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

OFFICE USE ONLY

APPLICATION #: OPM-0535

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Vogel's Products BV

Manufacturer's Technical Representative: Leon Grotten

Mailing Address: Hondsruglaan 93, Eindhoven, DB 5628 DB

Telephone: () - Email: l.grooten@vogels.com

Product Information

Product Name: Video Monitor Mounts

Product Type: Other Mechanical or Electrical Component

Product Model Number: PFW 6870 (Standard Option), PFW 6880 (Slim Low Profile Option), PFW 6875 (Portrait Option), PFW 6885 (Slim Low Profile Portrait Option)

General Description: Wall Mount for Video Wall Monitors

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:

Registered Design Professonal Preparing Engineering Recommendations

Company Name: EASE

Name: Jonathan Roberson California License Number: S4197

Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709

Telephone: (909) 606-7622 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, 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 HCAI prior to testing.

☒ Analysis

☐ Experience Data

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

HCAI Approval

Date: 12/21/2022

Name: Haeseong Lim Title: Senior Structural Engineer

Condition of Approval (if applicable):

EASE
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-0535-19

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **VOGEL'S PRODUCTS BV**

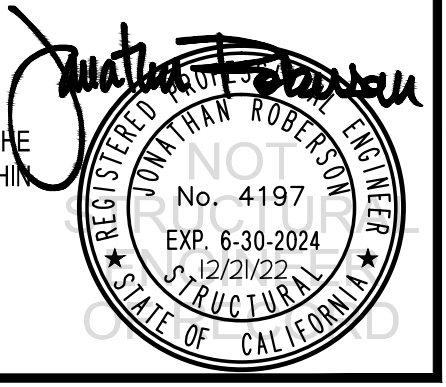
EQUIPMENT NAME: **PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS**

Date: 12/21/22

GENERAL NOTES

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 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 2019 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.20.
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,
   WHERE S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h $\leq$ 1 AT CONCRETE WALL, Ω_o = 1.5
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 BE TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976).
8. WOOD SCREWS GKR-RSS PER ICC-ES ESR-2442.
9. CONCRETE WALL VALID FOR DEMANDS SHOWN AT ANY ELEVATION. (i.e. z/h $\leq$ 1)
10. **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 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 SLAB 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 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 6hef FROM THIS UNIT'S ANCHORS.



VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 2 OF 14 SHEETS

11. **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 Kwik HUS	ESR-3027	1.92"	3.5"	12"	6"	N/A	779 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 12" 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.

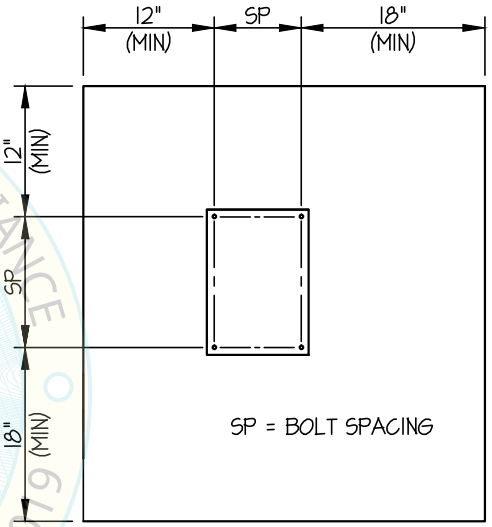
(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST AT LEAST 50% OF THE ANCHORS.

(ii) ACCEPTANCE CRITERIA:

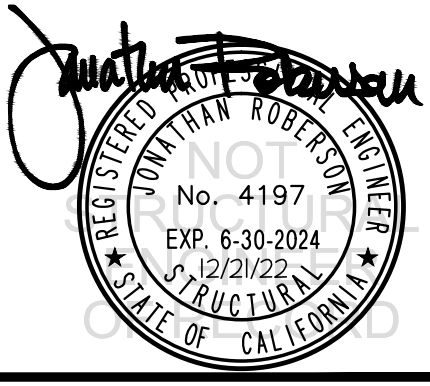
- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.

(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



VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
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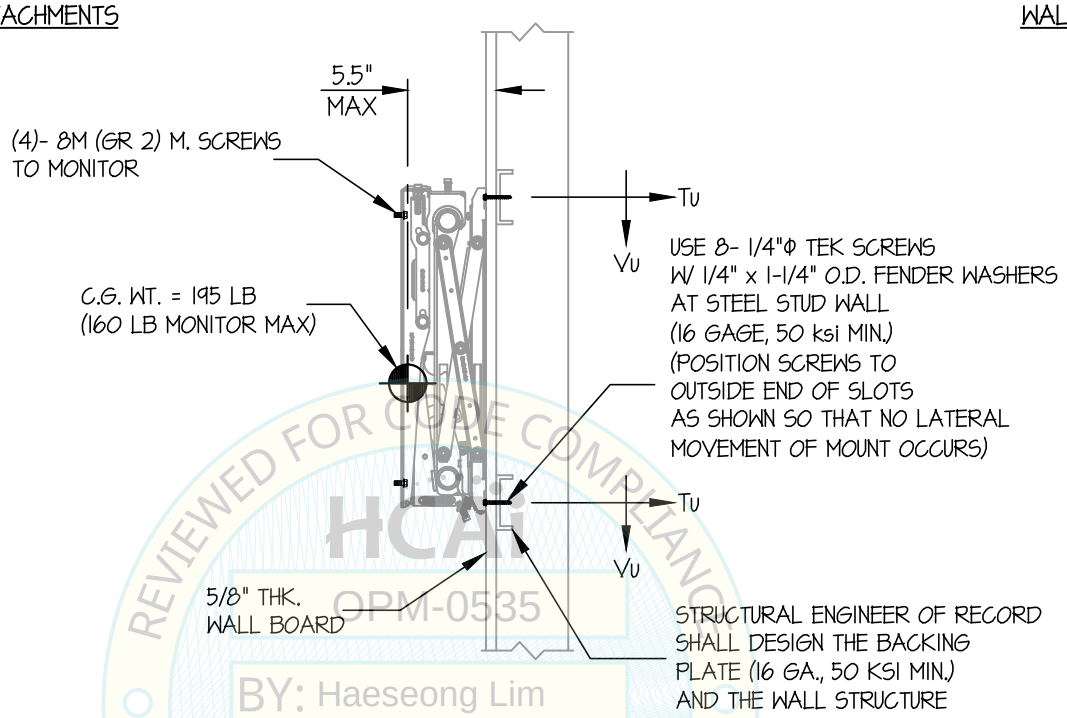
SHEET 3 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



