



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0134

HCAI Preapproval of Manufacturer's Certification (OPM)

Type:  New  Renewal/Update

Manufacturer Information

Manufacturer: SenCorp White

Manufacturer's Technical Representative: Scott Crossman

Mailing Address: 400 Kidds Hill Road, Hyannos, MA 02601

Telephone: (508) 771-9400

Email: scott.crossman-7288@sencorpwhite.com

Product Information

Product Name: VERTICAL CAROUSEL 21XXXX-XX2 SERIES 0134

Product Type: Other Mechanical & Electrical Equipment

Product Model Number: 21XXXX-XX2 SERIES

General Description: Pharmaceutical Storage and Retrieval System

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 Manager

"A healthier California where all receive equitable, affordable, and quality healthcare"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

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: 7/6/2023
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable):



**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-0134**

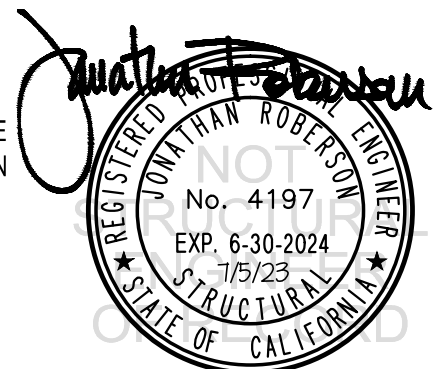
**THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE**

MANUFACTURER: **SenCorpWhite**  
EQUIPMENT NAME: **VERTICAL CAROUSEL (21XXXX-XX2 SERIES)**

Sheet: 1 of 4  
Date: 7/5/23

**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 1.40 & 2.00. SEE DETAIL FOR APPLICABILITY
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,  
WHERE  $S_{ds} = 1.40$ ,  $a_p = 1.0$ ,  $I_p = 1.5$ ,  $R_p = 1.5$ ,  $z/h = 0$  AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR  $\Omega_0$   
WHERE  $S_{ds} = 2.00$ ,  $a_p = 1.0$ ,  $I_p = 1.5$ ,  $R_p = 1.5$ ,  $z/h = 0$  AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR  $\Omega_0$
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 DETAIL VALID FOR DEMANDS SHOWN AT OR BELOW GRADE. (i.e.  $z/h = 0$ )
8. **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  $6h_{ef}$  FROM THIS UNIT'S ANCHORS.



**SenCorpWhite**

DES. **J. ROBERSON**

SHEET

**2**

**VERTICAL CAROUSEL  
(21XXXX-XX2 SERIES)**

JOB NO. **11-2316**

DATE **7/5/23**

OF **4** SHEETS

**9. 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
5/8"	Normal Weight	4000	Hilti Kwik Bolt TZ2 (CARBON STEEL)	ESR-4266	4"	7"	60"	6"	40 FT-LB	1363 lb
5/8"	Normal Weight	4000	HIT-HY 200 V3 (CARBON STEEL)	ESR-4868	7"	7"	60"	8.5"	N/A	3232 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 60" 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.

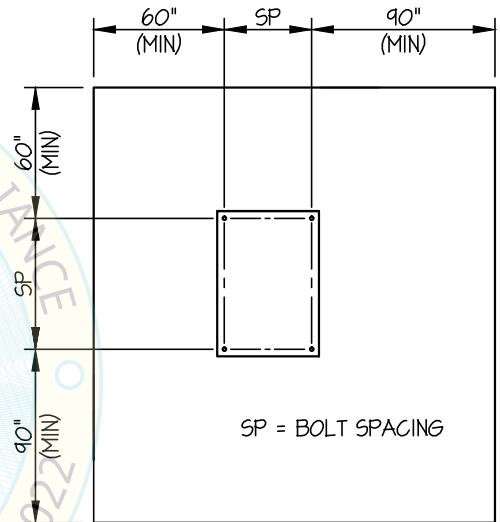
(ii) ACCEPTANCE CRITERIA:

- 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

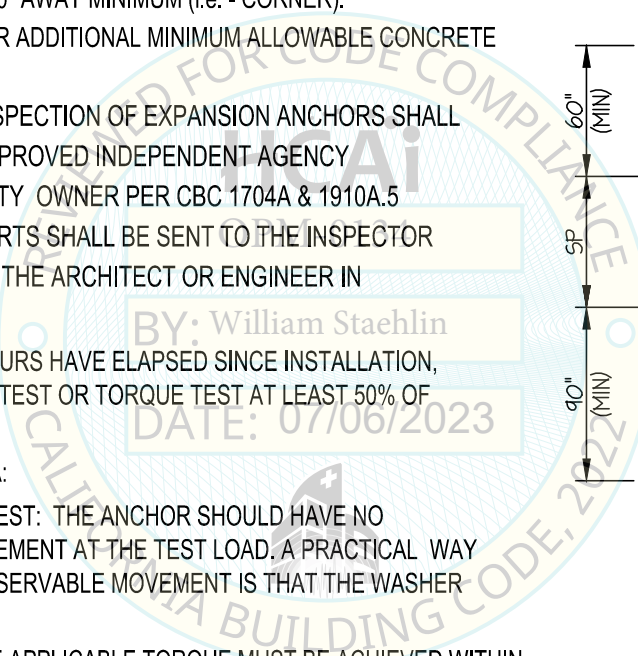
(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

