



City of Bentonville
Bentonville Utility Board Meeting
Tuesday, November 15th – 11:30 am
Bentonville City Hall 305 SW “A” St.
City Council Chambers

AGENDA

Call to Order
Pledge of Allegiance
Attendance
Approval of Minutes: October 18th, 2022

New Business

1. Resolution – Bid Award and Budget Adjustment – WRRF Vehicle Purchase – Chris Earl (pages 2-9)
2. Ordinance – Bid Waiver and Budget Adjustment – Old “B” Sub Transformer Relocation – Travis Matlock, PE (pages 10-16)
3. Ordinance – Bid Waiver and Budget Adjustment – 161 kV Breaker at “B” Sub – Travis Matlock, PE (pages 17-58)
4. Amendment to Ordinances – Additional Transformer Costs – Travis Matlock, PE (pages 59-63)
5. PURPA discussion – Travis Matlock, PE (pages 64-66)
6. Adjournment



Agenda Item Form

Date of Utility Board Meeting	11/15/2022
Department	Water Resource Recovery Facility
Submitted by	Chris Earl
Phone	(479) 696-0273

Item Type: (Check Applicable Item Type)					
☒ Budget Adjustment	☐ Change Order	☐ Informational	☐ Ordinance	☐ Resolution	☐ Bid Award
Recommendation/Suggested Action (Enter recommendation in space below):					
Staff requests the Utility Board Members approve a motion to accept a budget adjustment to allow for the purchase of a 2023 Ram Crew Cab 1500 4X4 through the Arkansas State Contract. This was a budgeted item in 2022 for the amount of \$35,000.00. We had found and purchased a desired vehicle in February 2022 for the amount of \$30,863.00. While waiting for the vehicle to arrive we were notified on October 16th, 2022, the remaining RAM DS orders will be canceled for 2022. The 2023 version of this vehicle on the state contract list has increased in price. The most basic model will now require the amount of \$35,400.00 to purchase. We would like to complete the purchase of the desired vehicle through a budget adjustment in the amount of \$400.00 from reserves. This will bring the total amount needed to complete purchase to \$35,400.00.					

Estimated Cost	\$35,400.00
Is this Item Budgeted?	☒ Yes ☐ No
If no, please explain how item will be funded (briefly explain in space below) :	



Memo



To: Utility Boards Members
From: Chris Earl, WRRF Manager
CC: Mike Bender, Preston Newbill
Date: 11/15/2022
RE: Budget adjustment to complete capital vehicle purchase.

.....

Staff requests the Utility Board Members approve a motion to accept a budget adjustment to allow for the purchase of a 2023 Ram Crew Cab 1500 4X4. This was a budgeted item in 2022 for the amount of \$35,000.00. We had found and purchased a desired vehicle in February 2022 for the amount of \$30,863.00. While waiting for the vehicle to arrive we were notified on October 16th, 2022, the remaining RAM DS orders will be cancelled for 2022. We intend to rollover the budgeted amount of \$35,000.00 from 2022 to 2023 to continue the attempt to purchase a vehicle. The 2023 version of this vehicle on the state contract list has increased in price. The most basic model will now require the amount of \$35,400.00 to purchase.

We would like to complete the purchase of the desired vehicle through a budget adjustment in the amount of \$400.00 out of the capital vehicles account #47420. This will bring the total amount budgeted to \$35,400.00.

Thank you for your consideration of this request,

Chris Earl, WRRF Manager



Budget Adjustment Request

Date of Utility Board Meeting	11/15/2022
Department	Water Resource Recovery Facility
Submitted by	Chris Earl
Phone	(479) 696-0273

Purpose of Budget Adjustment <i>(Enter purpose in space below):</i> Staff requests the Utility Board Members approve a motion to accept a budget adjustment to allow for the purchase of a 2023 Ram Crew Cab 1500 4X4. This was a budgeted item in 2022 for the amount of \$35,000.00. We had found and purchased a desired vehicle in February 2022 for the amount of \$30,863.00. While waiting for the vehicle to arrive we were notified on October 16th, 2022, the remaining RAM DS orders will be cancelled for 2022. We intend to rollover the budgeted amount of \$35,000.00 from 2022 to 2023 to continue the attempt to purchase a vehicle. The 2023 version of this vehicle on the state contract list has increased in price. The most basic model will now require the amount of \$35,400.00 to purchase. We would like to complete the purchase of the desired vehicle through a budget adjustment in the amount of \$400.00 out of the capital vehicles account #47420. This will bring the total amount budgeted to \$35,400.00.

General Ledger Account Information*				
Org (Department)	Object	Account Description	Revenue + (-)	Expense + (-)
503030	47420	Capital - Vehicle		\$ 400.00
		Totals	\$ -	\$ 400.00
		Net Impact on Fund Balance	\$ (400.00)	
*Final Account Number will be determined by Accounting Department after approval and purchase				





Purchase Agreement

Red River Dodge Chrysler Jeep Ram Fiat

#1 Ram Dealer in Arkansas

10/31/22

1060 Heber Springs Rd South, Heber Springs, Ar.72543
Office 501-362-5831 Cell 501-206-9958 Fax 501632-5522
Email:mike@redriverdodge.com

Matt Webster

Assistant Manager
The City of Bentonville WRRF
Office: 479-271-6749
Fax: 479-271-3163
mwebster@bentonvillear.com



SOLICITATION # S000000154
REFERENCE# 4600051622
VENDOR# 100158685
Type PRP 10133435
Item 62

FAN #00GN5

SALESPERSON	JOB		
Mike Haley	Fleet Manager	2023 Ram 1500 SSV Crew Cab 4x4	White

QTY	DESCRIPTION	UNIT PRICE	LINE TOTAL
	DS6T98 1500 SSV CREW CAB		\$ 35,340.00
	5.7 V8 HEMI MDS VVT ENGINE		STD
	8-SPD AUTO 8HP75 LCV TRANSMISSION		STD
	CLOTH Bench Seats/ REAR VINYL SEAT		\$ 60.00
	REAR BACK UP CAMERA		STD
	SPRAY IN BEDLINER		STD
	TRAILER TOW PACKAGE		STD
	POWER WINDOWS / POWER LOCKS		STD
	Uconnect 4 with 5" Screen /Hands free Bluetooth		STD

Vehicle Specifications & Pricing

ITEM 62

TYPE PRP 10133435

Dodge RAM 1500 Crew Cab

Special Service Pickup, 4WD

Not For High Speed Chase

(NO SUBSTITUTES)

Dealer Name: Red River Dodge Chrysler Jeep Ram

Vehicle Make/Model: SSV RAM CREW CAB 1500 4X4

Model Code: DST98

City MPG Estimate: 13

Highway MPG Estimate: 19

CO-OP Purchasing One Way Delivery Charge Per Mile: \$2.25

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VEHICLE BID PRICE: \$35,340.00

Body & Chassis	Base Vehicle Minimum Requirements	Enter Vehicle Specification and Manufacturer Codes (Fill-in Unshaded Blanks Only)
Crew Cab Pickup Truck	EPA Classified as Standard Pickup Truck	
Gross Vehicle Weight Rating	6900 lbs.	
Wheelbase/CA	Mfg. Std. - List Size	140 WB 28 CA
Bed (Short Box)	Short Wide Bed	
Stability Control System	Mfg. Std.	
Engine		
Engine Size	Mfg. Std. List Size	5.7L V8 395 HP
Fuel Type	Gasoline	
Transmission/Drivetrain		
Automatic	Automatic - List Type, Speeds etc.	8 SP AUTO
4WD	Mfg. Std. 4WD	
Differential Type/Ratio	Mfg.Std. - List Ratio & Type	3.21
Electrical		
Alternator	Mfg. Std.	
Battery	Mfg. Std.	
Fuel Tank	Mfg. Std.	
Fuel Capacity (Gals)	Mfg. Std. - List Amount in Gallons	26
Exterior		
Paint	One Color Paint	
Bumpers	Mfg.Std Front, Step-Type Rear	
License Plate Brackets	Front and Rear Brackets	
Windshield Washer	Windshield Washer & Multi-Speed Wipers	
Doors & Windows		
Doors	4 Full-Size Doors	
Mirrors	Two Outside, Right & Left. One Interior	
Interior		
Air Conditioning	AC Factory Installed	
Radio	Audio system with AM/FM Stereo	
Tilt Steering	Tilt Steering Wheel	
Cruise Control	Cruise Control	
Steering	Power Steering	
Tinted Glass	Mfg. Std.	
Gauges/Indicators	Mfg. Std.	
Flooring	Mfg. Std.	
Seats		
Seats	Mfg. Std., Colors Must Blend With Interior & Exterior Color	
Safety		
Brakes	Anti-Lock Brake System (ABS) - List Disc/Drums	4 WHEEL DISC ABS

ITEM 62**Dealer Name: Red River Dodge Chrysler Jeep Ram**

Restraint System All Pass	Required	
Air Bags, Front, Both Sides	Required	
Tires & Wheels		
Tires & Wheels	Mfg. Std. - List Size	265/70R17
are	Mfg. Std. - List Size (Full or Space Saver)	FULL SIZE
Wheel Covers	Mfg. Std.	
Warranty		
Bumper to Bumper Warranty	3 Years or 36,000 miles, whichever comes first	
Drive Train Warranty	List Warranty	5YR/100K MILES

ITEM 62	VEHICLE OPTIONS		Dealer Name: Red River Dodge Chry	
TYPE PRP Dodge RAM 1500 Special Service Pickup Vehicle, 4WD (NO SUBSTITUTES) Back to Table of Contents				
Body and Chassis	Code	Option Minimum Requirement	Enter Optional Equip. Desc. & Mfg. Option Codes	Price
Bed	QH	Long Wide Bed		N/A
Unmarked Police Package	ZI	Unmarked Police Package	AED	\$740.00
Engine				
Flex Fuel	FFV	Add Flex Fuel		N/A
Engine Block Heater	HB	Add Block Heater	NHK	\$115.00
Diesel Engine	CA	Diesel Engine Factory Installed		N/A
Bio Diesel	BD	Bio Diesel with OEM Warranty		N/A
PTO	PTO	Power Take Off		N/A
Transmission/Drive Train				
Skid Plate	KO	Add Skid Plate	ABD	\$425.00
Limited Slip Differential	LS	Limited Slip Differential	DSA	\$515.00
Electrical				
Daytime Running Lights	DL	Add Daytime Running Lights	LM1	\$49.00
Spot Lamp: Front, Left	SL	Spot Lamp: Front, Left	LSL	\$595.00
Spot Lamps: Front, Left And Right	ON	Spot Lamps: Front, Left And Right		N/A
Alternator	HA	Heavy Duty Alternator - List Amps		STD
Batteries	DB	Dual Batteries		N/A
Power Outlet	EP	Add 12-Volt Power Outlet		N/A
Doors & Windows				
Deep Tinted Windows	TG	Add Deep Tinted Glass	TG	\$250.00
Power Windows & Door Locks	XX	Power Windows & Door Locks		STD
Keyless Entry	KE	Keyless Entry		STD
Interior				
Radio Upgrade	RU	Premium Audio System with AM/FM Stereo & MP3 Capability	RSD SIRUIS XM SATELLITE RADIO	\$225.00
Cruise	PO	Cruise Control, Factory Installed		STD
Rubber/Vinyl Flooring Rear Only	VF	Rubber/Vinyl Flooring Rear Only		STD
Carpeted Floor, Front and Rear	CF	Carpeted Floor, Front and Rear	CKE	\$155.00
Cloth Seats, Front and Rear	CS	Cloth Seats, Front and Rear		N/A
Vinyl Seat Rear Only	VS	Vinyl Seat Rear Only		STD
Front Buckets	FB	Front Bucket Seats with Console	HAVIS 22" POLICE CONSOLE	\$1,095.00
Front Seat Center Floor Space	FS	15" Front Seat Center Open Floor Space		STD
Backup Camera	BR	Backup Camera		STD
Rear Air Conditioning	RA	Factory Installed Rear Air Conditioning		N/A
Backup Sensor	BS	Backup Sensor		N/A
Tires and Wheels				
All Terrain Tires	AT	All Terrain Tires	TTB	\$331.00
Spare	WL	Mounted Full Size Spare		STD
Towing				
Towing	XO	Towing Package Including: Hitch, Wiring Harness, Upgraded Radiator, Transmission Cooler		STD
Electric Brake Controller	BC	Add Electric Brake Controller	XHC	\$325.00
Trailer Mirrors	TM	Manual Telescoping Trailer Mirrors	GPG	\$210.00
Swing Differential	BO	Differential for Extra Towing Capability	DMH (3.92)	\$138.00



Agenda Item Form

Date of City Council Meeting	11/22/2002
Department	Electric
Submitted by	Traivs Matlock
Phone	479-271-5941

Item Type: (Check Applicable Item Type)					
☒ Budget Adjustment	☐ Change Order	☐ Informational	☒ Ordinance	☐ Resolution	☐ Bid Award
Recommendation/Suggested Action (Enter recommendation in space below):					
Ordinance to enter into an agreement with Servcie Electric Company and waive the requirements for competitive bidding to relocate the old Substation "B" transformer to the Bentonville City Warehouse and an associated budget adjustment for \$74,180. Due to the need to relocate the transformer to allow Wal-Mart to use the area as a laydown yard, it is not feasibel to solicit competitive bids.					

Estimated Cost	\$74,180.00
Is this Item Budgeted?	☐ Yes ☒ No
If no, please explain how item will be funded (briefly explain in space below) :	
Budget adjustment moving money from Underground Primary acct.	



MEMORANDUM

DATE: November 22, 2022

TO: City Council, Mayor Orman

FROM: Travis Matlock, Electric Utility Director

RE: Relocation of Existing "B" Sub Transformer

Electric Dept. staff recommends entering into an agreement with Service Electric Company to relocate the existing "B" Sub transformer to the City of Bentonville Warehouse and an associated budget adjustment for \$74,180.

As "B" Sub has been reconstructed in association with the WMT Campus Construction, it is the City's responsibility to moved to the old substation transformer. To transport the transformer, the oil must be drained, bushings removed, and a large crane available to lift. Service Electric Company has worked with BEUD staff in the past (at different substation transformers) draining/refilling oil, replacing bushings, etc. Service Electric Company will handle all responsibilities associated with the relocation including working with a crane company and trucking company.

To cover the costs of this service, BEUD will budget adjust money from Underground Primary, resulting in no change to the BEUD bottom line.



Budget Adjustment Request

Date of City Council Meeting	11/22/2022
Department	Electric
Submitted by	Travis Matlock, PE
Phone	479-271-5941

Purpose of Budget Adjustment <i>(Enter purpose in space below):</i>
Money will be moved from Acct 73-13 (Underground Primary) to pay for the \$74,180.00.

General Ledger Account Information*				
Org (Department)	Object	Account Description	Revenue + (-)	Expense + (-)
503010 - Electric	47313	Underground Primary		\$ (74,180.00)
503010 - Electric	47210	Plants and Building		\$ 74,180.00
		Totals	\$ -	\$ -
		Net Impact on Fund Balance	\$ -	

*Final Account Number will be determined by Accounting Department after approval and purchase



www.bentonvillear.com

PLEASE RECYCLE





SERVICE ELECTRIC Company

P.O. Box 3656
1631 East 25th Street
Chattanooga, TN 37404
Phone (423) 265-3161

Jeremy Hooper
Bentonville Electric Utility Department
Transmission Construction
3200 SW Municipal Drive
Bentonville, AR 72712

Proposal Date: 10/25/2022

Proposal Number: 221017 PJZ 346 01

***Equipment to be serviced: 3 Phase, Load Tap Changing Transformer w/
TLH-21 OLTC, MFG 1980***

ID#	MFR.	SERIAL#	GALLONS	TYPE OF SERVICE	PCB TEST REQD.
Spare	Kuhlman	292525-1	Main 4,507 OLTC 733	Transformer Relocation	YES

Detailed Scope of Work: Disassembly, 1991 SE 5th Street, Bentonville, AR 72712

NOTE: The customer must provide SEC with a current "As Found" Main & OLTC PCB baseline test report prior to deployment.

- Travel to site and set up.
- Unit is sitting in an empty fenced in area which was a decommissioned substation.
- Perform a site safety briefing identifying any possible hazards.
- Perform the following "As Found" electrical testing:
 - Doble power factor all windings, bushings, arrestors to include C1 & C2 capacitance if available
 - Excitation
 - SFRA (Sweep Frequency Response Analysis)
- Drain main tank oil into SEC provided SS tanker following the oil down with dry air.
- If required due to offset weight of OLTC, drain oil into customer provided containment, the customer will relocate this OLTC oil.
- Remove the H1, H2 & H3 primary bushings, install steel plates verified onsite. Build crates for all bushings.
- Remove the X1, X2 X3, XO secondary & neutral bushings, install steel plates verified onsite. Build crates for all bushings.
- Remove and crate (3) Ea. Primary w/ bracket & (4) ea. Secondary lightning arrestors, palletize all brackets.

- Remove (8) Ea. radiators w/ fans, install steel plates verified onsite, palletize radiators.
- SEC to contract Nabholz Construction Services, to load transformer and accessories then transport all equipment to the Warehouse to be offloaded.
- SS Tanker Rental & Relocation of tanker with oil will be contracted by United Rentals Fluid Solutions, Tulsa, OK.
- Clean up work site then depart site.
- Provide the customer with all electrical testing reports.

Detailed Scope of Work: Assembly, Warehouse, 501 SW 28th Street, Bentonville, AR 72712

- Travel to Warehouse and set up.
- The unit will have been offloaded onto the ground inside of a secondary containment berm already provided and onsite by the customer.
- SEC to perform inspection of transformer & accessories.
- Tanker will be parked near the transformer, a secondary containment berm will be installed under tanker.
- Perform a Core to Ground Megger Test.
- Remove steel plates then install the H1, H2 & H3 primary bushings.
- Remove steel plates then install the X1, X2 X3, XO secondary & neutral bushings.
- Remove steel plates then install (8) Ea. radiators w/ fans.
- Install brackets then (3) Ea. Primary w/ bracket & (3) ea. Secondary lightning arrestors.
- Re-gasket all main tank orifices excluding OLTC compartment.
- Perform a pressure leak check.
- Establish a vacuum of <1mm and hold for a minimum of (24) @ <1 TORR.
- Vacuum fill through heat and vacuum utilizing an oil processing rig w/ generator power.
- If removed for transportation, refill OLTC oil.
- Check for leaks and allow transformer to cool down overnight.
- Perform the following “As Left” electrical testing:
 - Doble power factor all windings, bushings, and arrestors to include C1 & C2 capacitance if available
 - Excitation
 - Winding Resistance
 - TTR (Transformer Turns Ratio) on the customer’s set tap position.
 - Perform a SFRA (Sweep Frequency Response Analysis)
- Check all accessories for correct operation.
- Pull an oil proof sample of Main & OLTC and submit them to a lab for analysis.
- Clean up work site then depart.
- Provide the customer with all electrical and oil testing reports.

NOTE: Contractor to provide preliminary test results to Owner prior to leaving jobsite. Final written reports to be provided to Owner no later than 2 weeks after testing is completed. No invoicing to be approved until test reports are received.

Total service cost which includes all mobilizations and per diem for (2) men and equipment, oil processing rig w/ generator power and fuel, crane, rigging & transportation, oil tanker rental & transportation, lumber, gasket material, electrical & oil testing reports: **\$ 74,180.00**

- Total Service Price includes only the services outlined in the Detailed Scope of Work above.

Service Electric Company's Responsibilities:

- Service Electric Company will provide the trained personnel, equipment and materials required to perform the service outlined above in Scope of Work.
- Service Electric Company will provide the required power to run any of our equipment unless a different arrangement has been made.
- Service Electric Company will perform the service quoted above under a mutually agreed upon schedule.
- If any oil is spilled while draining, disassembly, or reassembling SEC be responsibility for site cleanup.
- If for some reason bushings (High side or Low side), arrestor (High side or Low side), radiators become damaged in the removal process, transport process, or installation process SEC will be responsible for replacement.

Customer Responsibilities:

- Provide a safe, clear access to the equipment to be serviced.
- Provide a qualified site contact/liaison for SEC to contact as needed.
- Provide complete oil quality tests (less than one year old), including PCB analysis on any fluid filled equipment to be serviced. All isolated oil filled compartments must have an analysis. **If the unit has any detectable PCB content, greater than 2 ppm up to 49 ppm of PCB's, a \$1,500.00 rig decontamination charge will apply if an oil processing rig is utilized.**

General Clarifications and Exceptions:

- The prices quoted herein are valid for 60 days from the date of this proposal.
- **Any new oil needed for top off will be additionally billed to the customer at a rate of \$14.00 per gallon.**
- Any delays caused by other than Service Electric Company personnel or additions to the scope of work quoted above will be billed additionally at our currently published Time and Material Rates. Service Electric Company's oil processing crews consist of two personnel who when processing for a period of greater than 14 hours in a day will split up into shifts so that only one man per shift will be on the rig at any time. If the customer or job site owner require two men on the rig at all times, the additional man will be billed at our currently published Time and Material Rates.

- If the work scope of this job extends over a weekend, Service Electric Company's personnel will work on Saturday and Sunday unless the Customer or jobsite owner refuses to let Service Electric Company's personnel work. If SEC is not informed of this restriction in writing, prior to quoting the job or accepting the order, the customer will be billed at our currently published Time and Material Rates for an eight hour day/day for wait time.
- A customer representative must authorize any additional work. An **Additional Work** release form must be signed prior to our beginning the work. When the additional work is completed, the customer representative must sign the release form indicating that the work was completed.
- Any activities, including oil processing, in this quote, will be performed with the transformer de-energized unless otherwise stated in the scope of work.
- Any applicable Federal, State or Local taxes will be in addition to the price quoted above. When invoiced, the customer must provide tax exempt documentation or they will be invoiced for the applicable taxes.
- This bid and any contract awarded as a result is expressly conditioned upon the negotiation of mutually acceptable terms and conditions.

Warranty:

All work performed by SEC personnel is guaranteed from defects resulting from faulty workmanship for a period of one year from the completion date of the work. This does not include Acts of God, maintenance of units by others, or other natural or unnatural causes which are beyond the control of SEC. Any warranty claims must be made to SEC. If the customer has a third party make repairs that would have been under SEC's warranty period, SEC will not reimburse the customer for any parts or labor provided by the third party and the balance of SEC's warranty period will be voided.

Prepared by:

Paul Zychal

Regional Account Manager

Technical Services

SERVICE ELECTRIC Company

1631 East 25th St

Chattanooga, TN 37404

www.serviceelectricco.com

Cell: (423) 497-2121

Email: pzychal@serviceelectricco.com

A Quanta Services Company | www.quantaservices.com | NYSE:PWR

"Safety Excels with Commitment"



Agenda Item Form

Date of City Council Meeting	11/22/2022
Department	Electric
Submitted by	Travis Matlock, PE
Phone	479-271-5941

Item Type: (Check Applicable Item Type)					
☒ Budget Adjustment	☐ Change Order	☐ Informational	☒ Ordinance	☐ Resolution	☐ Bid Award
Recommendation/Suggested Action (Enter recommendation in space below):					
Ordinance and waiver of bid to purchase a 161 kV breaker from GE Grid Solutions, LLC. to replace a non-load break switch in Substation "B" for \$69,650 plus tax (estimated to be \$6,616.75). This is a sole source items and matches existing breakers used in all of Bentonville's substations, therefore it is not pacticable to solicit competitive bids.					

