

PLUMBING LEGEND

---	DOMESTIC COLD WATER PIPING
---	EXIST. DOMESTIC COLD WATER
---	DOMESTIC HOT WATER PIPING
---	EXIST. DOMESTIC HOT WATER
---	FILTERED WATER
---	HOT WATER RECIRC
---	VENT PIPING
---	WASTE (SANITARY SEWER)
---	UNDERGROUND WASTE (SANITARY SEWER)
---	INDIRECT WASTE
---	GREASE WASTE
---	UNDERGROUND GREASE WASTE
---	GAS PIPING
---	GAS VALVE
---	GAS SOLENOID VALVE
---	GATE VALVE
---	BALANCING VALVE
---	CHECK VALVE
---	UNION
---	PIPE UP
---	PIPE DOWN
---	FLOOR/HUB DRAIN
---	FLOOR SINK
---	FLOOR/GRADE CLEAN OUT
---	TRENCH DRAIN
---	WALL CLEAN OUT
---	KITCHEN EQUIPMENT ITEM NUMBER
---	FIXTURE DESIGNATION
---	ABOVE FINISHED FLOOR
---	PLUMBING SUB-CONTRACTOR
---	GENERAL CONTRACTOR
---	MECHANICAL SUB-CONTRACTOR
---	ELECTRICAL SUB-CONTRACTOR
---	FLOOR CLEAN OUT
---	WALL CLEAN OUT
---	GRADE CLEAN OUT
---	WALL HYDRANT
---	FLOOR DRAIN
---	TRENCH DRAIN
---	FLOOR SINK
---	HUB DRAIN
---	COLD WATER
---	HOT WATER
---	TEMPERED WATER
---	FILTERED WATER
---	AIR ADMITTANCE VALVE (STUDOR VENT)
---	TIE INTO EXISTING
---	CLEAN OUT DECK PLATE

