Facilities Development Division *www.oshpd.ca.gov/fdd*
400 R Street. Suite 200, Sacramento, California 95811-6213 Phone (916) 440-8300 Fax (916) 654-2973

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP-0240-10

Check whether application is: NEW [X] RENEWAL [ ]

1.0

Elevator Controls Corporation	Darren Chan
Manufacturer	*Manufacturer's Technical Representative*
6150 Warehouse Way	Sacramento, CA 95826
Mailing Address	
(916) 428-1708	darren.chan@elevatorcontrols.com
Telephone	*E-mail Address*

2.0

Hydraulic/Traction Elevator Controls	Electrical Equipment
Product Name	*Product Type*

V900 and H900 elevator control panels

Product model No (List all unique product identification numbers and/or serial numbers)

General Description: The approved units consist of V900 (traction) and H900 (hydraulic) elevator control panels within a NEMA 1 powder-coated carbon steel enclosure. The 14"L x 36"W x 65"H V900 panel may be floor or wall-mounted. V900 panels larger than 14"L x 36"W x 65"H are floor-mounted only. The H900 panels are wall-mounted only.

3.0

DYNAMIC CERTIFICATION LABORATORIES, LLC	*JOSEPH LA BRIE, S.E.*
Applicant Company Name	*Contact Person*
1315 GREG STREET, SUITE 109	*SPARKS, NV 89431*
Mailing Address	
(775) 358-5085	LaBrie@makeitright.net
Telephone	*E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the Department for review.

	12/8/11
Signature of Applicant	*Date*
Managing Partner	Dynamic Certification Laboratories, LLC
Title	*Company Name*

☑

Registered Design Professional Preparing the Report

4.0

DYNAMIC CERTIFICATION LABORATORIES, LLC	
Company Name	
JOSEPH LA BRIE, S.E.	SE-3566
Contact Name	*California License Number*
1315 GREG STREET, SUITE 109, SPARKS, NV 89431	
Mailing Address	
(626) 445-0366	*LaBrie@MakeItRight.net*
Telephone	*E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0

DYNAMIC CERTIFICATION LABORATORIES, LLC	
Company Name	
DR. AHMAD ITANI, SE	SE-5220
Contact Name	*California License Number*
1315 GREG STREET, SUITE 109, SPARKS, NV 89431	
Mailing Address	
(775) 358-5085	Itani@shaketest.com
Telephone	*E-mail Address*

Anchorage Pre-Approval

6.0

☐ *Anchorage is pre-approved under OPA-*

(Separate application for anchorage pre-approval is required)

☒ Anchorage is not Pre-approved

Certification Method

70. ☒ *Testing in accordance with:* ☒ *ICC-ES AC-156* ☐ *Other (Please Specify):*

☐ *Analysis*

☐ *Experience data*

☐ *Combination of Testing, Analysis, and/or Experience Data (Please Specify): Testing*

Testing Laboratory (if applicable)

8.0

DYNAMIC CERTIFICATION LABORATORIES, LLC	*KELLY LAPLACE, PROJECT ENGINEER*
Company Name	*Contact Name*
1315 GREG STREET, STE 109	SPARKS, NV 89431
Mailing Address	
(775) 358-5085	*Kelly@shaketest.com*
Telephone	E-mail:

Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.63

S_{DS} (Spectral response acceleration at short period) = 2.26g

a_p (In-structure equipment or component amplification factor) =1.0

R_p (Equipment or component response modification factor) =2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio)=1.0

Equipment or Component fundamental period(s) =SEE ATTACHMENT

Building period limits (if any) =NONE

Overall dimensions and weight (or range thereof) =SEE ATTACHMENT

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient)=1.0

Ω_0 (System overstrength factor) =1.0

C_d (Deflection amplification factor) =1.0

I_p (Importance factor) =1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: ☐ Yes ☒ No

List of attachments supporting the special seismic certification of equipment or components:

☒ *Test Report* ☒ *Drawings* ☒ *Manufacturer's Catalog*

☐ *Calculations* ☐ *Others (Please Specify):*

11.0 ***OSHPD Approval*** *(For Office Use Only)*

	12/12/11	**December 31, 2016**
Signature & Date		*Approval Expiration Date*
M. R. Karim, SHFR		S_{DS} (g) = **2.26** z/h = **1.0**
Name & Title		*Special Seismic Certification Valid Up to*

Condition of Approval (if any):

Special Seismic Certification
Tested and Approved Units

DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Product Construction:

Cabinet is powder-coated carbon steel, NEMA 1.

