



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, United Kingdom S13 9AD

Telephone: 07771623020

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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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

HCAI Special Seismic Certification Preapproval (OSP)

Special Seismic Certification is preapproved under OSP OSP Number: _____

Certification Method

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

*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) 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 2022 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: 6/14/2025
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 2022 CALIFORNIA BUILDING CODE

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

Sheet: 1 of 6

Date: 6/13/25

GENERAL NOTES

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2022 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 2022 CALIFORNIA BUILDING CODE WHERE S_{ds} IS NOT GREATER THAN 2.30.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,
WHERE $S_{ds} = 2.30$ $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h \leq 1$ CONCRETE WALL. SEE FOLLOWING SHEETS FOR Ω_0 .
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. $z/h \leq 1$)
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 2022 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 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 AND THIS OPM.
 - E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY CONCRETE WALL 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

2

JOB NO. 11-2501

SC60 - GS (TYPE A)

DATE 6/13/25

OF 6 SHEETS

10. SCREW 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
1/4"	Normal Weight	3000	Hilti KH EZ (STAINLESS STEEL)	ESR-3027	1.93"	2"	3"	6"	N/A	358
3/8"	Normal Weight	3000	Hilti Kwik Bolt TZ2 (CARBON STEEL)	ESR-4266	2"	6"	4"	6"	N/A	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 SCREW 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.

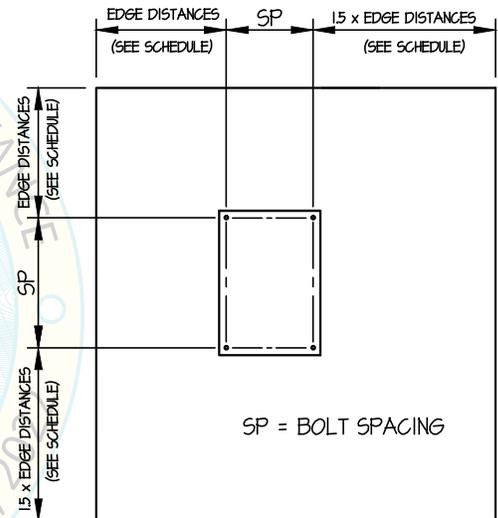
(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

(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 ANCHOR FAILS, TEST ALL ANCHORS.

