PLUMBING GENERAL NOTES:

1. PROVIDE REQUIRED WATER, WASTE, AND VENT PIPING, FITTINGS, AND INSULATION, AND MAKE FINAL CONNECTIONS TO EQUIPMENT. PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. PLANS DO NOT SHOW ALL REQUIRED BENDS, OFFSETS, VALVES, AND MISCELLANEOUS FITTINGS FOR A COMPLETE INSTALLATION. ALL PIPING, EQUIPMENT, AND CONNECTIONS MUST BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS, LOCAL CODES AND ORDINANCES, AND MANUFACTURER'S INSTRUCTIONS, WHICHEVER IS MORE STRINGENT.
2. PLUMBING WORK MUST BE IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE AND NORTH CAROLINA PLUMBING CODE.
3. "PROVIDE" IS AN INCLUSIVE TERM USED TO DESCRIBE ASPECTS OF THE WORK THAT MUST BE ACCOMPLISHED AND IS HEREBY DEFINED TO REQUIRE TO STORE, FURNISH, INSTALL, MOUNT, CONNECT, CONTROL AND POWER EQUIPMENT INDICATED, AS WELL AS ALL APPURTENANCES REQUIRED TO MAKE SYSTEMS OPERATE AS INDICATED WITHIN THESE DRAWINGS AND SPECIFICATIONS AND TO FULFILL THE SCOPE OF WORK.
4. SLOPES AND INVERT ELEVATIONS MUST BE ESTABLISHED BEFORE ANY PIPE IS INSTALLED IN ORDER TO MAINTAIN PROPER SLOPES. ANY DISCREPANCIES MUST BE REPORTED TO OWNER'S REPRESENTATIVE. ALL PIPING MUST BE LOCATED AND DETERMINED WHEN TO BE INSTALLED TO AVOID CONFLICT WITH OTHER TRADES.
5. WHERE CONNECTING TO A UTILITY OR SERVICE, VERIFY LOCATION, SIZES, MATERIALS, FLUID BEING HANDLED, AND INVERT ELEVATIONS OF ALL EXISTING UTILITIES AND CONFIRM THAT NEW PIPES BEING ROUTED TO EXISTING UTILITIES CAN BE INSTALLED CONFORMING TO CODE AND AS SHOWN. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO PURCHASING ANY MATERIALS OR PERFORMING ANY WORK OR EXTENSION OF CONNECTION, WITH THE EXCEPTION OF EXCAVATION OR OTHER WORK TO PROVIDE ACCESS TO THE CONCEALED UTILITY.
6. WASTE PIPING MUST BE INSTALLED TO PROVIDE A MINIMUM SLOPE OF 1% (1/8" PER LINEAR FOOT). WASTE PIPING SMALLER THAN 3" MUST BE INSTALLED TO PROVIDE A MINIMUM SLOPE OF 2% (1/4" PER LINEAR FOOT).
7. KEEP ALL BURIED PIPING CLEAR OF FOOTINGS. COORDINATE WITH STRUCTURAL.
8. COORDINATE LOCATION OF PIPING AND DRAINS WITH ALL MECHANICAL AND ELECTRICAL EQUIPMENT. PIPING MUST NOT BE INSTALLED ABOVE ELECTRICAL, COMMUNICATIONS, OR DATA EQUIPMENT OR PANELS. COMPLY WITH ARCHITECTURAL PLANS FOR EXACT LOCATION OF PLUMBING FIXTURES, COMPLIANCE TO ADA CLEARANCES, AND FINISHES.
9. PROVIDE EXTENSION OF EQUIPMENT DRAINS TO FLOOR DRAINS, FLOOR SINKS, AND OPEN SITE DRAINS.
10. SET TOPS OF ALL FLOOR DRAINS AND CLEANOUTS FLUSH WITH FINISHED FLOOR, UNLESS NOTED OTHERWISE.
11. PIPING MUST BE CONCEALED UNLESS OTHERWISE NOTED.
12. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND THE ELECTRICAL CONTRACTOR, AND FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN.
13. ALL PLUMBING EQUIPMENT AND SYSTEMS MUST BE GUARANTEED FOR A MINIMUM PERIOD OF ONE YEAR AFTER OWNER'S REPRESENTATIVE'S FINAL ACCEPTANCE.
14. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS, FIXTURE LOCATIONS, ROOM NAMES, AND NUMBERS.
15. ALL WALL CLEANOUTS MUST BE PROVIDED WITH WALL COVERS AND MOUNTED IN UNOBTRUSIVE LOCATIONS WHILE MAINTAINING ACCESSIBILITY. SET ALL FLOOR CLEANOUTS FLUSH WITH FLOOR AREAS OR FINISHED GRADE. COORDINATE FINAL WALL AND FLOOR CLEANOUT LOCATIONS WITH ARCHITECTURAL PLANS TO AVOID BEING COVERED BY FURNITURE OR OTHER APPURTENANCES.
16. WHERE POSSIBLE, INSTALL SHUT-OFF VALVES AND EQUIPMENT REQUIRING MAINTENANCE, CLEANING AND ADJUSTMENT ABOVE ACCESSIBLE CEILINGS OR IN SERVICE AREAS SUCH AS JANITOR'S CLOSETS. IN OTHER LOCATIONS, PROVIDE ACCESS PANELS IN INCONSPICUOUS LOCATIONS WITH FINISH TO MATCH ARCHITECTURAL. FIELD VERIFY FINAL LOCATIONS OF ACCESS PANELS WITH OTHER TRADES PRIOR TO INSTALLATION.
17. ALL HOSE BIBBS, WALL HYDRANTS, AND VALVES WITH THREADED HOSE CONNECTIONS MUST BE EQUIPPED WITH VACUUM BREAKER.
18. PROVIDE INSULATION, PIPE IDENTIFICATION, AND OTHER REQUIREMENTS AS LISTED IN PROJECT SPECIFICATIONS.
19. ALL PIPING ABOVE GRADE MUST BE SUPPORTED FROM THE BUILDING STRUCTURE AND MUST NOT REST ON CEILING TILES OR BE SUPPORTED FROM CEILING TILES.
20. WATER PIPING ROUTED ABOVE CEILINGS AND IN EXTERIOR WALLS MUST BE ROUTED ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE) OF WALL INSULATION.
21. LOCATE ALL SECTIONAL OR MAIN CONTROL VALVES WITHIN 1'-0" FROM ACCESS PANELS, CEILING TILES, OR OTHER POINT OF ACCESS.
22. PROVIDE WATER HAMMER ARRESTORS SIZED PER PLUMBING DRAINAGE INSTITUTE SPECIFICATIONS ON ALL DOMESTIC WATER LINES SERVING FLUSH VALVE FIXTURES, WASHING MACHINES SUPPLIES, PRV STATIONS, AND OTHER INSTALLATIONS WITH QUICK CLOSING VALVES.
23. WHERE A PIPING SYSTEM CROSSES A BUILDING EXPANSION JOINT, PROVIDE A MANUFACTURED EXPANSION DEVICE, FABRICATED EXPANSION LOOP, OR (WHERE INDICATED ON THE DRAWINGS) AN ENLARGED THROUGH-WALL SLEEVE THAT ALLOWS FOR BUILDING MOVEMENT. WHERE AN ENLARGED THROUGH-WALL SLEEVE IS PERMITTED, FILL SLEEVE OPENING AROUND THE PIPE WITH FLEXIBLE CAULK THAT WILL NOT IMPEDE PIPE MOVEMENT.
24. ALL PIPE PENETRATIONS OF FIRE AND/OR SMOKE-RATED ASSEMBLIES MUST BE FIRE-STOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS MUST BE AS MANUFACTURED BY 3M COMPANY, CP25 CAULK, CS195 COMPOSITE PANEL, FS195 WRAP/STRIP, OR PSS 7900 SERIES SYSTEMS AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR APPLICATION, OR EQUIVALENT SYSTEM AS APPROVED BY LOCAL CODE OFFICIALS.
25. ALL VENTS THROUGH ROOF MUST BE LOCATED A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKE.
26. ALL COLD WATER, HOT WATER, AND DRAIN PIPING AT HANDICAPPED FIXTURES MUST BE INSULATED WITH HANDI-LAV GUARD MODELS 102 AND 105 (OR APPROVED EQUAL) INSULATION KITS.
27. LOCATE ALL WATER CLOSET FLUSH VALVE LEVERS ON THE APPROACH SIDE OF THE WATER CLOSET.
28. NOT ALL PLUMBING ABBREVIATIONS SHOWN WILL BE USED FOR THIS PROJECT.

PLUMBING ABBREVIATIONS:

AAV	AIR ADMITTANCE VALVE
AC	AIR COMPRESSOR
A/C	ABOVE CEILING
AD	AIR DRYER
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ARCH	ARCHITECTURE, ARCHITECTURAL
BFP	BACKFLOW PREVENTER
B/F	BELOW FLOOR
B/G	BELOW GRADE
BLDG	BUILDING
BV	BALL VALVE
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
CONT.	CONTINUATION
CO	CLEANOUT
CV	CHECK VALVE
CONTR	CONTRACTOR
CW	COLD WATER (POTABLE / DOMESTIC)
DEG.	DEGREES
DF	DRINKING FOUNTAIN
DHWR	DOMESTIC HOT WATER RETURN
DN	DOWN
DSN	DOWNSPOUT NOZZLE
DWGS	DRAWINGS
(E), EXST.	EXISTING
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EMEW	EMERGENCY EYEWASH
EMSH	EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER / EYEWASH
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GC	GENERAL CONTRACTOR
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	GATE VALVE
GWH	GAS WATER HEATER
HB	HOSE BIBB
H/C	HANDICAP
HW	HOT WATER (POTABLE / DOMESTIC)
I.E.	INVERT ELEVATION
IBC	INTERNATIONAL BUILDING CODE
IFGC	INTERNATIONAL FUEL GAS CODE
IMB	ICE MAKER BOX
IPC	INTERNATIONAL PLUMBING CODE
IW	INDIRECT WASTE
KW	KILOWATT
L	LAUNDRY
LP	LIQUID PETROLEUM
LV	LAVATORY
MFG	MANUFACTURER
MS	MOP SINK
NFRH	NON-FREEZE ROOF HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NG	NATURAL GAS
NIC	NOT IN CONTRACT
ORD	OVERFLOW ROOF DRAIN
OST	OVERFLOW STORM DRAINAGE
P, PLBG	PLUMBING
PD	PUMPED DISHARGE
PDI	PLUMBING DRAINAGE INSTITUTE
PRV	PRESSURE REDUCING / REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RL	RAIN LEADER
RPZ	REDUCED PRESSURE ZONE
SAN, S	SANITARY PIPING
SANS	SANITARY SEWER
SH	SHOWER
SK	SINK
SOV	SHUT-OFF VALVE
ST	STORM DRAINAGE
STR	STRAINER
SS	STAINLESS STEEL
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
U/G	UNDERGROUND
U/SAN	UNDERGROUND SANITARY
V	VENT PIPING
VTR	VENT THROUGH ROOF
W	WASTE PIPING
WB	CLOTHES WASHER OUTLET BOX
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
W/O	WITHOUT
W/	WITH
YCO	YARD CLEANOUT

PLUMBING LEGEND:

- DIRECTION OF FLOW
- PIPE TURNED DOWN
- PIPE TURNED UP
- RISE OR DROP
- BRANCH BOTTOM CONNECTION
- BRANCH TOP CONNECTION
- TEE OUTLET UP
- TEE OUTLET DOWN
- CAP ON END OF PIPE
- CONTINUATION OF PIPE
- PIPING BELOW FLOOR OR GRADE, SINGLE LINE
- PIPING BELOW FLOOR OR GRADE, DOUBLE LINE
- SANITARY WASTE PIPING - ABOVE FLOOR OR GRADE, SINGLE LINE
- SANITARY WASTE PIPING - ABOVE FLOOR OR GRADE, DOUBLE LINE
- VENT PIPING, SINGLE LINE
- VENT PIPING, DOUBLE LINE
- POTABLE / DOMESTIC COLD WATER PIPING, SINGLE LINE
- POTABLE / DOMESTIC COLD WATER PIPING, DOUBLE LINE
- POTABLE / DOMESTIC HOT WATER SUPPLY PIPING, SINGLE LINE
- POTABLE / DOMESTIC HOT WATER SUPPLY PIPING, DOUBLE LINE
- POTABLE / DOMESTIC HOT WATER RETURN PIPING, SINGLE LINE
- POTABLE / DOMESTIC HOT WATER RETURN PIPING, DOUBLE LINE
- THERMOMETER
- TEMPERATURE & PRESSURE RELIEF VALVE
- FLOW MEASURING / BALANCING / SHUT-OFF VALVE
- BALL VALVE
- CHECK VALVE
- GATE VALVE
- STRAINER
- UNION

