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

OFFICE USE ONLY
APPLICATION #: OPM-0079-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Crimson AV

Manufacturer's Technical Representative: Tony Politz

Mailing Address: 10513 United Parkway, Schiller, IL. 60176

Telephone: (770) 277-8545 Email: tonyp@crimsonav.com

Product Information

Product Name: Crimson AU65 Articulating Wall Mount

Product Type: Wall Mount

Product Model Number: AU65

General Description: Monitor Support

REVIEWED FOR CODE COMPLIANCE
CALIFORNIA BUILDING CODE, 2013
oshpd
OPM-0079-13
BY: William Staehlin
DATE: 09/09/2014

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: 3/10/14

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: 09/09/2014

Print Name: William Staehlin

Title: SSE

Condition of Approval (if applicable):

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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-0079-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **CRIMSON AV MOUNTING SOLUTIONS**

EQUIPMENT NAME: **MODEL AU65 MONITOR WALL MOUNT**

Date: 9/9/14

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.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE

   S_{DS} = 1.20, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h $\leq$ 1. (COLD-FORMED STRUCTURAL STEEL MEMBERS ONLY)

   S_{DS} = 1.85, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h $\leq$ 1. (CONCRETE ONLY) SEE FOLLOWING SHEETS FOR Ω_o

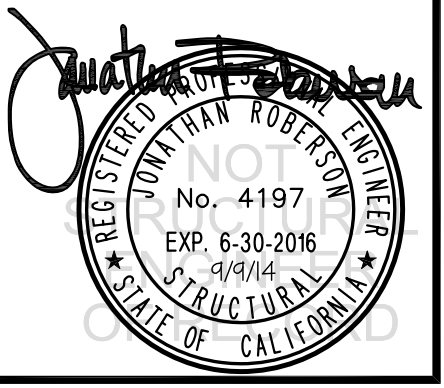
   S_{DS} = 2.50, a_p = 2.5, I_p = 1.5, R_p = 2.5, z/h $\leq$ 1. (COLD-FORMED STRUCTURAL STEEL MEMBERS, CMU OR WOOD SUBTRATES)
5. THE DETAILS IN THIS PREAPPROVAL MAY BE USED AT ANY LOCATION IN THE STATE OF CALIFORNIA, WHERE SDS IS NOT GREATER THAN 2.50, UNLESS OTHERWISE NOTED.
6. ALL DESIGN FORCES SHOWN 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. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
9. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING

   A. PROVIDE SUPPORTING STRUCTURE REQUIRED 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 SHOWN IN THIS PREAPPROVAL. VERIFY THAT THE ACTUAL EQUIPMENT'S WEIGHT, CG LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.

   C. VERIFY THAT THE COMBINATION OF S_{DS} & z/h RESULT IN SEISMIC FORCES (E_h , E_v) THAT ARE NOT GREATER THAN THE VALUES ON THE DETAILS.

   D. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.



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DATE: 09/09/2014
NOT STRUCTURAL ENGINEER OF RECORD

CRIMSON AV MOUNTING SOLUTIONS

MODEL AU65 MONITOR WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1411
DATE 9/9/14
SHEET 2 OF 7 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
1/4"	Normal Weight	3000	Hilti Kwik HUS-EZ	ESR-3027	2.5"	5.25"	12"	5"	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.

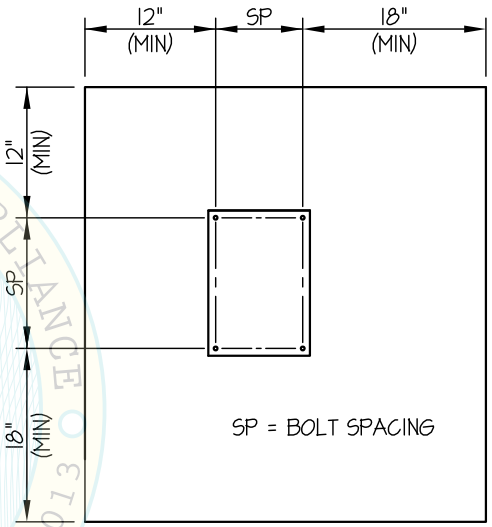
C. TESTING OF EXPANSION ANCHORS PER 2013 CBC, 1913A.7: TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST 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.



