

**PLUMBING GENERAL NOTES**

1. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERATING SYSTEM OF PLUMBING FROM THE SOIL, WASTE, VENT, STORM WATER, DOMESTIC COLD WATER, AND NATURAL GAS SERVICES. THE CONTRACTOR SHALL EXTEND THESE SERVICES TO ALL NEW FIXTURES SHOWN IN THE DRAWINGS AND PROVIDE ALL THESE SERVICES TO ALL CONNECTING PIPING, HARDWARE TAIL PIECES, SHUT-OFF FLEXIBLE CONNECTORS, UNIONS, TRAPS REQUIRED FOR THE FINAL CONNECTION TO ALL EQUIPMENT, WHETHER FURNISHED IN THE PLUMBING WORK OR SUPPLIED BY THE OWNER OR OTHER TRADES.
2. PLUMBING CONTRACTOR MUST BE LICENSED AS REQUIRED BY THE STATE OF ILLINOIS AND OBTAIN ALL REQUIRED BONDS.
3. PLUMBING CONTRACTOR SHALL OBTAIN AND PAY ALL FEES AND TAXES FOR NECESSARY PLUMBING PERMITS. ALL FEES AND TAXES SHALL BE INCLUDED IN BID PROPOSAL.
4. SITE CONDITIONS ARE PART OF THIS CONTRACT. PLUMBING CONTRACTOR IS RESPONSIBLE TO CHECK AND VERIFY DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE PRIOR TO PROCEEDING WITH HIS WORK.
5. PLUMBING CONTRACTOR SHALL FURNISH WRITTEN GUARANTEE OF ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM THE DATE OF ENGINEER'S SUBSTANTIAL COMPLETION ACCEPTANCE.
6. CLEANING UP REQUIRED AS JOB PROGRESSES, KEEP PREMISES AND PUBLIC WAYS BROOM CLEAN.
7. CLEAN, TEST AND BALANCE ALL SYSTEMS TO CONFORM TO CAPACITIES SHOWN ON PLANS, MAKE ALL REQUIRED ADJUSTMENTS.
8. SANITARY AND WASTE DRAINAGE PIPING SYSTEM SHALL BE PVC UNLESS CAST IRON IS REQUIRED. SERVICE WEIGHT CAST IRON HUB AND SPIGOT WITH APPROVED COMPOSITION JOINTS AS ALLOWED BY CODE. WASTE AND VENT PIPING 2 1/2 IN AND UNDER SHALL BE GALVANIZED STEEL PIPE AND DRAINAGE.
9. DOMESTIC HOT AND COLD WATER PIPING SHALL BE TYPE "L" COPPER WITH WROUGHT SOLDER FITTINGS AND TYPE "K" COPPER WITHOUT JOINTS FOR UNDERGROUND PIPING. PROVIDE DIALECTRIC FITTINGS WHEN JOINING OR ABUTTING DISSIMILAR METALS.
10. NATURAL GAS PIPING SHALL BE SCHEDULE 40 STANDARD WEIGHT BLACK STEEL PIPE WITH STANDARD BLACK THREADED MALLEABLE IRON FITTINGS 2 IN. OR SMALLER AND STANDARD WELDING FITTINGS 2 1/2 IN. AND LARGER.
11. EQUIPMENT CONNECTED TO NATURAL GAS PIPING SHALL BE HARD PIPED CONNECTIONS. PLUMBING CONTRACTOR TO MAKE FINAL CONNECTIONS ON ALL GAS EQUIPMENT AND PROVIDE GAS COOKS FOR EACH OF THEM. KITCHEN EQUIPMENT SHALL BE CONNECTED WITH FLEXIBLE HOSE.
12. ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIVE. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCES, PRESERVE HEADROOM AND AVOID OMISSION.
13. INSTALL AIR CHAMBERS TO PREVENT NOISE AND DAMAGE DUE TO WATER HAMMER. 1'-0" AIR CHAMBER, 2'-0" AIR CHAMBER & CHANGE OF FLOOR LEVEL.
14. PROVIDE AND INSTALL SHUT OFF VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE.
15. INSULATE COLD WATER PIPING RUNNING ABOVE CEILING WITH 2" IN THICK FIBERGLASS INSULATION WITH NON COMBUSTIBLE U.L. RATED VAPOR BARRIER.
16. INSTALL CLEAN OUTS AS REQUIRED BY APPLICABLE CODES AND LANDLORDS REQUIREMENTS. ALL CLEAN OUTS SHALL TERMINATE FLUSH WITH THE FINISH FLOOR OR WALL.
17. PROVIDE VACUUM BREAKER TO PLUMBING FIXTURES REQUIRED BY THE APPLICABLE CODES.
18. SLOPE ALL SANITARY LINES 1/4 IN PER FOOT OR AS SHOWN ON THE DRAWINGS.
19. CONTRACTOR SHALL CUT AND PATCH ANY WALL AND ROOF OPENINGS REQUIRED FOR THE PLUMBING WORK.
20. CONTRACTOR SHALL DO ALL THE TRENCHING REQUIRED FOR HIS PLUMBING WORK.
21. TERMINATE ALL HOT WATER, COLD WATER AND DRAINAGE PIPING AS SPECIFIED ON THE EQUIPMENT DRAWING AND OR AS DIRECTED BY THE ARCHITECT.

