PLUMBING NOTES

- 1. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.
- ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS, ETC. SEE FIXTURE SCHEDULE.
- 3. FURNISH AND INSTALL COMPLETE SYSTEMS OF SOIL, WASTE, VENT, HOT AND COLD WATER PIPING FROM ALL PLUMBING FIXTURES, AND/OR OTHER EQUIPMENT.
- 4. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS, AND AT EVERY 100 FEET. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS. NO FLOOR CLEANOUTS INSIDE BUILDING.
- 5. ALL SOIL, WASTE, AND VENT LINES SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION.
- 6. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST CONTACT WITH OTHER METALS.
- 7. WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY, CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY WITH ASPHALTIC ENAMEL AND PROVIDING 15# ASPHALT SATURATED FELT BETWEEN THE PIPE AND MASONRY.
- 8. THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY WITH THE MECHANICAL AND THE ELECTRICAL CONTRACTORS TO AVOID CONFLICT WITH OTHER TRADES.
- 9. CEILING AREA HAS LIMITED SPACE. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED.
- 10. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS.
- 11. PROVIDE DRAIN VALVES IN THE HOT AND COLD WATER SYSTEM AT ALL LOW POINTS TO ALLOW FOR
- COMPLETE DRAINAGE.

 12. VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED.
- VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED.

 13. WASTE/VENT & STORM PIPING SHALL BE AS FOLLOWS:

 BELOW SLAB: SOLID WALL BY CIPIE BY C SOCKET FITTINGS. AND SOLVENT CEMENTED FITTINGS.
- BELOW SLAB: SOLID WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED FITTINGS.

 ABOVE SLAB: SOLID WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED FITTINGS.
 INSULATION IS REQUIRED ON ALL ROOF DRAIN BODIES AND HORIZONTAL RUNS (ABOVE SLAB).

INSULATE WITH i" CLOSED-CELL ELASTOMERIC MATERIAL.

- 14. DOMESTIC WATER PIPING SHALL BE AS FOLLOWS:
 ABOVE SLAB: TYPE 'L' COPPER. AT CONTRACTOR'S OPTION, FLOWGUARD GOLD CPVC MAY BE
 UTILIZED.1" INSULATION IS REQUIRED ON ALL HOT WATER SUPPLY & RECIRC PIPING PER 2015
 INTERNATIONAL ENERGY CONSERVATION CODE(IECC).
- BELOW SLAB: TYPE 'K' COPPER.
- 15. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE WASTE PIPING IS INSTALLED SO THAT PROPER SLOPES WILL BE MAINTAINED.
- 16. THE PLUMBING CONTRACTOR SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING WHERE QUICK-CLOSING VALVES ARE UTILIZED. INSTALLATION OF SHOCK ARRESTORS SHALL BE IN ACCORDANCE WITH PDI-WH201. SEE SHOCK ARRESTOR SCHEDULE.
- 17. PROVIDE FULL PORT VALVES IN ALL BRANCH LINES OF THE HOT AND COLD WATER DISTRIBUTION SYSTEM ON S" AND LARGER CW & HW AND AS SHOWN ON PLANS, RISERS, AND SCHEMATIC DETAILS.
- 18. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- 19. PROVIDE ACCESS DOORS FOR ALL VALVES AND DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE INACCESSIBLE CEILING CONSTRUCTION.
- 20. WHERE EARTHQUAKE LOADS ARE APPLICABLE IN ACCORDANCE WITH THE STATE PLUMBING CODE, PIPING AND EQUIPMENT SUPPORTS SHALL BE DESIGNED AND INSTALLED FOR THE SEISMIC FORCES IN ACCORDANCE WITH THE STATE BUILDING CODE.
- 21. PROVIDE A U.L. LISTED ASSEMBLY FOR ALL PENETRATIONS THRU FIRE RATED WALLS AND FLOORS.

22. PROVIDE PRESSURE REDUCING VALVE IF PRESSURE EXCEEDS 80 PSI.

23. ALL SUSPENDED MATERIALS AND EQUIPMENT SHALL BE INDIVIDUALLY SUPPORTED FROM THE BUILDING STRUCTURE. DO NOT SUSPEND ITEMS FROM THE CEILING OR ITS SUPPORT SYSTEM.

PLUMBING I	LEGEND						
SAN —	SANITARY SEWER PIPING OIL SANITARY SEWER PIPING VENT PIPING DOMESTIC COLD WATER PIPING HOT WATER PIPING HOT WATER RETURN PIPING GAS PIPING PIPE RISE OR DROP PIPE RISER UP						
(11111111111111111111111111111111111111	TRENCH DRAIN						
	BALANCING VALVE						
[CAPPED END OF PIPE						
<u> </u>	CLEAN OUT						
0>-0	P-TRAP						
S.O.V.	SHUT-OFF VALVE						
COTC	CLEAN OUT TO GRADE						
CW	DOMESTIC COLD WATER						
HW	DOMESTIC HOT WATER						
HWR	DOMESTIC HOT WATER RETURN						
VTR	VENT THRU ROOF						
\bowtie	GATE VALVE						
	CHECK VALVE						
Ŕ	BALANCING VALVE						
—	GAS COCK						
P	WATER HAMMER ARRESTER						
● FD	FLOOR DRAIN						
F.W.	FILTERED WATER						
B.P.	BACKFLOW PREVENTOR						
I.W.	INDIRECT WASTE						
	FLOOR SINK						
	THERMOSTATIC MIXING VALVE						

SCOPE OF WORK

HAND SINK

PROVIDE ALL PLUMBING FOR NEW CAR PAINTING AREA INCLUDING ALL WATER, GAS, COMPRESSED AIR, OIL & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW ONE TANKLESS AND ONE STORAGE WATER HEATER.

COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES AND GAS FLUE FOR WATER HEATER.

FIXTURE BF	RANC	H SCI	HEDU	LES
FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
4" WATER CLOSET (TANK)	1"		4" 🖊	2"
2" LAVATORY	1/2"	1/2"	2"	1 1/2"-2"
3" KITCHEN SINK	3/4"	3/4"		1 1/2"-2"
FLOOR DRAIN /FLOOR			3"-4"	1 1/2"-2"

ENERGY CONSERVATION NOTES

1. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE SECTION C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.10 OF MINIMUM PIPE INSULATION THICKNESS.

2. HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, C404.5.1. THE HOT WATER VOLUME FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER MAXIMUM PIPING LENGTH TABLE.

3. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, WATER HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE REQUIREMENTS OF TABLE C404.2. THE EFFICIENCY SHALL BE VERIFIED THROUGH THE DATA FURNISHED BY THE MANUFACTURER.

4. AS PER 2018 INTERAIONALENERGY CONSERVATION CODE, C404.6.1, CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NOT DEMAND FOR HOT WATER.

5. AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, C404.7, THE CONTROLS SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO NOT GREATER THAN 104°F (40°C).

GAS PIPING NOTES

- 1. WORK TO INCLUDE PIPING FROM GAS METER TO ALL GAS FIRED EQUIPMENT. FINAL CONNECTION TO EQUIPMENT BY PLUMBING CONTRACTOR. PLUMBING CONTRACTOR TO PROVIDE SHUT-OFF VALVE, DIRT TRAP, AND PRESSURE STEP-DOWN REGULATOR AT EACH PIECE OF FOLLIPMENT.
- 2. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODE REQUIREMENTS AND THE PROVISIONS OF NFPA-54.
- 3. THE CONTRACTOR SHALL SUPPLY ALL PERMITS AND LICENSES REQUIRE
- 4. PIPE 3" AND SMALLER SHALL BE SCHEDULE 40 STEEL WITH THREADED MALLEABLE FITTINGS.
- 5. VALVES SHALL BE GAS COCKS MANUFACTURED BY NIBCO

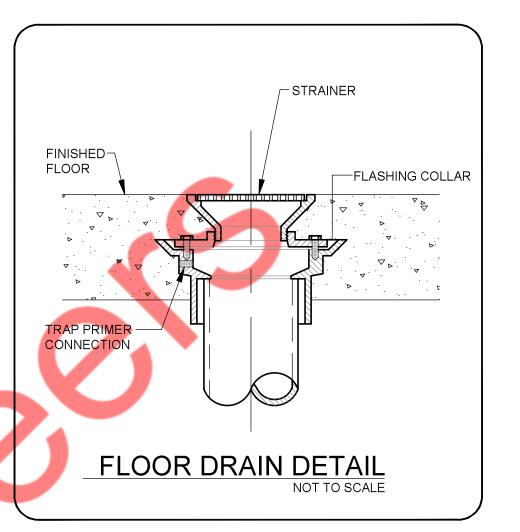
FOR THE WORK AND FOR ALL INSPECTIONS REQUIRED.

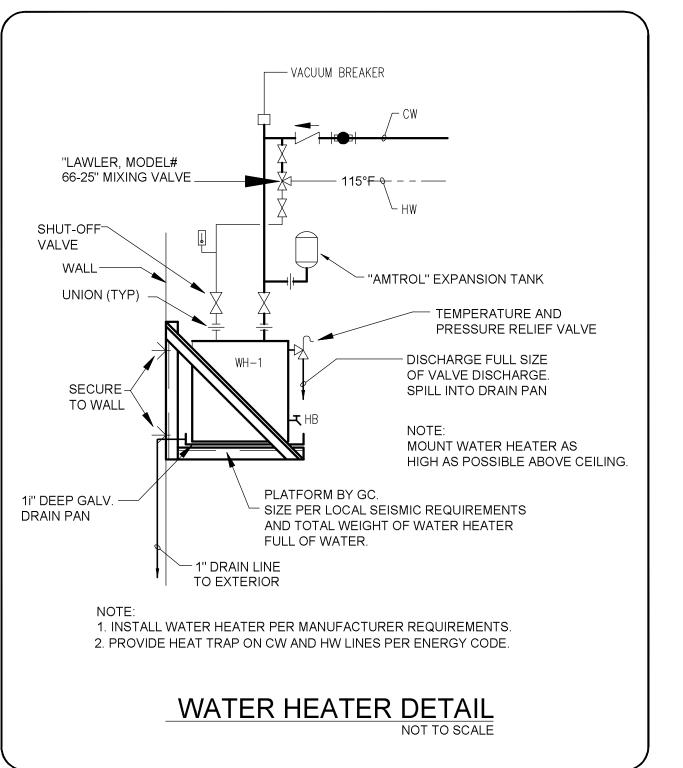
- 6. ALL GAS PIPING LOCATED UNDER THE FLOOR SLABS SHALL BE INSTALLED IN CONDUIT OR AS REQUIRED BY CODE.
- 7. ALL PIPING EXPOSED TO THE OUTDOORS OR RUN IN UNCONDITIONED SPACES SHALL BE PAINTED WITH TWO COATS OF ENAMEL.

