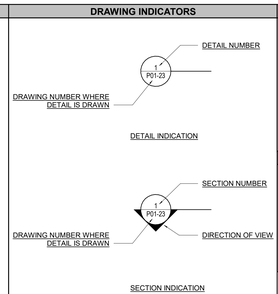
SYMBOLS

- BRANCH OFF TOP OF MAIN
- BRANCH OFF BOTTOM OF MAIN
- ELBOW DOWN
- ELBOW UP
- PUMP
- FLOOR OR AREA DRAIN
- FLOOR CLEANOUT
- PRESSURE GAUGE
- REDUCER
- STRAINER
- THERMOMETER
- LINE CLEANOUT
- TRAP
- UNION
- BALL VALVE
- CHECK VALVE
- HIGH PERFORMANCE BUTTERFLY VALVE
- RELIEF VALVE
- WALL HYDRANT OR HOSE BIBB
- WATER HAMMER ARRESTER

DRAWING INDICATORS



DRAWING ORGANIZATION

PLUMBING DISCIPLINE PREFIX
GROUP DESIGNATION
FLOOR LEVEL & GENERAL SHEET NUMBER

P00-01	LEGEND, SCHEDULES, AND NOTES
P01-00	UNDERSLAB PLUMBING PLANS
P02-01	PLUMBING PLANS
P03-00	ENLARGED SCALE PLANS
P04-00	RISER DIAGRAMS
P05-00	DETAILS
P06-00	SCHEDULES

FLOW TEST DATA

FLOW TEST NUMBER: TBD
TEST DATE: TBD

STATIC PRESSURE: TBD (PSI):
RESIDUAL PRESSURE: TBD (PSI)
FLOW: TBD (GPM):

INFORMATION PROVIDED FOR REFERENCE ONLY. CONTRACTOR TO VERIFY WATER SUPPLY DATA AND PERFORM HYDRAULIC CALCULATIONS BASED ON DATA FROM THE PREVIOUS 12 MONTHS.

SHEET INDEX

SHEET NO.	SHEET NAME	12-12-2025 - SCHEMATIC DESIGN	1-23-2025 - DESIGN DEVELOPMENT
12 - PLUMBING			
P00-01	LEGEND AND ABBREVIATIONS	■	■
P01-00	PLUMBING PLAN - UNDERSLAB - OVERALL	■	■
P01-00A	PLUMBING PLAN - UNDERSLAB - SEGMENT A		■
P01-00B	PLUMBING PLAN - UNDERSLAB - SEGMENT B		■
P01-00C	PLUMBING PLAN - UNDERSLAB - SEGMENT C		■
P01-00D	PLUMBING PLAN - UNDERSLAB - SEGMENT D		■
P01-00E	PLUMBING PLAN - UNDERSLAB - SEGMENT E		■
P01-00F	PLUMBING PLAN - UNDERSLAB - SEGMENT F		■
P01-00G	PLUMBING PLAN - UNDERSLAB - SEGMENT G		■
P01-00H	PLUMBING PLAN - UNDERSLAB - SEGMENT H		■
P02-01	LEVEL 1 - PLUMBING PLAN - OVERALL	■	■
P02-01A	LEVEL 1 - PLUMBING PLAN - SEGMENT A		■
P02-01B	LEVEL 1 - PLUMBING PLAN - SEGMENT B		■
P02-01C	LEVEL 1 - PLUMBING PLAN - SEGMENT C		■
P02-01D	LEVEL 1 - PLUMBING PLAN - SEGMENT D		■
P02-01E	LEVEL 1 - PLUMBING PLAN - SEGMENT E		■
P02-01F	LEVEL 1 - PLUMBING PLAN - SEGMENT F		■
P02-01G	LEVEL 1 - PLUMBING PLAN - SEGMENT G		■
P02-01H	LEVEL 1 - PLUMBING PLAN - SEGMENT H		■
P02-02	LEVEL 2 - PLUMBING PLAN - OVERALL	■	■
P02-02A	LEVEL 2 - PLUMBING PLAN - SEGMENT A		■
P02-02B	LEVEL 2 - PLUMBING PLAN - SEGMENT B		■
P02-02C	LEVEL 2 - PLUMBING PLAN - SEGMENT C		■
P02-02D	LEVEL 2 - PLUMBING PLAN - SEGMENT D		■
P02-02E	LEVEL 2 - PLUMBING PLAN - SEGMENT E		■
P02-02F	LEVEL 2 - PLUMBING PLAN - SEGMENT F		■
P02-02G	LEVEL 2 - PLUMBING PLAN - SEGMENT G		■
P02-02H	LEVEL 2 - PLUMBING PLAN - SEGMENT H		■
P02-03	ROOF - PLUMBING PLAN - OVERALL		■
P03-00	ENLARGED PLUMBING PLANS		■
P03-01	ENLARGED PLUMBING PLANS		■
P03-02	ENLARGED PLUMBING PLANS		■
P03-03	ENLARGED PLUMBING PLANS		■
P04-00	SANITARY RISER DIAGRAMS		■
P04-01	DOMESTIC RISER DIAGRAMS		■
P04-02	STORM RISER DIAGRAMS		■
P04-03	CONDENSATE RISER DIAGRAMS		■
P04-04	ENLARGED PLUMBING RISER DIAGRAMS		■
P04-05	ENLARGED PLUMBING RISER DIAGRAMS		■
P04-06	ENLARGED PLUMBING RISER DIAGRAMS		■
P04-07	ENLARGED PLUMBING RISER DIAGRAMS		■
P04-08	ENLARGED PLUMBING RISER DIAGRAMS		■
P05-01	PLUMBING DETAILS	■	■
P05-02	PLUMBING DETAILS		■
P06-01	PLUMBING SCHEDULES	■	■

