



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

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

OFFICE USE ONLY

APPLICATION #: OPM-0754

HCAI Preapproval of Manufacturer's Certification (OPM)

Type:  New  Renewal/Update

Manufacturer Information

Manufacturer: BLE Smoke & Fire Curtains, Ltd.

Manufacturer's Technical Representative: David Bramhall

Mailing Address: Velum House, Woodhouse Link Innovation Way, Woodhouse Mill, Sheffield SS139AD

Telephone: () - Email: dbramhall@blecurtains.com

Product Information

Product Name: SD60-GS (Type A) Smoke Containment System

Product Type: other mechanical or electrical components

Product Model Number: SD60-GS (Type A)

General Description: smoke containment system at various interior opening sizes

Applicant Information

Applicant Company Name: EASE LLC.

Contact Person: Tiffany Tonn

Mailing Address: 1515 FAIRVIEW AVE, STE 205, MISSOULA, MT 59801

Telephone: (406) 541-3273 Email: tiffany@easeco.com

Title: Office Assistant

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
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**Registered Design Professional Preparing Engineering Recommendations**

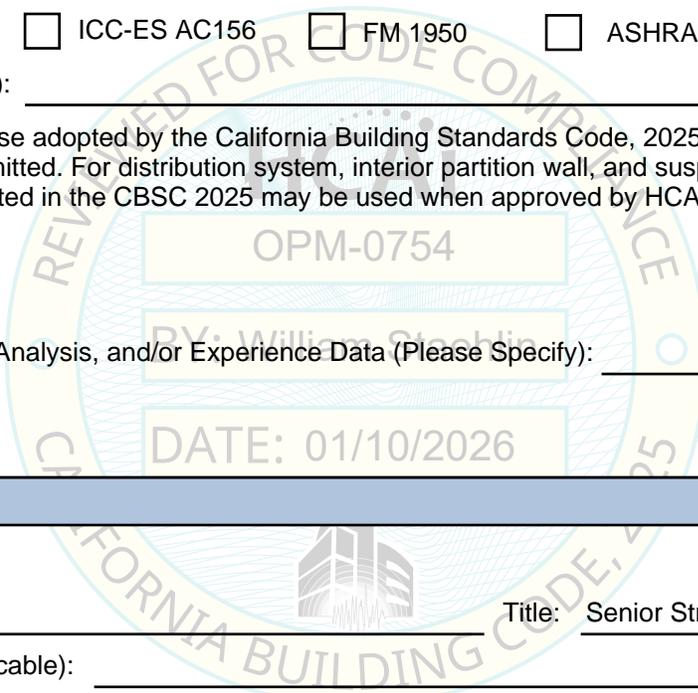
Company Name: EASE LLC  
Name: Jonathan Roberson California License Number: S4197  
Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709  
Telephone: (951) 295-1892 Email: jon@EASECo.com

**Certification Method**

Testing in accordance with:  ICC-ES AC156  FM 1950  ASHRAE 171  FEMA 461  
 Other(s) (Please Specify): \_\_\_\_\_

\*Use of criteria other than those adopted by the California Building Standards Code, 2025 (CBSC 2025) 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 2025 may be used when approved by HCAI prior to testing.

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



**HCAI Approval**

Date: 1/10/2026  
Name: William Staehlin Title: Senior Structural Engineer  
Condition of Approval (if applicable): \_\_\_\_\_

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**EQUIPMENT ANCHORAGE  
& SEISMIC ENGINEERING**

5877 Pine Ave, Ste. 210  
Chino Hills, CA. 91709  
Phn: (909) 606-7622

The Department of Health Care Access and Information  
**PREAPPROVAL OF MANUFACTURER'S CERTIFICATION**  
**OPM-0754**