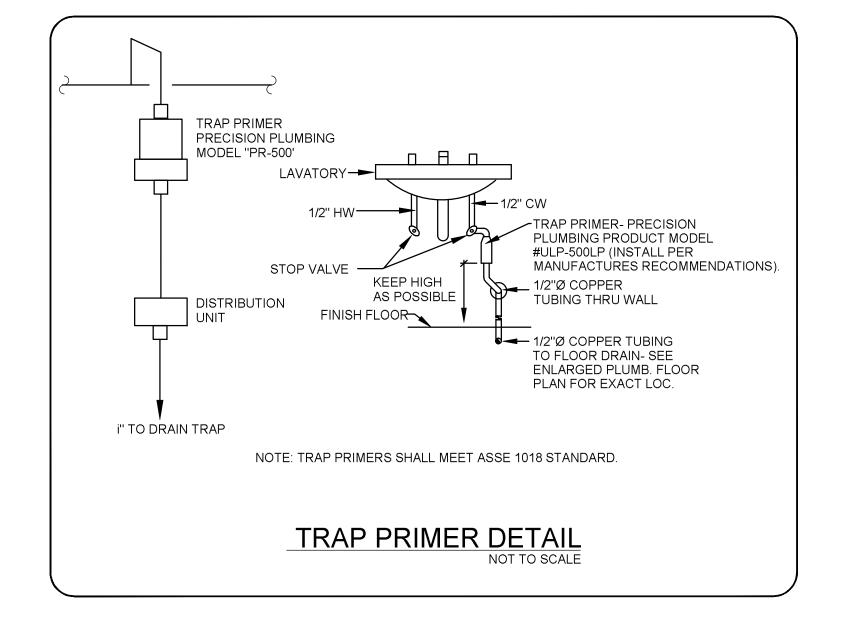
SHOCK ARRESTOR SCHEDULE

P.D.I SIZE	FIXTURE UNITS	MANUFACTURE OR EQUAL
SA'A	1-11	ZURN,SMITH,PPI,SIOUX-CHIEF
SA'B	11-32	n

LOCATE SHOCK ARRESTORS IN AN ACCESSIBLE LOCATION,OR PROVDE SIOUX-CHIEF SHOCK ARRESTORS ONLY.
PROVIDE SHOCK ARRESTORS AS INDICATED PER SCHEDULE.
SHOCK ARRESTORS SHALL BE SAME SIZE AS PIPE INSTALLED ON, MINIMUM







PLUMBING PLAN KEY NOTE

 $\stackrel{\frown}{\Omega}$ EXTEND AND CONNECT NEW 4" SANITARY PIPE TO EXISTING SANITARY PIPE. CONTRACTOR TO VERIFY SIZE AND LOCATION IN FIELD .

PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE

			I	T		T T							I				T	I	T
C-2	WATER CLOSET	FLUSH TANK	AMERICAN STANDARD	2467.016	VITREOUS CHINA	ADA ELONGATED	-	-	-	-	-	-	McQUIRE 185	3"	2"	1	-	FLOOR	PROVIDE WITH OPEN FRONT SEAT WITH NO LID
C-1	LAVATORY	WALL HUNG	AMERICAN STANDARD	0124.024	VITREOUS CHINA	ADA COMPLIANT	CHICAGO 802-V317CP	CENTERSET	SENSOR 10YR BAT	4''	GRID	1i"	McQUIRE 175 WITH PW2125	2"	2"	1/2"	1/2"	WALL HUNG	PROVIDE WITH MIXING VALVE SET @ 80°F.
Ξ5	EMERGENCY EYEWASH	WALL HUNG	GLOBAL STANDARD	T9F708381	-	-	-	-	-	-	-	1i"	-	2"	2	1/2"	-	WALL HUNG	
⊣B-1	HOSE BIBB	ANTI- SIPHON	CHICAGO	952-CP	CAST BRASS	WALL FAUCET	-	-	-	-	-	-	-	-	-	1/2"	_	WALL	1/2" MALE HOSE THREADED OUTLET
HB-2	HOSE BIBB	ANTI- SIPHON	CHICAGO	V122	CAST BRASS	WALL FAUCET	-	-	-	-	-	-	-	-	-	3/4"	-	WALL	3/4" MALE HOSE THREADED OUTLET
HB-3	HOSE BIBB	FREEZE PROOF	CHICAGO	Z1320-C	CAST BRASS	RECESSED BOX	-	-	-	-	-	-	-	-	-	3/4"	-	WALL	3/4" MALE HOSE THREADED OUTLET
=D-1	FLOOR DRAIN	SQUARE TOP	J.R. SMITH	2010CA-NB	CAST IRON	NIKALOY TOP	-	-	-	-	-	-	-	-	-	-	-	FLOOR	PROVIDE WITH TRAP PRIMER
co	FLOOR CLEAN-OUT	ROUND TOP	J.R. SMITH	4020	CAST IRON	CAST IRON TOP	-	-	-	-	-	-	-	-	-	-	-	GRADE	
ΓD	TRENCH DRAIN	SQUARE TOP	J.R. SMITH	9878	POLYMER CONCRETE/ DUCTILE IRON		-	-	-	-	-	-	-	4"	-	_	-	FLOOR	PRE-SLOPED POLYMER CONCITRENCH DRAIN W/ DUCTILE IR "POWERLOK ADA" GRATE
	KITCHEN SINK AND FAUCET	WALL HUNG	REGENCY	600DI12812	STAINLESS STEEL		-	-	-	-	-	-	-	2"	2"	1/2"	1/2"	WALL HUNG	MOUNT AT ADA HEIGHT. PROV WITH POINT OF USE MIXING VA & 0.5 GPM AERATOR
Ξ6	HAND SINK	WALL HUNG	AMERICAN STANDARD	0124.024	VITREOUS CHINA	ADA COMPLIANT	-	-	-	-	-	-	-	2"	2"	1/2"	1/2"	WALL HUNG	PROVIDE WITH MIXING VALVE SET @ 80°F.
≣7	DRINKING FOUNTAIN	WALL HUNG	ELKAY	EZSTL8LC	-	-	-	-	-	-	-	-	-	2"	2"	1/2"	1/2"	WALL HUNG	
	THERMOSTAT. MIXING VALVE	-	WATTS	LFMMV	-	-	-	-	-	-	-	-	-	-	-	1/2"	1/2"		

