SHALL BE NO SMALLER THAN 3/8" DIAMETER. ALL SUSPENDED PIPING SHALL BE PROVIDED WITH SEISMIC SWAY BRACES IN ACCORDANCE WITH THE MASON INDUSTRIES SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK AND ELECTRICAL SYSTEMS AND THE APPLICABLE CODES.

7. COMBUSTION AIR AND VENT PIPING SHALL BE PVC PER MANUFACTURER'S REQUIREMENTS. CONCENTRIC VENT SHALL BE INSTALLED TO PROPERLY REGARDLESS OF WIND DIRECTION. CAP SHALL BE STORM PROOF, BIRD PROOF.

8. ALL VALVES CONCEALED ABOVE HARD CEILINGS OR IN WALLS SHALL BE PROVIDED WITH ACCESS PANELS. ALL OPENINGS FOR PIPING THROUGH FIRE RATED ENCLOSURES SHALL BE SEALED AS REQUIRED BY CODE TO MAINTAIN FIRE RATING.

9. INSULATE HOT WATER PIPING WITH 3/4" THICK ARMAFLEX, AS REQUIRED. INSULATION AND COVERING ON PIPING SHALL HAVE A FLAME-SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH CBC SECTION 707.

10. ALL PLUMBING FIXTURES SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS AND AS SHOWN ON PLANS. PROVIDE ALL PLUMBING FIXTURES WITH INDIVIDUAL STOPS OR SHUT-OFF VALVES.

11. ALL HOT AND COLD WATER PIPES MUST BE ISOLATED FROM THE BUILDING FRAME BY 1/4" THICK COLLARS OF FELT, CARPET, OR EQUIVALENT SOFT MATERIAL. NO PLASTIC ISOLATORS PERMITTED. THE CAVITY AROUND THE PIPES SHOULD BE FILLED WITH OPEN-FACED FIBERGLASS (OR MINERAL WOOL), OR SPRAYED WITH AN ADHESIVE CELLULOSE PRODUCTS (E.G. CELLAR, THERMACON, ETC.).

PART III: TITLE-24

1. THESE PLANS HAVE BEEN DESIGNED TO SHOW SUBSTANTIAL COMPLIANCE WITH THE TITLE-24 STANDARDS. ALL HVAC AND PLUMBING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE 2013 CALIFORNIA ENERGY EFFICIENCY STANDARDS.

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REGISTERED PROFESSIONAL ENGINEER
No. M25130
Exp. 09-30-17
MECHANICAL
STATE OF CALIFORNIA

Date Signed: 11/8/16

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PLUMBING SPECIFICATIONS AND GAS CALCULATIONS

RICHLAND HOUSING PHASE II
DEVELPMENT 1, BUILDING TYPES 'A', 'B' & 'C'
REHABILITATION & IMPROVEMENTS
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DATE 11/24/2016
DRAWN BY GS/NN/KD
JOB 15002-000
SHEET

P0.2

GENERAL SHEET NOTES

A. DISCONNECT GAS PIPING FROM ALL EXISTING GAS METERS. DEMOLISH OR ABANDON IN PLACE ALL GAS PIPING AS REQUIRED.

SHEET KEYNOTES

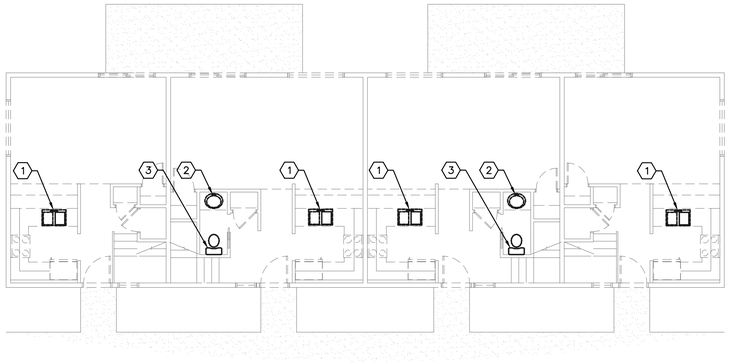
1 REMOVE EXISTING KITCHEN SINK AND ALL ASSOCIATED PIPING.

