DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0511

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Getinge USA

Manufacturer's Technical Representative: Paul Fraser

Mailing Address: 1777 E. Henrietta Road, Rochester, NY 14623

Telephone: (201) 574-3596 Email: paul.fraser@getinge.com

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HCAi
OPM-0511
BY: William Staehlin
DATE: 09/29/2023
CALIFORNIA BUILDING CODE, 2019

Product Information

Product Name: PowerLED/Volista

Product Type: Cantilever

Product Model Number: PowerLED Light and Volista Surgical Light

General Description: Overhead surgical lights used in surgery rooms

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: () - 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):

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HCAI Approval

Date: 9/29/2023

Name: William Staehlin 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-0511

THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE

MANUFACTURER: **GETINGE USA, INC.**

EQUIPMENT NAME: **PowerLED/Volista CEILING MOUNT**

Date: 9/1/23

GENERAL NOTES

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CBC. THE DEMANDS
2. (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2022 CBC
3. 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.
4. THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.20.
5. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,

   WHERE $S_{DS} = 2.20$, $a_p = 2.5$, $I_p = 1.5$, $R_p = 2.5$, $z/h \leq 1$ AT CONCRETE SLAB ON METAL DECK. SEE FOLLOWING SHEETS FOR Ω_o
6. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
7. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
8. CONCRETE SLAB ON METAL DECK DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION IN THE BUILDING. (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.

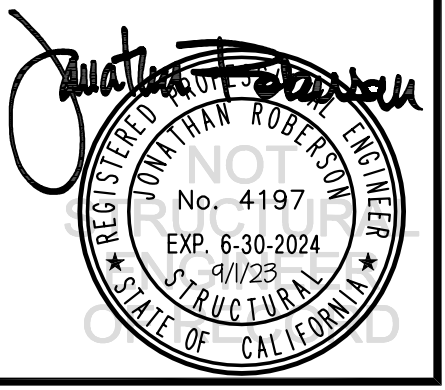
   B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.

   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 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 6hef FROM THIS UNIT'S ANCHORS.



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CALIFORNIA BUILDING CODE 2022
NOT STRUCTURAL ENGINEERED

GETINGE USA, INC.

PowerLED/Volista CEILING MOUNT

DES. J. ROBERSON
JOB NO. 36-1403
DATE 9/1/23

SHEET 2 OF 11 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. Over Flutes	Torque Test	Direct Tension Test
1/2"	Sand Light Weight	3000	Hilti Kwik Bolt TZ2 (CARBON STEEL)	ESR-4266	2"	6.75"	24"	3.25"	50 FT-LB	N/A

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 24" 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) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST OR TORQUE 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.
- 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.

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JONATHAN ROBERSON
No. 4197
EXP. 6-30-2024
9/1/23
STRUCTURAL
STATE OF CALIFORNIA

GETINGE USA, INC.

PowerLED/Volista CEILING MOUNT

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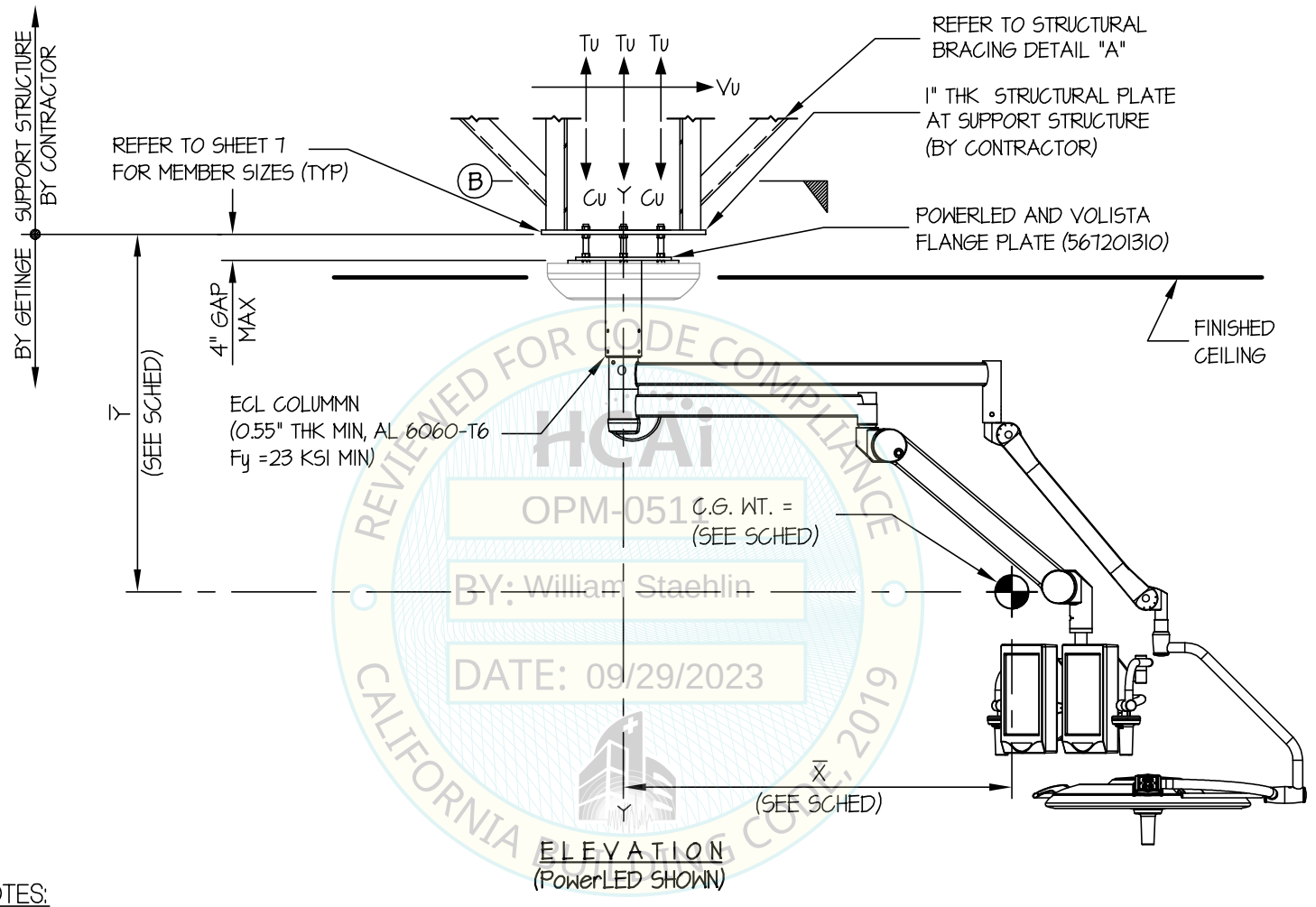
JOB NO.	36-1403
DATE	9/1/23