^{*} SEE SPECIFICATIONS

NOTES & REMARKS:

1. COLOR OF FIXTURES SHALL BE WHITE, UNLESS NOTED OTHERWISE.

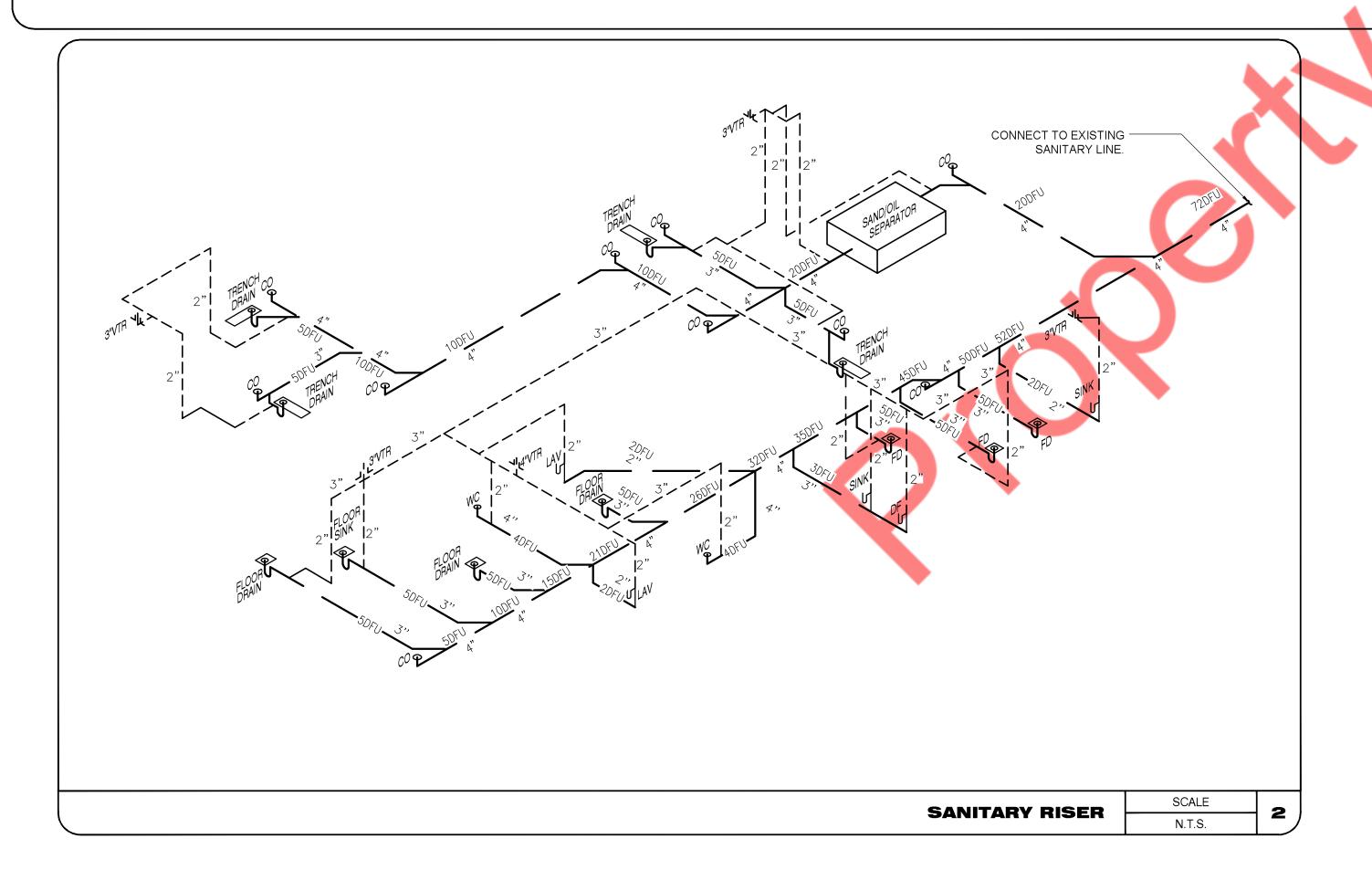
2. ALL SINKS AND LAVATORIES SHALL HAVE MINIMUM 17 GAUGE TRAPS, WITH CLEAN OUT PLUGS AND WALL ESCUTCHEONS, CHROME PLATED, OFFSET TRAP ON DRAIN LINE,

