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

OFFICE USE ONLY
APPLICATION #: OPM-0160-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: IPA, LLC.

Manufacturer's Technical Representative: Ward Broom

Mailing Address: 1105 Satellite Blvd, Suite 300, Suwanee, GA. 30024

Telephone: (888) 200-4797 Email: wbroom@thinkipa.com

Product Information

Product Name: alEx Linen Center (Manual)

Product Type: Other mechanical components constructed of high-deformability materials

Product Model Number: N/A

General Description: Dispenses clean linen to authorized users

Applicant Information

Applicant Company Name: **EASE Co.**

Contact Person: Jonathan Roberson, S.E.

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

Telephone: (909) 606-7622 Email: J.Roberson@EASECo.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: _____ Date: 11/13/14

Title: Principal Engineer Company Name: **EASE Co.**

Registered Design Professional Preparing Engineering Recommendations

Company Name: EASE Co.

Name: Jonathan Roberson, S.E. California License Number: S4197

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

Telephone: 909-606-7667 Email: J.Roberson@EASECo.com

OSHPD Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)

☒ Special Seismic Certification is not preapproved

Certification Method(s)

☐ Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-10

☐ Other* (Please Specify):

*Use of test criteria other than those adopted by the California Building Standards Code, 2013 (CBSC 2013) 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 2013 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

List of Attachments Supporting the Manufacturer's Certification

☐ Test Report ☒ Drawings ☒ Calculations ☐ Manufacturer's Catalog

☐ Other(s) (Please Specify):

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2013 ONLY

Signature: Date: 04/24/2015

Print Name: William Staehlin

Title: SSE

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-0160-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **IPA, LLC**

EQUIPMENT NAME: **alEx LINEN CENTER (MANUAL)**

Date: 4/22/15

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2013 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 2013 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 2.20.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE $S_{DS} = 2.20$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 2.5$, $z/h = 0$ AT CONCRETE SLAB & $z/h \leq 1$ AT CONCRETE SLAB ON METAL DECK. SEE FOLLOWING SHEETS FOR Ω_o
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 ON GRADE DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION BELOW GRADE. (i.e. $z/h = 0$)
9. SHEET METAL SCREWS SHALL BE TEKS SCREWS BY ITW BUILDEX (ICC ESR-1976).
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 2013 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.

    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. 6-30-2016
STRUCTURAL
STATE OF CALIFORNIA
4/22/15

IPA, LLC

alEx LINEN CENTER (MANUAL)

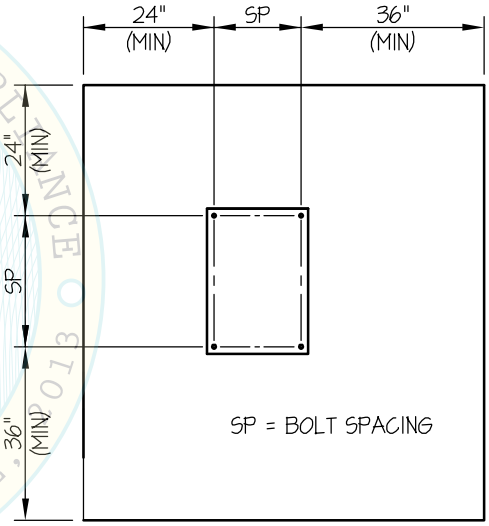
DES. J. ROBERSON | JOB NO. 11-1345 | DATE 4/22/15 | SHEET 2 OF 14 SHEETS

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. Thickness	Torque Test	Direct Tension
3/8"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	2"	-	-	-	25 FT-LB	1187 lb
1/2"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	3-1/4"	16"	24"	6"	40 FT-LB	3282 lb
5/8"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	4"	11"	24"	6"	60 FT-LB	4350 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.



TYPICAL CONCRETE EDGE DETAIL

C. TESTING OF EXPANSION ANCHORS PER 2013 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

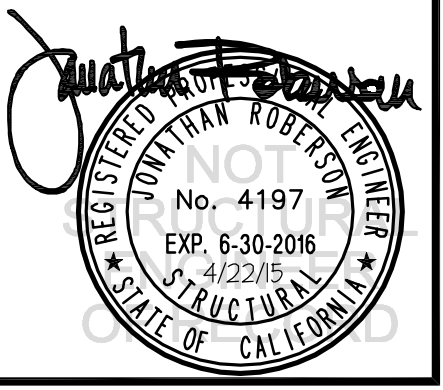
(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

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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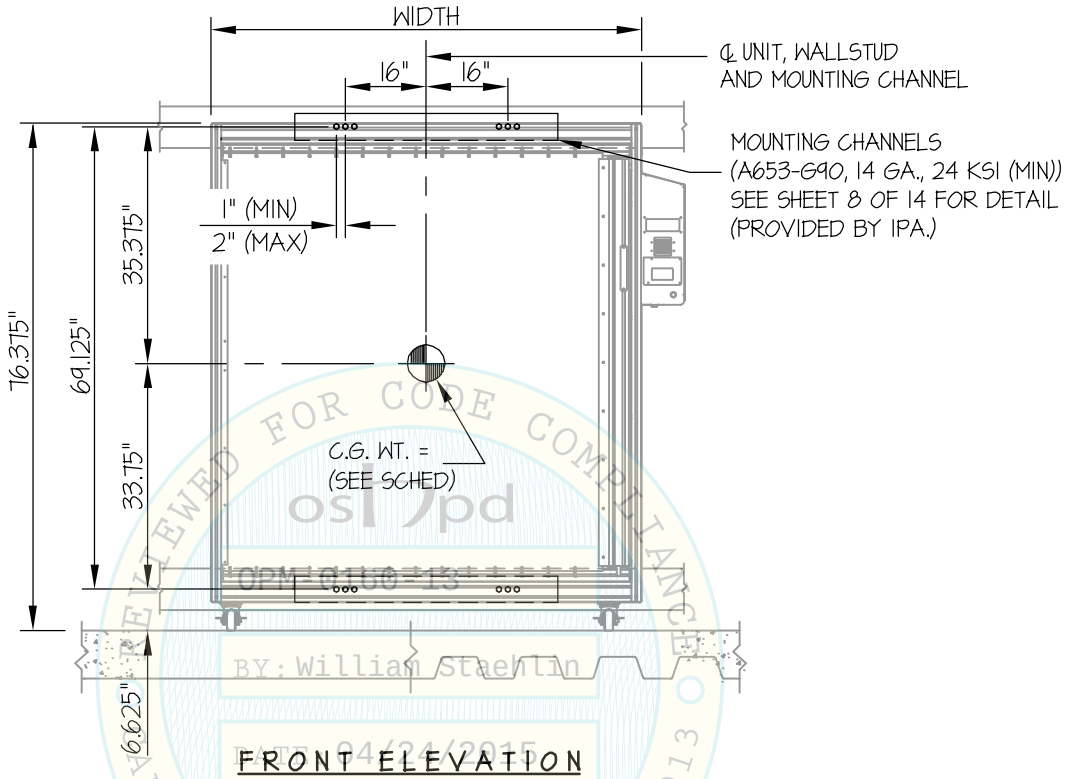
JOB NO.	11-1345
DATE	4/22/15