SHEET 3 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — CEILING MOUNTED



ELEVATION
(PowerLED SHOWN)

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HCAi
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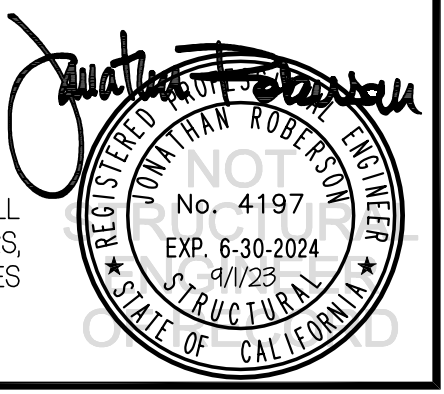
NOTES:

1. FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16.
   STRENGTH DESIGN IS USED. (EXAMPLE: S_{DS} = 2.20, a_p = 2.5, I_p = 1.5, R_p = 2.5, Ω_0 = 2.0, $z/h \leq 1$)

   HORIZONTAL FORCE (E_h) = 3.96 W_p
   HORIZONTAL FORCE (E_{mh}) = 7.92 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.44 W_p
2. THIS CALCULATION ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
3. THIS CALCULATION 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: SHEETS 1 AND 2.



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PowerLED/Volista CEILING MOUNT

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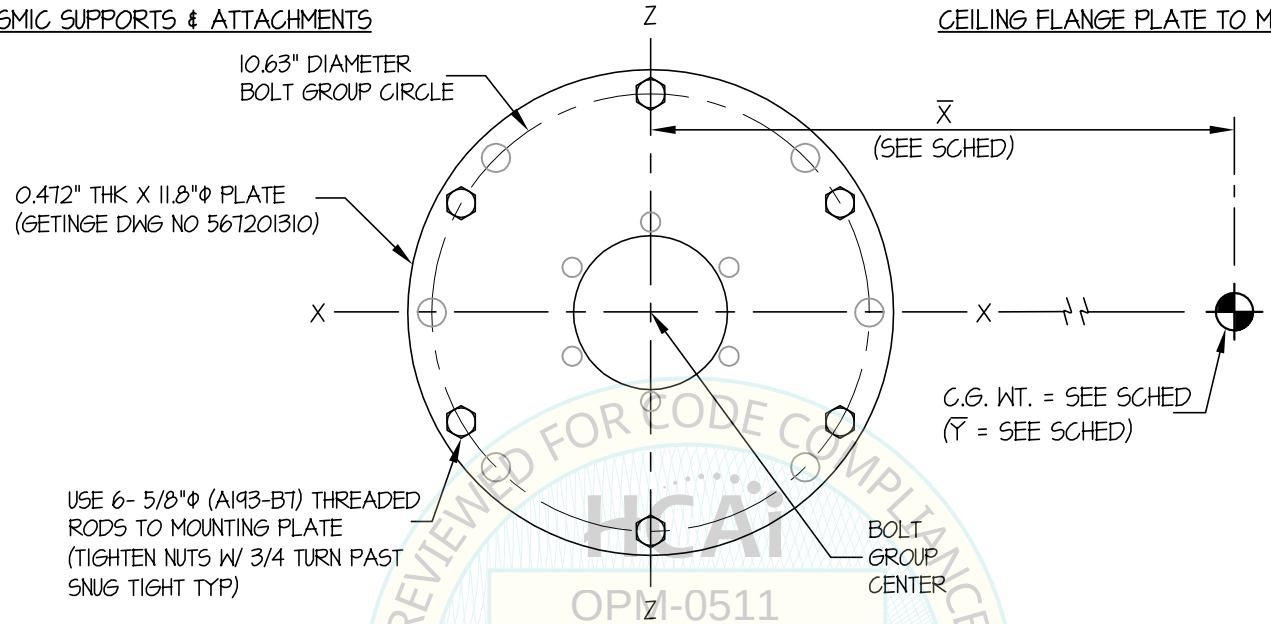
SHEET 4 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CEILING FLANGE PLATE TO MOUNTING PLATE



