



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PREAPPROVAL OF
MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0546

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Smoke Guard Inc.

Manufacturer's Technical Representative: Herb Kaup

Mailing Address: 287 N. Maple Grove, Bosie, ID 83704

Telephone: (208) 639-7871

Email: herb@smokeguard.com

Product Information

Product Name: Smoke Curtain

Product Type: Other mechanical and electrical components

Product Model Number: M600

General Description: Closes off elevator openings to curtail smoke migration between spaces.

Applicant Information

Applicant Company Name: SGW Designworks LLC

Contact Person: Tasche Streib

Mailing Address: 3131 W State Street, Suite 230, Boise,, ID 83703

Telephone: (208) 391-4021

Email: tasche.streib@sgwdesignworks.com

Title:

\*Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs\*

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY





OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

Registered Design Professional Preparing Engineering Recommendations

Company Name: Structural Engineering Consultants, Inc.
Name: Patrick Van Kleek California License Number: C49971
Mailing Address: 410 S. Orchard Street, Suite 116, Boise, ID 83705
Telephone: 208-887-7760 Email: pat@secidaho.com

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP- (Separate application for OSP is required)
Special Seismic Certification is not preapproved

Certification Method(s)

- Testing in accordance with: ICC-ES AC156 FM 1950-16
Other\* (Please Specify):

\*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.

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

List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
Other(s) (Please Specify):

OFFICE USE ONLY - OSHPD APPROVAL VALID FOR CBC 2019 & ALL PRE-2019 CODE BASED PROJECTS

Signature: Jeffrey Kikumoto Date: 12/10/2020
Print Name: Jeffrey Kikumoto
Title: Senior Structural Engineer
Condition of Approval (if applicable):

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
**PREAPPROVAL OF MANUFACTURER'S CERTIFICATION**  
OPM-0546-19

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

**MANUFACTURER:** SMOKE GAURD  
**EQUIPMENT NAME:** M600 SMOKE CURTAIN

**GENERAL NOTES**

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED BELOW FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PRE-APPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE WHERE  $S_{DS}$  IS NOT GREATER THAN 2.5.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2, & 13.3-3.

WHERE  $S_{DS} = 2.5$ ,  $a_p = 1.0$ ,  $I_p = 1.5$ ,  $R_p = 1.5$ ,  $z/h \leq 1$ . SEE FOLLOWING SHEETS FOR APPLICABILITY OF  $\Omega_0$

5. THIS PRE-APPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
7. SHEET METAL SCREWS SHALL BE TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976)
8. CONCRETE WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e.  $z/h \leq 1$ )

**9. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING**

- A. PROVIDE SUPPORTING STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
- B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE DETAILS, MATERIAL AND GAUGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
- C. VERIFY THAT PROJECT SPECIFIC VALUES OF  $S_{DS}$  &  $z/h$  RESULT IN SEISMIC FORCES ( $E_h$ ,  $E_v$ ) THAT DO NOT EXCEED THE VALUES ON THE DETAILS.
- D. VERIFY THAT THE CONCRETE WALL TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR REPORT AND THIS OPM.
- E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY CONCRETE WALL EDGES OR OPENINGS (SEE TYPICAL DETAILS ON SHEET 2).
- F. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR  $6h_{ef}$  FROM THIS UNIT'S ANCHORS.
- G. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



Digitally signed by Patrick D. VanKleek  
 Date: 12/03/2020

MANUFACTURER:				NAME	DATE	<b>PROPRIETARY &amp; CONFIDENTIAL</b>  THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SMOKE GUARD ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SMOKE GUARD IS PROHIBITED.	
SMOKE GUARD		DRWN BY	JW	6/1/2019			
PRODUCT:  M600		ENG APPR.	SC	11/5/2020			
		CHKD BY					
REV:	SIZE: A	SHEET 1 OF 7	CUST. APPR.				

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10. EXPANSION ANCHORS:

A. ATTACHMENT IS TO BE MADE WITH THE ANCHORS LISTED BELOW FASTENER AND INSTALLED AS DESCRIBED IN THE CORRESPONDING ICC REPORT.