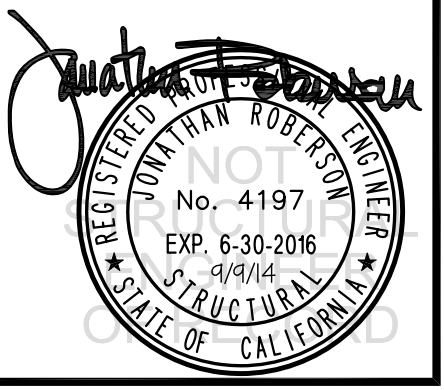
TYPICAL CONCRETE EDGE DETAIL

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.



OSHPD REVIEWED FOR CODE COMPLIANCE CALIFORNIA BUILDING CODE, 2013
OSHPD
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BY: William Staehlin
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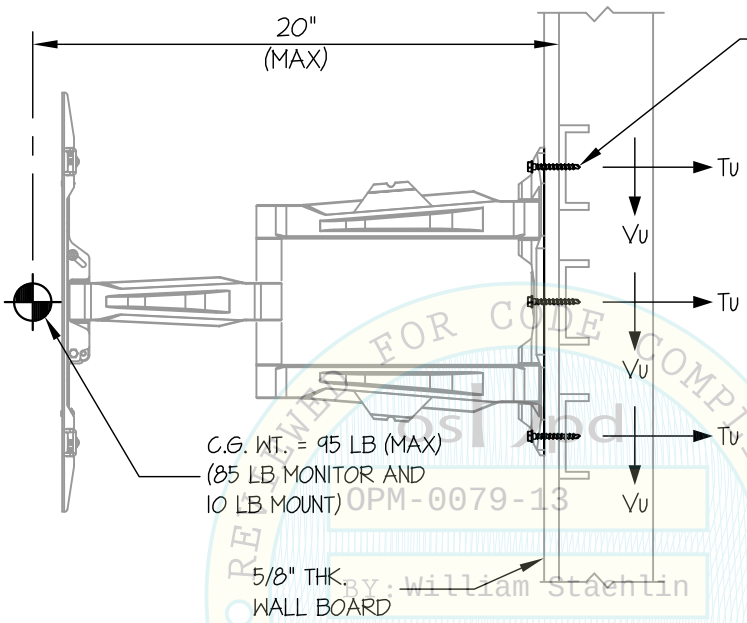
CRIMSON AV MOUNTING SOLUTIONS

MODEL AU65 MONITOR WALL MOUNT

DES. J. ROBERSON
JOB NO. 11-1411
DATE 9/9/14
SHEET 3 OF 7 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED



USE 3- 1/4"Φ TEK SCREW TO STRUCTURAL WALL SUPPORT (16 GA, 50 KSI MIN) (REFER TO SHEET 4 OF 7) (BY STRUCTURAL ENGINEER OF RECORD)

NOTE: REFER TO SHEET 7 OF 7 FOR BOLTED ATTACHMENTS TO CMU & COLD-FORMED STRUCTURAL STEEL MEMBERS AND FOR SCREW ATTACHMENTS TO CONCRETE AND WOOD SUBSTRATES.

STEEL STUD WALL SECTION

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BY: William Staehlin
DATE: 09/09/2014
CALIFORNIA BUILDING CODE 2013

NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. (S_{DS} = 1.20, a_p = 2.5, I_p = 1.5, R_p = 2.5, $z/h \leq 1$)

   AT SHEET METAL SCREWS: (COLD-FORMED STRUCTURAL STEEL MEMBERS)
   HORIZONTAL FORCE (E_h) = 2.16 W_p
   VERTICAL FORCE (E_v) = 0.24 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASS 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
EXP. 6-30-2016
9/9/14
STRUCTURAL
STATE OF CALIFORNIA