SHEET 3 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

STEEL/WOOD STUD WALL MOUNTED



FRONT ELEVATION
(LC 30 SHOWN)

NOTES:

1. **FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 2.5, Ω_o = 2.5, z/h ≤ 1)
   HORIZONTAL FORCE (E_h) = 1.58 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.95 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 PRE APPROVAL 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.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
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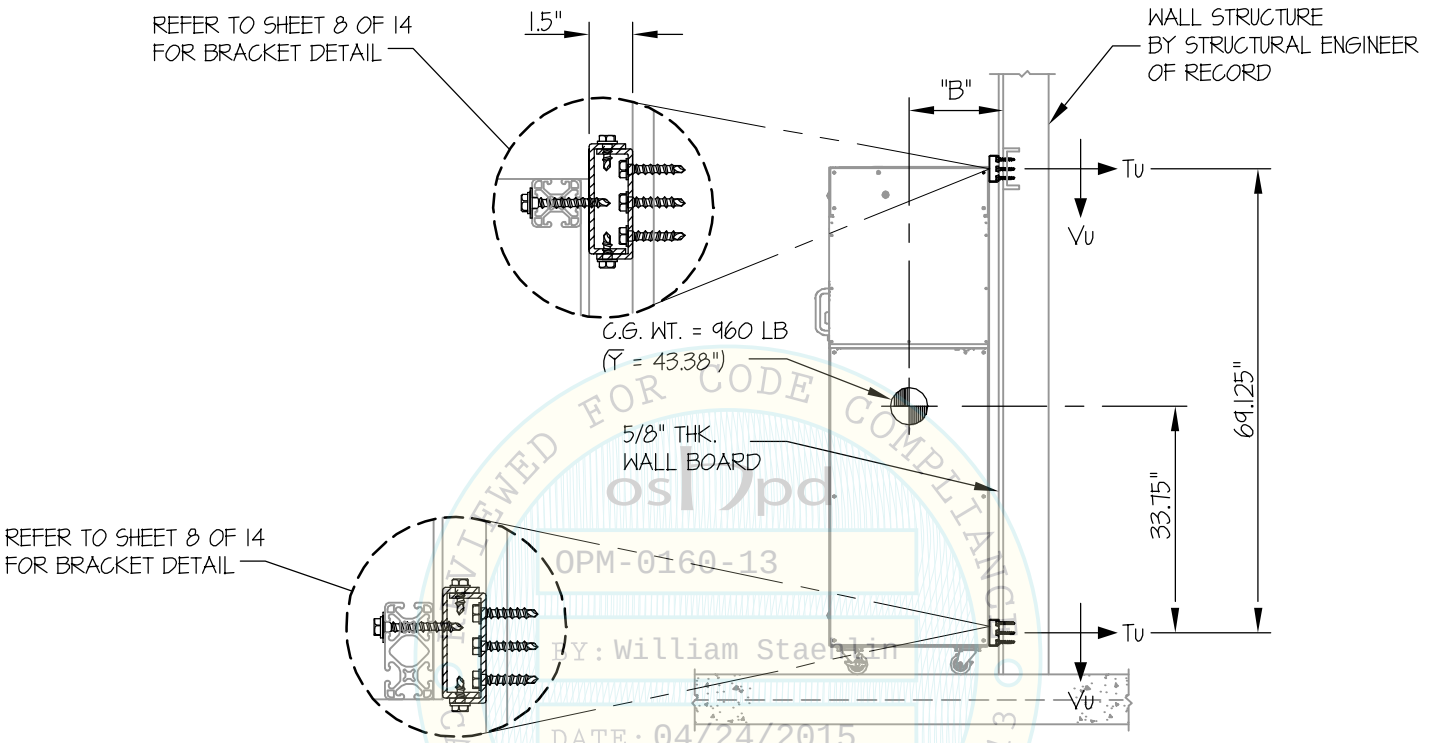
DES. J. ROBERSON
JOB NO. 11-1345
DATE 4/22/15

SHEET 4 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

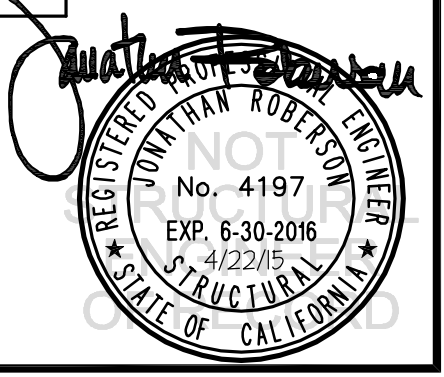
STEEL/WOOD STUD WALL MOUNTED



SIDE ELEVATION
(LC 30 SHOWN)

UNITS	WT	WIDTH (in)	"B"	* Tu Wall	* Vu Wall
LC24	750	64.875	14.25	128	101
MC24	600	52.875	14.25	102	81
SC24	500	40.875	14.25	85	67
LC30	960	64.875	17.25	178	129
MC30	800	52.875	17.25	148	107
SC30	675	40.875	17.25	125	91

