

GATEWAY REGIONAL WATER COMPANY

2021 KINMUNDY PUMP STATION

CONTRACT B

MARION COUNTY, ILLINOIS

GATEWAY BOARD OF DIRECTORS

PRESIDENT KEITH RITTER, N.E. MARION COUNTY WATER CO.
VICE PRESIDENT TOBY REINHART, CITY OF FLORA

BOARD MEMBERS

FMC WATER CO.	KEITH MOUNT
FAYETTE WATER CO.	DENNIS R. VAUGHN
RACCOON WATER COMPANY	KIM TORRES
CLAY COUNTY WATER, INC.	ADAM McKNIGHT
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VILLAGE OF ALMA	STEVE LINDSEY
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VILLAGE OF PATOKA	
VILLAGE OF VERNON	CHET BURKS
VILLAGE OF FARINA	RANDY ENGEL
VILLAGE OF KINMUNDY	JANE MIDDLETON
WESTERN WAYNE WATER DISTRICT, INC.	LARRY REED
MANAGER	TERRY NIX
SECRETARY	SHELBY COX
TREASURER	BILL CASH
ATTORNEY	DAVID FOREMAN



811 or 800-892-0123

Contractor to contact J.U.L.I.E. prior to any excavation or demolition for the location of any pipes, cables, lines, mains, etc. The contractor shall also coordinate any disconnection required with the various utility companies and/or governmental agencies serving the site.

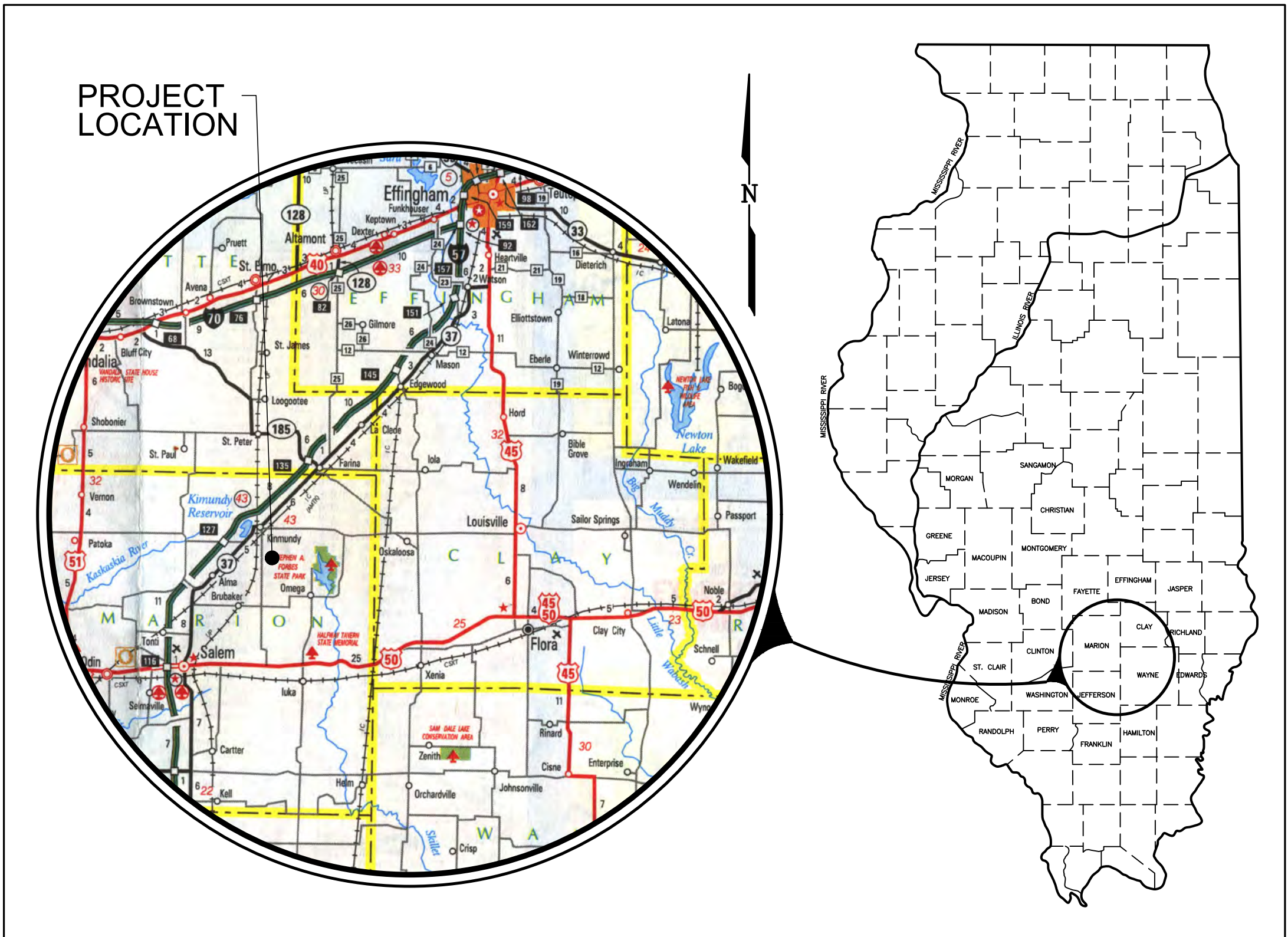
Underground facilities, structures and utilities have been plotted from available surveys and records. Their locations must be considered to be approximate only. It is possible there may be others, the existence of which is not presently known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto.

DIG LOG# _____

FACILITY NUMBER: IL0270040

IEPA PERMIT NUMBER: _____

DATE: May 18, 2021



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Lindsey Lee Bowlin
LINDSEY LEE BOWLIN
REG. ILLINOIS P.E. #062-064926

EXP. NOVEMBER 30, 2021



HENEGHAN AND ASSOCIATES, P.C.
ENGINEERS-SURVEYORS
www.haengr.com

DESIGN FIRM NUMBER IL.: 184-002692, EXPIRES APRIL 30, 2023
MO.: 001310, EXPIRES DECEMBER 31, 2021

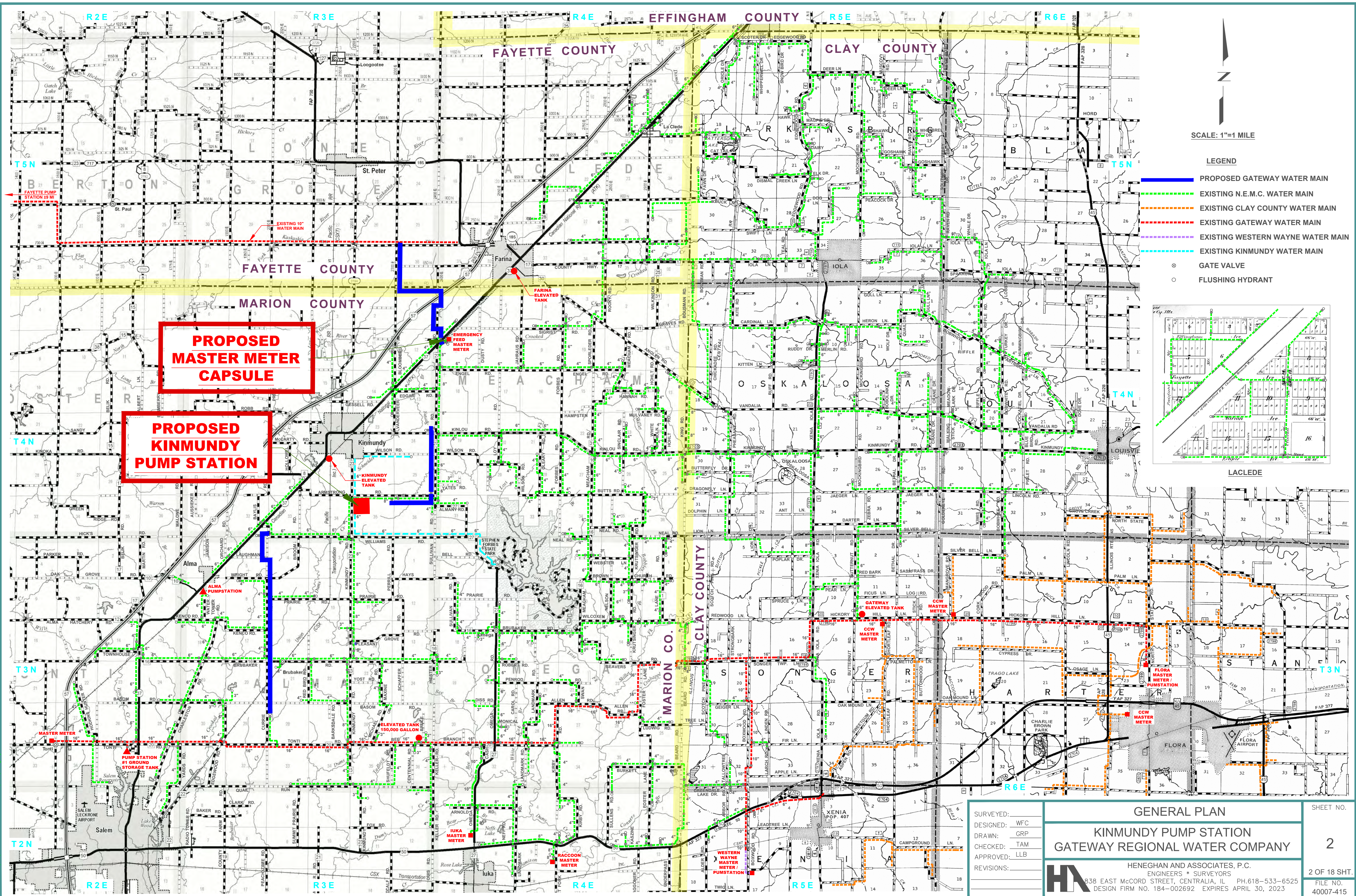
1004 STATE HWY. 16
JERSEYVILLE, ILLINOIS 62052
PHONE NO. (618) 498-6418
FAX NO. (618) 498-6410

838 EAST McCORD STREET
CENTRALIA, ILLINOIS 62801
PHONE NO. (618) 533-6525
FAX NO. (618) 533-6652

310A VISION DRIVE
COLUMBIA, ILLINOIS 62236
PHONE NO. (618) 281-8133
FAX NO. (618) 281-8290

1929 RICHARDSON ROAD
ARNOLD, MISSOURI 63010
PHONE NO. (636) 464-3610
FAX NO. (636) 464-2059

PATH:s:\shared\clients\40007 - gateway regional water company\415 - farina farm\cad\dwg\pump station\2-general plan2.dwg
PLOTED: 5/18/2021 @ 4:00:10 PM BY: dchillins_cwr



☐ 1004 STATE HWY. 16
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ARNOLD, MO 63010
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F: (636) 464-2059

NO.	DATE	REVISIONS

SITE PLAN
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY:	GRP
CHECKED BY:	WFC
APPROVED BY:	LLB
HORIZONTAL SCALE:	

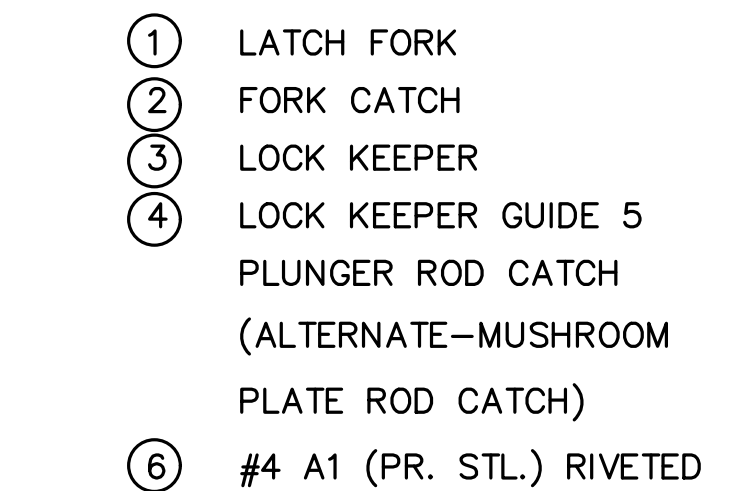
AS NOTED

VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

DATE: 5/18/21

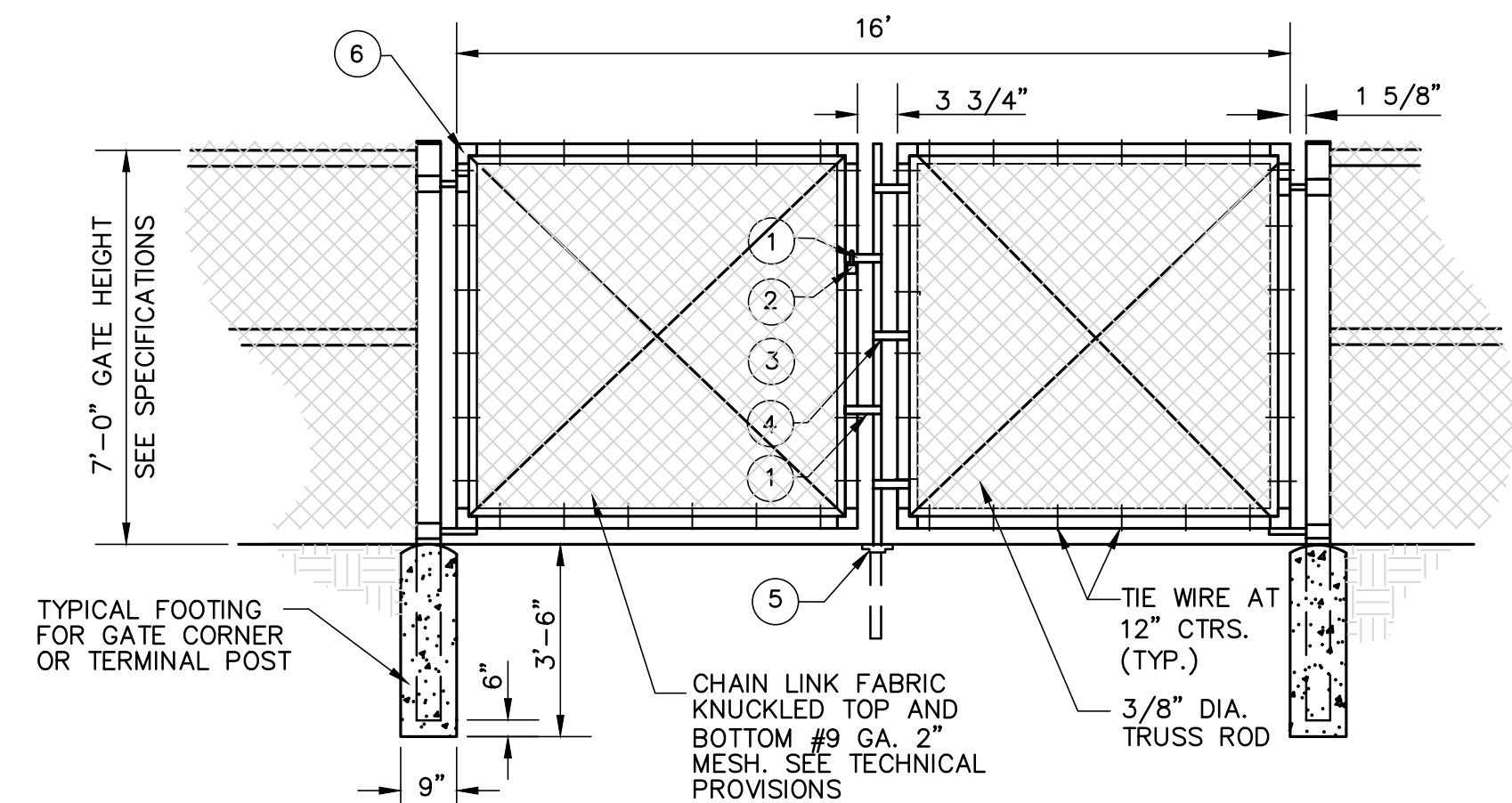
SHEET NO. 3



TUBULAR RAIL AND POSTS

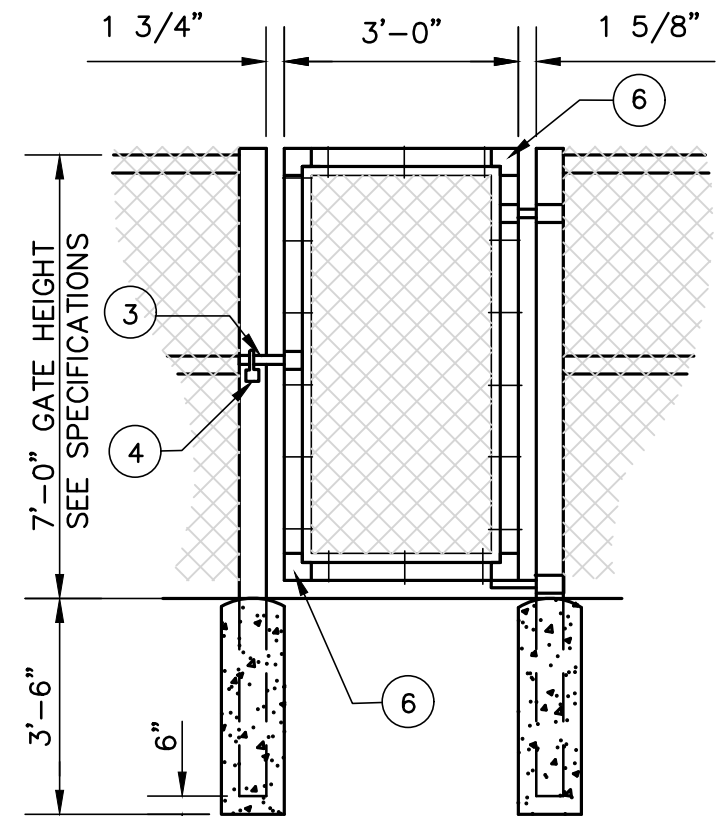
TOP AND BRACE RAIL—1 5/8" O.D., SCH 40
INTERMEDIATE POSTS—2 1/2" O.D., SCH 40
TERMINAL POST----3" O.D., SCH 40

NOTE: ALL POSTS SHALL BE GALVANIZED OR ALUMINUM COATED STEEL.



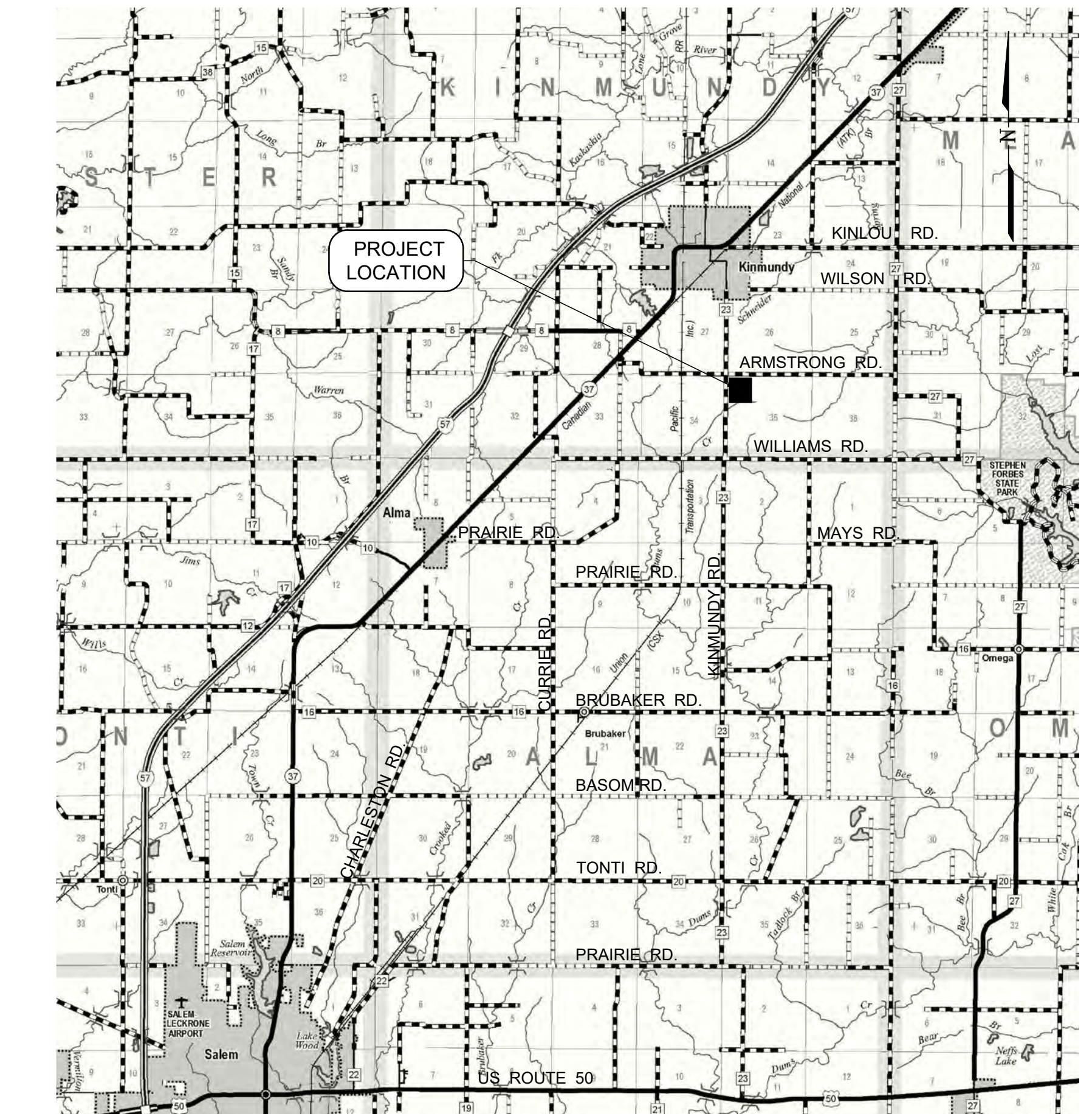
DOUBLE SWING GATES

NO SCALE



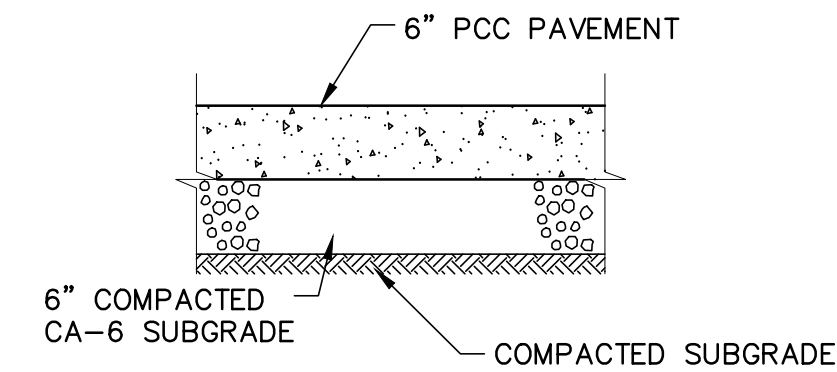
SINGLE SWING GATES

NO SCALE



LOCATION MAP

SCALE: 0.73" = 1 MILE

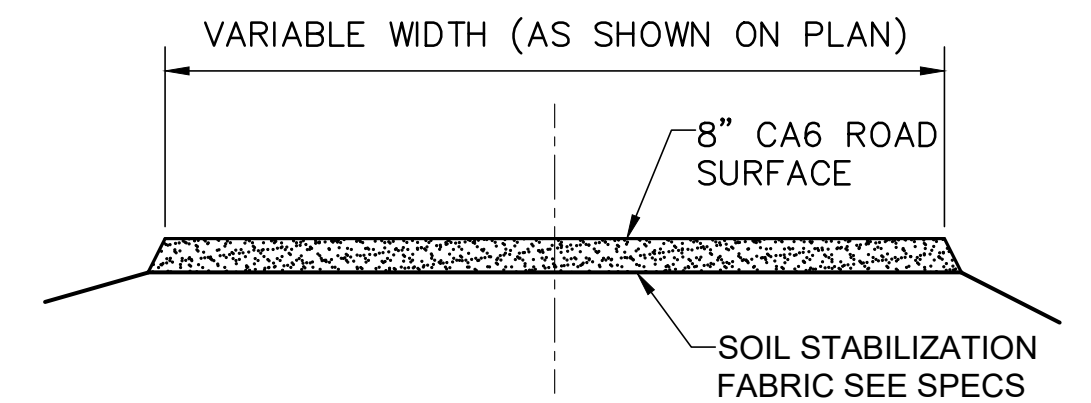


NOTE:
PORTLAND CEMENT CONCRETE SHALL CONFORM
TO SECTION 420 OF THE LATEST EDITION OF THE
"STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION" AS PUBLISHED BY THE
ILLINOIS DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT

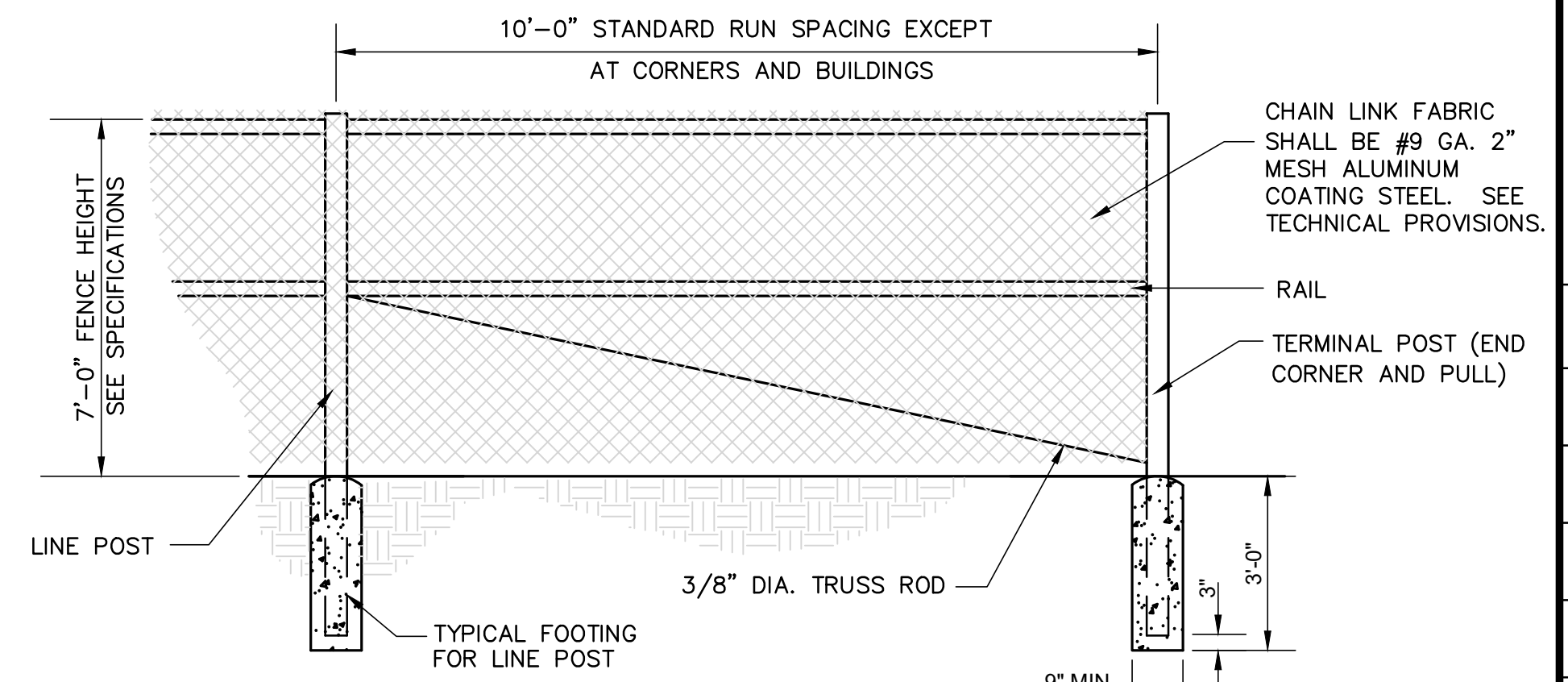
SECTION

(NOT TO SCALE)



TYPICAL DRIVE DETAIL

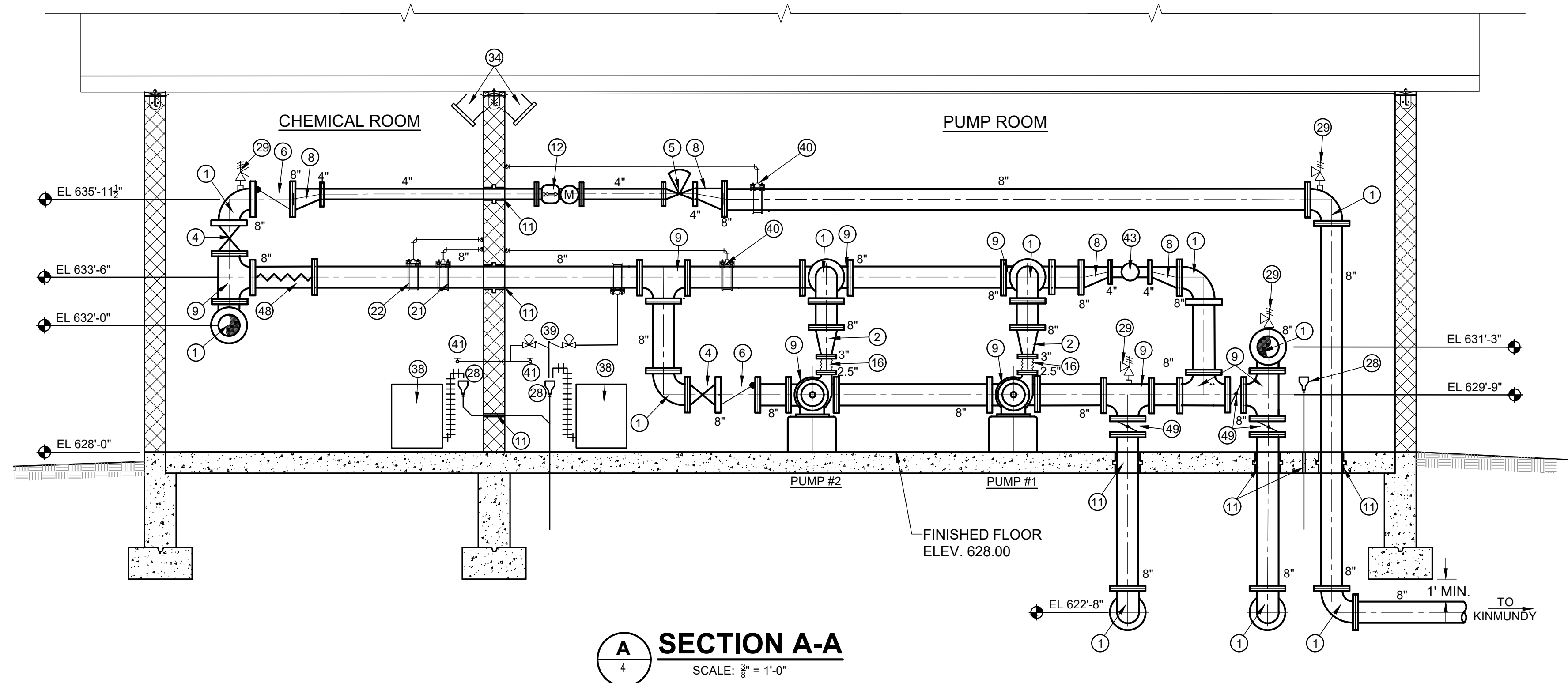
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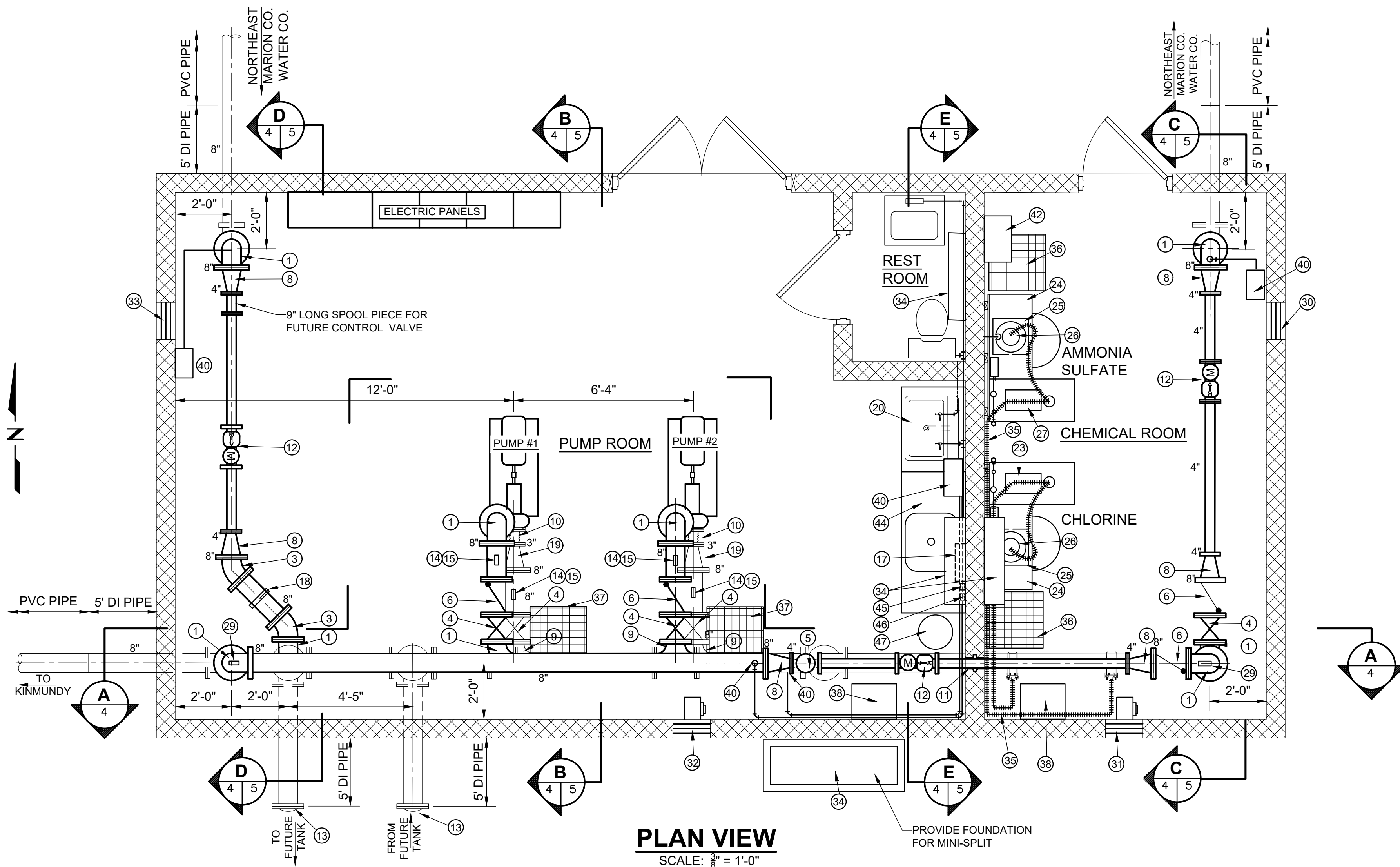
STANDARD RUN FENCING DETAILS

NO SCALE

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PLOTTER: 6/16/2024 1:47:10 PM BY: philip.cory



A SECTION A-A
SCALE: $\frac{3}{8}$ " = 1'-0"



PLAN VIEW
SCALE: $\frac{3}{8}$ " = 1'-0"

FITTING SCHEDULE

- ① 8" 90° DI ELBOW
- ② 8" x 3" DI CONCENTRIC REDUCER
- ③ 8" 45° DI ELBOW
- ④ 8" GATE VALVE
- ⑤ 4" BUTTERFLY CONTROL VALVE / w PRESSURE REDUCING CAPABILITY
- ⑥ 8" CHECK VALVE
- ⑦ 8"x4" DI CONCENTRIC REDUCER
- ⑧ 8"x4" DI ECCENTRIC REDUCER
- ⑨ 8"x8"x8" DI TEE
- ⑩ 3" FLEXIBLE CONNECTION
- ⑪ PIPE SLEEVE (TYP AT ALL FLOOR & WALL PENETRATIONS)
- ⑫ 4" METER
- ⑬ 8" D.I. BLIND FLANGE
- ⑭ $\frac{1}{4}$ " BALL VALVE
- ⑮ PRESSURE GAUGE, 0 - 160 PSI
- ⑯ 3" x 2.5" REDUCER FLEXIBLE CONNECTION
- ⑰ TOTAL CHLORINE ANALYZER, HACH CL 17SC
- ⑱ SMOOTH - NOSED $\frac{1}{4}$ " SAMPLE TAP
- ⑲ 8" x 3" DI ECCENTRIC REDUCER
- ⑳ WOODEN BASE CABINET (36" WIDTH x 24" DEEP) WITH SINGLE BASIN DROP-IN STAINLESS STEEL LAUNDRY SINK (25"x22") w/ MOEN 4975 CHATEAU DOUBLE HANDLE LAUNDRY FAUCET OR EQUAL. CABINET SHALL HAVE A FORMICA COUNTER TOP w/ SPLASH GUARD COLOR CHOICE BY OWNER. BASE CABINETS SHALL HAVE TWO OPENING DOORS WITH A MINIMUM OF TWO SHELVES PER BAY. CABINET SHOULD BE STOCK ITEM.
- ㉑ 8" SADDLE w/ 1" TAP, 1" CHLORINE INJECTOR w/ BALL VALVE CORP. STOP.
- ㉒ 8" SADDLE w/ 1" TAP, 1" AMMONIA INJECTOR w/ BALL VALVE CORP. STOP.
- ㉓ SODIUM HYPOCHLORITE INJECTION PUMP.
- ㉔ TANK STAND - SEE SHEET 7
- ㉕ SCALE w/ DIGITAL READOUT.
- ㉖ 15 GALLON DAY TANK
- ㉗ AMMONIA INJECTION PUMP.
- ㉘ 6"x2" PVC REDUCER
- ㉙ AIR RELIEF VALVE, 1" INLET & OUTLET
- ㉚ 8" X 16" SCREENED AIR VENT w/ MOTORIZED DAMPER (12" BELOW CEILING)
- ㉛ EXHAUST FAN (12" ABOVE FLOOR)
- ㉜ EXHAUST FAN (12" BELOW CEILING)
- ㉝ 8" x 16" SCREENED AIR VENT w/ MOTORIZED DAMPER (12" ABOVE FLOOR)
- ㉞ 3 ZONE MINI-SPLIT AIR CONDITIONER/HEAT PUMP-30,000 BTU (19,000 BTU PUMP ROOM, 9,000 BTU CHEMICAL ROOM, & 2,000 BTU REST ROOM), MINIMUM SEER SHALL BE 18.9.
- ㉟ $\frac{1}{4}$ " FLEXIBLE CHEMICAL FEED LINE
- ㊱ 2'x2'x2' SUMP PIT w/ FIBERGLASS GRATING
- ㊲ 2'x2'x1' SUMP PIT & DRAIN w/ FIBERGLASS GRATING
- ㊳ DEHUMIDIFIER
- ㊴ RPZ
- ㊵ GAUGE PANEL
- ㊶ HOSE BIB
- ㊷ WALL MOUNTED EYE WASH STATION
- ㊸ 4" PRESSURE RELIEF CONTROL VALVE
- ㊹ WOODEN BASE CABINET (60" W x 35" H x 23.75" D) WITH SINGLE DROP-IN 25" x 22" STAINLESS STEEL SINK w/MOEN M-DURA COMMERCIAL FAUCET OR EQUAL. CABINET SHALL HAVE A FORMICA COUNTER TOP w/ SPLASH GUARD, COLOR CHOICE BY OWNER.
- ㊺ DIGITAL PLATFORM SCALE READOUT FROM AMMONIA SULFATE SCALE.
- ㊻ DIGITAL PLATFORM SCALE READOUT FROM CHLORINE SCALE.
- ㊼ 20 GAL ELECTRIC WATER HEATER w/INSULATION BLANKET.
- ㊽ 8"Ø x 23" LONG STATIC MIXER, KOFLO CORP. OR EQUAL.
- ㊾ 8" BUTTERFLY VALVE

**HENEGHAN &
ASSOCIATES, P.C.**

HA
ENGINEERS-SURVEYORS
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MO: 001310, EXPIRES DECEMBER 31, 2021

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□ 310A VISION DRIVE
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P: (618) 281-8133
F: (618) 281-8290

□ 1929 RICHARDSON ROAD
ARNOLD, MO 63010
P: (636) 464-3610
F: (636) 464-2059

REVISIONS

DATE

NO.

PIPING PLAN
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:

AS NOTED

VERTICAL SCALE:

N/A

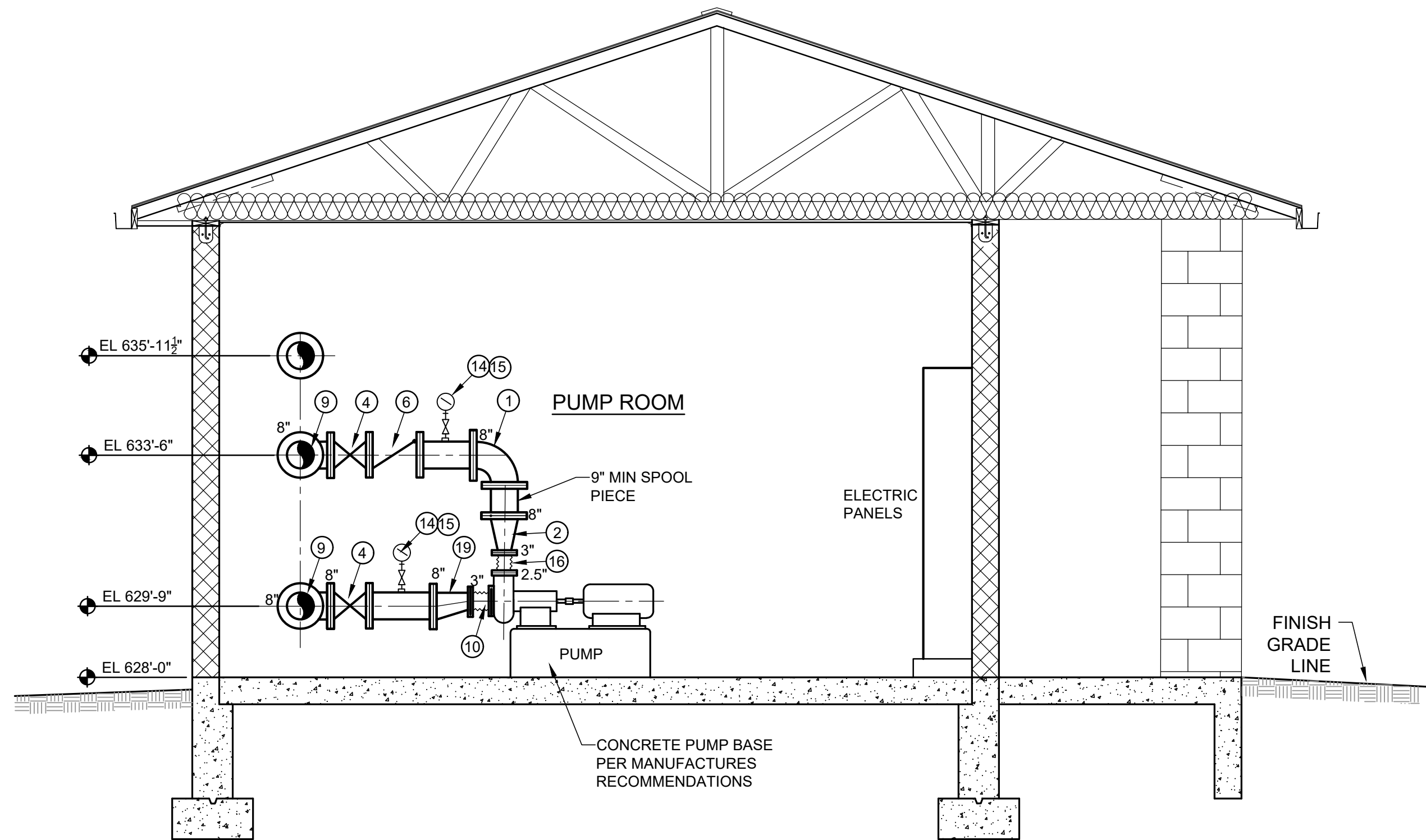
PROJECT NO.
40007-415

DATE:
6/16/21

SHEET NO.
4

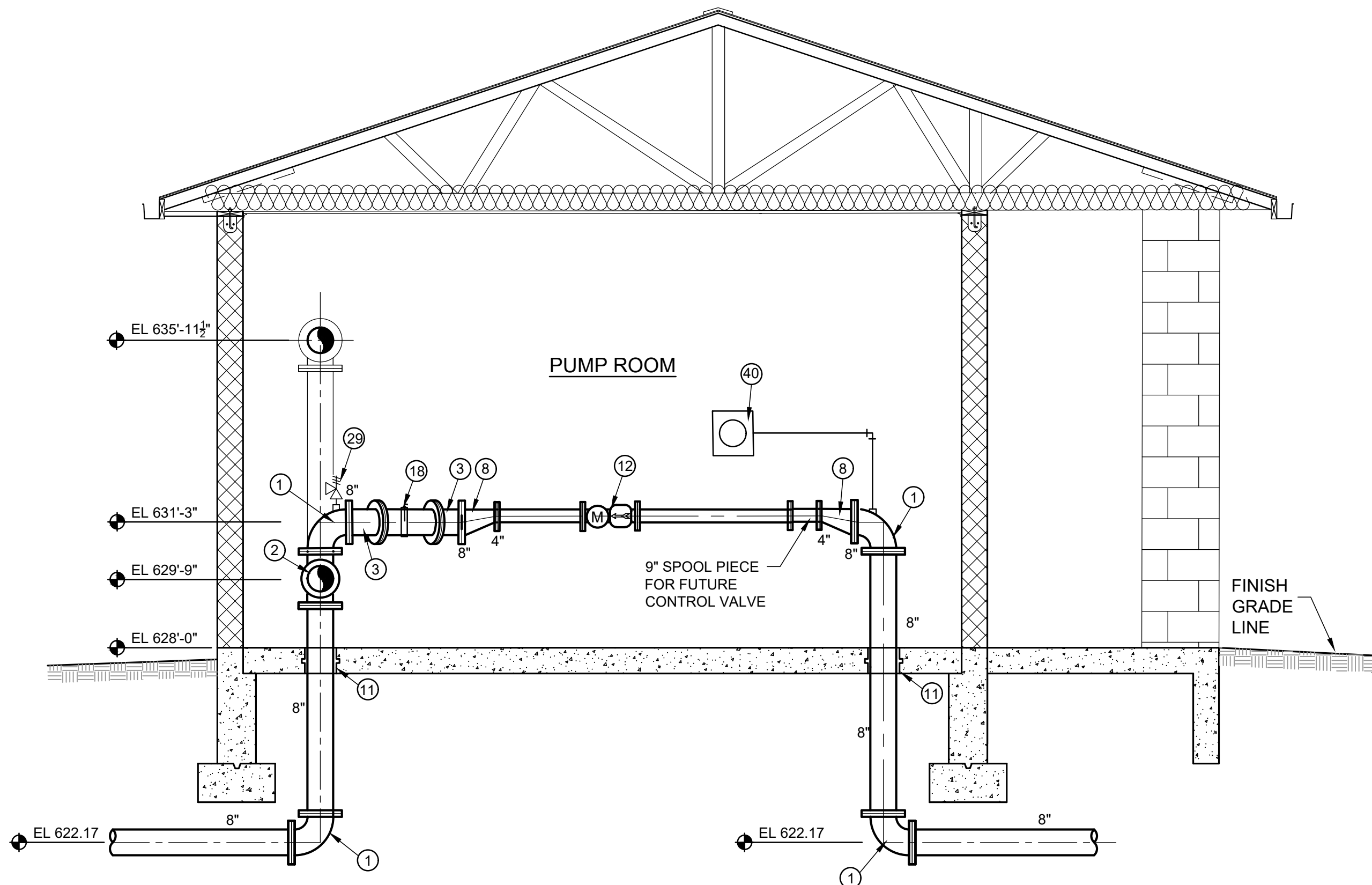
4 OF 18 SHEETS

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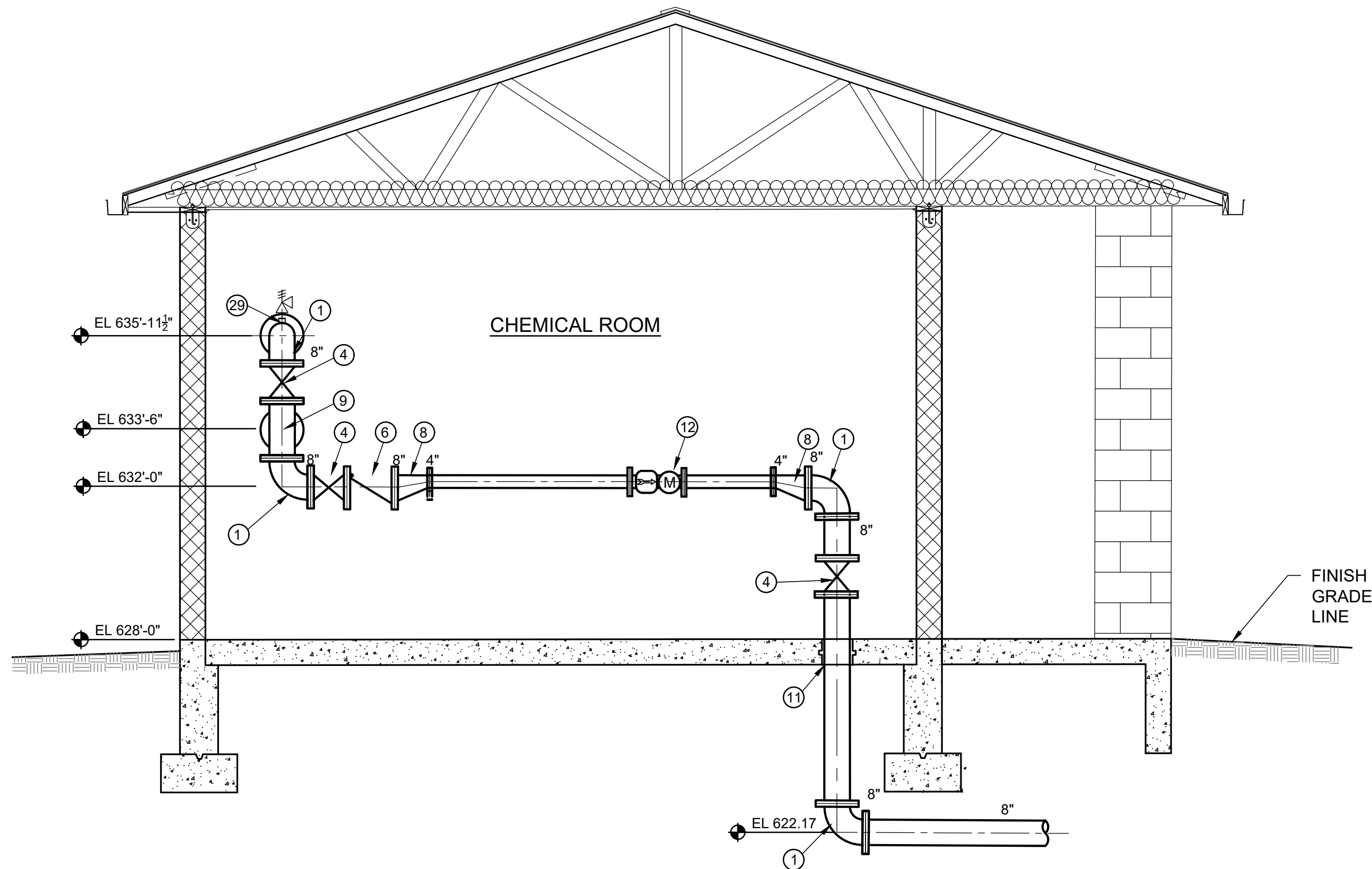


B **PUMP ROOM SECTION**
SCALE: 3/8" = 1'-0"

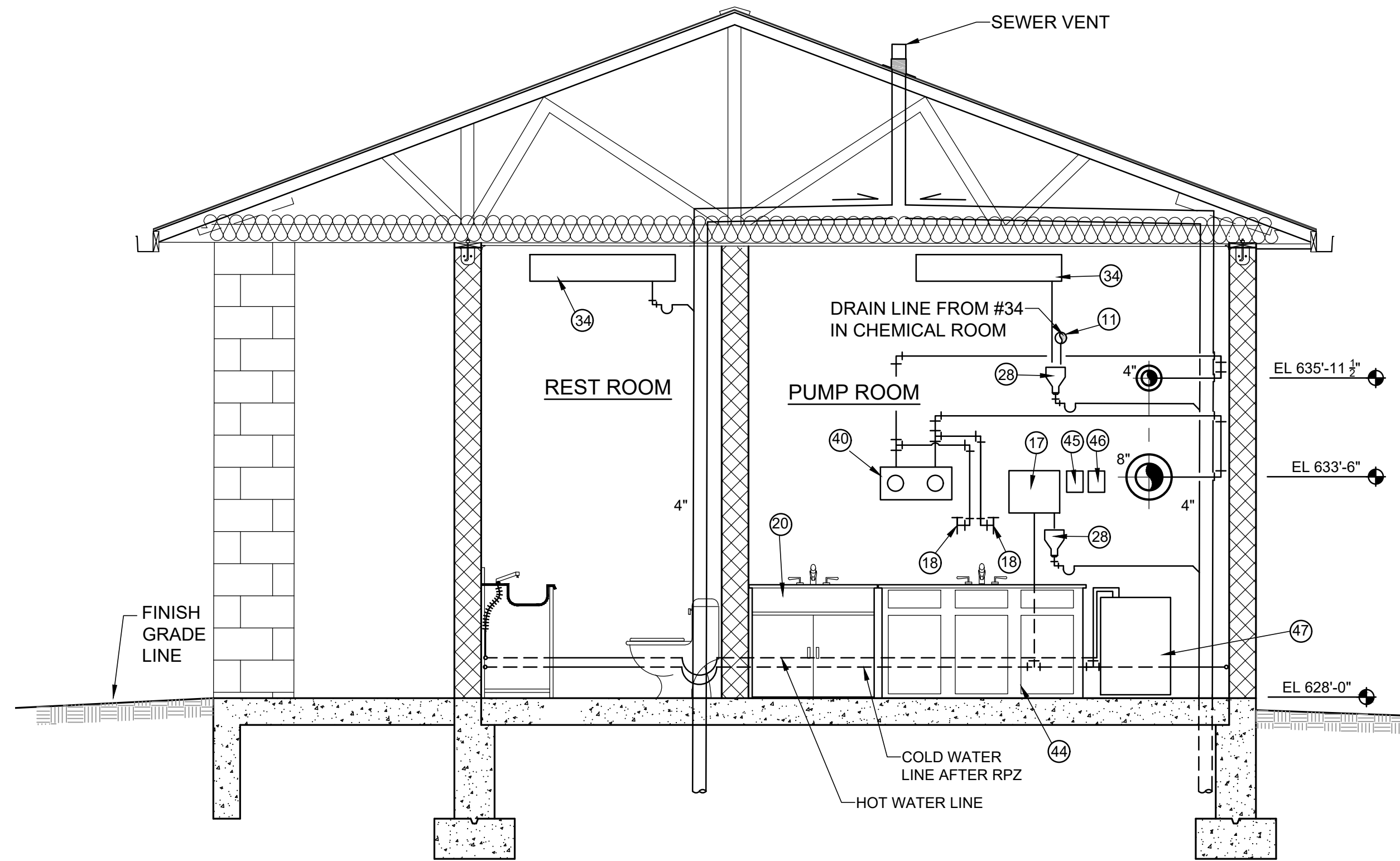
FITTING SCHEDULE
SEE SHEET 4



D **PUMP ROOM SECTION**
SCALE: 3/8" = 1'-0"



C **CHEMICAL ROOM SECTION**
SCALE: 3/8" = 1'-0"



E **PUMP ROOM SECTION**
SCALE: 3/8" = 1'-0"

NO.	DATE	REVISIONS

PIPING SECTIONS
KIMMUDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

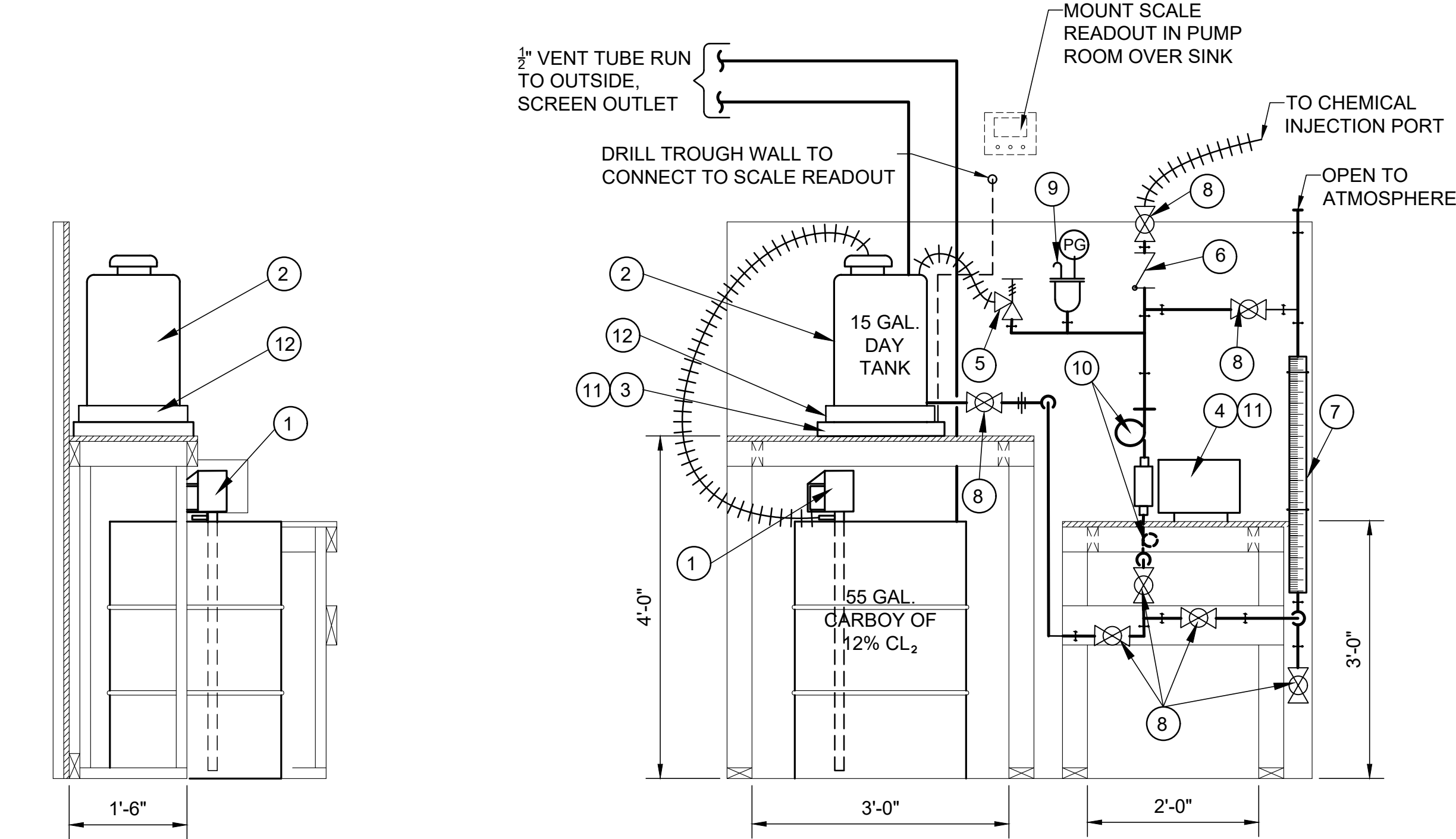
VERTICAL SCALE:
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PROJECT NO.
40007-415

DATE:
6/16/21

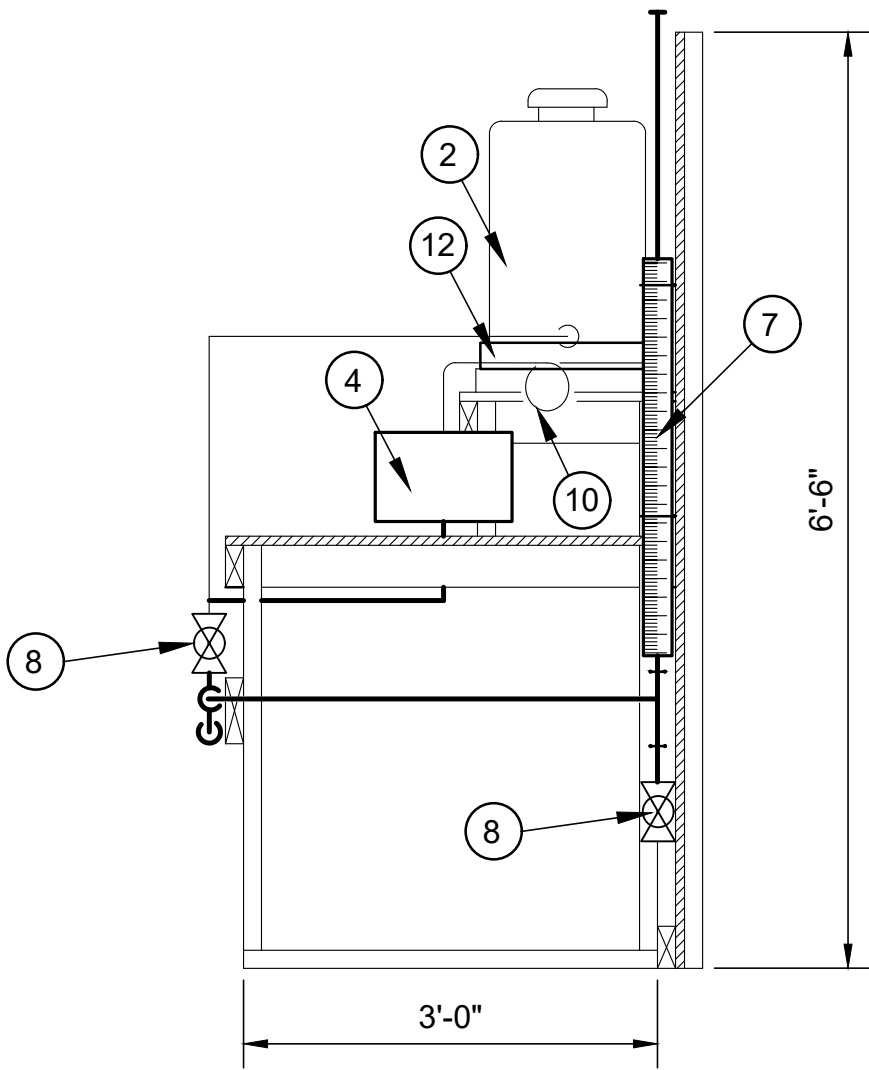
SHEET NO.
5

PATH:s:\shared\clients\40007 - gateway regional water company\415 - farina forms\cad\dwg\pump station\6-7 chemical feed.dwg
PLOTTER: 5/18/2021 4:01:44 PM BY: philip.s.cox



LEFT VIEW
(PIPING OMITTED FOR CLARITY)

FRONT VIEW

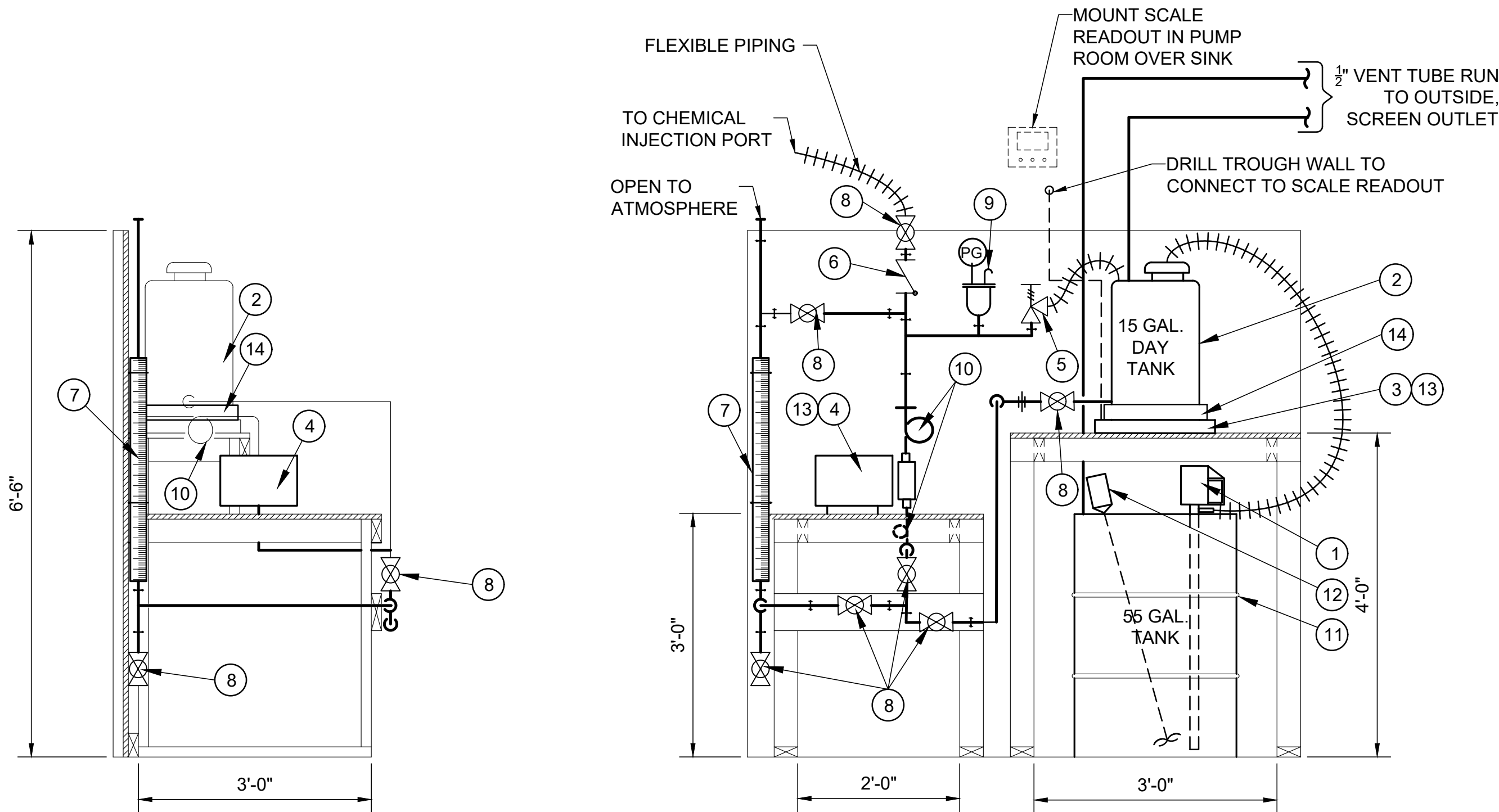


RIGHT VIEW

1. 120V, AC, TEFC, 0.5 HP DRUM PUMP w/ 40" PVDF PUMP TUBE AND 1" PP DISPENSING NOZZLE WITH VALVE.
2. POLYETHYLENE 15 GAL., 13" DIA x 21" HIGH TRANSLUCENT DAY TANK.
3. 600 LB. DIGITAL PLATFORM SCALE, 0.1% FULL SCALE ACCURACY DESIGNED FOR CONTINUOUS READING FOR MONITORING USAGE FROM A DAY TANK, READ IN 0.2 LB. INCREMENTS, SS, 120 V, RS-232 COMMUNICATION. READOUT TO BE LOCATED ABOVE SINK CABINET IN PUMP ROOM.
4. PERISTALTIC METERING PUMP, RATED AT 0 GPH TO 1.67 GPH, MAXIMUM INJECTING PRESSURE SHALL BE 100 PSIG, SHALL BE CAPABLE OF FLOW PROPORTIONAL CONTROL, 1/4" INLET & OUTLET.
5. PRESSURE RELIEF VALVE, 1/4", 10 - 150 PSI ADJUSTABLE SETTING.
6. BACK PRESSURE VALVE, 1/4" - 10 - 150 PSI ADJUSTABLE SETTING.
7. 100 ML CALIBRATION COLUMN WITH SLIP CAPS TO ALLOW CLEANING.
8. 1/4" TRUE UNION PVC BALL VALVES.
9. AIR RELIEF VALVE w/ PRESSURE GAUGE 0 - 150 PSI.
10. 1/4" FLEX TUBING.
11. FASTEN TO PLYWOOD SHELF WITH SCREWS.

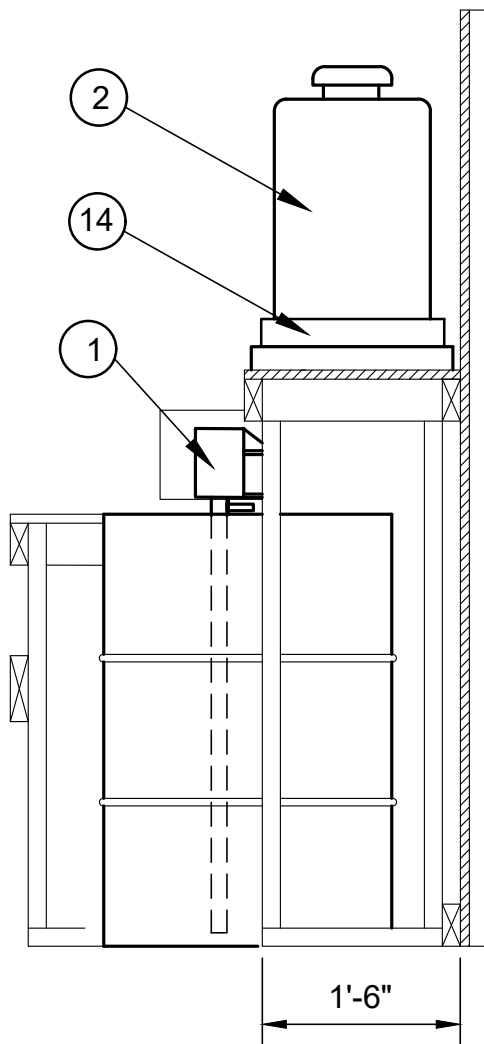
CHLORINE CHEMICAL FEED SYSTEM

SCALE: NONE



LEFT VIEW

FRONT VIEW



RIGHT VIEW
(PIPING OMITTED FOR CLARITY)

1. 120V, AC, TEFC, 0.5 HP DRUM PUMP w/ 40" PVDF PUMP TUBE AND 1" PP DISPENSING NOZZLE WITH VALVE.
2. POLYETHYLENE 15 GAL., 13" DIA x 21" HIGH TRANSLUCENT DAY TANK.
3. 600 LB. DIGITAL PLATFORM SCALE, 0.1% FULL SCALE ACCURACY DESIGNED FOR CONTINUOUS READING FOR MONITORING USAGE FROM A DAY TANK, READ IN 0.2 LB. INCREMENTS, SS, 120 V, RS-232 COMMUNICATION. READOUT TO BE LOCATED ABOVE SINK CABINET IN PUMP ROOM.
4. PERISTALTIC METERING PUMP, RATED AT 0 GPH TO 1.67 GPH, MAXIMUM INJECTING PRESSURE SHALL BE 100 PSIG, SHALL BE CAPABLE OF FLOW PROPORTIONAL CONTROL, 1/4" INLET & OUTLET.
5. PRESSURE RELIEF VALVE, 1/4", 10 - 150 PSI ADJUSTABLE SETTING.
6. BACK PRESSURE VALVE, 1/4" - 10 - 150 PSI ADJUSTABLE SETTING.
7. 100 ML CALIBRATION COLUMN WITH SLIP CAPS TO ALLOW CLEANING.
8. 1/4" TRUE UNION PVC BALL VALVES.
9. AIR RELIEF VALVE w/ PRESSURE GAUGE 0 - 150 PSI.
10. 1/4" FLEX TUBING.
11. POLYETHYLENE 55 GAL., 22" x 39" HIGH TRANSLUCENT AMMONIA STORAGE TANK, 2.5 GAL. GRADUATIONS MOLDED INTO TANK. FURNISH WITH FLOOR STAND WITH MIXER MOUNTING SUPPORT.
12. 1/2 HP, 115 VAC, 1750 RPM, TEFC MOTOR, FIXED SPEED MIXER, WITH 1/2" SHAFT x 32" L, CLAMP MOUNT, 316 SS. SHAFT & PROPELLER.
13. FASTEN TO PLYWOOD SHELF WITH SCREWS.