Approved Options:

Equipment contained control boards, power supply, drive, fuses, terminals, relays, resistors, and additional components required to form a complete hydraulic/traction elevator control system.

Mounting Description:

Equipment was tested with both rigid wall and floor mounting.

Tested Units

Product Line	Model Number	Cabinet Dimensions (inches)			Operating Weight (lb)	NEMA Rating	Mount	Sds level Approved	Unit
		Depth	Width	Height					
Hydraulic / Traction Elevator Controls	V900 (Large)	17	47	77	430	NEMA 1	Floor Mounted	2.26	UUT1
	V900 (Small)	14	36	65	230	NEMA 1	Wall Mounted	2.26	UUT2
							Floor Mounted		UUT5
	H900 (Large)	14	36	48	160	NEMA 1	Wall Mounted	2.26	UUT3
	H900 (Small)	8	36	30	116	NEMA 1	Wall Mounted	2.26	UUT4

Approved Units

Product Line	Model Number	Cabinet Dimensions (inches)			Operating Weight (lb)	NEMA Rating	Mount	Sds level Approved
		Depth	Width	Height				
Hydraulic / Traction Elevator Controls	V900	14 to 17	36 to 47	65 to 77	230 to 430	NEMA 1	Floor or Wall Mounted*	2.26
	H900	8 to 14	36	30 to 48	116 to 160	NEMA 1	Wall Mounted	2.26

*Note: Only the V900 14" x 36" x 65" panel is approved for wall and floor mounting. All other V900 panels are floor-mounted.

UUT1 Unit Under Test Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Model Number: V900 (Large)

Product Construction Summary:

Powder-coated carbon steel, NEMA 1

Options / Component Summary:

240VAC, control boards, transformer, power supply, drive, fuses, relays, resistors and additional components required for a complete elevator control panel.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
430	17	47	77	6.5	11.5	17.0

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2010	2010 ICC-ES AC156	2.26	1.0	1.5	3.62	2.71	1.51	0.6

Note: The unit was visually inspected before and after the shake test and it was determined that the structural integrity of the component attachment system and force-resisting systems was maintained. The unit was working after the shake test and it was verified that it satisfied the functional requirements with equivalent results to that of the pre-test functionality check.

Unit Mounting Description:

UUT1, floor-mounted to shake table interface plate.

UUT1 was rigid floor-mounted to the DCL steel shake table interface plate with four 1/2-inch Grade 5 bolts, using the existing holes in the manufacturer-provided floor stand. The floor stand was welded to the base of the cabinet. The interface plate was attached to the shake table using M12 threaded rod, spaced approximately 8-inches on-center.

UUT2 Unit Under Test Summary Sheet

((●)) DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Model Number: V900 (Small)

Product Construction Summary:

Powder-coated carbon steel, NEMA 1

Options / Component Summary:

240VAC, control boards, transformer, power supply, drive, fuses, relays, resistors and additional components required for a complete elevator control panel.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
230	14	36	65	n/a	n/a	n/a

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2010	2010 ICC-ES AC156	2.26	1.0	1.5	3.62	2.71	1.51	0.6

Note: The unit was visually inspected before and after the shake test and it was determined that the structural integrity of the component attachment system and force-resisting systems was maintained. The unit was working after the shake test and it was verified that it satisfied the functional requirements with equivalent results to that of the pre-test functionality check.

Unit Mounting Description:

UUT2, wall-mounted to shake table interface frame.

UUT2 was wall-mounted to a rigid DCL-provided stud wall shake table interface frame using four 1/2-inch Grade 5 bolts, strut and strut nuts, utilizing the existing manufacturer-provided mounting holes. The interface frame was attached to the shake table using M12 threaded rod, spaced approximately 8-inches on-center.

UUT3 Unit Under Test Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Model Number: H900 (Large)

Product Construction Summary:

Powder-coated carbon steel, NEMA 1

Options / Component Summary:

240VAC, control boards, transformer, power supply, fuses, relays, resistors and additional components required for a complete elevator control panel.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
160	14	36	48	n/a	n/a	n/a

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2010	2010 ICC-ES AC156	2.26	1.0	1.5	3.62	2.71	1.51	0.6

Note: The unit was visually inspected before and after the shake test and it was determined that the structural integrity of the component attachment system and force-resisting systems was maintained. The unit was working after the shake test and it was verified that it satisfied the functional requirements with equivalent results to that of the pre-test functionality check.