**PLUMBING NOTES**

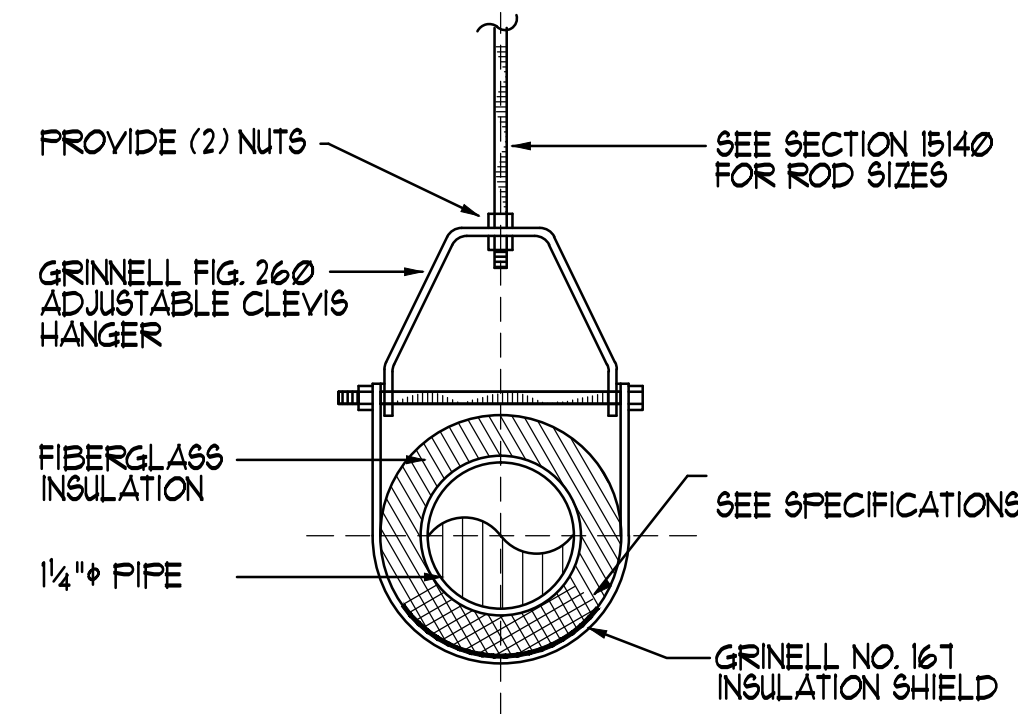
1. THERE MUST BE A CLEANOUT ON THE MAIN SEWER, EITHER INSIDE OR OUTSIDE OF THE BUILDING AND EVERY 50' THEREAFTER.
2. ANY PORTION OF THE DRAINAGE SYSTEM INSTALLED UNDERGROUND (IN BUILDINGS) SHALL BE A MINIMUM OF 4" IN DIAMETER.
3. PIPES PASSING UNDER OR THROUGH WALLS MUST BE PROTECTED FROM BREAKAGE. STUD PROTECTORS ARE REQUIRED ON ALL PLATES AND STUDS WHERE WASTES, VENTS, AND WATER GO THROUGH THEM.
4. SEWER AND/OR WATER UNDER PARKING AREAS, DRIVEWAYS, OR WALK, THE DITCH IS TO BE FILLED TO GRADE WITH 1/2 OR 3/4 STONE OR ROAD MIX. THE SEWER MATERIAL SHALL BE SDR 35 PLASTIC PIPE OR CAST IRON.
5. WATER HEATERS ARE TO COMPLY TO ASHRAE STANDARD 90 OF THE BOCA CODE AND THE ILLINOIS DEPARTMENT OF ENERGY AND NATIONAL RESOURCES 1986, PUBLIC ACT 84-216.
6. WATER HEATERS IN COMMERCIAL PLACES ARE TO BE INSPECTED EVERY 3 YEARS. WHEN A HEATER NEED REPLACING, A NEW RELIEF MUST BE INSTALLED AND A PERMIT MUST BE OBTAINED FOR THE BUILDING DEPARTMENT.
7. LAVATORIES FOR PUBLIC USE SHALL BE EQUIPPED WITH SELF CLOSING FAUCET.
8. SILLCOCKS SHALL BE SEPARATELY CONTROLLED BY A VALVE INSIDE THE BUILDING. THIS SHALL INCLUDE ALL FROST-PROOF SILLCOCKS.
9. SILLCOCKS MUST HAVE A VACUUM BREAKER ATTACHED OR HAVE BUILT-IN VACUUM BREAKERS AND HAVE PROVISIONS FOR DRAINING OR BE SELF-DRAINING.
10. CONCEALED GAS PIPING SHALL NOT BE RUN IN SOLID PARTITIONS UNLESS PROTECTED AGAINST PHYSICAL DAMAGE.
11. WHEN BACKFLOW PREVENTERS ARE TO BE INSTALLED THEY MUST BE INSTALLED BY A LICENSED PLUMBER AND IT IS HIS RESPONSIBILITY TO SEE THAT A SET OF MANUFACTURERS SPECS REMAIN ON THE JOB. EXPANSION DEVICES ARE REQUIRED ON HOT WATER HEATERS.
12. ALL BACKFLOW PREVENTERS, VACUUM BREAKERS, ETC. MUST HAVE A SEAL OF APPROVAL TAG ATTACHED.