PLAN AT FLANGE PLATE

MODELS	TOTAL LOAD (LB.)	$\bar{X}$ (in.)	$\bar{Y}$ (in.)	Tu (lb.)	Cu (lb.)	Vu (lb.)	MOMENT (Mxx) (IN-LB)	MOMENT (Myy) (IN-LB)
POWERLED LIGHT	232	66.6	68.25	5582	5501	362	88,056	6660
VOLISTA SURGICAL LIGHT	183	52.1	50.81	3341	3277	284	52,499	5210

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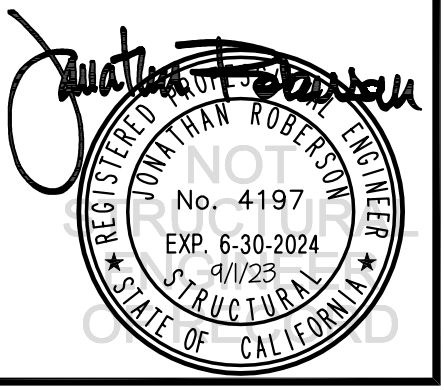
CALIFORNIA BUILDING CODE, 2022



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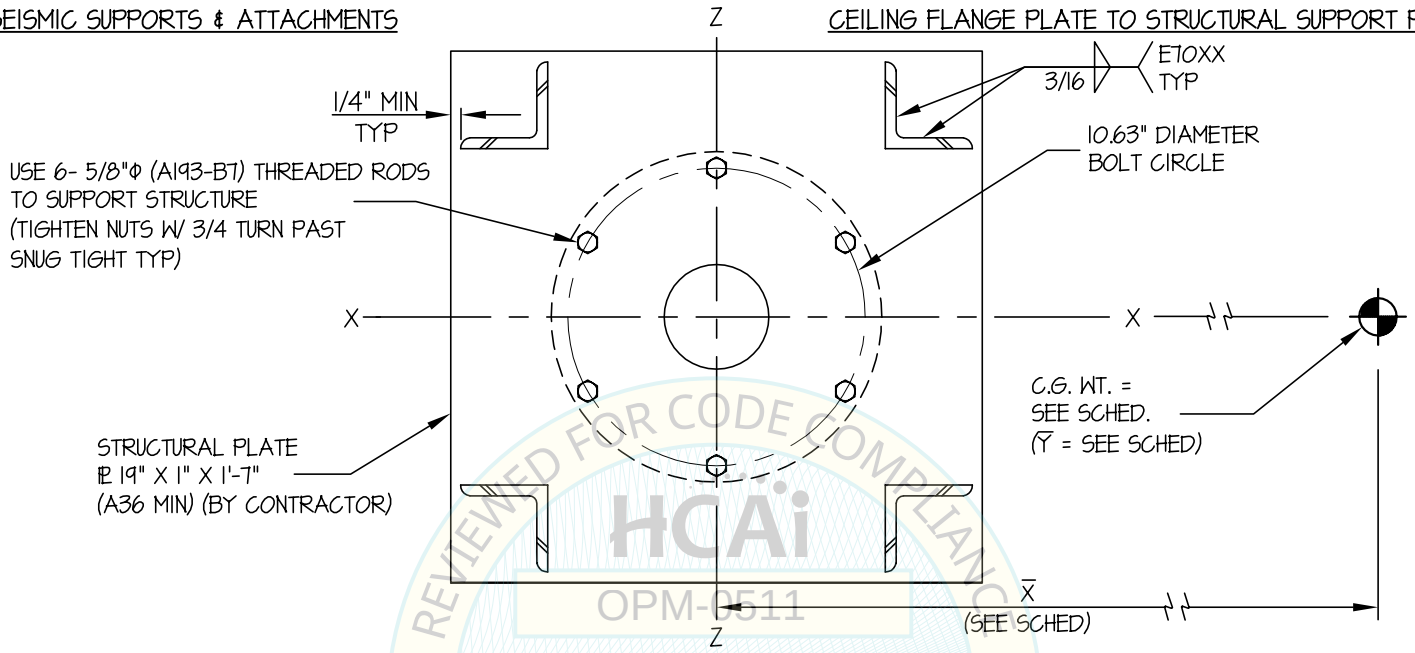
SHEET 5 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CEILING FLANGE PLATE TO STRUCTURAL SUPPORT PLATE



PLAN AT STRUCTURAL PLATE

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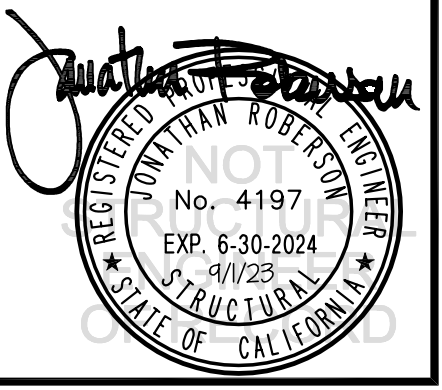

