

DESCRIPTION	ABBREV.	SYMBOL
SANITARY WASTE PIPING	SAN	---
GREASE WASTE PIPING	GSAN	---
VENT PIPING	V	---
GAS PIPING	G	---
CLEAN OUT TO GRADE	COTG	---
WALL CLEAN OUT	WCO	WCO
COLD WATER PIPING	CW	---
HOT WATER PIPING	HW	---
FILTERED WATER PIPING	FW	---
BALL VALVE	BV	⊗
BACKFLOW PREVENTOR	BFP	⊗
CAP	CAP	CAP
VENT THRU ROOF	VTR	---
TEE UP		---
TEE DOWN		---
90° UP		---
90° DOWN		---
SHUT OFF VALVE	SOV	---
BELOW FINISHED FLOOR HOSE BIB	BFF HB	---
REDUCED PRESSURE ZONE ASSEMBLY		---
BALANCING VALVE		---
RECIRCULATION PUMP	RCP	---

**CONTRACTOR NOTES:**

IT IS RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT, LANDLORD OR TENANT OF ANY DISCREPANCIES ENCOUNTERED ON THE PLANS OR IN EXISTING SITE CONDITIONS PRIOR TO SUBMISSION OF BID. BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK. THE BASE BID SHALL REFLECT MODIFICATIONS TO SYSTEMS AND DEVICES AS REQUIRED BY STATE, LOCAL AND FEDERAL CODES WHETHER INDICATED OR NOT ON CONTRACT DOCUMENTS. THE SUBMISSIONS OF A BID WILL BE EVIDENCE THAT SUCH AS EXAMINATION AND COMPLIANCE WITH THE GOVERNING CODES/REQUIREMENTS HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION AND CODE/REQUIREMENTS REVIEW BEEN MADE, WILL NOT BE ALLOWED.

