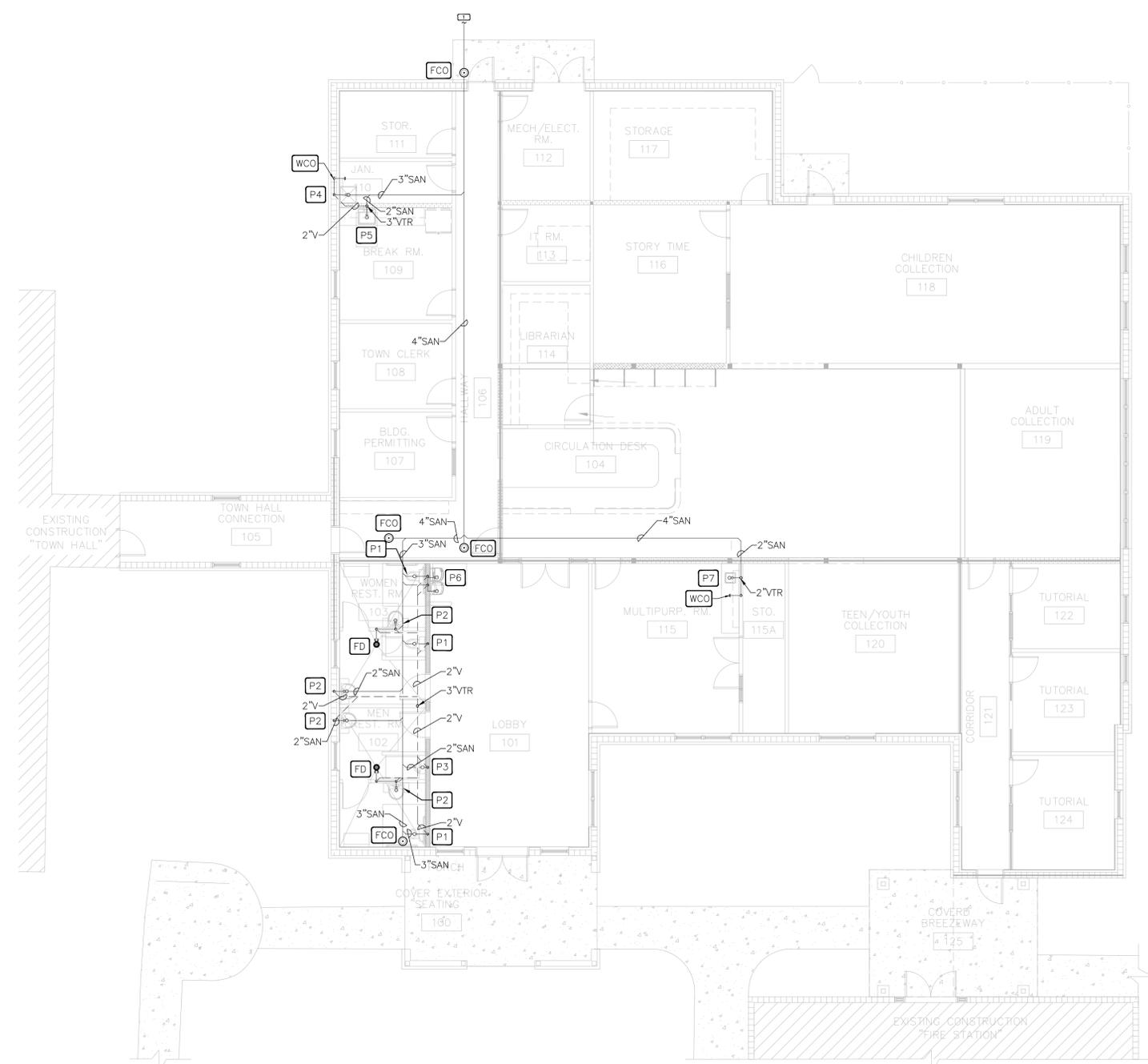


KEYNOTES

- 1 4" SANITARY LINE CONNECT TO NEW SEPTIC TANK. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE AND LOCATION.



