APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0078

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Siemens Industry, Inc.

Manufacturer's Technical Representative: Michael White

Mailing Address: 501 Fountain Parkway, Grand Prairie, TX 75050

Telephone: (817) 652-6460 Email: michaelwhite@siemens.com

Product Information

Product Name: P1, P2, P3, P4, P5, C1, C2 wall mounted panelboards (see attached)

Product Model Number(s): P1, P2, P3, P4, P5, C1, C2 wall mounted panelboards (see attached)

Product Category: Panelboards

Product Sub-Category: Panelboards

General Description: Wall mounted panelboards that divides electrical power to feed to branch circuits

Mounting Description: Wall Mounted Rigid

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe

Mailing Address: 1199 Shoreline Dr, Suite 310, Boise, ID 83702

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Title: SE

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: W.E. GUNDY & ASOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3

☐ Other (Please Specify):

Testing Laboratory

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657 Email: jeremy@etldallas.com

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)

Contact Person: Don Smith

Mailing Address: 7800 Highway 20 West, Huntsville AL 35806

Telephone: (256) 837-4411 Email: don.smith@wyle.com

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.35 (z/h = 1); 1.13 (z/h = 0)

S_{DS} (Design spectral response acceleration at short period, g) = 1.80 (z/h = 1); 2.50 (z/h = 0)

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 08/20/2031

Date: 8/20/2025

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: S_{DS} (g) = See Above z/h = See Above

Condition of Approval (if applicable):

TABLE 1	SIEMENS PANELBOARDS CERTIFIED PRODUCT LINE MATRIX							WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
ID Number	Panel Type	Main Breaker Amperage	NEMA Rating	Enclosure Width (in.)	Enclosure Depth (in.)	Enclosure Height (in.)	Total WT (lbs)	Representative UUT
C1-100 to C1-250	column	100-250A	1	7.6	5.75	48 - 85	100-125	Interpolated
C2-100 to C2-250	column	100-250A	1	8.5	5.75	48 - 85	100-125	Interpolated
C2-250	column	250A	1	8.5	5.75	85	123	UUT_y-18
P1-100 to P1-400	lighting	100-400A	1 / 4 / 4x / 3R / 12	20	5.75 - 7.75	26 - 74	80-250	Interpolated
P1-250	lighting	250A	4x	20	5.75	38	93	UUT_y-16
P1-250	lighting	250A	1	20	5.75	44	132	UUT_x-12
P2-100 to P2-600	lighting	125-600A	1 / 4 / 4x / 3R / 12	20	5.75 - 7.75	26 - 74	80-250	Interpolated
P2-600	lighting	600A	1	20	7.75	71	213	UUT_x-13
P3-250 to P3-800	lighting	250-800A	1 / 4 / 4x / 3R / 12	24 - 30	7.75 - 9.5	56 - 80	80-340	Interpolated
P3-250	lighting	250A	3R	24	7.75	80	277	UUT_y-17
P3-600	lighting	600A	1	24	7.75	68	340	UUT_x-15
P3-800	lighting	800A	3R	30	9.5	80	440	UUT_z-3
P5-1200	distribution	1200A	1	38	14.25	90	461	UUT_z-4
P4-400 to P4-1200	distribution	400-1200A	1 / 4 / 4x / 3R / 12	32	10	60 - 90	480-720	Interpolated
P4-1000	distribution	1000A	4x	32	10	90	528	UUT_y-19
P5-400 to P5-1200	distribution	400-1200A	1 / 4 / 4x / 3R / 12	32	12.75	60 - 90	480-720	Interpolated
P5-1200	distribution	1200A	3R	38	14.25	90	760	UUT_y-20
P5-400-P5-1200	distribution	400-1200A	1 / 4 / 4x / 3R / 12	38	12.75 - 14.25	60 - 90	600-900	Interpolated
P5-1200	distribution	1200A	1	38	12.75	90	900	UUT_x-14[2]

General Notes:

[1] Subscripts x, y, and z indicate the test report in which the units were qualified: x - 46143-2 / y - 15314 / z - 17715

[2] Denotes the controlling UUT for the product family seismic rating (lowest tested S_{DS})

TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES							WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer	Description		Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Molded Case Breakers - Sentron								
FD6, FXD6	Siemens	70-250A	2/3P	4.5	4.0	9.5	10	UUT_x-12 / 13 / 14 / 15
FD6, FXD6	Siemens		2/3P	4.5	4.0	9.5	10	UUT_y-16 / 18 / 19
ED2	Siemens			4.5	4.0	9.5	10	UUT_z-3
HFD6, HFXD6	Siemens		2/3P, HIC	4.5	4.0	9.5	10	Interpolated
HHFD6, HHFXD6	Siemens		2/3P, EHIC	4.5	4.0	9.5	10	Interpolated
CFD6	Siemens		2/3P, Highest IC & CL	4.5	4.0	14.3	16	UUT_y-19
SCFD6	Siemens		2/3P, ETU, Highest IC & CL	4.5	4.0	14.3	16	Interpolated
JXD2	Siemens	250-400A	2/3P	7.5	4.0	11.0	19.5	Interpolated
JD6, JXD2	Siemens		2/3P	7.5	4.0	11.0	19.5	UUT_x-14 / UUT_y-19
HJ66, HJXD6, HHJD6	Siemens		2/3P, HIC, HHIC	7.5	4.0	11.0	19.5	Interpolated
HHJXD6	Siemens		2/3P, HHIC	7.5	4.0	11.0	19.5	Interpolated
SJD6, SHJD6	Siemens		2/3P, ETU	7.5	4.0	11.0	19.5	Interpolated
CJD6	Siemens		2/3P, Highest IC & CL	7.5	4.0	17.0	31.5	Interpolated
SCJD6	Siemens		2/3P, ETU, Highest IC & CL	7.5	4.0	17.0	31.5	Interpolated
LD6, LXD6	Siemens	250-600A	2/3P,	7.5	4.0	11.0	19.5	UUT_x-13 / 14 / 15
HLD6, HLXD6	Siemens		2/3P, HIC	7.5	4.0	11.0	19.5	Interpolated
HHLD6, HHLXD6	Siemens		2/3P, HHIC	7.5	4.0	11.0	19.5	Interpolated
SLD6, SHLD6	Siemens		2/3P, ETU	7.5	4.0	11.0	19.5	Interpolated
CLD6	Siemens		2/3P, Highest IC & CL	7.5	4.0	17.9	31.5	Interpolated
SCLD6	Siemens		2/3P, ETU, Highest IC & CL	7.5	4.0	17.9	31.5	Interpolated

General Notes:

[1] Subscripts x, y and z indicate the test report in which the units were qualified: x - 46143-2 / y - 15314 / z - 17715

[2] All Sentron breakers can be installed with either thermal mag (no prefix) or electronic trip unit (S prefix)

TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES							WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer		Description	Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Molded Case Breakers - Sentron								
MD6, MXD6	Siemens	500-800A	2/3P	9.0	6.0	16.0	61.5	UUT_x-14
HMD6, HMXD6	Siemens		2/3P, HIC	9.0	6.0	16.0	61.5	Interpolated
SMD6, SHMD6	Siemens		2/3P, ETU & HIC	9.0	6.0	16.0	61.5	UUT_y-20
CMD6	Siemens		2/3P, Highest IC & CL	9.0	6.0	16.0	61.5	Interpolated
SCMD6	Siemens		2/3P, ETU, Highest IC & CL	9.0	6.0	16.0	61.5	Interpolated
LMD6, LMXD6	Siemens		2/3P,	7.5	4.5	16.0	61.5	Interpolated
HLMD6, HLMX6D	Siemens		2/3P, HIC	7.5	4.5	16.0	61.5	Interpolated
ND6, NXD6	Siemens	800-1200A	2/3P,	9.0	6.0	16.0	61.5	UUT_x-14
HND6, HNXD6	Siemens		2/3P, HIC	9.0	6.0	16.0	61.5	Interpolated
SND6, SHND6	Siemens		2/3P, ETU & HIC	9.0	6.0	16.0	61.5	Interpolated
CND6	Siemens		2/3P, Highest IC & CL	9.0	6.0	16.0	61.5	Interpolated
SCND6	Siemens		2/3P, ETU, Highest IC & CL	9.0	6.0	16.0	61.5	UUT_y-20
Molded Case Breakers - 3VA								
3VA51	Siemens	15-150A	3/4P, TM, TMTU	3.0	3.7	5.5	4.7	Extrapolated
3VA61	Siemens		3/4P, TM, ETU	4.1	3.4	7.8	5.5	Extrapolated
3VA52	Siemens	40-250A	3/4P, TM, TMTU	4.1	3.3	7.3	5.2	UUT_y-17 / 19
3VA62	Siemens		3/4P, TM, ETU	4.1	4.2	7.8	10.5	UUT_y-19
3VA53	Siemens	200-400A	3/4P, TM, TMTU	5.4	5.4	9.8	11.0	Interpolated
3VA63	Siemens		3/4P, TM, ETU	5.4	5.4	9.8	10.5	Interpolated
3VA54	Siemens	400-600A	3/4P, TM, TMTU	5.4	5.4	9.8	11.0	Interpolated
3VA64	Siemens		3/4P, TM, ETU	5.4	5.4	9.8	10.5	Interpolated

General Notes:

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[2] All Sentron breakers can be installed with either thermal mag (no prefix) or electronic trip unit (S prefix)

TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES							WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer	Description		Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Molded Case Breakers - 3VA - cont'd								
3VA55	Siemens	600-800A	2/3/4P, TM	11.0	5.8	12.5	37.0	UUT_z-3
3VA65	Siemens	600-800A	3/4P, ETU	11.0	5.8	12.5	37.0	Interpolated
3VA66	Siemens	1000A	3/4P, ETU	11	5.8	12.5	37	Interpolated
3VA57	Siemens	1200A	2/3P, TM	9	6.2	16.0	55.1	Interpolated
3VA67	Siemens	1200A	2/3P, ETU	9	6.2	16.0	55.1	UUT_z-4
Molded Case Breakers - VL								
FG6	Siemens	70-250A	2/3P	4.5	4.0	9.5	10	Interpolated
HFG6	Siemens		2/3P, HIC	4.5	4.0	9.5	10	UUT_y-18
HHFG6	Siemens		2/3P, EHIC	4.5	4.0	9.5	10	Interpolated
NJGA	Siemens	250-400A	2/3P	4.2	4.5	11.0	12.6	Interpolated
HJGA	Siemens		2/3P, HIC	4.2	4.5	11.0	12.6	Interpolated
LJGA	Siemens		2/3P, HHIC	4.2	4.5	11.0	12.6	Interpolated
NLGB	Siemens	250-600A	2/3P,	4.2	5.5	11.0	20.9	Interpolated
HLGB	Siemens		2/3P, HIC	4.2	5.5	11.0	20.9	Interpolated
LLGB	Siemens		2/3P, HHIC	4.2	5.5	11.0	20.9	Interpolated
NMG	Siemens	500-800A	2/3P,	4.7	7.5	16.0	35.3	Interpolated
HMG	Siemens		2/3P, HIC	4.7	7.5	16.0	35.3	Interpolated
LMG	Siemens		2/3P, HHIC	4.7	7.5	16.0	35.3	UUT_y-19
Molded Case Breakers - 3VL								
3VL400	Siemens	250-600A	3P, TM, ETU, LCD ETU	5.5"	5.5"	11.0"	20.5	UUT_y-19
3VL800	Siemens	600-800A	3P, TM, ETU, LCD ETU	7.5"	6.0"	16.0"	35.0	Interpolated
3VL1200	Siemens	800-1200A	3P, TM, ETU, LCD ETU	9.0"	8.0"	16.0"	55.0	UUT_y-20

General Notes:

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TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES						WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer	Description	Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Surge Protection Device							
TPS3AL115XXXX	Siemens	120/240V, 1 Ph 3 W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3BL215XXXX	Siemens	120/240V, 3 Ph, 4W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3CL115XXXX	Siemens	120/208V, 3 Ph, 4W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	UUT_y-16
TPS3	Siemens	240V, 3Ph, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3	Siemens	277/480V, 3 Ph, 4W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3	Siemens	480V, 3Ph, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3	Siemens	380/220V, 3 Ph, 4W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3	Siemens	400/230V, 3 Ph, 4W, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	Interpolated
TPS3F2005XXXX	Siemens	600V, 3 Ph, 100 kA - 500kA	11.5"	4.5"	10.75"	6.8 - 9.8	UUT_y-19
Lighting Contactors							
LEN00XXX	Siemens	30-200A	4.2"	3.9"	7.4"	9.0	UUT_y-17
Vacu-Break Switch							
V7E3202	Siemens	240VAC 60A, 3P	17"	6.75"	7.5"	13	Extrapolated
V7E3203	Siemens	240VAC 100A, 3P	17"	6.75"	7.5"	14	UUT_z-4
V7E2611	Siemens	600VAC, 30A-30A, 2P	17"	6.75"	7.5"	14	Interpolated
V7E2612	Siemens	600VAC, 30A-60A, 2P	17"	6.75"	7.5"	14	Interpolated
V7E3611	Siemens	600VAC, 30A-30A, 3P	17"	6.75"	7.5"	14	Interpolated
V7E3611R	Siemens	600VAC, 30A-30A, 3P, R CLASS FUSE	17.0	6.8	7.5	14	Interpolated
V7E3601	Siemens	600VAC, 30A, 3P	17.0	6.8	7.5	14	Interpolated
V7E3612	Siemens	600VAC, 30A-60A, 3P	17.0	6.8	7.5	14	Interpolated
V7E3622	Siemens	600VAC, 60A-60A, 3P	17.0	6.8	7.5	14	Interpolated
V7E3622R	Siemens	600VAC, 60A-60A, 3P, R CLASS FUSE	17.0	6.8	7.5	14	Interpolated

