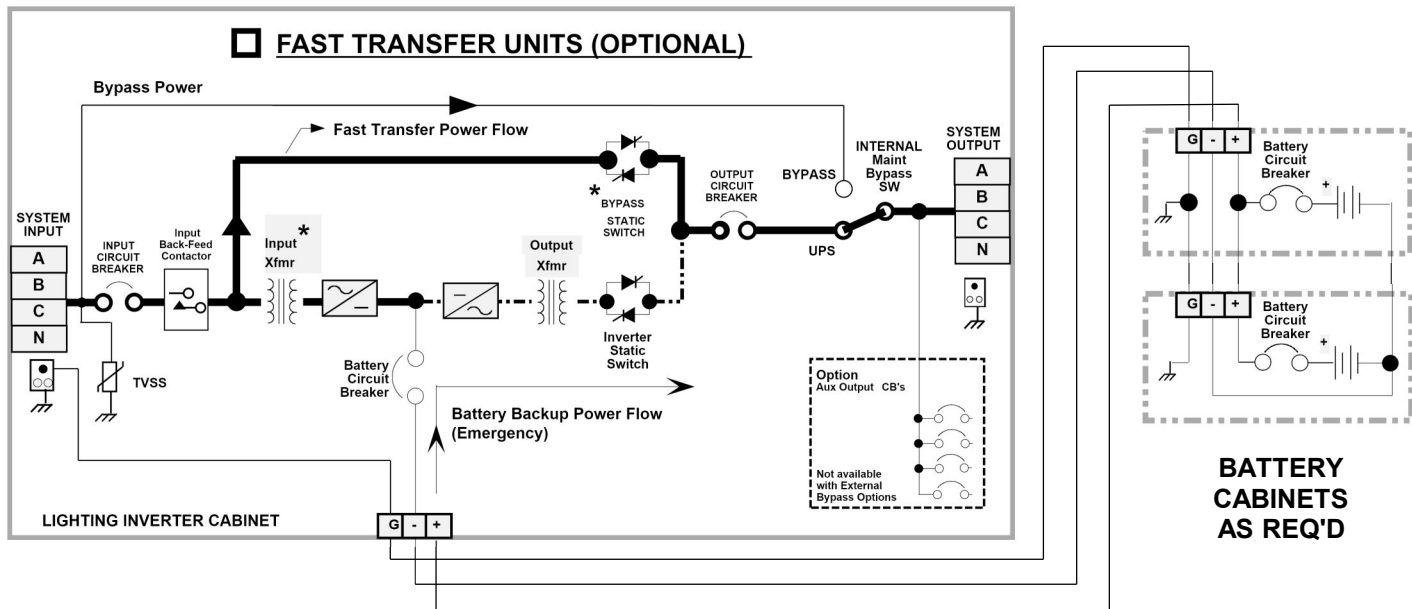
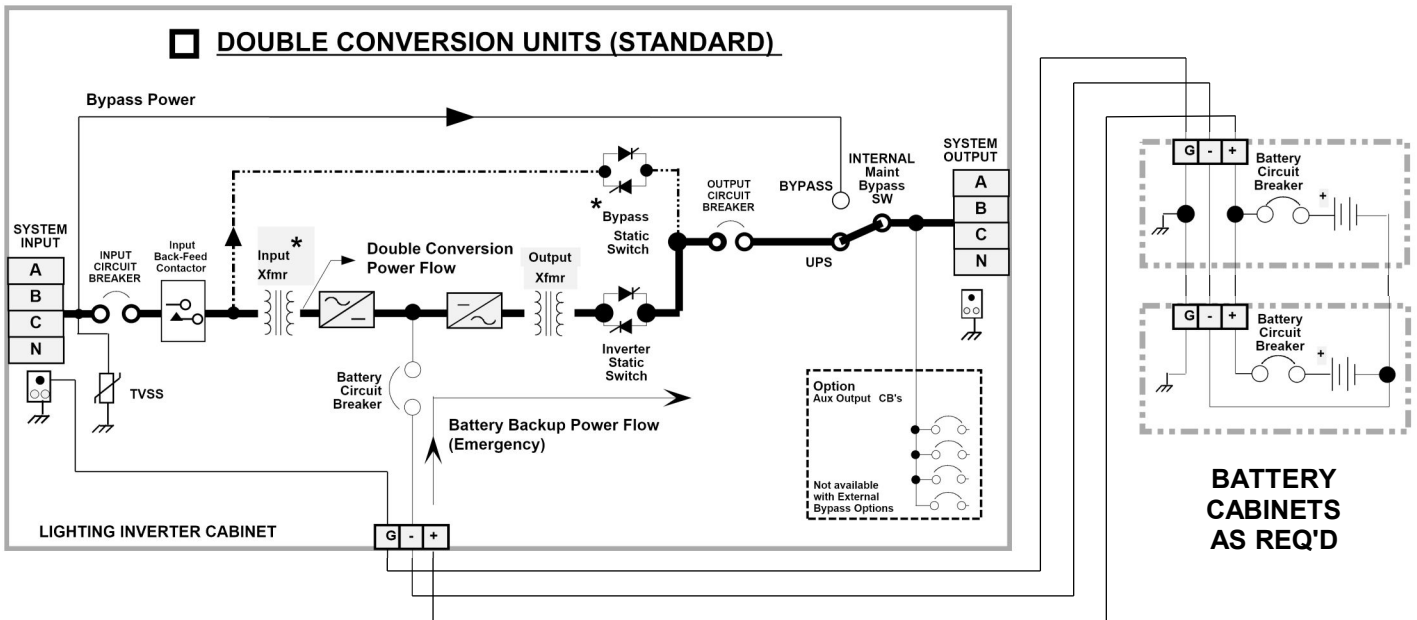


3 PHASE LIGHTING INVERTER TYPICAL SINGLE LINE DIAGRAM



NOTES:

- * Bypass and Inverter Static Switches will be powered from the Input Transformer for different input and output voltage configurations.
- Delta Input Power is available using External Transformer (transformer must be sized min 25% larger than UPS capacity)
- Battery Cabinet Quantity might vary depending on the Battery type.



