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

OFFICE USE ONLY

APPLICATION #: OPM-0208

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: BD

Manufacturer's Technical Representative: Jared Zamaloff

Mailing Address: 10020 Pacific Mesa Blvd., San Diego, CA 92121

Telephone: (818) 876-4287 Email: jared.zamaloff@carefusion.com

Product Information

Product Name: PYXIS DUOSTATION

Product Type: Other Mechanical & Electrical Equipment

Product Model Number: Pyxis DuoStation

General Description: Pyxis DuoStation system allows clinicians to safely and accurately dispense both medications and medical supplies from single dispensing machine.

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 LLC

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

OSHPD 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 OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

OSHPD Approval

Date: 5/6/2020

Name: Jeffrey Kikumoto 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

Office of Statewide Health Planning and Development

PREAPPROVAL OF MANUFACTURER'S CERTIFICATION

OPM-0208

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **BD**

EQUIPMENT NAME: **PYXIS DUOSTATION**

Date: 4/29/20

GENERAL NOTES

1. THIS OSHPD 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 1.00 & 1.85. SEE DETAIL FOR APPLICABILITY
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,

   WHERE S_{DS} = 1.00, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB, z/h $\leq$ 1 AT CONCRETE SLAB ON METAL DECK
   SEE FOLLOWING SHEETS FOR Ω_0

   WHERE S_{DS} = 1.85, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB , z/h $\leq$ 1 AT CONCRETE SLAB ON METAL DECK.
   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. CONCRETE SLAB ON METAL DECK DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION IN THE BUILDING. (i.e. z/h $\leq$ 1)
8. CONCRETE SLAB DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION AT OR BELOW GRADE. (i.e. z/h = 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 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 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.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2020
4/29/20
STRUCTURAL
STATE OF CALIFORNIA

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
1/2"	Sand Light Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	3.25"	6.75"	24"	See Detail "A"	40 FT-LB	1585 lb
1/2"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	3-1/4"	8"	24"	6"	40 FT-LB	3026 lb

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.

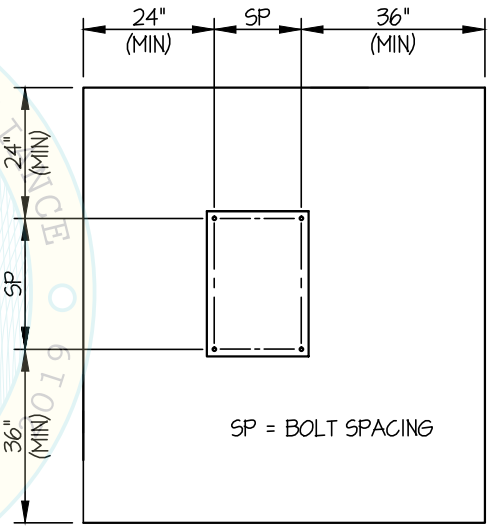
C. TESTING OF EXPANSION ANCHORS PER 2019 CBC, 1913A.7: TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

(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.



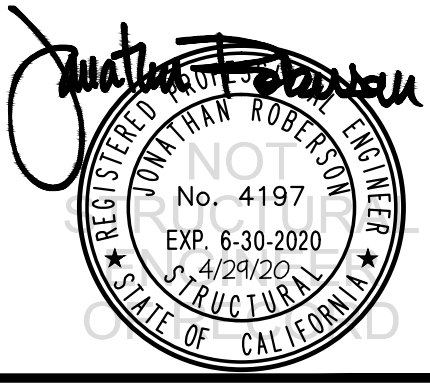
TYPICAL CONCRETE EDGE DETAIL

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.



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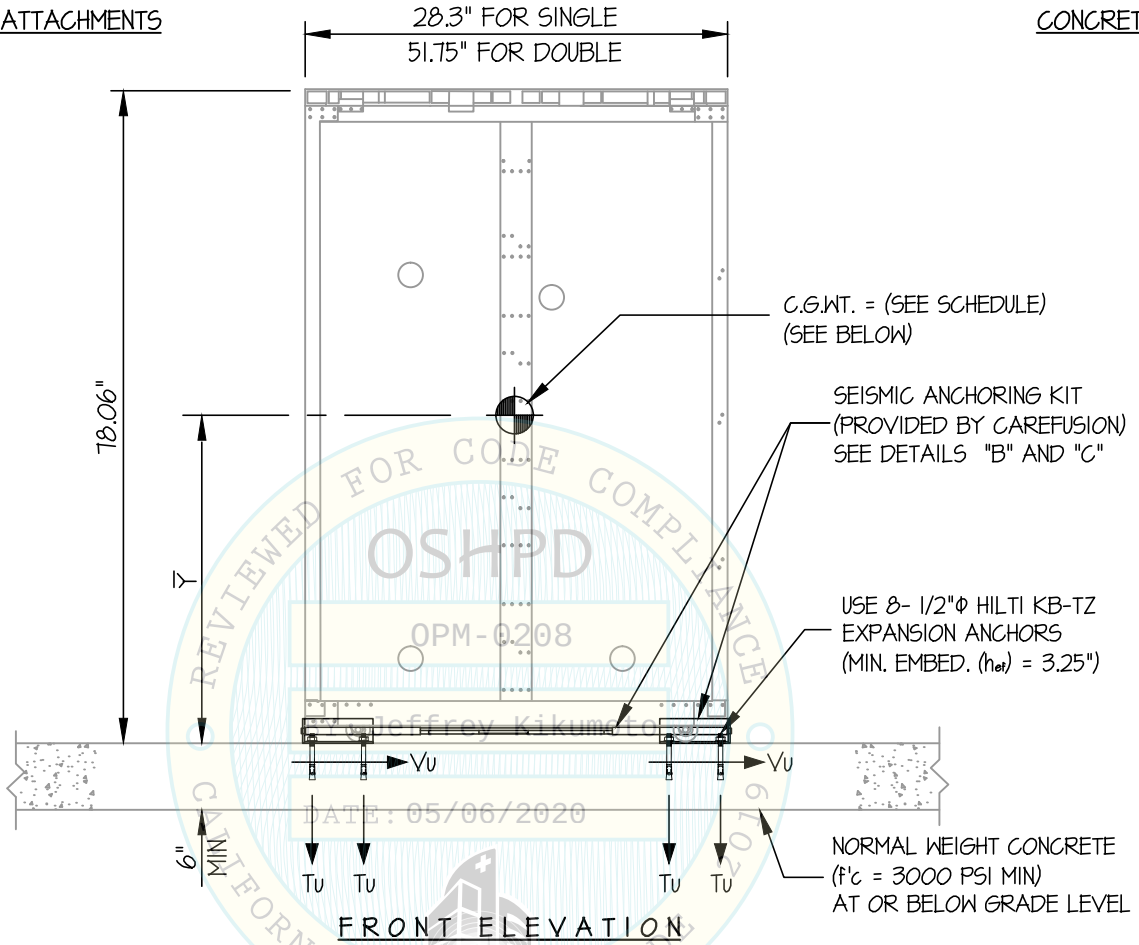
PYXIS DUOSTATION