**PLUMBING LEGEND**

- 4" DIA. UNDERGROUND C.I. SANITARY LINE
- ABOVE GROUND RIGID PVC SANITARY LINE
- ABOVE GROUND RIGID PVC VENT LINE
- HOT WATER COPPER LINE
- COLD WATER COPPER LINE
- PROVIDE SHUT-OFF VALVES @ ALL FIXTURES
- PROVIDE 1'-0" AIR CHAMBERS @ ALL FIXTURES
- PROVIDE 1'-0" AIR CHAMBERS @ ALL RISERS
- PROVIDE VACUUM BREAKER WHERE REQ'D BY CODE
- NOTE: ALL FAUCETS TO BE WRIST BLADES, LEVER PUSH.

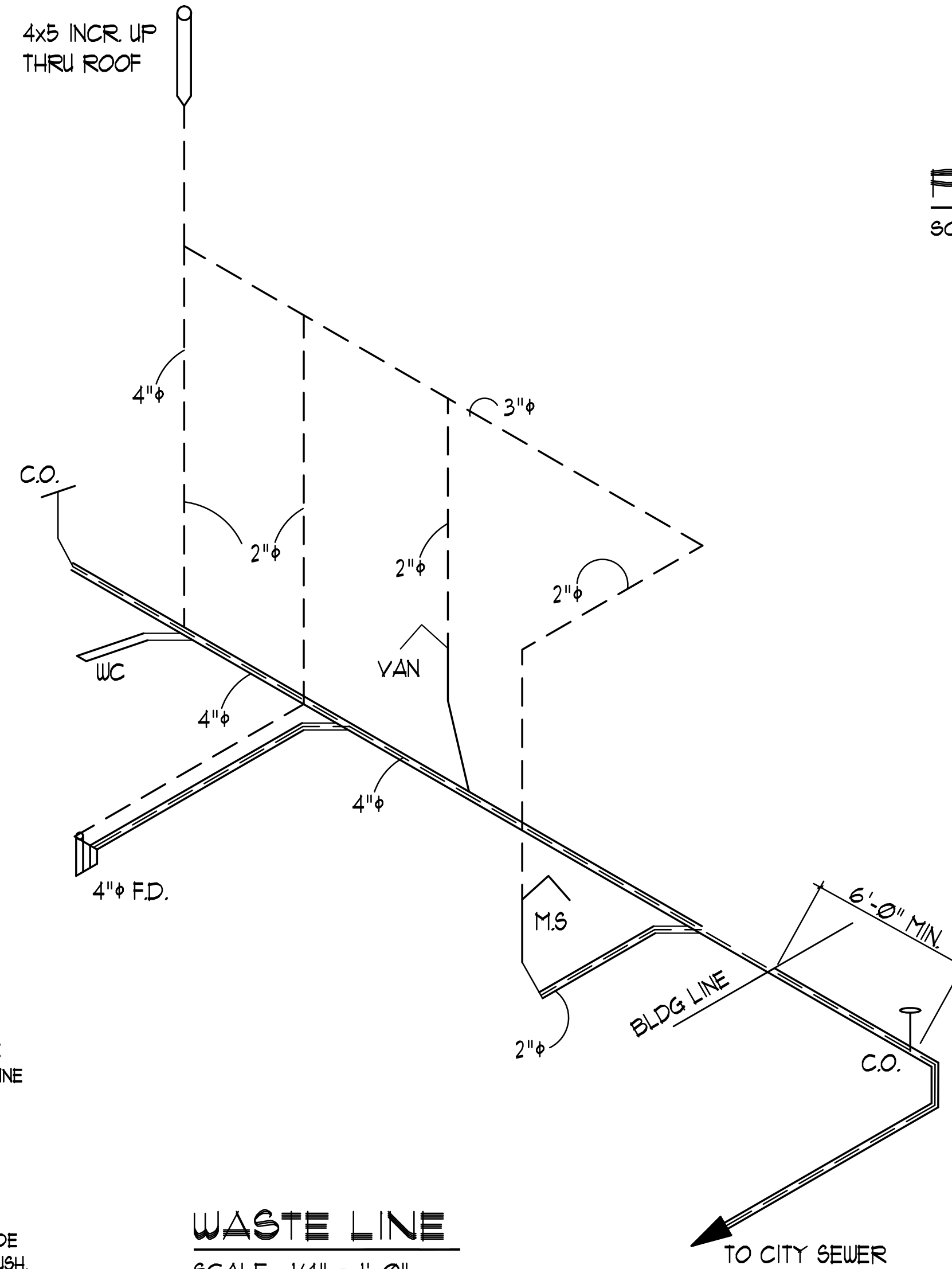
**PLUMBING NOTE:**

1. PROVIDE BACK FLOW PREVENT ON HOT AND COLD WATER SUPPLY FOR ALL DECK MOUNTED FAUCETS INSTALLED WITH HOSE AND SPRAY ON SOAKING OR WHIRLPOOL BATHTUB
2. INSTALL PRESSURE BALANCING VALVE OR THERMOSTATIC TYPE VALVE SET TO A MAXIMUM OF 115 DEGREES FOR ALL TUB AND SHOWER FAUCETS.
3. PROVIDE ACCESS PANEL FOR ALL CONTROLS AND EQUIPMENT.
4. PROVIDE FLOOR DRAINS AT WATER HEATERS FOR RELIEF VALVE DISCHARGE, FLOOR DRAIN TO DRAIN INTO SANITARY EJECTOR PIT AND PUMPED INTO AND WATER SEWER.
5. PLUMBING WALL TO BE 2X6 INCH.