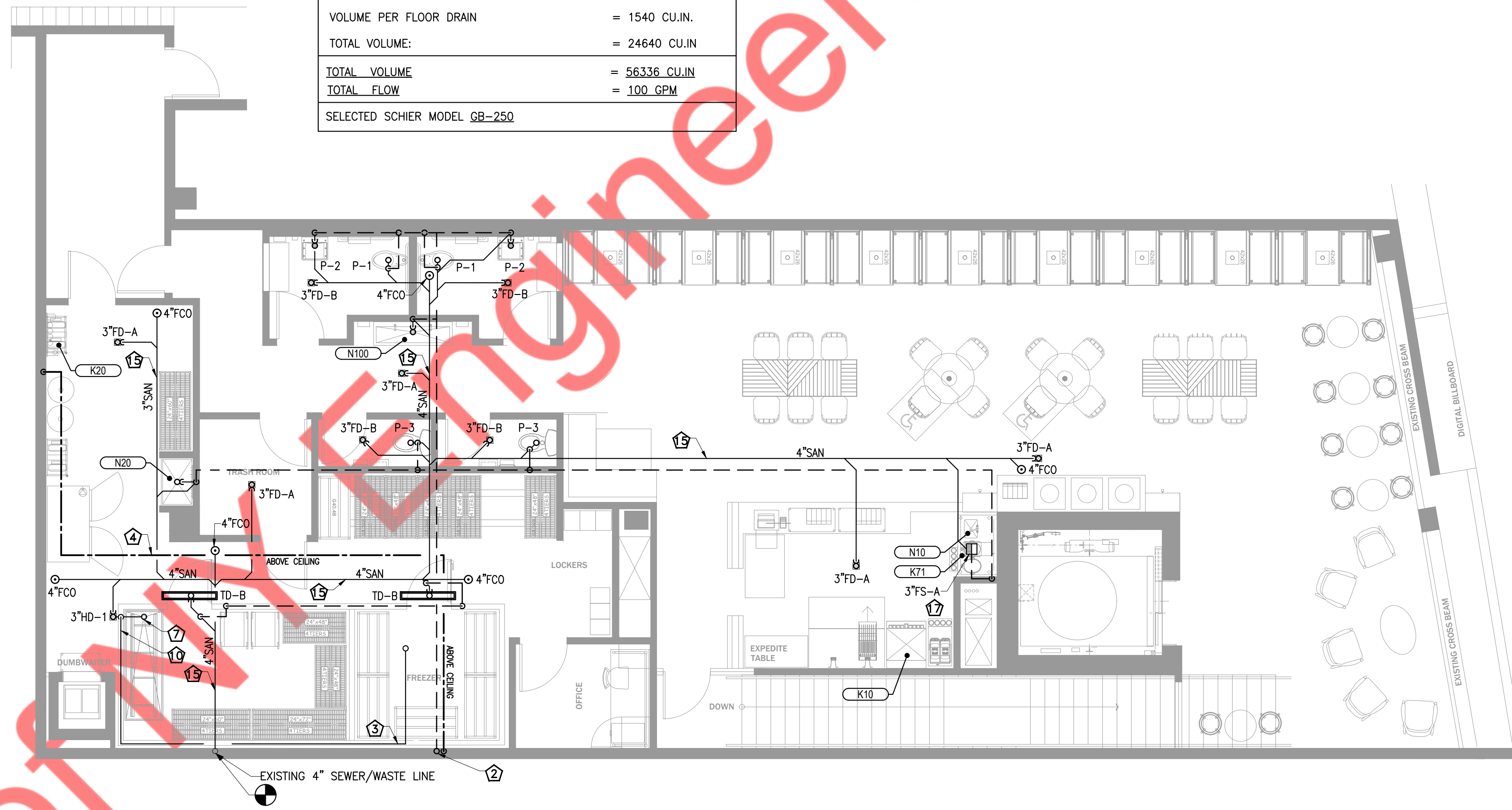
NOT ALL SYMBOLS AND ABBREVIATIONS IN THIS LEGEND WILL APPEAR IN DRAWING.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	CONN.			MANUF. & MODEL	DESCRIPTION
		W	CW	HW		
P-1	WATER CLOSET (HANDICAP)	4"	1-1/2"	-	AM. STD. 3043.102	VITREOUS CHINA, 16-3/4" HIGH ELONGATED BOWL, 1.6 GPF, SIPHON JET; W/ ZURN Z-6000-WS1-YBYC FLUSH VALVE MOUNTED 11" ABOVE WATER CLOSET; CHURCH 9500CT OPEN FRONT SEAT, WHITE SOLID PLASTIC.
P-2	LAVATORY (HANDICAP)	2"	1/2"	1/2"	COMMERCIAL INTERIORS MANUFACTURING MODEL R-2030	WITH AM. STANDARD 6056.205-V10 - INNSBROOK AC VERSION PROXIMITY FAUCET, WITH V10 1.0 GPM VANDAL RESISTANT AERATOR, AND 605XTMV MIXING VALVE, POLISH CHROME FINISH
P-3	WATER CLOSET	4"	1-1/2"	-	AS PER ARCHITECTURE	AS PER ARCHITECTURE DETAILS
FD-A	FLOOR DRAIN	3"	-	-	ZURN Z-1732-33	ALL TYPE 304 STAINLESS STEEL HEAVY DUTY ADJUSTABLE FLOOR DRAIN WITH INTEGRAL ANCHOR FLANGE.
FD-B	FLOOR DRAIN	3"	-	-	ZURN Z-1732-33	SAME AS FD-A, EXCEPT W/1/2" TRAP PRIMER CONNECTION
FS-A	FLOOR SINK	3"	-	-	ZURN Z-1900-2-33 12"x12"x6" A.R.E.	3" FLOOR SINK, 12"x12" A.R.E SANI-FLOOR RECEPTOR, ANTI SPLASH STRAINER, ACID RESIST. PORCELAIN ENAMEL INTERIOR AND SQ. TOP. BOTTOM DOME STRAINER.
FS-B	FLOOR SINK	3"	-	-	ZURN Z-1900-2-33 12"x12"x6" A.R.E.	3" FLOOR SINK, 12"x12" A.R.E SANI-FLOOR RECEPTOR, ANTI SPLASH STRAINER, ACID RESIST. PORCELAIN ENAMEL INTERIOR AND SQ. TOP. BOTTOM DOME STRAINER.