TYPICAL 3-PH LIGHTING INVERTER SINGLE LINE DIAGRAM

SDR : SS
CHKD : BC
APPVD : BC

8/29/22
8/29/22
8/29/22

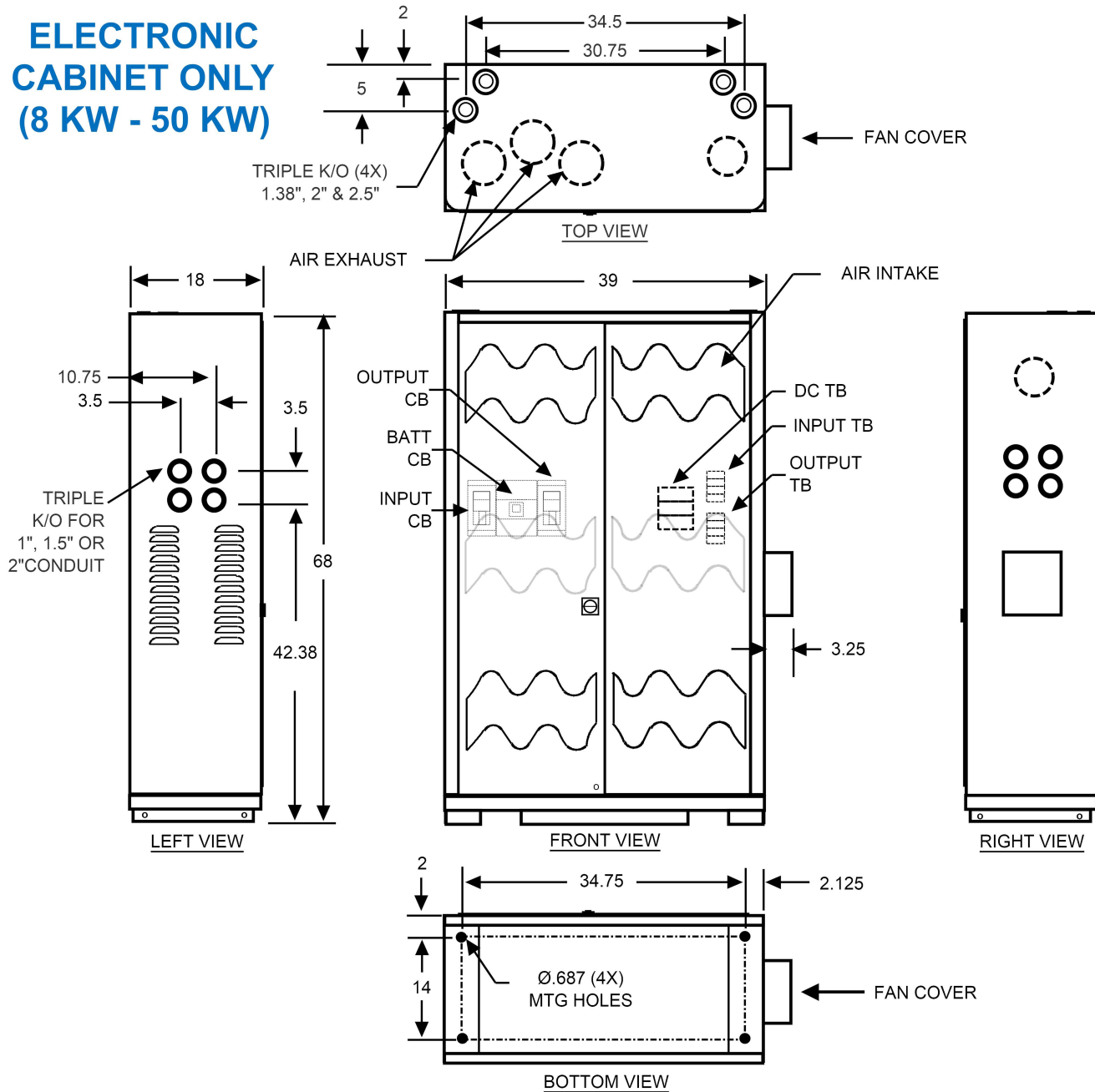
DWG NO.: 115-TD-010

REV.: B
SHT 1 OF 1

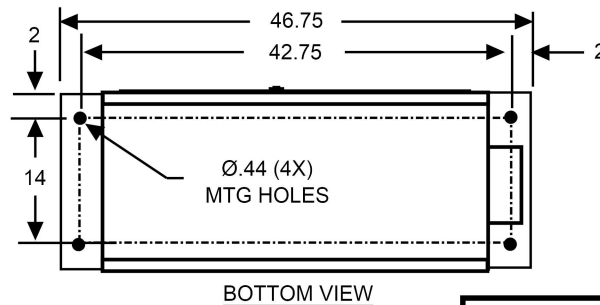
SUBJECT TO CHANGE WITHOUT NOTICE

POWER WAVE 3 CENTRAL LIGHTING INVERTER

**ELECTRONIC
CABINET ONLY
(8 KW - 50 KW)**



INSTALLATION WITH SEISMIC BRACKETS FOR ZONE 4 BOTTOM VIEW



NOTES:

- 1) CONSTRUCTION: NEMA1 INDOOR
- 2) OPTIONAL SEISMIC BRACKETS AVAILABLE
- 3) ANCHORING HARDWARE TO BE SUPPLIED BY CUSTOMER



**POWER WAVE 3
INVERTER CAB, 39" WIDE**

SDR : SS 10/11/22
CHKD : BC 10/11/22
APPVD : HN 10/11/22

DWG NO.: 115-TD-011

REV.: A

SHT 1 OF 1

SUBJECT TO CHANGE WITHOUT NOTICE

BATTERY CABINET (10KVA/8KW), STANDARD VRLA BATTERY

NOTES:

- 1) CONSTRUCTION: NEMA1 INDOOR
- 2) OPTIONAL SEISMIC BRACKETS AVAILABLE
- 3) OPTIONAL STACKABLE RACKS AVAILABLE (10KVA/8KW UNITS ONLY)
- 4) ANCHORING HARDWARE TO BE SUPPLIED BY CUSTOMER (REFER TO SEISMIC DWG)

TOP VIEW

Dimensions: 34.5, 30.75, 2, 5

TRIPLE K/O (4X) 1.38", 2" & 2.5"