DES. J. ROBERSON
JOB NO. 11-2009
DATE 4/29/20
SHEET 3 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



FRONT ELEVATION

MAX SDS	MODEL	WEIGHT (lb)	Ȳ (in)	* Tu	* Vu
1.00	DOUBLE 6 DWR	2810	45.59	2051	619
1.00	DOUBLE 3 DWR	2873	45.07	2066	633
1.85	SINGLE 6 DWR	1338	45.1	2059	504
1.85	SINGLE 3 DWR	1425	42.94	2077	537

NOTE: SEE SHEET 4-5 OF 12 FOR WEIGHTS, DIMENSION & BOLT FORCES

* VALUES INCLUDE Ω_0

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.** STRENGTH DESIGN IS USED. (a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_0 = 1.5, z/h = 0)
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. CALCULATION COVERS PYXIX STATION DOUBLE UNIT, SYSTEM 30 DOUBLE UNIT & SYSTEMS EC DOUBLE UNIT. ALL UNITS HAVE SAME WEIGHT AND DIMENSIONS.

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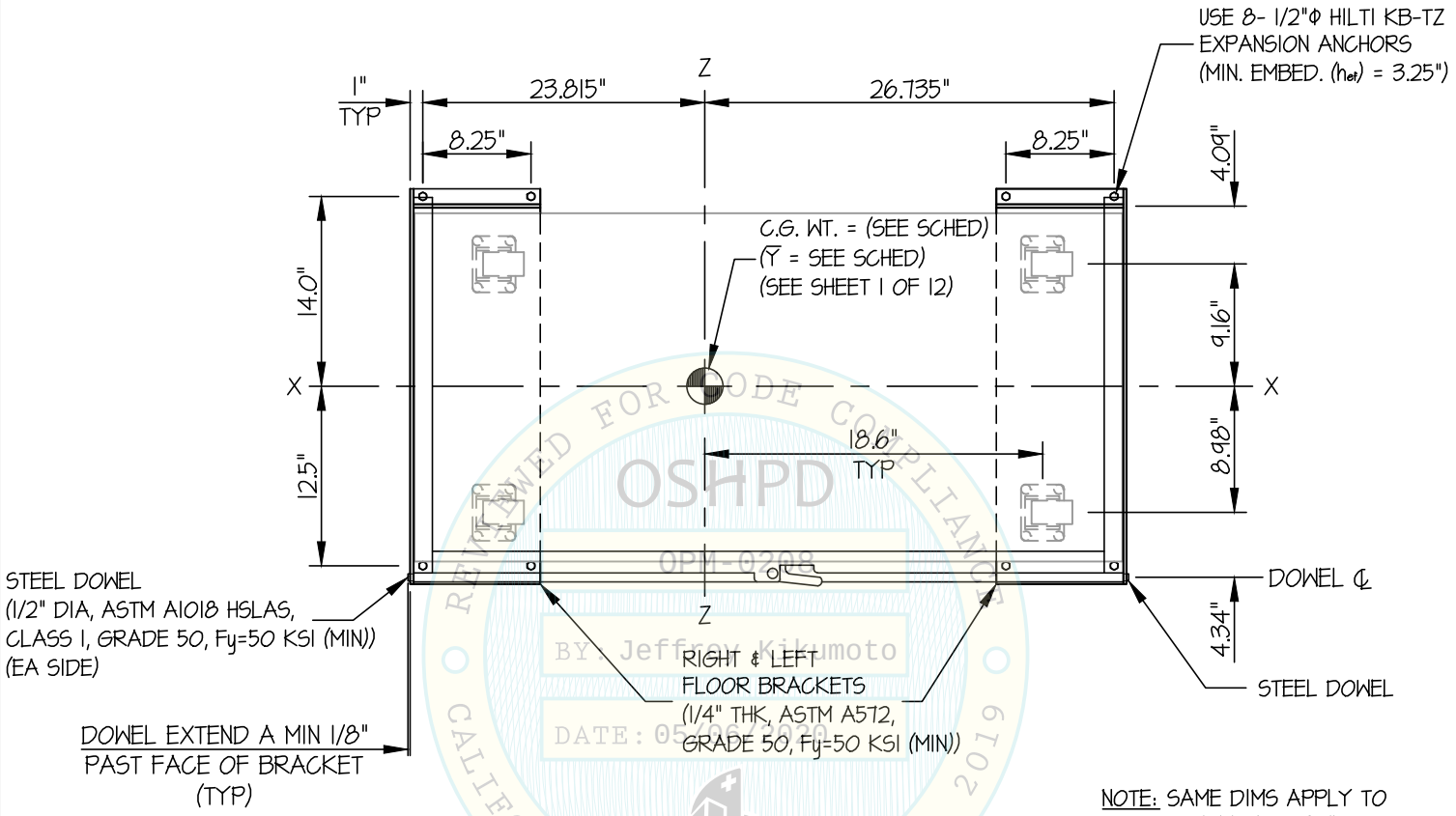
SHEET 4 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