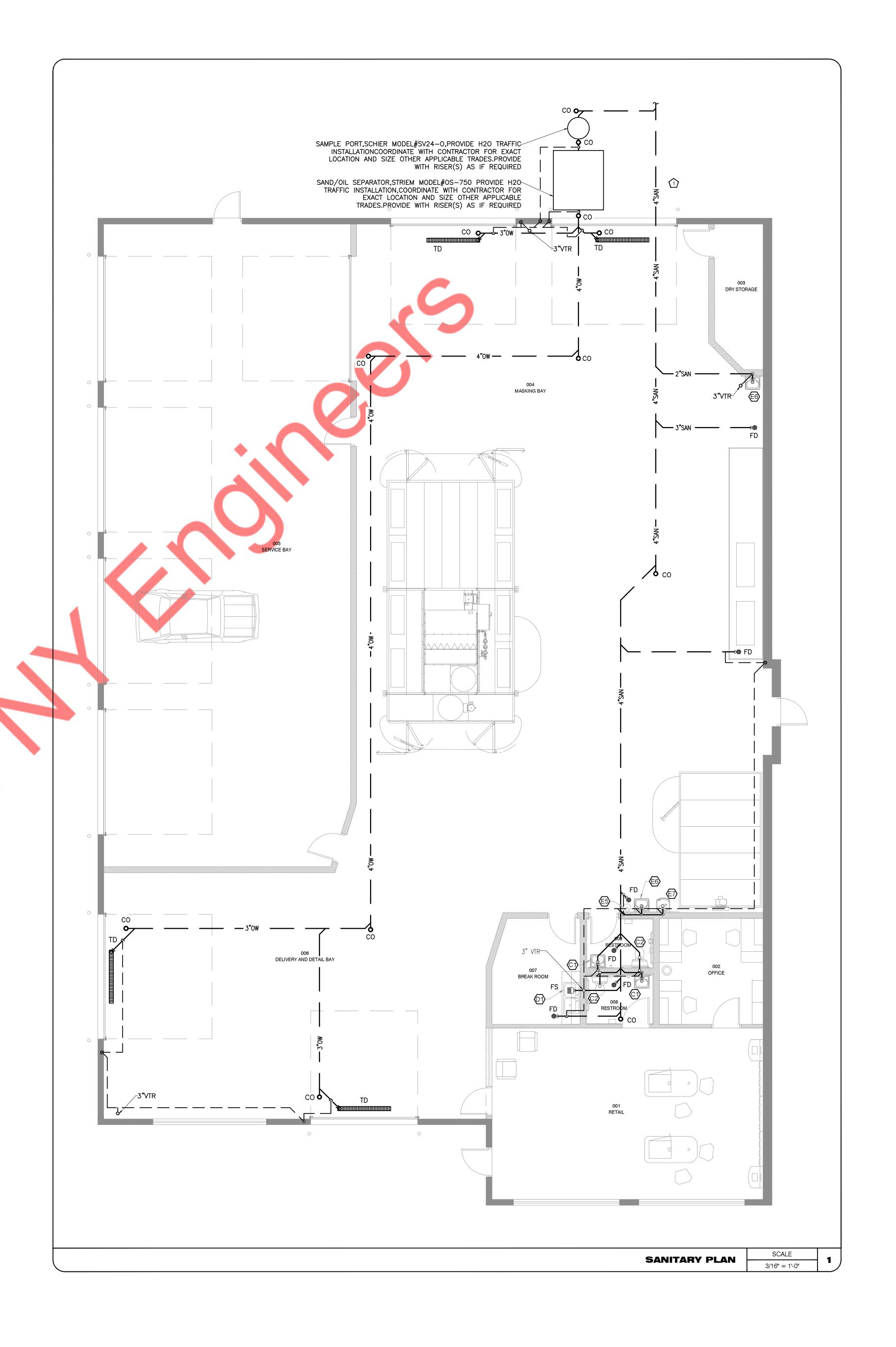
TAILPIECE WITH STRAINER, HANDI-SHIELD VINYL COVERED PIPE INSULATION WITH HOOD OVER NEW DRAIN LINE AND HOT AND COLD WATER LINES. 3. ALL FIXTURES SHALL HAVE INDIVIDUAL WALL SUPPLY STOPS, LOOSE KEY OPERATED, WITH WALL ESCUTCHEONS, CHROME PLATED.

4. TOILET SEATS: ELONGATED WITH OPEN FRONT AND CONTAINING ANTI-MICROBIAL AGENT, BEMIS MODEL #3155CT. 5. WATER COOLERS FURNISHED WITH INTEGRAL VOLUME REGULATORS, HANGERS, WALL MOUNTING PLATE AND 5 YEAR WARRANTY.

6. LAVATORIES L-1 AND L-2 SHALL BE PROVIDED WITH A VANDAL RESISTANT 0.5 GPM AERATOR - CHICAGO FAUCET MODEL E2805JKCP.

7. ALL TOILET FLUSH CONTROLS SHALL BE PROVIDED ON THE WIDE SIDE OF THE FIXTURE. (AWAY FROM WALL) 8. PROVIDE WALL MOUNTED SERVICE FAUCET, MOP HANGER BRACKET AND STAINLESS STEEL STRAINER AT MS-1 LOCATION.
9. ALL FIXTURES SHALL BE SUBMITTED AND APPROVED BY ENGINEER.
10. PROVIDE 4" DEEP-SEAL TRAP FOR ALL FLOOR DRAINS.