STEEL STUD WALL SECTION
(PFW 6870 MOUNT)

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, $z/h \leq 1$)

   HORIZONTAL FORCE (E_h) = 2.64 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.96 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.44 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. 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.
4. SEE GENERAL NOTES: SHEET 1 AND 2

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2024
12/21/22
STRUCTURAL
STATE OF CALIFORNIA

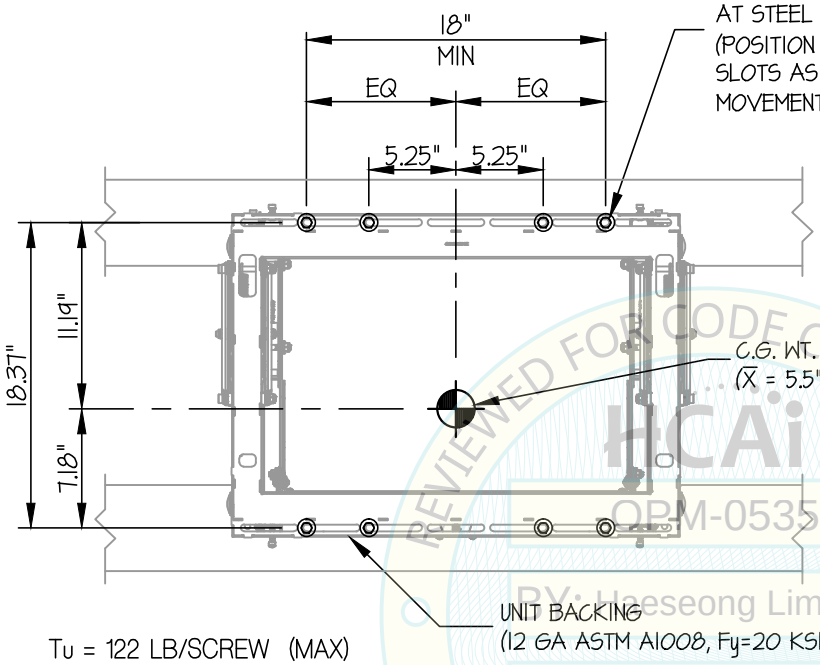
VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22
SHEET 4 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

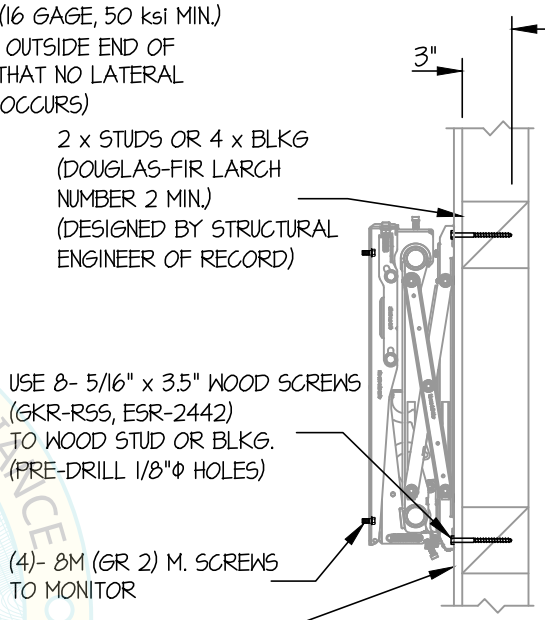
WALL MOUNTED



USE 8- 1/4"Φ TEK SCREWS W/ 1/4" x 1-1/4" O.D. FENDER WASHERS AT STEEL STUD WALL (16 GAGE, 50 ksi MIN.) (POSITION SCREWS TO OUTSIDE END OF SLOTS AS SHOWN SO THAT NO LATERAL MOVEMENT OF MOUNT OCCURS)

Tu = 122 LB/SCREW (MAX)
Vu = 162 LB/SCREW (MAX)
(VALUES DO NOT INCLUDE Ω₀)

ELEVATION AT STEEL STUD WALL
(PFW 6870 MOUNT)