Anchor Diameter	Concrete Type	Min. F'c (psi)	Anchor Type	ICC Report No.	Min. Embed.	Min. Spacing.	Min. Edge Dist.	Min. Conc. Thickness	Install Torque	Direct Tension
1/4"	Normal Weight	3000	Hiti Kwik Bolt Hus-EZ	ESR-3027	1.92"	6"	6"	6"	18 FT-LB	799lb

B. THIS PRE-APPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE WALL EDGES, 6" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF SCREW ANCHORS SHALL BE PREFORMED BY AN APPROVED INDEPENDENT AGENCY EMPLOYED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5 AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER, AND THE ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE.

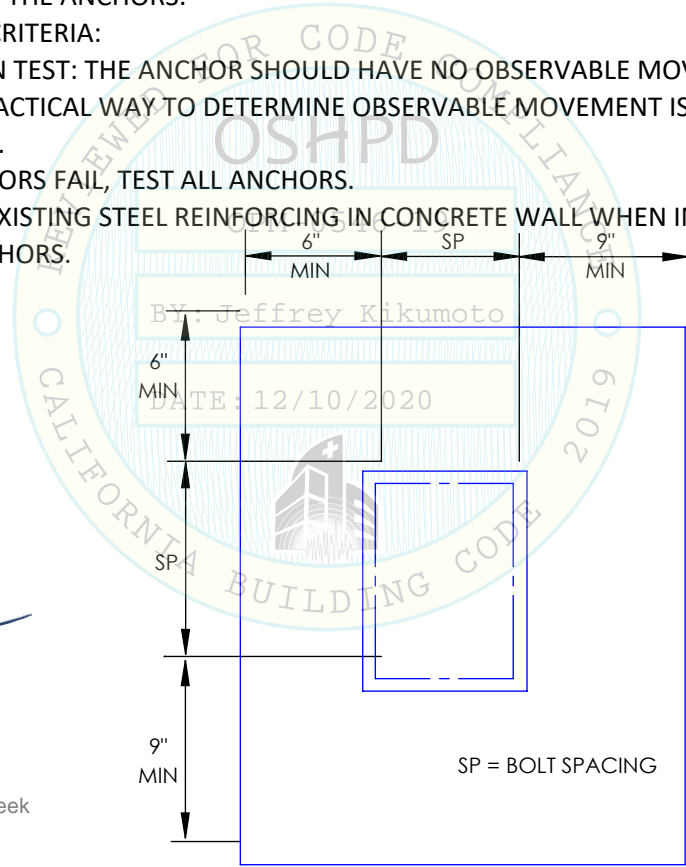
i. AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

ii. ACCEPTANCE CRITERIA:

- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.

iii. IF ANY ANCHORS FAIL, TEST ALL ANCHORS.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE WALL WHEN INSTALLING CONCRETE SCREW ANCHORS.

