



**APPLICATION FOR PREAPPROVAL
SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS**

For Office Use Only

<p>APPLICATION NO.</p> <p>OSP -0233-10</p>
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Check whether application is: NEW RENEWAL

1.0 Hochiki America Corporation Mr. Michael Um
Manufacturer *Manufacturer's Technical Representative*

7051 Village Drive, Suite 100 Buena Park, CA 90621
Mailing Address

(714) 670-3246 mum@hochiki.com
Telephone *E-mail Address*

2.0 FireNET Alarm Control Panel Fire Alarm Control Panel
Product Name *Product Type*

See Table #1
Product model No (List all unique product identification numbers and/or serial numbers)

General Description: Rigid wall mounted Analog Addressable Fire Alarm Control Panel, cabinets, battery enclosure and components

3.0 Tobolski Watkins Engineering Inc. Matthew Tobolski, Ph.D., P.E.
Applicant Company Name *Contact Person*

3710 Ruffin Road San Diego, CA 92123
Mailing Address

(858) 381-5843 mtobolski@tobolskiwatkins.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.

11/17/2011
Signature of Applicant *Date*

President and CEO Tobolski Watkins Engineering, Inc.
Title *Company Name*



Registered Design Professional Preparing the Report

4.0 **Tobolski Watkins Engineering Inc.**
Company Name

Matthew J. Tobolski, PhD, P.E. **C 72806**
Contact Name California License Number

3710 Ruffin Road San Diego, CA 92123
Mailing Address

(858) 381-5843 **mtobolski@tobolskiwatkins.com**
Telephone E-mail Address

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 **Tobolski Watkins Engineering Inc.**
Company Name

Derrick A. Watkins, S.E. **S 5257**
Contact Name California License Number

3710 Ruffin Road San Diego, CA 92123
Mailing Address

(858) 381-5843 **d Watkins@tobolskiwatkins.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 Laboratory (if applicable)

8.0 **NTS-National Technical Systems** **Rathish Rao**
Company Name Contact Name

1536 East Valencia Drive Fullerton, CA 92831
Mailing Address

(714) 879-6110 **Ratish.rao@nts.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) = **1.88**

S_{DS} (Spectral response acceleration at short period) = **2.50g**

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 Attachments**

Building period limits (if any) = **None**

Overall dimensions and weight (or range thereof) = **See Table #1 in Attachments**

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

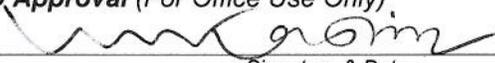
10.0 List of attachments supporting the special seismic certification of equipment or components:

Test Report Drawings Manufacturer's Catalog

Calculations Others (Please Specify):

Attachments: A) Certification Product Matrix, B) Unit Under Test Summaries, C) Test Report, D) Product Data Sheets

11.0 OSHPD Approval (For Office Use Only)



11/22/2011

December 31, 2016

Signature & Date

Approval Expiration Date

M. R. Karim, SHFR

S_{DS} (g) = **2.5**

z/h = **1.0**

Name & Title

Special Seismic Certification Valid Up to

Condition of Approval (if any):



UUT - # 1

**UNIT UNDER TEST (UUT)
Summary Sheet**

TWEI Project No.: 2011-0121-CO-001

Manufacturer: Hochiki America Corporation

Model Line: FireNET Alarm Control Panel

Model Number: FireNET FN-4127N

Product Construction Summary:

FireNET Alarm Control Panel is ABS/Steel Enclosure construction.

Options/Subcomponent Summary:

FireNET Alarm Control Panel Models to be seismic certified contain standardized subcomponents/features.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
31	5	14.5	24	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2010	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	2.66g	2.00g

Test Mounting Details:



Description: FireNET FN-4127N Alarm Control Panel wall-mounted to wood panel of mount fixture. Mount fixture per NTS construction and is mounted to shake table platen.

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Form: 2010-QAP-EF-004, revision 0

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UUT - # 2

**UNIT UNDER TEST (UUT)
Summary Sheet**

TWEI Project No.: 2011-0121-CO-001

Manufacturer: Hochiki America Corporation

Model Line: FireNET Alarm Control Panel

Model Number: FireNET FN-4127-DDWN

Product Construction Summary:

FireNET Alarm Control Panel FN-4127-DDWN is ABS/Steel Enclosure construction with a Plexiglass window over the display board

Options/Subcomponent Summary:

FireNET Alarm Control Panel Models to be seismic certified contain standardized subcomponents/features.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
31	5	14.5	24	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2010	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	2.66g	2.00g

Test Mounting Details:



(4) Mounting holes at each corner of UUT

Wall Mount Fixture (by NTS)

Description: FireNET FN-4127-DDWN Alarm Control Panel has a Plexiglass window over the display board and is wall-mounted to wood panel of mount fixture. Mount fixture per NTS construction and is mounted to shake table platen.