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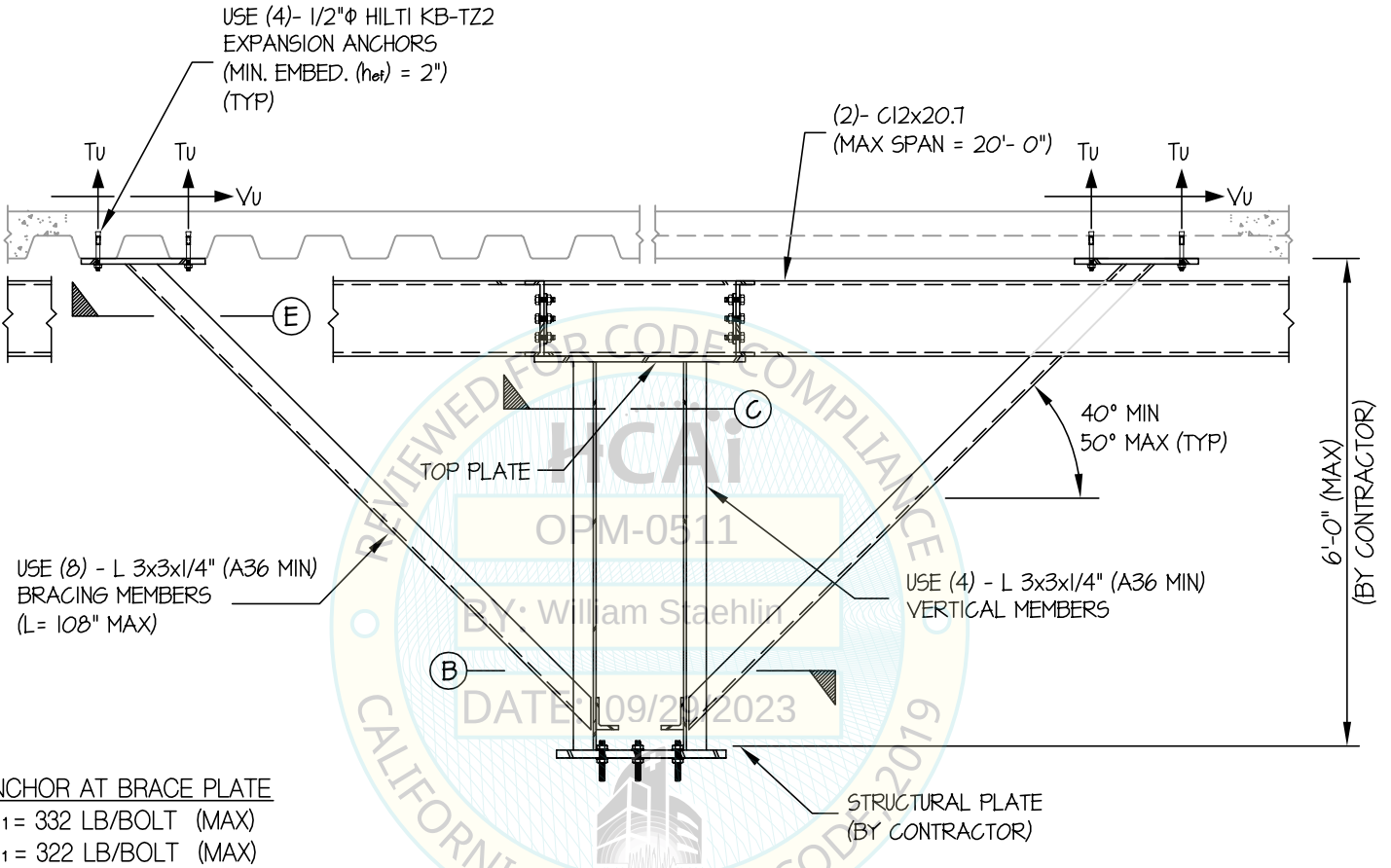
SHEET 6 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



ANCHOR AT BRACE PLATE
T_{u1} = 332 LB/BOLT (MAX)
V_{u1} = 322 LB/BOLT (MAX)
(ALL VALUES INCLUDE Ω_o)

STRUCTURAL BRACING (A)

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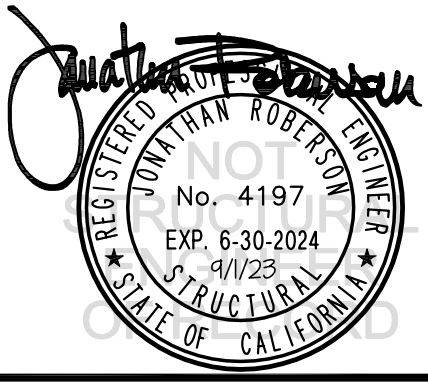