FCO	FLOOR CLEANOUT	4"	-	-	Z-1400-BP	ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY.
WCO	WALL CLEANOUT	SEE RISER	-	-	Z-1446-BP	CLEANOUT TEE, DURA-COATED CAST IRON BODY, SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW.
WH-1	WATER HEATER	-	3/4"	3/4"	A.O.SMITH DEN-66	12KW INPUT, 240V, 3PH, 66 GAL STORAGE CAPACITY, FLOOR MOUNTED ELECTRIC STORAGE WATER. DIMENSIONS 21-3/4"D X 60-3/4"H. PROVIDE EXPANSION TANK AS PER SCHEDULE. REFER TO DETAIL 1/P-501.00.
WH-2	WATER HEATER	-	3/8"	3/8"	CHRONOMITE SR-20L/208	INSTANT-FLOW SR - LOW FLOW ELECTRIC WATER HEATER; 208V, 4.16KW, SINGLE PHASE, 0.4 GPM @ 71°F RISE EACH. INSTALL EACH PER MANUFACTURER'S RECOMMENDATIONS.
GI-1	GREASE INTERCEPTOR	4"	-	-	SCHIER GB-250	INDOOR, ABOVE GRADE INSTALLATION, 100 GPM FLOW RATE, 1895 LBS. GREASE CAPACITY. REFER TO DETAIL 8/P-501.00.
HD-1	HUB DRAIN	3"	-	-	-	SEE DETAIL SHEET 7/P-501.00
RCP-1	RECIRCULATION PUMP	-	-	-	GRUNDFOS UPS 15-18	2 GPM FLOW RATE, 10 FT TOTAL HEAD, 0.115 HP MOTOR
ET-1	EXPANSION TANK	-	-	-	THERM-X-TROL ST-5	2 GALLONS, 5LBS WEIGHT, 13"(H)x8"(DIA)
TD-A	80" TRENCH DRAIN	3"	-	-	AS PER ARCHITECTURE	AS PER ARCHITECTURE DETAILS
TD-B	40" TRENCH DRAIN	3"	-	-	AS PER ARCHITECTURE	AS PER ARCHITECTURE DETAILS