NOT STRUCTURAL ENGINEER OF RECORD

CRIMSON AV MOUNTING SOLUTIONS

MODEL AU65 MONITOR WALL MOUNT

DES. J. ROBERSON
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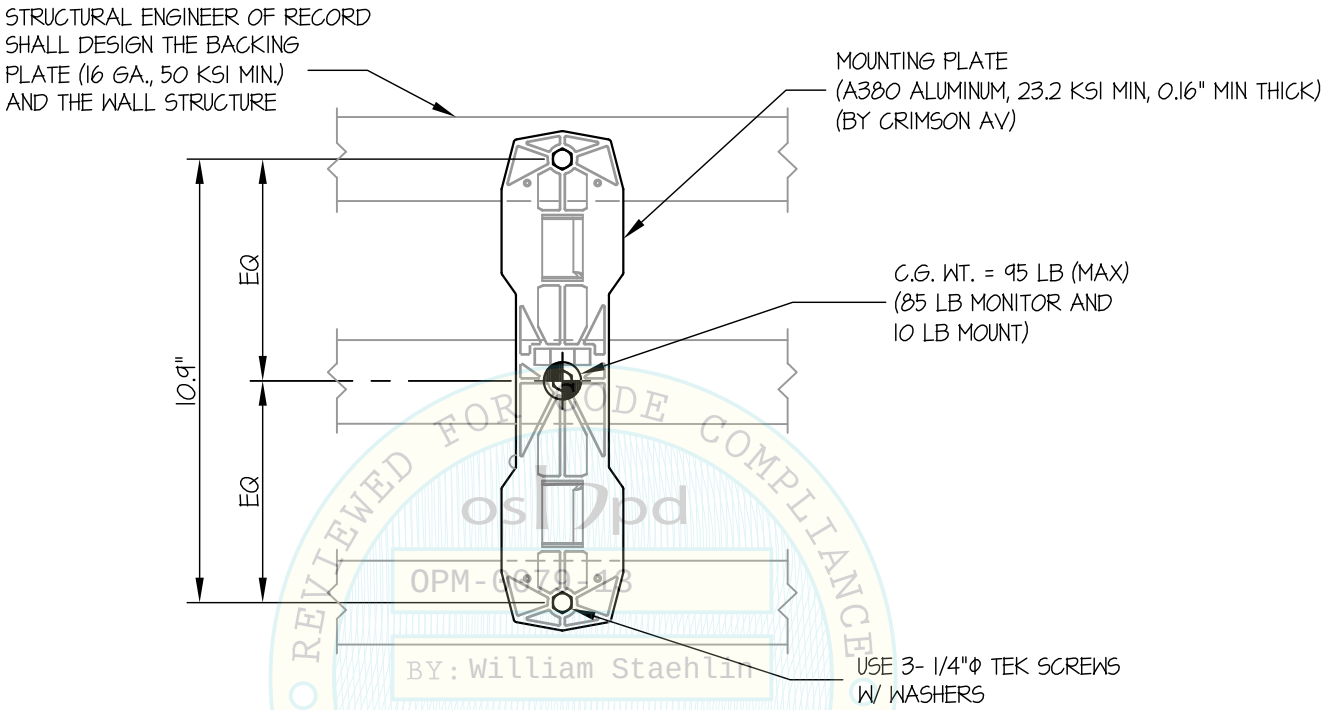
DATE 9/9/14
SHEET 4 OF 7 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

$S_{DS} \leq 1.20$

WALL MOUNTED



ELEVATION AT WALL PLATE
(AT COLD-FORMED STRUCTURAL STEEL MEMBERS)

T_u = 318 LB/SCREW (MAX)
V_u = 82 LB/SCREW (MAX)

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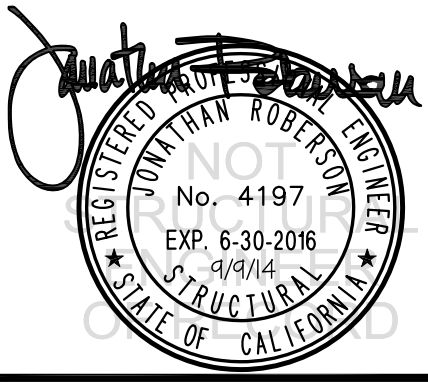

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MODEL AU65 MONITOR WALL MOUNT