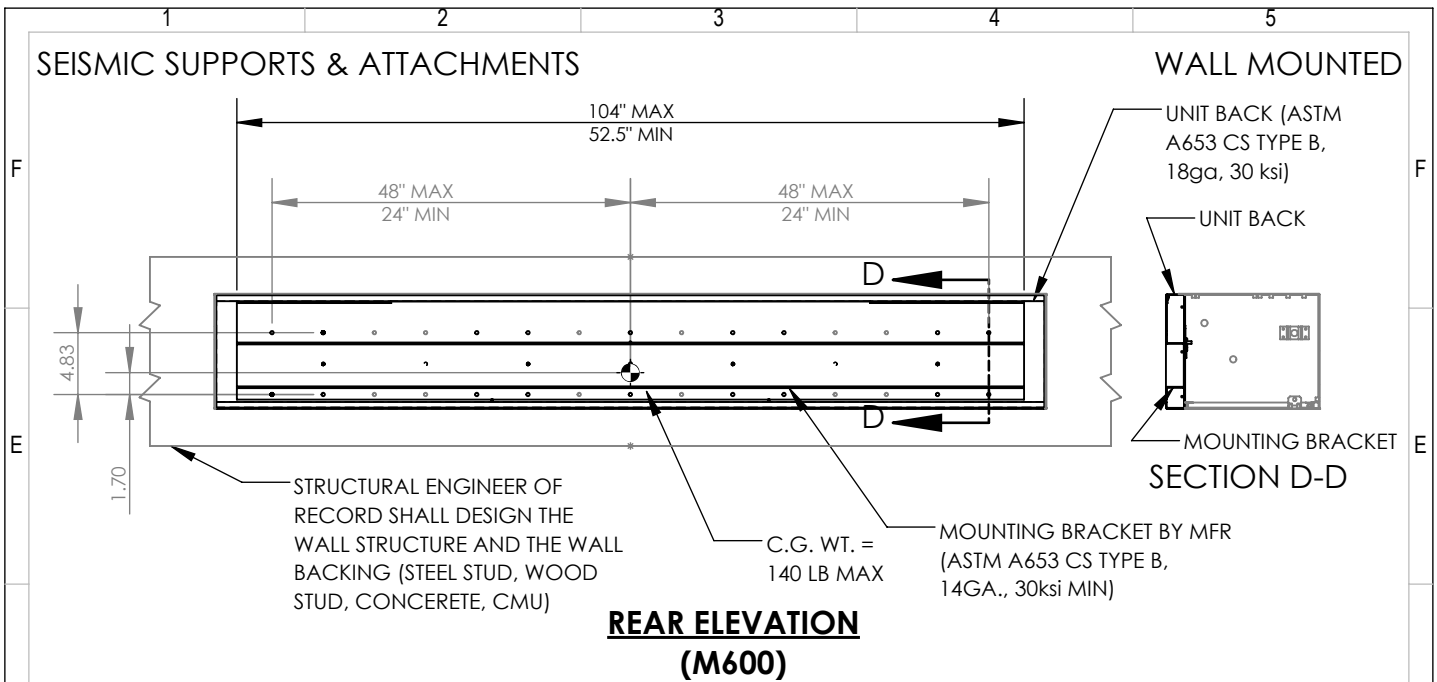


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**REAR ELEVATION  
(M600)**

DESCRIPTION	INDEX	PAGE
SEISMIC SUPPORTS AND ATTACHMENTS FOR UNIT BACK TO MOUNTING BRACKET CONNECTION		4
SEISMIC SUPPORTS AND ATTACHMENTS FOR MOUNTING BRACKET TO STEEL AND WOOD STUD WALL		5
SEISMIC SUPPORTS AND ATTACHMENTS FOR MOUNTING BRACKET TO CONCRETE AND BLOCK WALL		6
SCREW SPACING DETAIL		7

THE FOLLOWING DRAWINGS DETAIL THE ATTACHEMENT AND SEISMIC SUPPORTS FOR APPROVED USE CASES OF THE SMOKE GUARD M600 PRODUCTS.

MODEL 600	
LENGTH (in)	MAX WEIGHT (lb)
55	80
65	90
73	98
85	110
109	140

**NOTES:**

- FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.**  
 STRENGTH DESIGN IS USED:  $S_{DS}=2.5g$  ( $a_p = 1.0, I_p = 1.5, R_p = 1.5, \Omega_0 = 1.5, z/h \leq 1$ )  
 PER ASCE 7-16 TABLE 13.5-1, OTHER RIGID COMPONENTS  
 HORIZONTAL FORCE ( $E_h$ ) =  $3.0W_p = (3.0) * (140LBS) = 420LBS$   
 HORIZONTAL FORCE ( $Em_h$ ) =  $4.5W_p = (4.5) * (140LBS) = 630LBS$   
 VERTICAL FORCE ( $E_v$ ) =  $0.5W_p = (0.5) * (140LBS) = 70LBS$   
 ( $Em_h = E_h \times \Omega_0$ ; FOR CONCRETE ANCHORAGE)
- CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.