Estimated Cost	\$76,266.75
Is this Item Budgeted?	☐ Yes ☒ No
If no, please explain how item will be funded (briefly explain in space below) :	
Budget adjustment from Underground Primary.	



MEMORANDUM

DATE: November 22, 2022

TO: City Council, Mayor Orman

FROM: Travis Matlock, Electric Utility Director

RE: Purchase of 161 kV Breaker for Substation "B"

Electric Dept. staff recommends entering into an agreement with GE Grid Solutions, LLC to purchase a 161 kV Breaker to replace a non-load break switch in "B" Sub and an associated budget adjustment for \$69,650 plus tax (estimated to be \$6,616.75).

As the new "B" Sub was energized, it became apparent that that the switch to the south transformer cannot be operated under load. To open or close the switch, the entire substation would have to be de-energized, the switch operated, and the entire substation re-energized. Installation of this breaker would allow the switching of load while the substation is energized. This breaker will match the breaker that feeds the north transformer. The breaker has a 54 week lead time.

To cover the costs of this service, BEUD will budget adjust money from Underground Primary, resulting in no change to the BEUD bottom line.



Budget Adjustment Request

Date of City Council Meeting	11/22/2022
Department	Electric
Submitted by	Travis Matlock, PE
Phone	479-271-5941

Purpose of Budget Adjustment <i>(Enter purpose in space below):</i>
Money will be moved from Acct 73-13 (Underground Primary) to pay for the \$76,266.75.

General Ledger Account Information*				
Org (Department)	Object	Account Description	Revenue + (-)	Expense + (-)
503010 - Electric	47313	Underground Primary		\$ (76,266.75)
503010 - Electric	47210	Plants and Building		\$ 76,266.75
		Totals	\$ -	\$ -
		Net Impact on Fund Balance	\$ -	
*Final Account Number will be determined by Accounting Department after approval and purchase				





Grid Solutions



City of Bentonville

November 3, 2022

GE Proposal Number – AR-OP22061346542 – Revision 2

GE Grid Solutions, LLC

One Power Lane

Charleroi, PA 15022

USA

www.GEGridSolutions.com

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1 Executive Summary

City of Bentonville
Attn: Lauren Haislup

Thank you for your interest in GE Grid Solutions, LLC for the reference opportunity. We are pleased to submit the enclosed proposal for your consideration in accordance with the specification provided and the noted comments, clarifications, and exceptions.

Grid Solutions is an industry leading manufacturer of high voltage circuit breakers with R&D and manufacturing facilities located in Charleroi, Pennsylvania. Our facility is the Competence Center for research and development, testing, and manufacturing of dead tank circuit breakers for worldwide distribution and is certified to ISO 9001-2015 and ISO 14001-2015.

The factory has manufactured and delivered over 32,000 breakers since 1995 to locations all over the world. In addition to the product offered herein, we have a complete range of dead tank circuit breakers, live tank circuit breakers and circuit switchers to meet your needs now and into the future.

Our uniquely qualified team includes industry leaders with decades of experience in the transmission and distribution world as well as the high voltage circuit breaker industry. The members of the Grid Solutions team are available at any time and are dedicated together with our Charleroi staff of over 200 employees to providing you best in industry service and support.

We once again thank you for this opportunity to submit an offer and look forward to answering any questions which arise while reviewing our proposal.

Sincerely,

George Muchesko
Lead Sales & Proposal Manager
Phone: 724-483-7874
Email: George.Muchesko@ge.com

2 Proposal

Item #1

One (1) 170 kV Dead Tank Circuit Breakers according to ANSI/IEEE standards for outdoor installation with mechanical spring operating mechanisms including support structures:

▪ Type	DT1-170 FK F1
▪ Rated Nominal Voltage	161 kV
▪ Rated Maximum Voltage	170 kV
▪ Frequency	60 Hz
▪ First Pole to Clear Factor	1.3
▪ Rated Continuous Current	1200 A (up to 2000 A)
▪ Rated Short-Circuit Current	40 kA
▪ BIL	750 kV
▪ Creep Distance / Material / Color	177" / Composite / Gray
▪ Insulating Medium	SF ₆ - Included for 1 st Fill
▪ Interrupting Time	3 cycles
▪ High-Speed Auto-Reclosure	3 phase, Gang Operated
▪ Current Transformers	(12) 1200:5 MR C800, TRF 2.0
▪ Cabinet Enclosure Rating / Material	NEMA 3R / Painted Steel
▪ Ambient Temperature	-30°C to +50°C without tank heaters
▪ Seismic Rating	Per IEEE 693-2005 Low
▪ Altitude	≤ 3,300' ASL
▪ Control Voltage / Range	125 VDC / (T) 70-140 VDC - (C) 90-140 VDC
▪ Motor Voltage	120 VAC / 125 VDC
▪ Alternate Current Circuit (Lighting / Heating):	120 VAC / 240 VAC

Unit Price: **\$67,950.00 - USD, FOB Jobsite, AR**

***SF6 Gas Surcharge per breaker:** **\$1,700.00 – USD**

Total Unit Price: **\$69,650.00 – USD, FOB Jobsite, AR**

***SF6 Surcharge:** The price of Sulfur Hexafluoride is subject to the enclosed surcharge due to global events that have affected cost and availability.

3 Spare Parts, Special Tools & Service

Item #	Parts Description	DT1-170 FK F1
		Price per unit in USD
a	(1) Trip Coil or (1) Close Coil	\$125.-
b	(1) Spring Charge Motor	\$625.-

Prices of spare parts are valid only when ordered and delivered with the circuit breaker.

It's recommended for emergency purposes to purchase and stock a spare charging motor, trip coil and close

Special Tools

No special tools are necessary for installation or maintenance of the breakers. We do recommend, however, having one (1) of each of the following SF₆ handling tools on site:

- Gas regulator and fill hose set One (1) per breaker type per order included
- Doble Transducer Bracket One (1) per breaker type per order included

Field Service

A field service representative is not included in the base price of the circuit breakers. If service is required, pricing information is listed below.

- Initial Trip (airfare & travel time) \$4,250.00 - USD
- Eight (8) hour day (time, lodging, meals & local transportation) \$2,250.00 - USD

4 Comments, Clarifications, and Exceptions

- This offer is made in accordance with the attached Terms and Conditions for Sale of Products and Services Form EM 104 (Grid Solutions). However, GE Grid Solutions, LLC is open to negotiation of the Terms and Conditions.
- The quoted circuit breaker will be similar to the previous order PO 22200757 for the City of Bentonville, see the attached drawings for details.

5 Commercial Terms of Sale

Validity:	Thirty (30) days after the date of this proposal.
Delivery:	Standard delivery is between fifty-four (54) to fifty-eight (58) weeks after receipt of order (ARO). All orders are subject to prior factory loading and material availability at the time of purchase order placement. All orders are subject to PO delivery date no later than 10 weeks after the quoted lead time. Longer delivery schedules are subject to the enclosed price escalation.
Delivery Note:	Delivery is based upon customer return of approved drawings in two (2) weeks. Drawings will be submitted for approval between four (4) to six (6) weeks after receipt of order.
Shipping Point:	Charleroi, Pennsylvania, USA.
PO Remittance:	GE Grid Solutions, LLC., One Power Lane, Charleroi, PA 15022.
Terms of Delivery:	Pricing is firm in USD, FOB Jobsite (DDP per INCOTERMS 2020), pre-paid and allowed. Shipment to destination is limited to sites accessible by the vehicle in which the unit ships from the factory. Unloading is to be provided by others.
Payment Conditions:	100% Net 30 days after drawing submittal. All Payments by wire transfer.
Instruction Manuals:	One instruction book is shipped inside the control cabinet of the breaker. Remaining instruction books will ship within two weeks of breaker shipment.
Warranty:	Twelve (12) months after installation, not to exceed eighteen (18) months after delivery. Warranties exclude wear and tear associated with normal circuit breaker operation, circuit breakers used in special applications not covered by ANSI/IEEE C37.04, and circuit breakers that have exceeded the maximum allowable cumulated current. Warranties are based on strict accordance with the maintenance instructions found in the breaker manual.
Liquidated Damages:	Provisions for liquidated damages are not included in this offer.
Sales Tax:	This offer does not include any sales tax (federal, state or local).
Damages:	The manufacturer shall not be liable for consequential or indirect damages such as loss of use, profit, contract, production, or any financial loss. In addition, the total liability is limited to a maximum of the contract value. The right for technical modifications is reserved.

Cancellation: In the event of order cancellation, a payment will be due based on the table below.

Schedule (based on EXW factory)	Cancellation Charge
	(% of contract value)
0 – 2 weeks after receipt of order	5.0%
2 – 4 weeks after receipt of order	10.0%
30+ weeks before shipment	15.0%
24 – 30 weeks before shipment	15.0%
20 – 24 weeks before shipment	20.0%
16 – 20 weeks before shipment	40.0%
8 – 16 weeks before shipment	60.0%
4 – 8 weeks before shipment	80.0%
0 – 4 weeks before shipment	100.0%

Delays: In case of delay, a progress payment will be due based on the table below and subject to price escalation

28+ weeks before delivery	0.0%
24 – 28 weeks before shipment	5.0%
16 – 24 weeks before shipment	10.0%
14 – 16 weeks before shipment	15.0%
8 – 14 weeks before shipment	25.0%
4 – 8 weeks before shipment	70.0%
0 – 4 weeks before shipment	100% plus Storage Fees. Short term storage of up to 4 weeks is \$750 per breaker per week ($\leq 245\text{kV}$). Storage fees in excess of 4 weeks and for $>245\text{kV}$ will be quoted at the time of request.

Seller is entitled to adjust contract price based on public indices, if any change of delivery time required by contractor for more than 30 days

Price Escalation:

Prices subject to escalation will be adjusted based on the price escalation formula shown below and utilizing the latest data for the listed indices from the US Bureau of Labor Statistics website <http://data.bls.gov/cgi-bin/srgate> as listed herein and with reference to the original date of this proposal.

$$PA = \frac{[PCa \times \frac{a2}{a1} + PCb \times \frac{b2}{b1} + PCc \times \frac{c2}{c1} + PCd \times \frac{d2}{d1} + PCE \times \frac{e2}{e1} + PCf \times \frac{f2}{f1} + PCg \times \frac{g2}{g1} + PCh \times \frac{h2}{h1} + PCi \times \frac{i2}{i1}]}{100}$$

Porcelain bushing insulators:

	BLS Series ID	Series Title	PC Content %		1 Month Year	2 Month Year	% change
a	WPU102802	Aluminum castings	20.0%	PCa	a1	a2	
b	PCU33211133211111	Hot impression die impact, press, and upset carbon steel forgings	8.0%	PVb	b1	b2	
c	PCU335929335929A	Electronic wire and cable, made of nonferrous metals	3.0%	PCc	c1	c2	
d	PCU3271103271107	Porcelain, steatite, and other ceramic electrical products	12.0%	PCd	d1	d2	
e	CEU0500000008	Average hourly earnings of production workers	12.0%	PCe	e1	e2	
f	PCU335314335314	Relay and industrial control mfg	2.0%	PCf	f1	f2	
g	PCU4842304842306	Specialized freight (except used goods) trucking, long-distance	10.0%	PCg	g1	g2	
h	PCU335311335311	Electric power and specialty transformer mfg (BCTs)	8.0%	PCh	h1	h2	
i	PCU335313335313	Switchgear and switchboard apparatus mfg	20.0%	Pci	i1	i2	
j		Fixed	5.0%	PCj			
			100.0%	Price Adjustment (PA) = PA			

Composite bushing insulators:

	BLS Series ID	Series Title	PC Content %		1 Month Year	2 Month Year	% change
a	WPU102802	Aluminum castings	20.0%	PCa	a1	a2	
b	PCU33211133211111	Hot impression die impact, press, and upset carbon steel forgings	8.0%	PVb	b1	b2	
c	PCU335929335929A	Electronic wire and cable, made of nonferrous metals	3.0%	PCc	c1	c2	
d	PCU325991325991P	Custom compounding of purchased resins (Comp Insulators)	12.0%	PCd	d1	d2	
e	CEU0500000008	Average hourly earnings of production workers	12.0%	PCe	e1	e2	
f	PCU335314335314	Relay and industrial control mfg	2.0%	PCf	f1	f2	
g	PCU4842304842306	Specialized freight (except used goods) trucking, long-distance	10.0%	PCg	g1	g2	
h	PCU335311335311	Electric power and specialty transformer mfg (BCTs)	8.0%	PCh	h1	h2	
i	PCU335313335313	Switchgear and switchboard apparatus mfg	20.0%	Pci	i1	i2	
j		Fixed	5.0%	PCj			
			100%	Price Adjustment (PA) = PA			

Hardship:

If due to an event that is beyond the Seller's reasonable control and which it could not reasonably have been expected to have taken into account at the time of the submission of the Offer (which will include for the avoidance of doubt the evolution of any event that was pre-existing at the time of submission of the Offer but which impact was not capable of being properly assessed), the Seller shall be entitled to request revision of the prices and, as applicable, of the other conditions of its Offer to take into account the consequences of the above mentioned event. In the case where the Buyer would not permit the Seller to revise and update its Offer, the Seller shall be entitled, subject to written notice to the Buyer, to withdraw its Offer without liability to the Buyer. Buyer is hereby informed that the consequences that the conflict in Ukraine and its future evolutions may have on prices and availability of raw materials, manpower, component, transport and logistics and any other components of the scope of the Offer shall be considered for the purpose of this provision."

During contract execution, in case the Contract does not comprise a price escalation mechanism and if a Party can demonstrate that the continued performance of its contractual obligations has become excessively onerous due to a Force Majeure event (as defined in the contract and which will include evolution of any event pre-existing at the time of signature of the Contract), the Parties are bound, within a reasonable time of written notice by one Party to the other, to negotiate alternative contractual terms or a mitigation plan which reasonably permit the consequences of the event to be mitigated or the restoration of the balance that was pre-existing at the signature of the Contract between the Parties. The Party serving notice under this Clause shall provide the other Party with as much commercially available details of the event or events affecting that Party's contractual obligations, the affected obligations themselves and how and to which extent these events are (and will be) affecting the performance of the Contract. The Parties shall act in the spirit of openness and transparency in this communication within the limits set by applicable antitrust laws and regulations. Where an agreement is reached, the Parties shall start implementing the agreed measures immediately, pending the signature of the relevant amendment to the Contract. In the event the Parties are unable to agree on alternative contractual terms or on a mitigation plan as provided above within fifteen (15) days of the written notice, and in the absence of any other agreement, the Party serving notice under this Clause will be entitled to either suspend its performance of the affected portion of the Contract, or to terminate the Contract, without any liability to the other party. If the Contract is suspended for a period greater than 60 consecutive days by that Party, either Party may terminate the Contract by sending written notice of termination to the other Party. In case of termination of the Contract hereunder, the Parties shall settle their accounts accordingly as if the Contract had been terminated through no fault of the Parties, without prejudice to any Party's right to pursue a dispute in accordance to the dispute resolution mechanism set forth in the contract.

COVID-19:

The impacts of Coronavirus cannot be reasonably determined at this time. This proposal does not account for any potential adverse impacts of Coronavirus on GE's performance of obligations. In the event of any delays and adverse impacts, GE reserves the right for an equitable adjustment of the schedule and prices herein to offset the effects of Coronavirus delays.

6 Attachments

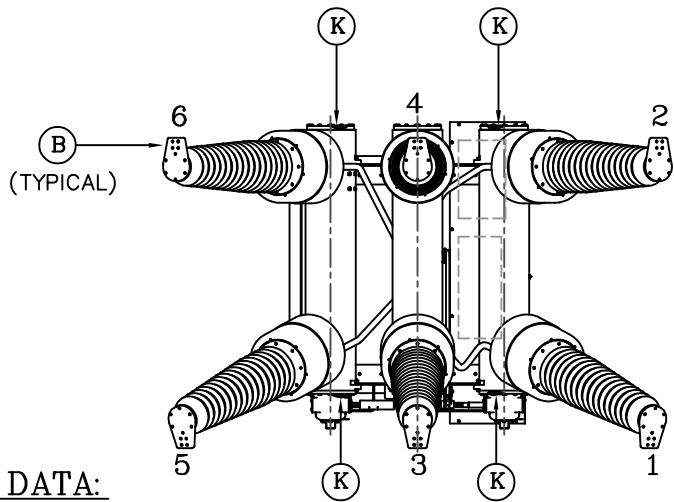
- DT1-170 FK F1 Sample Outline Drawing & Wiring Schematic
- DT1-170 FK Product Brochure
- Grid Solutions High Voltage Circuit Breaker Line Card
- Terms and Conditions for Sale of Products and Services Form EM 104 (Grid Solutions)

A

B

C

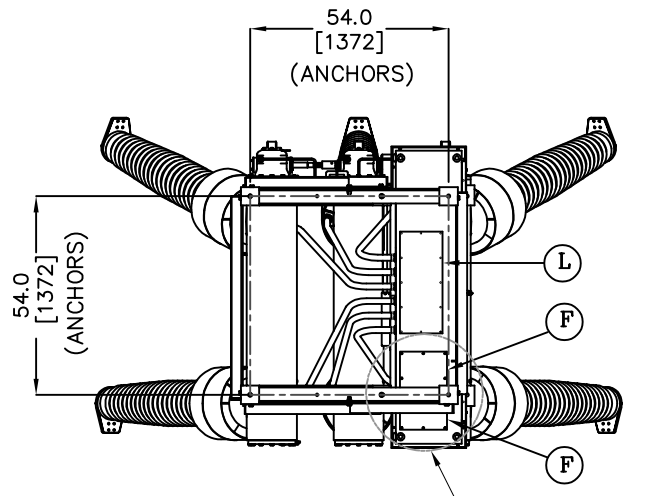
D



BUSHING DATA:

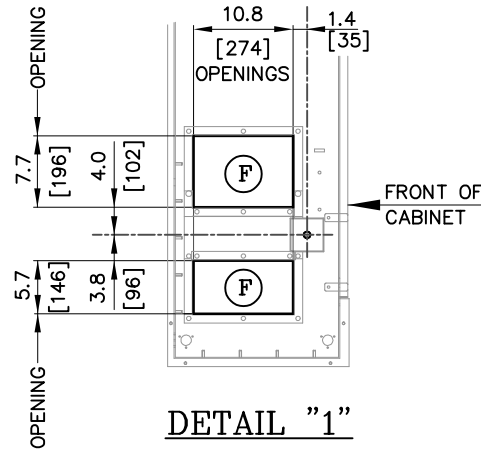
CREEPAGE: 177.4" (4505 mm)
STRIKE DISTANCE: 51.4" (1305 mm)
MATERIAL: COMPOSITE
COLOR: ANSI 70 GRAY

TOP VIEW



BOTTOM VIEW

SEE DETAIL "1"
(THIS DRAWING)

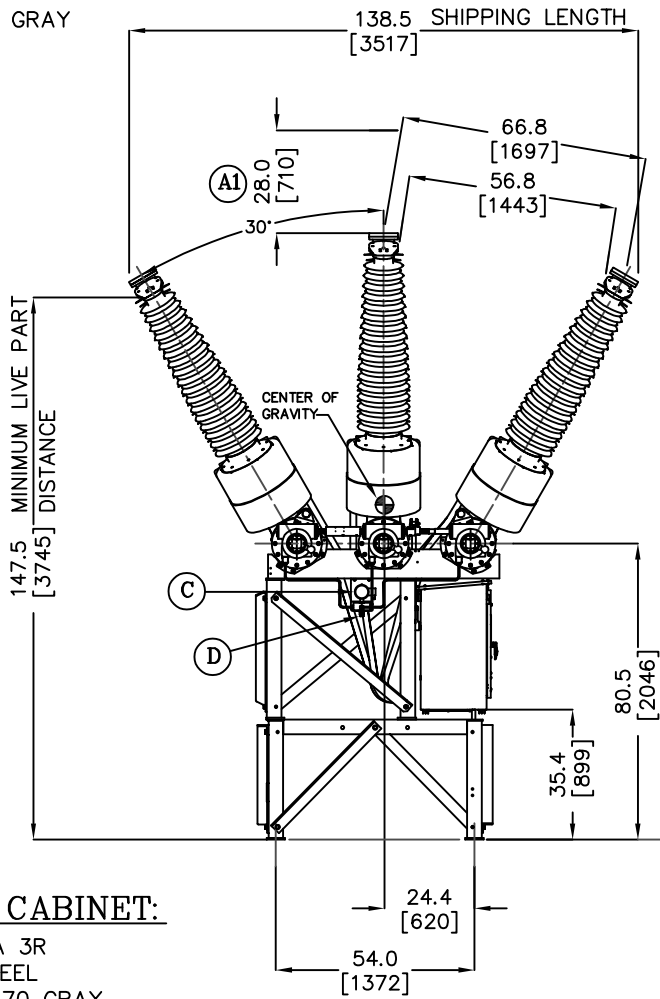


DETAIL "1"

BOTTOM VIEW
(CABLE ENTRANCE OPENINGS)

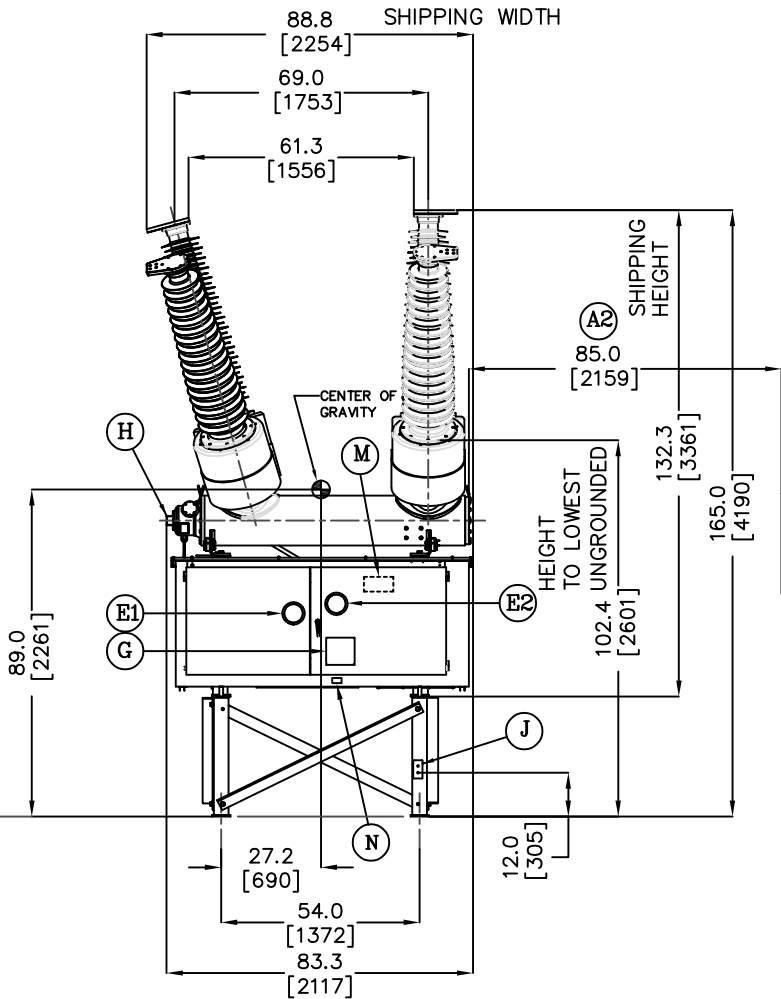
LEGEND:

- A1 -- MINIMUM DISTANCE FOR BUSHING REMOVAL: 28.0" (710 mm)
- A2 -- MINIMUM DISTANCE FOR INTERRUPTER REMOVAL: 85.0" (2159 mm)
- B -- NEMA 4 HOLE TERMINAL PAD
- C -- SF6 DENSITY MONITOR
- D -- SF6 FILL VALVE
- E1 -- CHARGED/DISCHARGE INDICATORS
- E2 -- OPEN/CLOSE INDICATORS & COUNTER
- F -- CABLE ENTRANCE
- G -- RATINGS NAME PLATE (EXTERNAL)
- H -- PRESSURE RELIEF DEVICE
- J -- NEMA 2 GROUND PAD (DIAMETRICALLY OPPOSED)
- K -- LIFTING LOCATIONS
- L -- MECHANISM ACCESS
- M -- BCT NAMEPLATE (INTERNAL)
- N -- EXTERNAL GFI RECEPTACLE



CONTROL CABINET:

RATING: NEMA 3R
MATERIAL: STEEL
COLOR: ANSI 70 GRAY



3,249 lbs. (1,474 kg) -- WEIGHT OF BREAKER
76 lbs. (34 kg) -- WEIGHT OF SF6 GAS
1,740 lbs. (790 kg) -- WEIGHT OF BCTs
5,065 lbs. (2,298 kg) -- TOTAL WEIGHT OF BREAKER

TYPE:	DT1-170FK-40-F1
IMPULSE WITHSTAND:	750 kV
MAXIMUM VOLTAGE:	170 kV
INTERRUPTER CURRENT RATING:	40 kA
CURRENT RATING:	1200 A

DIMESIONS: $\frac{\text{INCHES}}{\text{mm}}$

NOTES:

- 1) FOUR (4) $\phi 3/4"$ [19 mm] ANCHOR BOLTS (ASTM A 36 OR GREATER). ANCHOR BOLTS SHOWN FOR INFORMATION ONLY. NOT INCLUDED IN GE SCOPE OF WORK.
- 2) 3.0" [76 mm] MINIMUM PROJECTION ABOVE FOUNDATION.
- 3) ANCHORING TO BE SUPPLIED BY CUSTOMER.
- 4) FOUNDATION TO BE LEVEL WITHIN 0.25" [6 mm] AT FOUR (4) BASEPLATES.
- 5) SHIM AND GROUT AS REQUIRED.
- 6) RATED SEISMIC LEVEL 0.2g OF RRS PER IEEE 693
- 7) OPERATIONAL FORCES IN ANY DIRECTION = 1112N (250 lbf)
- 8) HV TERMINAL STATIC HORIZONTAL FORCE (LONGITUDINAL) = 1250N (281 lbf)
- 9) HV TERMINAL STATIC HORIZONTAL FORCE (TRANSVERSE) = 750N (169 lbf)
- 10) HV TERMINAL STATIC VERTICAL FORCE = 1000N (225 lbf)
- 11) CENTER OF GRAVITY DIMENSIONS ARE APPROXIMATE ONLY. DIMENSIONS CAN VARY DUE TO BUSHINGS, ADDITIONAL BRACING, BCTs AND BREAKER HEIGHT.

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE
CUSTOMER ORDER No.: 22200757
SUBSTATION: SUBSTATION E
SERIAL No.: 3595560010001

MATERIAL ID:
CCDT1-170FK-F1-001

ORDER No.
359556

CUSTOMER EQ. No.:

REV.	DESCRIPTION	DRAWN	CHECKED	DATE
		W. HOLT	A. LISITSA	02/22/2022
		DRAWN	CHECKED	DATE

OUTLINE DRAWING



Grid Solutions
One Power Lane
Charleroi, PA 15022

DRAWING No.:

M359556010

SHT 1 OF 1

A

B

C

D

1

2

3

1

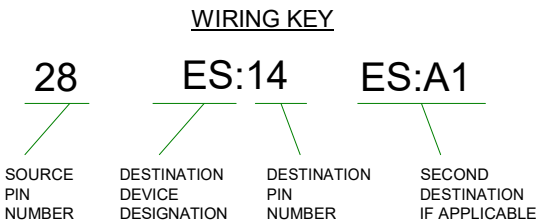
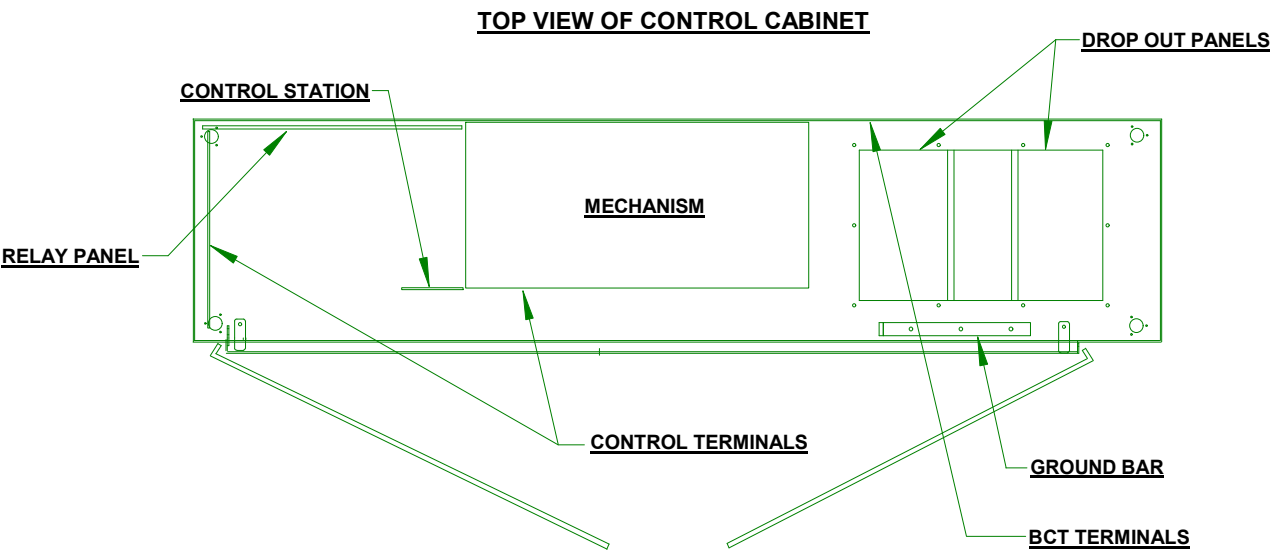
2

3

	CIRCUIT BREAKER		FUSE PULLOUT, SLUGGED
	CABINET LIGHT		INDICATOR LIGHT
	COIL		KNIFE SWITCH
	CONTACT, NORMALLY CLOSED		MOTOR
	CONTACT, NORMALLY OPEN		PUSHBUTTON
	CONNECTOR		RESISTOR/ HEATER
	DENSITY MONITOR		TERMINAL BLOCK
	DOOR SWITCH		TERMINAL BLOCK (AUXILIARY)
	FUSE BLOCK		THERMOSTAT
	FUSE BLOCK, SLUGGED		THERMAL OVERLOAD
	FUSED DISCONNECT		TOGGLE SWITCH
	FUSED DISCONNECT, SLUGGED		TRANSFORMER
	FUSE PULLOUT		

STANDARD ANSI DESIGNATIONS

- 01CS BREAKER CONTROL SWITCH
- 23 THERMOSTAT
- 23X HEATER CONTACTOR
- 27X LOSS OF POWER RELAY
- 30 ANNUNCIATOR
- 37 UNDERCURRENT ALARM
- 43L/R LOCAL REMOTE TRANSFER SWITCH
- 49 MOTOR THERMAL OVERLOAD
- 52a,b BREAKER AUXILIARY SWITCH
- 52C CLOSE PUSHBUTTON
- 52CC BREAKER CLOSE COIL
- 52T TRIP PUSHBUTTON
- 52TC BREAKER TRIP COIL
- 52X CLOSING RELAY
- 52Y ANTIPUMP RELAY
- 52-MON BREAKER CONDITION MONITOR
- 63G SF6 PRESSURE / DENSITY GAUGE
- 63GX SF6 PRESSURE / DENSITY RELAY
- 69 PERMISSIVE CONTROL SWITCH
- 69-KI KEY INTERLOCK
- 74CC CLOSE COIL MONITOR
- 74TC TRIP COIL MONITOR
- 79X RECLOSE DELAY RELAY
- 83X MOTOR TRANSFER CONTACTOR
- 88 MOTOR
- 88F MOTOR FAILURE ALARM
- 88LS MOTOR LIMIT SWITCH
- AIL AMBER INDICATOR LIGHT
- GIL GREEN INDICATOR LIGHT
- HTR HEATER
- RIL RED INDICATOR LIGHT



4

4

						CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE CUSTOMER ORDER No.: 22200757 SUBSTATION: SUBSTATION E SERIAL No.: 3595560010001		MATERIAL ID: CCDT1-170FK-F1-001
								ORDER No. 359556
1	Replaced control relays due to availability issues	226888915	N. BUZZARD	W. HOLT	05/31/2022	CUSTOMER EQ. No.:		SHT 1 OF 13
REV.	DESCRIPTION	ECN NO.	DRAWN BY	CHECKED	DATE			
LEGEND			W. Holt	A. Lisitsa	02/21/2022	 Grid Solutions One Power Lane Charleroi, PA 15022		
			DRAWN	CHECKED	DATE	DRAWING No.: E359556010		

A

B

C

D

A

B

C

D

CLOSE CIRCUIT

TRIP 1 CIRCUIT

TRIP 2 CIRCUIT

1

1

2

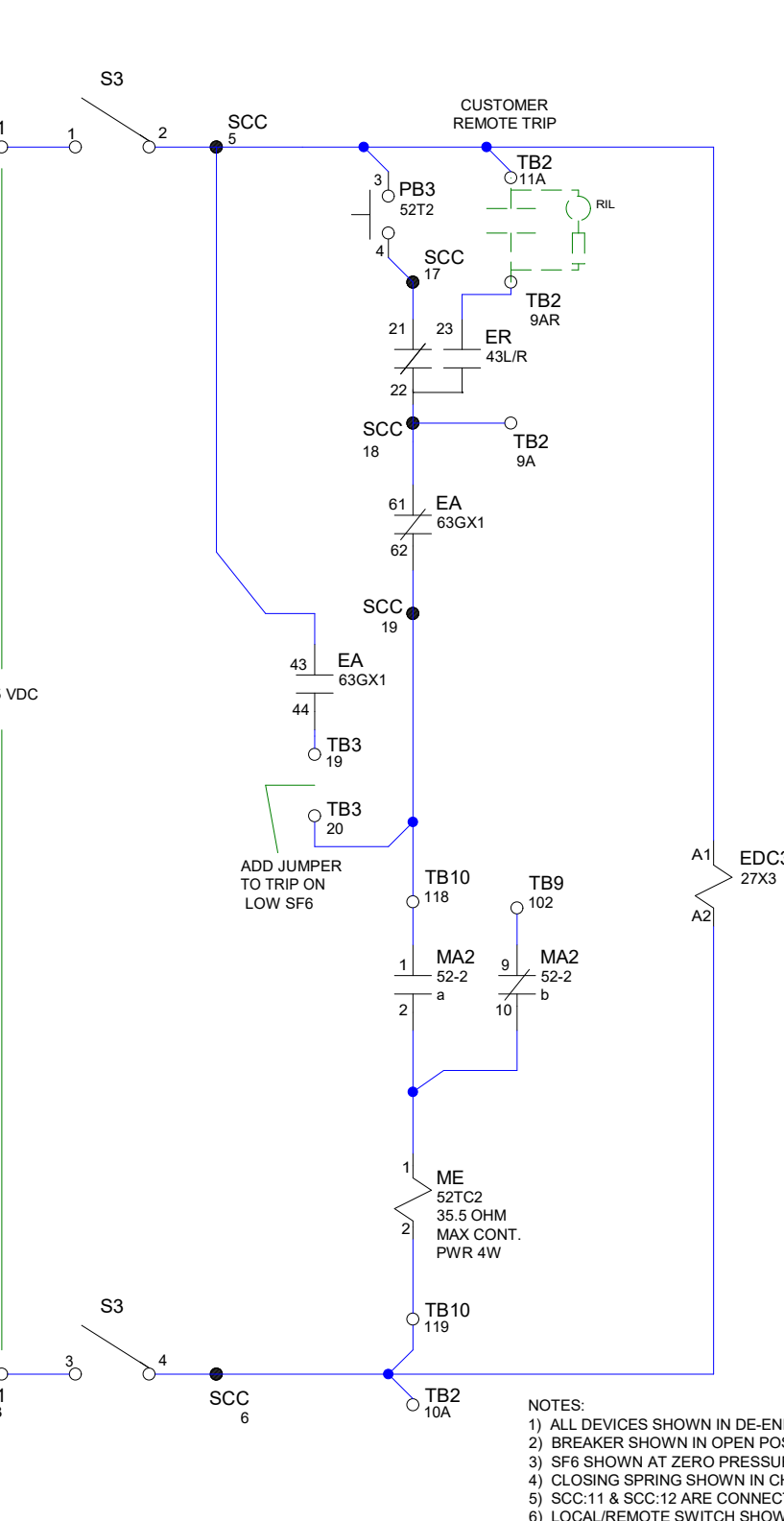
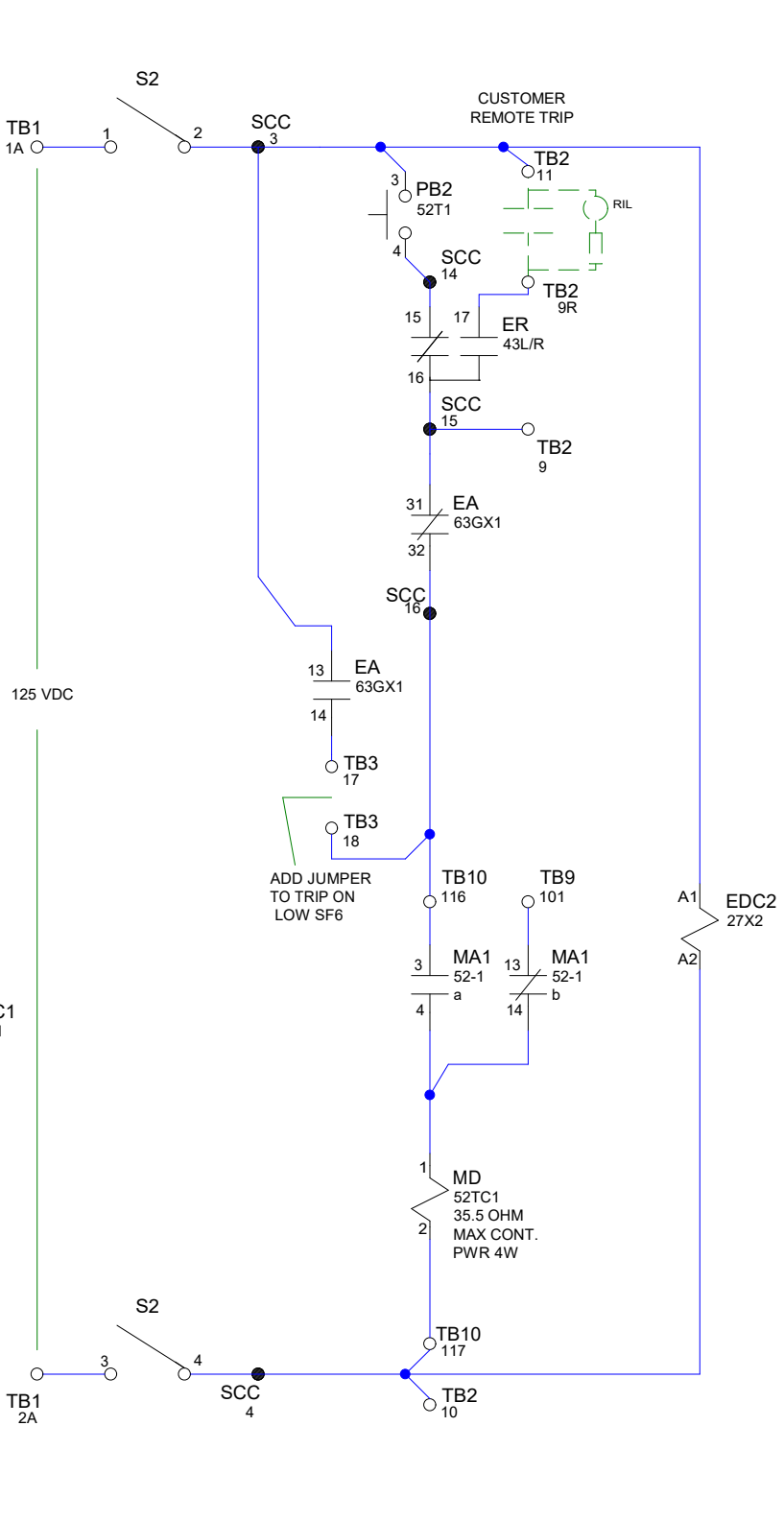
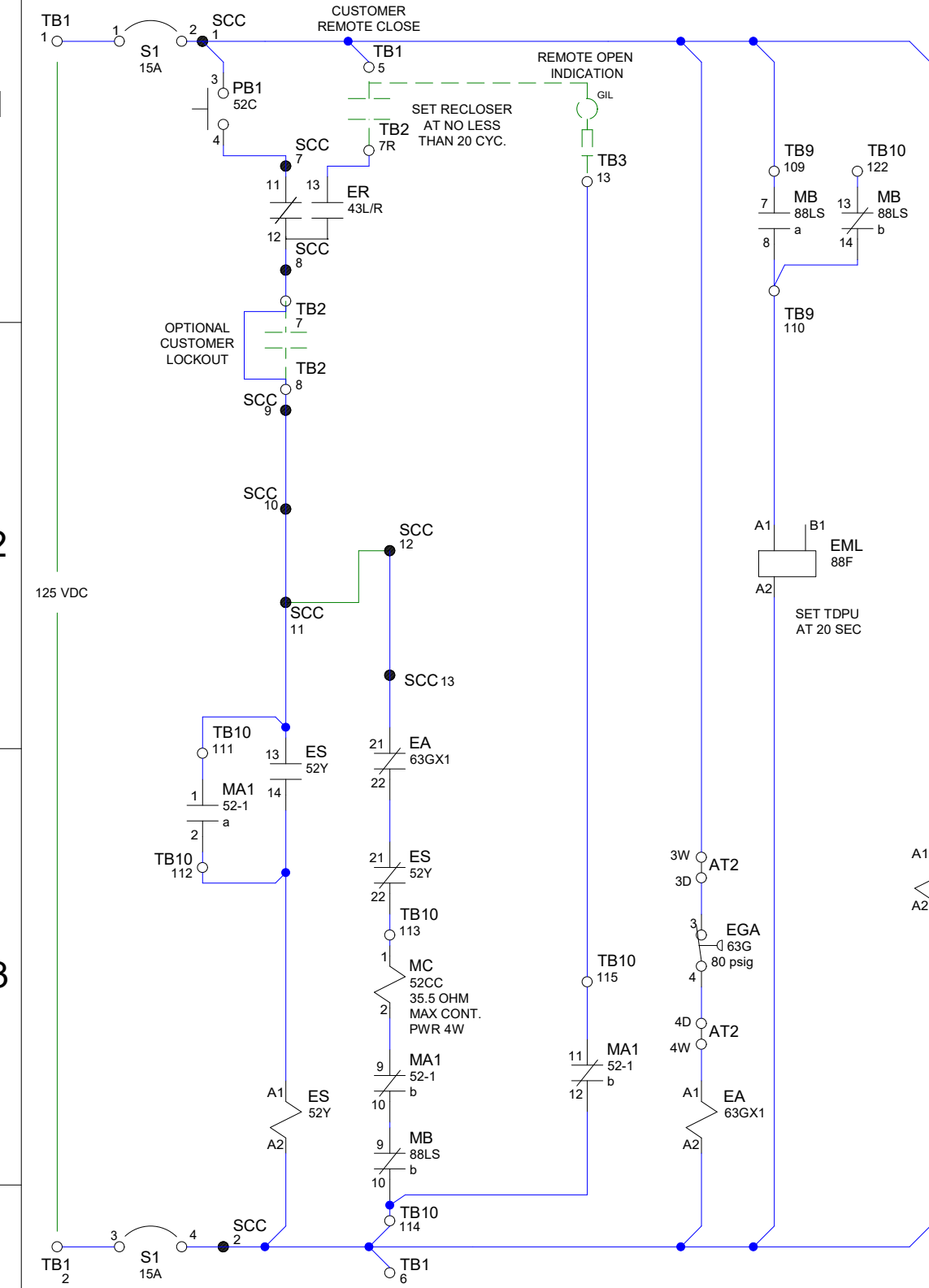
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3

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4

4



- NOTES:
- 1) ALL DEVICES SHOWN IN DE-ENERGIZED POSITION
 - 2) BREAKER SHOWN IN OPEN POSITION
 - 3) SF6 SHOWN AT ZERO PRESSURE
 - 4) CLOSING SPRING SHOWN IN CHARGED POSITION
 - 5) SCC:11 & SCC:12 ARE CONNECTED BY A 2PT SHORTING BAR
 - 6) LOCAL/REMOTE SWITCH SHOWN IN LOCAL POSITION

1	Replaced control relays due to availability issues	226888915	N. BUZZARD	W. HOLT	05/31/2022
REV.	DESCRIPTION	ECN NO.	DRAWN BY	CHECKED	DATE
			W. Holt	A. Lisitsa	02/21/2022
			DRAWN	CHECKED	DATE

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE
CUSTOMER ORDER No.: 22200757
SUBSTATION: SUBSTATION E
SERIAL No.: 3595560010001

CUSTOMER EQ. No.:

MATERIAL ID:
CCDT1-170FK-F1-001

ORDER No.
359556

Grid Solutions
One Power Lane
Charleroi, PA 15022

DRAWING No.: E359556010

SHT 2 OF 13

A

B

C

D

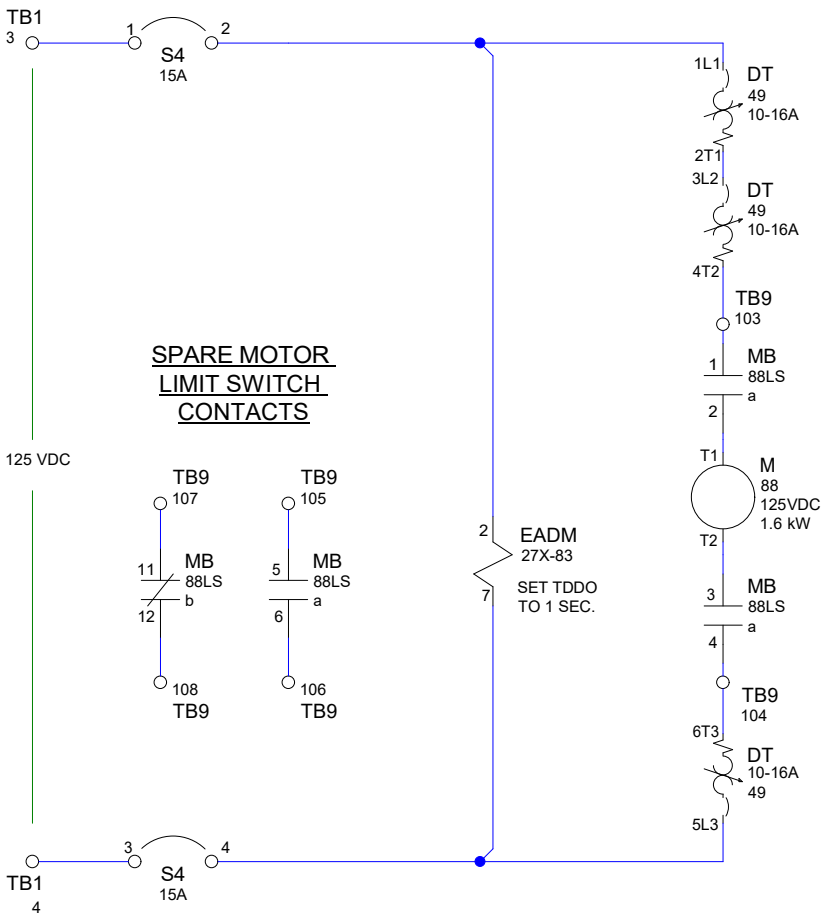
A

B

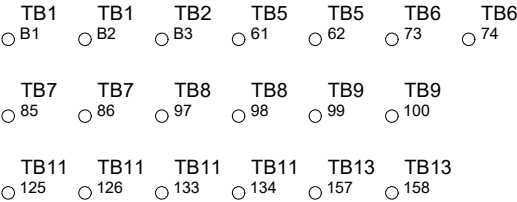
C

D

MOTOR CIRCUIT



SPARE TERMINAL BLOCKS FOR CUSTOMER USE



A

B

C

D

1

1

2

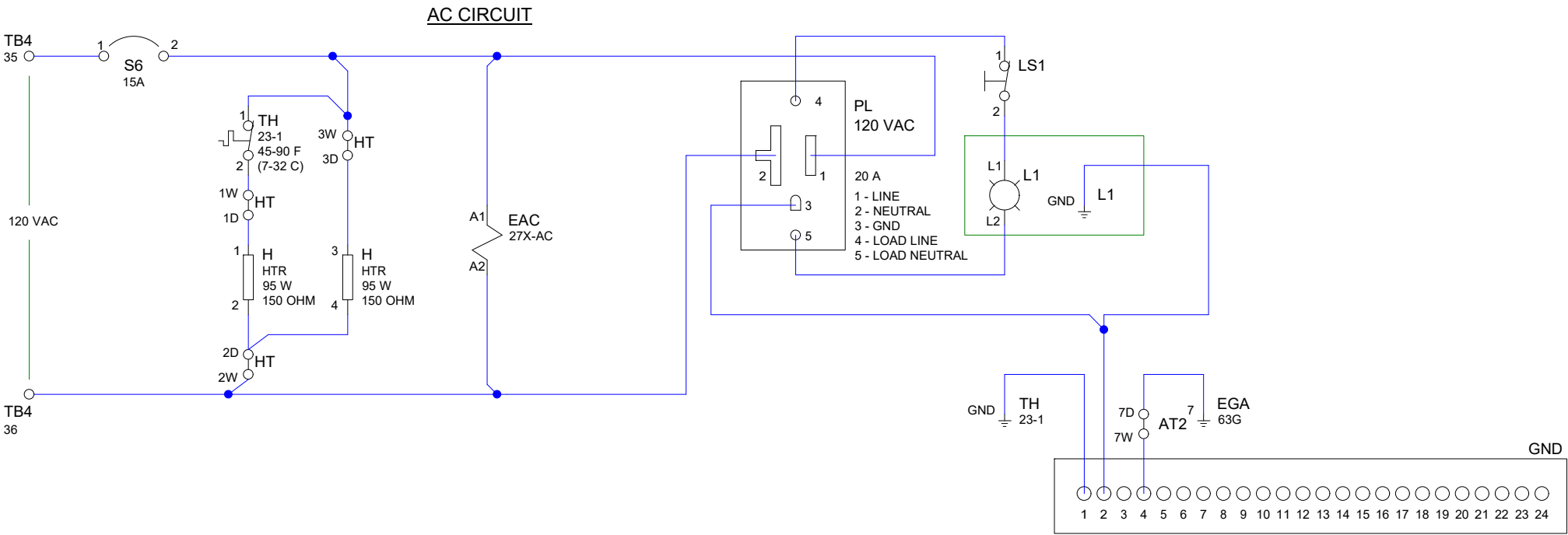
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3

3

4

4



NOTES:
1) ALL DEVICES SHOWN IN DE-ENERGIZED POSITION
2) BREAKER SHOWN IN OPEN POSITION
3) SF6 SHOWN AT ZERO PRESSURE
4) CLOSING SPRING SHOWN IN CHARGED POSITION
5) SCC:11 & SCC:12 ARE CONNECTED BY A 2PT SHORTING BAR
6) LOCAL/REMOTE SWITCH SHOWN IN LOCAL POSITION

1	Replaced control relays due to availability issues	226888915	N. BUZZARD	W. HOLT	05/31/2022
REV.	DESCRIPTION	ECN NO.	DRAWN BY	CHECKED	DATE
AC SCHEMATIC			W. Holt	A. Lisitsa	02/21/2022
			DRAWN	CHECKED	DATE

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE CUSTOMER ORDER No.: 22200757 SUBSTATION: SUBSTATION E SERIAL No.: 3595560010001		MATERIAL ID: CCDT1-170FK-F1-001	
		ORDER No. 359556	
 Grid Solutions One Power Lane Charleroi, PA 15022		DRAWING No.: E359556010	
		SHT 4 OF 13	

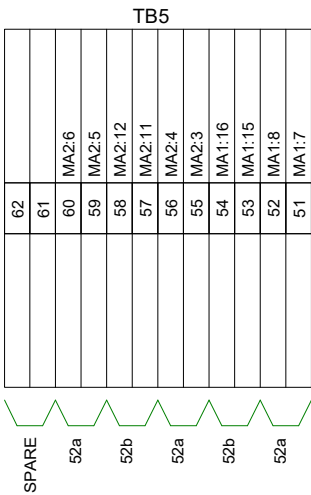
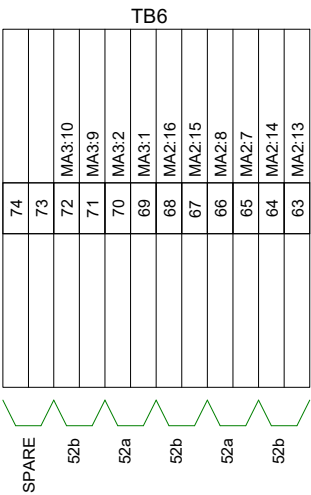
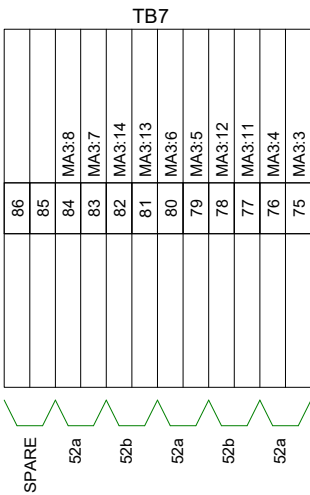
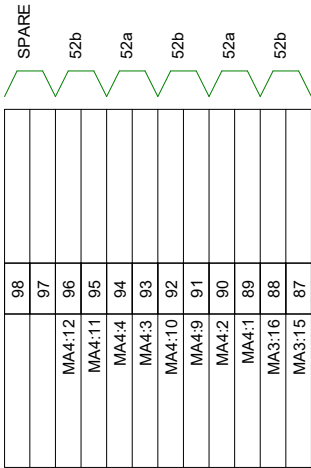
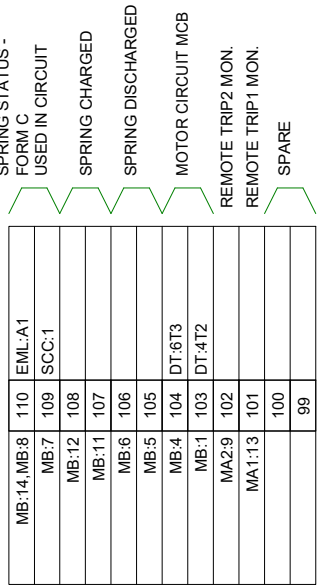
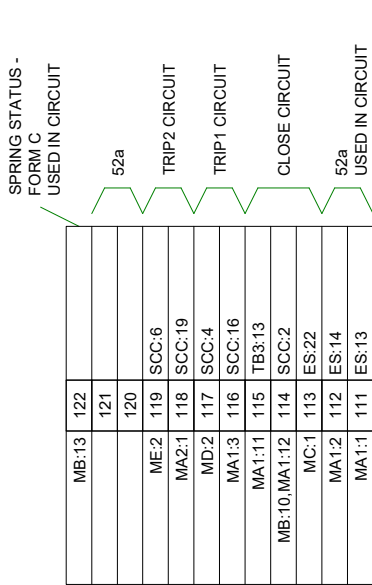
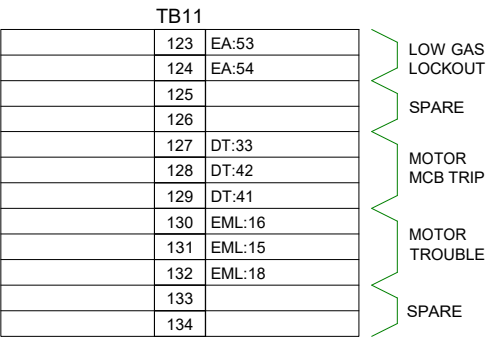
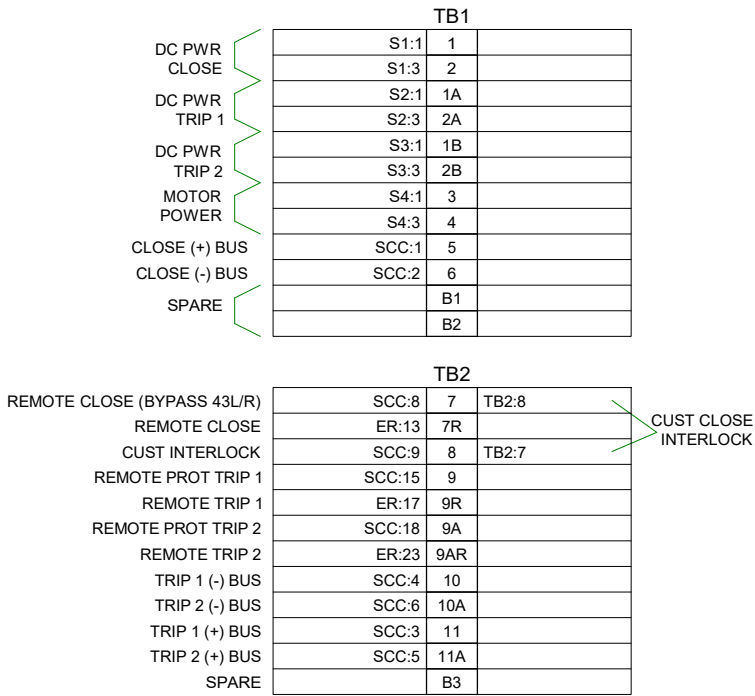
A

B

C

D

TERMINAL BLOCK WIRING



- NOTES:
- 1) DC WIRING TO BE 14GA GRAY SIS VW1
 - 2) AC WIRING TO BE 12GA GRAY SIS VW1
 - 3) ALL GROUND WIRES TO BE 14GA GREEN SIS VW1
 - 4) WIRE MARKERS TO BE SHRINK-TYPE AND TO SHOW SAME-END/OPPOSITE-END DESIGNATION
 - 5) WIRE LUGS ARE TO BE INSULATED RING-TYPE (EXCEPT FOR DEVICES THAT DO NOT ACCEPT RING-TYPE TERMINALS)
 - 6) SCC:11 & SCC:12 ARE CONNECTED BY A 2PT SHORTING BAR

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE
CUSTOMER ORDER No.: 22200757
SUBSTATION: SUBSTATION E
SERIAL No.: 3595560010001

MATERIAL ID:
CCDT1-170FK-F1-001

ORDER No.
359556

TERMINAL BLOCK WIRING DIAGRAM

A

B

C

D



Grid Solutions
One Power Lane
Charleroi, PA 15022

DRAWING No.: E359556010

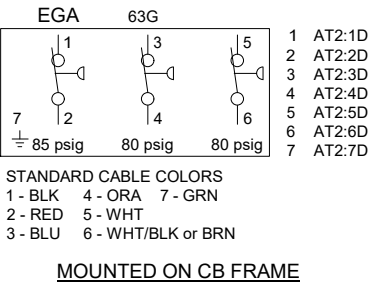
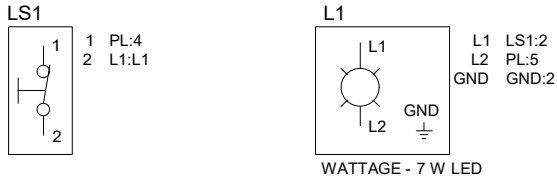
SHT 5 OF 13

A

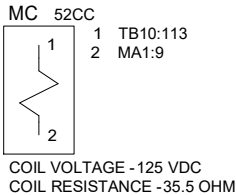
B

C

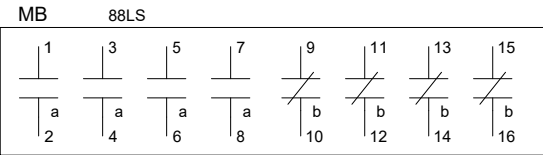
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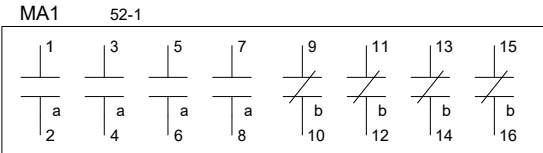
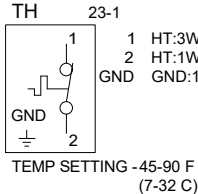
MECHANISM WIRING



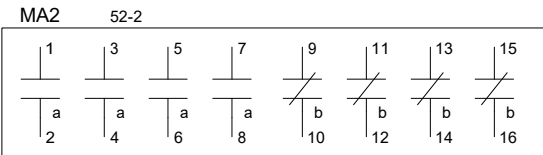
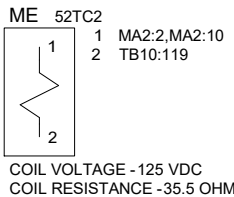
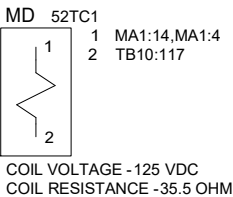
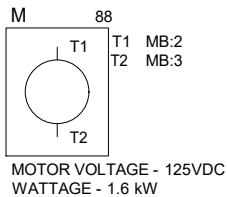
DECK	CONTACTS FRONT END	SWITCH POSITION	
		LOCAL	REMOTE
1	12°	X	
	16°		X
2	22°	X	
	26°		X
3	32°	X	
	36°		X



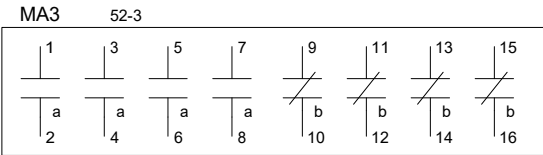
9 MA1:10
10 TB10:114
11 TB9:107
12 TB9:108
13 TB10:122
14 TB9:110



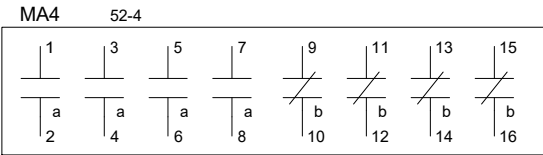
11 TB10:115
12 TB10:114
13 TB9:101
14 MD:1
15 TB5:53
16 TB5:54



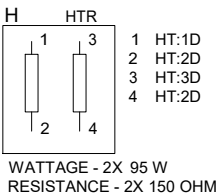
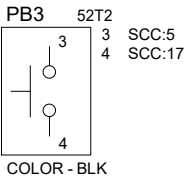
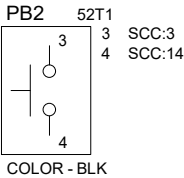
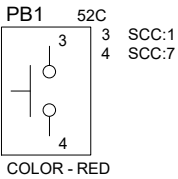
9 TB9:102
10 ME:1
11 TB5:57
12 TB5:58
13 TB6:63
14 TB6:64
15 TB6:67
16 TB6:68



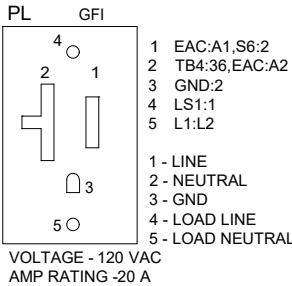
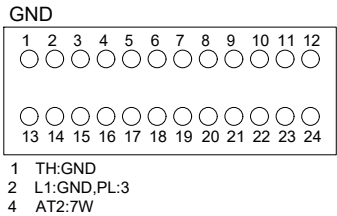
9 TB6:71
10 TB6:72
11 TB7:77
12 TB7:78
13 TB7:81
14 TB7:82
15 TB8:87
16 TB8:88



1 TB8:89
2 TB8:90
3 TB8:93
4 TB8:94
9 TB8:91
10 TB8:92
11 TB8:95
12 TB8:96



HT			
H:1	1D	1W	TH:2
H:4,H:2	2D	2W	TB4:36
H:3	3D	3W	S6:2,TH:1
	4D	4W	
	5D	5W	
	6D	6W	



- NOTES:
- 1) DC WIRING TO BE 14GA GRAY SIS VW1
 - 2) AC WIRING TO BE 12GA GRAY SIS VW1
 - 3) ALL GROUND WIRES TO BE 14GA GREEN SIS VW1
 - 4) WIRE MARKERS TO BE SHRINK-TYPE AND TO SHOW SAME-END/OPPOSITE-END DESIGNATION
 - 5) WIRE LUGS ARE TO BE INSULATED RING-TYPE (EXCEPT FOR DEVICES THAT DO NOT ACCEPT RING-TYPE TERMINALS)
 - 6) SCC:11 & SCC:12 ARE CONNECTED BY A 2PT SHORTING BAR

4

REV.	DESCRIPTION	ECN NO.	DRAWN BY	CHECKED	DATE
1	Replaced control relays due to availability issues	226888915	N. BUZZARD	W. HOLT	05/31/2022

MECHANISM AND CONTROL STATION WIRING DIAGRAM

W. Holt	A. Lisitsa	02/21/2022
DRAWN	CHECKED	DATE

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE
CUSTOMER ORDER No.: 22200757
SUBSTATION: SUBSTATION E
SERIAL No.: 3595560010001

CUSTOMER EQ. No.:



Grid Solutions
One Power Lane
Charleroi, PA 15022

DRAWING No.: E359556010

MATERIAL ID:
CCDT1-170FK-F1-001

ORDER No.
359556

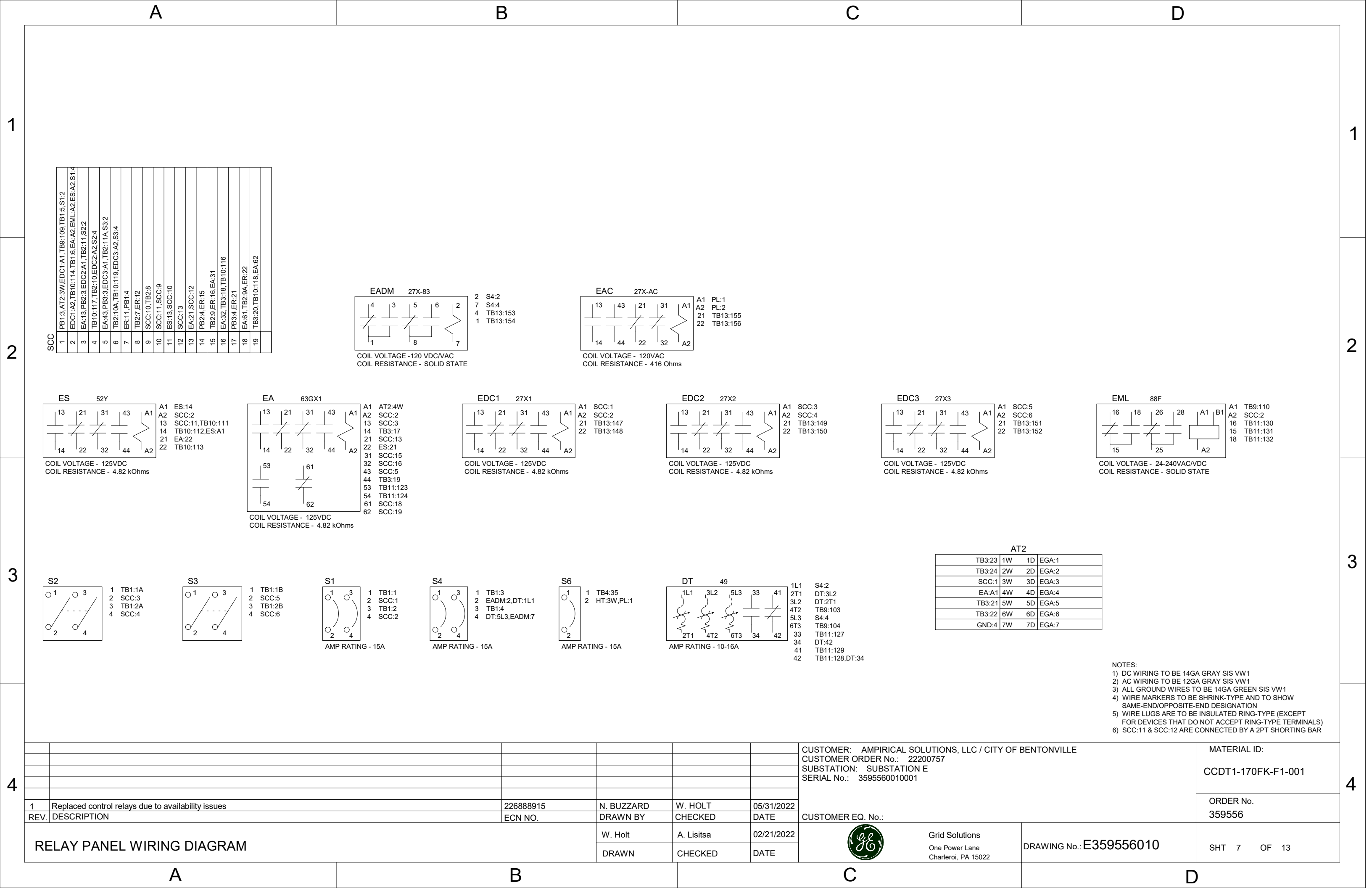
SHT 6 OF 13

A

B

C

D

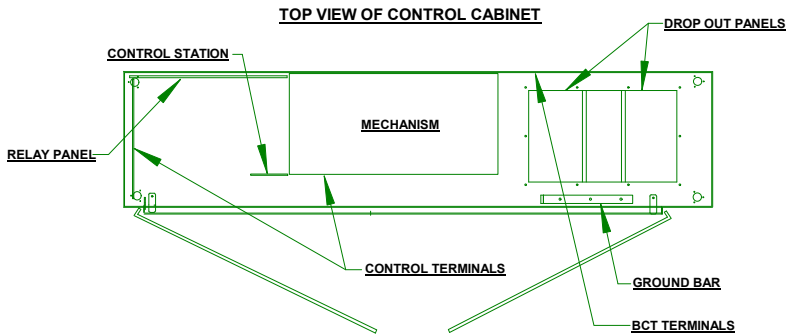


A

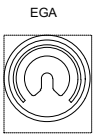
B

C

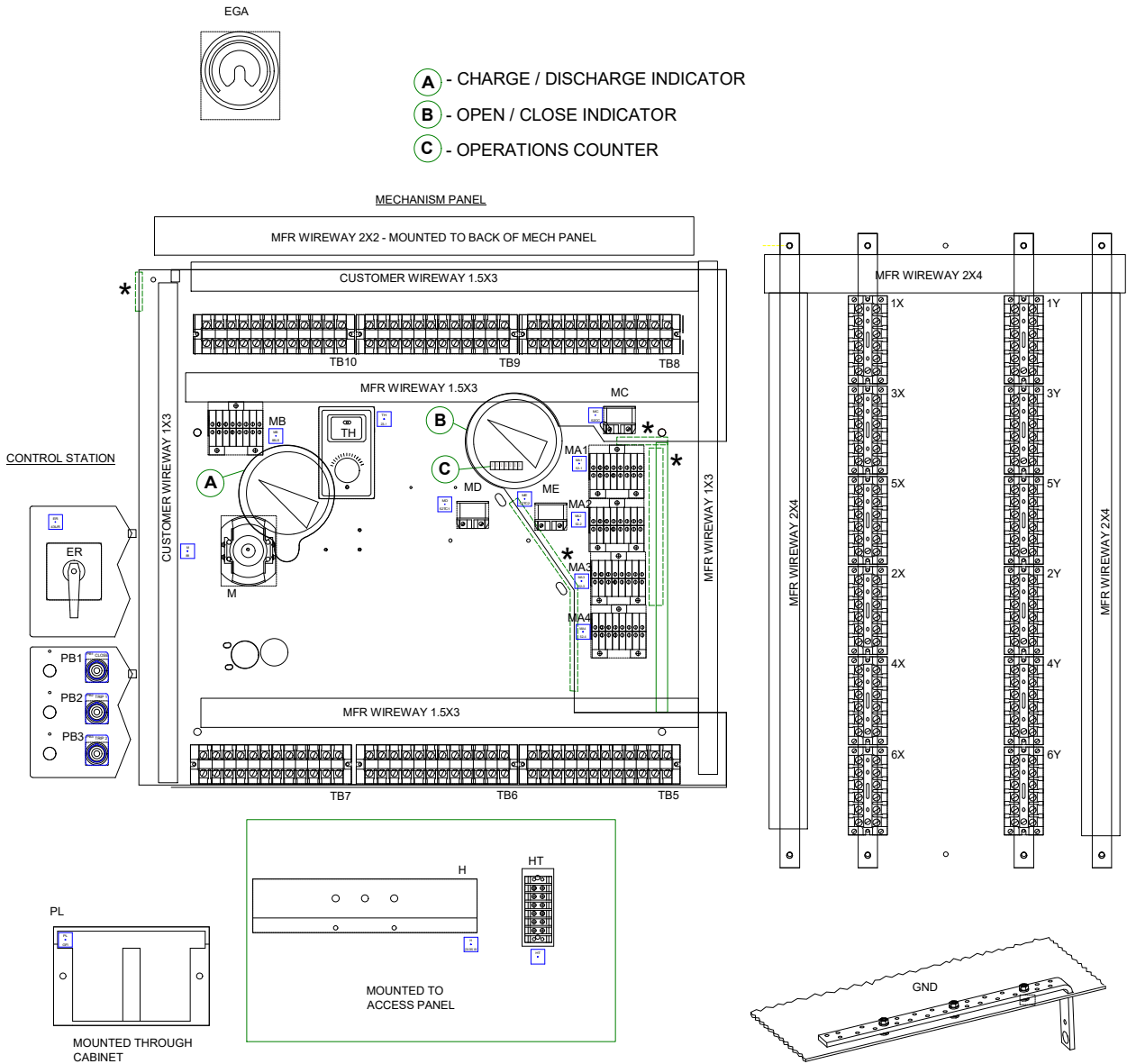
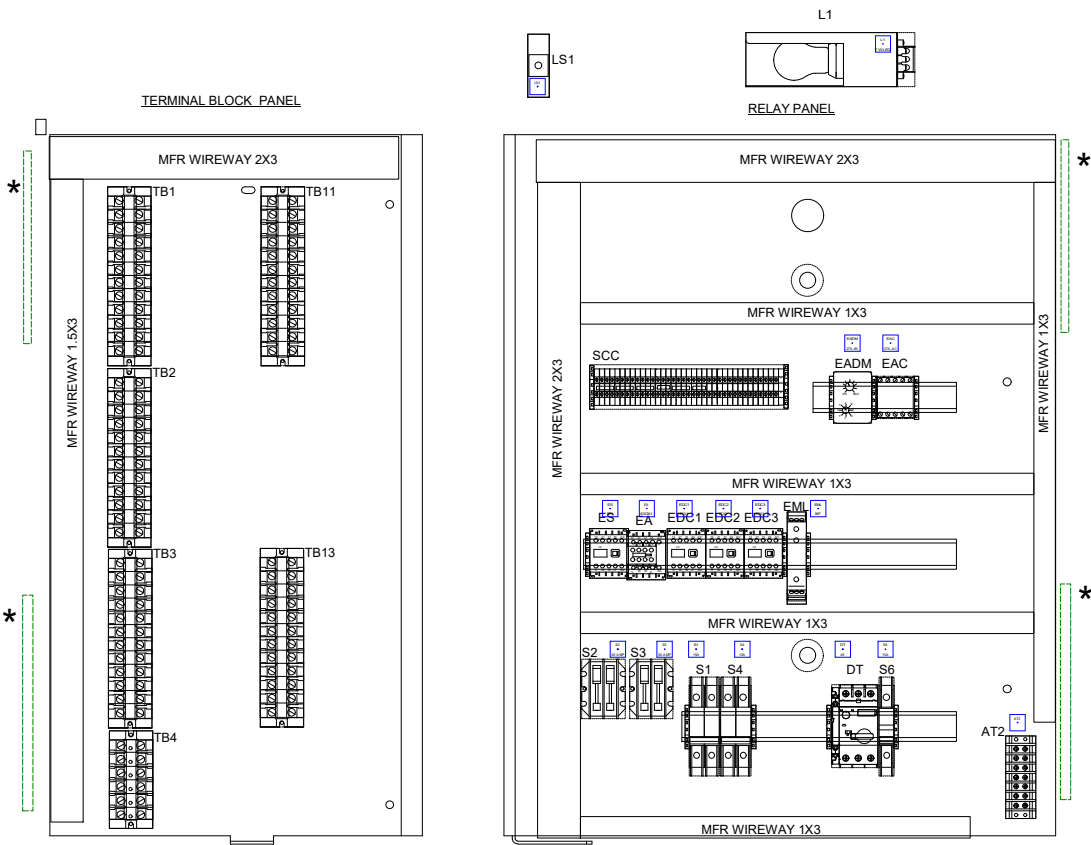
D



MANUFACTURING NOTES:
1) DEVICES TO BE MARKED WITH ENGRAVED PLASTIC TAGS.
2) DIN RAIL TO BE PER SPEC 1_415_881.
3) POSITION INDICATOR TAGS ATTACHED WITH STAINLESS STEEL SCREWS.
4) SCC:11 & SCC:12 ARE CONNECTED BY A 2PT SHORTING BAR.
5) MECHANISM OPERATION COUNTER TO INCREMENT ON CB OPENING.



- A - CHARGE / DISCHARGE INDICATOR
- B - OPEN / CLOSE INDICATOR
- C - OPERATIONS COUNTER



						CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE CUSTOMER ORDER No.: 22200757 SUBSTATION: SUBSTATION E SERIAL No.: 3595560010001		MATERIAL ID: CCDT1-170FK-F1-001
1	Replaced control relays due to availability issues	226888915	N. BUZZARD	W. HOLT	05/31/2022			ORDER No. 359556
REV.	DESCRIPTION	ECN NO.	DRAWN BY	CHECKED	DATE	CUSTOMER EQ. No.:		
COMPONENT LAYOUT			W. Holt	A. Lisitsa	02/21/2022	 Grid Solutions One Power Lane Charleroi, PA 15022		DRAWING No.:E359556010
			DRAWN	CHECKED	DATE			

A

B

C

D

A

B

C

D

BCT WIRING

1X			1Y		
1X-X1	1X1			1Y1	1Y-X1
1X-X2	1X2			1Y2	1Y-X2
1X-X3	1X3			1Y3	1Y-X3
1X-X4	1X4			1Y4	1Y-X4
1X-X5	1X5			1Y5	1Y-X5
GND	GND			GND	GND

3X			3Y		
3X-X1	3X1			3Y1	3Y-X1
3X-X2	3X2			3Y2	3Y-X2
3X-X3	3X3			3Y3	3Y-X3
3X-X4	3X4			3Y4	3Y-X4
3X-X5	3X5			3Y5	3Y-X5
GND	GND			GND	GND

5X			5Y		
5X-X1	5X1			5Y1	5Y-X1
5X-X2	5X2			5Y2	5Y-X2
5X-X3	5X3			5Y3	5Y-X3
5X-X4	5X4			5Y4	5Y-X4
5X-X5	5X5			5Y5	5Y-X5
GND	GND			GND	GND

2X			2Y		
2X-X1	2X1			2Y1	2Y-X1
2X-X2	2X2			2Y2	2Y-X2
2X-X3	2X3			2Y3	2Y-X3
2X-X4	2X4			2Y4	2Y-X4
2X-X5	2X5			2Y5	2Y-X5
GND	GND			GND	GND

4X			4Y		
4X-X1	4X1			4Y1	4Y-X1
4X-X2	4X2			4Y2	4Y-X2
4X-X3	4X3			4Y3	4Y-X3
4X-X4	4X4			4Y4	4Y-X4
4X-X5	4X5			4Y5	4Y-X5
GND	GND			GND	GND

6X			6Y		
6X-X1	6X1			6Y1	6Y-X1
6X-X2	6X2			6Y2	6Y-X2
6X-X3	6X3			6Y3	6Y-X3
6X-X4	6X4			6Y4	6Y-X4
6X-X5	6X5			6Y5	6Y-X5
GND	GND			GND	GND

CT WIRING NOTES:
1) LEADS TO BE TERMINATED WITH INSULATED TYPE LUGS.
2) ALL CT LEADS ARE TO BE SHORTED BEFORE SHIPMENT. IF TERMINAL BLOCKS ARE NOT EQUIPPED WITH INTEGRATED SHORTING BARS - SHORTING TO BE ACCOMPLISHED WITH 10GA GRAY SIS VW1 WIRE JUMPERS. WHT-BLK-GND.
(IF LEADS ARE NOT COLOR CODED SHORT THE FIRST LEAD-THE LAST LEAD-GROUND)
3) ALL BCT LEADS ARE 10GA WIRE.
4) ALL GROUND WIRES ARE 10GA GREEN SIS WIRE.

BCT NAMEPLATE

56

34

12

CT MFR: GENERAL ELECTRIC

BUSHING	1	2	3	4	5	6
UPPER	X	X	X	X	X	X
LOWER	Y	Y	Y	Y	Y	Y

X1 X2 X3 X4 X5

RATIO: 1200:5MR
ACCURACY: C800@1200:5
FREQUENCY: 60Hz
RATING FACTOR: 2.0
ID #: CC417048-10015G
POSITION: 1X ~ 6X, 1Y ~ 6Y

X2-X3	100:5
X1-X2	200:5
X1-X3	300:5
X4-X5	400:5
X3-X4	500:5
X2-X4	600:5
X1-X4	800:5
X3-X5	900:5
X2-X5	1000:5
X1-X5	1200:5

BCT NAMEPLATE NOTES:
1) NAMEPLATE MATERIAL: ANODIZED ALUMINUM
2) NAMEPLATE LOCATION: INTERNAL
3) NAMEPLATE DIMENSIONS AS SHOWN ON DRAWING 1_416_218_P3/4.
4) NAMEPLATE IS TO BE ATTACHED WITH ALUMINUM RIVETS.

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE
CUSTOMER ORDER No.: 22200757
SUBSTATION: SUBSTATION E
SERIAL No.: 3595560010001

MATERIAL ID:
CCDT1-170FK-F1-001

ORDER No.
359556

CUSTOMER EQ. No.:



Grid Solutions
One Power Lane
Charleroi, PA 15022

DRAWING No.: E359556010

SHT 10 OF 13

BCT WIRING DIAGRAM & NAMEPLATE

A

B

C

D

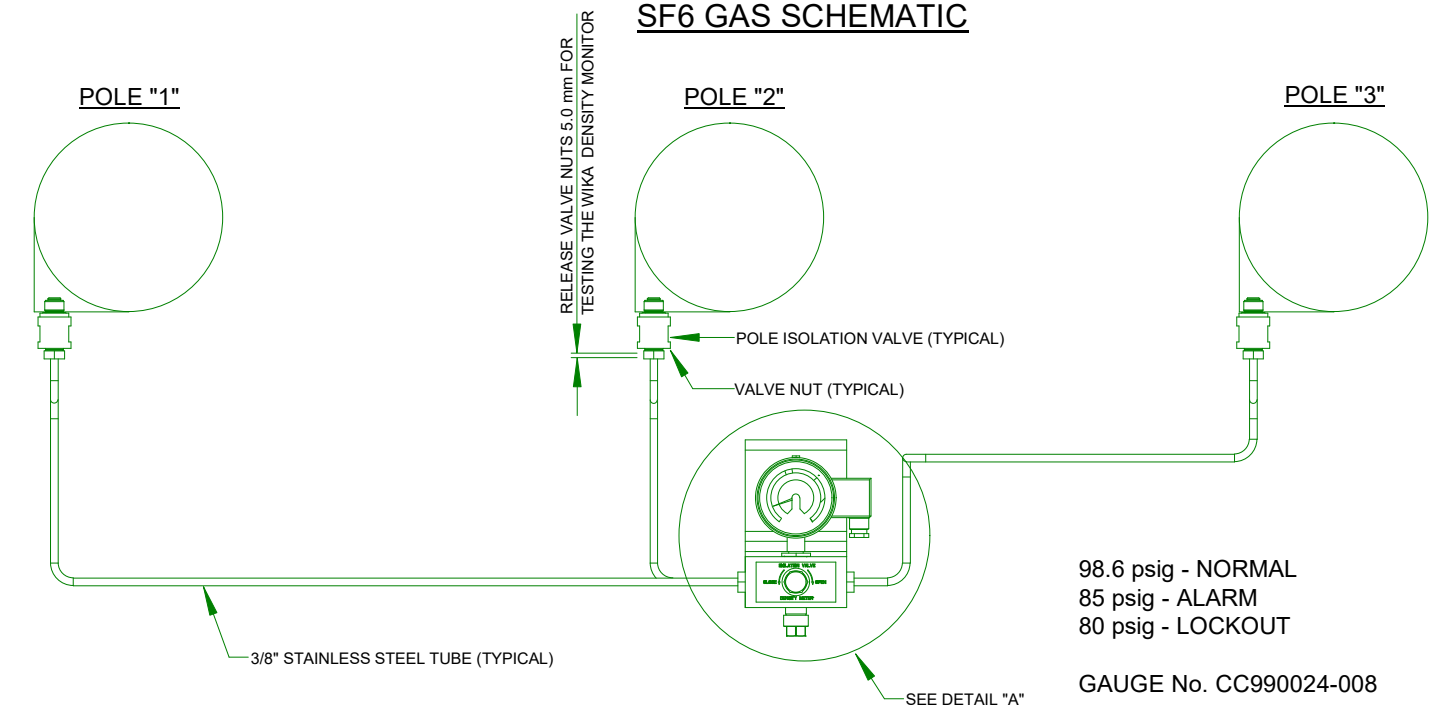
A

B

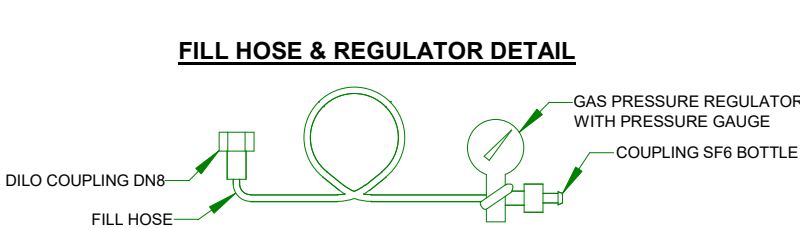
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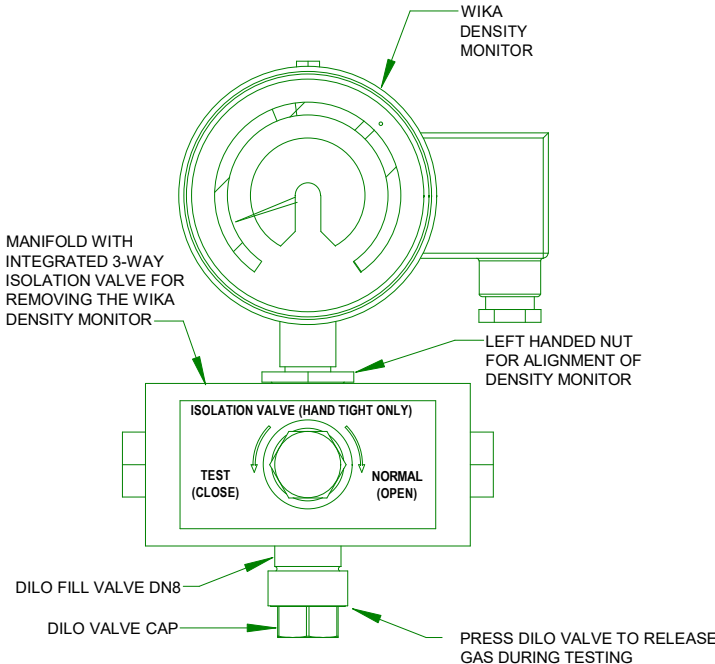
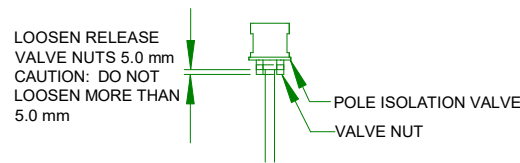
SF6 GAS SCHEMATIC



FILL HOSE & REGULATOR DETAIL



POLE ISOLATION VALVE DETAIL



DETAIL "A"

- NOTES:
- 1) ALL TUBING IS 3/8" STAINLESS.
 - 2) GAS SAMPLING CAN BE DONE THROUGH FILL VALVE.
 - 3) POLE ISOLATION VALVES USED TO ISOLATE TANK FROM GAS PIPING.
 - 4) PRESSURE SWITCHES ARE LOCATED INSIDE THE DENSITY GAUGE HOUSING

RATINGS NAMEPLATE

	TYPE: DT1-170FK-40-F1	CUSTOMER P.O.: 22200757
	SERIAL NUMBER:	ORDER NUMBER: 359556
	MANUFACTURE DATE:	PARTS LIST No.: 359556-010
		WIRING DIAGRAM: E359556010
		INSTRUCTION BOOK No.: IB-DT12FK
RATED MAXIMUM VOLTAGE	170 kV	SF6 PRESSURE (@ 20° C / 68° F) RELATIVE PRESSURE
RATED VOLTAGE RANGE FACTOR (K)	1.0	-NORMAL OPERATING PRESSURE 98.6 psig
RATED FREQUENCY	60 Hz	-LOW PRESSURE ALARM 85 psig
DUTY CYCLE	O-0.3s-CO-15s-CO	-MINIMUM PRESSURE 80 psig
RATED CONTINUOUS CURRENT	1200 A	WEIGHT OF GAS
CAPACITANCE CURRENT SWITCHING		76 lbs
-VOLTAGE FACTOR 1.2		TEMPERATURE RANGE -30° C to +50° C
-LINE CHARGING 160 A		TOTAL WEIGHT 5,065 lbs
-ISOLATED BANK 400 A		MECHANISM TYPE
-BACK-TO-BACK 400 A		FK3-1/131 SPRING
-INRUSH PEAK 20 kA		CONTROL VOLTAGE
-INRUSH FREQUENCY 4250 Hz		-CLOSING 125VDC, 3.5A
		-TRIPPING (EACH) 125VDC, 3.5A
OUT-OF-PHASE SWITCHING		-MOTOR 125VDC, 1.6kW
		-SPACE HEATER 120VAC, 190W
ONE POWER LANE CHARLEROI, PA 15022		DESIGNED AND MANUFACTURED IN USA
GRID SOLUTIONS		

- RATINGS NAMEPLATE NOTES:
- 1) NAMEPLATE MATERIAL: ANODIZED ALUMINUM
 - 2) NAMEPLATE LOCATION: EXTERNAL
 - 3) NAMEPLATE DIMENSIONS AS SHOWN ON DRAWING 1_416_218_P1/P2
 - 4) MANUFACTURE DATE AND SERIAL NUMBER ARE TO BE FILLED IN BY NAMEPLATE VENDOR PRIOR TO ENGRAVING
 - 5) NAMEPLATE IS TO BE ATTACHED WITH ALUMINUM RIVETS.

