

ADDENDUM NO. 1

March 17, 2023

**RE: Master Meter
Guy Water Works
Guy, Arkansas
Faulkner County, Arkansas**

**FROM: GarNat Engineering, LLC
3825 Mt Carmel Road
Bryant, Arkansas 72022**

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated **January, 2023** as noted below. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of two (2) pages and seven (7) attachments.

GENERAL

Acknowledge receipt of this addendum by signing in the space provided below and returning this page to the Engineer by e-mail to garnatengineering@gmail.com.

Signature

Company Name

CHANGES TO DRAWINGS:

- A. Sheet W1.0 – Main A & B Plan
 - 1. Delete sheet and replace with enclosed document.

- B. Sheet W1.1 – Road Bore Profile
 - 1. Delete sheet and replace with enclosed document.

- C. Sheet W2.0 – Main C & D Plan
 - 1. Delete sheet and replace with enclosed document.

- D. Sheet MM5.0 – Master Meter Station Chemical Feed Schematics
 - 1. Delete sheet and replace with enclosed document.

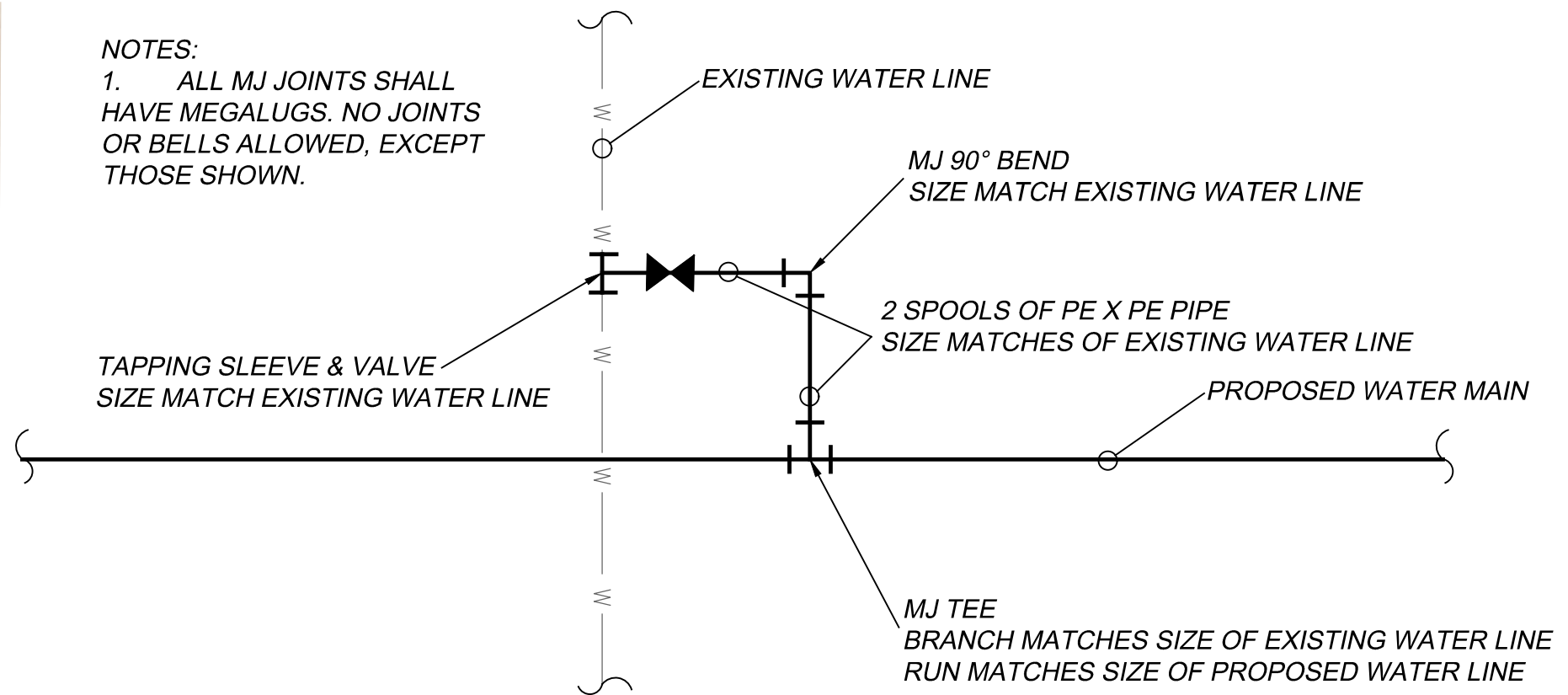
- E. Sheet E0.1 – General Notes, Legend, Riser, Fixture Sched
 - 1. Delete sheet and replace with enclosed document.

- F. Sheet E1.1 – Lightning and Power Plan
 - 1. Delete sheet and replace with enclosed document.

- G. Sheet E1.2 – Mechanical Power Plan
 - 1. Delete sheet and replace with enclosed document.

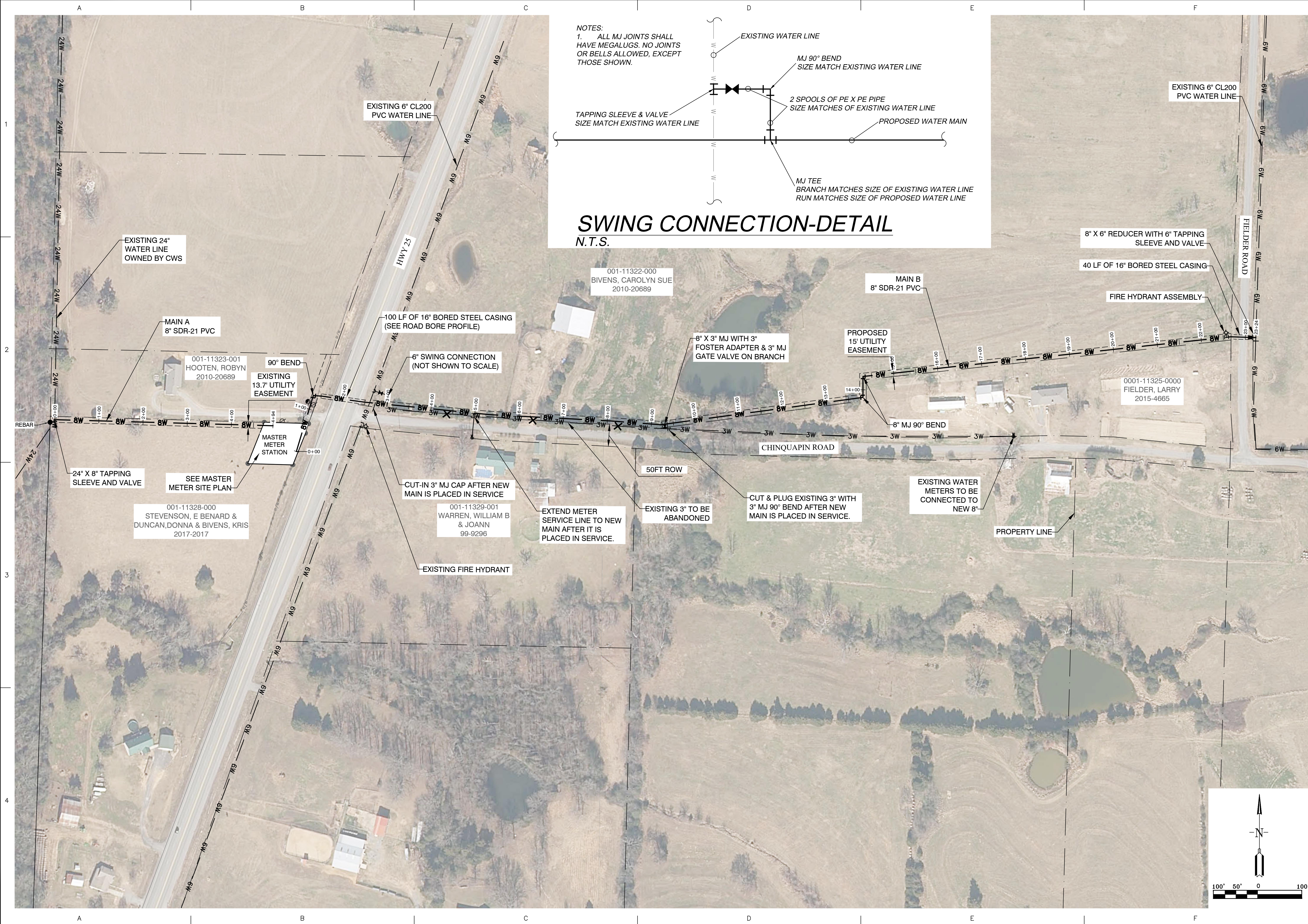
END OF ADDENDUM

NOTES:
 1. ALL MJ JOINTS SHALL HAVE MEGALUGS, NO JOINTS OR BELLS ALLOWED, EXCEPT THOSE SHOWN.



SWING CONNECTION-DETAIL

N.T.S.



DATE	REVISION	PER ADH	COMMENTS
03-08-2023	03-17-2023	SHAK	ADDENDUM 1
		SHAK	

GNE Designing our client's success
GarNat Engineering, LLC
 3825 Mt Carmel Road
 Bryant, AR 72022
 gemnatengineering@gmail.com
 P.O. Box 116
 Benton, AR 72018
 Ph: (501) 408-4650