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UUT - # 3

UNIT UNDER TEST (UUT) Summary Sheet

TWEI Project No.: 2011-0121-CO-001

Manufacturer: Hochiki America Corporation

Model Line: FireNET Alarm Control Panel

Model Number: FireNET Plus-1127

Product Construction Summary:

FireNET Alarm Control Panel Plus-1127 is ABS/Steel Enclosure construction.

Options/Subcomponent Summary:

FireNET Alarm Control Panel Models to be seismic certified contain standardized subcomponents/features.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
20	3.5	14.5	19	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2010	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	2.66g	2.00g

Test Mounting Details:



(4) Mounting holes at each corner of UUT

Wall Mount Fixture (by NTS)

Description: FireNET Plus-1127 Alarm Control Panel wall-mounted to wood panel of mount fixture. Mount fixture per NTS construction and is mounted to shake table platen.

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UUT - # 4

**UNIT UNDER TEST (UUT)
Summary Sheet**

TWEI Project No.: 2011-0121-CO-001

Manufacturer: Hochiki America Corporation

Model Line: Battery Enclosure

Model Number: FN-ACC - contains two (2) MK Powered Batteries (ES7-12)

Product Construction Summary:

Battery Enclosure is ABS/Steel Enclosure construction.

Options/Subcomponent Summary:

FN-ACC Battery Enclosure stores up to two (2) batteries (each battery weighing 25 lbs, maximum). UUT #4 is battery enclosure (FN-ACC) with (2) MK Powered Batteries (ES7-12) and has a total estimated weight of 29 lbs (17 lbs + 6 lbs + 6 lbs). This configuration has the lightest total weight.

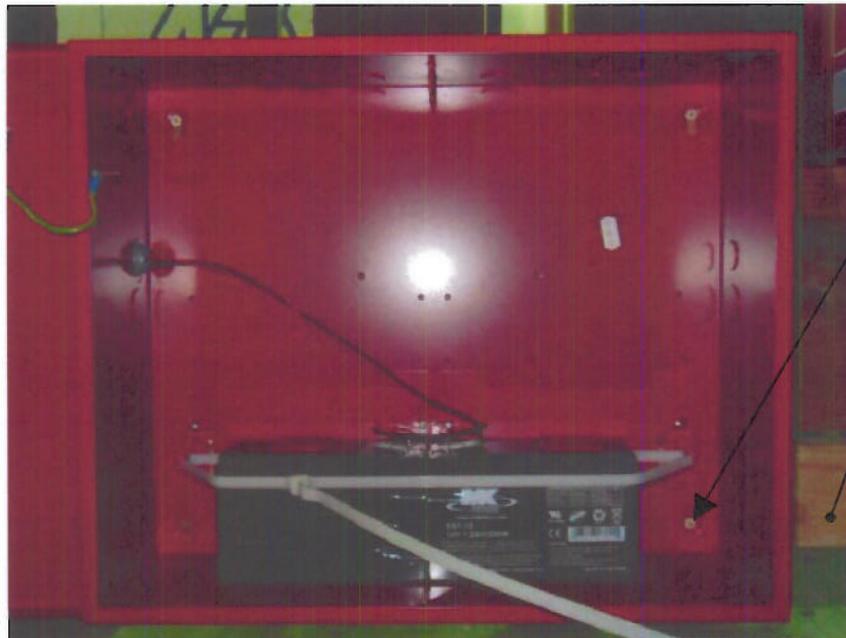
UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
29	5.8	17.8	14.9	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2010	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	2.66g	2.00g

Test Mounting Details:



(4) Mounting holes at each corner of UUT

Wall Mount Fixture (by NTS)

Description: Battery Enclosure with (2) batteries wall-mounted to wood panel of mount fixture. Mount fixture per NTS construction and is mounted to shake table platen.

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UUT - # 5

**UNIT UNDER TEST (UUT)
Summary Sheet**

TWEI Project No.: 2011-0121-CO-001

Manufacturer: Hochiki America Corporation

Model Line: Battery Enclosure

Model Number: FN-ACC - contains two (2) MK Powered Battery (ES33-12)

Product Construction Summary:
Battery Enclosure is ABS/Steel Enclosure construction.

Options/Subcomponent Summary:
FN-ACC Battery Enclosure stores up to two (2) batteries (each battery weighing 25 lbs, maximum). UUT #5 is battery enclosure (FN-ACC) with (2) MK Powered Battery (ES33-12) and has a total estimated weight of 67 lbs (17 lbs + 25 lbs + 25 lbs). This configuration has the heaviest total weight.

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
67	5.8	17.8	14.9	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS}	z/h	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2010	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	2.66g	2.00g

Test Mounting Details:



(4) Mounting holes at each corner of UUT

Wall Mount Fixture (by NTS)

Description: Battery Enclosure with (2) batteries wall-mounted to wood panel of mount fixture. Mount fixture per NTS construction and is mounted to shake table platen.

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