1 WASTE AND VENT PIPING PLAN - PLUMBING NORTH

0 4' 8' 16' 24'

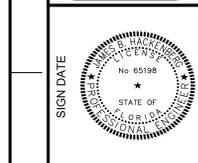
1/8" = 1'-0"

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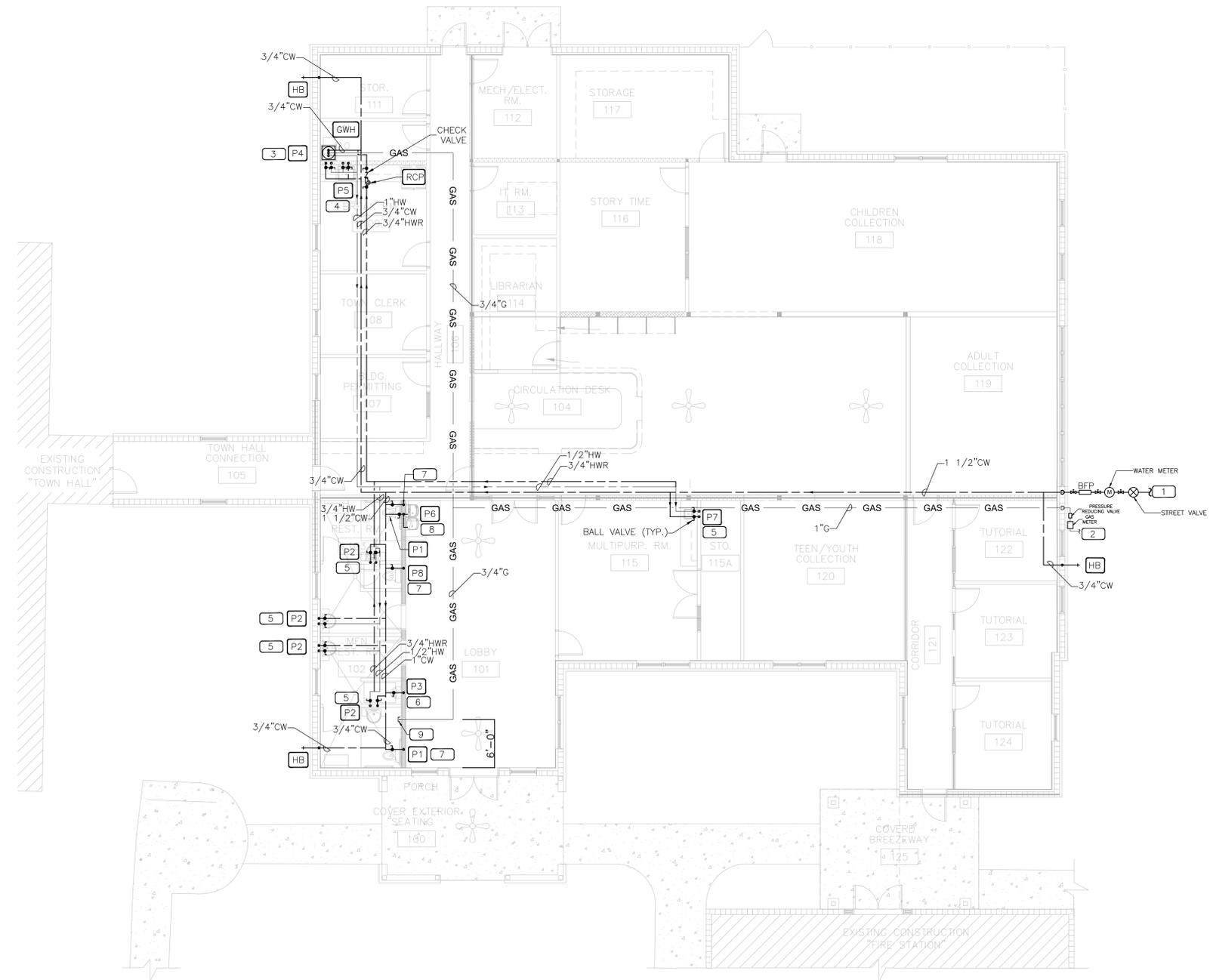
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WASTE & VENT PIPING PLAN - PLUMBING
P-101
 ISSUE DATE 09-26-2023
 JOB #: GC-22-010

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 Winter Park, FL 32790

KEYNOTES

- 1 1/2" CW DOMESTIC COLD LINE CONNECT WITH EXISTING DOMESTIC WATER LINE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE AND LOCATION.
- 2 1" DOMESTIC GAS LINE CONNECT TO CIVIL GAS LINE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE, PRESSURE AND LOCATION.
- 3 1/2" CW & 1/2" HW DN TO MOP SINK.
- 4 1/2" CW & 1/2" HW DN TO KITCHEN SINK.
- 5 1/2" CW & 1/2" HW DN TO FIXTURE.
- 6 1/2" CW DN TO URINAL.
- 7 3/4" CW DN TO WATER CLOSET.
- 8 1/2" COLD WATER DOWN IN WALL TO DRINKING FOUNTAIN.
- 9 3/4" GAS PIPE STUBOUT FOR FUTURE CONNECTIONS.