MAX $S_{DS} \leq 1.00$

CONCRETE SLAB



NOTE: SAME DIMS APPLY TO DOUBLE 6-DRAWER

PLAN AT BASE
(DOUBLE 3-DRAWER)

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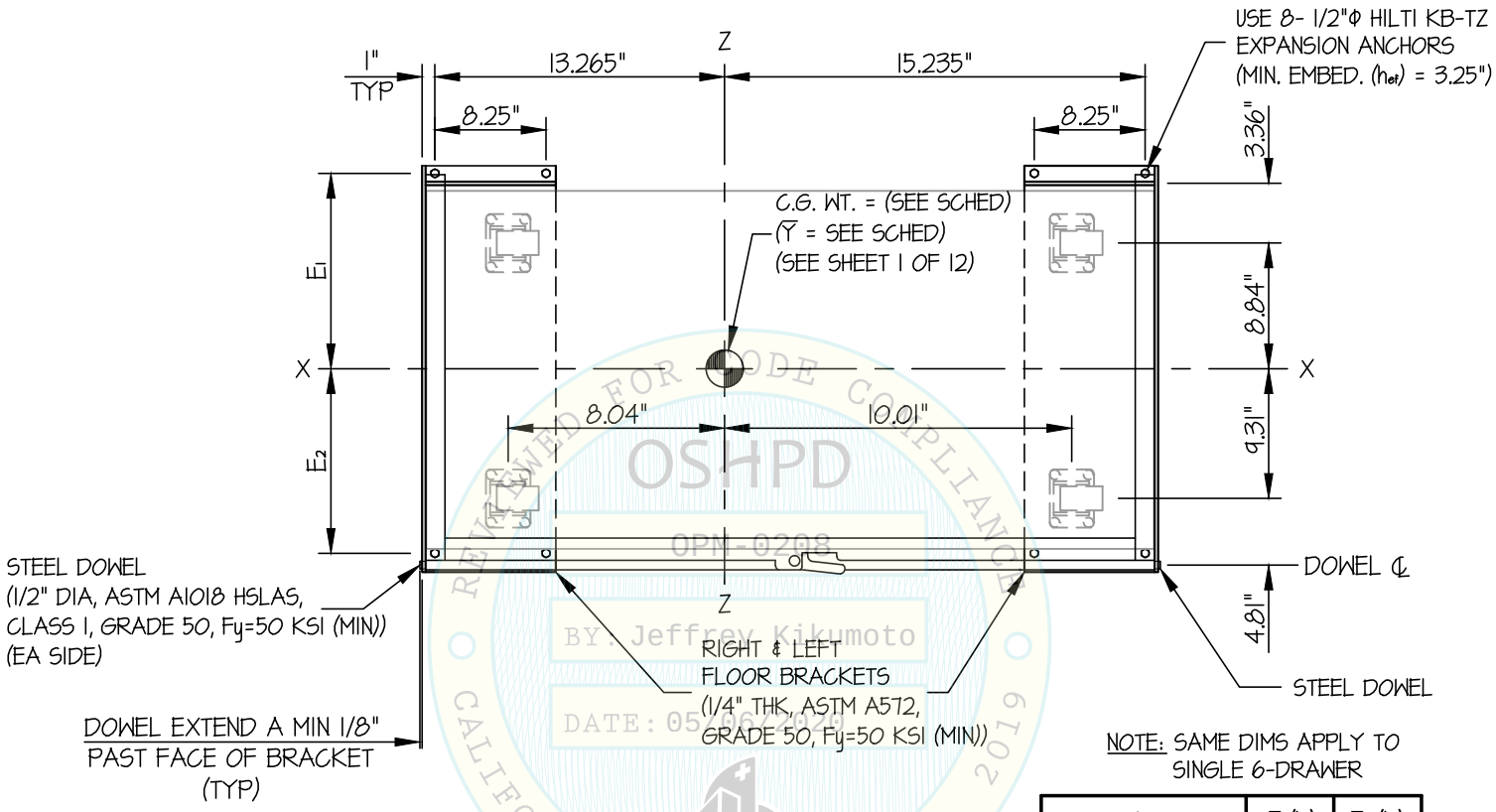
SHEET 5 OF 12 SHEETS

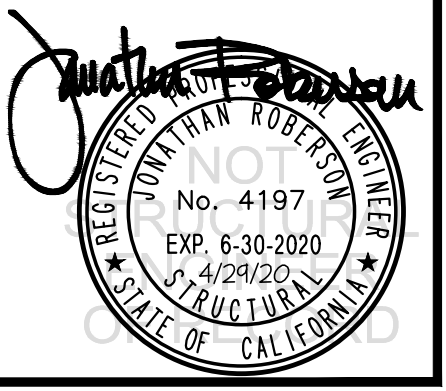
SEISMIC SUPPORTS & ATTACHMENTS — MAX $S_{DS} \leq 1.85$ — CONCRETE SLAB



PLAN AT BASE
(SINGLE 3-DRAWER)