WOOD STUD WALL SECTION

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VOGEL'S PRODUCTS BV

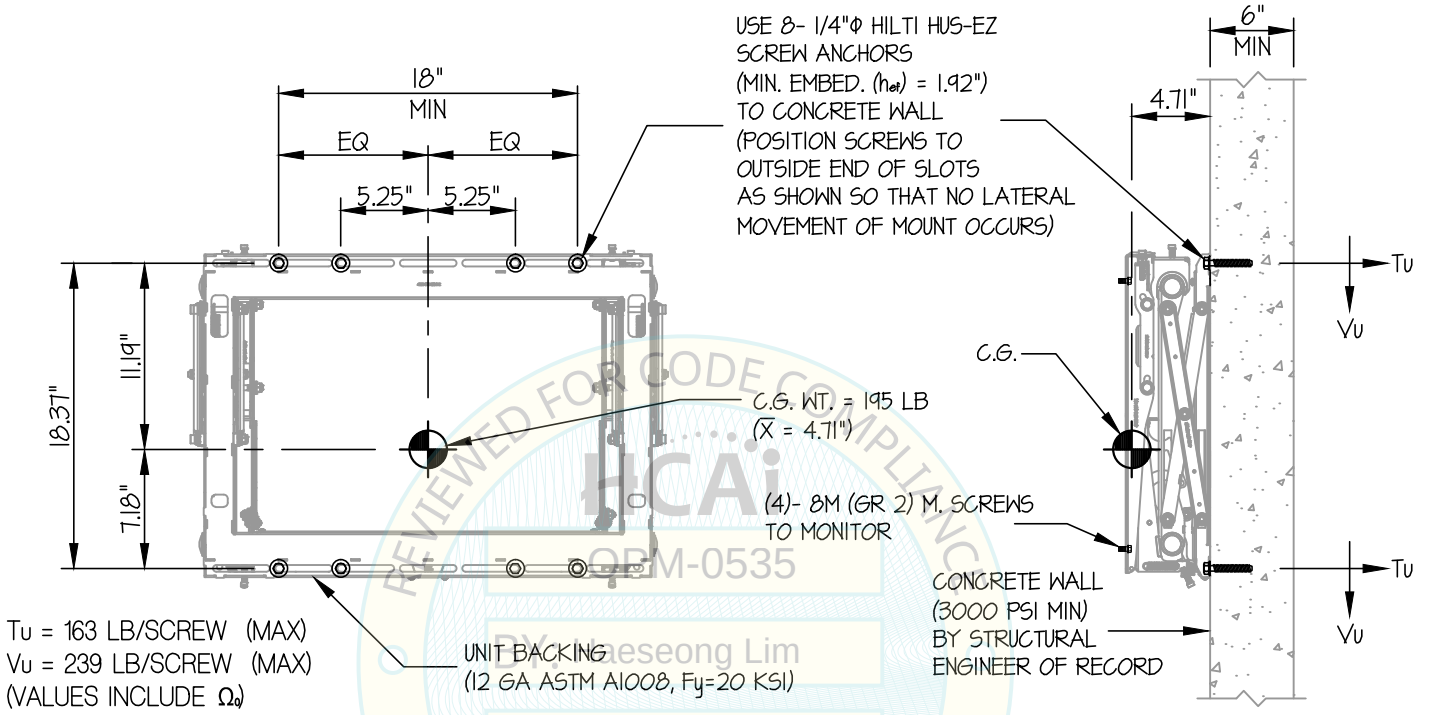
PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 5 OF 14 SHEETS

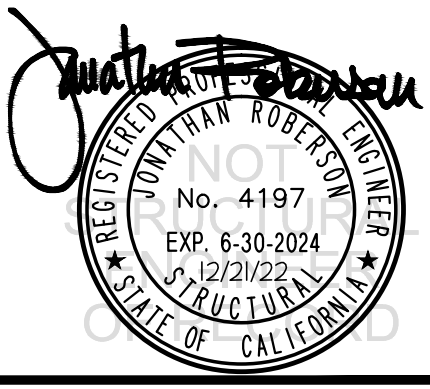
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT CONCRETE WALL
(PFW 6870 MOUNT)

CONCRETE WALL SECTION



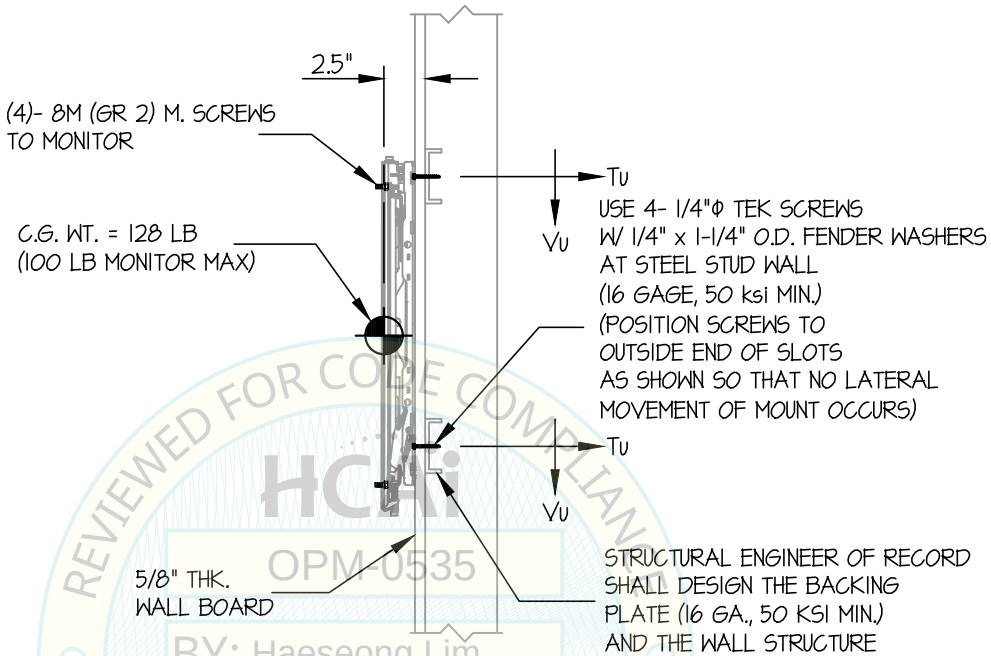
VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 6 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



STEEL STUD WALL SECTION
(PFW 6880 MOUNT)

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, z/h ≤ 1)

   HORIZONTAL FORCE (E_h) = 2.64 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.96 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.44 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. 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.
4. SEE GENERAL NOTES: SHEET 1 AND 2