PLAN	ELEV	
		HOSE BIBB
		FLOOR DRAIN
TP		TRAP PRIMER
FCO	FCO	FLOOR CLEANOUT
WCO	WCO	WALL CLEANOUT
		WATER HAMMER ARRESTOR

- SANITARY (S) / DOMESTIC WATER (W) RISER DIAGRAM
- RISER DIAGRAM NUMBER
- REFER TO
- DETAIL NUMBER
- 1 / REF: A1/ M-501
- SHEET NUMBER OF DETAIL
- KEYNOTE NUMBER; REFER TO KEYNOTE LEGEND ON SHEET

POND
3500 Parkway Lane
Suite 500
Peachtree Corners
Georgia 30092

EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES V. LEDYARD 5/29/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON,
NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

PLUMBING GENERAL NOTES, ABBREVIATIONS, AND LEGENDS

SHEET NUMBER

P-001

ORIGINAL SHEET SIZE: 30" X 42"

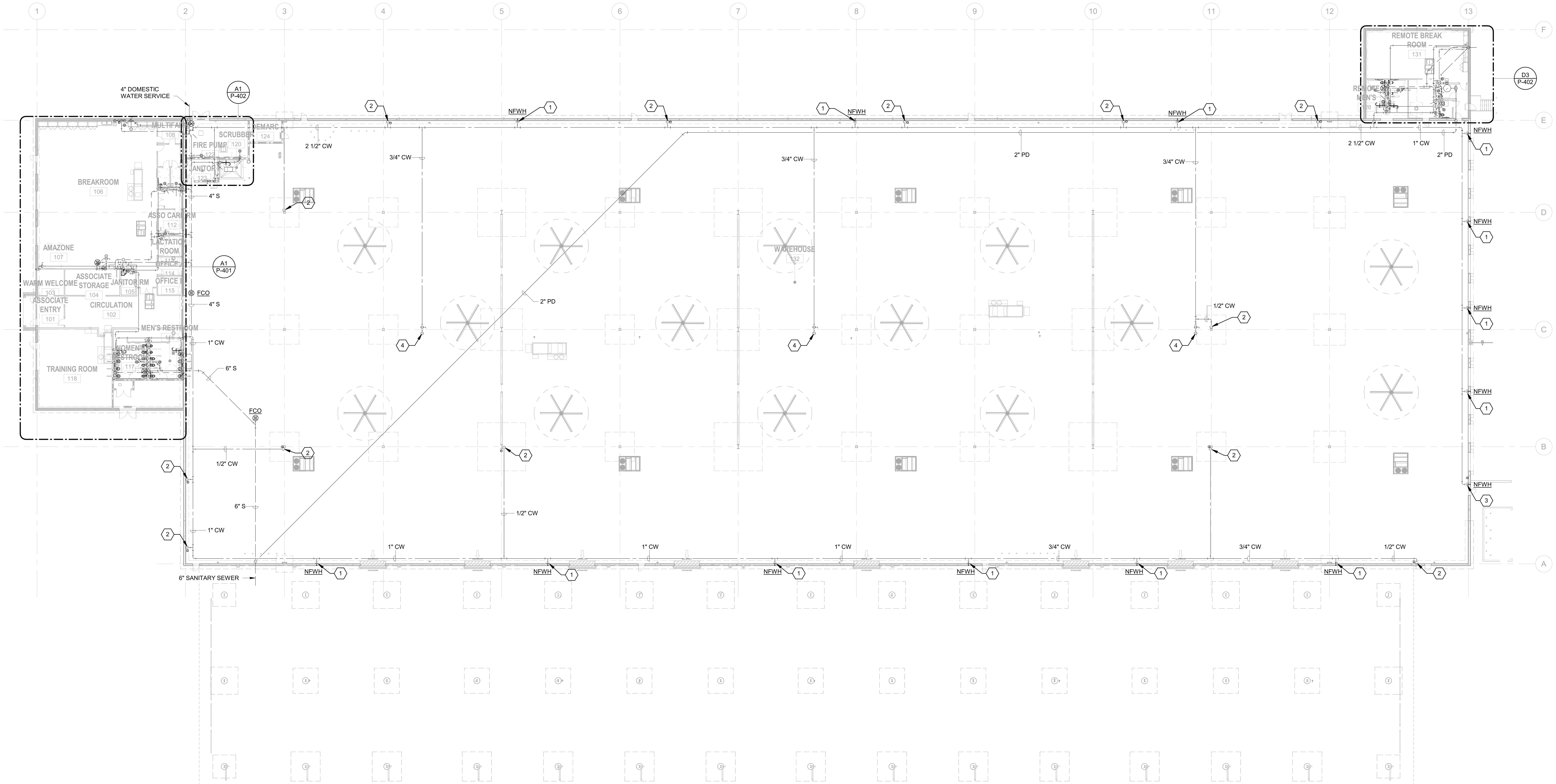
ISSUED FOR PERMIT

SHEET NOTES

1. REFER TO P-001 FOR PLUMBING GENERAL NOTES, ABBREVIATIONS AND LEGENDS.

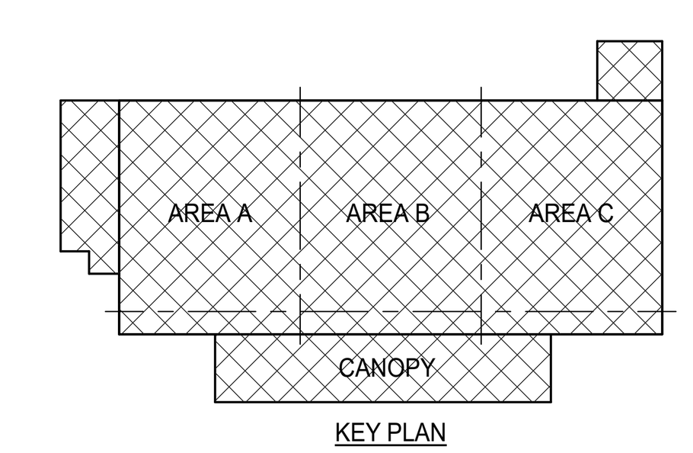
KEYNOTES

1. BALL VALVE IN CW DROP AT 5'-0" AFF.
2. 1/2" CW DN ALONG COLUMN OR WALL TO OWNER-FURNISHED WATER COOLER. PROVIDE BALL VALVE AT 5'-0" AFF AND 3/8" QUICK DISCONNECT.
3. 3/4" CW DN ALONG WALL TO NFWH. PROVIDE TEE AT 5'-0" AFF AND ROUTE 1/2" CW TO OWNER-FURNISHED WATER COOLER WITH 3/8" QUICK DISCONNECT. PROVIDE BALL VALVES ON EACH BRANCH TO FIXTURES.
4. 3/4" CW UP TO NFRH ON ROOF.



A1 BTS - PLUMBING FLOOR PLAN - OVERALL

SCALE: NOT TO SCALE



KEY PLAN

SCALE: 3/64" = 1'-0"

PLAN NORTH

POND
3500 Parkway Lane
Suite 500
Peachtree Corners
Georgia 30092

EOR/AOR SEAL

COA SEAL

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA 28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCD8_BTS & EV_CD100_REVD_05012025	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

BTS - PLUMBING FLOOR PLAN - OVERALL

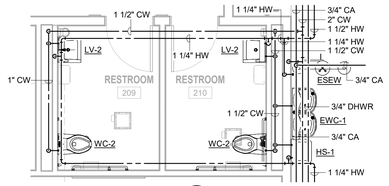
SHEET NUMBER

P-101

ORIGINAL SHEET SIZE: 30" X 42"

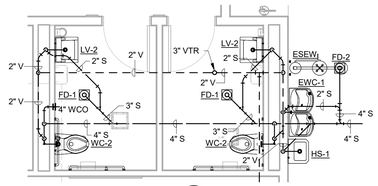
ISSUED FOR PERMIT

4/29/2025 12:28:27 PM Autodesk Docs://1240989-AMZL DCD8 - BTS - Wilmington, NC - Seefr/1240989_AMZL DCD8_MEPF_v23.rvt



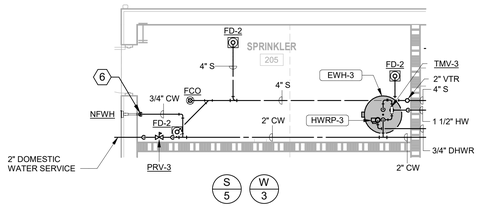
E1 FSC RESTROOM SUPPLY PLAN

SCALE: 1/4" = 1'-0"



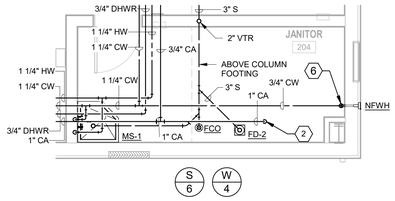
E2 FSC RESTROOM SANITARY PLAN

SCALE: 1/4" = 1'-0"



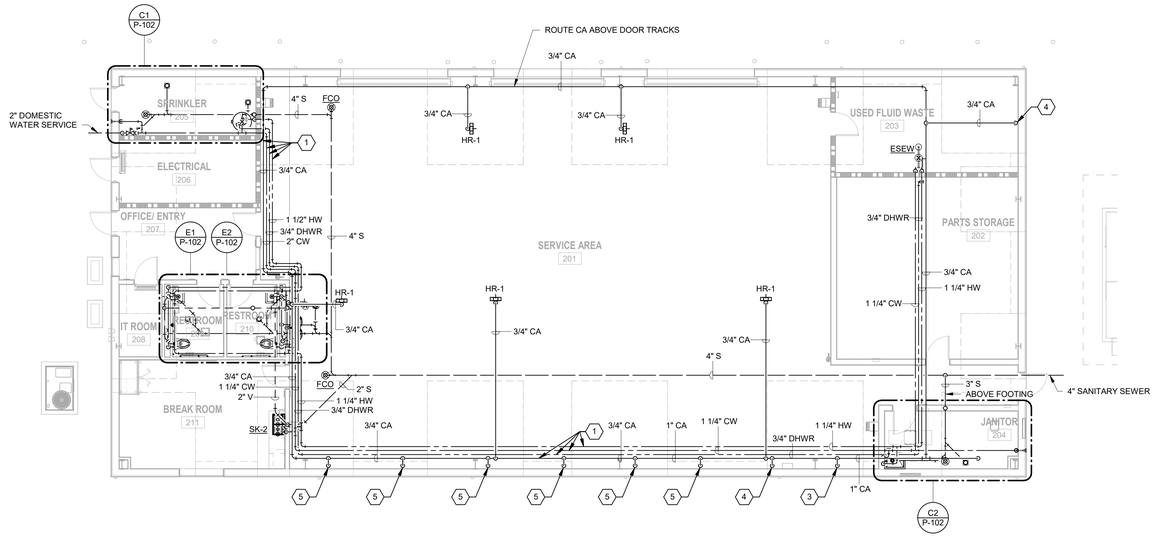
C1 SPRINKLER 205 PLUMBING PLAN

SCALE: 1/4" = 1'-0"



C2 JANITOR 204 PLUMBING PLAN

SCALE: 1/4" = 1'-0"



A1 FSC - PLUMBING FLOOR PLAN - OVERALL

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

SHEET NOTES

1. REFER TO P-001 FOR PLUMBING GENERAL NOTES, ABBREVIATIONS AND LEGENDS.

KEYNOTES

1. ROUTE PIPING ALONG WALL AT 12 TO 13 FEET ABOVE FLOOR WITH STAINLESS STEEL WALL SUPPORT BRACKETS.
2. 1" CA DN TO OWNER FURNISHED AIR COMPRESSOR AND AIR DRYER. COORDINATE WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
3. 1/2" CA DN TO OWNER FURNISHED EQUIPMENT WITH BV AT 6'-0" AFF. COORDINATE WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
4. 3/4" CA DN TO OWNER FURNISHED EQUIPMENT WITH BV AT 6'-0" AFF. COORDINATE WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
5. 1" CA DN TO OWNER FURNISHED EQUIPMENT WITH BV AT 6'-0" AFF. COORDINATE WITH EQUIPMENT PROVIDER PRIOR TO INSTALLATION.
6. BALL VALVE IN CW DROP AT 5'-0" AFF.