Unit Mounting Description:

UUT3, wall-mounted to shake table interface frame.

UUT3 was wall-mounted to a rigid DCL-provided stud wall shake table interface frame using four 1/2-inch Grade 5 bolts, strut and strut nuts, utilizing the existing manufacturer-provided mounting holes. The interface frame was attached to the shake table using M12 threaded rod, spaced approximately 8-inches on-center.

UUT4 Unit Under Test Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Model Number: H900 (Small)

Product Construction Summary:

Powder-coated carbon steel, NEMA 1

Options / Component Summary:

240VAC, control boards, transformer, power supply, fuses, relays, resistors and additional components required for a complete elevator control panel.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
116	8	36	30	n/a	n/a	n/a

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2010	2010 ICC-ES AC156	2.26	1.0	1.5	3.62	2.71	1.51	0.6

Note: The unit was visually inspected before and after the shake test and it was determined that the structural integrity of the component attachment system and force-resisting systems was maintained. The unit was working after the shake test and it was verified that it satisfied the functional requirements with equivalent results to that of the pre-test functionality check.

Unit Mounting Description:

UUT4, wall-mounted to shake table interface frame.

UUT4 was wall-mounted to a rigid DCL-provided stud wall shake table interface frame using four 1/2-inch Grade 5 bolts, strut and strut nuts, utilizing the existing manufacturer-provided mounting holes. The interface frame was attached to the shake table using M12 threaded rod, spaced approximately 8-inches on-center.

UUT5 Unit Under Test Summary Sheet

DCL Dynamic Certification Laboratories

Manufacturer: Elevator Controls

Product Line: Hydraulic/Traction Elevator Controls

Model Number: V900 (Small)

Product Construction Summary:

Powder-coated carbon steel, NEMA 1

Options / Component Summary:

240VAC, control boards, transformer, power supply, drive, fuses, relays, resistors and additional components required for a complete elevator control panel.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
230	14	36	65	5.4	14.3	>33

Seismic Test Parameters

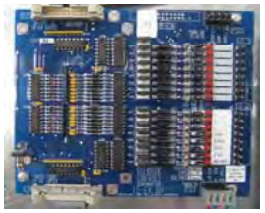
Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2010	2010 ICC-ES AC156	2.26	1.0	1.5	3.62	2.71	1.51	0.6

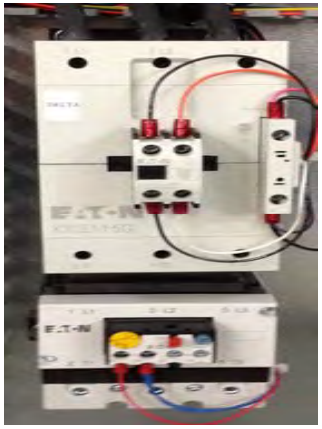
Note: The unit was visually inspected before and after the shake test and it was determined that the structural integrity of the component attachment system and force-resisting systems was maintained. The unit was working after the shake test and it was verified that it satisfied the functional requirements with equivalent results to that of the pre-test functionality check.

Unit Mounting Description:

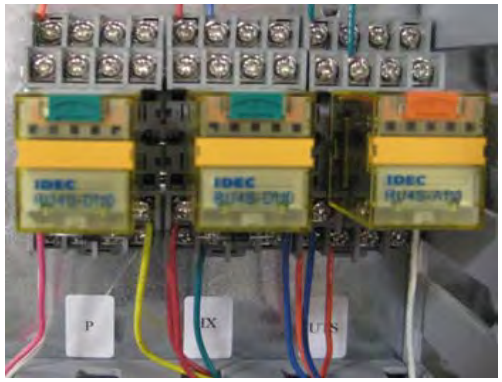
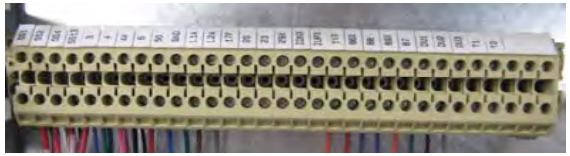
UUT5, floor-mounted to shake table interface plate.

UUT5 was rigid floor-mounted to the DCL steel shake table interface plate with four 1/2-inch Grade 5 bolts, using the existing holes in the manufacturer-provided floor stand. The floor stand was welded to the base of the cabinet. The interface plate was attached to the shake table using M12 threaded rod, spaced approximately 8-inches on-center.