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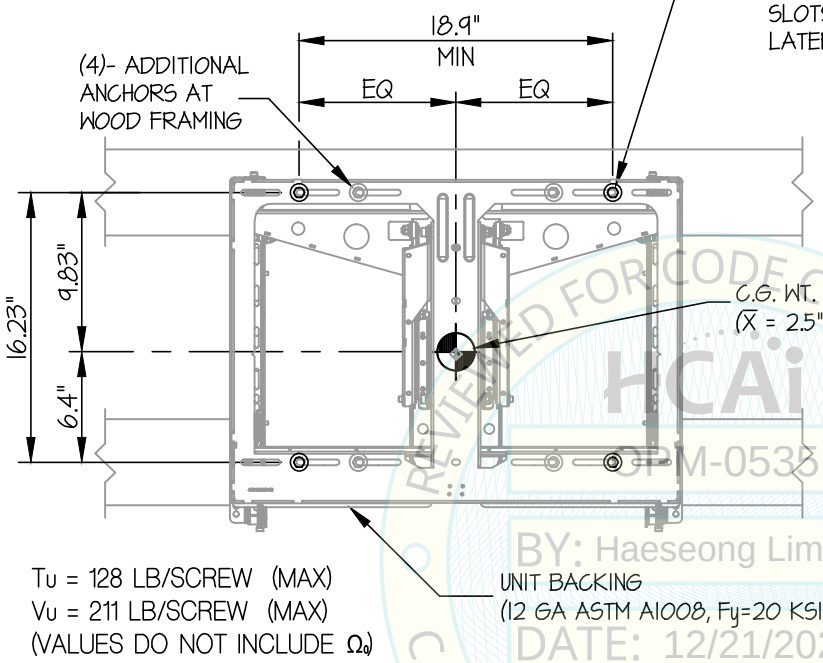
VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

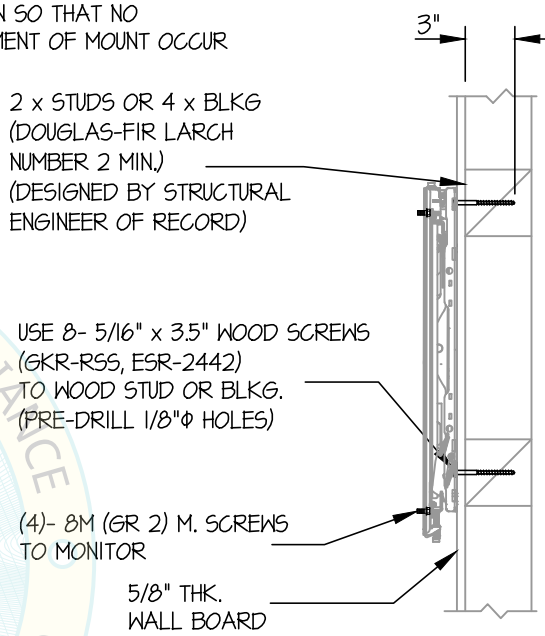
DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22
SHEET 7 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

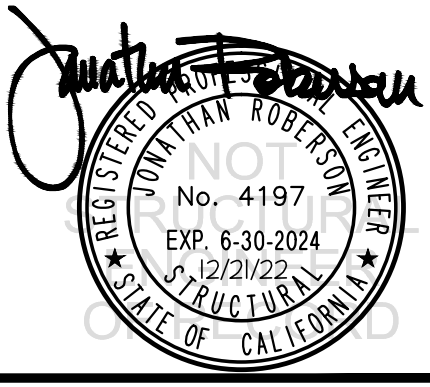
WALL MOUNTED



ELEVATION AT STEEL STUD WALL
(PFW 6880 MOUNT)



WOOD STUD WALL SECTION



VOGEL'S PRODUCTS BV

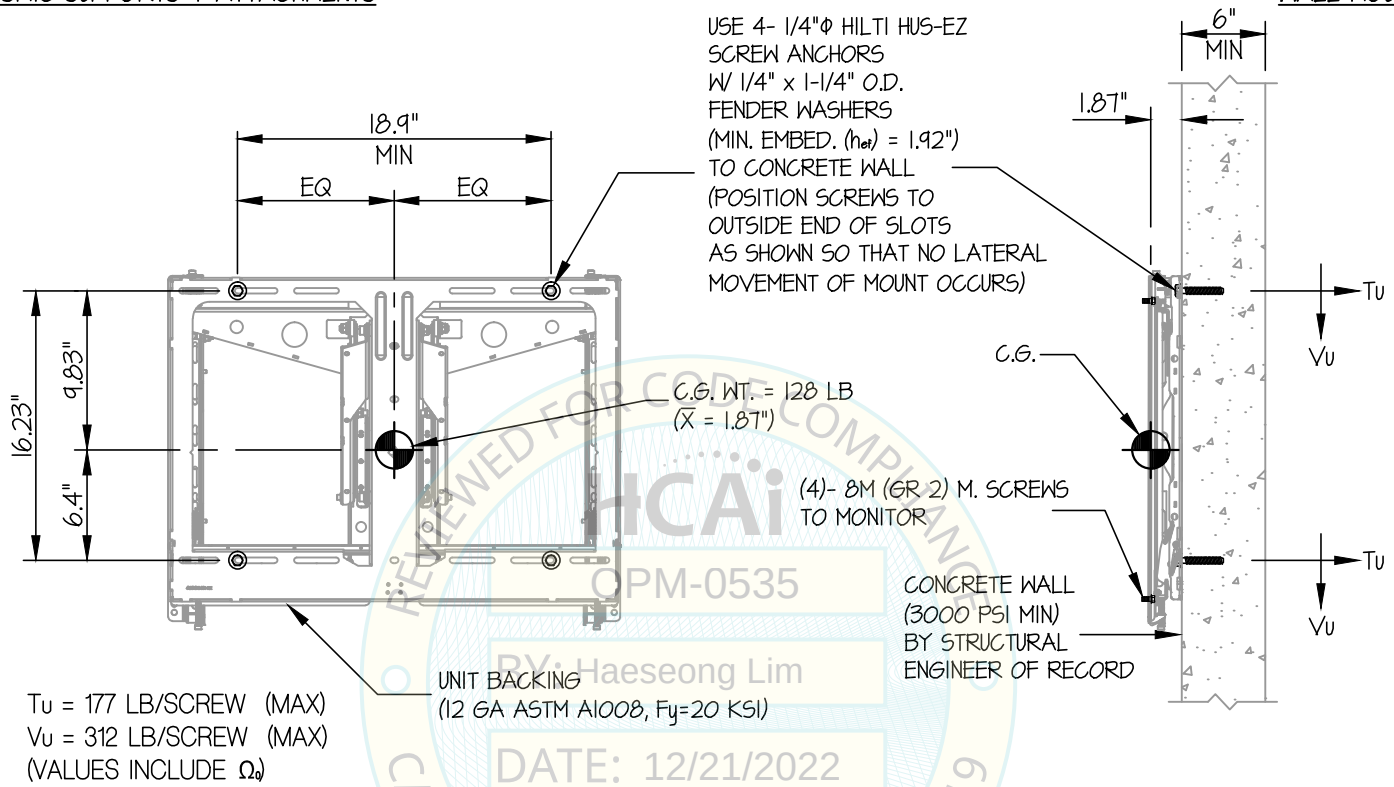
PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 8 OF 14 SHEETS

