150	SEND
LEG	SEND
SYMBOL	DESCRIPTION
0	PIPING UP
C	PIPING DOWN
C	PIPING RISE OR DROP
U	BRANCH-TOP CONNECTION
	BRANCH-BOTTOM CONNECTION
	REDUCER
co	CLEANOUT
•	FLOOR CLEANOUT
	CAPPED PIPE
(M)	METER
	FLOOR DRAIN
$\Diamond$	AQUASTAT
	PUMP
	STRAINER
	UNION
	THERMOSTATIC MIXING VALVE
	BALANCING VALVE (BLV)
	GLOBE VALVE (GLV)
	CHECK VALVE (CV)
	GAS COCK, GAS STOP
<u></u> б	BALL VALVE (BV)
<del></del>	BUTTERFLY VALVE (BFV)
\$\(\oplus \)	SOLENOID VALVE
<del></del>	PRESSURE-REDUCING VALVE (PRV)
	GATE VALVE (GV)
<b>—</b> □ <b>∴</b>	PRESSURE-RELIEF VALVE (RV)
-M-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	BACKFLOW PREVENTER
*+	FROST FREE HOSE BIBB
<u>†</u>	HOSE BIBB
<b>\</b>	RECESSED-BOX HOSE BIBB OR WALL HYDRANT
	EXPANSION JOINT
	WATER HAMMER ARRESTER
HDO	VALVE IN RISER
<b>CO</b>	WALL CLEANOUT (WCO)
	PITCH DOWN OR UP IN DIRECTION
	OF ARROW FLOW IN DIRECTION OF ARROW
<u> </u>	COLD WATER (CW)
5	\$ V
	TEMPERED WATER (TW)
	HOT WATER (HW)
	TEMPERED WATER RETURN (TWR)
	HOT WATER RETURN (HWR)
	WASTE PIPING (W,S,OW)
	BELOW SLAB WASTE PIPING
	VENT PIPING (V)
	GAS PIPING (G)
· <i></i>	TO BE REMOVED
	POINT OF CONNECTION
	POINT OF DISCONNECTION

LEG	SEND		ABBREVIATIONS
SYMBOL	DESCRIPTION	AFF	ABOVE FINISHED FLOOR
O	PIPING UP	вти	BRITISH THERMAL UNIT
C	PIPING DOWN	втин	BTU PER HOUR
C	PIPING RISE OR DROP	CLG	CEILING
(l)	BRANCH-TOP CONNECTION	со	CLEAN OUT
	BRANCH-BOTTOM CONNECTION	CODP	CLEAN OUT DECK PLATE
	REDUCER	COWP	CLEAN OUT WALL PLATE
→co co ×	CLEANOUT	cw	COLD WATER
·	FLOOR CLEANOUT	(D)	DEMOLISH
	CAPPED PIPE	DCV	DOUBLE CHECK VALVE DEVICE
(M)	METER	DEG.	° FAHRENHEIT
	FLOOR DRAIN	DIA	DIAMETER
$\Diamond$	AQUASTAT	DN	DOWN
	PUMP	(E)	EXISTING
	STRAINER	EA	EACH
 	UNION	FAI	FRESH AIR INTAKE
	THERMOSTATIC MIXING VALVE	FD	FLOOR DRAIN
	BALANCING VALVE (BLV)	G	GAS
	GLOBE VALVE (GLV)	'GC'	GENERAL CONSTRUCTION CONTRACTOR
	CHECK VALVE (CV)	GPM	GALLONS PER MINUTE
	GAS COCK, GAS STOP	GPH	GALLONS PER HOUR
	BALL VALVE (BV)	'H'	HVAC CONTRACTOR
<del></del>	BUTTERFLY VALVE (BFV)	HP	HORSEPOWER
\$ P	SOLENOID VALVE	HW	HOT WATER
	PRESSURE-REDUCING VALVE (PRV)	HWR	HOT WATER RETURN
	GATE VALVE (GV)	IN.	INCHES
——————————————————————————————————————	PRESSURE-RELIEF VALVE (RV)	IN. W.C. (W.G.)	INCHES WATER COLUMN (WATER GAUGE)
-X-1-X-	BACKFLOW PREVENTER	KW	KILOWATTS
*+	FROST FREE HOSE BIBB	LBS	POUNDS
†	HOSE BIBB	M	METER
ф <u>з</u>	RECESSED-BOX HOSE BIBB OR	MAX	MAXIMUM
7	WALL HYDRANT  EXPANSION JOINT	МІМ	MINIMUM
•	WATER HAMMER ARRESTER	NTS	NOT TO SCALE
HDO	VALVE IN RISER	OD	OUTER DIAMETER
CO	WALL CLEANOUT (WCO)	(P)	PROPOSED
	PITCH DOWN OR UP IN DIRECTION	'P'	PLUMBING CONTRACTOR
	OF ARROW FLOW IN DIRECTION OF ARROW	PD	PRESSURE DROP
	COLD WATER (CW)	RD	ROOF DRAIN
	TEMPERED WATER (TW)	RPM	REVOLUTIONS PER MINUTE
	HOT WATER (HW)	RPZ	REDUCED PRESSURE ZONE
	TEMPERED WATER RETURN (TWR)	SAN / S ST	SANITARY STORM DRAIN
	HOT WATER RETURN (HWR)	TEMP	STORM DRAIN TEMPERATURE
	WASTE PIPING (W,S,OW)	TYP	TYPICAL
	BELOW SLAB WASTE PIPING	TW	TEMPERED WATER (110°F)
	VENT PIPING (V)	TWR	All and devices and function of the American States And the American States and Americ
	GAS PIPING (G)	V	TEMPERED WATER RETURN  VENT
	TO BE REMOVED	VTR	VENT THROUGH ROOF
	POINT OF CONNECTION	W	WASTE
	POINT OF CONNECTION		
	TOTAL OF DISCONNECTION		

### GENERAL PLUMBING NOTES

- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- THE CONTRACTOR, BY PRESENTING THEIR BID FOR THE WORK, REPRESENTS THAT HE/SHE HAS INSPECTED THE SITE AND IS COMPLETELY FAMILIAR WITH THE SCOPE OF WORK AND ALL FIELD CONDITIONS RELATED TO, AND AFFECTING THE WORK AND ITS PERFORMANCE. EXCEPTIONS AFFECTING THE WORK AND ITS PERFORMANCE, OR CONFLICTS BETWEEN FIELD CONDITIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION
- PERFORM ALL WORK IN ACCORDANCE WITH THE 2020 NEW YORK STATE PLUMBING (NYSPC), FIRE (NYSFC), MECHANICAL (NYSMC), ENERGY CONSERVATION CONSTRUCTION (NYSECC), AND FUEL GAS (NYSFGC) CODE AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
- COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF DIVISION 26 FOR ALL ELECTRICAL INSTALLATIONS.
- APPLY FOR AND SECURE ALL REQUIRED PERMITS AND INSPECTIONS AND PAY ALL COSTS FOR THE SAME.
- FIRE STOP ALL OPENINGS IN FIRE RATED CONSTRUCTION FOR PIPING, CONDUIT, ETC.
- DO NOT SCALE DRAWINGS. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE.
- COORDINATE CONTRACT DOCUMENTS PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS, MANUFACTURERS REQUIREMENTS FOR INSTALLATION. OPERATION, AND MAINTENANCE, CONTRACTORS INTENDED MEANS AND METHODS OF INSTALLATION AND CONTRACTORS FABRICATED ITEMS TO ENSURE A PROPER "FIT" AND INSTALLATION. BRING ANY CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER DURING THE SUBMITTAL PHASE FOR RESOLUTION PRIOR TO PURCHASING ANY EQUIPMENT.
- MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE. NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE FROM FINISHED FLOOR TO UNDERSIDE OF PIPES, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
- 10. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK. OBTAIN THE APPROVAL OF THE ARCHITECT/ENGINEER FOR MODIFICATIONS.
- PROVIDE PRODUCTS OF ONE MANUFACTURER WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF MATERIAL OR EQUIPMENT IS REQUIRED.
- 12. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. REFER TO DETAILS FOR ADDITIONAL PIPING AND EQUIPMENT INSTALLATION REQUIREMENTS.
- 13. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER TO ENSURE MANUFACTURER CERTIFIED ACCURACY.
- COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL CONNECTIONS TO EQUIPMENT.
- COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.
- 16. COMPLETE ALL PRESSURE TESTS BEFORE ANY PLUMBING EQUIPMENT, OR PIPING INSULATION IS APPLIED.
- 17. MAKE ALL ATTACHMENTS TO JOISTS, TRUSSES, OR JOIST GIRDERS AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. THE USE OF C-CLAMPS IS NOT PERMITTED.
- 18. PROVIDE CONCRETE PADS A MINIMUM OF 4 INCHES HIGH FOR ALL FLOOR MOUNTED EQUIPMENT. EXTEND PAD 4 INCHES BEYOND THE EQUIPMENT ON ALL SIDES.
- 19. INSTALL PIPING, AND CONDUIT CONCEALED IN AREAS HAVING HUNG CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 20. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL ACCESSIBLE FIXTURES. MOUNT ALL SUCH FIXTURES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- 21. PROVIDE ACCESS DOORS IN WALLS, PARTITIONS, AND CEILINGS AS REQUIRED TO MAKE VALVES, WATER HAMMER
- 22. ARRANGE FOR, COORDINATE, AND MAKE CONNECTION TO ALL SERVICES PROVIDED BY OTHERS. CONFORM TO ALL REQUIREMENTS APPLICABLE TO CONNECTIONS IMPOSED BY UTILITY COMPANIES AND AUTHORITIES HAVING
- 23. INSTALL FIXTURES AND EQUIPMENT WITH VALVES, UNIONS, ETC. TO ALLOW FOR EASE OF SERVICE AND/OR REMOVAL.
- 24. CORE DRILL ALL PENETRATIONS THROUGH CONCRETE FLOORS, WALLS, AND FOOTINGS.
- 25. INSTALL LINK SEAL TYPE PROTECTION FOR WATER RESISTANT SEALS AT ALL SLAB AND BELOW GROUND WALL FOOTING PENETRATIONS.

26. PROVIDE A CLEANOUT AT THE BASE OF WASTE AND VENT STACKS WITH FINISHED WALL PLATE IN FINISHED WALLS.

- 27. FURNISH AND INSTALL WATER PRESSURE REDUCING VALVE AND PRESSURE RELIEF VALVE IN ACCORDANCE WITH THE NEW YORK STATE PLUMBING CODE ON ALL INCOMING DOMESTIC WATER SYSTEMS IN EXCESS OF 80 P.S.I.G.
- 28. COVER ALL COPPER PIPING BELOW SLAB WITH "ARMAFLEX" TYPE INSULATION.
- 29. SLOPE ALL VENT PIPING TO DRAIN BACK TO THE DRAINAGE SYSTEM.

ARRESTERS, ETC. READILY ACCESSIBLE.