FRONT VIEW

Dimensions: 39, 68, 18, 3.5, 45.88, 10.75

BATTERY BREAKER

SIDE VIEW

TRIPLE K/O FOR 1", 1.5" OR 2" CONDUIT

OPTIONAL STACKABLE CABINET LAYOUT

Dimensions: 60, 2.5, 52.5, 62, 142, 69.75, 56, 28.25, 2, 3" MIN 9" MAX, 54, 4, 7.125, 12, 42.75, 5.625, 20X, 20X

BOTTOM VIEW

Dimensions: 2, 34.75, 2.13, 14

Ø.69 (4X) MTG HOLES

INSTALLATION WITH SEISMIC BRACKETS FOR ZONE 4 BOTTOM VIEW

Dimensions: 2, 46.75, 42.75, 2, 14

Ø.44 (4X) MTG HOLES

STANDARD VRLA BATTERY		
KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
10KVA/8KW	1	1

BATTERY CABINET LAYOUTS

Dimensions: 39, 18, 18, 18, 18, 39, 4, 18, 18, 18, 18, 39, 4

BATTERY CABINET

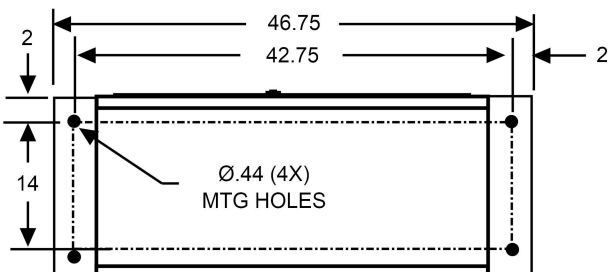
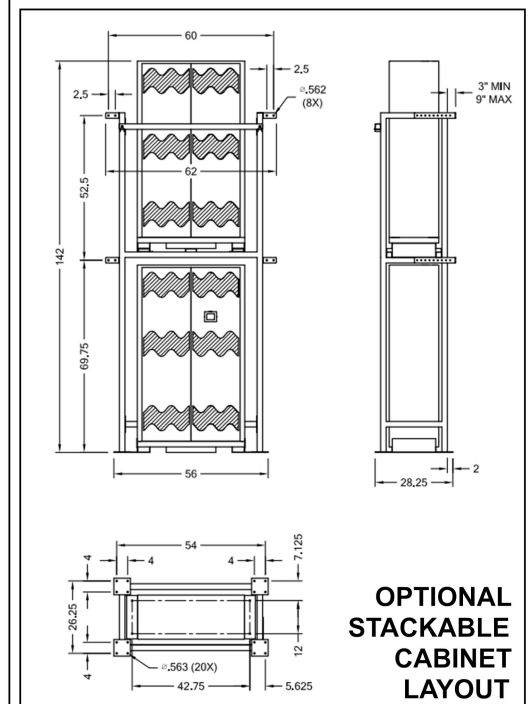
INVERTER CABINET

B	1.0"	8.0"
A	1.0"	4.0"
DIM	WITHOUT EXTERNAL SEISMIC	WITH EXTERNAL SEISMIC

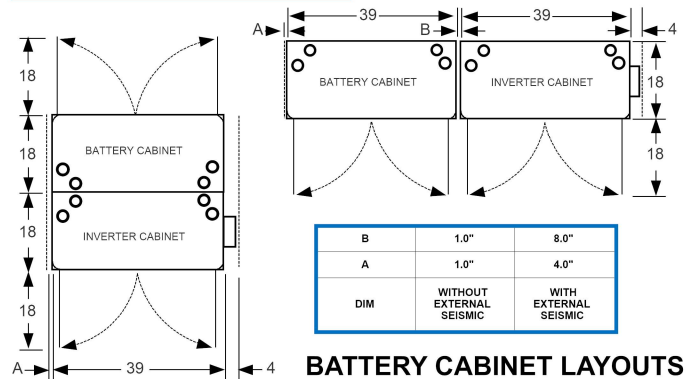
POWER WAVE 3 BATT CAB, 39" WIDE

SDR: SS	10/11/22	DWG NO.: TD-115-012	REV.: A SHT 1 OF 1
CHKD: BC	10/11/22		
APPVD: HN	10/11/22	SUBJECT TO CHANGE WITHOUT NOTICE	

- 1) CONSTRUCTION: NEMA1 INDOOR
- 2) OPTIONAL SEISMIC BRACKETS AVAILABLE
- 3) OPTIONAL STACKABLE RACKS AVAILABLE
(10KVA/8KW UNITS ONLY)
- 4) ANCHORING HARDWARE TO BE
SUPPLIED BY CUSTOMER
(REFER TO SEISMIC DWG)



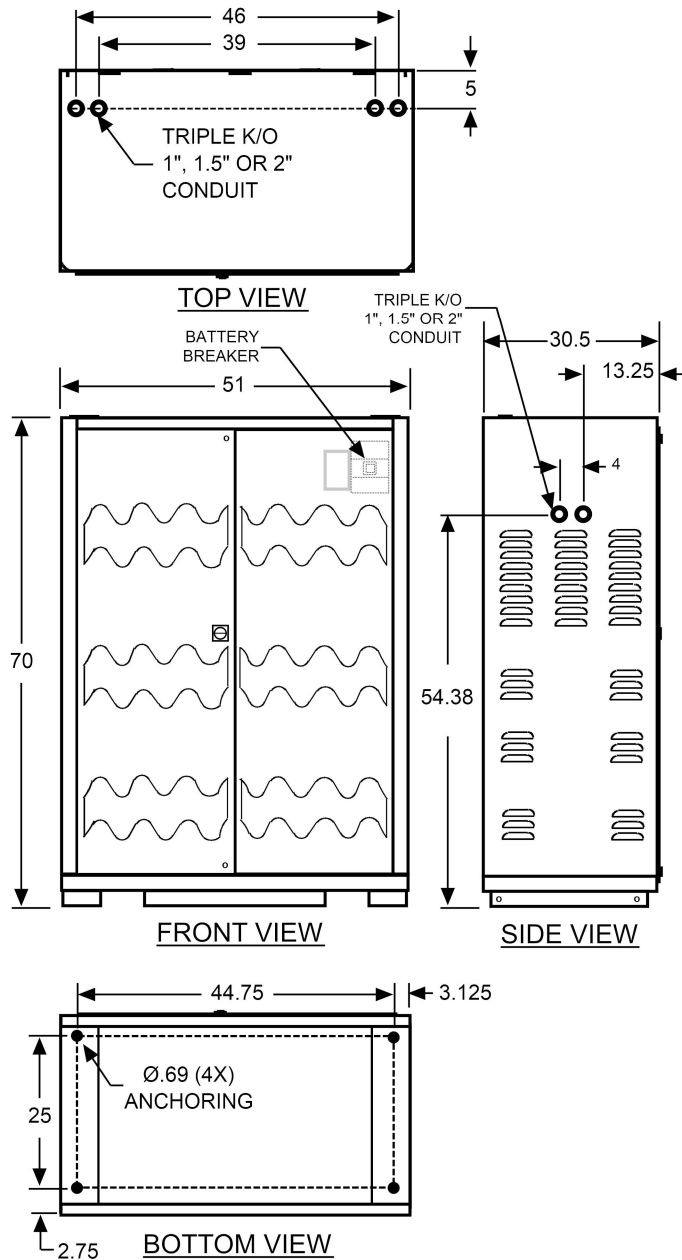
STANDARDVRLA BATTERY		
KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
10KVA/8KW	1	1