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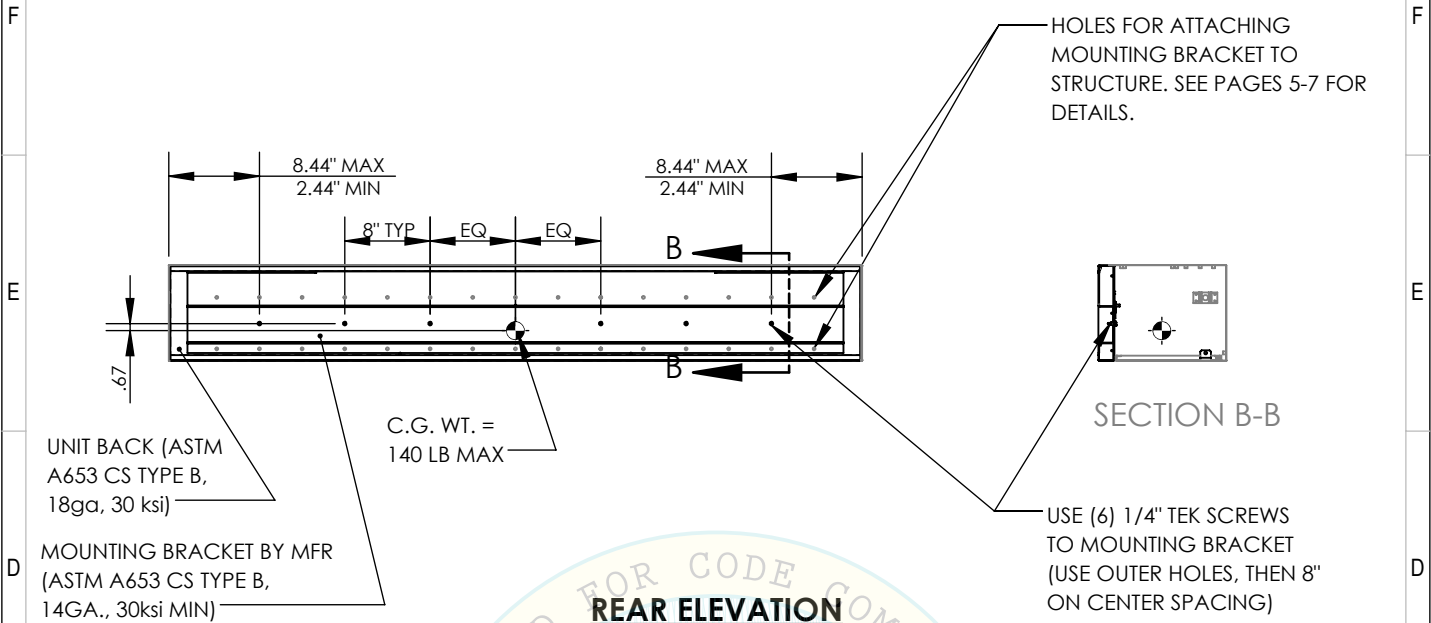
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SEISMIC SUPPORTS AND ATTACHEMENTS FOR  
MOUNTING BRACKET TO UNIT BACK CONNECTION

WALL MOUNTED



**REAR ELEVATION  
(M600)**

The M600 is mounted to a mounting bracket that is attached to the wall. Vertical, shear, and perpendicular forces are absorbed by all 6 screws that fasten the unit to the mounting bracket. Perpendicular forces are absorbed by one screw.

BY: Jeffrey Kikumoto

DATE: 12/10/2020

Component to Mounting Bracket

Tu = 169 lb/screw

Vu = 81 lb/screw



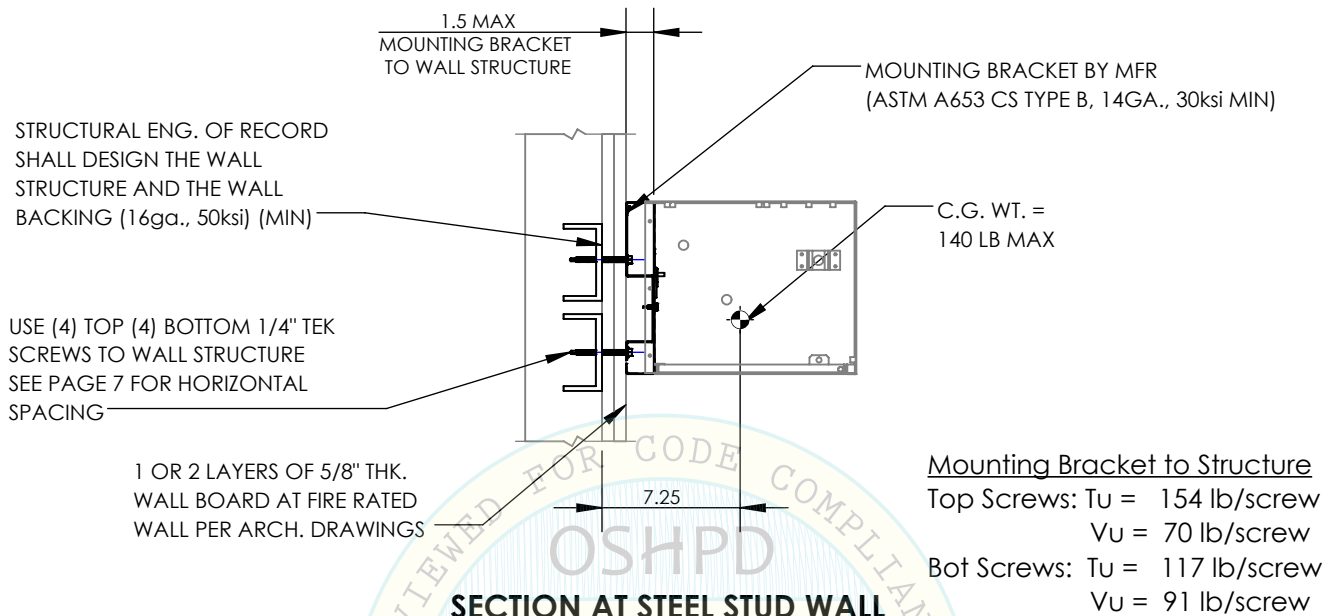
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# SEISMIC SUPPORTS AND ATTACHEMENTS FOR MOUNTING BRACKET TO STEEL AND WOOD STUD WALL