NATURAL GAS PIPING SYSTEM

PROVIDE A COMPLETE GAS PIPING SYSTEM

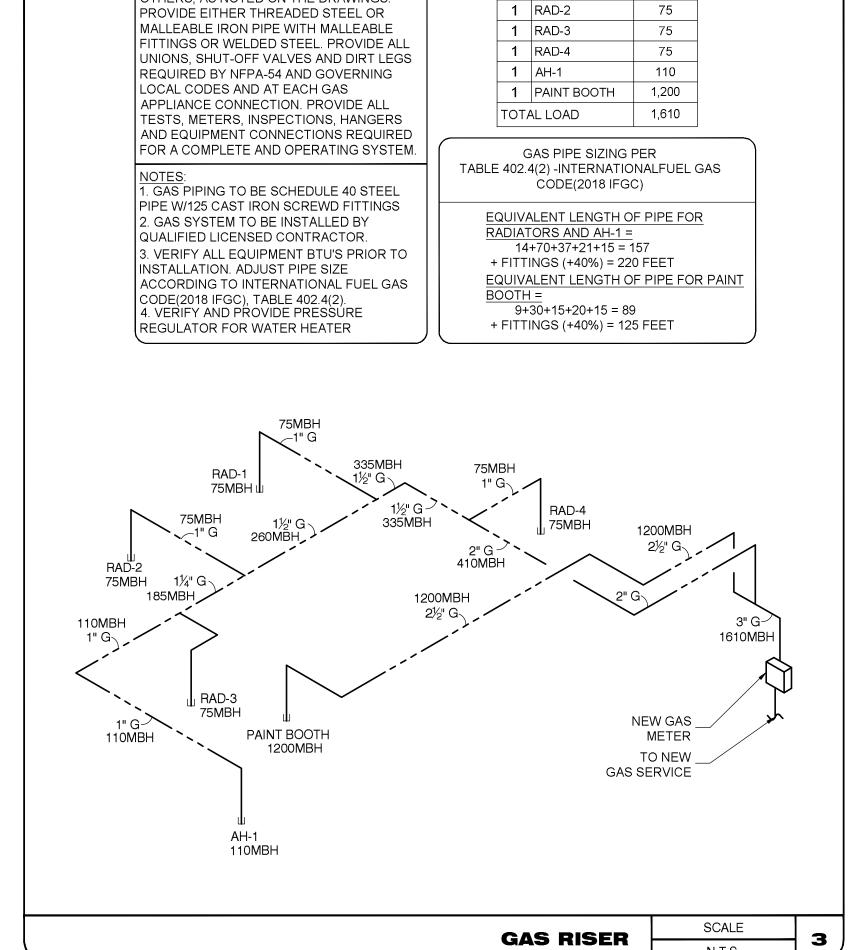
TO SERVE GAS EQUIPMENT FURNISHED BY

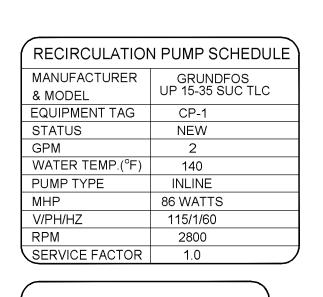
OTHERS, AS NOTED ON THE DRAWINGS.