1 WATER PIPING PLAN - PLUMBING NORTH

0 4' 8' 16' 24'

1/8" = 1'-0"

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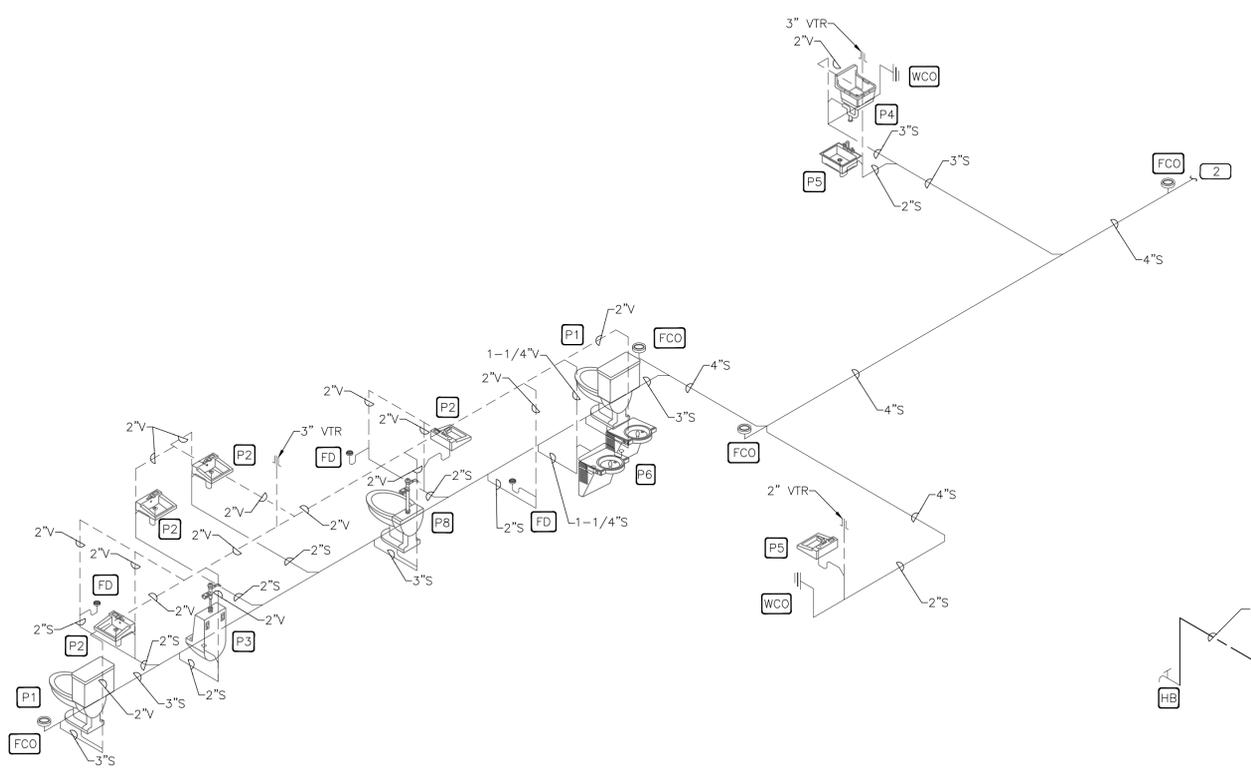
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WATER PIPING PLAN - PLUMBING
P-102
 ISSUE DATE 09-26-2023

