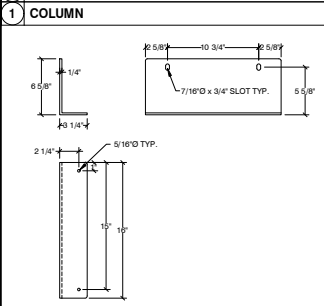
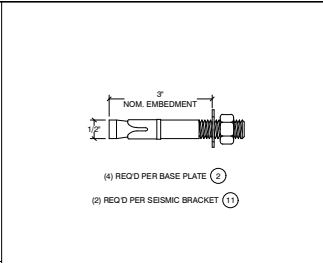


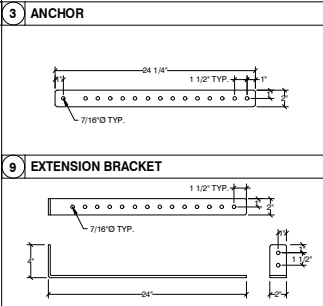
2 BASE PLATE



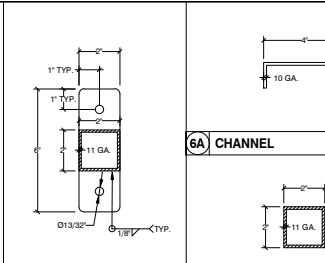
1 COLUMN



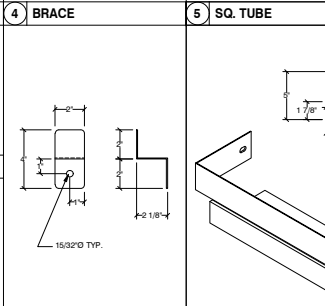
3 ANCHOR



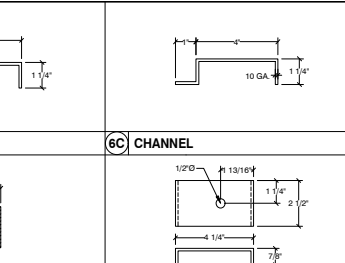
8 WALL MOUNTED BRACKET



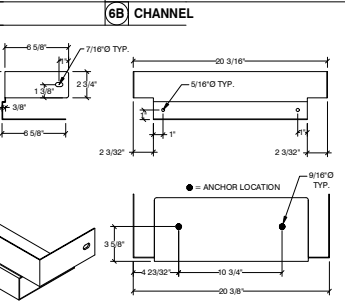
4 BRACE



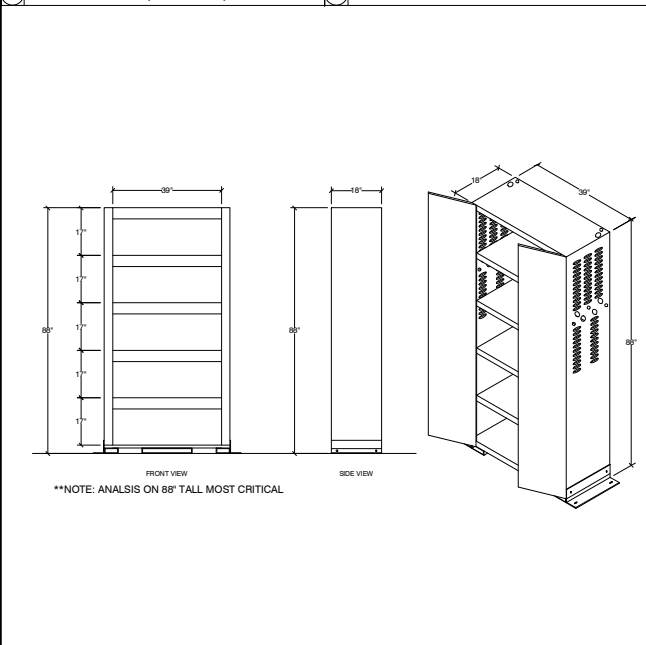
10 BRACKET



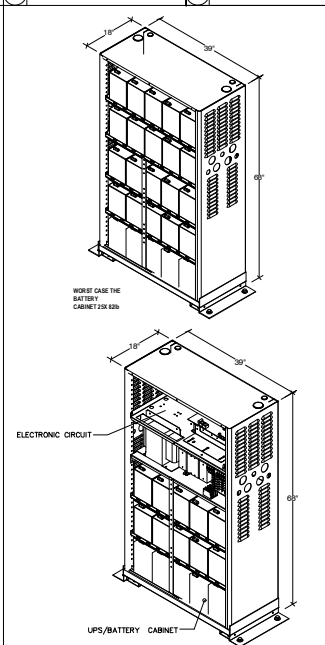
6A CHANNEL 6C CHANNEL



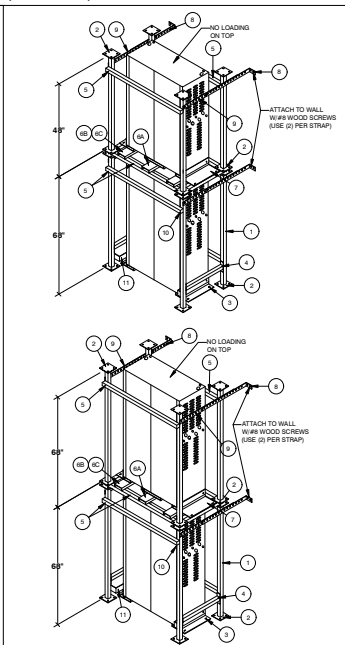
11 SEISMIC BRACKET (LOWER UNIT)



CABINET ELEVATIONS



TYP. LOADING PROFILE (BATTERY)



CABINET ELEVATIONS (STACKED UNITS)

NOTES:
 1. DESIGNED PER THE 2021 IBC / 2022 CBC / 2020 IABC,
 $F_a = 1.2$ & $S_s = 1.82$
 2. STORAGE CAPACITY: 410# PER LEVEL
 3. ANCHORS: HILTI KWIK BOLT T22,
 ICC #ESR-4266 W/ LABC SUPPLEMENT
 4. CONCRETE: 8" THICK x 2,900 PSI
 5. SOIL BEARING PRESSURE: 400 PSF (MIN. REQ'D)
 6. EVALUATION BASED ON NORTH RIDGE 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 18 OF THE 2021 IBC/2022 CBC/2023 IABC

$F_p(13.3-3) = 0.4 \times \text{sp} \times S_{ps} \times W_p / (R_p/10)$ 0.234 x Wp SHALL NOT BE GREATER THAN
 $F_p(13.3-2) = 1.6 \times S_{ps} \times \text{ip} \times W_p$ 2.336 x Wp SHALL NOT BE LESS THAN