MASTER METER WORKS
 GUY, ARKANSAS
 FAULKNER COUNTY, ARKANSAS



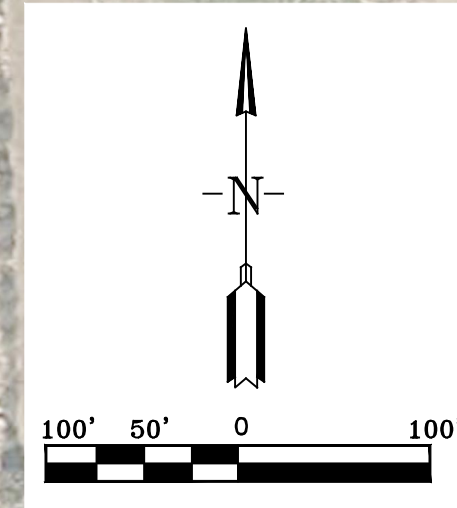
1-31-2023

CONTENTS:
 MAIN A & B
 PLAN

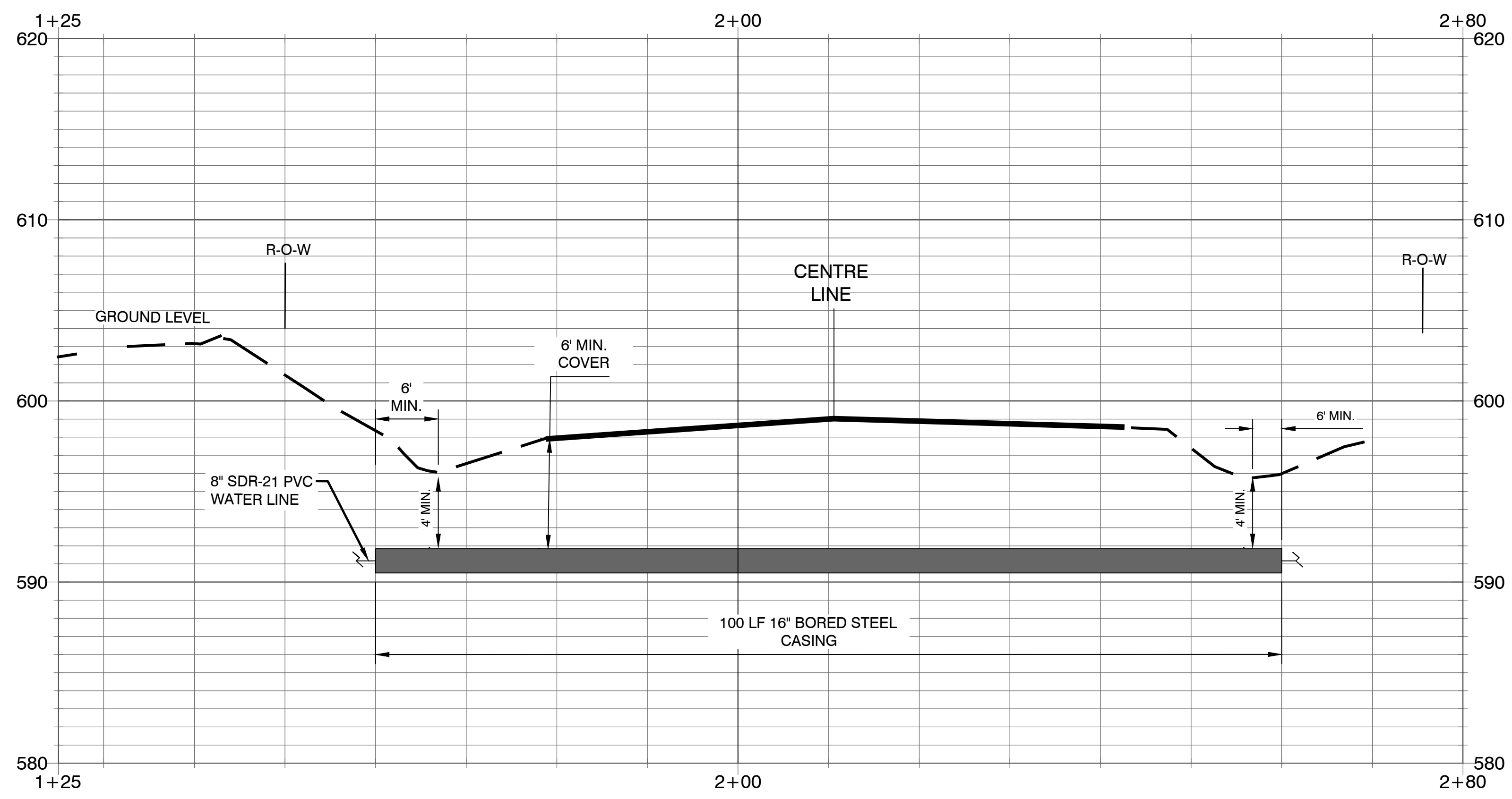
PROJECT NO:
 20107

DATE:
 JAN 2023

SHEET NO:
W1.0



ROAD BORE PROFILE



DATE	REVISION	PER ADH COMMENTS	BY
03-08-2023	ADDENDUM 1		SHAK
03-17-2023			SHAK

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MASTER METER
 GUY, ARKANSAS
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 FAULKNER COUNTY, ARKANSAS



1-31-2023

CONTENTS:
 ROAD BORE
 PROFILE

PROJECT NO:
 20107

DATE:
 09/01/2020

SHEET NO:
W1.1

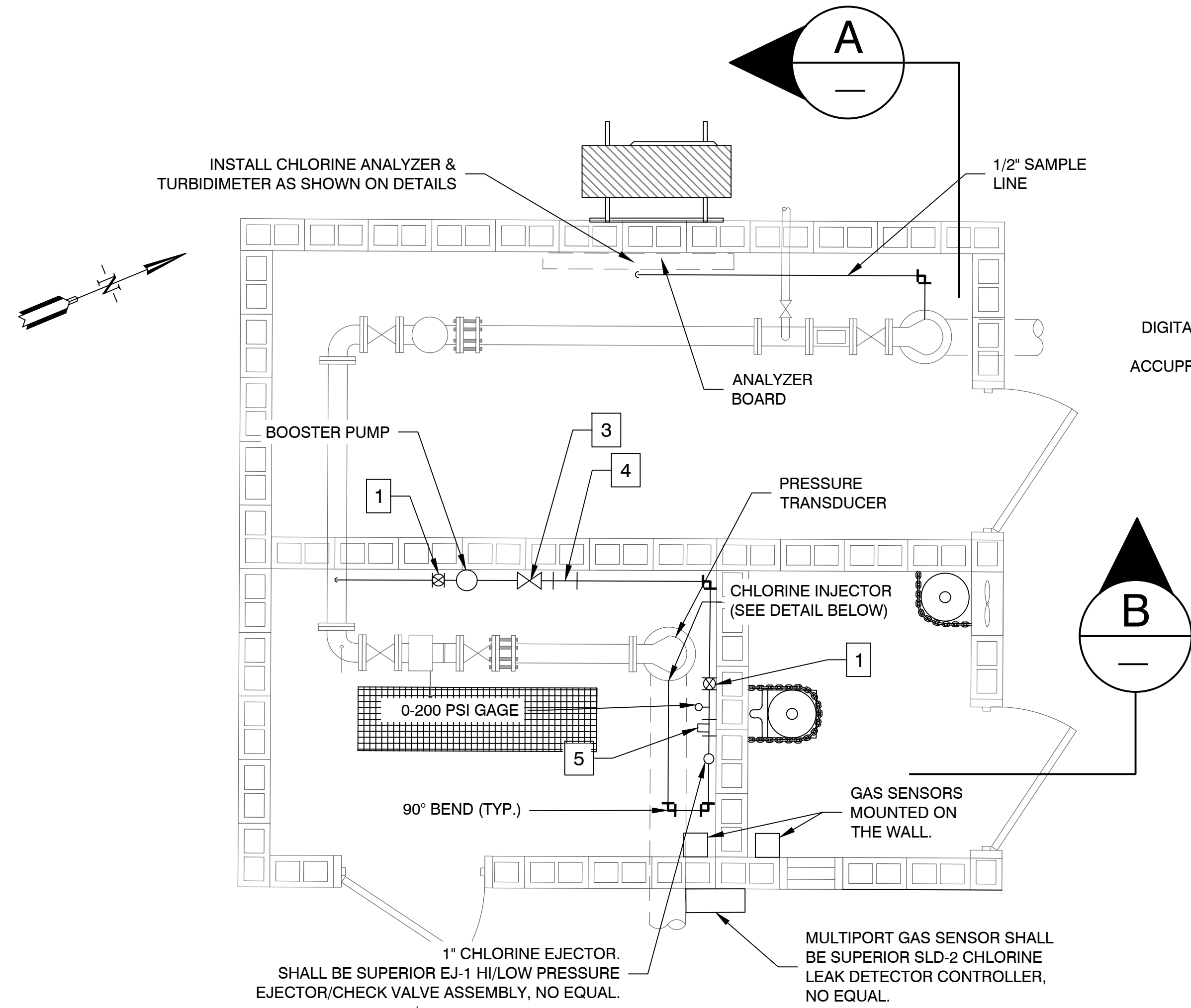
C:\Projects\2020 Projects\20107 2020 Guy System Improvement\Drawings\DWG\3 - M. Design\20107 GUY SYSTEM IMPROVEMENT.rvt

NOTES:

1. ALL EQUIPMENT AND MATERIALS THAT CONTACT DISINFECTION CHEMICALS OR WATER SHALL BE NSF60 CERTIFIED.

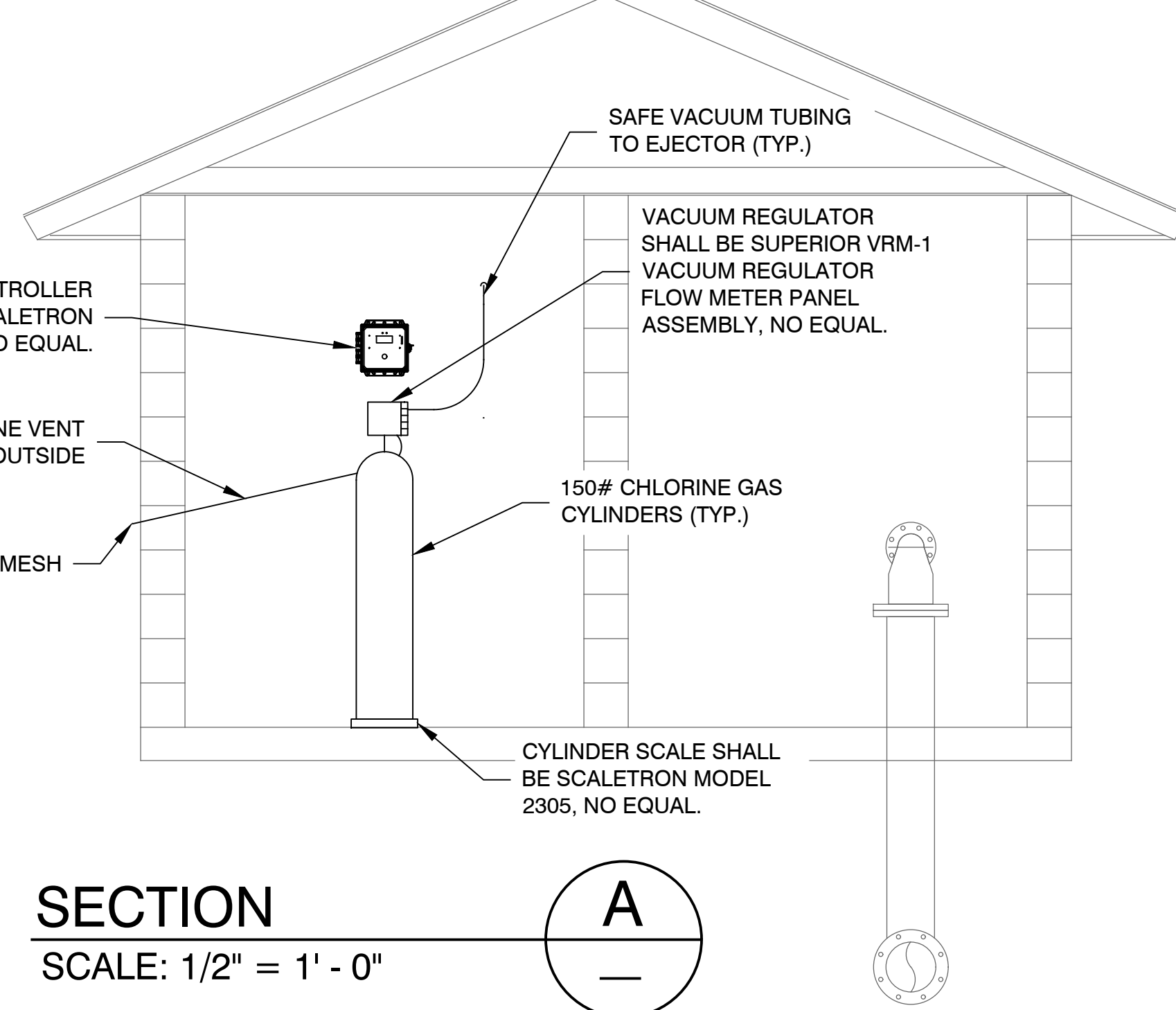
KEYED NOTES:

- 1 1" PVC BALL VALVE SHALL BE ASAHI 21BALL VALVE X 1" TRUE UNION SOC/THRD PVC VITON OR EQUAL.
- 2 1" CHECK VALVE SHALL BE WATTS LEAD FREE MAXI FLOW CHECK VALVE, 1" NPT, 00555177, 400 PSI - WATER, OIL, GAS OR EQUAL.
- 3 1" PVC WYE STRAINER SHALL BE ASAHI/AMERICA TRANSPARENT PVC TRUE UNION Y-STRAINERS, 1", 20 MESH SCREEN OR EQUAL.
- 4 1" PRESSURE REDUCING VALVE SHALL BE WATTS LF25AUB-DU-QC-Z3 PRESSURE REGULATOR, 300 PSI OR EQUAL.
- 5 1" SOLENOID VALVE SHALL BE NORMALLY CLOSED BRASS SOLENOID VALVE PARKER/ASCO OR EQUAL.
- 6 1" TYPE L COPPER NIPPLE. OTHER PIPE NOT DESIGNATED AS COPPER SHALL BE 1" SCH 80 PVC.
- 7 1" BALL VALVE SHALL BE APOLLO 94ALF-A, 1" NPT, 600 PSI OR EQUAL.



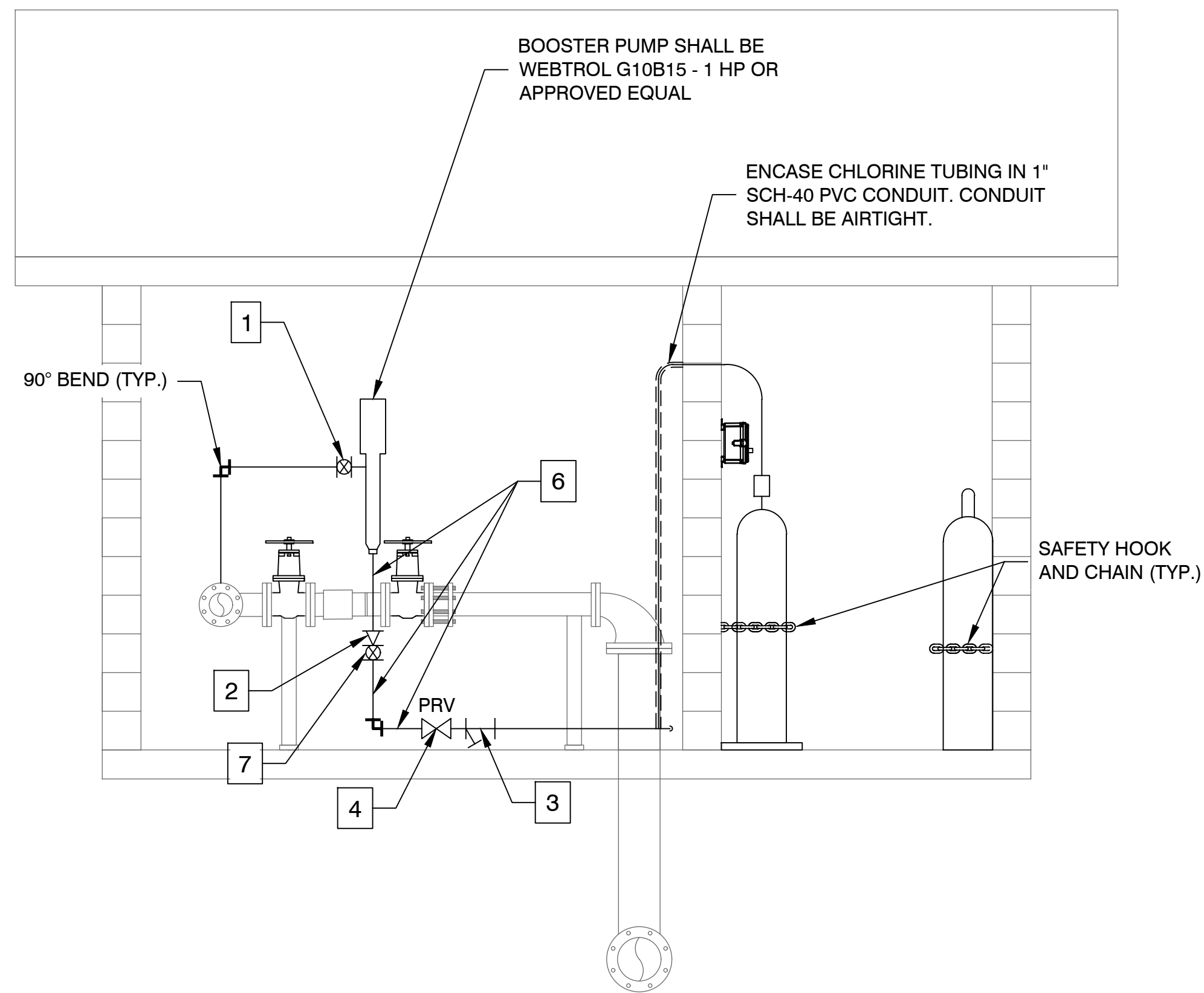
CHEMICAL FEED SCHEMATICS

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



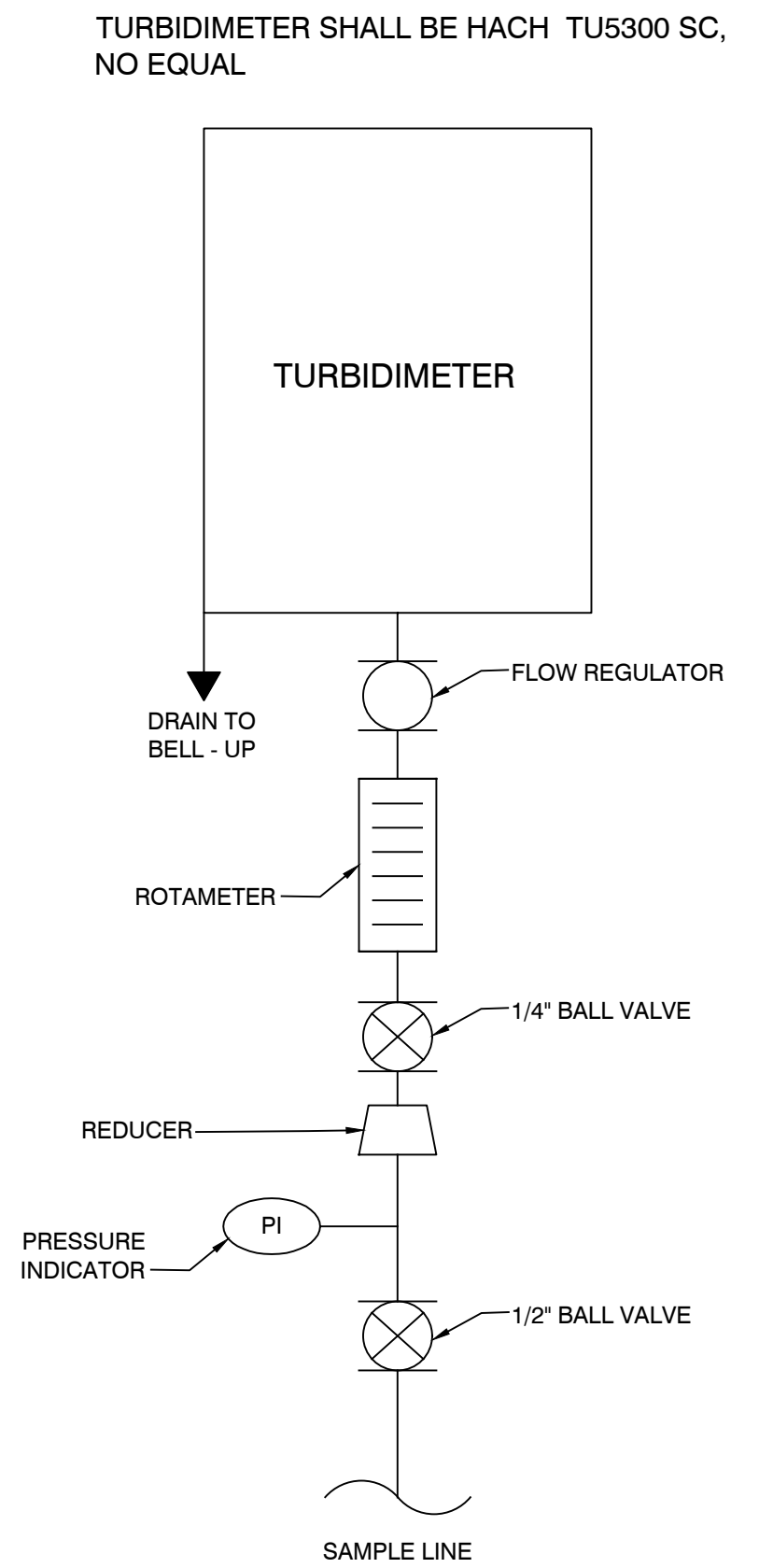
SECTION A

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



SECTION B

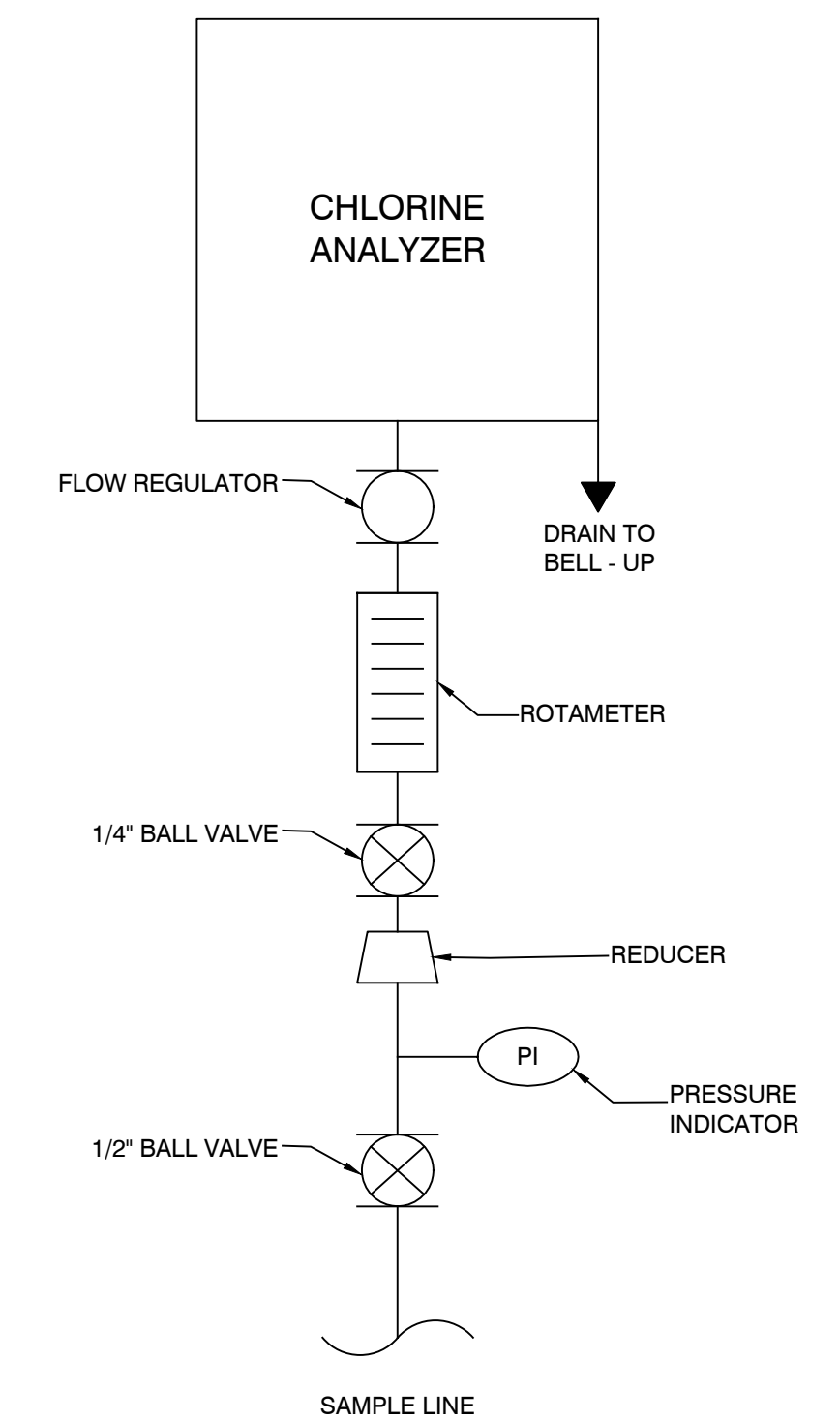
SCALE: 1/2" = 1'-0"



TURBIDIMETER

NTS

CHLORINE ANALYZER BE HACH CL17 SC, NO EQUAL



CHLORINE ANALYZER

NTS

DATE	REVISION	BY
2-13-2023	REVISIONS PER CWS COMMENTS	SHAK
3-8-2023	REVISIONS PER ADH COMMENTS	SHAK
3-17-2023	ADDENDUM 1	SHAK

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MASTER METER WORKS
 GUY, ARKANSAS
 FAULKNER COUNTY, ARKANSAS



1-31-2023

CONTENTS:
 MASTER METER STATION
 CHEMICAL FEED SCHEMATICS

PROJECT NO:
 20107

DATE:
 JAN 2023

SHEET NO:

MM5.0

LIGHT FIXTURE SCHEDULE							
NO.	MANUFACTURER AND MODEL NO.	WATTS	LAMP	VOLT	MOUNTING AND DESCRIPTION	NOTES	WATTS
A	METALUX # 4V72LDS-8-DR100-L940-SSL-TH-U	1-ELEC	LED/80004K	UNV	WASHBAY 4' CHAIN HUNG/SURFACE MOUNT - WET LOCATION		58
B	STREETWORKS # GAW-SA1-C-740-U-T2-BK	1-ELEC	LED/74124K	UNV	EXTERIOR WALL PACK		59
Y	SURELITES # AP2SQLED	1-ELEC	LED W/UUNIT	UNV	2-HEAD EMERGENCY		2

- SCHEDULE NOTES:**
- PROVIDE EMERGENCY BALLAST IN FIXTURES WHERE INDICATED ON DRAWINGS.
 - PROVIDE 5% SPARE LAMPS OF ALL SIZES, BUT NOT LESS THAN THREE EACH (DRIVER FOR L.E.D.).
 - OPERATES IN EMERGENCY MODE ONLY.
 - VERIFY QUANTITY OF FIXTURES ON PLANS PRIOR TO ORDERING.

ELECTRICAL DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
E0.1	GENERAL NOTES, LEGEND, FIXTURE SCHEDULE
E1.1	LIGHTING & POWER PLAN
E1.2	MECHANICAL POWER & EQUIPMENT POWER PLAN

- ELECTRICAL GENERAL NOTES**
- ALL WORK SHALL COMPLY WITH THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE, THE 2014 EDITION OF THE ARKANSAS ENERGY CONSERVATION CODE, AND ALL STATE, CITY, AND LOCAL REQUIREMENTS.
 - REFER TO THE PROJECT MANUAL FOR ALL REQUIREMENTS.
 - THE DRAWINGS ARE DIAGRAMMATIC, INDICATING THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES AND ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING, OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS TO PERFORM WORK OF INSTALLED EQUIPMENT AND ITS COMPONENTS. EQUIPMENT SCHEDULES SHALL TAKE PRECEDENCE OVER CONFLICTING DRAWING INFORMATION DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS, REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
 - EACH CIRCUIT SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR, AND MULTI-WIRE CIRCUITS OF DIFFERENT PHASES MAY SHARE EQUIPMENT GROUNDING CONDUCTOR. EQUIPMENT GROUNDING CONDUCTOR SIZE SHALL NOT BE LESS THAN #12 AWG OR AS INDICATED ON THE DRAWINGS.
 - ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER AND ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER USING BOLTED LUGS AT TERMINALS.
 - ALL WIRING DEVICES SHALL BE INSTALLED FLUSH SQUARE AND TRUE, AND ALL DEVICES INSTALLED AT A SINGLE LOCATION SHALL BE ALIGNED AND GANGED TOGETHER.
 - MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE SPECIFIED, #15 OR LESS HOME-RUN OF CONDUIT.
 - THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING ALL SWITCHES, RECEPTACLES, AND FIXED EQUIPMENT WITH THE BRANCH CIRCUIT PANEL NAME AND NUMBER SERVING EACH DEVICE.
 - ALL CONDUIT SHALL BE INSTALLED AS HIGH AS POSSIBLE (MOUNT TO BOTTOM OF STRUCTURE) TO AVOID CONFLICTS WITH DUCTWORK AND PIPING. THE ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION WITH THE MECHANICAL CONTRACTOR.
 - MULTI-WIRE BRANCH CIRCUITS ARE NOT ALLOWED UNLESS SHOWN ON PLANS, WHERE MULTI-WIRE CIRCUITS ARE SHOWN AND A COMMON NEUTRAL IS USED, NO MORE THAN THREE CIRCUITS CAN SHARE THE NEUTRAL AND THE CIRCUITS MUST HAVE HEADS TO BE SIMULTANEOUSLY DISCONNECTED, MORE THAN THREE CIRCUITS IN ANY ONE CONDUIT IS NOT ALLOWED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
 - ALL DEVICE PLATES, OUTLET COVERS, ETC., FINISH/COLOR TO BE STAINLESS STEEL UNLESS OTHERWISE DIRECTED BY THE ARCHITECT.
 - PRIOR TO BID, THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE ALL EXISTING CONDITIONS AND THE EXTENT OF WORK TO BE DONE.
 - PROVIDE FIRE-STOP AT ALL PENETRATIONS IN FIRE ENVELOPES.
 - PROVIDE A GROUNDING CONDUCTOR, SIZED PER 2017 NATIONAL ELECTRICAL CODE, IN ALL RACEWAYS.
 - WHERE STATED ELECTRICAL CONTRACTOR IS TO PROVIDE MATERIAL, IT IS TO BE KNOWN THAT "PROVIDE" MEANS TO FURNISH AND INSTALL.
 - CONTRACTOR SHALL REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN AND ELEVATIONS FOR LIGHT FIXTURES MOUNTING HEIGHTS AND CEILING TYPES.
 - ALL ELECTRICAL WORK SHALL BE IN CONDUIT. MINIMUM SIZE SHALL BE 3/4" (A) EXIT INDOORS, ABOVE GRADE. (B) GALVANIZED RIGID, EXTERIOR AND ON ROOF. (C) PVC BELOW GRADE, WITH RIGID 40 DEGREE ELBOWS PENETRATING CONCRETE, OR EARTH EXPOSURE. NO PVC ALLOWED EXPOSED IN BUILDING. PVC MAY BE USED THROUGHOUT FOR SITE LIGHTING. (D) USE FLEXIBLE CABLE FOR FINAL CONNECTIONS. (E) SEAL/TITE CONNECTIONS ON ROOF FOR EQUIPMENT.
 - WIRING DEVICES TO BE 20-AMP, LEVITON OR P45 EXCEPT WHERE OCCUPANCY-SENSOR SWITCH TAKES PRECEDENCE.
 - EMT FITTINGS SHALL BE STEEL, EITHER SET SCREW OR COMPRESSION. DIECAST NOT ALLOWED.
 - ALL PVC CONDUIT SHALL BE SCHEDULE 80.
 - THE QUANTITY AND LOCATIONS OF OCCUPANCY SENSORS SHALL BE ADJUSTED AS NECESSARY FOR FULL ROOM COVERAGE (HAND MOTION) BASED ON THE BEAM PATTERN OF THE ACTUAL SENSORS INSTALLED. THE DISTANCE BETWEEN SENSORS AND HVAC REGISTERS SHALL BE NO LESS THAN THE MINIMUM DISTANCE RECOMMENDED BY THE SENSOR MANUFACTURER.
 - OCCUPANCY SENSORS SHALL CONTROL ALL LIGHT FIXTURES IN THE ROOM IN WHICH THEY ARE INSTALLED UNLESS OTHERWISE INDICATED.
 - POWER RACKS FOR OCCUPANCY SENSORS SHALL BE LOCATED ABOVE THE CEILING WHERE ACCESSIBLE.
 - OCCUPANCY SENSORS IN STAIRWELLS SHALL BE SET FOR A 10-MINUTE TIME DELAY. ALL OTHER OCCUPANCY SENSORS SHALL BE SET FOR A 15-MINUTE TIME DELAY UNLESS OTHERWISE INDICATED.