1

2

3

4

1

2

3

4

RATINGS NAMEPLATE - GAS SCHEMATIC

A

B

C

D

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE					MATERIAL ID:	
CUSTOMER ORDER No.: 22200757					CCDT1-170FK-F1-001	
SUBSTATION: SUBSTATION E					ORDER No.	
SERIAL No.: 3595560010001					359556	
CUSTOMER EQ. No.:					SHT 11 OF 13	
		Grid Solutions	DRAWING No.: E359556010			
One Power Lane						
Charleroi, PA 15022						

A

B

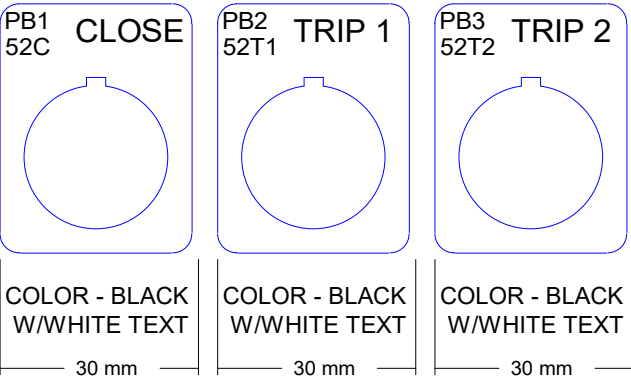
C

D

DEVICE TAGS

AT2 •	EA • 63GX1	DT • 49	ES • 52Y	H • 2X 95 W	HT •	L1 • 7 W LED
LS1 •	M • 88	MA1 • 52-1	MA2 • 52-2	MA3 • 52-3	MA4 • 52-4	MB • 88LS
MC • 52CC	MD • 52TC1	ME • 52TC2	PL • GFI	S1 • 15A	S2 • 30 AMP	S3 • 30 AMP
S4 • 15A	S6 • 15A	TH • 23-1	EML • 88F	ER • 43L/R	EADM • 27X-83	EDC1 • 27X1
EDC2 • 27X2	EDC3 • 27X3	EAC • 27X-AC				

DEVICE TAG NOTES:
1) TAG MATERIAL: PLASTIC - YELLOW WITH BLACK LETTERS
2) TAG DIMENSIONS AS PER FABRICATION
DRAWING 1_417_376_P1.



TERMINAL BLOCK MARKER STRIPS

TB1 1 ○	TB2 7 ○	TB3 13 ○	TB5 51 ○	TB6 63 ○	TB7 75 ○	TB8 87 ○	TB9 99 ○	TB10 111 ○	TB11 123 ○	TB13 147 ○
2	7R	17	52	64	76	88	100	112	124	148
1A	8	18	53	65	77	89	101	113	125	149
2A	9	19	54	66	78	90	102	114	126	150
1B	9R	20	55	67	79	91	103	115	127	151
2B	9A	21	56	68	80	92	104	116	128	152
3	9AR	22	57	69	81	93	105	117	129	153
4	10	23	58	70	82	94	106	118	130	154
5	10A	24	59	71	83	95	107	119	131	155
6	11	25	60	72	84	96	108	120	132	156
○	○	○	○	○	○	○	○	○	○	
B1 ○	11A	26	61	73	85	97	109	121	133	157
○	○	○	○	○	○	○	○	○	○	
○	○	○	○	○	○	○	○	○	○	
B2	B3	27	62	74	86	98	110	122	134	158
P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4

TERMINAL MARKER STRIP NOTES:
1) STRIP MATERIAL: PLASTIC - BLACK WITH WHITE LETTERS
2) STRIP DIMENSIONS AS SHOWN ON FABRICATION
DRAWING 1_417_376_P... (SEE P#S FOR EACH STRIP)

BCT TERMINAL BLOCK MARKER STRIPS

○ 1X 1X1	○ 2X 2X1	○ 3X 3X1	○ 4X 4X1	○ 5X 5X1	○ 6X 6X1
1X2	2X2	3X2	4X2	5X2	6X2
1X3	2X3	3X3	4X3	5X3	6X3
1X4	2X4	3X4	4X4	5X4	6X4
1X5	2X5	3X5	4X5	5X5	6X5
GND	GND	GND	GND	GND	GND
○	○	○	○	○	○
P8	P8	P8	P8	P8	P8
○ 1Y 1Y1	○ 2Y 2Y1	○ 3Y 3Y1	○ 4Y 4Y1	○ 5Y 5Y1	○ 6Y 6Y1
1Y2	2Y2	3Y2	4Y2	5Y2	6Y2
1Y3	2Y3	3Y3	4Y3	5Y3	6Y3
1Y4	2Y4	3Y4	4Y4	5Y4	6Y4
1Y5	2Y5	3Y5	4Y5	5Y5	6Y5
GND	GND	GND	GND	GND	GND
○	○	○	○	○	○
P8	P8	P8	P8	P8	P8

BCT TERMINAL MARKER STRIP NOTES:
1) STRIP MATERIAL: PLASTIC - YELLOW WITH BLACK LETTERS
2) STRIP DIMENSIONS AS SHOWN ON FABRICATION
DRAWING 1_417_376_P... (SEE P#S FOR EACH STRIP)

CUSTOMER: AMPIRICAL SOLUTIONS, LLC / CITY OF BENTONVILLE CUSTOMER ORDER No.: 22200757 SUBSTATION: SUBSTATION E SERIAL No.: 3595560010001				MATERIAL ID: CCDT1-170FK-F1-001	
CUSTOMER EQ. No.:				ORDER No. 359556	
		Grid Solutions One Power Lane Charleroi, PA 15022	DRAWING No.: E359556010		SHT 12 OF 13

A

B

C

D

1

1

2

2

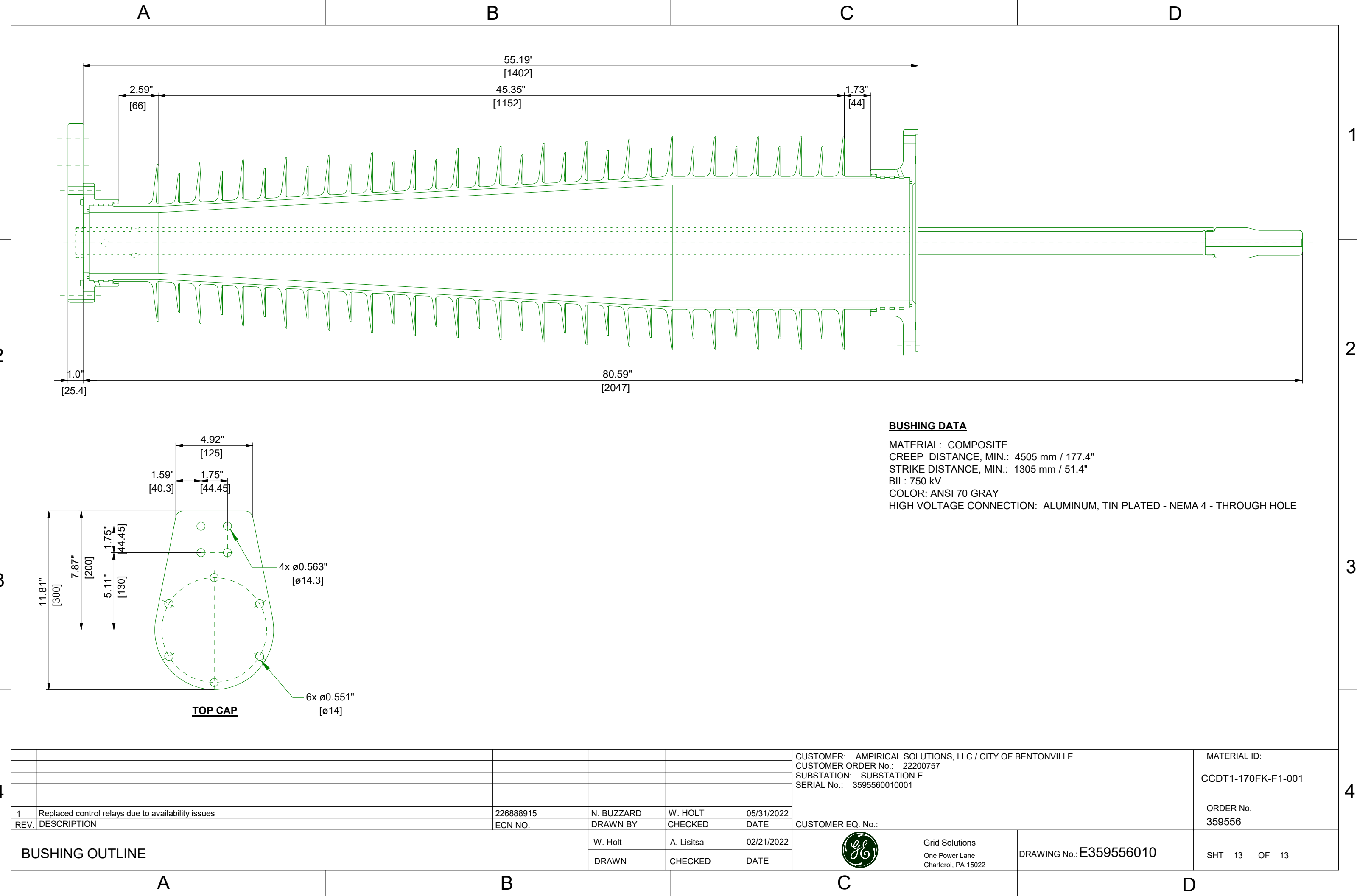
3

3

4

4

DEVICE TAGS





Grid Solutions
a GE and Alstom joint venture

CIRCUIT BREAKERS PRODUCT SOLUTIONS

DT1-145 and DT1-170

Dead tank circuit breakers
from 123 kV to 170 kV

Grid Solutions' position as global leader in circuit breaker development comes from the operating experience accumulated from more than 100,000 circuit breakers with spring-spring-operated mechanisms in service worldwide.



CUSTOMER BENEFITS

- SF₆ gas tightness guarantee
- High performance ratings
- Reliability under the most severe conditions
- Flexibility
- Virtually maintenance free
- Easy to install

With Grid Solutions, you are choosing a company that you can trust.

The DT1-145 and the DT1-170 are dead tank circuit breakers suitable for application at 170 kV and below. They are specifically designed and tested for general or definite purpose applications as well as for severe environmental conditions including low temperature, highly active seismic areas and regions with high pollution levels or corrosive atmospheres.

PERFORMANCE

The DT1-145/170 are suitable for application up to nameplate ratings, including definite purpose ratings. Extensive mechanical design testing to 10,000 operations and Class M2 certification ensure trouble-free operation for the lifetime of the circuit breaker.

GAS TIGHTNESS GUARANTEE

Grid Solutions leads the industry in SF₆ gas tightness testing technology including seals, castings and plumbing systems. Each breaker is factory tested using Grid Solutions's proprietary gas tightness testing system which provides measurable, quantifiable test results on the breaker in its fully assembled, as-shipped condition.

QUALITY

Grid Solutions designs, manufactures, tests and delivers its circuit breakers in accordance with the latest IEEE/ANSI and IEC Standards, maintaining a quality assurance system according to ISO-9001 and ISO 14001 certifications. The center of excellence for dead tank circuit breakers is located in Charleroi, PA (USA).

INSTALLATION AND MAINTENANCE

The DT1-145/170 are factory tested and adjusted and do not require any "special tools" for installation. Designed with the smallest symmetrical footprint to allow for minimised foundation costs, they are recognized worldwide as easy-to-install and operate circuit breakers. Thanks to the low energy mechanism and lifetime lubricants, the DT series is virtually maintenance free.

The DT1 series on-site installation requires only a few simple steps. For installations where truck shipment is impossible, all DT series circuit breakers can be readied for standard container shipment with only their bushings disassembled.

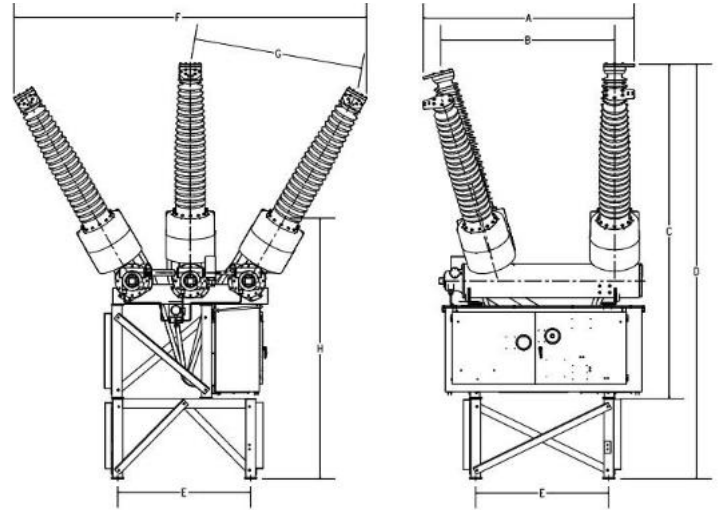


Low energy FK3-1 mechanism

TECHNICAL DATA

	Value	Units
SF ₆ pressure	93/0.64	psig/Mpa
Motor	1,600	watts
Close coil/Trip coil	440/440	watts
Ambient temperature range*	-30 to +40	degree C
High seismic capability in accordance with IEEE 693-2005		
Weight (without current transformers)	4,180/1,900	lb/kg

* Optional values available on request



DIMENSIONS

Rated Maximum Voltage	A (in/mm)	B (in/mm)	C (in/mm)	D (in/mm)	E (in/mm)	F (in/mm)	G (in/mm)	H (in/mm)
145 kv	90/2,284	70/1,779	136/3,459	169/4,289	54/1,372	90/2,284	69/1,747	102/2,600
170 kv	90/2,366	73/1,849	146/3,719	179/4,549	54/1,372	153/3,898	74/1,881	102/2,591

RATINGS

IEEE/ANSI	IEC	Value	Units
Rated maximum voltage	Rated voltage	123/145/170	kV
Rated power frequency	Rated frequency	50/60	Hz
Rated dielectric withstand capability	Rated insulation level		
dry withstand	at power frequency, dry	260/310/365	kV
wet withstand	at power frequency, wet	230/275/315	kV
Rated lightning impulse withstand voltage	at lightning impulse	550/650/750	kV
Rated chopped wave impulse voltage 2us		710/838/968	kV
Rated continuous current	Rated normal current	1,200/2,000/3,000	A
Rated short-circuit current	Rated short-circuit breaking current	40	kA
Rated closing, latching, and short time carrying		104	kA
Rated capacitance switching*			
	Rated single capacitor bank breaking current	400	A
Rated interrupting time		3	cycles
	Rated break time	50	ms
Rated standard operating duty	Rated operating sequence	O-0.3s-CO-15s-CO	

* Ratings available upon request.

** Please contact Grid Solutions for special purpose, high TRV, high X/R or other ratings requirements.

IPO OPTION

The DT1-145 and the DT1-170 are also available in Independent Pole Operation (IPO) configuration with separated spring/spring mechanism for each phase. Paired with a synchronous controller this can be used for point-on-wave switching of shunt capacitor or shunt reactor banks.

For more information please contact
GE Grid Solutions

Worldwide Contact Center

Web: www.GEGridSolutions.com/contact
Phone: +44 (0) 1785 250 070

www.GEGridSolutions.com





Line Card

High Voltage Circuit Breakers

Grid Solutions offers a comprehensive portfolio of high voltage circuit breakers designed and tested to meet the rigorous demands of the North American power system

Product		Ratings	Features
DT1-38FK-40-F1		• Up to 38kV • 1200A to 3000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanism • Gang Operated
DT1-72.5FK-40-F1		• 72.5kV • 1200A to 3000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanism • Gang Operated
DT1-72.5FK-40-F3		• 72.5kV • 1200A to 3000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Optional Synchronous Control for Point-on-Wave Switching
DT1-145FK-40-F1 DT1-170FK-40-F1		• 123kV, 145kV, 170kV • 1200A to 3000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanism • Gang Operated
DT1-145FK-40-F3 DT1-170FK-40-F3		• 123kV, 145kV, 170kV • 1200A to 3000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Optional Synchronous Control for Point-on-Wave Switching
DT1-72.5-63-F1 DT1-145-63-F1		• 72.5kV, 123kV, 145kV • 1200A to 4000A • 63kA, 3 cycles	• FK3-4 SPRING/SPRING mechanism • Gang Operated • NO CAPACITORS
DT1-245P-40-F1		• 245kV • 1200A to 4000A • 40kA, 3 cycles	• FK3-4 SPRING/SPRING mechanism • Gang Operated • Optional 2 cycle performance
DT1-245P-40-F3		• 245kV • 1200A to 4000A • 40kA, 3 cycles	• FK3-1 SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Optional Synchronous Control for Point-on-Wave Switching
DT1-245P-63-F1		• 245kV • 1200A to 5000A • 63kA, 2 cycles	• FK3-6 SPRING/SPRING mechanism • Gang Operated • NO CAPACITORS
DT1-245P-63-F3		• 245kV • 1200A to 5000A • 63kA, 2 cycles	• FK3-1 SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Optional Synchronous Control for Point-on-Wave Switching • NO CAPACITORS



Line Card

High Voltage Circuit Breakers

Product		Ratings	Features
MOV for Shunt Reactor Switching		• 38kV to 800kV • Dead Tank, Live Tank, Circuit Switcher • Varistors sized based on user specifications.	• Varistors across HV Terminals extend circuit breaker life • External mounting for increased reliability and ease of maintenance
DT1-362-63-F3 DT1-362R-63-F3		• 362kV • 1200A to 5000A • 63kA, 2 cycles	• FK3-6 SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Optional Synchronous Control for Point-on-Wave Switching • Optional Pre-Insertion Resistors (PIR)
DT2-550-63-H3 DT2-550-63-F3 DT2-550R-63-H3 DT2-550R-63-F3		• 550kV • 1200A to 5000A • 63kA, 2 cycles	• Hydraulic Mechanisms • Independent Pole Operation (IPO) • Optional Point-on-Wave Switching • Optional Pre-Insertion Resistors (PIR) • Optional SPRING/SPRING Mechanisms
GL3 Series Live Tank		• 72.5kV to 800kV • 1200A to 4000A • Up to 63kA, 3 cycles	• FK3-x SPRING/SPRING mechanisms • Independent Pole Operation (IPO) • Or Gang Operated (voltage dependent)
Live Tank GL309 GL312 GL313 GL314		• 72.5kV to 245kV • 1200A to 3000A • Up to 40kA, 3 cycles	• Circuit Switcher applications • FK SPRING/SPRING operated mechanism • Circuit Breaker performance in a Circuit Switcher footprint
GL314BPS High Speed Bypass Switch		• Up to 800kV system • Up to 170kV across gap • Making Current 120kAp • Insertion Current 5000A • Insertion Voltage 300kVp	• Series Capacitor Bypass Protection • FK3-2 SPRING/SPRING mechanisms • Independent Pole Operation
HYpact		• 72.5 kV to 170kV • 2500A • 40kA, 3 cycles • Hybrid compact switchgear assembly	• FK3-1 SPRING/SPRING mechanism • Gang Operated • Endless configurations –breakers, disconnect switches, CTs, VTs, cable connections.
CBWatch3		• Circuit Breaker Monitoring • IEC 61850 8.1 (DNP3 option)	• Permanent real-time monitoring of CB operational parameters • SF6 emissions trending
		• Ratings are product and customer specific.	• SF₆ Free • Global Warming Potential 98% lower than SF₆ gas
Synchronous Control (Point on Wave Switching)		• Cabinet mounted or Rack Mounted	• Point-on-wave (POW) trip/close • Capacitors, reactors, transformers • Residual Flux compensation available

* Special ratings and applications available on request. Contact your GE representative for more information.

Terms and Conditions for Sale of Products and Services

Form EM 104 (Grid Solutions)

NOTICE: Sale of any Products or Services is expressly conditioned on Buyer's assent to these Terms and Conditions. Any acceptance of Seller's offer is expressly limited to acceptance of these Terms and Conditions and Seller expressly objects to any additional or different terms proposed by Buyer. No facility entry form shall modify these Terms and Conditions even if signed by Seller's representative. Any order to perform work and Seller's performance of work shall constitute Buyer's assent to these Terms and Conditions. Unless otherwise specified in the quotation, Seller's quotation shall expire 30 days from its date and may be modified or withdrawn by Seller before receipt of Buyer's conforming acceptance.

1. Definitions

"Buyer" means the entity to which Seller is providing Products or Services under the Contract.

"Contract" means either the contract agreement signed by both parties, or the purchase order signed by Buyer and accepted by Seller in writing, for the sale of Products or Services, together with these Terms and Conditions, Seller's final quotation, the agreed scope(s) of work, and Seller's order acknowledgement. In the event of any conflict, the Terms and Conditions shall take precedence over other documents included in the Contract.

"Contract Price" means the agreed price stated in the Contract for the sale of Products and Services, including adjustments (if any) in accordance with the Contract.

"Firmware" means software provided with or embedded in a Product and necessary for the proper functioning of the Product, but excluding software supplied by a third party and software applications licensed separately

"Hazardous Materials" means any toxic or hazardous substance, hazardous material, dangerous or hazardous waste, dangerous good, radioactive material, petroleum or petroleum-derived products or by-products, or any other chemical, substance, material or emission, that is regulated, listed or controlled pursuant to any national, state, provincial, or local law, statute, ordinance, directive, regulation or other legal requirement of the United States ("U.S.") or the country of the Site.

"Insolvent/Bankrupt" means that a party is insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for it or any of its assets, or files or has filed against it a proceeding under any bankruptcy, insolvency dissolution or liquidation laws.

"Products" means the equipment, parts, materials, supplies, software, and other goods Seller has agreed to supply to Buyer under the Contract.

"Seller" means the entity providing Products or performing Services under the Contract.

"Services" means the services Seller has agreed to perform for Buyer under the Contract.

"Site" means the premises where Products are used or Services are performed, not including Seller's premises from which it performs Services.

"Terms and Conditions" means these "Terms and Conditions for Sale of Products and Services", including any relevant addenda pursuant to Article 18, together with any modifications or additional provisions specifically stated in Seller's final quotation or specifically agreed upon by Seller in writing.