NOT STRUCTURAL ENGINEER OF RECORD

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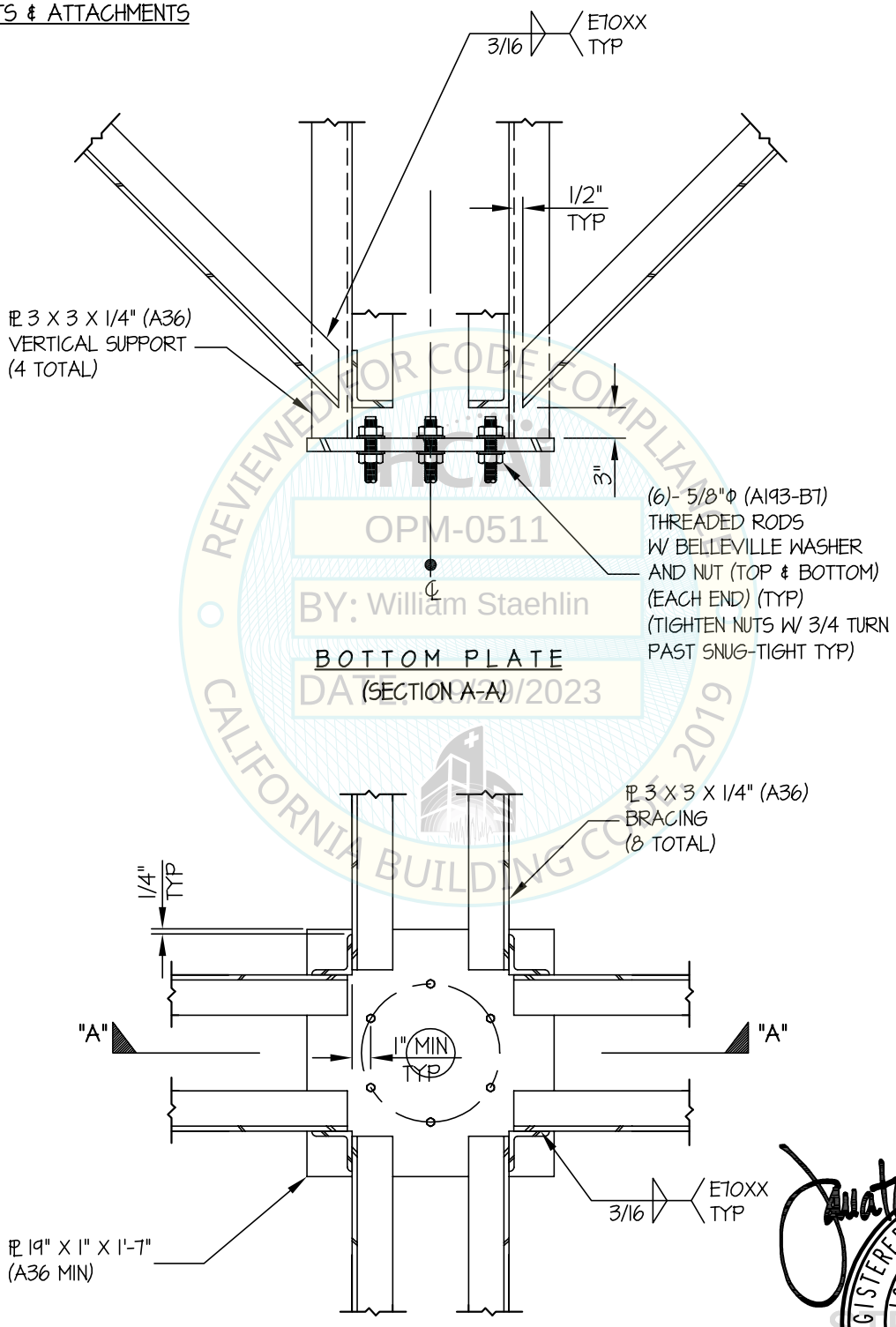
SHEET 7 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



STRUCTURAL PLATE DETAIL (B)

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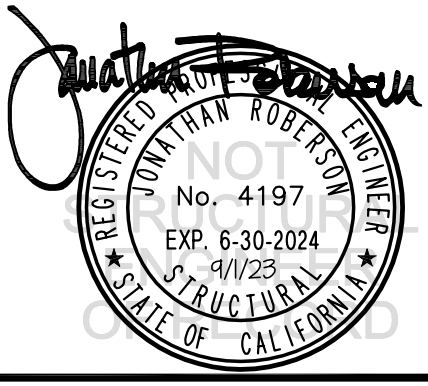