* VALUES DO NOT INCLUDE Ω_o



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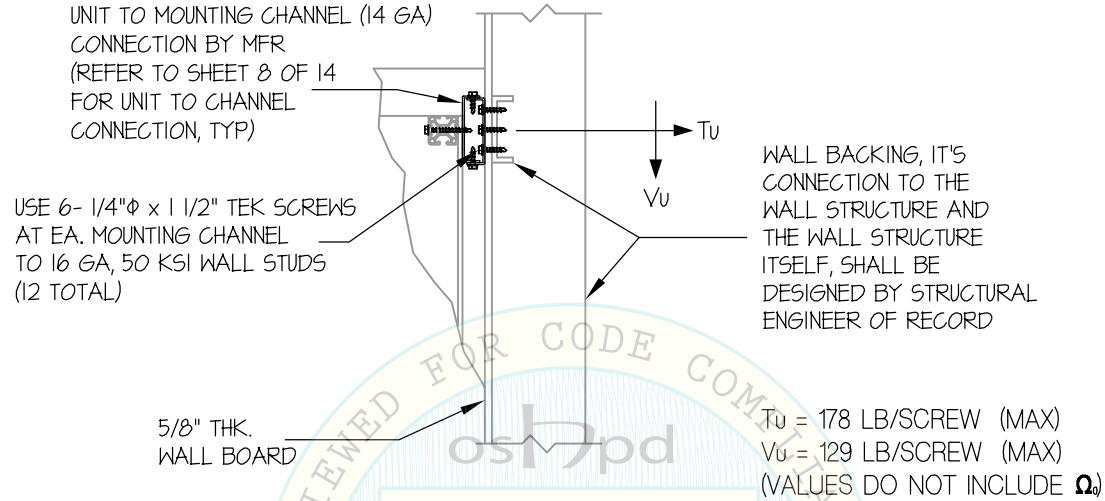
DATE	4/22/15

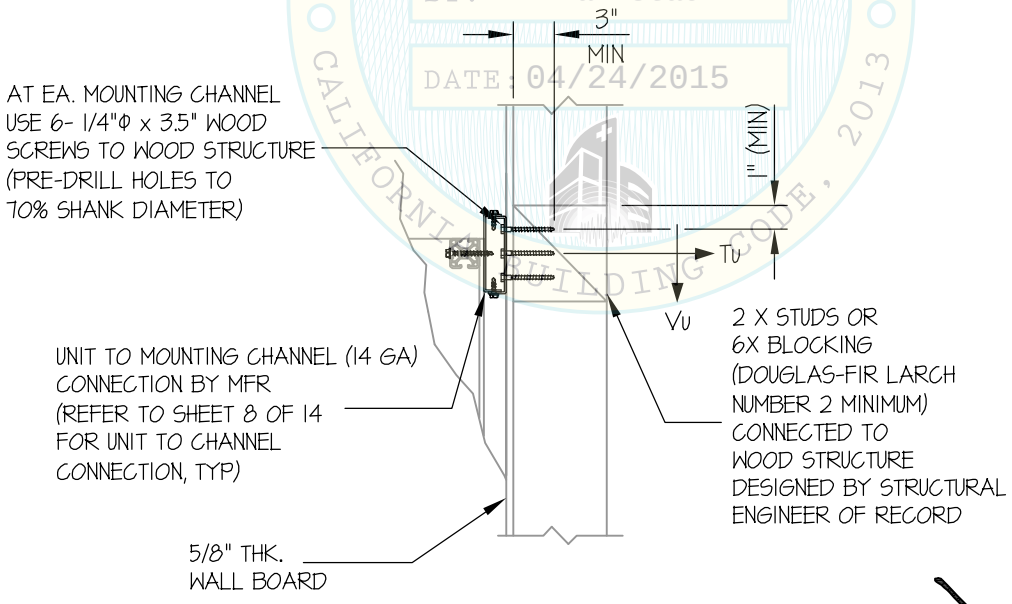
SHEET 5 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

STEEL/WOOD STUD WALL MOUNTED

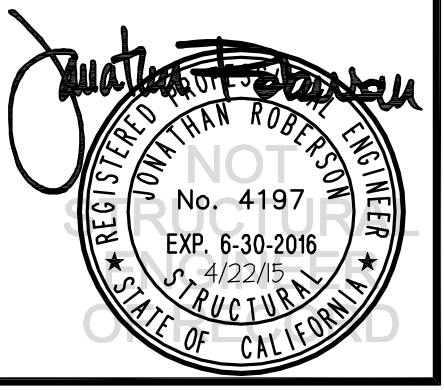


SECTION AT STEEL STUD WALL



Tu = 178 LB/SCREW (MAX)
Vu = 129 LB/SCREW (MAX)
(VALUES DO NOT INCLUDE Ω0)

SECTION AT WOOD STUD WALL



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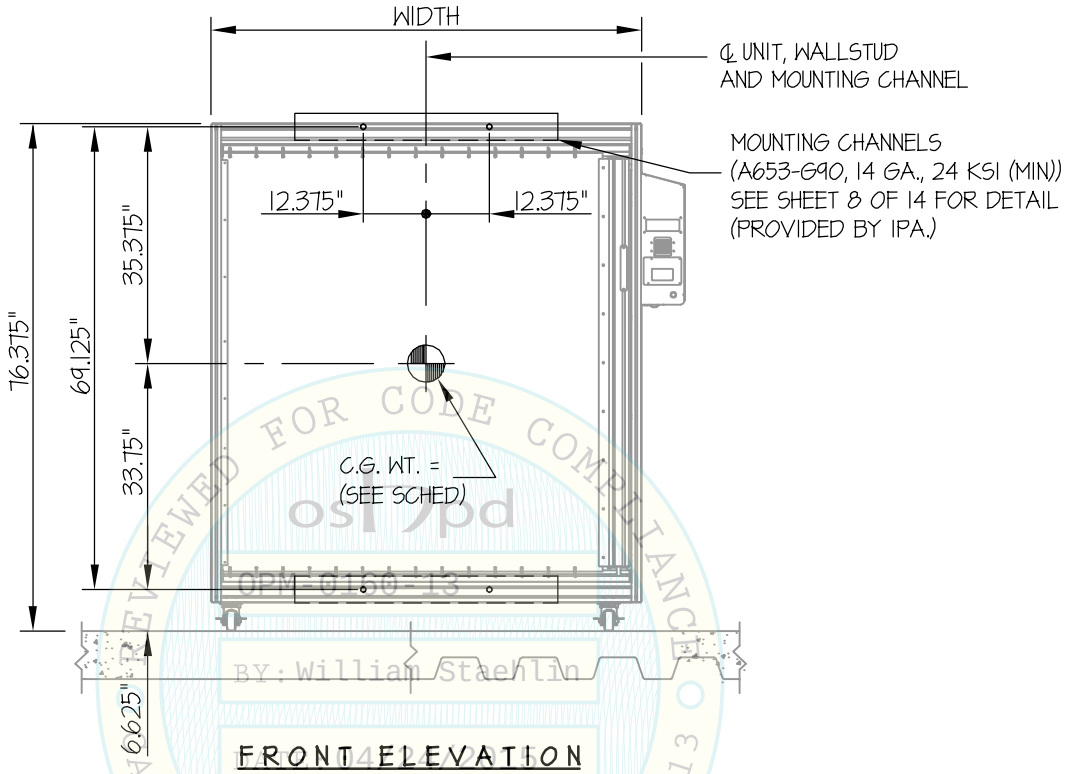
DATE	4/22/15