AMMONIA SULFATE CHEMICAL FEED SYSTEM

SCALE: NONE

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REVISIONS	DATE	NO.			

CHEMICAL FEED DETAIL
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY
MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
6

6 OF 18 SHEETS

PATH:s:\ehers\clients\40007 - gateway regional water company\415 - farmo forms\cad\dwg\pump station\6-7 chemical feed.dwg
PLOTTER: 5/18/2021 4:01:45 PM BY:chilliss,carv

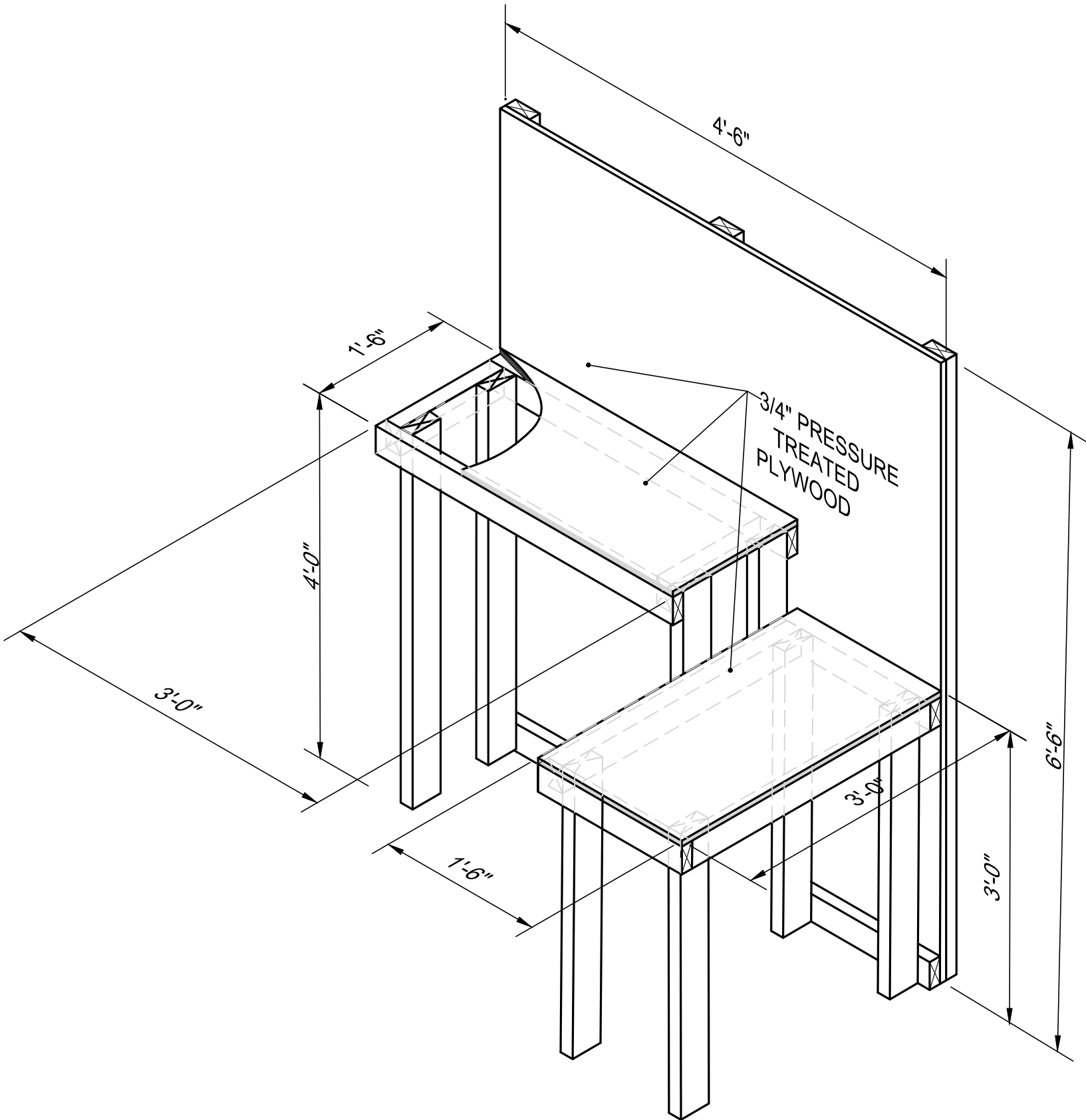
DOOR SCHEDULE							
DOOR NO.	LOCATION	SIZE	DOOR TYPE	DOOR MAT.	FRAME MAT.	HEAD	JAMB
1	PUMP ROOM	6'-0"x7'-0"x1 3/4"	THRULITE TYPE TX	STEEL (INSULATED) w/ 12 GA. STEEL PLATE CLOSURE REINFORCEMENT	8.75" DEPTH	2"	2"
2	CHEMICAL ROOM	3'-0"x7'-0"x1 3/4"	MEDALLION TYPE F	STEEL (INSULATED) w/ 12 GA. STEEL PLATE CLOSURE REINFORCEMENT	5.75" DEPTH	2"	2"
3	REST ROOM	3'-0"x7'-0"x1 3/4"	HOLLOW CORE FLUSH	WOOD	5.75" DEPTH	2"	2"
DOOR NO.	HARDWARE						
1	1 EA. EXTERIOR LOCK, 1 EA. WEATHER STRIPPING, 2 EA. RAIN DRIP, 2 EA. SWEEP, 1 EA. THRESHOLD, 6 EA. HINGES, 2 EA. CLOSER						
2	1 EA. EXTERIOR LOCK, 1 EA. WEATHER STRIPPING, 1 EA. RAIN DRIP, 1 EA. SWEEP, 1 EA. THRESHOLD, 3 EA. HINGES, 1 EA CLOSER						
3	1 EA. INTERIOR LOCK, 3 EA. HINGES, 1 EA. CLOSER						

ROOM FINISH SCHEDULE					
ROOM NAME	WALLS			FLOOR	
	MATERIAL	FINISH	BASE	MATERIAL	FINISH
EXTERIOR	CONC. BLOCK	SEALANT	_____	_____	_____
PUMP ROOM	CONC. BLOCK	PAINT	_____	CONCRETE	PAINT
CHEMICAL ROOM	CONC. BLOCK	PAINT	_____	CONCRETE	PAINT

CEILINGS			
LOCATION	MATERIAL	FINISH	HEIGHT
_____	_____	_____	_____
PUMP ROOM	FRP BOARD	_____	11'-4"
CHEMICAL ROOM	FRP BOARD	_____	11'-4"

NOTE:
ALL FRAMING IS 2"x4" PRESSURE TREATED WOOD

ALL 3/4" PANELS PRESSURE TREATED WOOD



CHEMICAL FEED STAND (CONCEPT DRAWING)
SCALE: NONE

HENEGHAN &
ASSOCIATES, P.C.



ENGINEERS-SURVEYORS
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CHEMICAL FEED DETAIL
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GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
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AS NOTED

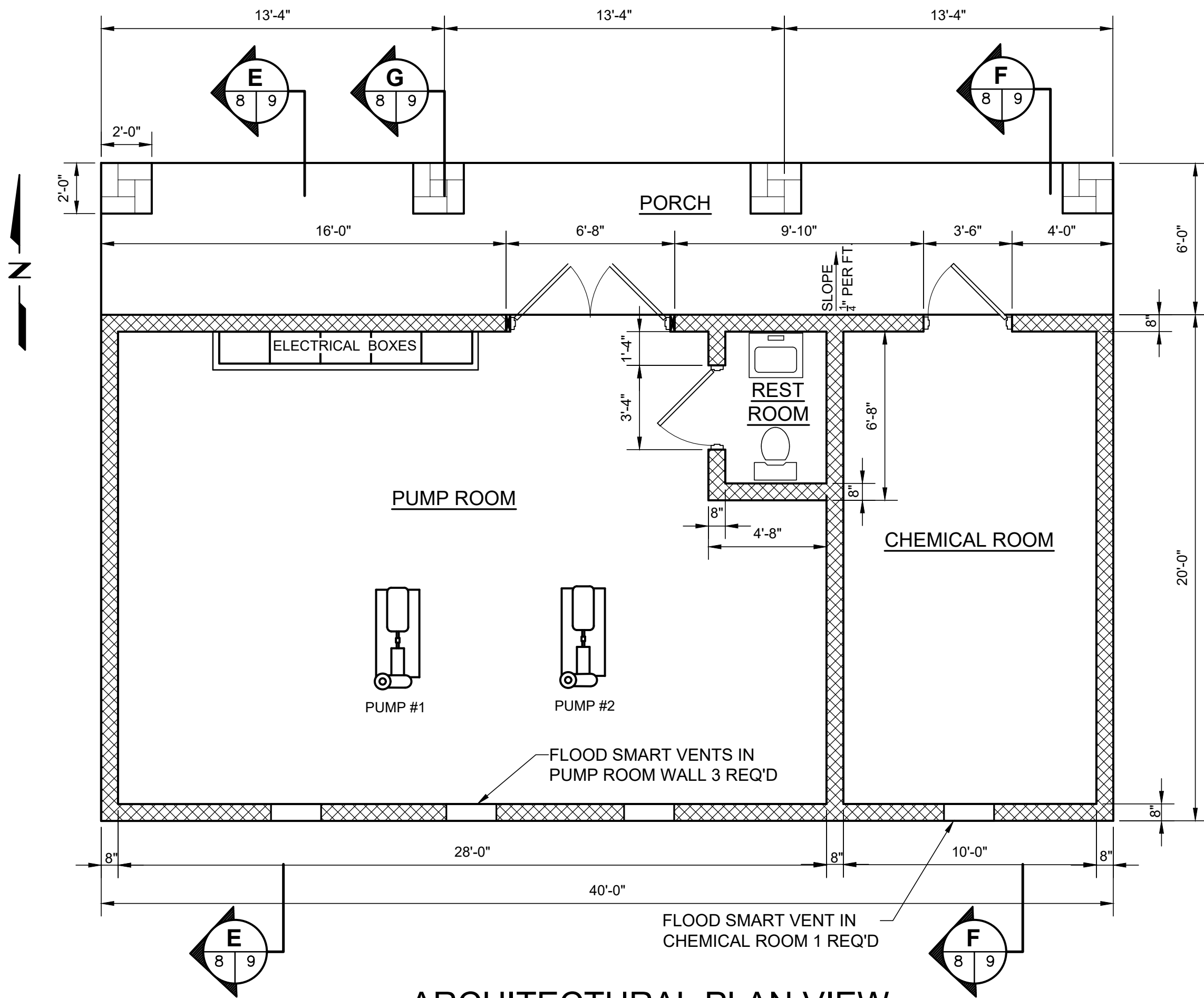
VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

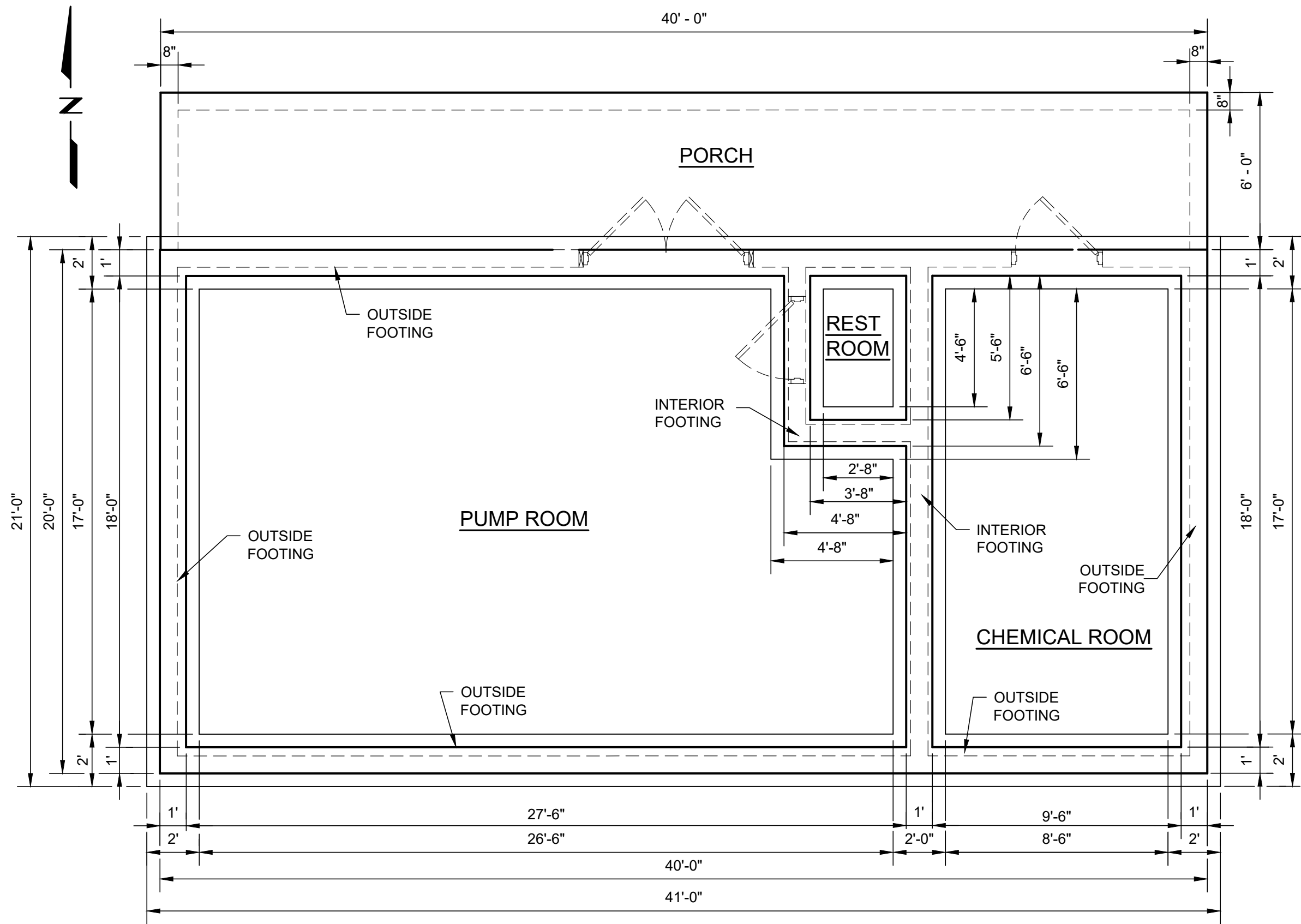
DATE:
5/18/21

SHEET NO.
7

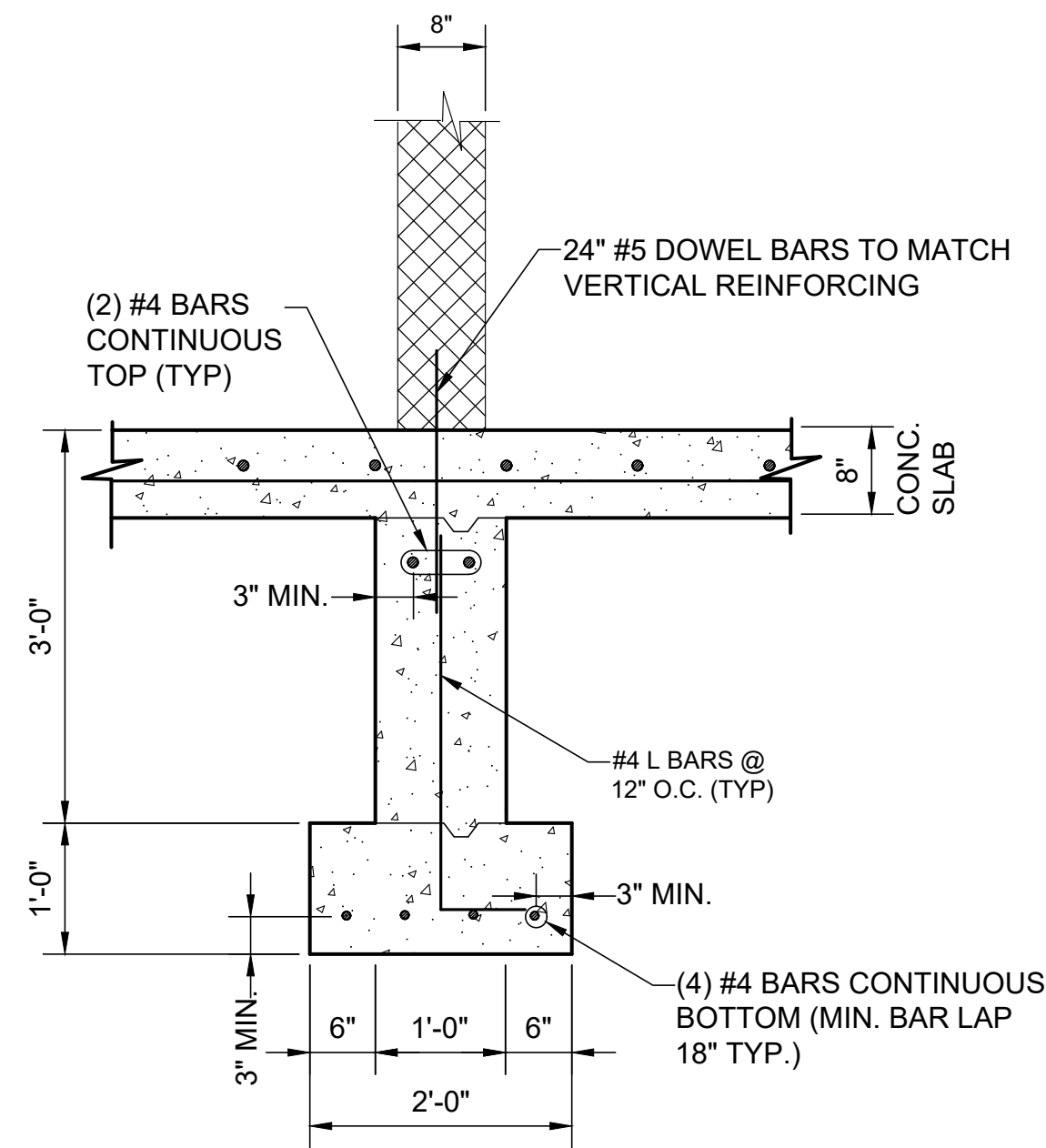
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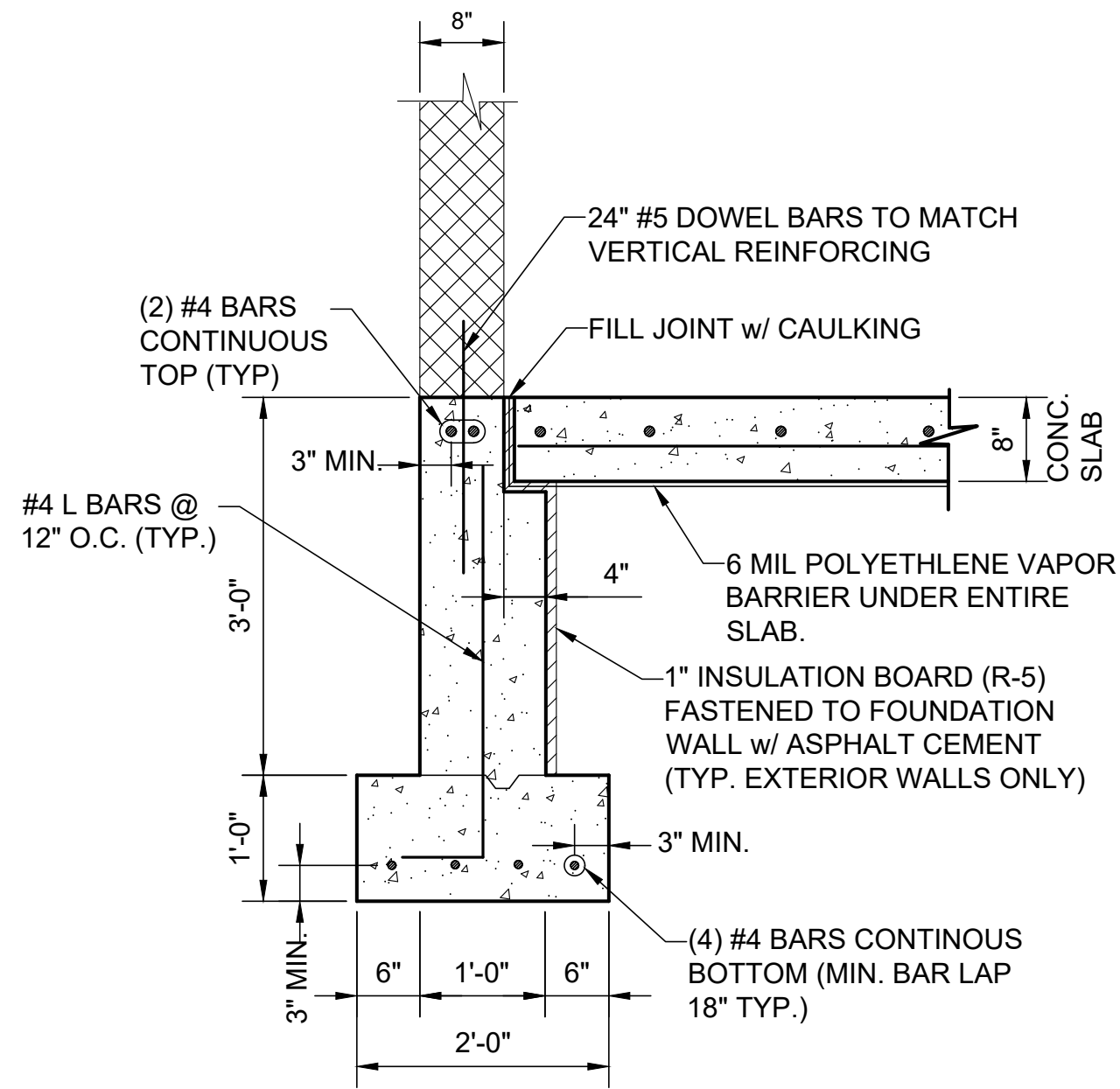
ARCHITECTURAL PLAN VIEW
SCALE: 1/4"=1'-0"