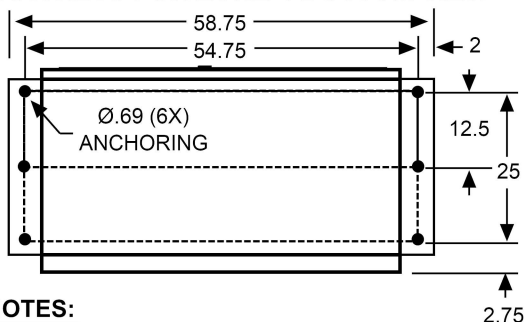
B	1.0"	8.0"
A	1.0"	4.0"
DIM	WITHOUT EXTERNAL SEISMIC	WITH EXTERNAL SEISMIC

		POWER WAVE 3 BATT CAB, 39" WIDE	
SDR : SS	10/11/22	DWG NO.: TD-115-012	REV.: A
CHKD : BC	10/11/22		SHT 1 OF 1
APPVD : HN	10/11/22	SUBJECT TO CHANGE WITHOUT NOTICE	

BATTERY CABINET (12 KW - 50 KW) STANDARD VRLA BATTERY



INSTALLATION WITH SEISMIC BRACKETS FOR ZONE 4 BOTTOM VIEW



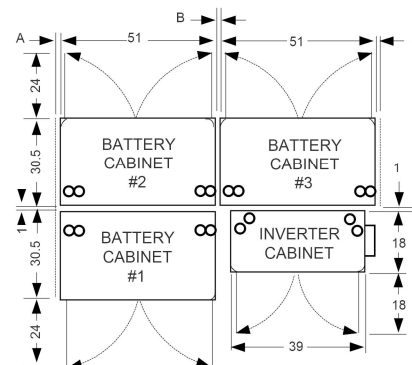
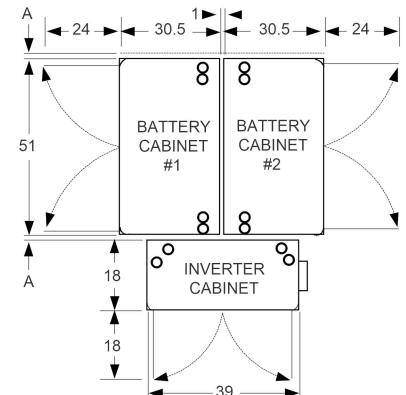
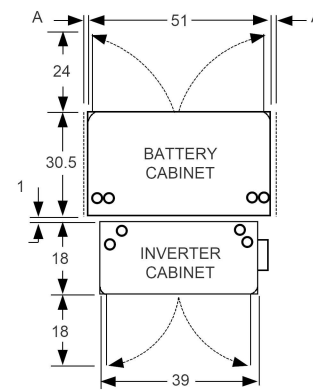
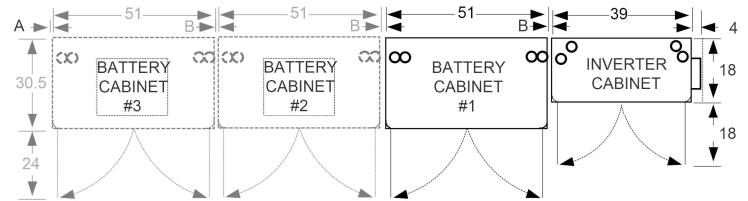
NOTES:

- 1) CONSTRUCTION: NEMA1 INDOOR
- 2) OPTIONAL SEISMIC BRACKETS AVAILABLE
(FOR ANCHOR DETAILS, REFER TO SEISMIC DWG)

BATTERY CABINET LAYOUTS

STANDARD VRLA BATTERY

KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
15KVA/12KW	1	1
20KVA/16KW	1	1
25KVA/20KW	1	1
30KVA/24KW	1	2
40KVA/32KW	2	2
50KVA/40KW	2	2
50KW	2	3