NOT STRUCTURE ENGINEERED

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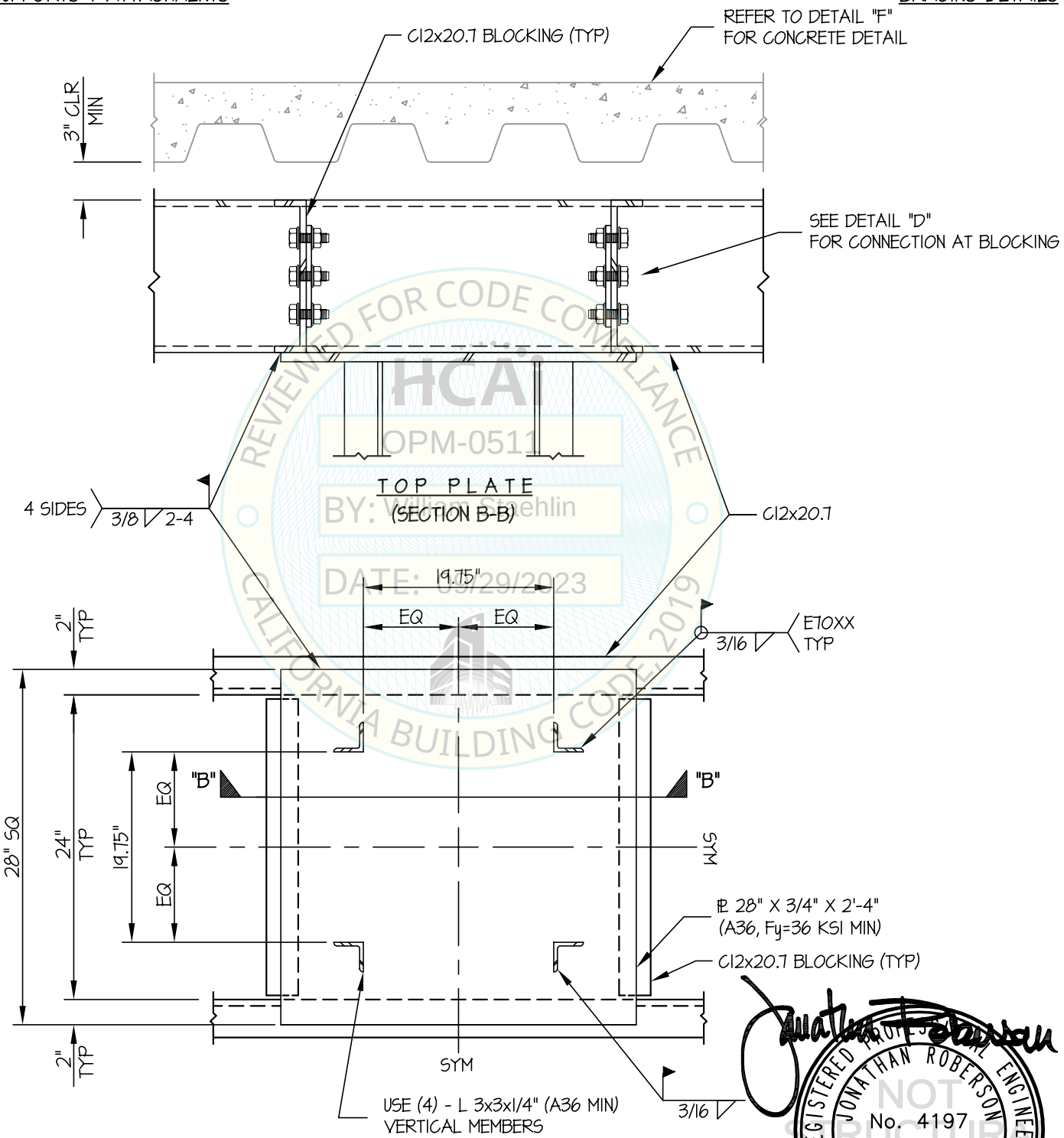
SHEET 8 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



REFLECTED CEILING PLAN AT TOP PLATE

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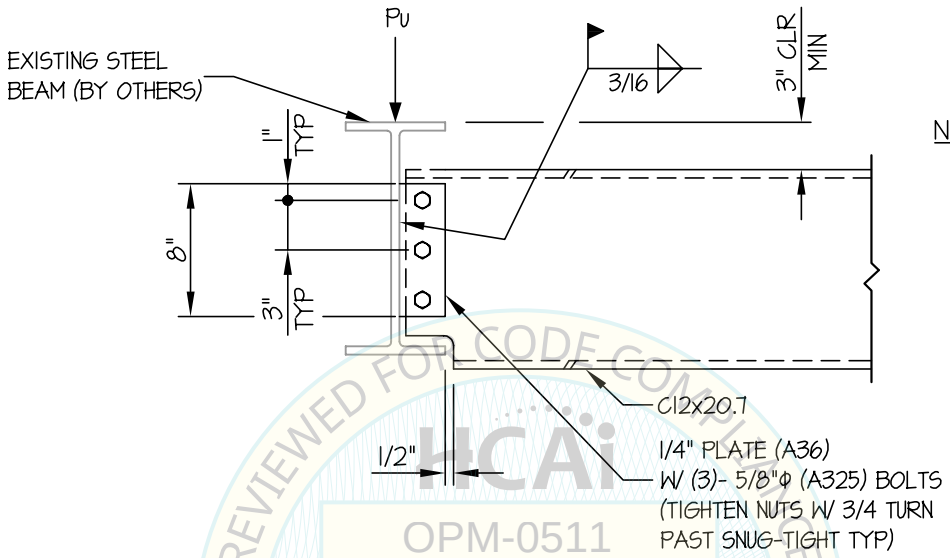
SHEET 9 OF 11 SHEETS

