



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0841

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Gavan Graham Electrical Solutions

Manufacturer's Technical Representative: Scott DeMarco

Mailing Address: 751 Rahway Avenue, Union, NJ 07083

Telephone: (908) 729-9000 Email: sdemarco@gavangraham.com

Product Information

Product Name: Low Voltage Switchboards

Product Model Number(s): Varies. See Attachment

Product Category: Switchgear/Switchboards

Product Sub-Category: Switchboards

General Description: Low voltage switchboards.

Mounting Description: Base Mounted Rigid -

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Pre Compliance

Contact Person: Galen Reid

Mailing Address: 36 SW Wall Street, Bend, OR 97702

Telephone: (541) 241-2310 Email: galen@go-pre.com

Title: Principal & Program Manager



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

Company Name: PRE COMPLIANCE

Name: Andrew Coughlin

California License Number: S6082

Mailing Address: 36 SW Wall Street, Bend, OR 97702

Telephone: (415) 635-8461

Email: Andy@go-pre.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify):

Testing Laboratory

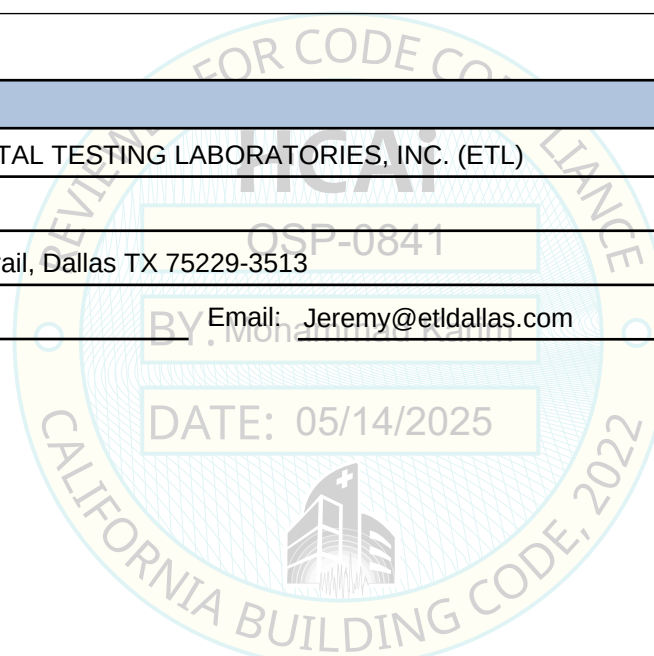
Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

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

Telephone: (972) 247-9657

Email: Jeremy@etldallas.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 0.72 at $z/h=0$; 1.20 at $z/h=1$

S_Ds (Design spectral response acceleration at short period, g) = 1.60

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) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 05/14/2031

Date: 5/14/2025

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: S_Ds (g) = 1.60

z/h = 1

Condition of Approval (if applicable):

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENTS

Manufacturer: Gavan Graham Electrical Products
Product Type: Switchboards
Model Line: Low Voltage Switchboard

Seismic Parameters
 $S_{DS} = 1.6g$ for $z/h=1$
 $S_{DS} = 1.6g$ for $z/h=0$
 $I_p = 1.5$

Building Codes
CBC 2022

TABLE 1

Mounting Configuration: Base Mounted - Rigid

Construction Summary

NEMA 3R carbon steel enclosures.
 120-600V. 800-4000A

Options Summary

Sections may be installed standalone or ganged.
 UUT1 was a ganged configuration.

Model Line	Model	Max. Dimensions (in)			Wt. (lb)	Notes	UUT
		D	W	H			
Low Voltage Switchboard	24W	24	24	92	800		Interp.
		32	24	92	1050		Interp.
		36	24	92	1180		Interp.
		40	24	92	1325		Interp.
		42	24	92	1390		Interp.
		48	24	92	1590		Interp.
		51	24	92	1650		Interp.
		53	24	92	1750		Interp.
		60	24	92	1970		Interp.
	32W	24	32	92	1050		Interp.
		32	32	92	1600		Interp.
		36	32	92	1750		Interp.
		40	32	92	1908		Interp.
		42	32	92	2000		Interp.
		48	32	92	2250		Interp.
		51	32	92	2360		Interp.
		53	32	92	2450		Interp.
		60	32	92	2600		Interp.
	36W	24	36	92	1180		Interp.
		32	36	92	1750		Interp.
		36	36	92	2070		1,3
		40	36	92	2290		Interp.
		42	36	92	2350		Interp.
		48	36	92	2600		Interp.
		51	36	92	2600		Interp.
		53	36	92	2600		Interp.
		60	36	92	2600		Interp.
	38W	24	38	92	1250		Interp.
		32	38	92	1850		Interp.
		36	38	92	2160		Interp.