B	1.0"	8.0"
A	1.0"	4.0"
DIM	WITHOUT EXTERNAL SEISMIC	WITH EXTERNAL SEISMIC



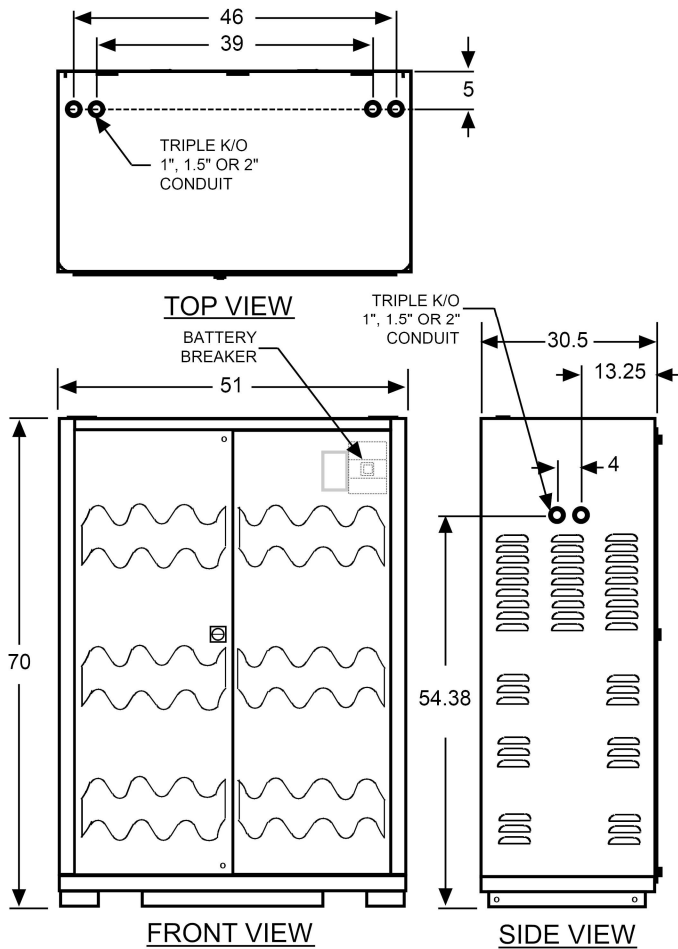
**POWER WAVE 3
BATT CAB, 51" WIDE**

SDR : SS	10/11/22
CHKD : BC	10/11/22
APPVD : HN	10/11/22

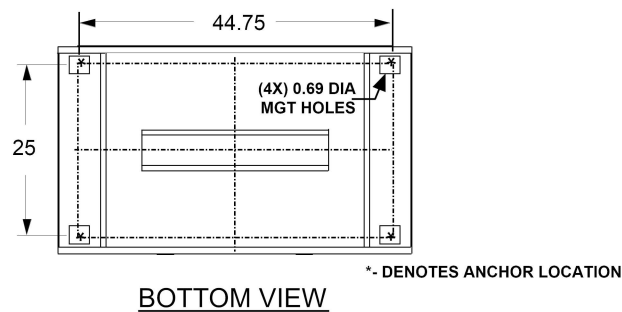
DWG NO.: 115-TD-013	REV.: A
SHT 1 OF 1	
SUBJECT TO CHANGE WITHOUT NOTICE	

BATTERY CABINET (12 KW - 50 KW) STANDARD VRLA BATTERY

INTEGRATED BRACKETS



INSTALLATION WITH INTEGRATED SEISMIC MOUNTING FOR ZONE 4



NOTES:

1) CONSTRUCTION: NEMA1 INDOOR

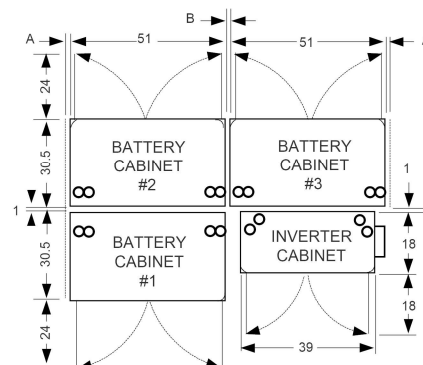
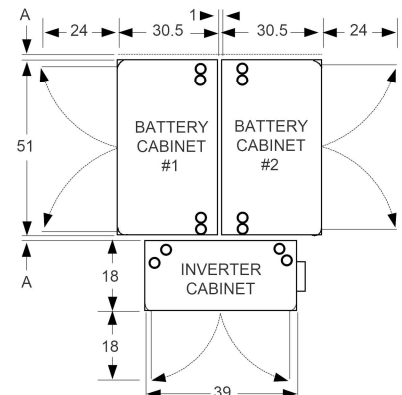
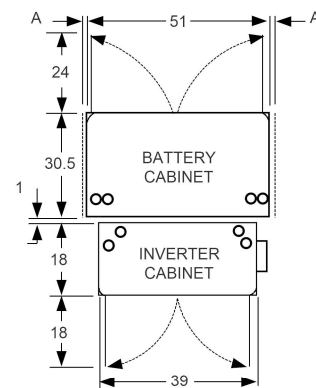
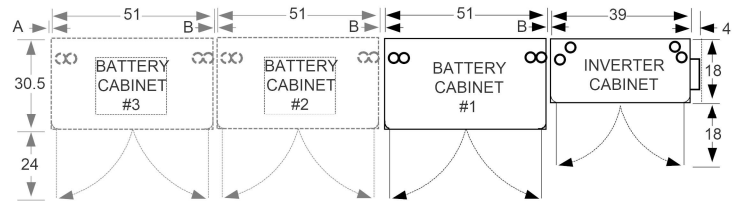
2) ANCHORS FOR INTEGRATED SEISMIC MOUNTING:

- USE 5/8"DIA x 3-3/4" MIN. EMBED HILTI KB-TZ ANCHORS, ICCESR-1917 (LARR#25701) OR APPROVED EQUAL (4) TOTAL PER CABINET, (2) PER ANCHOR BRACKET
 - CONCRETE 5" THICK x 2,500 PSI (MIN. REQ'D).
 - SOIL BEARING PRESSURE 500 PSF (MIN. REQ'D)
- FOR ALL DETAILS REFER TO SEISMIC DWG. FOR EACH CABINET MOUNTING**

BATTERY CABINET LAYOUTS

STANDARD VRLA BATTERY

KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
15KVA/12KW	1	1
20KVA/16KW	1	1
25KVA/20KW	1	1
30KVA/24KW	1	2
40KVA/32KW	2	2
50KVA/40KW	2	2
50KW	2	3



