

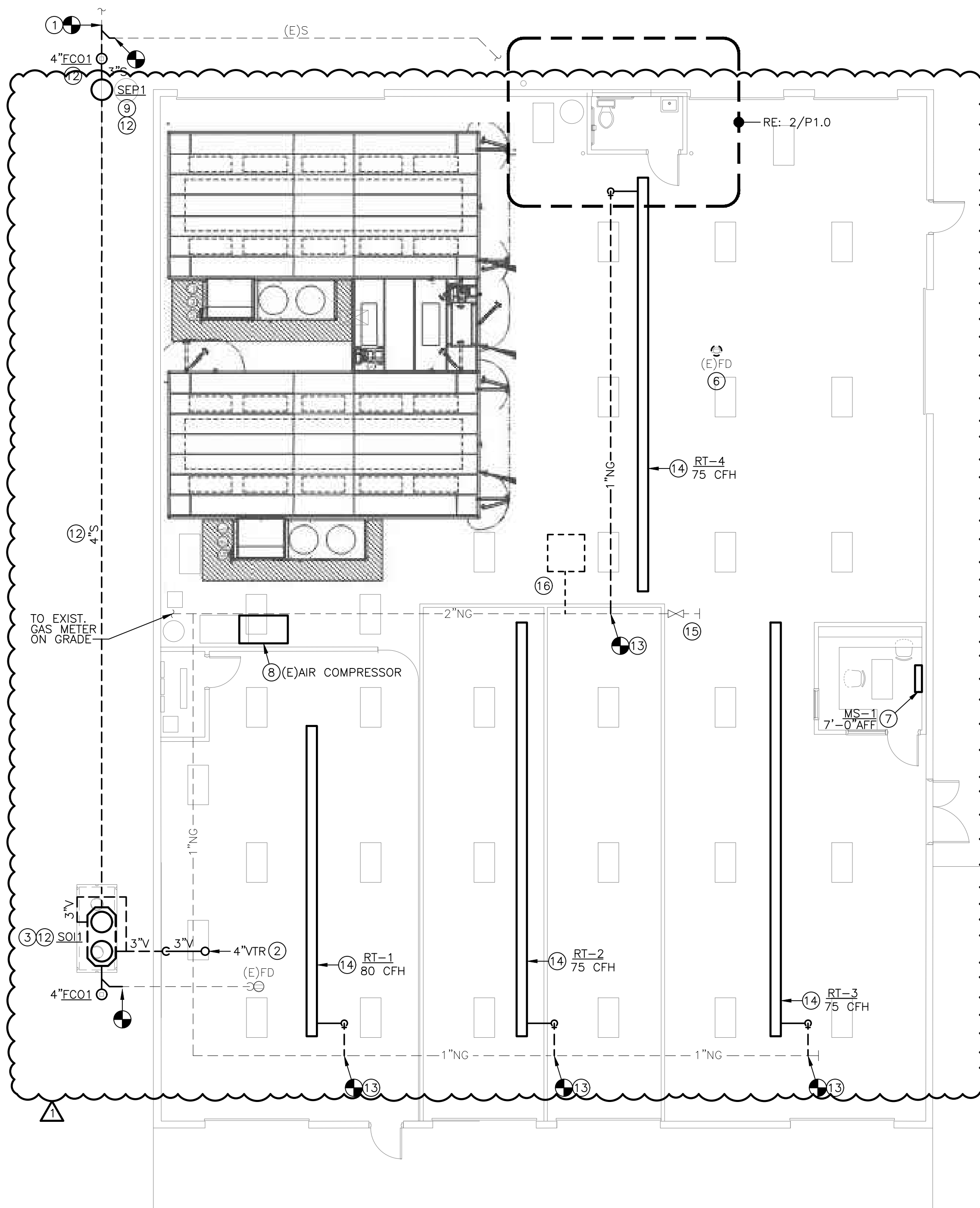
New 01, 2023 - User KevinWhite@a
Nov 01, 2023 - 3:39pm - Users\KevinWhite@a\5b5 Engineers Dropbox\5B5 ACTIVE PROJECTS\2023003039 Crash Champions Lees Summit Bldg B - Rose\Base-CAD\PLUM.dwg
This document is the PROPERTY OF RISE ENGINEERING GROUP, INC. AND IS SUBJECT TO RETURN UPON REQUEST. THE DOCUMENT INCLUDES CONFIDENTIAL AND PROPRIETARY INFORMATION OF RISE ENGINEERING GROUP, INC. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE EXPRESS WRITTEN PERMISSION OF, AND THAT NEITHER THE DOCUMENT NOR THE CONTENTS HEREIN WILL BE USED ADVERSELY TO THE INTERESTS OF RISE ENGINEERING GROUP, INC. WITHOUT THE EXPRESS WRITTEN PERMISSION OF RISE ENGINEERING GROUP, INC.