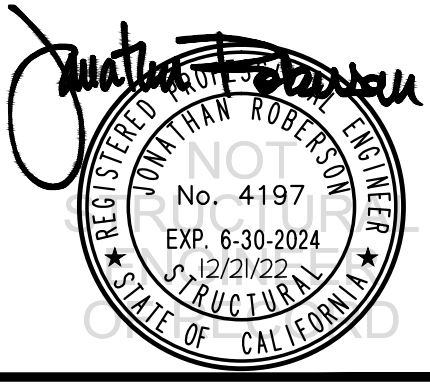
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT CONCRETE WALL
(PFW 6880 MOUNT)

CONCRETE WALL SECTION



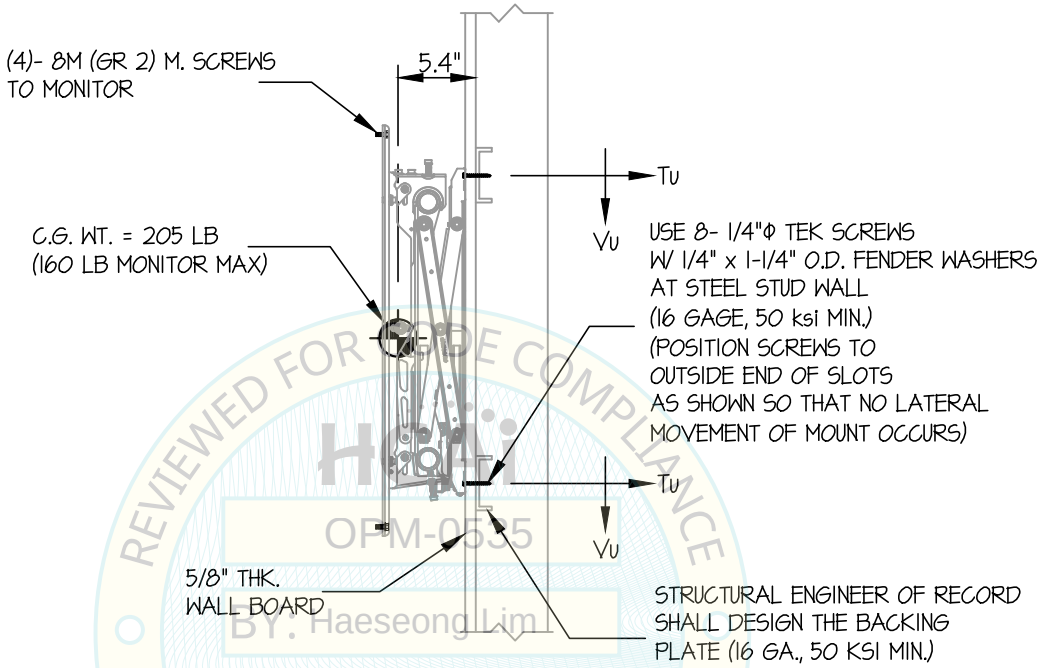
VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES.	J. ROBERSON
JOB NO.	11-1703
DATE	12/21/22

SHEET 9 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



STEEL STUD WALL SECTION
(PFW 6875 MOUNT)

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, $z/h \leq 1$)

   HORIZONTAL FORCE (Eh) = 2.64 Wp
   HORIZONTAL FORCE (Emh) = 3.96 Wp (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (Ev) = 0.44 Wp

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. 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.
4. SEE GENERAL NOTES: SHEET 1 AND 2

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2024
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STATE OF CALIFORNIA

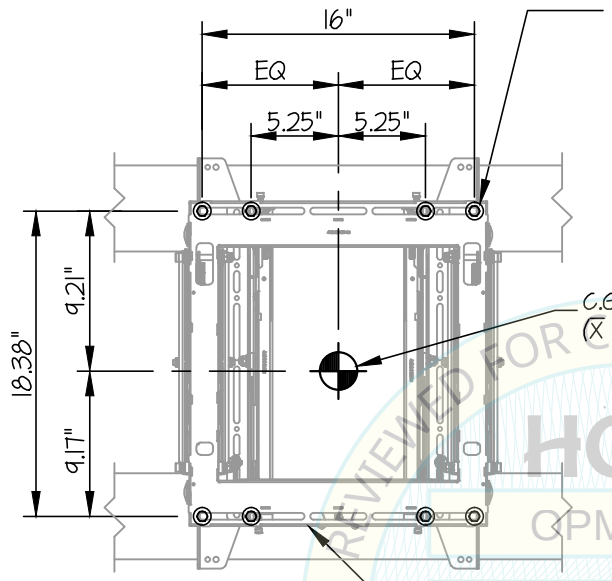
VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 10 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