2 REMOVE EXISTING LAVATORY AND ALL ASSOCIATED PIPING.

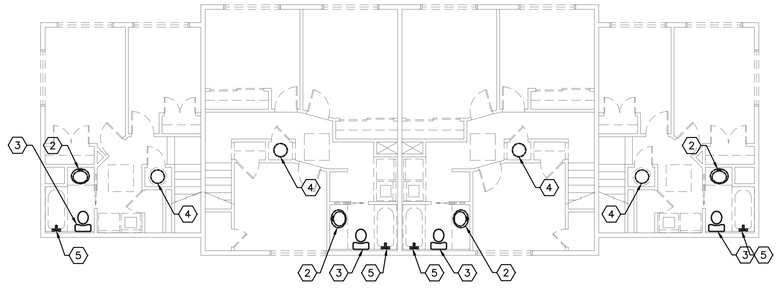
3 REMOVE EXISTING WATER CLOSET AND ALL ASSOCIATED PIPING.

4 REMOVE EXISTING WATER HEATER AND ALL ASSOCIATED PIPING.

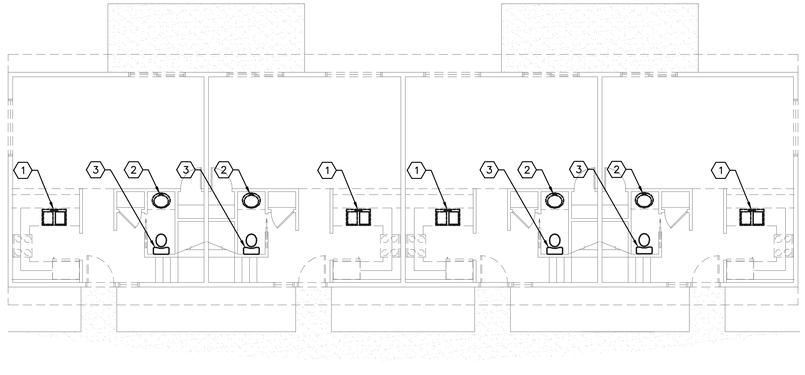
5 REMOVE EXISTING TUB SPOUT, SHOWER HEAD, CONTROL VALVE AND DRAIN. OPEN UP FLOOR AND REMOVE EXISTING TRAP.



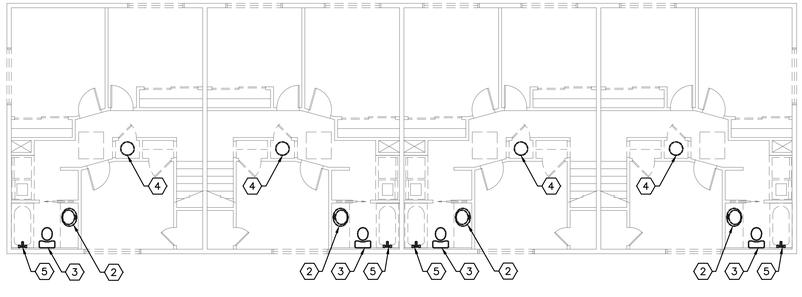
1 FIRST FLOOR DEMO PLAN BUILDING 'TYPE A' - PLUMBING
SCALE: 1/8"=1'-0"
0 4' 8' 16'



2 SECOND FLOOR DEMO PLAN BUILDING 'TYPE A' - PLUMBING
SCALE: 1/8"=1'-0"
0 4' 8' 16'



2 FIRST FLOOR DEMOL PLAN BUILDING 'TYPE B' - PLUMBING
SCALE: 1/8"=1'-0"
0 4' 8' 16'



3 SECOND FLOOR DEMO PLAN BUILDING 'TYPE B' - PLUMBING
SCALE: 1/8"=1'-0"
0 4' 8' 16'

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Date Signed: 11/8/16

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BUILDINGS 'A' AND 'B'
FIRST AND SECOND FLOOR
DEMO PLANS - PLUMBING

RICHLAND HOUSING PHASE II
DEVELPMENT 1, BUILDING TYPES 'A', 'B' & 'C'
REHABILITATION & IMPROVEMENTS
YUBA CITY, CALIFORNIA 95992