NOTE: SAME DIMS APPLY TO SINGLE 6-DRAWER

MODEL	E1 (in)	E2 (in)
SINGLE 3 DWR	12.83	13.67
SINGLE 6 DWR	12.40	14.10



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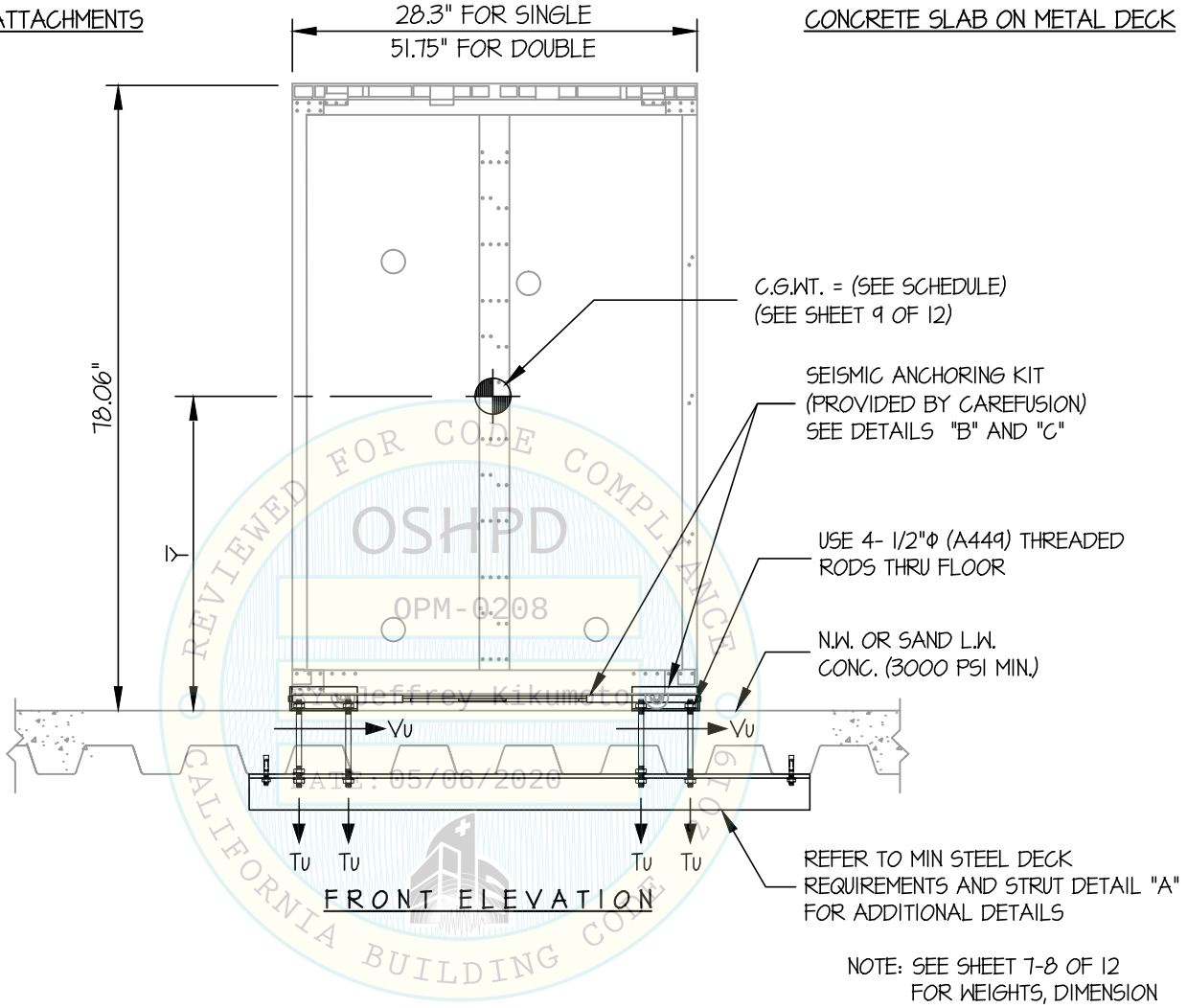
PYXIS DUOSTATION

DES. J. ROBERSON
JOB NO. 11-2009
DATE 4/29/20
SHEET 6 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



FRONT ELEVATION

NOTE: SEE SHEET 7-8 OF 12 FOR WEIGHTS, DIMENSION & BOLT FORCES

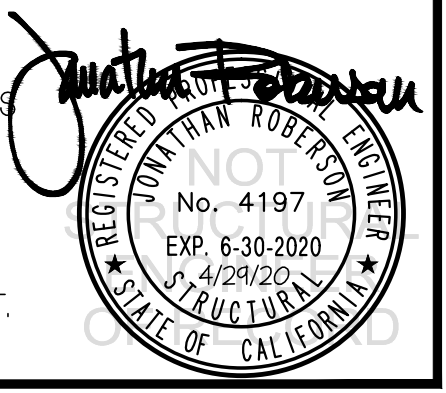
NOTES:

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

S_{DS}	1.00	1.85
HORIZONTAL FORCE (E_h)	1.20 Wp	2.22 Wp
HORIZONTAL FORCE (E_{mh})	1.80 Wp	3.33 Wp
VERTICAL FORCE (E_v)	0.20 Wp	0.37 Wp

(E_{mh} = E_h x Ω_o; FOR CONCRETE ANCHORAGE)

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.