**THIS PREAPPROVAL CONFORMS TO THE 2025 CALIFORNIA BUILDING CODE**

MANUFACTURER: **BLE SMOKE AND FIRE CURTAINS**  
EQUIPMENT NAME: **SC60 - GS (TYPE A) SMOKE CURTAIN**

Sheet: 1 of 6  
Date: 1/6/26

**GENERAL NOTES**

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2025 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2025 CBC
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PREAPPROVAL CONFORMS TO THE 2025 CALIFORNIA BUILDING CODE WHERE  $S_{DS}$  IS NOT GREATER THAN 2.50.
4. FORCES PER ASCE 7-22 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,  
WHERE  $S_{DS} = 2.50$ ,  $I_p = 1.5$ ,  $CAR = 1.0$ ,  $R_{po} = 1.5$ ,  $z/h \leq 1.0$ , ( $R_p = 1.3$ ,  $H_f = 3.50$ ) CONCRETE WALL. SEE FOLLOWING SHEETS FOR  $\Omega_{op}$
5. THIS PREAPPROVAL 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 SATISFY AC118 - ACCEPTANCE CRITERIA FOR TAPPING SCREW FASTENERS AND MUST BE SUPPORTED BY AN INTERNATIONAL CODE COUNCIL (ICC) ICC - ES EVALUATION REPORT.
8. CONCRETE WALL DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e.  $z/h \leq 1.0$ )
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 2025 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.
  - C. VERIFY THAT PROJECT SPECIFIC SEISMIC PARAMETERS RESULT IN SEISMIC FORCES ( $E_h$ ,  $E_v$ ) THAT DO NOT EXCEED THE VALUES IN THIS OPM.
  - D. VERIFY THAT THE CONCRETE SLAB 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 SLAB EDGES OR OPENINGS (SEE TYPICAL DETAIL 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.



### BLE SMOKE AND FIRE CURTAINS

DES. J. ROBERSON

SHEET

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JOB NO. 11-2512

### SC60 - GS (TYPE A)

DATE 1/6/26

OF 6 SHEETS

#### 10. EXPANSION ANCHORS:

A. ATTACHMENT IS TO BE MADE WITH THE ANCHORS LISTED BELOW 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	Torque Test	Direct Tension Test
1/4"	Normal Weight	3000	Hilti KH EZ (STAINLESS STEEL)	ESR-3027	1.93"	2"	3"	6"	18 FT-LB	358
3/8"	Normal Weight	3000	Hilti Kwik Bolt TZ2 (STAINLESS STEEL)	ESR-4266	2"	6"	4"	6"	30 FT-LB	1982

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 3" OR 4" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED 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) DIRECT PULL TENSION TEST OR TORQUE TEST AT LEAST 50% OF THE ANCHORS. FOR KH-EZ ANCHORS AT RAILS, ONLY 10% OF ANCHORS REQUIRED TENSION TESTING PER 1910A. 5.3.2 EXCEPTION 2.

(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.
- TORQUE TEST: THE APPLICABLE TORQUE MUST BE ACHIEVED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE : 1/2 TURN OF THE NUT

(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE SLAB WHEN INSTALLING CONCRETE EXPANSION ANCHORS.

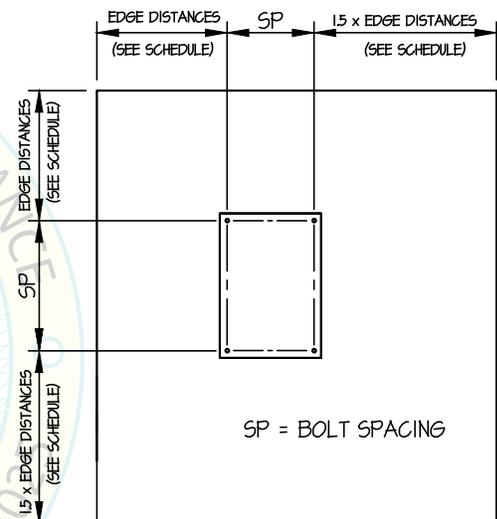
E. PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT & WASHER.

#### 11. BOLTS THROUGH CONCRETE ON METAL DECK

A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNLESS OTHERWISE NOTED.

B. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16) FOR CONCRETE.