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



TYPICAL CONCRETE EDGE DETAIL



BLE SMOKE AND FIRE CURTAINS

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SHEET

3

SC60 - GS (TYPE A) SMOKE CURTAIN

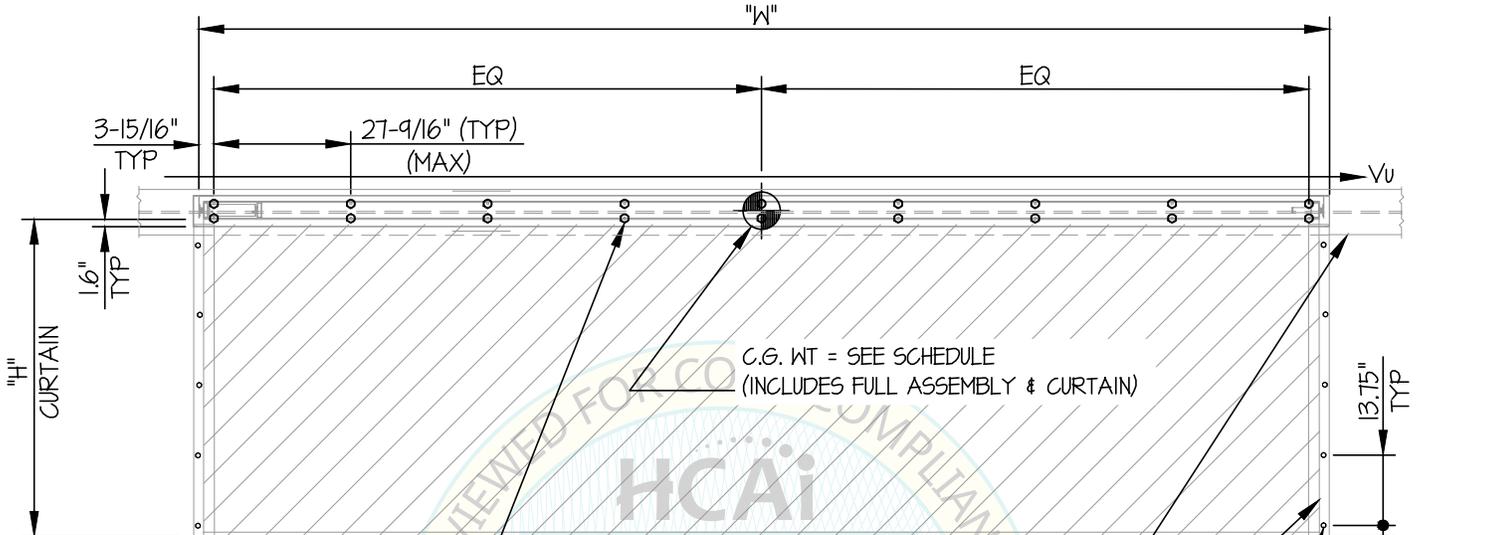
JOB NO. 11-2501

DATE 6/13/25

OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



C.G. WT = SEE SCHEDULE
(INCLUDES FULL ASSEMBLY & CURTAIN)

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 SS)
(PROVIDE BY BLE)
EA SIDE

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

- 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)

ELEVATION

NOTES:

1. FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. (EXAMPLE: $S_{ds} = 2.30$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $\Omega_o = 2.0$, $z/h \leq 1$)

HORIZONTAL FORCE (E_h) = $2.76 W_p$
 HORIZONTAL FORCE (E_{mh}) = $5.52 W_p$ (FOR CONCRETE ANCHORAGE)
 VERTICAL FORCE (E_v) = $0.46 W_p$

- 2. THIS PREAPPROVAL ENCOMPASSES WEIGHTS AND VERTICAL CG POSITIONS UP TO THE VALUES SHOWN.
- 3. 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.
- 4. 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.