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TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES						WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer	Description	Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Table 8: Vacu-Break Switch - cont'd							
V7E3602	Siemens	600VAC, 60A, 3P	17.0	6.8	7.5	14	Interpolated
V7E3603	Siemens	600VAC, 100A, 3P	17.0	6.8	7.5	14	Interpolated
V7E2223	Siemens	240VAC 60-100, 2P, 3-7.5HP	17.0	6.8	7.5	18	Interpolated
V7E3223	Siemens	240VAC 60A-100A, 3P	17.0	6.8	7.5	18	Interpolated
V7E3623	Siemens	600VAC, 60A-100A, 3P	17.0	6.8	7.5	18	Interpolated
V7E2233	Siemens	240VAC 100-100, 2P, 7.5HP	17.0	6.8	7.5	20	Interpolated
V7E3233	Siemens	240VAC 100A-100A, 3P	17.0	6.8	7.5	20	Interpolated
V7E3233R	Siemens	240VAC 100A-100A, 3P, R CLASS FUSE	17.0	6.8	7.5	20	Interpolated
V7E3633	Siemens	600VAC, 100A-100A, 3P	17.0	6.8	7.5	20	Interpolated
V7E3633R	Siemens	600VAC, 100A-100A, 3P, R CLASS FUSE	17.0	6.8	7.5	20	Interpolated
V7E2204	Siemens	240VAC 200A, 2P, 15HP	17.0	6.8	7.5	21	Interpolated
V7F3204	Siemens	240VAC 200A, 3P	17.0	6.8	10.0	21	Interpolated
V7F3604	Siemens	600VAC, 200A, 3P	17.0	6.8	10.0	21	Interpolated
V7F3604R	Siemens	600VAC, 200A, 3P, R CLASS FUSE	17.0	6.8	10.0	21	Interpolated
V7F3205A	Siemens	240VAC 200A, 2P	17.0	10.5	10.0	35	Interpolated
V7F3205A	Siemens	240VAC 400A, 3P	17.0	10.5	10.0	35	Interpolated
V7F3605A	Siemens	600VAC, 400A, 3P	17.0	10.5	10.0	35	Interpolated
V7E3644	Siemens	240VAC 200A-200A, 3P	17.0	6.8	10.0	40	Interpolated
V7E3644R	Siemens	240VAC 200A-200A, 3P, R CLASS FUSE	17.0	6.8	10.0	40	Interpolated
V7F3644J	Siemens	600VAC, 200A-200A, 3P	17.0	6.8	10.0	40	Interpolated
V7H2205A	Siemens	240VAC 200A, 2P	17.0	10.5	15.0	44	Interpolated
V7H2206A	Siemens	240VAC 400A, 2P	17.0	10.5	15.0	44	Interpolated

General Notes:

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TABLE 2	SIEMENS PANELBOARDS CERTIFIED SUBCOMONENT MATRICES						WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING
Subcomponent ID	Manufacturer	Description	Width (in)	Depth (in)	Height (in)	Weight (lbs)	Representative UUT
Vacu-Break Switch - cont'd							
V7H3205A	Siemens	240VAC 400A, 3P	17.0	10.5	15.0	44	Interpolated
V7H3605A	Siemens	600VAC, 400A, 3P	17.0	10.5	15.0	44	Interpolated
V7H3606A	Siemens	600VAC, 600A, 3P	17.0	10.5	15.0	44	Interpolated
V7H3206A	Siemens	240VAC 600A, 3P	17.0	10.5	15.0	44	UUT_z-4

General Notes:

[1] Subscripts x, y and z indicate the test report in which the units were qualified: x - 46143-2 / y - 15314 / z - 17715

UUT_x-12	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 1/2" diameter grade 5 bolts.

Manufacturer: Siemens Industry, Inc.	**Test Location:** Wyle Laboratories
Product Line: Panelboards	**Test Date:** April 1997
Identification Number: P1-250	**Report Number:** 46143-2

UUT Function: Lighting panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel P1 enclosure with internally mounted componnents.

UUT Component Description: NEMA 1 carbon steel P1 enclosure with Sentron modeled case breakers: (1) FXD63B250, (1) QJ23B225, (8) B3100, (6) BQD3100.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
132	20.0"	5.75"	44"	NA	NA	NA

SEISMIC TEST PARAMETERS - Run #7

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	1.80	1	1.5	2.88g	2.16g	-	-
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_x-13	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall mounted with 4 - 1/2" diameter grade 5 bolts.

Manufacturer: Siemens Industry, Inc.	**Test Location:** Wyle Laboratories
Product Line: Panelboards	**Test Date:** April 1997
Identification Number: P2-600	**Report Number:** 46143-2

UUT Function: Lighting panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel P2 enclosure with internally mounted componnents.

UUT Component Description: NEMA 1 carbon steel P2 enclosure with Sentron modeled case breakers: (1) LXD63B600, (1) FXD63B250, (1) QJ23B, (6) BQD3100.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
213	20.0"	7.75"	71"	NA	NA	NA