 $F_p(13.3-3) = 0.3 \times S_{ps} \times \text{ip} \times W_p$ 0.438 x Wp SHALL NOT BE LESS THAN

SITE CLASS = D
 $F_a = 1.2$
 $S_s = 1.83$
 $S_{ps} = 1.46$
 $I_p = 1.00$
 $R_p = 2.5$ ASCE 7-16 Table 13.5-1
 $q_p = 5$ ASCE 7-16 Table 13.5-1
 $w_{DL} = 20$ LB PER LEVEL
 $w_{LL} = 410$ LB PER LEVEL
 $W_p = w_{DL} + w_{LL}$

$0.7F_p = 0.7 \times 0.438 \times W_p = 0.31 \times (20 + 410) \text{ LB} = 132 \text{ LB}$

SEISMIC DISTRIBUTION:

| LEVEL | h IN | Wt LB | HEIGHT IN | F1 LB | Mut IN-LB |
|----------|---------|----------|--------------|----------|--------------|
| 1 | 3.0 | 430 | 3.0 | 132 | 396 |
| 2 | 17.0 | 430 | 20.0 | 132 | 2637 |
| 3 | 17.0 | 430 | 37.0 | 132 | 4878 |
| 4 | 17.0 | 430 | 54.0 | 132 | 7119 |
| 5 | 17.0 | 430 | 71.0 | 132 | 9360 |
| Σ | 71.0 | 2150 | | 659 | 24,390 |

OVERTURNING ANALYSIS: CABINET
 ANCHORS SPACING, D = 14 IN
 TOP LEVEL HEIGHT = 71 IN

FULLY LOADED:
 Total Shear = 659 LB
 $M_{ot} = 2(f_1 \cdot h)$
 $= 26,390 \text{ IN-LB}$
 $M_{st} = 2(w_{DL} + w_{LL}) \cdot D^2$
 $= (80 \text{ LB} + 1640 \text{ LB}) \cdot 14 \text{ IN}^2$
 $= 12,240 \text{ IN-LB}$
 $P_{uolift} = (M_{ot} - 0.6 \cdot M_{st}) / D$
 $= (26390 - 0.6 \cdot 12040) / 14$
 $= 1226 \text{ LB} < UPLIFT$