2. Payment

2.1 Buyer shall pay Seller for the Products and Services by paying all invoiced amounts by direct bank transfer in the currency specified by Seller in the Contract, without set-off for any payment from Seller not due under this Contract, within thirty (30) days from the invoice date. Remittance advice notifying of payment is to be sent to Remit.Renewable.Energy@ge.com. Invoicing and payment shall be in accordance with the Contract. If not otherwise agreed in the Contract, Seller shall issue invoices upon shipment of Products and as Services are performed, or if the Contract Price is U.S. Two Hundred Fifty Thousand Dollars (\$250,000) or more, progress payments shall be invoiced starting with twenty-five percent (25%) of the Contract Price for Products and Services upon the earlier of Contract signature or issuance of Seller's order acknowledgement and continuing such that ninety percent (90%) of the Contract Price for Products is re-

ceived before the earliest scheduled Product shipment and Services are invoiced as performed ("the Progress Payments"). For each calendar month, or fraction thereof, that payment is late, Buyer shall pay a late payment charge computed at the rate of 1.5% per month on the overdue balance, or the maximum rate permitted by law, whichever is less. If the price is set by the Contract in a currency other than U.S. dollars, references to U.S. dollars in this Section 2.1 shall mean the equivalent amount in the applicable currency. In case of any increase in material or labor costs over the Contract execution period the Seller shall be entitled to get compensated as per the Contract price escalation mechanism specified in the Seller's offer. In case the Contract does not comprise a price escalation mechanism and if a Party can demonstrate that the continued performance of its contractual obligations has become excessively onerous due to an event as per Clause 10 (which will include evolution of any event preexisting at the time of signature of the Contract), the Parties are bound, within a reasonable time of written notice by one Party to the other, to negotiate alternative contractual terms or a mitigation plan which reasonably permit the consequences of the event to be mitigated or the restoration of the balance that was pre-existing at the signature of the Contract between the Parties. The Party serving notice under this Clause shall provide the other Party with as much commercially available details of the event or events affecting that Party's contractual obligations, the affected obligations themselves and how and to which extent these events are (and will be) affecting the performance of the Contract. The Parties shall act in the spirit of openness and transparency in this communication within the limits set by applicable antitrust laws and regulations. Where an agreement is reached, the Parties shall start implementing the agreed measures immediately, pending the signature of the relevant amendment to the Contract. In the event the Parties are unable to agree on alternative contractual terms or on a mitigation plan as provided above within fifteen (15) days of the written notice, and in the absence of any other agreement, the Party serving notice under this Clause will be entitled to either suspend its performance of the affected portion of the Contract, or to terminate the Contract, without any liability to the other party. If the Contract is suspended for a period greater than 60 consecutive days by that Party, either Party may terminate the Contract by sending written notice of termination to the other Party. In case of termination of the Contract hereunder, the Parties shall settle their accounts accordingly as if the Contract had been terminated through no fault of the Parties, without prejudice to any Party's right to apply the provisions of Clause 16.2 hereof. To support the prevention of fraud, in the event the Buyer is required to make a payment to a bank account that is not the one expressly agreed in the Contract, the Buyer shall before proceeding with payment request confirmation to the Seller that the bank account identified in the invoice or request for payment is valid. Verification must be anticipated not to lead to any delay in making payment.

2.2 As and if requested by Seller, Buyer shall at its expense establish and keep in force payment security in the form of an irrevocable, unconditional, sight letter of credit or bank guarantee allowing for pro-rata payments as Products are shipped and Services are performed, plus payment of cancellation and termination charges, and all other amounts due from Buyer under the Contract ("Payment Security"). The Payment Security shall be (a) in a form, and issued or confirmed by a bank acceptable to Seller, (b) payable at the counters of such acceptable bank or negotiating bank, (c) opened prior to commencement of work by Seller with respect to development, manufacturing and shipment of Products and at least sixty (60) days prior to commencement of Services, and (d) remain in effect until the latest of ninety (90) days after the last scheduled Product shipment, completion of all Services and Seller's receipt of the final payment required under the Contract. Buyer shall, at its expense, increase the amount(s), extend the validity period(s) and make other appropriate modifications to any Payment Security within ten (10) days of Seller's notification that such adjustment is necessary in connection with Buyer's obligations under the Contract.

2.3 Seller is not required to commence or continue its performance unless and until any required Payment Security is received, operative and in effect and all applicable Progress Payments have been received. For each day of delay in receiving Progress Payments or acceptable Payment Security, Seller shall be entitled to an equitable extension of the schedule. If at any time Seller reasonably determines that Buyer's financial condition or payment history does not justify continuation of Seller's performance, Seller shall be entitled to require full or partial payment in advance or otherwise restructure payments, request additional forms of Payment Security, suspend its performance or terminate the Contract.

3. Taxes and Duties

Seller shall be responsible for all corporate taxes measured by net income due to performance of or payment for work under this Contract ("Seller Taxes"). Buyer shall be responsible for all taxes, duties, fees, or other charges of any nature (including, but not limited to, consumption, gross receipts, import, property, sales, stamp, turnover, use, or value-added taxes, and all items of withholding, deficiency, penalty, addition to tax, interest, or assessment related thereto, imposed by any governmental authority on Buyer or Seller or its subcontractors) in relation to the Contract or the performance of or payment for work under the Contract other than Seller Taxes ("Buyer Taxes"). The Contract Price does not include the amount of any Buyer Taxes. If Buyer deducts or withholds Buyer Taxes, Buyer shall pay additional amounts so that Seller receives the full Contract Price without reduction for Buyer Taxes. Buyer shall provide to Seller, within one month of payment, official receipts from the applicable governmental authority for deducted or withheld taxes.

4. Deliveries; Title Transfer; Risk of Loss; Storage

4.1 For shipments that do not involve export, including shipments from one European Union ("EU") country to another EU country, Seller shall deliver Products to Buyer FCA Seller's facility or warehouse (Incoterms 2020). For export shipments, Seller shall deliver Products to Buyer FCA Port of Export (Incoterms 2020). Notwithstanding anything to the contrary, for any importation, Buyer shall be identified as the importer in all applicable documents. Buyer shall pay all delivery costs and charges or pay Seller's standard shipping charges plus

up to twenty-five (25%) percent. Partial deliveries are permitted. Seller may deliver Products in advance of the delivery schedule. In case Buyer and Seller agree on different transportation arrangement with cost of freight and delivery to destination included in the Contract Price, Seller will not be responsible for any increase in transportation costs occurring after the Contract signature unless if caused by Seller's sole negligence, and Seller will be entitled to invoice the Buyer the additional transportation costs it has actually incurred, subject to reasonable justification of such additional costs. Delivery times are approximate and are dependent upon prompt receipt by Seller of all information necessary to proceed with the work without interruption. If Products delivered do not correspond in quantity, type or price to those itemized in the shipping invoice or documentation, Buyer shall so notify Seller within ten (10) days after receipt.

4.2 For shipments that do not involve export, title to Products shall pass to Buyer upon delivery in accordance with Section 4.1. For export shipments from a Seller facility or warehouse outside the U.S., title shall pass to Buyer upon delivery in accordance with Section 4.1. For shipments from the U.S. to another country, title shall pass to Buyer immediately after each item departs from the territorial land, seas and overlying airspace of the U.S. The 1982 United Nations Convention of the law of the Sea shall apply to determine the U.S. territorial seas. For all other shipments, title to Products shall pass to Buyer the earlier of (i) the port of export immediately after Products have been cleared for export or (ii) immediately after each item departs from the territorial land, seas and overlying airspace of the sending country. When Buyer arranges the export or intercommunity shipment, Buyer will provide Seller evidence of exportation or intercommunity shipment acceptable to the relevant tax and custom authorities.

4.3 Risk of loss shall pass to Buyer upon delivery pursuant to Section 4.1, except that for export shipments from the U.S., risk of loss shall transfer to Buyer upon title passage.

4.4 If any Products to be delivered under this Contract or if any Buyer equipment repaired at Seller's facilities cannot be shipped to or received by Buyer or end user when ready due to any cause attributable to Buyer, its other contractors or the end user, Seller may ship the Products and equipment to a storage facility, including storage at the place of manufacture or repair, or to an agreed freight forwarder. If Seller places Products or equipment into storage, the following apply: (i) title and risk of loss immediately pass to Buyer, if they have not already passed, and delivery shall be deemed to have occurred; (ii) any amounts otherwise payable to Seller upon delivery or shipment shall be due; (iii) Seller will be entitled to invoice the Buyer the costs of transportation to the storage facilities plus a lumpsum amount of 0.5% of the Contract Price per full week (or prorata thereof) of storage with a minimum of USD 1000 (one thousand United States Dollars). Invoices shall be on a weekly basis starting the beginning of third week of storage until the shipment of the Products can be made ; and (iv) when conditions permit and upon payment of all amounts due, Seller shall make Products and repaired equipment available to Buyer for delivery. If the Contract requires Seller to submit drawings or other documents for approval by Buyer, Buyer shall review and issue its response (either approval or disapproval with reasons for disapproval detailed) within 10 days of Seller's submittal. If Buyer fails to provide a response within 10 days, the submittal shall be deemed approved.

4.5 If repair Services are to be performed on Buyer's equipment at Seller's facility, Buyer shall be responsible for, and shall retain risk of loss of, such equipment at all times, except that Seller shall be responsible for damage to the equipment while at Seller's facility to the extent such damage is caused by Seller's negligence.

5. Warranty

5.1 Seller warrants that Products shall be delivered free from defects in material, workmanship and title and that Services shall be performed in a competent, diligent manner in accordance with any mutually agreed specifications.

5.2 The warranty for Products shall expire one (1) year from first use or eighteen (18) months from delivery, whichever occurs first, except that software is warranted for ninety (90) days from delivery. The warranty for Services shall expire one (1) year after performance of the Service, except that software-related Services are warranted for ninety (90) days.

5.3 If Products or Services do not meet the above warranties, Buyer shall promptly notify Seller in writing prior to expiration of the warranty period. Seller shall (i) at its option, repair or replace defective Products and (ii) re-perform defective Services. If despite Seller's reasonable efforts, a non-conforming Product cannot be repaired or replaced, or non-conforming Services cannot be re-performed, Seller shall refund or credit monies paid by Buyer for such non-conforming Products and Services. Warranty repair, replacement or re-performance by Seller shall not extend or renew the applicable warranty period. Buyer shall obtain Seller's agreement on the specifications of any tests it plans to conduct to determine whether a non-conformance exists.

5.4 Buyer shall bear the costs of access for Seller's remedial warranty efforts (including removal and replacement of systems, structures or other parts of Buyer's facility), de-installation, decontamination, re-installation and transportation of defective Products to Seller and back to Buyer.

5.5 The warranties and remedies are conditioned upon (a) proper storage, installation (by properly certified installers or under the supervision of properly certified supervisors, if required), use, operation, and maintenance of Products, (b) Buyer keeping accurate and complete records of operation and maintenance during the warranty period and providing Seller access to those records, and (c) modifi-

cation or repair of Products or Services only as authorized by Seller in writing. Failure to meet any such conditions renders the warranty null and void. Seller is not responsible for normal wear and tear.

5.6 This Article 5 provides the exclusive remedies for all claims based on failure of or defect in Products or Services, regardless of when the failure or defect arises, and whether a claim, however described, is based on contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise. The warranties provided in this Article 5 are exclusive and are in lieu of all other warranties, conditions and guarantees whether written, oral, implied or statutory. NO IMPLIED OR STATUTORY WARRANTY, OR WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLIES.

6. Confidentiality

6.1 Seller and Buyer (as to information disclosed, the "Disclosing Party") may each provide the other party (as to information received, the "Receiving Party") with Confidential Information in connection with this Contract. "Confidential Information" means (a) information that is designated in writing as "confidential" or "proprietary" by Disclosing Party at the time of written disclosure, and (b) information that is orally designated as "confidential" or "proprietary" by Disclosing Party at the time of oral or visual disclosure and is confirmed to be "confidential" or "proprietary" in writing within twenty (20) days after the oral or visual disclosure. In addition, prices for Products and Services shall be considered Seller's Confidential Information.

6.2 Receiving Party agrees: (i) to use the Confidential Information only in connection with the Contract and use of Products and Services, (ii) to take reasonable measures to prevent disclosure of the Confidential Information to third parties, and (iii) not to disclose the Confidential Information to a competitor of Disclosing Party. Notwithstanding these restrictions, (a) Seller may disclose Confidential Information to its affiliates and subcontractors in connection with performance of the Contract, (b) a Receiving Party may disclose Confidential Information to its auditors, (c) Buyer may disclose Confidential Information to lenders as necessary for Buyer to secure or retain financing needed to perform its obligations under the Contract, and (d) a Receiving Party may disclose Confidential Information to any other third party with the prior written permission of Disclosing Party, and in each case, only so long as the Receiving Party obtains a non-disclosure commitment from any such subcontractors, auditors, lenders or other permitted third party that prohibits disclosure of the Confidential Information and provided further that the Receiving Party remains responsible for any unauthorized use or disclosure of the Confidential Information. Receiving Party shall upon request return to Disclosing Party or destroy all copies of Confidential Information except to the extent that a specific provision of the Contract entitles Receiving Party to retain an item of Confidential Information. Seller may also retain one archive copy of Buyer's Confidential Information.

6.3 The obligations under this Article 6 shall not apply to any portion of the Confidential Information that: (i) is or becomes generally available to the public other than as a result of disclosure by Receiving Party, its representatives or its affiliates; (ii) is or becomes available to Receiving Party on a non-confidential basis from a source other than Disclosing Party when the source is not, to the best of Receiving Party's knowledge, subject to a confidentiality obligation to Disclosing Party; (iii) is independently developed by Receiving Party, its representatives or affiliates, without reference to the Confidential Information; (iv) is required to be disclosed by law or valid legal process provided that the Receiving Party intending to make disclosure in response to such requirements or process shall promptly notify the Disclosing Party in advance of such disclosure and reasonably cooperate in attempts to maintain the confidentiality of the Confidential Information.

6.4 Each Disclosing Party warrants that it has the right to disclose the information that it discloses. Neither Buyer nor Seller shall make any public announcement about the Contract without prior written approval of the other party. As to any individual item of Confidential Information, the restrictions under this Article 6 shall expire five (5) years after the date of disclosure. Article 6 does not supersede any separate confidentiality or nondisclosure agreement signed by the parties.

7. Intellectual Property

7.1 Notwithstanding the provisions of section 4.2, Seller grants only a non-exclusive license, and does not pass title, to any Firmware and other software provided by Seller under this Contract, drawings and other documentation delivered for use of Buyer shall remain subject to ownership and/or intellectual property rights of Seller, as applicable and title to any leased equipment remains with Seller.

7.2 Seller shall defend and indemnify Buyer against any claim by a non-affiliated third party (a "Claim") alleging that Products or Services furnished under this Contract infringe a patent in effect in the U.S., an EU member state or the country of the Site (provided there is a corresponding patent issued by the U.S. or an EU member state), or any copyright or trademark registered in the country of the Site, provided that Buyer (a) promptly notifies Seller in writing of the Claim, (b) makes no admission of liability and does not take any position adverse to Seller, (c) gives Seller sole authority to control defense and settlement of the Claim, and (d) provides Seller with full disclosure and reasonable assistance as required to defend the Claim.

7.3 Section 7.2 shall not apply and Seller shall have no obligation or liability with respect to any Claim based upon (a) Products or Services that have been modified, or revised, (b) the combination of any Products or Services with other products or services when such

combination is a basis of the alleged infringement, (c) failure of Buyer to implement any update provided by Seller that would have prevented the Claim, (d) unauthorized use of Products or Services, or (e) Products or Services made or performed to Buyer's specifications.

7.4 Should any Product or Service, or any portion thereof, become the subject of a Claim, Seller may at its option (a) procure for Buyer the right to continue using the Product or Service, or applicable portion thereof, (b) modify or replace it in whole or in part to make it non-infringing, or (c) failing (a) or (b), take back infringing Products or Services and refund the price received by Seller attributable to the infringing Products or Services.

7.5 Article 7 states Seller's exclusive liability for intellectual property infringement by Products and Services.

7.6 Each party shall retain ownership of all Confidential Information and intellectual property it had prior to the Contract. All rights in and to Firmware and software not expressly granted to Buyer are reserved by Seller. All new intellectual property conceived or created by Seller in the performance of this Contract, whether alone or with any contribution from Buyer, shall be owned exclusively by Seller. Buyer agrees to deliver assignment documentation as necessary to achieve that result.

8. Indemnity

Each of Buyer and Seller (as an "Indemnifying Party") shall indemnify the other party (as an "Indemnified Party") from and against claims brought by a third party, on account of personal injury or damage to the third party's tangible property, to the extent caused by the negligence of the Indemnifying Party in connection with this Contract. In the event the injury or damage is caused by joint or concurrent negligence of Buyer and Seller, the loss or expense shall be borne by each party in proportion to its degree of negligence. For purposes of Seller's indemnity obligation, no part of the Products or Site is considered third party property.

9. Insurance

During the term of the Contract, Seller shall maintain for its protection the following insurance coverage: (i) Worker's Compensation, Employer's Liability and other statutory insurance required by law with respect to work related injuries or disease of employees of Seller in such form(s) and amount(s) as required by applicable laws; (ii) Automobile Liability insurance with a combined single limit of \$2,500,000.00; and (iii) Commercial General Liability or Public Liability insurance for bodily injury and property damage with a combined single limit of \$2,500,000.00. If required in the Contract, Seller shall provide a certificate of insurance reflecting such coverage.

10. Excusable Events

Seller shall not be liable or considered in breach of its obligations under this Contract to the extent that Seller's performance is delayed or prevented, directly or indirectly, by any cause beyond its reasonable control, or by armed conflict, acts or threats of terrorism, epidemics, pandemics, strikes or other labor disturbances, or acts or omissions of any governmental authority or of the Buyer or Buyer's contractors or suppliers. If an excusable event occurs, the schedule for Seller's performance shall be extended by the amount of time lost by reason of the event plus such additional time as may be needed to overcome the effect of the event. If acts or omissions of the Buyer or its contractors or suppliers cause the delay, Seller shall also be entitled to an equitable price adjustment.

Buyer recognizes that in case of epidemics or pandemics (or evolution of existing epidemics or pandemics), the precautionary, mitigation or corrective measures implemented by the Seller in the frame of the Contract are implemented in the best interest of the Buyer and the Contract performance, and the Buyer and Seller both agree that the additional costs reasonably incurred by Seller in implementing such measures shall be compensated by the Buyer to the Seller.

11. Termination and Suspension

11.1 Buyer may terminate the Contract (or the portion affected) for cause if Seller (i) becomes Insolvent/Bankrupt, or (ii) commits a material breach of the Contract which does not otherwise have a specified contractual remedy, provided that: (a) Buyer shall first provide Seller with detailed written notice of the breach and of Buyer's intention to terminate the Contract, and (b) Seller shall have failed, within 30 days after receipt of the notice, to commence and diligently pursue cure of the breach.

11.2 If Buyer terminates the Contract pursuant to Section 11.1, (i) Seller shall reimburse Buyer the difference between that portion of the Contract Price allocable to the terminated scope and the actual amounts reasonably incurred by Buyer to complete that scope, and (ii) Buyer shall pay to Seller (a) the portion of the Contract Price allocable to Products completed, (b) lease fees incurred, and (c) amounts for Services performed before the effective date of termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates.

11.3 Seller may suspend or terminate the Contract (or any affected portion thereof) immediately for cause if Buyer (i) becomes Insolvent/Bankrupt, or (ii) materially breaches the Contract, including, but not limited to, failure or delay in Buyer providing Payment Security, making any payment when due, or fulfilling any payment conditions.

11.4 If the Contract (or any portion thereof) is terminated for any reason other than Seller's default under Section 11.1, Buyer shall pay Seller for all Products completed, lease fees incurred and Services performed before the effective date of termination, plus expenses reasonably incurred by Seller in connection with the termination. The amount due for Services shall be determined in accordance with the milestone schedule (for completed milestones) and rates set forth in the Contract (for work toward milestones not yet achieved and where there is no milestone schedule), as applicable or, where there are no milestones and/or rates in the Contract, at Seller's then-current standard time and material rates. In addition, Buyer shall pay Seller a cancellation charge equal to 80% of the Contract Price applicable to uncompleted made-to-order Products and 15% of the Contract Price applicable to all other uncompleted Products or Services.

11.5 Either Buyer or Seller may terminate the Contract (or the portion affected) upon twenty (20) days advance notice if there is an excusable event (as described in Article 10) lasting longer than ninety (90) days or such other period agreed upon in writing. In such case, Buyer shall pay to Seller amounts payable under Section 11.4, provided that Buyer's payments shall include the cancellation charge for uncompleted Products if the excusable event(s) leading to the termination included an act or omission of the Buyer or Buyer's contractors or suppliers but Buyer shall not be required to pay the cancellation charge if the excusable event(s) leading to termination did not include any act or omission of the Buyer or Buyer's contractors or suppliers.

11.6 Buyer shall pay all reasonable expenses incurred by Seller in connection with a suspension, including, but not limited to, expenses for repossession, fee collection, demobilization/remobilization, and costs of storage during suspension. The schedule for Seller's obligations shall be extended for a period of time reasonably necessary to overcome the effects of any suspension.

12. Compliance with Laws and Regulations

12.1 Seller shall comply with laws applicable to the manufacture of Products and its performance of Services. Buyer shall comply with laws applicable to the purchase, application, operation, use and disposal of the Products and Services, including without limitation those regarding anticorruption/antibribery, fair competition (antitrust), and environment, health and safety (EHS). Buyer acknowledges it had access, reviewed, and fully understands GE's Integrity Policies. Seller shall at all times comply with the GE Integrity Policies. The GE Integrity Policies can be accessed electronically at https://www.ge.com/sites/default/files/S&L_Booklet_English_0.pdf

12.2 Seller's obligations are conditioned upon Buyer's compliance with all US, EU, UK and other applicable trade control laws and regulations. Buyer shall not trans-ship, re-export, divert or direct or otherwise make or allow any disposition of equipment, materials, services, technology, technical data, software, or other information or assistance or Product furnished by the Seller under the Contract other than in and to the ultimate country of destination declared by Buyer and specified as the country of ultimate destination on Seller's invoice. The Buyer hereby certifies that the equipment, materials, services, technology, technical data, software, or other information or assistance or product furnished by the Seller under the Contract will not be used in the design, development, production, stockpiling or use of chemical, biological, or nuclear weapons. The Buyer shall also ensure that the bank or financial institution or other entity executing any payments or financial transactions under the Contract on behalf of the Buyer (including without limitation the issuance of any payment securities such as a letter of credit) is not subject to any export regulation prohibiting to do business with such bank, financial institution or entity. Should the Buyer fail to comply with any of the obligations as specified above, the Seller may, without prejudice to the exercise of any other rights or remedies which may be available to it, terminate the Contract by giving the Buyer notice in writing to that effect. In the event of a change in applicable trade control laws and regulations, including but not limited to the laws of the US, EU and UK and changes in the interpretation thereof, or in the event an authorization pursuant to said laws is either denied, revoked, withdrawn or cancelled at any time, preventing the Seller from executing its obligations without breaching such applicable trade control laws and regulations or makes Seller's execution of its obligations unreasonably burdensome or unbalanced, Seller shall have the right without incurring liability to the Buyer to (i) withdraw its proposal, or either (ii) suspend its performance of the Contract or terminate the Contract. If the suspension lasts more than four (4) months, any of the Parties shall have the right to terminate the Contract by giving the other Party notice in writing to that effect.