DATE 11/24/2016
DRAWN BY GS/NN/KD
JOB 15002-000
SHEET

P2.1

GENERAL SHEET NOTES

A. DISCONNECT GAS PIPING FROM ALL EXISTING GAS METERS. DEMOLISH OR ABANDON IN PLACE ALL GAS PIPING AS REQUIRED.

SHEET KEYNOTES

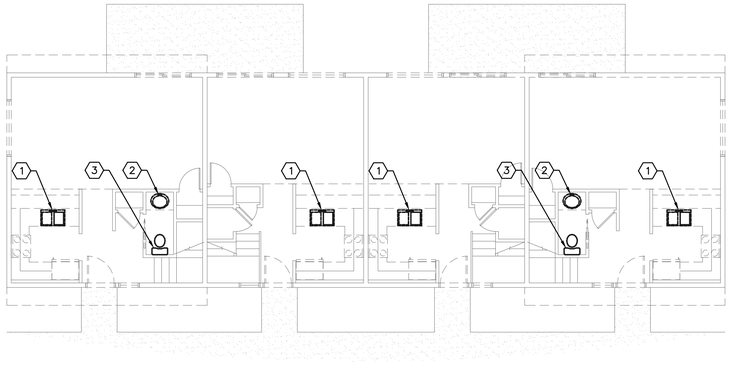
1 REMOVE EXISTING KITCHEN SINK AND ALL ASSOCIATED PIPING.

2 REMOVE EXISTING LAVATORY AND ALL ASSOCIATED PIPING.

3 REMOVE EXISTING WATER CLOSET AND ALL ASSOCIATED PIPING.

4 REMOVE EXISTING WATER HEATER AND ALL ASSOCIATED PIPING.

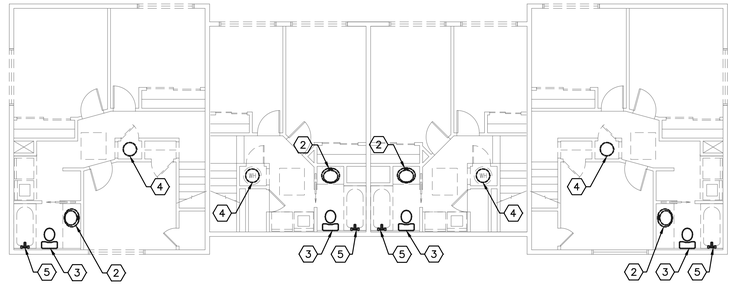
5 REMOVE EXISTING TUB SPOUT, SHOWER HEAD, CONTROL VALVE AND DRAIN. OPEN UP FLOOR AND REMOVE EXISTING TRAP.



1 FIRST FLOOR DEMO PLAN BUILDING 'TYPE C' - PLUMBING

SCALE: 1/8"=1'-0" (TYPICAL FOR BUILDING 5)

0 4' 8' 16'



2 SECOND FLOOR DEMO PLAN BUILDING 'TYPE C' - PLUMBING

SCALE: 1/8"=1'-0" (TYPICAL FOR BUILDING 5)

0 4' 8' 16'