GREASE INTERCEPTOR CALCULATIONS PER DEP GUIDELINES 19-11 (GI-1) AS PER TABLE-1

DESCRIPTION: 3-COMP. SINK	SIZE PER COMP. = 18"L x 22"W x 14"H = 5544 CU.IN.
TOTAL VOLUME:	= 16632 CU.IN.
DESCRIPTION: MOP SINK	SIZE PER COMP. = 34"L x 20"W x 14"H = 9520 CU.IN.
TOTAL VOLUME:	= 9520 CU.IN.
DESCRIPTION: PRE RINSE SINK	SIZE PER COMP. = 18"L x 22"W x 14"H = 5544 CU.IN.
TOTAL VOLUME:	= 5544 CU.IN.
DESCRIPTION: FLOOR SINK/TRENCH DRAIN-QTY.16	VOLUME PER FLOOR DRAIN = 1540 CU.IN.
TOTAL VOLUME:	= 24640 CU.IN.
TOTAL VOLUME	= 56336 CU.IN
TOTAL FLOW	= 100 GPM
SELECTED SCHIER MODEL	GB-250

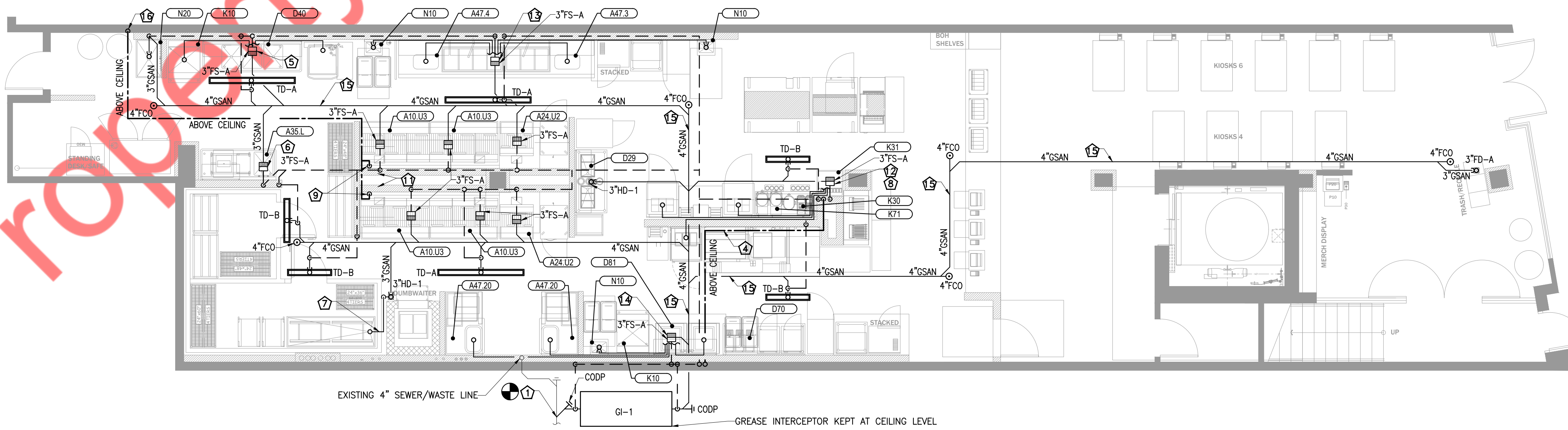


1 PLUMBING SECOND FLOOR SANITARY AND GREASE WASTE PLAN

P-101 3/16"=1'-0"

PLUMBING KEY NOTES

- 1 4" SANITARY WASTE PIPING. SEE CIVIL ENGINEERING DRAWINGS FOR CONTINUATION. COORDINATE EXACT INVERT ELEVATION WITH SITE CONDITIONS.
- 2 4" VENT UP TO NEW 4" VTR. PC SHALL VERIFY THAT NEW 4" VTR IS INSTALLED 10' FROM ANY MECHANICAL OUTSIDE AIR INTAKE.
- 3 3/4" CONDENSATE PIPING BRACED TO WALK-IN WALLS. SPILL W/INDIRECT CONNECTION INTO HUB DRAIN.
- 4 CO2 AND SODA LINES RUN OVERHEAD IN CEILING SPACE.
- 5 PROVIDE 2" INDIRECT WASTE FROM 3 COMP SINK & 1-1/2" INDIRECT WASTE FROM ICE MAKER & DISHWASHER TO FLOOR SINK.
- 6 PROVIDE 1-1/2" INDIRECT WASTE FROM 1 COMP SINK TO FLOOR SINK.
- 7 EXTEND CHICKEN CRATE VAT 2" COPPER INDIRECT WASTE LINE THRU COOLER/FREEZER WALL TO DISCHARGE IN HUB DRAIN LOCATED BESIDE WALL.
- 8 ROUTE DRINK STATION DRAINAGE TO FLOOR SINK. PROVIDE DRAIN LINE FROM SELF-SERVE BEVERAGE COUNTER STATION TO FLOOR SINK.
- 9 GREASE DISPOSAL LINE MOUNTED FLUSH AGAINST WALL @ 3'-0" A.F.F. (SEE DTL 6/P-501.00). G.C. TO PROVIDE STAINLESS STEEL COVER TO CEILING.
- 10 1" CONDENSATE PIPING BRACED TO WALK-IN WALLS. SPILL W/INDIRECT CONNECTION INTO HUB DRAIN.
- 11 ALL CW, HW, WASTE AND/OR VENT PIPING IN THIS WALL TO BE MADE OF NON-COMBUSTIBLE MATERIAL.
- 12 PROVIDE 1-1/2" INDIRECT WASTE FROM SANDWICH STATION TO FLOOR SINK.
- 13 PROVIDE 1-1/2" INDIRECT WASTE FROM 2 NO'S HAND SINK & BATTER STATIONS TO FLOOR SINK.
- 14 PROVIDE 1-1/2" INDIRECT WASTE FROM BATTER STATIONS, HAND SINK, ICE MAKER & CHUBB WARMER TO FLOOR SINK.
- 15 ALL SANITARY & GREASE WASTE RUNNING BELOW SLAB.
- 16 DROP PIPING DOWN IN WALL. STUB OUT OF WALL @ 96" AFF INTO GREASE TANK.
- 17 PROVIDE 1-1/2" INDIRECT WASTE FROM ICE MAKER, HAND SINK & BEVERAGE COUNTER STATION TO FLOOR SINK.