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PYXIS DUOSTATION

DES. J. ROBERSON
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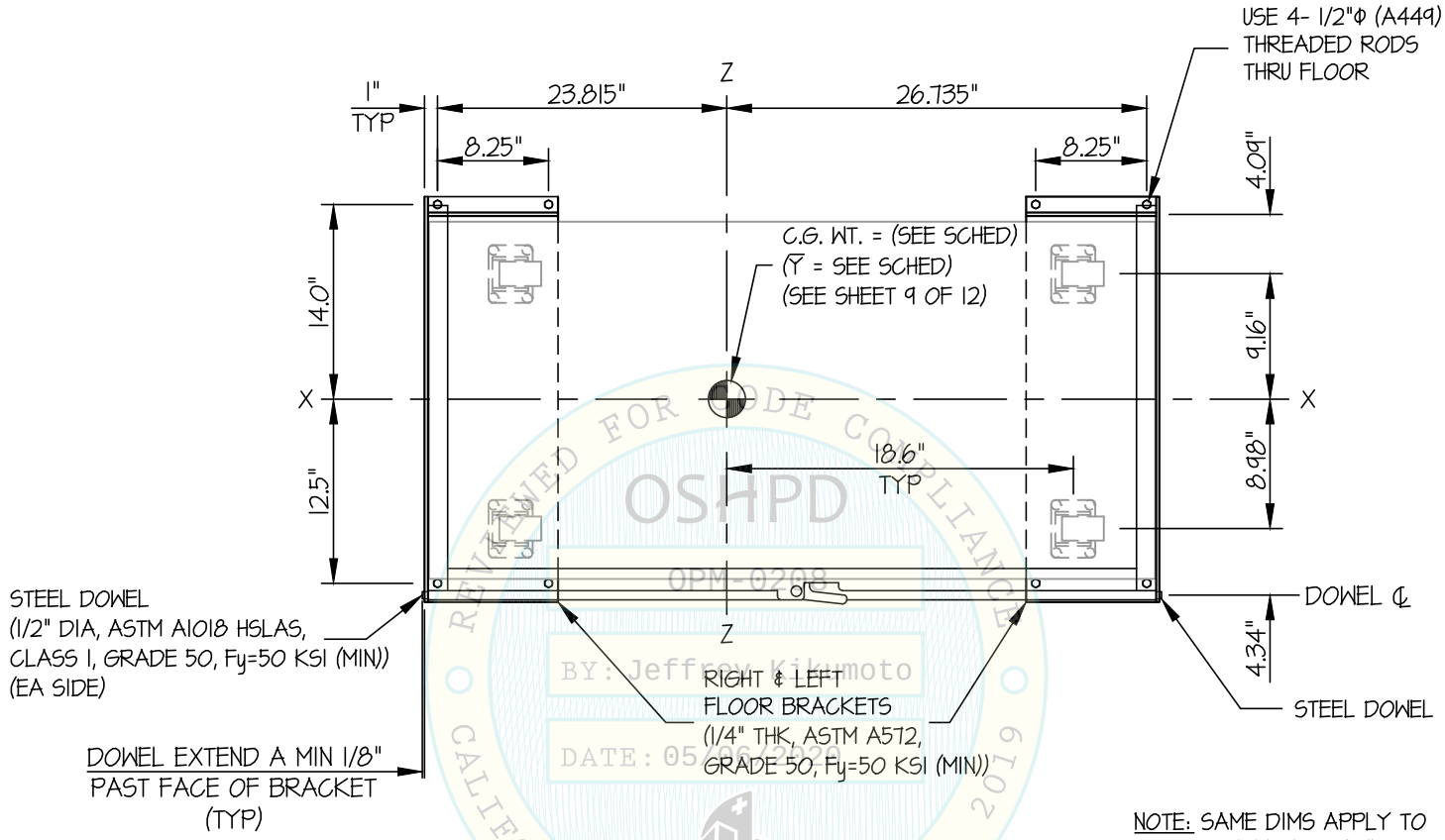
SHEET 7 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

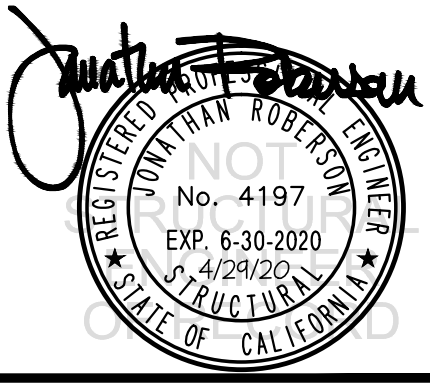
MAX $S_{DS} \leq 1.00$

CONCRETE SLAB ON METAL DECK



PLAN AT BASE
(DOUBLE 3-DRAWER)