B	1.0"
A	1.0"
DIM	WITH INTEGRATED SEISMIC



**POWER WAVE 3
BATT CAB, 51" WIDE**

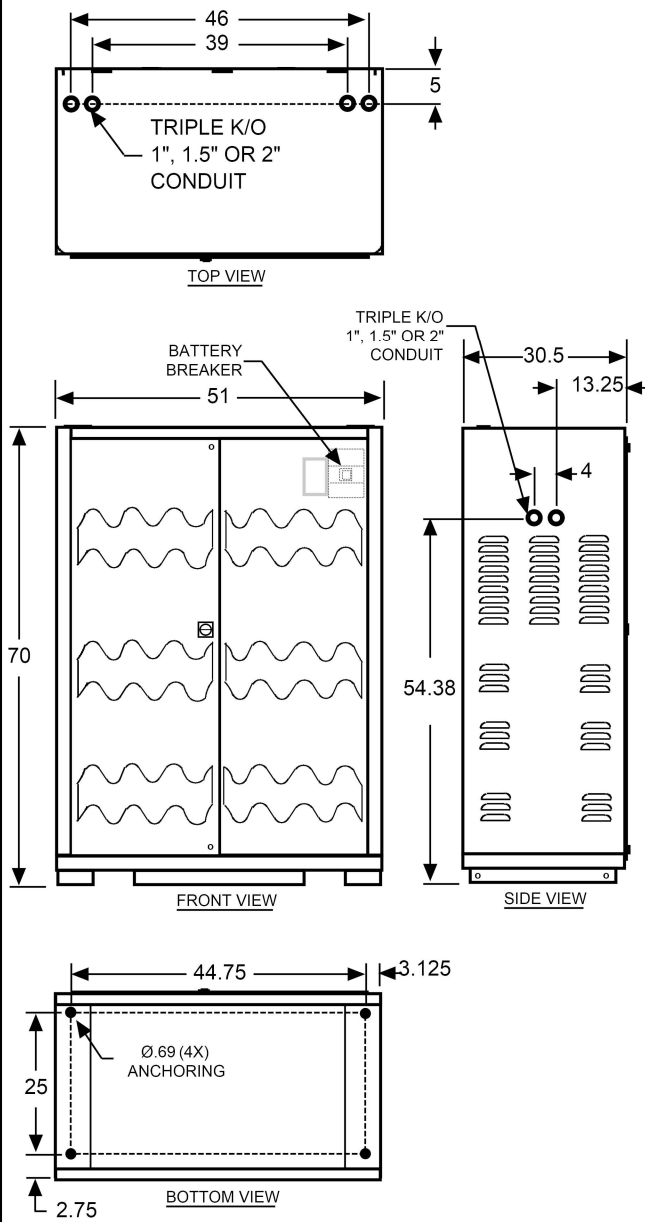
SDR : SS	10/11/22
CHKD : BC	10/11/22
APPVD : HN	10/11/22

DWG NO.: 115-TD-014

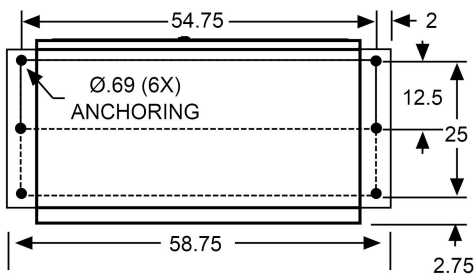
REV.: A
SHT 1 OF 1

SUBJECT TO CHANGE WITHOUT NOTICE

BATTERY CABINET (8 KW - 50 KW) LONG LIFE BATTERY



INSTALLATION WITH SEISMIC BRACKETS FOR ZONE 4 BOTTOM VIEW



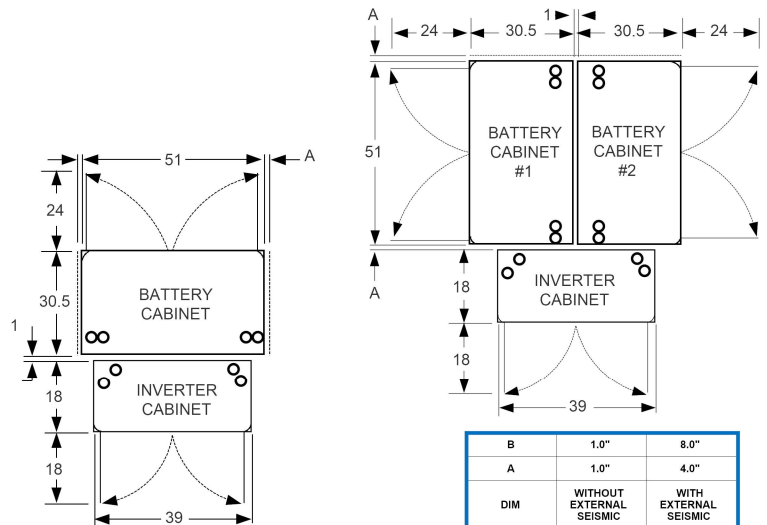
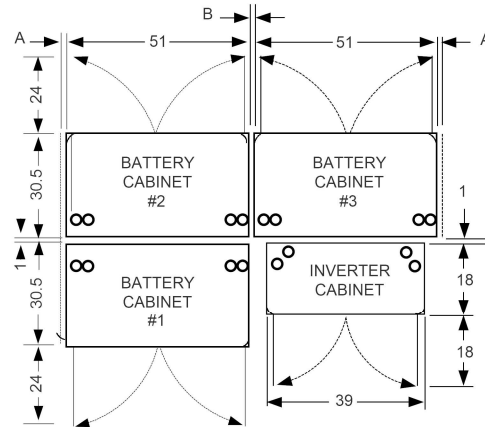
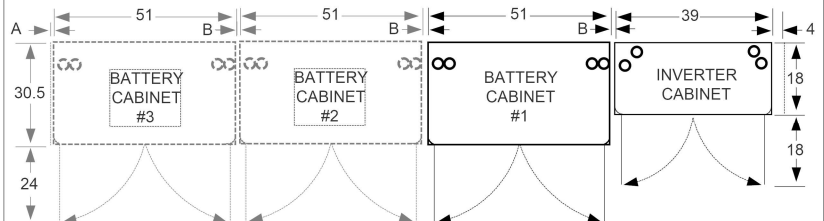
NOTES:

- 1) CONSTRUCTION: NEMA1 INDOOR
- 2) OPTIONAL SEISMIC BRACKETS AVAILABLE
(FOR ANCHOR DETAILS, REFER TO SEISMIC DWG)

BATTERY CABINET LAYOUTS

LONG LIFE BATTERY

KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
10KVA/8KW	1	1
15KVA/12KW	1	1
20KVA/16KW	1	1
25KVA/20KW	1	1
30KVA/24KW	1	2
40KVA/32KW	2	2
50KVA/40KW	2	3
50KW	3	3



