

ABBREVIATIONS		(ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)	
ABV ADJ AFC AFF AFG ANSI ARCH ASME ASSY ASTM AUX AWS AWWA	ABOVE ADJUSTABLE ABOVE FINISHED CEILING ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMERICAN NAT'L STANDARDS INSTITUTE ARCHITECT, ARCHITECTURAL AMERICAN SOCIETY OF MECHANICAL ENGRS ASSEMBLY AMERICAN SOCIETY OF TESTING & MATLS AUXILIARY AMERICAN WELDING SOCIETY AMERICAN WATER WORKS ASSOC.	MAX MBH MC MECH MFR MH MIN MTO MUA	MAXIMUM 1000 BTU PER HOUR MECHANICAL CONTRACTOR MECHANICAL MANUFACTURER MANHOLE MINIMUM MOUNTED MAKE-UP AIR
BIF BAS BLDG BMS BOP BOS BTU	BELOW FLOOR BUILDING AUTOMATION SYSTEM BUILDING BUILDING MANAGEMENT SYSTEM BOTTOM OF PIPE BOTTOM OF STRUCTURE BRITISH THERMAL UNIT	N/A N.C NEC NEMA NFPA NIC N.O. N.TS	NOT APPLICABLE NORMALLY CLOSED NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MFR'S ASSOC. NATIONAL FIRE PROTECTION ASSOC. NOT IN CONTRACT NORMALLY OPEN NOT TO SCALE
CC CFH CFM CL CLG CO CONN COP COL CTE CW D DEG DIA (OR Ø) DIM DN DOM DS DWG	CONCRETE CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CENTERLINE CEILING CLEANOUT CONNECT, CONNECTION COLUMN CONNECT TO EXISTING DOMESTIC COLD WATER DEPTH DEGREES DIAMETER DIMENSION DOWN DOMESTIC DOWNSPOUT DRAWING	OH OC OD OPNG ORD OSKY OSHA	OVERHEAD ON CENTER OVERFLOW DRAINAGE OPENING OVERFLOW ROOF DRAIN OUTSIDE STEM AND YOKE OCCUPATIONAL SAFETY & HEALTH ADMIN.
EA EC ELEV ELEC ENCL EQUIP ESP ETR EXH EX	EACH ELECTRICAL CONTRACTOR ELEVATION ELECTRICAL ENCLOSURE EQUIPMENT EXTERNAL STATIC PRESSURE EXISTING TO REMAIN EXHAUST EXISTING	PB PD PH, Ø PIV PLBG PSI PRV	PUSH BUTTON PRESSURE DROP PHASE POST INDICATOR VALVE PLUMBING POUNDS PER SQUARE INCH PRESSURE RELIEF VALVE
FCO FD FF FS FLEX FP FPM FT FW °F	FLOOR CLEANOUT FLOOR DRAIN FINISHED FLOOR FLOOR SINK FLEXIBLE FIRE PROTECTION FEET PER MINUTE FOOT, FEET FILTERED WATER DEGREES FAHRENHEIT	RCP RD REINF REL REQ REV REX RHW RPM RR RWC	REFLECTED CEILING PLAN ROOF DRAIN REINFORCING, REINFORCED RELOCATED REQUIRED REVISION, REVISE REMOVE EXISTING DOMESTIC HOT WATER RETURN REVOLUTIONS PER MINUTE REMOVE AND RELOCATE RAIN WATER CONDUCTOR
G GA GAL GALV GC GI GPD GPH GPM GRD GW	GAS GAUGE GALLON GALVANIZED GENERAL CONTRACTOR GREASE INTERCEPTOR GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE GROUND GREASE WASTE	SAN SECT SF SHT SPEC SQ ST STD SURF SUSP	SANITARY SECTION SQUARE FEET, SQUARE FOOT SHEET SPECIFICATION SQUARE STORM WATER STANDARD SURFACE SUSPEND
H HD HP HVAC HW HYD HZ	HEIGHT HEAD, HUB DRAIN HORSEPOWER HEATING, VENTILATING & A/C DOMESTIC HOT WATER HYDRANT HERTZ	TDH THRU TP TSP TMV TYP	TOTAL DYNAMIC HEAD THROUGH TOTAL PRESSURE TOTAL STATIC PRESSURE THERMOSTATIC MIXING VALVE TYPICAL
ID IE IN IN w.c	INSIDE DIAMETER INVERT ELEVATION INCH, INCHES INCHES OF WATER COLUMN (GAS)	U/F UG US UL UON	UNDERFLOOR UNDERGROUND UNDERSLAB UNDERWRITERS LABORATORIES, INC. UNLESS OTHERWISE NOTED
KEC  LBS. # LP	KITCHEN EQUIPMENT CONTRACTOR  POUNDS LOW PRESSURE	V VAC VTR	VENT VACUUM VENT THROUGH ROOF
		W/ W/O WC	WITH WITHOUT WATER COLUMN

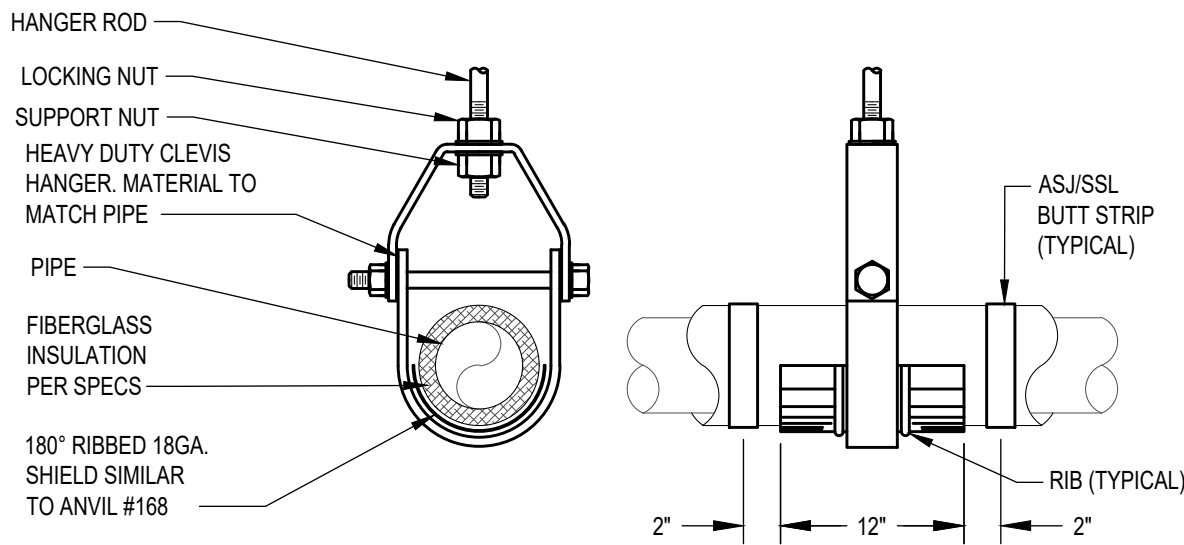
PLUMBING SYMBOLS	
	ELBOW UP
	ELBOW DOWN
	VALVE IN DROP
	DIRECTION OF FLOW
	TEE OUTLET UP
	TEE OUTLET DOWN
	UNION
	EXPANSION JOINT
	BALL VALVE
	OS&Y VALVE
	SHUT-OFF VALVE
	CALIBRATED BALANCING VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	3-WAY SELF OPERATING VALVE
	2-WAY SELF OPERATING VALVE
	MOTOR OPERATED VALVE
	PIPE GUIDE
	HOSE BIB
	SANITARY PIPING
	SANITARY VENT PIPING
	OXYGEN PIPING
	STORM PIPING (UNDERGROUND)
	OVERFLOW DRAIN PIPING
	COLD WATER (CW) PIPING
	HOT WATER (HW) PIPING
	HOT WATER RECIRCULATION (RHW)
	NATURAL GAS PIPING
	GREASE WASTE
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	NEW PIPING / EQUIPMENT
	PIPING ABOVE FLOOR
	PIPING BELOW FLOOR
	CAP ON END LINE
	FLOW SWITCH
	PRESSURE SWITCH
	T&P RELIEF VALVE
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	FLEXIBLE CONNECTION
	PIPE FLANGE
	THERMOMETER WELL
	GAS VALVE
	WATER METER
	GAS REGULATOR
	WALL CLEANOUT OR CLEAOUT PLUG
	FLOOR CLEANOUT
	FLOOR SINK (FS)
	FLOOR DRAIN WITH P-TRAP
	POINT OF CONNECTION - NEW TO EXISTING
	DRAWING NOTE REFERENCE
	PLUMBING FIXTURES
	GAS MANIFOLD LOCATION
	DOUBLE CHECK BACKFLOW PREVENTER
	DOMESTIC WATER RISER
	STUB UP FOR FUTURE TENANT CONNECTION
	SPRINKLER HEAD (SEMI-RECESSED)
	SPRINKLER HEAD (FULLY-RECESSED)
	SPRINKLER HEAD (UPRIGHT)
(ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)	

GAS LOAD SUMMARY SCHEDULE		
TAG	DESCRIPTION	LOAD (CFH)
WH-1	WATER HEATER	76
RTU-1	ROOFTOP UNIT	150
RTU-2	ROOFTOP UNIT	200
	TOTAL CFH	426

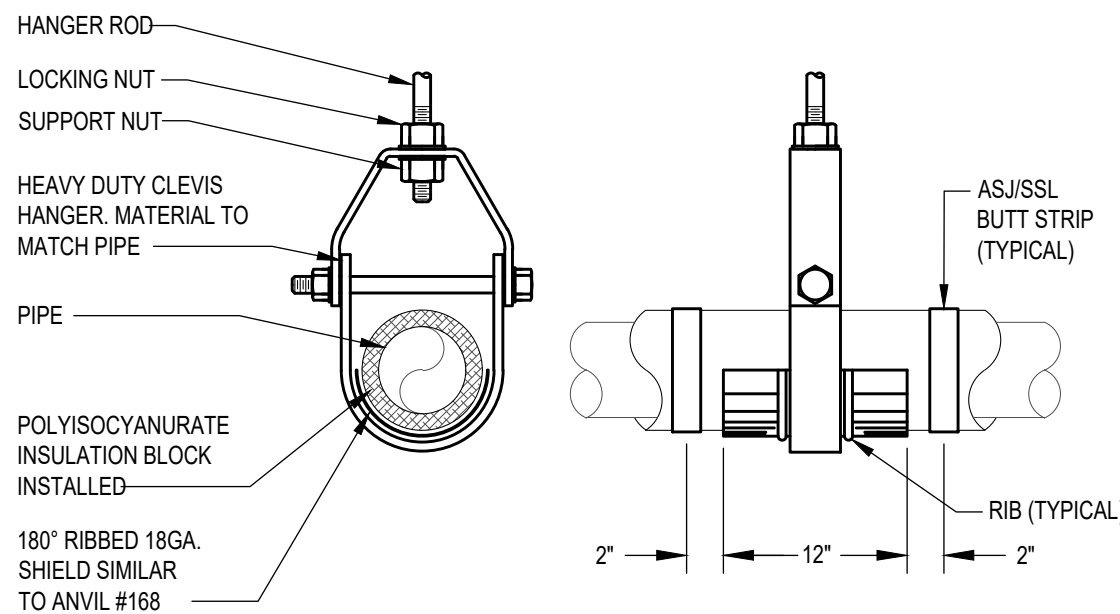
NOTE: GAS PIPING SIZED USING LONGEST LENGTH METHOD. TOTAL DEVELOPED LENGTH OF 180 FT, INCLUDING FITTINGS. LOW PRESSURE DELIVERY TO FIXTURES, SIZED PER 2018 IFGC TABLE 404.2(4).