- 30. FLUSH AND DISINFECT ALL DOMESTIC POTABLE WATER PIPING AND TEST THE WATER IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE. PROVIDE CERTIFICATE OF PERFORMANCE AND LABORATORY TEST REPORT TO LOCAL AUTHORITIES HAVING JURISDICTION AND OBTAIN THEIR APPROVAL.
- 31. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK CLOSING FIXTURE VALVE LOCATIONS.
- 32. ALL PIPING, VALVES AND FITTINGS USED FOR POTABLE WATER SHALL BE NSF 61/372 COMPLIANT AND BE TESTED FOR LOW LEAD.
- 33. ANY PENETRATIONS THROUGH AIR BARRIER SHALL BE SEALED AS PER 2020 NYSECC RESIDENTIAL AND COMMERCIAL
- ALL PIPING IN PLENUM SPACES SHALL BE CAST IRON FOR SANITARY, STORM, VENT SYSTEMS, AND COPPER PIPING FOR DOMESTIC SYSTEMS, AND STEEL PIPING FOR GAS SYSTEMS. NO PLASTIC PIPING ALLOWED.
- 35. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN DESIGN PLANS, RISER DIAGRAMS, AND/OR SPECIFICATIONS CONCERNING PIPE SIZES, FIXTURES, AND/OR EQUIPMENT, THE MOST STRINGENT REQUIREMENTS SHALL BE APPLIED TO THE PROJECT.

### **APPLICABLE CODES**

- 2020 NEW YORK STATE RESIDENTIAL CODE (NYSRC) 1ST PRINTING (INCLUDES PLUMBING, MECHANICAL, FUEL GAS, AND
- ENERGY CONSERVATION) 2020 NEW YORK STATE BUILDING CODE (NYSBC) 1ST PRINTING
- 2020 NEW YORK STATE FIRE CODE (NYSFC) 1ST PRINTING
- 2020 NEW YORK STATE PLUMBING CODE (NYSPC) 1ST PRINTING
- 2020 NEW YORK STATE FUEL GAS CODE (NYSFGC) 1ST PRINTING 2020 NEW YORK STATE MECHANICAL CODE (NYSMC) 1ST PRINTING
- 2020 NEW YORK STATE ENERGY CONSERVATION CODE (NYSECC) 1ST PRINTING

### **ENERGY NOTES**

2020 NEW YORK STATE ENERGY CONSERVATION CODE NOTES: STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK STATE ENERGY CONSERVATION CODE (NYSECC).

- 1. SERVICE WATER HEATING EQUIPMENT PERFORMANCE EFFICIENCY:
- 1.1. WATER HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE REQUIREMENTS OF TABLE C404.2 IN THE 2020 NYSECC. (NYSECC C404.2)
- SERVICE WATER HEATING SHALL BE COMMISSIONED AND COMPLETED IN ACCORDANCE WITH SECTION C408.2 OF

### TEMPERATURE CONTROL:

- 2.1. SERVICE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH CONTROLS ALLOWING A SETPOINT OF 110°F FOR DWELLING UNITS AND 90 °F FOR OTHER OCCUPANCIES. PUBLIC REST ROOM LAVATORIES SHALL HAVE A MAXIMUM OUTLET TEMPERATURE OF 110°F.
- WHERE WATER HEATING EQUIPMENT SERVING NONCIRCULATING SYSTEMS IS NOT SUPPLIED WITH INTEGRAL HEAT 2.2. TRAPS, HEAT TRAPS SHALL BE PROVIDED ON THE SUPPLY AND DISCHARGE PIPING. (NYSECC C404.3)

### PIPE INSULATION:

- 3.1. AUTOMATIC CIRCULATING HOT WATER SYSTEM PIPING SHALL BE INSULATED WITH 1 INCH OF INSULATION WITH A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H X FT X FT X °F, OR THE INSULATION REQUIREMENTS OF SPECIFICATIONS, WHICHEVER IS GREATER. THE FIRST 8 FT OF PIPING IN NONCIRCULATING SYSTEMS WITH EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS SHALL BE INSULATED WITH 0.5 INCH OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H X FT X FT X °F, OR THE INSULATION REQUIREMENTS OF
- SPECIFICATIONS, WHICHEVER IS GREATER. (NYSECC C404.5) ALL PIPING TO BE INSULATED WITH 0.21-0.28 CONDUCTIVITY
- COLD WATER PIPING ALL SIZES 1-INCH INSULATION, A.S. JACKET.
- 3.4. STORM DRAINAGE PIPING ALL HORIZONTAL RUNS AND DRAIN BODY MINIMUM 1-INCH INSULATION, A.S. JACKET.
- 3.5. HOT WATER PIPING (140°F) AND TEMPERED WATER PIPING (110°F) 3.5.1. PIPE SIZE: < 1" INSULATION: 1"
- PIPE SIZE: 1" TO < 1-1/2" INSULATION: 1"
- 3.5.3. PIPE SIZE: 1-1/2 TO < 4" INSULATION: 1.5"
- PIPE SIZE: 4" TO < 8" INSULATION: 1.5"

### 4. HOT WATER SYSTEM CONTROLS:

4.1. CIRCULATING HOT WATER SYSTEM PUMPS OR HEAT TRACE SHALL BE ARRANGED TO BE TURNED OFF EITHER AUTOMATICALLY OR MANUALLY WHEN THERE IS LIMITED HOT WATER DEMAND. READY ACCESS SHALL BE PROVIDED TO THE OPERATING CONTROLS. (NYSECC C404.6)

### PIPE VOLUME AND MAXIMUM LENGTHS

5.1. PER SECTION OF C404.5.1 OF THE 2020 NYSECC, ALL MAXIMUM PIPE LENGTHS FROM FIXTURES SHALL COMPLY WITH THE MAXIMUM PIPE LENGTHS ON THE CHART BELOW. CONTRACTOR TO ENSURE HOT WATER RETURN PIPING IS INSTALLED AS PER PLANS AND THAT THESE LENGTHS ARE MAINTAINED.

NOMINAL PIPE SIZE	VOLUME (LIQUID OUNCES PER	MAXIMUM PIPING LENGTH (FEET)					
(INCHES)	FOOT LENGTH)	PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES				
1/4"	0.33	6	50				
5/16"	0.5	4	50				
3/8"	0.75	3	50				
1/2"	1.5	2	43				
5/8"	2	1	32				
3/4"	3	0.5	21				
7/8"	4	0.5	16				
1"	5	0.5	13				
1-1/4"	8	0.5	8				
1-1/2"	11	0.5	6				
2" OR LARGER	18	0.5	4				

### **FUEL GAS NOTES**

- PERFORM ALL WORK IN ACCORDANCE WITH NFPA 54 NATIONAL FUEL GAS CODE, THE 2020 NEW YORK STATE FUEL GAS CODE (NYSFGC), 2015 NATIONAL GRID BLUE BOOK, 2018 CONEDISON YELLOW BOOK, 2017 PSEG NJ BOOK, AND THE
- REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION. THE DEPTH OF COVER FOR ALL GAS SERVICE PIPING SHALL BE 24 INCHES.
- THE WATER SERVICE SHALL BE KEPT A MINIMUM OF 10-FEET FROM THE INCOMING GAS SERVICE MEASURED IN ANY
- IF ELECTRIC AND GAS SHARE A COMMON TRENCH, THE TRENCH MUST BE WIDE ENOUGH TO MAINTAIN A 6-INCH MINIMUM
- SEPARATION DISTANCE.
- LOCATION OF PROPOSED GAS METER ON CONTRACT DOCUMENTS ARE SUBJECT TO CHANGE BY THE LOCAL UTILITY
- REFER TO THE LOCAL UTILITY COMPANY HANDBOOKS FOR METER RIG CONSTRUCTION DETAILS, RULES AND REGULATIONS. THIS INCLUDES, BUT NOT LIMITED TO LOCATION OF STEP DOWN REGULATORS, METER SIZE AND SET LENGTHS, VENTING OF REGULATORS, BYPASS PIPING, BOLLARD REQUIREMENTS, CONCRETE PAD, SUPPORTS, AND SHUT
- INDOOR STEEL PIPE- SCHEDULE 40 WITH WELDED OR THREADED JOINTS. THREADED JOINTS SHALL BE 150 POUND
- MALLEABLE IRON, FORGED STEEL, BLACK IRON, OR GALVANIZED STEEL
- OUTDOOR ABOVE GROUND GALVANIZED PIPE OR PROPERLY COATED BLACK STEEL PIPE WITH SCREWED OR
- BELOW GRADE STEEL PIPE- MILL WRAPPED SCHEDULE 40 WITH WELDED OR THREADED JOINTS WELDED JOINTS MUST BE USED FOR GAS PIPING LARGER THAN 4-INCH, OR 3-INCH FOR SCHOOLS.
- GAS PIPING ENTERING A BUILDING SHALL BE ABOVE GRADE. PENETRATIONS THROUGH BURIED WALLS ARE NOT
- WHERE GAS PIPING IS INSTALLED BELOW GRADE INSIDE A BUILDING, THE GAS PIPING MUST BE INSTALLED IN A CONDUIT
- AND BE VENTED TO THE EXTERIOR. GAS PRESSURE TEST
- 10.1. GALVANIZED OR BARE STEEL UP TO 14" W.C. AIR AT 3 PSIG FOR 30 MINUTES AIR AT 15 PSIG FOR 1-HOUR (SED) GALVANIZED OR BARE STEEL - GREATER THAN 14" W.C. - AIR AT 50 PSIG FOR 30 MINUTES - AIR AT 1.5 TIMES THE WORKING PRESSURE FOR 1-HOUR (SED)
- COATED OR WRAPPED LESS THAN 2-INCH AIR AT 90 PSIG FOR 1-HOUR ALL SIZES AIR AT 100 PSIG FOR 1-HOUR
- 10.3. COATED OR WRAPPED 2-INCH TO 12-INCH AIR AT 90 PSIG FOR 4-HOURS
- I. SUPPLY ALL GAS-FIRED EQUIPMENT WITH GAS PIPING AS PER THE NEW YORK STATE FUEL GAS CODE. PROVIDE EACH PIECE OF EQUIPMENT WITH A DIRT LEG, UNION AND GAS COCK. PROVIDE A VENTED REGULATOR IF EQUIPMENT REQUIRES
- 12. PROVIDE VEHICLE IMPACT PROTECTION FOR NEW METER HEADER. BOLLARDS SHALL BE SPACED NO MORE THAN 4-FEET BETWEEN POSTS ON CENTER AND LOCATED NOT LESS THAN 3-FEET FROM THE PROTECTED OBJECT.
- 13. SHUTOFF VALVES INSTALLED IN TUBING SYSTEMS MUST BE RIGIDLY AND SECURELY SUPPORTED INDEPENDENTLY OF THE
- 14. ALL COOKING APPLIANCE CONNECTIONS MUST BE LISTED AND LABELED.

### MANUAL GAS VALVE STANDARDS OTHER VALVE APPLICATIONS APPLIANCE SHUTOFF VALVE STANDARDS | VALVE APPLICATION UP | UP TO 1/2 PSIG | UP TO 2 PSIG | UP TO 5 PSIG TO 1/2 PSIG PRESSURE PRESSURE PRESSURE PRESSURE ANSI Z21.15/CGA9.1 **ASME B16.44** X ASME B16.33

### FOR SI: 1 POUND PER SQUARE INCH GAUGE = 6.895 kPa.

X\* IF LABELED 2G X\*\* IF LABELED 5G

LOWER THAN LINE GAS PRESSURE.