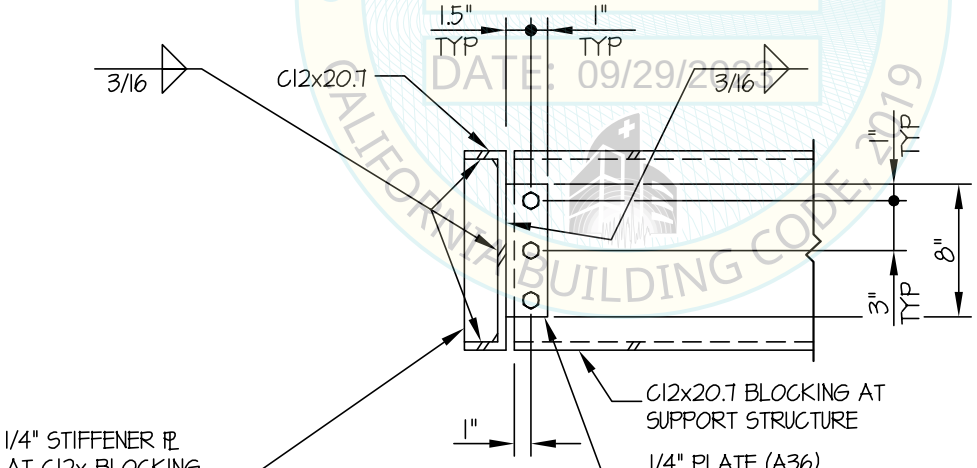
SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



NOTE CHECK (E) BEAM FOR ADDITIONAL LOAD OF Pu = 6.0K LOCATED HALFWAY BETWEEN (N) C12x BEAMS

CONNECTION AT (E) STEEL BEAM



CONNECTION AT BLOCKING

MC18x CONNECTION DETAILS (D)

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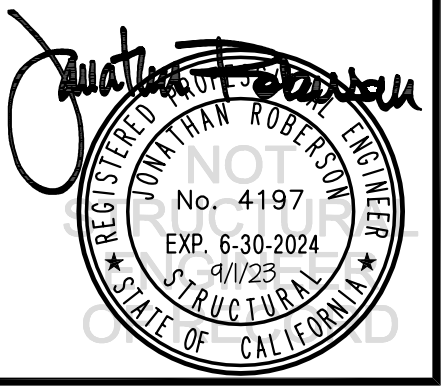

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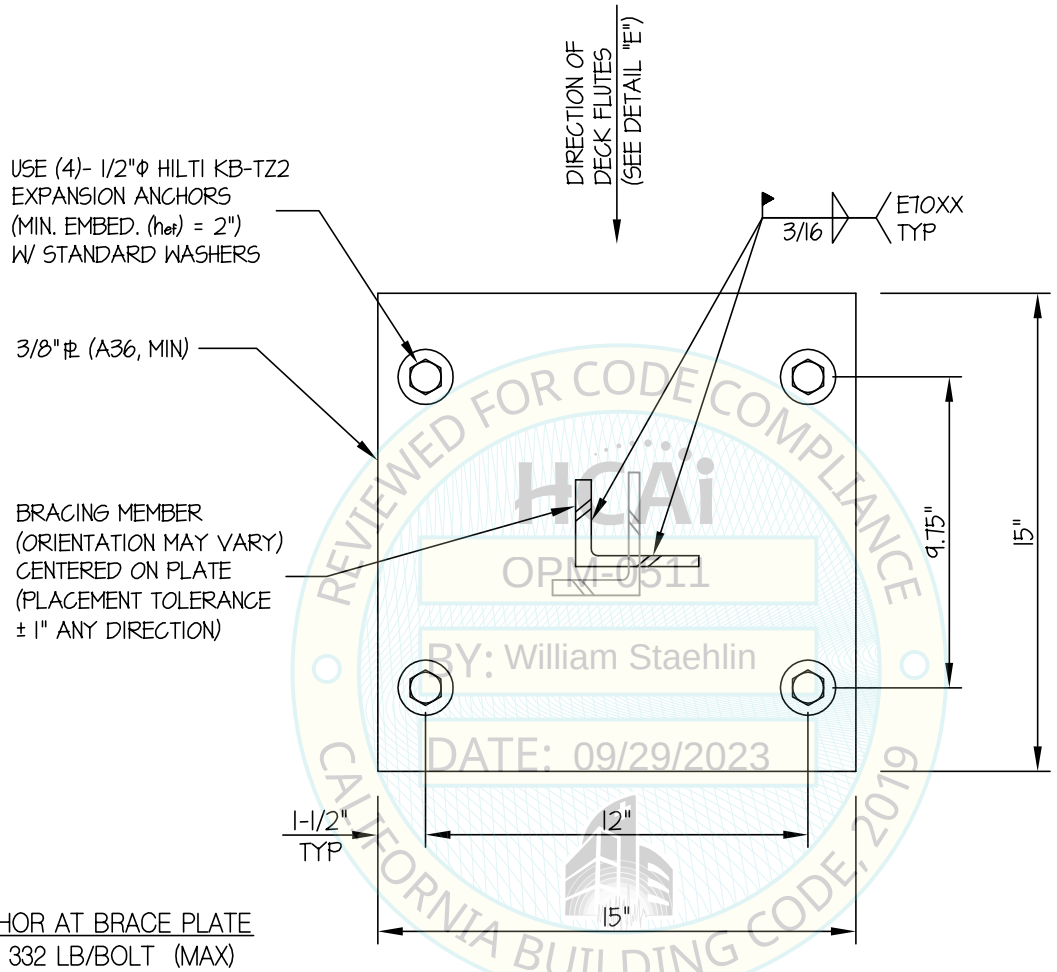
SHEET 10 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