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE										
TAG	FIXTURE TYPE	CONNECTION SIZE						MFR	MODEL No.	DESCRIPTION
		O2	GAS	SAN	VENT	HW	CW			
BV-1	HOT WATER RECIRCULATION BALANCE VALVE	-	-	-	-	1/2"	-	CALEFFI	116441A(C)	THERMOSTATICALLY CONTROLLED ADJUSTABLE BALANCING VALVE SET TO 135 DEG F WITH INTEGRAL OUTLET THERMOMETER. LEAD FREE BRASS CONSTRUCTION.
EW-1	EMERGENCY EYE-WASH	-	-	-	-	3/4"	3/4"	HAWS	7611	HAWS MSR SINK MOUNT EYE/FACE WASH, SINGLE ACTION SWING-AWAY WITH AXION MSR EYE/FACE WASH HEAD DESIGNED TO MOUNT ON LEFT OR RIGHT SIDE OF SINK. PROVIDE WITH HAWS MODEL 9201EW THERMOSTATIC MIXING VALVE INSTALLED BELOW COUNTER, ASSE 1071 LISTED, 4.1 GPM AT 5 PSI PRESSURE DROP. COORDINATE WITH OWNER'S REPRESENTATIVE FOR TEMPERATURE SET POINT. OTHER APPROVED MANUFACTURERS: BRADLEY, GUARDIAN
EW-1	ELECTRIC WATER COOLER	-	-	1-1/2"	1-1/2"	-	1/2"	ELKAY	LZSTL8WSSP	BI-LEVEL WITH BOTTLE FILLING STATION, SELF-CONTAINED, WALL HUNG ELECTRIC REFRIGERATED WATER COOLER WITH SELF-CLOSING EASY-TOUCH CONTROLS ON FRONT AND BOTH RIGHT AND LEFT SIDE, WATER FILTER, ADA COMPLIANT, AND NO LEAD DESIGN. CHILLING CAPACITY OF 50 DEG. F DRINKING WATER, BASED UPON 80 DEG. F INLET WATER AND 90 DEG. F AMBIENT. ELECTRICAL DATA: 370 RATED WATTS, 5.0 FLA, 115V, 1 PHASE, 60 HZ. OTHER APPROVED MANUFACTURERS: HALSEY TAYLOR, OASIS
FCO	FLOOR CLEANOUT	-	-	SEE PLANS	-	-	-	ZURN	Z1400	ADJUSTABLE CLEANOUT, IF FLOORS ARE TILED OR TERRAZZO PROVIDE WITH EITHER NICKEL, BRONZE OR CHROME FINISH, IF FLOORS ARE CARPETED PROVIDE WITH RECESSED TOP. CLEANOUTS ARE TO BE FLUSH WITH FINISHED FLOOR. OTHER APPROVED MANUFACTURERS: WADE, JOSAM, J.R. SMITH
FD-1	FLOOR DRAIN (GENERAL SERVICE)	-	-	3"	1-1/2"	-	-	JAY R. SMITH	2005-NB	FURNISH WITH DUCO CAST IRON BODY, NICKEL BRONZE STRAINER, TRAP PRIMER CONNECTION. COORDINATE WITH THE ARCHITECT FOR SQUARE OR ROUND TYPE TOP. OTHER APPROVED MANUFACTURERS: WADE, JOSAM, ZURN
FD-2	FLOOR DRAIN (PET WASH AREAS)	-	-	3"	1-1/2"	-	-	JAY R. SMITH	2005-SS	FURNISH WITH DUCO CAST IRON BODY, STAINLESS STEEL STRAINER, TRAP PRIMER CONNECTION. COORDINATE WITH THE ARCHITECT FOR SQUARE OR ROUND TYPE TOP. OTHER APPROVED MANUFACTURERS: WADE, JOSAM, ZURN
HB-1	HOSE BIBB	-	-	-	-	-	3/4"	JAY R. SMITH	5670	BRASS BODY WITH ROUGH FINISH, WHEEL HANDLE, 3/4" HOSE CONNECTION, ASSE 1011 VACUUM BREAKER
IMB-1	ICE MAKER OUTLET BOX	-	-	-	-	-	1/2"	OATEY	88531	METAL WHITE POWDER COATED LEAD FREE ICE MAKER OUTLET BOX WITH 1/2" COPPER SWEAT CONNECTION, QUARTER TURN BALL VALVE, AND WATER HAMMER ARRESTOR. OTHER APPROVED MANUFACTURERS: GUY GRAY, IPS CORP.
LAV-1	LAVATORY WALL HUNG	-	-	1-1/2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD	0355.012	"LUCERNE" WALL HUNG LAVATORY WITH FAUCET LEDGE, FAUCET HOLES ON 4" CENTERS, & WALL HANGER. FAUCET SHALL BE MOEN MODEL 8400 SINGLE HANDLE FAUCET, WITH 4" HANDLE, 1.2 GPM FLOW RATE, 4" SPREAD, CHROME PLATED FINISH, FURNISH WITH CHROME STOPS, SUPPLIES AND A 1-1/4" WHEELCHAIR LAVATORY DRAIN WITH STAINLESS STEEL GRID AND P-TRAP. PROTECT TRAP AND SUPPLIES WITH A TRAP WRAP KIT 500R AS MANUFACTURED BY BROCAR PRODUCTS INC. LAVATORY MOUNTING HEIGHT SHALL BE AS DETAILED ON ARCHITECTURAL DRAWINGS. PROVIDE TMV-1 SET TO 105°F OUTLET TEMPERATURE. OTHER APPROVED LAVATORY MANUFACTURERS: KOHLER, TOTO, MANSFIELD. OTHER APPROVED FAUCET MANUFACTURERS: CHICAGO FAUCETS, DELTA
MS-1	MOP SINK	-	-	3"	1-1/2"	3/4"	3/4"	FIAT	MSB2424	24" X 24" X 10" HIGH, MOLDED STONE MOP SINK WITH VINYL BUMPER GUARDS E-77-AA ON ALL CURBS. PROVIDE MOP SINK WITH 832-AA HOSE AND HOSE BRACKET AND 889-CC MOP HANGER. FAUCET SHALL BE CHICAGO FAUCET 897 WITH BACK SUPPLIES ON ADJUSTABLE CENTERS, VACUUM BREAKER, AND A POLISHED CHROME FINISH. OTHER APPROVED MOP BASIN MANUFACTURERS: MUSTEE & SONS. OTHER APPROVED FAUCET MANUFACTURERS: T&S BRASS, ZURN
PET GROOMING TUB	PET GROOMING TUB	-	-	2"	1-1/2"	1/2"	1/2"	BY OWNER	BY OWNER	PET GROOMING TUB PROVIDED BY OWNER. PLUMBING CONTRACTOR TO PROVIDE PLUMBING CONNECTIONS, TMV-2, AND HAIR TRAP. COORDINATE WITH OWNER AND GC FOR ADDITIONAL INFORMATION IN FIELD.
SK-1	SINK	-	-	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY	GECR2521L	"CELEBRITY, 25" x 21-1/4" x 5-3/8", 20 GAUGE-TYPE 304 STAINLESS STEEL SINGLE COMPARTMENT DROP-IN SINK WITH A 3-1/2" LEFT OFF-SET DRAIN OPENING. FAUCETS MODEL 200-AGNBAE35-317AB FAUCET, 1.5 GPM FLOW RATE, 8" CENTERS, 8" GOOSENECK SPOUT, 4" WRIST BLADE HANDLES, CHROME PLATED FINISH. PROVIDE WITH INSINKERATOR MODEL LC-50 FOOD WASTE DISPOSAL, 1/2 HP, 120V/1PH, 5 AMPS WITH DRAIN FITTING AND STOPPER. PROVIDE CHROME SUPPLIES, SERVICE STOPS AND 1-1/2" P-TRAP WITH CLEANOUT. PROVIDE TMV-1 SET TO 110°F OUTLET TEMPERATURE. OTHER APPROVED MANUFACTURERS: AMERICAN STANDARD, JUST
SK-2	SINK	-	-	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY	GECR2521L	"CELEBRITY, 25" x 21-1/4" x 5-3/8", 20 GAUGE-TYPE 304 STAINLESS STEEL SINGLE COMPARTMENT DROP-IN SINK WITH A 3-1/2" LEFT OFFSET DRAIN OPENING. FAUCET SHALL BE CHICAGO FAUCETS MODEL 200-AGNBAE35-317AB FAUCET, 1.5 GPM FLOW RATE, 8" CENTERS, 8" GOOSENECK SPOUT, 4" WRIST BLADE HANDLES, AND #LX-35 STRAINER/DRAIN FITTING. PROVIDE CHROME SUPPLIES, SERVICE STOPS AND 1-1/2" P-TRAP WITH CLEANOUT. PROVIDE TMV-1 SET TO 110°F OUTLET TEMPERATURE. OTHER APPROVED MANUFACTURERS: AMERICAN STANDARD, JUST
SK-3	SINK	-	-	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY	BCR15	"CELEBRITY, 15" x 15" x 6-1/8", 20 GAUGE-TYPE 304 STAINLESS STEEL SINGLE COMPARTMENT DROP-IN SINK WITH A 3-1/2" CENTER DRAIN OPENING. FAUCET SHALL BE CHICAGO FAUCETS MODEL 200-AGNBAE35-317AB FAUCET, 1.5 GPM FLOW RATE, 8" CENTERS, 8" GOOSENECK SPOUT, 4" WRIST BLADE HANDLES, AND #LX-35 STRAINER/DRAIN FITTING. PROVIDE CHROME SUPPLIES, SERVICE STOPS AND 1-1/2" P-TRAP WITH CLEANOUT. PROVIDE TMV-1 SET TO 110°F OUTLET TEMPERATURE. OTHER APPROVED MANUFACTURERS: AMERICAN STANDARD, JUST
SK-4	SCRUB SINK	-	-	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY	EWSF13026KWSC	SURGEON SCRUB SINK 30" x 23" x 26", 16 GAUGE-TYPE 304 STAINLESS STEEL SINGLE COMPARTMENT WALL MOUNTED SINK WITH A 3-1/2" CENTER DRAIN OPENING, WITH KNEE OPERATED FAUCET AND SOAP DISPENSER. FAUCET SHALL BE LAMINAR FLOW PROVIDED WITH THE SINK BY ELKAY. SOAP DISPENSER SHALL BE PROVIDED WITH SINK BY ELKAY. PROVIDE CHROME SUPPLIES, SERVICE STOPS AND 1-1/2" P-TRAP. PROVIDE TMV-1 SET TO 110°F OUTLET TEMPERATURE. OTHER APPROVED MANUFACTURERS: JUST
TD-1	TRENCH DRAIN	-	-	2"	1-1/2"	-	-	JAY R. SMITH	9666	13'-0" LONG FABRICATED 14 GA TYPE 304 STAINLESS STEEL BODY WITH VANDAL-PROOF STAINLESS STEEL PERFORATED GRATE AND 2" NO-HUB BOTTOM OUTLET. GRATE HAS 1/4 INCH DIA. PERFORATIONS. OTHER APPROVED MANUFACTURERS: WADE, JOSAM, ZURN
TMV-1	THERMOSTATIC MIXING VALVE	-	-	-	-	1/2"	1/2"	CASH ACME	HG135	POINT OF USE ASSE 1070 RATED THERMOSTATIC MIXING VALVE, OUTLET TEMPERATURE: 110°F AT NON-PUBLIC BACK OF HOUSE HANDSINKS AND 105° F AT PUBLIC LAVS, 3/8" COMPRESSION RINGS, NICKEL PLATED. INSTALLED AT ALL SINGLE COMPARTMENT BAR SINKS, DUMP SINKS, HANDWASH SINKS AND LAVS. CONTRACTOR MAY CHOOSE TO USE ASSE 1070 MIXING VALVE OFFERED AS ACCESSORY BY FAUCET MANUFACTURER IN LIEU OF TMV-1. OTHER APPROVED MANUFACTURERS: BRADLEY CORPORATION, WATTS, LAWLER, ZURN, POWERS.
TMV-2	THERMOSTATIC MIXING VALVE	-	-	-	-	1/2"	1/2"	CASH ACME	HG110-HX	POINT OF USE ASSE 1070 RATED THERMOSTATIC MIXING VALVE, OUTLET TEMPERATURE: 120°F OUTLET TEMPERATURE SET POINT, NICKEL PLATED. INSTALLED AT ALL MOP SINKS AND DOG GROOMING TUBS. OTHER APPROVED MANUFACTURERS: BRADLEY CORPORATION, WATTS, LAWLER, ZURN, POWERS.
TP-1	UNDER-LAV TRAP PRIMER	-	-	-	-	-	1/2"	PRECISION PLUMBING PRODUCTS	PRO1-UJP500	UNDER-LAV AUTOMATIC TRAP PRIMER, CHROME PLATED FINISH, 1/2" INLET, 1/2" OUTLET TO FLOOR DRAIN WITH ESCUTCHEON, 3/8" OUTLET TO LAV COLD WATER SUPPLY. ASSE 1018 CERTIFIED.
UT-1	FLOOR MOUNTED UTILITY TUB	-	-	1-1/2"	1-1/2"	1/2"	1/2"	MUSTEE & SONS	19F	24" x 20" FLOOR MOUNTED ONE PIECE MOLDED THERMOPLASTIC "UTILATUB" WITH DRAIN ASSEMBLY AND FLOOR MOUNTING HARDWARE. FAUCET SHALL BE MUSTEE & SONS MODEL 93.600, 4" CENTER SET BRASS BODY AND SWING SPOUT.
WB-1	WASHING MACHINE BOX	-	-	2"	1-1/2"	1/2"	1/2"	GUY GRAY	WB-200	20 GA. BOX WITH SINGLE LEVER VALVE, 1/2"NPT BRASS SWEAT CONNECTION AND 2" PVC DRAIN. MAKE FINAL CONNECTIONS TO MACHINE. UNIT SHALL BE 82043.
WC-1	FLOOR MOUNTED WATER CLOSET (ADA)	-	-	3"	2"	-	1/2"	AMERICAN STANDARD	2467.016	"CADET" RIGHT HEIGHT, PRESSURE ASSIST, TWO-PIECE, 1.6 GPF, ELONGATED FLUSH TANK TOILET WITH ALL ASSOCIATED TRIM, FITTINGS AND HARDWARE. SEAT SHALL BE BEMIS MODEL 1950SS, WHITE SOLID PLASTIC SEAT WITH STAINLESS STEEL HARDWARE, OPEN FRONT WITH COVER. OTHER APPROVED MANUFACTURERS: KOHLER, MANSFIELD, TOTO
WH-1	GAS FIRED WATER HEATER	-	1"	-	-	1-1/4"	1-1/4"	A.O. SMITH	BTX-80	GLASS-LINED WATER HEATER WITH 50 GALLON STORAGE AND 3 YEAR WARRANTY, 120V, SINGLE PHASE, 60 HZ, 95 GPH RECOVERY AT 90 DEG F TEMPERATURE RISE. 140 DEG F STORAGE TEMPERATURE. UNIT SHALL BE COMPLETELY FACTORY PREWIRED AND SHALL BE UL LISTED. FURNISH HEATER WITH APPROPRIATE WATTS REGULATOR TEMP AND PRESSURE (T&P) RELIEF VALVE ALONG WITH A VACUUM BREAKER VALVE. SAFEWASTE RELIEF PIPE TO NEAREST FLOOR DRAIN. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT. OTHER APPROVED MANUFACTURERS: STATE, AMERICAN, BRADFORD WHITE
ET-1	EXPANSION TANK	-	-	-	-	-	3/4"	AMTROL	ST-12C-DD	ASME RATED THERMAL EXPANSION TANK, 3.2 GALLON ACCEPTANCE VOLUME, 150 PSI WORKING PRESSURE, STEEL CONSTRUCTION. 65 TOTAL SYSTEM GALLONS. CONTRACTOR SHALL MEASURE THE SYSTEM PRESSURE AT POINT OF INSTALLATION AND CHARGE ET TO MEASURED PRESSURE. OTHER APPROVED MANUFACTURERS: ELBI, TACO
RP-1	HOT WATER RECIRCULATING PUMP	-	-	-	-	1/2"	-	BELL & GOSSETT	NBF-36	LEAD FREE BRONZE CONSTRUCTION, 120V/1PH, 270 WATTS, 2.30 AMPS, 3300 RPM, 2.5 GPM FLOW RATE AT 15 FEET HEAD, SET TO SPEED 1. PROVIDE AQUASTAT SET TO 140 DEG F. OTHER APPROVED MANUFACTURERS: TACO, GRUNDFOS
ZVB-1	ZONE VALVE BOX	3/4"	-	-	-	-	-	BEACONMEDAES	ZVB1-B-ENG	SINGLE ZONE VALVE BOX WITH THREE PIECE BRONZE FULL PORT, DOUBLE SEAL, BALL VALVE WITH MAXIMUM WORKING PRESSURE OF 600 PSIG. BOX CONSTRUCTED OF 18 GAUGE STEEL WITH WHITE EPOXY FINISH. ZONE VALVE AND BOX ASSEMBLY SHALL MEET ALL THE REQUIREMENTS OF NFPA 99, CSA Z7396-1:09 AND AS2886-2011. VALVE SHALL CONFORM TO MSS SP-110, TYPE K COPPER TUBE EXTENSIONS SHALL CONFORM TO ASTM B88, UNS NO. C12200, AND H58 TEMPER. GAUGES SHALL CONFORM TO ANSI B40.1. PROVIDE WITH GAS SENSOR MOUNTED INSIDE BOX.
OMC-1	OXYGEN MANIFOLD CONTROLLER	3/4"	-	-	-	-	-	BEACONMEDAES	MNE-HH4X4-Q2-AS	4X4 AUTOMATIC CHANGEOVER MANIFOLD CONTROLLER AT 55 PSI DELIVERY PRESSURE. LED ELECTRONICS, NEMA 4 ENCLOSURE FOR POWER SUPPLY AND CONTROL BOARD, 1/4 TURN SHUT-OFF VALVE, STAINLESS STEEL SOLENOID VALVE, 250mA AT 120V/1PH POWER, AND MEETS THE REQUIREMENTS OF NFPA 99.
MGA-1	MEDICAL GAS ALARM	-	-	-	-	-	-	BEACONMEDAES	M3-C01-O	MEGAS MEDICAL GAS ALARM, COMBINATION AREA AND MASTER ALARM, DISPLAY FOR UP TO 3 GASES, 10 INPUTS, AND 6 RELAY OUTPUTS. LED DISPLAY FOR GAS NAME, ROOM NAMES, PRESSURE, AND STATUS. AUDIBLE ALARM. MEETS THE REQUIREMENTS OF NFPA 99.
MGO-1	MEDICAL GAS OUTLET	1/2"	-	-	-	-	-	BEACONMEDAES	SERIES B DISS	DISS MEDICAL GAS CEILING OUTLET FOR O2, UL LISTED, CSA CERTIFIED, AND NFPA 99 COMPLIANT.