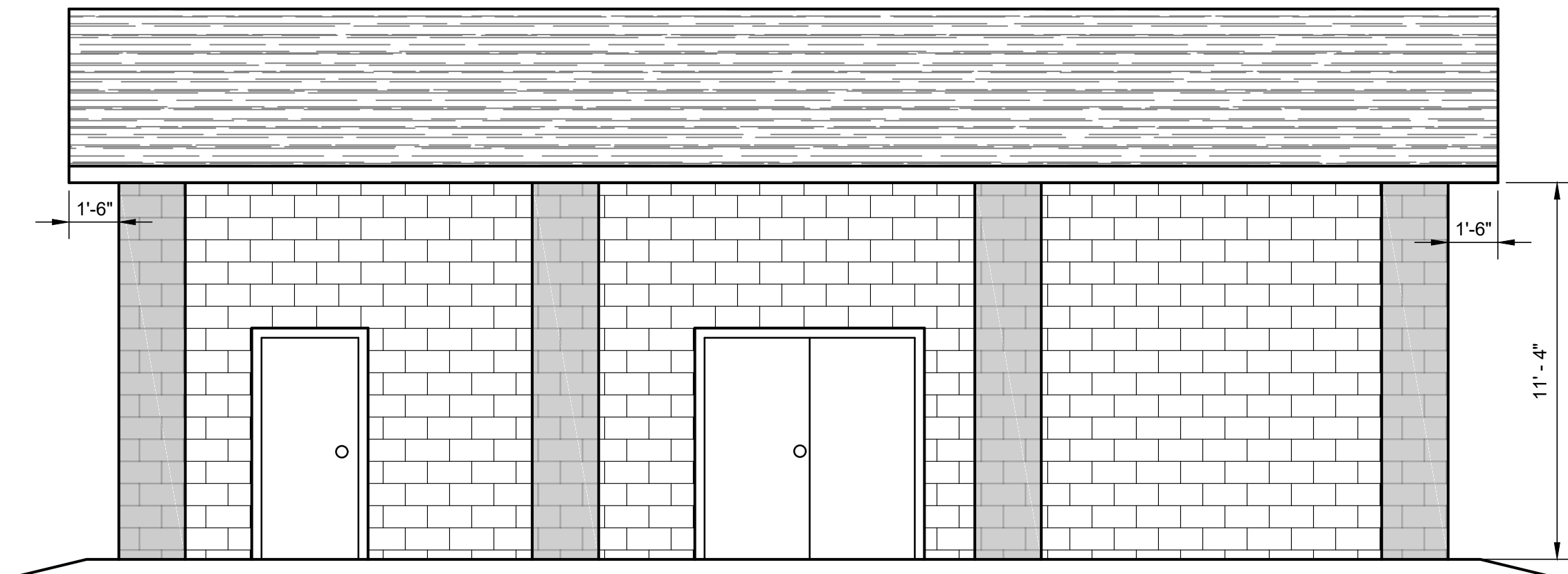
ARCHITECTURAL FOOTING VIEW
SCALE: 1/4"=1'-0"



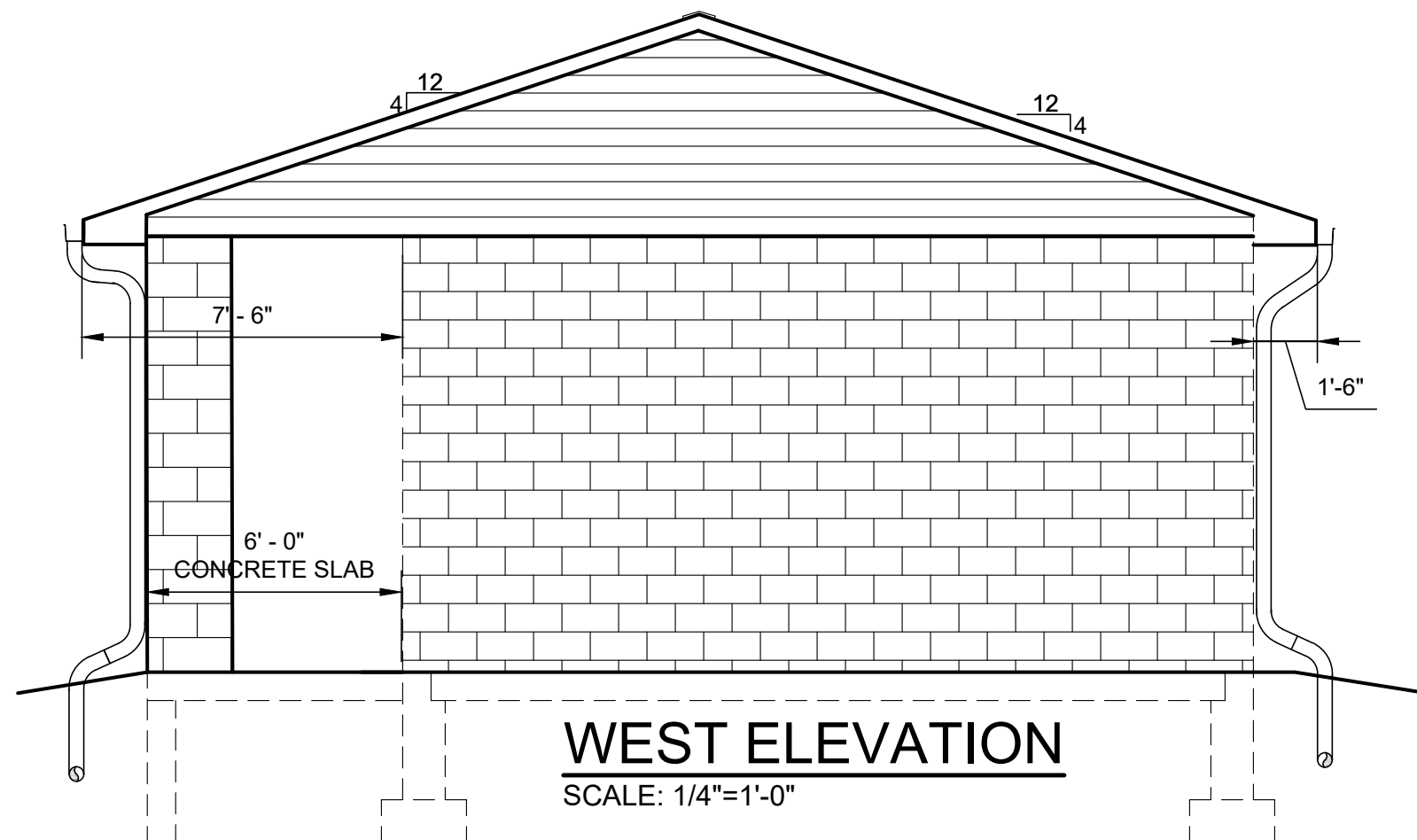
INTERIOR WALL FOOTING SECTION
SCALE: 3/4"=1'-0"



OUTSIDE FOOTING WALL SECTION
SCALE: 3/4"=1'-0"



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



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

REVISIONS

DATE

NO.

BUILDING DETAILS
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

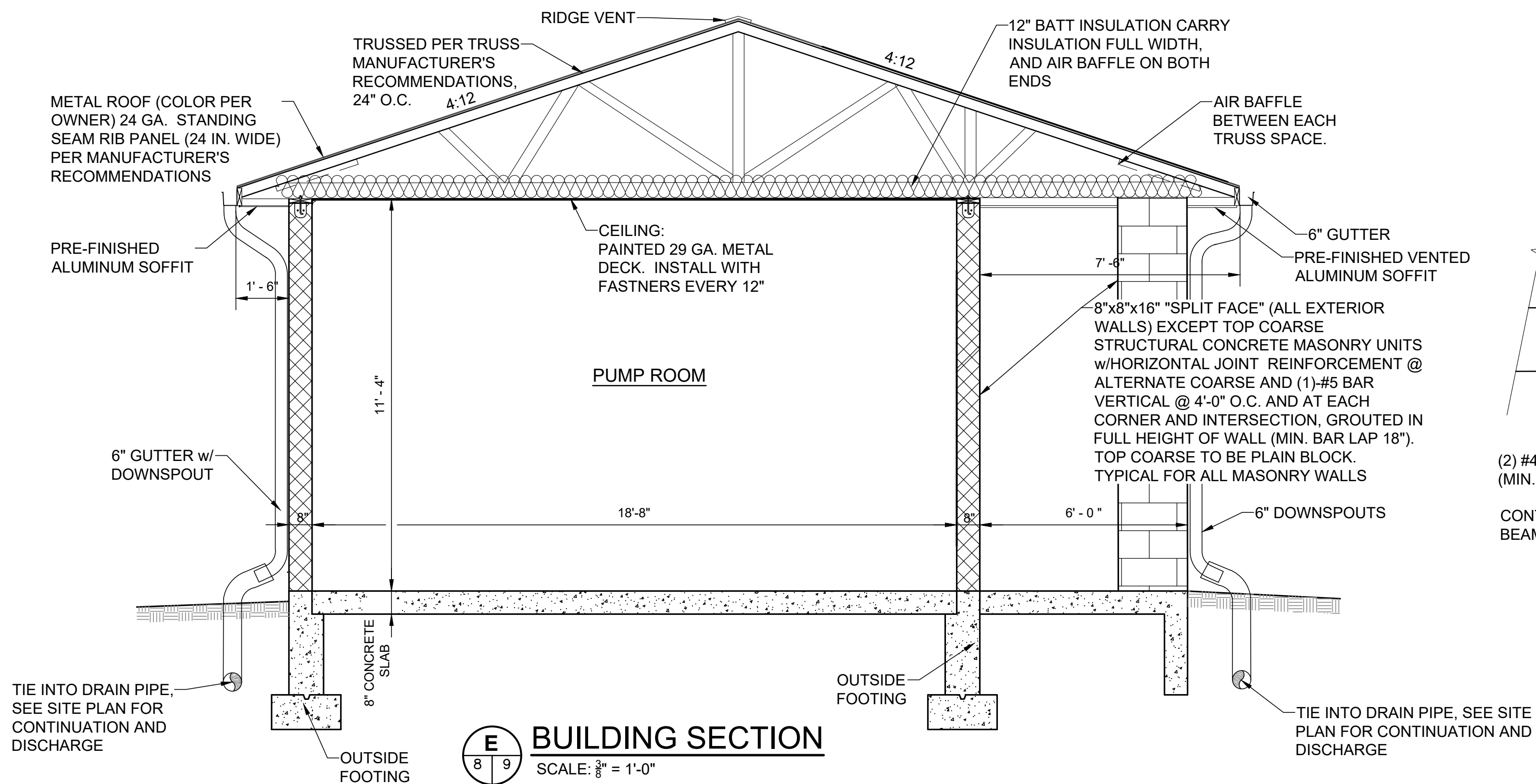
VERTICAL SCALE:
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PROJECT NO.
40007-415

DATE:
5/18/21

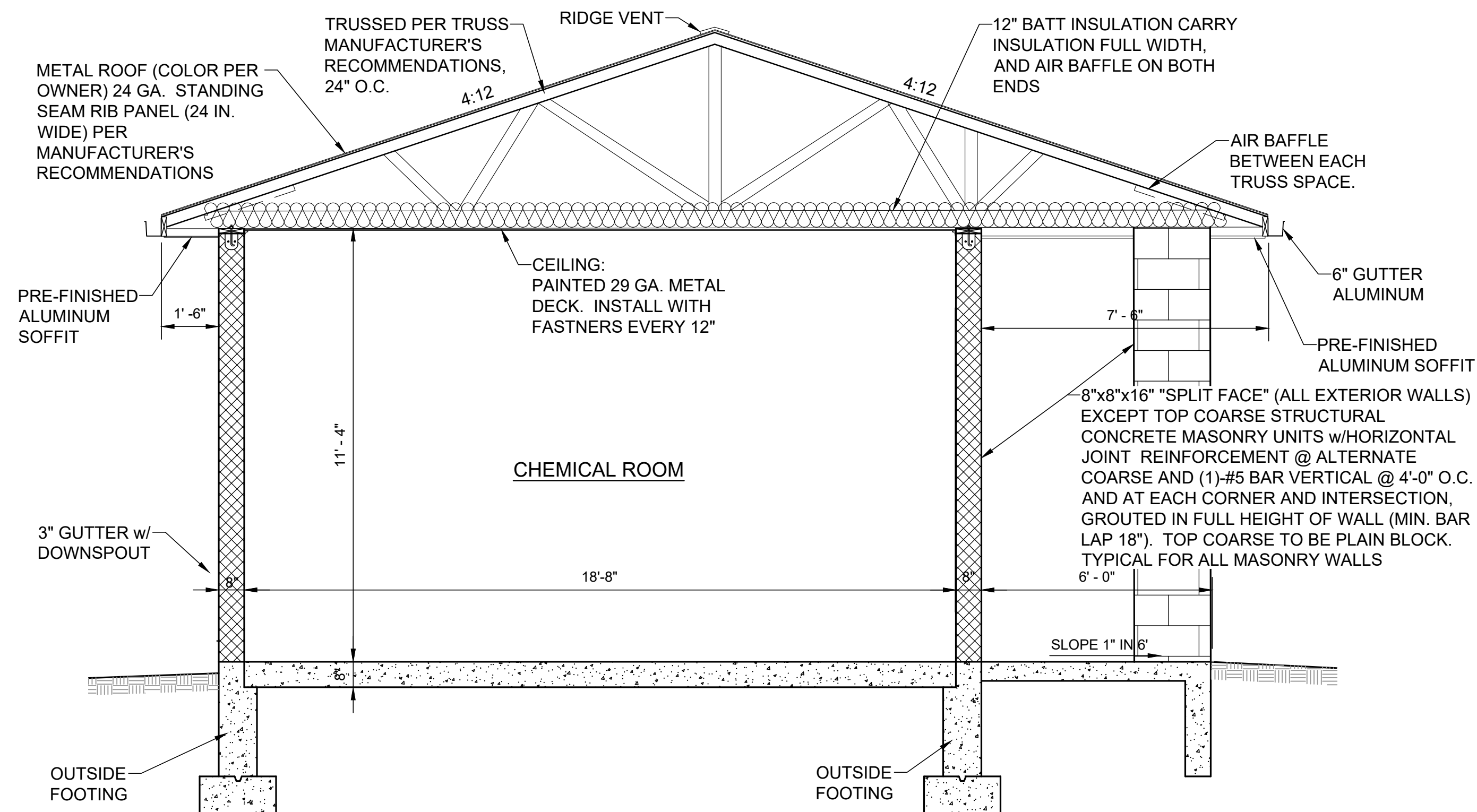
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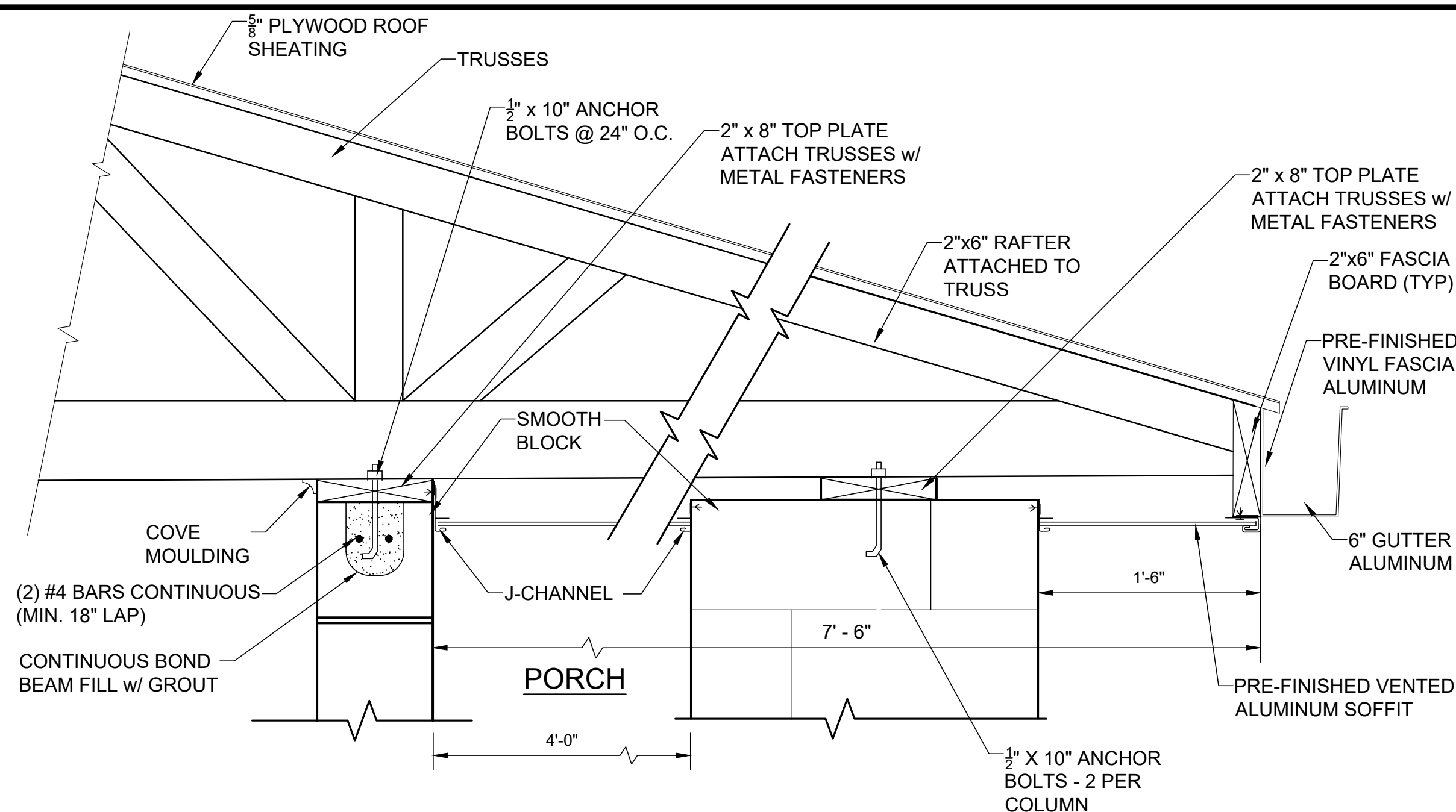


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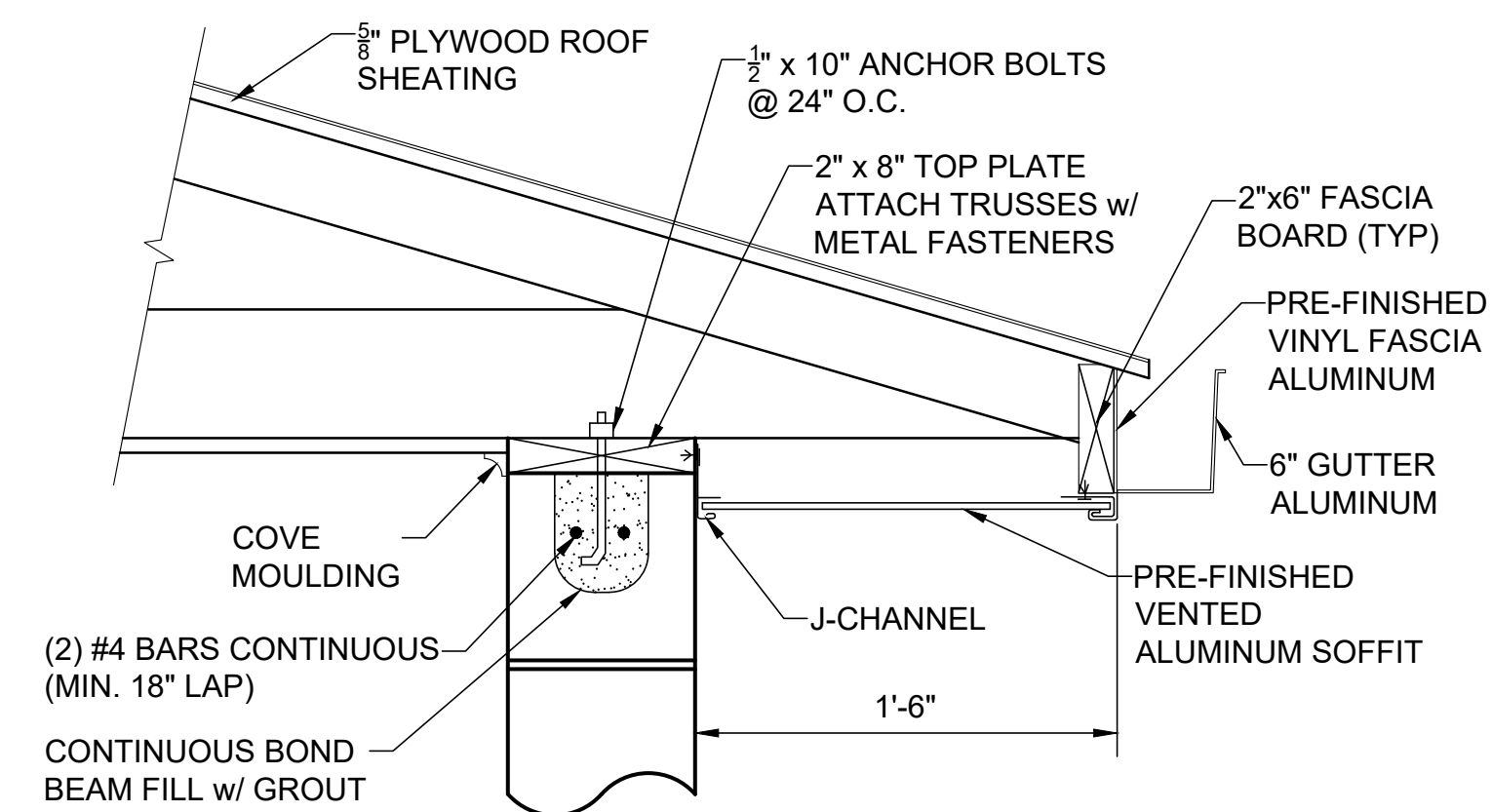
1. CONCRETE BLOCK SHALL BE ASTM C-90 "NORMAL- WEIGHT" BLOCK FOR LOAD BEARING CONCRETE MASONRY. MORTAR SHALL BE NCMA TEK TYPE N.
2. BLOCK WALLS SHALL BE FILLED W/ THERMCO FOAM INSULATION, OR EQUAL.
3. LINTELS SHALL BE INSTALLED ABOVE ALL OPENINGS, AND SHALL CONSIST OF 2 - 3 1/2" x 3 1/2" x 5/16" STEEL ANGLES GROUTED FULL.
4. "SPLIT-FACE" BLOCK ON ALL EXTERIOR WALLS. PLAIN BLOCK FOR INTERIOR WALLS. TOP BLOCK COARSE ON EXTERIOR WALL TO BE PLAIN BLOCK.
5. ALL DOOR LOCKS SHALL BE KEYED ALIKE
6. SURE-KLEAN MASONRY SEALER, OR EQUAL, SHALL BE USED TO WATERPROOF/SEAL ALL BLOCK WALLS, BOTH INTERIOR AND EXTERIOR.
7. ALL FLOORS SHALL SLOPE AT LEAST ONE INCH IN EVERY 10 FEET TO A SUITABLE DRAIN.