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

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



TYPICAL CONCRETE EDGE DETAIL  
(SLAB ON GRADE ONLY)



**SenCorpWhite**

**VERTICAL CAROUSEL  
(21XXX-XX2 SERIES)**

DES. **J. ROBERSON**

JOB NO. **11-2316**

DATE **7/5/23**

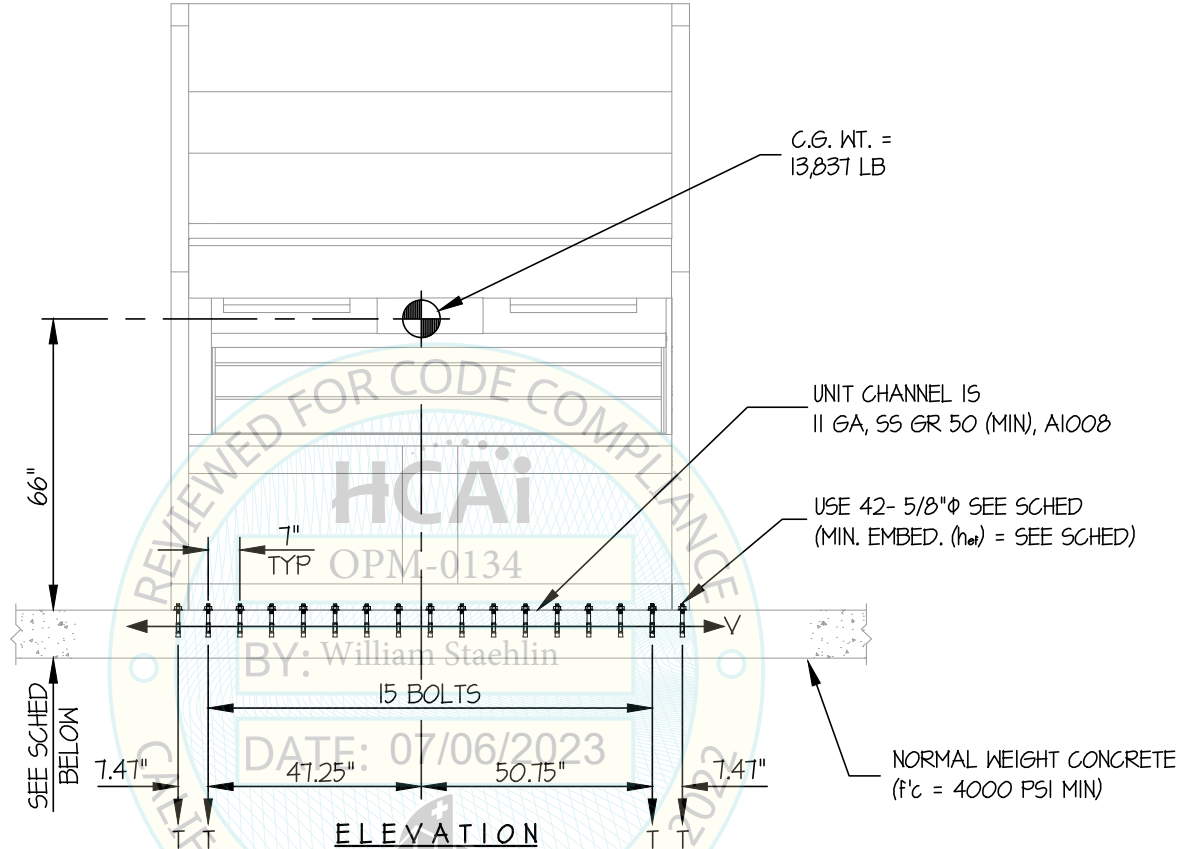
SHEET

**3**

OF **4** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



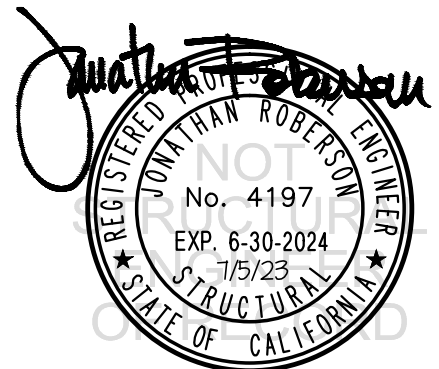
SLAB	Sds	BOLT TYPE	DIAM	EMBED	Emh	(0.3)Emh	Mot	(0.3) Mot	0.9Wp-Ev	** Tu MAX	** Vu MAX
6	1.40	HILTI KB-TZ2	5/8"	4	17,435	5231	1,150,710	345,213	8579	1158	428
* 8.5	2.00	HIT-HY 200 V3	5/8"	7	24,907	7472	1,643,862	493,159	6919	1578	550