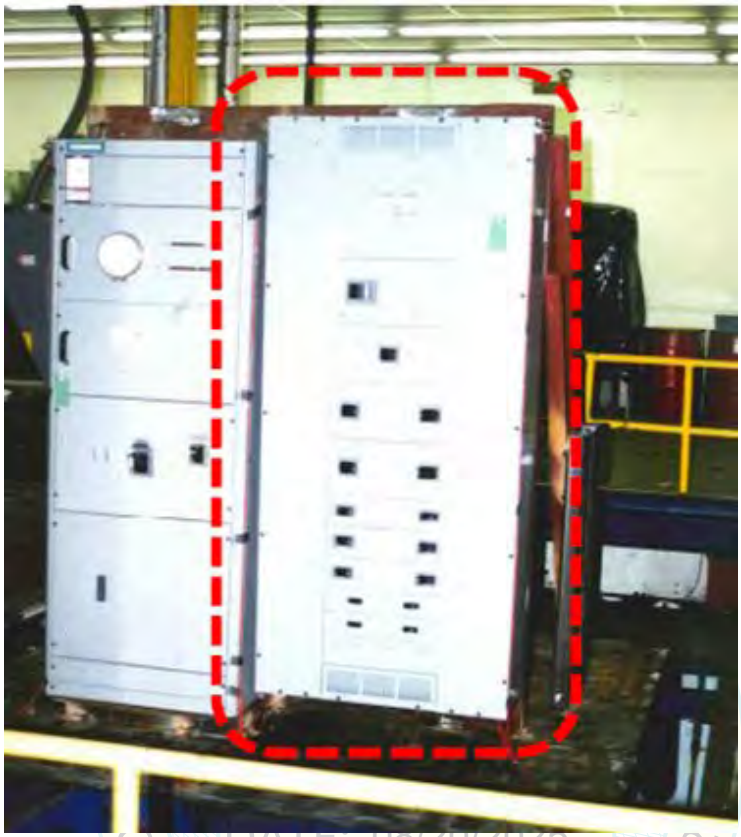
SEISMIC TEST PARAMETERS - Run #7

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	1.80	1	1.5	2.88g	2.16g	-	-
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_x-14	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 1/2" diameter grade 5 bolts.



Manufacturer: Siemens Industry, Inc.	**Test Location:** Wyle Laboratories
Product Line: Panelboards	**Test Date:** April 1997
Identification Number: P5-1200	**Report Number:** 46143-2

UUT Function: Distribution panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel P5 enclosure with internally mounted componnents.

UUT Component Description: NEMA 1 carbon steel P4 enclosure with Sentron modeled case breakers: (1) NXD63B120, (1) MXD63B800, (2) LXD63B600, (2) JXD63B400, (2) FXD63B250 (2) ED43B125, (4) B3100.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
900	38.0"	12.75"	90.0"	NA	NA	NA

SEISMIC TEST PARAMETERS - Run #5

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	1.80	1	1.5	2.88g	2.16g	-	-
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. This is the controlling UUT for the Panelboard product line.

UUT_x-15	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 1/2" diameter grade 5 bolts.

Manufacturer: Siemens Industry, Inc.	**Test Location:** Wyle Laboratories
Product Line: Panelboards	**Test Date:** April 1997
Identification Number: P3-600	**Report Number:** 46143-2

UUT Function: Lighting panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel P3 enclosure with internally mounted componnents.

UUT Component Description: NEMA 1 carbon steel P3 enclosure with Sentron modeled case breakers: (1) LXD63B600, (1) FXD63D250, (1) ED43B125, (10) ED43B125, (4) B3100.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
340	24.0"	7.75"	68.0"	NA	NA	NA