_____ NEW - ABOVE SLAB
 - - - - - NEW - BELOW SLAB
 _____ EXISTING - ABOVE SLAB
 - - - - - EXISTING - BELOW SLAB
 - - - - - DEMOLITION

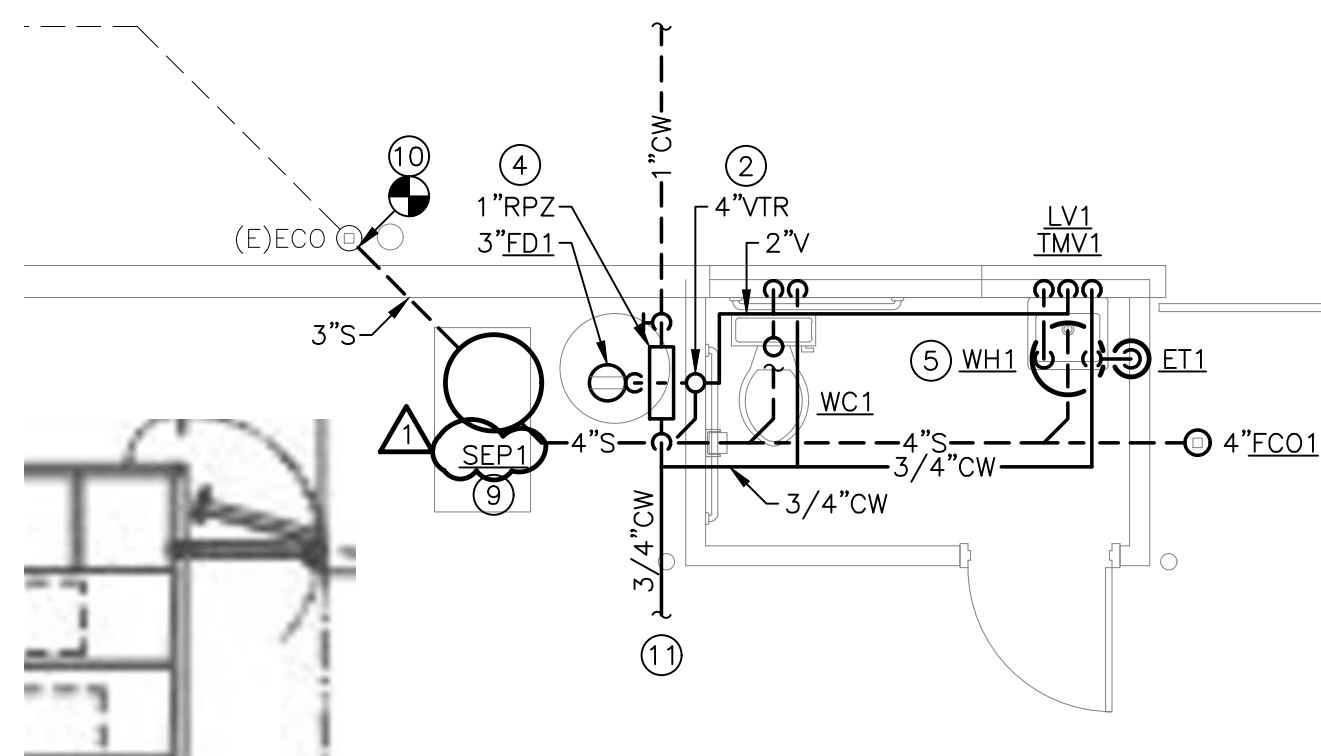
	ELBOW DOWN
	ELBOW UP
	P=TRAP
	TEE DOWN
	ELBOW UP
	SHUT-OFF VALVE (GENERIC)
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	GATE VALVE
	CHECK VALVE
	BALANCING VALVE
	PRESSURE REDUCING VALVE
	GAS COCK
	WYE-STRAINER
	UNION
	FLANGE
	RELIEF VALVE
	AIR VENT (MANUAL/AUTOMATIC)
	FLOW DIRECTION
	PIPE BREAK / CONTINUATION
	FLOOR DRAIN
	FLOOR SINK
	FLOOR CLEANOUT
	HOSE BIBB