5. SEE GENERAL NOTES: SHEET 1 AND 2



BLE SMOKE AND FIRE CURTAINS

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SHEET

4

SC60 - GS (TYPE A) SMOKE CURTAIN

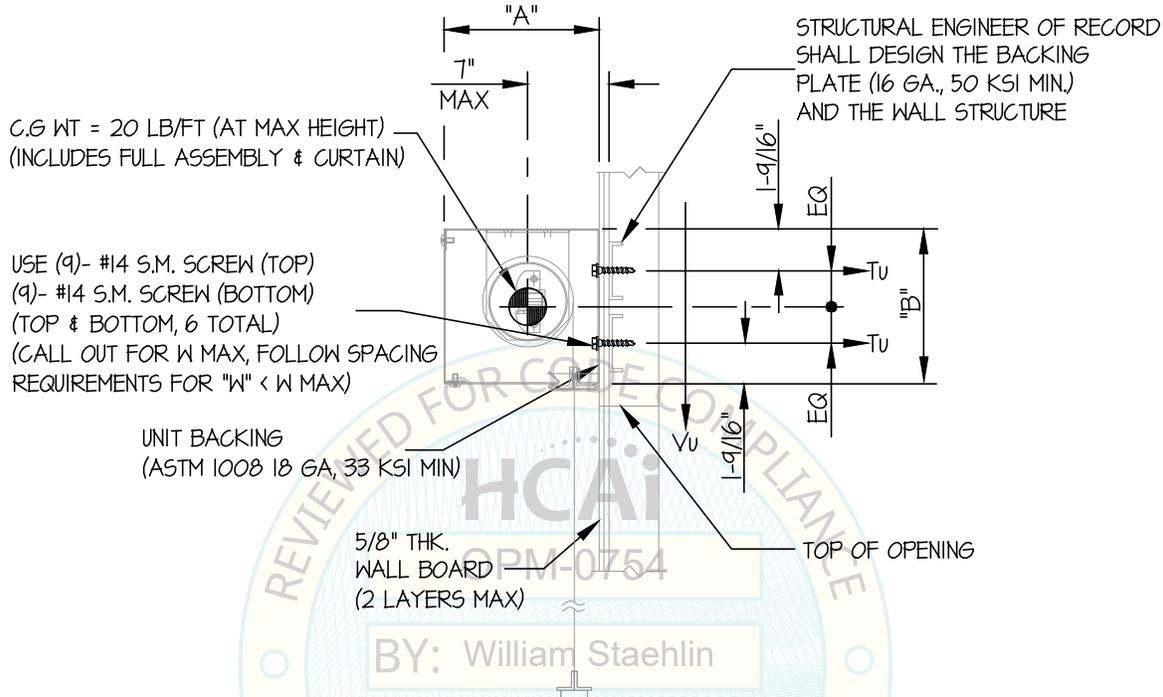
JOB NO. 11-2501

DATE 6/13/25

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	118	32	130	37
SC60-GS A2	43	240	7.09	7.09	118.11	25.59	216.54	100	35	117	43
SC60-GS A3	48	298	8.27	8.27	236.22	25.59	216.54	95	39	123	53
SC60-GS A4	55	346	9.06	9.06	472.44	25.59	216.54	101	44	131	62

** DOES NOT INCLUDE SIDE GUIDES

+ (VALUES DO NOT INCLUDE Ω)



BLE SMOKE AND FIRE CURTAINS

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5

SC60 - GS (TYPE A) SMOKE CURTAIN

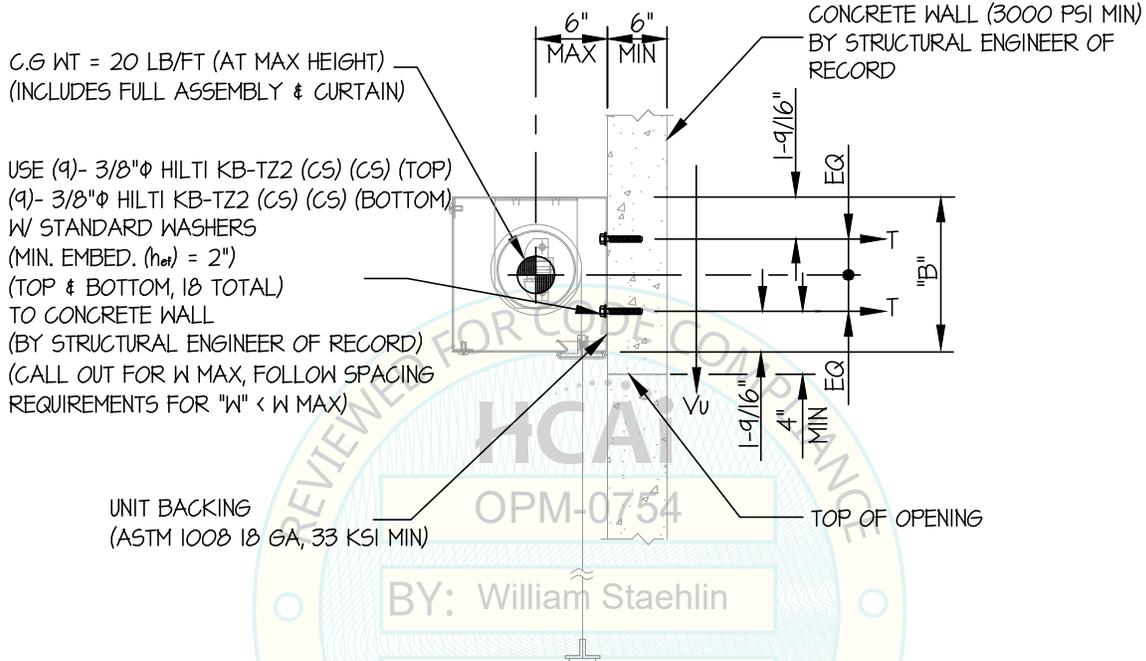
JOB NO. 11-2501

DATE 6/13/25

OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



SECTION AT 6" 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 _u (lb.)	++V _u (lb.)	++T _u (lb.)	++V _u (lb.)
SC60-GS A1	40	208	5.91	5.91	59.06	25.59	216.54	138	58	149	67
SC60-GS A2	43	240	7.09	7.09	118.11	25.59	216.54	125	62	144	77
SC60-GS A3	48	298	8.27	8.27	236.22	25.59	216.54	126	69	160	95
SC60-GS A4	55	346	9.06	9.06	472.44	25.59	216.54	137	79	175	111