WALL MOUNTED

The mounting bracket is attached to wall through 4 top and 4 bottom fasteners.



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NOTE:  
MIN EDGE DISTANCE = 1"  
MIN END DISTANCE = 2"

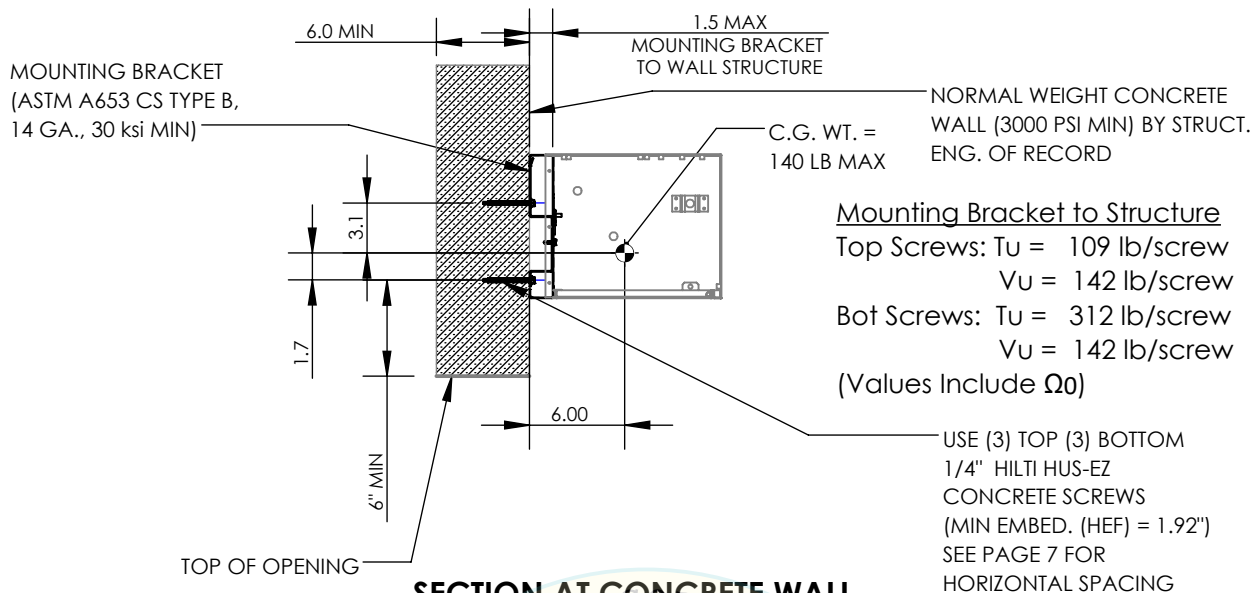
## SECTION AT WOOD STUD WALL

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SESMIC SUPPORTS AND ATTACHEMENTS FOR  
MOUNTING BRACKET TO CONCRETE WALL