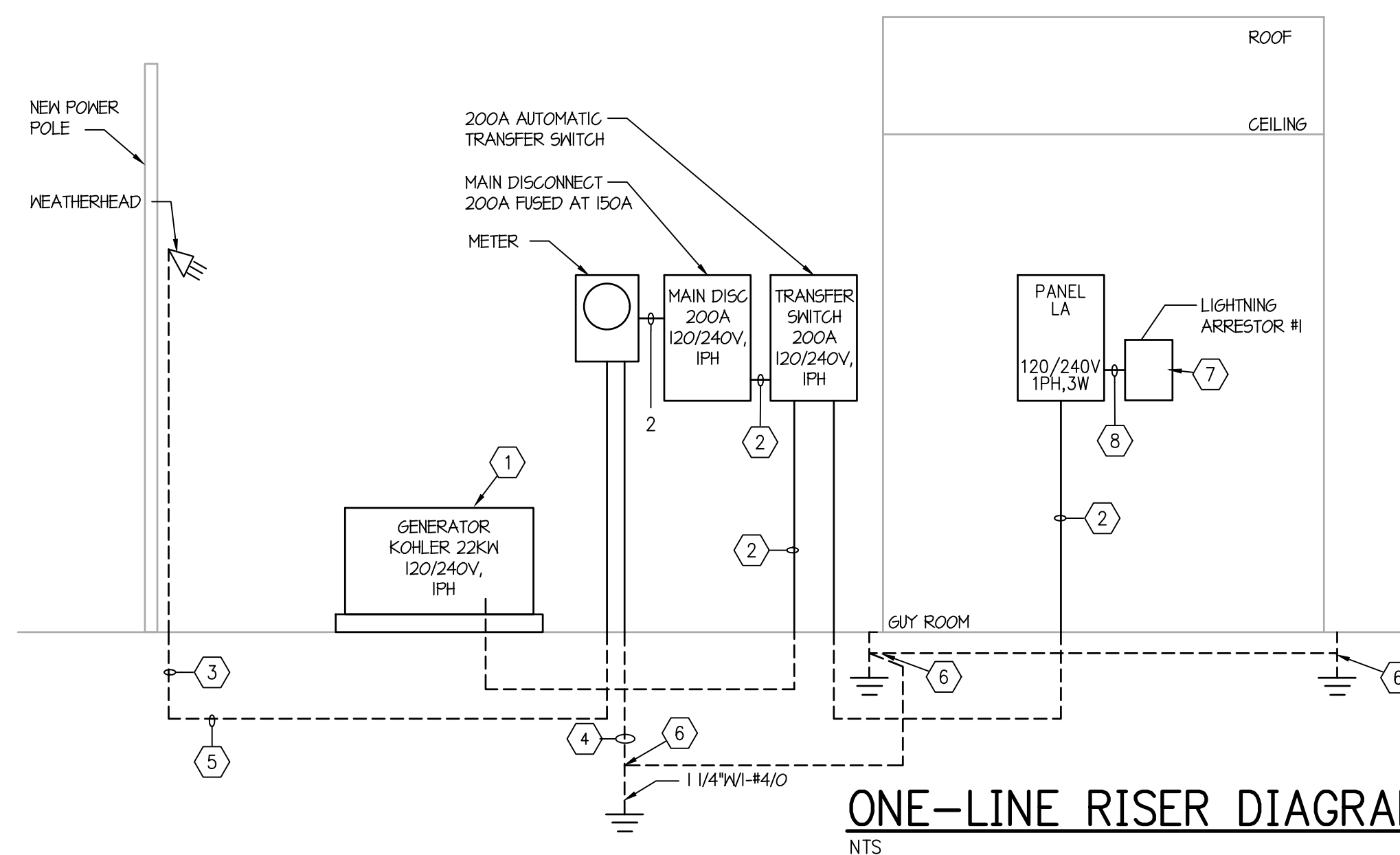
ELECTRICAL LEGEND (NOTE: ALL SYMBOLS MAY NOT BE USED)			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFB	ABOVE FINISHED FLOOR	☎	PHONE - SYSTEM SPEAKER
AFG	ABOVE FINISHED GRADE	TV	CABLE TV OUTLET
GF1	GROUND FAULT INTERRUPTER	M	MICROPHONE OUTLET
AM	ABOVE MILLWORK	CC	SECURITY TV CAMERA
HEB	HIGH FREQUENCY ELECTRONIC BALLAST	CR	CARD READER
IG	ISOLATED GROUND	CH	CHIME
NF	NON-FUSIBLE	DB	DOOR BELL
UPS	UNINTERRUPTED POWER SUPPLY	BZ	BUZZER
VFD	VARIABLE FREQUENCY DRIVE	PSH	PUSHBUTTON
HP	WEATHERPROOF CONSTRUCTION	K	KEY SWITCH
(A) g	LAY-IN LIGHT FIXTURE - A FIXTURE TYPE - g INDICATES SWITCH	DS	DOOR SWITCH
(A) g	FIXTURE ON EMERGENCY POWER (PART OR ALL)	***	PUSH BUTTON - UP/DOWNSTOP
(A) g	SUSPENDED FIXTURE	UPP	UTILITY POWER POLE
(A) g	SUSPENDED FIXTURE ON EMERGENCY POWER	J	JUNCTION BOX
(A)	RECESSED LIGHT FIXTURE	P	SERVICE POLE
(A)	LIGHT FIXTURE WITH WALL BRACKET	(A)	MOTOR CONNECTION (X* DENOTES HP)
(A)	EMERGENCY LIGHT FIXTURE	(A)	DISCONNECT SWITCH (X* DENOTES RATING, POLES, FUSE)
(A)	TRACK LIGHT	(A)	CONTRACTOR
(A)	SITE LIGHTING POLE (2.5A HEADS AS INDICATED ON PLANS)	(A)	MOTOR STARTER
(A)	CEILING FAN (A - WITH LIGHT FIXTURE)	(A)	COMBINATION STARTER-DISCONNECT
(A)	EXIT LIGHT (SINGLE FACE, DOUBLE FACE) (ARROW DENOTES DIRECTION)	T	TRANSFORMER
(A)	EXIT LIGHT WITH DUAL HEAD EGRESS LIGHTS	M	METER
(A)	BATTERY POWERED EMERGENCY LIGHT	(A)	CLOCK OUTLET 6" BELOW CEILING
(A)	SINGLE POLE SWITCH 46" A.F.F.	(A)	PHOTO ELECTRIC CONTROL SENSOR
(A)	SINGLE POLE SWITCH - (A) MULTILEVEL SWITCHING	(A)	TIME CLOCK CONTROLLER
(A)	DOUBLE POLE SWITCH 46" A.F.F.	(A)	PANELBOARDS
(A)	3-WAY SWITCH 46" A.F.F.	(A)	DISTRIBUTION BOARD
(A)	4-WAY SWITCH 46" A.F.F.	(A)	MULTI-USE PANEL
(A)	INTERCOM CALL SWITCH 46" A.F.F.	(A)	INTERCOM MASTER
(A)	DIMMER SWITCH 46" A.F.F.	(A)	INTERCOM
(A)	KEY-OPERATED SWITCH 46" A.F.F.	(A)	FIRE ALARM SPEAKER
(A)	LOW VOLTAGE SWITCH 46" A.F.F.	(A)	FIRE ALARM BELL/STROBE
(A)	MANUAL MOTOR STARTER 46" A.F.F.	(A)	FIRE ALARM BELL
(A)	MOMENTARY CONTACT SWITCH 46" A.F.F.	(A)	DOOR HOLDER
(A)	OVERRIDE CONTROL SWITCH -46" A.F.F.	(A)	ENERGY MANAGEMENT RELAY WIRING POINT
(A)	OCCUPANCY SENSOR SWITCH -46" A.F.F.	(A)	RELAY
(A)	SWITCH W/ PILOT LAMP 46" A.F.F.	(A)	FIRE ALARM CHIME/STROBE
(A)	RAISE-LOWER SWITCH 46" A.F.F.	(A)	FIRE ALARM AUDIBLE/VISUAL DEVICE
(A)	TIMER SWITCH - SPRING WOUND 46" A.F.F.	(A)	FIRE ALARM AUDIBLE/VISUAL DEVICE - CEILING MOUNT
(A)	VOLUME CONTROL SWITCH 46" A.F.F.	(A)	FIRE ALARM STROBE LIGHT
(A)	OCCUPANCY SENSOR	(A)	FIRE ALARM MANUAL STATION
(A)	WALL MOUNTED OCCUPANCY SENSOR - SINGLE POLE	(A)	FIRE DAMPER
(A)	WALL MOUNTED OCCUPANCY SENSOR - 3-WAY	(A)	SMOKE DETECTOR
(A)	WALL MOUNTED OCCUPANCY SENSOR - 4-WAY	(A)	SMOKE DETECTOR, SONDER
(A)	SINGLE RECEPTACLE 18" A.F.F. (UNLESS OTHERWISE NOTED)	(A)	SMOKE DAMPER
(A)	DUPLEX RECEPTACLE 18" A.F.F. (UNLESS OTHERWISE NOTED)	(A)	HEAT DETECTOR (A-ABOVE CEILING)
(A)	DUPLEX RECEPTACLE 18" A.F.F. (1/0N) WITH CHARGING PORTS	(A)	DUCT DETECTOR
(A)	DUPLEX RECEPTACLE (SPECIAL MOUNTING INSTRUCTIONS) MOUNT RECEPTACLE 6" (TO CENTER OF BACKBOX) HORIZONTALLY BELOW MILLWORK/ COUNTERTOP.	(A)	FLOW SWITCH
(A)	DUPLEX INSTALLED ABOVE COUNTER (VARIES)	(A)	TAMPER SWITCH
(A)	QUADRA-FLEX RECEPTACLE	(A)	DUCT DETECTOR TEST SWITCH 6"-2" A.F.F.
(A)	QUADRA-FLEX RECEPTACLE INSTALLED ABOVE COUNTER	(A)	WEATHERHEAD
(A)	FLOOR RECEPTACLE	(A)	TRANSIENT VOLTAGE SURGE SUPPRESSION
(A)	CEILING MOUNTED RECEPTACLE	(A)	CONDUIT CONCEALED IN WALLS OR ABOVE CEILING
(A)	SPECIAL OUTLET (X* DENOTES AMPS)	(A)	CONDUIT CONCEALED IN OR UNDER FLOORS
(A)	SIMPLEX 1/200 LOCK	(A)	EXISTING TO BE REMOVED
(A)	DUPLEX DROP RECEPTACLE	(A)	EXISTING ELECTRICAL (LIGHT GRAY) (X* DENOTES SYSTEM TYPE)
(A)	QUADRA-FLEX DROP RECEPTACLE	(A)	EXISTING ELECTRICAL (LIGHT GRAY) (X* DENOTES SYSTEM TYPE)
(A)	SINGLE DROP RECEPTACLE	(A)	EMERGENCY CIRCUIT
(A)	39, 4 OR 5 WIRE (X* DENOTES AMPS)	(A)	LINEAR HEAT DETECTION CABLE
(A)	FLOOR BOX - RECEPTACLE/DATA	(A)	OVERHEAD COMMUNICATION
(A)	FLOOR BOX - RECEPTACLE/TELEPHONE	(A)	OVERHEAD ELECTRICAL
(A)	FLOOR TELEPHONE OUTLET	(A)	OVERHEAD PRIMARY
(A)	TELEPHONE OUTLET- (W) WALL MOUNTED	(A)	OVERHEAD SECONDARY
(A)	TELEPHONE OUTLET-PAYPHONE	(A)	OVERHEAD TELEPHONE
(A)	COMPUTER OUTLET	(A)	OVERHEAD FIRE ALARM
(A)	DATA OUTLET (TELEPHONE, COMPUTER, ETC.)	(A)	OVERHEAD TELEVISION
(A)	CONNECT TO EXISTING AT THIS LOCATION	(A)	UNDERGROUND ELECTRICAL
(A)	POINT OF DEMOLITION	(A)	UNDERGROUND PRIMARY
(A)	KEYED NOTE (X* DENOTES KEYED NOTE NUMBER)	(A)	UNDERGROUND SECONDARY
(A)	REVISION SYMBOL (X* DENOTES REVISION NUMBER)	(A)	UNDERGROUND TELEPHONE
(A)	SURFACE PLUG/MOLD STRIP	(A)	UNDERGROUND COMMUNICATION
(A)	ELECTRICAL GROUND	(A)	UNDERGROUND TELEVISION
(A)	CONTROL DESIGNATION (LIGHTING CONTROL/RELAY DESIGNATION)	(A)	UNDERGROUND TELEVISION
(A)	RELAY DESIGNATION	(A)	UNDERGROUND FIRE ALARM
(A)	DATA/TELE OR EQUIPMENT RACK		
(A)	SPEAKER		