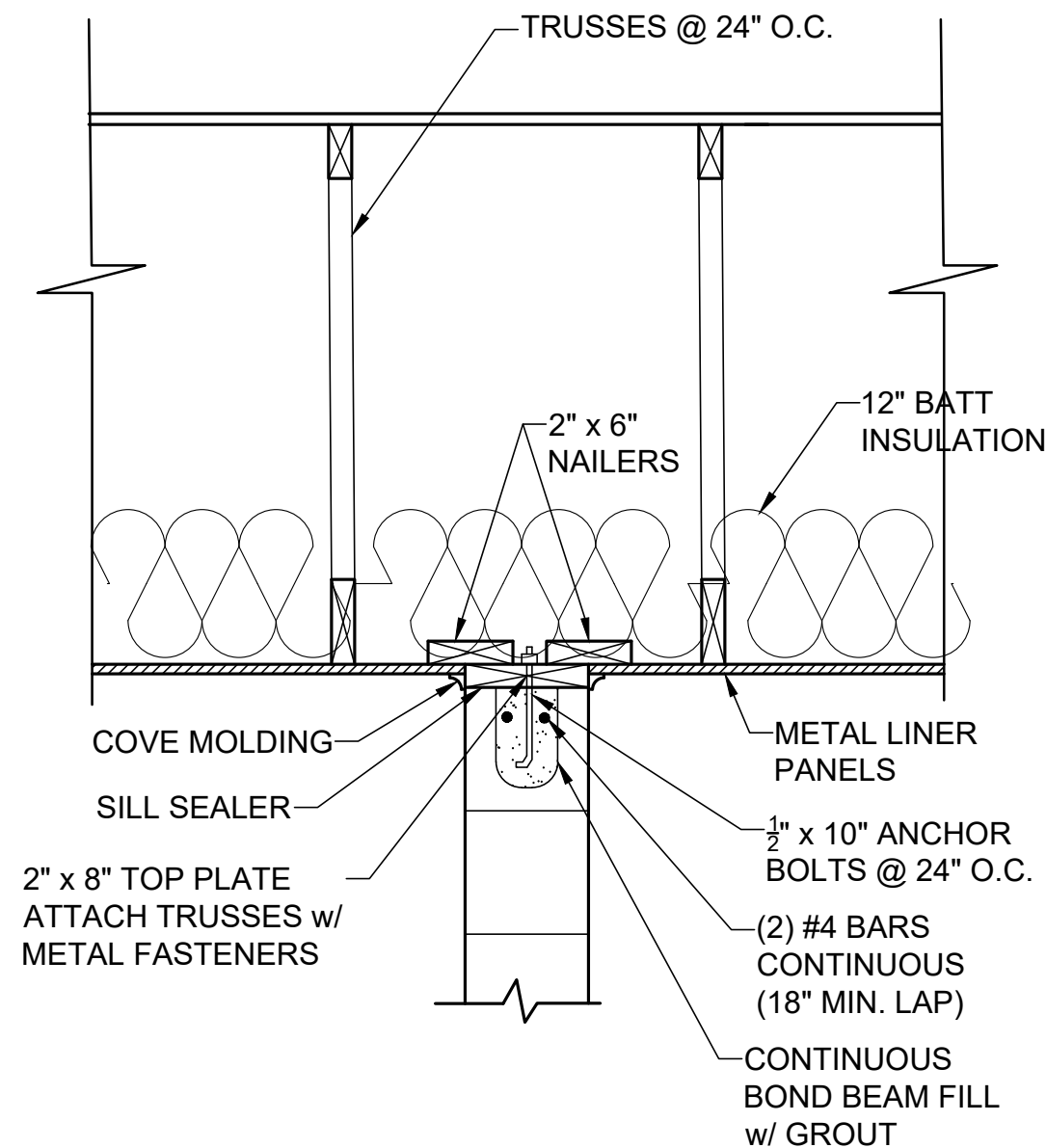
F BUILDING SECTION
SCALE: 3/8" = 1'-0"



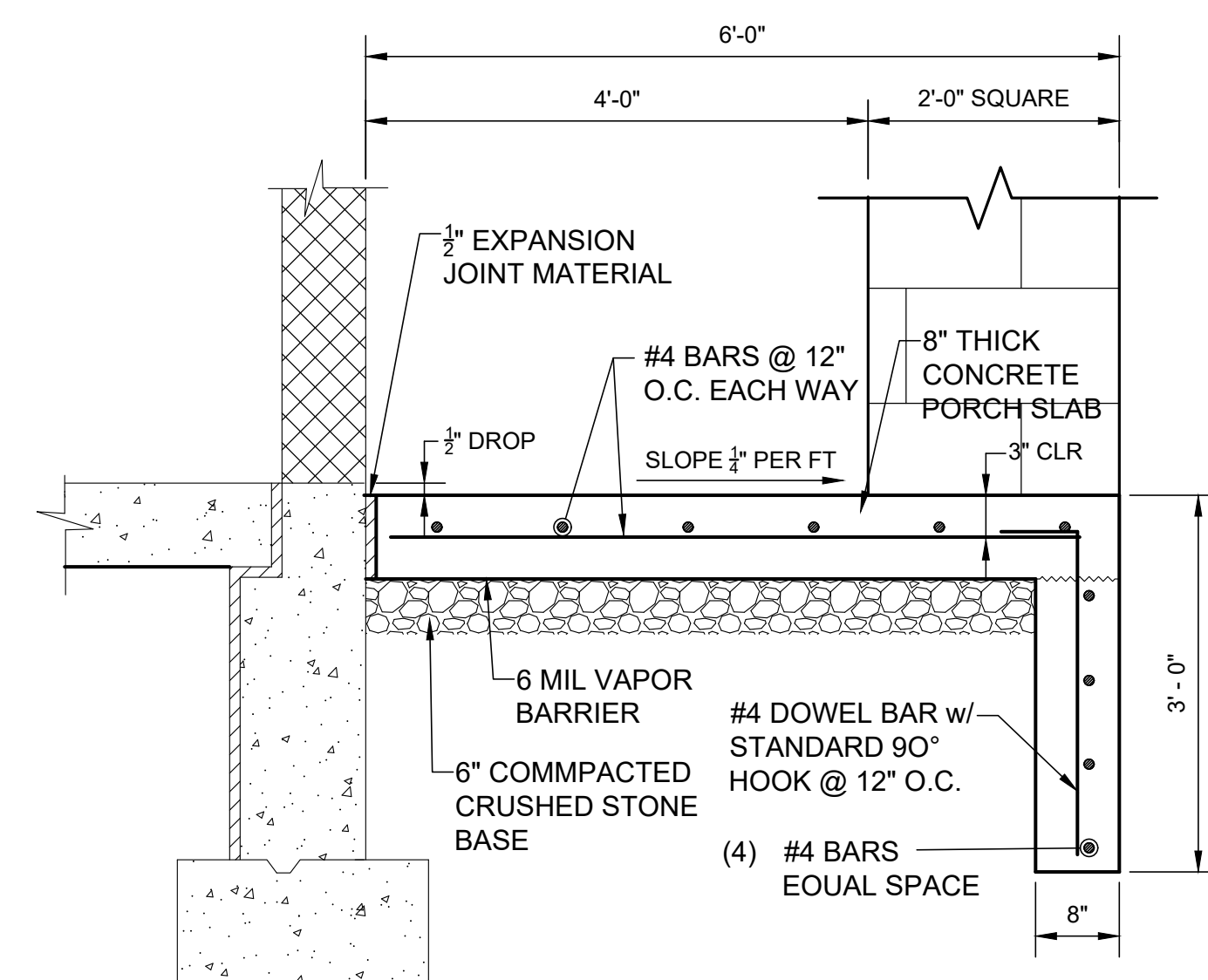
ENLARGED ROOF DETAIL (PORCH)
SCALE: NONE



ENLARGED ROOF DETAIL
SCALE: NONE



INTERIOR WALL DETAIL
SCALE: 1" = 1'-0"



G PORCH SLAB & FOOTING WALL SEC.
SCALE: NONE

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F: (618) 533-6652

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COLUMBIA, IL 62236
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F: (618) 281-8290

1929 RICHARDSON ROAD
ARNOLD, MO 63010
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F: (636) 464-2059

REVISIONS	DATE	NO.

BUILDING SECTIONS
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

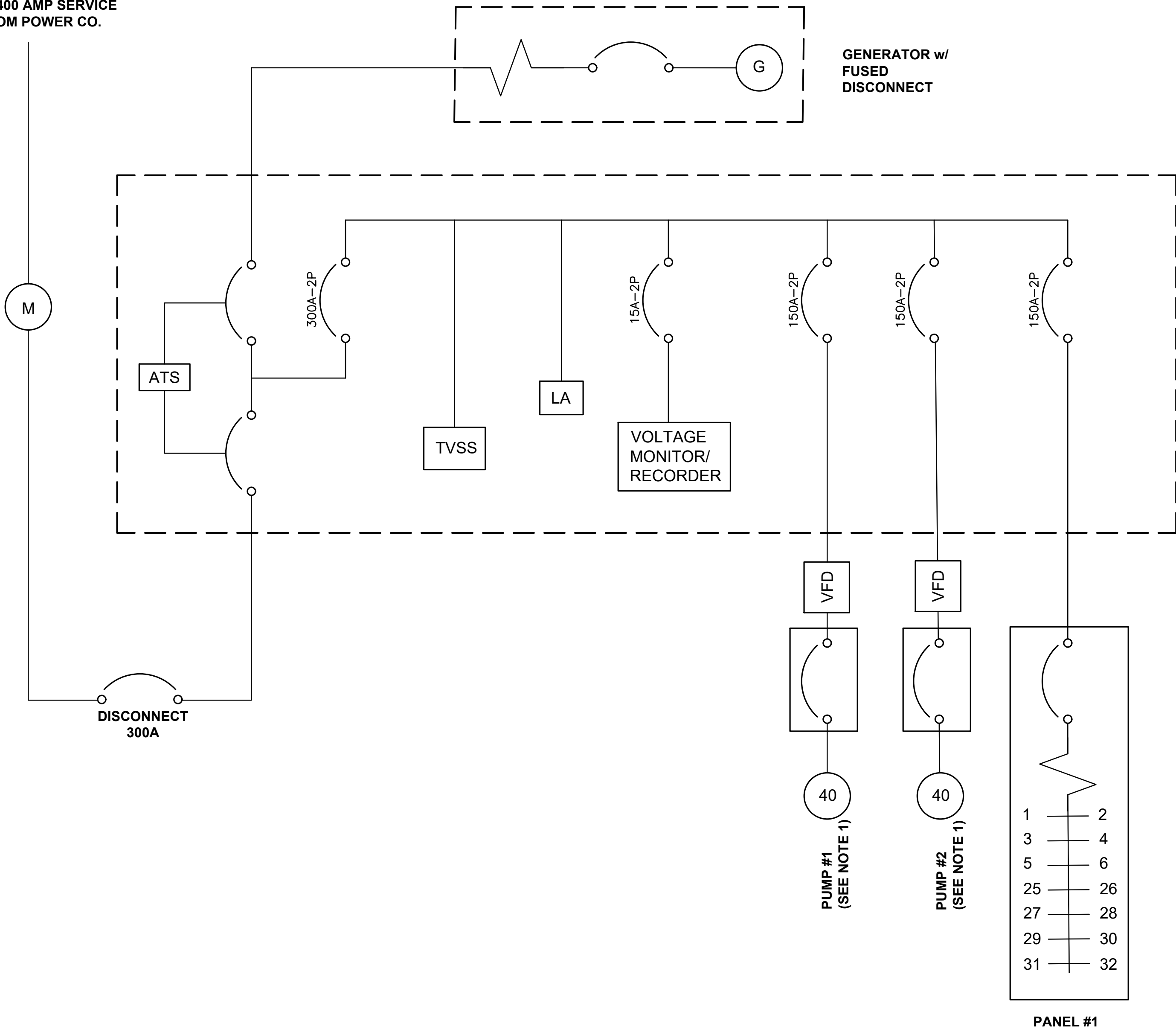
DATE:
5/18/21

SHEET NO.
9

9 OF 18 SHEETS

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PLOTTER: 5/18/2021 4:02:36 PM BY: chilleri-arx

240V, 400 AMP SERVICE
1φ FROM POWER CO.



NOTES:

1. MIN CONDUIT SIZE FOR MOTOR WIRING SHALL BE 1 1/4" TO ALLOW FOR UPSIZING PUMPS AND MOTORS IN THE FUTURE.

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F: (636) 464-2059

REVISIONS	DATE	NO.

--

POWER SCHEDULE KINMUNDY PUMP STATION GATEWAY REGIONAL WATER COMPANY	MARION COUNTY, ILLINOIS
--	-------------------------

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
NOT TO SCALE

VERTICAL SCALE:
NOT TO SCALE

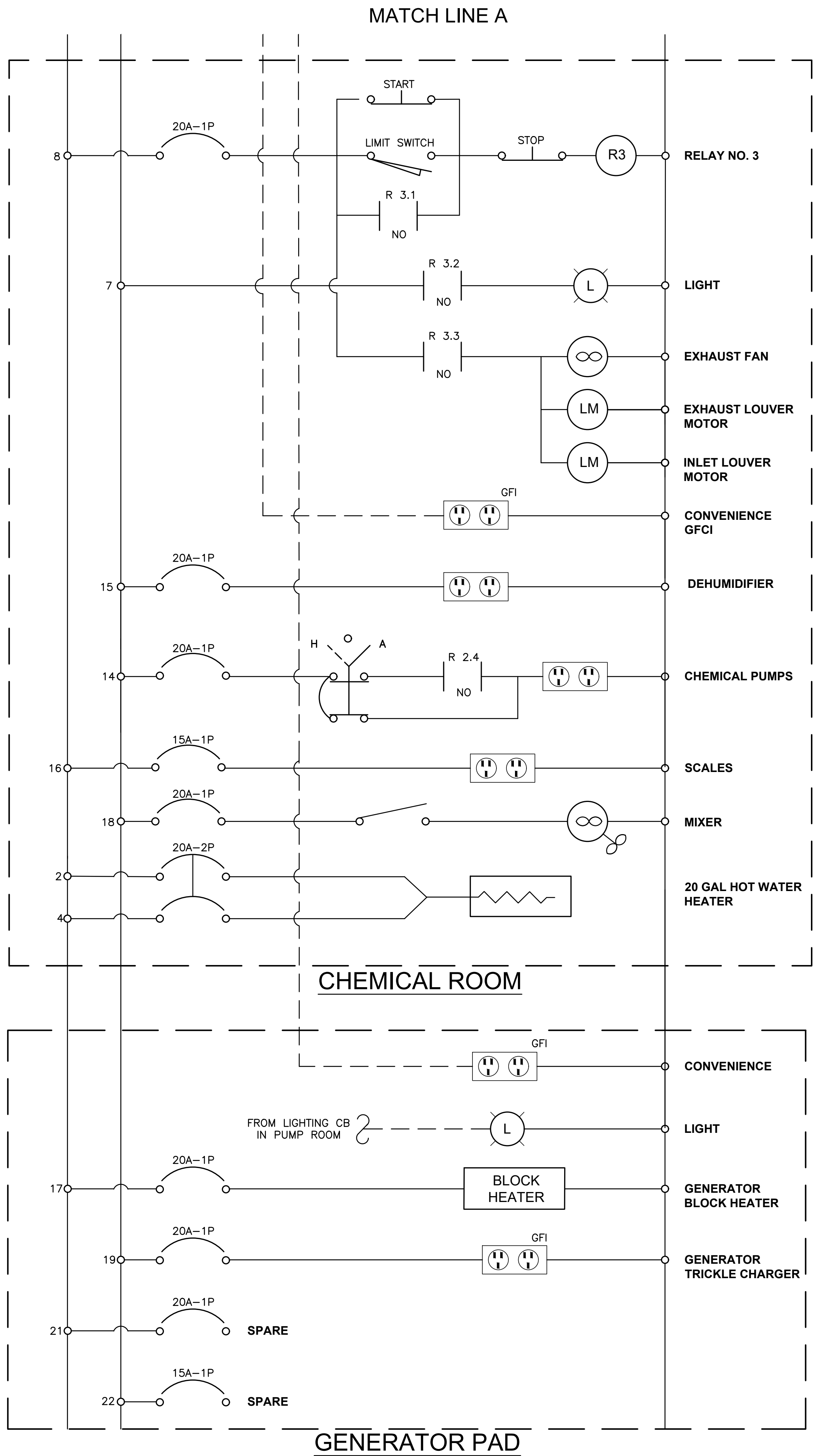
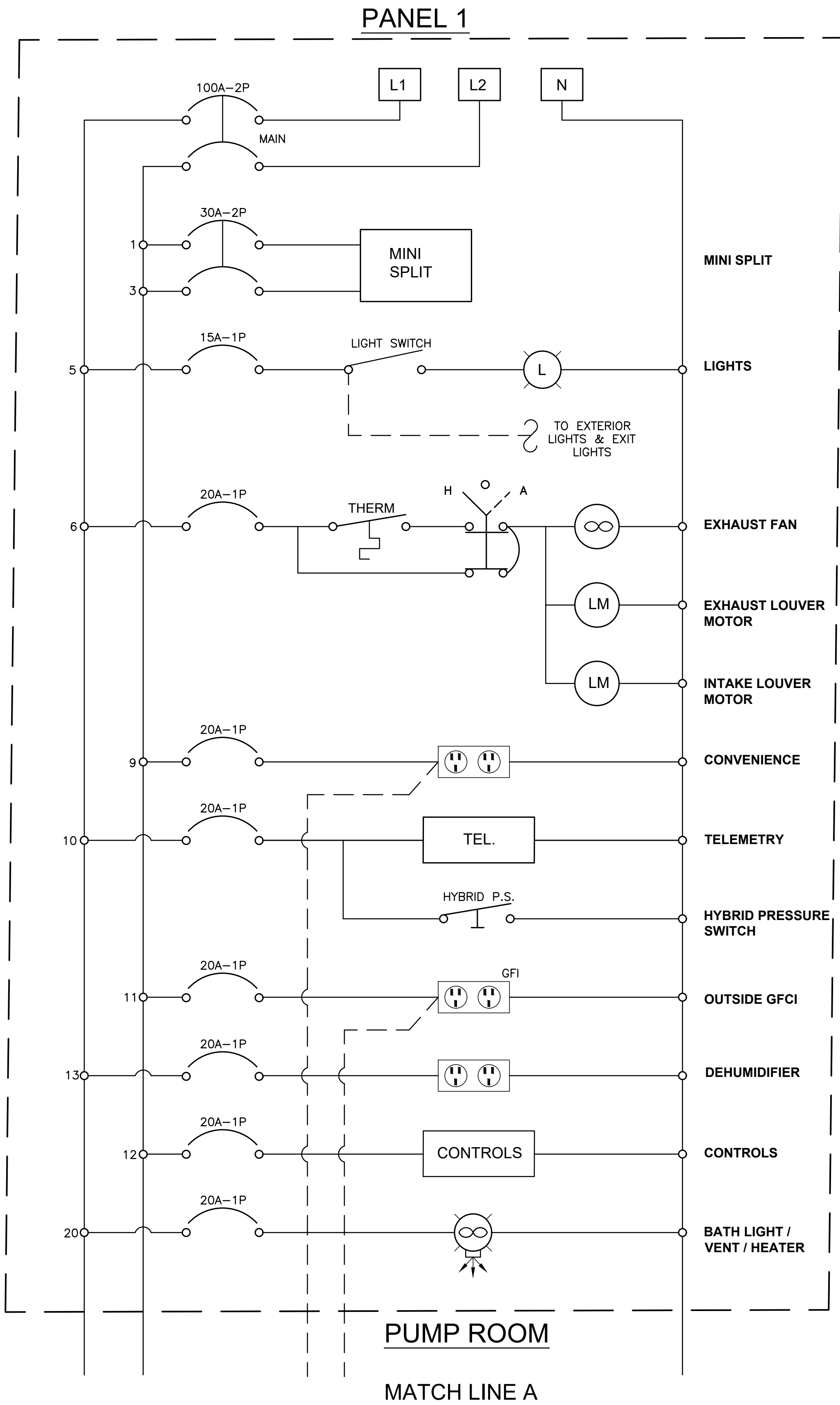
PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
10

10 OF 18 SHEETS

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IL: 184-002692, EXPIRES APRIL 30, 2023
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REVISIONS	DATE	NO.

ELECTRIC SCHEDULE
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY
MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
NOT TO SCALE

VERTICAL SCALE:
NOT TO SCALE

PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
11

11 OF 18 SHEETS

P:\T\as\chicago\clients\40007 - gateway regional water company\415 - farina forms\cad\dwg\pump station\12 electric pump station.dwg
PLOTTER: 5/18/2021 4:03:16 PM BY: chilleri, carv

ABBREVIATIONS

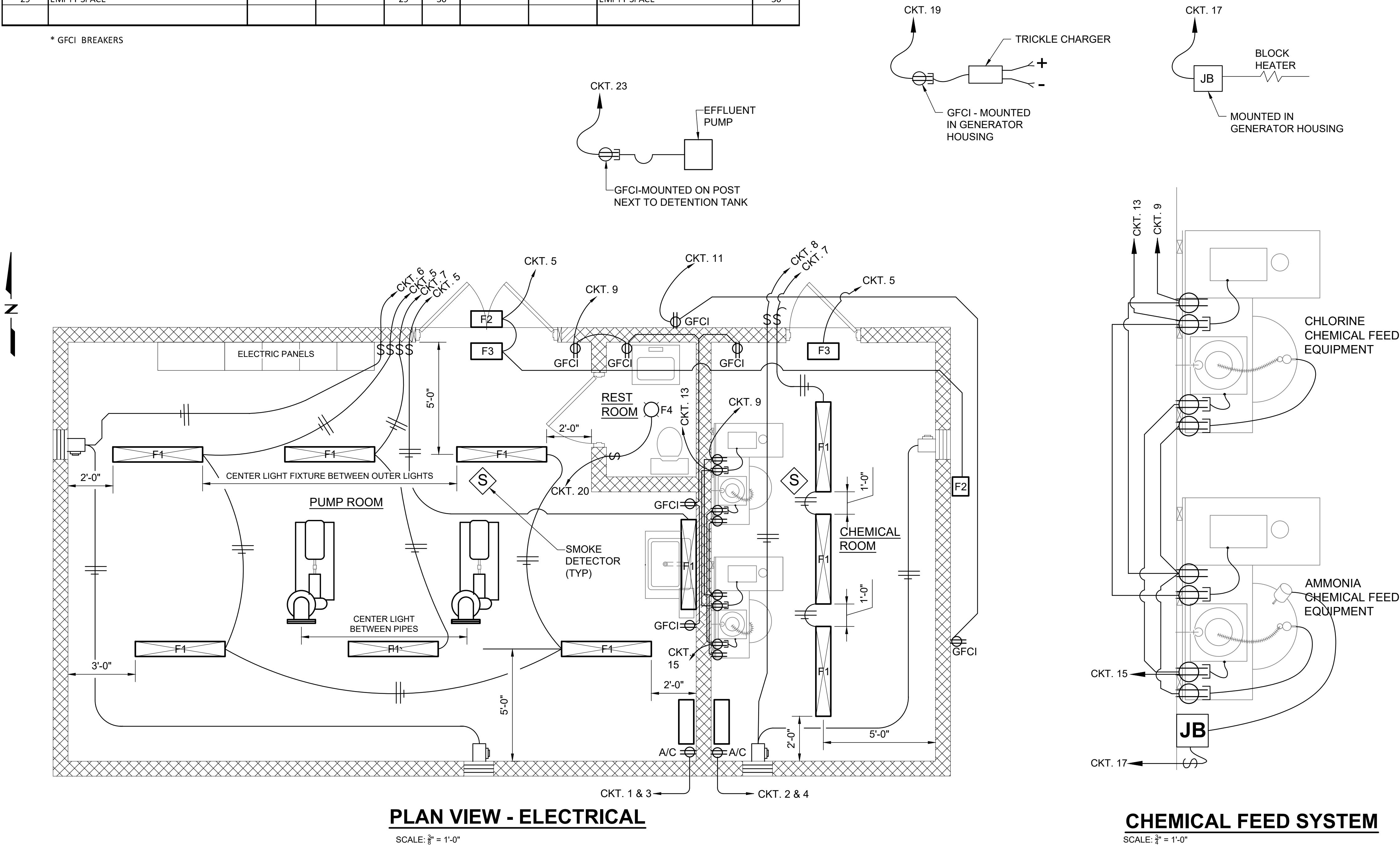
A/C	AIR CONDITIONER
A/E	ARCHITECT / ENGINEER
A.F.F.	ABOVE FINISHED FLOOR
A.C.	ABOVE COUNTER
ATS	AUTOMATIC TRANFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKERS
CKT	CIRCUIT
CL ₂	CHLORINE
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EMT	ELECTRICAL METALLIC TUBING
EP	EXPLOSION PROOF
EXH	EXHAUST
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HOA	HAND - OFF - AUTO
HP	HORSEPOWER
HZ	HERKZ (CYCLE)
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATT
LC	LIGHTING CONTACTOR
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO.	NUMBER
OL	OVERLOAD
OS	OCCUPANCY SENSOR
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL BOARD
PF	POWER FACTOR
RECEPT	RECEPTACLE
RM	ROOM
RTU	REMOTE TERMINAL UNIT
SS	STAINLESS STEEL
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SWGR	SWITCH GEAR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP.	TYPICAL
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
XFMR	TRANSFORMER

PANEL SCHEDULE									
CKT. NO.	LOAD	BRAKER SIZE	LOAD AMPS	POLE NO.		LOAD AMPS	BREAKER SIZE	LOAD	CKT. NO.
1	HEATER / AIR CONDITIONER	20 - 2P		1	2		20 - 2P	HEATER / AIR CONDITIONER	2
3	PUMP ROOM			3	4			CHEMICAL ROOM	4
5	LIGHTS	15 - 1P		5	6		20 - 1P	EXHAUST FAN - PUMP ROOM	6
7	LIGHTS	15 - 1P		7	8		20 - 1P	EXHAUST FAN - CHEMICAL ROOM	8
9	RECEPTICAL (INSIDE)	20 - 1P		9	10		20 - 1P	TELEMENTRY	10
11	RECEPTICAL (OUTSIDE)	20 - 1P		11	12		20 - 1P	CONTROLS	12
13	RECEPTICAL - PUMP ROOM DEHUMIDIFIER	20 - 1P*		13	14		20 - 1P	CHEMICAL PUMPS	14
15	RECEPTICAL - CHEMICAL ROOM DEHUMIDIFIER	20 - 1P*		15	16		20 - 1P	SCALES	16
17	GENERATOR BLOCK HEATER	20 - 1P		17	18		20 - 1P	CHEMICAL MIXER	18
19	GENERATOR TRICKLE CHARGE	20 - 1P		19	20		20 - 1P	BATHROOM LIGHT / HEATER	20
21	SPARE	20 - 1P		21	22		15 - 1P	SPARE	22
23	EFFLUENT PUMP	20-1P		23	24		—	EMPTY SPACE	24
25	EMPTY SPACE	—		25	26		—	EMPTY SPACE	26
27	EMPTY SPACE	—		27	28		—	EMPTY SPACE	28
29	EMPTY SPACE	—		29	30		—	EMPTY SPACE	30

* GFCI BREAKERS

LIGHT FIXTURE SCHEDULE

FIXTURE NO.	MANUFACTURER OR EQUAL	MAKE OR MODEL #	LAMP
F1	e - conolight	E - VW4L04UNW (4700 LUMENS) VAPOR TIGHT	48W LED NEUTRAL WHITE
F2	e - conolight	E - WP9 (5600 LUMENS) WALL PACK	96W LED
F3	e - conolight	E - XEL 1RBCA EDGELIT EXIT SIGN w/ 4.8 V NICAD BATTERY BACKUP	3.6 W LED @ 120V
F4	NUTONE	COMBINATION LIGHT EXHAUST FAN, HEATER 100W LIGHT (MAX.) 1300W - 120V HEATER 70CFM EXHAUST FAN	100W (MAX.)