**POWER WAVE 3
LONG LIFE BATT CAB
51" WIDE**

SDR : SS
CHKD : BC
APPVD : HN

10/11/22
10/11/22
10/11/22

DWG NO.: 115-TD-015

REV.: A
SHT 1 OF 1

SUBJECT TO CHANGE WITHOUT NOTICE

REMOTE STATUS PANEL

SIDE
MOUNT
PROVISION

BACK
MOUNT
PROVISION

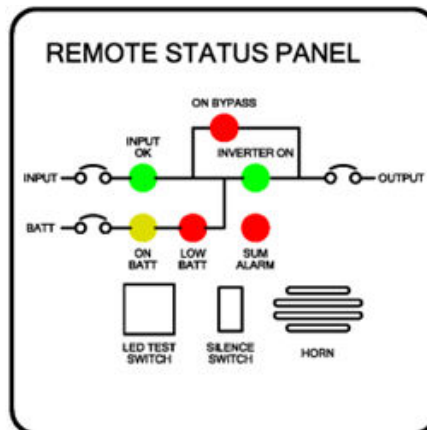


TO UPS P100 TERMINAL
BLOCK
SEE INSTALLATION
INSTRUCTION SHIPPED
WITH THE ASSEMBLY

USE
BUMPER
FOR
CONSOLE
INSTALL

Remote Status Panel displays the following:

INPUT OK:	Input power is within acceptable range
INVERTER ON:	Inverter is on
ON BYPASS:	Unit is on Bypass Mode
ON BATT:	Unit is running from Battery
LOW BATT:	Battery voltage is at low voltage before shutdown
SUM ALARM:	Unit is on critical alarm such as: Over temperature, DC OV/UV
HORN:	Audible warning for alarm condition
SILENCE WATCH:	Silences the audible warning
LED TEST:	Tests the LED's by push in



REMOTE STATUS PANEL ASSEMBLY

SDR : MT 12/28/22
APPVD : HAI 12/28/22
CHKD : MT 12/28/22

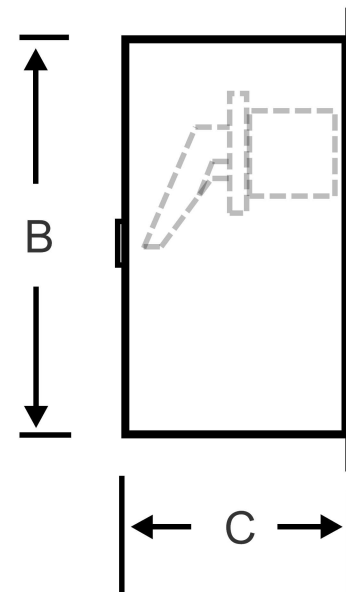
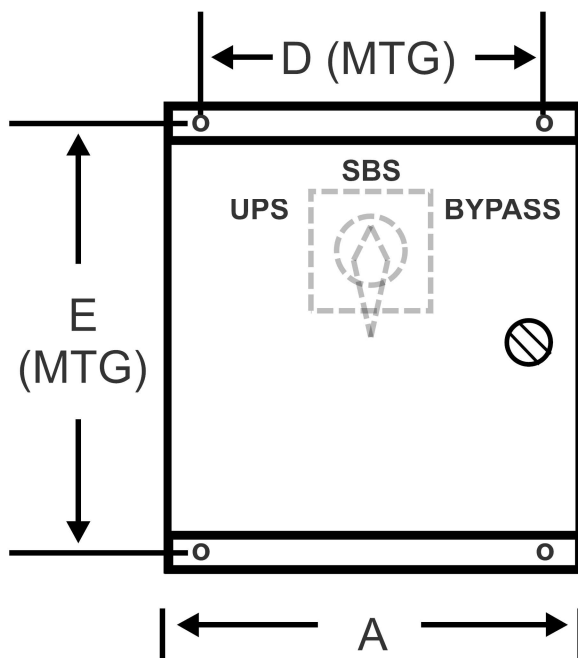
DWG NO.:
110-SV-TD-014

REV.: A
SHT 1 OF 1

SUBJECT TO CHANGE WITHOUT NOTICE

MAKE BEFORE BREAK EXTERNAL WRAP AROUND BY-PASS SWITCH

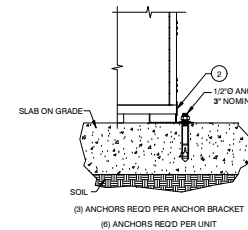
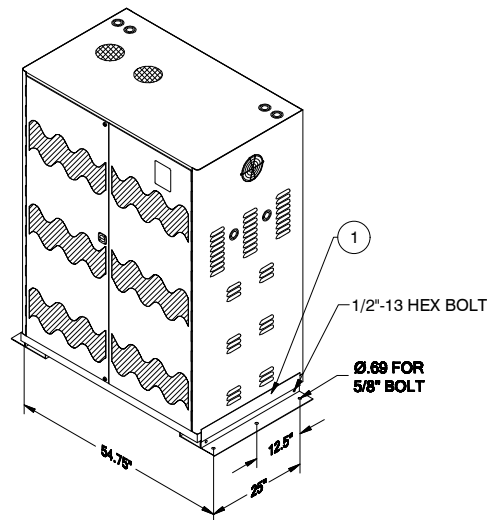
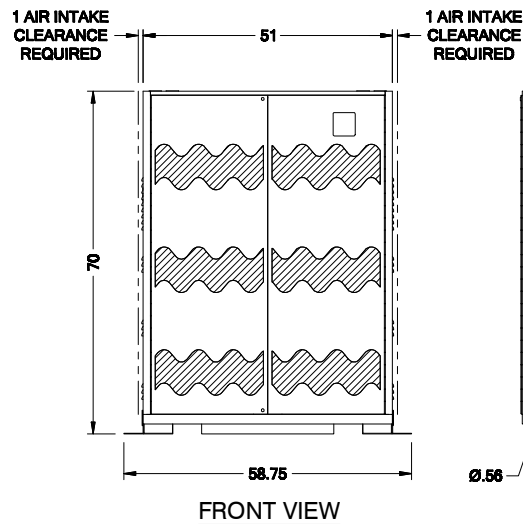
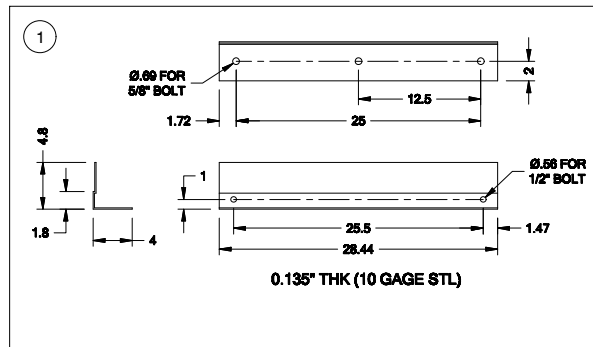
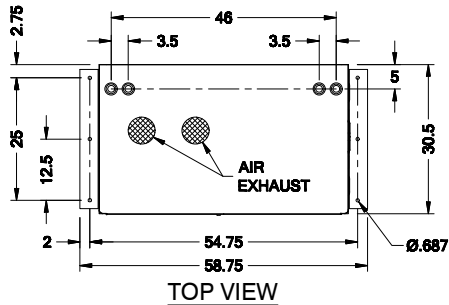
350 AMPS	600V	30	36	16	28.5	34.5
240 AMPS	600V	30	30	12	28.5	28.5
175 AMPS	600V	20	20	12	18.5	18.5
110 AMPS	600V	14	16	10	12	16.75
55 AMPS	600V	14	16	8	12	16.75
RATING	VOLTAGE	DIM A	DIM B	DIM C	DIM D (MTG)	DIM E (MTG)