ABC-1	EQUIPMENT / FIXTURE TAG
⊖	PLAN NOTE
◐	CONNECT TO EXISTING

AF	ABOVE FINISHED FLOOR
CW	DOMESTIC COLD WATER
(C)	CEILING
E/C	EXTERIOR CLEANOUT
ET	EXPANSION TANK
FC	FLOOR CLEANOUT
FD	FLOOR DRAIN
FT,WG	FEET WATER GAUGE
PM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
IE	INVERT ELEVATION
LV	LAVATORY
MAX	MAXIMUM
MIN	MINIMUM
NHB	NON-FREEZE HOSE BIBB
QTY	QUANTITY
RPTZ	REDUCED PRESSURE ZONE
S	BACKFLOW PREVENTER
SO	SANITARY WASTE
S	SAND/OIL INTERCEPTOR
SP	SEWAGE PUMP
TMV	THERMOSTATIC MIXING VALVE
TRA	TO ROOF ABOVE
V	VENT
WC	WATER CLOSET
WH	WATER HEATER
WCO	WALL CLEANOUT



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



2 ENLARGED PLUMBING PLAN
NEW RESTROOM
SCALE: 1/4" = 1'-0"

1. CONNECT TO MINIMUM 4" EXISTING SANITARY. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
2. ROUTE 4"V UP THROUGH ROOF ("VTR"). INSTALL AT A MINIMUM OF 10'-0" FROM ALL AIR INTAKES AND BUILDING OPENINGS.
3. INSTALL SAND/OIL INTERCEPTOR BELOW GRADE. PROVIDE ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER, WHICH MAY INCLUDE SAMPLING PORT, MANHOLE RISER EXTENSIONS, ETC).
4. PROVIDE NEW 1" DOMESTIC WATER SERVICE ENTRANCE. REFER TO DETAIL 1/P2.0 FOR MORE INFORMATION.
5. INSTALL WATER HEATER ABOVE CEILING. PROVIDE PIPING CONNECTIONS, VALVES, AND SPECIALS PER DETAIL 2/P2.0 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. REMOVE EXISTING FLOOR DRAIN. CAP ITS ASSOCIATED BRANCH PIPING AT ACTIVE MAIN.
7. PROVIDE CONDENSATE DRAIN WITH P-TRAP, FULL SIZE OF CONNECTION AT WALL-MOUNTED MINI-SPLIT EVAPORATOR COIL. ROUTE CONDENSATE PIPING CONCEALED IN WALL CAVITY, AND DISCHARGE OUT WALL AT 1'-6" AFG TO SPLASH BLOCK ON GRADE.
8. INSTALL SAVED AIR COMPRESSOR AT NEW LOCATION. PROVIDE NEW COMPRESSED AIR PIPING FROM CONNECTION AT COMPRESSOR TO EXISTING MAIN, OF SAME SIZE AS EXISTING MAIN. FIELD VERIFY SIZE AND LOCATION OF CONNECTION AT EXISTING. COMPRESSED AIR PIPING SHALL BE GALVANIZED STEEL PIPE WITH MALLEABLE IRON SCREWED FITTINGS. INSTALL VALVES, FILTERS, REGULATORS, AND OTHER FITTINGS FURNISHED BY THE OWNER AS A PART OF THE COMPRESSED AIR SYSTEM. AT THE COMPLETION OF THE WORK, LEAVE A COMPLETE AND OPERATING SYSTEM, CONFORMING TO THE LATEST EDITION OF THE OSHA CODE.
9. COORDINATE FINAL LOCATION OF SEWAGE PUMP WITH EXISTING CONDITIONS AND OTHER TRADES. INSTALL PER MANUFACTURER'S REQUIREMENTS.
10. CONNECT NEW 3" SANITARY FROM SEWAGE PUMP DISCHARGE INTO EXISTING CLEANOUT. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
11. CONNECT TO EXISTING COLD WATER MAIN AND/OR EXISTING FIXTURES. FIELD VERIFY LOCATION AND SIZES AT CONNECTIONS TO EXISTING.
12. COORDINATE NEW INSTALLATION WITH EXISTING WATER UTILITY AND GAS UTILITY LINES ALONG WEST SIDE OF BUILDING.
13. CONNECT NEW NATURAL GAS LINE OF SIZE INDICATED TO EXISTING NATURAL GAS PIPE. COORDINATE EXISTING CONNECTIONS IN FIELD.
14. PROVIDE 1" GAS TO RADIANT HEATER. PROVIDE SHUT-OFF VALVE, PRESSURE REGULATOR, DIRT LEG, AND FLEXIBLE CONNECTION. MAKE CONNECTIONS TO UNIT HEATER AS REQUIRED. SET REGULATOR TO PROVIDE 11" W.C. AT UNIT. REFER TO HEATER GAS CONNECTION DETAIL 3/P2.0.
15. EXISTING SHUT OFF VALVE TO REMAIN. FIELD VERIFY EXIST LOCATION.
16. REMOVE EXISTING UNIT HEATER AND GAS LINE BACK TO EXISTING GAS MAIN. CAP GAS PIPE AT MAIN AS NEEDED.