DES. J. ROBERSON
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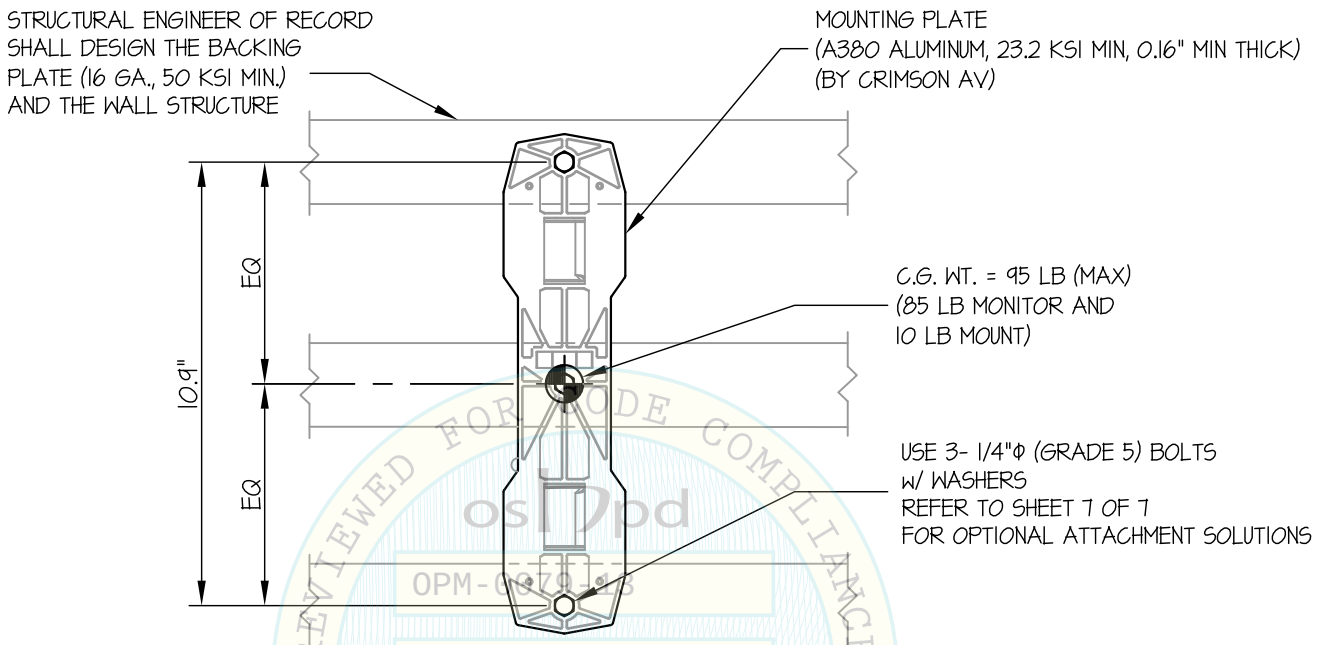
SHEET 5 OF 7 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — 1.20 < SDS ≤ 2.50 — WALL MOUNTED



T_u = 440 LB/BOLT (MAX)
V_u = 153 LB/BOLT (MAX)

ELEVATION AT WALL PLATE
(AT COLD-FORMED STRUCTURAL STEEL MEMBERS)

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NOTES:

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   AT BOLTS: CMU & COLD-FORMED STRUCTURAL STEEL MEMBERS:
   AT WOOD SCREWS:
   HORIZONTAL FORCE (E_h) = 4.50 W_p
   VERTICAL FORCE (E_v) = 0.50 W_p

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

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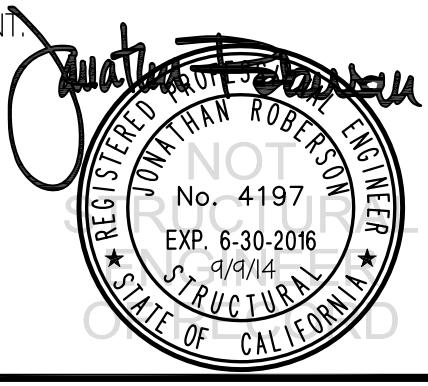

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MODEL AU65 MONITOR WALL MOUNT

DES. J. ROBERSON
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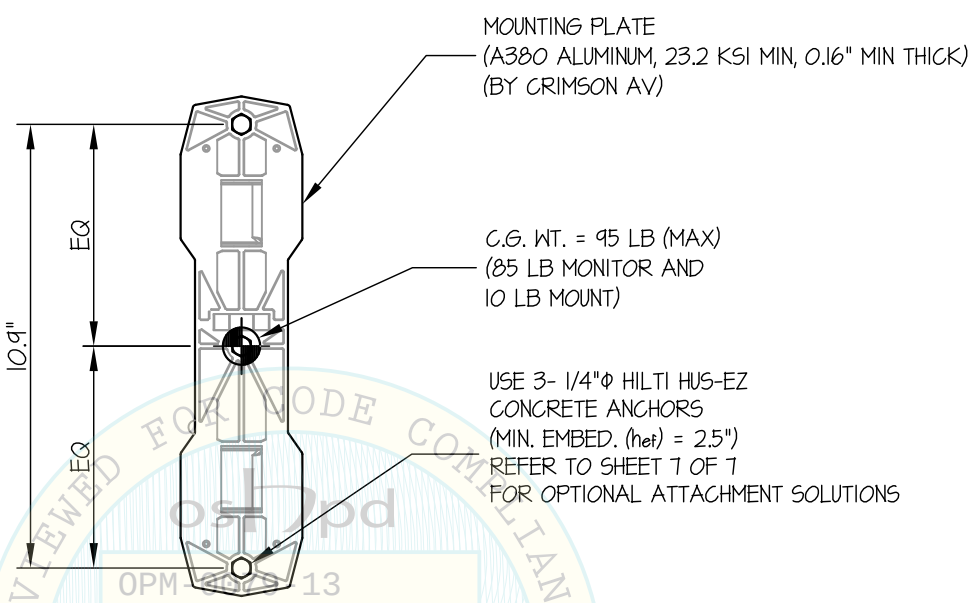
SHEET 6 OF 7 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 1.85$ — WALL MOUNTED