538 Broad Hollow Road, 4th Floor East Melville, NY 11747 631.756.8000 • www.h2m.com

MARK	DATE	DESCRIPTION



## **VAILS GATE FIRE** DISTRICT

New Storage Building (Phase I) New Fire Station (Phase II)



872 Blooming Grove Turnpike New Windsor, NY 12553

**CONTRACT G** GENERAL CONSTRUCTION

FINAL BID DOCUMENT

PLUMBING GENERAL **NOTES AND LEGENDS** 

P1 001.00

PLUMBIN	G FIXTURE SCHEDULE														
					TRI	М				MINIMUN	CONNECTIO	ON SIZES (IN)			
FIXTURE TAG	DESCRIPTION	MANUFACTURER	MODEL	MANUFACTURER	MODEL	TYPE	MOTION SENSOR CONTROL	COLD	WATER FU	7	WATER	SIZE	RAIN	VENT	SPECIFICATION REMARKS
LAV-1	LAVATORY - WALL MOUNTED - BARRIER FREE - ADA	AMERICAN STANDARD	WHEELCHAIR USERS LAVATORY	KOHLER	K-13462	ELECTRONIC	YES	1/2	1.5	SIZE	FU 1.5	1-1/2	1	1-1/2	VITREOUS CHINA, 20" X 27" WALL MOUNT SINK W/ 14" WIDE, 14-3/4" FRONT TO BACK, 4-3/4" DEEP BOWL, FRONT OVERFLOW, CONCEALED ARMS SUPPORT, FAUCET LEDGE. FAUCET CENTER HOLE ONLY. ASME A112.19.2 CERTIFIED.  PROVIDE ZURN Z1231 CONCEALED ARM WALL-MOUNTED LAVATORY SUPPORT SYSTEM.
WC-1	WATER CLOSET - FLUSH VALVE - WALL MOUNTED - BARRIER FREE - ADA	AMERICAN STANDARD	AFWALL MILLENIUM FLOWISE TOILET SYSTEM	AMERICAN STANDARD	SELECTRONIC FLUSH VALVE	ELECTRONIC	YES	1	10			4	4	2	VITREOUS CHINA, 26" X 14" X 15" WALL-MOUNTED FLUSHOMETER VALVE TOILET, CONVENTIONAL GLAZE, SENSOR OPERATED  1.28/1.1 GPF DUAL FLUSH, 1-1/2" TOP SPUD. ASME A112.19.2 CERTIFIED.  PROVIDE ZURN Z1202-N4 NO-HUB WATER CLOSET CARRIER SYSTEM FOR SINGLE WATER CLOSETS.
SK-1	SERVICE SINK	ADVANCE TABCO	FS-WM-1-ADA-F	AMERICAN STANDARD	8350.235	MANUAL	NO	1/2	2.25	1/2	2.25	3	2	1-1/2	14 GAUGE TYPE "304" STAINLESS STEEL, 1-5/8" TUBULAR "304" STAINLESS STEEL WALL BRACKETS, STAINLESS STEEL GUSSETS. 8" O.C. FAUCET HOLES PUNCHED. ALL TIG WELDED, WELDED AREAS BLENDED TO MATCH ADJACENT SURFACES AND TO A SATIN FINISH. DIE FORMED TUBULAR WALL BRACKETS. 8-1/2" HIGH BACKSPLASH, 5" SINK BOWL DEPTH. NSF 61 STANDARD 9  COMPLIANT.
HB-1	INTERIOR HOSE BIBB WITH KEY	MURDOCK	8121CP-LF		-	MANUAL		3/4	*	-		-	-		HEAVY BRASS BODY, FURNISHED WITH A LOCK SHIELD BONNET AND REMOVABLE LOOSE KEY HANDLE. VACUUM BREAKERS ARE ATMOSPHERIC TYPE AND CONFORM TO THE REQUIREMENTS OF ASSE STANDARD 1011.
FD-1	FLOOR DRAIN · SEE NOTE 3	ZURN	Z415SL				.,			-		3	2	2	FLOOR AND SHOWER DRAIN, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND "TYPE SL" POLISHED, NICKEL BRONZE SQUARE, WIDE FLANGED, LIGHT DUTY STRAINER.
CB-1	CATCH BASIN	ZURN	Z887-24-HD	-	-	<b>-</b>	•		-	_		4			CATCH BASIN SHALL BE 23·1/4" WIDE REVEAL X 24-5/3" LONG AND 24" DEEP. CATCH BASIN SHALL BE MADE OF 0% WATER ABSORBENT HDPE. SHALL MECHANICALLY LOCK INTO THE CONCRETE SURROUND. BASIN SHALL WEIGH LESS THAN 20.0 LBS. CATCH BASIN SHALL HAVE REBAR CLIPS STANDARD TO SECURE BASIN IN ITS FINAL LOCATION. SHALL BE PROVIDED WITH STANDARD DGC GRATES THAT LOCK DOWN TO FRAME. ZURN 22-1/4" WIDE REVEAL DUCTILE IRON SLOTTED GRATE CONFORMING TO ASTM SPECIFICATION A536-84, GRADE 80-55-06. DUCTILE IRON GRATE IS RATED CLASS C PER THE DIN EN 1433 TOP LOAD CLASSIFICATION. SUPPLIED IN 24" NOMINAL LENGTH WITH 11/16 WIDE SLOTS, AND 2-1/2" BEARING DEPTH. GRATE HAS AN OPEN AREA OF 164.00 SQ IN. PER FT. THE 1/4" THICK HEAVY DUTY FRAME ASSEMBLY CONFORMS TO EITHER ASTM SPECIFICATION A36 OR A536-84, WITH 4-4 LONG CONRETE ANCHORS PER BASIN. THE FRAME IS SUPPLIED WITH A PODER COATED FINISH. ALL WELDS MUST BE PERFORMED BY A CERTIFIED WELDER PER ASTM STANDARD AWS D1.1. FRAMES SHALL BE PRODUCED IN USA.
EW-1	EMERGENCY EYEWASH STATION	HAWS	7360B-7460B	-	-	·•		1/2	-	1/2	-	-			WALL MOUNTED EYE/FACE WASH SHALL INCLUDE A STAINLESS STEEL 11" ROUND BOWL, AN AXION MSR EYE/FACE WASH HEAD SUPPLIED BY AN INTEGRAL FLOW CONTROL, CHROME-PLATED BRASS STAY-OPEN BALL VALVE EQUIPPED WITH STAINLESS STEEL BALL AND STEM, AND CHROME-PLATED BRASS IN-LINE 50 X 50 MESH WATER STRAINER. UNIT SHALL ALSO INCLUDE CAST-ALUMINUM CHROMATE PROTECTED WALL BRACKET, YELLOW PLASTIC POP-OFF DUST COVER FOR EYEWASH HEAD, TAILPIECE, UNIVERSAL SIGN, 1/2" IPS INLET AND 1-1/2" IPS WASTE.

NOTES:

1. CHROME PLATE ALL DRAIN PIPE, FITTINGS, P-TRAPS AND SUPPLY LINES THAT ARE EXPOSED, LOCATED WITHIN VANITIES OR ACCESSIBLE CABINETS OR BEHIND WATER CLOSETS

2. MINIMUM CONNECTION SIZES INDICATED ARE EQUIPMENT CONNECTION SIZES OR CODE MINIMUM SIZES, SEE PLANS AND DIAGRAMS FOR ACTUAL SIZES REQUIRED

3. ALL FLOOR DRAINS SHALL HAVE TRAP SEALS. MANUFACTURER: ZURN; Z1072

4. INSULATE EXPOSED DRAIN AND SUPPLY PIPING FOR HANDICAPPED FIXTURES WITH TRUEBRO LAV GUARD.

## WATER HEATER [ELECTRIC]

							EC	QUIPMENT SPECIFICATI	ONS		MINIMU	JM PERFORMANC	E OF WATER HEATIN	NG (NYSECC TABL	E C404.2)	
EQUIPMENT NO.	LOCATION	SYSTEM SERVED	ELECTRIC POWER	RECOVERY GPH AT 100 DEG RISE	WATER CONNECTION	MNF	MODEL NO.	NOMINAL DIMENSION DIA x H	NOMINAL OPERATING WEIGHT (LBS.)	VOLTS / PHASE	EQUIPMENT TYPE	SIZE CATEGORY	SUBCATEGORY	PERFORMANC E REQUIRED 0.97-0.00132V EFFICIENCY	WATER HEATER EFFICIENCY	SPECIFICATIONS
WH-1	MEZZANINE	BUILDING	3,000 W	12 GAL.	3/4"	A.O. SMITH	DEL-6	14.25" X 15.5" 6	85	208/1	WATER HEATER, ELECTRIC	< 12 KW	RESISTANCE	-	•	HEATER SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED HIGH DENSITY ANODE ROD. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUTOFF SWITCH. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH FRONT PANELS AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING. HEATER TANK SHALL SHALL A THREE YEAR LIMITED WARRANTY AS OUTLINED IN THE WRITTEN WARRANTY. FULLY ILLUSTRATED INSTRUCTION MANUAL TO BE INCLUDED.

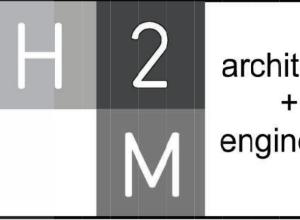
### EXPANSION TANK SCHEDULE

ı,	LAFANSIO	IN TAINE SC	HEDULE										
Γ			SYSTEM	PERFORM	IANCE/CONSTRUCTION I	REQUIREMENTS		EQUIPMENT SPECIFICA					
	EQUIPMENT NO.	LOCATION	SERVED	ESTIMATED VOLUME (GAL.)	MAX. OPERATING PRESS. RANGE (PSIG)	MAX. OPERATING TEMP. RANGE (DEG. F)	MNF	MODEL NO.	CONNECTION   WEIGHT (LDS.)		WEIGHT (LBS.)	SPECIFICATION	REMARKS
	ET-1	MEZZANINE	HOT WATER HEATING	2.0	150	200	AMTROL	ST-5	8" X 13"	3/4"	7	I LIDETHENE TODOGAT EINIGH WATED CIDCHI ATOD AND DDG IECTION WEI DED AID VAI VE	CONTRACTOR TO SET PRESSURE OF EXPANSION TANK TO MATCH WATER SUPPLY PRESSURE PRIOR TO INSTALLATION. EXPANSION TANK TO BE MOUNTED VERTICALLY.

MIXING VALVE							
EQUIDMENT				BASIS	S OF DESIGN INFORMATION	<u> </u>	
EQUIPMENT NO.	LOCATION	MAXIMUM PRESSURE RANGE	MINIMUM FLOW	MAXIMUM FLOW	MANUFACTUER	MODEL	NOMINAL DIMENSIONS (W X H)
MV-1	LAVATORY	125 PSI	0.25 GPM	12 GPM	LEONARD	270-LF	5" X 5.5"
MV-2	EMERGENCY EYEWASH STATION	125 PSI	1 GPM	12 GPM	HAWS	9201EFE	4-1/2" X 5-1/4"

## INTERCEPTOR SCHEDULE

EQUIPMENT				BASIS	OF DESIGN INFORMA	ATION					
NO.	LOCATION	FLUID	FLOW (GPM)	INLET AND OUTLET SIZE	MANUFACTUER	MODEL	NOMINAL DIMENSIONS (L X W X H)	SPECIFICATION	REMARKS		
SI-1	OPEN FLOOR	SAND	50	4"	ZURN	Z1187-SI-E	48" X 24" X 26"	INTEGRAL EVITENCIAN ALMO TITO NILET/OUTLET	INTERCEPTOR TO BE INSTALLED FLUSH WITH F.F. PROVIDE NO-HUB INLET/OUTLETS. PROVIDE EXTRA-HEAVY-DUTY REINFORCED COVER FOR VEHICULAR TRAFFIC.		