2 PLUMBING FIRST FLOOR SANITARY AND GREASE WASTE PLAN

P-101 3/16"=1'-0"

PLUMBING LEGEND

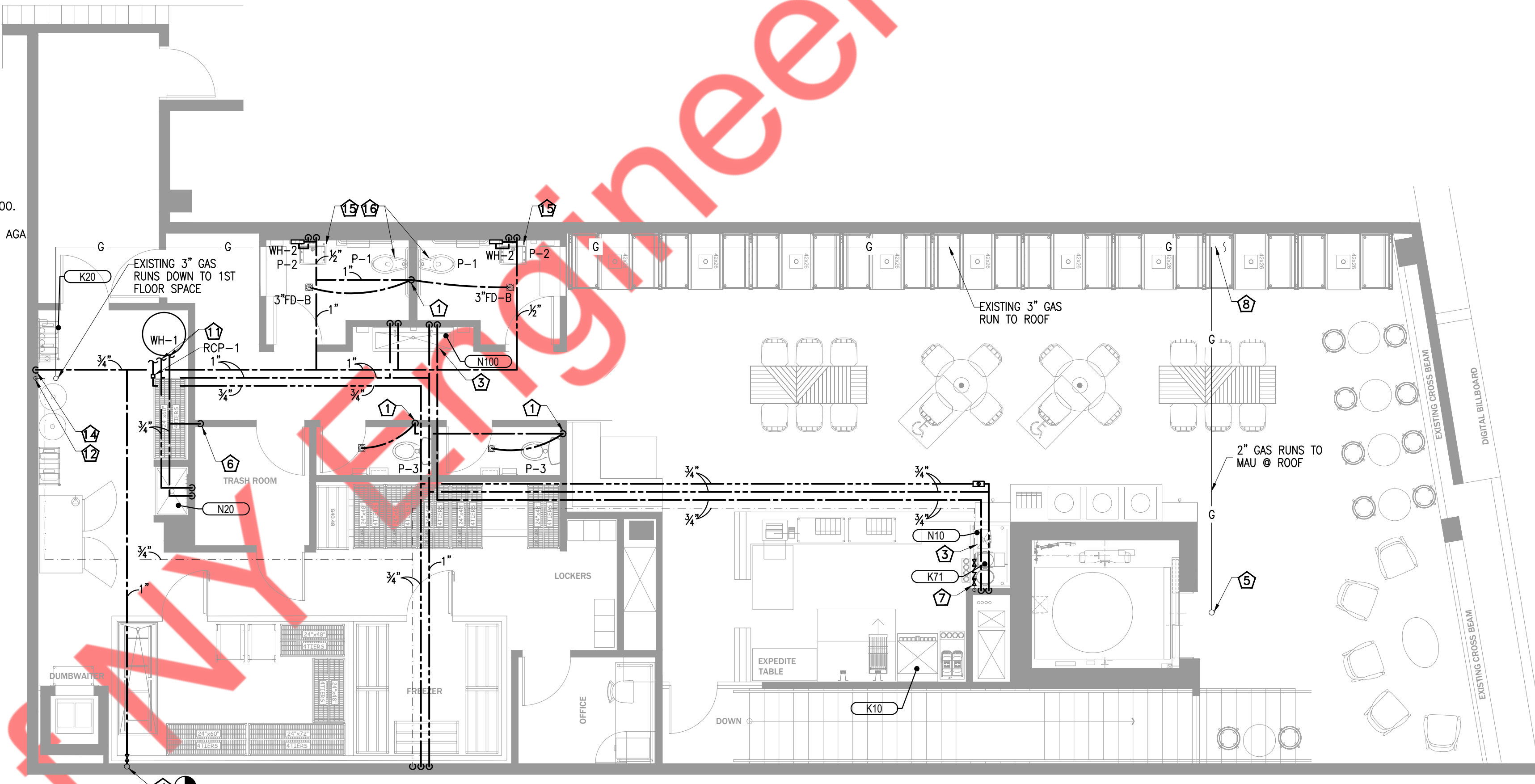
- DOMESTIC COLD WATER PIPING
- - - EXIST. DOMESTIC COLD WATER
- DOMESTIC HOT WATER PIPING
- - - EXIST. DOMESTIC HOT WATER
- FILTERED WATER
- HOT WATER RECIRC
- VENT PIPING
- WASTE (SANITARY SEWER)
- UNDERGROUND WASTE (SANITARY SEWER)
- INDIRECT WASTE
- GW GREASE WASTE
- GW UNDERGROUND GREASE WASTE
- G GAS PIPING
- ⊗ GAS VALVE
- ⊗ GAS SOLENOID VALVE
- ⊗ GATE VALVE
- ⊗ BALANCING VALVE
- ⊗ CHECK VALVE
- ⊗ UNION
- PIPE UP
- PIPE DOWN
- ⊗ FLOOR/HUB DRAIN
- ⊗ FLOOR SINK
- ⊗ FLOOR/GRADE CLEAN OUT
- ⊗ TRENCH DRAIN
- ⊗ WALL CLEAN OUT
- XXX KITCHEN EQUIPMENT ITEM NUMBER
- P-1 FIXTURE DESIGNATION
- AFF ABOVE FINISHED FLOOR
- PC PLUMBING SUB-CONTRACTOR
- GC GENERAL CONTRACTOR
- MC MECHANICAL SUB-CONTRACTOR
- EC ELECTRICAL SUB-CONTRACTOR
- FCO FLOOR CLEAN OUT
- WCO WALL CLEAN OUT
- GCO GRADE CLEAN OUT
- WHD WALL HYDRANT
- FD FLOOR DRAIN
- TD TRENCH DRAIN
- FS FLOOR SINK
- HD HUB DRAIN
- CW COLD WATER
- HW HOT WATER
- TW TEMPERED WATER
- FW FILTERED WATER
- AAV AIR ADMITTANCE VALVE (STUDOR VENT)
- ⊗ TIE INTO EXISTING
- CODP CLEAN OUT DECK PLATE