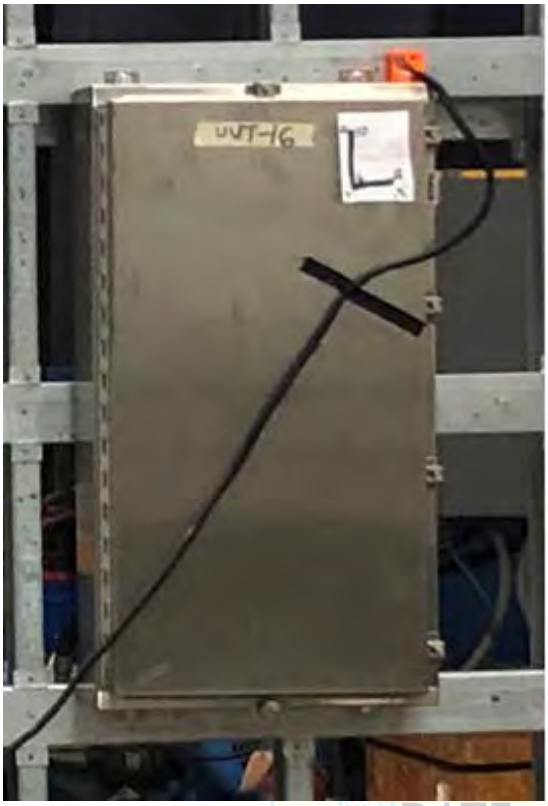
SEISMIC TEST PARAMETERS - Run #7

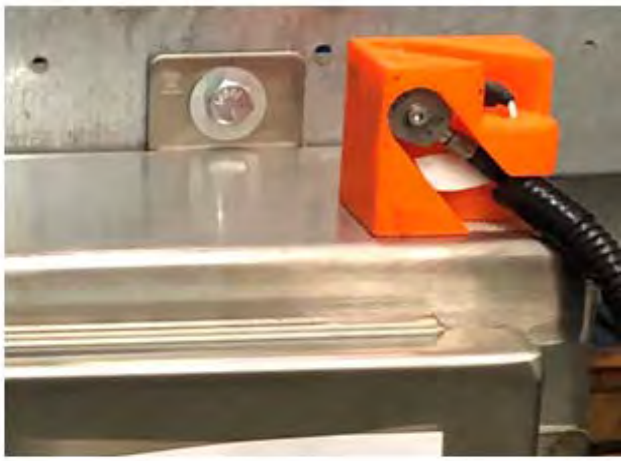
Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	1.80	1	1.5	2.88g	2.16g	-	-
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UNIT UNDER TEST (UUT) SUMMARY SHEET

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.





Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** July 2019
Identification Number: P1-250	**Report Number:** 15314 Rev. 0

UUT Function: Lighting panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 4x stainless steel P3 enclosure with internally mounted componnents.

UUT Component Description: NEMA 4x carbon stainless steel P1 enclosure, FD6 Breaker, BQD breaker, (7) B320 breakers, (6) B115 breakers, and surge pretection device (TPS3CL).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
93	20.0"	5.75"	38.0"	NA	NA	NA

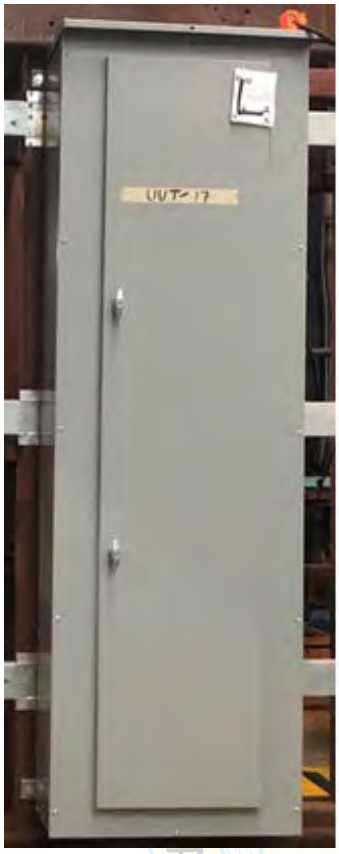
SEISMIC TEST PARAMETERS - Run #5

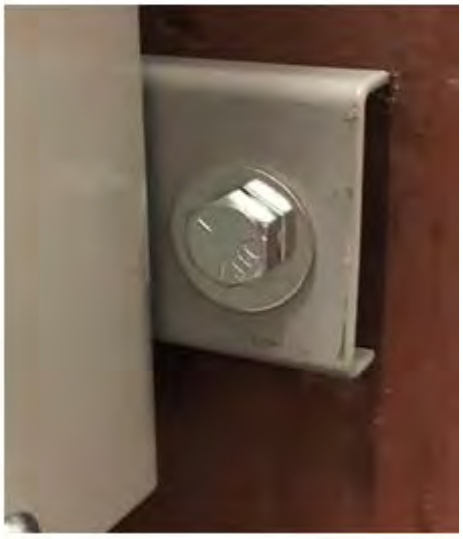
Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	3.00	0	1.5	–	–	2.00g	0.81g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_y-17	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.





Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** July 2019
Identification Number: P3-250	**Report Number:** 15314 Rev. 0

UUT Function: Lighting panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 3R carbon steel P3 enclosure with internally mounted componnents.

UUT Component Description: NEMA 3R carbon steel P3 enclosure, lighting contactors (LEN00), Astro Time Clock, 3VA52 breaker, (6) Q350 reakers, and (4) QR breaker.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
277	24.0"	7.75"	80.0"	NA	NA	NA

SEISMIC TEST PARAMETERS - Run #2

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	3.00	0	1.5	–	–	2.00g	0.81g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_y-18	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.

Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** July 2019
Identification Number: C2-250	**Report Number:** 15314 Rev. 0

UUT Function: Column panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel C2 enclosure with internally mounted componnents.

UUT Component Description: NEMA1 carbon steel C2 enclosure with VL (HFG6) modeled case breakers, and (10) BQD breakers,.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
123	8.5"	5.75"	85.0"	NA	NA	NA