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EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 5/01/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON,
NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCDB_BTS & EV_CODE RESPONSE	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

FSC - PLUMBING FLOOR PLAN - OVERALL

SHEET NUMBER

P-102

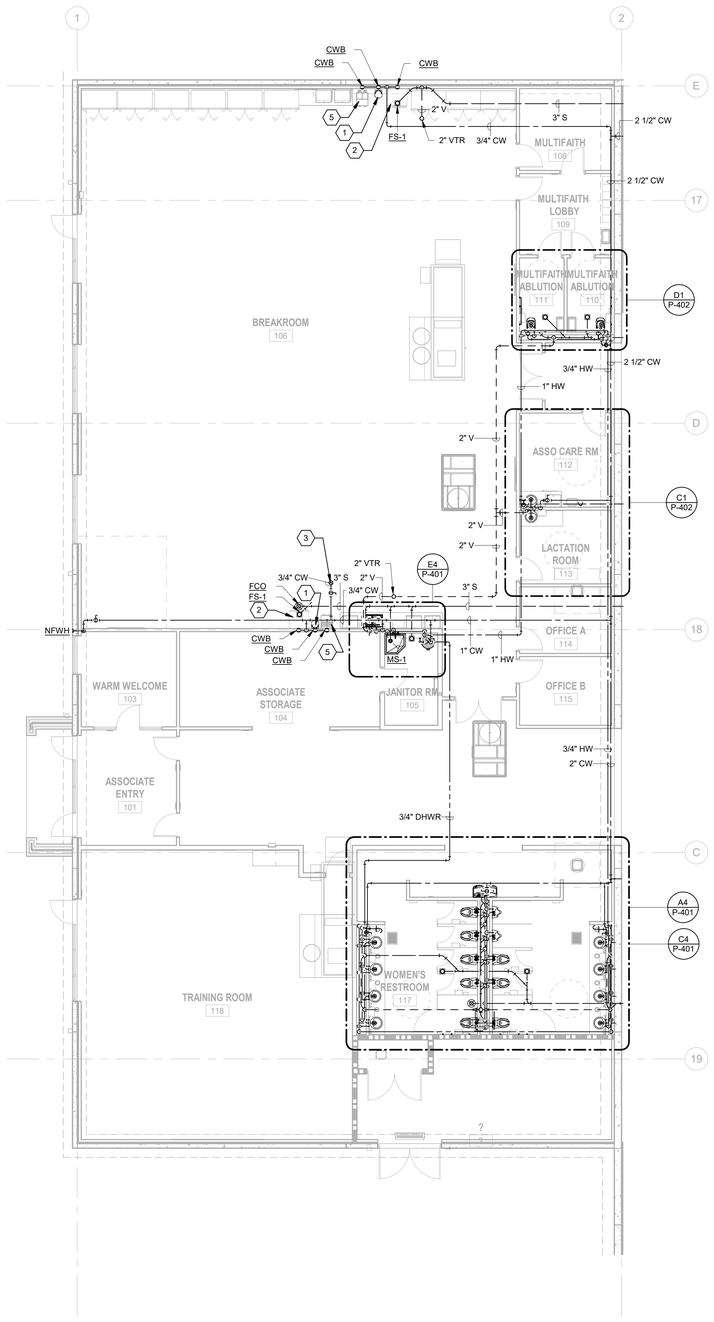
ORIGINAL SHEET SIZE: 30" X 42"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

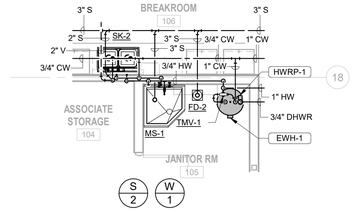
PLAN NORTH

ISSUED FOR PERMIT



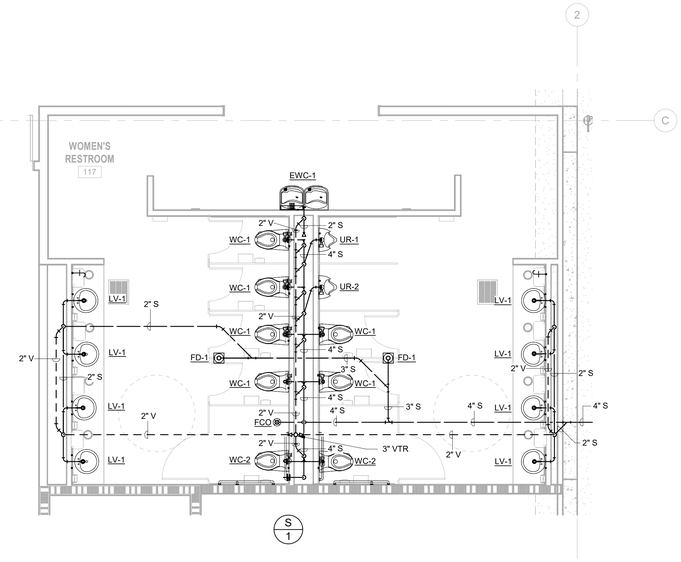
A1 OFFICE AREA PLUMBING PLAN

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



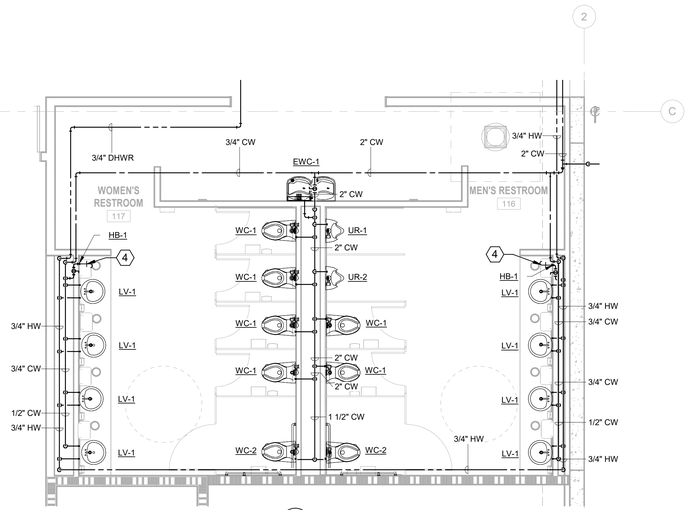
E4 JANITOR 105 PLUMBING PLAN

SCALE: 1/4" = 1'-0"



C4 RESTROOM SANITARY PLAN

SCALE: 1/4" = 1'-0"



A4 RESTROOM SUPPLY PLAN

SCALE: 1/4" = 1'-0"

SHEET NOTES

1. REFER TO P-001 FOR PLUMBING GENERAL NOTES, ABBREVIATIONS AND LEGENDS.

KEYNOTES

1. WATER COOLER FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB WITH 3/8" QUICK DISCONNECT.
2. COMBINATION ICE MACHINE / WATER DISPENSER FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB. PIPE DRAIN TO FS-1. SEE DETAIL D3/P-501.
3. 3/4" CW UP TO NFRH ON ROOF.
4. HB-1 MOUNTED ON WALL BELOW COUNTER. PROVIDE ACCESS PANEL BELOW COUNTER FOR IN-WALL BALL VALVE.
5. COFFEE VENDING MACHINE FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB.

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EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 05/01/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCD8_BTS & EV_CD DOCUMENTS	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

ENLARGED PLUMBING PLANS

SHEET NUMBER

P-401

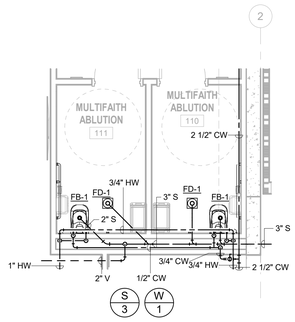
ORIGINAL SHEET SIZE: 30" X 42"

0 2' 4' 8' SCALE: 1/4" = 1'-0"

0 4' 8' 16' SCALE: 1/8" = 1'-0"

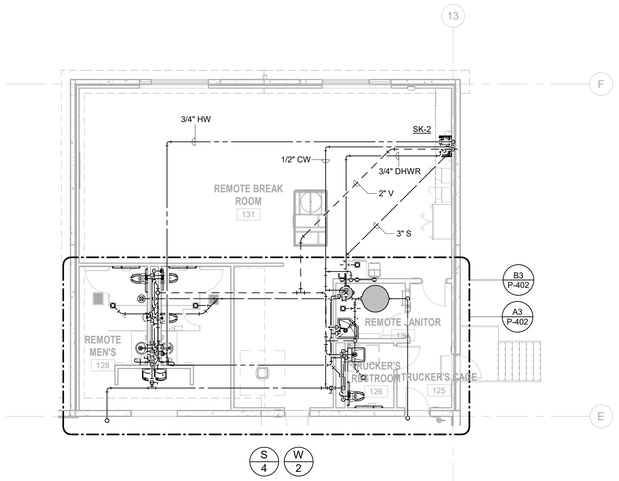
PLAN NORTH

ISSUED FOR PERMIT



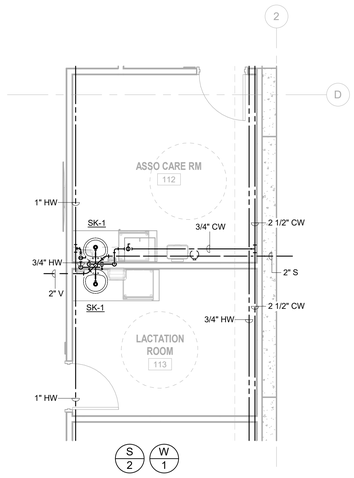
D1 ABLUTION ROOMS PLUMBING PLAN

SCALE: 1/4" = 1'-0"



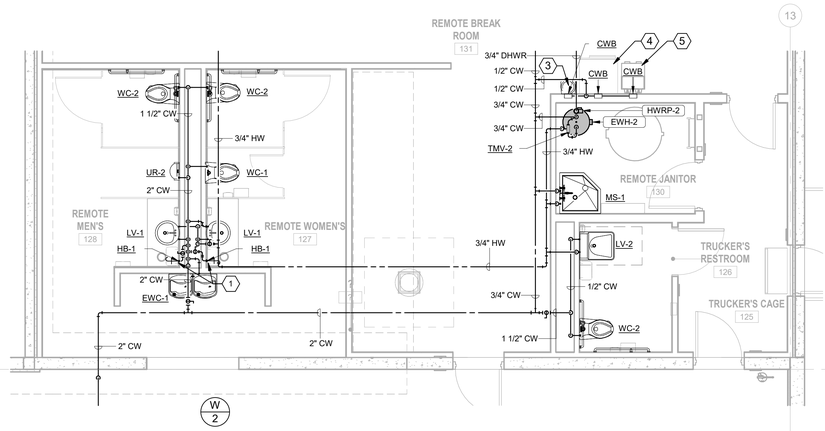
D3 REMOTE OFFICE PLUMBING PLAN

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



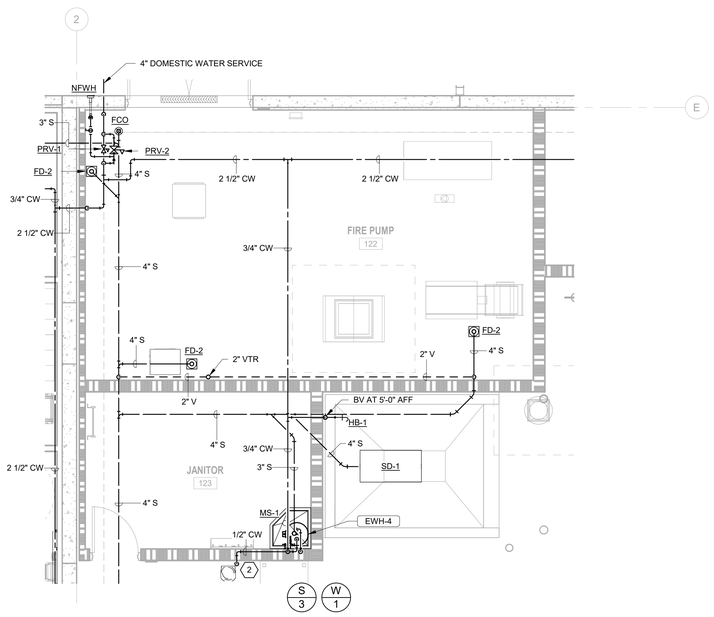
C1 LACTATION ROOM PLUMBING PLAN

SCALE: 1/4" = 1'-0"



