



APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0139-10

Check whether application is: NEW RENEWAL

1.0 The H.R. Kirkland Co., Inc. Bruce Kirkland
Manufacturer *Manufacturer's Technical Representative*
4935 Allison Street #13, Arvada, CO 80002
Mailing Address
303-422-6670 bruce@hrkirkland.com
Telephone *E-mail Address*

2.0 Graphic Annunciator Panels Graphic Annunciator Panels
Product Name *Product Type*
Various products are included in this listing: See Attachment B
Product model No (List all unique product identification numbers and/or serial numbers)
General Description: Rigid wall mounted fire alarm annunciator panels with graphic display, switches, and LEDs. See Attachment B for full description.

3.0 The H.R. Kirkland CO., Inc. Bruce Kirkland
Applicant Company Name *Contact Person*
4935 Allison Street #13, Arvada, CO 80002
Mailing Address
303-422-6670 bruce@hrkirkland.com
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.

Bruce G. Kirkland

11/19/10

Signature of Applicant

Date

President
Title

The H.R. Kirkland Co., Inc.
Company Name

1/7



Registered Design Professional Preparing the Report

4.0

ANCO Engineers, Inc.

Company Name

John C. Stoessel

Contact Name

C 37259

California License Number

1965-A 33rd St., Boulder, CO 80301

Mailing Address

(818) 591-9001

Telephone

john@ancoengineers.com

E-mail Address

California Licensed Structural Engineer Review and Acceptance of the Report

5.0

Tobolski Watkins Engineering Inc.

Company Name

Derrick Watkins

Contact Name

S 5257

California License Number

3170 Ruffin Road, San Diego, CA 92123

Mailing Address

(858) 381-5843

Telephone

dwatkins@tobolskiwatkins.com

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 Laboratory (if applicable)

8.0

ANCO Engineers, Inc.

Company Name

Paul Ibanez

Contact Name

1965-A 33rd Street, Boulder, CO 80301

Mailing Address

(303)443-7580 x239

Telephone

paul@ancoengineers.com

E-mail:

2/7



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) = **1.7g**

- S_{DS} (Spectral response acceleration at short period) = **2.28g**
- a_p (In-structure equipment or component amplification factor) = **2.5**
- R_p (Equipment or component response modification factor) = **6.0**
- I_p (Importance factor) = **1.5**
- z/h (Height factor ratio) = **1.0**
- Equipment or Component fundamental period(s) = **See Attachment A**
- Building period limits (if any) = **None**
- Overall dimensions and weight (or range thereof) = **See Attachment B**

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

Design Basis of Equipment or Components (VW) =

- 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

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

- Test Report Drawings Manufacturer's Catalog
- Calculations Others (Please Specify): RRS Parameters

11.0 OSHPD Approval (For Office Use Only)

<p style="text-align: center;"> _____ Signature & Date Chris Tokas, SHFR _____ Name & Title </p>	<p>1/6/10</p>	<p>December 31, 2016 Approval Expiration Date</p> <p>S_{DS} (g) = 2.28 z/h = 1.0</p> <p>Special Seismic Certification Valid Up to</p>
Condition of Approval (if any):		

36

Attachment A: UUT Description



#	Model	Dimension [in]			Weight [lbs]	Center of Gravity ^a [in]			Resonance ^b [Hz]			Mounting Type	Post Test Results
		Length	Width	Height		X	Y	Z	FB	SS	V		
WALL MOUNTED ANNUNCIATOR UNITS													
1	RSF-GR-GP4	41.75	29.75	5.0	94.5	19.875	14.75	2.375	NA	NA	NA	Wall	Pass
2	RSE-GR-GP4	30.0	24.0	5.0	53.0	14.125	12.125	2.75	NA	NA	NA	Wall	Pass
3	RSG-GR-GP4	53.0	41.0	5.0	165.5	25.25	20.125	2.75	NA	NA	NA	Wall	Pass

- a) From the front: Referenced to the lowest left side of the UUT's
 b) FB: Front to back (Horiz. Longitudinal), SS: Side to Side (Horiz. Transversal), V : Vertical

Certified Option	Quantity of tested option in each UUT:		
	UUT#3 RSG-GR-GP4	UUT#1 RSF-GR-GP4	UUT#2 RSE-GR-GP4
Structures			
Surface Mounted	1	1	1
NVGR EXTRUSION:	1	1	1
DISPLAY:			
0.010 Lexan (UL94V0)	1	1	1
0.125 ALUM: (5052H32)	1	1	1
LAMP PANEL: (G10 .031)	1	1	1
FR4: (G10 .062)	1	1	1
BACKPLANE:			
(0.062 Galv. CS-B G90U)	1	1	1
Switches			
ES1054:			
(C&K Rotary MF00S1N)	3	3	2
ES1004:			
(Chicago Lock 2171 2274 70)	1	1	1
ES4001:			
(SQ D ZB6 Series)	1	1	1
ES4000:			
(SQ D ZB6 Series)	3	3	2
ES3003:			
(SQ D ZB4 Series)	1	1	1
ES2001:			
(Toggles-APEM 5639AB3V)	4	4	4
ES1061:	1	1	1