TOP SHELF LOADED ONLY:
 Shear = 132 LB
 $M_{ot} = W_{top} \cdot h$
 $= 5,340 \text{ IN-LB}$
 $M_{st} = 2(w_{DL} + w_{LL}) \cdot D^2$
 $= (80 \text{ LB} + 410 \text{ LB}) \cdot 14 \text{ IN}^2$
 $= 3,430 \text{ IN-LB}$
 $P_{uolift} = (M_{ot} - 0.6 \cdot M_{st}) / D$
 $= (9360 - 0.6 \cdot 3430) / 14$
 $= 522 \text{ LB} < UPLIFT$

ANCHORS
 ALLOWABLE CAPACITY PER ICC REPORT AND ACI 318-14 CHAPTER 17
 $P_{allow, RCD} = 14,210 \text{ LB}$
 $V_{allow, RCD} = 2390 \text{ LB}$

COMBINED STRESS1 = $(1226 \text{ LB} / 2340 \text{ LB}) + (659 \text{ LB} / 9560 \text{ LB})$
 $= 0.59 < 1.2 \text{ OK}$

COMBINED STRESS2 = $(522 \text{ LB} / 2340 \text{ LB}) + (132 \text{ LB} / 9560 \text{ LB})$
 $= 0.24 < 1.2 \text{ OK}$

USE 1/2" x 3" x 3/16" EMBED. HILTI KB-T22 (ICC ESR-4266) OR APPROVED EQUAL
 (4) PER BATTERY CABINET
 (4) PER BASE PLATE ON STACKED UNITS

CALCULATIONS

POWER COMPANY
 NORTH RIDGE, CA 91194

DESCRIPTION

DATE BY

REV

SEIZMIC
 EST. 1980
 SEIZMIC
 ENGINEERING, INC.
 1138 E. Cypress St.
 Covina, California
 91724
 Tel: (909) 869-0989

DRAWN BY: M.V. T.C.
 DATE: 01/25/24

CAD REV BY:
 REV DATE

TYPE:
 SCALE: N.T.S.

W/P/D BY: SALE FATEEN

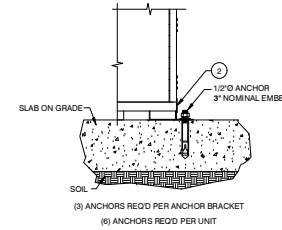
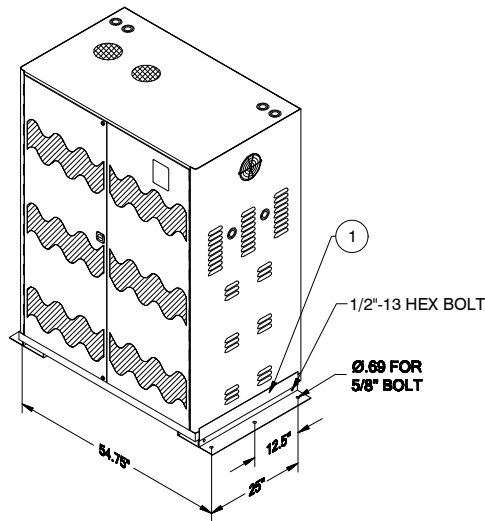
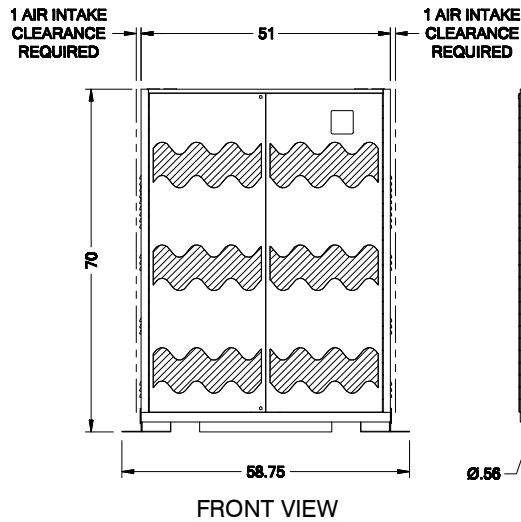
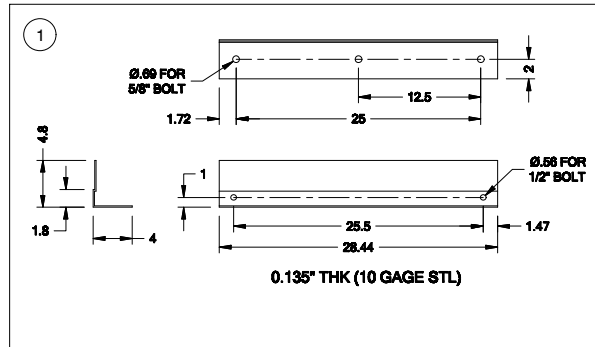
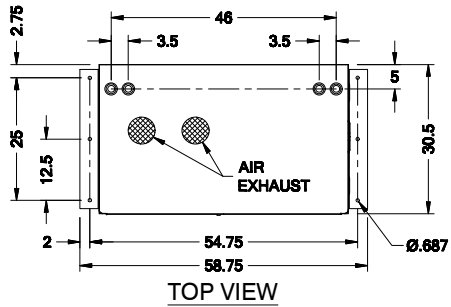
Digitally signed
 by Sal Fateen
 Date: 2024.03.05
 16:20:39-08'00'