C. THROUGH-BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TENSION TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



TYPICAL CONCRETE EDGE DETAIL



## BLE SMOKE AND FIRE CURTAINS

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SHEET

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## SC60 - GS (TYPE A) SMOKE CURTAIN

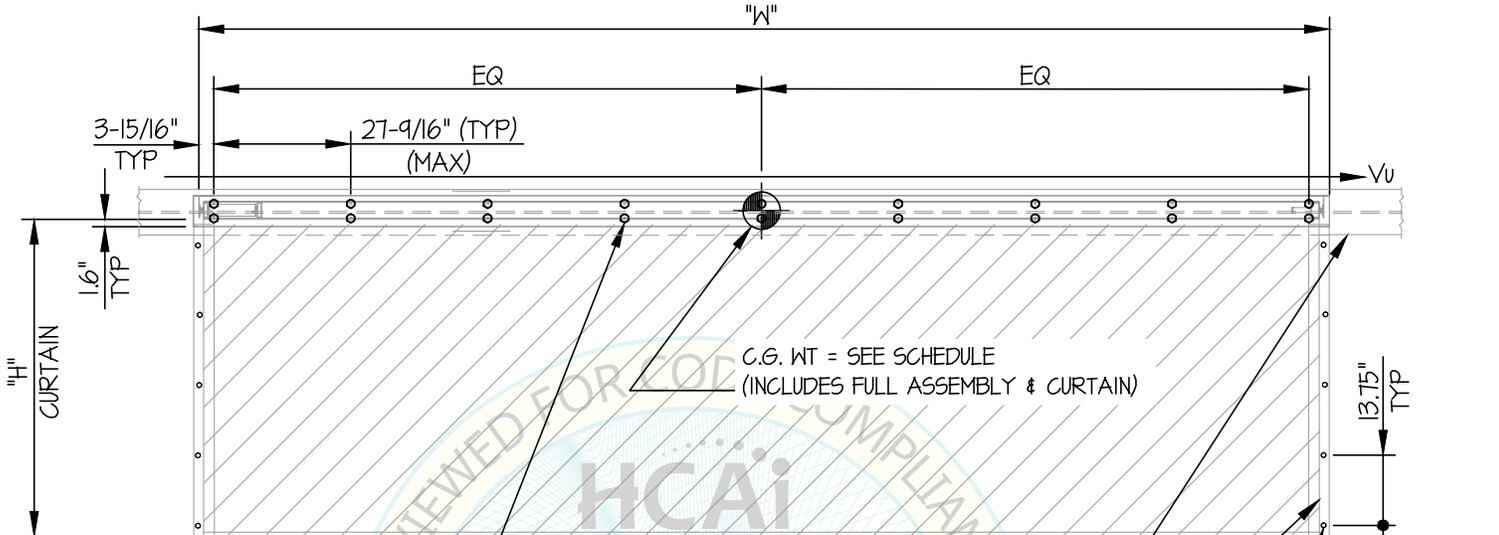
JOB NO. **11-2512**

DATE **1/6/26**

OF **6** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



USE (9)- #14 S.M. SCREW (TOP)  
(9)- #14 S.M. SCREW (BOTTOM)  
(TOP & BOTTOM, 18 TOTAL)  
OR

USE (9)- 3/8"φ HILTI KB-TZ2 (CS) (TOP)  
(9)- 3/8"φ HILTI KB-TZ2 (CS) (BOTTOM)  
W/ STANDARD WASHERS TO CONCRETE WALL  
(BY STRUCTURAL ENGINEER OF RECORD)  
(TOP & BOTTOM, 18 TOTAL)  
(CALL OUT FOR W MAX, FOLLOW SPACING  
REQUIREMENTS ABOVE FOR "W" < W MAX)

STRUCTURAL ENGINEER OF RECORD  
SHALL DESIGN THE BACKING  
PLATE (16 GA., 50 KSI MIN.)  
AND THE WALL STRUCTURE

OPTIONAL 14 GA RAIL  
(ASTM A653 GR 230 55)  
(PROVIDE BY BLE)  
EA SIDE

#14 TEK SCREWS  
OR  
1/4"φ HILTI KH-EZ

### ELEVATION

#### NOTES:

- FORCES ARE DETERMINED PER 2025 CALIFORNIA BUILDING CODE AND ASCE 7-22. STRENGTH DESIGN IS USED. (EXAMPLE:  $S_{DS}=2.50$ ,  $I_p=1.5$ ,  $CAR=1.0$ ,  $R_{po}=1.5$ ,  $\Omega_{op}=2.0$ ,  $R_U=1.3$ ,  $H_f=3.50$ ,  $z/h \leq 1.0$ )
 