ABBREVIATIONS

ABD	AUTOMATIC BALL DRIP
ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AUTO	AUTOMATIC
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BLW	BELOW
BOP	BOTTOM OF PIPE
BOT	BOTTOM
C	CUBIC FEET PER HOUR
CD	CONDENSATE
CI	CAST IRON
CKV	CHECK VALVE
CL	CENTER LINE
CO	CLEAN OUT
CODP	CLEAN OUT DECK PLATE
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE, CONTINUOUS
COTG	CLEAN OUT TO GRADE
COWP	CLEAN OUT WALL PLATE
CW	COLD WATER
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAG(RAM, RAMMATIC, ONAL)
DISC	DISCONNECT
DISCH	DISCHARGE
DN	DOWN
DOM	DOMESTIC
DR	DRAIN PIPE
DWG	DRAWING
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EMER	EMERGENCY
ENCL	ENCLOSE, ENCLOSURE
EQPT	EQUIPMENT
ESEW	EMERGENCY SHOWER EYEWASH
EST	ESTIMATE
EVAP	EVAPORAT(E,ING,ED,OR)
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FIG	FIGURE
FLR	FLOOR
FM	FACTORY MUTUAL
FP	FIRE PROTECTION
FS	FLOOR SINK
FT	FOOT, FEET
FU	FIXTURE UNIT

GAL	GALLON
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GRAY WATER
HB	HOSE BIBB
HD	HUB DRAIN
HORIZ	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
HW	HOT WATER
HWR	HOT WATER RETURN
INT	INTER(IOR,NAL)
I.E.	INVERT ELEVATION
ID	DIAMETER, INSIDE
IN	INCHES
IW	INDIRECT WASTE
JC	JANITOR'S CLOSET
KW	KILOWATT
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FEET
MECH	MECHANICAL
MFR	MANUFACTUR(E,ER,ED)
MH	MANHOLE
MIN	MINIMUM
MSB	MOP SINK BASIN
MTD	MOUNTED
MTG	MOUNTING
N.I.C.	NOT IN CONTRACT
NC	NORMALLY CLOSED
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NFYH	NON-FREEZE YARD HYDRANT
NO	NORMALLY OPEN
NO.	NUMBER
NPS	NOMINAL PIPE SIZE
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
O.D.	OUTSIDE DIAMETER
OF-RD	OVERFLOW ROOF DRAIN
OF-ST	OVERFLOW STORM LINE
OS&Y	OUTSIDE STEM AND YOKE VALVE
%	PERCENT
PD	PRESSURE DROP/PUMP DISCHARGE
PD	PUMPED DISCHARGE
PH	PHASE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
QTY, (X)	QUANTITY