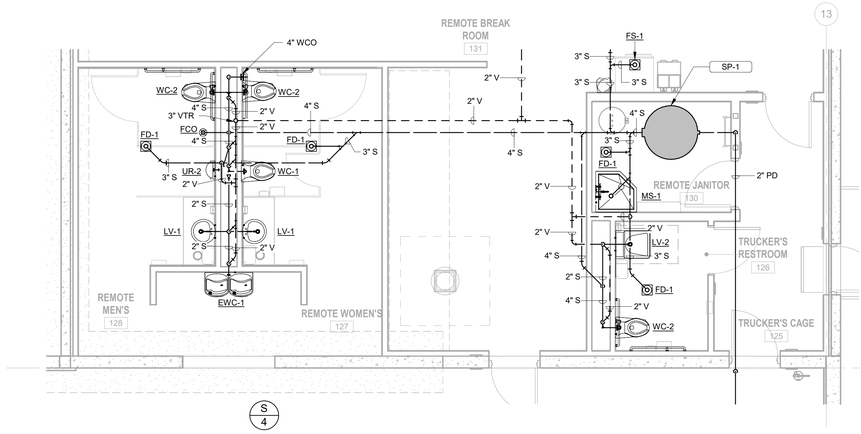
B3 REMOTE OFFICE SUPPLY PLAN

SCALE: 1/4" = 1'-0"



A1 FIRE PUMP 122 - PLUMBING PLAN

SCALE: 1/4" = 1'-0"



A3 REMOTE OFFICE SANITARY PLAN

SCALE: 1/4" = 1'-0"

SHEET NOTES

1. REFER TO P-001 FOR PLUMBING GENERAL NOTES, ABBREVIATIONS AND LEGENDS.

KEYNOTES

1. HB-1 MOUNTED ON WALL BELOW COUNTER. PROVIDE ACCESS PANEL BELOW COUNTER FOR IN-WALL BALL VALVE.
2. 1/2" CW DN ALONG COLUMN OR WALL TO OWNER-FURNISHED WATER COOLER. PROVIDE BALL VALVE AT 5'-0" AFF AND 3/8" QUICK DISCONNECT.
3. WATER COOLER FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB WITH 3/8" QUICK DISCONNECT.
4. COMBINATION ICE MACHINE / WATER DISPENSER FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB. PIPE DRAIN TO FS-1. SEE DETAIL D3/P-501.
5. COFFEE VENDING MACHINE FURNISHED BY OWNER. PROVIDE CW CONNECTION FROM CWB.

POND
3500 Parkway Lane
Suite 500
Peachtree Corners
Georgia 30092

EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 05/01/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCDB_BTS & EV_CONSTRUCTION	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

ENLARGED PLUMBING PLANS

SHEET NUMBER

P-402

ORIGINAL SHEET SIZE: 30" X 42"

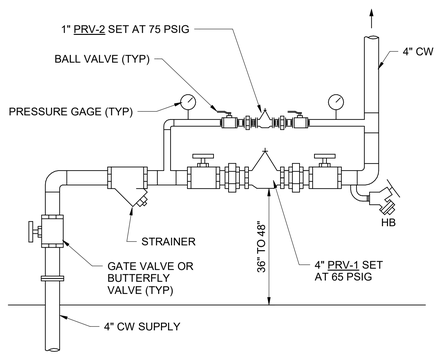
SCALE: 1/4" = 1'-0"

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

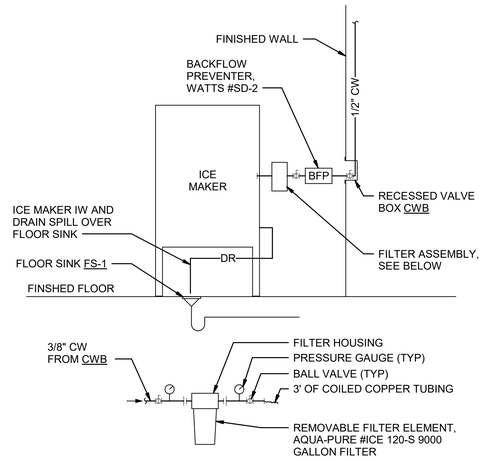
PLAN NORTH

ISSUED FOR PERMIT

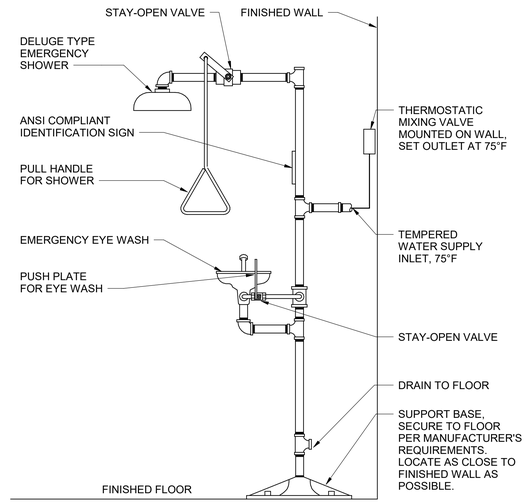
4/29/2025 12:28:52 PM Autodesk Docs://1240989-AMZL DCDB - BTS - Wilmington, NC - Seefri/1240989_AMZL DCDB_MEPP_v23.rvt



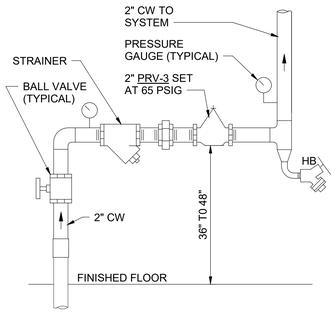
D1 DOMESTIC WATER SERVICE DETAIL - BTS
NOT TO SCALE



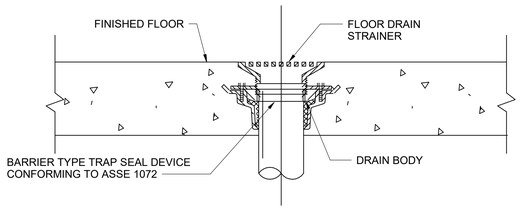
D3 ICE MACHINE CONNECTION DETAIL
NOT TO SCALE



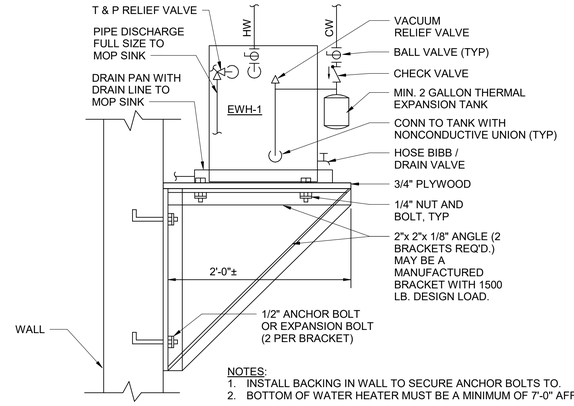
D5 EMERGENCY SHOWER & EYE WASH DETAIL
NOT TO SCALE



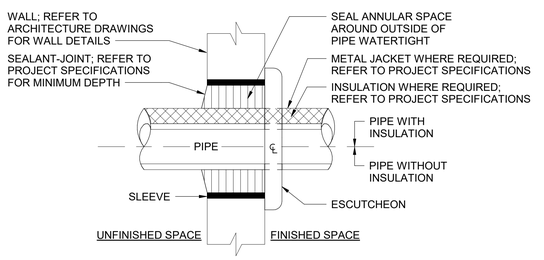
C1 DOMESTIC WATER SERVICE DETAIL - FSC
NOT TO SCALE



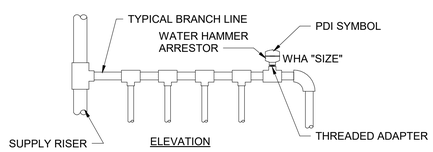
C3 BARRIER TYPE TRAP SEAL DEVICE
NOT TO SCALE



C5 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE



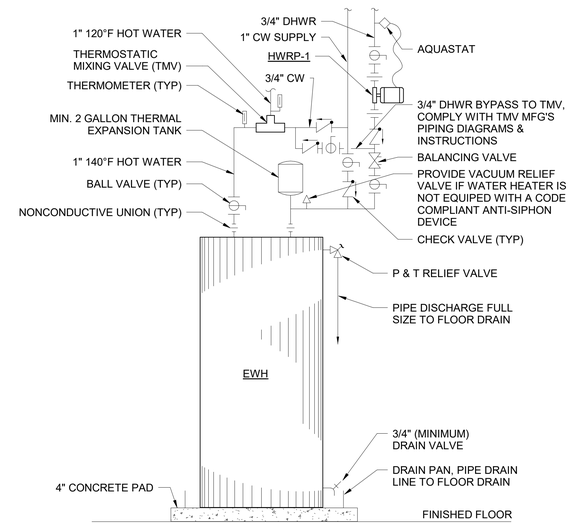
A1 INTERIOR WALL PIPE PENETRATION DETAIL
SCALE: NOT TO SCALE



WATER HAMMER ARRESTOR SCHEDULE						
PDI SYMBOL	A	B	C	D	E	F
FIXTURE UNIT RATING	1-11	12-32	33-60	61-113	114-154	155-330

NOTES:
1. INSTALL WATER HAMMER ARRESTORS AT THE END OF BRANCH LINE BETWEEN THE LAST TWO FIXTURES SERVED.
2. ONE WATER HAMMER ARRESTOR PER 20' LINE, AND ANOTHER FOR BRANCHES OVER 20' IN LENGTH.
3. THE SUM OF FIXTURE UNIT RATING OF UNITS OVER 20' IN LENGTH MUST BE EQUAL TO OR GREATER THAN THE DEMAND OF THE BRANCHES.

A3 WATER HAMMER ARRESTOR DETAIL
SCALE: NOT TO SCALE



A5 ELECTRIC TANK WATER HEATER DETAIL
NOT TO SCALE

POND
3500 Parkway Lane
Suite 500
Peachtree Corners
Georgia 30092

EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 1/24/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE WILMINGTON, NORTH CAROLINA 28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCDR_BTS & EV_CD'S_REV_05012025	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

PLUMBING DETAILS

SHEET NUMBER

P-501

ORIGINAL SHEET SIZE: 30" X 42"