SHEET 6 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE WALL MOUNTED



FRONT ELEVATION
(LC 30 SHOWN)

NOTES:

1. **FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10.**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 2.5, Ω_o = 2.5, z/h ≤ 1)
   HORIZONTAL FORCE (E_h) = 1.58 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.95 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 PRE APPROVAL 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.

REGISTERED PROFESSIONAL ENGINEER
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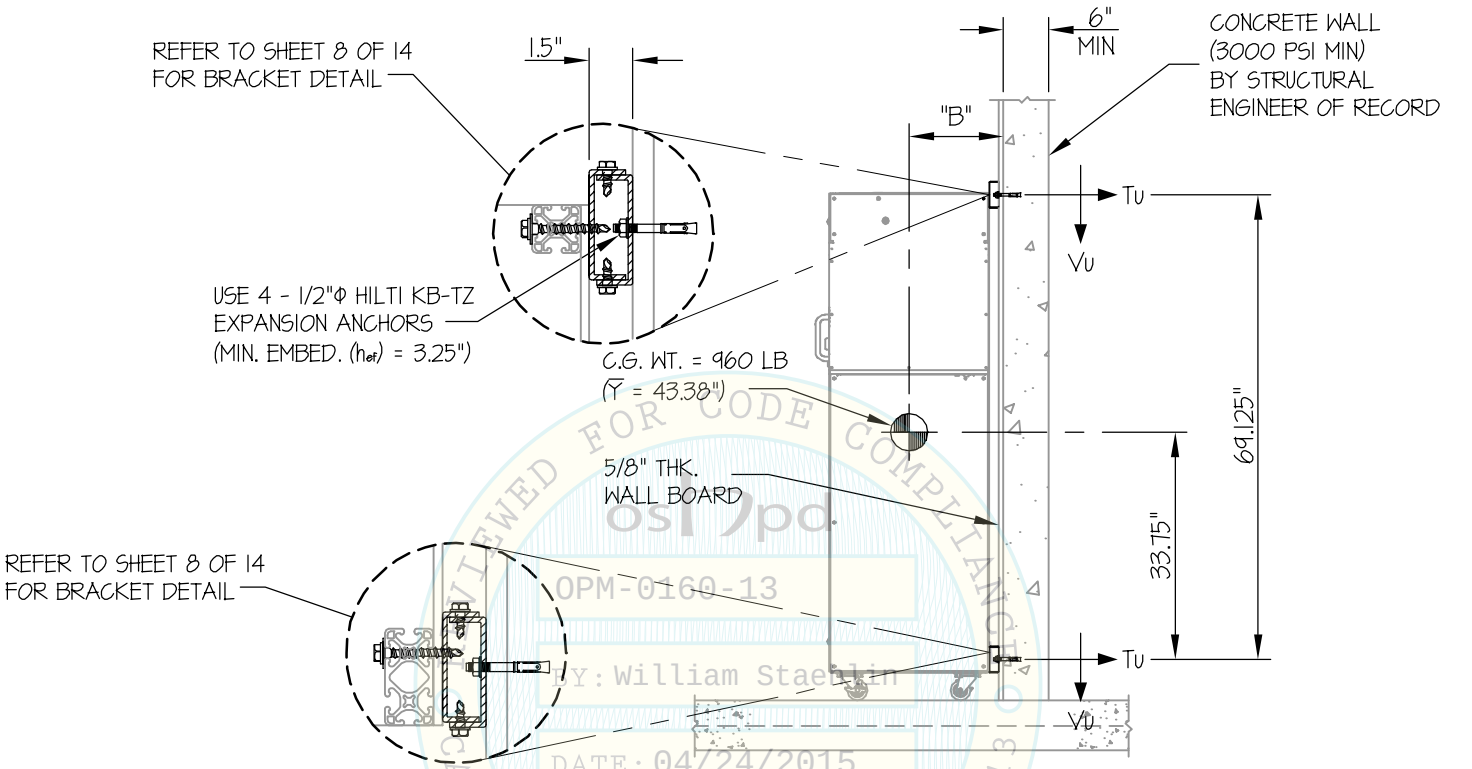
alEx LINEN CENTER (MANUAL)

DES. J. ROBERSON
JOB NO. 11-1345
DATE 4/22/15
SHEET 7 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

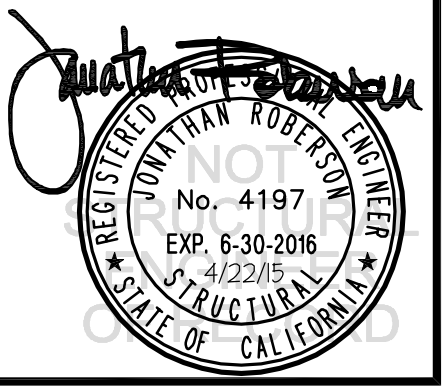
CONCRETE WALL MOUNTED



SIDE ELEVATION
(LC 30 SHOWN)

UNITS	WT	WIDTH (in)	"B"	*Tu Wall	*Vu Wall
LC24	750	64.875	14.25	1096	755
MC24	600	52.875	14.25	877	604
SC24	500	40.875	14.25	731	504
LC30	960	64.875	17.25	1638	967
MC30	800	52.875	17.25	1365	806
SC30	675	40.875	17.25	1152	680