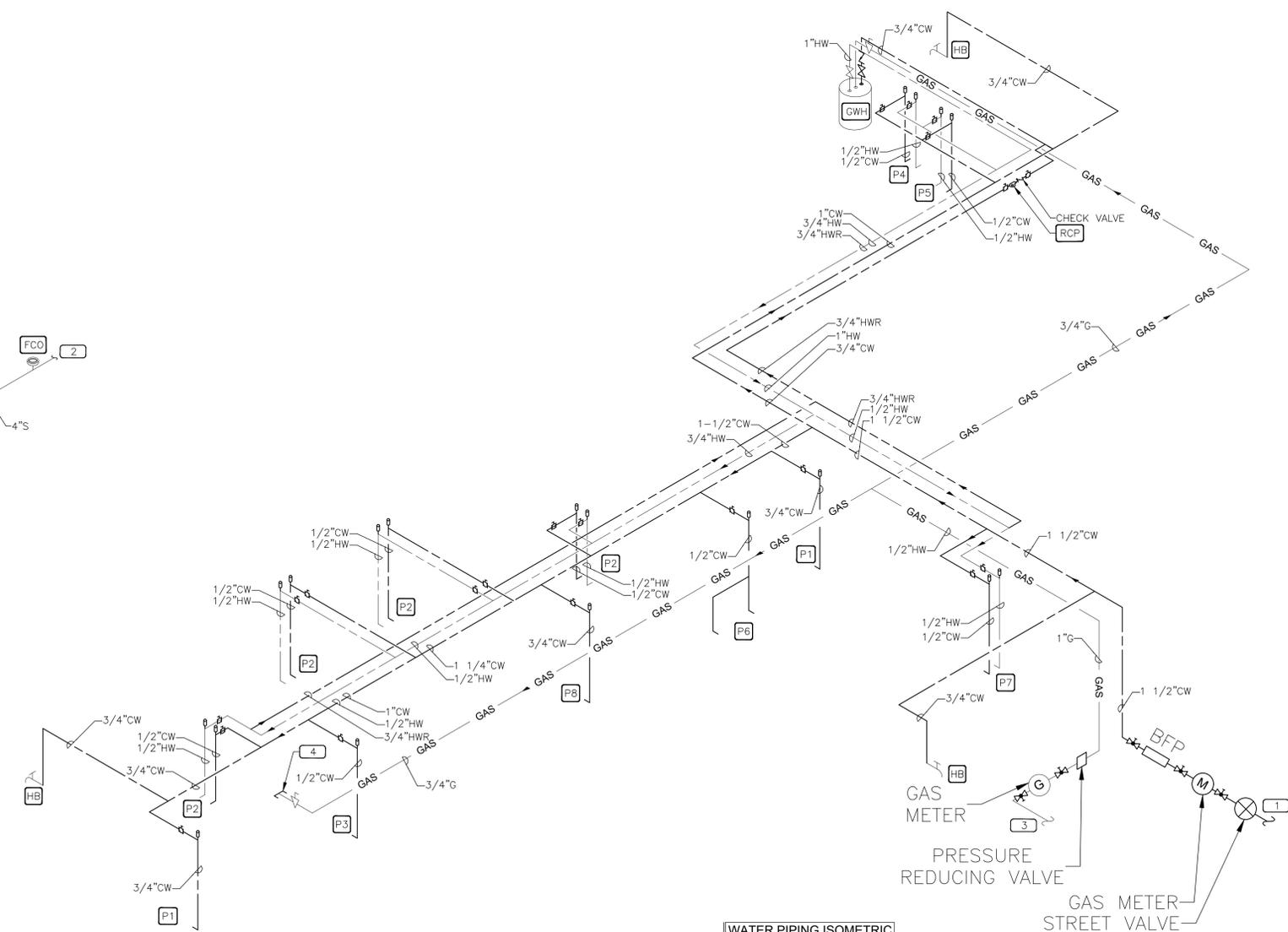
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 Hackenberg Engineering
 PO Box 1886
 Winter Park, FL 32790

KEYNOTES

- 1 1 1/2" CW DOMESTIC COLD LINE CONNECT WITH EXISTING DOMESTIC WATER LINE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE AND LOCATION.
- 2 4" SANITARY LINE CONNECT TO MAIN SEWER SANITARY LINE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE AND LOCATION.
- 3 1" DOMESTIC GAS LINE CONNECT TO CIVIL GAS LINE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH ACTUAL SIZE, PRESSURE AND LOCATION.
- 4 3/4" GAS PIPE STUBOUT FOR FUTURE CONNECTIONS.



WASTE AND VENT PIPING ISOMETRIC
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WATER PIPING ISOMETRIC
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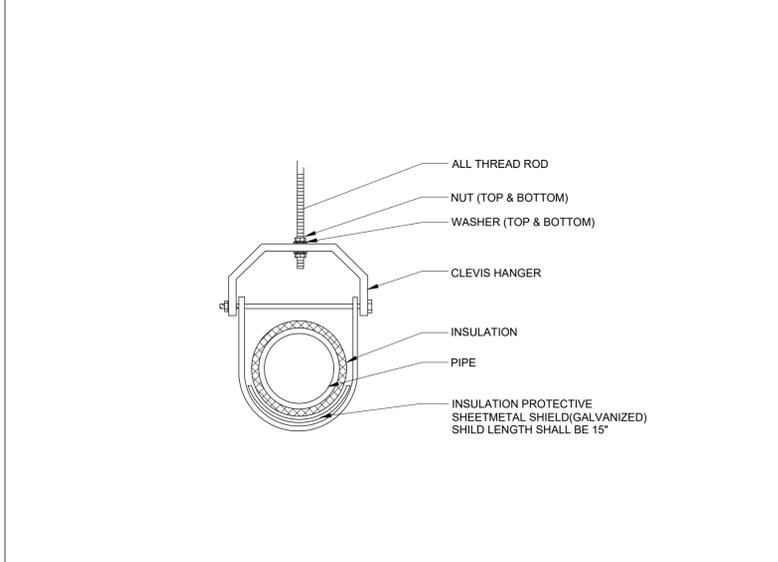
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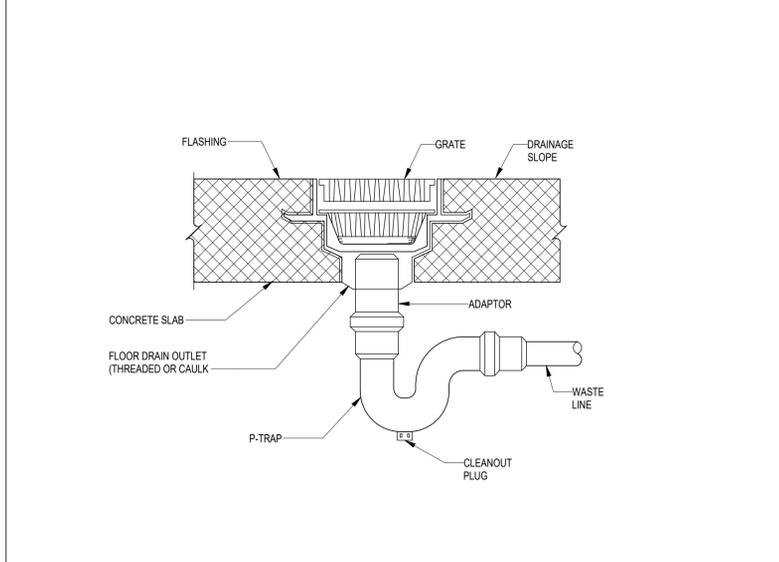
A