NOTE: SAME DIMS APPLY TO DOUBLE 6-DRAWER



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PYXIS DUOSTATION

DES. J. ROBERSON
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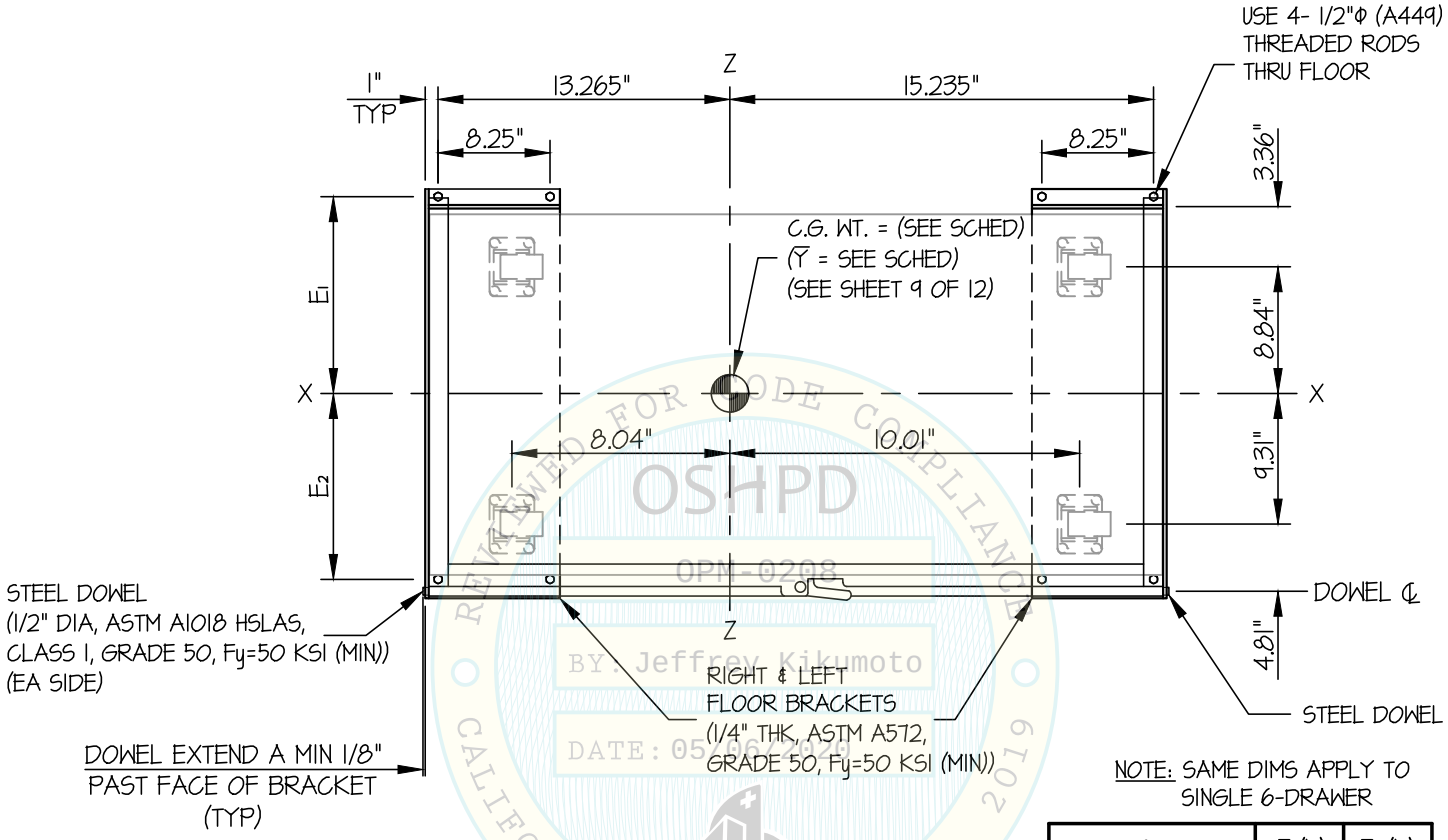
DATE 4/29/20

SHEET 8 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

MAX $S_{DS} \leq 1.85$

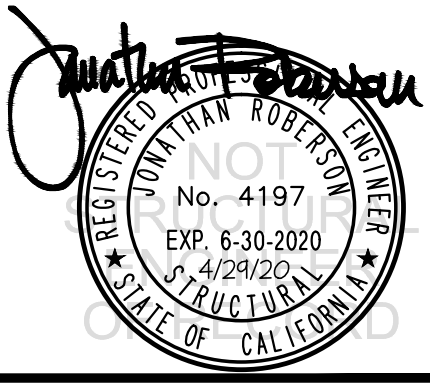
CONCRETE DETAIL



PLAN AT BASE
(SINGLE 3-DRAWER)

NOTE: SAME DIMS APPLY TO SINGLE 6-DRAWER

MODEL	E1 (in)	E2 (in)
SINGLE 3 DWR	12.83	13.67
SINGLE 6 DWR	12.40	14.10



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PYXIS DUOSTATION

DES. J. ROBERSON
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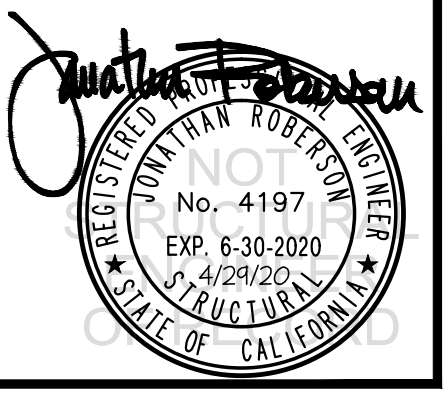
SHEET 9 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — BASE DETAIL

	S_{DS}	MODEL	WEIGHT (LB)	$\bar{Y}$ (in)	*** T_U (lb)	*** V_U (lb)
**	1.85	SINGLE 3-DWR	1425	42.94	3857	953
	1.85	SINGLE 6-DWR	1338	45.1	3814	895
*	1.00	DOUBLE 3-DWR	2873	45.07	4100	1118
	1.00	DOUBLE 6-DWR	2810	45.59	4063	1093

* THIS UNIT IS USED IN CALCULATION ON SHEET 5 OF 10
** THIS UNIT IS USED IN CALCULATION ON SHEET 6 OF 10
*** (VALUES DO NOT INCLUDE Ω_0)