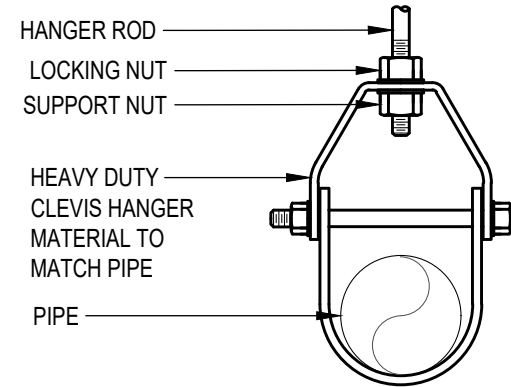




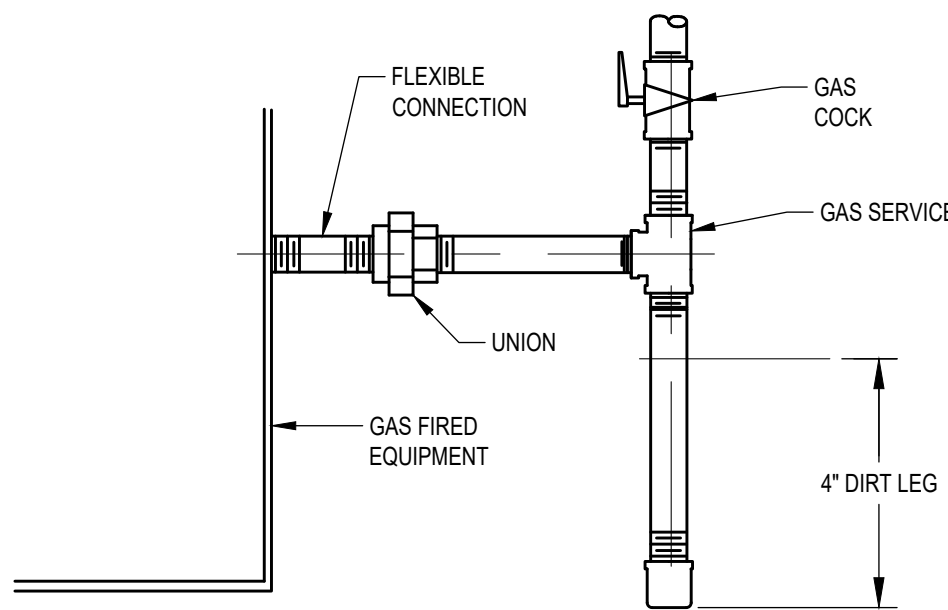
1	UP TO 1-1/4" PIPE SUPPORT DETAIL
P002	SCALE: NONE



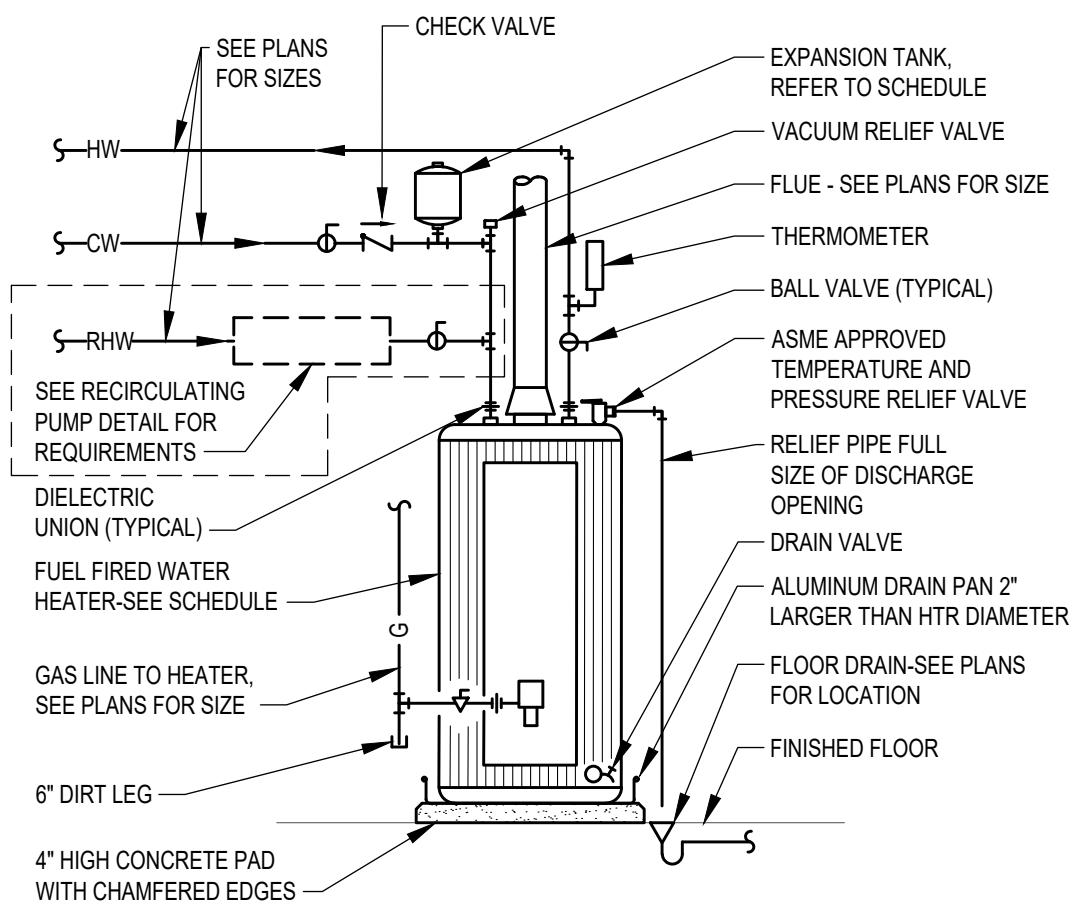
2	PIPE SUPPORT DETAIL 1-1/2" - 12"Ø
P002	SCALE: NONE



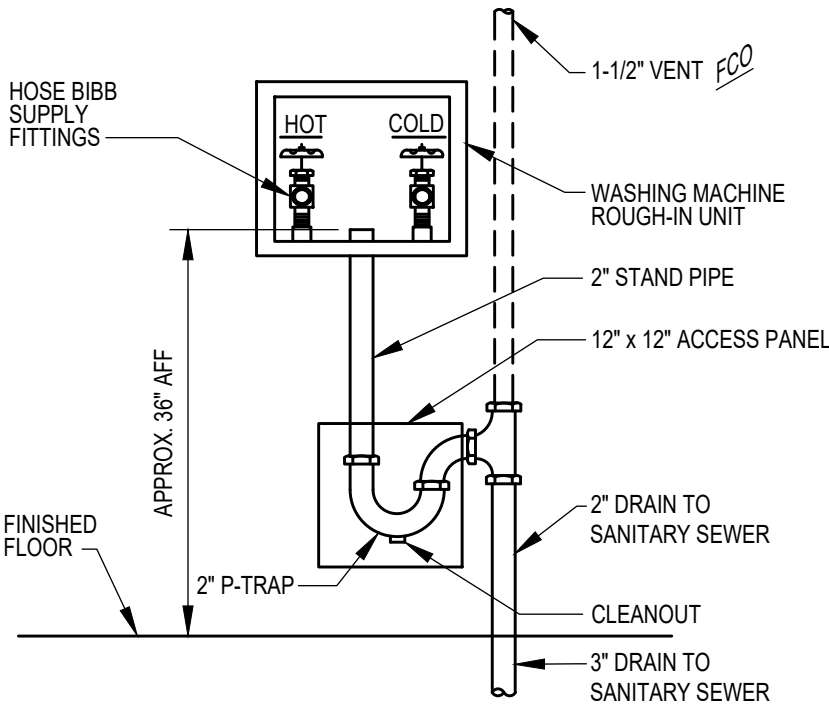
3	UNINSULATED PIPE SUPPORT DETAIL
P002	SCALE: NONE



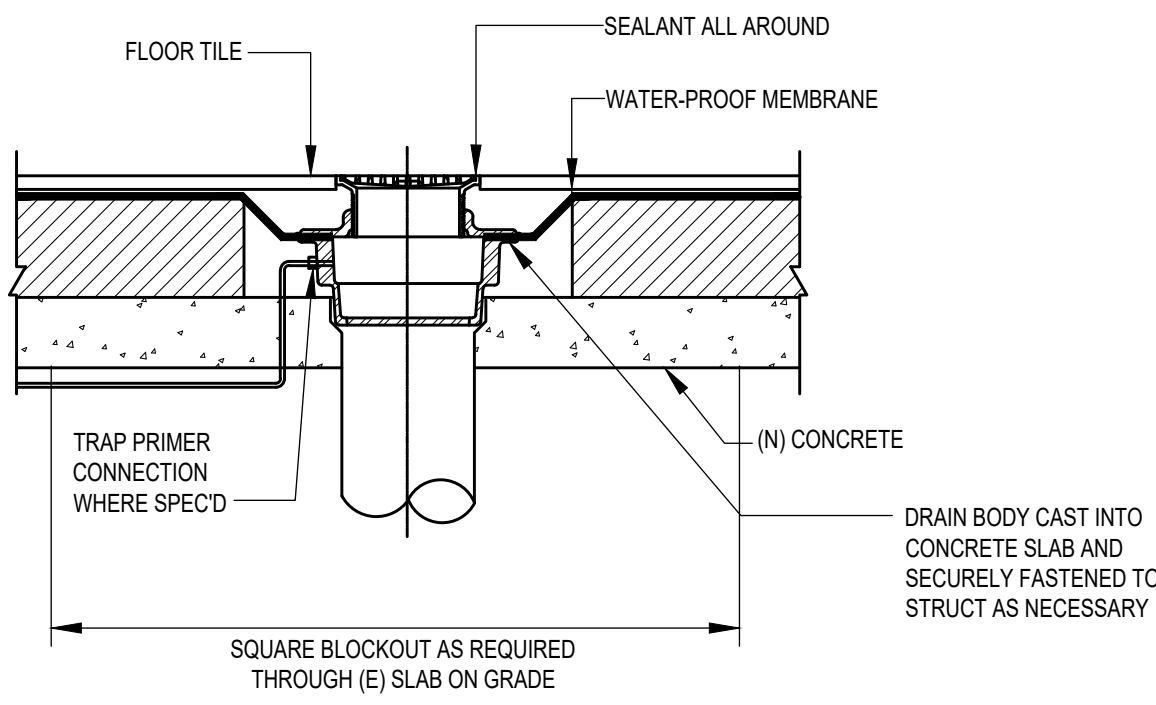
4	GAS CONNECTION DETAIL
P002	SCALE: NONE



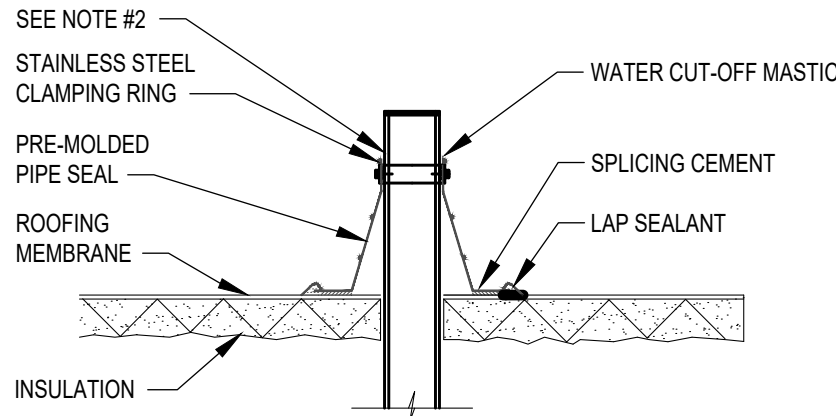
5	FUEL FIRED WATER HEATER DETAIL
P002	SCALE: NONE



9	WASHING MACHINE HOOK-UP DETAIL
P002	SCALE: NONE

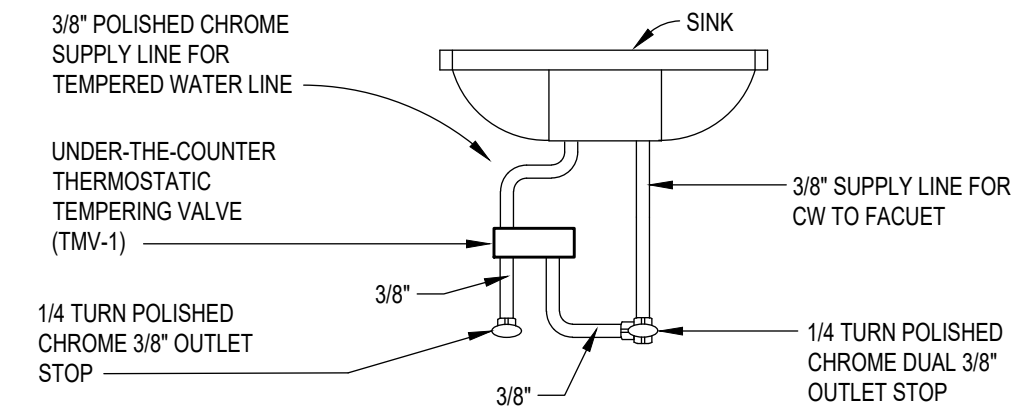


7	FLOOR DRAIN DETAIL
P002	SCALE: NONE

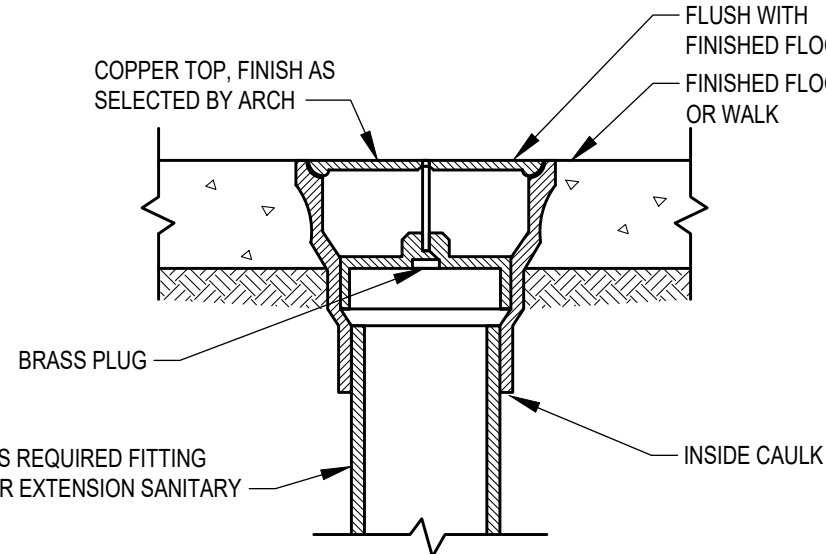


- DETAIL NOTES**
- PRE-MOLDED PIPE SEAL CANNOT BE CUT VERTICALLY TO BE INSTALLED.
  - PRE-MOLDED PIPE SEAL MUST HAVE INTACT RIB AT THE TOP EDGE, REGARDLESS OF THE PIPE DIAMETER.
  - WHEN PRE-MOLDED PIPE SEAL CANNOT BE INSTALLED, USE FIELD FABRICATED PIPE SEAL.
  - FOR BALLAST SYSTEMS, REPLACE BALLAST AFTER WORK IS COMPLETED.
  - FLANGE MUST BE SET BY ROOFER. COORDINATE WITH ROOFING CONTRACTOR.
  - VENTS SHALL BE A MINIMUM OF 15'-0" FROM OUTSIDE AIR INTAKES.
  - DO NOT TRIM DECK FLANGE.