\* USED IN CALCULATIONS

\*\* (VALUES INCLUDE Ω)

**NOTES:**

- FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. (EXAMPLE:  $\alpha_p = 1.0$ ,  $l_p = 1.5$ ,  $R_p = 1.5$ ,  $\Omega_o = 2.0$ ,  $z/h = 0$ )
- THIS CALCULATION ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
- 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.
- 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



**SenCorpWhite**

DES. **J. ROBERSON**

SHEET

**4**

**VERTICAL CAROUSEL  
(21XXX-XX2 SERIES)**

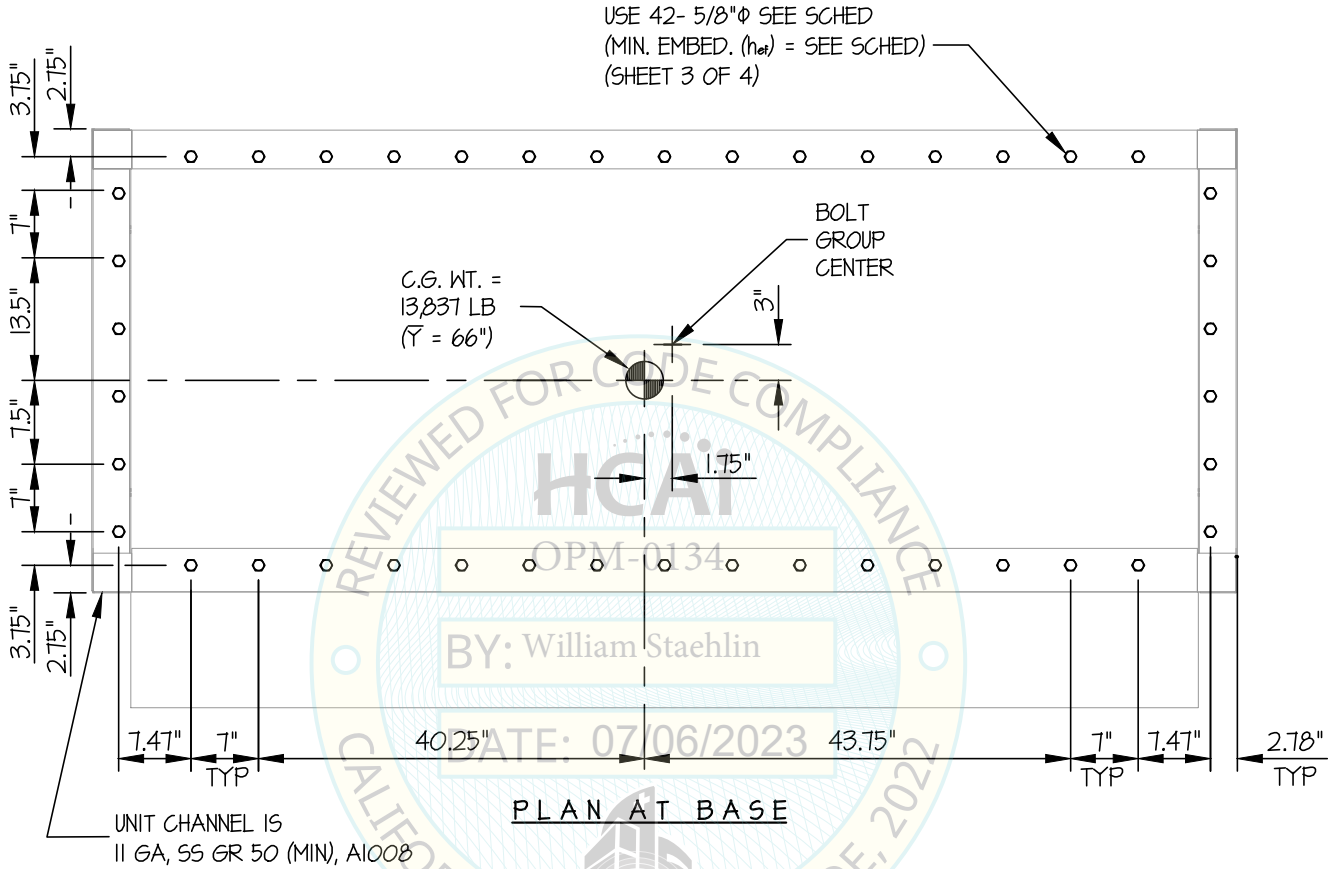
JOB NO. **11-2316**

DATE **7/5/23**

OF **4** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



*Jonathan Roberson*

REGISTERED PROFESSIONAL ENGINEER  
JONATHAN ROBERSON  
No. 4197  
EXP. 6-30-2024  
7/5/23  
STRUCTURAL  
STATE OF CALIFORNIA