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PYXIS DUOSTATION

DES. J. ROBERSON
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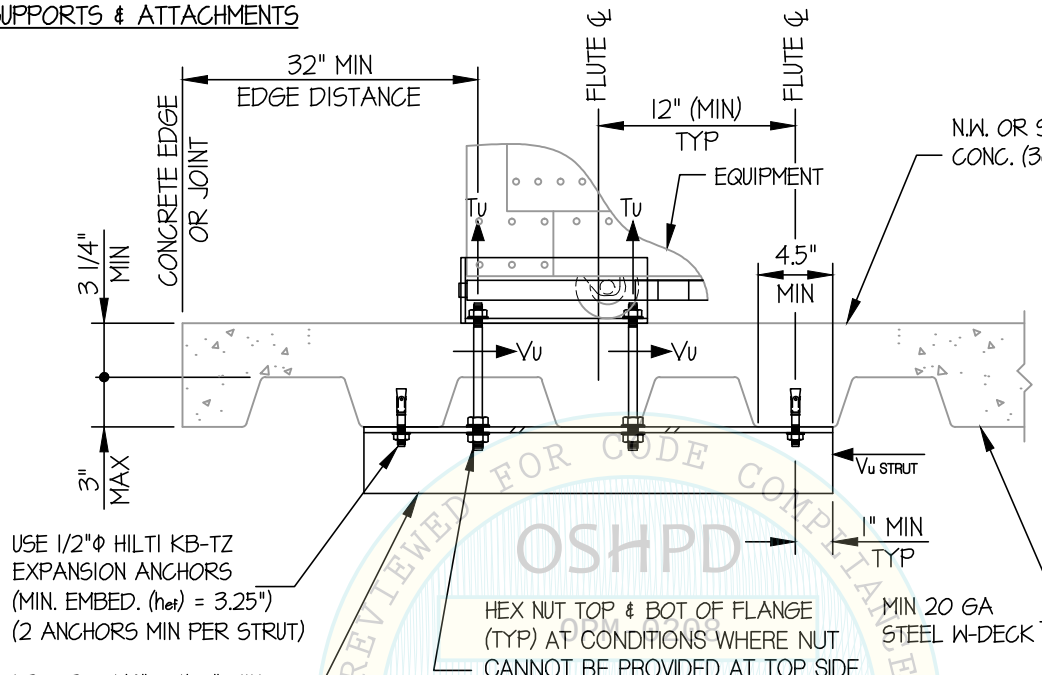
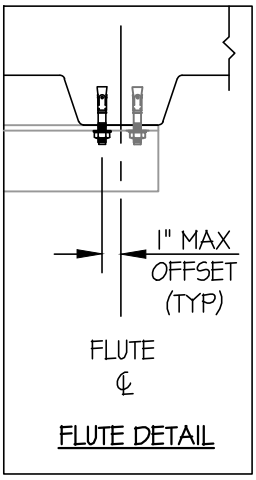
SHEET 10 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

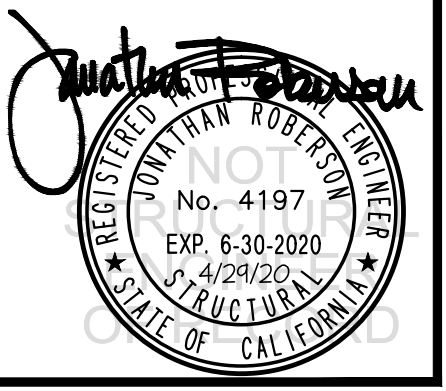


MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (A)

BASE DETAIL



FLUTE DETAIL



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PYXIS DUOSTATION

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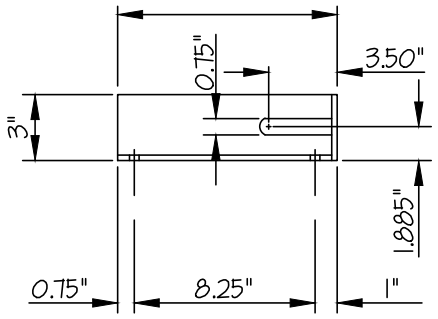
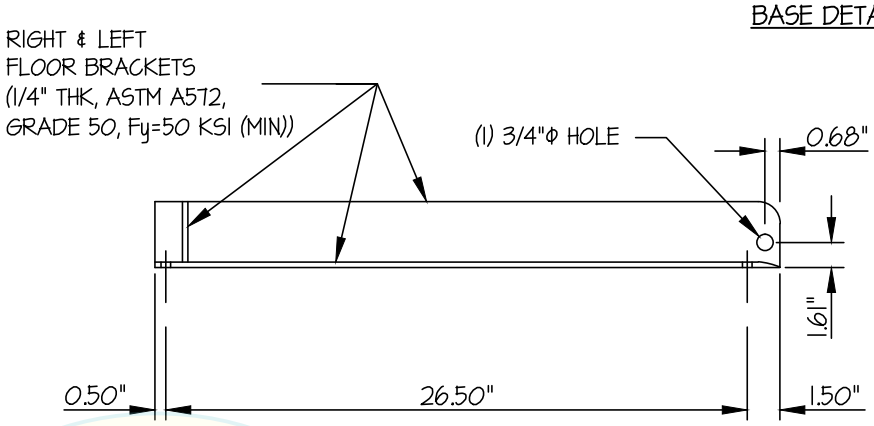
SHEET 11 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

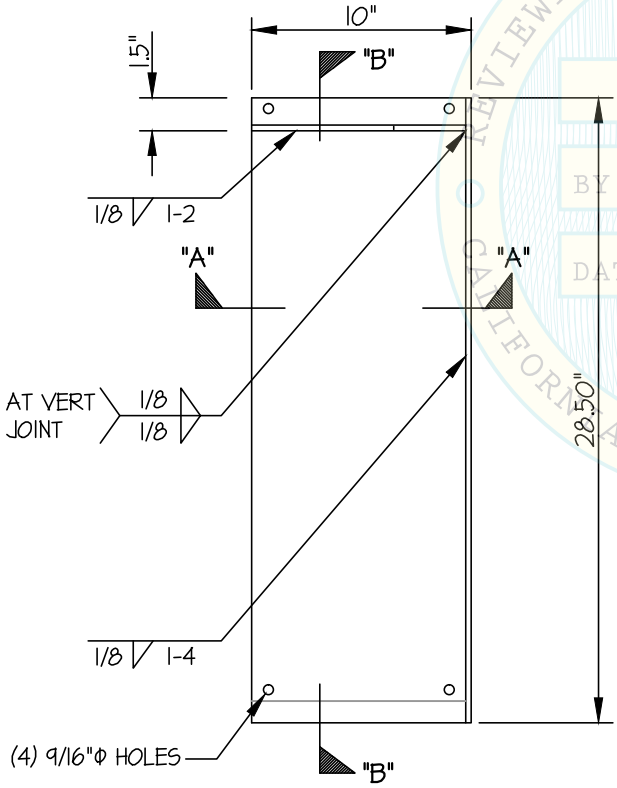


SECTION A-A

BASE DETAIL



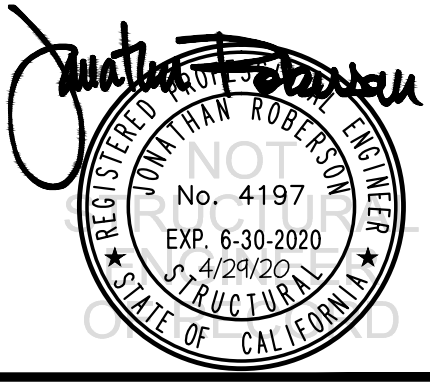
SECTION B-B



PLAN
(RIGHT FLOOR BRACKET SHOWN)