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BUILDING 'C'
FIRST AND SECOND FLOOR
DEMO PLANS - PLUMBING

RICHLAND HOUSING PHASE II
DEVELPMENT 1, BUILDING TYPES 'A', 'B' & 'C'
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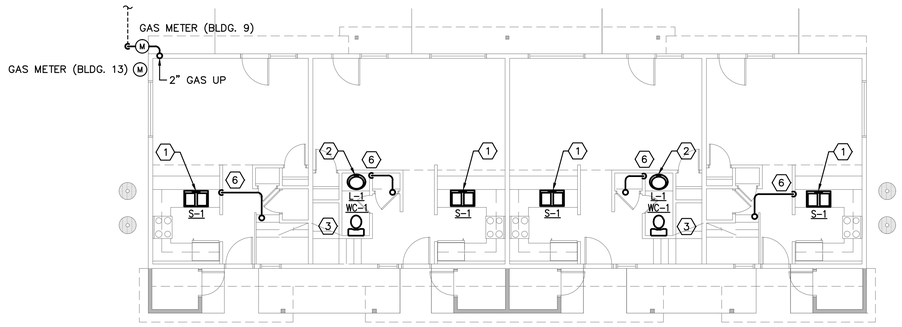
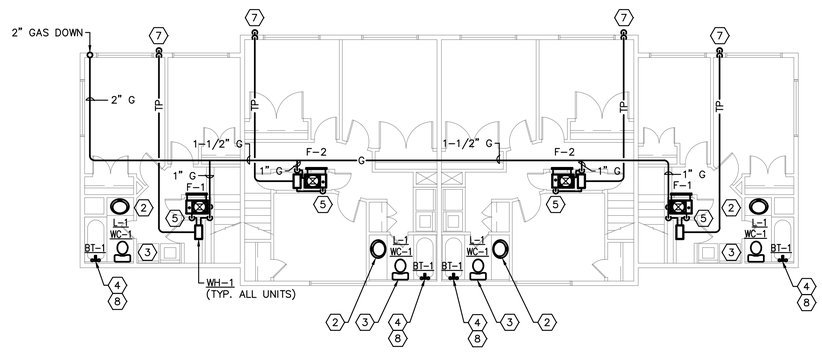
P2.2



1 FIRST FLOOR PLAN BUILDING 'TYPE A' - PLUMBING

SCALE: 1/8"=1'-0"

0 4' 8' 16'



2 SECOND FLOOR PLAN BUILDING 'TYPE A' - PLUMBING

SCALE: 1/8"=1'-0"

0 4' 8' 16'

GENERAL SHEET NOTES

A. FIELD VERIFY EXACT LOCATION OF ALL GAS METERS.

B. GAS PIPING AND TEMPERATURE AND RELIEF PIPING SHOWN ON DRAWING 2 IS TYPICAL FOR ALL TYPE B BUILDINGS. ADJUST AND EXTEND GAS PIPING PER GAS METER LOCATION FOR ALL TYPE B BUILDINGS

SHEET KEYNOTES

1 INSTALL NEW KITCHEN SINK. CONNECT TO EXISTING PIPING AS REQUIRED.

2 INSTALL NEW LAVATORY. CONNECT TO EXISTING PIPING AS REQUIRED.

3 INSTALL NEW WATER CLOSET. CONNECT TO EXISTING PIPING AS REQUIRED.

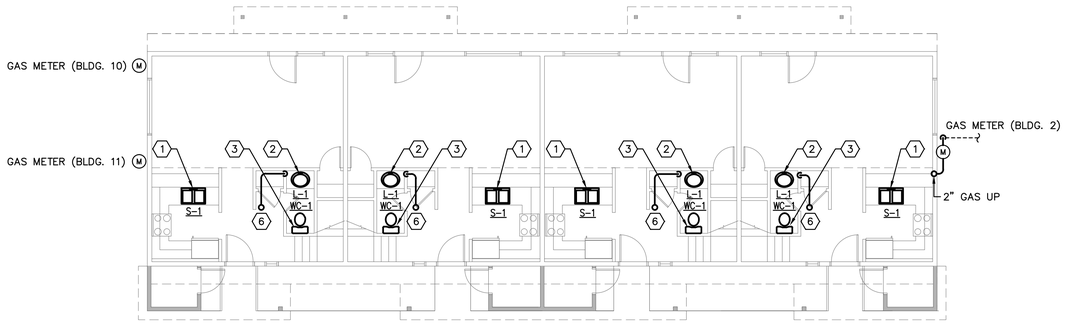
4 INSTALL NEW TUB SPOUT, SHOWER HEAD, CONTROL VALVE AND DRAIN. CONNECT TO EXISTING PIPING AS REQUIRED.

5 1 INCH CONDENSATE DRAIN PIPING FROM COOLING COIL, FURNACE DOWN AND TANKLESS WATER HEATER TO FLOOR BELOW.

6 1 INCH CONDENSATE DRAIN PIPING FROM COOLING COIL, FURNACE AND TANKLESS WATER HEATER FROM FLOOR ABOVE. ROUTE OVER TO WALL. DROP DOWN IN WALL AND CONNECT TO SINK TAILPIECE.