R	RISER
RAF	RAISED ACCESS FLOOR
RCPT	RECEPTACLE
RD	ROOF DRAIN
REF	REFERENCE
REQD	REQUIRED
RFI	REQUEST FOR INFORMATION
RM	ROOM
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
S.S.	STAINLESS STEEL
SAN	SANITARY LINE
SCHED	SCHEDULE
SECT	SECTION
SEG	SEGMENT
SF OR SQ.FT.	SQUARE FOOT
SH	SHOWER
SIB	STRUCTURAL ISOLATION BREAK
SIM	SIMILAR
SK	SINK
SP	SUMP PUMP
SPECS	SPECIFICATIONS
SQ. IN.	SQUARE INCH
SS	SERVICE SINK
ST	STORM LINE
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
THD	THREAD
THK	THICK(NESS)
TMV	THERMOSTATIC MIXING VALVE
TO	TELECOMMUNICATIONS OUTLET
TOC	TOP OF CONCRETE
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOT	TOTAL
TS	TUBE STEEL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VENT
V.I.F.	VERIFY IN FIELD
VOL	VOLUME
VRFY	VERIFY
VTR	VENT THRU ROOF
VTW	VENT THRU WALL
W	WASTE LINE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
WT	WEIGHT

APPLICABLE CODES

BUILDING CODE:
ACCESSIBILITY CODE:
ELECTRICAL CODE:
ENERGY CODE:
FIRE CODE:
MECHANICAL CODE:
PLUMBING CODE:
REGIONAL OR MUNICIPAL CODE:
FUEL GAS CODE:
ELEVATOR CODE:

GENERAL NOTES

1. ALL SANITARY, WASTE, VENT, & STORM DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE AND ANY AMENDMENTS ADOPTED BY THE CITY OF XXX.
2. CLEANING AND DISINFECTION OF POTABLE WATER PIPE AS FOLLOWS:
   a. CLEAN AND DISINFECT POTABLE SERVICE ENTRANCE PIPING AND WATER DISTRIBUTION PIPING IN ACCORDANCE WITH CHAPTER 6, SECTION 610 OF THE PLUMBING CODE, AND ANY AMENDMENTS ADOPTED BY THE CITY OF XXX.
   b. PURGE ALL WATER PIPING BEFORE USING, USE PURGING AND DISINFECTING PROCEDURE PRESCRIBED BY AUTHORITIES HAVING JURISDICTION OR, IF METHOD IS NOT PRESCRIBED, PROCEDURE DESCRIBED IN EITHER AWWA C651, AWWA C652 OR AS DESCRIBED BELOW.
   c. FLUSH PIPING SYSTEM WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT OUTLETS.
   d. FILL AND ISOLATE SYSTEM ACCORDING TO EITHER OF THE FOLLOWING:
      - FILL SYSTEM WITH WATER/CHLORINE SOLUTION WITH AT LEAST 50 PPM OF CHLORINE; ISOLATE WITH VALVES AND ALLOW TO STAND FOR 24 HOURS.
      - FILL SYSTEM WITH WATER/CHLORINE SOLUTION WITH AT LEAST 200 PPM OF CHLORINE.; ISOLATE AND ALLOW TO STAND FOR 3 HOURS.
   e. FLUSH SYSTEM WITH CLEAN, POTABLE WATER UNTIL CHLORINE IS NO LONGER PRESENT IN WATER COMING FROM SYSTEM.
   f. SUBMIT WATER SAMPLES IN STERILE BOTTLES TO AUTHORITIES HAVING JURISDICTION. REPEAT PROCEDURE IF BIOLOGICAL EXAMINATION SHOWS CONTAMINATION.
   g. PREPARE AND SUBMIT REPORTS FOR PURGING AND DISINFECTING ACTIVITIES TO THE ENGINEER.
3. PIPING SHALL BE LABELED IN ACCORDANCE WITH THE PLUMBING CODE AND ASME A13.1.
4. PIPING INSULATION TO BE INSTALLED AS FOLLOWS IN ACCORDANCE WITH SPEC 220719:
   a. INSTALL INSULATION MATERIALS, ACCESSORIES, AND FINISHES WITH SMOOTH , STRAIGHT, AND EVEN SURFACES; FREE OF VOIDS THROUGHOUT THE LENGTH OF EQUIPMENT AND PIPING INCLUDING FITTINGS, VALVES, AND SPECIALTIES.
   b. INSTALL ACCESSORIES COMPATIBLE WITH INSULATION MATERIALS AND SUITABLE FOR THE SERVICE. INSTALL ACCESSORIES THAT DO NOT CORRODE, SOFTEN, OR OTHERWISE ATTACH INSULATION OR JACKET IN EITHER WET OR DRY STATE.
5. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPES WHERE THEY CROSS EXPANSION JOINTS, SEISMIC JOINTS, ARE SUBJECT TO STRUCTURAL DEFLECTIONS, WHERE ADJACENT SECTIONS OF PIPE/BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, & WHERE THEY TERMINATE WITH CONNECTIONS TO EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ELEMENTS SUPPORTING THEM AS THEY APPROACH EQUIPMENT.