NOTE: THE SEISMIC ANCHORING KIT CONSISTS OF TWO FLOOR BRACKETS, A RIGHT FLOOR BRACKET AND A LEFT FLOOR BRACKET (SHOWN HERE) AND FRAME ASSEMBLY (SEE DETAIL "C") (TYP)

BRACKET DETAIL (B)



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PYXIS DUOSTATION

DES. J. ROBERSON
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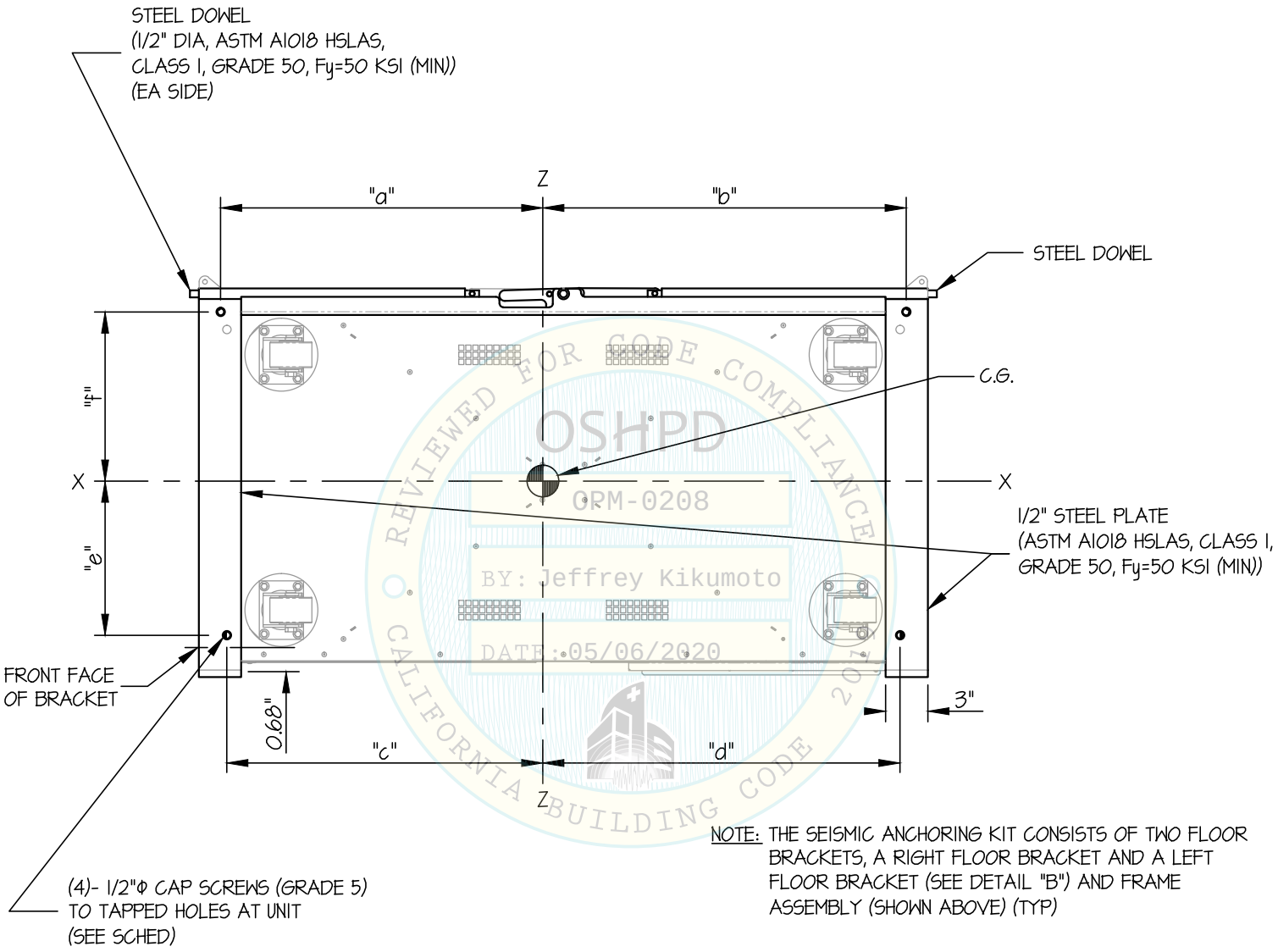
DATE 4/29/20

SHEET 12 OF 12 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BASE DETAIL



NOTE: THE SEISMIC ANCHORING KIT CONSISTS OF TWO FLOOR BRACKETS, A RIGHT FLOOR BRACKET AND A LEFT FLOOR BRACKET (SEE DETAIL "B") AND FRAME ASSEMBLY (SHOWN ABOVE) (TYP)

REFLECTED PLAN AT FRAME ASSEMBLY DETAIL ©

(FRAME ASSEMBLY SHOP ATTACHED TO UNDERSIDE OF UNIT BY MFG)

MODEL	"a" (in)	"b" (in)	"c" (in)	"d" (in)	"e" (in)	"f" (in)
DOUBLE 6-DWR	22.90	25.82	22.46	25.38	10.95	12.03
DOUBLE 3-DWR	22.90	25.82	22.46	25.38	10.95	12.03
SINGLE 6-DWR	12.35	14.32	11.91	13.88	12.36	10.62
SINGLE 3-DWR	12.35	14.32	11.91	13.88	12.36	10.62