ISSUED FOR PERMIT

PLUMBING FIXTURE SCHEDULE

ID	FIXTURE TYPE	COLD WATER PIPE SIZE	HOT WATER PIPE SIZE	WASTE PIPE SIZE	VENT PIPE SIZE	FLOW RESTRICTION	BASIS OF DESIGN: MANUFACTURER	BASIS OF DESIGN: MODEL	BASIS OF DESIGN: DESCRIPTION
CWB	COLD WATER CONNECTION BOX	1/2"	---	---	---	---	OATEY	38681	RECESSED WALL BOX WITH ¼ TURN BRASS BALL VALVE & WHA. MAKE FINAL CONNECTION TO APPLIANCE WITH STAINLESS STEEL BRAIDED HOSE.
ESEW	EMERGENCY SHOWER / EYE WASH	1-1/4"	1-1/4"	---	---	---	GUARDIAN	GBF1909	ADA, FREE-STANDING DRENCH SHOWER AND EYEWASH COMPLYING WITH ANSI STANDARD Z358.1. THERMOSTATIC MIXING VALVE, 20 GPM SHOWER FLOW CONTROL.
EWC-1	ELECTRIC WATER COOLER, DUAL HEAD, BOTTLE FILLER	1/2"	---	2"	1-1/2"	---	ELKAY	LZSTL8WSSK	ADA COMPILIANT, STAINLESS STEEL DUAL LEVEL WALL MOUNT WATER COOLER, ZURN #Z1225 SUPPORT, ELECTRONIC BOTTLE FILLER STATION ELKAY #LZWSR.
FB-1	FOOT BATH	1/2"	1/2"	2"	2"	---	WUDUMATE	WM-COM-A	SANITARY GRADE REINFORCED ACRYLIC, WUDUMATE PILLAR TAP 120 #WM-T-P-120 FAUCET WITH AERATOR. WATTS #LFMMV THERMOSTATIC MIXING VALVE. WATTS #LFMMV THERMOSTATIC MIXING VALVE.
FCO	FLOOR CLEANOUT	---	---	<varies>	---	---	ZURN	Z1400, ZN1400	HEAVY DUTY CAST IRON COVER (Z) IN MECH ROOMS AND NICKEL BRONZE COVER (ZN) IN PUBLIC SPACES
FD-1	FLOOR DRAIN	---	---	3"	2"	---	ZURN	415S	CAST IRON FLOOR DRAIN WITH 6" NICKEL BRONZE STRAINER, MEMBRANE CLAMP AND BARRIER TYPE TRAP SEAL DEVICE.
FD-2	FLOOR DRAIN	---	---	4"	2"	---	ZURN	Z508-Y	CAST IRON FLOOR DRAIN WITH HEAVY DUTY 9" CAST IRON GRATE, CAST IRON SEDIMENT BUCKET, MEMBRANE CLAMP AND BARRIER TYPE TRAP SEAL DEVICE.
FS-1	FLOOR SINK	---	---	3"	2"	---	ZURN	Z1900-2	12" SQUARE X 6" DEEP SANITARY FLOOR SINK WITH WHITE PORCELAIN ENAMEL COATED INTERIOR, LOOSE SET PORCELAIN ENAMEL COATED CAST IRON 1/2 GRATE, ALUMINUM DOME BOTTOM STRAINER, AND BARRIER TYPR TRAP SEAL DEVICE.
HB-1	HOSE BIBB	3/4"	<varies>	<varies>	<varies>	---	WOODFORD	24	INTERIOR HOSE BIBB WITH VACUUM BREAKER, 3/4" HOSE THREAD OUTLET, LOCK SHIELD CAP, AND REMOVABLE "TEE" HANDLE. PROVIDE SHUTOFF VALVE IN COLD WATER SUPPLY AHEAD OF HOSE BIBB.
HS-1	HAND SINK	1/2"	1/2"	---	---	0.5	ELKAY	EHS-18X	SINGLE COMPARTMENT, WALL HUNG, 18 GAUGE, WITH STRAINER AND FAUCET INCLUDED, P-TRAP, TAILPIECES, SUPPLIES AND STOPS.
LV-1	LAVATORY, COUNTERTOP, ACCESSIBLE	1/2"	1/2"	2"	2"	0.35 GPM	KOHLER	K-2211	ADA COMPIANT, VITREOUS CHINA, WHITE, UNDER COUNTER MOUNT, SLOAN #EBF-650-BDT BATTERY POWERED SENSOR FAUCET WITH 0.5 GPM AERATOR & BELOW DECK THERMOSTATIC MIXING VALVE AND GRID DRAIN.
LV-2	LAVATORY, WALL-MOUNT, ACCESSIBLE	1/2"	1/2"	2"	1-1/2"	0.35 GPM	KOHLER	K-2005	ADA COMPIANT, VITREOUS CHINA, WHITE, SLOAN #EBF-650-BDT BATTERY POWERED SENSOR FAUCET WITH 0.5 GPM AERATOR & BELOW DECK THERMOSTATIC MIXING VALVE, GRID DRAIN AND ZURN #1231 SUPPORT.
MS-1	MOP SINK	3/4"	3/4"	3"	2"	---	FIAT	TSB100	24" X 24" X 12" FLOOR-MOUNT TERRAZZO BASIN WITH FIAT #830-AA FAUCET, #832AA HOSE AND BRACKET, #1239 BUMPER GUARD, AND #889CC MOP HANGER.
NFRH	NON-FREEZE ROOF HYDRANT	3/4"	---	---	---	---	WOODFORD	SRH-MS	ASSE 1057 FREEZELESS SANITARY ROOF HYDRANT WITH ASSE1052 DUAL CHECK BACKFLOW PREVENTER. NO DRAIN LINE REQUIRED. PROVDE SHUT-OFF VALVE IN ACCESSIBLE LOCATION.
NFWH	NON-FREEZE WALL HYDRANT	3/4"	---	---	---	---	WOODFORD	B65	INTEGRAL VACUUM BREAKER, VALVE ON THE INSIDE OF THE WALL, LOOSE KEY SOCKET ON THE OUTSIDE OF THE WALL. RECESSED WALL BOX WITH LOCKING COVER. PROVDE SHUT-OFF VALVE IN ACCESSIBLE LOCATION.
SD-1	SCRUBBER DRAIN / INTERCEPTOR	---	---	4"	2"	---	JAY R. SMITH	8811-50	GRAY DUCO COATED STEEL 2' X 4' X 26" DEEP CATCH BASIN WITH INTERNAL BAFFLE, LOOSE SET HEAVY DUTY CAST IRON GRATES AND 4" OUTLET.
SK-1	SINK, SINGLE COMPARTMENT	1/2"	1/2"	2"	2"	1.5 GPM	ELKAY	LRAD221965	ADA COMPLIANT 18 GAGE STAINLESS STEEL SELF RIMMING SINK WITH DELTA #400-DST FAUCET WITH SPRAY & #RP19754 LOW FLOW AERATOR (1.5 GPM), ELKAY #LK35 DRAIN FITTING.
SK-2	SINK, DOUBLE COMPARTMENT	1/2"	1/2"	2"	2"	1.5 GPM	ELKAY	ELUHAD311845	ADA COMPLIANT 18 GAGE STAINLESS STEEL UNDER COUNTER MOUNT SINK WITH DELTA #400-DST FAUCET WITH SPRAY & #RP19754 LOW FLOW AERATOR (1.5 GPM), (2) ELKAY #LK35 DRAIN FITTINGS.
UR-1	URINAL	3/4"	---	2"	1-1/2"	0.125 GPF	KOHLER	K-4991-ET	VITREOUS CHINA, WHITE, SLOAN #ECOS 8186-0.125-OR (0.125 GPF) BATTERY POWERED SENSOR FLUSHOMETER WITH MANUAL OVERRIDE, ZURN #Z1218 SUPPORT, STANDARD MOUNTING HEIGHT.
UR-2	URINAL, ACCESSIBLE	3/4"	---	2"	1-1/2"	0.125 GPF	KOHLER	K-4991-ET	ADA COMPLIANT, VITREOUS CHINA, WHITE, SLOAN #ECOS 8186-0.125-OR (0.125 GPF) BATTERY POWERED SENSOR FLUSHOMETER WITH MANUAL OVERRIDE, ZURN #Z1218 SUPPORT, ADA MOUNTING HEIGHT.
WC-1	WATER CLOSET, WALL-MOUNT	1"	---	4"	2"	1.28 GPF	KOHLER	K-4325	VITREOUS CHINA, WHITE, SLOAN #G2 8111-1.28 BATTERY POWERED SENSOR FLUSHOMETER WITH MANUAL OVERRIDE, KOHLER #K-4731-C SEAT, ZURN #1203 CARRIER, STANDARD MOUNTING HEIGHT.
WC-2	WATER CLOSET, WALL-MOUNT, ACCESSIBLE	1"	---	4"	2"	1.28 GPF	KOHLER	K-4325	ADA COMPLIANT, VITREOUS CHINA, WHITE, SLOAN # G2 8111-1.28 BATTERY POWERED SENSOR FLUSHOMETER WITH MANUAL OVERRIDE, KOHLER #K-4731-C SEAT, ZURN #1203 CARRIER, ADA MOUNTING HEIGHT.

ELECTRIC WATER HEATER SCHEDULE

ID	LOCATION: NAME	LOCATION: NO.	BASIS OF DESIGN: MANUFACTURER	BASIS OF DESIGN: MODEL NO.	TYPE	HEATING DATA: HEATING CAPACITY (KW)	HEATING DATA: STORAGE RECOVERY (GPH)	HEATING DATA: STORAGE VOL (GAL)	HEATING DATA: MAX TEMP RISE (°F)	ELECTRICAL DATA: VOLTAGE	ELECTRICAL DATA: NO. OF POLES	REMARKS
EWH-1	JANITOR	105	A.O. SMITH	DEN-52	STORAGE	4.5	18.0	50.0	100.0	480	2	1-3, SEE DETAIL A5/P-501.
EWH-2	REMOTE JANITOR	130	A.O. SMITH	DEN-30	STORAGE	4.5	18.0	30.0	100.0	480	2	1-3, SEE DETAIL A5/P-501.
EWH-3	SPRINKLER	205	A.O. SMITH	DEN-120	STORAGE	12.0	49.0	120.0	100.0	480	2	1-3, SEE DETAIL A5/P-501.
EWH-4	JANITOR	123	A.O. SMITH	DEL-10	STORAGE	2.0	8.0	10.0	100.0	480	2	1-3, SEE DETAIL C5/P-501.

REMARKS:
1. DISCONNECT PROVIDED BY ELECTRICAL.
2. PROVIDE EQUIPMENT REQUIRED TO INTERFACE WITH THE DDC SYSTEM. REFER TO SPECIFICATIONS FOR CONTROLS SYSTEM TYPE.
3. PROVIDE LEAK DETECTION KIT.
4. SEE DETAIL A5/P-501.

DOMESTIC CIRCULATING PUMP SCHEDULE

ID	LOCATION: NAME	LOCATION: NO.	BASIS OF DESIGN: MANUFACTURER	BASIS OF DESIGN: MODEL NO.	SERVICE	TYPE	DESIGN FLOW (GPM)	HEAD (FT.)	POWER (HP)	ELECTRICAL DATA: VOLTAGE	ELECTRICAL DATA: NO. OF POLES	REMARKS
HWRP-1	JANITOR	105	TACO	008-BC6	DOMESTIC HOT WATER RETURN	INLINE CIRCULATOR	3.0	14.0	0.04	120	1	ALL
HWRP-2	REMOTE JANITOR	130	TACO	008-BC6	DOMESTIC HOT WATER RETURN	INLINE CIRCULATOR	3.0	14.0	0.04	120	1	ALL
HWRP-3	SPRINKLER	205	TACO	008-BC6	DOMESTIC HOT WATER RETURN	INLINE CIRCULATOR	3.0	14.0	0.04	120	1	ALL

REMARKS:
1. DISCONNECT PROVIDED BY ELECTRICAL.
2. PROVIDE ELECTRONICALLY-COMMUTATED (EC) MOTOR.
3. PROVIDE EQUIPMENT REQUIRED TO INTERFACE WITH THE DDC SYSTEM. REFER TO SPECIFICATIONS FOR CONTROLS SYSTEM TYPE.
4. SEE DETAL A5/P-501.

PLUMBING SPECIALTIES SCHEDULE

ID	LOCATION: NAME	LOCATION: NO.	BASIS OF DESIGN: MANUFACTURER	BASIS OF DESIGN: MODEL	DESCRIPTION	REMARKS
PRV-1	FIRE PUMP	122	WATTS	LF127W	PRESSURE REDUCING VALVE	LEAD FREE, SEE DETAIL D1/P-501.
PRV-2	FIRE PUMP	122	WATTS	LF223	PRESSURE REDUCING VALVE	LEAD FREE, SEE DETAIL D1/P-501.
PRV-3	SPRINKLER (FSC)	205	WATTS	LF223	PRESSURE REDUCING VALVE	LEAD FREE, SEE DETAIL C1/P-501.
TMV-1	JANITOR	105	POWERS	LFLM490	THERMOSTATIC MIXING VALVE	LEAD FREE, NOT MORE THAN 1 GPM MINIMUM FLOW, NOT MORE THAN 10 PSI PRESSURE DROP AT 11 GPM. THERMOMETER AT OUTLET. SEE DETAIL A5/P-501.
TMV-2	REMOTE JANITOR	130	POWERS	LFLM490	THERMOSTATIC MIXING VALVE	LEAD FREE, NOT MORE THAN 1 GPM MINIMUM FLOW, NOT MORE THAN 10 PSI PRESSURE DROP AT 11 GPM. THERMOMETER AT OUTLET. SEE DETAIL A5/P-501.
TMV-3	SPRINKLER (FSC)	205	POWERS	LFLM490	THERMOSTATIC MIXING VALVE	LEAD FREE, NOT MORE THAN 1 GPM MINIMUM FLOW, NOT MORE THAN 10 PSI PRESSURE DROP AT 11 GPM. THERMOMETER AT OUTLET. SEE DETAIL A5/P-501.