NOT ALL SYMBOLS AND ABBREVIATIONS IN THIS LEGEND WILL APPEAR IN DRAWING.

PLUMBING KEY NOTES

- 1 TRAP PRIMER VALVE EQUAL TO PRECISION PLUMBING PRODUCTS OREGON-1. LOCATE IN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING. ROUTE 1/2" TYPE "L" SOFT COPPER TRAP PRIMER LINES DOWN TO BELOW FLOOR TO CONNECTIONS TO FD-B.
- 2 1-1/2" AUTOMATIC GAS VALVE EXPOSED 6" BELOW CEILING HEIGHT. PROVIDED BY OWNER INSTALLED BY CONTRACTOR. INTERLOCK WITH HOOD SUPPRESSION SYSTEM. REDUCE FROM 2" AT INLET, AND INCREASE TO 2" AT OUTLET. PROVIDE 2" UNION ON INLET AND OUTLET.
- 3 PROVIDE TEMPERATURE MIXING VALVE, SET AT 110°, ON ALL HANDSINKS. REFER TO DETAIL 5/P501.00.
- 4 1-1/2" DOMESTIC WATER SERVICE INTO THE BUILDING WITH IT'S OWN METER. THE TENANT SPACE HAS SUBMETER REFER TO DETAIL 13/P501.00 CONTAINMENT BACKFLOW PREVENTER BY CIVIL.
- 5 EXISTING GAS PIPING RUNS TO ROOF TO HVAC UNIT SEE DETAIL 14/P-501.00. COORDINATE EXACT LOCATION WITH MAU.
- 6 PROVIDE 1/2" WATER SUPPLY TO TRASH ROOM.
- 7 1/2" WATTS NO. 9 DUAL CHECK BACKFLOW PREVENTER IN SUPPLY LINE TO ICE MACHINE AND ALL EQUIPMENT CONNECTING TO FILTERED WATER. LOCATE IN ACCESSIBLE LOCATION.
- 8 EXISTING NATURAL GAS SERVICE LINE, COORDINATE INSTALLATION AND PAY ALL ASSOCIATED FEES. REFER TO GAS LOAD SUMMARY AND GAS RISER DIAGRAM - SHEET P-601.00.
- 9 PROVIDE WATTS SD3 DUAL CHECK BACKFLOW PREVENTER IN FILTER SUPPLY LINE TO BEVERAGE AREA OR ICE MACHINE. LOCATE IN ACCESSIBLE LOCATION ABOVE CEILING.
- 10 ALL CW, HW, WASTE AND/OR VENT PIPING IN THIS WALL TO BE MADE OF NON-COMBUSTIBLE MATERIAL.
- 11 1" HW & CW TO FLOOR MOUNTED ELECTRIC STORAGE WATER HEATER. REFER TO DETAIL 1/P-501.00.
- 12 WATER FILTER MOUNTED ON WALL ABOVE BAG-IN-BOX SYSTEM. STUB-OUT WATER SUPPLY @ 8'-4" A.F.F. SEE DETAIL 2/P-501.00.
- 13 2 1/2" GAS DOWN, EXPOSED ON WALL. EXTEND UNDER EQUIPMENT TO FINAL CONNECTIONS. PROVIDE PLUG VALVE, REDUCER, AND AGA RATED FLEX SUPPLY AT CONNECTION.
- 14 3/4" WATTS NO.9 DUAL CHECK BACKFLOW PREVENTER INSTALLED VERTICALLY.
- 15 GC TO ENSURE THAT ALL FAUCET HANDLES ARE LEVER TYPE.
- 16 COORDINATE THE FLUSH VALVE HANDLE WITH OPEN SIDE OF THE RESTROOM.