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CONSULTANTS:		

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DESIGNED BY: JRM	DRAW	N BY: KJE	CHECKED BY	<i>(</i> :	REVIEWED BY:
PROJECT No.: VGFD20	001	DATE:	JLY 2022	SCALI	AS SHOWN

# VAILS GATE FIRE DISTRICT

New Storage Building (Phase I) New Fire Station (Phase II)



872 Blooming Grove Turnpike New Windsor, NY 12553

CONTRACT

CONTRACT G
GENERAL CONSTRUCTION

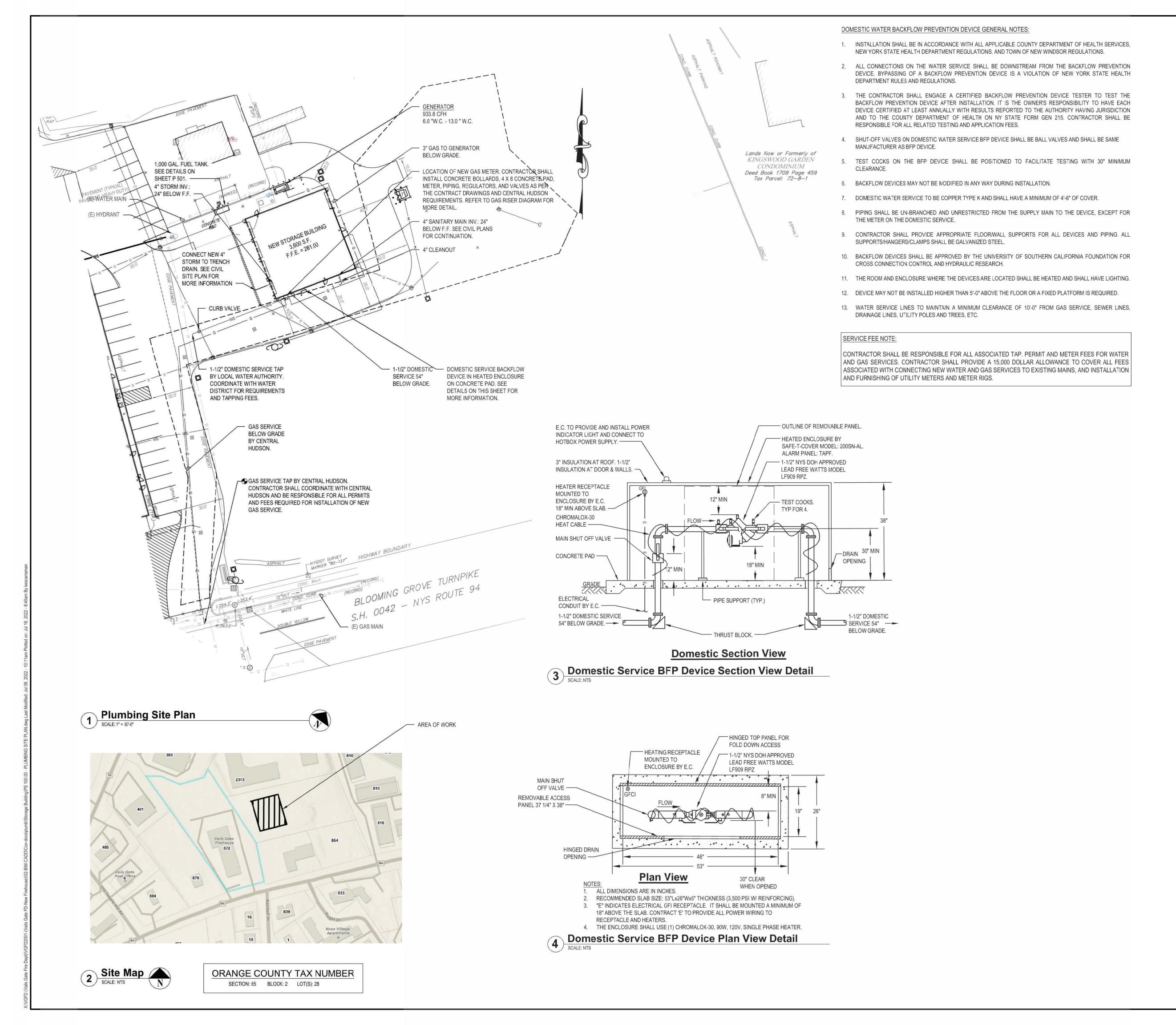
FINAL BID DOCUMENT

SHEET TITLE

PLUMBING SCHEDULES

DRAWING No.

P1 002.00





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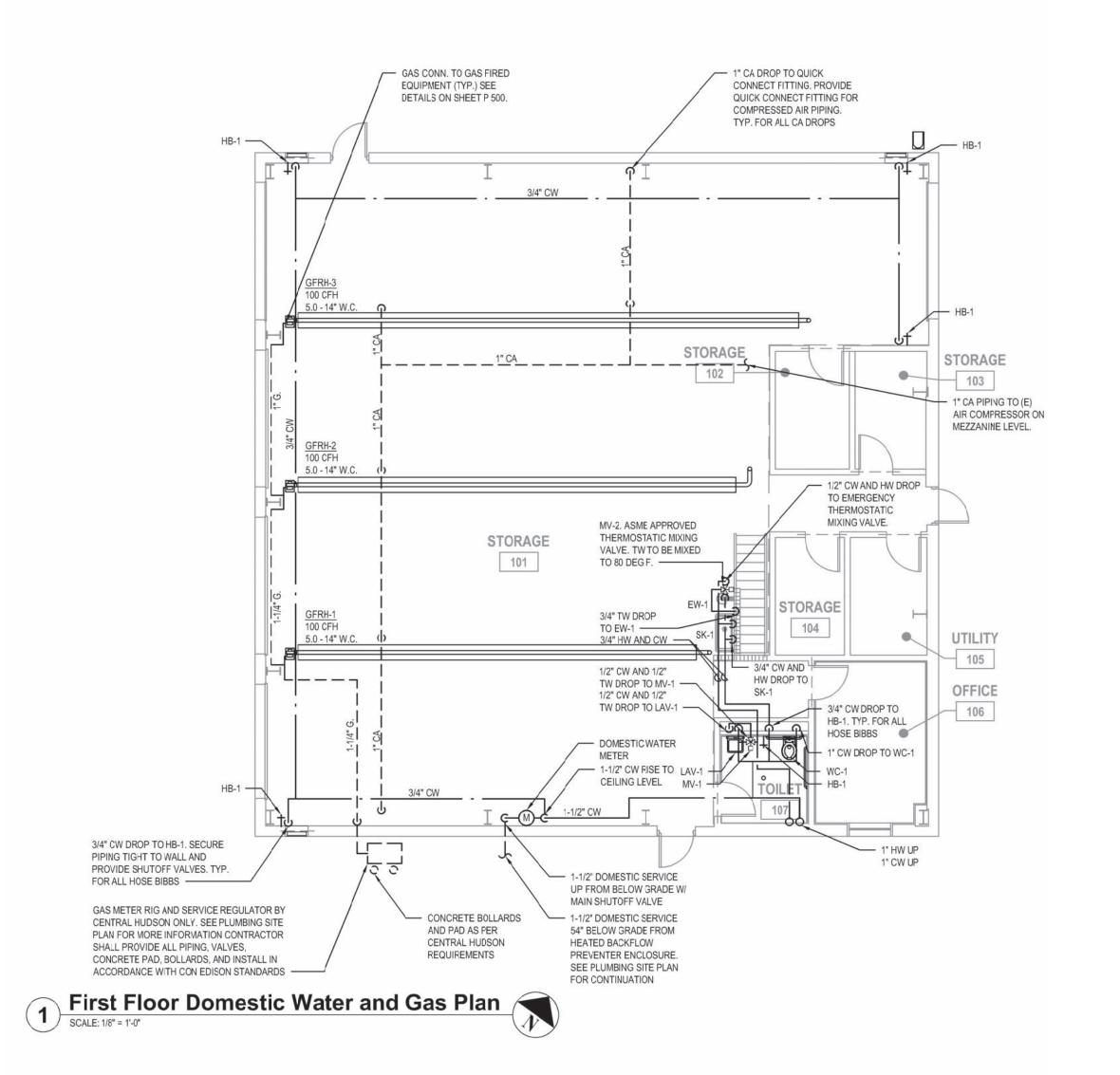
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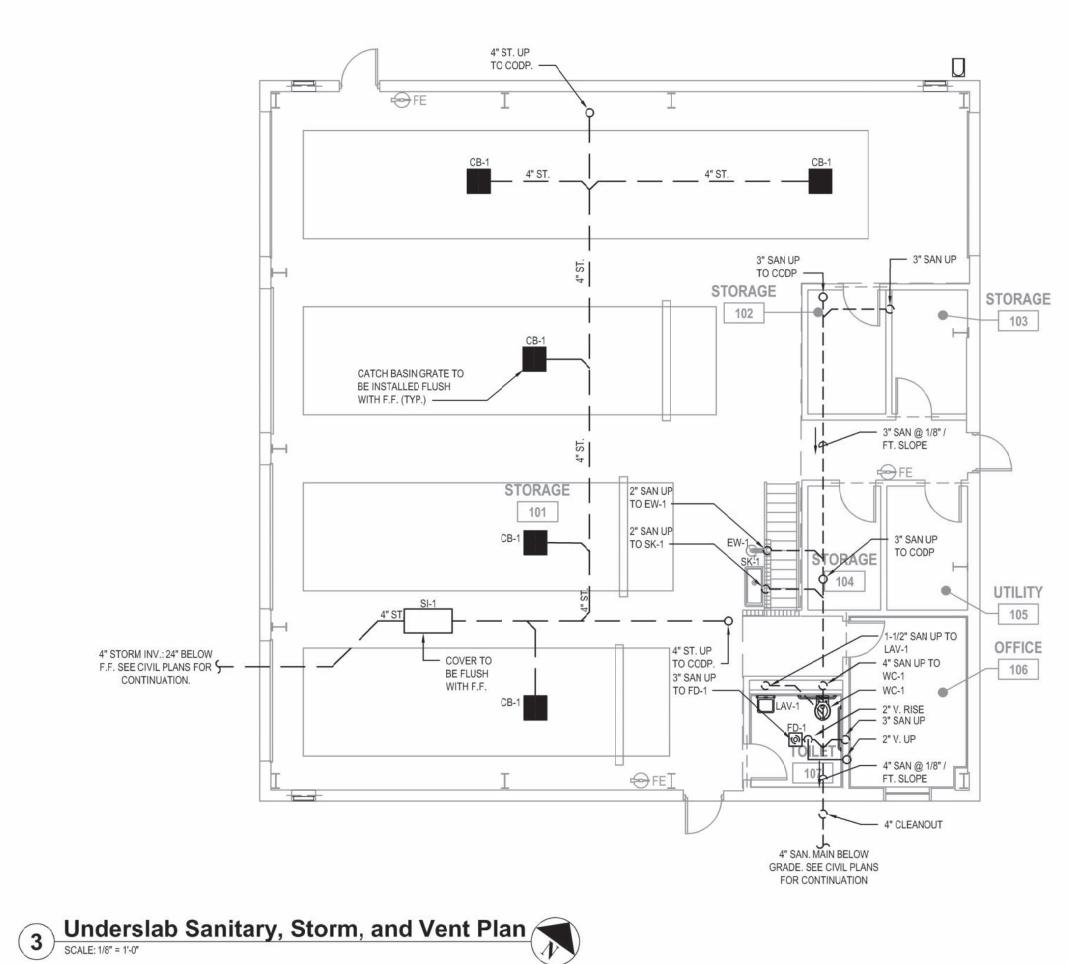
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PLUMBING SITE PLAN -**NEW STORAGE BUILDING** 