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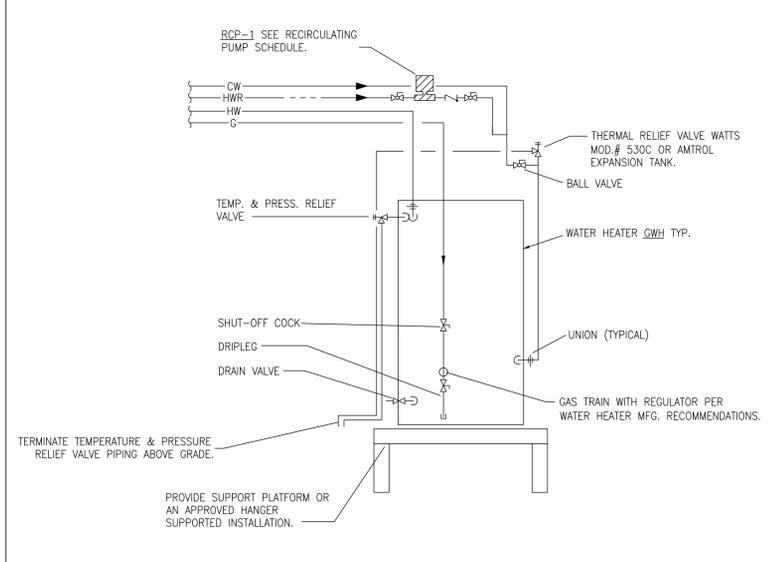
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P-201
 ISSUE DATE 09-26-2023
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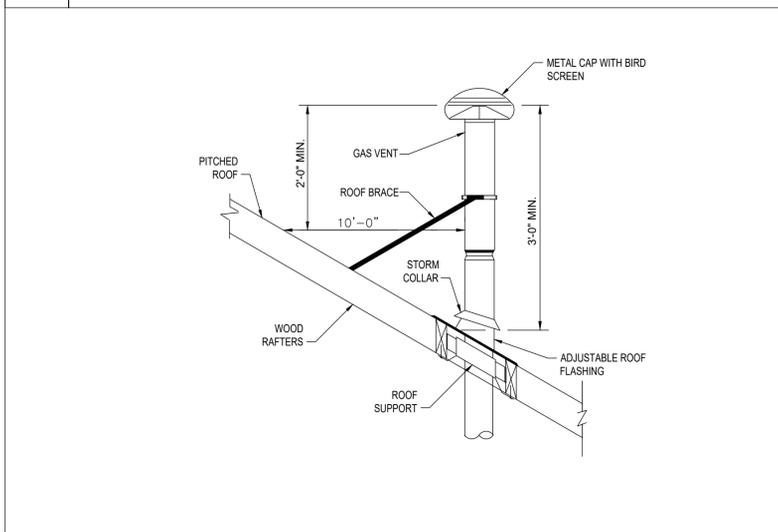
01 TYPICAL CLEVIS HANGER DETAIL.
N.T.S.