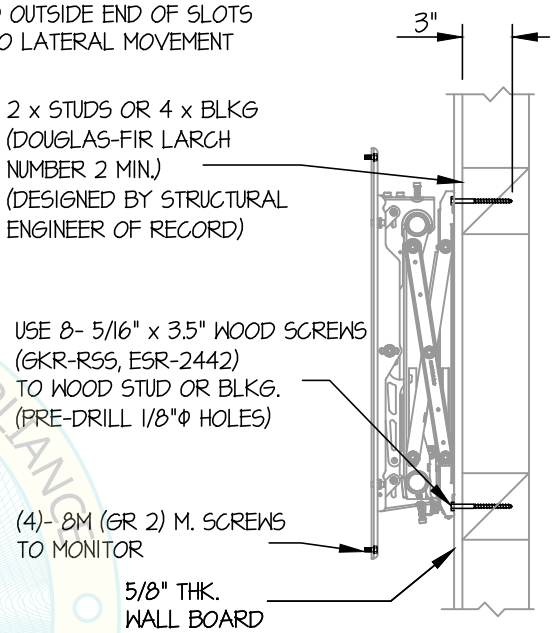


USE 8- 1/4"Φ TEK SCREWS W/ 1/4" x 1-1/4" O.D. FENDER WASHERS AT STEEL STUD WALL(16 GAGE, 50 ksi MIN.) (POSITION SCREWS TO OUTSIDE END OF SLOTS AS SHOWN SO THAT NO LATERAL MOVEMENT OF MOUNT OCCURS)

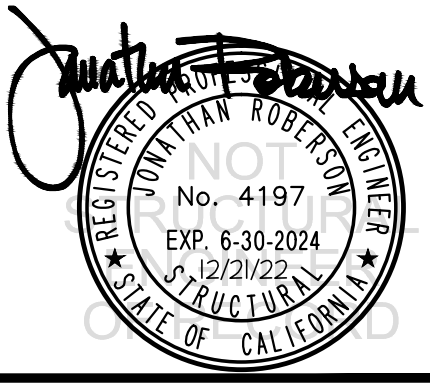
Tu = 110 LB/SCREW (MAX)
Vu = 142 LB/SCREW (MAX)
(VALUES DO NOT INCLUDE Ω0)

ELEVATION AT STEEL STUD WALL
(PFW 6875 MOUNT)

WALL MOUNTED



WOOD STUD WALL SECTION



VOGEL'S PRODUCTS BV

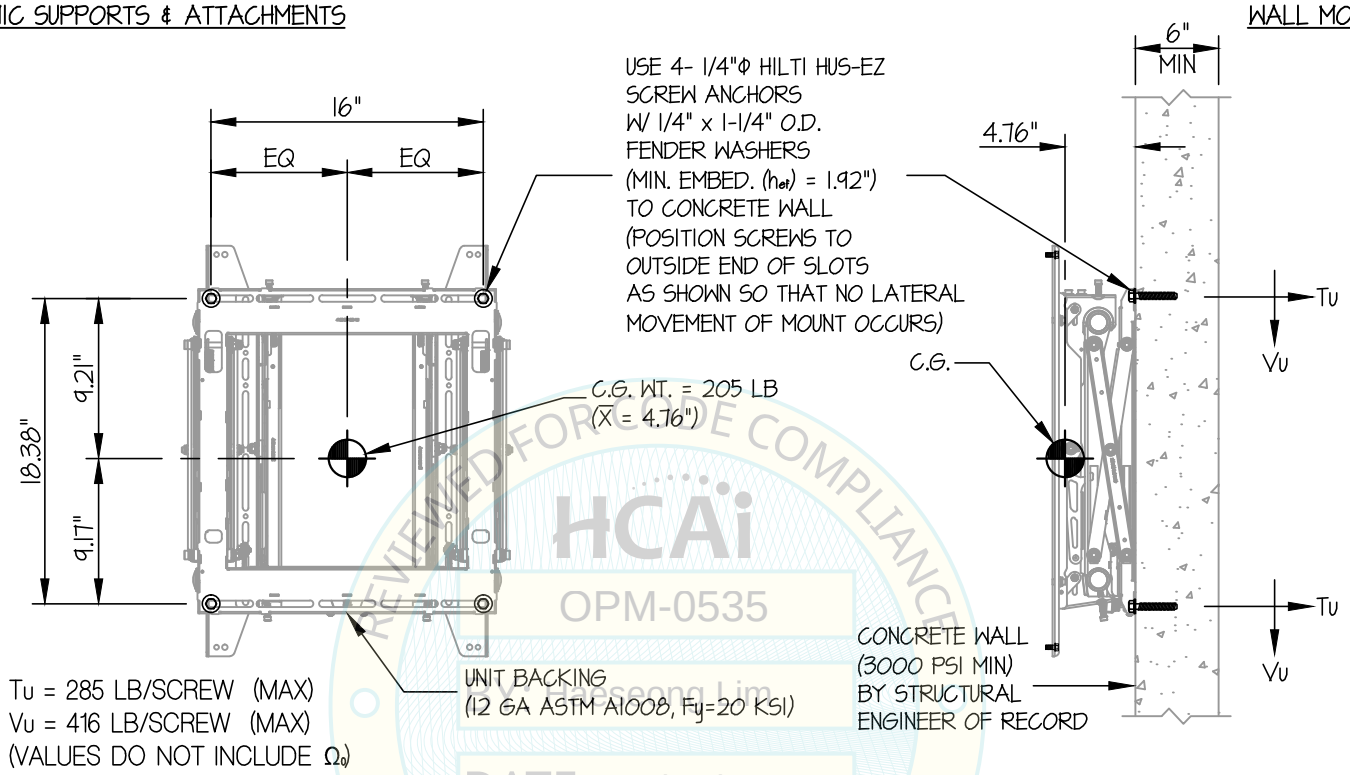
PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 11 OF 14 SHEETS

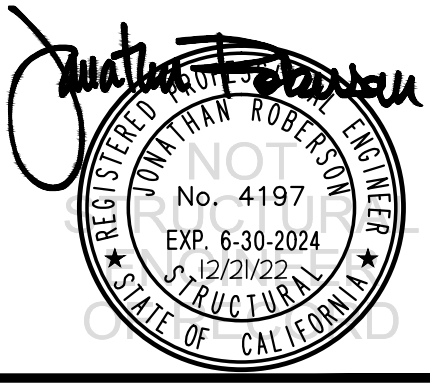
SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT STEEL STUD WALL
(PFW 6875 MOUNT)