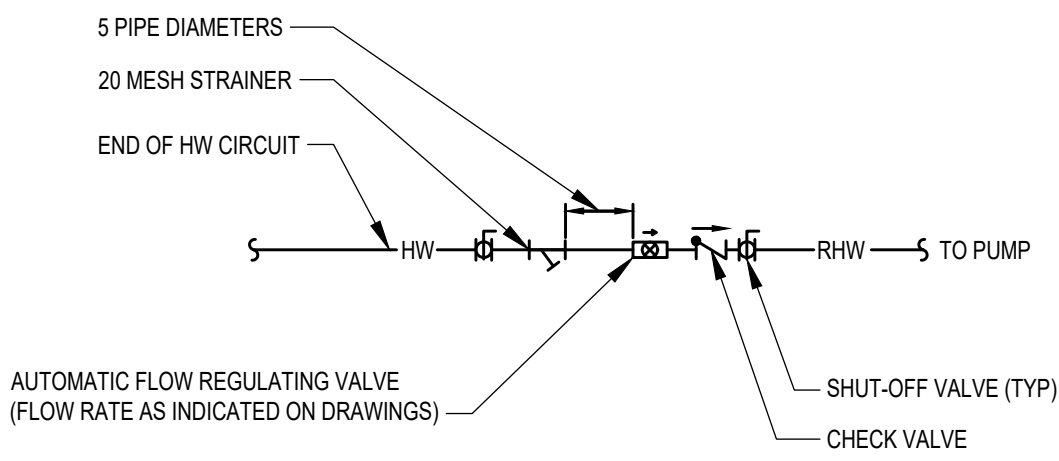
8	PIPE THROUGH ROOF DETAIL
P002	SCALE: NONE



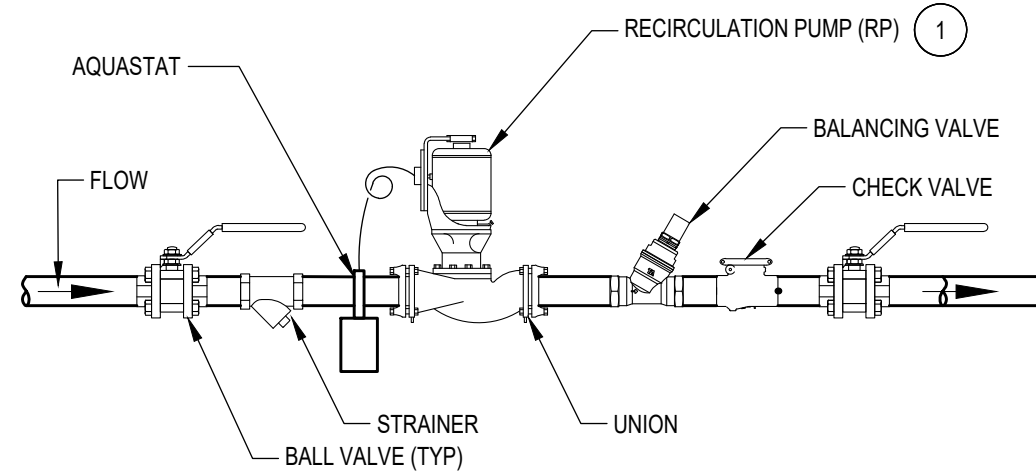
9	"TMV" THERMOSTATIC MIXING VALVE DETAIL
P002	SCALE: NONE



10	FLOOR CLEANOUT DETAIL
P002	SCALE: NONE



11	RHW CIRCUIT VALVING DETAIL
P002	SCALE: NONE



- NOTES**
- REFER TO RECIRCULATION PUMP SCHEDULE FOR ADDITIONAL INFORMATION.

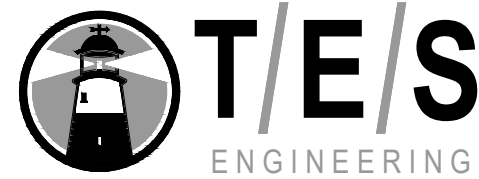
12	RECIRCULATING PUMP DETAIL
P002	SCALE: NONE

RELEASE FOR CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
04/27/2021

**CURRAN**  
ARCHITECTURE

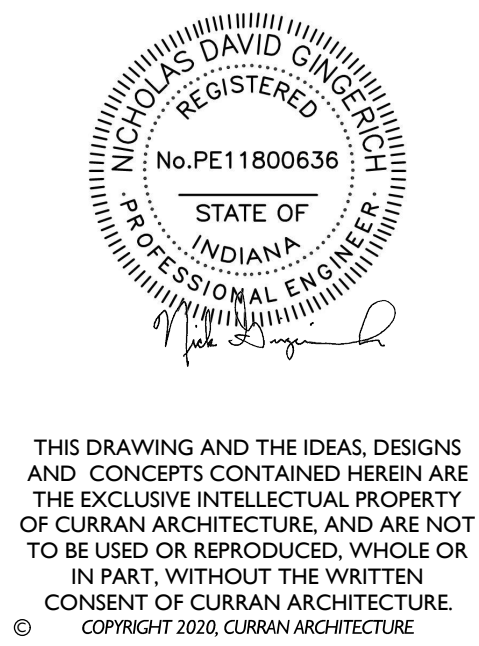
5719 LAWTON LOOP E. DR.  
#212 INDIANAPOLIS, IN 46216  
O :: 317 . 288 . 0681  
F :: 317 . 288 . 0753

DRAWN BY: JJC CHECKED BY: DLJ



25760 First Street  
Cleveland, OH 44145  
P 440 871 2410  
F 440 871 7954  
tesengineering.com

CERTIFICATION



THIS DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF CURRAN ARCHITECTURE. AND ARE NOT TO BE USED OR REPRODUCED, WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF CURRAN ARCHITECTURE. COPYRIGHT 2020, CURRAN ARCHITECTURE.

PROJECT INFORMATION

LEE'S SUMMIT ANIMAL HOSPITAL NORTH

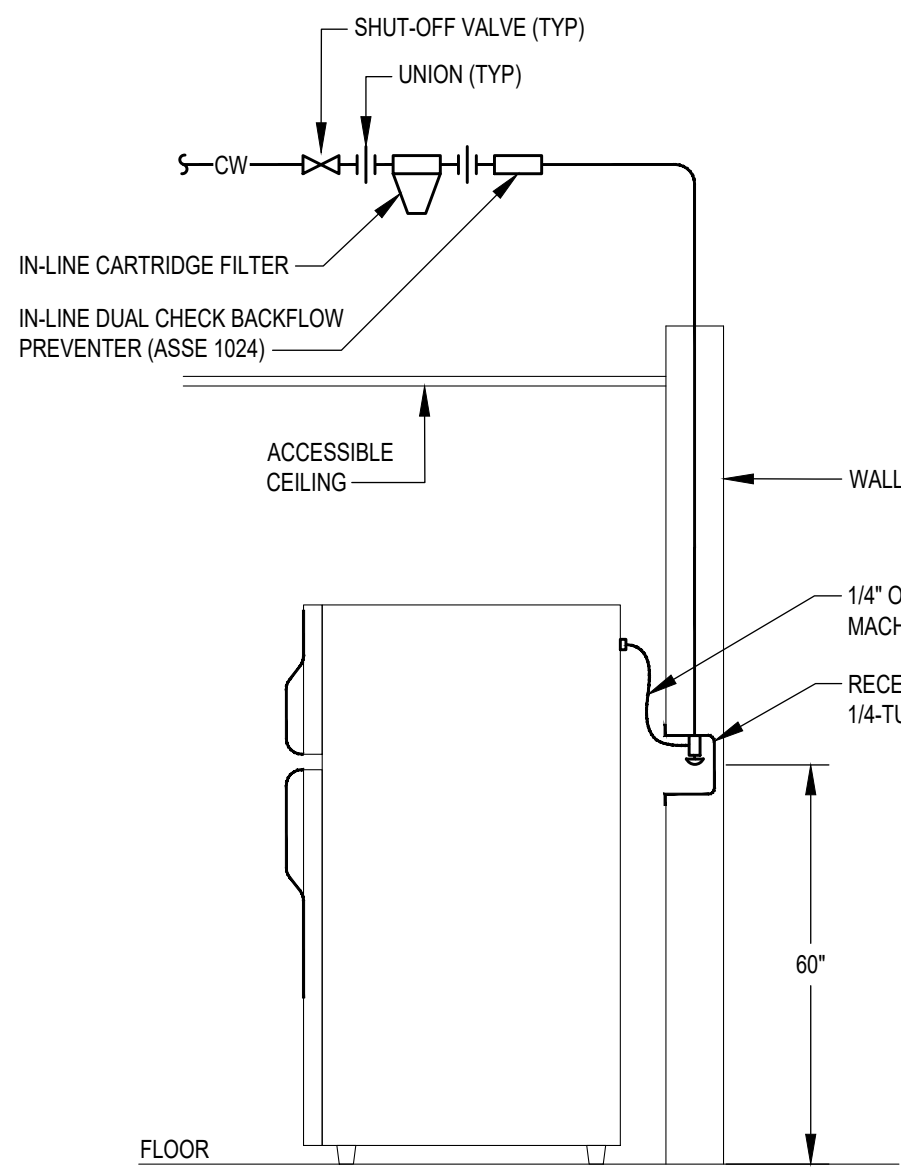
250 NW McNARY COURT  
LEE'S SUMMIT, MO 64086

ISSUE DATES

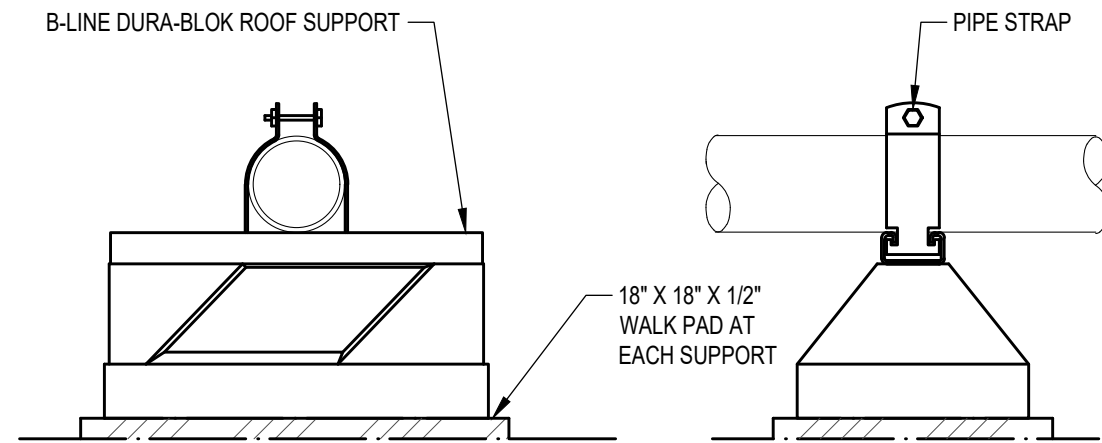
PERMIT SET	04.01.21
------------	----------

210095  
PLUMBING DETAILS

P002

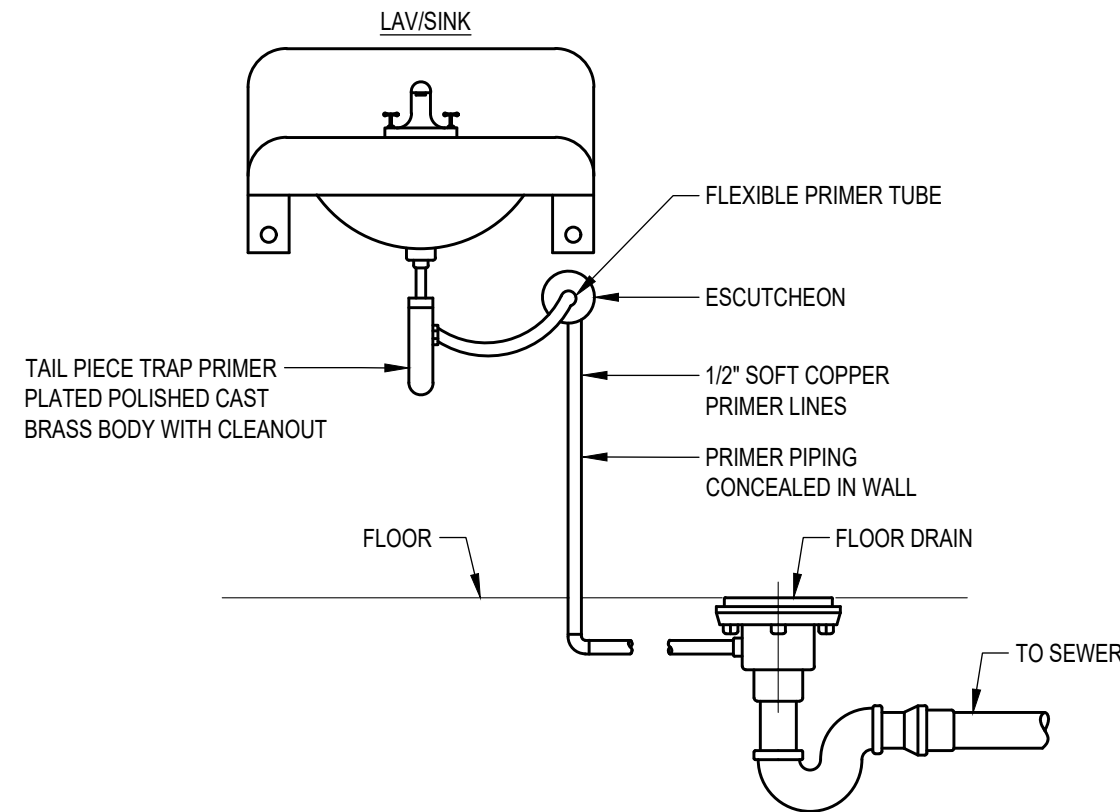


1	REFRIGERATOR WITH ICE MAKER PIPING DIAGRAM
P003	SCALE: NONE

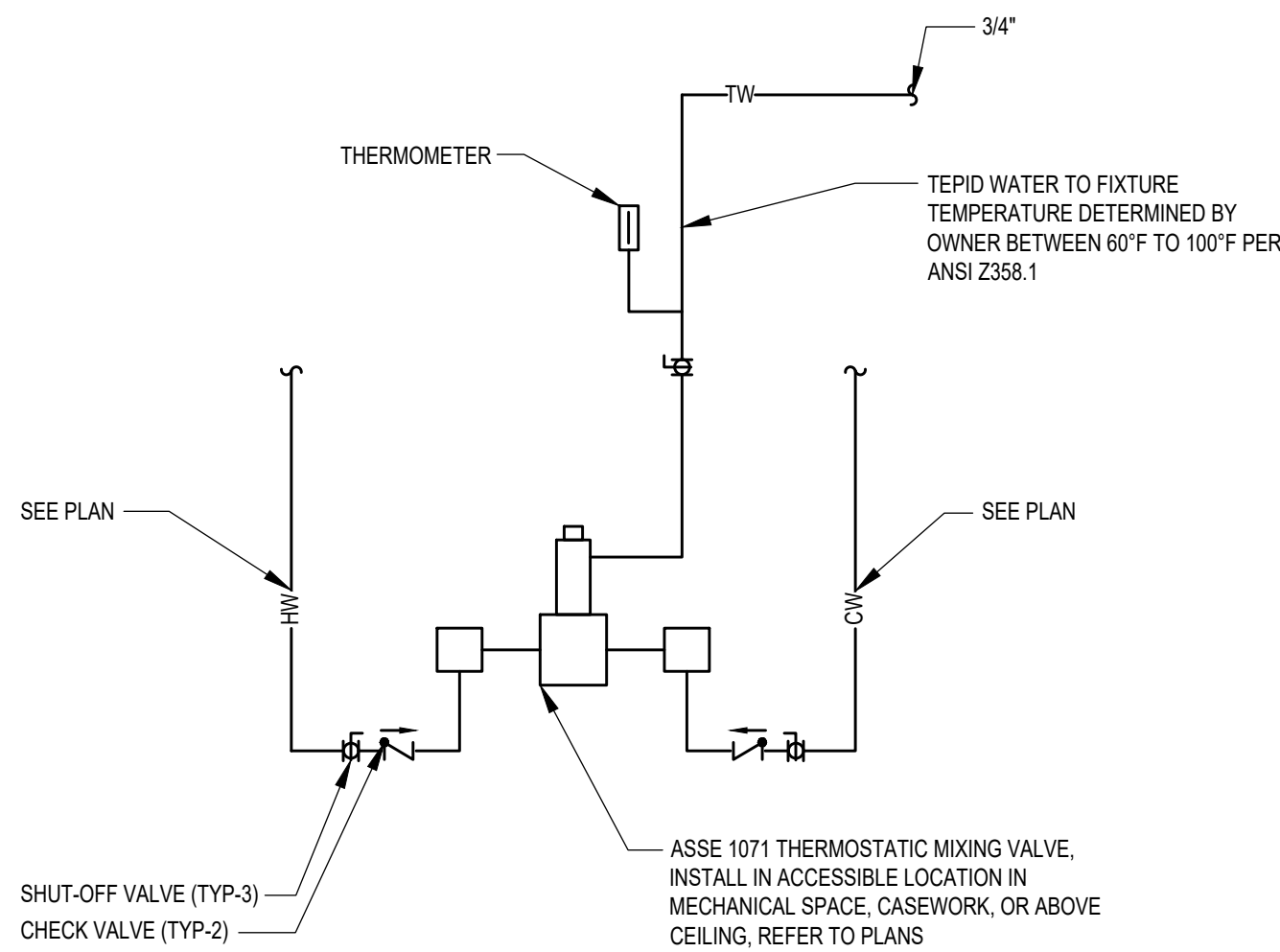


- DETAIL NOTES
1. INSTALLATION SHALL BE PER MANUFACTURERS RECOMMENDATIONS.
  2. WOOD BLOCK SUPPORTS ARE NOT ACCEPTABLE
  3. BLACK IRON PIPING SHALL BE PAINTED; (PAINTING OF GALVANIZED PIPING IS NOT REQ'D)