12.3 Notwithstanding any other provision, Buyer shall timely obtain, effectuate and maintain in force any required permit, license, exemption, filing, registration and other authorization, including, but not limited to, building and environmental permits, import licenses, environmental impact assessments, and foreign exchange authorizations, required for the lawful performance of Services at the Site or fulfillment of Buyer's obligations, except that Seller shall obtain any license or registration necessary for Seller to generally conduct business and visas or work permits, if any, necessary for Seller's personnel. Buyer shall provide reasonable assistance to Seller in obtaining such visas and work permits.

13. Environmental, Health and Safety Matters

13.1 Buyer shall maintain safe working conditions at the Site, including, without limitation, implementing appropriate procedures regarding Hazardous Materials, confined space entry, and energization and de-energization of power systems (electrical, mechanical and hydraulic) using safe and effective lock-out/tag-out ("LOTO") procedures including physical LOTO or a mutually agreed upon alternative method.

13.2 Buyer shall timely advise Seller in writing of all applicable Site-specific health, safety, security and environmental requirements and procedures. Without limiting Buyer's responsibilities under Article 13, Seller has the right but not the obligation to, from time to time, review and inspect applicable health, safety, security and environmental documentation, procedures and conditions at the Site.

13.3 If, in Seller's reasonable opinion, the health, safety, or security of personnel or the Site is, or is apt to be, imperiled by security risks, terrorist acts or threats, the presence of or threat of exposure to Hazardous Materials, or unsafe working conditions, Seller may, in addition to other rights or remedies available to it, evacuate some or all of its personnel from Site, suspend performance of all or any part of the Contract, and/or remotely perform or supervise work. Any such occurrence shall be considered an excusable event. Buyer shall reasonably assist in any such evacuation.

13.4 Operation of Buyer's equipment is the responsibility of Buyer. Buyer shall not require or permit Seller's personnel to operate Buyer's equipment at Site.

13.5 Buyer will make its Site medical facilities and resources available to Seller personnel who need medical attention.

13.6. Seller has no responsibility or liability for the pre-existing condition of Buyer's equipment or the Site. Prior to Seller starting any work at Site, Buyer will provide documentation that identifies the presence and condition of any Hazardous Materials existing in or about Buyer's equipment or the Site that Seller may encounter while performing under this Contract. Buyer shall disclose to Seller industrial hygiene and environmental monitoring data regarding conditions that may affect Seller's work or personnel at the Site. Buyer shall keep Seller informed of changes in any such conditions.

13.7 Seller shall notify Buyer if Seller becomes aware of: (i) conditions at the Site differing materially from those disclosed by Buyer, or (ii) previously unknown physical conditions at Site differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract. If any such conditions cause an increase in Seller's cost of, or the time required for, performance of any part of the work under the Contract, an equitable adjustment in price and schedule shall be made.

13.8 If Seller encounters Hazardous Materials in Buyer's equipment or at the Site that require special handling or disposal, Seller is not obligated to continue work affected by the hazardous conditions. In such an event, Buyer shall eliminate the hazardous conditions in accordance with applicable laws and regulations so that Seller's work under the Contract may safely proceed, and Seller shall be entitled to an equitable adjustment of the price and schedule to compensate for any increase in Seller's cost of, or time required for, performance of any part of the work. Buyer shall properly store, transport and dispose of all Hazardous Materials introduced, produced or generated in the course of Seller's work at the Site.

13.9 Buyer shall indemnify Seller for any and all claims, damages, losses, and expenses arising out of or relating to any Hazardous Materials which are or were (i) present in or about Buyer's equipment or the Site prior to the commencement of Seller's work, (ii) improperly handled or disposed of by Buyer or Buyer's employees, agents, contractors or subcontractors, or (iii) brought, generated, produced or released on Site by parties other than Seller.

14. Changes

14.1 Each party may at any time propose changes in the schedule or scope of Products or Services. Seller is not obligated to proceed with any change until both parties agree upon such change in writing. The written change documentation will describe the changes in scope and schedule, and the resulting changes in price and other provisions, as agreed.

14.2 The scope, Contract Price, schedule, and other provisions will be equitably adjusted to reflect additional costs or obligations incurred by Seller resulting from a change, after Seller's proposal date, in Buyer's Site-specific requirements or procedures, or in industry specifications, codes, standards, applicable laws or regulations. However, no adjustment will be made on account of a general change in Seller's manufacturing or repair facilities resulting from a change in laws or regulations applicable to such facilities. Unless otherwise agreed by the parties, pricing for additional work arising from such changes shall be at Seller's time and material rates.

14.3 It shall be acceptable and not considered a change if Seller delivers a Product that bears a different, superseding or new part or version number compared to the part or version number listed in the Contract.

15. Limitations of Liability

15.1 The total liability of Seller for all claims of any kind arising from or related to the formation, performance or breach of this Contract, or any Products or Services, shall not exceed the (i) Contract Price, or (ii) if Buyer places multiple order(s) under the Contract, the price of each particular order for all claims arising from or related to that order and ten thousand US dollars (US \$10,000) for all claims not part of any particular order.

15.2 Seller shall not be liable for loss of profit or revenues, loss of use of equipment or systems, interruption of business, cost of replacement power, cost of capital, downtime costs, increased operating costs, any special, consequential, incidental, indirect, or punitive damages, or claims of Buyer's customers for any of the foregoing types of damages.

15.3 All Seller liability shall end upon expiration of the applicable warranty period, provided that Buyer may continue to enforce a claim for which it has given notice prior to that date by commencing an action or arbitration, as applicable under this Contract, before expiration of any statute of limitations or other legal time limitation but in no event later than one year after expiration of such warranty period.

15.4 Seller shall not be liable for advice or assistance that is not required for the work scope under this Contract.

15.5 If Buyer is supplying Products or Services to a third party, or using Products or Services at a facility owned by a third party, Buyer shall either (i) indemnify and defend Seller from and against any and all claims by, and liability to, any such third party in excess of the limitations set forth in this Article 15, or (ii) require that the third party agree, for the benefit of and enforceable by Seller, to be bound by all the limitations included in this Article 15.

15.6 For purposes of this Article 15, the term "Seller" means Seller, its affiliates, subcontractors and suppliers of any tier, and their respective employees. The limitations in this Article 15 shall apply regardless of whether a claim is based in contract, warranty, indemnity, tort/extra-contractual liability (including negligence), strict liability or otherwise, and shall prevail over any conflicting terms, except to the extent that such terms further restrict Seller's liability.

16. Governing Law and Dispute Resolution

16.1 This Contract shall be governed by and construed in accordance with the laws of (i) the State of New York if Buyer's place of business is in the U.S. or (ii) England and Wales if the Buyer's place of business is outside the U.S., in either case without giving effect to any choice of law rules that would cause the application of laws of any other jurisdiction (the "Governing Law"). If the Contract includes the sale of Products and the Buyer is outside the Seller's country, the United Nations Convention on Contracts for the International Sale of Goods shall apply.

16.2 In the event of any dispute arising out of or in connection with this Contract, including any question regarding its existence or validity, the parties agree to submit the matter to mediation under the ICC mediation Rules, without prejudice to either party's right to seek emergency, interim or conservatory measures of protection at any time.

If the dispute has not been settled pursuant to the ICC Mediation Rules within thirty (30) days following the filing of a request for Mediation or within such other period as the parties may agree in writing, such dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules of Arbitration. In case the arbitral tribunal is constituted of more than one arbitrator, the party-appointed arbitrators shall, for a period of two (2) weeks following the date on which their appointments have both been confirmed, attempt to reach agreement on the president of the arbitral tribunal. For this purpose, the arbitrators may communicate with the parties on an *ex-parte* basis.

If the two arbitrators are unable to agree upon the third, upon request of either Buyer or Seller, the President of the ICC shall appoint the third.

The seat, or legal place, of the mediation and arbitration shall be Geneva, Switzerland.

The language to be used in the mediation and in the arbitration shall be the English language.

The parties' written submissions shall, to the extent possible, contain all arguments and supporting materials on fact, law and damages, including all exhibits on which each party intends to rely, supporting witness statements, expert reports and legal authorities.

17. Inspection and Factory Tests

Seller will apply its normal quality control procedures in manufacturing Products and perform any factory tests in accordance with Seller's standard procedures. Seller shall attempt to accommodate requests by Buyer to witness Seller's factory tests of Products, subject to appropriate access restrictions, if such witnessing can be arranged without delaying the work. Travel and living expenses of Buyer personnel to witness such tests shall be borne by Buyer. Unless otherwise agreed, failure by the Buyer or its representative to attend the factory tests on the scheduled date shall entitle the Seller to proceed with such factory tests alone and the Seller shall promptly share the results of such tests with the Buyer. In the event the factory tests or any other tests to be performed under the Contract cannot be either witnessed or performed (as the case may be) by the Buyer for any reason (including as a consequence of any pandemic) and the Buyer cannot delegate any third party to represent it, or to perform the tests in its name and on its behalf, the Seller may propose to the Buyer alternate measures in order to avoid delaying the testing, including but not limited to the use of electronic messaging services such as Skype, Teams or equivalent, recording devices such as cameras, and a distribution of results via electronic storage media such as DVD or streamed videos. The Buyer and the Seller shall make their best efforts to agree on such measures with a view not to delay the testing of the Products. If despite reasonable alternate measures proposed by the Seller, the Buyer instructs the Seller to suspend or postpone the performance of the tests, the Seller shall, notwithstanding anything to the contrary in the Contract, be entitled to a reasonable exten-

sion of the time for completion and compensation by the Buyer for the additional costs incurred as a result of the suspension or postponement of the affected tests.

18. Firmware, Software, Leased Equipment, Remote Diagnostic Services, PCB Services

Seller grants Buyer a non-exclusive license to use Firmware solely in connection with use of the Product for which the Firmware is provided by Seller. Buyer shall not sublicense, assign, or otherwise transfer the license to use the Firmware to any third party, except with that specific Product and to the extent such transfer is not otherwise restricted by the Contract. If Seller provides any software to Buyer other than Firmware, the Software License Addendum shall apply. If Seller leases any of Seller's equipment or provides related Services to Buyer, including placing Seller's equipment at Buyer's site to provide remote Services, the Lease Addendum shall apply. If Seller provides remote diagnostic services to Buyer, the Remote Diagnostic Services Addendum shall apply. If Seller provides PCB Services to Buyer, the PCB Services Addendum shall apply. If there is any conflict between these "Terms and Conditions for the Sale of Products and Services, Form EM 104" and the terms of any addendum incorporated pursuant to this Article 18, the terms of the addendum shall take precedence with respect to the applicable scope.

19. General Clauses

19.1 Products and Services sold by Seller are not intended for use in connection with any nuclear facility or activity, and Buyer warrants that it shall not use or permit others to use Products or Services for such purposes, without the advance written consent of Seller. If, in breach of this, any such use occurs, Seller (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any nuclear or other damage, injury or contamination, and, in addition to any other rights of Seller, Buyer shall indemnify and hold Seller (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability. Consent of Seller to any such use, if any, will be conditioned upon additional terms and conditions that Seller determines to be acceptable for protection against nuclear liability.

19.2 Seller may assign or novate its rights and obligations under the Contract, in whole or in part, to any of its affiliates or may assign any of its accounts receivable under this Contract to any party without Buyer's consent. Buyer agrees to execute any documents that may be necessary to complete Seller's assignment or novation. Seller may subcontract portions of the work, so long as Seller remains responsible for it. The delegation or assignment by Buyer of any or all of its rights or obligations under the Contract without Seller's prior written consent (which consent shall not be unreasonably withheld) shall be void.

19.3 Buyer shall notify Seller immediately upon any change in ownership of more than fifty percent (50%) of Buyer's voting rights or of any controlling interest in Buyer. If Buyer fails to do so or Seller objects to the change, Seller may (a) terminate the Contract, (b) require Buyer to provide adequate assurance of performance (including but not limited to payment), and/or (c) put in place special controls regarding Seller's Confidential Information.

19.4 If any Contract provision is found to be void or unenforceable, the remainder of the Contract shall not be affected. The parties will endeavor to replace any such void or unenforceable provision with a new provision that achieves substantially the same practical and economic effect and is valid and enforceable.

19.5 The following Articles shall survive termination or cancellation of the Contract: 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 18, 19 and 20.

19.6 The Contract represents the entire agreement between the parties. No oral or written representation or warranty not contained in this Contract shall be binding on either party. Buyer's and Seller's rights, remedies and obligations arising from or related to Products and Services sold under this Contract are limited to the rights, remedies and obligations stated in this Contract. No modification, amendment, rescission or waiver shall be binding on either party unless agreed in writing.

19.7 Except as provided in Article 15 (Limitations of Liability) and in Section 19.1 (no nuclear use), this Contract is only for the benefit of the parties, and no third party shall have a right to enforce any provision of this Contract, whether under the English Contracts (Rights of Third Parties) Act of 1999 or otherwise.

19.8 This Contract may be signed in multiple counterparts that together shall constitute one agreement. If permitted by applicable laws, the Contract may be signed by the parties using certified digital signature tools such as DocuSign, or any other agreed upon certified means.

20. US Government Contracts

20.1 This Article 20 applies only if the Contract is for the direct or indirect sale to any agency of the U.S. government and/or is funded in whole or in part by any agency of the U.S. government.

20.2 Buyer agrees that all Products and Services provided by Seller meet the definition of "commercial-off-the-shelf" ("COTS") or "commercial item" as those terms are defined in Federal Acquisition Regulation ("FAR") 2.101. Unless otherwise specifically stated by Seller

in this Contract, Seller makes no representation or warranty as to the country of origin of Products. Buyer agrees any Services offered by Seller are exempt from the Service Contract Act of 1965 (FAR 52.222-41). The version of any applicable FAR clause listed in this Article 20 shall be the one in effect on the effective date of this Contract.

20.3 If Buyer is an agency of the U.S. Government, then as permitted by FAR 12.302, Buyer agrees that all paragraphs of FAR 52.212-4 (except those listed in 12.302(b)) are replaced with these Terms and Conditions. Buyer further agrees the subparagraphs of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the Contract Price.

20.4 If Buyer is procuring the Products or Services as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S. Government, then Buyer agrees that FAR 52.212-5(e) or 52.244-6 (whichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the Contract Price.



Agenda Item Form

Date of City Council Meeting	11/22/2022
Department	Inventory Control
Submitted by	Travis Matlock
Phone	479 271-3145

Item Type: (Check All That Apply)					
☐ Budget Adjustment	☐ Change Order	☐ Informational	☒ Ordinance	☐ Resolution	☐ Bid Award
Recommendation/Suggested Action (Enter recommendation in space below):					
Amendment to Ordinances 2022-55 and 2022-56 for Purchase of Transformers due to increase costs. See attached memo for break down.					

Estimated Cost	179,870
Is this Item Budgeted?	☒ Yes ☐ No
If no, please explain how item will be funded (briefly explain in space below) :	



MEMORANDUM

DATE: NOVEMBER 22, 2022

TO: City Council, Mayor Orman

FROM: Travis Matlock, Electric Utility Director

RE: Transformer Cost Increases

The City of Bentonville recommends amending ordinances 2022-55 and 2022-56 and associated POs for the purchase of double bushing and single-phase transformers totaling \$179,870.00 per attached breakdown.

Howard Transformers, the manufacture for the transformers BEUD uses, issued a letter addressing the increase in cost due to material availability for any order not started on November 1, 2022. The increase in cost is due to the core steel.

There are 2 POs that are affected by this increase as broken down below:

- Ordinance 2022-55; PO #22201556 - \$23,850
- Ordinance 2022-56; PO #22201606 - \$156,020



Howard Industries, Inc.
Distribution Transformer Division

P.O. Box 1588 / Laurel, MS 39441-1588 / Voice: (601) 425-3151 / Fax: (601) 649-8090 / E-mail: mkt@howard-ind.com

October 3, 2022

Dear Valued Customer:

As you are aware, the distribution transformer industry continues to face significant challenges due to labor and material supply constraints, just as it has for the last few years. The industry-wide production backlog for distribution transformers, due to these constraints, has led to never-before-experienced lead times. In addition to these issues, prices for key commodities and their fabrication in this market are extremely high. Howard is working proactively with our partners to navigate these challenges. We are committed to increasing our production rates and reducing our backlog to return to more normal lead times.

Our biggest commodity challenge is silicon core steel. There is a worldwide shortage of this material, and distribution transformer manufacturers are on allocation. After working diligently with our silicon core steel suppliers for over a year, we are happy to report that Howard has secured a significant increase in our core steel allocation. This added electrical steel will be available to Howard beginning in November of 2022 and through 2023. However, this steel is being offered at a significant price increase for BOTH the additional allocation AND the steel in our existing contract. This price increase will begin on November 1, 2022, on deliveries made to Howard Industries. It is important to note that HI would have incurred the price increase in January, with no additional allocation. While the additional allocation will certainly help alleviate some of the pressure on Howard's production system, we will still not have all of the silicon core steel required to meet our currently planned increases in production based on customer demand.

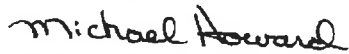
Howard has also worked to address the labor challenges the market is experiencing. To this end, we instituted significant pay rate increases in August. Pay rates for key positions in the factory were raised considerably to attract and retain skilled workers. While we had not anticipated raising rates at this juncture, the increased rates are necessary to increase production to the desired levels. In addition, to enable the hiring of additional workers HI is spending millions of dollars to expand our manufacturing operations outside the local labor market.

We believe that the combination of additional electrical steel, additional personnel as outlined above, personnel retention (both of the latter aided by increased wages) will help us reach our goal of increased output starting in the fourth quarter of this year.

Due to the aforementioned issues, Howard cannot maintain pricing on open purchase orders. We are, therefore, instituting an increase of 16.5% on all open purchase orders that have not begun the manufacturing process as of November 1st.

As a valued customer, we appreciate your business and understanding during these unprecedented times. We continue to work to develop innovative ways to minimize the impact on both your shipments and prices from the ongoing supply chain and inflation issues. One of our sales agents or regional managers will contact you soon to confirm your acceptance.

Sincerely,

A handwritten signature in black ink that reads "Michael Howard". The signature is written in a cursive style with a large, stylized "M" and "H".

Michael Howard

CEO

Howard Industries, Inc.

Qty	PO number	KVA	COB Part #	Old Cost	New Cost	Difference	Old Total	New Total	
50	22201556	25	2021	\$1,572.00	\$1,747.00	\$175.00	\$78,600.00	\$87,350.00	
10	All DB	37.5	2032	\$2,007.00	\$2,230.00	\$223.00	\$20,070.00	\$22,300.00	
25		50	2035	\$2,318.00	\$2,576.00	\$258.00	\$57,950.00	\$64,400.00	
15		1000	2003	\$3,861.00	\$4,289.00	\$428.00	\$57,915.00	\$64,335.00	
							\$214,535.00	\$238,385.00	\$23,850.00 Additional

Qty	PO number	KVA	COB Part #	Old Cost	New Cost	Difference	Old Total	New Total	
18	22201578	1.5	2001	\$1,576.00	\$1,751.00	\$175.00	\$28,368.00	\$31,518.00	\$3,150.00 Additional
	DB								

Qty	PO number	KVA	COB Part #	Old Cost	New Cost	Difference	Old Total	New Total	
20	22201606	15	2010	\$2,308.00	\$2,564.00	\$256.00	\$46,160.00	\$51,280.00	
60	All single ph.	25	2024	\$2,584.00	\$2,871.00	\$287.00	\$155,040.00	\$172,260.00	
200		50	2037	\$3,197.00	\$3,552.00	\$355.00	\$639,400.00	\$710,400.00	
40		75	2043	\$3,988.00	\$4,431.00	\$443.00	\$159,520.00	\$177,240.00	
40		100	2005	\$5,340.00	\$5,933.00	\$593.00	\$213,600.00	\$237,320.00	
30		167	2016	\$6,390.00	\$7,098.00	\$708.00	\$191,700.00	\$212,940.00	
							\$1,405,420.00	\$1,561,440.00	\$156,020.00 Addiotional
									\$183,020.00 Total



Agenda Item Form

Date of City Council Meeting	11/22/2022
Department	Electric
Submitted by	Travis Matlock, PE
Phone	479-271-5941

Item Type: (Check Applicable Item Type)					
☐ Budget Adjustment	☐ Change Order	☐ Informational	☐ Ordinance	☐ Resolution	☐ Bid Award
Recommendation/Suggested Action (Enter recommendation in space below):					
Informational - New PURPA Requirement					

Estimated Cost	
Is this Item Budgeted?	☐ Yes ☐ No
If no, please explain how item will be funded (briefly explain in space below) :	



MEMORANDUM

DATE: November 15, 2022

TO: Wayman Thurman PE/April Hayes/Charlie Barnes/Lance Henderson

FROM: Travis Matlock, Electric Utility Director

RE: Consideration of New Standards Under PURPA 111(d)

The purpose of this memorandum is to commence consideration of two new standards that were added to Section 111(d) of the Public Utility Regulatory Policy Act by the Infrastructure Investment and Jobs Act (P.L. 117-58) on November 15, 2021.

New PURPA 111(d) Standards

1. BEUD will consider whether measures should be implemented to promote greater electrification of the transportation sector, including the establishment of rates that:

(A) promote affordable and equitable electric vehicle charging options for residential, commercial, and public electric vehicle charging infrastructure;

(B) improve the customer experience associated with electric vehicle charging, including by reducing charging times for light-, medium-, and heavy-duty vehicles;

(C) accelerate third-party investment in electric vehicle charging for light-, medium-, and heavy-duty vehicles; and

(D) appropriately recover the marginal costs of delivering electricity to electric vehicles and electric vehicle charging infrastructure.

2. BEUD will also consider whether measures should be implemented to promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand. As part of this consideration, BEUD will consider whether to establish one or more rate mechanisms or the timely recovery of the costs of promoting demand-response and demand flexibility practices.

Tasks

Each person addressed in this memorandum is appointed to serve as a staff representative during the consideration process. This will require cooperatively gathering factual evidence related to the standards described above, making findings about the application of that evidence to BEUD, and ultimately recommending a determination to Bentonville's Utility Board/City Council. The consideration process will follow the timeline described below, which may be updated as the process proceeds:

Action	Deadline
Consideration process initiated	November 14, 2022
Initial staff meeting	November 28, 2022
Draft evidence and findings submitted	March 15, 2023
Advertise public request for input	April 1, 2023
Initial hearing	May 1, 2023
Complete consideration process	November 15, 2023

Hearing

I anticipate that the hearing associated with these new PURPA 111(d) standards will be conducted through a "paper" proceeding without live testimony. Thus, all staff reports, and public input must be gathered and organized for presentation to and consideration by City of Bentonville Utility Board/City Council in accordance with the hearing schedule shown above. The initial hearing will be continued as necessary to finalize determinations in writing by November 15, 2023. Final determinations will be posted on the Bentonville's website.