QTY	TAG	DESCRIPTION	WATER	WASTE	GAS	REMARKS			
			COLD	HOT	DIRECT	INDIRECT	SIZE	MBTUH	
A Fryer									
4	A10.U3	Fryer Battery, 3-20", Gas					0.75	225	
2	A24.U2	Fryer Battery, 2-14", Gas					1.00	180	
1	A35.L	Sink, 1 Compartment, Left Hand Drain Board, 52"	0.50	0.50	1.50				
1	A47.4	Ice Batter/Sifter Table, 4 Pans, 100" Long			0.50				
1	A47.3	Ice Batter/Sifter Table, 3 Pans, 86-1/4" Long			0.50				
2	A54	Freezer, Upright						0	
1	D29	Packing Station w/Cup Dispenser & Dipper Well	0.50		2.00			0	
1	D40	Sink, 3 Compartment, 100" Long, KTOF DISH SINK	0.50	0.50	2.00			0	
3	D70	Dispenser, Hot Water w/Wall Bracket		0.25				0	
2	D81	Chubb Warmer, Elec. Rethermalizer		0.25		1.50		0	
1	K10	Ice Cuber Self Contained, w/ Mounting Install kit		0.375		0.5		0	
1	K15	Ice Bin, 710 lbs				0.75		0	
1	K20	Water Filter, Equipment	0.75					0	
2	K31	Post Mix Drop-In Dispenser, w/conversion stand		0.375		0.75		0	
3	N10	Hand Sink, w/ Hand Free Lever	0.50	0.50	1.50			0	
2	N20	Map Sink	0.50	0.50	3.00			0	
1	N100	Hand Wash Through 60"	0.50	0.50	2.00			0	