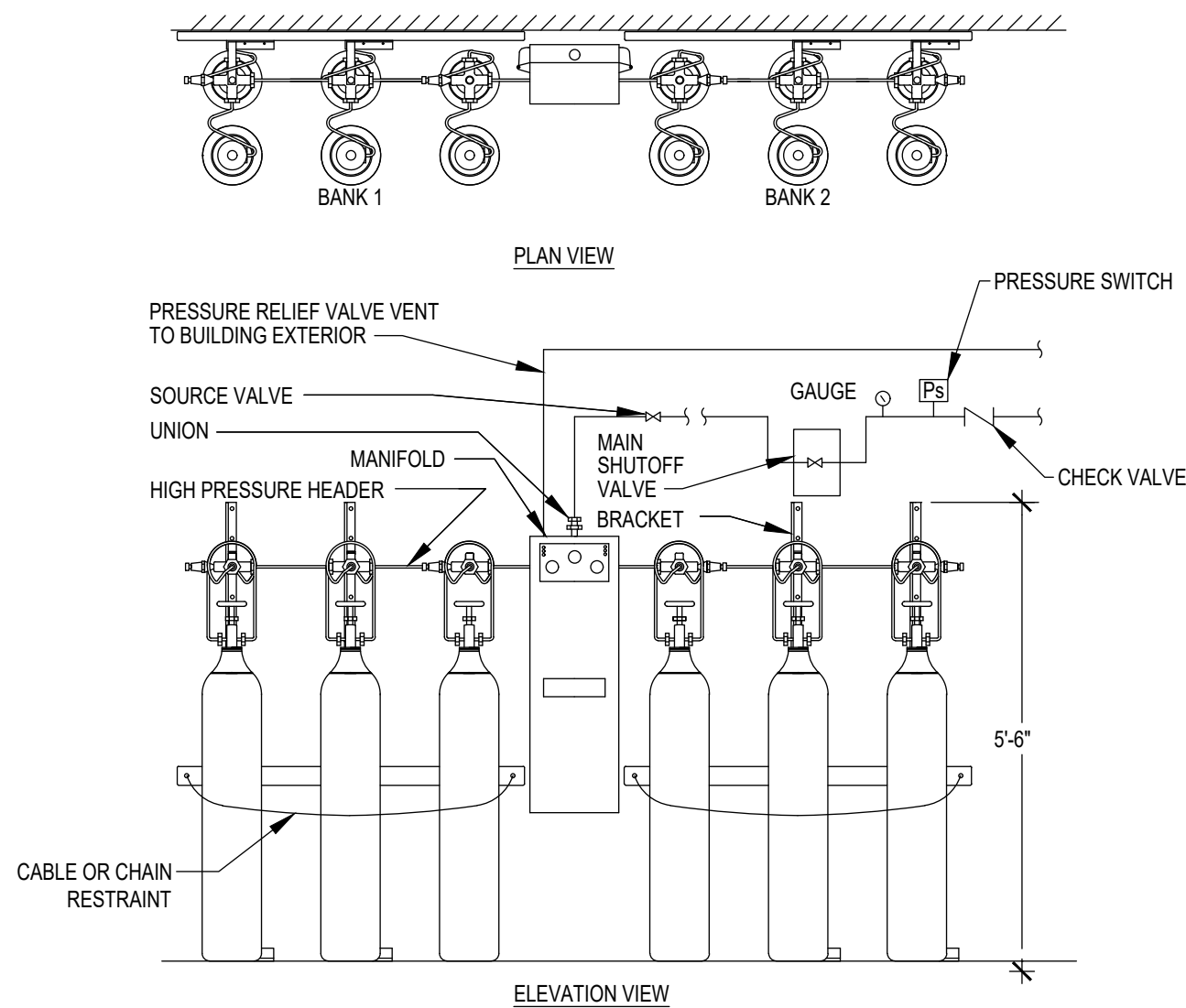
2	GAS SUPPORT ON ROOF DETAIL
P003	SCALE: NONE



3	TRAP PRIMER DETAIL
P003	SCALE: NONE

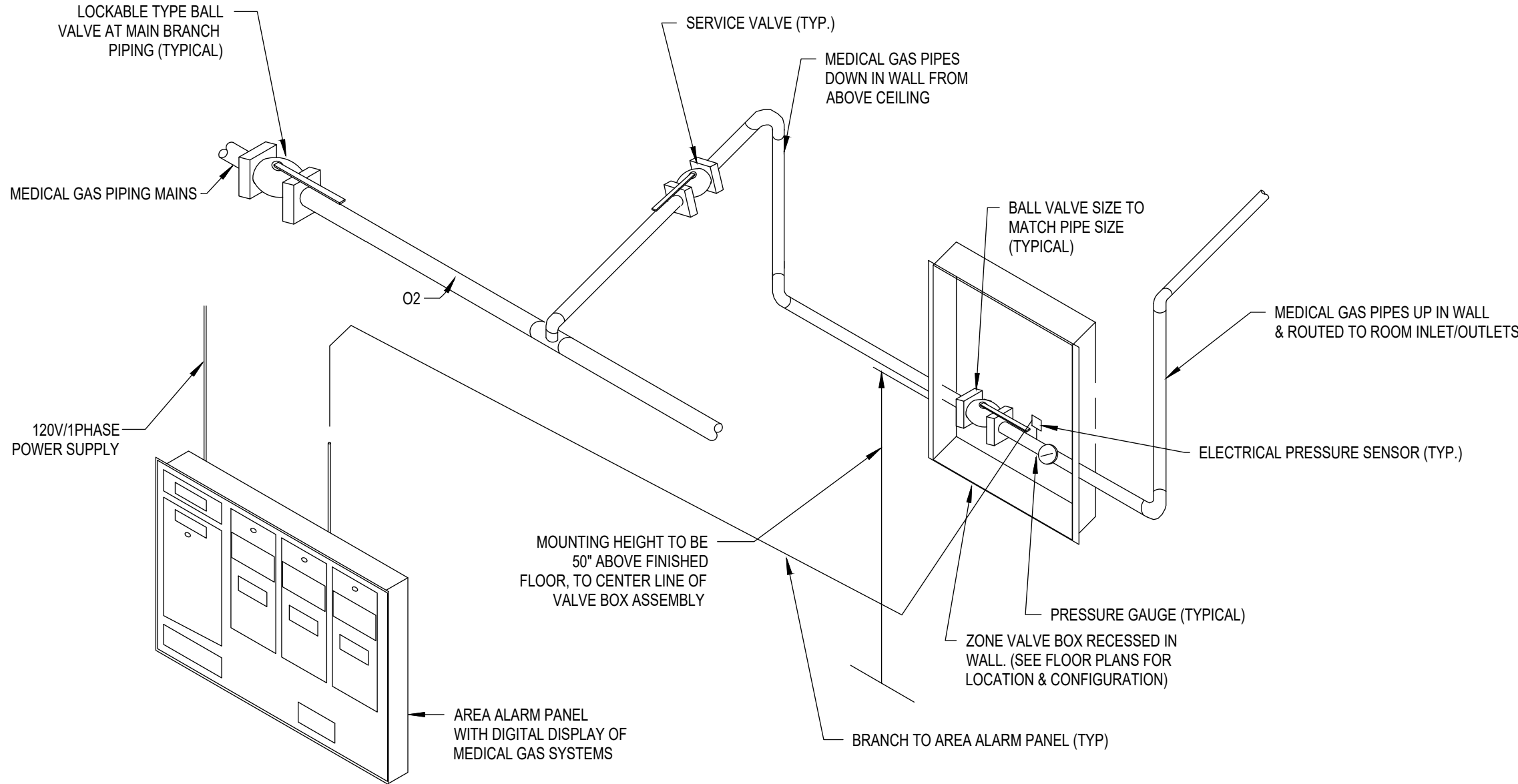


4	EMERGENCY FIXTURE TMV DIAGRAM
P003	SCALE: NONE



- DETAIL NOTES
1. THIS IS A GENERIC DETAIL. REFER TO THE PLANS AND SCHEDULES FOR MANIFOLD SIZE.

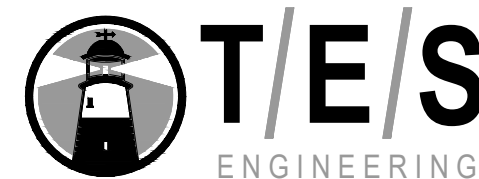
5	MEDICAL GAS CYLINDER MANIFOLD DETAIL
P003	SCALE: NONE



6	ZONE VALVE MOX AND AREA ALARM DETAIL
P003	SCALE: NONE

**CURRAN**  
ARCHITECTURE  
5719 LAWTON LOOP E. DR.  
#212 INDIANAPOLIS, IN 46216  
O :: 317 . 288 . 0681  
F :: 317 . 288 . 0753

DRAWN BY: JJC CHECKED BY: DLJ



25760 First Street  
Cleveland, OH 44145  
P 440 871 2410  
F 440 871 7954  
tesengineering.com

CERTIFICATION



THIS DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF CURRAN ARCHITECTURE, AND ARE NOT TO BE USED OR REPRODUCED, WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF CURRAN ARCHITECTURE. COPYRIGHT 2020, CURRAN ARCHITECTURE

PROJECT INFORMATION

LEE'S SUMMIT ANIMAL  
HOSPITAL NORTH

250 NW McNARY COURT  
LEE'S SUMMIT, MO  
64086

ISSUE DATES

PERMIT SET 04.01.21

210095

PLUMBING DETAILS

P003



PLUMBING SPECIFICATIONS

GENERAL

REFER TO ALL OTHER DRAWINGS AND SPECIFICATIONS AND BE RESPONSIBLE FOR ALL APPLICABLE PROVISIONS THEREIN. FURNISH AND INSTALL ALL NECESSARY LABOR AND MATERIALS FOR A COMPLETE SYSTEM. ANY APPLIANCES OR MATERIALS OBVIOUSLY A PART OF THE SYSTEM AND NECESSARY FOR ITS PROPER OPERATION ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL.

ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES INCLUDING THE BUILDING CODE AND ANY SPECIAL OWNER REQUIREMENTS IN ADDITION TO THOSE SPECIFIED. ATTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES. EQUIPMENT AND MATERIALS SHALL BE NEW, UNLESS OTHERWISE SPECIFIED.

APPLICABLE CODES AND STANDARDS:

- 2018 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL PLUMBING CODE
- 2018 INTERNATIONAL FUEL GAS CODE
- 2018 NFPA 99
- ALL FEDERAL, STATE AND LOCAL CODES OR ORDINANCES.

DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY FITTING, OFFSET, DROP AND RISE OF RUNS AND DETAIL. DO NOT SCALE DRAWINGS.

INSTALL EQUIPMENT AND CONTROLS IN A NEAT, WORKMANLIKE MANNER AND IN ACCORDANCE WITH GOOD PRACTICE FOR A COMPLETE, WORKABLE INSTALLATION. AVOID CONFLICT WITH LOCATIONS OF FIXTURES, APPARATUS, DUCTWORK AND PIPING. AND WHILE THESE DRAWINGS ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE, IF IT IS NECESSARY TO CHANGE THE LOCATION OF SAME TO ACCOMMODATE BUILDING CONDITIONS, MAKE CHANGES WITHOUT ADDITIONAL COST TO THE OWNER AND AS APPROVED BY THE ARCHITECT.

PROVIDE ADEQUATE ACCESS TO THE EQUIPMENT AND APPARATUS REQUIRING OPERATION, SERVICE OR MAINTENANCE WITHIN THE LIFE OF THE EQUIPMENT AND THE SYSTEM.

DO NOT RUN PIPING OR LOCATE EQUIPMENT (WITH RESPECT TO SWITCHBOARDS, PANEL BOARDS, POWER PANELS, MOTOR CONTROL CENTERS OR DRY TYPE TRANSFORMERS) WITHIN 42 INCHES OF FRONT OF EQUIPMENT, OVER EQUIPMENT, OR WITHIN 36 INCHES HORIZONTALLY OF THAT SAME SPACE.

SEAL AROUND ALL PIPES PENETRATING FIRE WALLS, SMOKE WALLS OR FLOORS IN ACCORDANCE WITH THE GENERAL TRADE'S SPECIFICATIONS.

PROVIDE WATER HAMMER ARRESTERS ON HOT AND COLD WATER PIPING IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE (PDI) STANDARD PD1-WH-201.

PROVIDE QUARTER-TURN BRASS SUPPLY STOP SHUT-OFF VALVES AT EACH PLUMBING FIXTURE.

PROVIDE CORRUGATED STAINLESS STEEL FLEXIBLE HOSES FROM SUPPLY STOP SHUT-OFF VALVES TO EACH PLUMBING FIXTURE.

ALL KITCHEN FIXTURES AND EQUIPMENT SHALL HAVE HARD PIPE CONNECTIONS.

EXISTING CONDITIONS

CONTRACTOR SHALL VISIT THE SITE AND GET FAMILIARIZED WITH THE JOB CONDITIONS BEFORE SUBMITTING A PROPOSAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND SIZES OF ALL EXISTING UTILITY SERVICES AND CONDITIONS PRIOR TO SUBMITTING A PROPOSAL. NO CONSIDERATION WILL BE GIVEN TO CLAIMS FOR EXTRA COST ARISING FROM CONTRACTOR'S FAILURE TO BE FULLY COGNIZANT OF JOB OR SITE CONDITIONS EXISTING AT TIME OF ACCEPTANCE OF BID.

IF DURING THIS SITE VISIT THE CONTRACTOR FINDS ANY OBSTRUCTION OR INTERFERENCE THAT MAY PROHIBIT THE PROPER INSTALLATION OF WORK, THE CONTRACTOR SHALL MAKE IT KNOWN TO THE BUILDING MANAGEMENT AND/OR OWNER BEFORE AND AT THE TIME OF SUBMITTING A PROPOSAL.

BY SUBMISSION OF THE BID, IT IS UNDERSTOOD THAT SUCH INSPECTION HAS BEEN MADE AND INCLUDES ALL THE MATERIALS AND REQUIRED RELOCATION FOR ALL WORK.

ACTIVE SERVICES, WHEN ENCOUNTERED IN WORK: PROTECT, BRACE AND / OR SUPPORT EXISTING ACTIVE SEWERS, GAS AND OTHER SERVICES REQUIRED FOR PROPER EXECUTION OF WORK. IF EXISTING ACTIVE SERVICES ARE ENCOUNTERED THAT REQUIRE RELOCATION, RELOCATE AS APPROVED. DO NOT PREVENT OR DISTURB OPERATION OF ACTIVE SERVICES THAT ARE TO REMAIN.

INACTIVE SERVICES, WHEN ENCOUNTERED IN WORK: REMOVE, CAP OR PLUG INACTIVE SERVICES AS INDICATED.

INTERRUPTION OF SERVICES: WHERE WORK MAKES TEMPORARY SHUT-DOWN OF SERVICES UNAVOIDABLE, SHUT DOWN AT NIGHT OR AT SUCH TIMES AS APPROVED BY OWNER AND THE BUILDING MANAGEMENT WHICH WILL CAUSE MINIMUM INTERFERENCE WITH ESTABLISHED OPERATING ROUTINES. ARRANGE WORK TO ASSURE THAT SERVICES WILL BE SHUT DOWN ONLY DURING THE ACTUALLY REQUIRED TIME TO MAKE NECESSARY CONNECTIONS TO EXISTING WORK.