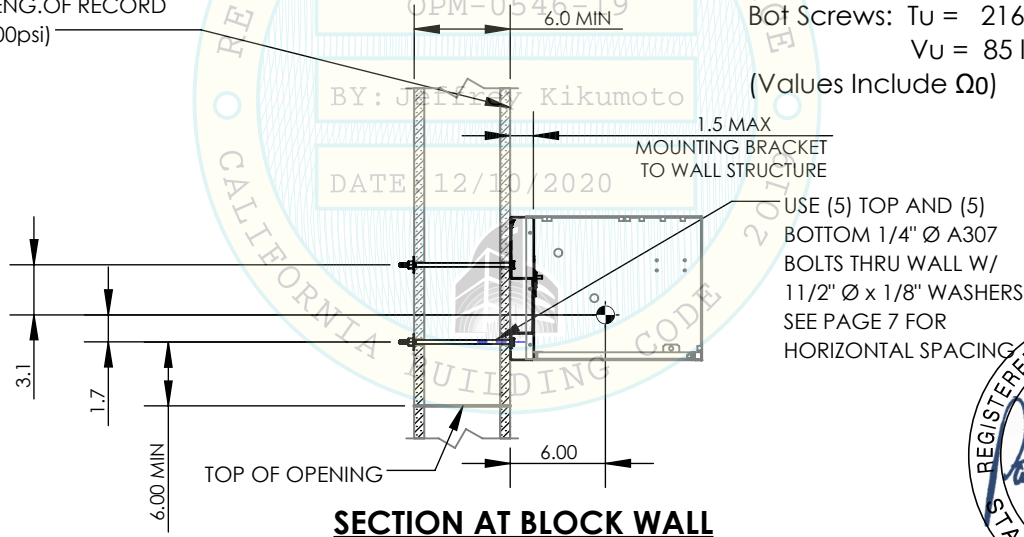
WALL MOUNTED



**SECTION AT CONCRETE WALL**

The mounting plate is attached to wall through 3 top and 3 bottom fasteners.

CMU WALL DESIGNED BY  
STRUCT. ENG. OF RECORD  
(f'm = 2000psi)



**SECTION AT BLOCK WALL**

The mounting plate is attached to wall through 5 top and 5 bottom fasteners.

Mounting Bracket to Structure

Top Screws: Tu = 66 lb/screw  
Vu = 85 lb/screw  
Bot Screws: Tu = 216 lb/screw  
Vu = 85 lb/screw  
(Values Include  $\Omega_0$ )



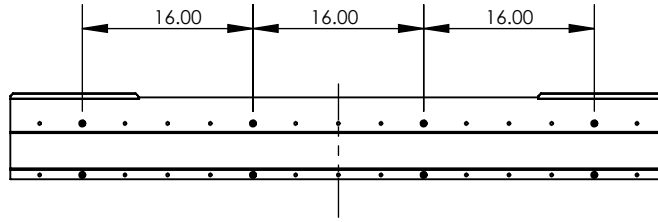
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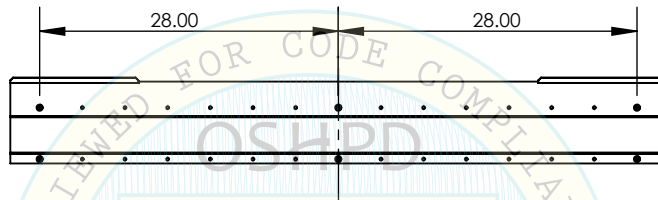
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SCREW SPACING DETAIL FOR MOUNTING BRACKET



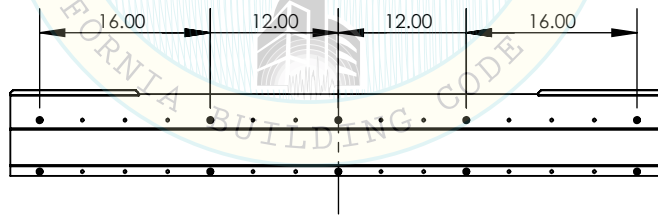
**STEEL STUD AND WOOD STUD SCREW LOCATIONS**



**CONCRETE WALL SCREW LOCATIONS**

BY: Jeffrey Kikumoto

DATE: 12/10/2020



**BLOCK WALL SCREW LOCATIONS**



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