SEIZMIC
 No. 25969
 STATE OF CALIFORNIA
 CIVIL ENGINEER
 12-31-2025

DESCRIPTION

CABINET
 DETAILS

DRAWING NUMBER
 24-0186-A



NOTES:
 1. DESIGNED PER THE 2021 IBC / 2022 CBC / 2023 LABC.
 2. STORAGE CAPACITY: 4,640# MAX. WEIGHT.
 3. ANCHORS: HILTI KWIK BOLT TZ 2, ICC ESR-4266 W/ LABC SUPPLEMENT
 4. CONCRETE: 4" THICK x 2,500 PSI
 5. SOIL BEARING PRESSURE: 600 PSF. (MIN. REQ'D).
 6. EVALUATION BASED ON NORTHDRIDGE LOCATION (ONE OF THE HIGHEST LA FAULT AREAS) WITH THE FOLLOWING CALCULATION AS A TYPICAL EXAMPLE. (ASSUMED GROUND FLOOR INSTALLATION)

2 ANCHOR DETAIL

LOADS & DISTRIBUTION: CABINET
 ANALYSIS BASED ON SECTION 23.3 OF THE ASCE 7-16 SPECIFICATION REFERENCED IN CHAPTER 16 OF THE 2021 IBC/2022 CBC/2023 LABC

$$F_u (13.3-1): 0.4 \times \text{ap} \times S_u \times W_p / (R_p / I_p) = 0.234 \times W_p$$

$$F_u (13.3-2): 1.6 \times S_u \times I_p \times W_p = 2.336 \times W_p$$

$$F_u (13.3-3): 0.3 \times S_u \times I_p \times W_p = 0.438 \times W_p$$

SHALL NOT BE GREATER THAN
 SHALL NOT BE LESS THAN

SITE CLASS = D
 $F_a = 1.2$
 $S_s = 1.83$
 $S_u = 1.46$
 $I_p = 1.00$
 $R_p = 2.5$
 $ap = 1$

ASCE 7-16 Table 13.5-1
 ASCE 7-16 Table 13.5-1

$$W_p = 4640 \text{ LB}$$

$$D \cdot W_p = 0.77 \cdot 438 \cdot W_p = 0.33 \cdot 4640 \text{ LB} = 1,423 \text{ LB}$$

OVERTURNING ANALYSIS:
 CABINET HEIGHT, HE = 70.0 IN
 ANCHORS SPACING, D = 25.0 IN

$$M_{ot} = V_{\text{anch}} \cdot H / I$$

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

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

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

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

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

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

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

$$= 600 \text{ LB}$$

< UPLIFT

ANCHORS
 ALLOWABLE CAPACITY PER ICC REPORT AND ACI 318-14 CHAPTER 17
 PULLOUT: 2170 LB $T_{\text{develop, ACI}}$
 SHEAR: 2350 LB $V_{\text{develop, ACI}}$

$$\text{COMBINED STRESS} = (600 \text{ LB} / 3510 \text{ LB}) + (1423 \text{ LB} / 14340 \text{ LB}) < 0.27$$

USE 1/2" Ø x 3" MIN. EMBED. HILTI KB-TZ2 (ICC ESR-4266) OR APPROVED EQUIVALENT (G) PER CABINET

CABINET ELEVATIONS

CALCULATIONS

POWER COMPANY
NORTHDRIDGE, CA 91524

EST. 1990
SEIZMIC
ENGINEERING, INC.
1138 E. Cypress St.
Covina, California
91724
Tel: (909) 863-0989

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

SEIZMIC ENGINEERING
No. 5969
1138 E. CYPRESS ST.
COVINA, CALIFORNIA 91724
12-31-2025

DESCRIPTION: CABINET DETAILS

DRAWING NUMBER: 24-0186-B