**ENERGY CONSERVATION NOTES:**

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

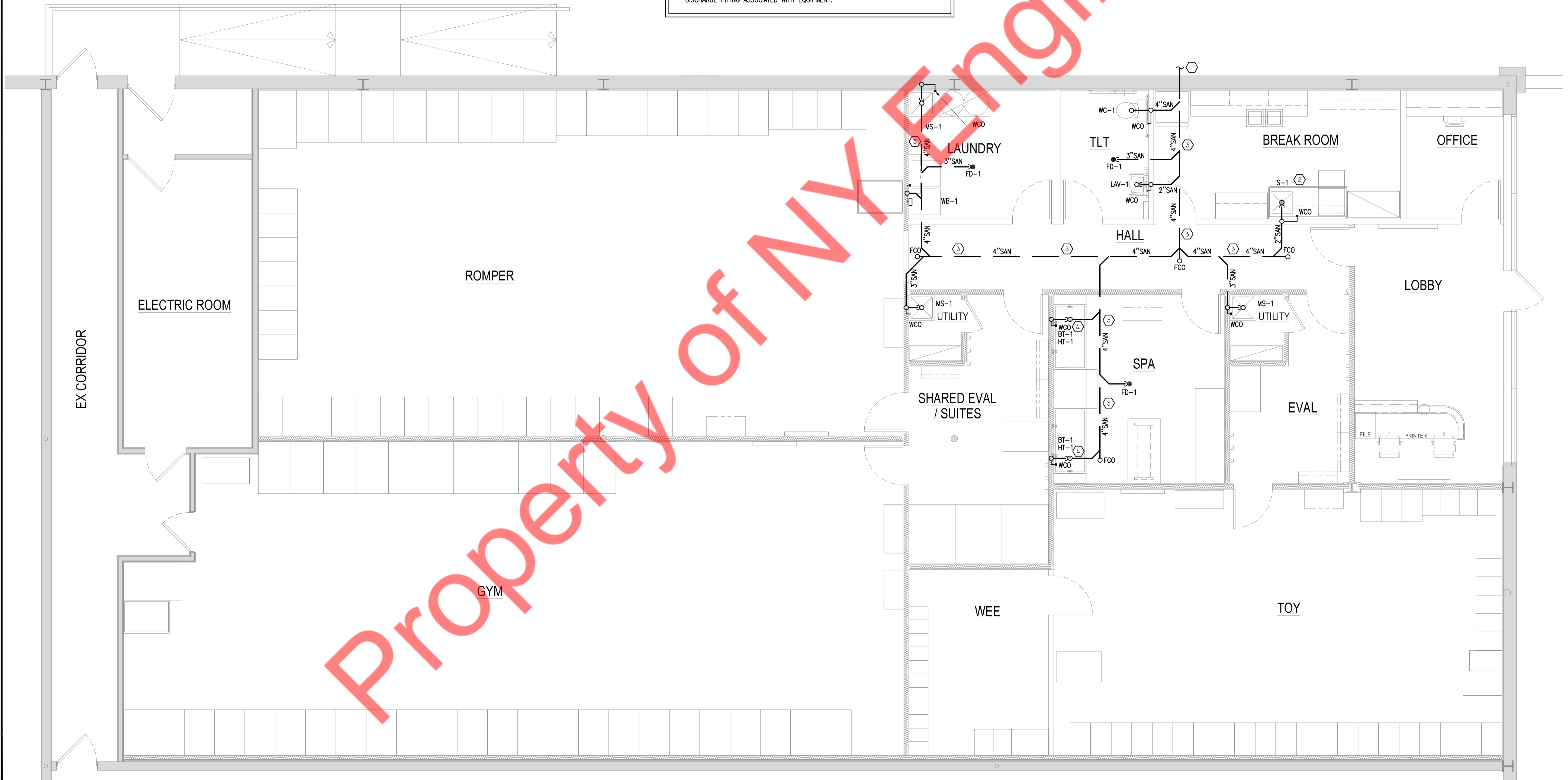
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		MINIMUM PIPE INSULATION THICKNESS				
	CONDUCTIVITY BTU-IN./ (H· FT2· °F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4	4 to < 8	>8
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

- HOT WATER SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.5 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.
- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RE-CIRCULATING PUMP AND THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.
- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:
  - THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
  - THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).
- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.3, WATER HEATING EQUIPMENT NOT SUPPLIED WITH INTEGRAL HEAT TRAPS AND SERVING NON RE-CIRCULATING SYSTEM SHALL BE PROVIDED WITH HEAT TRAPS ON SUPPLY AND DISCHARGE PIPING ASSOCIATED WITH EQUIPMENT.

**PLUMBING KEYED NOTES:**

- CONNECT NEW 4" SANITARY PIPING TO EXISTING SANITARY PIPING. CONTRACTOR SHALL VERIFY EXACT LOCATION.
- ROUTE INDIRECT WASTE FROM DISHWASHER TO S-1 P-TRAP.
- ROUTE SANITARY PIPING UNDERGROUND WITH 1/8" SLOPE. CONTRACTOR SHALL VERIFY EXACT LOCATION.
- ROUGH-IN FOR TUB DRAINS IS 20" AFF.