** VALUES INCLUDE Ω_0



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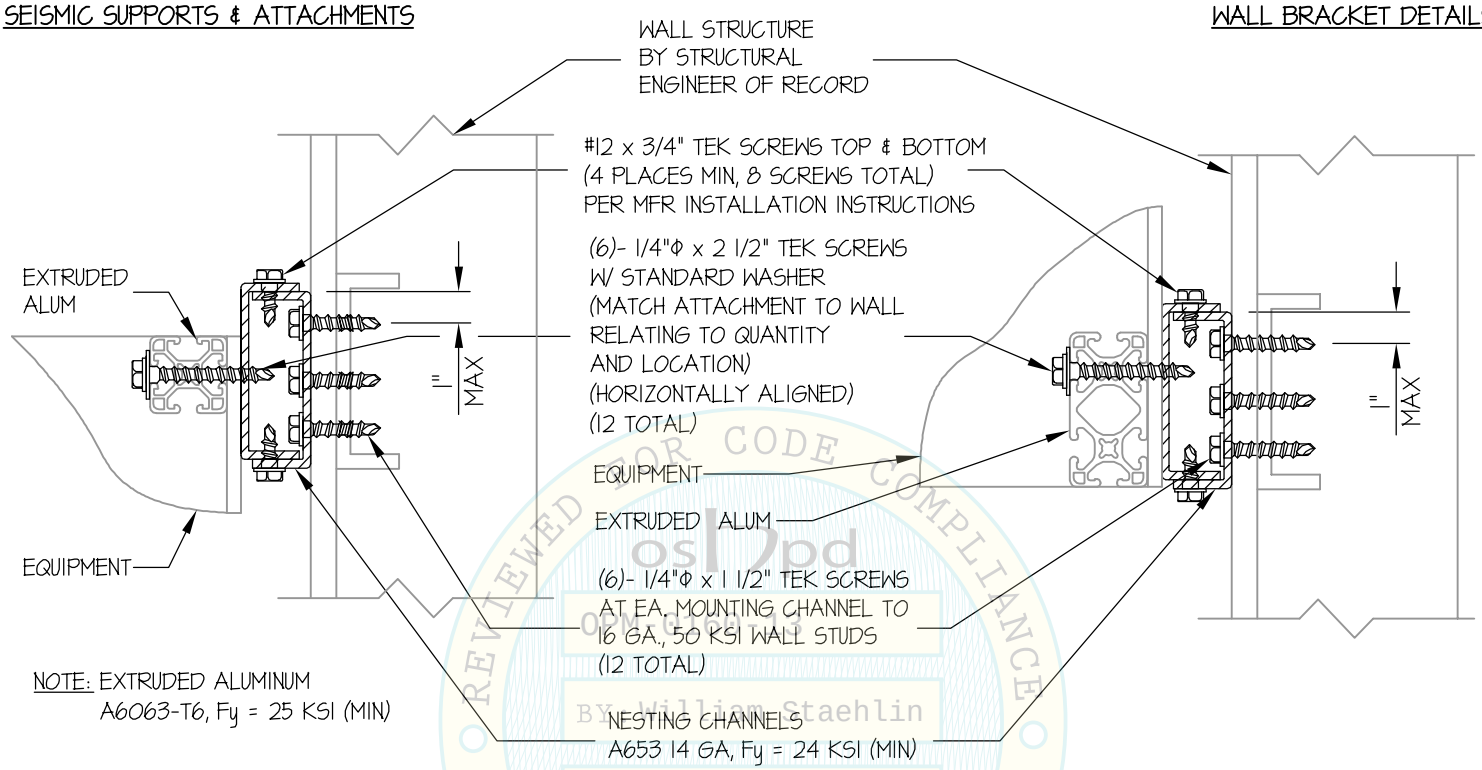
SHEET 8 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL BRACKET DETAILS



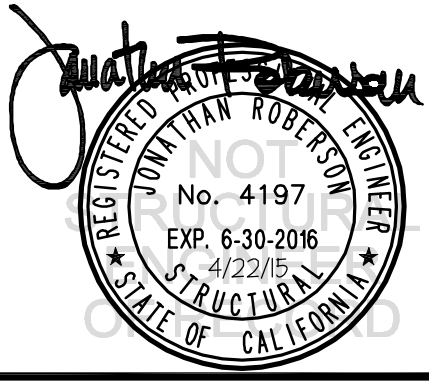
NOTE: EXTRUDED ALUMINUM A6063-T6, Fy = 25 KSI (MIN)

SECTION AT TOP BRACKET

SECTION AT BOTTOM BRACKET

CHANNEL INSTALLATION SEQUENCE:

1. INSTALL C-CHANNEL TO WALL
2. ATTACH SECOND C-CHANNEL TO INSTALLED WALL C-CHANNEL
3. POSITION EQUIPMENT AND ATTACH TO WALL CHANNEL ASSEMBLY



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alEx LINEN CENTER (MANUAL)

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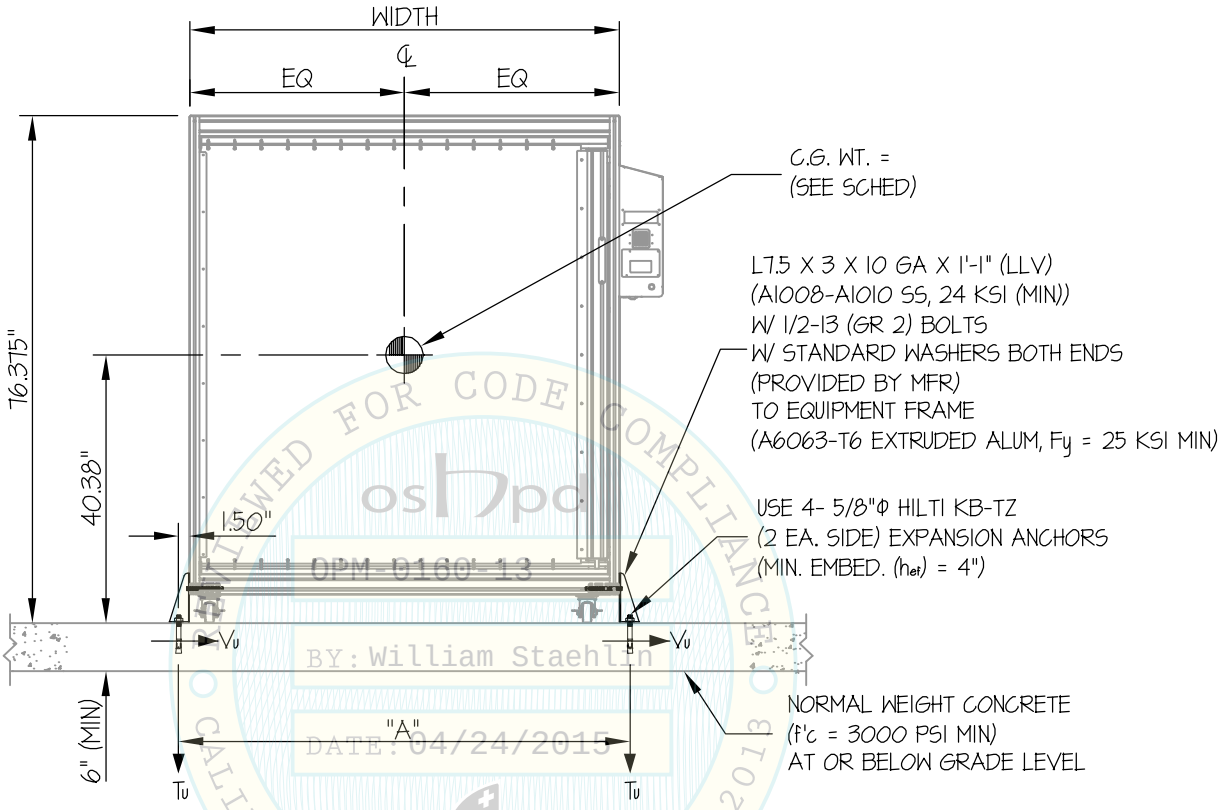
JOB NO.	11-1345
DATE	4/22/15