Bob Clark

STATE OF MISSOURI
BROCK
CENTIVJRE
NUMBER
PE-2014007261
PROFESSIONAL ENGINEER

11/1/23

LICENSE #: PE-2014007261
BROCK CENTIVJRE, LICENSED ENGINEER



ROSE
DESIGN GROUP INC.

A Division of Rose Design Build

913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF www.BuildWithRose.com
AUTHORITY # 2008034845



BUILDING B INTERIOR MODIFICATIONS:

CRASH CHAMPIONS

UNIT B 451 SE OLDHAM PARKWAY

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	05.10.2023
1	CITY COMMENT	10/05/2023

PROJECT NUMBER 23016
DATE ISSUED: 05 / 10 / 2023

SHEET NUMBER

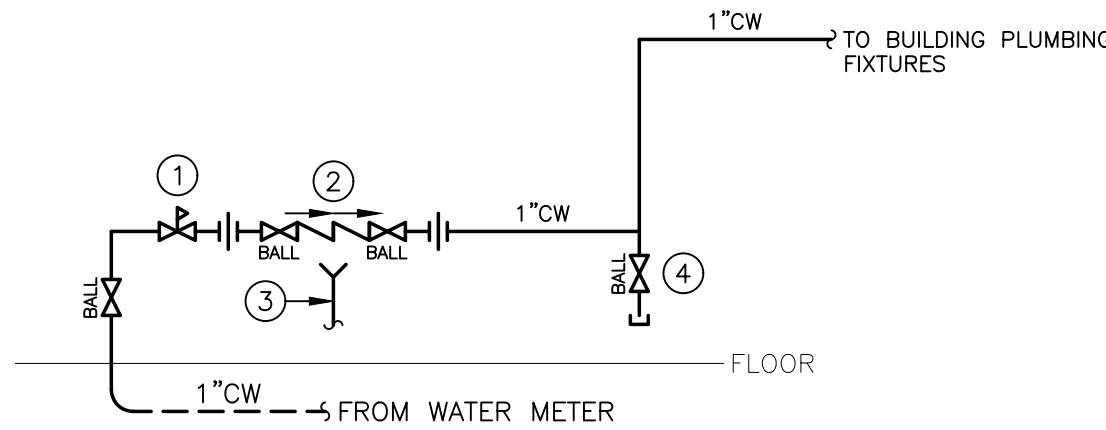
P1.0

PLUMBING PLANS

5BY5

ENGINEERS

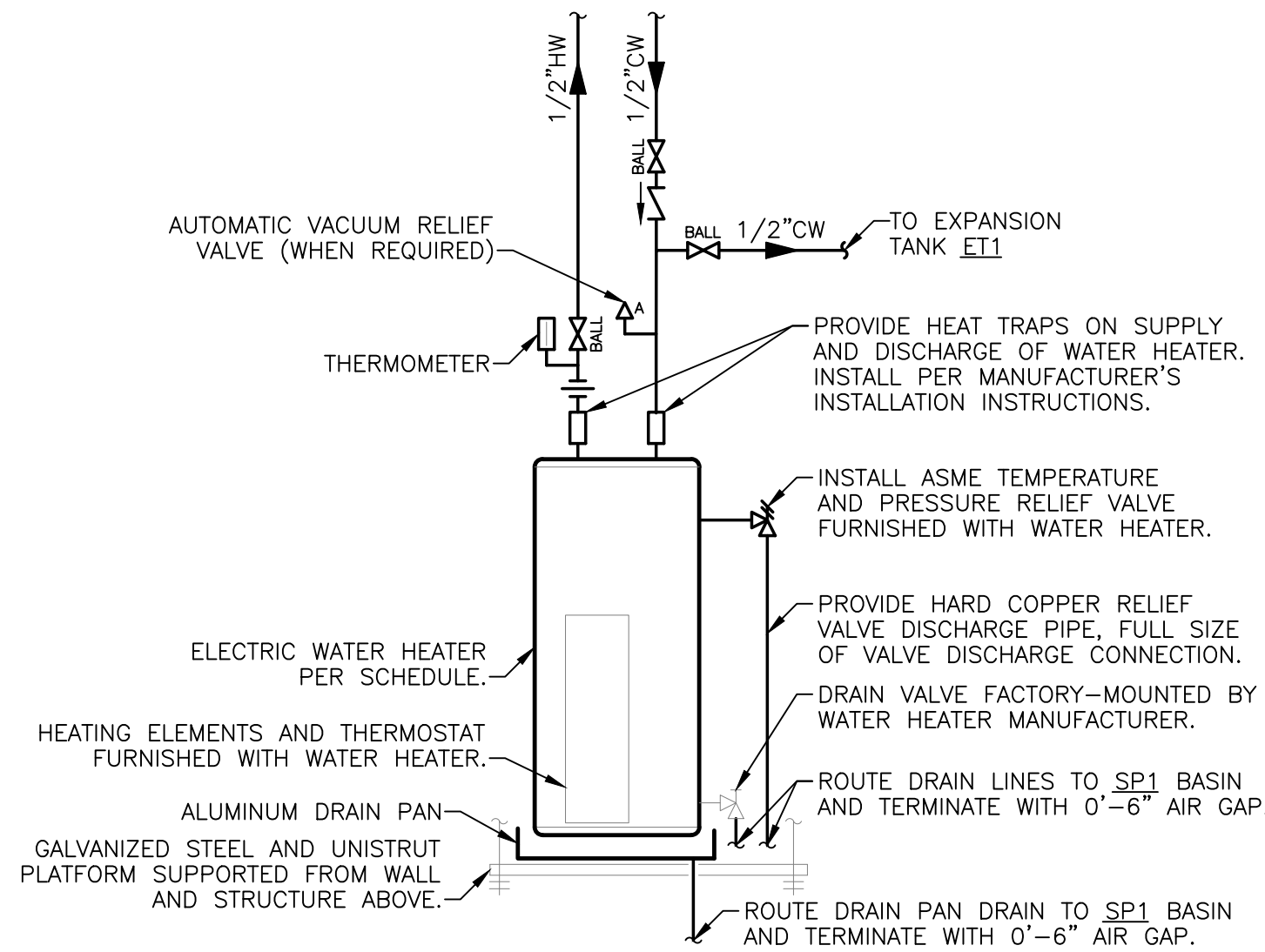
1100 Main Street, 4th Floor
Kansas City, MO 64105
Missouri COA: 2017040776
913-689-9449
contact@5by5eng.com
5by5eng.com