SEWAGE PUMP SCHEDULE

ID	LOCATION: NAME	LOCATION: NO.	BASIS OF DESIGN: MANUFACTURER	BASIS OF DESIGN: MODEL NO.	TYPE	FLOW (GPM)	HEAD (FT.)	POWER (HP)	DISCHARGE SIZE (DIA.)	ELECTRICAL DATA: VOLTAGE	ELECTRICAL DATA: NO. OF POLES	REMARKS
SP-1	REMOTE JANITOR	130	LIBERTY PUMPS	D3648LSG	DUPLEX, GRINDER, SUBMERSIBLE	30.0	75.0	4	2"	480	3	PACKAGED SYSTEM WITH BASIN AND REMOVABLE COVER, TWO (2) GRINDER PUMPS AT 2 HP EACH, GUIDE RAILS FOR PUMP REMOVAL, FLOAT SWITHES AND ELECTRICAL WIRING AND COMPONENTS. CONTROL PANEL SHALL BE ALTERNATING TYPE WITH AUDIBLE AND VISUAL ALARMS. ALARMS SHALL ALSO BE PROVIDED IN THE MAIN OFFICE AREA.

POND
3500 Parkway Lane
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Georgia 30092

EOR/AOR SEAL
NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 4/29/25

COA SEAL
NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION
SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME
OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA 28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCD8_BTS & EV_CD100_REVD_05012025	05/01/2025

DESIGNED BY: JAA
DRAWN BY: JAA
CHECKED BY: WWC
SUBMITTED BY: DP
DATE: 05/01/2025
PROJECT #: 1240989

SHEET TITLE
PLUMBING SCHEDULES

SHEET NUMBER
P-601

ORIGINAL SHEET SIZE: 30" X 42"

ISSUED FOR PERMIT

DIVISION 220000 - GENERAL PLUMBING

QUALITY ASSURANCE

A. THE PLUMBING EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES:
   1. THE NORTH CAROLINA BUILDING CODE 2018
   2. THE NORTH CAROLINA MECHANICAL CODE 2018
   3. THE NORTH CAROLINA PLUMBING CODE 2018
   4. THE NORTH CAROLINA FUEL GAS CODE 2018
   5. ASHRAE 90.1 2013
   6. THE NATIONAL ELECTRIC CODE
B. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES HAVING JURISDICTION IN THE LOCATION OF THE PROJECT. IN THE EVENT SUCH CODES DO NOT EXIST, THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE SHALL BE USED.

OVERALL INSTALLATION

A. CONNECT ALL PLUMBING DOMESTIC WATER, SANITARY WASTE, AND VENT LINES TO EXISTING SERVICE LINES WITHIN THE BUILDING.
B. IT IS THE INTENT OF THIS DESIGN TO PROVIDE FOR A COMPLETE PLUMBING SYSTEM. APPURTENANCES SUCH AS PIPE HANGERS, FITTINGS, FLASHINGS, CLAMPS, ETC. THAT ARE NOT SHOWN ON THE DRAWINGS BUT ARE NECESSARY AND REQUIRED TO PROVIDE A COMPLETE PLUMBING SYSTEM SHALL BE CONSIDERED TO BE A PART OF THIS SPECIFICATION AND SHALL BE PROVIDED AND INSTALLED AS PART OF THIS PROJECT.
C. ARRANGEMENT OF SYSTEM SHALL BE AS DIRECT AS POSSIBLE, AVOIDING ALL UNNECESSARY BENDS AND OFFSETS.
D. CHANGES IN DIRECTION OF SOIL AND WASTE PIPING SHALL BE MADE WITH 1/8" BENDS, "Y" BRANCHES OR COMBINATIONS FITTINGS.
E. EXPOSED PIPING SHALL BE INSTALLED STRAIGHT AND TRUE, PARALLEL OR AT RIGHT ANGLES WITH BUILDING WALLS, FLOORS, OR CEILINGS.
F. INSTALL GAUGES AND THERMOMETERS IN LOCATIONS WHERE THEY ARE EASILY READ FROM NORMAL OPERATING LEVEL. INSTALL VERTICAL TO 45 DEGREES OFF VERTICAL.
G. PROVIDE HOUSEKEEPING PADS OR EQUIPMENT BASES FOR ALL EQUIPMENT. PADS/BASES SHALL BE 4" HIGH WITH A 4" OVERHANG ON ALL SIDES OF EQUIPMENT.
H. PROVIDE FLOOR DRAINS, LOCATED AT LOW POINTS IN FLOOR. INSTALL TRAP PRIMER CONNECTIONS OR BARRIER TYPE TRAP SEALS CONFORMING TO ASSE 1072 (IF APPROVED BY AHJ) AT ALL FLOOR DRAINS. INSTALL UNIONS ON BOTH SIDES OF TRAP PRIMER AND DISTRIBUTION UNIT TO EASE MAINTENANCE AND REPLACEMENT.
I. INSTALL WATER HAMMER ARRESTORS ON HOT AND COLD WATER SUPPLY PIPING TO ALL FIXTURES AND TOILET BATTERIES. SIZE AND INSTALL IN ACCORDANCE WITH THE (PLUMBING AND DRAINAGE INSTITUTE STANDARD) PDI WH-201.

PIPING MATERIALS

A. PIPING MATERIALS SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES HAVING JURISDICTION IN THE LOCATION OF THE PROJECT. IN THE EVENT SUCH CODES DO NOT EXIST, THE CURRENT EDITION OF THE INTERNATIONAL PLUMBING CODE SHALL BE USED.
B. DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS. MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE END DAMAGE AND TO PREVENT ENTRANCE OF DIRT, DEBRIS, AND MOISTURE.
C. EXPOSED PIPE AND FITTINGS AT SINKS AND HANDICAPPED LAVATORIES SHALL BE INSULATED WITH PREFABRICATED KITS PER MANUFACTURER.
D. SANITARY SEWER AND STORM DRAINAGE:
   1. PIPING SHALL BE SOLID CORE SCHEDULE 40 PVC, ASTM D 2665, WITH SOLVENT WELD JOINTS ABOVE AND BELOW GRADE AS ALLOWED BY CODE. PIPING SHALL BE SERVICE WEIGHT CAST IRON WHERE PVC IS NOT ALLOWED.
   2. CLEANOUTS SHALL BE PROVIDED AT THE END OF ALL RESTROOM BATTERIES, AND THEY SHALL BE READILY ACCESSIBLE AND LOCATED IN THE MEN'S RESTROOMS WHERE POSSIBLE.
   3. CLEANOUTS SHALL BE PROVIDED WITHIN THE SYSTEM RUN AT INTERVALS NOT TO EXCEED 100 FEET MAXIMUM.
E. WATER PIPING:
   1. PIPING ABOVE GRADE SHALL BE ASTM B 88, TYPE "L" COPPER WITH SOLDER OR PRESS FIT JOINTS AND COPPER FITTINGS. GROOVED JOINTS MAY BE USED FOR PIPING 2-1/2" AND LARGER.
   2. PIPING BELOW GRADE SHALL BE ASTM B 88, TYPE "K" COPPER WITH BRAZED JOINTS AND COPPER FITTINGS.
   3. PROVIDE FULL PORT BALL VALVES, MSS SP-110 OR MSS SP-145, WITH SOLDERED OR THREADED ENDS AT ALL BRANCH PIPING 2" AND SMALLER FOR ISOLATION. PROVIDE GATE VALVES OR BUTTERFLY VALVES WITH FLANGED ENDS FOR PIPING 2-1/2" AND LARGER.
   4. PROVIDE A CALIBRATED BALANCING VALVE AND CHECK VALVE AT EACH DOMESTIC HOT WATER RETURN BRANCH. BALANCING VALVES SHALL BE BRASS OR BRONZE, BALL TYPE WITH TWO READOUT PORTS AND MEMORY-SETTING INDICATOR.
   5. ISOLATION VALVES SHALL BE PROVIDED FOR ALL FIXTURES.
   6. ROUGH-IN FOR A PROBE-TYPE WATER METER SHALL BE PROVIDED NEAR THE SERVICE ENTRY FOR CONNECTION TO THE BUILDING MANAGEMENT SYSTEM (BMS).
F. PROVIDE AMPLE ACCESS FOR MAINTENANCE, SERVICE, AND ADJUSTMENT TO ALL EQUIPMENT, PLUMBING PIPING, AND ISOLATION VALVES.
G. PROVIDE UNIONS IN PIPING TO ALL EQUIPMENT AND SPECIALTIES TO PERMIT REMOVAL FOR SERVICE; UNIONS SHALL BE METAL SEAT TYPE. PROVIDE INSULATING UNIONS WHERE NEEDED. DISSIMILAR METALS, I.E. COPPER AND STEEL, SHALL NOT BE INSTALLED TO ALLOW DIRECT CONTACT BETWEEN THE METALS. PROVIDE DIELECTRIC CONNECTIONS.

PIPING INSULATION

A. DOMESTIC WATER:
   1. DOMESTIC HOT, TEMPERED, AND CIRCULATING PIPING: 1.5-INCH THICK RIGID GLASS FIBER WITH FACTORY ASJ JACKET.
   2. DOMESTIC COLD PIPING: 1-INCH THICK RIGID GLASS FIBER WITH FACTORY ASJ JACKET.
B. WASTE PIPING HANDLING HVAC CONDENSATE: 1 INCH THICK PHENOLIC FOAM WITH SARAN VAPOR JACKET. INSULATE FITTINGS WITH PIPE INSULATION MITERED TO FIT.
C. INSULATION EXPOSED TO THE EXTERIOR OR UNCONDITIONED SPACES SHALL BE WRAPPED WITH ALUMINUM JACKET.

GENERAL PLUMBING (CONT.)

IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

A. IDENTIFY EQUIPMENT SUCH AS PUMPS, WATER HEATERS, TANKS, COMPRESSORS AND ENCLOSED MOTOR CONTROLLERS WITH PLASTIC NAMEPLATES.
B. WHERE EQUIPMENT IS LOCATED ABOVE CEILINGS; APPLY NAMEPLATE TO CEILING GRID FOR EQUIPMENT LOCATED ABOVE ACCESSIBLE CEILINGS OR TO ACCESS PANEL FOR NON-ACCESSIBLE CEILINGS.
C. IDENTIFY CONTROL PANELS AND MAJOR CONTROL COMPONENTS OUTSIDE PANELS WITH PLASTIC NAMEPLATES.
D. INSTALL PIPE MARKERS ON ALL PIPING SYSTEMS AT THE FOLLOWING LOCATIONS:
   1. MECHANICAL EQUIPMENT ROOMS:
      A. WITHIN 18 INCHES OF EACH VALVE.
      B. WITHIN 36 INCHES OF EACH 90 ELBOW, TEE, CONNECTION TO EQUIPMENT OR VESSEL AND POINT WHERE PIPE EXITS ROOM.
      C. AT NOT OVER 20 FEET INTERVALS ALONG ALL EXPOSED PIPING.
   2. ABOVE SUSPENDED CEILINGS:
      A. WITHIN 18 INCHES OF EACH VALVE OR VALVE ASSEMBLY.
      B. AT TEES, IDENTIFY BOTH MAIN AND BRANCH WITHIN 36 INCHES OF TEE.
      C. WITHIN 36 INCHES OF EACH 90 ELBOW.
      D. AT NOT OVER 15 FEET INTERVALS ALONG ALL CONCEALED PIPING.
   3. PIPING EXPOSED IN ROOMS OTHER THAN MECHANICAL EQUIPMENT AREAS:
      A. OMIT IDENTIFICATION ON PIPING, 1 INCH EXTERIOR DIAMETER OR SMALLER (INSULATED OR UNINSULATED) OR EXPOSED AT CONNECTIONS TO EQUIPMENT OR PLUMBING FIXTURES.
      B. WITH THE ABOVE EXCEPTION, IDENTIFY AT NOT LESS THAN ONE POINT EACH PIPING RUN VISIBLE IN EACH ROOM, WITH IDENTIFICATION ON NOT OVER 20 FEET INTERVALS.

PLUMBING SYSTEM TEST

A. FURNISH ALL MATERIAL AND LABOR REQUIRED FOR TESTING PLUMBING SYSTEMS.
B. NO PIPE SHALL BE COVERED OR CONCEALED UNTIL PLUMBING SYSTEMS HAVE BEEN TESTED, ALL LEAKS STOPPED, RETESTED, AND APPROVED BY THE CONTRACTING OFFICER.
C. TEST THE ENTIRETY OF THE BUILDING SANITARY SEWER SYSTEM OR IN SECTIONS WITH WATER AT NOT LESS THAN 10 FEET HEAD, OR APPROVED TEST PRESSURE FOR MINIMUM OF ONE HOUR. TEST SHALL BE CONDUCTED AND ANY LEAKS FOUND SHALL BE REPAIRED PRIOR TO BACKFILLING AND CONCEALING.
D. TEST THE ENTIRETY OF THE BUILDING DOMESTIC WATER SYSTEM OR IN SECTIONS AND SUBJECTED TO A 150 PSI HYDROSTATIC PRESSURE FOR MINIMUM OF ONE HOUR WITHOUT LEAKS OR LOSS IN PRESSURE. TEST SHALL BE CONDUCTED AND ANY LEAKS FOUND SHALL BE REPAIRED PRIOR TO BACKFILLING AND CONCEALING.