(C&K Key Sw. Y201-1U-2C2)			
LEDs			
5mm SUPER-BRIGHT:	34	34	26
Drivers			
UTC: (EST3 3-ANNCPU)	1	1	1
UTC: (EST3 3-EVPWR)	1	1	1
UTC: (EST3 3-EVDVR)	1	1	1
Simplex: (4100-7402)	1	1	0
Simplex: (4100-7403)	1	1	0
Simplex: (4100-7404)	1	1	0
Notifier: (LDM-32)	1	1	1
Notifier: (LDM-E32)	1	1	1
Notifier: (SCS-8L)	1	1	1
Notifier: (SCE-8L)	1	1	1
Siemens: (XLS-OCM-16)	1	1	1
Siemens: (XLS-SIM-16)	1	1	1
Hardwired: (EP-1012-8)	1	1	1
Lampstest Relay:			
(HC4 DC 24VDC)	1	1	1

Attachment B: Certified Kirkland Units and Options



Kirkland Model	Width (in)	Height (in)	Depth (in)	Max Weight (lbs)	Testing scope	Mounting	Door Attachment
RSE-GR-GP4	30	24	4.75	53	UUT2	Wall mounted: Surface Mount or Semi-Flush Mount	Hinged on short side
RSE-L-GR-GP4	24.3	29.75	4.75	53	Interpolated		Hinged on long side
RSF-GR-GP4	41.6	30	4.75	95	UUT1		Hinged on short side
RSF-L-GR-GP4	30	41.63	4.75	95	Interpolated		Hinged on long side
RSG-GR-GP4	52.8	41	4.75	167	UUT3		Hinged on short side
RSG-L-GR-GP4	41	52.75	4.75	167	Interpolated		Hinged on long side

***NOTE: all certified options are listed in next table and apply to all certified panels.**

Certified Option	Description	Testing Scope
Structures		
Backbox Enclosure	Main body of cabinet	Tested in UUT1, UUT2, & UUT3
Steel Door	Steel cabinet door frame in which GP4 door panel is mounted	Tested in UUT1, UUT2, & UUT3
Stainless Steel Door	Stainless steel cabinet door frame in which GP4 door panel is mounted (same gage as steel door)	Interpolated
Surface Mounted	Surface mounted using four ¼" anchors (minimum)	Tested in UUT1, UUT2, & UUT3
Semi-Flush Mounted	Semi-flush mounted using four ¼" anchors (minimum)	Interpolated
NVGR EXTRUSION:	Door mounting bracket for GP4 door panel	Tested in UUT1, UUT2, & UUT3
DISPLAY:	Graphic door panel (adhered to 0.125 Alum)	Tested in UUT1, UUT2, & UUT3
0.010 Lexan (UL94V0)		
0.125 ALUM: (5052H32)	Door panel	Tested in UUT1, UUT2, & UUT3
LAMP PANEL: (G10 .031)	G10 fiberglass electrical insulation on door panel	Tested in UUT1, UUT2, & UUT3
FR4: (G10 .062)	G10 fiberglass electrical insulation on door panel	Tested in UUT1, UUT2, & UUT3
Dry erase coating	Coating on GP4 door panel, purely cosmetic	Interpolated
BACKPLANE:	Mounting panel on standoffs in cabinet backbox for mounting drivers.	Tested in UUT1, UUT2, & UUT3
(0.062 Galv. CS-B G90U)		

Switches		
ES1054: (C&K Rotary MF00S1N)	Switch	Tested in UUT1, UUT2, & UUT3
ES1004: (Chicago Lock 2171 2274 70)	Switch	Tested in UUT1, UUT2, & UUT3
ES4001: (SQ D ZB6 Series)	Switch	Tested in UUT1, UUT2, & UUT3
ES4000: (SQ D ZB6 Series)	Switch	Tested in UUT1, UUT2, & UUT3
ES3003: (SQ D ZB4 Series)	Switch	Tested in UUT1, UUT2, & UUT3
ES2001: (Toggles-APEM 5639AB3V)	Switch	Tested in UUT1, UUT2, & UUT3
ES1061: (C&K Key Sw. Y201-1U-2C2)	Switch	Tested in UUT1, UUT2, & UUT3
LEDs		
5mm SUPER-BRIGHT:	LED for notification and display purposes.	Tested in UUT1, UUT2, & UUT3
Power on LED	Single 5mm SUPER-BRIGHT LED on face of cabinet indicating that power to the cabinet is turned on.	Interpolated
Drivers		
UTC: (EST3 3-ANNCPU)	Driver	Tested in UUT1, UUT2, & UUT3
UTC: (EST3 3-EVPWR)	Driver	Tested in UUT1, UUT2, & UUT3
UTC: (EST3 3-EVDVR)	Driver	Tested in UUT1, UUT2, & UUT3
Simplex: (4100-7402)	Driver	Tested in UUT1 & UUT2
Simplex: (4100-7403)	Driver	Tested in UUT1 & UUT2
Simplex: (4100-7404)	Driver	Tested in UUT1 & UUT2
Notifier: (LDM-32)	Driver	Tested in UUT1, UUT2, & UUT3
Notifier: (LDM-E32)	Driver	Tested in UUT1, UUT2, & UUT3
Notifier: (SCS-8L)	Driver	Tested in UUT1, UUT2, & UUT3
Notifier: (SCE-8L)	Driver	Tested in UUT1, UUT2, & UUT3
Siemens: (XLS-OCM-16)	Driver	Tested in UUT1, UUT2, & UUT3
Siemens: (XLS-SIM-16)	Driver	Tested in UUT1, UUT2, & UUT3
Hardwired: (EP-1012-8)	Driver	Tested in UUT1, UUT2, & UUT3
Lampstest Relay: (HC4 DC 24VDC)	Relay	Tested in UUT1, UUT2, & UUT3