SANITARY, WASTE, STORM, AND VENT PIPING MATERIAL

1. UNDERGROUND, SOIL, WASTE, AND VENT PIPING NPS 16" AND SMALLER SHALL BE THE FOLLOWING:
   a. SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS.
2. ABOVEGROUND STORM, SOIL, & WASTE PIPING NPS 4" AND SMALLER SHALL BE ANY OF THE FOLLOWING:
   a. SERVICE CLASS, CAST-IRON SOIL PIPE AND FITTINGS; GASKETS; AND GASKETED JOINTS.
   b. HUBLESS CAST-IRON SOIL PIPE AND FITTINGS; STANDARD SHIELDED STAINLESS-STEEL AND RIGID, UNSHIELDED COUPLINGS, AND HUBLESS-COUPLING JOINTS.
   c. STEEL PIPE, DRAINAGE FITTINGS, AND THREADED JOINTS.
   d. COPPER DWV TUBE, COPPER DRAINAGE FITTINGS, AND SOLDERED JOINTS.
   e. DISSIMILAR PIPE-MATERIAL COUPLINGS: SHIELDED, NON-PRESSURE PIPE COUPLINGS FOR JOINING DISSIMILAR PIPE MATERIALS WITH SMALL DIFFERENCE IN OD.
3. ABOVEGROUND STORM, SOIL, & WASTE PIPING NPS 5" AND LARGER SHALL BE ANY OF THE FOLLOWING:
   a. SERVICE CLASS, CAST-IRON SOIL PIPE AND FITTINGS; GASKETS; AND GASKETED JOINTS.
   b. HUBLESS CAST-IRON SOIL PIPE AND FITTINGS; HEAVY-DUTY SHIELDED, STAINLESS-STEEL COUPLINGS AND HUBLESS-COUPLING JOINTS.
   c. STEEL PIPE, DRAINAGE FITTINGS, AND THREADED JOINTS.
   d. DISSIMILAR PIPE-MATERIAL COUPLINGS: FLEXIBLE, SHIELDED, NON-PRESSURE PIPE COUPLINGS FOR JOINING DISSIMILAR PIPE MATERIALS WITH SMALL DIFFERENCE IN OD.
4. ABOVEGROUND VENT PIPING NPS 6" AND SMALLER SHALL BE ANY OF THE FOLLOWING:
   a. SERVICE CLASS, CAST-IRON SOIL PIPE AND FITTINGS; GASKETS; AND GASKETED JOINTS.
   b. HUBLESS CAST-IRON SOIL PIPE AND FITTINGS; STANDARD SHIELDED, STAINLESS-STEEL COUPLINGS; AND HUBLESS-COUPLING JOINTS.
   c. STEEL PIPE, DRAINAGE FITTINGS, AND THREADED JOINTS.
   d. STAINLESS-STEEL PIPE AND FITTINGS, GASKETS, AND GASKETED JOINTS.
   e. COPPER DWV TUBE, COPPER DRAINAGE FITTINGS, AND SOLDERED JOINTS.
   f. DISSIMILAR PIPE-MATERIAL COUPLINGS: SHIELDED, NON-PRESSURE PIPE COUPLINGS FOR JOINING DISSIMILAR PIPE MATERIALS WITH SMALL DIFFERENCE IN OD.
      - OPTION FOR VENT PIPING, NPS 2-1/2" AND NPS 3-1/2": HARD COPPER TUBE, TYPE M; COPPER PRESSURE FITTINGS; AND SOLDERED JOINTS.
5. FLANGES AND UNIONS MAY BE USED ON ABOVEGROUND PRESSURE PIPING, UNLESS OTHERWISE INDICATED.