1 EXTEND AND CONNECT NEW 1-1/2" CW PIPE TO MAIN PIPE. CONTRACTOR TO VERIFY SIZE AND LOCATION IN FIELD.

QTY. DESCRIPTION

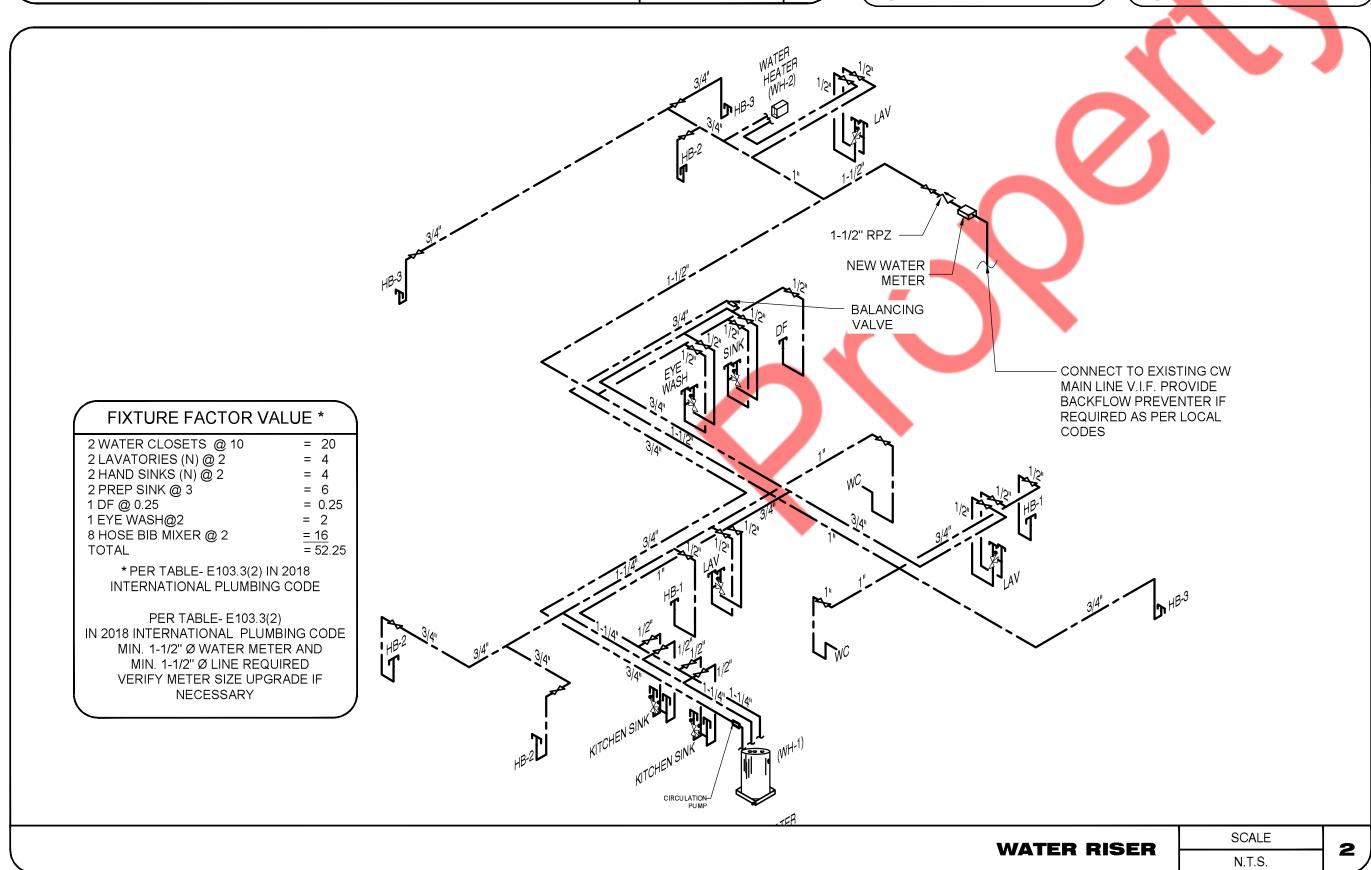
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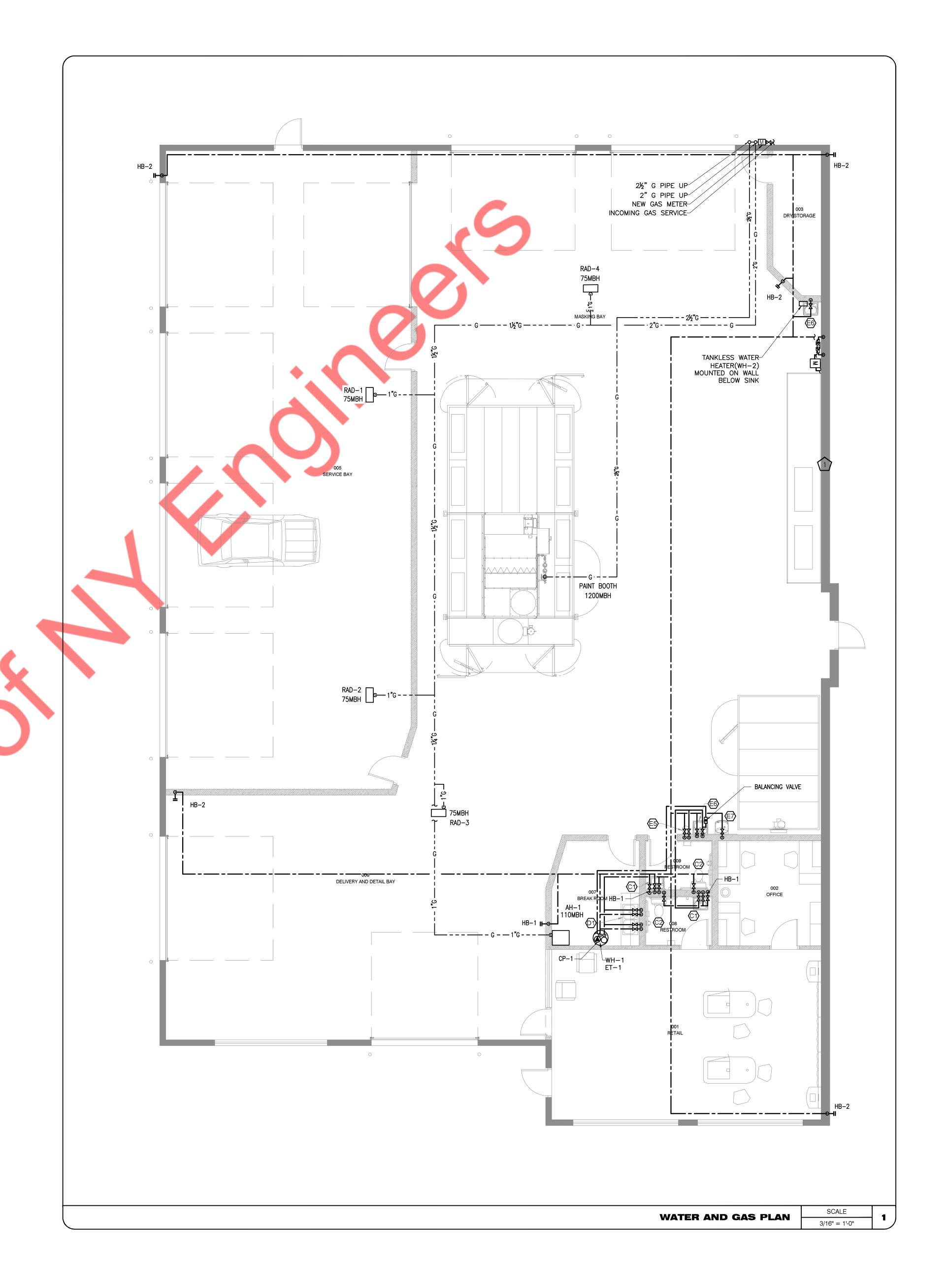