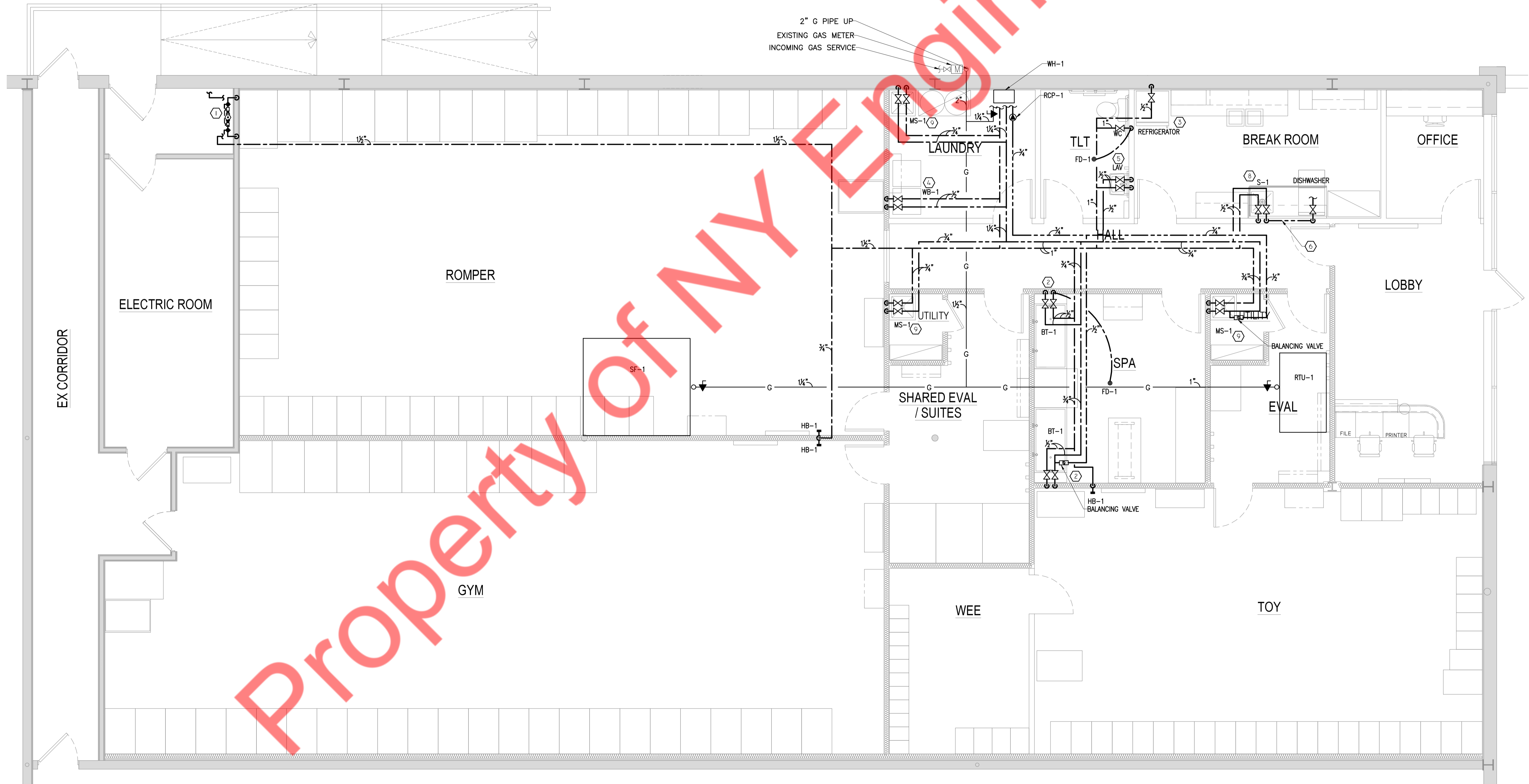
Property of NY Engineers



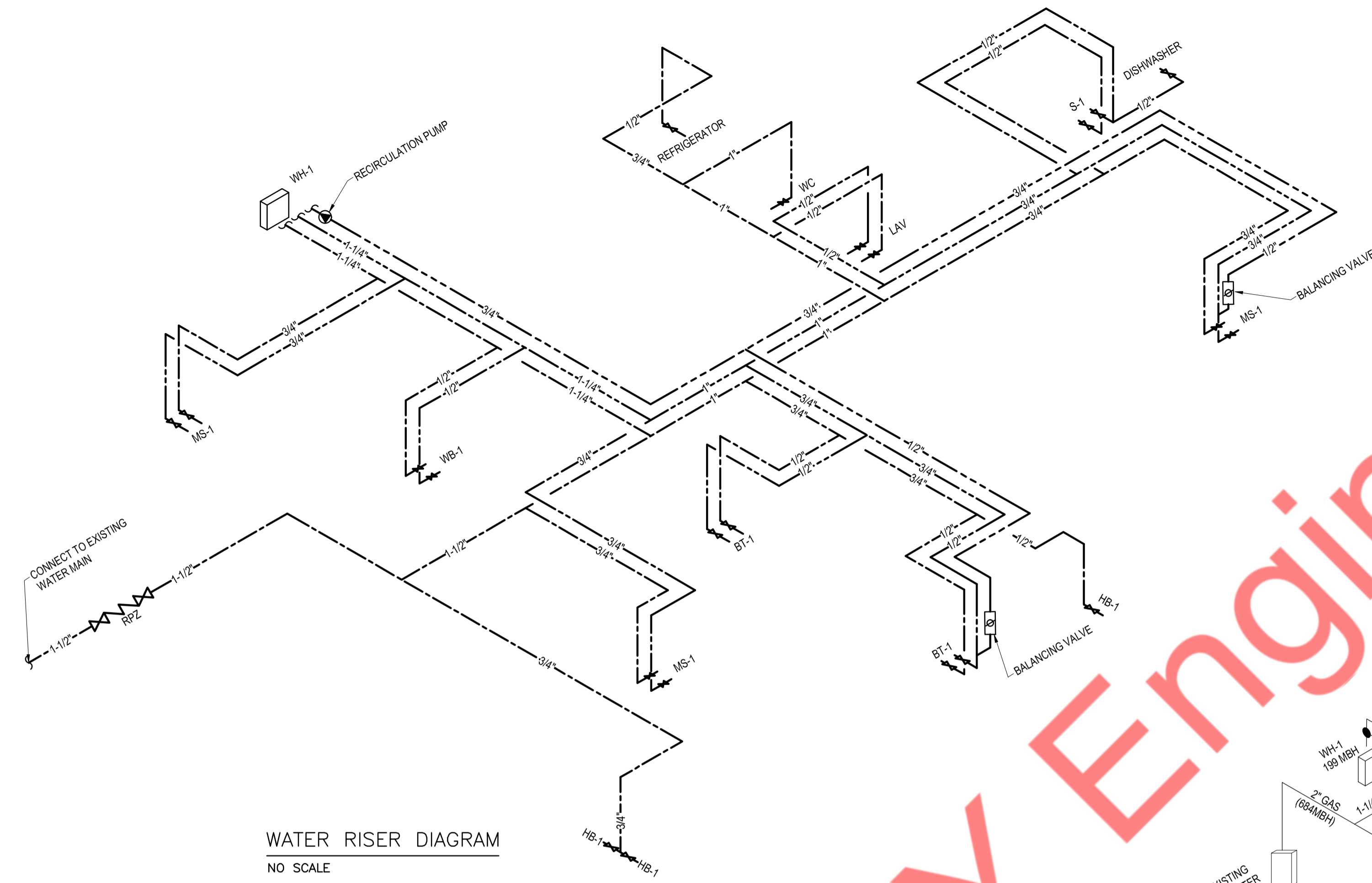
**A1 FLOOR PLAN-SANITARY**

- PLUMBING KEYED NOTES:**
- ① EXTEND AND CONNECT NEW 1-1/2" CW PIPING TO EXISTING WATER MAIN. PROVIDE NEW WATER METER AND BACKFLOW PREVENTER (RPZ), IF NOT EXISTING. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION IN FIELD.