PS1 100.00

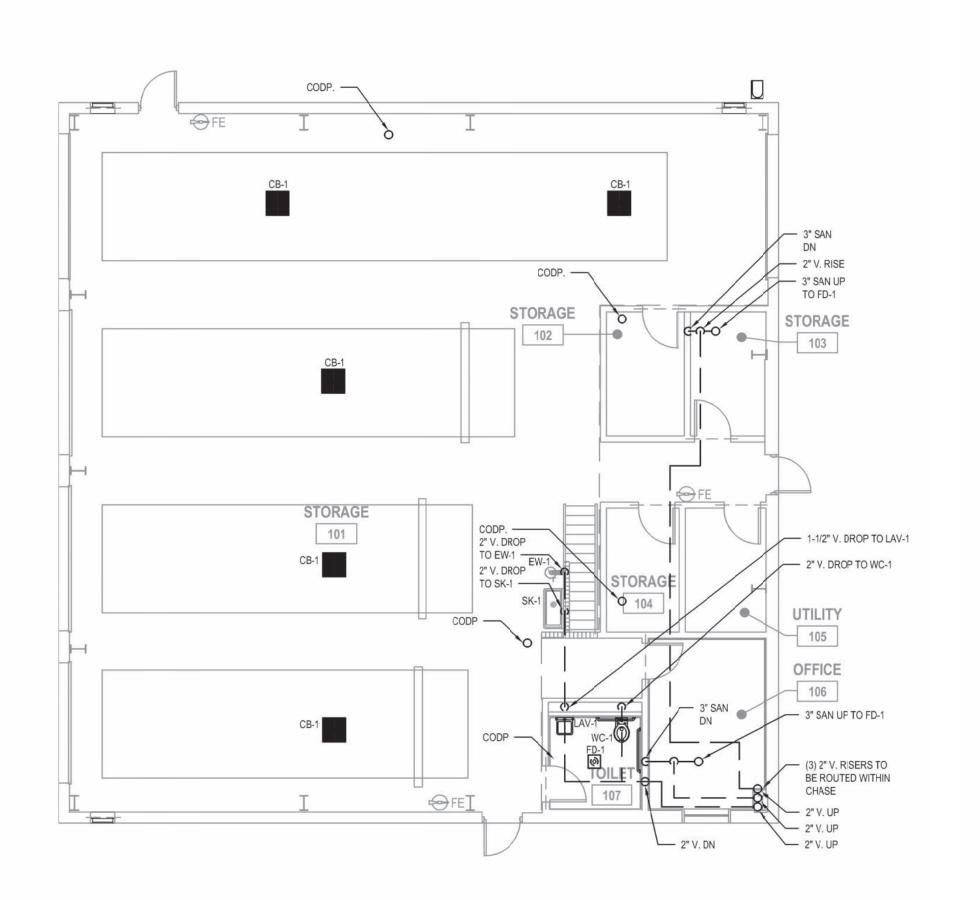




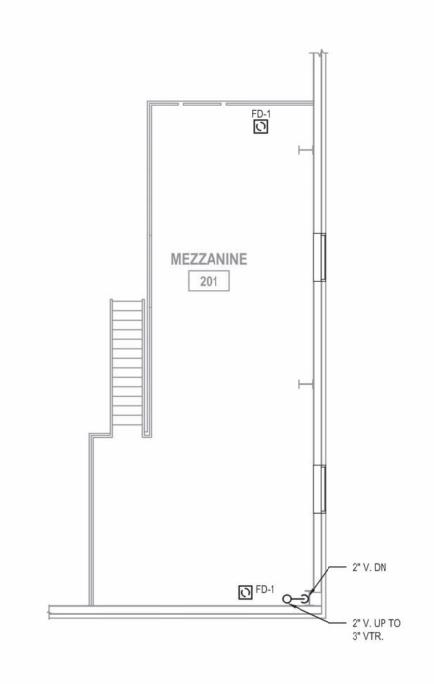
- CONNECT 1" CA PIPING TO (E) AIR COMPRESSOR (E) AIR COMPRESSOR BY OWNER \_\_ \_\_1" <u>CA</u> \_\_ \_\_ MEZZANINE 201

Mezzanine Domestic Water and Gas Plan

SCALE: 1/8" = 1'-0"

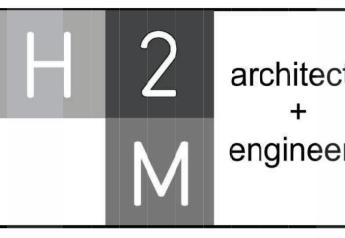


First Floor Sanitary, Storm, and Vent Plan



Mezzanine Sanitary, Storm, and Vent Plan

SCALE: 1/8" = 1'-0"



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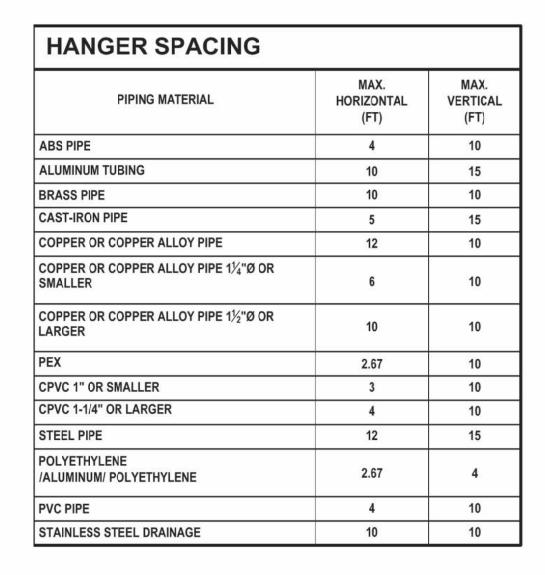
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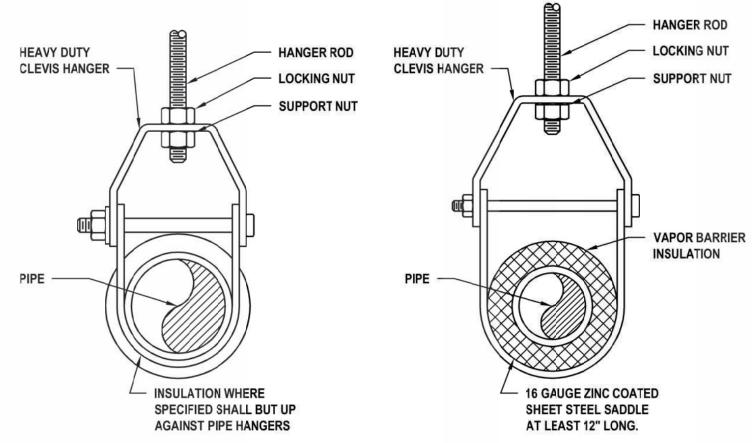
FINAL BID DOCUMENT

PLUMBING FLOOR PLAN

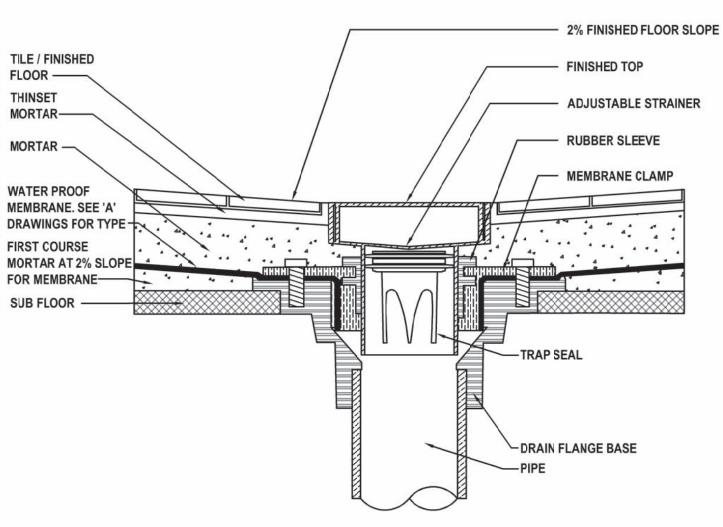
P1 110.00



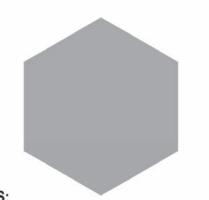
PIPE SIZE	ROD SIZE	PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.	4" THRU 5"	5/8" DIA.
2 1/2" THRU 3"	1/2" DIA		



## Pipe Hanger Detail







NC	TES:		
	EII I	PORT MARKING CYMROL CHALL	

	This tank is manufa	ctured to UL-1316 Standard	
	Manf. Date:	MM-YYYY	
	Tank Dia.:	X ft X in.	
	Tank Length:	X ft X in.	
	Nominal Capacity:		gallons
<u>S:</u>	Design Capacity:		gallons
LL PORT MARKING SYMBOL SHALL BE A SOLID	Working Capacity:		gallons
ELLOW HEXAGON.	Model No.:		
	Manufacturer:	***	
	Intalled Date/By:		
	Serial No.:	E	

Tank ID #:



### 1. LABEL SHALL BE OF DURABLE MATERIAL

2. LABEL SHALL BE PERMANENTLY AFFIXED **INSIDE FILL PORT (WITH 18-INCH STAINLESS** STEEL CHAIN) AND AT TANK MONITORING

DIESEL

This tank conforms with 6 NYCRR Part 613

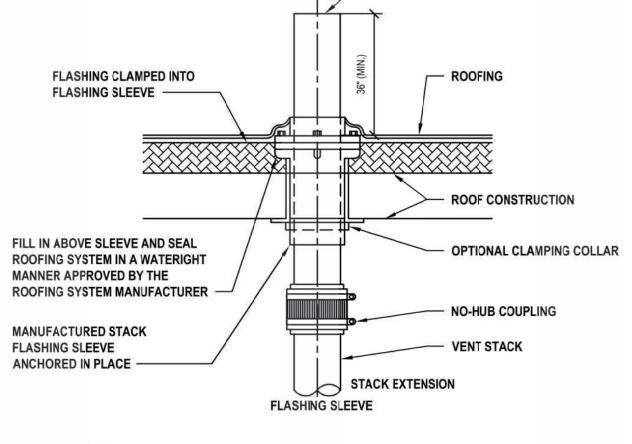


NOTES:

## NFPA DIAMOND SIGN SHALL BE OF DURABLE MATERIAL.

SIGN SHALL BE PERMANENTLY AFFIXED TO GASOLINE DISPENSER AT A CLEARLY VISIBLE LOCATION.

**Diesel Fuel Signage** 



STACK EXTENSION

FINAL VENT STACK OUTLET LOCATION TO BE 15 FEET (MIN.) AWAY FROM ANY OUTSIDE VENTILATION AIR INTAKE LOCATION, 10 FEET (MIN.) FROM ANY WALL OR STRUCTURE AND 3 (MIN.) FEET ABOVE STRUCTURE.