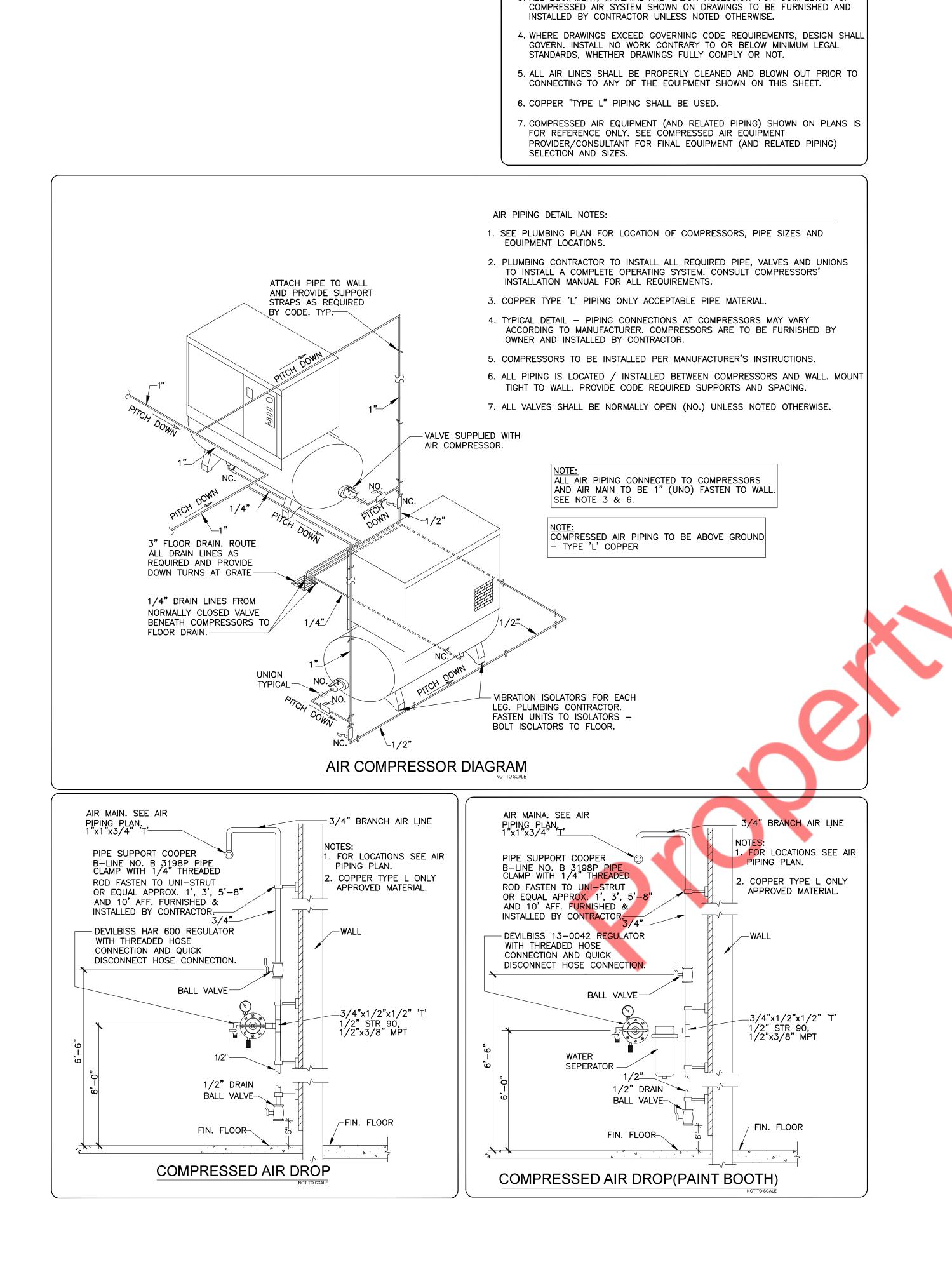
MANUFACTURER	AO SMITH
MODEL	DEL-30
EQUIPMENT TAG	WH-1
STATUS	NEW
CAPACITY	30 GAL.
FUEL	ELECTRIC
FLOW RATE	30 GPH*
ENERGY FACTOR	0.96
KW	8
VOLTAGE	208/1/60
AMPERAGE	38.4
WEIGHT (EMPTY)	45.4 LBS.

MANUFACTURER	EEMAX
MODEL	SP35
EQUIPMENT TAG	WH-2
STATUS	NEW
CAPACITY	TANKLESS
FUEL	ELECTRIC
FLOW RATE	0.5 GPM*
ENERGY FACTOR	0.99
KW	3.5
VOLTAGE	208/1/60
AMPERAGE	14.6



N.T.S.





COMPRESSED AIR PIPING NOTES

1. PROVIDE SHUTOFF VALVES IN EACH BRANCH USING BALL VALVES. REFER

3. ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY FOR COMPLETION OF

TO AIR SUPPLY DIAGRAMS THIS SHEET FOR MOUNTING HEIGHT.

TAKE-OFFS FROM TOP OF MAIN.

2. PITCH PIPING BACK TO AIR COMPRESSOR. TAP ALL BRANCH PIPING