  - ② PIPING DOWN IN WALL, ROUTE TO FAUCET AT HEAD OF TUB. ROUGH-IN AT 43" AFF. MAKE ALL NECESSARY CONNECTIONS.
  - ③ PROVIDE 1/2" CW REFRIGERATOR BOX IN WALL FOR CONNECTION TO ICE MAKER.
  - ④ EXTEND AND CONNECT NEW 1/2" CW/HW PIPING TO WASHER BOX.
  - ⑤ PROVIDE THERMOSTATIC MIXING VALVES AT ALL LAVATORIES. SET AT 110° F MAX.
  - ⑥ ROUTE HW PIPING IN WALL TO DISHWASHER. CONTRACTOR SHALL VERIFY EXACT LOCATION.
  - ⑦ EXTEND AND CONNECT NEW 2" GAS PIPING TO EXISTING GAS METER. CONTRACTOR SHALL VERIFY EXACT LOCATION AND CAPACITY.
  - ⑧ EXTEND AND CONNECT NEW 1/2" CW/HW PIPING TO SINK. CONTRACTOR SHALL VERIFY EXACT LOCATION.
  - ⑨ EXTEND AND CONNECT NEW 3/4" CW/HW PIPING TO MOP SINK. CONTRACTOR SHALL VERIFY EXACT LOCATION.

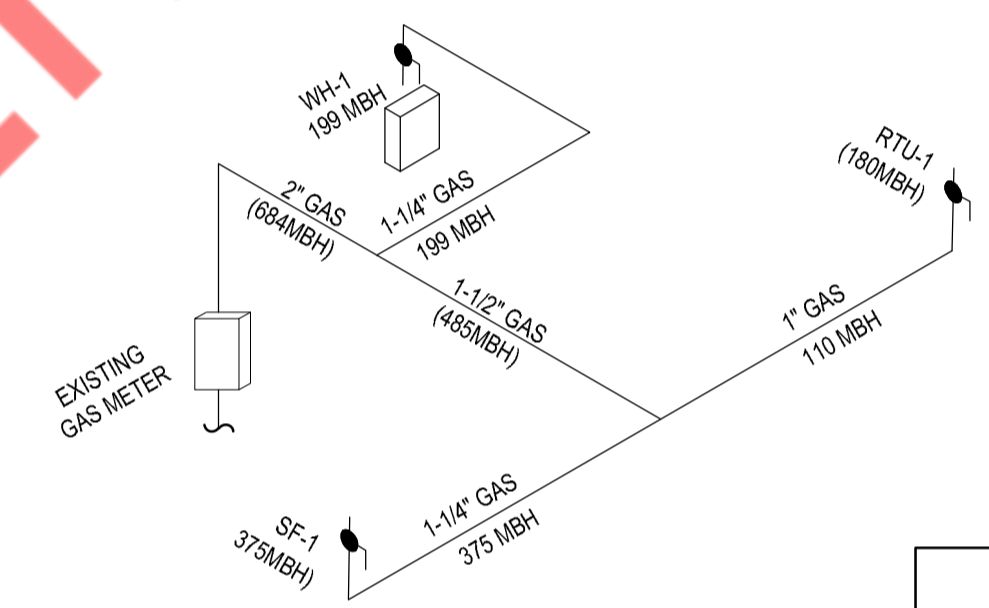
**SPRINKLER NOTE:**  
 SPRINKLER MODIFICATIONS TO BE MADE UNDER SEPARATE PERMIT AND COVER.