T_u = 538 LB/BOLT (MAX)
V_u = 269 LB/BOLT (MAX)

ELEVATION AT WALL PLATE
(AT CONCRETE CONNECTION)

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1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. (S_{DS} = 1.85, a_p = 2.5, I_p = 1.5, R_p = 2.5, Ω_o = 2.5, z/h ≤ 1)

   AT CONCRETE SCREWS:
   HORIZONTAL FORCE (E_h) = 3.33 W_p
   HORIZONTAL FORCE (E_{hc}) = 8.33 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.37 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASS ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
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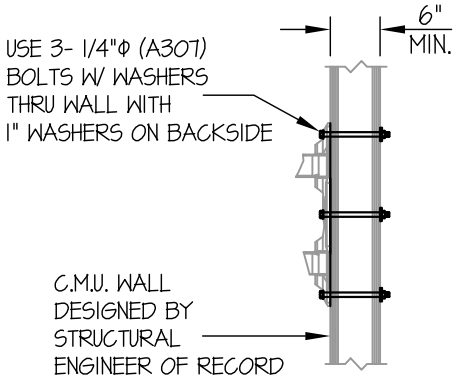
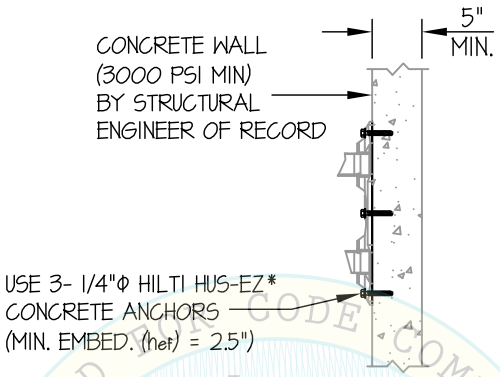
SHEET 7 OF 7 SHEETS

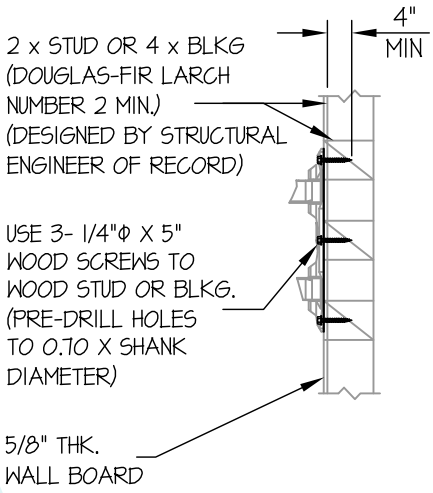
SEISMIC SUPPORTS & ATTACHMENTS — WALL MOUNTED



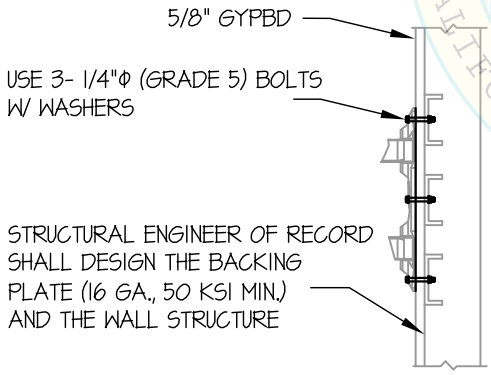
SECTION AT BLOCK WALL
(SDS ≤ 2.50)



SECTION AT CONCRETE WALL
(SDS ≤ 1.85)



SECTION AT WOOD STUD WALL
(SDS ≤ 1.85)



STEEL STUD WALL SECTION
(SDS ≤ 2.50)

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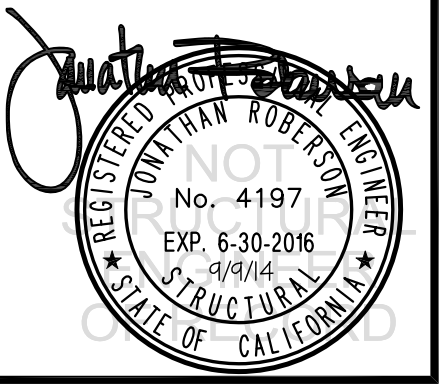

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