COMPONENT IDENTIFICATION MATRIX:					
COMPONENT NAME	COMPONENT MANUFACTURER	DESCRIPTION	MODEL	TEST IN UUT	PHOTO
PIO9 Board	Elevator Controls	PCB	PIO9	UUT1, UUT2, UUT3, UUT4, UUT5	
HLS7 Board	Elevator Controls	PCB	HLS7	UUT1, UUT2, UUT3, UUT4, UUT5	
IOEX Board	Elevator Controls	PCB	IOEX	UUT1, UUT2, UUT3, UUT4, UUT5	
LSSM Board	Elevator Controls	PCB	LSSM	UUT1, UUT2, UUT5	
T1	Pacific Transformer	Transformer	31720	UUT1, UUT2, UUT3, UUT4, UUT5	

COMPONENT IDENTIFICATION MATRIX:					
COMPONENT NAME	**COMPONENT MANUFACTURER**	**DESCRIPTION**	**MODEL**	**TEST IN UUT**	**PHOTO**
Power Supply	Power One	Power Supply	HB5-3/OVP-AG	UUT1, UUT2, UUT3, UUT4, UUT5	
Drive	Yaskawa	Drive	CIMR-LU2A0115DAA	UUT1	
Drive	Yaskawa	Drive	CIMR-LU2A0018DAA	UUT2, UUT5	
Delta	Cutler Hammer	Motor Contactor	XTAE115G00B125	UUT1	
Delta	Cutler Hammer	Motor Contactor	XTAE018C10B016	UUT2, UUT5	

COMPONENT IDENTIFICATION MATRIX:					
COMPONENT NAME	**COMPONENT MANUFACTURER**	**DESCRIPTION**	**MODEL**	**TEST IN UUT**	**PHOTO**
Starter	Sprecher+Schuh	Starter	PCEC-032-600V-120V	UUT4	
Starter	Sprecher+Schuh	Starter	PCEC-147-600V-120V	UUT3	
Fuse Block 250V	Bussmann	Fuse Block	S8000	UUT1, UUT2, UUT3, UUT4, UUT5	
Fuse Block 600V	Bussmann	Fuse Block	BM6031SQ	UUT1, UUT2, UUT5	
FL1 & FL2	Bussmann	Fuse	250V MDA-10A	UUT1, UUT2, UUT3, UUT4, UUT5	
F7 & F8	Bussmann	Fuse	250V MDA-4A	UUT1, UUT2, UUT3, UUT4, UUT5	
FPI2	Bussmann	Fuse	250V AGC-3A	UUT1, UUT2, UUT3, UUT4, UUT5	
FGP	Bussmann	Fuse	250V FNM-3A	UUT1, UUT2, UUT5	
Terminals	Magil	Power Block Terminals	1423572	UUT2, UUT5	
Terminals	Magil	Power Block Terminals	1433126	UUT1	

COMPONENT IDENTIFICATION MATRIX:					
COMPONENT NAME	**COMPONENT MANUFACTURER**	**DESCRIPTION**	**MODEL**	**TEST IN UUT**	**PHOTO**
BK2 Relay	Sprecher+Schuh	Relay	CA7-16C-01	UUT1, UUT2, UUT5	
Relay Socket	Idec	Relay Socket	SY4S-05	UUT1, UUT2, UUT3, UUT4, UUT5	
UTS Relay	Idec	Relay	RU4S-A110	UUT3, UUT4	
HX Relay	Idec	Relay	RU4S-D110		
P Relay	Idec	Relay	RU4S-D110		
AAX Relay	Idec	Relay	RU4S-D110	UUT1, UUT2, UUT5	
LVL2 Relay	Idec	Relay	RU4S-D110		
EQS Relay	Schrack	Relay	PT570024		
BRBD	DC Components	Diode Bridge	MB3510		
Terminals	Wiedmuller	Panel Mount Terminals	SAK 4/EN	UUT1, UUT2, UUT3, UUT4, UUT5	
RG1 & RG2	Huntington	Resistor	FSE2000-5	UUT1	
RG3	Ohmite	Resistor	C2000K20R	UUT1	
RBH	Huntington	Resistor	AST200-100	UUT1, UUT2, UUT5	
RBP & RBV	Huntington	Resistor	AST200-50	UUT1, UUT2, UUT5	
RBD1	Huntington	Resistor	AST200-1K	UUT1, UUT2, UUT5	
RBD2	Huntington	Resistor	AST200-500	UUT1, UUT2, UUT5	