DETAIL 1/P2.0 NOTES:

1. PROVIDE PRESSURE REDUCING VALVE (PRV) WHEN UTILITY PRESSURE EXCEEDS 80 PSIG.
2. PROVIDE LINE SIZE USC-APPROVED REDUCED PRESSURE BACKFLOW PREVENTER.
3. PROVIDE FUNNEL FOR RPZ DISCHARGE AND ROUTE TO FLOOR DRAIN. SIZE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. PROVIDE 3/4" DRAIN VALVE WITH THREADED CAP AT BASE OF RISER.

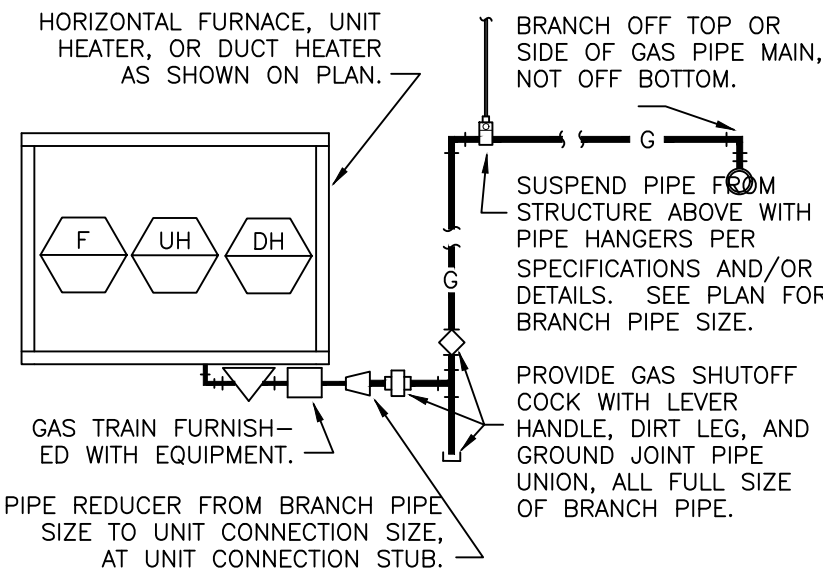
1 WATER SERVICE ENTRANCE DETAIL
SCALE: NTS



NOTES:

- STRUCTURE AND PLATFORM SHALL BE DESIGNED TO HOLD THE MAXIMUM WEIGHT OF THE WATER HEATER. CONFIRM CAPACITY OF SHELF WITH MANUFACTURER PRIOR TO INSTALLATION.

2 WATER HEATER DETAIL
SCALE: NTS



FOLLOW MANUFACTURER'S RECOMMENDATIONS FROM EQUIPMENT INSTALLATION MANUAL. PROVIDE WELDED PIPE AND FITTINGS ON ANY CONCEALED PIPE. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT ACTUAL INSTALLATION CONDITIONS. PROVIDE GAS PRESSURE REGULATOR WITH EXISTING 1/2\"/>

3 HEATER GAS CONNECTION
SCALE: NTS

NATURAL GAS LOAD SCHEDULE				
EQUIPMENT TAG	QTY	DESCRIPTION	CFH INPUT (EACH)	TOTAL CFH
RT-1	1	RADIANT TUBE	80	80
RT-2	1	RADIANT TUBE	75	75
RT-3	1	RADIANT TUBE	75	75
RT-4	1	RADIANT TUBE	75	75
PAINT BOOTH	2	AIR DRYER HEATER	1,513	3,025
SYSTEM TOTAL =			3,330	

NOTES:
A. METER DISCHARGE PRESSURE: 2PSI
B. TOTAL DEVELOPED LENGTH: 225 FT.
C. DESIGN NATURAL GAS PIPING SYSTEM PRESSURE DROP: 0.5 IN.WG
D. INLET PRESSURE FOR GAS-FIRED EQUIPMENT: VARIES FROM 11 IN.WG. TO 2.0PSI
E. SIZING PER IFG CODE 2018, CHAPTER 4.
F. SERVICE SIZE OF PIPE = 2", PER CODE, TABLE 402.4(5) BASED ON 3330 CFH AT 2 PSI PRESSURE FOR 225 FEET OF EQUIVALENT LENGTH OF PIPE.