NOTES:

- 1) SWITCH CONTACTS ARE THREE PHASE L-NEUTRAL "MAKE BEFORE-BREAK"
- 2) CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION
- 3) CONTACTS MARKED "BYPASS" ARE CLOSED IN THE "BYPASS" POSITION
- 4) CONTACTS MARKED "SBS" ARE CLOSED IN THE "SBS" POSITION
- 5) WRAP AROUND BY-PASS SWITCH IS FOR SAME INPUT/OUTPUT VOLTAGES ONLY
- 6) WRAP AROUND BY-PASS SWITCH CAN ONLY BE USED WITHOUT ANY BUILT-IN SECONDARY DISTRIBUTION CIRCUIT BREAKERS IN UPS

Line POWER		POWER WAVE 3 / 4 EXTERNAL WRAP AROUND BYPASS SWITCH	
SDR : SS	10/11/22	DWG NO.: 115-TD-016	REV.: A
CHKD : BC	10/11/22		SHT 1 OF 1
APPVD : HN	10/11/22	SUBJECT TO CHANGE WITHOUT NOTICE	



- NOTES:**
1. DESIGNED PER THE 2021 IBC / 2022 CBC / 2023 IABC.
 2. STORAGE CAPACITY: 4,640# MAX. WEIGHT.
 3. ANCHORS: HILTI KWIK BOLT T2 Z.
 4. CONCRETE: 8" THICK x 2,500 PSI.
 5. SOIL BEARING PRESSURE: 800 PSF. (MIN. REQ'D).
 6. EVALUATION BASED ON NORTHBRIDGE LOCATION (ONE OF THE HIGHEST LA FAULT AREAS) WITH THE FOLLOWING CALCULATION AS A TYPICAL EXAMPLE. (ASSUMED GROUND FLOOR INSTALLATION)

LOADS & DISTRIBUTION: CABINET

ANALYSIS BASED ON SECTION 13.3 OF THE ASCE 7-16 SPECIFICATION REFERENCED IN CHAPTER 16 OF THE 2021 IBC/2022 CBC/2023 IABC

F_p (13.3-1): $0.4 \times ap \times S_{ps} \times W_p / (R_p / I_p)$	$0.234 \times W_p$	SHALL NOT BE GREATER THAN
F_p (13.3-2): $1.6 \times S_{ps} \times I_p \times W_p$	$2.336 \times W_p$	SHALL NOT BE LESS THAN
F_p (13.3-3): $0.3 \times S_{ps} \times I_p \times W_p$	$0.438 \times W_p$	

SITE CLASS = D

$F_a = 1.2$

$S_s = 1.83$

$S_{ps} = 1.46$

$I_p = 1.00$

$ap = 2.5$

$ap = 1$

ASCE 7-16 Table 13.5-1

ASCE 7-16 Table 13.5-1

$W_p = 4640 \text{ LB}$

$D \cdot F_p = 0.77 \times 438 \times W_p$

$= 0.33 \times 4640 \text{ LB}$

$= 1,423 \text{ LB}$

OVERTURNING ANALYSIS:

CABINET HEIGHT, $H = 70.0 \text{ IN}$

ANCHORS SPACING, $D = 25.0 \text{ IN}$

$M_{ot} = V_{total} \cdot H / 2$

$= 1423 \text{ LB} \cdot 70 \text{ IN} \cdot 1/2$

$= 49,792 \text{ IN-LB}$

$M_{st} = W_p \cdot D / 2$

$= 4640 \text{ LB} \cdot 25 \text{ IN} / 2$

$= 58,000 \text{ IN-LB}$

$P_{u\text{lift}} = (M_{ot} - 0.6 \cdot M_{st}) / D$

$= (49,792 \text{ IN-LB} - 0.6 \cdot 58,000 \text{ IN-LB}) / 25 \text{ IN}$

$= 600 \text{ LB}$

$\leq UPLIFT$

ANCHORS

ALLOWABLE CAPACITY PER ICC REPORT AND ACI 318-14 CHAPTER 17

PULLOUT: $11,70 \text{ LB}$

$T_{allowable, ACI}$

SHEAR: $2,590 \text{ LB}$

$V_{allowable, ACI}$

COMBINED STRESS $= (800 \text{ LB} / 3510 \text{ LB}) + (1423 \text{ LB} / 14340 \text{ LB})$

< 0.27

USE 1/2" - 13 x 3" MIN. EMBED. HILTI KB-T2Z (ICC ESR-4266) OR APPROVED EQUAL

(6) PER CABINET

POWER COMPANY
NORTHBRIDGE, CA 91194

NOTES:

NO.	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

REV.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



DRAWN BY: M.V. / T.C.
DATE: 01/25/24
CHECKED BY:
REV. DATE:
TYPE:
SCALE: N.T.S.
APPROVED BY: SALE / PATRICK



DESCRIPTION:
CABINET DETAILS

DRAWING NUMBER:
24-0186-B

CABINET ELEVATIONS

CALCULATIONS