- FIXTURE SCHEDULE GENERAL NOTES**
- COORDINATE WITH ARCHITECT FOR ALL COLORS/FINISHES.
 - PROVIDE ALL NECESSARY FRAMING KITS FOR FIXTURES MOUNTED IN SPECIAL CEILING (DRYWALL/METALLIC/SPY)
 - PROVIDE EMERGENCY BALLAST EQUAL TO BODINE B-50 IN FIXTURE DESIGNATED AS EMERGENCY.
 - PROVIDE ALL NECESSARY STEPS, MOUNTING BRACKETS, AND ASSOCIATED EQUIPMENT AND MATERIAL.
 - ALL FIXTURES SHALL BE PROVIDED WITH ALL ACCESSORIES FOR A COMPLETE ASSEMBLY INCLUDING HARDWARE.
 - COORDINATE EXACT MOUNTING HEIGHT AND DETAILS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
 - BALLASTS TO HAVE TOTAL HARMONIC DISTORTION LESS THAN 10% WITH ZERO DEGREE RATED BALLAST.
 - PROVIDE TYPE-WRITTEN LAMP ORDERING GUIDE FOR EACH TYPE OF FIXTURE IN CLOSE-OUT DOCUMENTS FOR EASY-ORDER LAMP REPLACEMENT.

- NOTES:**
- CONTRACTOR TO VERIFY WITH UTILITY COMPANY PRIOR TO BID AND INCLUDE ALL COST REQUIRED FOR PERMITS, PAY ALL FEES, ETC., FOR INITIAL, PERMANENT ELECTRICAL SERVICE.

KEYED NOTES

- NEM (120/240V) PH3W KOHLER 22KW LP GENERATOR.
- 2 1/2" W 3# 3/0, #4 GRD
- 1- 3" SCHED 40 CONDUIT (VERIFY WITH UTILITY)
- 3/4" X 10' COPPER ROD(S)
- 3" W 3# 3/0. VERIFY WITH LOCAL UTILITY COMPANY
- GROUNDING AT ALL 4 CORNERS OF BUILDING TIED INTO MAIN GROUNDING AT METER. REFER TO PLANS
- LIGHTNING ARRESTOR # JOSLYN 1265-85-MN-5
- 1 1/4" W 4# 6



CONTRACTOR TO USE PVC CONDUIT, BACKBOXES, AND IN ALL INTERIOR SPACES.

PROVIDE A COMPLETE LIGHTNING PROTECTION SYSTEM FOR THE METER BUILDING AND EQUIPMENT, ROOF AND GROUND-MOUNTED, IN COMPLIANCE WITH SPEC SECTION 16610

BY: CCB

REVISION: ADDENDUM #1

DATE: 03/17/2023

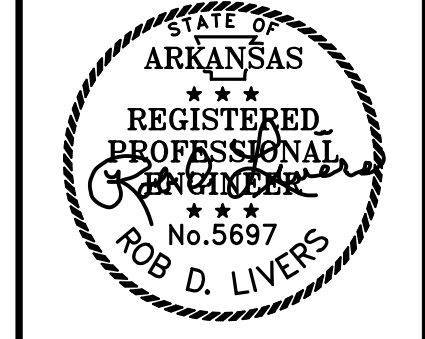
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PROPOSED MASTER METER
GUY WATER WORKS
GUY, ARKANSAS
FAULKNER COUNTY, ARKANSAS



02-17-2023

CONTENTS:
GENERAL NOTES,
LEGEND, RISER,
FIXTURE SCHED

PROJECT NO:
20107

DATE:
FEB 2023

SHEET NO:

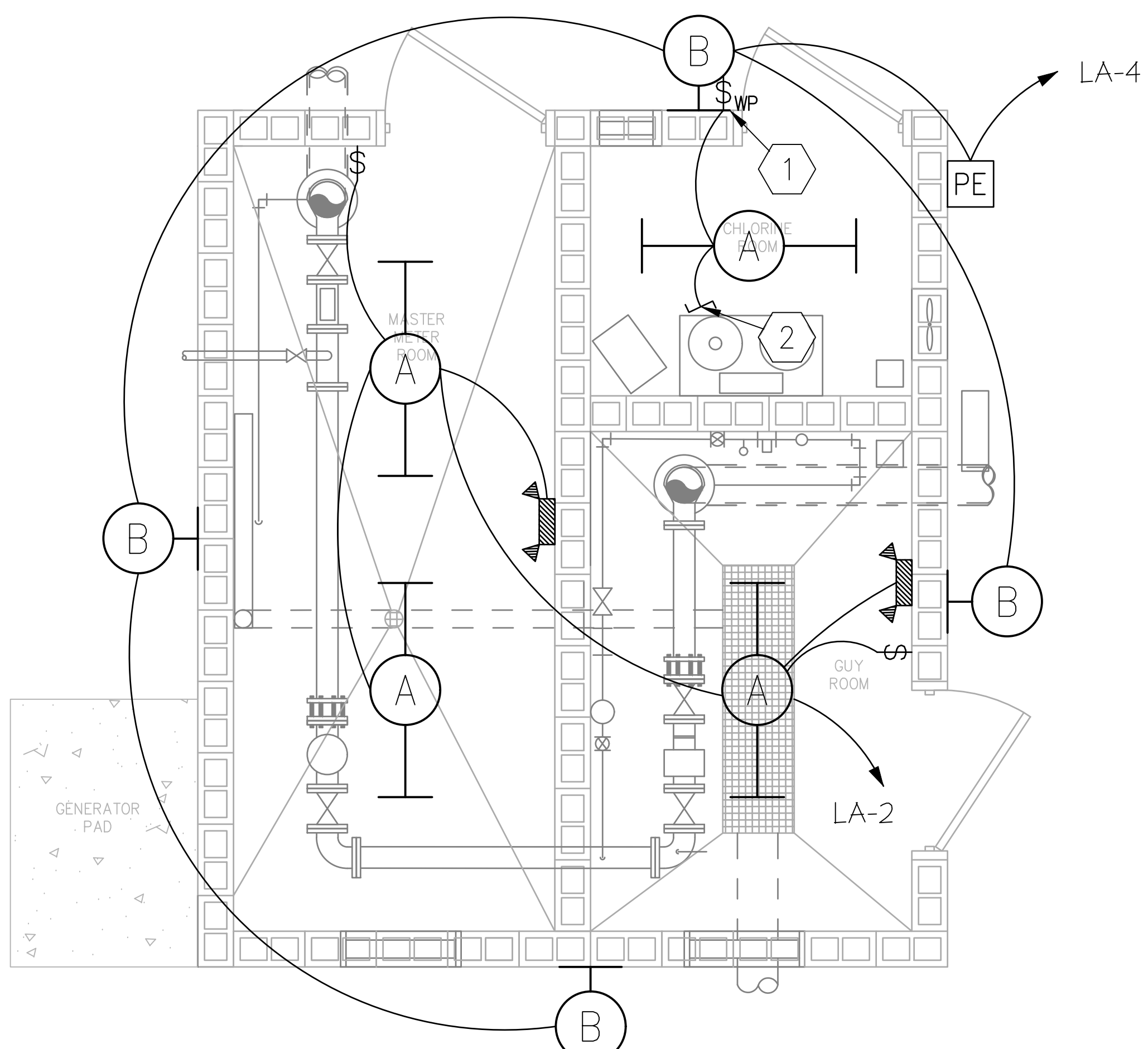
E0.1

LIVERS+CALHOUN ENGINEERS

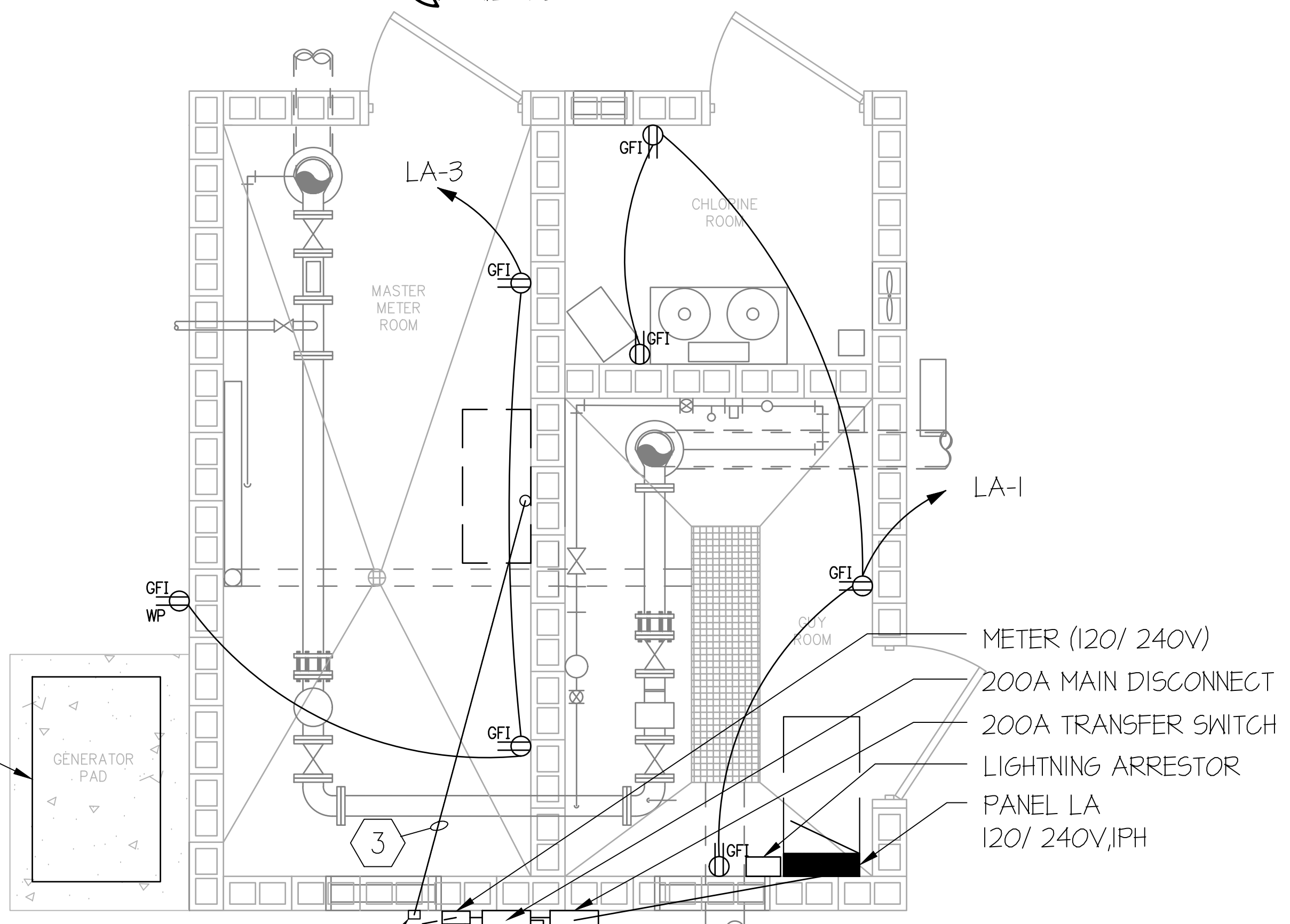
600 Stewart Road Little Rock, AR 72223 • Office: 501.570.6470