PLUMBING GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- PRIOR TO START OF WORK, CONTRACTOR SHALL CAMERA ALL EXISTING UNDERGROUND SANITARY SEWER LINES. VERIFY UNDERGROUND PIPING LOCATION, DEPTH AND FLOW DIRECTION. REPORT ANY PIPING DAMAGE OR LOCATION DISCREPANCIES TO ENGINEER AND/OR OWNER PRIOR TO START OF WORK.
- EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (E.G. DOMESTIC WATER AND SEWER) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.
- SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.
- SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO-HUB CAST IRON. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2-1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.
- CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER PIPING WITH WROUGHT FITTINGS AND SOLDERED JOINTS. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE CONDENSATE DRAIN PIPING AS FOLLOWS: 1/4" PER FOOT FOR ALL PIPE SIZES.
- PROVIDE WATER SUPPLY SHUT-OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.
- PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.
- PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.
- COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A. REQUIREMENTS.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- INSULATE NEW DOMESTIC COLD WATER, HOT WATER, AND INTERIOR CONDENSATE DRAIN PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R=4.0) WITH PAPER COVERING.
- INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'-0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45°. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.
- EXISTING NATURAL GAS SYSTEM SHALL REMAIN IN USE. VERIFY PROPER OPERATION AND REPORT ANY DEFICIENCIES TO OWNER.

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT, SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

ET1

- EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 2.0-GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.

FCO1

- FLOOR CLEANOUT - HEAVY DUTY: JAY R. SMITH # 4111L CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORIATED NICKEL BRONZE TOP.

FD1

- FLOOR DRAIN: SIOUX CHIEF # 860-APLU SERIES WITH 5" DEEP ROUND PVC BODY, PVC SOCKET OUTLET, ANCHOR FLANGE, ROUND PVC DEBRIS BUCKET, 9" ROUND CAST IRON GRATE AND FRAME. PROVIDE TRAP GUARD.

LV1

- WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
- FAUCET: 4" CENTERSET, VANDAL-RESISTANT, WITH LEVER HANDLES AND 0.5 GPM AERATOR.
- TRIM: GRID DRAIN WITH TAILPIECE, QUARTER-TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1-1/4" 17-GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND INSULATION KIT FOR WATER AND WASTE PIPES.

SEP1

- SEWAGE PUMP: ZOELLER SERIES 912 SIMPLEX SEWAGE SYSTEM OR EQUAL, COMPLETE SEWAGE PUMP SYSTEM WITH BASIN, PUMP, AND NON-CLOG CHECK VALVE, SIZE PUMP FOR 20 GPM AT 18.0 FT.WG HEAD WITH A 2" DISCHARGE CONNECTION.
- ACCESSORIES: CONTROL PANEL, HIGH LEVEL ALARM, BATTERY BACKUP, RETRIEVAL SYSTEM, FLOAT SWITCHES, AND OTHER ACCESSORIES FOR A COMPLETE SYSTEM.
- ELECTRICAL: 1/2 HP PUMP MOTOR, 120V/1Ø POWER CONNECTION.

TMV1

- THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110 DEGREES. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.

WC1

- FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION, AND CLOSE-COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY-DUTY, SEAT-LESS COVER WITH SELF-SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER-TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.

WH1

- WATER HEATER: A.O. SMITH MODEL # DEL-10 OR EQUAL, ELECTRIC, 10 GALLON, 1.5 kW INPUT, 8 GALLON PER HOUR RECOVERY AT 80°F TEMPERATURE RISE AND 120°F OPERATING TEMPERATURE. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ELECTRICAL REQUIREMENTS: 120V/1Ø, 13 FLA.