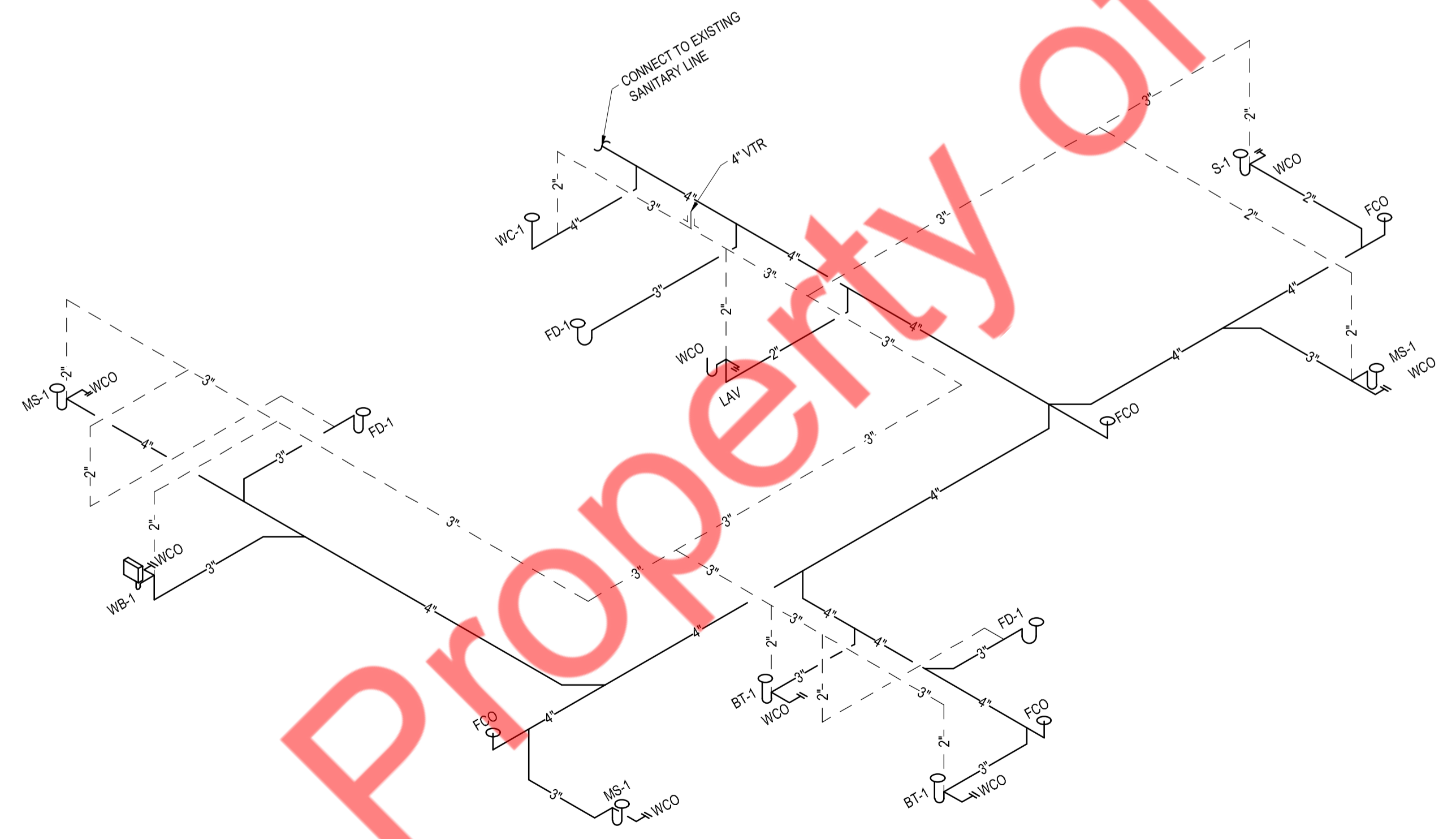
WATER RISER DIAGRAM  
NO SCALE



GAS RISER DIAGRAM  
NO SCALE

GAS LOAD SUMMARY	
EQUIPMENT	CFH LOAD
RTU-1	110
SF-1	375
WH-1	199
TOTAL LOAD	684

NOTE:  
INLET PRESSURE LESS THAN 2 PSI  
WITH PRESSURE DROP OF 0.5" W.C.  
AT A SPECIFIC GRAVITY OF 0.60.  
EQUIVALENT LENGTH OF PIPE  
= 63 FEET + FITTINGS (+40%) = 88 FEET  
GAS METER AND REGULATOR BY GAS  
COMPANY. COORDINATE ALL  
REQUIREMENTS WITH GAS COMPANY.



SANITARY RISER DIAGRAM  
NO SCALE