Pre No. CC241427-01-R0

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENTS

Manufacturer: Gavan Graham Electrical Products
Product Type: Switchboards
Model Line: Low Voltage Switchboard

Seismic Parameters
 $S_{DS} = 1.6g$ for $z/h=1$
 $S_{DS} = 1.6g$ for $z/h=0$
 $I_p = 1.5$

Building Codes
CBC 2022

TABLE 1**Mounting Configuration: Base Mounted - Rigid****Construction Summary**

NEMA 3R carbon steel enclosures.
 120-600V. 800-4000A

Options Summary

Sections may be installed standalone or ganged.
 UUT1 was a ganged configuration.

Model Line	Model	Max. Dimensions (in)			Wt. (lb)	Notes	UUT
		D	W	H			
Low Voltage Switchboard	38W	40	38	92	2432		Interp.
		42	38	92	2554		Interp.
		48	38	92	2600		Interp.
		51	38	92	2600		Interp.
		53	38	92	2600		Interp.
		60	38	92	2600		Interp.
	42W	24	42	92	1390		Interp.
		32	42	92	2000		Interp.
		36	42	92	2370		Interp.
		40	42	92	2600		Interp.
		42	42	92	2600		Interp.
		48	42	92	2600		Interp.
		51	42	92	2600		Interp.
		53	42	92	2600		Interp.
		60	42	92	2600		Interp.
		24	48	92	1590		Interp.
	48W	32	48	92	2250		Interp.
		36	48	92	2600		1,2
		40	48	92	2600		Interp.
		42	48	92	2600		Interp.
		48	48	92	2600		Interp.
		51	48	92	2600		Interp.
		53	48	92	2600		Interp.
		60	48	92	2600		Interp.
	54W	24	54	92	1780		Interp.
		32	54	92	2500		Interp.
		36	54	92	2600		Interp.
		40	54	92	2600		Interp.
		42	54	92	2600		Interp.
		48	54	92	2600		Interp.



Manufacturer: Gavan Graham Electrical Products
Product Type: Switchboards
Model Line: Low Voltage Switchboard

$S_{DS} = 1.6g$ for $z/h=1$

$$I_p = 1.5$$

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Mounting Configuration: Base Mounted - Rigid

NEMA 3R carbon steel enclosures.
120-600V. 800-4000A

Sections may be installed standalone or ganged.
UUT1 was a ganged configuration.

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Manufacturer: Gavan Graham Electrical Products
Product Type: Switchboards
Model Line: Low Voltage Switchboard

CBC 2022

Table Description: Electrical Subcomponents

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SPECIAL SEISMIC CERTIFICATION TESTING SUMMARY

Notes:



UUT 1

Test Report# TR241427-01-R0

Highest Passed Test Level

Dimensions/Weights¹

Lowest Natural Frequency (Hz)

Construction/Option Summary

NEMA 3R Carbon steel enclosure.
600V, 4000A

¹UUT1 is made up of UUT2 and UUT3 joined together. Weights and Dimensions listed are for overall 2-section lineup. See above breakdown of individual section details.



UUT 2

Test Report# TR241427-01-R0

Highest Passed Test Level

Dimensions/Weights

Lowest Natural Frequency (Hz)

Building Codes

Test Criteria

Construction/Option Summary

UUT Mounting Details:

List of Included Subcomponents



Model #

HLA36100

JLA36250U33X

JJA36250U31X

LLA36600U33X

PLA34080U33A

RJA36120CU44A

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UUT 3

Test Report# TR241427-01-R0

Manufacturer: Gavan Graham Electrical Products
Model Line: Low Voltage Switchboard
Model Number: Main Section
Serial Number: N/A

Highest Passed Test Level

S_{DS}	z/h	I_p	$A_{\text{flx-h}}$	$A_{\text{rig-h}}$	$A_{\text{flx-v}}$	$A_{\text{rig-v}}$
1.6	1	1.5	2.56	1.92	1.07	0.43
1.6	0					

Dimensions/Weights

Depth (in)	Width (in)	Height (in)	Weight (lbs.)
36	36	92	2070

Lowest Natural Frequency (Hz)

Front-Back	Side-Side	Vertical
7.60	7.52	17.55

Building Codes

CBC 2022

Test Criteria

ICC-ES AC156

Construction/Option Summary

NEMA 3R Carbon steel enclosure.
600V, 4000A

UUT Mounting Details:



List of Included Subcomponents

Description	Model #
SPD	TVS4IMA24O1
Power Meter	METSEPM5563RD
CPT	9070T1500D1
Circuit Breaker	MTZ2-4000

UUT was rigid base mounted using (4) 1/2"-13 Grade 8 bolts and flat washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.