## **Vent Through Roof**

SCALE: NTS



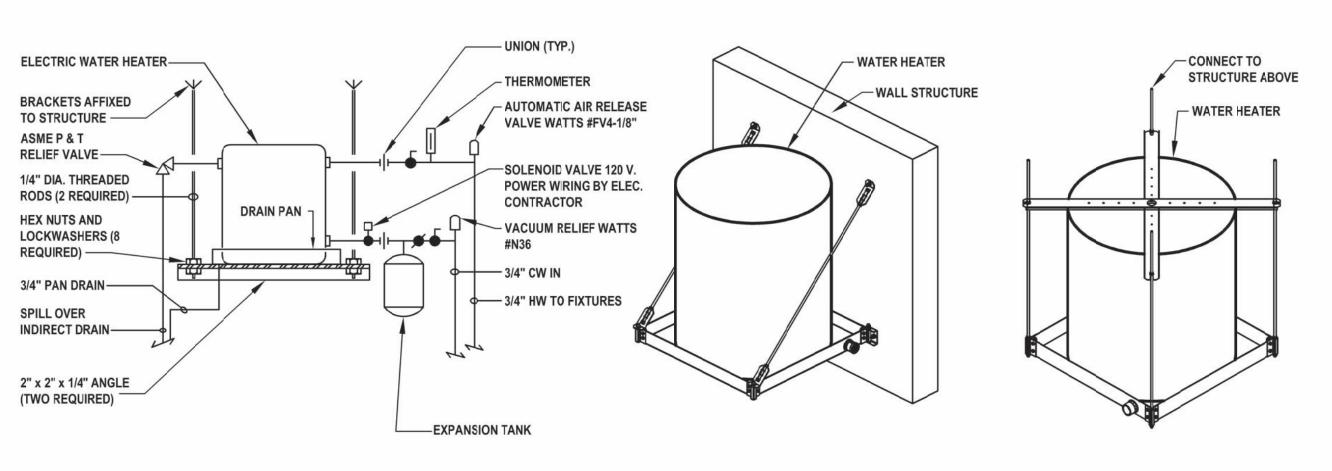






- SIGNS SHALL BE OF DURABLE MATERIAL.
- 2. SIGN 'A' "DANGER" SHALL BE WHITE LETTERING ON A RED BACKGROUND. ALL LETTERS SHALL NOT BE LESS THAN 3" IN HEIGHT AND 1/2" IN STROKE.
- 3. SIGN 'B' "DANGER" AND HAZCOM "FLAMMABLE" SIGNS SHALL BE PERMANENTLY AFFIXED TO OR NEAR TANK AT CLEARLY VISIBLE LOCATIONS.
- 4. SIGN 'C' "CAUTION" SIGN SHALL BE PERMANENTLY AFFIXED IN A CLEARLY VISIBLE LOCATION ABOVE OR BELOW THE OVERFILL ALARM PANEL.
- SIGN 'D' "EMERGENCY SHUT-OFF" SIGN SHALL BE PERMANENTLY AFFIXED IN A CLEARLY VISIBLE LOCATION AT OR NEAR EMERGENCY KILL SWITCH.

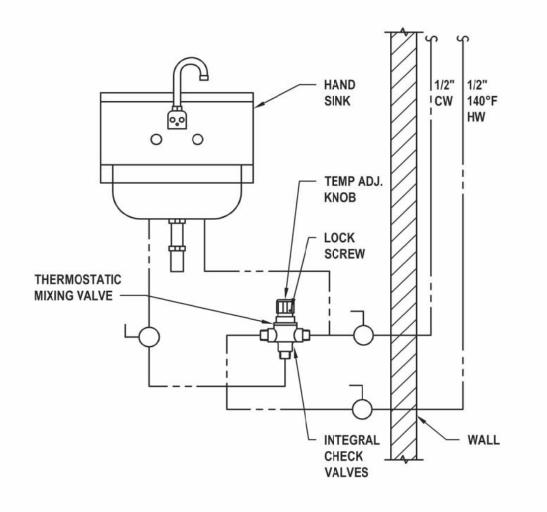
## HazCom Signage



**Front View** 

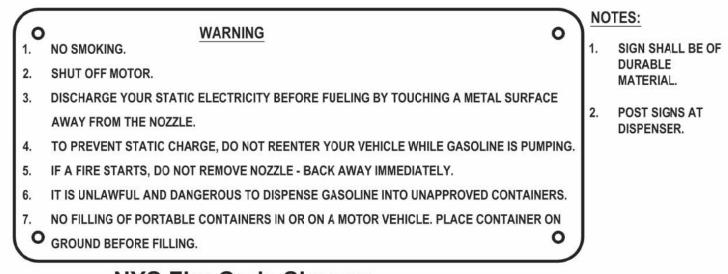
**Suspended Isometric Views** 

Domestic Water Heater Suspended From Wall

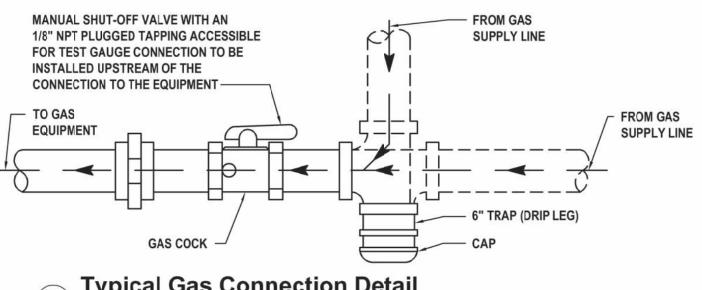


NOTE: ADJUST OUTPUT TEMPERATURE TO A MAXIMUM OF 110°F

Under Sink Thermostatic Mixing Valve Detail 5 Under

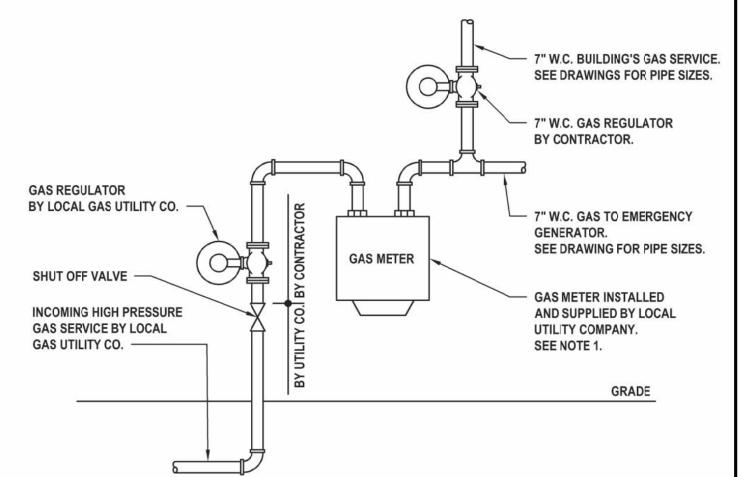


9 NYS Fire Code Signage
SCALE: NTS



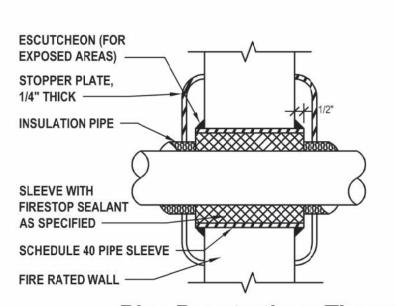
Typical Gas Connection Detail

SCALE: NTS



NOTES: GAS METER RIG SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL REQUIREMENTS OF GAS UTILITY CO. INCLUDING, BUT NOT LIMITING TO; DIMENSIONS, PIPING, FITTINGS, CONNECTIONS, VALVE,

Gas Meter With Gas Fired Emergency Generator Detail 6 SCALE: NTS



CONCRETE PADS, AND BOLLARDS.

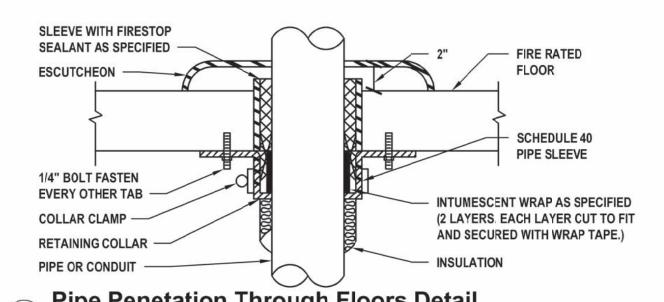
FIRE STOPPING NOTES: I. CONTRACTOR SHALL BE RESPONSIBLE FOR **ENSURING THAT PENETRATIONS ARE PROPERLY FIRE** STOPPED WITH THE FOLLOWING:

SHALL BE AS MANUFACTURED BY 3M. NO SUBSTITUTIONS SHALL BE PERMITTED. METAL PIPES OR CONDUIT THROUGH BLOCK WALL SHALL USE UL SYSTEM NO. CAJ1044 AND 3M FRODUCT CP25 WB & CAULK