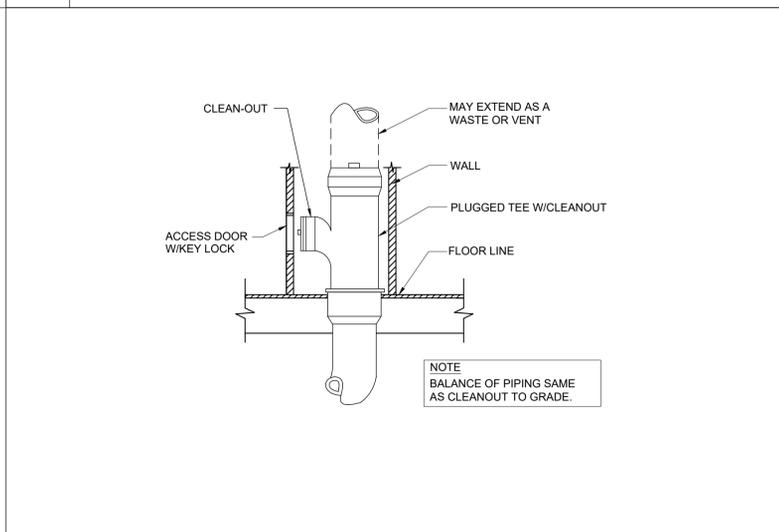
02 FLOOR DRAIN
N.T.S.



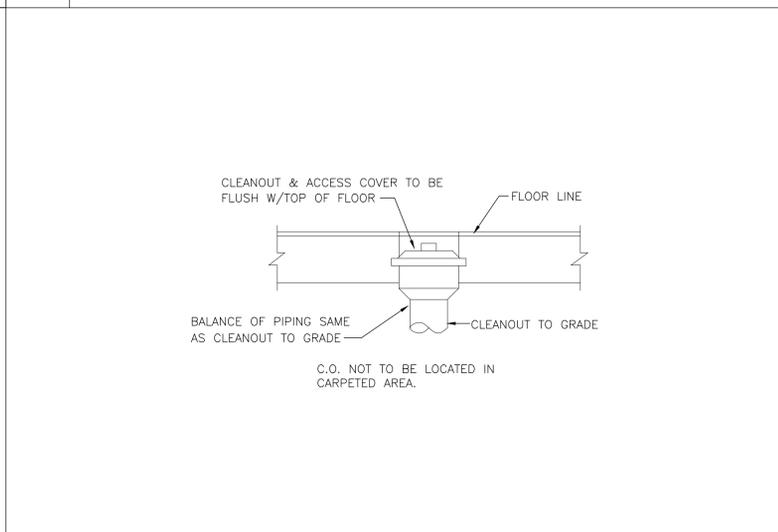
03 WALL MOUNTED GAS WATER HEATER DETAIL
N.T.S.



04 VENT THRU ROOF
N.T.S.



05 WALL CLEANOUT DETAIL
N.T.S.



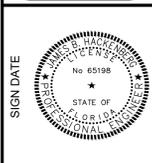
06 FLOOR CLEANOUT DETAIL
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**PLUMBING
DETAILS**
P-501
ISSUE DATE 09-26-2023
JOB #: GC-22-010

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RECIRCULATION PUMP SCHEDULE															
TAG	PUMP LIQUID	DESIGN FLOW (GPM)	MAX. FLOW (GPM)	MAX. PUMP HEAD (FT)	TEMPRATURE RANGE (°F)	MAX. OPERATING PRESSURE (PSI)	PIPE CONNECTION (INCHES)	MAX. POWER INPUT (HP)	GROSS WEIGHT (LBS)	ELECTRICAL DATA			MODEL NUMBER	MANUFACTURER	REMARKS
										VOLTAGE	PHASE	CURRENT (AMPS)			
RCP	DOMESTIC HOT WATER	14	23	10	40-230	125	1	1/25	7	115	1	0.76	007-SF5	TACO	-

NATURAL GAS LOAD SCHEDULE						
SR NO	Equipment	ITEM NO	Qty	BTU/UNIT	TOTAL BTU	PIPE SIZE(IN.)
1	WATER HEATER	WH	1	50000	50000	3/4" size
2	STUBOUT FOR FUTURE		1	50000	50000	3/4" size
				TOTAL	100 CFH	
						1" size

DEVELOPED LENGTH = 152 FT.
 MULTIPLYING FACTOR FOR FITTING AND VALVES = 1.3
 EQUIVALENT LENGTH OF NATURAL GAS PIPING = 1.3 * 152 = 197 FT

NOTES:
 1. CONTRACTOR COORDINATE WITH NATURAL GAS UTILITY COMPANY FOR FACILITY NEW NATURAL GAS LOAD AND DELIVERY/ CUSTOMER SIDE NATURAL GAS PRESSURE REQUIREMENT FOR A LOW PRESSURE NATURAL GAS SYSTEM. PRESSURE SHALL BE LESS THAN 2 PSI.