HORIZONTAL FORCE ( $E_h$ )	=	2.69	$W_p$
HORIZONTAL FORCE ( $E_{mh}$ )	=	5.39	$W_p$ (FOR CONCRETE ANCHORAGE)
VERTICAL FORCE ( $E_v$ )	=	0.50	$W_p$
- THIS PREAPPROVAL ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
- THIS PREAPPROVAL WAS PREPARED WITHOUT KNOWLEDGE OF ANY SITE CONDITION. COMPATIBILITY FOR USE WITH A SITE SHALL BE EVALUATED BY THE STRUCTURAL ENGINEER OF RECORD OF THE INSTALLATION (SEOR). USE REQUIRES APPROVAL BY THE SEOR.
- STRUCTURAL ENGINEER OF RECORD FOR THE INSTALLATION SHALL VERIFY ALL CONDITIONS, EVALUATE INTERACTION WITH ADJACENT EQUIPMENT AND ANCHORS, AND PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- SEE GENERAL NOTES: SHEETS 1 AND 2



### BLE SMOKE AND FIRE CURTAINS

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### SC60 - GS (TYPE A) SMOKE CURTAIN

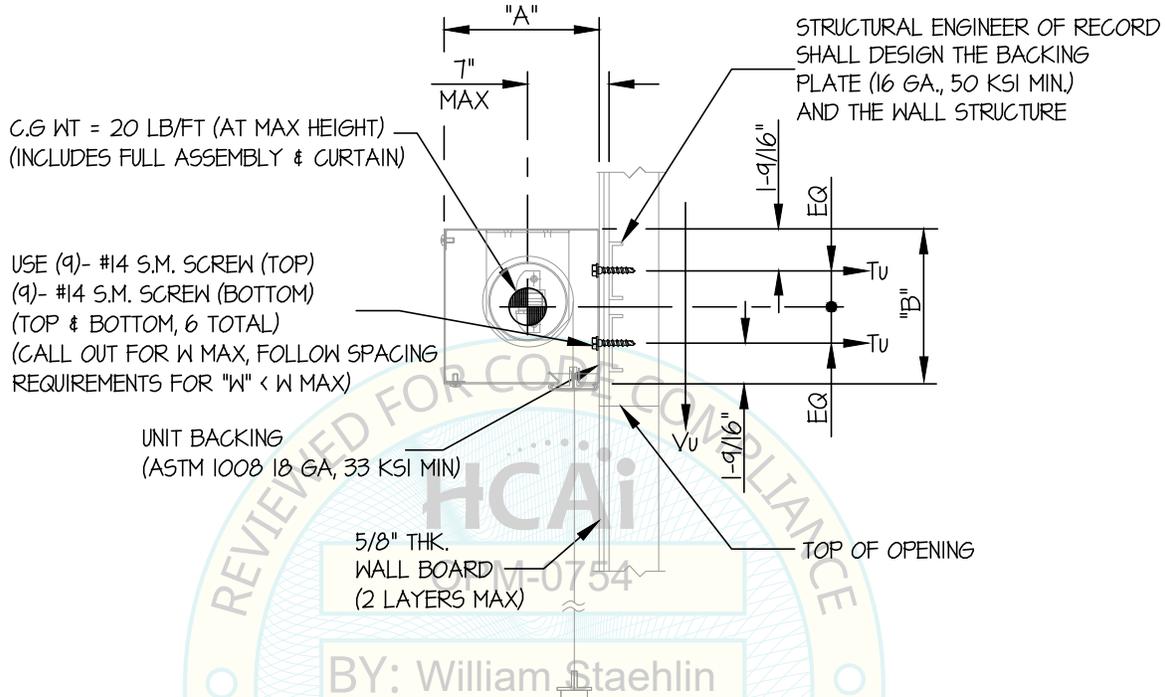
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OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



SECTION AT STEEL STUD WALL

UNIT	WEIGHT AT MIN ** (lb.)	WEIGHT AT MAX ** (lb.)	"A" (in.)	"B" (in.)	"H" (in.)	"W" (MIN) (in.)	"W" (MAX) (in.)	AT MIN "W", "H" MAX		AT MAX "W", "H" MAX	
								+ Tu (lb.)	+ Vu (lb.)	+ Tu (lb.)	+ Vu (lb.)
SC60-GS A1	40	208	5.91	5.91	59.06	25.59	216.54	119	32	132	37
SC60-GS A2	43	240	7.09	7.09	118.11	25.59	216.54	100	35	118	43
SC60-GS A3	48	298	8.27	8.27	236.22	25.59	216.54	96	39	123	53
SC60-GS A4	55	346	9.06	9.06	472.44	25.59	216.54	101	44	132	62