THE FIRE STOPPING SYSTEM AND COMPONENTS

METAL PIPES THROUGH GYPSUM WALLS SHALL USE UL SYSTEM NO. WL 1001 AND 3M PRODUCT CP 25 WB & CAULK

Pipe Penetrations Through Fire Rated Walls 10 Pipe I



Pipe Penetation Through Floors Detail

engineers

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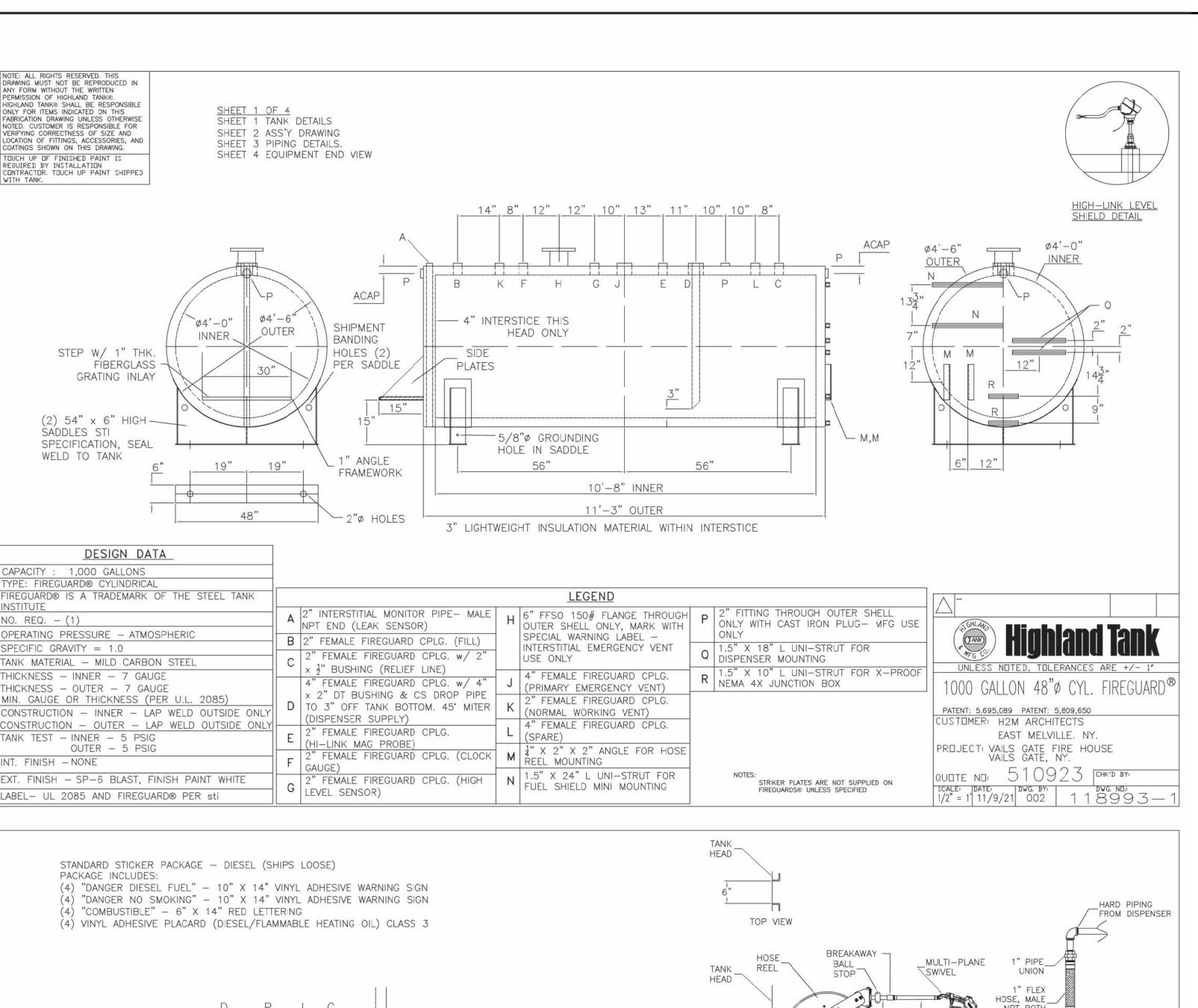
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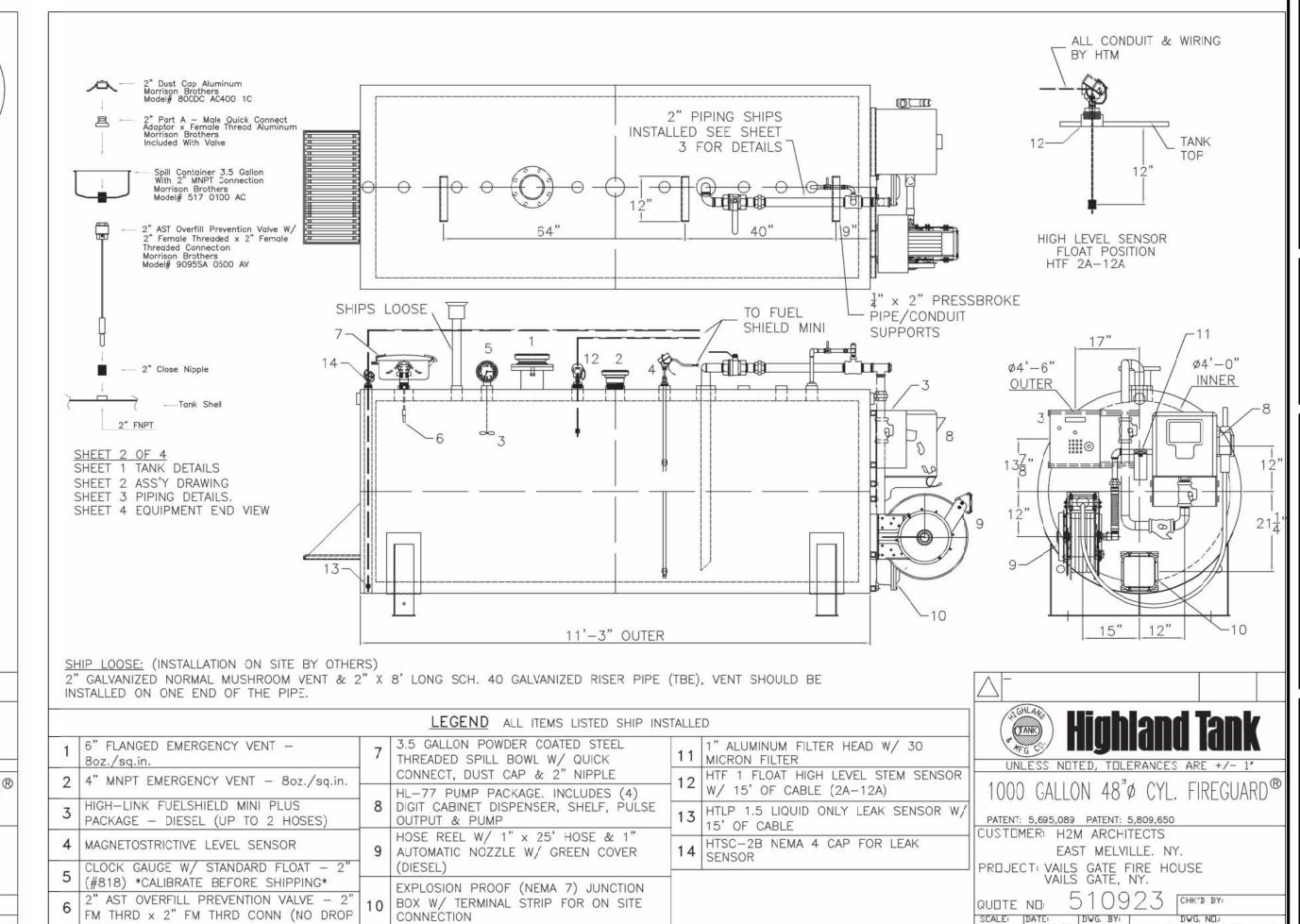
**CONTRACT G GENERAL CONSTRUCTION** 

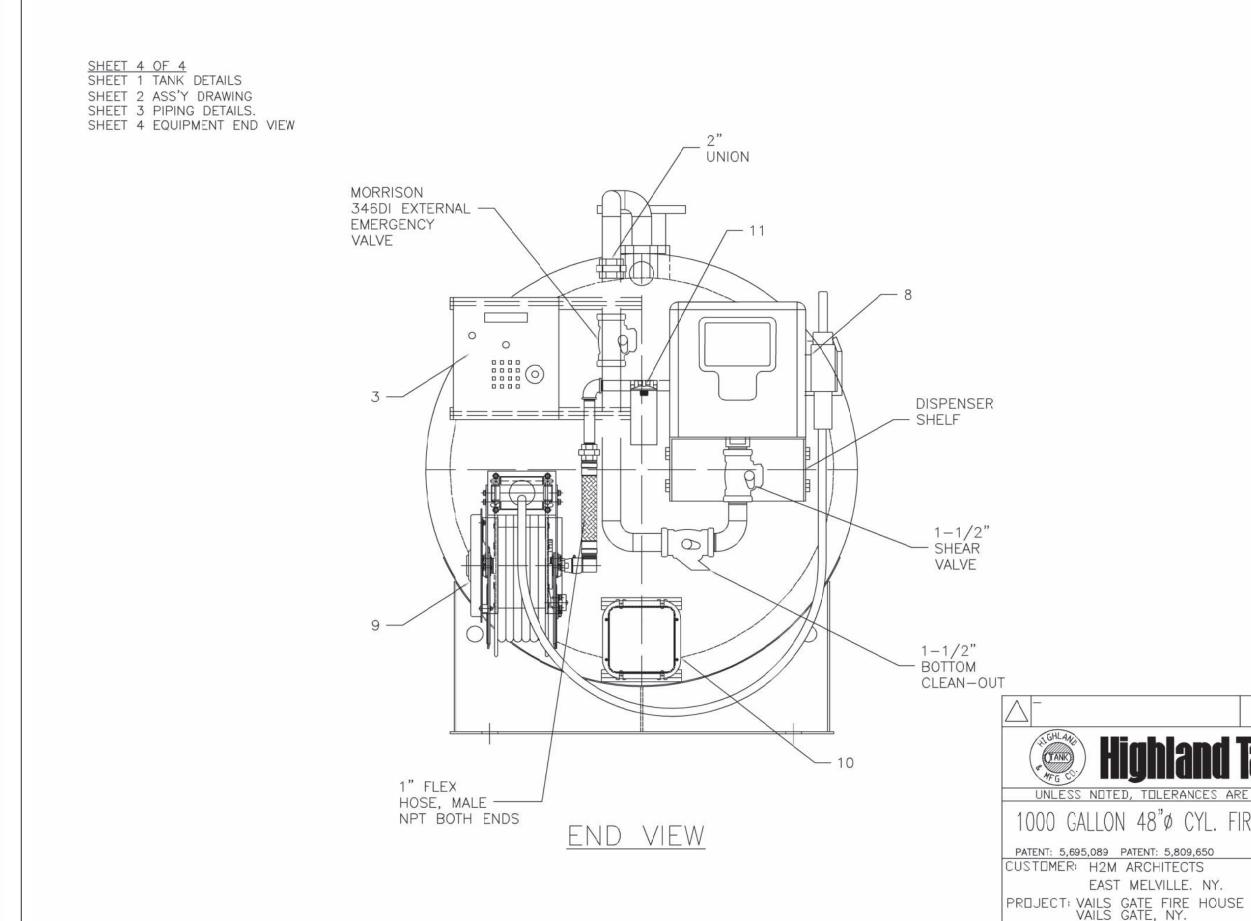
FINAL BID DOCUMENT

PLUMBING DETAILS

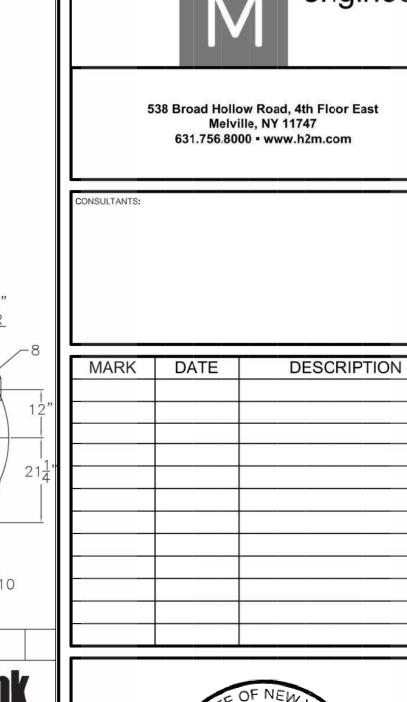
P 500.00







TUBE)





## **VAILS GATE FIRE** DISTRICT

SCALE: DATE: DWG. BY: DWG. ND.: 1/2" = 1' 11/9/21 002 1 1 8 9 9 3 -

QUOTE NO: 510923 CHK'D BY:

SCALE: DATE: DWG. BY: 1 1 18993—

New Storage Building (Phase I) New Fire Station (Phase II)