CONCRETE WALL SECTION



VOGEL'S PRODUCTS BV

PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

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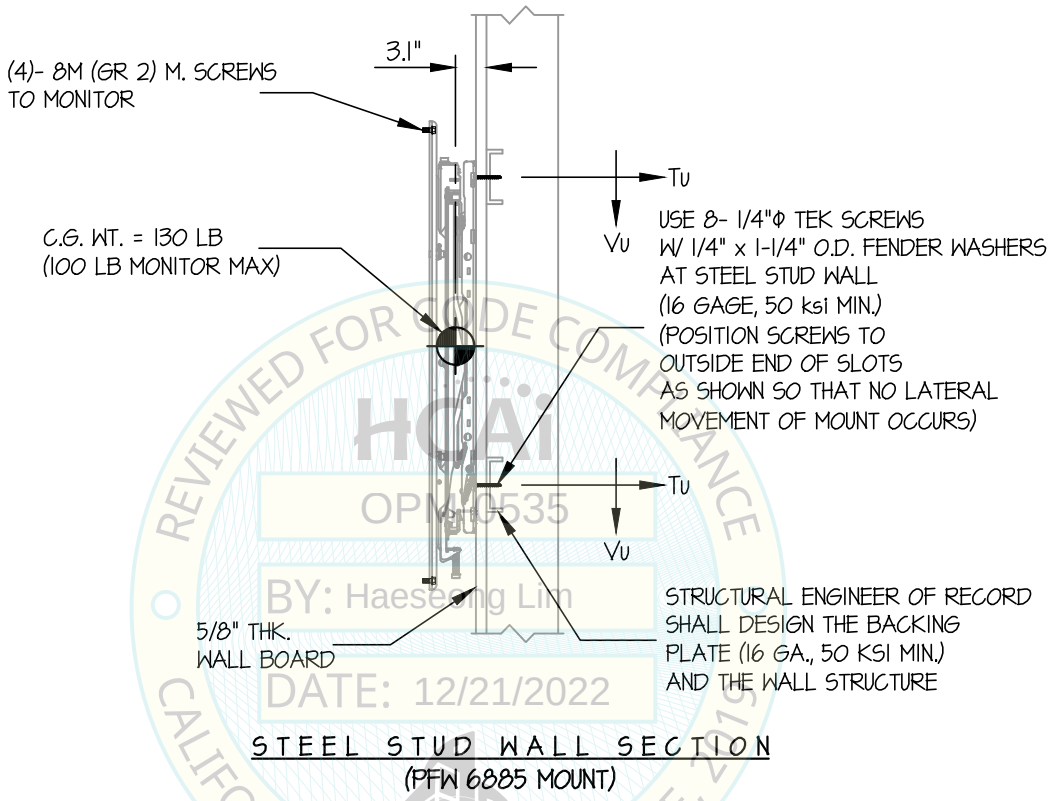
JOB NO. 11-1703
DATE 12/21/22

SHEET 12 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



STEEL STUD WALL SECTION
(PFW 6885 MOUNT)

NOTES:

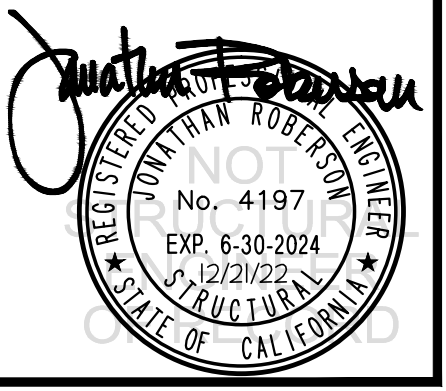
1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, z/h ≤ 1)

   HORIZONTAL FORCE (E_h) = 2.64 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.96 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.44 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.

3. 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.

4. SEE GENERAL NOTES: SHEET 1 AND 2



VOGEL'S PRODUCTS BV

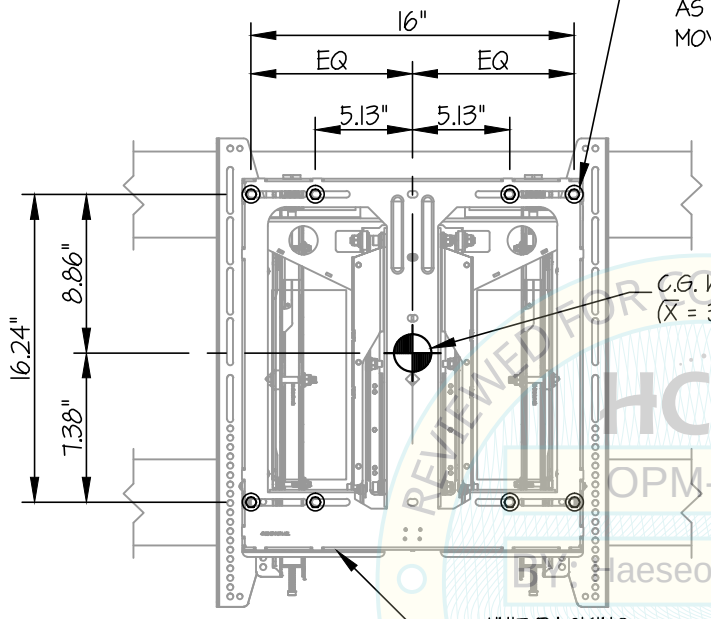
PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 13 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