\*\* DOES NOT INCLUDE SIDE GUIDES

+ (VALUES DO NOT INCLUDE Ω)



### BLE SMOKE AND FIRE CURTAINS

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### SC60 - GS (TYPE A) SMOKE CURTAIN

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OF 6 SHEETS

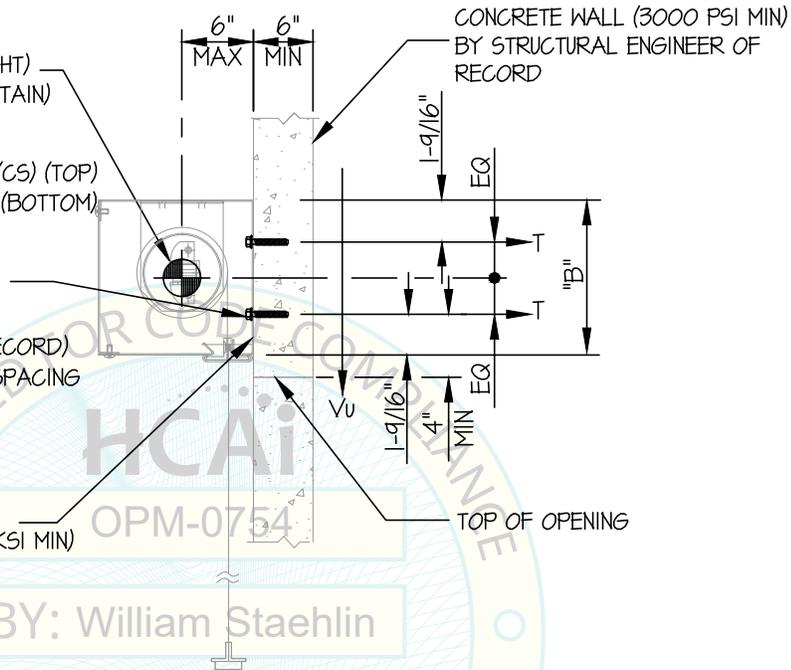
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

C.G. WT = 20 LB/FT (AT MAX HEIGHT)  
(INCLUDES FULL ASSEMBLY & CURTAIN)

USE (4)- 3/8"φ HILTI KB-TZ2 (CS) (CS) (TOP)  
(4)- 3/8"φ HILTI KB-TZ2 (CS) (CS) (BOTTOM)  
W/ STANDARD WASHERS  
(MIN. EMBED. (h<sub>ef</sub>) = 2")  
(TOP & BOTTOM, 18 TOTAL)  
TO CONCRETE WALL  
(BY STRUCTURAL ENGINEER OF RECORD)  
(CALL OUT FOR W MAX, FOLLOW SPACING  
REQUIREMENTS FOR "W" < W MAX)

UNIT BACKING  
(ASTM 1008 18 GA, 33 KSI MIN)



SECTION AT STEEL STUD WALL

UNIT	WEIGHT AT MIN ** (lb.)	WEIGHT AT MAX ** (lb.)	"A" (in.)	"B" (in.)	"H" (in.)	"W" (MIN) (in.)	"W" (MAX) (in.)	AT MIN "W", "H" MAX		AT MAX "W", "H" MAX	
								++T <sub>u</sub> (lb.)	++V <sub>u</sub> (lb.)	++T <sub>u</sub> (lb.)	++V <sub>u</sub> (lb.)
SC60-GS A1	40	208	5.91	5.91	59.06	25.59	216.54	138	57	150	66
SC60-GS A2	43	240	7.09	7.09	118.11	25.59	216.54	125	61	144	76
SC60-GS A3	48	298	8.27	8.27	236.22	25.59	216.54	126	68	160	95
SC60-GS A4	55	346	9.06	9.06	472.44	25.59	216.54	137	78	175	109

\*\* DOES NOT INCLUDE SIDE GUIDES

++ (VALUES INCLUDE Ω)