DOMESTIC WATER HEATER ACCESSORIES

A. DOMESTIC-WATER EXPANSION TANKS FROM SINGLE SOURCE MANUFACTURER.
   1. DESCRIPTION: STEEL PRESSURE-RATED TANK CONSTRUCTED WITH WELDED JOINTS AND FACTORY-INSTALLED, BUTYL-RUBBER DIAPHRAGM. INCLUDE AIR PRECHARGE TO MINIMUM SYSTEM-OPERATING PRESSURE AT TANK.
   2. CONSTRUCTION:
      A. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING. INCLUDE ASME B1.20.1 PIPE THREAD.
      B. INTERIOR FINISH: COMPLY WITH NSF 61 AND NSF 372 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.
      C. AIR-CHARGING VALVE: FACTORY INSTALLED.

B. DRAIN PANS: CORROSION-RESISTANT METAL WITH RAISED EDGE. INCLUDE DIMENSIONS NOT LESS THAN BASE OF DOMESTIC-WATER HEATER, AND INCLUDE DRAIN OUTLET NOT LESS THAN NPS 3/4" (DN 20) WITH ASME B1.20.1 PIPE THREADS.

C. PIPING-TYPE HEAT TRAPS: FIELD-FABRICATED PIPING ARRANGEMENT IN ACCORDANCE WITH ASHRAE/IES 90.1.

D. HEAT-TRAP FITTINGS: IN COMPLIANCE WITH ASHRAE/IES 90.1.

E. PRESSURE-REDUCING VALVES: ASSE 1003 FOR WATER. SET AT 25-PSIG- (172.5-KPA-) MAXIMUM OUTLET PRESSURE UNLESS OTHERWISE INDICATED.

F. COMBINATION TEMPERATURE-AND-PRESSURE RELIEF VALVES: ASME RATED AND STAMPED. INCLUDE RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT, AND INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER. SELECT RELIEF VALVES WITH SENSING ELEMENT THAT EXTENDS INTO STORAGE TANK.

G. PRESSURE RELIEF VALVES: ASME RATED AND STAMPED. INCLUDE PRESSURE SETTING LESS THAN WORKING-PRESSURE RATING OF DOMESTIC-WATER HEATER.

H. VACUUM RELIEF VALVES: ANSI Z21.22/CSA 4.4.

GENERAL PLUMBING (CONT.)

ELECTRIC WATER HEATER (TANK)

A. CONSTRUCTED IN ACCORDANCE WITH ASME CODE, SHALL BEAR APPROPRIATE SYMBOL AND BE LISTED WITH THE NATIONAL BOARD AS REQUIRED.
B. HEATER SHALL BE LISTED WITH UNDERWRITERS' LABORATORIES AND CLASSIFIED TO THE NATIONAL SANITATION FOUNDATION STANDARD NO. 5.
C. ALL INTERNAL SURFACES OF THE TANK SHALL BE GLASS-LINED WITH AN ALKALINE BOROSILICATE COMPOSITION THAT HAS BEEN FUSED-TO-STEEL BY FIRING AT A TEMPERATURE OF 1600° F.
D. TANK SHALL BE CATHODICALLY PROTECTED WITH A COMBINATION OF SACRIFICIAL AND POWERED ANODES. THE ENTIRE VESSEL IS TO BE ENCLOSED IN A ROUND STEEL ENCLOSURE WITH BAKED ENAMEL FINISH.
E. WATER HEATER SHALL HAVE AN ELECTRONIC CONTROL WITH LARGE LCD DISPLAYING CURRENT WATER HEATER STATUS; PROVIDE REAL TIME ELEMENT STATUS AND SENSING, LOW WATER CUTOFF AND ECONOMY MODE OPERATION. SHALL HAVE 120 VOLT CONTROL CIRCUIT TRANSFORMER, TRANSFORMER FUSING, MAGNETIC CONTACTOR(S), ELEMENT FUSING PER N.E.C., AND COMMERCIAL GRADE INCOLOY ELEMENTS.
F. TEMPERATURE CONTROLS INCLUDE LIMITING SWITCH WHICH WILL REQUIRE RESETTING MANUALLY IN THE EVENT THE TEMPERATURE REACHES 202°F.
G. FOAM INSULATION SHALL MEET THE THERMAL EFFICIENCY AND/OR STANDBY LOSS REQUIREMENTS OF THE U.S. DEPARTMENT OF ENERGY AND CURRENT EDITION OF ASHRAE/IES 90.1.
H. HEATER SHALL INCLUDE A CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE AND A DRAIN VALVE.

CIRCULATION PUMPS

A. PROVIDE IN-LINE DOMESTIC WATER CIRCULATION PUMP(S) AS INDICATED ON THE DRAWINGS.
   1. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
   2. UL-778 COMPLIANCE.
   3. FACTORY-ASSEMBLED AND FACTORY-TESTED.
   4. HERMETICALLY SEALED MOTORS.
   5. MINIMUM WORKING PRESSURE: 125 PSIG.
   6. MAXIMUM CONTINUOUS OPERATING TEMPERATURE: 200 °F.
   7. CASING: STAINLESS STEEL WITH THREADED OR COMPANION-FLANGE CONNECTIONS.
B. CIRCULATION PUMP SHALL BE RATED FOR HORIZONTAL OR VERTICAL INSTALLATION AS INDICATED ON THE DRAWINGS. MOUNT PUMPS IN ORIENTATION COMPLYING WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
C. PROVIDE ELECTRIC TIMER CONTROLS THAT SHALL BE 7-DAY PROGRAMMABLE WITH MANUAL OVERRIDE ON-OFF SWITCH. INTERLOCK WITH ASSOCIATED WATER HEATING EQUIPMENT AS REQUIRED:
   1. PROGRAMMABLE SEQUENCE SHALL INCLUDE UP TO TWO ON-OFF CYCLES EACH DAY.
   2. CONTROL ENCLOSURE SHALL BE WALL-MOUNTED.
D. PERFORM TESTS AND INSPECTIONS FOR LEAKS, MOTOR OPERATION, AND CONTROLS AND SAFETIES. IF ANY TESTS OR INSPECTIONS ARE FAILED, THE CIRCULATION PUMP SHALL BE CONSIDERED DEFECTIVE. REPLACE BROKEN OR DAMAGED COMPONENTS FOR DEFECTIVE PUMPS PRIOR TO RETESTING.
E. PREPARE TEST AND INSPECTION REPORTS FOR PROJECT RECORD.

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EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 5/29/25

COA SEAL

NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON,
NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCD8_BTS & EV_CODE_REVISIONS	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

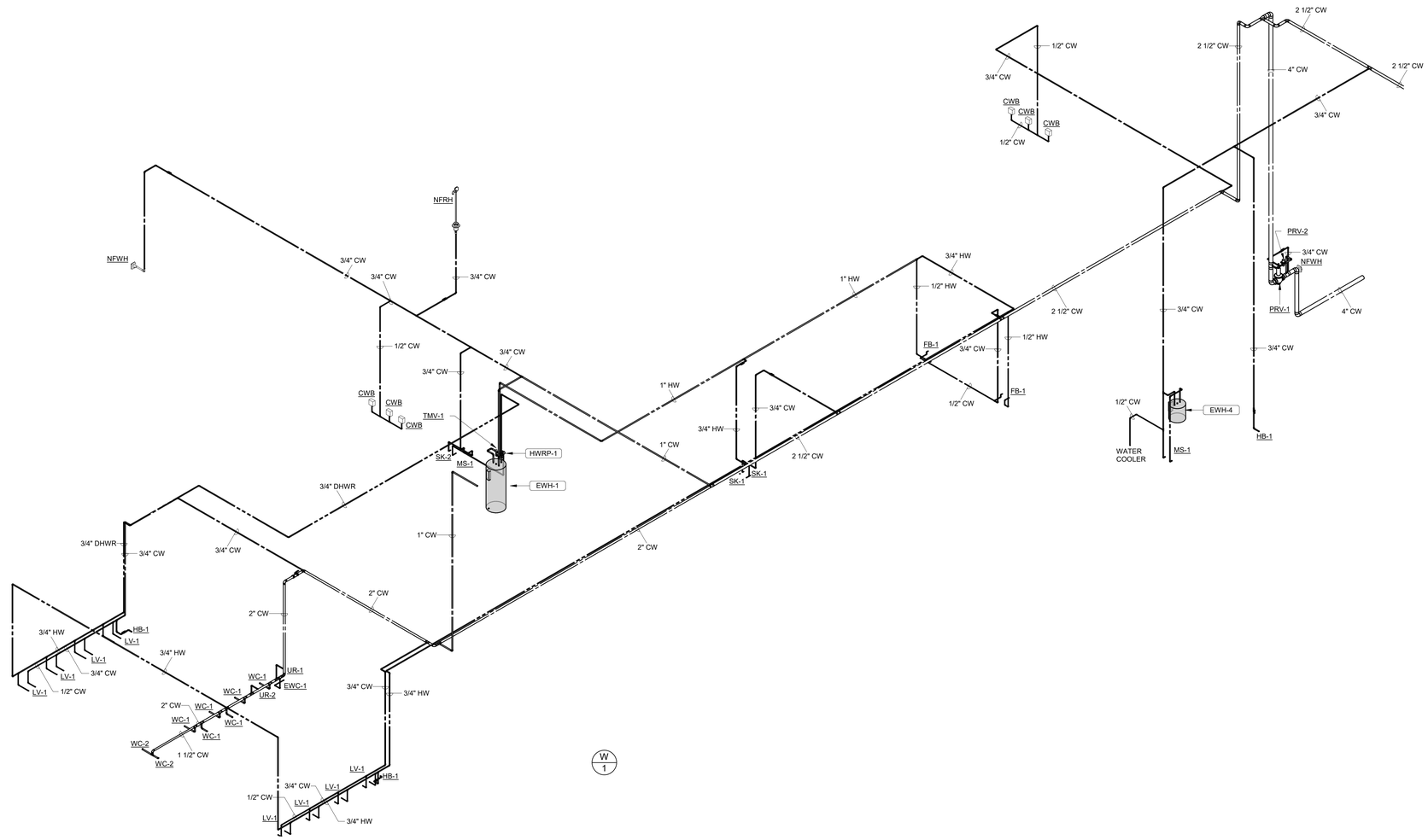
PLUMBING SPECIFICATIONS

SHEET NUMBER

P-701

ORIGINAL SHEET SIZE:
30" X 42"

ISSUED FOR PERMIT



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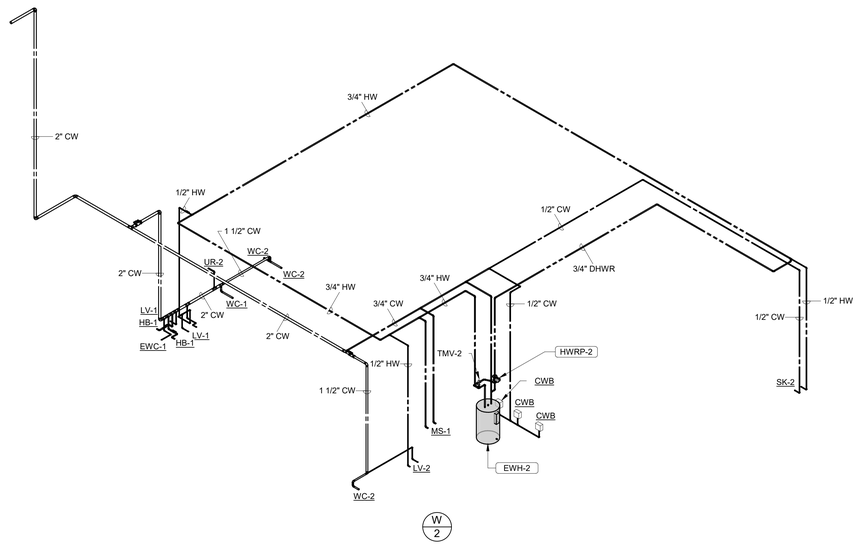