4485 W Wyoming Dr Fayetteville, AR 72074 • Office: 501.570.6470

3051 Mt. McGregor Benton, AR 72019 • Office: 501.570.6470



LIGHTING PLAN
1/2" = 1'-0"



POWER PLAN
1/2" = 1'-0"

CONTRACTOR TO USE PVC CONDUIT, BACKBOXES, AND IN ALL INTERIOR SPACES.

ELECTRICAL GENERAL NOTES AND LEGEND

REFER TO SHEET E0.1 FOR ELECTRICAL GENERAL NOTES AND ELECTRICAL LEGEND.

LIGHTING & POWER PLAN: KEYED NOTES

- KEYED NOTES INDICATED AS (X) ON PLANS
- PROVIDE WEATHERPROOF SWITCH MOUNTED ON EXTERIOR FOR LIGHT, EF-1, AND LOUVER CONTROL. VERIFY WITH MECHANICAL FOR CONTROLS AND LOCATION PRIOR TO WORK.
 - LIGHT TO BE SWITCHED WITH FAN AND LOUVER. SEE MECHANICAL POWER PLAN FOR CIRCUIT.
 - PROVIDE 1/2" CONDUIT UNDER SLAB FROM TELEPHONE BOX TO SCADA CABINET LOCATION.
 - VERIFY TELEPHONE ENTER-FACE WITH LOCAL TELEPHONE COMPANY.

LA		ELECTRICAL PANEL																																													
AMP RATING		200		PHASE		1		SECTION(S)		1		MIN. AMP INT. CAPACITY		10K																																	
150A	MAIN	LUGS ONLY		WIRE WGRD. BAR		3		TYPE		NQDD		MOUNTING		SURFACE																																	
VOLTS		120 / 240		CIRCUIT		30		BUS		COPPER		NEMA		1																																	
CATEGORY	SERVES	LOAD IN AMPS				WIRE	TRIP/ POLES	CIRCUIT NO.	CIRCUIT NO.	LOAD IN AMPS				SERVES	CATEGORY																																
		A	B	Ø & N	EGC					A	B	Ø & N	EGC																																		
R	RECEPTACLE	7.5		12	12	201	1	2	201	12	12	10		LIGHTS	L																																
R	RECEPTACLE	6		12	12	201	3	4	201	12	12	10		EXTERIOR LIGHTS	L																																
H	EH-1	13.7		10	10	302	5	6	201	12	12	5		EF-1	F																																
H			13.7	10			7	8	301	10	10	8		CONTROL CABINET	R																																
M	M5OU-1	22		8	10	402	9	10	301	10	10			SPARE	R																																
M			22	8			11	12	201	12	12	5		HMI	R																																
M	PUMP	16		10	10	301	13	14	302					SPARE	R																																
R	ANALYZER BOARD	2		12	12	201	15	16						SPARE	R																																
R	CHLORINE GAS DETECTION SYSTEM	2		12	12	201	17	18	201	12	12	2		DIGITAL SCALE	R																																
	SPARE					201	19	20	201					SPARE	R																																
	SPARE					201	21	22	201					SPARE	R																																
	SPARE					201	23	24	201					SPARE	R																																
	SPARE					201	25	26	201					SPARE	R																																
	SPARE					201	27	28	602	6	6			LIGHTNING ARRESTOR	R																																
	SPARE					201	29	30		6	6				R																																
TOTAL LOAD PER PHASE		PHASE A		78.2		PHASE B		66.7		TOTAL CONNECTED LOAD (KVA)		17.4		DEMAND LINE (AMPS)		50.0		ESTIMATED DEMAND LOAD (KVA)		0.0		LOAD PER CATEGORY (AMPS)		LIGHTING		0.0		HEATING		27.4		RECEPTACLES		17.5		COOLING		0.0		FAN MOTORS		0.0		MISC.		60.0	

GENERAL NOTES:

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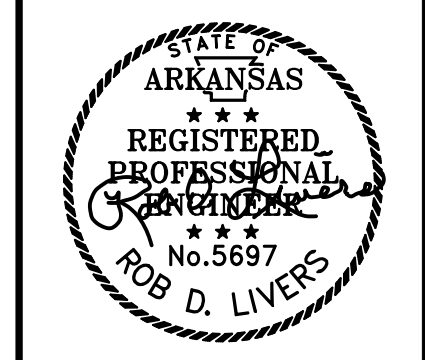
BY: CCB

REVISION: ADDENDUM #1

DATE: 03/17/2023

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02-17-2023

CONTENTS:
 LIGHTING AND POWER PLAN

PROJECT NO:
 20107

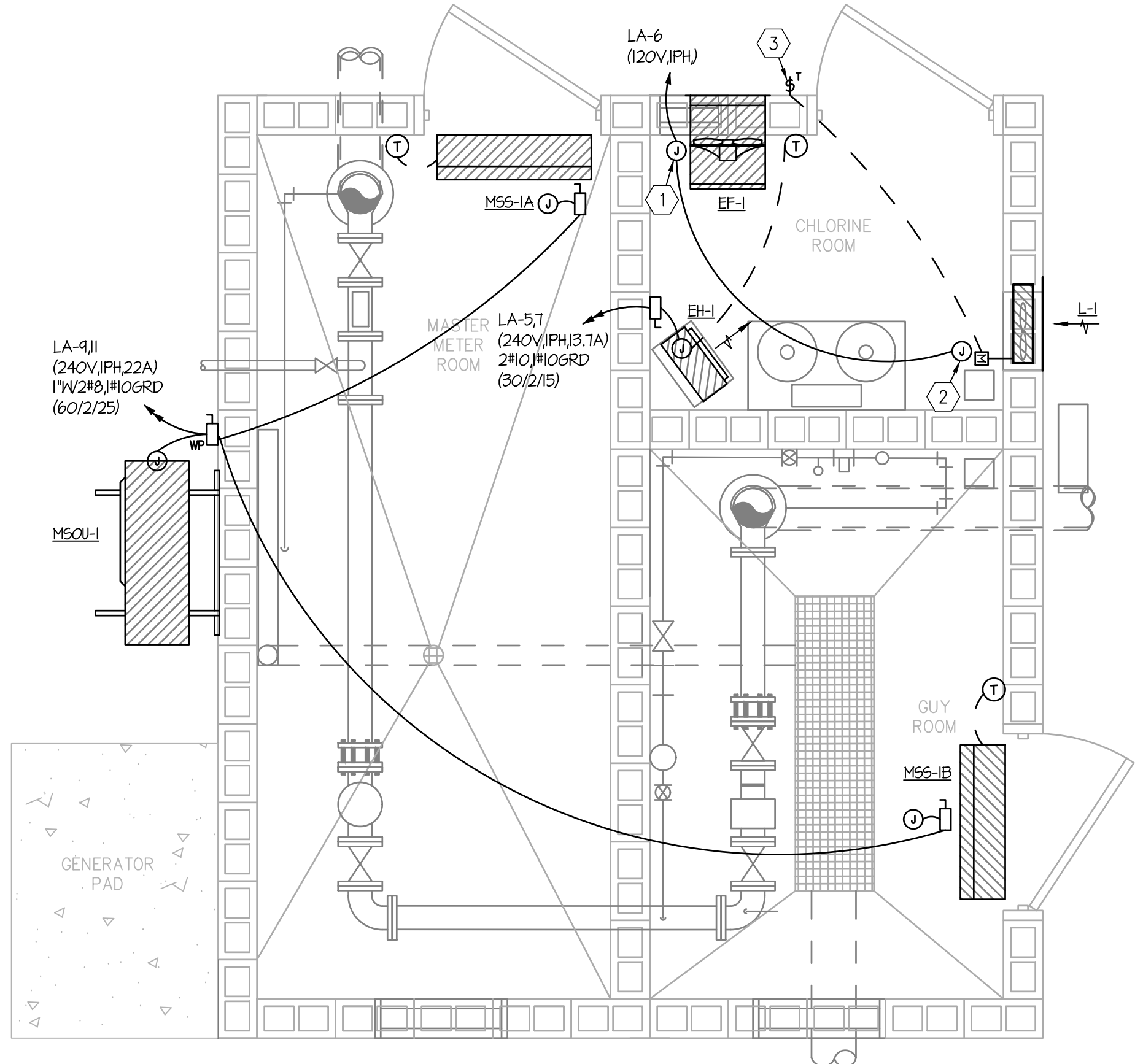
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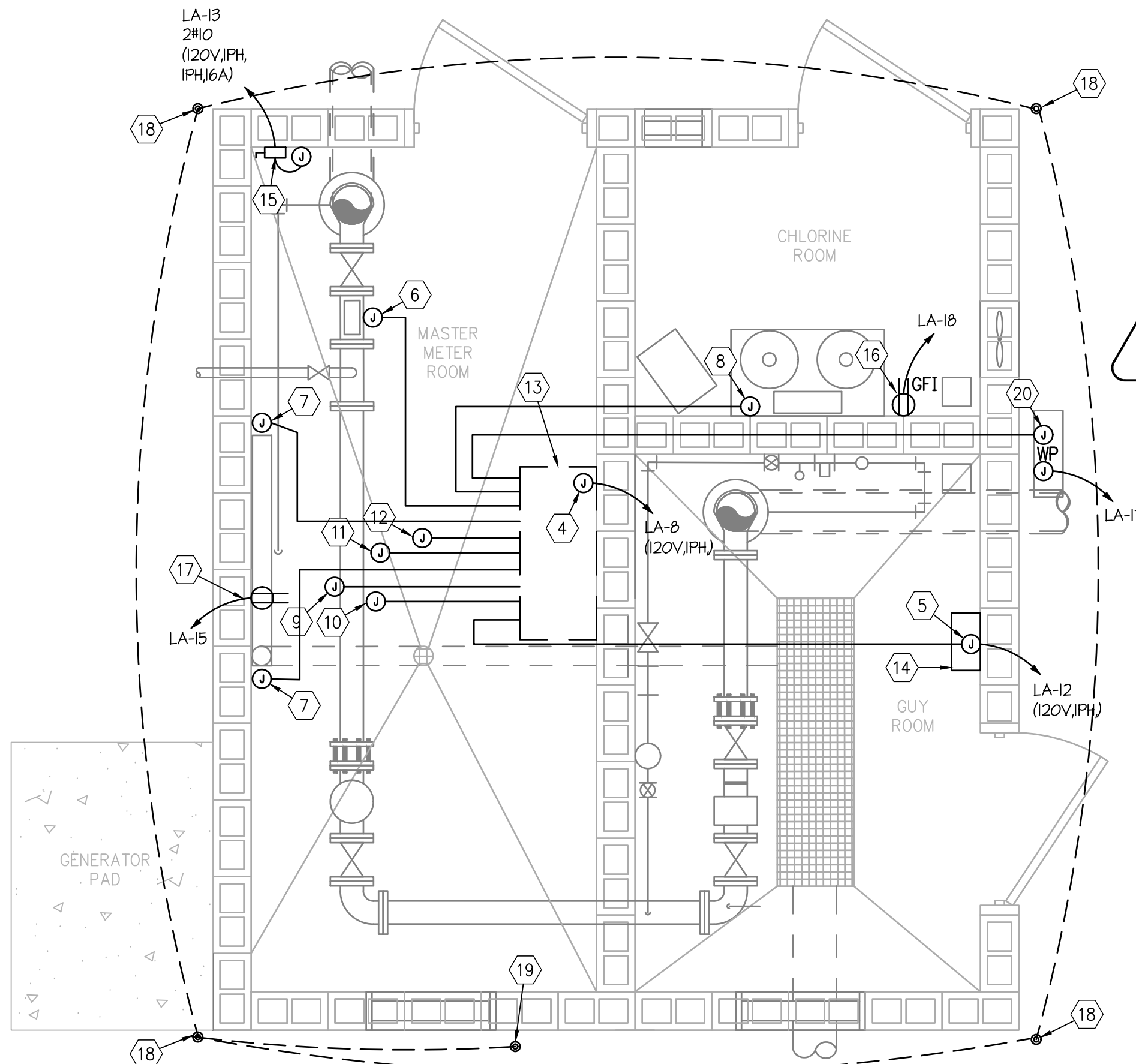
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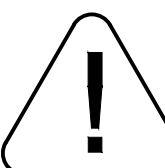
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MECHANICAL POWER PLAN
1/2" = 1'-0"