LINETYPES LEGEND:

- NEW - ABOVE SLAB
- - - NEW - BELOW SLAB
- EXISTING - ABOVE SLAB
- - - EXISTING - BELOW SLAB
- - - - DEMOLITION

PIPING LEGEND:

- ↘ ELBOW DOWN
- ↗ ELBOW UP
- ⊘ P-TRAP
- ↘ TEE DOWN
- ↗ ELBOW UP
- ⊘ SHUT-OFF VALVE (GENERIC)
- ⊘ BALL VALVE
- ⊘ GLOBE VALVE
- ⊘ BUTTERFLY VALVE
- ⊘ GATE VALVE
- ⊘ CHECK VALVE
- ⊘ BALANCING VALVE
- ⊘ PRESSURE REDUCING VALVE
- ⊘ GAS COCK
- ⊘ WYE-STRAINER
- ⊘ UNION
- ⊘ FLANGE
- ⊘ RELIEF VALVE
- ⊘ AIR VENT (MANUAL/AUTOMATIC)
- ⊘ FLOW DIRECTION
- ⊘ PIPE BREAK / CONTINUATION
- ⊘ FLOOR DRAIN
- ⊘ FLOOR SINK
- ⊘ FLOOR CLEANOUT
- ⊘ HOSE BIBB

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
- ⊘ PLAN NOTE
- ⊘ CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

- AFF ABOVE FINISHED FLOOR
- CW DOMESTIC COLD WATER
- (E) EXISTING
- ECO EXTERIOR CLEANOUT
- ET EXPANSION TANK
- FCO FLOOR CLEANOUT
- FD FLOOR DRAIN
- FT.WG FEET WATER GAUGE
- GPM GALLONS PER MINUTE
- HB HOSE BIBB
- HP HORSEPOWER
- IE INVERT ELEVATION
- LV LAVATORY
- MAX MAXIMUM
- MIN MINIMUM
- NHB NON-FREEZE HOSE BIBB
- QTY QUANTITY
- RPZ REDUCED PRESSURE ZONE BACKFLOW PREVENTER
- S SANITARY WASTE
- SOI SAND/OIL INTERCEPTOR
- SP SEWAGE PUMP
- TMV THERMOSTATIC MIXING VALVE
- TRA TO ROOF ABOVE VENT
- WC WATER CLOSET
- WH WATER HEATER
- WCO WALL CLEANOUT

FIXTURE CONNECTION SCHEDULE					
FIXTURE	WASTE	VENT	COLD	HOT	NOTES
LAVATORY - PUBLIC	2"	1-1/2"	1/2"	1/2"	TMV
WATER CLOSET (TANK TYPE)	4"	2"	1/2"	---	---

NOTES:
TMV: POINT OF USE TYPE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070.
VB: ATMOSPHERIC TYPE VACUUM BREAKER CONFORMING TO ASSE 1020.

OIL SEPARATOR CALCULATIONS	
SERVICE AREA	1000 SQ. FT.
OIL SEPARATOR SIZING	
6.0 CU. FT. FOR FIRST 100 SQ. FT. OF DRAINAGE AREA	6 CU. FT.
1.0 CU. FT. FOR EACH ADDITIONAL 100 SQ. FT. OF DRAINAGE AREA	9 CU. FT.
CU. FT. REQUIREMENT	15 CU. FT.
GAL. REQUIREMENT	113 GAL
Sizing methodology complies with UPC section 1017.2 and IPC section 1003.4.2.2.	

5BY5
ENGINEERS

1100 Main Street, 4th Floor
Kansas City, MO 64105
Missouri COA: 2017040776
913-689-9449
contact@5by5eng.com
5by5eng.com



ROSE
DESIGN GROUP INC.

ARCHITECTS ■ PLANNERS

A Division of Rose Design Build

913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051

MISSOURI STATE CERTIFICATE OF www.BuildWithRose.com
AUTHORITY # 2008034845



BUILDING B INTERIOR MODIFICATIONS:

CRASH CHAMPIONS

UNIT B 451 SE OLDHAM PARKWAY

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	05.10.2023
1	CITY COMMENT	10/05/2023

PROJECT NUMBER 23016
DATE ISSUED: 05 / 10 / 2023

SHEET NUMBER

P2.0

PLUMBING DETAILS &
SCHEDULES