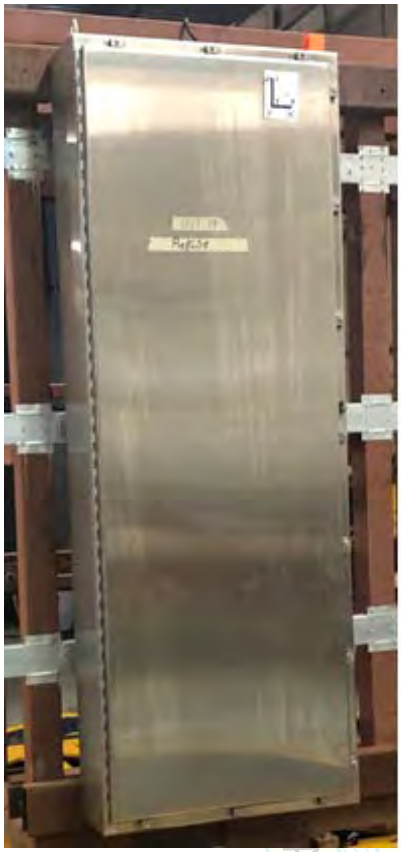
SEISMIC TEST PARAMETERS - Run #5

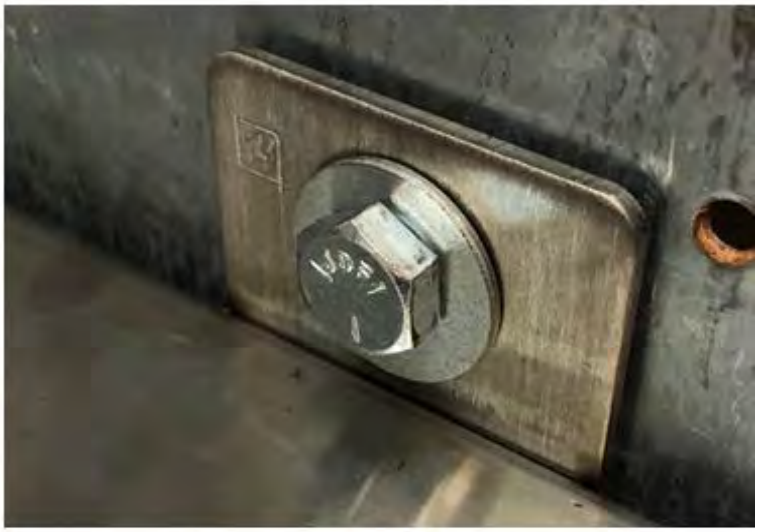
Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	3.00	0	1.5	–	–	2.00g	0.81g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_y-19	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.





Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** July 2019
Identification Number: P4-1000	**Report Number:** 15314 Rev. 0

UUT Function: Distribution panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 4x stainless steel P4 enclosure with internally mounted componnents.

UUT Component Description: NEMA 4x carbon stainless steel P4 enclosure with sentron TPS3F SPD, (FXD6, JDX6, CFD6), VL (LMG), 3VA (3VA52, 3VA62), and 3VL (3VL400) molded case breakers.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
528	32.0"	10.0"	90"	NA	NA	NA

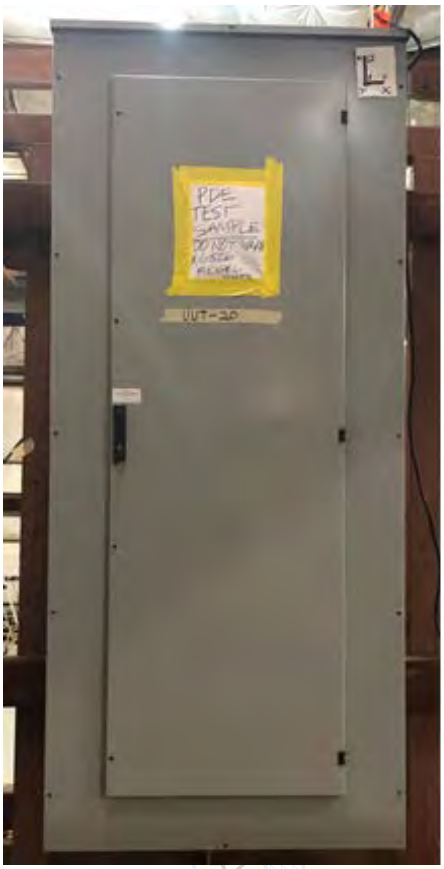
SEISMIC TEST PARAMETERS - Run #3

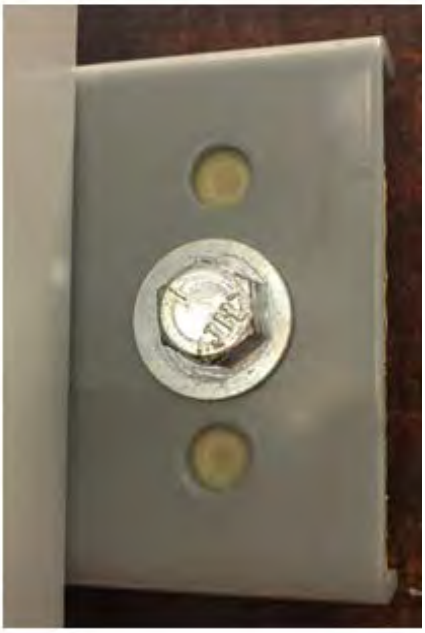
Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	3.00	0	1.5	–	–	2.00g	0.81g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. The UUT required modifications (thru bolt interior panel to enclosure backwall) to pass the test and modifications shall be incorporated in the production units. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_y-20	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.





Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** July 2019
Identification Number: P5-1200	**Report Number:** 15314 Rev. 0

UUT Function: Distribution panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 3R carbon steel P5 enclosure with internally mounted componnents.

UUT Component Description: NEMA 3R carbon steel P5 enclosure with sentron, VL (SMD6, SCND6), 3VL (3VL1200) molded case breakers and surge protection device (TPS3F2005).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
760	38.0"	14.25"	90.0"	NA	NA	NA

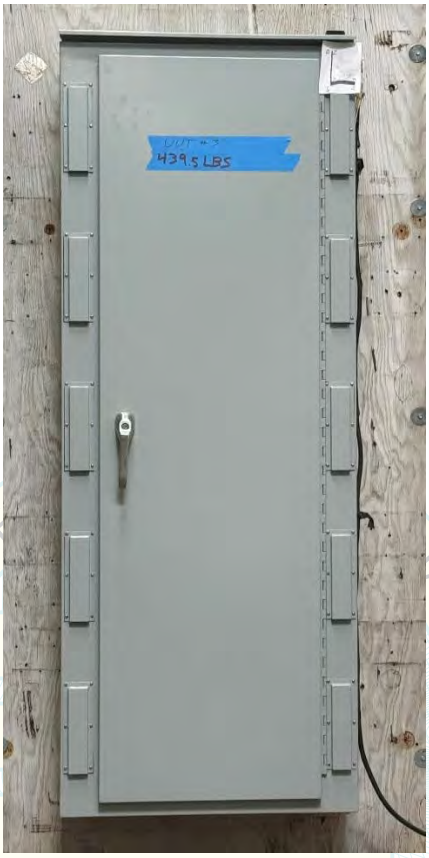
SEISMIC TEST PARAMETERS - Run #2

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	3.00	0	1.5	–	–	2.00g	0.81g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_z-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.



Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** April 2025
Identification Number: P3-800	**Report Number:** 17715

UUT Function: Distribution panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 3R carbon steel P3 enclosure with internally mounted componnents.

UUT Component Description: NEMA 3R carbon steel P3 enclosure with 3VA55 Breaker and ED2 Sentron Breakers.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
440	30"	9.5"	80"	NA	NA	NA

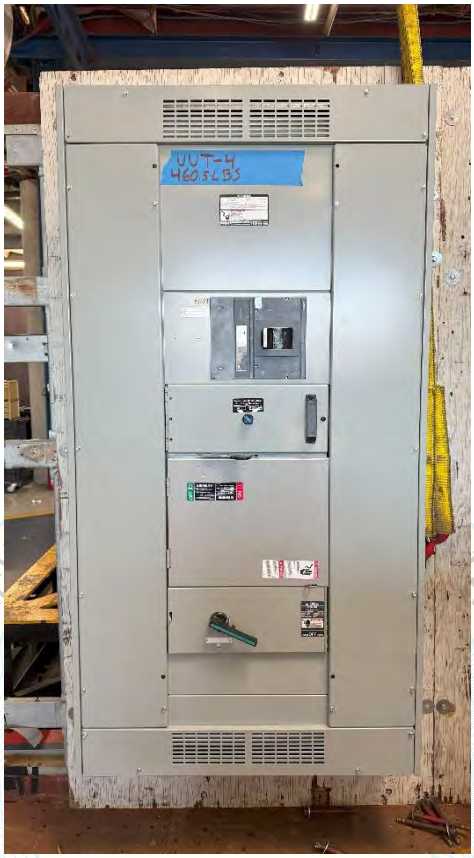
SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.

UUT_z-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. GUNDY & ASSOCIATES, INC. STRUCTURAL & EARTHQUAKE ENGINEERING

Mounting Details: Wall mounted with 4 - 3/8" diameter grade 5 bolts.



Manufacturer: Siemens Industry, Inc.	**Test Location:** Environmental Testing Laboratory
Product Line: Panelboards	**Test Date:** April 2025
Identification Number: P5-1200	**Report Number:** 17715

UUT Function: Distribution panelboard that divides electirical power feed to branch circuits.

UUT Description: The unit is comprised of a NEMA 1 carbon steel P5 enclosure with internally mounted componnents.

UUT Component Description: NEMA 1 carbon steel P5 enclosure with 3VA67 Breaker, Dynamic Arc Sentry (DAS), and Vacu-Break Switches V7E3203 / V7H3206A.

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Enclosure Width	Enclosure Depth	Enclosure Height	FB	SS	V
461	38"	14.25"	90"	NA	NA	NA

SEISMIC TEST PARAMETERS

Test Criteria	S_{DS} (g)	z / h	I_P	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2022 / ICC-ES-AC156	2.00	1	1.5	3.2g	2.4g	–	–
	2.50	0	1.5	-	-	1.67g	0.67g

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 Test. UUT was tested at the level shown on this sheet however the product family is limited to a lower level based on testing of UUT_x-14.