METER EQUIPMENT POWER PLAN
1/2" = 1'-0"

-  REMINDER TO CONTRACTOR: ALL NEW WORK INDICATED TO BE CONSTRUCTED AS SHOWN ON PLANS. ALL AREAS NOT SHOWING NEW WORK TO BE REMAIN IN WORKING ORDER AS IS. CONTRACTOR TO SITE VISIT PRIOR TO BID AND CLOSELY COORDINATE WITH ARCHITECT.
-  CONTRACTOR TO REFER TO MECHANICAL PLANS AND SCHEDULES FOR INTERNAL DISCONNECTS SPECIFIED AS FEATURE ON RTU'S, EF'S, ETC.
-  CONTRACTOR TO REFER TO PLUMBING PLANS AND SCHEDULES FOR INTERNAL DISCONNECTS SPECIFIED AS FEATURE ON WATER HEATERS, RE-CIRC PUMPS AND ETC..
-  CONTRACTOR TO REFER PRIOR TO BID TO MECHANICAL PLANS AND SCHEDULES FOR MECHANICAL ITEMS AND PROVIDE ELECTRICAL CONNECTIONS TO ALL EQUIPMENT AS REQUIRED.
-  CONTRACTOR TO USE PVC CONDUIT, BACKBOXES, AND IN ALL INTERIOR SPACES.

GENERAL NOTES

1. PROVIDE A GROUNDING CONDUCTOR, SIZED PER 2017 NATIONAL ELECTRICAL CODE, IN ALL RACEWAY.
2. ALL CONDUIT TO BE CONCEALED UNLESS SPECIFICALLY ALLOWED BY ARCHITECT.
3. REFER TO THE PANEL SCHEDULE FOR THE REQUIRED WIRE SIZE OF HOMERUN CONDUCTOR TO FIRST OUTLET OF CIRCUIT.
4. CONTRACTOR TO VERIFY EXACT PLACEMENT OF DEVICES AND OUTLET BOXES WITH OWNER PRIOR TO ROUGH-IN. DIMENSIONS SHALL BE VERIFIED FROM MILLWORK ELEVATION, EQUIPMENT SHOP DRAWING ETC. OWNER RESERVES THE PRIVILEGE OF MOVING FINAL ROUGH-IN LOCATIONS WITHIN SIX (6) FEET OF WHERE DIAGRAMMATICALLY SHOWN ON PLANS.
5. FIRESTOP ALL FIREWALL PENETRATIONS.
6. ISOLATED GROUND RECEPTACLE REQUIRES THE SYSTEM GROUND CONDUCTOR (BONDING TO THE RACEWAY AT DEVICE BOXES) AS WELL AS THE ISOLATED GROUND SOLELY FOR DEVICES. BOTH TERMINATE AT THE GROUND BAR IN THE BRANCH PANEL.
7. RECEPTACLES SERVING COMPUTERS TO BE ISOLATED GROUND TYPE. DO NOT SHARE GROUND WITH ANY OTHER CIRCUITS.
8. CONTRACTOR TO USE PVC CONDUIT IN CHLORINE ROOM.

METER EQUIPMENT POWER PLAN NOTE:
CONTRACTOR TO CLOSELY COORDINATE WITH SCADA SUB-CONTRACTOR AND CWS FOR COMPLETE INSTALLATION OF EQUIPMENT. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL ALL RACEWAY, J-BOX, AND WIRE (WHERE APPLICABLE) FOR COMPLETE INSTALLATION. ELECTRICAL CONTRACTOR TO COORDINATE COMPLETE SCOPE OF WORK WITH SCADA AND CWS PRIOR TO BID.

ELECTRICAL GENERAL NOTES AND LEGEND

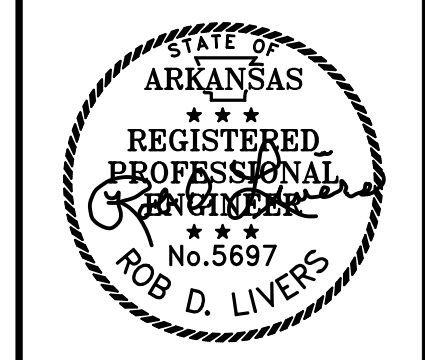
REFER TO SHEET E0.1 FOR ELECTRICAL GENERAL NOTES AND ELECTRICAL LEGEND.

MECH POWER PLAN: KEYED NOTES

- KEYED NOTES INDICATED AS (X) ON PLANS
1. PROVIDE CONNECTION FOR EXHAUST FAN. PROVIDE NECESSARY SWITCHES, RELAYS AND CONTRACTOR FOR COMPLETE CONTROL OR TO INTERLOCK WITH FANS. VERIFY WITH MECHANICAL PRIOR TO WORK.
 2. PROVIDE CONNECTION FOR LOUVER. PROVIDE NECESSARY RELAYS AND CONTRACTOR FOR COMPLETE CONTROL OR TO INTERLOCK WITH FANS. VERIFY WITH MECHANICAL PRIOR TO WORK.
 3. SWITCH (WEATHERPROOF) TO BE MOUNTED ON EXTERIOR OF BUILDING FOR CONTROL OF LIGHT, EF-1 AND LOUVER. VERIFY WITH MECHANICAL PRIOR TO WORK.
 4. CONNECTION FOR CONTROL CABINET. COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 5. CONNECTION FOR HMI PANEL. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 6. PROVIDE 1" CONDUIT AND CONNECTION FOR ELECTROMAGNETIC FLOW METER. CLOSELY COORDINATE CONTROL WIRING AND ROUTING AND LOCATION FOR FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 7. PROVIDE 1" CONDUIT AND CONNECTION FOR ANALYZER BOARD. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 8. PROVIDE 1" CONDUIT AND CONNECTION FOR CHLORINATOR. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 9. PROVIDE 1" CONDUIT AND CONNECTION FOR FLOW CONTROL VALVE FOR SOLENOID VALVES. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 10. PROVIDE 1" CONDUIT AND CONNECTION FOR PRESSURE TRANSDUCER (VERIFY QUANTITY AND LOCATION). CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 11. PROVIDE 1" CONDUIT AND CONNECTION FOR ALARM SYSTEM. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 12. CONNECTION FOR BUILDING GROUNDING SYSTEM. REFER TO ELECTRICAL GROUNDING DETAIL.
 13. PROVIDE 60"X 36" X 16"D NEMA12 STEEL CONTROL CABINET LOCATION. CLOSELY COORDINATE LOCATION AND COORDINATE CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 14. PROVIDE 12"X12"X6" GRAINGER BOX (#4FY10) FOR HMI LOCATION CLOSELY COORDINATE LOCATION AND COORDINATE CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 15. CONNECTION FOR BOOSTER PUMP GIOBIS. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH CWS PRIOR TO WORK.
 16. CONNECTION FOR MODEL 2350 DIGITAL DUAL CYLINDER SCALE. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH CWS PRIOR TO WORK.
 17. PROVIDE 1" CONDUIT AND CONNECTION FOR ANALYZER BOARD POWER. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.
 18. PROVIDE GROUNDING LOOP. PROVIDE 3/4" GROUNDING RODS WITH #2 SOLID COPPER GROUND AND GADWELDED CONNECTION. CONNECT TO MAIN GROUND ROD (REFER TO RISER).
 19. MAIN GROUND ROD AT METER. REFER TO RISER
 20. PROVIDE 1" CONDUIT AND CONNECTION FOR CHLORINE GAS DETECTION SYSTEM. CLOSELY COORDINATE ROUTING AND LOCATION FOR FINAL COORDINATE FINAL CONNECTION REQUIREMENTS WITH SCADA SUB CONTRACTOR PRIOR TO WORK.

BY	CCB
REVISION	ADDENDUM #1
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MECHANICAL POWER PLAN

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