PLAN VIEW - ELECTRICAL

SCALE: $\frac{3}{8}" = 1'-0"$

CHEMICAL FEED SYSTEM

SCALE: $\frac{3}{8}" = 1'-0"$

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F: (618) 533-6652

☐ 310A VISION DRIVE
COLUMBIA, IL 62236
P: (618) 281-8133
F: (618) 281-8290

☐ 1929 RICHARDSON ROAD
ARNOLD, MO 63010
P: (636) 464-3610
F: (636) 464-2059

REVISIONS					
DATE					
NO.					

ELECTRIC- PUMP STATION
KIMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

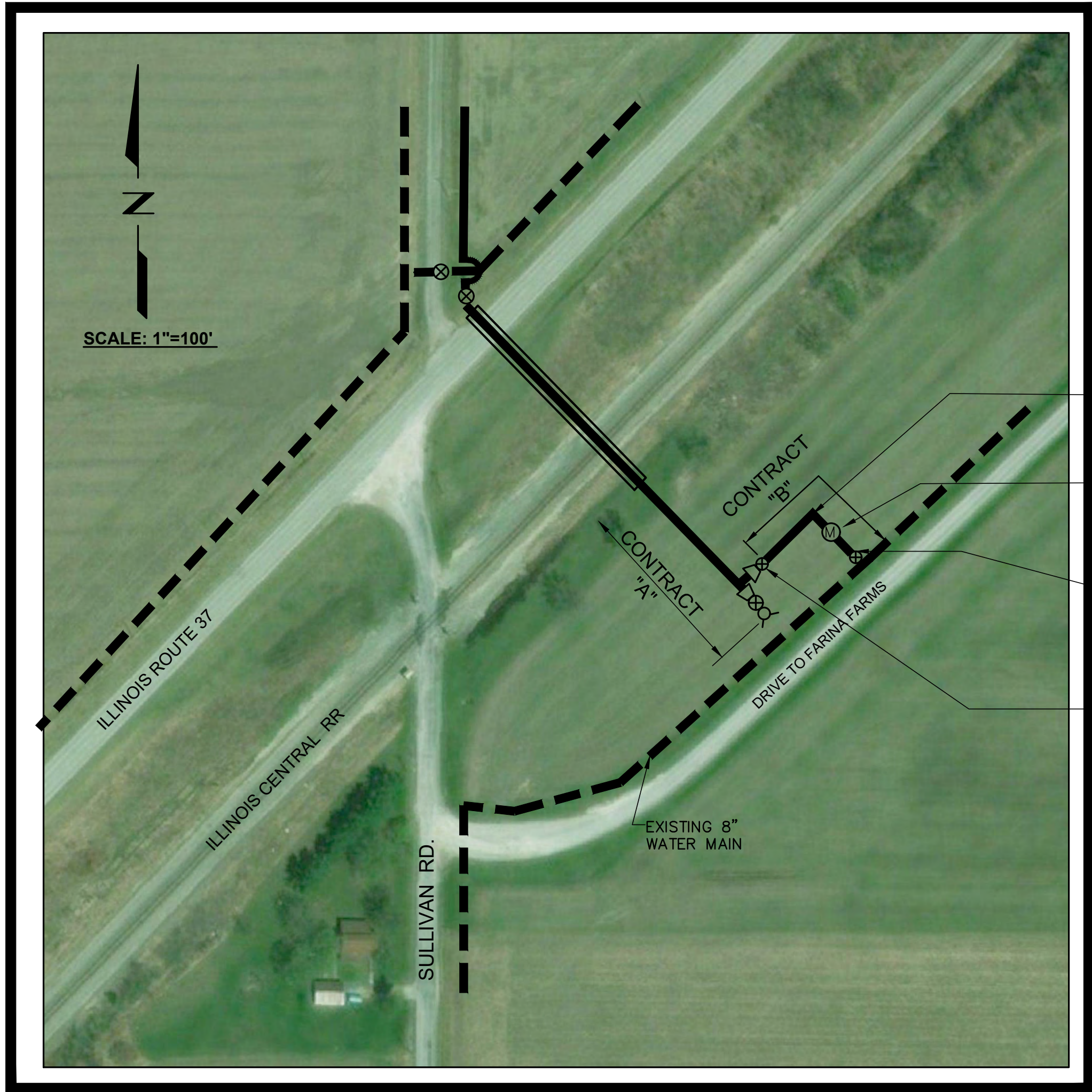
VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
12

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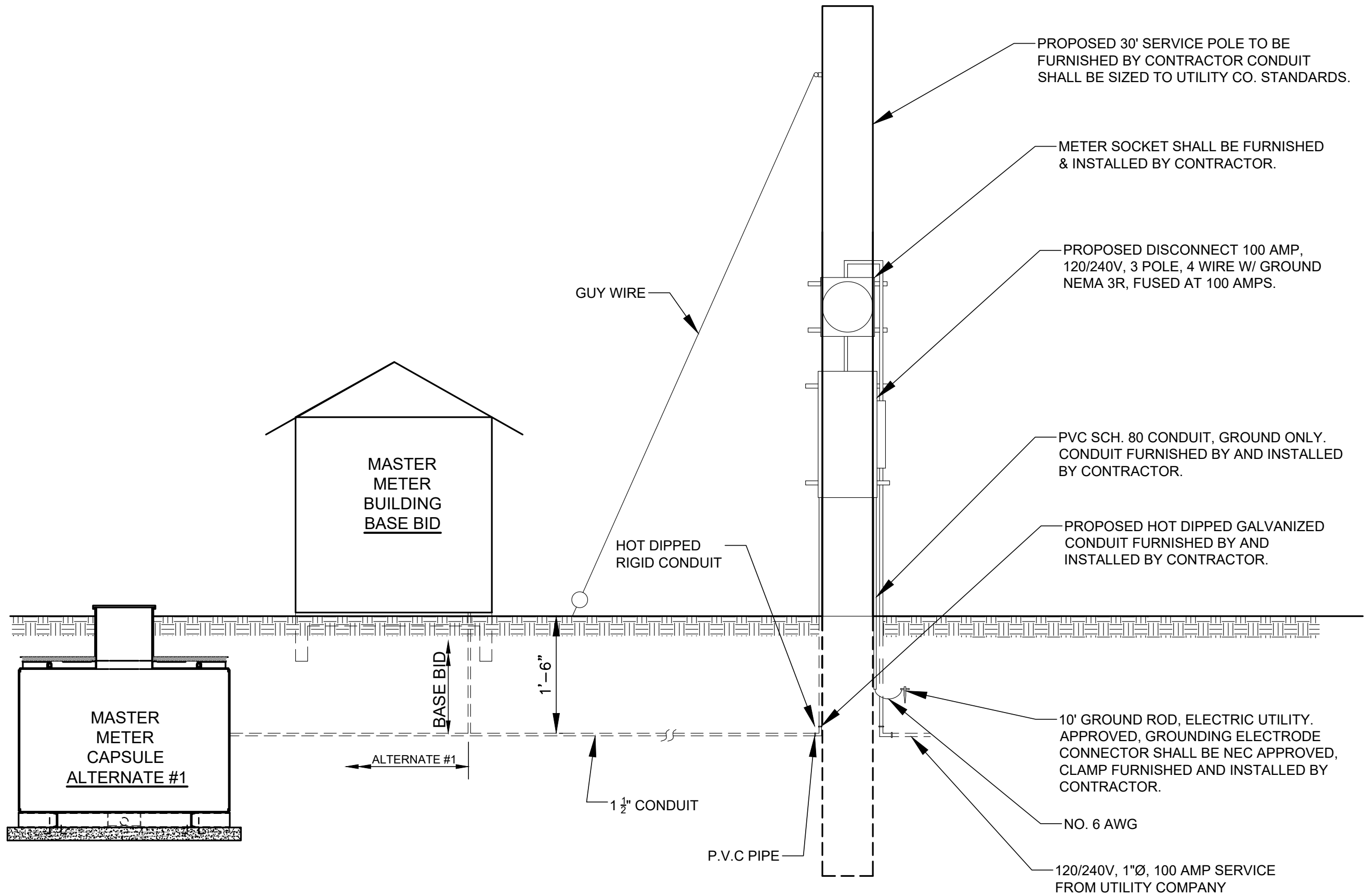


MASTER METER LOCATION MAP

SCALE: 1"=100'

NOTE: CONTRACT "B" CONTRACTOR IS RESPONSIBLE FOR FINAL CONNECTION AT GV-15-3.

- PROPOSED 8" WATER MAIN
(280 L.F. PVC CL. 160)
CONTRACT "B"
- PROPOSED MASTER METER
CONTRACT "B" - SEE SHEET 15
- 8" x 8" TAPPING SLEEVE w/
FLANGE x MECHANICAL JOINT
8" GATE VALVE G.V. - 15-4
CONTRACT "B"
- 10" x 8" REDUCER
8" GATE VALVE
GV-15-3
CONTRACT "A"



POWER POLE DETAIL

NO SCALE

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MASTER METER
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY
MARION COUNTY, ILLINOIS

DRAWN BY: CJM
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

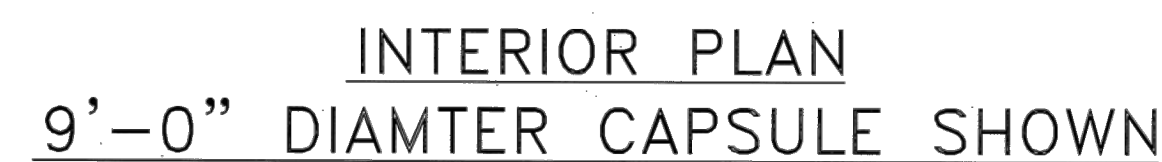
VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
14

14 OF 18 SHEETS



NO SCALE

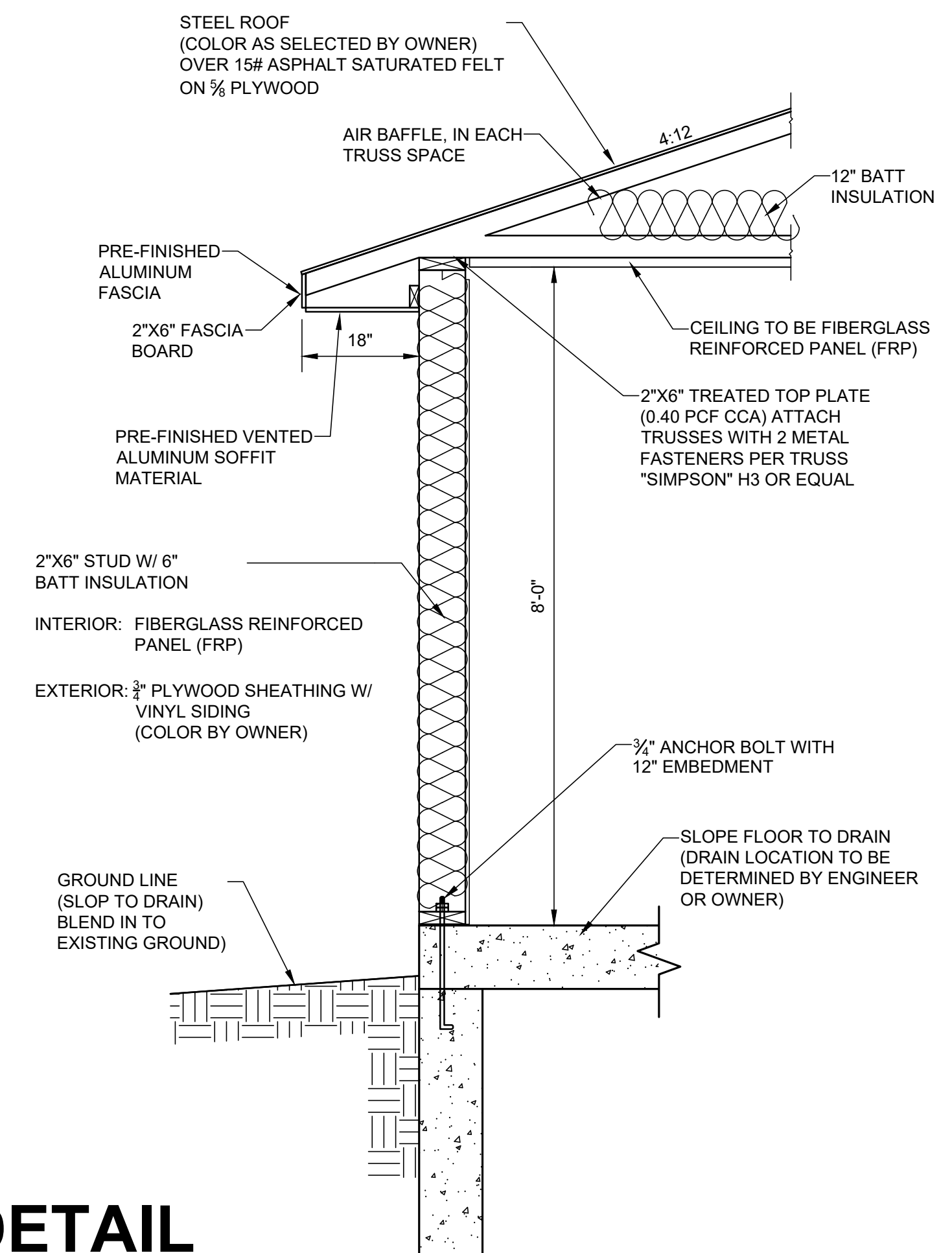
ABOVE GROUND MASTER METER DETAILS



FOUNDATION DETAILS

NO SCALE

WALL DETAILS



WALL DETAILS

- 1.) WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST CODES AND INDUSTRY STANDARDS, AS WELL AS THE LATEST OSHA, STATE OF ILLINOIS, AND MARION COUNTY REQUIREMENTS.
- 2.) CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AND INSTALL ALL EQUIPMENT AND PIPING TO AVOID INTERFERENCE WITH STRUCTURAL MEMBERS AND EQUIPMENT.
- 3.) DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND OTHER RELATED DRAWINGS.
- 4.) PIPING LAYOUT IS APPROXIMATE AND SHOULD BE COORDINATED TO AVOID FIELD INTERFERENCES.
- 5.) PIPING SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER AND RUN PARALLEL OR PERPENDICULAR TO WALLS, CEILINGS, AND FLOORS.
- 6.) REFER TO ALL OTHER DRAWINGS AND/OR CONSULT CONSTRUCTION COORDINATOR PRIOR TO ROUGH-IN FOR PLUMBING WORK TO AVOID FIELD CONFLICTS.
- 7.) MATERIALS AND EQUIPMENT USED ON THIS PROJECT SHALL BE NEW UNLESS OTHERWISE NOTED. NEW EQUIPMENT SHALL BE U.L. APPROVED AS APPLICABLE.
- 8.) PLUMBING, ACCESSORIES AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION SECTIONS AND MANUFACTURERS RECOMMENDATIONS.
- 9.) FIRE STOP PIPE PENETRATIONS AT ALL FIRE RATED WALLS.
- 10.) INSTALL HOT AND COLD WATER SUPPLY PIPING ABOVE THE LAY-IN CEILING AND DROP DOWN INSIDE WALLS (OR PIPING CHASE) TO FIXTURES UNLESS OTHERWISE INDICATED.
- 11.) INSTALLATION OF WATER SUPPLY PIPING AND VENT PIPING ABOVE LAY-IN CEILING SHALL BE COORDINATED WITH OTHER UTILITIES. ALL HOT AND COLD WATER PIPING, VALVES, AND ACCESSORIES SHALL BE INSULATED.
- 12.) ALL WASTE AND DRAIN PIPING SHALL BE INSTALLED A MINIMUM OF 12" BELOW THE BUILDING FLOOR SLAB (TO PIPE INVERT).
- 13.) ALL PIPING SHALL BE SUPPORTED AS PER SPECIFICATIONS.

- 14.) STOPS AND/OR SHUT-OFF VALVES SHALL BE PROVIDED AT EACH EIGHTH.
- 15.) PIPING ROUGH-IN SHALL NOT COMMENCE UNTIL APPROVED EQUIPMENT SHOP DRAWINGS HAVE BEEN FURNISHED.
- 16.) THE ARRANGEMENT AND LOCATION OF PIPING SHALL BE SUBSTANTIALLY AS ILLUSTRATED ON THE DRAWINGS. IN GENERAL PIPING SHALL BE INSTALLED RUNNING PARALLEL TO OR AT RIGHT ANGLES WITH BUILDING LINES.
- 17.) PROVIDE ACCESS TO ALL VALVES.
- 18.) CHANGES IN DIRECTION IN WASTE AND SANITARY PIPING SHALL BE MADE BY THE APPROPRIATE USE 45 DEGREE WYES, HALF-WYES OR LONG SWEEP QUARTER, SIXTH, EIGHTH, OR SIXTEENTH BENDS.
- 19.) WHERE WASTE AND SANITARY PIPING INCREASES IN SIZE AT A JUNCTION, SUCH INCREASE SHALL BE MADE (IMMEDIATELY) PRIOR TO JUNCTION USING STANDARD INCREASERS OR REDUCERS.
- 20.) PIPE SIZE SHOWN ARE MINIMUM SIZES.
- 21.) WHERE VENT PIPES CONNECT TO A HORIZONTAL WASTE PIPE, THE VENT SHALL BE TAKEN OFF ABOVE THE CENTER LINE OF THE WASTE LINE AND SHALL RISE VERTICALLY, OR AT AN ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL, BEFORE OFFSETTING HORIZONTALLY.
- 22.) SLOPE HORIZONTAL VENTS AT 1/8" PER FOOT TO DRAIN BACK TOWARD WASTE/DRAIN PIPING.
- 23.) WASTE AND DRAIN PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT, MINIMUM. WASTE AND DRAIN PIPING 4" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM.
- 24.) COORDINATE ALL FLOOR DRAIN LOCATIONS AND BELOW GRADE PIPING WITH STRUCTURAL DRAWINGS.
- 25.) COORDINATE SANITARY PIPING BELOW GRADE WITH STRUCTURAL FOOTINGS



SCALE: $3/8" = 1"-0"$



- COARSE GRAVEL: $\frac{3}{4}$ " TO $2\frac{1}{2}$ " DIA.
- PEA GRAVEL: $\frac{1}{8}$ " TO $\frac{3}{8}$ " DIA.
- SAND FILTER MEDIA: EFFECTIVE SIZE OF 0.5 TO 2.0 MILLIMETERS & A UNIFORMITY COEFFICIENT OF LESS THEN 3.5, SHALL BE FREE OF CLAY & SILT.

A
15

SCALE: 3/8" = 1"-0"



SCALE: NONE

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NO.	DATE	REVISIONS

**SAND FILTER
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY**

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: LLB

HORIZONTAL SCALE:
AS NOTED

VERTICAL SCALE:
N/A

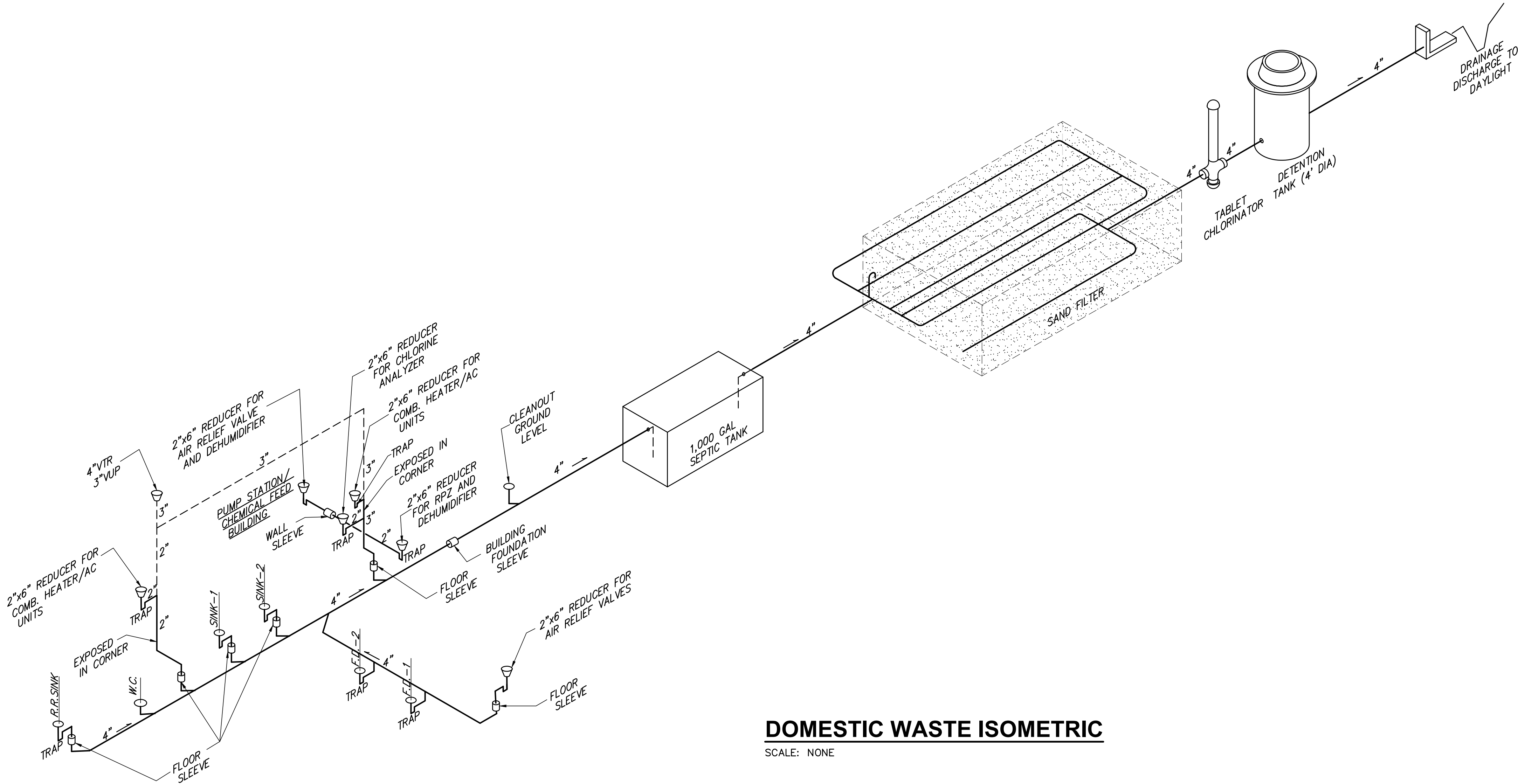
PROJECT NO.
40007-415

DATE: 5/18/21


SHEET NO. 16

16 OF 18 SHEETS

PATH=s:\shared\clients\40007 - gateway regional water company\415 - ferina farms\cad\dwg\pump station\16 sand filter rec.dwg
PLOTTED: 5/18/2021 @ 4:04:31 PM BY:chilliss_sarv



DOMESTIC WASTE ISOMETRIC
SCALE: NONE

HENEGHAN & ASSOCIATES, P.C.