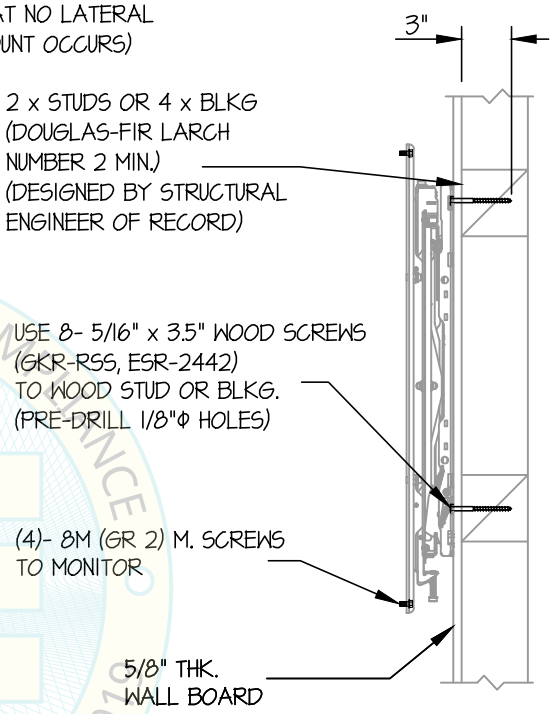
WALL MOUNTED



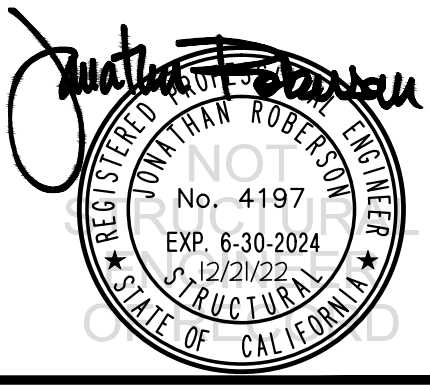
Tu = 64 LB/SCREW (MAX)
Vu = 97 LB/SCREW (MAX)
(VALUES DO NOT INCLUDE Ω0)

ELEVATION AT STEEL STUD WALL
(PFW 6885 MOUNT)

USE 8- 1/4"Φ TEK SCREWS
W/ 1/4" x 1-1/4" O.D. FENDER WASHERS
AT STEEL STUD WALL (16 GAGE, 50 ksi MIN.)
(POSITION SCREWS TO OUTSIDE END OF SLOTS
AS SHOWN SO THAT NO LATERAL
MOVEMENT OF MOUNT OCCURS)



WOOD STUD WALL SECTION



VOGEL'S PRODUCTS BV

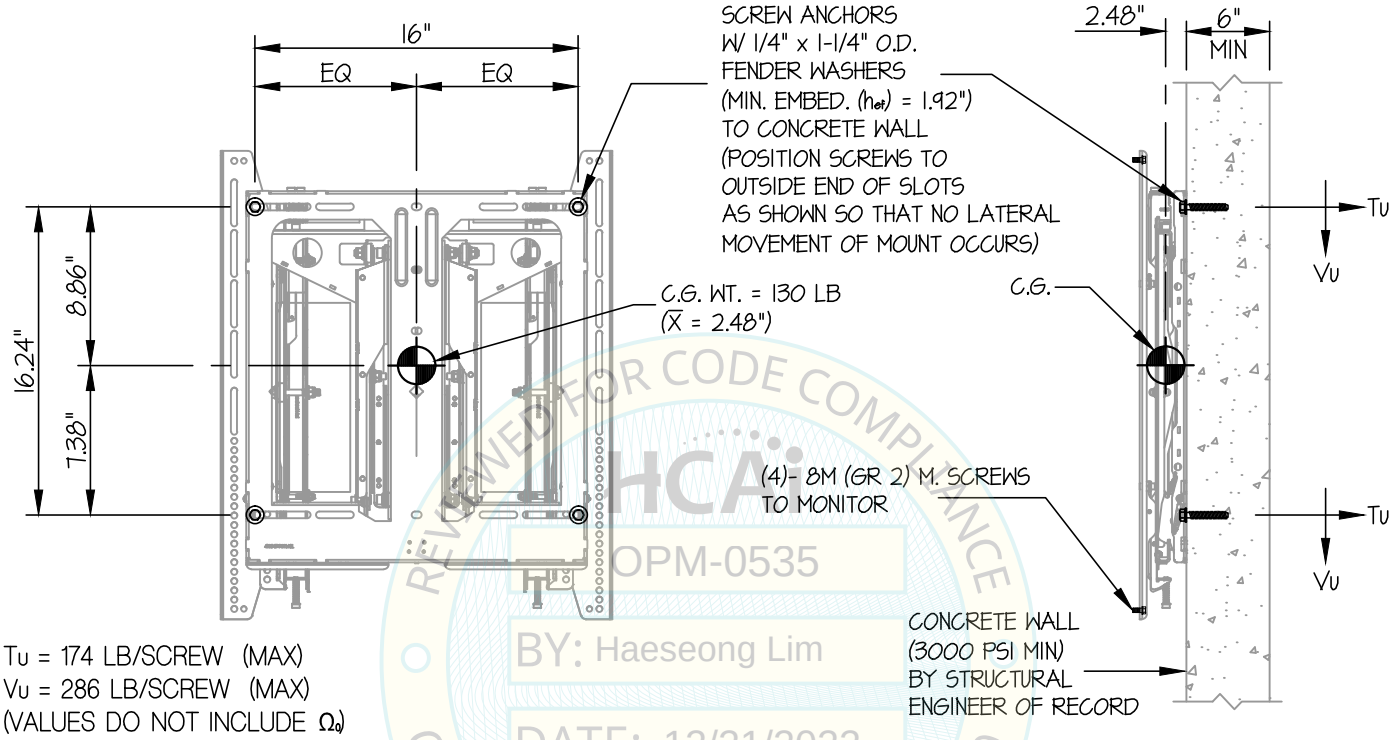
PFW 6870, PFW 6880, PFW 6875 AND PFW 6885 WALL MOUNTS

DES. J. ROBERSON
JOB NO. 11-1703
DATE 12/21/22

SHEET 14 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



ELEVATION AT STEEL STUD WALL
(PFW 6885 MOUNT)

CONCRETE WALL SECTION