WHERE EXISTING WALLS, CEILINGS, FLOORS, ROOFS, ETC., ARE CUT OR OTHERWISE DAMAGED DURING CONSTRUCTION, REPAIR ALL SURFACES TO THEIR ORIGINAL CONDITION.

SUBMITTALS

PREPARE SHOP DRAWINGS AND PRODUCT DATA FOR PLUMBING EQUIPMENT WITH ADEQUATE DETAILS AND SCALES AS NECESSARY TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS AND DESIGN CONDITIONS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE DRAWINGS AS TO MARK, LOCATION, AND USE.

THE SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE AND NOT FOR DIMENSIONS, QUANTITIES, ETC. THE SUBMITTALS THAT ARE RETURNED SHALL BE USED FOR PROCUREMENT. THE RESPONSIBILITY OF CORRECT PROCUREMENT REMAINS SOLELY WITH THE CONTRACTOR. REVIEW OF SUBMITTALS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR OMISSIONS AND DEVIATIONS FROM THE CONTRACT REQUIREMENTS.

AFTER THE SUBMITTAL HAS BEEN REVIEWED, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL PROVIDE THE PRODUCTS, MATERIALS, AND MANUFACTURER THAT WAS SUBMITTED. THE ENGINEER WILL NOT REVIEW ANY ADDITIONAL ATTEMPTS TO RESUBMIT PRODUCT DATA AFTER A SUBMITTAL HAS BEEN REVIEWED AND APPROVED.

EACH SUBCONTRACTOR SHALL KEEP ONE SET OF DRAWINGS ON-SITE ON WHICH THEY SHALL RECORD ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION. RECORD DRAWINGS SHALL BE KEPT CLEAN AND UNDAMAGED. UPON COMPLETION OF THE PROJECT, THE RECORD DRAWINGS SHALL BE DELIVERED TO THE OWNER.

PROVIDE PRODUCT SUBMITTALS FOR THE FOLLOWING ITEMS:

- PIPES, FITTINGS, VALVES, INSULATION, AND ACCESSORIES
- TRENCH DRAINS
- FLOOR DRAINS
- TRAP PRIMERS
- SLEEVES
- ESCUTCHEONS
- LAVATORIES AND FAUCETS
- WATER CLOSETS AND FLUSH VALVES
- THERMOSTATIC MIXING VALVES
- BACKFLOW PREVENTER DEVICES
- HANGERS AND SUPPORTS
- WATER HEATERS
- PUMPS
- EYEWASHES

COORDINATION

COORDINATE ALL WORK UNDER THIS DIVISION WITH WORK UNDER OTHER DIVISIONS. PROVIDE ADJUSTMENTS AS NECESSARY TO EQUIPMENT, APPARATUS, PIPING, ETC. THAT WAS INSTALLED WITHOUT REGARD FOR THE SPACE REQUIREMENTS OF OTHER TRADES. THESE CONFLICTS WILL BE REWORKED AT THE EXPENSE OF THE INSTALLING SUB-CONTRACTOR IF IT CREATES AN UNNECESSARY HINDRANCE TO THE INSTALLATION OF ANOTHER TRADES WORK. ALL ITEMS MOUNTED AT OR BELOW THE CEILING AND ANY ITEM PENETRATING THE CEILING SHALL BE COORDINATED WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.

COORDINATE PLACEMENT OF ALL PLUMBING RELATED EQUIPMENT AND DEVICES WITH OTHER TRADES. DO NOT POSITION OR INSTALL ANY PLUMBING EQUIPMENT OR DEVICES IN ANY SYSTEM IN SUCH A WAY THAT IT WILL BE INACCESSIBLE OR UN-MAINTAINABLE AFTER CONSTRUCTION IS COMPLETED.

NO OTHER TRADES ARE ALLOWED TO BE SUPPORTED FROM MATERIALS, EQUIPMENT OR DEVICES INSTALLED BY THE PLUMBING TRADES. LIKEWISE, ALL WORK INSTALLED BY THE PLUMBING TRADES MUST BE SUPPORTED FROM THE STRUCTURE ABOVE, FROM WALLS OR FROM THE FLOOR UNLESS OTHERWISE INDICATED.

RESTORE ROADS, GROUNDS, TUNNELS, INSULATION, PIPING, BUILDING, ETC., TO THEIR ORIGINAL CONDITION WHENEVER THIS WORK CAUSES DAMAGE.

PROVIDE TO OWNER AFTER ALL EQUIPMENT IS IN OPERATION AND AT AN AGREEABLE TIME, COMPETENT INSTRUCTORS FOR THE PURPOSE OF TRAINING PERSONNEL IN ALL PHASES OF OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS.

PROTECTION OF WORK DURING CONSTRUCTION

PROVIDE PROTECTIVE COVERS, SKIDS, PLUGS OR CAPS TO PROTECT EQUIPMENT AND MATERIALS FROM DAMAGE AND DETERIORATION DURING CONSTRUCTION. CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OR DISRUPTING ALL BUILDING SYSTEMS INCLUDING, WIRING, CONTROLS, ETC. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTORS COST USING THE SAME QUALITY OF MATERIAL AS THE EXISTING SYSTEMS THAT WERE DAMAGED.

GUARANTEE

MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AGAINST DEFECTS FOR A PERIOD OF ONE YEAR STARTING FROM THE MUTUALLY AGREED UPON DATE OF SUBSTANTIAL COMPLETION.

CONTRACTOR REQUIREMENTS

CONTRACTOR SHALL BE LICENSED IN THIS STATE TO INSTALL COMMERCIAL PLUMBING SYSTEMS. CONTRACTOR SHALL BE CERTIFIED TO INSTALL MEDICAL GAS SYSTEMS PER NFPA 99.

GENERAL PIPING REQUIREMENTS

GENERAL: PIPING SHALL BE COMPLETE WITH PIPE FITTINGS, VALVES, COUPLING, STRAINERS, HANGER RODS, HANGERS, SUPPORTS, GUIDES, SLEEVES AND ACCESSORIES IN CONFORMANCE WITH THE LATEST CODES AND ASME, ANSI, ASTM AND MSS STANDARDS.

PROVIDE FITTINGS FOR CHANGE IN PIPE SIZE AND FOR FINAL CONNECTION AT EQUIPMENT, AS REQUIRED.

PROVIDE UNION CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON EACH SIDE OF ALL VALVES AND IN-LINE EQUIPMENT.

PROVIDE VALVED AND CAPPED CONNECTIONS AT ALL POINTS IN PIPING SYSTEMS REQUIRED FOR DRAINING SYSTEMS.

PROVIDE SLEEVES AT ALL WALL AND FLOOR PENETRATIONS.

PIPE AND FITTING MATERIALS

SANITARY (RESTROOMS AND WASTE BELOW 135 DEG F) AND VENT PIPING ABOVE AND BELOW GRADE: SCHEDULE 40 SOLID WALL PVC PER ASTM D 2665 DRAIN, WASTE AND VENT.

SANITARY (WASTE ABOVE 135 DEG F) AND VENT PIPING ABOVE GRADE: HUBLESS CAST IRON PER ASTM A 888 OR CISPI 301 AND BEARING THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE.

APPROVED MANUFACTURERS: AB&I FOUNDRY, TYLER PIPE AND COUPLING, CHARLOTTE PIPE AND FOUNDRY.

SANITARY (WASTE ABOVE 135 DEG F) AND VENT PIPING BELOW GRADE: HUB AND SPIGOT CAST IRON PIPE PER ASTM A 74 BEARING THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE.

APPROVED MANUFACTURERS: AB&I FOUNDRY, TYLER PIPE AND COUPLING, CHARLOTTE PIPE AND FOUNDRY.

DOMESTIC WATER PIPING ABOVE GRADE: HARD COPPER TUBE, TYPE L PER ASTM B88

CONDENSATE DRAIN PIPING ABOVE GRADE: HARD COPPER TUBE, TYPE DWV PER ASTM B306

NATURAL GAS PIPING ABOVE GRADE: SCHEDULE 40 BLACK STEEL PIPE PER ASTM A 53/A 53M, TYPE E OR S, GRADE B WITH THREADED OR WELDED JOINTS.

MEDICAL GAS PIPING ABOVE GRADE: HARD DRAWN COPPER TUBE, TYPE K PER ASTM B819 PER CGA 4.1 AND NFPA 99 WITH BRAZED JOINTS UTILIZING NITROGEN PURGE DURING BRAZING.

PIPE COUPLINGS

PVC SANITARY, VENT PIPING BELOW GRADE: SOCKET FITTINGS PER ASTM D 2665, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PIPE WITH SOLVENT JOINTS.

CAST IRON HUBLESS SANITARY, VENT PIPING ABOVE GRADE: HEAVY DUTY COUPLINGS PER ASTM C 1277 AND ASTM C 1540.

APPROVED MANUFACTURERS: ANACO-HUSKY, MISSION RUBBER COMPANY, CHARLOTTE PIPE AND FOUNDRY

COPPER DOMESTIC WATER PIPE ABOVE GRADE: PER ASME B16.18, CAST BRONZE OR ASME B16.22, WROUGHT COPPER AND BRONZE. JOINTS SHALL BE PER ASTM B32, SOLDER, GRADE 95TA.

BLACK STEEL NATURAL GAS PIPING ABOVE GRADE: THREADED FITTINGS PER ASME B16.3, CLASS 150, STANDARD PATTERN. WROUGHT-STEEL WELDING FITTINGS PER ASTM A 234/A 234M FOR BUTT WELDING AND SOCKET WELDING.

COPPER MEDICAL GAS PIPE: PER ASME B16.22 WROUGHT COPPER. JOINTS SHALL BE BRAZED PER MSS SP-73. INSTALL PER NFPA 99.

PIPE SUPPORTS

HORIZONTAL PIPE HANGERS SHALL BE CARBON STEEL, ADJUSTABLE CLEVIS TYPE FOR GENERAL SERVICE APPLICATIONS, COPPER PLATED WHEN IN CONTACT WITH COPPER PIPING, AND RUBBER/PLASTIC COATED WHEN IN CONTACT WITH PLASTIC PIPING. PROVIDE THERMAL HANGER SHIELD INSERTS FOR ALL INSULATED PIPING AND HANGER SHIELD FOR PLASTIC PIPING PER THE PIPE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS. HANGER RODS AND SPACING SHALL BE PER THE LOCAL CODE REQUIREMENTS.

PIPE INSULATION MATERIALS

TYPE 1:

DESCRIPTION: FIBERGLASS, MINIMUM 4 POUNDS PER CUBIC FOOT (P.C.F.) DENSITY, K FACTOR 0.23 MAXIMUM AT 75 DEGREE F MEAN, WITH FACTORY-APPLIED ALL-SERVICE JACKET (ASJ) COMPOSED OF REINFORCED KRAFT AND ALUMINUM FOIL LAMINATE. JACKET SHALL HAVE SELF-SEALING LAP TO FACILITATE CLOSING LONGITUDINAL AND END JOINTS.

STANDARD: ASTM C547, CLASS 1 (-20 DEGREE F TO 500 DEGREE F).

APPROVED MANUFACTURERS: JOHNS MANVILLE, KNAUF, OWENS CORNING

TYPE 2:

DESCRIPTION: FLEXIBLE, CLOSED CELL ELASTOMERIC, NOMINAL 6 PCF DENSITY, K FACTOR 0.27 MAXIMUM AT 75 DEGREE F MEAN.

STANDARD: ASTM C534 (-40 DEGREE F TO 220 DEGREE F).

APPROVED MANUFACTURERS: AEROFLEX, ARMACELL

INSTALLATION OF PIPE INSULATION

INSTALL INSULATION ON PIPE SYSTEMS SUBSEQUENT TO TESTING AND ACCEPTANCE OF TEST.

MAINTAIN INTEGRITY OF VAPOR-BARRIER JACKETS ON PIPE INSULATION, AND PROTECT TO PREVENT PUNCTURE OR OTHER DAMAGE. SEAL OPEN ENDS OF INSULATION WITH MASTIC. SECTIONALLY SEAL ALL BUTT ENDS OF ALL COLD WATER PIPING INSULATION AT FITTINGS WITH WHITE VAPOR BARRIER COATING.

COVER VALVES, FLANGES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN. INSTALL FACTORY MOLDED, PRECUT OR JOB FABRICATED UNITS (AT INSTALLERS OPTION) AS NECESSARY. FINISH COLD PIPE FITTINGS WITH WHITE VAPOR BARRIER COATING AND HOT PIPING WITH WHITE VINYL ACRYLIC MASTIC, BOTH REINFORCED WITH GLASS CLOTH.

EXTEND PIPING INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, HANGERS, AND SIMILAR PIPING PENETRATIONS EXCEPT WHERE OTHERWISE INDICATED.

INSTALL PROTECTIVE METAL SHIELDS AND FOAM GLASS INSERTS WHERE PIPE HANGERS BEAR ON OUTSIDE OF INSULATION.

INSTALL INSULATION PER THE MICA MANUAL AND ALL REQUIREMENTS LISTED IN THE MANUFACTURER'S INSTALLATION MANUAL.

PIPE INSULATION SCHEDULE

DOMESTIC COLD WATER PIPING ABOVE GRADE <1-1/2":

TYPE 1: FIBERGLASS  
1/2 INCH THICKNESS

TYPE 2: FLEXIBLE, CLOSED CELL ELASTOMERIC  
1/2 INCH THICKNESS

DOMESTIC COLD WATER AND TRAP PRIMER PIPING BELOW GRADE:

TYPE 2: FLEXIBLE, CLOSED CELL ELASTOMERIC  
1/2 INCH THICKNESS

DOMESTIC HOT WATER AND HOT WATER RECIRCULATION PIPING ABOVE GRADE <1-1/2":

TYPE 1: FIBERGLASS  
1 INCH THICKNESS

TYPE 2: FLEXIBLE, CLOSED CELL ELASTOMERIC  
1 INCH THICKNESS

SLEEVES

ALL PIPING PENETRATING WALLS, PARTITIONS, AND FLOORS SHALL BE SLEEVED WITH GALVANIZED STEEL PIPE SLEEVE. ASTM A 53/A 53M, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED, PLAIN ENDS. SEAL ANNULAR RECESS WITH PERMANENTLY FLEXIBLE SEALANT OR FIRESTOP (AT FIRE WALLS), BOTH SIDES OF WALL. REFER TO DETAIL ON DETAILS SHEET.

PIPE LABELS

GENERAL REQUIREMENTS FOR MANUFACTURED PIPE LABELS: PREPRINTED, COLOR-CODED, WITH LETTERING INDICATING SERVICE, AND SHOWING FLOW DIRECTION.

SELF-ADHESIVE PIPE LABELS: PRINTED PLASTIC WITH CONTACT-TYPE, PERMANENT-ADHESIVE BACKING.

PIPE LABEL CONTENTS: INCLUDE IDENTIFICATION OF PIPING SERVICE USING SAME DESIGNATIONS OR ABBREVIATIONS AS USED ON DRAWINGS; ALSO INCLUDE PIPE SIZE AND AN ARROW INDICATING FLOW DIRECTION.

LETTERING SIZE: SIZE LETTERS ACCORDING TO ASME A13.1 FOR PIPING

LOCATION OF PIPE LABELS:

NEAR EACH VALVE AND CONTROL DEVICE. NEAR EACH BRANCH CONNECTION, EXCLUDING SHORT TAKEOFFS FOR FIXTURES AND TERMINAL UNITS. WHERE FLOW PATTERN IS NOT OBVIOUS, MARK EACH PIPE AT BRANCH. NEAR PENETRATIONS THROUGH WALLS, FLOORS, CEILINGS, AND INACCESSIBLE ENCLOSURES. AT ACCESS DOORS, MANHOLES, AND SIMILAR ACCESS POINTS THAT PERMIT VIEW OF CONCEALED PIPING. NEAR MAJOR EQUIPMENT ITEMS AND OTHER POINTS OF ORIGINATION AND TERMINATION. SPACED AT MAXIMUM INTERVALS OF 50 FEET ALONG EACH RUN. REDUCE INTERVALS TO 25 FEET IN AREAS OF CONGESTED PIPING AND EQUIPMENT.