SHEET 9 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — CONCRETE SLAB



FRONT ELEVATION
(LC 30 SHOWN)

NOTES:

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   HORIZONTAL FORCE (E_{mh}) = 2.48 W_p (FOR CONCRETE ANCHORAGE)
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2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
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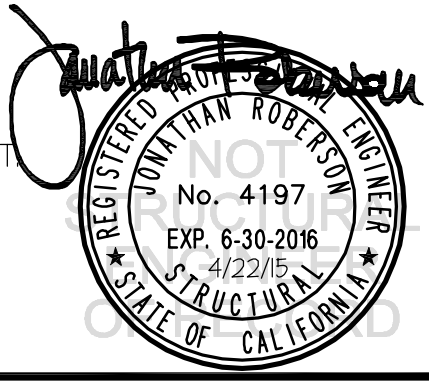

IPA, LLC

alEx LINEN CENTER (MANUAL)

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JOB NO. 11-1345
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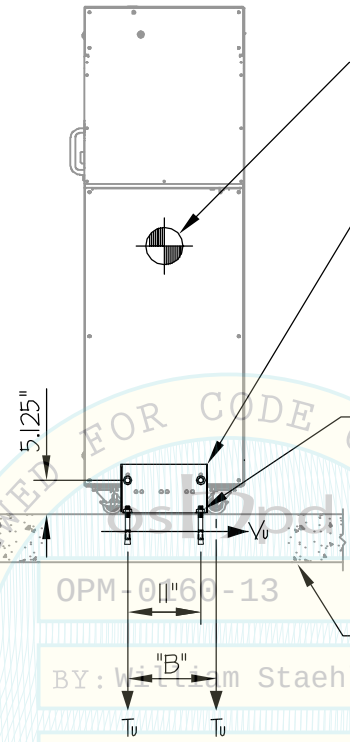
SHEET 10 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

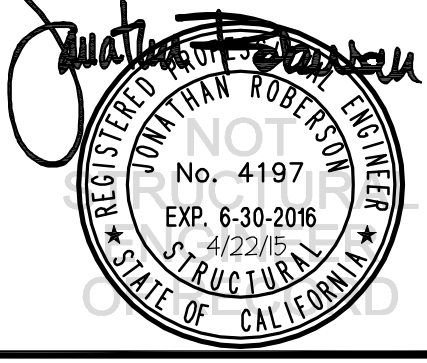
CONCRETE SLAB



SIDE ELEVATION
(LC 30 SHOWN)

UNITS	WT	WIDTH (in)	"A"	"B"	** Tu	** Vu
LC24	750	64.875	68.125	13.31	2901	465
MC24	600	52.875	56.125	13.31	2349	372
SC24	500	40.875	44.125	13.31	1994	310
LC30	960	64.875	68.125	16.31	3048	595
MC30	800	52.875	56.125	16.31	2578	496
SC30	675	40.875	44.125	16.31	2224	419

** VALUES INCLUDE Ω_o



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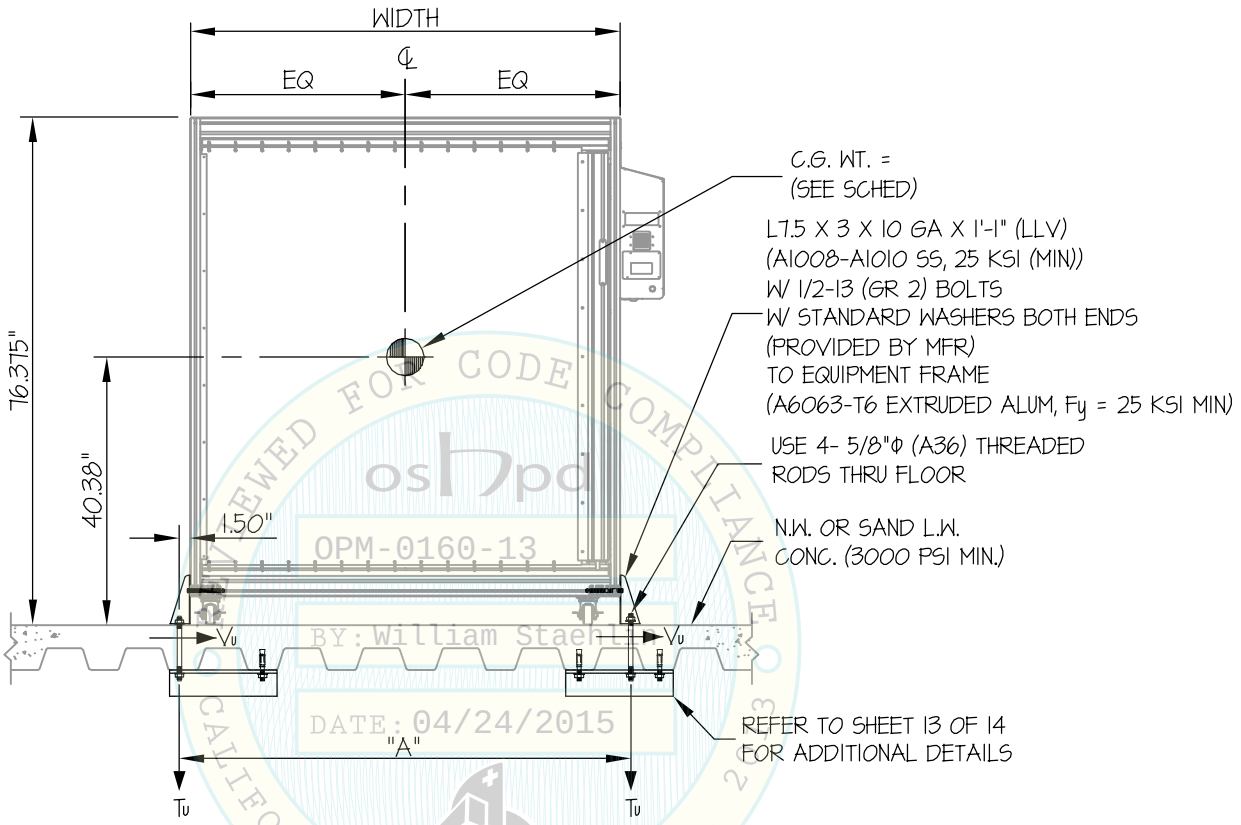
SHEET 11 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