ENGINEERS-SURVEYORS
www.haengr.com

DESIGN FIRM NUMBERS:
IL: 184-002692, EXPIRES APRIL 30, 2023
MO: 001310, EXPIRES DECEMBER 31, 2021

□ 1004 STATE HWY. 16
JERSEYVILLE, IL 62052
P: (618) 498-6418
F: (618) 498-6410

□ 838 EAST McCORD STREET
CENTRALIA, IL 62801
P: (618) 533-6525
F: (618) 533-6652

□ 310A VISION DRIVE
COLUMBIA, IL 62236
P: (618) 281-8133
F: (618) 281-8290

□ 1929 RICHARDSON ROAD
ARNOLD, MO 63010
P: (636) 464-3610
F: (636) 464-2059

NO.	DATE	REVISIONS

DOMESTIC WASTE ISOMETRIC
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: WFC
APPROVED BY: CAO

HORIZONTAL SCALE:
AS NOTED

VERTICAL SCALE:
N/A

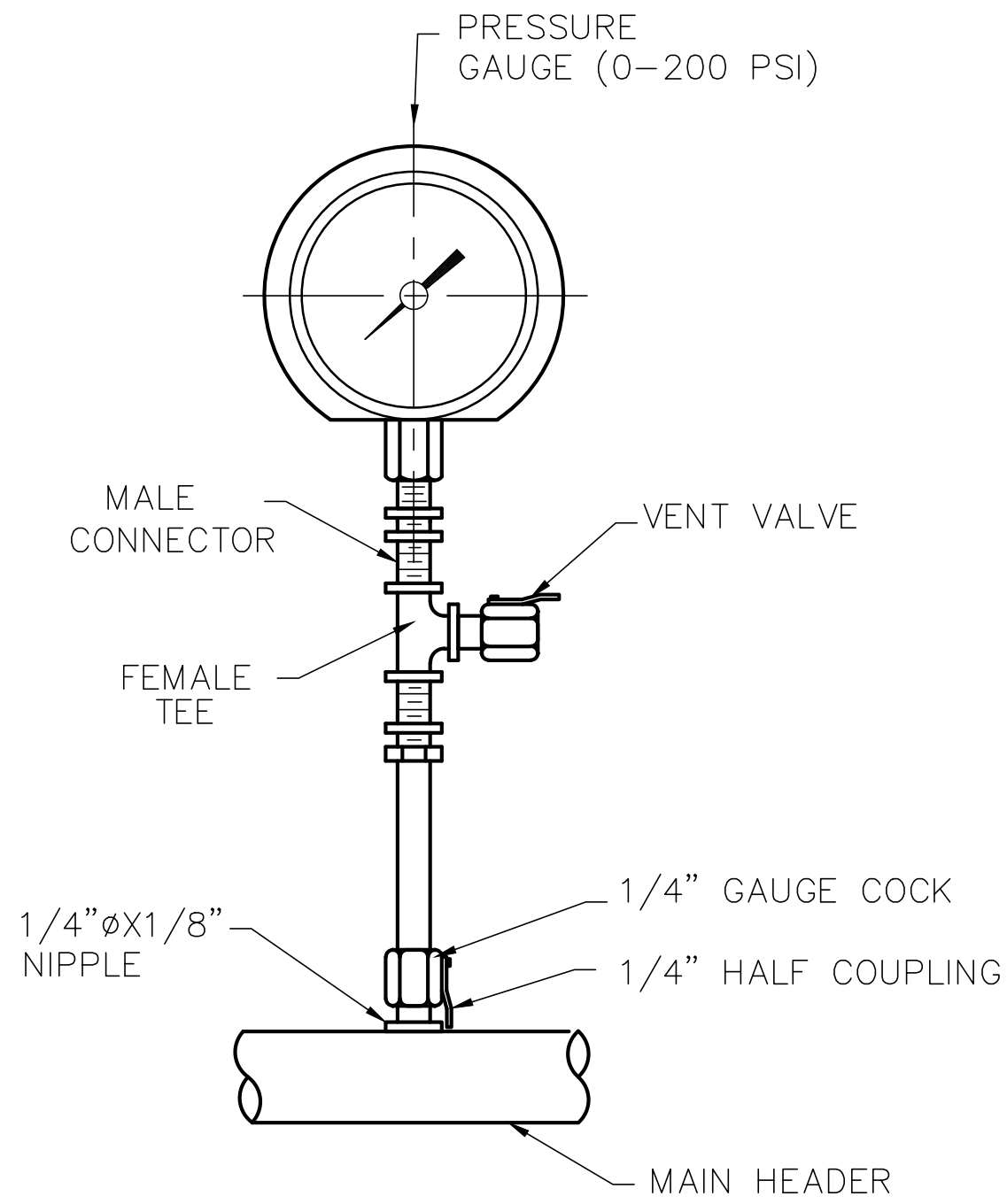
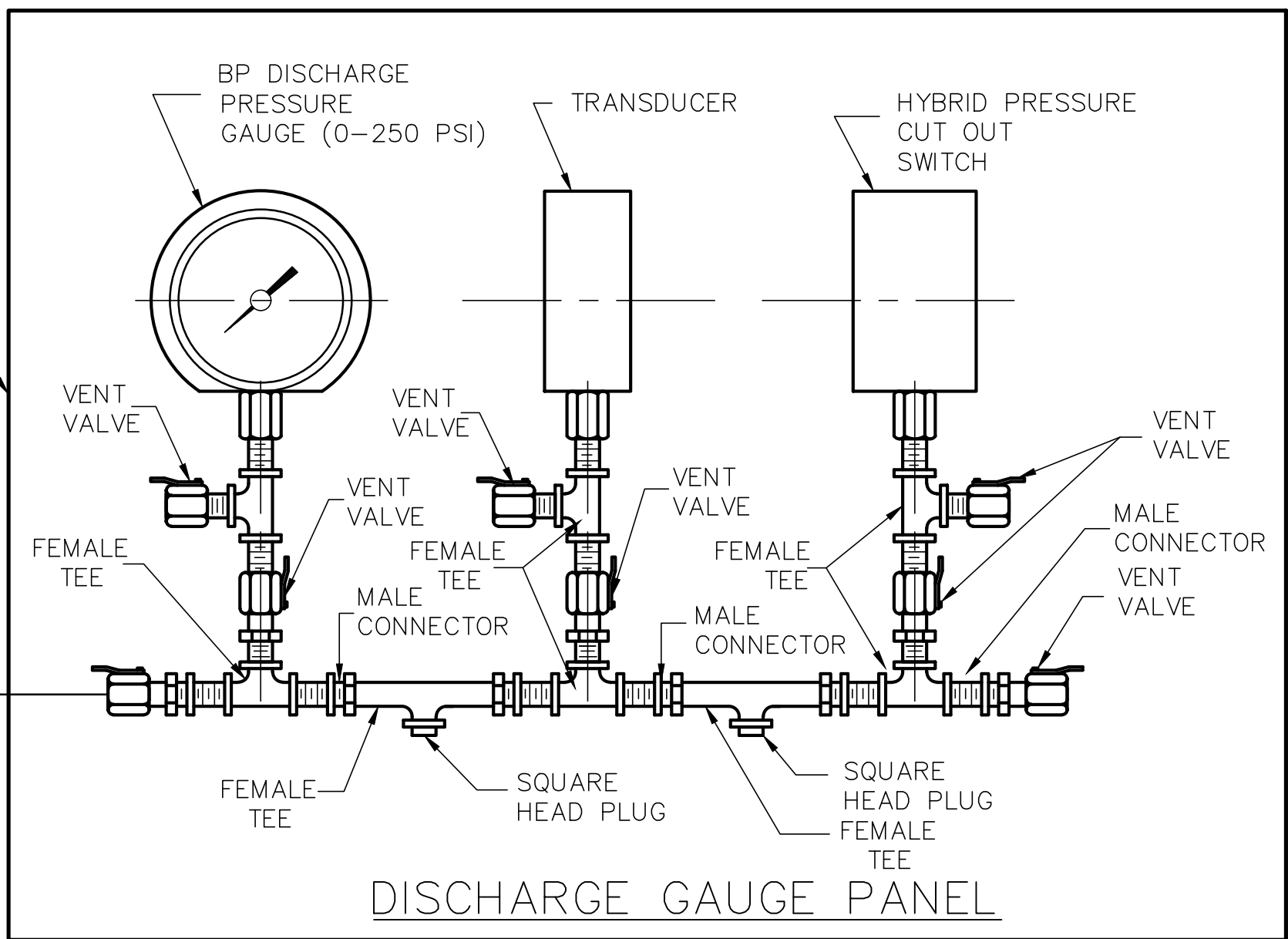
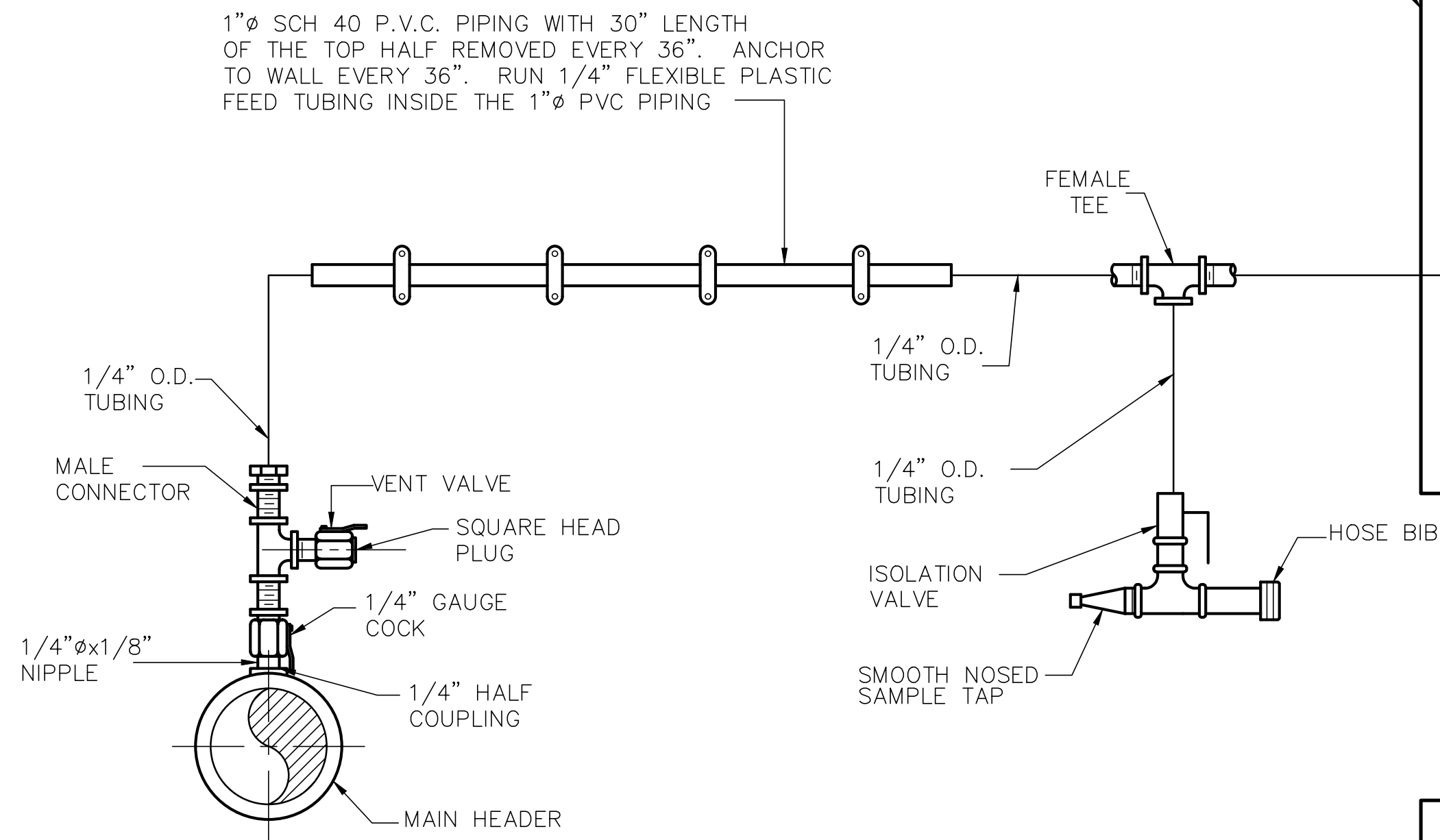
PROJECT NO.
40007-415

DATE:
5/18/21

SHEET NO.
17

17 OF 18 SHEETS

P:\T\as\where\clients\40007 - gateway regional water company\415 - farina farms\cad\dwg\pump station\17 gauge panel detail.dwg
PLOTTER: 6/16/2021 11:48:12 PM BY: chad.fox

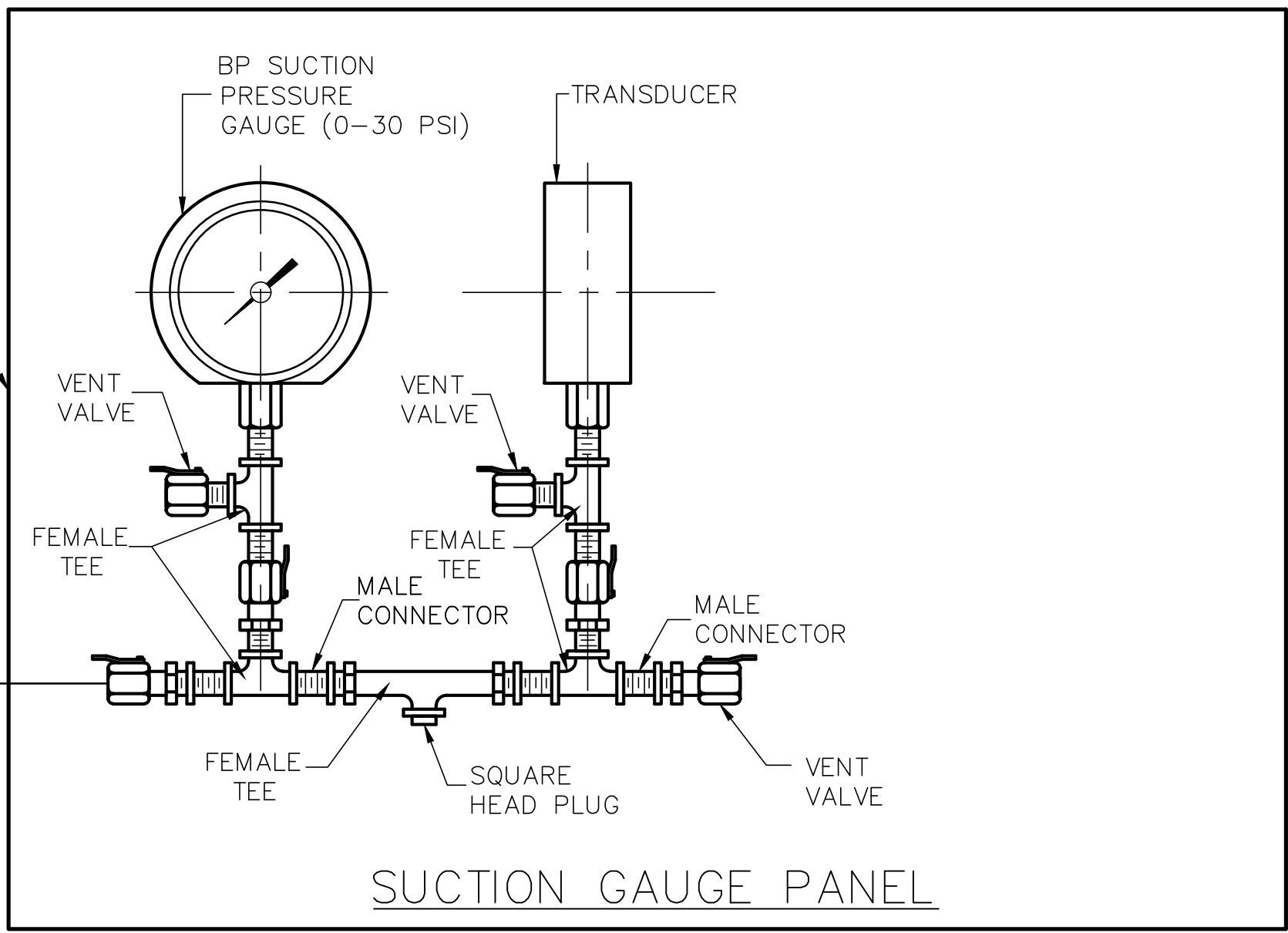
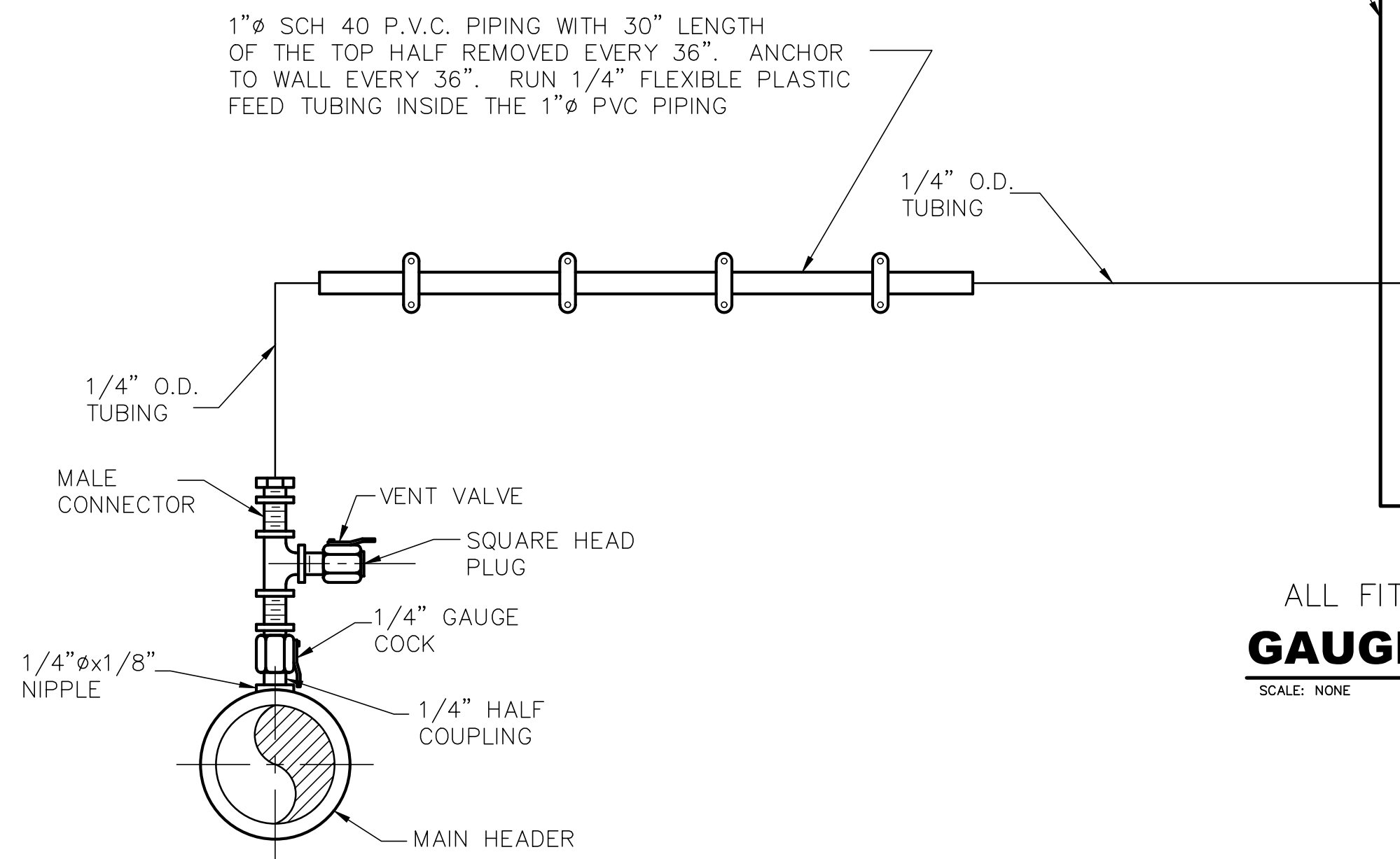


ALL FITTINGS 1/4" BRASS
PIPE MOUNTED GAUGE DETAIL

SCALE: NONE

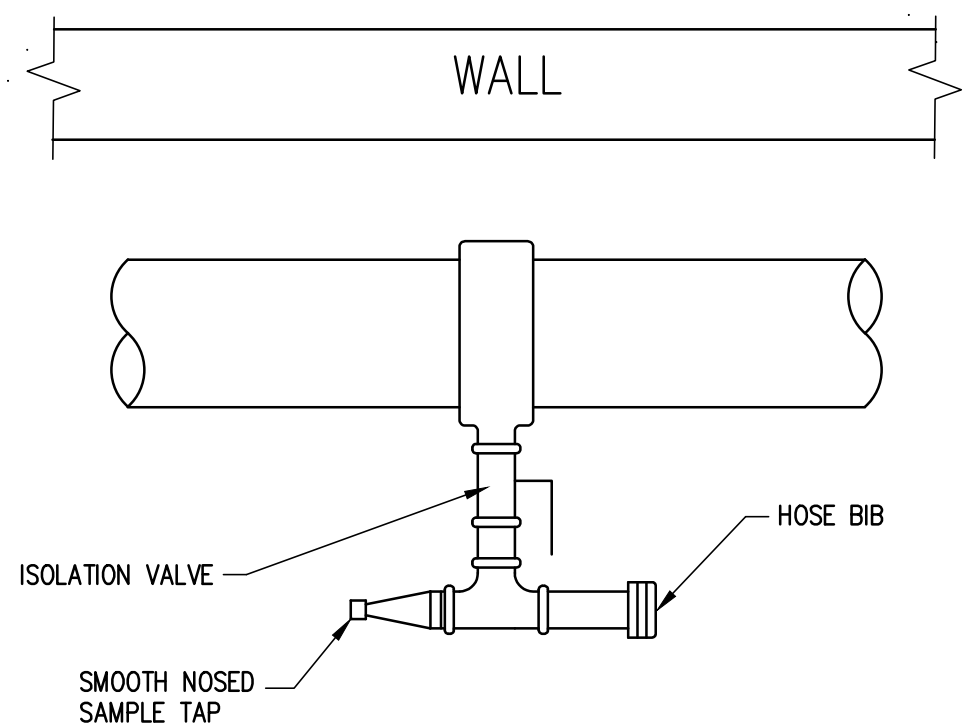
NOTES:

1. HYBRID PRESSURE CUT OUT SWITCH ONLY TO BE INCLUDED ON DISCHARGE GAUGE PANEL ON KINMUNDY DISCHARGE PIPE.



ALL FITTINGS 1/4" BRASS
GAUGE PANEL DETAIL

SCALE: NONE



SMOOTH NOSED SAMPLE TAP & HOSE BIB DETAIL (PLAN VIEW)

SCALE: NONE

HENEGHAN & ASSOCIATES, P.C.



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REVISIONS	DATE	NO.			

GAUGE PANEL DETAIL
KINMUNDY PUMP STATION
GATEWAY REGIONAL WATER
COMPANY

MARION COUNTY, ILLINOIS

DRAWN BY: GRP
CHECKED BY: TAM
APPROVED BY: LLB

HORIZONTAL SCALE:
N/A

VERTICAL SCALE:
N/A

PROJECT NO.
40007-415

DATE:
6/16/21

SHEET NO.
18

18 OF 18 SHEETS