PIPE LABEL COLOR SCHEDULE:

DOMESTIC WATER PIPING: SAFETY GREEN BACKGROUND WITH WHITE LETTERS.

SANITARY, VENT PIPING: SAFETY PURPLE BACKGROUND WITH WHITE LETTERS.

NATURAL GAS: SAFETY YELLOW BACKGROUND WITH BLACK LETTERS.

MEDICAL GAS PIPING: SAFETY BLUE BACKGROUND WITH WHITE LETTERS.

APPROVED MANUFACTURERS: BRADY CORPORATION, BRIMAR INDUSTRIES, AND SETON.

VALVE TAGS

VALVE TAGS: STAMPED OR ENGRAVED WITH 1/4-INCH HIGH LETTERS FOR PIPING SYSTEM ABBREVIATION AND 1/2-INCH HIGH NUMBERS.

TAG MATERIAL: ALUMINUM, 0.032-INCH MINIMUM THICKNESS, AND HAVING PREDRILLED OR STAMPED HOLES FOR ATTACHMENT HARDWARE.

FASTENERS: STAINLESS STEEL BEADED CHAIN.

VALVE SCHEDULES: FOR EACH PIPING SYSTEM, ON 8-1/2-BY-11-INCH BOND PAPER, TABULATE VALVE NUMBER, PIPING SYSTEM, SYSTEM ABBREVIATION (AS SHOWN ON VALVE TAG), LOCATION OF VALVE (ROOM OR SPACE), NORMAL-OPERATING POSITION (OPEN, CLOSED, OR MODULATING), AND VARIATIONS FOR IDENTIFICATION. MARK VALVES FOR EMERGENCY SHUTOFF AND SIMILAR SPECIAL USES.

APPROVED MANUFACTURERS: BRADY CORPORATION, BRIMAR INDUSTRIES, AND SETON.

INSTALL TAGS ON VALVES AND CONTROL DEVICES IN PIPING SYSTEMS EXCEPT CHECK VALVES. VALVES WITHIN FACTORY-FABRICATED EQUIPMENT UNITS, SHUTOFF VALVES, FAUCETS, CONVENIENCE AND LAWN-WATERING HOSE CONNECTIONS, AND SIMILAR ROUGH-IN CONNECTIONS OF END-USE FIXTURES AND UNITS. LIST TAGGED VALVES IN A VALVE SCHEDULE.

VALVE-TAG APPLICATION SCHEDULE: TAG VALVES ACCORDING TO SIZE, SHAPE, AND COLOR SCHEME AND WITH CAPTIONS SIMILAR TO THOSE INDICATED IN THE FOLLOWING:

VALVE-TAG SIZE AND SHAPE: ALL SERVICES: 1-1/2 INCHES, ROUND.

ESCUTCHEONS

ONE-PIECE, CAST-BRASS TYPE: WITH POLISHED, CHROME-PLATED FINISH AND SETSCREW FASTENER. INSTALL ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS AND CEILINGS. INSTALL ESCUTCHEONS WITH INSIDE DIAMETER TO CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF PIPING AND WITH OUTSIDE DIAMETER THAT COMPLETELY COVERS OPENING.

DOMESTIC WATER VALVES

COPPER PIPE SYSTEMS:

VALVES SHALL BE TWO PIECE, FULL PORT AND INSTALLED WHERE INDICATED ON DRAWINGS AND WHERE NECESSARY FOR PROPER AND SAFE OPERATION AND MAINTENANCE.

VALVES FOR DOMESTIC WATER PIPE SYSTEMS SHALL BE SUITABLE FOR THE SERVICE PRESSURE AND TEMPERATURE.

BALL VALVES ARE ACCEPTABLE FOR USE AS A SHUT-OFF VALVE.

BALANCING VALVES SHALL BE THERMOSTATIC TYPE.

APPROVED VALVE MANUFACTURERS: CALEFFI, BELL AND GOSSETT, APOLLO, HAMMOND, NIBCO, WATTS.

NATURAL GAS VALVES

VALVES 1/2" THROUGH 2" SHALL BE NON-LUBRICATED BRONZE PLUG VALVES.

VALVES 2" THROUGH 4" SHALL BE NON-LUBRICATED CAST IRON PLUG VALVES.

APPROVED MANUFACTURERS: HOMESTEAD, DEZURIK

MEDICAL GAS VALVES

VALVES SHALL BE THREE PIECE, FULL PORT, AND MEET THE REQUIREMENTS OF NFPA 99. INSTALLED WHERE INDICATED ON DRAWINGS AND WHERE NECESSARY FOR PROPER AND SAFE OPERATION AND MAINTENANCE.

VALVES SHALL BE SUITABLE FOR THE SERVICE PRESSURE AND TEMPERATURE.

BALL VALVES ARE ACCEPTABLE FOR USE AS A SHUT-OFF VALVE.

APPROVED VALVE MANUFACTURERS: APOLLO, NIBCO, BEACON MEDAEs.

RELEASE FOR  
CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI

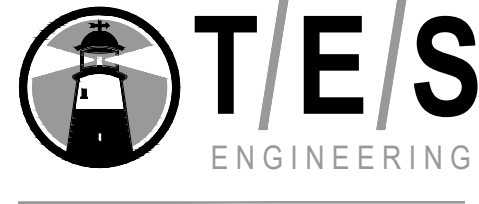
01/27/2021

CURRAN

ARCHITECTURE

5719 LAWTON LOOP E. DR.  
#212 INDIANAPOLIS, IN 46216  
O :: 317 . 288 . 0681  
F :: 317 . 288 . 0753

DRAWN BY: JUC CHECKED BY: DLJ



25760 First Street  
Cleveland, OH 44145  
P 440 871 2410  
F 440 871 7954  
tesengineering.com

CERTIFICATION



THIS DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF CURRAN ARCHITECTURE, AND ARE NOT TO BE USED OR REPRODUCED, WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF CURRAN ARCHITECTURE. COPYRIGHT 2020, CURRAN ARCHITECTURE

PROJECT INFORMATION

LEE'S SUMMIT ANIMAL HOSPITAL NORTH

250 NW McNARY COURT  
LEE'S SUMMIT, MO  
64086

ISSUE DATES	
PERMIT SET	04.01.21

210095  
PLUMBING SPECIFICATIONS

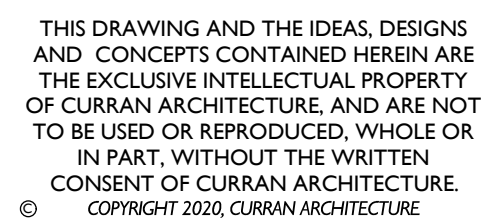




---



tesengineering.com



## PROJECT INFORMATION

LEE'S SUMMIT ANIMAL  
HOSPITAL NORTH

250 NW McNARY COURT

ISSUE DATES	
1997	1998
1999	2000
2001	2002
2003	2004
2005	2006
2007	2008
2009	2010
2011	2012
2013	2014
2015	2016
2017	2018
2019	2020
2021	2022
2023	2024
2025	2026
2027	2028
2029	2030
2031	2032
2033	2034
2035	2036
2037	2038
2039	2040
2041	2042
2043	2044
2045	2046
2047	2048
2049	2050
2051	2052
2053	2054
2055	2056
2057	2058
2059	2060
2061	2062
2063	2064
2065	2066
2067	2068
2069	2070
2071	2072
2073	2074
2075	2076
2077	2078
2079	2080
2081	2082
2083	2084
2085	2086
2087	2088
2089	2090
2091	2092
2093	2094
2095	2096
2097	2098
2099	2100

PERMIT SET 04.01.21

---

---

---

---

210095

DOMESTIC WATER PLAN

DOI

— — — — —

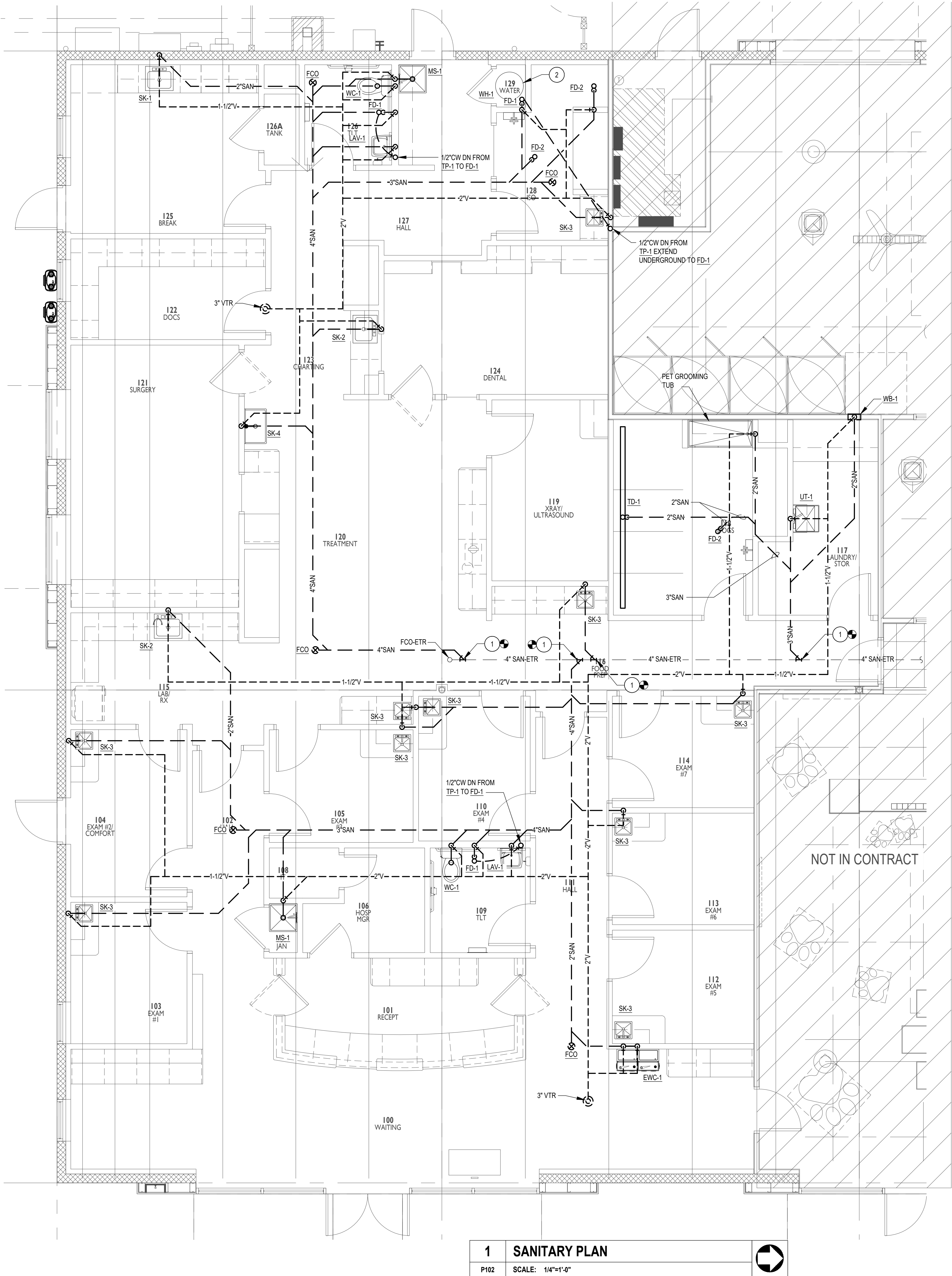
1. EXISTING PLUMBING INFORMATION IS BASED ON LIMITED EXISTING BUILDING DRAWINGS AND FIELD WORK. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS FOR ACCURACY. CONTRACTOR SHALL NOTIFY OWNER, ARCHITECT AND ENGINEER OF ANY SITUATIONS THAT MODIFY OR INCREASE THE SCOPE OF WORK FROM THAT IS DESCRIBED IN THE DOCUMENTS.
2. ANYTHING NOT NOTED AS EXISTING IS TO BE FURNISHED AND INSTALLED AS PART OF THIS PROJECT.
3. REFER TO DRAWINGS AND PROJECT SPECIFICATIONS OF OTHER DISCIPLINES FOR ADDITIONAL PROJECT INFORMATION AND REQUIREMENTS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN THE INFORMATION PRESENTED AND FIELD CONDITIONS.
4. PRIOR TO ANY ISOLATION OF SYSTEMS, SHUTDOWNS OR DEMOLITION THE CONTRACTOR SHALL PROVIDE NECESSARY INVESTIGATION AND NOTIFY THE FACILITIES ENGINEERING/MAINTENANCE PERSONNEL OF WORK TO BE PERFORMED SO AS TO AVOID ANY DETRIMENTAL SHUTDOWN OF SYSTEMS TO ADJACENT SPACES.
5. PROTECT EQUIPMENT, FIXTURES, PIPING, DUCTWORK, ETC. INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION, WHEN PERMITTED BY THE ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.
6. WHERE PIPING, DUCTWORK, INSULATION, FIXTURES OR EQUIPMENT TO REMAIN IS DAMAGED OR DISTURBED, REMOVE THE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY AND QUALITY. WHERE IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED, USE MATERIALS WHOSE INSTALLED PERFORMANCE EQUALS OR SURPASSES THAT OF THE EXISTING MATERIALS.
7. MAINTAIN AND RESTORE, IF INTERRUPTED BY DEMOLITION OR IN THE PATH OF NEW CONSTRUCTION, ALL UTILITIES PASSING THROUGH AND SERVING OUTSIDE OF DEMOLITION AREA.
8. PLUMBING INSTALLATION MUST MAINTAIN INTEGRITY OF WALLS, PARTITIONS AND FLOORS DESIGNATED AS EITHER FIRE RATED OR "SMOKE TIGHT". SEAL AROUND ALL PENETRATIONS THROUGH RATED OR SMOKE TIGHT ASSEMBLIES. COORDINATE WITH ARCHITECTURAL PLANS AND GENERAL CONTRACTOR.
9. SPACE ABOVE CEILING IS INDICATED TO BE A RETURN AIR PLENUM. CONSTRUCTION MATERIALS ABOVE CEILING SHALL BE NONCOMBUSTIBLE, OR HAVE A MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPMENT FINISH RATING. WIRING SHALL BE LABELED PLENUM RATED PER NFPA 70.
10. PROVIDE STOP VALVES AT EVERY Fixture ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC. MUST BE CHROME PLATED. WHERE EXPOSED, CHROME PLATED PIPE IS TO BE USED.
11. ALL SANITARY PIPING INSTALLED UNDERGROUND IS TO BE PITCHED @ 1% SLOPE EXCEPT FOR 2" LINES WHICH SHALL BE PITCHED AT 2% SLOPE.
12. ALL OVERHEAD PIPING IS TO BE ROUTED TIGHT TO BUILDING STRUCTURE.
13. DO NOT ROUTE ANY WATER CONVEYING PIPING OVER ELECTRICAL EQUIPMENT.
14. ALL ACCESSIBLE P-TRAPS MUST BE PROVIDED WITH BOTTOM CLEANOUT PLUGS.
15. INSULATE EXPOSED P-TRAPS, HOT AND COLD VALVES AND PIPING SERVING HANDICAPPED LAVATORIES.
16. NOTHING IS PERMITTED TO BE ATTACHED TO, SUSPENDED FROM, OR PENETRATE THE ROOF DECK. CONTRACTOR MAY ATTACH TO OR SUSPEND FROM THE TOP CHORD OF THE JOIST OR THE STRUCTURAL STEEL, WHICH EXISTS ABOVE THE SPACE.
17. ALL CONCEALED PIPING SHALL BE TESTED AND PROVEN LEAK PROOF AND FREE FROM DEFECTS PRIOR TO CONCEALMENT.
18. ALL FLOOR DRAINS AND CLEANOUTS ARE TO BE INSTALLED FLUSH WITH THE FINISHED FLOOR.