FRONT ELEVATION
(LC 30 SHOWN)

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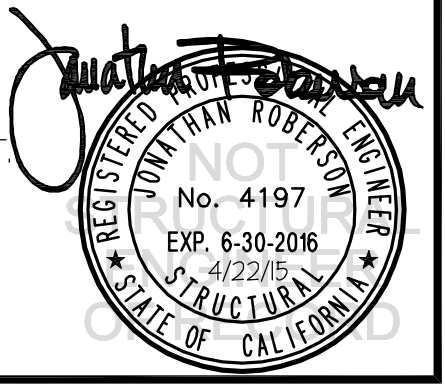

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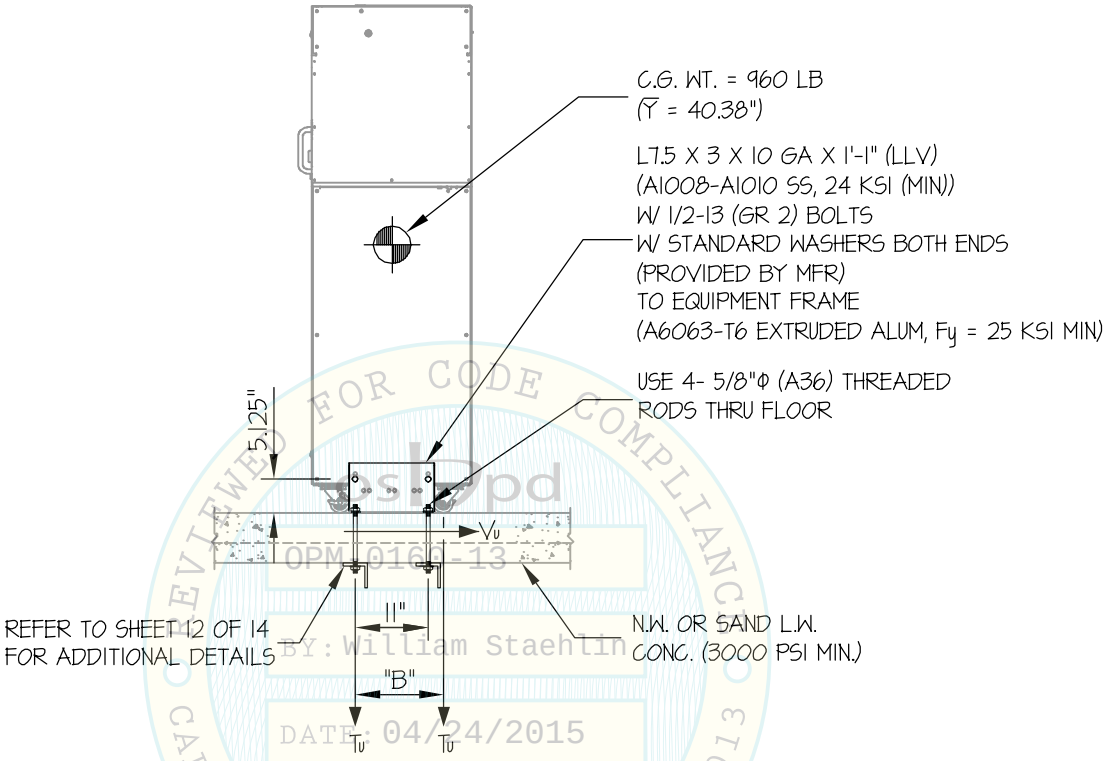
SHEET 12 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

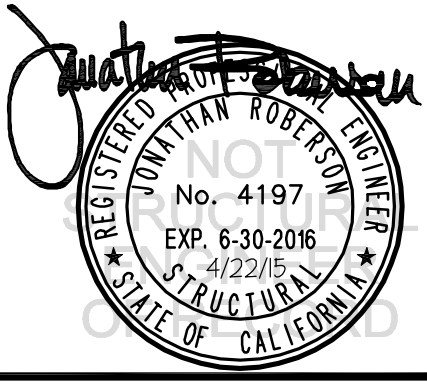
CONCRETE SLAB ON METAL DECK



SIDE ELEVATION
(LC 30 SHOWN)

UNITS	WT	WIDTH (in)	"A"	"B"	** Tu	** Vu
LC24	750	64.875	68.125	13.31	1817	296
MC24	600	52.875	56.125	13.31	1471	237
SC24	500	40.875	44.125	13.31	1249	198
LC30	960	64.875	68.125	16.31	1902	379
MC30	800	52.875	56.125	16.31	1609	316
SC30	675	40.875	44.125	16.31	1389	267