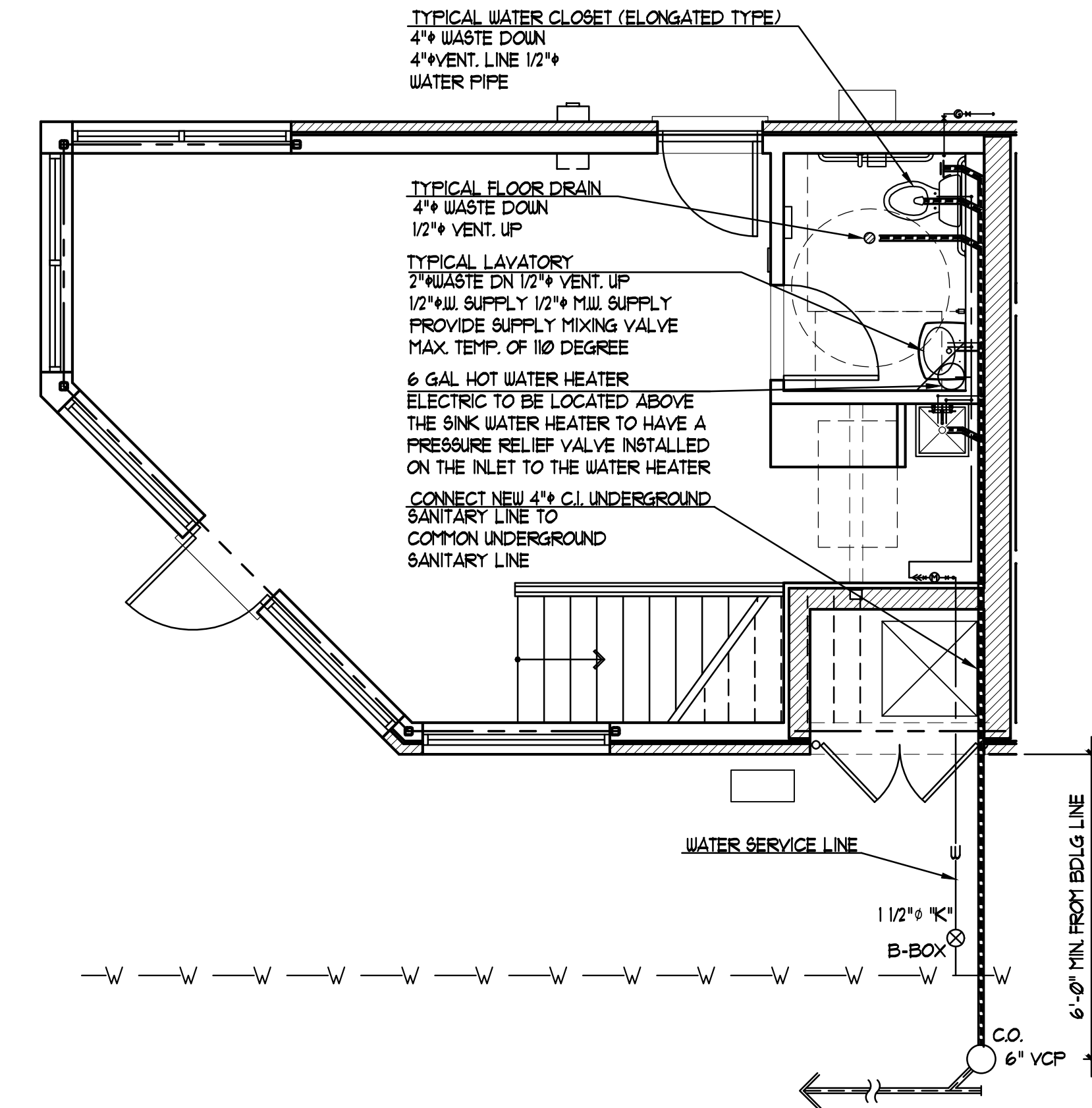
**PIPE SUPPORT DETAIL**

SCALE: NTS



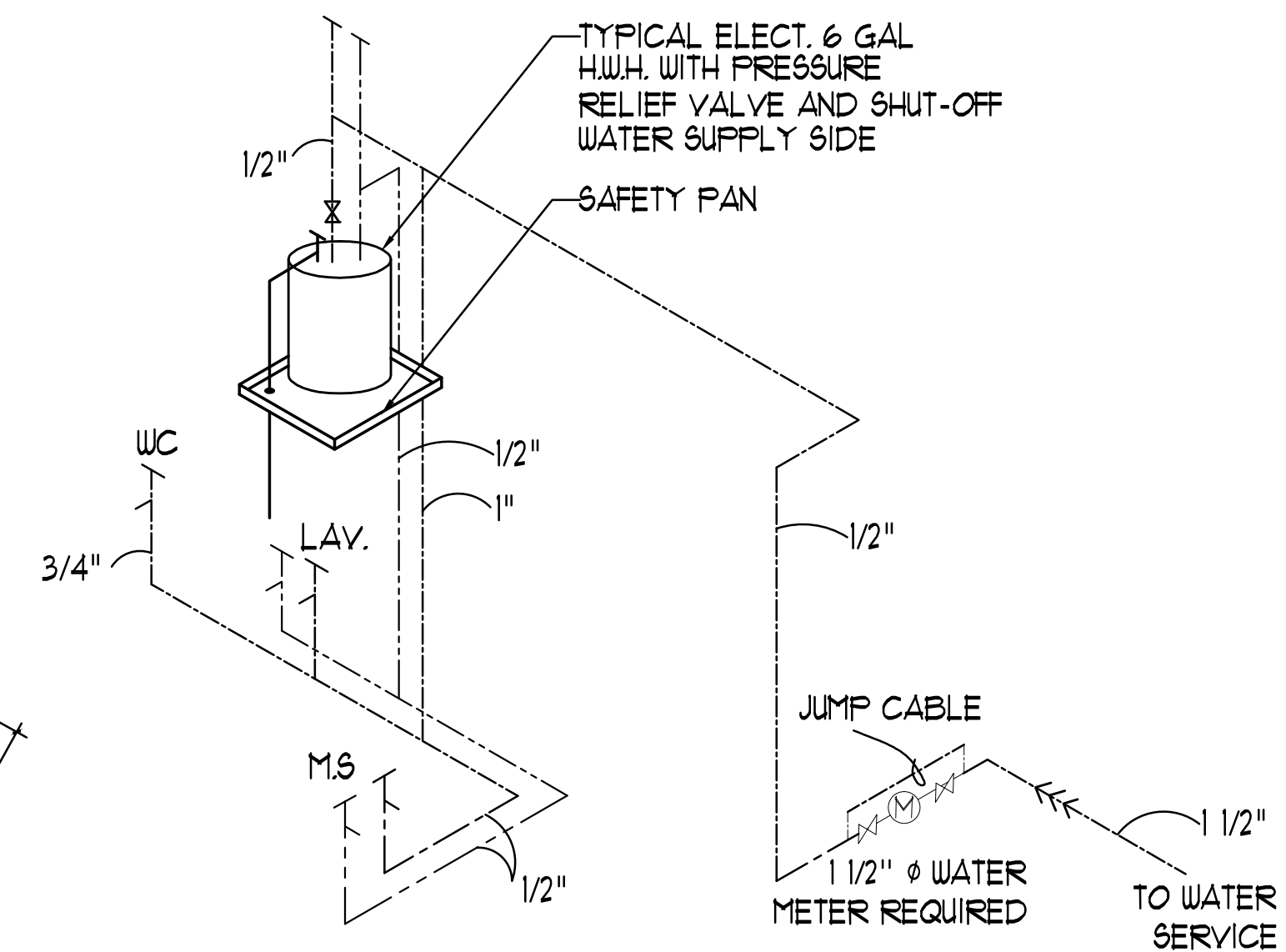
**WASTE LINE**

SCALE: 1/4" = 1'-0"



**PLUMBING PLAN @ COMMERCIAL AREA**

SCALE: 1/4" = 1'-0"



**WATER LINE**

SCALE: 1/4" = 1'-0"

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I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF ILLINOIS AND THE VILLAGE OF BOCAS CODES AND ORDINANCE THEY ARE IN COMPLIANCE WITH ALL APPLICABLE CODES INCLUDING THE ENVIRONMENTAL BARBERS ACT (48-150) AND THE ILLINOIS ACCESSIBILITY CODE (ILLIAC) (CODE 400) AS SIGNIFIED BY MY HAND AND SEAL.

NO.	REVISION
1.	PER CITY COMMENT 03/20/16
2.	PER CITY COMMENT 04/20/17
3.	PER CITY COMMENT 02/23/21

CERTIFICATION AND SEAL

DRAWING NAME: **PLUMBING PLANS @ COMMERCIAL UNIT**

PROJECT NAME: **KANDU TOWNHOMES**

8163 LINCOLN AVE  
SKOKIE, ILLINOIS

released to const. 1651

scale AS SHOWN

date 10/14/2016

drawn by WU

checked by AF

sheet **P-11**

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