1 PLUMBING SECOND FLOOR WATER AND GAS PLAN
3/16"=1'-0"

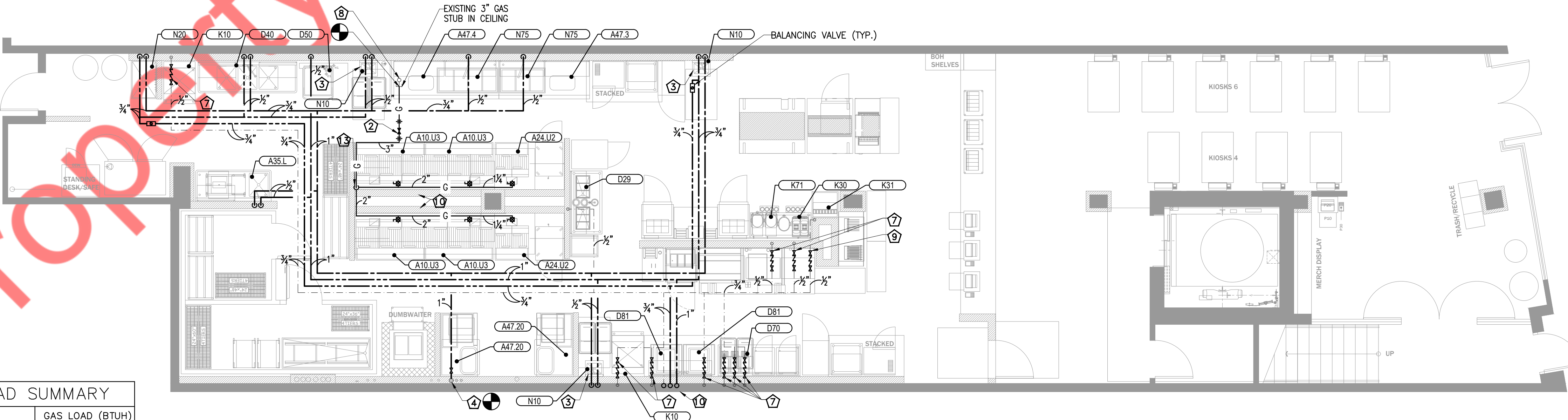
FRYER'S GAS PRESSURE REQ. WATER COLUMN
7" INPUT SIDE.
4" OUTPUT SIDE.
G.C. TO VERIFY READINGS WHEN CHECKING SYSTEM.
TOTAL LENGTH TO FURTHEST APPLIANCE = 250'

GAS PIPE SIZING - SERVICE TO END OF BUILDING - 0.5 PSIG

<p>LENGTH: 166 FT FITTINGS FACTOR: 1.5 EQUIVALENT TOTAL LENGTH TO METER: 250'</p> <p>TOTAL DEMAND = 1729 CFH LOW PRESSURE DELIVERY PRESSURE = LESS THAN 2 PSIG PRESSURE DROP = 0.5 PSIG PIPE: STEEL (SCHD. 40)</p> <p>CAPACITY OF PIPES IN CFH PER TABLE 402.4(2), 2014 NC FUEL GAS CODE:</p> <table border="1"> <thead> <tr> <th>PIPE SIZE</th> <th>CFH OF GAS</th> </tr> </thead> <tbody> <tr><td>3/4"</td><td>63</td></tr> <tr><td>1"</td><td>119</td></tr> <tr><td>1 1/4"</td><td>244</td></tr> <tr><td>1 1/2"</td><td>366</td></tr> <tr><td>2"</td><td>704</td></tr> <tr><td>2 1/2"</td><td>1120</td></tr> <tr><td>3"</td><td>1980</td></tr> <tr><td>4"</td><td>4050</td></tr> </tbody> </table>	PIPE SIZE	CFH OF GAS	3/4"	63	1"	119	1 1/4"	244	1 1/2"	366	2"	704	2 1/2"	1120	3"	1980	4"	4050	<p>NOTES:</p> <p>GAS PIPING IS SIZED FOR 0.5 PSIG PRESSURE.</p> <p>PIPE SIZES ARE BASE ON SCHEDULE 40 PIPE.</p> <p>CONTRACTOR SHALL VERIFY THE FOLLOWING PRIOR TO INSTALLATION:</p> <ul style="list-style-type: none"> - SERVICE PRESSURE - LONGEST RUN LENGTH OF PIPE FROM APPLIANCE TO METER <p>NOTIFY ENGINEER IN WRITING IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN.</p>
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GAS LOAD SUMMARY

DESCRIPTION	GAS LOAD (BTUH)
KITCHEN EQUIPMENT	1260,000
BUILDING HEATING	469,000
TOTAL GAS LOAD	1729,000 BTUH @ 7.5" W.C. DELIVERY PRESSURE



2 PLUMBING FIRST FLOOR WATER AND GAS PLAN
3/16"=1'-0"