BY: William Staehlin



### BLE SMOKE AND FIRE CURTAINS

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SHEET

**6**

### SC60 - GS (TYPE A) SMOKE CURTAIN

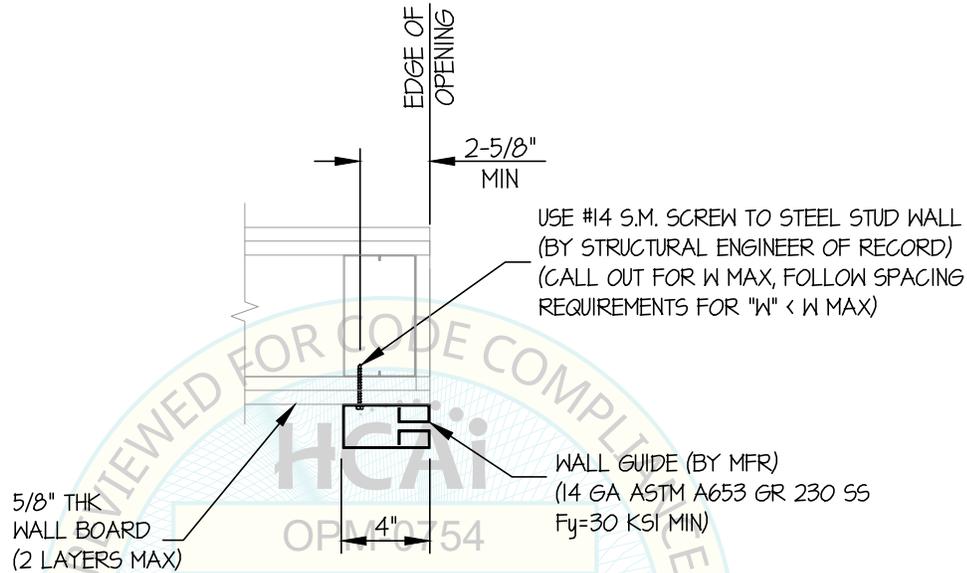
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OF **6** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

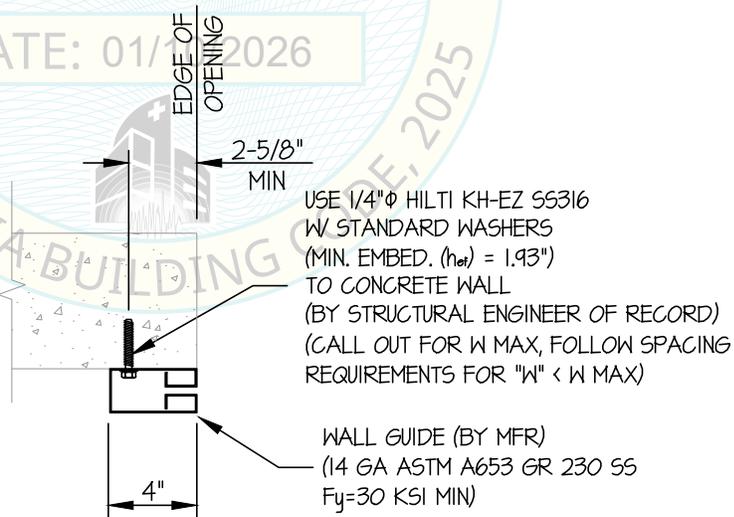
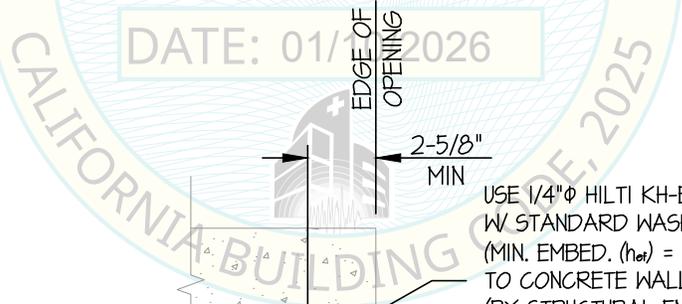
WALL MOUNTED



SECTION AT STEEL STUD WALL

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DATE: 01/10/2026



SECTION AT CONCRETE WALL

SECTION A-A