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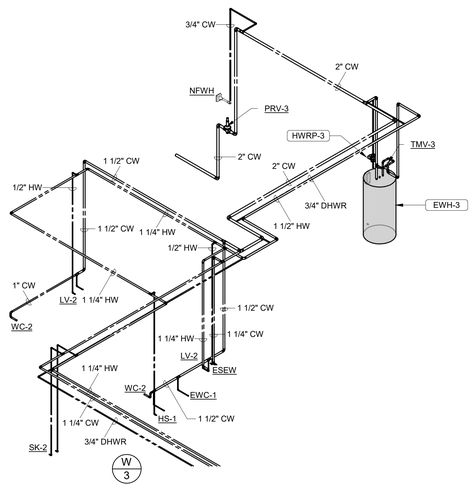

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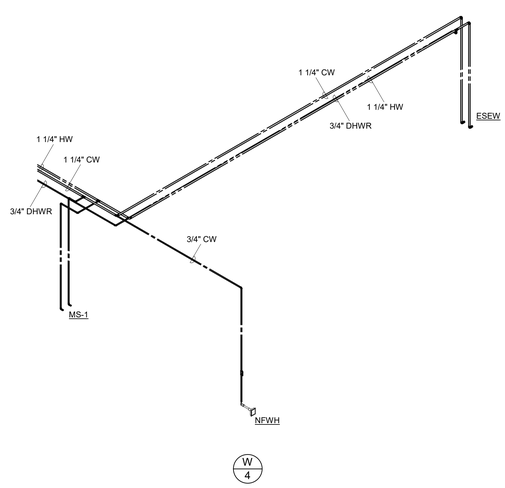

W 4

A3 DOMESTIC WATER RISER DIAGRAMS

NOT TO SCALE

ISSUED FOR PERMIT

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EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 12/9/25

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CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA
28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCD8_BTS & EV_CD100_REVISIONS	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

DOMESTIC WATER RISER DIAGRAMS

SHEET NUMBER

P-901

ORIGINAL SHEET SIZE:
30" X 42"

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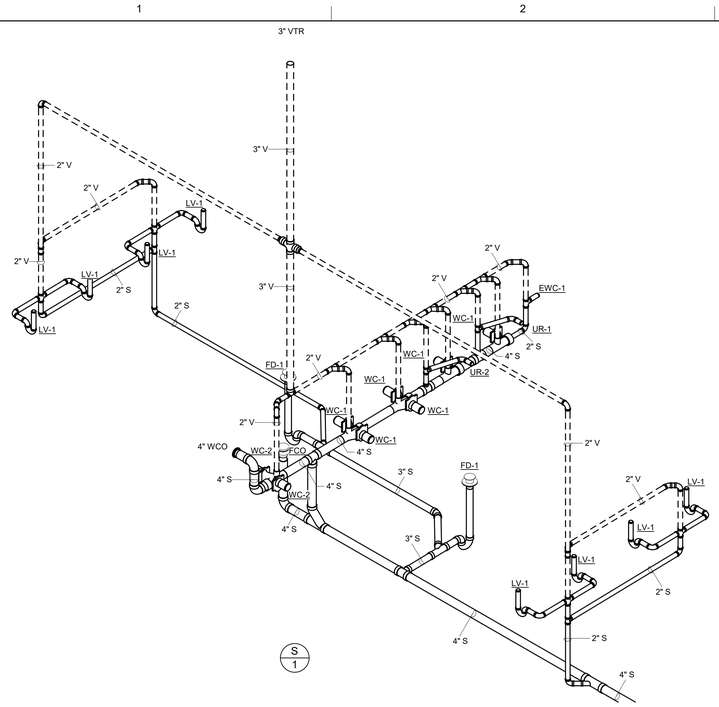

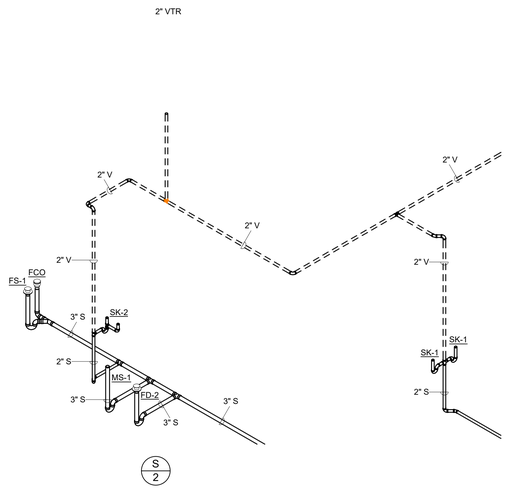

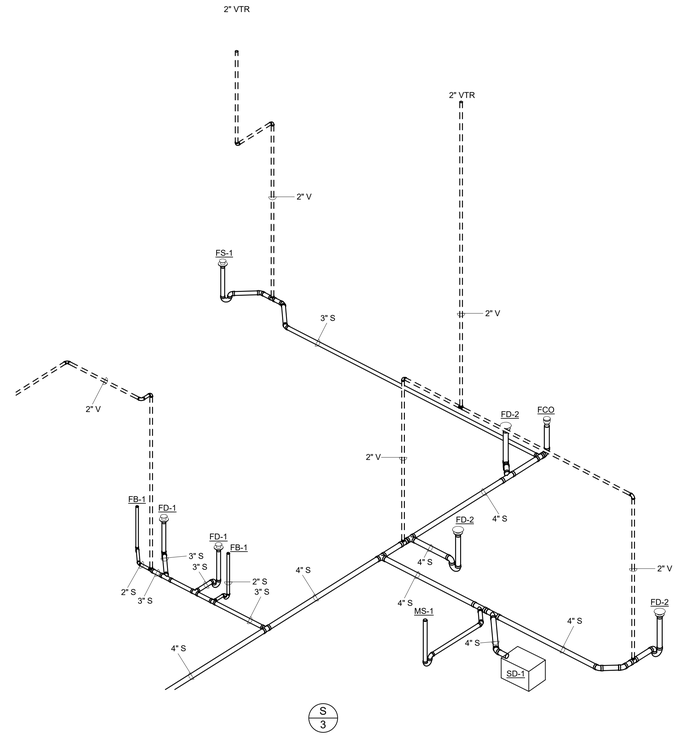

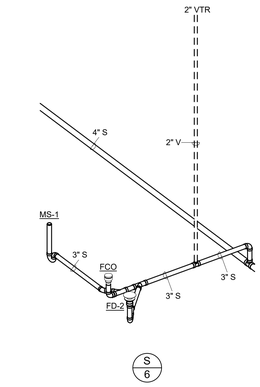

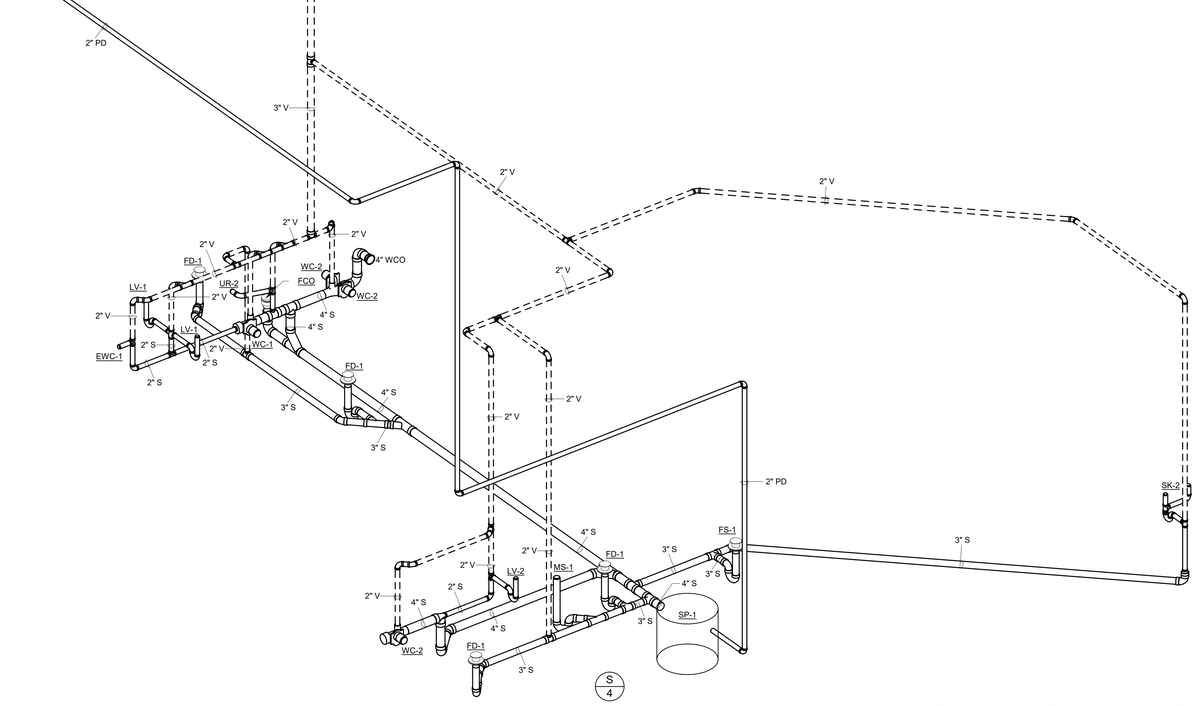

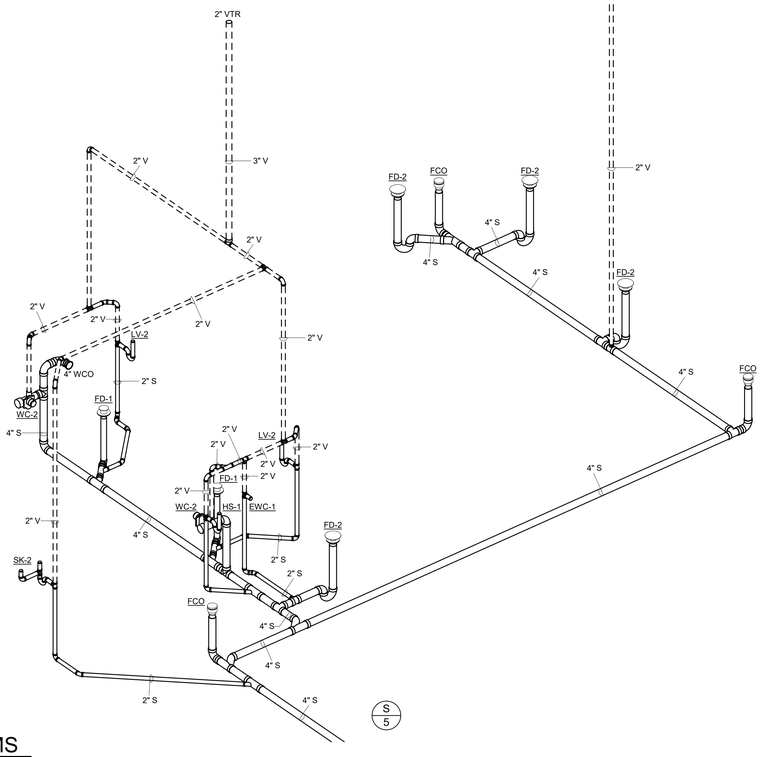

A3 SANITARY WASTE AND VENT RISER DIAGRAMS
NOT TO SCALE

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EOR/AOR SEAL

NORTH CAROLINA PROFESSIONAL SEAL 038169 ENGINEER JAMES N. LEDYARD 5/01/25

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NORTH CAROLINA POND & COMPANY No. C-1803 CERTIFICATE OF AUTHORIZATION

CLIENT INFORMATION

SEEFRIED INDUSTRIAL PROPERTIES

PROJECT NAME

OFFICE/ WAREHOUSE DEVELOPMENT

34 CORPORATE DRIVE
WILMINGTON, NORTH CAROLINA 28435

DRAWING ISSUE

MARK	DESCRIPTION	DATE
0	DCB_BTS & EV_CODE REVISION	05/01/2025

DESIGNED BY:	JAA
DRAWN BY:	JAA
CHECKED BY:	WWC
SUBMITTED BY:	DP
DATE:	05/01/2025
PROJECT #:	1240989

SHEET TITLE

SANITARY WASTE AND VENT RISER DIGARAMS

SHEET NUMBER

P-902

ORIGINAL SHEET SIZE: 30" X 42"

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