7 ROUTE 3/4 INCH TEMPERATURE AND RELIEF PIPING FROM WATER HEATER UP IN CEILING SPACE TO EXTERIOR WALL. DROP DOWN IN EXTERIOR WALL AND DAYLIGHT TO OUTSIDE, ELBOW DOWN MINIMUM 6 INCHES ABOVE GRADE.

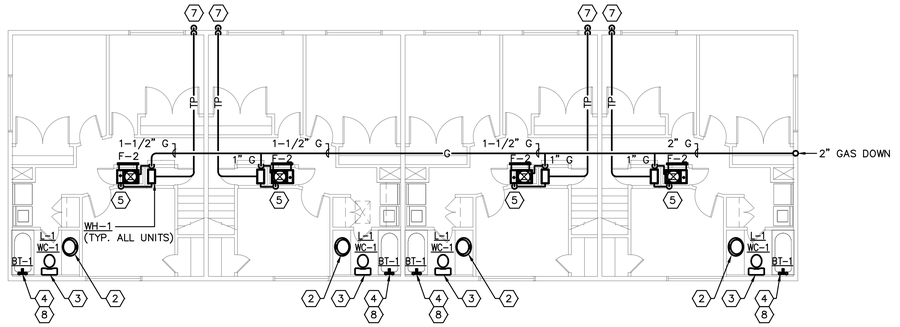
8 INSTALL NEW TRAP ON EXISTING PIPING. FIELD VERIFY EXACT SIZE. 2 INCH MINIMUM.



3 FIRST FLOOR PLAN BUILDING 'TYPE B' - PLUMBING

SCALE: 1/8"=1'-0"

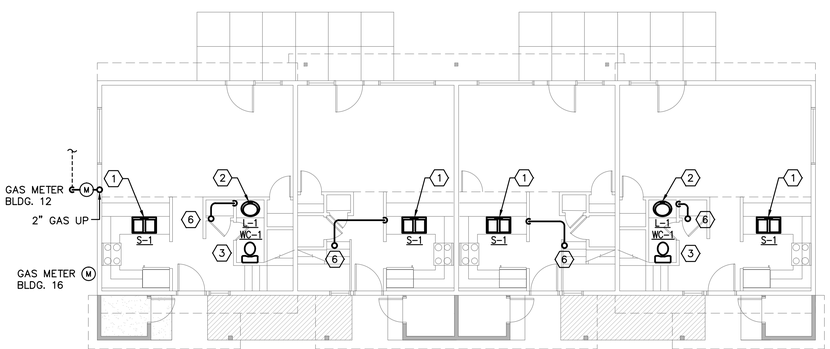
0 4' 8' 16'



4 SECOND FLOOR PLAN BUILDING 'TYPE B' - PLUMBING

SCALE: 1/8"=1'-0"

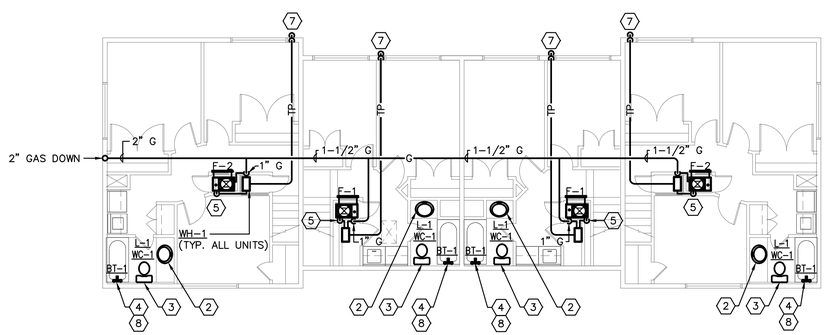
0 4' 8' 16'



5 FIRST FLOOR PLAN BUILDING 'TYPE C' - PLUMBING

SCALE: 1/8"=1'-0"

0 4' 8' 16'



6 SECOND FLOOR PLAN BUILDING 'TYPE C' - PLUMBING

SCALE: 1/8"=1'-0"

0 4' 8' 16'

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