DOMESTIC PIPING MATERIAL

1. ABOVEGROUND DOMESTIC & MAKE-UP WATER PIPING - USE ANY OF THE FOLLOWING PIPING MATERIALS FOR EACH SIZE RANGE:
   a. NPS 1 AND SMALLER: HARD COPPER TUBE, TYPE L; COPPER PRESSURE FITTINGS; AND SOLDERED JOINTS.
   b. NPS 1-1/4 AND NPS 1-1/2: HARD COPPER TUBE, TYPE L; COPPER PRESSURE FITTINGS; AND SOLDERED JOINTS.
   c. NPS 2: HARD COPPER TUBE, TYPE L; COPPER PRESSURE FITTINGS; AND SOLDERED JOINTS.
   d. NPS 2: HARD COPPER TUBE, TYPE L WITH GROOVED ENDS; COPPER GROOVED-END FITTINGS; GROOVED-END-TUBE COUPLINGS; AND GROOVED JOINTS.
   e. NPS 2-1/2 TO NPS 3: HARD COPPER TUBE, TYPE L; COPPER PRESSURE FITTINGS; AND SOLDERED JOINTS.
   f. NPS 2-1/2 TO NPS 3: HARD COPPER TUBE, TYPE L WITH GROOVED ENDS; COPPER GROOVED-END FITTINGS; GROOVED-END-TUBE COUPLINGS; AND GROOVED JOINTS.
2. QUALITY ASSURANCE
   a. PIPING MATERIALS SHALL BEAR LABEL, STAMP, OR MARKINGS NSF®-61 AND NSF®-372 (OR NSF®-61-G) OR OTHER ACCEPT CERTIFIER MARKS DEMONSTRATING THIRD PARTY CERTIFICATION WITH THESE REQUIREMENTS.
   b. COMPLY WITH NSF/ANSI 61, "DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS; SECTIONS 1 THROUGH 9," FOR POTABLE DOMESTIC WATER PIPING AND COMPONENTS.
   c. PRODUCTS INTENDED TO DISPENSE WATER FOR HUMAN CONSUMPTION THROUGH DRINKING OR COOKING SHALL HAVE A WEIGHTED AVERAGE LEAD CONTENT OF NOT MORE THAN 0.25% AS DETERMINED BY NSF/ANSI 372, AND NSF/ANSI 61.
   d. WATER DISTRIBUTION MAIN GATE VALVES TWO INCHES AND LARGER IN DIAMETER EXEMPTED FROM THE 0.25% WEIGHTED AVERAGE LEAD CONTENT REQUIREMENT. PRODUCT SHALL BE CERTIFIED COMPLIANT WITH THESE REQUIREMENTS BY AN AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) ACCREDITED CERTIFICATION ORGANIZATION.

SEISMIC DESIGN CRITERIA

1. S_{DS} = g
   S_{D1} = g
   SEISMIC DESIGN CATEGORY =
   RISK CATEGORY =
   SEISMIC IMPORTANCE FACTOR I_e (NOT Le) =

serverfarm
CORGAN
TGRWA STRUCTURAL ENGINEERS
kW Mission Critical Engineering Member of WSP
EP ENGINEERING PLUS
Kimley»Horn

ISSUES		
1	12.12.2025	30% SCHEMATIC DESIGN
2	01.23.2026	60% DESIGN DEVELOPMENT

REVISIONS

kW Mission Critical Engineering
Contact: Kyle Jenkins Phone: 518.268.2841
Engineer:
License #: Exp. Date:

NOT FOR CONSTRUCTION

Date of Issue:
01/23/2026

SF - ARK01
DESIGN DEVELOPMENT

Clarksville, AR 72830

LEGEND AND ABBREVIATIONS

JOB US0049903.5614
SHEET

P00-01