ANCHOR AT BRACE PLATE
T_{u1} = 332 LB/BOLT (MAX)
V_{u1} = 322 LB/BOLT (MAX)

BRACE PLATE DETAIL (E)

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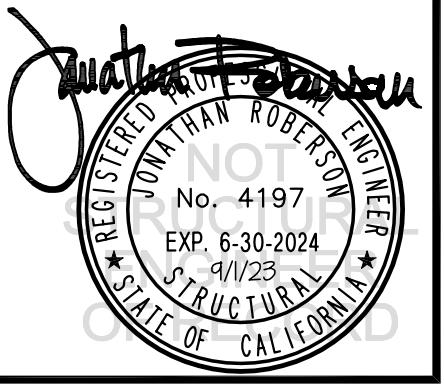

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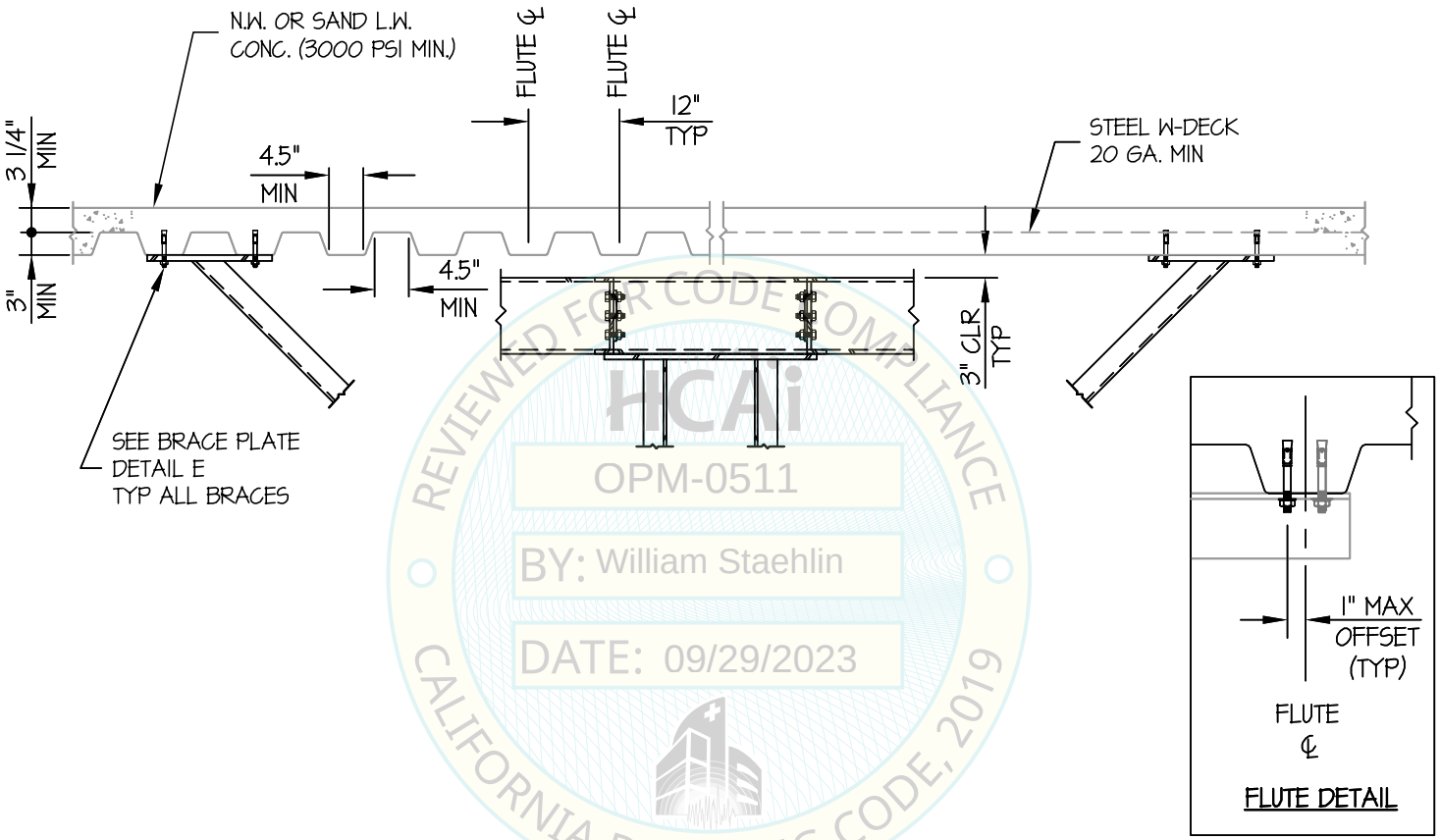
SHEET 11 OF 11 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACING DETAILS



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MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (F)