** VALUES DO NOT INCLUDE Ω₀



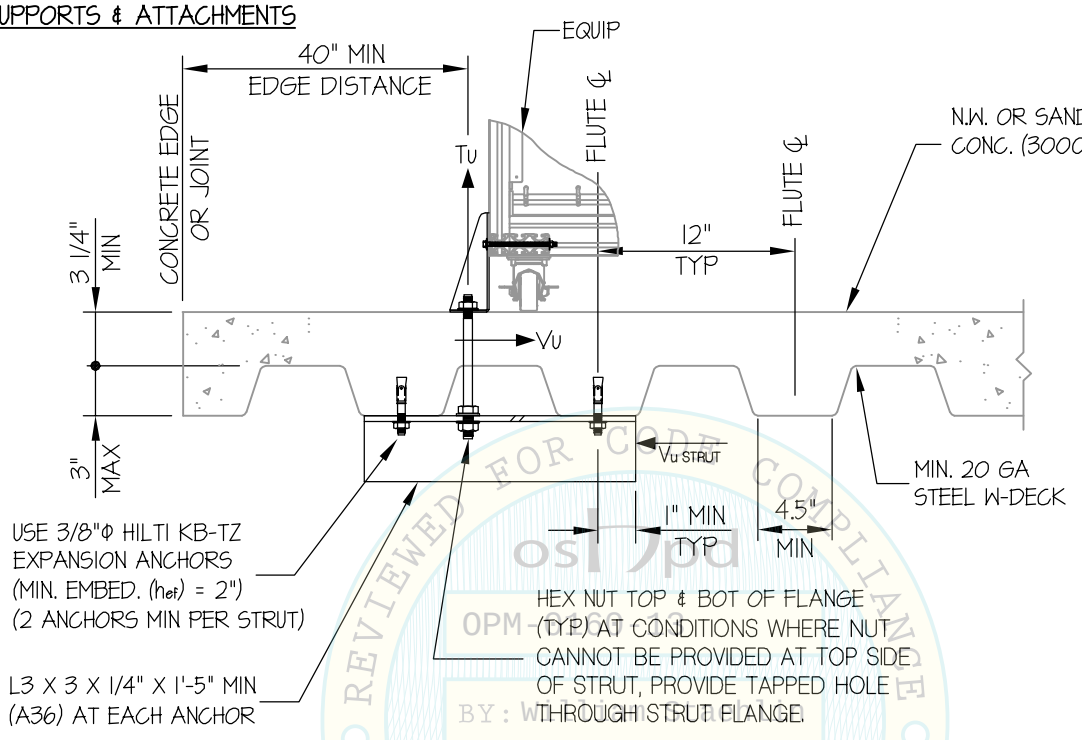
IPA, LLC

alEx LINEN CENTER (MANUAL)

DES. J. ROBERSON
JOB NO. 11-1345
DATE 4/22/15

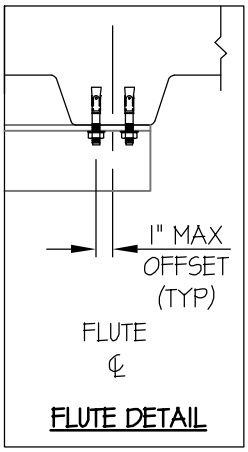
SHEET 13 OF 14 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

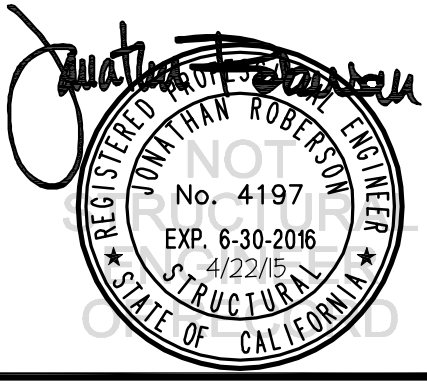


MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL

CONCRETE DETAIL



FLUTE DETAIL



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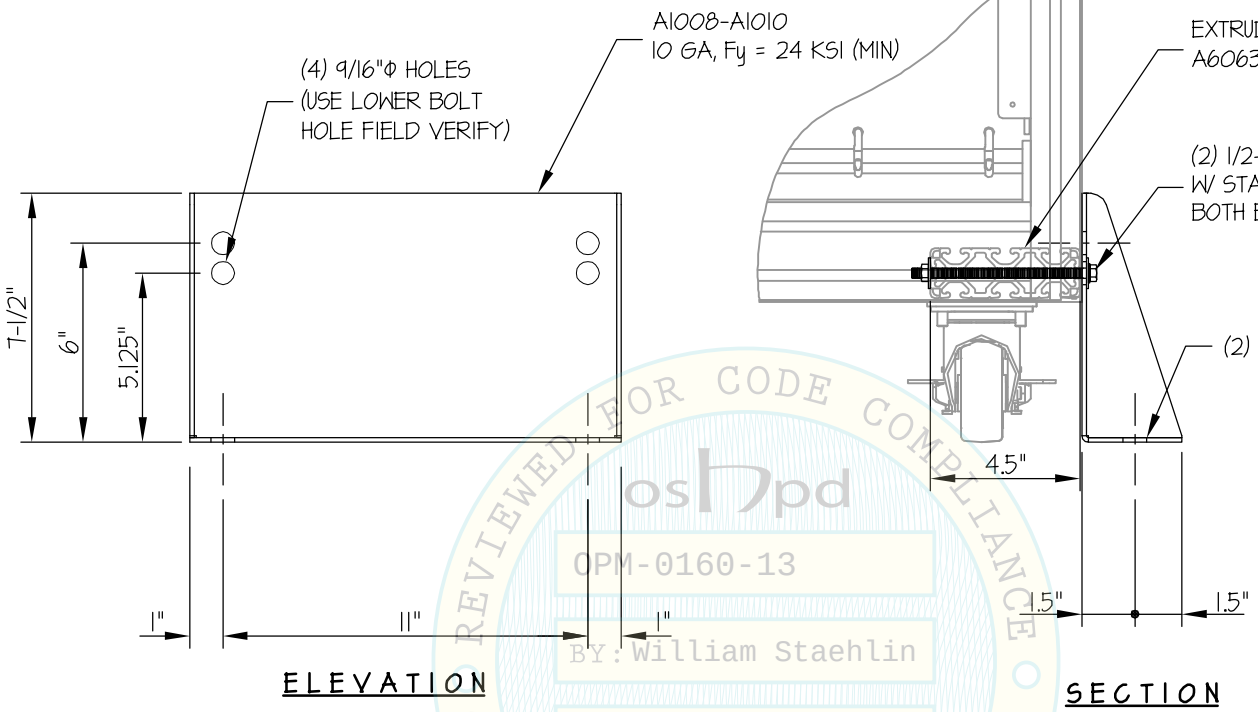

FLOOR BRACKET DETAILS