PLUMBING FIXTURE DEMAND TABULATION													
Project Name:	Montverde Library												
Project No.:	23-002												
FIXTURE	DESCRIPTION	OCCUPANCY	QTY.	DRAINAGE	SUB-FIXTURE	LOAD VALUES IN WATER (EACH)			LOAD VALUES IN WATER (TOTAL)			FLUSH VALVE	Remarks
						SUPPLY FIXTURE UNITS (WSFU)			SUPPLY FIXTURE UNITS (WSFU)				
						COLD	HOT	TOTAL	COLD	HOT	TOTAL		
WC	Water Closet, Flush Valve, 1.6 GPF	Public	3	4	12	10.0	0.0	10.0	30	0	30		
UR	Urinal, 1" Flush Valve	Public	1	4	4	10.0	0.0	10.0	10	0	10		
LAV1	Lavatory, Wall Hung, HC	Public	5	1	5	1.5	1.5	2.0	7.5	7.5	10		
KS	Kitchen Sink	Hotel, Restaurant	1	2	2	3.0	3.0	4.0	3	3	4		
MS	Mop (Service) Sink	Offices, etc.	1	2	2	2.3	2.3	3.0	2.25	2.25	3		
IMB	Ice Maker Valve Box - (Refrigerator / Ice Maker)	Public or Private	0	0	0	0.3	0.0	0.3	0	0	0		
FD	Floor Drain		2	2	4	0.0	0.0	0.0	0	0	0		
TOTALS						29	DFU		52.75	12.75	57	WSFU	
DFU = DRAINAGE FIXTURE UNITS						3	EIGHTH		6.5	6.5	8.0	GPM	
WSFU = WATER SUPPLY FIXTURE UNITS						3	DIAMETER OF PIPE (INCHES)		0.75	0.75	0.75	INCHES REQ'D.	

PLUMBING FIXTURE SCHEDULE										
MARK	FIXTURE	MANUFACTURER	MODEL #	FIXTURE DESCRIPTION	CONNECTION SCHEDULE					
					CW	HW	FW	WASTE	VENT	
P1	WATER CLOSET	AMERICAN STANDARD	2467.0160	FLOOR MOUNTED, CHAIR HEIGHT, ELONGATED BOWL, PRESSURE ASSIST TOILET, 1-1/2" INLET, 16-1/2" RIM HEIGHT	3/4"	-	-	3"	2"	
P2	WALL HUNG LAVATORY	AMERICAN STANDARD	LUCERNE 0356.041	WALL-MOUNTED, D-SHAPE BOWL, SELF-DRAINING DECK WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, SINGLE CENTER FAUCET HOLE	-	-	-	2"	2"	
	FAUCET	T&S BRASS	B-0712-VF05	SILL FAUCET, SELF-CLOSING METERING, 1/2" NPSM MALE SHANK, 0.5 GPM OUTLET DEVICE	1/2"	1/2"	-	-	-	
P3	URINAL	KOHLER	BRANHAM K-25039-T	FLUSH OUTLET TECHNOLOGY: WASHOUT SPUD SIZE: 3/4", INLET, TOP MIN. WATER PER FLUSH: 0.5, GAL (1.9 L) MAX. WATER PER FLUSH: 1 GAL (3.8 L) FIXTURE PRESSURE MIN (STATIC): 20 PSI (137.9 KPA) FIXTURE PRESSURE MAX (STATIC): 80 PSI (551.6 KPA)	3/4"	-	-	2"	2"	
P4	MOP SINK	ZURN	Z1996-24	MOLDED HIGH-DENSITY COMPOSITE, STAINLESS STEEL DOME STRAINER / LINT BASKET, PVC DRAIN WITH ADJUSTABLE CAULKING NUT AND GASKET	-	-	-	3"	2"	
	FAUCET	T&S BRASS	B-0665-BSTR	SERVICE SINK FAUCET, WALL MOUNT, 8" CENTERS, BUILT-IN STOPS, VACUUM BREAKER, ROUGH CHROME PLATED BRASS BODY, PAIL HOOK, GARDEN HOSE MAIL OUTLET, LEVER HANDLES, COMPRESSION CARTRIDGES WITH SPRING CHECKS, 1/2" NPT FEMALE INLETS, UPPER SUPPORT ROD	1/2"	1/2"	-	-	-	
P5	KITCHEN SINK	KRAUS	KWT311-15	KRAUS- SINK DIMENSIONS OVERALL DIMENSIONS: 15" X 22", BOWL DIMENSIONS: 13" X 16", SINK DEPTH: 9", 16 GAUGE STAINLESS STEEL CONSTRUCTION, DUAL MOUNT SINGLE BOWL SINK, REQUIRED MINIMUM CABINET SIZE: 18", LEFT TO RIGHT, 24" FRONT TO BACK, REAR OFF-SET DRAIN, 3 1/2" DRAIN OPENING, NOISE DEFEND UNDERCOATING AND SOUND DAMPENING PADS.	1/2"	1/2"	-	2"	2"	
P6	DRINKING FOUNTAIN	ELKAY	EZO0TL8WSSK	ELKAY BOTTLE FILLING STATION WITH BI-LEVEL ADA COOLER DUAL HANDS FREE ACTIVATION NON-FILTERED REFRIGERATED STAINLESS. CHILLING CAPACITY OF 8.0 GPH (GALLONS PER HOUR) OF 50°F DRINKING WATER, BASED ON 80°F INLET WATER AND 90°F AMBIENT, PER ASHRAE 18 TESTING. FEATURES SHALL INCLUDE ANTIMICROBIAL, HANDS FREE, LAMINAR FLOW, REAL DRAIN. FURNISHED WITH FLEXI-GUARD SAFETY BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR & SENSOR BUBBLER ACTIVATION. PRODUCT SHALL BE WALL MOUNT (ON WALL).	1/2"	1/2"	-	1-1/4"	1-1/4"	
P7	BAR SINK	AMERICAN STANDARD	22SB.6151511S.075	COLONY ADA SINGLE BOWL SINK, 1 HOLE ON CENTER, 6" DEEP BOWL, 20 GAUGE STAINLESS STEEL, TOP MOUNT INSTALLATION, BOTTOM SOUND DEADENING PADS WITH UNDERCOATING, WASTE FITTING INCLUDED CUTOUT TEMPLATE, INSTALLATION INSTRUCTIONS AND TOP, MOUNT HARDWARE INCLUDED, 18" (457MM) CABINET REQUIRED, NOMINAL DIMENSIONS: 15" X 15" X 6" (381 X 381 X 152MM)	1/2"	1/2"	-	2"	2"	
HB	WALL HYDRANT	WOODFORD	75	VALVE SEAT - PERMANENT TYPE BRASS VALVE BODY WITH HEMISPHERICAL SEATING SURFACE, STEM - HARDENED STAINLESS STEEL STEM RESISTS DAMAGE, PACKING - EPDM RUBBER WITH ADJUSTABLE PACKING NUT, TEE KEY - LOOSE KEY OPERATES HYDRANT INLET - 3/4" FEMALE PIPE THREAD, INLET SWIVELS 360° TO ANY POSITION, MAX PRESSURE - 125 P.S.I., MAX TEMPERATURE - 120° F OPTIONS - RK BRACKET KIT SHIPPING WEIGHT - MODEL 75: 3.1 LBS.	3/4"	-	-	-	-	