** DOES NOT INCLUDE SIDE GUIDES

++ (VALUES INCLUDE Ω)



BLE SMOKE AND FIRE CURTAINS

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SHEET

6

SC60 - GS (TYPE A) SMOKE CURTAIN

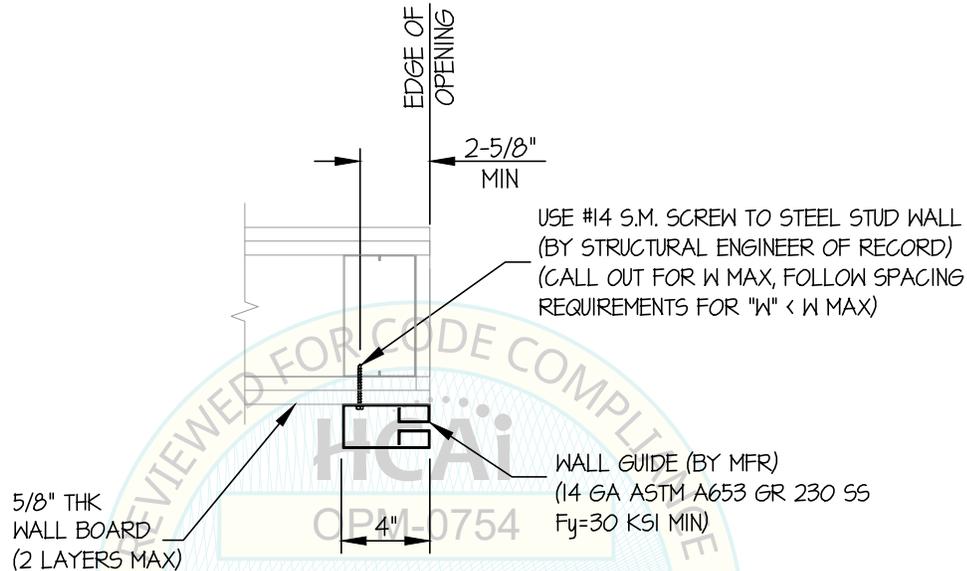
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DATE 6/13/25

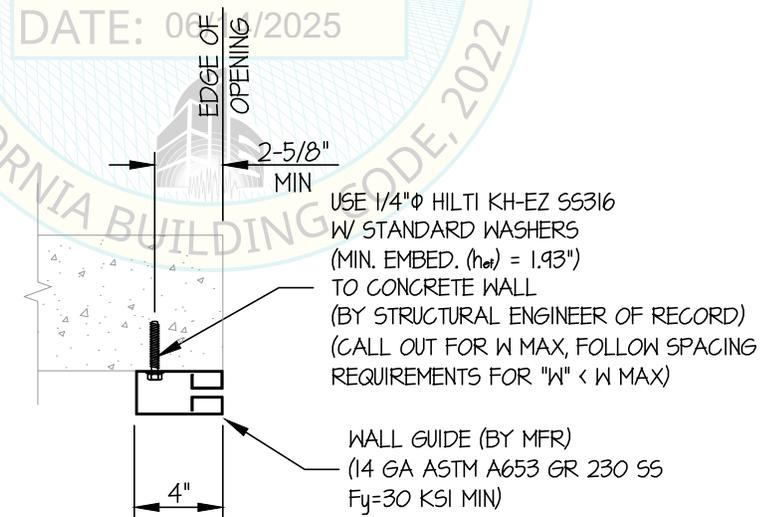
OF 6 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



SECTION AT STEEL STUD WALL



SECTION AT CONCRETE WALL

SECTION A-A