- 1 1/2" CW DN TO EWC-1
- 2 1/2" CW AND 1/2" HW DN TO LAV-1
- 3 1/2" CW DN TO WC-1
- 4 3/4" CW AND 3/4" HW DN TO MS-1
- 5 3/4" CW AND 3/4" HW DN TO SK-2 AND EW-1. EXTEND 3/4" TEMPERED WATER FROM EW-1 MIXING VALVE TO EW-1
- 6 1/2" CW AND 1/2" HW DN TO SINK
- 7 1/2" CW DN TO HB-1
- 8 1/2" CW AND 1/2" HW DN TO UT-1
- 9 1/2" CW AND 1/2" HW DN TO DENTAL SINK
- 10 1-1/4" CW AND 1-1/4" HW DN TO WH-1
- 11 3/4" CW DN TO WC-1 AND MS-1
- 12 3/4" HW DN TO MS-1
- 13 1/2" CW AND 1/2" HW DN TO WB-1
- 14 3/4" CW DN TO GROOMING TUB.
- 15 1/2" DN TO IMB-1
- 16 1-1/4" CW CONNECT TO EXISTING 1-1/4" CW MAIN IN THIS AREA. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING MAIN PRIOR TO COMMENCING WORK.
- 17 1/2" CW AND 1/2" HW DN TO SINKS.
- 18 REMOVE EXISTING GAS FIRED HEATER AND ALL EXISTING PIPING AND ACCESSORIES. CAP PIPING IN THE CEILING SPACE.
- 19 1" GAS PIPING DN THROUGH ROOF WITH CURB TO WATER HEATER.
- 20 1" GAS PIPING CONNECT TO EXISTING 1" GAS PIPING ON ROOF IN THIS AREA. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS PIPING PRIOR TO COMMENCING WORK.
- 21 1-1/4" GAS PIPING CONNECT TO EXISTING 1-1/4" GAS PIPING ON ROOF IN THIS AREA. EXTEND NEW 1-1/4" GAS PIPING TO ROOFTOP UNIT. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS PIPING PRIOR TO COMMENCING WORK.



1	DOMESTIC WATER PLAN	
P101	SCALE: 1/4"=1'-0"	





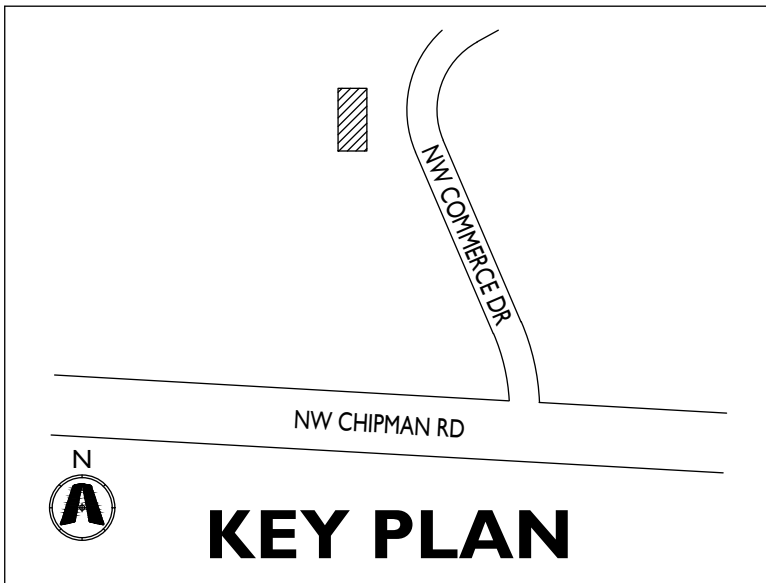
1 SANITARY PLAN  
P102 SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

- 1. EXISTING PLUMBING INFORMATION IS BASED ON LIMITED EXISTING BUILDING DRAWINGS AND FIELD WORK. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS FOR ACCURACY. CONTRACTOR SHALL NOTIFY OWNER, ARCHITECT AND ENGINEER OF ANY SITUATIONS THAT MODIFY OR INCREASE THE SCOPE OF WORK FROM THAT IS DESCRIBED IN THE DOCUMENTS.
- 2. ANYTHING NOT NOTED AS EXISTING IS TO BE FURNISHED AND INSTALLED AS PART OF THIS PROJECT.
- 3. REFER TO DRAWINGS AND PROJECT SPECIFICATIONS OF OTHER DISCIPLINES FOR ADDITIONAL PROJECT INFORMATION AND REQUIREMENTS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN THE INFORMATION PRESENTED AND FIELD CONDITIONS.
- 4. PRIOR TO ANY ISOLATION OF SYSTEMS, SHUTDOWNS OR DEMOLITION THE CONTRACTOR SHALL PROVIDE NECESSARY INVESTIGATION AND NOTIFY THE FACILITIES ENGINEERING/MAINTENANCE PERSONNEL OF WORK TO BE PERFORMED SO AS TO AVOID ANY DETRIMENTAL SHUTDOWN OF SYSTEMS TO ADJACENT SPACES.
- 5. PROTECT EQUIPMENT, FIXTURES, PIPING, DUCTWORK, ETC. INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY THE ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.
- 6. WHERE PIPE, DUCTWORK, INSULATION, FIXTURES OR EQUIPMENT TO REMAIN IS DAMAGED OR DISTURBED, REMOVE THE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY AND QUALITY. WHERE IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED, USE MATERIALS WHOSE INSTALLED PERFORMANCE EQUALS OR SURPASSES THAT OF THE EXISTING MATERIALS.
- 7. MAINTAIN AND RESTORE, IF INTERRUPTED BY DEMOLITION OR IN THE PATH OF NEW CONSTRUCTION, ALL UTILITIES PASSING THROUGH AND SERVING OUTSIDE OF DEMOLITION AREA.
- 8. PLUMBING INSTALLATION MUST MAINTAIN INTEGRITY OF WALLS, PARTITIONS AND FLOORS DESIGNATED AS EITHER FIRE RATED OR "SMOKE TIGHT". SEAL AROUND ALL PENETRATIONS THROUGH RATED OR SMOKE TIGHT ASSEMBLIES. COORDINATE WITH ARCHITECTURAL PLANS AND GENERAL CONTRACTOR.
- 9. SPACE ABOVE CEILING IS INDICATED TO BE A RETURN AIR PLENUM. CONSTRUCTION MATERIALS ABOVE CEILING SHALL BE NONCOMBUSTIBLE, OR HAVE A MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPMENT FINISH RATING. WIRING SHALL BE LABELED PLENUM RATED PER NFPA 70.
- 10. PROVIDE STOP VALVES AT EVERY FIXTURE ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC. MUST BE CHROME PLATED. WHERE EXPOSED, CHROME PLATED PIPE IS TO BE USED.
- 11. ALL SANITARY PIPING INSTALLED UNDERGROUND IS TO BE PITCHED @ 1% SLOPE EXCEPT FOR 2" LINES WHICH SHALL BE PITCHED AT 2% SLOPE.
- 12. ALL OVERHEAD PIPING IS TO BE ROUTED TIGHT TO BUILDING STRUCTURE.
- 13. DO NOT ROUTE ANY WATER CONVEYING PIPING OVER ELECTRICAL EQUIPMENT.
- 14. ALL ACCESSIBLE P-TRAPS MUST BE PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- 15. INSULATE EXPOSED P-TRAPS, HOT AND COLD VALVES AND PIPING SERVING HANDICAPPED LAVATORIES.
- 16. NOTHING IS PERMITTED TO BE ATTACHED TO, SUSPENDED FROM, OR PENETRATE THE ROOF DECK. CONTRACTOR MAY ATTACH TO OR SUSPEND FROM THE TOP CHORD OF THE JOIST OR THE STRUCTURAL STEEL WHICH EXISTS ABOVE THE SPACE.
- 17. ALL CONCEALED PIPING SHALL BE TESTED AND PROVEN LEAK PROOF AND FREE FROM DEFECTS PRIOR TO CONCEALMENT.
- 18. ALL FLOOR DRAINS AND CLEANOUTS ARE TO BE INSTALLED FLUSH WITH THE FINISHED FLOOR.

SHEET KEYNOTES

- 1. CONNECT SANITARY PIPING TO EXISTING 4" SAN MAIN UNDER SLAB IN THIS AREA. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION PRIOR TO COMMENCING WORK.
- 2. EXTEND 3" AIR INTAKE AND 3" FLUE EXHAUST UP THROUGH ROOF SEPARATELY WITH GOOSENECK DOWN. TERMINATE 4 FEET ABOVE FINISHED ROOF LEVEL WITH BIRD SCREEN. ENSURE 4 FEET OF HORIZONTAL SEPARATION BETWEEN INTAKE AND EXHAUST. INTAKE AND FLUE MATERIAL SHALL BE UL 1738 LISTED PVC MANUFACTURED BY IPEX.



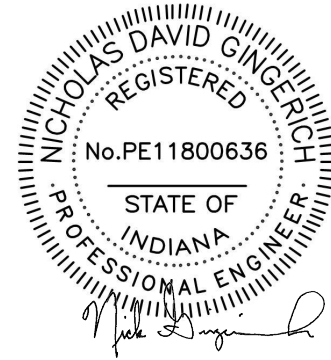
CURRAN ARCHITECTURE  
5719 LAWTON LOOP E. DR.  
#212 INDIANAPOLIS, IN 46216  
O :: 317 . 288 . 0681  
F :: 317 . 288 . 0753

DRAWN BY: JJC CHECKED BY: DLJ



25760 First Street  
Cleveland, OH 44145  
P 440 871 2410  
F 440 871 7954  
tesengineering.com

CERTIFICATION



THIS DRAWING AND THE IDEAS, DESIGNS AND CONCEPTS CONTAINED HEREIN ARE THE EXCLUSIVE INTELLECTUAL PROPERTY OF CURRAN ARCHITECTURE, AND ARE NOT TO BE USED OR REPRODUCED, WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF CURRAN ARCHITECTURE. COPYRIGHT 2020, CURRAN ARCHITECTURE.

PROJECT INFORMATION

LEE'S SUMMIT ANIMAL HOSPITAL NORTH

250 NW McNARY COURT  
LEE'S SUMMIT, MO  
64086

ISSUE DATES

PERMIT SET 04.01.21

210095

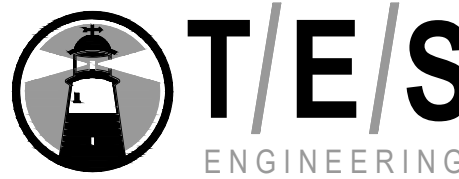
SANITARY PLAN

P102

CURRAN  
ARCHITECTURE

5719 LAWTON LOOP E. DR.  
#212 INDIANAPOLIS, IN 46216  
O :: 317 . 288 . 0681  
F :: 317 . 288 . 0753

DRAWN BY: JJC CHECKED BY: DLJ



25760 First Street  
Cleveland, OH 44145  
P 440 871 2410  
F 440 871 7954  
tesengineering.com

CERTIFICATION



THIS DRAWING AND THE IDEAS, DESIGNS  
AND CONCEPTS CONTAINED HEREIN ARE  
THE EXCLUSIVE INTELLECTUAL PROPERTY  
OF CURRAN ARCHITECTURE, AND ARE NOT  
TO BE USED OR REPRODUCED, WHOLE OR  
IN PART, WITHOUT THE WRITTEN  
CONSENT OF CURRAN ARCHITECTURE.  
© COPYRIGHT 2020, CURRAN ARCHITECTURE

PROJECT INFORMATION

LEE'S SUMMIT ANIMAL  
HOSPITAL NORTH

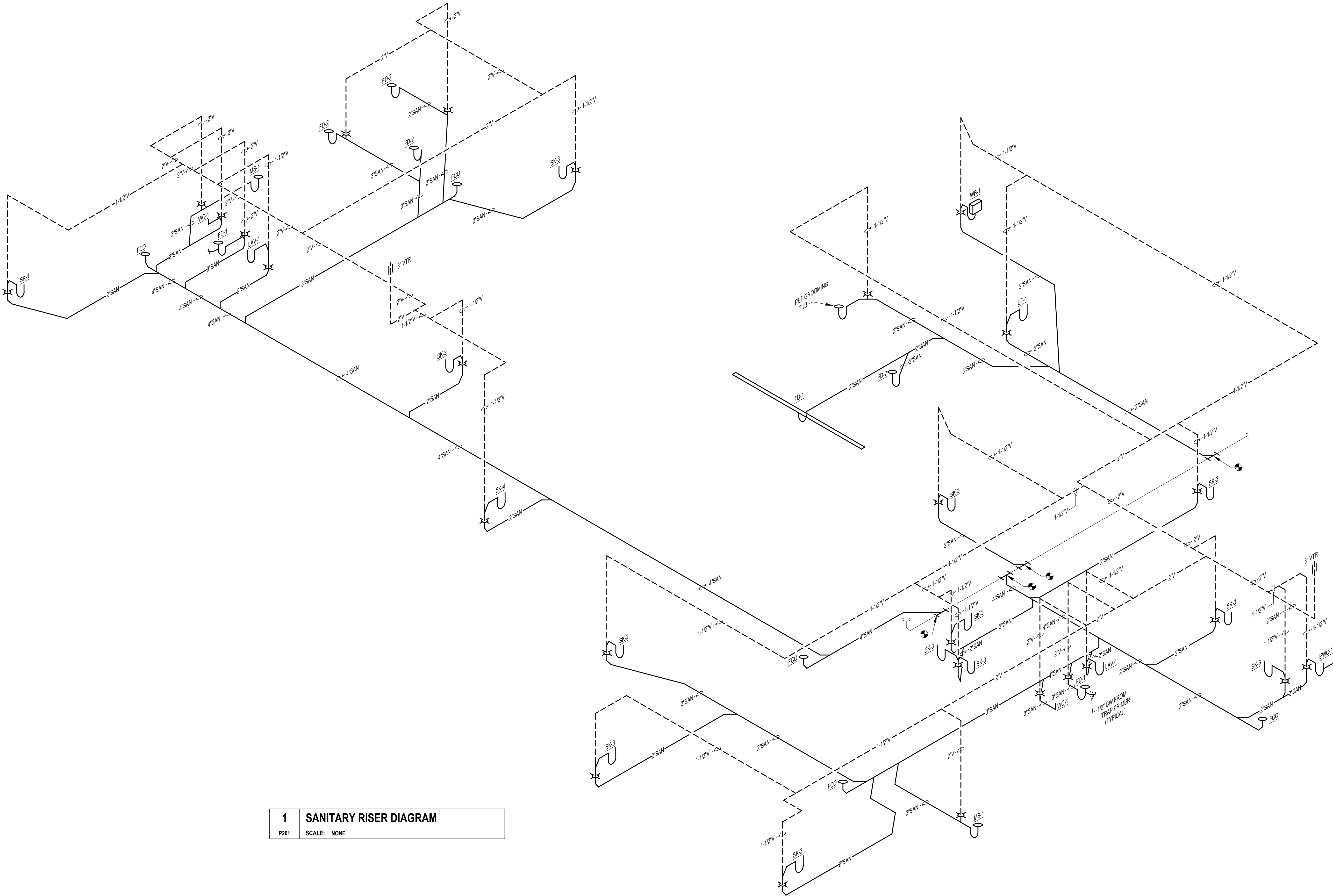
250 NW McNARY COURT  
LEE'S SUMMIT, MO  
64086

ISSUE DATES

PERMIT SET04.01.21

210095  
PLUMBING SANITARY  
ISOMETRIC

P201



1	SANITARY RISER DIAGRAM
P201	SCALE: NONE