NOTES:
 1. A.D.A. FIXTURES, TRIM, ACCESSORIES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT, A.D.A., AND LOCAL STANDARDS AND CODES. REFER TO THE ARCHITECTURAL DRAWINGS FOR DETAILS.
 2. FOR ALL APPLIANCE SPECIFICATIONS REFER TO ENLARGED UNIT PLANS PROVIDED BY THE ARCHITECT.

DRAIN AND CLEANOUT SCHEDULE						
MARK	OUTLET SIZE	STRAINER SIZE INSTALL TYPE	MANUFACTURER'S NUMBERS			NOTES
			JOSAM	WADE	ZURN	
FD	3"	8"x8"	30000-S	W-1100-G	Z-415-S	NICKLE BRONZE TOP, 1/2" TRAP PRIMER CONNECTION, PRECISION PLUMBING "ORGON #1 TRAP PRIMER.
FCO	SEE PLANS	FLOOR	58363	EQUAL	Z-1400	BRONZE PLUG, NIKALOY TOP.
WCO	SEE PLANS	WALL	58910/58600	EQUAL	Z-1446	BRONZE PLUG, STAINLESS STEEL WALL COVER.

GAS WATER HEATER SCHEDULE										
TAG	LOCATION	MANUFACTURER	MODEL NO.	NOMINAL CAPACITY (GALLONS)	RECOVERY 90°F RISE GALLONS PER HOUR	BTU	DIMENSIONS (INCH)		MAX TEMPERATURE	APPROX. SHIPPING WEIGHT (LBS)
							HEIGHT	DIAMETER		
GWH	SEE PLANS	AO SMITH	G62-50T50	51	54	50000	57	22	180°F	165

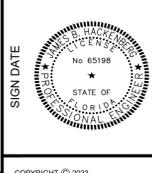
REMARKS:
 1. WATER CONNECTION 3/4" FOR WATER HEATER.
 2. COMPLIES WITH THE FEDERAL ENERGY CONSERVATION STANDARDS EFFECTIVE APRIL 16, 2015, IN ACCORDANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (EPCA), AS AMENDED, CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE MAXIMUM HYDROSTATIC WORKING PRESSURE 150 PSI

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PLUMBING SCHEDULE
P-601
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