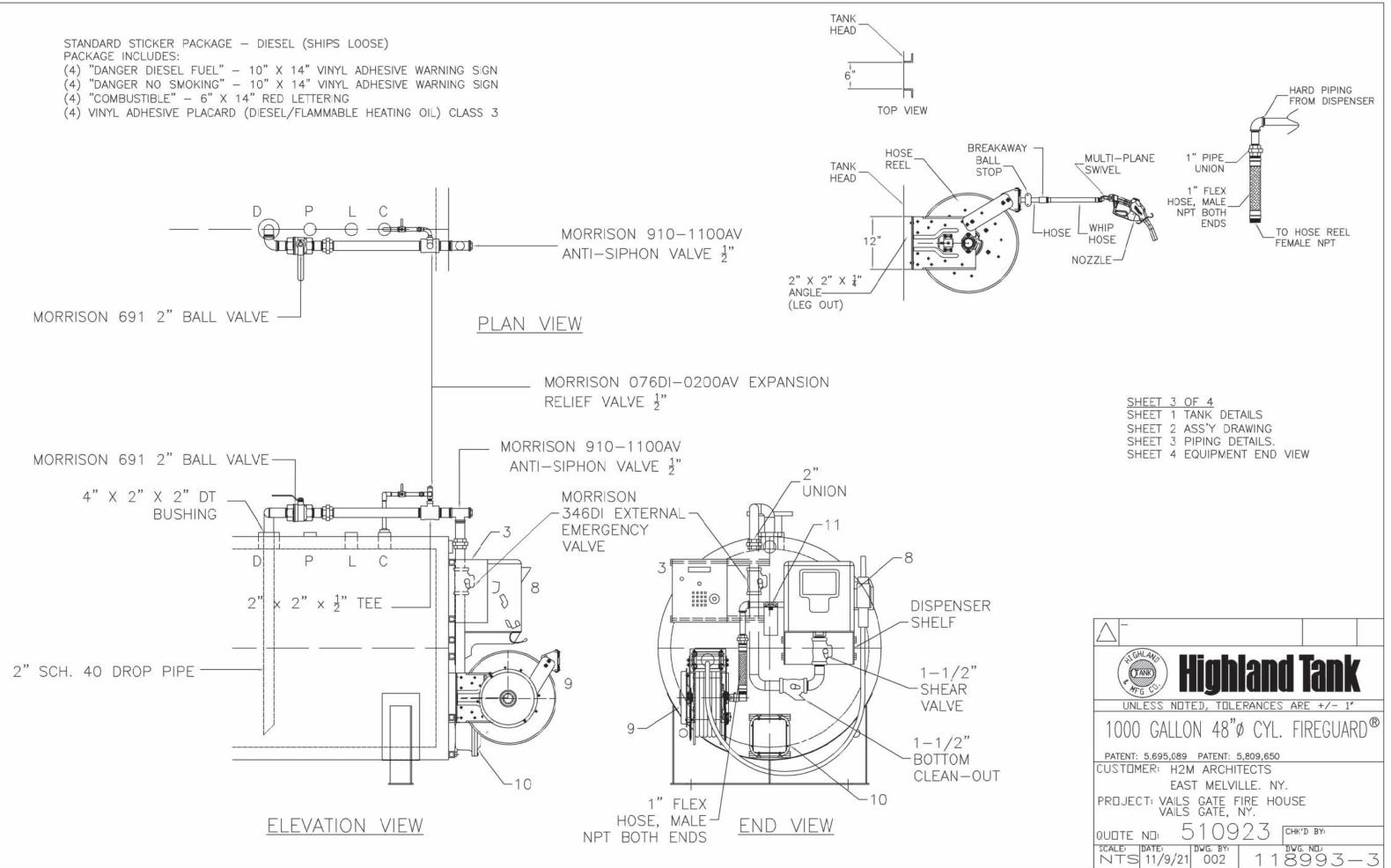
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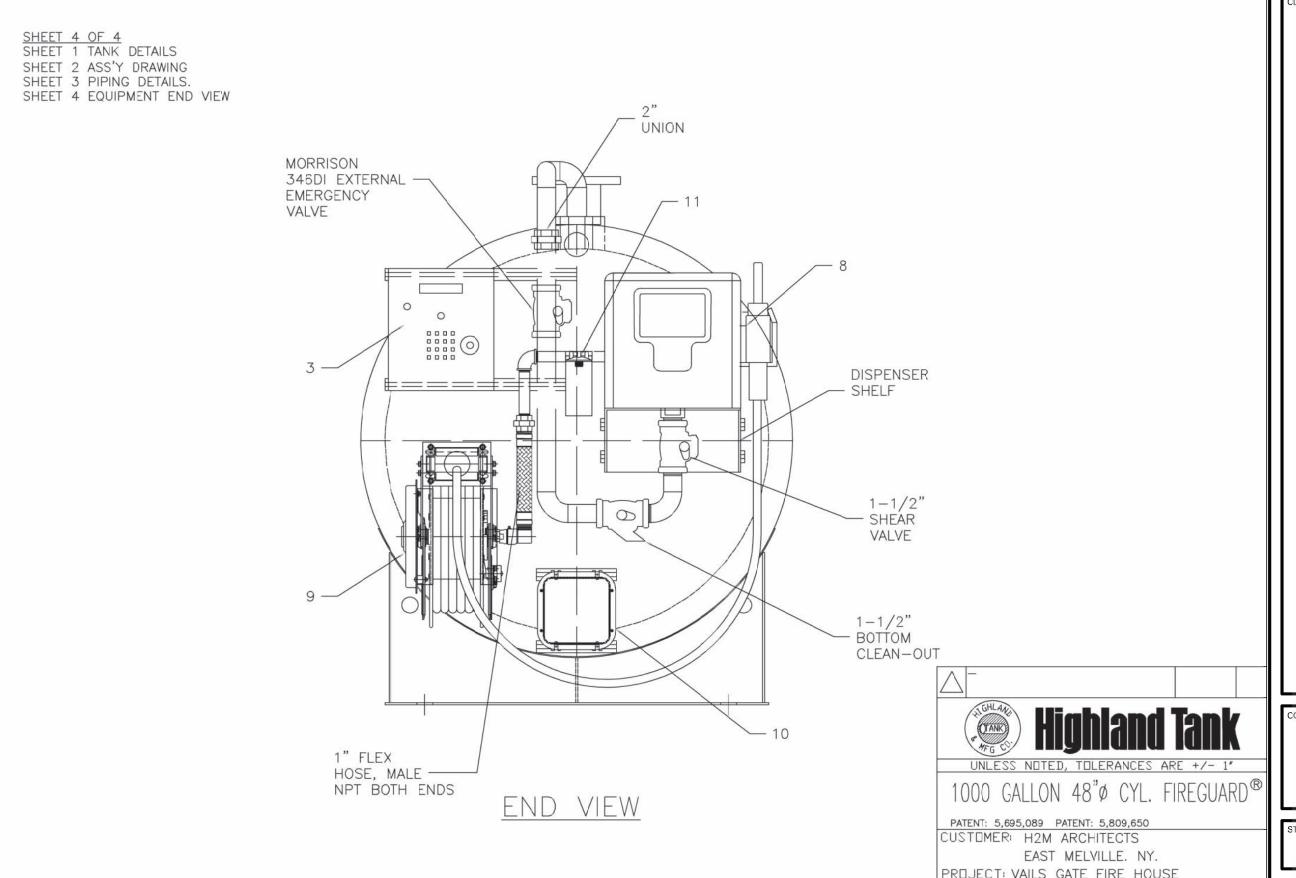
FINAL BID DOCUMENT

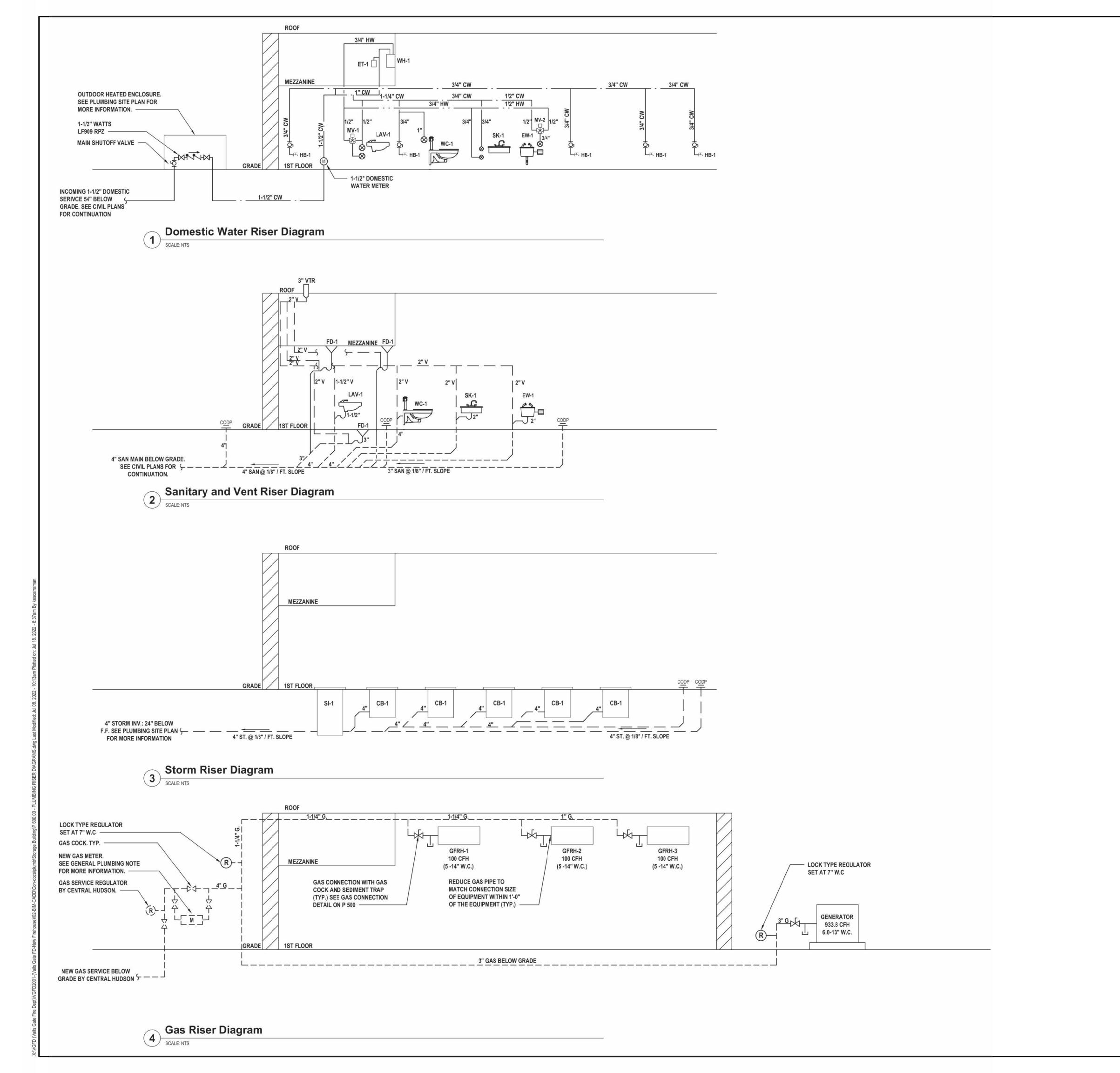
**DIESEL FUEL TANK DETAILS** 

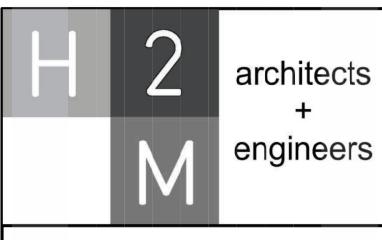
P 501.00



5 1,000 GAL. Fuel Tank Details







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PLUMBING RISER **DIAGRAMS** 

P1 600.00